TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-116538-2

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

For:
Leidos, Inc.
Picatinny Arsenal
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Attention: Rita Schmon-Stasik



Approved for release.
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12/12/2018 6:48 PM

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12/12/2018
Revision: 1

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

The Lab Certification ID# is 4025.

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

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Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Leidos, Inc.

Project: Leidos RFP# 001088 - Ravenna AAP-66

Report Number: 280-116538-2

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

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

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

REVISED REPORT
The attached report was revised as the cyanide result for IDW sample (FWGIDW-181002-WW) was included in job 280-116538-1 and should have been included in this job 280-116538-2. No other changes were made.

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

Received one bottle for sample ID FWGIDW-181001-WW labeled for cyanide analysis. Container is labeled with Zinc Acetate and NaOH preservative label; analysis requires NaOH preservative only.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples FWGIDW-181001-WW (280-116538-4) and FWGqc-015-TB (280-116538-5) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with 1311. The samples were leached on 11/09/2018 and analyzed on 11/23/2018.

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

TCLP SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Sample FWGIDW-181001-WW (280-116538-4) was analyzed for TCLP semivolatile organic compounds (GC-MS) in accordance with 8270D. The samples were leached on 11/07/2018, prepared on 11/12/2018 and analyzed on 11/16/2018.

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

ORGANOCHLORINE PESTICIDES (GC)
Sample FWGIDW-181001-WW (280-116538-4) was analyzed for Organochlorine Pesticides (GC) in accordance with EPA SW-846 Method 1311/8081B. The samples were leached on 11/07/2018, prepared on 11/12/2018 and analyzed on 11/21/2018.

The following sample required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: FWGIDW-181001-WW (280-116538-4). The reagent lot number used was: T31E034.

The continuing calibration verification (CCV) associated with batch 280-438443 recovered above the upper control limit for DCB Decachlorobiphenyl and Methoxychlor on the front column. The compounds were in control on the back column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the back, in control, column.

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

POLYCHLORINATED BIPHENYLS (PCBS)
Sample FWGIDW-181001-WW (280-116538-4) was analyzed for polychlorinated biphenyls (PCBs) in accordance with SW-846 8082A. The samples were prepared on 11/13/2018 and analyzed on 11/28/2018.

The continuing calibration verification (CCV) associated to the following samples recovered below the lower limit for Tetrachloro-m-xylene on the confirmation column: (CCVIS 280-439075/4). The primary column was in control. The surrogate recoveries are in control; therefore, the data is being reported from the in control column.

The initial calibration verification (ICV) result for batch 280-439075 was above the upper control limit for surrogate DCB Decachlorobiphenyl, PCB-1248 and PCB-1262. This surrogate in the associated samples was in control. Sample results were non-detects, and have been reported as qualified data.

The following sample required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: FWGIDW-181001-WW (280-116538-4). Acid Lot: 161554.

The following sample required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: FWGIDW-181001-WW (280-116538-4). The reagent lot number used was: T31E034

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

TCLP CHLORINATED HERBICIDES

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for TCLP chlorinated herbicides in accordance with EPA SW-846 Methods 1311/8151A. The samples were leached on 11/07/2018, prepared on 11/08/2018 and analyzed on 11/13/2018.

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

TCLP METALS

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for TCLP metals in accordance with EPA SW846 Methods 1311/6010C. The samples were leached on 11/07/2018, and prepared and analyzed on 11/13/2018.

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

TCLP MERCURY

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for TCLP mercury in accordance with SW-846 1311/7470. The samples were leached on 11/07/2018, prepared on 11/14/2018 and analyzed on 11/15/2018.

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

IGNITABILITY

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for ignitability in accordance with EPA SW-846 Method 1010. The samples were analyzed on 11/16/2018.

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

CYANIDE, TOTAL

Samples FWGIDW-181001-WW (280-116538-4) and FWIDW0181002-WW were analyzed for Cyanide, Total in accordance with 9012B.

Sample FWGIDW-181001-WW (280-116538-4) required a 5X dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

SULFIDE

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 11/07/2018.

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

CORROSIVITY (PH)

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for Corrosivity (pH) in accordance with EPA SW-846 9040C. The samples were analyzed on 11/19/2018.

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

ANIONS (48 HOURS)

Sample FWGIDW-181001-WW (280-116538-4) was analyzed for anions (48 hours) in accordance with 9056A. The samples were analyzed on 11/03/2018.

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

Sample FWGIDW-181001-WW (280-116538-4) required a 5X dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Detection Summary

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

TestAmerica Job ID: 280-116538-2

Client Sample ID: FWGIDW-181001-WW — Lab Sample ID: 280-116538-4

Analyte	Result	Qualifier	RL		MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.015	J	1.0		0.0040	mg/L	1		6010C	TCLP
Flashpoint	>60		1.00		1.00	Degrees C	1		1010A	Total/NA
Cyanide, Total	0.63		0.050		0.010	mg/L	5		9012B	Total/NA
pH adj. to 25 deg C	7.8	HF	0.1		0.1	SU	1		9040C	Total/NA
Temperature	20.3	HF	1.0		1.0	Degrees C	1		9040C	Total/NA
Nitrate as N	14		2.5		0.21	mg/L	5		9056A	Total/NA
Nitrite as N	0.52	B	0.50		0.049	mg/L	1		9056A	Total/NA

Client Sample ID: FWGqc-015-TB — Lab Sample ID: 280-116538-5

No Detections.

Client Sample ID: FWIDW-181002-WW — Lab Sample ID: 280-116538-7

Analyte	Result	Qualifier	RL		MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.27		0.010	0.0050	0.0020	mg/L	1		9012B	Total/NA

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Benzene	ND		0.010	0.0016	mg/L		11/23/18 13:45	1
2-Butanone (MEK)	ND		0.10	0.020	mg/L		11/23/18 13:45	1
Carbon tetrachloride	ND		0.010	0.0019	mg/L		11/23/18 13:45	1
Chlorobenzene	ND		0.010	0.0017	mg/L		11/23/18 13:45	1
Chloroform	ND		0.010	0.0016	mg/L		11/23/18 13:45	1
1,2-Dichloroethane	ND		0.010	0.0013	mg/L		11/23/18 13:45	1
1,1-Dichloroethene	ND		0.010	0.0023	mg/L		11/23/18 13:45	1
Tetrachloroethene	ND		0.010	0.0020	mg/L		11/23/18 13:45	1
Trichloroethene	ND		0.010	0.0016	mg/L		11/23/18 13:45	1
Vinyl chloride	ND		0.010	0.0010	mg/L		11/23/18 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*78 - 120*		*11/23/18 13:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*64 - 129*		*11/23/18 13:45*	*1*
4-Bromofluorobenzene (Surr)	*92*		*78 - 121*		*11/23/18 13:45*	*1*
Dibromofluoromethane (Surr)	*87*		*79 - 119*		*11/23/18 13:45*	*1*

Client Sample ID: FWGqc-015-TB **Lab Sample ID: 280-116538-5**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Benzene	ND		0.010	0.0016	mg/L		11/23/18 14:05	1
2-Butanone (MEK)	ND		0.10	0.020	mg/L		11/23/18 14:05	1
Carbon tetrachloride	ND		0.010	0.0019	mg/L		11/23/18 14:05	1
Chlorobenzene	ND		0.010	0.0017	mg/L		11/23/18 14:05	1
Chloroform	ND		0.010	0.0016	mg/L		11/23/18 14:05	1
1,2-Dichloroethane	ND		0.010	0.0013	mg/L		11/23/18 14:05	1
1,1-Dichloroethene	ND		0.010	0.0023	mg/L		11/23/18 14:05	1
Tetrachloroethene	ND		0.010	0.0020	mg/L		11/23/18 14:05	1
Trichloroethene	ND		0.010	0.0016	mg/L		11/23/18 14:05	1
Vinyl chloride	ND		0.010	0.0010	mg/L		11/23/18 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*78 - 120*		*11/23/18 14:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*64 - 129*		*11/23/18 14:05*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 121*		*11/23/18 14:05*	*1*
Dibromofluoromethane (Surr)	*89*		*79 - 119*		*11/23/18 14:05*	*1*

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

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
2-Methylphenol	ND		0.050	0.0049	mg/L		11/16/18 01:29	1
3 & 4 Methylphenol	ND		0.050	0.0013	mg/L		11/16/18 01:29	1
1,4-Dichlorobenzene	ND		0.020	0.0016	mg/L		11/16/18 01:29	1
2,4-Dinitrotoluene	ND		0.050	0.0083	mg/L		11/16/18 01:29	1
Hexachlorobenzene	ND		0.050	0.0033	mg/L		11/16/18 01:29	1
Hexachlorobutadiene	ND		0.050	0.017	mg/L		11/16/18 01:29	1

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

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Hexachloroethane	ND		0.050	0.011	mg/L		11/16/18 01:29	1
Nitrobenzene	ND		0.050	0.0041	mg/L		11/16/18 01:29	1
Pentachlorophenol	ND		0.25	0.10	mg/L		11/16/18 01:29	1
Pyridine	ND		0.10	0.0057	mg/L		11/16/18 01:29	1
2,4,5-Trichlorophenol	ND		0.050	0.0022	mg/L		11/16/18 01:29	1
2,4,6-Trichlorophenol	ND		0.025	0.0014	mg/L		11/16/18 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*49 - 120*	*11/12/18 13:36*	*11/16/18 01:29*	*1*
2-Fluorophenol (Surr)	*60*		*50 - 120*	*11/12/18 13:36*	*11/16/18 01:29*	*1*
2,4,6-Tribromophenol (Surr)	*77*		*51 - 120*	*11/12/18 13:36*	*11/16/18 01:29*	*1*
Nitrobenzene-d5 (Surr)	*71*		*51 - 120*	*11/12/18 13:36*	*11/16/18 01:29*	*1*
Phenol-d5 (Surr)	*51*		*47 - 120*	*11/12/18 13:36*	*11/16/18 01:29*	*1*
Terphenyl-d14 (Surr)	*70*		*56 - 120*	*11/12/18 13:36*	*11/16/18 01:29*	*1*

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

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Endrin	ND		0.00050	0.000079	mg/L		11/21/18 17:07	1
Heptachlor	ND		0.00050	0.000077	mg/L		11/21/18 17:07	1
Heptachlor epoxide	ND		0.00050	0.000075	mg/L		11/21/18 17:07	1
gamma-BHC (Lindane)	ND		0.00050	0.000069	mg/L		11/21/18 17:07	1
Methoxychlor	ND		0.0010	0.00013	mg/L		11/21/18 17:07	1
Toxaphene	ND		0.020	0.0037	mg/L		11/21/18 17:07	1
Chlordane (technical)	ND		0.0050	0.0014	mg/L		11/21/18 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*28 - 115*	*11/12/18 19:56*	*11/21/18 17:07*	*1*
DCB Decachlorobiphenyl	*87*		*34 - 122*	*11/12/18 19:56*	*11/21/18 17:07*	*1*

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

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
PCB-1016	ND		1.1	0.14	ug/L		11/28/18 20:29	1
PCB-1221	ND		1.1	0.24	ug/L		11/28/18 20:29	1
PCB-1232	ND		1.1	0.18	ug/L		11/28/18 20:29	1
PCB-1242	ND		1.1	0.12	ug/L		11/28/18 20:29	1
PCB-1248	ND		1.1	0.10	ug/L		11/28/18 20:29	1
PCB-1254	ND		1.1	0.13	ug/L		11/28/18 20:29	1
PCB-1260	ND		1.1	0.18	ug/L		11/28/18 20:29	1
PCB-1262	ND		1.1	0.094	ug/L		11/28/18 20:29	1
PCB-1268	ND		1.1	0.40	ug/L		11/28/18 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*25 - 120*	*11/13/18 18:28*	*11/28/18 20:29*	*1*

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

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*70*		*30 - 136*	*11/13/18 18:28*	*11/28/18 20:29*	*1*

Method: 8151A DOD - Herbicides (GC) - TCLP

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
2,4-D	ND		0.040	0.0021	mg/L		11/13/18 18:57	1
Silvex (2,4,5-TP)	ND		0.010	0.0017	mg/L		11/13/18 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*79*		*10 - 131*	*11/08/18 07:48*	*11/13/18 18:57*	*1*

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Arsenic	ND		0.50	0.022	mg/L		11/13/18 14:56	1
Barium	**0.015**	**J**	1.0	0.0040	mg/L		11/13/18 14:56	1
Cadmium	ND		0.10	0.0020	mg/L		11/13/18 14:56	1
Chromium	ND		0.50	0.0030	mg/L		11/13/18 14:56	1
Lead	ND		0.50	0.014	mg/L		11/13/18 14:56	1
Selenium	ND		0.10	0.032	mg/L		11/13/18 14:56	1
Silver	ND		0.50	0.0040	mg/L		11/13/18 14:56	1

Method: 7470A - Mercury (CVAA) - TCLP

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.0020	0.000030	mg/L		11/15/18 15:55	1

General Chemistry

Client Sample ID: FWGIDW-181001-WW **Lab Sample ID: 280-116538-4**
Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Flashpoint	**>60**		1.00	1.00	Degrees C		11/16/18 01:31	1
Cyanide, Total	**0.63**		0.050	0.010	mg/L		11/15/18 19:28	5
Sulfide	ND		4.0	0.79	mg/L		11/07/18 20:06	1
pH adj. to 25 deg C	**7.8**	**HF**	0.1	0.1	SU		11/19/18 13:46	1
Temperature	**20.3**	**HF**	1.0	1.0	Degrees C		11/19/18 13:46	1
Nitrate as N	**14**		2.5	0.21	mg/L		11/03/18 16:36	5
Nitrite as N	**0.52**	**B**	0.50	0.049	mg/L		11/03/18 14:16	1

General Chemistry

Client Sample ID: FWIDW-181002-WW **Lab Sample ID: 280-116538-7**
Date Collected: 11/14/18 15:55 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	**0.27**		0.010	0.0050	0.0020	mg/L		11/21/18 11:07	1

Default Detection Limits

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

TestAmerica Job ID: 280-116538-2

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

Leach: 1311

Analyte	RL	MDL	Units	Method
1,1-Dichloroethene	0.010	0.0023	mg/L	8260B
1,2-Dichloroethane	0.010	0.0013	mg/L	8260B
2-Butanone (MEK)	0.10	0.020	mg/L	8260B
Benzene	0.010	0.0016	mg/L	8260B
Carbon tetrachloride	0.010	0.0019	mg/L	8260B
Chlorobenzene	0.010	0.0017	mg/L	8260B
Chloroform	0.010	0.0016	mg/L	8260B
Tetrachloroethene	0.010	0.0020	mg/L	8260B
Trichloroethene	0.010	0.0016	mg/L	8260B
Vinyl chloride	0.010	0.0010	mg/L	8260B

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

Prep: 3510C
Leach: 1311

Analyte	RL	MDL	Units	Method
1,4-Dichlorobenzene	0.020	0.0016	mg/L	8270D
2,4,5-Trichlorophenol	0.050	0.0022	mg/L	8270D
2,4,6-Trichlorophenol	0.025	0.0014	mg/L	8270D
2,4-Dinitrotoluene	0.050	0.0083	mg/L	8270D
2-Methylphenol	0.050	0.0049	mg/L	8270D
3 & 4 Methylphenol	0.050	0.0013	mg/L	8270D
Hexachlorobenzene	0.050	0.0033	mg/L	8270D
Hexachlorobutadiene	0.050	0.017	mg/L	8270D
Hexachloroethane	0.050	0.011	mg/L	8270D
Nitrobenzene	0.050	0.0041	mg/L	8270D
Pentachlorophenol	0.25	0.10	mg/L	8270D
Pyridine	0.10	0.0057	mg/L	8270D

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

Prep: 3510C
Leach: 1311

Analyte	RL	MDL	Units	Method
Chlordane (technical)	0.0050	0.0014	mg/L	8081B
Endrin	0.00050	0.000079	mg/L	8081B
gamma-BHC (Lindane)	0.00050	0.000069	mg/L	8081B
Heptachlor	0.00050	0.000077	mg/L	8081B
Heptachlor epoxide	0.00050	0.000075	mg/L	8081B
Methoxychlor	0.0010	0.00013	mg/L	8081B
Toxaphene	0.020	0.0037	mg/L	8081B

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

Prep: 3510C

Analyte	RL	MDL	Units	Method
PCB-1016	1.0	0.12	ug/L	8082A
PCB-1221	1.0	0.21	ug/L	8082A
PCB-1232	1.0	0.17	ug/L	8082A
PCB-1242	1.0	0.10	ug/L	8082A
PCB-1248	1.0	0.092	ug/L	8082A
PCB-1254	1.0	0.11	ug/L	8082A

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

Prep: 3510C

Analyte	RL	MDL	Units	Method
PCB-1260	1.0	0.16	ug/L	8082A
PCB-1262	1.0	0.085	ug/L	8082A
PCB-1268	1.0	0.36	ug/L	8082A

Method: 8151A DOD - Herbicides (GC) - TCLP

Prep: 8151A
Leach: 1311

Analyte	RL	MDL	Units	Method
2,4-D	0.040	0.0021	mg/L	8151A DOD
Silvex (2,4,5-TP)	0.010	0.0017	mg/L	8151A DOD

Method: 6010C - Metals (ICP) - TCLP

Prep: 3010A
Leach: 1311

Analyte	RL	MDL	Units	Method
Arsenic	0.50	0.022	mg/L	6010C
Barium	1.0	0.0040	mg/L	6010C
Cadmium	0.10	0.0020	mg/L	6010C
Chromium	0.50	0.0030	mg/L	6010C
Lead	0.50	0.014	mg/L	6010C
Selenium	0.10	0.032	mg/L	6010C
Silver	0.50	0.0040	mg/L	6010C

Method: 7470A - Mercury (CVAA) - TCLP

Prep: 7470A
Leach: 1311

Analyte	RL	MDL	Units	Method
Mercury	0.0020	0.000030	mg/L	7470A

General Chemistry

Analyte	RL	MDL	Units	Method
Flashpoint	1.00	1.00	Degrees C	1010A
pH adj. to 25 deg C	0.1	0.1	SU	9040C
Temperature	1.0	1.0	Degrees C	9040C
Nitrate as N	0.50	0.042	mg/L	9056A
Nitrite as N	0.50	0.049	mg/L	9056A

General Chemistry

Prep: 9012B

Analyte	RL	MDL	Units	Method
Cyanide, Total	0.010	0.0020	mg/L	9012B

General Chemistry

Prep: 9030B

Analyte	RL	MDL	Units	Method
Sulfide	4.0	0.79	mg/L	9034

Surrogate Summary

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

TestAmerica Job ID: 280-116538-2

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

Matrix: Water **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(78-120)	(64-129)	(78-121)	(79-119)
280-116538-4	FWGIDW-181001-WW	99	90	92	87
280-116538-5	FWGqc-015-TB	99	89	98	89
LB3 280-437096/1-A	Method Blank	93	89	98	90
LCS 280-437096/2-A	Lab Control Sample	99	90	91	88

Surrogate Legend

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

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

Matrix: Water **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	TBP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(49-120)	(50-120)	(51-120)	(51-120)	(47-120)	(56-120)
280-116538-4	FWGIDW-181001-WW	73	60	77	71	51	70
280-116538-4 MS	FWGIDW-181001-WW	78	64	81	75	53	67
280-116538-4 MSD	FWGIDW-181001-WW	89	70	89	83	61	70
LB3 280-436732/1-G	Method Blank	84	69	78	77	57	88
LCS 280-436732/3-B	Lab Control Sample	86	73	83	80	59	88

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(28-115)	(34-122)
280-116538-4	FWGIDW-181001-WW	87	87
280-116538-4 MS	FWGIDW-181001-WW	89	92
280-116538-4 MS	FWGIDW-181001-WW	88	106
280-116538-4 MSD	FWGIDW-181001-WW	88	94
280-116538-4 MSD	FWGIDW-181001-WW	82	100
LB3 280-436732/1-I	Method Blank	88	101
LCS 280-436732/3-E	Lab Control Sample	90	103
LCS 280-436732/3-F	Lab Control Sample	89	115

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Surrogate Summary

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

TestAmerica Job ID: 280-116538-2

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TCX2 (25-120)	DCBP2 (30-136)								
280-116538-4	FWGIDW-181001-WW	78	70								
LCS 280-437451/4-A	Lab Control Sample	86	93								
LCSD 280-437451/5-A	Lab Control Sample Dup	87	97								
MB 280-437451/1-A	Method Blank	85	94								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8151A DOD - Herbicides (GC)

Matrix: Water **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	DCPAA1 (10-131)									
280-116538-4	FWGIDW-181001-WW	79									
280-116538-4 MS	FWGIDW-181001-WW	83									
280-116538-4 MSD	FWGIDW-181001-WW	78									
LB3 280-436732/1-B	Method Blank	76									
LCS 280-436732/2-B	Lab Control Sample	78									

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: LB3 280-437096/1-A
Matrix: Water
Analysis Batch: 438589

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB3 Result	LB3 Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Benzene	ND		0.010		0.0016	mg/L		11/23/18 13:07	1
2-Butanone (MEK)	ND		0.10		0.020	mg/L		11/23/18 13:07	1
Carbon tetrachloride	ND		0.010		0.0019	mg/L		11/23/18 13:07	1
Chlorobenzene	ND		0.010		0.0017	mg/L		11/23/18 13:07	1
Chloroform	ND		0.010		0.0016	mg/L		11/23/18 13:07	1
1,2-Dichloroethane	ND		0.010		0.0013	mg/L		11/23/18 13:07	1
1,1-Dichloroethene	ND		0.010		0.0023	mg/L		11/23/18 13:07	1
Tetrachloroethene	ND		0.010		0.0020	mg/L		11/23/18 13:07	1
Trichloroethene	ND		0.010		0.0016	mg/L		11/23/18 13:07	1
Vinyl chloride	ND		0.010		0.0010	mg/L		11/23/18 13:07	1

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*78 - 120*		*11/23/18 13:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*64 - 129*		*11/23/18 13:07*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 121*		*11/23/18 13:07*	*1*
Dibromofluoromethane (Surr)	*90*		*79 - 119*		*11/23/18 13:07*	*1*

Lab Sample ID: LCS 280-437096/2-A
Matrix: Water
Analysis Batch: 438589

Client Sample ID: Lab Control Sample
Prep Type: TCLP

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0496		mg/L		99	74 - 135		
2-Butanone (MEK)			0.200	0.170		mg/L		85	44 - 150		
Carbon tetrachloride			0.0500	0.0504		mg/L		101	67 - 135		
Chlorobenzene			0.0500	0.0488		mg/L		98	76 - 135		
Chloroform			0.0500	0.0503		mg/L		101	76 - 120		
1,2-Dichloroethane			0.0500	0.0469		mg/L		94	70 - 135		
1,1-Dichloroethene			0.0500	0.0498		mg/L		100	71 - 136		
Tetrachloroethene			0.0500	0.0520		mg/L		104	70 - 135		
Trichloroethene			0.0500	0.0498		mg/L		100	73 - 135		
Vinyl chloride			0.0500	0.0481		mg/L		96	40 - 144		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*78 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*64 - 129*
4-Bromofluorobenzene (Surr)	*91*		*78 - 121*
Dibromofluoromethane (Surr)	*88*		*79 - 119*

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

Lab Sample ID: LB3 280-436732/1-G
Matrix: Water
Analysis Batch: 437797

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437243

Analyte	LB3 Result	LB3 Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
2-Methylphenol	ND		0.050		0.0049	mg/L		11/15/18 19:52	1

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

Lab Sample ID: LB3 280-436732/1-G **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: TCLP**
Analysis Batch: 437797 **Prep Batch: 437243**

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		0.050	0.0013	mg/L		11/15/18 19:52	1
1,4-Dichlorobenzene	ND		0.020	0.0016	mg/L		11/15/18 19:52	1
2,4-Dinitrotoluene	ND		0.050	0.0083	mg/L		11/15/18 19:52	1
Hexachlorobenzene	ND		0.050	0.0033	mg/L		11/15/18 19:52	1
Hexachlorobutadiene	ND		0.050	0.017	mg/L		11/15/18 19:52	1
Hexachloroethane	ND		0.050	0.011	mg/L		11/15/18 19:52	1
Nitrobenzene	ND		0.050	0.0041	mg/L		11/15/18 19:52	1
Pentachlorophenol	ND		0.25	0.10	mg/L		11/15/18 19:52	1
Pyridine	ND		0.10	0.0057	mg/L		11/15/18 19:52	1
2,4,5-Trichlorophenol	ND		0.050	0.0022	mg/L		11/15/18 19:52	1
2,4,6-Trichlorophenol	ND		0.025	0.0014	mg/L		11/15/18 19:52	1

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*49 - 120*	*11/12/18 13:36*	*11/15/18 19:52*	*1*
2-Fluorophenol (Surr)	*69*		*50 - 120*	*11/12/18 13:36*	*11/15/18 19:52*	*1*
2,4,6-Tribromophenol (Surr)	*78*		*51 - 120*	*11/12/18 13:36*	*11/15/18 19:52*	*1*
Nitrobenzene-d5 (Surr)	*77*		*51 - 120*	*11/12/18 13:36*	*11/15/18 19:52*	*1*
Phenol-d5 (Surr)	*57*		*47 - 120*	*11/12/18 13:36*	*11/15/18 19:52*	*1*
Terphenyl-d14 (Surr)	*88*		*56 - 120*	*11/12/18 13:36*	*11/15/18 19:52*	*1*

Lab Sample ID: LCS 280-436732/3-B **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: TCLP**
Analysis Batch: 437797 **Prep Batch: 437243**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	0.250	0.176		mg/L		70	45 - 120
3 & 4 Methylphenol	0.500	0.350		mg/L		70	44 - 120
1,4-Dichlorobenzene	0.250	0.174		mg/L		69	36 - 120
2,4-Dinitrotoluene	0.100	0.0694		mg/L		69	36 - 120
Hexachlorobenzene	0.100	0.0778		mg/L		78	52 - 120
Hexachlorobutadiene	0.250	0.168		mg/L		67	35 - 120
Hexachloroethane	0.250	0.169		mg/L		68	35 - 120
Nitrobenzene	0.250	0.189		mg/L		75	50 - 120
Pentachlorophenol	0.500	0.256		mg/L		51	39 - 120
Pyridine	0.250	0.102		mg/L		41	10 - 121
2,4,5-Trichlorophenol	0.250	0.191		mg/L		76	46 - 120
2,4,6-Trichlorophenol	0.250	0.194		mg/L		77	43 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*86*		*49 - 120*
2-Fluorophenol (Surr)	*73*		*50 - 120*
2,4,6-Tribromophenol (Surr)	*83*		*51 - 120*
Nitrobenzene-d5 (Surr)	*80*		*51 - 120*
Phenol-d5 (Surr)	*59*		*47 - 120*
Terphenyl-d14 (Surr)	*88*		*56 - 120*

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

Lab Sample ID: 280-116538-4 MS **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water **Prep Type: TCLP**
Analysis Batch: 437797 **Prep Batch: 437243**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	ND		0.250	0.160		mg/L		64	45 - 120
3 & 4 Methylphenol	ND		0.500	0.328		mg/L		66	44 - 120
1,4-Dichlorobenzene	ND		0.250	0.161		mg/L		64	36 - 120
2,4-Dinitrotoluene	ND		0.100	0.0693		mg/L		69	36 - 120
Hexachlorobenzene	ND		0.100	0.0676		mg/L		68	52 - 120
Hexachlorobutadiene	ND		0.250	0.152		mg/L		61	35 - 120
Hexachloroethane	ND		0.250	0.156		mg/L		62	35 - 120
Nitrobenzene	ND		0.250	0.177		mg/L		71	50 - 120
Pentachlorophenol	ND		0.500	0.299		mg/L		60	39 - 120
Pyridine	ND		0.250	0.127		mg/L		51	10 - 121
2,4,5-Trichlorophenol	ND		0.250	0.184		mg/L		74	46 - 120
2,4,6-Trichlorophenol	ND		0.250	0.179		mg/L		72	43 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*78*		*49 - 120*
2-Fluorophenol (Surr)	*64*		*50 - 120*
2,4,6-Tribromophenol (Surr)	*81*		*51 - 120*
Nitrobenzene-d5 (Surr)	*75*		*51 - 120*
Phenol-d5 (Surr)	*53*		*47 - 120*
Terphenyl-d14 (Surr)	*67*		*56 - 120*

Lab Sample ID: 280-116538-4 MSD **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water **Prep Type: TCLP**
Analysis Batch: 437797 **Prep Batch: 437243**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylphenol	ND		0.250	0.185		mg/L		74	45 - 120	15	30
3 & 4 Methylphenol	ND		0.500	0.374		mg/L		75	44 - 120	13	30
1,4-Dichlorobenzene	ND		0.250	0.174		mg/L		70	36 - 120	8	30
2,4-Dinitrotoluene	ND		0.100	0.0751		mg/L		75	36 - 120	8	30
Hexachlorobenzene	ND		0.100	0.0736		mg/L		74	52 - 120	9	30
Hexachlorobutadiene	ND		0.250	0.168		mg/L		67	35 - 120	10	30
Hexachloroethane	ND		0.250	0.167		mg/L		67	35 - 120	7	30
Nitrobenzene	ND		0.250	0.199		mg/L		80	50 - 120	11	30
Pentachlorophenol	ND		0.500	0.330		mg/L		66	39 - 120	10	30
Pyridine	ND		0.250	0.136		mg/L		54	10 - 121	7	30
2,4,5-Trichlorophenol	ND		0.250	0.204		mg/L		82	46 - 120	10	30
2,4,6-Trichlorophenol	ND		0.250	0.207		mg/L		83	43 - 120	15	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*89*		*49 - 120*
2-Fluorophenol (Surr)	*70*		*50 - 120*
2,4,6-Tribromophenol (Surr)	*89*		*51 - 120*
Nitrobenzene-d5 (Surr)	*83*		*51 - 120*
Phenol-d5 (Surr)	*61*		*47 - 120*
Terphenyl-d14 (Surr)	*70*		*56 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: LB3 280-436732/1-I
Matrix: Water
Analysis Batch: 438443

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437290

Analyte	LB3 Result	LB3 Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Endrin	ND		0.00050		0.000079	mg/L		11/21/18 15:57	1
Heptachlor	ND		0.00050		0.000077	mg/L		11/21/18 15:57	1
Heptachlor epoxide	ND		0.00050		0.000075	mg/L		11/21/18 15:57	1
gamma-BHC (Lindane)	ND		0.00050		0.000069	mg/L		11/21/18 15:57	1
Methoxychlor	ND		0.0010		0.00013	mg/L		11/21/18 15:57	1
Toxaphene	ND		0.020		0.0037	mg/L		11/21/18 15:57	1
Chlordane (technical)	ND		0.0050		0.0014	mg/L		11/21/18 15:57	1

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*28 - 115*	*11/12/18 19:56*	*11/21/18 15:57*	*1*
DCB Decachlorobiphenyl	*101*		*34 - 122*	*11/12/18 19:56*	*11/21/18 15:57*	*1*

Lab Sample ID: LCS 280-436732/3-E
Matrix: Water
Analysis Batch: 438443

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 437290

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Endrin			0.00500	0.00514		mg/L		103	66 - 143		
Heptachlor			0.00500	0.00484		mg/L		97	59 - 143		
Heptachlor epoxide			0.00500	0.00481		mg/L		96	37 - 142		
gamma-BHC (Lindane)			0.00500	0.00474		mg/L		95	68 - 142		
Methoxychlor			0.00500	0.00560		mg/L		112	30 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*90*		*28 - 115*
DCB Decachlorobiphenyl	*103*		*34 - 122*

Lab Sample ID: LCS 280-436732/3-F
Matrix: Water
Analysis Batch: 438443

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 437290

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toxaphene			0.200	0.219		mg/L		109	63 - 142		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*89*		*28 - 115*
DCB Decachlorobiphenyl	*115*		*34 - 122*

Lab Sample ID: 280-116538-4 MS
Matrix: Water
Analysis Batch: 438443

Client Sample ID: FWGIDW-181001-WW
Prep Type: TCLP
Prep Batch: 437290

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Endrin	ND		0.00500	0.00505		mg/L		101	66 - 143		
Heptachlor	ND		0.00500	0.00494		mg/L		99	59 - 143		
Heptachlor epoxide	ND		0.00500	0.00481		mg/L		96	37 - 142		
gamma-BHC (Lindane)	ND		0.00500	0.00484		mg/L		97	68 - 142		

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

Lab Sample ID: 280-116538-4 MS — **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 438443 — **Prep Batch: 437290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methoxychlor	ND		0.00500	0.00532		mg/L		106	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*89*		*28 - 115*
DCB Decachlorobiphenyl	*92*		*34 - 122*

Lab Sample ID: 280-116538-4 MS — **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 438443 — **Prep Batch: 437290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	ND		0.200	0.205		mg/L		102	63 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*88*		*28 - 115*
DCB Decachlorobiphenyl	*106*		*34 - 122*

Lab Sample ID: 280-116538-4 MSD — **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 438443 — **Prep Batch: 437290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endrin	ND		0.00500	0.00490		mg/L		98	66 - 143	3	30
Heptachlor	ND		0.00500	0.00489		mg/L		98	59 - 143	1	30
Heptachlor epoxide	ND		0.00500	0.00468		mg/L		94	37 - 142	3	30
gamma-BHC (Lindane)	ND		0.00500	0.00474		mg/L		95	68 - 142	2	30
Methoxychlor	ND		0.00500	0.00535		mg/L		107	30 - 150	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*88*		*28 - 115*
DCB Decachlorobiphenyl	*94*		*34 - 122*

Lab Sample ID: 280-116538-4 MSD — **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 438443 — **Prep Batch: 437290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene	ND		0.200	0.200		mg/L		100	63 - 142	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*82*		*28 - 115*
DCB Decachlorobiphenyl	*100*		*34 - 122*

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

Lab Sample ID: MB 280-437451/1-A
Matrix: Water
Analysis Batch: 439075

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437451

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
PCB-1016	ND		1.0		0.12	ug/L		11/28/18 18:43	1
PCB-1221	ND		1.0		0.21	ug/L		11/28/18 18:43	1
PCB-1232	ND		1.0		0.17	ug/L		11/28/18 18:43	1
PCB-1242	ND		1.0		0.10	ug/L		11/28/18 18:43	1
PCB-1248	ND		1.0		0.092	ug/L		11/28/18 18:43	1
PCB-1254	ND		1.0		0.11	ug/L		11/28/18 18:43	1
PCB-1260	ND		1.0		0.16	ug/L		11/28/18 18:43	1
PCB-1262	ND		1.0		0.085	ug/L		11/28/18 18:43	1
PCB-1268	ND		1.0		0.36	ug/L		11/28/18 18:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*85*		*25 - 120*	*11/13/18 18:28*	*11/28/18 18:43*	*1*
DCB Decachlorobiphenyl	*94*		*30 - 136*	*11/13/18 18:28*	*11/28/18 18:43*	*1*

Lab Sample ID: LCS 280-437451/4-A
Matrix: Water
Analysis Batch: 439075

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437451

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			2.00	2.12		ug/L		106	46 - 129		
PCB-1260			2.00	2.16		ug/L		108	45 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*86*		*25 - 120*
DCB Decachlorobiphenyl	*93*		*30 - 136*

Lab Sample ID: LCSD 280-437451/5-A
Matrix: Water
Analysis Batch: 439075

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 437451

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			2.00	2.10		ug/L		105	46 - 129	1	30
PCB-1260			2.00	2.34		ug/L		117	45 - 134	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*87*		*25 - 120*
DCB Decachlorobiphenyl	*97*		*30 - 136*

Method: 8151A DOD - Herbicides (GC)

Lab Sample ID: LB3 280-436732/1-B
Matrix: Water
Analysis Batch: 437382

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 436773

Analyte	LB3 Result	LB3 Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
2,4-D	ND		0.040		0.0021	mg/L		11/13/18 18:24	1
Silvex (2,4,5-TP)	ND		0.010		0.0017	mg/L		11/13/18 18:24	1

Surrogate	LB3 %Recovery	LB3 Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	76		10 - 131	11/08/18 07:48	11/13/18 18:24	1

Lab Sample ID: LCS 280-436732/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 437382 — **Prep Batch: 436773**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.0500	0.0376	J	mg/L		75	13 - 115
Silvex (2,4,5-TP)	0.0500	0.0403		mg/L		81	10 - 158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	78		10 - 131

Lab Sample ID: 280-116538-4 MS — **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 437382 — **Prep Batch: 436773**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	ND		0.0500	0.0389	J	mg/L		78	13 - 115
Silvex (2,4,5-TP)	ND		0.0500	0.0392		mg/L		78	10 - 158

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	83		10 - 131

Lab Sample ID: 280-116538-4 MSD — **Client Sample ID: FWGIDW-181001-WW**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 437382 — **Prep Batch: 436773**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	ND		0.0500	0.0372	J	mg/L		74	13 - 115	5	30
Silvex (2,4,5-TP)	ND		0.0500	0.0374		mg/L		75	10 - 158	5	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	78		10 - 131

Method: 6010C - Metals (ICP)

Lab Sample ID: LB3 280-436732/1-F — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 437502 — **Prep Batch: 437152**

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Arsenic	ND		0.50	0.022	mg/L		11/13/18 14:46	1
Barium	ND		1.0	0.0040	mg/L		11/13/18 14:46	1
Cadmium	ND		0.10	0.0020	mg/L		11/13/18 14:46	1
Chromium	ND		0.50	0.0030	mg/L		11/13/18 14:46	1
Lead	ND		0.50	0.014	mg/L		11/13/18 14:46	1
Selenium	ND		0.10	0.032	mg/L		11/13/18 14:46	1
Silver	ND		0.50	0.0040	mg/L		11/13/18 14:46	1

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

Lab Sample ID: LCS 280-436732/2-F
Matrix: Water
Analysis Batch: 437502

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 437152

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	3.57		mg/L		89	80 - 120
Barium	12.0	11.0		mg/L		92	80 - 120
Cadmium	1.10	1.01		mg/L		92	80 - 120
Chromium	5.20	4.80		mg/L		92	80 - 120
Lead	5.50	5.12		mg/L		93	80 - 120
Selenium	3.00	2.61		mg/L		87	80 - 120
Silver	1.05	0.940		mg/L		90	80 - 120

Lab Sample ID: LCSD 280-436732/13-B
Matrix: Water
Analysis Batch: 437502

Client Sample ID: Lab Control Sample Dup
Prep Type: TCLP
Prep Batch: 437152

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.00	3.86		mg/L		97	80 - 120	8	20
Barium	12.0	11.9		mg/L		99	80 - 120	8	20
Cadmium	1.10	1.09		mg/L		99	80 - 120	7	20
Chromium	5.20	5.21		mg/L		100	80 - 120	8	20
Lead	5.50	5.53		mg/L		100	80 - 120	8	20
Selenium	3.00	2.82		mg/L		94	80 - 120	8	20
Silver	1.05	1.01		mg/L		96	80 - 120	7	20

Lab Sample ID: 280-116538-4 MS
Matrix: Water
Analysis Batch: 437502

Client Sample ID: FWGIDW-181001-WW
Prep Type: TCLP
Prep Batch: 437152

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		4.00	3.98		mg/L		99	80 - 120
Barium	0.015	J	12.0	12.2		mg/L		102	80 - 120
Cadmium	ND		1.10	1.09		mg/L		99	80 - 120
Chromium	ND		5.20	5.27		mg/L		101	80 - 120
Lead	ND		5.50	5.61		mg/L		102	80 - 120
Selenium	ND		3.00	2.88		mg/L		96	80 - 120
Silver	ND		1.05	1.06		mg/L		101	80 - 120

Lab Sample ID: 280-116538-4 MSD
Matrix: Water
Analysis Batch: 437502

Client Sample ID: FWGIDW-181001-WW
Prep Type: TCLP
Prep Batch: 437152

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		4.00	3.99		mg/L		100	80 - 120	0	20
Barium	0.015	J	12.0	12.1		mg/L		101	80 - 120	1	20
Cadmium	ND		1.10	1.11		mg/L		100	80 - 120	1	20
Chromium	ND		5.20	5.29		mg/L		102	80 - 120	0	20
Lead	ND		5.50	5.63		mg/L		102	80 - 120	0	20
Selenium	ND		3.00	2.90		mg/L		97	80 - 120	1	20
Silver	ND		1.05	1.04		mg/L		99	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB3 280-436732/1-J
Matrix: Water
Analysis Batch: 437814

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437496

Analyte	LB3 Result	LB3 Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.0020		0.000030	mg/L		11/15/18 14:15	1

Lab Sample ID: LCS 280-436732/2-G
Matrix: Water
Analysis Batch: 437814

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 437496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00500	0.00495		mg/L		99	90 - 116		

Lab Sample ID: LCSD 280-436732/13-D
Matrix: Water
Analysis Batch: 437814

Client Sample ID: Lab Control Sample Dup
Prep Type: TCLP
Prep Batch: 437496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00500	0.00482		mg/L		96	90 - 116	3	10

Lab Sample ID: 280-116538-4 MS
Matrix: Water
Analysis Batch: 437814

Client Sample ID: FWGIDW-181001-WW
Prep Type: TCLP
Prep Batch: 437496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00500	0.00497		mg/L		99	90 - 116		

Lab Sample ID: 280-116538-4 MSD
Matrix: Water
Analysis Batch: 437814

Client Sample ID: FWGIDW-181001-WW
Prep Type: TCLP
Prep Batch: 437496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00500	0.00514		mg/L		103	90 - 116	3	10

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: MB 160-401121/1
Matrix: Water
Analysis Batch: 401121

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

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Flashpoint	>60		1.00		1.00	Degrees C		11/15/18 23:43	1

Lab Sample ID: LCS 160-401121/2
Matrix: Water
Analysis Batch: 401121

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			25.0	27.00		Degrees C		108	90 - 110		

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

Lab Sample ID: MB 280-437763/5-A
Matrix: Water
Analysis Batch: 437833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437763

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	ND		0.010		0.0020	mg/L		11/15/18 18:00	1

Lab Sample ID: HLCS 280-437763/1-A
Matrix: Water
Analysis Batch: 437833

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

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

Lab Sample ID: LCS 280-437763/3-A
Matrix: Water
Analysis Batch: 437833

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

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

Lab Sample ID: LCSD 280-437763/4-A
Matrix: Water
Analysis Batch: 437833

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

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

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

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

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

Lab Sample ID: MB 280-438264/5-A
Matrix: Water
Analysis Batch: 438452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438264

Analyte	MB Result	MB Qualifier	RL		MDL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/21/18 10:41	1

Lab Sample ID: HLCS 280-438264/1-A
Matrix: Water
Analysis Batch: 438452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438264

Analyte			Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.350	0.358		mg/L		102	90 - 110		

Lab Sample ID: LCS 280-438264/3-A
Matrix: Water
Analysis Batch: 438452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438264

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.110		mg/L		110	83 - 116		

Lab Sample ID: LCSD 280-438264/4-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 438452 **Prep Batch: 438264**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.105		mg/L		105	83 - 116	5	20

Lab Sample ID: LLCS 280-438264/2-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 438452 **Prep Batch: 438264**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.0979		mg/L		98	44 - 167

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

Lab Sample ID: MB 280-436723/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436735 **Prep Batch: 436723**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Sulfide	ND		4.0	0.79	mg/L		11/07/18 20:06	1

Lab Sample ID: LCS 280-436723/3-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436735 **Prep Batch: 436723**

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

Method: 9040C - pH

Lab Sample ID: LCS 280-438182/4 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 438182

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-436181/6 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.042	mg/L		11/03/18 12:07	1
Nitrite as N	0.0961	J	0.50	0.049	mg/L		11/03/18 12:07	1

Lab Sample ID: LCS 280-436181/4 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

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

Lab Sample ID: LCSD 280-436181/5
Matrix: Water
Analysis Batch: 436181

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

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

Lab Sample ID: MRL 280-436181/3
Matrix: Water
Analysis Batch: 436181

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

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

GC/MS VOA

Leach Batch: 437096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	1311	
280-116538-5	FWGqc-015-TB	TCLP	Water	1311	
LB3 280-437096/1-A	Method Blank	TCLP	Water	1311	
LCS 280-437096/2-A	Lab Control Sample	TCLP	Water	1311	

Analysis Batch: 438589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	8260B	437096
280-116538-5	FWGqc-015-TB	TCLP	Water	8260B	437096
LB3 280-437096/1-A	Method Blank	TCLP	Water	8260B	437096
LCS 280-437096/2-A	Lab Control Sample	TCLP	Water	8260B	437096

GC/MS Semi VOA

Leach Batch: 436732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	1311	
LB3 280-436732/1-G	Method Blank	TCLP	Water	1311	
LCS 280-436732/3-B	Lab Control Sample	TCLP	Water	1311	
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	1311	
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	1311	

Prep Batch: 437243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	3510C	436732
LB3 280-436732/1-G	Method Blank	TCLP	Water	3510C	436732
LCS 280-436732/3-B	Lab Control Sample	TCLP	Water	3510C	436732
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	3510C	436732
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	3510C	436732

Analysis Batch: 437797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	8270D	437243
LB3 280-436732/1-G	Method Blank	TCLP	Water	8270D	437243
LCS 280-436732/3-B	Lab Control Sample	TCLP	Water	8270D	437243
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	8270D	437243
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	8270D	437243

GC Semi VOA

Leach Batch: 436732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	1311	
LB3 280-436732/1-B	Method Blank	TCLP	Water	1311	
LB3 280-436732/1-I	Method Blank	TCLP	Water	1311	
LCS 280-436732/2-B	Lab Control Sample	TCLP	Water	1311	
LCS 280-436732/3-E	Lab Control Sample	TCLP	Water	1311	
LCS 280-436732/3-F	Lab Control Sample	TCLP	Water	1311	
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	1311	
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	1311	

GC Semi VOA (Continued)

Prep Batch: 436773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	8151A	436732
LB3 280-436732/1-B	Method Blank	TCLP	Water	8151A	436732
LCS 280-436732/2-B	Lab Control Sample	TCLP	Water	8151A	436732
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	8151A	436732
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	8151A	436732

Prep Batch: 437290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	3510C	436732
LB3 280-436732/1-I	Method Blank	TCLP	Water	3510C	436732
LCS 280-436732/3-E	Lab Control Sample	TCLP	Water	3510C	436732
LCS 280-436732/3-F	Lab Control Sample	TCLP	Water	3510C	436732
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	3510C	436732
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	3510C	436732
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	3510C	436732
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	3510C	436732

Analysis Batch: 437382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	8151A DOD	436773
LB3 280-436732/1-B	Method Blank	TCLP	Water	8151A DOD	436773
LCS 280-436732/2-B	Lab Control Sample	TCLP	Water	8151A DOD	436773
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	8151A DOD	436773
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	8151A DOD	436773

Prep Batch: 437451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	3510C	
MB 280-437451/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-437451/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-437451/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 438443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	8081B	437290
LB3 280-436732/1-I	Method Blank	TCLP	Water	8081B	437290
LCS 280-436732/3-E	Lab Control Sample	TCLP	Water	8081B	437290
LCS 280-436732/3-F	Lab Control Sample	TCLP	Water	8081B	437290
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	8081B	437290
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	8081B	437290
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	8081B	437290
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	8081B	437290

Analysis Batch: 439075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	8082A	437451
MB 280-437451/1-A	Method Blank	Total/NA	Water	8082A	437451
LCS 280-437451/4-A	Lab Control Sample	Total/NA	Water	8082A	437451
LCSD 280-437451/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	437451

QC Association Summary

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

TestAmerica Job ID: 280-116538-2

Metals

Leach Batch: 436732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	1311	
LB3 280-436732/1-F	Method Blank	TCLP	Water	1311	
LB3 280-436732/1-J	Method Blank	TCLP	Water	1311	
LCS 280-436732/2-F	Lab Control Sample	TCLP	Water	1311	
LCS 280-436732/2-G	Lab Control Sample	TCLP	Water	1311	
LCSD 280-436732/13-B	Lab Control Sample Dup	TCLP	Water	1311	
LCSD 280-436732/13-D	Lab Control Sample Dup	TCLP	Water	1311	
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	1311	
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	1311	

Prep Batch: 437152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	3010A	436732
LB3 280-436732/1-F	Method Blank	TCLP	Water	3010A	436732
LCS 280-436732/2-F	Lab Control Sample	TCLP	Water	3010A	436732
LCSD 280-436732/13-B	Lab Control Sample Dup	TCLP	Water	3010A	436732
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	3010A	436732
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	3010A	436732

Prep Batch: 437496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	7470A	436732
LB3 280-436732/1-J	Method Blank	TCLP	Water	7470A	436732
LCS 280-436732/2-G	Lab Control Sample	TCLP	Water	7470A	436732
LCSD 280-436732/13-D	Lab Control Sample Dup	TCLP	Water	7470A	436732
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	7470A	436732
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	7470A	436732

Analysis Batch: 437502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	6010C	437152
LB3 280-436732/1-F	Method Blank	TCLP	Water	6010C	437152
LCS 280-436732/2-F	Lab Control Sample	TCLP	Water	6010C	437152
LCSD 280-436732/13-B	Lab Control Sample Dup	TCLP	Water	6010C	437152
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	6010C	437152
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	6010C	437152

Analysis Batch: 437814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	TCLP	Water	7470A	437496
LB3 280-436732/1-J	Method Blank	TCLP	Water	7470A	437496
LCS 280-436732/2-G	Lab Control Sample	TCLP	Water	7470A	437496
LCSD 280-436732/13-D	Lab Control Sample Dup	TCLP	Water	7470A	437496
280-116538-4 MS	FWGIDW-181001-WW	TCLP	Water	7470A	437496
280-116538-4 MSD	FWGIDW-181001-WW	TCLP	Water	7470A	437496

General Chemistry

Analysis Batch: 401121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	1010A	
MB 160-401121/1	Method Blank	Total/NA	Water	1010A	
LCS 160-401121/2	Lab Control Sample	Total/NA	Water	1010A	

Analysis Batch: 436181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	9056A	
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	9056A	
MB 280-436181/6	Method Blank	Total/NA	Water	9056A	
LCS 280-436181/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-436181/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-436181/3	Lab Control Sample	Total/NA	Water	9056A	

Prep Batch: 436723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	9030B	
MB 280-436723/1-A	Method Blank	Total/NA	Water	9030B	
LCS 280-436723/3-A	Lab Control Sample	Total/NA	Water	9030B	

Analysis Batch: 436735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	9034	436723
MB 280-436723/1-A	Method Blank	Total/NA	Water	9034	436723
LCS 280-436723/3-A	Lab Control Sample	Total/NA	Water	9034	436723

Prep Batch: 437763

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

Analysis Batch: 437833

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

Analysis Batch: 438182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-4	FWGIDW-181001-WW	Total/NA	Water	9040C	
LCS 280-438182/4	Lab Control Sample	Total/NA	Water	9040C	

Prep Batch: 438264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-7	FWIDW-181002-WW	Total/NA	Water	9012B	

General Chemistry (Continued)

Prep Batch: 438264 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-438264/5-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-438264/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-438264/3-A	Lab Control Sample	Total/NA	Water	9012B	
LCSD 280-438264/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	
LLCS 280-438264/2-A	Lab Control Sample	Total/NA	Water	9012B	

Analysis Batch: 438452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-7	FWIDW-181002-WW	Total/NA	Water	9012B	438264
MB 280-438264/5-A	Method Blank	Total/NA	Water	9012B	438264
HLCS 280-438264/1-A	Lab Control Sample	Total/NA	Water	9012B	438264
LCS 280-438264/3-A	Lab Control Sample	Total/NA	Water	9012B	438264
LCSD 280-438264/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	438264
LLCS 280-438264/2-A	Lab Control Sample	Total/NA	Water	9012B	438264

Client Sample ID: FWGIDW-181001-WW — Lab Sample ID: 280-116538-4

Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	437096	11/09/18 15:44	DFB1	TAL DEN
TCLP	Analysis	8260B		1	2 mL	20 mL	438589	11/23/18 13:45	GPM	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	436732	11/07/18 09:48	DFB1	TAL DEN
TCLP	Prep	3510C			200 mL	1 mL	437243	11/12/18 13:36	KJS	TAL DEN
TCLP	Analysis	8270D		1			437797	11/16/18 01:29	AFH	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	436732	11/07/18 09:48	DFB1	TAL DEN
TCLP	Prep	3510C			100 mL	10 mL	437290	11/12/18 19:56	AJE	TAL DEN
TCLP	Analysis	8081B		1			438443	11/21/18 17:07	TEM	TAL DEN
Total/NA	Prep	3510C			897.7 mL	10 mL	437451	11/13/18 18:28	AJE	TAL DEN
Total/NA	Analysis	8082A		1			439075	11/28/18 20:29	BJP	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	436732	11/07/18 09:48	DFB1	TAL DEN
TCLP	Prep	8151A			100 mL	10 mL	436773	11/08/18 07:48	JZ	TAL DEN
TCLP	Analysis	8151A DOD		1			437382	11/13/18 18:57	AMB1	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	436732	11/07/18 09:48	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	437152	11/13/18 07:00	LLB	TAL DEN
TCLP	Analysis	6010C		1			437502	11/13/18 14:56	CML	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	436732	11/07/18 09:48	DFB1	TAL DEN
TCLP	Prep	7470A			30 mL	50 mL	437496	11/14/18 12:30	THP	TAL DEN
TCLP	Analysis	7470A		1			437814	11/15/18 15:55	THP	TAL DEN
Total/NA	Analysis	1010A		1	70 mL	70 mL	401121	11/16/18 01:31	JCB	TAL SL
Total/NA	Prep	9012B			50 mL	50 mL	437763	11/15/18 11:37	RK	TAL DEN
Total/NA	Analysis	9012B		5	50 mL	50 mL	437833	11/15/18 19:28	RK	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	436723	11/07/18 17:19	EC	TAL DEN
Total/NA	Analysis	9034		1			436735	11/07/18 20:06	EC	TAL DEN
Total/NA	Analysis	9040C		1			438182	11/19/18 13:46	SGB	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	436181	11/03/18 14:16	A1D	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	436181	11/03/18 16:36	A1D	TAL DEN

Client Sample ID: FWGqc-015-TB — Lab Sample ID: 280-116538-5

Date Collected: 11/02/18 15:30 **Matrix: Water**
Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	437096	11/09/18 15:44	DFB1	TAL DEN
TCLP	Analysis	8260B		1	2 mL	20 mL	438589	11/23/18 14:05	GPM	TAL DEN

Client Sample ID: FWIDW-181002-WW — Lab Sample ID: 280-116538-7

Date Collected: 11/14/18 15:55 **Matrix: Water**
Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	438264	11/20/18 10:20	AML	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	438452	11/21/18 11:07	AJA	TAL DEN

Lab Chronicle

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

TestAmerica Job ID: 280-116538-2

Laboratory References:

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

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116538-2
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Laboratory: TestAmerica Denver

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
9040C		Water	Temperature

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116538-2
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
8151A DOD	Herbicides (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL SL
9012B	Cyanide, Total and/or Amenable	EPA	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL DEN
9040C	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
1311	TCLP Extraction	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
8151A	Extraction (Herbicides)	SW846	TAL DEN
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL DEN
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Leidos, Inc.
TestAmerica Job ID: 280-116538-2
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-116538-4	FWGIDW-181001-WW	Water	11/02/18 15:30	11/03/18 09:00
280-116538-5	FWGqc-015-TB	Water	11/02/18 15:30	11/03/18 09:00
280-116538-7	FWIDW-181002-WW	Water	11/14/18 15:55	11/03/18 09:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: VMS_Q Analysis Batch Number: 437259

Lab Sample ID: STD010 280-437259/13 IC Client Sample ID:

Date Analyzed: 11/12/18 14:32 Lab File ID: Q75344.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	4.45	Incomplete Integration	meierg	11/12/18 16:09

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 430035

Lab Sample ID: ICIS 280-430035/3 Client Sample ID:

Date Analyzed: 09/18/18 12:53 Lab File ID: D29296.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.33	Split Peak	kiekeld	09/18/18 13:24

Lab Sample ID: STD004 280-430035/4 IC Client Sample ID:

Date Analyzed: 09/18/18 13:22 Lab File ID: D29297.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Indeno[1,2,3-cd]pyrene	20.56	Wrong peak	kiekeld	09/18/18 13:48

Lab Sample ID: STD010 280-430035/5 IC Client Sample ID:

Date Analyzed: 09/18/18 13:52 Lab File ID: D29298.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.63	Wrong peak	kiekeld	09/18/18 15:11
Indeno[1,2,3-cd]pyrene	20.56	Wrong peak	kiekeld	09/18/18 15:12

Lab Sample ID: STD020 280-430035/6 IC Client Sample ID:

Date Analyzed: 09/18/18 14:21 Lab File ID: D29299.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.65	Wrong peak	kiekeld	09/18/18 15:12

Lab Sample ID: STD050 280-430035/7 IC Client Sample ID:

Date Analyzed: 09/18/18 14:51 Lab File ID: D29300.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.69	Wrong peak	kiekeld	09/18/18 15:15
Caprolactam	6.32	Split Peak	kiekeld	09/18/18 15:15

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 430035

Lab Sample ID: STD120 280-430035/8 IC Client Sample ID:

Date Analyzed: 09/18/18 15:21 Lab File ID: D29301.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.35	Split Peak	kiekeld	09/18/18 15:59

Lab Sample ID: STD160 280-430035/9 IC Client Sample ID:

Date Analyzed: 09/18/18 15:51 Lab File ID: D29302.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.36	Split Peak	kiekeld	09/19/18 09:23
Indeno[1,2,3-cd]pyrene	20.63	Shouldering	kiekeld	09/19/18 09:23

Lab Sample ID: STD200 280-430035/10 IC Client Sample ID:

Date Analyzed: 09/18/18 16:20 Lab File ID: D29303.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.37	Split Peak	kiekeld	09/19/18 09:24
Indeno[1,2,3-cd]pyrene	20.65	Shouldering	kiekeld	09/19/18 09:23

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SMS_D Analysis Batch Number: 437797

Lab Sample ID: CCV 280-437797/3 Client Sample ID:

Date Analyzed: 11/15/18 15:55 Lab File ID: D30212.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aniline	4.35	Peak assignment corrected	hoeflera	11/15/18 16:19
Nitrobenzene-d5 (Surr)	5.19	Peak assignment corrected	hoeflera	11/15/18 16:19
Dibenz(a,h)anthracene	20.50	Peak assignment corrected	hoeflera	11/15/18 16:20

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

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

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

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

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

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

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

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

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

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

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

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

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

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

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

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

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

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

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

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

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

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

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

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

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

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

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

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD4 280-433303/23 IC Client Sample ID:

Date Analyzed: 10/13/18 18:12 Lab File ID: 018F2601.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlordane (technical) Peak 1	5.12	Split Peak	mooret	10/14/18 21:24
Technical Chlordane Peak 1	5.12	Split Peak	mooret	10/14/18 21:24
Chlordane (technical) Peak 2	5.59	Split Peak	mooret	10/14/18 21:24
Technical Chlordane Peak 2	5.59	Split Peak	mooret	10/14/18 21:24
Chlordane (technical) Peak 3	6.21	Split Peak	mooret	10/14/18 21:24
Technical Chlordane Peak 3	6.21	Split Peak	mooret	10/14/18 21:24
Chlordane (technical) Peak 4	6.35	Split Peak	mooret	10/14/18 21:24
Technical Chlordane Peak 4	6.35	Split Peak	mooret	10/14/18 21:24
Chlordane (technical) Peak 5	7.16	Split Peak	mooret	10/14/18 21:24
Technical Chlordane Peak 5	7.16	Split Peak	mooret	10/14/18 21:24

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

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

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

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

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

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

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

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

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

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

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 438443

Lab Sample ID: CCV 280-438443/11 Client Sample ID:

Date Analyzed: 11/21/18 14:47 Lab File ID: 11210011.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.21	Baseline Smoothing	mooret	11/25/18 21:03
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 21:03
Toxaphene Peak 3	7.49	Baseline Smoothing	mooret	11/25/18 21:03
Toxaphene Peak 4	7.85	Baseline Smoothing	mooret	11/25/18 21:03
Toxaphene Peak 5	8.16	Baseline Smoothing	mooret	11/25/18 21:03

Lab Sample ID: CCV 280-438443/12 Client Sample ID:

Date Analyzed: 11/21/18 15:04 Lab File ID: 11210012.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlordane (technical) Peak 4	6.31	Split Peak	mooret	11/25/18 21:04
Technical Chlordane Peak 4	6.31	Split Peak	mooret	11/25/18 21:04

Lab Sample ID: LCS 280-436732/3-F Client Sample ID:

Date Analyzed: 11/21/18 16:32 Lab File ID: 11210017.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.20	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 3	7.48	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 4	7.85	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 5	8.17	Baseline Smoothing	mooret	11/25/18 21:05
DCB Decachlorobiphenyl	9.41	Baseline Smoothing	mooret	11/25/18 21:05

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 438443

Lab Sample ID: LCS 280-436732/3-F Client Sample ID:

Date Analyzed: 11/21/18 16:32 Lab File ID: 11210017.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.73	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 2	7.08	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 3	7.22	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 4	7.72	Baseline Smoothing	mooret	11/25/18 21:05
Toxaphene Peak 5	8.03	Baseline Smoothing	mooret	11/25/18 21:05
DCB Decachlorobiphenyl	9.60	Baseline Smoothing	mooret	11/25/18 21:05

Lab Sample ID: 280-116538-4 MS Client Sample ID: FWGIDW-181001-WW MS

Date Analyzed: 11/21/18 18:00 Lab File ID: 11210022.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.20	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 3	7.49	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 4	7.85	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 5	8.17	Baseline Smoothing	mooret	11/25/18 21:07
DCB Decachlorobiphenyl	9.41	Baseline Smoothing	mooret	11/25/18 21:07

Lab Sample ID: 280-116538-4 MSD Client Sample ID: FWGIDW-181001-WW MSD

Date Analyzed: 11/21/18 18:18 Lab File ID: 11210023.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.20	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 3	7.48	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 4	7.85	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 5	8.17	Baseline Smoothing	mooret	11/25/18 21:07
DCB Decachlorobiphenyl	9.41	Baseline Smoothing	mooret	11/25/18 21:07

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 438443

Lab Sample ID: 280-116538-4 MSD Client Sample ID: FWGIDW-181001-WW MSD

Date Analyzed: 11/21/18 18:18 Lab File ID: 11210023.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.73	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 2	7.08	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 3	7.22	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 4	7.72	Baseline Smoothing	mooret	11/25/18 21:07
Toxaphene Peak 5	8.03	Baseline Smoothing	mooret	11/25/18 21:07
DCB Decachlorobiphenyl	9.60	Baseline Smoothing	mooret	11/25/18 21:07

Lab Sample ID: CCV 280-438443/35 Client Sample ID:

Date Analyzed: 11/21/18 20:20 Lab File ID: 11210035.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.21	Baseline Smoothing	mooret	11/25/18 21:12
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 21:12
Toxaphene Peak 3	7.49	Baseline Smoothing	mooret	11/25/18 21:12
Toxaphene Peak 4	7.85	Baseline Smoothing	mooret	11/25/18 21:12
Toxaphene Peak 5	8.16	Baseline Smoothing	mooret	11/25/18 21:12

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

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

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

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

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

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

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

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

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

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

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

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

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

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

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

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

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

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

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

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

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

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

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

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

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

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

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

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

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

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

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

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: MB 280-437451/1-A Client Sample ID:

Date Analyzed: 11/28/18 18:43 Lab File ID: 11281809.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1262		Unspecified		
PCB-1268		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54

8082A

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: MB 280-437451/1-A Client Sample ID:

Date Analyzed: 11/28/18 18:43 Lab File ID: 11281809.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1262 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1262 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1262 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1262 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1262 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1268 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1268 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1268 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1268 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:54
PCB-1268 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:54

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: MB 280-437451/1-A Client Sample ID:

Date Analyzed: 11/28/18 18:43 Lab File ID: 11281809.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1262		Unspecified		
PCB-1268		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: MB 280-437451/1-A Client Sample ID:

Date Analyzed: 11/28/18 18:43 Lab File ID: 11281809.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		
PCB-1262 Peak 1		Unspecified		
PCB-1262 Peak 2		Unspecified		
PCB-1262 Peak 3		Unspecified		
PCB-1262 Peak 4		Unspecified		
PCB-1262 Peak 5		Unspecified		
PCB-1268 Peak 1		Unspecified		
PCB-1268 Peak 2		Unspecified		
PCB-1268 Peak 3		Unspecified		
PCB-1268 Peak 4		Unspecified		
PCB-1268 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: 280-116538-4 Client Sample ID: FWGIDW-181001-WW

Date Analyzed: 11/28/18 20:29 Lab File ID: 11281814.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1262		Unspecified		
PCB-1268		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: 280-116538-4 Client Sample ID: FWGIDW-181001-WW

Date Analyzed: 11/28/18 20:29 Lab File ID: 11281814.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1262 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1262 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1262 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1262 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1262 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1268 Peak 1		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1268 Peak 2		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1268 Peak 3		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1268 Peak 4		Invalid Compound ID	patadiab	11/30/18 10:57
PCB-1268 Peak 5		Invalid Compound ID	patadiab	11/30/18 10:57

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: 280-116538-4 Client Sample ID: FWGIDW-181001-WW

Date Analyzed: 11/28/18 20:29 Lab File ID: 11281814.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1262		Unspecified		
PCB-1268		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 439075

Lab Sample ID: 280-116538-4 Client Sample ID: FWGIDW-181001-WW

Date Analyzed: 11/28/18 20:29 Lab File ID: 11281814.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		
PCB-1262 Peak 1		Unspecified		
PCB-1262 Peak 2		Unspecified		
PCB-1262 Peak 3		Unspecified		
PCB-1262 Peak 4		Unspecified		
PCB-1262 Peak 5		Unspecified		
PCB-1268 Peak 1		Unspecified		
PCB-1268 Peak 2		Unspecified		
PCB-1268 Peak 3		Unspecified		
PCB-1268 Peak 4		Unspecified		
PCB-1268 Peak 5		Unspecified		

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8081 LCS_00451	11/15/18	11/08/18	P&T Methanol, Lot 7MethanolP&T_00217	50 mL	8081HCBPrim_00002	0.5 mL	Hexachlorobenzene	0.5 ug/mL
					8081LCSPrim_00044	0.5 mL	4,4'-DDD	0.5 ug/mL
							4,4'-DDE	0.5 ug/mL
							4,4'-DDT	0.5 ug/mL
							Aldrin	0.5 ug/mL
							alpha-BHC	0.5 ug/mL
							beta-BHC	0.5 ug/mL
							cis-Chlordane	0.5 ug/mL
							delta-BHC	0.5 ug/mL
							Dieldrin	0.5 ug/mL
							Endosulfan I	0.5 ug/mL
							Endosulfan II	0.5 ug/mL
							Endosulfan sulfate	0.5 ug/mL
							Endrin	0.5 ug/mL
							Endrin aldehyde	0.5 ug/mL
							Endrin ketone	0.5 ug/mL
							gamma-BHC (Lindane)	0.5 ug/mL
							Heptachlor	0.5 ug/mL
							Heptachlor epoxide	0.5 ug/mL
							Methoxychlor	0.5 ug/mL
							trans-Chlordane	0.5 ug/mL
.8081HCBPrim_00002	05/08/19	11/08/18	Hexane, Lot Hexane_Cycl_00053	10 mL	8081HCBStkSS_00038	0.5 mL	Hexachlorobenzene	50 ug/mL
..8081HCBStkSS_00038	11/08/19	Ultra Scientific, Lot CR-5129			(Purchased Reagent)		Hexachlorobenzene	1000 ug/mL
.8081LCSPrim_00044	04/30/19	10/30/18	Hexane, Lot Hexane_Cycl_00053	10 mL	8081ABResPS_00030	0.25 mL	4,4'-DDD	50 ug/mL
							4,4'-DDE	50 ug/mL
							4,4'-DDT	50 ug/mL
							Aldrin	50 ug/mL
							alpha-BHC	50 ug/mL
							beta-BHC	50 ug/mL
							cis-Chlordane	50 ug/mL
							delta-BHC	50 ug/mL
							Dieldrin	50 ug/mL
							Endosulfan I	50 ug/mL
							Endosulfan II	50 ug/mL
							Endosulfan sulfate	50 ug/mL
							Endrin	50 ug/mL
							Endrin aldehyde	50 ug/mL
							Endrin ketone	50 ug/mL
							gamma-BHC (Lindane)	50 ug/mL
							Heptachlor	50 ug/mL
							Heptachlor epoxide	50 ug/mL
							Methoxychlor	50 ug/mL
							trans-Chlordane	50 ug/mL
..8081ABResPS_00030	10/30/19	Restek, Lot A0133751			(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
8081/82 Surr_00105	03/25/19	09/25/18	ACETONE, Lot Acetone_00232	1000 mL	AR_SURR_RES_00084	1 mL	DCB Decachlorobiphenyl	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
.AR_SURR_RES_00084	11/30/23		RESTEK, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081_EvalBPEM_00013	02/27/19	08/27/18	Hexane, Lot 173156	100 mL	8081EvalBStk2_00020	20 uL	4,4'-DDT	0.04 ug/mL
							Endrin	0.04 ug/mL
.8081EvalBStk2_00020	02/27/19		AccuStandard, Inc, Lot 217101288		(Purchased Reagent)		4,4'-DDT	200 ug/mL
							Endrin	200 ug/mL
8081_IS_00008	12/02/18	06/02/18	Hexane, Lot 189035	500 mL	BNB stock_00014	1 mL	1-Bromo-2-nitrobenzene	2 ug/mL
.BNB stock_00014	08/31/20		Restek, Lot A0127264		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
8081ABICVL3_00035	02/28/19	10/13/18	Hexane, Lot 190112	100 mL	8081ABICVStk_00034	2.5 mL	Endrin	25 ng/mL
							gamma-BHC (Lindane)	25 ng/mL
							Heptachlor	25 ng/mL
							Heptachlor epoxide	25 ng/mL
							Methoxychlor	25 ng/mL
							DCB Decachlorobiphenyl	25 ng/mL
							Tetrachloro-m-xylene	25 ng/mL
.8081ABICVStk_00034	02/28/19	10/13/18	Hexane, Lot 190112	50 mL	8081ABResSS_00012	0.025 mL	Endrin	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					AR_SURR_RES_00093	0.25 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResSS_00012	02/28/19		Restek, Lot A0108854		(Purchased Reagent)		Endrin	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methoxychlor	2000 ug/mL
..AR_SURR_RES_00093	04/13/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081ChlorL1_00023	11/15/18	05/15/18	Hexane, Lot 189045	100 mL	8081ChlrWSPS_00014	0.05 mL	Chlordane (technical) Peak 1	50 ng/mL
							Chlordane (technical) Peak 2	50 ng/mL
							Chlordane (technical) Peak 3	50 ng/mL
							Chlordane (technical) Peak 4	50 ng/mL
							Chlordane (technical) Peak 5	50 ng/mL
							Technical Chlordane Peak 1	50 ng/mL
							Technical Chlordane Peak 2	50 ng/mL
							Technical Chlordane Peak 3	50 ng/mL
							Technical Chlordane Peak 4	50 ng/mL
							Technical Chlordane Peak 5	50 ng/mL
.8081ChlrWSPS_00014	11/15/18	05/15/18	hexane, Lot 189045	10 mL	8081ChlrStkPS_00023	0.2 mL	Chlordane (technical) Peak 1	100 ug/mL
							Chlordane (technical) Peak 2	100 ug/mL
							Chlordane (technical) Peak 3	100 ug/mL
							Chlordane (technical) Peak 4	100 ug/mL
							Chlordane (technical) Peak 5	100 ug/mL
							Technical Chlordane Peak 1	100 ug/mL
							Technical Chlordane Peak 2	100 ug/mL
							Technical Chlordane Peak 3	100 ug/mL
							Technical Chlordane Peak 4	100 ug/mL
							Technical Chlordane Peak 5	100 ug/mL
..8081ChlrStkPS_00023	04/30/20	Restek, Lot A0118733			(Purchased Reagent)		Chlordane (technical) Peak 1	5000 ug/mL
							Chlordane (technical) Peak 2	5000 ug/mL
							Chlordane (technical) Peak 3	5000 ug/mL
							Chlordane (technical) Peak 4	5000 ug/mL
							Chlordane (technical) Peak 5	5000 ug/mL
							Technical Chlordane Peak 1	5000 ug/mL
							Technical Chlordane Peak 2	5000 ug/mL
							Technical Chlordane Peak 3	5000 ug/mL
							Technical Chlordane Peak 4	5000 ug/mL
							Technical Chlordane Peak 5	5000 ug/mL
8081ChlorL2_00024	11/15/18	05/15/18	Hexane, Lot 189045	100 mL	8081ChlrWSPS_00014	0.2 mL	Chlordane (technical) Peak 1	200 ng/mL
							Chlordane (technical) Peak 2	200 ng/mL
							Chlordane (technical) Peak 3	200 ng/mL
							Chlordane (technical) Peak 4	200 ng/mL
							Chlordane (technical) Peak 5	200 ng/mL
							Technical Chlordane Peak 1	200 ng/mL
							Technical Chlordane Peak 2	200 ng/mL
							Technical Chlordane Peak 3	200 ng/mL
							Technical Chlordane Peak 4	200 ng/mL
							Technical Chlordane Peak 5	200 ng/mL
.8081ChlrWSPS_00014	11/15/18	05/15/18	hexane, Lot 189045	10 mL	8081ChlrStkPS_00023	0.2 mL	Chlordane (technical) Peak 1	100 ug/mL
							Chlordane (technical) Peak 2	100 ug/mL
							Chlordane (technical) Peak 3	100 ug/mL
							Chlordane (technical) Peak 4	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlordane (technical) Peak 5	100 ug/mL
							Technical Chlordane Peak 1	100 ug/mL
							Technical Chlordane Peak 2	100 ug/mL
							Technical Chlordane Peak 3	100 ug/mL
							Technical Chlordane Peak 4	100 ug/mL
							Technical Chlordane Peak 5	100 ug/mL
..8081ChlrStkPS_00023	04/30/20		Restek, Lot A0118733		(Purchased Reagent)		Chlordane (technical) Peak 1	5000 ug/mL
							Chlordane (technical) Peak 2	5000 ug/mL
							Chlordane (technical) Peak 3	5000 ug/mL
							Chlordane (technical) Peak 4	5000 ug/mL
							Chlordane (technical) Peak 5	5000 ug/mL
							Technical Chlordane Peak 1	5000 ug/mL
							Technical Chlordane Peak 2	5000 ug/mL
							Technical Chlordane Peak 3	5000 ug/mL
							Technical Chlordane Peak 4	5000 ug/mL
							Technical Chlordane Peak 5	5000 ug/mL
8081ChlorL3_00022	11/15/18	05/15/18	Hexane, Lot 189045	100 mL	8081ChlrWSPS_00014	0.5 mL	Chlordane (technical) Peak 1	500 ng/mL
							Chlordane (technical) Peak 2	500 ng/mL
							Chlordane (technical) Peak 3	500 ng/mL
							Chlordane (technical) Peak 4	500 ng/mL
							Chlordane (technical) Peak 5	500 ng/mL
							Technical Chlordane Peak 1	500 ng/mL
							Technical Chlordane Peak 2	500 ng/mL
							Technical Chlordane Peak 3	500 ng/mL
							Technical Chlordane Peak 4	500 ng/mL
							Technical Chlordane Peak 5	500 ng/mL
.8081ChlrWSPS_00014	11/15/18	05/15/18	hexane, Lot 189045	10 mL	8081ChlrStkPS_00023	0.2 mL	Chlordane (technical) Peak 1	100 ug/mL
							Chlordane (technical) Peak 2	100 ug/mL
							Chlordane (technical) Peak 3	100 ug/mL
							Chlordane (technical) Peak 4	100 ug/mL
							Chlordane (technical) Peak 5	100 ug/mL
							Technical Chlordane Peak 1	100 ug/mL
							Technical Chlordane Peak 2	100 ug/mL
							Technical Chlordane Peak 3	100 ug/mL
							Technical Chlordane Peak 4	100 ug/mL
							Technical Chlordane Peak 5	100 ug/mL
..8081ChlrStkPS_00023	04/30/20		Restek, Lot A0118733		(Purchased Reagent)		Chlordane (technical) Peak 1	5000 ug/mL
							Chlordane (technical) Peak 2	5000 ug/mL
							Chlordane (technical) Peak 3	5000 ug/mL
							Chlordane (technical) Peak 4	5000 ug/mL
							Chlordane (technical) Peak 5	5000 ug/mL
							Technical Chlordane Peak 1	5000 ug/mL
							Technical Chlordane Peak 2	5000 ug/mL
							Technical Chlordane Peak 3	5000 ug/mL
							Technical Chlordane Peak 4	5000 ug/mL
							Technical Chlordane Peak 5	5000 ug/mL
8081ChlorL4_00022	11/15/18	05/15/18	Hexane, Lot 189045	250 mL	8081ChlrWSPS_00014	2.5 mL	Chlordane (technical) Peak 1	1000 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlordane (technical) Peak 2	1000 ng/mL
							Chlordane (technical) Peak 3	1000 ng/mL
							Chlordane (technical) Peak 4	1000 ng/mL
							Chlordane (technical) Peak 5	1000 ng/mL
							Technical Chlordane Peak 1	1000 ng/mL
							Technical Chlordane Peak 2	1000 ng/mL
							Technical Chlordane Peak 3	1000 ng/mL
							Technical Chlordane Peak 4	1000 ng/mL
							Technical Chlordane Peak 5	1000 ng/mL
.8081ChlrWSPS_00014	11/15/18	05/15/18	hexane, Lot 189045	10 mL	8081ChlrStkPS_00023	0.2 mL	Chlordane (technical) Peak 1	100 ug/mL
							Chlordane (technical) Peak 2	100 ug/mL
							Chlordane (technical) Peak 3	100 ug/mL
							Chlordane (technical) Peak 4	100 ug/mL
							Chlordane (technical) Peak 5	100 ug/mL
							Technical Chlordane Peak 1	100 ug/mL
							Technical Chlordane Peak 2	100 ug/mL
							Technical Chlordane Peak 3	100 ug/mL
							Technical Chlordane Peak 4	100 ug/mL
							Technical Chlordane Peak 5	100 ug/mL
..8081ChlrStkPS_00023	04/30/20		Restek, Lot A0118733		(Purchased Reagent)		Chlordane (technical) Peak 1	5000 ug/mL
							Chlordane (technical) Peak 2	5000 ug/mL
							Chlordane (technical) Peak 3	5000 ug/mL
							Chlordane (technical) Peak 4	5000 ug/mL
							Chlordane (technical) Peak 5	5000 ug/mL
							Technical Chlordane Peak 1	5000 ug/mL
							Technical Chlordane Peak 2	5000 ug/mL
							Technical Chlordane Peak 3	5000 ug/mL
							Technical Chlordane Peak 4	5000 ug/mL
							Technical Chlordane Peak 5	5000 ug/mL
8081ChlorL4_00023	05/15/19	11/15/18	Hexane, Lot 192742	250 mL	8081ChlrWSPS_00015	2.5 mL	Chlordane (technical)	1000 ng/mL
.8081ChlrWSPS_00015	05/15/19	11/15/18	hexane, Lot 192742	10 mL	8081ChlrStkPS_00025	0.2 mL	Chlordane (technical)	100 ug/mL
..8081ChlrStkPS_00025	05/15/19		Restek, Lot A0128252		(Purchased Reagent)		Chlordane (technical)	5000 ug/mL
8081ChlorL5_00023	11/15/18	05/15/18	Hexane, Lot 189045	100 mL	8081ChlrWSPS_00014	2 mL	Chlordane (technical) Peak 1	2000 ng/mL
							Chlordane (technical) Peak 2	2000 ng/mL
							Chlordane (technical) Peak 3	2000 ng/mL
							Chlordane (technical) Peak 4	2000 ng/mL
							Chlordane (technical) Peak 5	2000 ng/mL
							Technical Chlordane Peak 1	2000 ng/mL
							Technical Chlordane Peak 2	2000 ng/mL
							Technical Chlordane Peak 3	2000 ng/mL
							Technical Chlordane Peak 4	2000 ng/mL
							Technical Chlordane Peak 5	2000 ng/mL
.8081ChlrWSPS_00014	11/15/18	05/15/18	hexane, Lot 189045	10 mL	8081ChlrStkPS_00023	0.2 mL	Chlordane (technical) Peak 1	100 ug/mL
							Chlordane (technical) Peak 2	100 ug/mL
							Chlordane (technical) Peak 3	100 ug/mL
							Chlordane (technical) Peak 4	100 ug/mL
							Chlordane (technical) Peak 5	100 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Technical Chlordane Peak 1	100 ug/mL
							Technical Chlordane Peak 2	100 ug/mL
							Technical Chlordane Peak 3	100 ug/mL
							Technical Chlordane Peak 4	100 ug/mL
							Technical Chlordane Peak 5	100 ug/mL
..8081ChlrStkPS_00023	04/30/20		Restek, Lot A0118733		(Purchased Reagent)		Chlordane (technical) Peak 1	5000 ug/mL
							Chlordane (technical) Peak 2	5000 ug/mL
							Chlordane (technical) Peak 3	5000 ug/mL
							Chlordane (technical) Peak 4	5000 ug/mL
							Chlordane (technical) Peak 5	5000 ug/mL
							Technical Chlordane Peak 1	5000 ug/mL
							Technical Chlordane Peak 2	5000 ug/mL
							Technical Chlordane Peak 3	5000 ug/mL
							Technical Chlordane Peak 4	5000 ug/mL
							Technical Chlordane Peak 5	5000 ug/mL
8081ChlSSL3_00023	03/19/19	09/19/18	Hexane, Lot 190112	100 mL	8081ChlrStkSS_00026	0.01 mL	Chlordane (technical)	500 ng/mL
.8081ChlrStkSS_00026	03/19/19		Restek, Lot A0128498		(Purchased Reagent)		Chlordane (technical)	5000 ug/mL
8081IcalL1_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	0.4 mL	4,4'-DDD	4 ng/mL
							4,4'-DDE	4 ng/mL
							4,4'-DDT	4 ng/mL
							Aldrin	4 ng/mL
							alpha-BHC	4 ng/mL
							beta-BHC	4 ng/mL
							cis-Chlordane	4 ng/mL
							delta-BHC	4 ng/mL
							Dieldrin	4 ng/mL
							Endosulfan I	4 ng/mL
							Endosulfan II	4 ng/mL
							Endosulfan sulfate	4 ng/mL
							Endrin	4 ng/mL
							Endrin aldehyde	4 ng/mL
							Endrin ketone	4 ng/mL
							gamma-BHC (Lindane)	4 ng/mL
							Heptachlor	4 ng/mL
							Heptachlor epoxide	4 ng/mL
							Methoxychlor	4 ng/mL
							trans-Chlordane	4 ng/mL
							Hexachlorobenzene	4 ng/mL
							DCB Decachlorobiphenyl	4 ng/mL
							Tetrachloro-m-xylene	4 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							beta-BHC	1000 ng/mL
							cis-Chlordane	1000 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
							trans-Chlordane	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL2_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	1 mL	4,4'-DDD	10 ng/mL
							4,4'-DDE	10 ng/mL
							4,4'-DDT	10 ng/mL
							Aldrin	10 ng/mL
							alpha-BHC	10 ng/mL
							beta-BHC	10 ng/mL
							cis-Chlordane	10 ng/mL
							delta-BHC	10 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dieldrin	10 ng/mL
							Endosulfan I	10 ng/mL
							Endosulfan II	10 ng/mL
							Endosulfan sulfate	10 ng/mL
							Endrin	10 ng/mL
							Endrin aldehyde	10 ng/mL
							Endrin ketone	10 ng/mL
							gamma-BHC (Lindane)	10 ng/mL
							Heptachlor	10 ng/mL
							Heptachlor epoxide	10 ng/mL
							Methoxychlor	10 ng/mL
							trans-Chlordane	10 ng/mL
							Hexachlorobenzene	10 ng/mL
							DCB Decachlorobiphenyl	10 ng/mL
							Tetrachloro-m-xylene	10 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							beta-BHC	1000 ng/mL
							cis-Chlordane	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
							trans-Chlordane	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL3_00028	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	2.5 mL	4,4'-DDD	25 ng/mL
							4,4'-DDE	25 ng/mL
							4,4'-DDT	25 ng/mL
							Aldrin	25 ng/mL
							alpha-BHC	25 ng/mL
							beta-BHC	25 ng/mL
							cis-Chlordane	25 ng/mL
							delta-BHC	25 ng/mL
							Dieldrin	25 ng/mL
							Endosulfan I	25 ng/mL
							Endosulfan II	25 ng/mL
							Endosulfan sulfate	25 ng/mL
							Endrin	25 ng/mL
							Endrin aldehyde	25 ng/mL
							Endrin ketone	25 ng/mL
							gamma-BHC (Lindane)	25 ng/mL
							Heptachlor	25 ng/mL
							Heptachlor epoxide	25 ng/mL
							Methoxychlor	25 ng/mL
							trans-Chlordane	25 ng/mL
							Hexachlorobenzene	25 ng/mL
							DCB Decachlorobiphenyl	25 ng/mL
							Tetrachloro-m-xylene	25 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							beta-BHC	1000 ng/mL
							cis-Chlordane	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
							trans-Chlordane	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL4_00031	12/20/18	06/20/18	Hexane, Lot 192742	500 mL	8081ABCalStk_00033	25 mL	4,4'-DDD	50 ng/mL
							4,4'-DDE	50 ng/mL
							4,4'-DDT	50 ng/mL
							Aldrin	50 ng/mL
							alpha-BHC	50 ng/mL
							beta-BHC	50 ng/mL
							cis-Chlordane	50 ng/mL
							delta-BHC	50 ng/mL
							Dieldrin	50 ng/mL
							Endosulfan I	50 ng/mL
							Endosulfan II	50 ng/mL
							Endosulfan sulfate	50 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endrin	50 ng/mL
							Endrin aldehyde	50 ng/mL
							Endrin ketone	50 ng/mL
							gamma-BHC (Lindane)	50 ng/mL
							Heptachlor	50 ng/mL
							Heptachlor epoxide	50 ng/mL
							Methoxychlor	50 ng/mL
							trans-Chlordane	50 ng/mL
							Hexachlorobenzene	50 ng/mL
							DCB Decachlorobiphenyl	50 ng/mL
							Tetrachloro-m-xylene	50 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							beta-BHC	1000 ng/mL
							cis-Chlordane	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
							trans-Chlordane	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL5_00026	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	7.5 mL	4,4'-DDD	75 ng/mL
							4,4'-DDE	75 ng/mL
							4,4'-DDT	75 ng/mL
							Aldrin	75 ng/mL
							alpha-BHC	75 ng/mL
							beta-BHC	75 ng/mL
							cis-Chlordane	75 ng/mL
							delta-BHC	75 ng/mL
							Dieldrin	75 ng/mL
							Endosulfan I	75 ng/mL
							Endosulfan II	75 ng/mL
							Endosulfan sulfate	75 ng/mL
							Endrin	75 ng/mL
							Endrin aldehyde	75 ng/mL
							Endrin ketone	75 ng/mL
							gamma-BHC (Lindane)	75 ng/mL
							Heptachlor	75 ng/mL
							Heptachlor epoxide	75 ng/mL
							Methoxychlor	75 ng/mL
							trans-Chlordane	75 ng/mL
							Hexachlorobenzene	75 ng/mL
							DCB Decachlorobiphenyl	75 ng/mL
							Tetrachloro-m-xylene	75 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							beta-BHC	1000 ng/mL
							cis-Chlordane	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
							trans-Chlordane	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL6_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	10 mL	4,4'-DDD	100 ng/mL
							4,4'-DDE	100 ng/mL
							4,4'-DDT	100 ng/mL
							Aldrin	100 ng/mL
							alpha-BHC	100 ng/mL
							beta-BHC	100 ng/mL
							cis-Chlordane	100 ng/mL
							delta-BHC	100 ng/mL
							Dieldrin	100 ng/mL
							Endosulfan I	100 ng/mL
							Endosulfan II	100 ng/mL
							Endosulfan sulfate	100 ng/mL
							Endrin	100 ng/mL
							Endrin aldehyde	100 ng/mL
							Endrin ketone	100 ng/mL
							gamma-BHC (Lindane)	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Heptachlor	100 ng/mL
							Heptachlor epoxide	100 ng/mL
							Methoxychlor	100 ng/mL
							trans-Chlordane	100 ng/mL
							Hexachlorobenzene	100 ng/mL
							DCB Decachlorobiphenyl	100 ng/mL
							Tetrachloro-m-xylene	100 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							beta-BHC	1000 ng/mL
							cis-Chlordane	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
							trans-Chlordane	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081Toxaphene_00032	05/09/19	10/09/18	ACETONE, Lot Acetone_00235	100 mL	8081 ToxStock_00020	1 mL	Toxaphene	20 ug/mL
					8081 ToxStock_00021	1 mL	Toxaphene	20 ug/mL
.8081 ToxStock_00020	01/30/25	AccuStandard, Lot 215011420			(Purchased Reagent)		Toxaphene	1000 ug/mL
.8081 ToxStock_00021	01/30/25	AccuStandard, Lot 215011420			(Purchased Reagent)		Toxaphene	1000 ug/mL
8081TOXCCVL4_00014	11/12/18	05/12/18	Hexane, Lot 189045	250 mL	8081ToxPS_00034	0.1 mL	Toxaphene Peak 1	2000 ng/mL
							Toxaphene Peak 2	2000 ng/mL
							Toxaphene Peak 3	2000 ng/mL
							Toxaphene Peak 4	2000 ng/mL
							Toxaphene Peak 5	2000 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081TOXCCVL4_00015	05/12/19	11/12/18	Hexane, Lot 189045	250 mL	8081ToxPS_00039	0.1 mL	Toxaphene	2000 ng/mL
.8081ToxPS_00039	05/12/19	Restek, Lot A0128388			(Purchased Reagent)		Toxaphene	5000 ug/mL
8081ToxICVL3_00013	03/19/19	09/19/18	Hexane, Lot 190112	100 mL	8081ToxSS_00020	0.1 mL	Toxaphene	1000 ng/mL
.8081ToxSS_00020	03/19/19	Accustandard, Inc., Lot 217071319			(Purchased Reagent)		Toxaphene	1000 ug/mL
8081ToxL1_00020	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.004 mL	Toxaphene Peak 1	200 ng/mL
							Toxaphene Peak 2	200 ng/mL
							Toxaphene Peak 3	200 ng/mL
							Toxaphene Peak 4	200 ng/mL
							Toxaphene Peak 5	200 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL2_00021	11/12/18	05/12/18	Hexane, Lot 175756	100 mL	8081ToxPS_00034	0.01 mL	Toxaphene Peak 1	500 ng/mL
							Toxaphene Peak 2	500 ng/mL
							Toxaphene Peak 3	500 ng/mL
							Toxaphene Peak 4	500 ng/mL
							Toxaphene Peak 5	500 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL3_00020	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.02 mL	Toxaphene Peak 1	1000 ng/mL
							Toxaphene Peak 2	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toxaphene Peak 3	1000 ng/mL
							Toxaphene Peak 4	1000 ng/mL
							Toxaphene Peak 5	1000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL5_00021	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.1 mL	Toxaphene Peak 1	5000 ng/mL
							Toxaphene Peak 2	5000 ng/mL
							Toxaphene Peak 3	5000 ng/mL
							Toxaphene Peak 4	5000 ng/mL
							Toxaphene Peak 5	5000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL6_00023	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.2 mL	Toxaphene Peak 1	10000 ng/mL
							Toxaphene Peak 2	10000 ng/mL
							Toxaphene Peak 3	10000 ng/mL
							Toxaphene Peak 4	10000 ng/mL
							Toxaphene Peak 5	10000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8082 LCS_00049	12/11/18	07/11/18	ACETONE, Lot Acetone_00221	500 mL	8082LCSSTOCK_00034	1 mL	PCB-1016	2 ug/mL
							PCB-1260	2 ug/mL
.8082LCSSTOCK_00034	07/11/19		RESTEK, Lot A0116282		(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
8151 LCS_00100	12/06/18	10/26/18	P&T Methanol, Lot MethanolP&T_00216	100 mL	8151_LCS_Stck_00037	1 mL	2,4,5-T	10 ug/mL
							2,4-D	10 ug/mL
							2,4-DB	10 ug/mL
							Dalapon	10 ug/mL
							Dicamba	10 ug/mL
							Dichlorprop	10 ug/mL
							Dinoseb	10 ug/mL
							MCPA	1000 ug/mL
							MCPP	1000 ug/mL
							Picloram	10 ug/mL
							Silvex (2,4,5-TP)	10 ug/mL
					8151_PCP_Stk_00002	1 mL	Pentachlorophenol	10 ug/mL
					MCPA&MCPP_00078	1 mL	MCPA	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							MCPP	1000 ug/mL
.8151_LCS_Stck_00037	12/06/18	Accustandard, Lot 216111344			(Purchased Reagent)		2,4,5-T	1000 ug/mL
							2,4-D	1000 ug/mL
							2,4-DB	1000 ug/mL
							Dalapon	1000 ug/mL
							Dicamba	1000 ug/mL
							Dichlorprop	1000 ug/mL
							Dinoseb	1000 ug/mL
							MCPA	10000 ug/mL
							MCPP	10000 ug/mL
							Picloram	1000 ug/mL
							Silvex (2,4,5-TP)	1000 ug/mL
.8151_PCP_Stk_00002	10/26/19	restek, Lot A0135955			(Purchased Reagent)		Pentachlorophenol	1000 ug/mL
.MCPA&MCPP_00078	05/01/19	AccuStandard, Lot 217031352			(Purchased Reagent)		MCPA	90 mg/mL
							MCPP	90 mg/mL
8151ICALL4_00131	06/30/19	10/29/18	Hexane, Lot 196294	50 mL	8151WorkALT_00015	2.5 mL	2,4-Dichlorophenylacetic acid	0.464 ug/mL
.8151WorkALT_00015	06/30/19	10/29/18	Hexane, Lot 196294	10 mL	8151StkSurr_00065	1 mL	2,4-Dichlorophenylacetic acid	9.28 ug/mL
..8151StkSurr_00065	04/20/20	AccuStandard, Lot 215041203-02			(Purchased Reagent)		2,4-Dichlorophenylacetic acid	92.8 ug/mL
8151ICALL4_00131	06/30/19	10/29/18	Hexane, Lot 196294	50 mL	8151WorkALT_00015	2.5 mL	2,4-D	0.47015 ug/mL
							Silvex (2,4,5-TP)	0.48 ug/mL
.8151WorkALT_00015	06/30/19	10/29/18	Hexane, Lot 196294	10 mL	8151ResMix#1_00013	0.5 mL	2,4-D	9.403 ug/mL
							Silvex (2,4,5-TP)	9.6 ug/mL
..8151ResMix#1_00013	10/29/19	Restek, Lot A0136598			(Purchased Reagent)		2,4-D	188.06 ug/mL
							Silvex (2,4,5-TP)	192 ug/mL
8151ICALL7_00062	06/30/19	10/29/18	HEXANE, Lot 196294	5 mL	8151WorkALT_00015	1 mL	Pentachlorophenol	1.9095 ug/mL
							2,4,5-T	1.9148 ug/mL
							2,4-D	1.8806 ug/mL
							2,4-DB	1.9023 ug/mL
							Dicamba	1.8985 ug/mL
							Dichlorprop	1.9063 ug/mL
							Dinoseb	1.9085 ug/mL
							Silvex (2,4,5-TP)	1.92 ug/mL
							Dalapon	1.8107 ug/mL
							MCPA	187.967 ug/mL
							MCPP	188.508 ug/mL
							2,4-Dichlorophenylacetic acid	1.856 ug/mL
.8151WorkALT_00015	06/30/19	10/29/18	Hexane, Lot 196294	10 mL	8151PCP_Mrkr_00005	0.1 mL	Pentachlorophenol	9.5475 ug/mL
					8151ResMix#1_00013	0.5 mL	2,4,5-T	9.574 ug/mL
							2,4-D	9.403 ug/mL
							2,4-DB	9.5115 ug/mL
							Dicamba	9.4925 ug/mL
							Dichlorprop	9.5315 ug/mL
							Dinoseb	9.5425 ug/mL
							Silvex (2,4,5-TP)	9.6 ug/mL
					8151ResMix#2_00011	50 uL	Dalapon	9.0535 ug/mL
					8151ResMix#3_00016	0.5 mL	MCPA	939.834 ug/mL
							MCPP	942.542 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8151StkSurr_00065	1 mL	2,4-Dichlorophenylacetic acid	9.28 ug/mL
..8151PCP_Mrkr_00005	06/30/19	Restek, Lot A0128694			(Purchased Reagent)		Pentachlorophenol	954.75 ug/mL
..8151ResMix#1_00013	10/29/19	Restek, Lot A0136598			(Purchased Reagent)		2,4,5-T	191.48 ug/mL
							2,4-D	188.06 ug/mL
							2,4-DB	190.23 ug/mL
							Dicamba	189.85 ug/mL
							Dichlorprop	190.63 ug/mL
							Dinoseb	190.85 ug/mL
							Silvex (2,4,5-TP)	192 ug/mL
..8151ResMix#2_00011	01/31/24	Restek, Lot A0124376			(Purchased Reagent)		Dalapon	1810.7 ug/mL
..8151ResMix#3_00016	08/31/24	Restek, Lot A0130139			(Purchased Reagent)		MCPA	18796.7 ug/mL
							MCPP	18850.8 ug/mL
..8151StkSurr_00065	04/20/20	AccuStandard, Lot 215041203-02			(Purchased Reagent)		2,4-Dichlorophenylacetic acid	92.8 ug/mL
8151ICV_00019	09/30/19	10/29/18	Hexane, Lot 196294	10 mL	8151SSWrking_00032	0.375 mL	2,4-Dichlorophenylacetic acid	0.348 ug/mL
.8151SSWrking_00032	09/30/19	10/29/18	Hexane, Lot 196294	5 mL	8151StkSurr_00067	0.5 mL	2,4-Dichlorophenylacetic acid	9.28 ug/mL
..8151StkSurr_00067	10/29/19	AccuStandard, Lot 215041203-02			(Purchased Reagent)		2,4-Dichlorophenylacetic acid	92.8 ug/mL
8151ICV_00019	09/30/19	10/29/18	Hexane, Lot 196294	10 mL	8151SSWrking_00032	0.375 mL	2,4-D	0.352613 ug/mL
							Silvex (2,4,5-TP)	0.356438 ug/mL
.8151SSWrking_00032	09/30/19	10/29/18	Hexane, Lot 196294	5 mL	8151SSStk_00031	0.5 mL	2,4-D	9.403 ug/mL
							Silvex (2,4,5-TP)	9.505 ug/mL
..8151SSStk_00031	09/30/19	UltraScientific, Lot CR-3523			(Purchased Reagent)		2,4-D	94.03 ug/mL
							Silvex (2,4,5-TP)	95.05 ug/mL
8151Surrogate_00170	12/23/18	10/23/18	P&T Methanol, Lot MethanolP&T_00217	200 mL	8151-SurStock_00097	1 mL	2,4-Dichlorophenylacetic acid	5 ug/mL
.8151-SurStock_00097	12/23/18	Restek, Lot A0132641			(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
8270Surrogate_00128	07/09/19	10/17/18	ACETONE, Lot Acetone_00232	1000 mL	8270SurStkHL_00282	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
					8270SurStkHL_00283	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
					8270SurStkHL_00289	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
					8270SurStkHL_00290	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
.8270SurStkHL_00282	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
.8270SurStkHL_00283	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
.8270SurStkHL_00289	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
.8270SurStkHL_00290	12/31/22		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
8270TCLPSpike_00062	10/31/19	11/08/18	P&T Methanol, Lot MethanolP&T_00217	100 mL	8270 TCLP Stk_00081	10 mL	1,4-Dichlorobenzene	50 ug/mL
							2,4,5-Trichlorophenol	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trichlorophenol	50 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2-Methylphenol	50 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Methylphenol	100 ug/mL
							4-Methylphenol	100 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexachloroethane	50 ug/mL
							Nitrobenzene	50 ug/mL
							Pentachlorophenol	100 ug/mL
							Pyridine	50 ug/mL
.8270 TCLP Stk_00081	10/31/20	sigma-aldrich, Lot LRAC0996			(Purchased Reagent)		1,4-Dichlorobenzene	500 ug/mL
							2,4,5-Trichlorophenol	500 ug/mL
							2,4,6-Trichlorophenol	500 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2-Methylphenol	500 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	500 ug/mL
							Hexachloroethane	500 ug/mL
							Nitrobenzene	500 ug/mL
							Pentachlorophenol	1000 ug/mL
							Pyridine	500 ug/mL
AR_1248_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1248_RESss_00010	25 uL	PCB-1248	250 ng/mL
.AR_1248_RESss_00010	06/06/19	RESTEK, Lot A0124143			(Purchased Reagent)		PCB-1248	1000 ug/mL
AR_1248_L1_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	0.25 mL	PCB-1248 Peak 1	0.025 ug/mL
							PCB-1248 Peak 2	0.025 ug/mL
							PCB-1248 Peak 3	0.025 ug/mL
							PCB-1248 Peak 4	0.025 ug/mL
							PCB-1248 Peak 5	0.025 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19	RESTEK, Lot A0130978			(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L2_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	0.5 mL	PCB-1248 Peak 1	0.05 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 2	0.05 ug/mL
							PCB-1248 Peak 3	0.05 ug/mL
							PCB-1248 Peak 4	0.05 ug/mL
							PCB-1248 Peak 5	0.05 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	1 mL	PCB-1248 Peak 1	0.1 ug/mL
							PCB-1248 Peak 2	0.1 ug/mL
							PCB-1248 Peak 3	0.1 ug/mL
							PCB-1248 Peak 4	0.1 ug/mL
							PCB-1248 Peak 5	0.1 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	2.5 mL	PCB-1248 Peak 1	0.25 ug/mL
							PCB-1248 Peak 2	0.25 ug/mL
							PCB-1248 Peak 3	0.25 ug/mL
							PCB-1248 Peak 4	0.25 ug/mL
							PCB-1248 Peak 5	0.25 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	5 mL	PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL
							PCB-1248 Peak 4	0.5 ug/mL
							PCB-1248 Peak 5	0.5 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L6_00019	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	7.5 mL	PCB-1248 Peak 1	0.75 ug/mL
							PCB-1248 Peak 2	0.75 ug/mL
							PCB-1248 Peak 3	0.75 ug/mL
							PCB-1248 Peak 4	0.75 ug/mL
							PCB-1248 Peak 5	0.75 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
.AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1660_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1660_RESss_00010	25 uL	PCB-1016	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260	250 ng/mL
					AR_SURR_RES_00090	6.25 uL	DCB Decachlorobiphenyl	12.5 ng/mL
							Tetrachloro-m-xylene	12.5 ng/mL
.AR_1660_RESss_00010	06/06/19	RESTEK, Lot A0114674			(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
.AR_SURR_RES_00090	06/06/19	RESTEK, Lot A0130424			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L1_00031	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	0.25 mL	PCB-1016 Peak 1	0.025 ug/mL
							PCB-1016 Peak 2	0.025 ug/mL
							PCB-1016 Peak 3	0.025 ug/mL
							PCB-1016 Peak 4	0.025 ug/mL
							PCB-1016 Peak 5	0.025 ug/mL
							PCB-1260 Peak 1	0.025 ug/mL
							PCB-1260 Peak 2	0.025 ug/mL
							PCB-1260 Peak 3	0.025 ug/mL
							PCB-1260 Peak 4	0.025 ug/mL
							PCB-1260 Peak 5	0.025 ug/mL
							DCB Decachlorobiphenyl	0.00125 ug/mL
							Tetrachloro-m-xylene	0.00125 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L2_00030	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	0.5 mL	PCB-1016 Peak 1	0.05 ug/mL
							PCB-1016 Peak 2	0.05 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 3	0.05 ug/mL
							PCB-1016 Peak 4	0.05 ug/mL
							PCB-1016 Peak 5	0.05 ug/mL
							PCB-1260 Peak 1	0.05 ug/mL
							PCB-1260 Peak 2	0.05 ug/mL
							PCB-1260 Peak 3	0.05 ug/mL
							PCB-1260 Peak 4	0.05 ug/mL
							PCB-1260 Peak 5	0.05 ug/mL
							DCB Decachlorobiphenyl	0.0025 ug/mL
							Tetrachloro-m-xylene	0.0025 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L3_00031	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	1 mL	PCB-1016 Peak 1	0.1 ug/mL
							PCB-1016 Peak 2	0.1 ug/mL
							PCB-1016 Peak 3	0.1 ug/mL
							PCB-1016 Peak 4	0.1 ug/mL
							PCB-1016 Peak 5	0.1 ug/mL
							PCB-1260 Peak 1	0.1 ug/mL
							PCB-1260 Peak 2	0.1 ug/mL
							PCB-1260 Peak 3	0.1 ug/mL
							PCB-1260 Peak 4	0.1 ug/mL
							PCB-1260 Peak 5	0.1 ug/mL
							DCB Decachlorobiphenyl	0.005 ug/mL
							Tetrachloro-m-xylene	0.005 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L4_00068	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	2.5 mL	PCB-1016 Peak 1	0.25 ug/mL
							PCB-1016 Peak 2	0.25 ug/mL
							PCB-1016 Peak 3	0.25 ug/mL
							PCB-1016 Peak 4	0.25 ug/mL
							PCB-1016 Peak 5	0.25 ug/mL
							PCB-1260 Peak 1	0.25 ug/mL
							PCB-1260 Peak 2	0.25 ug/mL
							PCB-1260 Peak 3	0.25 ug/mL
							PCB-1260 Peak 4	0.25 ug/mL
							PCB-1260 Peak 5	0.25 ug/mL
							DCB Decachlorobiphenyl	0.0125 ug/mL
							Tetrachloro-m-xylene	0.0125 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L5_00066	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	25 mL	AR_1660_L7_00026	12.5 mL	PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
							DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L5_00066	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	25 mL	AR_1660_L7_00026	12.5 mL	PCB-1016	0.5 ug/mL
							PCB-1260	0.5 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016	1 ug/mL
							PCB-1260	1 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
AR_1660_L6_00033	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	7.5 mL	PCB-1016 Peak 1	0.75 ug/mL
							PCB-1016 Peak 2	0.75 ug/mL
							PCB-1016 Peak 3	0.75 ug/mL
							PCB-1016 Peak 4	0.75 ug/mL
							PCB-1016 Peak 5	0.75 ug/mL
							PCB-1260 Peak 1	0.75 ug/mL
							PCB-1260 Peak 2	0.75 ug/mL
							PCB-1260 Peak 3	0.75 ug/mL
							PCB-1260 Peak 4	0.75 ug/mL
							PCB-1260 Peak 5	0.75 ug/mL
							DCB Decachlorobiphenyl	0.0375 ug/mL
							Tetrachloro-m-xylene	0.0375 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_2154_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1221_RESss_00010	25 uL	PCB-1221	250 ng/mL
					AR_1254_RESss_00010	25 uL	PCB-1254	250 ng/mL
.AR_1221_RESss_00010	06/06/19		RESTEK, Lot A0117382		(Purchased Reagent)		PCB-1221	1000 ug/mL
.AR_1254_RESss_00010	06/06/19		RESTEK, Lot A0105373		(Purchased Reagent)		PCB-1254	1000 ug/mL
AR_2154_L1_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	0.25 mL	PCB-1221 Peak 1	0.025 ug/mL
							PCB-1221 Peak 2	0.025 ug/mL
							PCB-1221 Peak 3	0.025 ug/mL
							PCB-1254 Peak 1	0.025 ug/mL
							PCB-1254 Peak 2	0.025 ug/mL
							PCB-1254 Peak 3	0.025 ug/mL
							PCB-1254 Peak 4	0.025 ug/mL
							PCB-1254 Peak 5	0.025 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L2_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	0.5 mL	PCB-1221 Peak 1	0.05 ug/mL
							PCB-1221 Peak 2	0.05 ug/mL
							PCB-1221 Peak 3	0.05 ug/mL
							PCB-1254 Peak 1	0.05 ug/mL
							PCB-1254 Peak 2	0.05 ug/mL
							PCB-1254 Peak 3	0.05 ug/mL
							PCB-1254 Peak 4	0.05 ug/mL
							PCB-1254 Peak 5	0.05 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	1 mL	PCB-1221 Peak 1	0.1 ug/mL
							PCB-1221 Peak 2	0.1 ug/mL
							PCB-1221 Peak 3	0.1 ug/mL
							PCB-1254 Peak 1	0.1 ug/mL
							PCB-1254 Peak 2	0.1 ug/mL
							PCB-1254 Peak 3	0.1 ug/mL
							PCB-1254 Peak 4	0.1 ug/mL
							PCB-1254 Peak 5	0.1 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	2.5 mL	PCB-1221 Peak 1	0.25 ug/mL
							PCB-1221 Peak 2	0.25 ug/mL
							PCB-1221 Peak 3	0.25 ug/mL
							PCB-1254 Peak 1	0.25 ug/mL
							PCB-1254 Peak 2	0.25 ug/mL
							PCB-1254 Peak 3	0.25 ug/mL
							PCB-1254 Peak 4	0.25 ug/mL
							PCB-1254 Peak 5	0.25 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L5_00022	04/22/19	10/23/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	5 mL	PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L6_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	7.5 mL	PCB-1221 Peak 1	0.75 ug/mL
							PCB-1221 Peak 2	0.75 ug/mL
							PCB-1221 Peak 3	0.75 ug/mL
							PCB-1254 Peak 1	0.75 ug/mL
							PCB-1254 Peak 2	0.75 ug/mL
							PCB-1254 Peak 3	0.75 ug/mL
							PCB-1254 Peak 4	0.75 ug/mL
							PCB-1254 Peak 5	0.75 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
.AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_3262_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1232_RESss_00010	25 uL	PCB-1232	250 ng/mL
					AR_1262_RESss_00010	25 uL	PCB-1262	250 ng/mL
.AR_1232_RESss_00010	06/06/19		RESTEK, Lot A095877		(Purchased Reagent)		PCB-1232	1000 ug/mL
.AR_1262_RESss_00010	06/06/19		RESTEK, Lot A094156		(Purchased Reagent)		PCB-1262	1000 ug/mL
AR_3262_L1_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	0.25 mL	PCB-1232 Peak 1	0.025 ug/mL
							PCB-1232 Peak 2	0.025 ug/mL
							PCB-1232 Peak 3	0.025 ug/mL
							PCB-1232 Peak 4	0.025 ug/mL
							PCB-1232 Peak 5	0.025 ug/mL
							PCB-1262 Peak 1	0.025 ug/mL
							PCB-1262 Peak 2	0.025 ug/mL
							PCB-1262 Peak 3	0.025 ug/mL
							PCB-1262 Peak 4	0.025 ug/mL
							PCB-1262 Peak 5	0.025 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L2_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	0.5 mL	PCB-1232 Peak 1	0.05 ug/mL
							PCB-1232 Peak 2	0.05 ug/mL
							PCB-1232 Peak 3	0.05 ug/mL
							PCB-1232 Peak 4	0.05 ug/mL
							PCB-1232 Peak 5	0.05 ug/mL
							PCB-1262 Peak 1	0.05 ug/mL
							PCB-1262 Peak 2	0.05 ug/mL
							PCB-1262 Peak 3	0.05 ug/mL
							PCB-1262 Peak 4	0.05 ug/mL
							PCB-1262 Peak 5	0.05 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	1 mL	PCB-1232 Peak 1	0.1 ug/mL
							PCB-1232 Peak 2	0.1 ug/mL
							PCB-1232 Peak 3	0.1 ug/mL
							PCB-1232 Peak 4	0.1 ug/mL
							PCB-1232 Peak 5	0.1 ug/mL
							PCB-1262 Peak 1	0.1 ug/mL
							PCB-1262 Peak 2	0.1 ug/mL
							PCB-1262 Peak 3	0.1 ug/mL
							PCB-1262 Peak 4	0.1 ug/mL
							PCB-1262 Peak 5	0.1 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	2.5 mL	PCB-1232 Peak 1	0.25 ug/mL
							PCB-1232 Peak 2	0.25 ug/mL
							PCB-1232 Peak 3	0.25 ug/mL
							PCB-1232 Peak 4	0.25 ug/mL
							PCB-1232 Peak 5	0.25 ug/mL
							PCB-1262 Peak 1	0.25 ug/mL
							PCB-1262 Peak 2	0.25 ug/mL
							PCB-1262 Peak 3	0.25 ug/mL
							PCB-1262 Peak 4	0.25 ug/mL
							PCB-1262 Peak 5	0.25 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	5 mL	PCB-1232 Peak 1	0.5 ug/mL
							PCB-1232 Peak 2	0.5 ug/mL
							PCB-1232 Peak 3	0.5 ug/mL
							PCB-1232 Peak 4	0.5 ug/mL
							PCB-1232 Peak 5	0.5 ug/mL
							PCB-1262 Peak 1	0.5 ug/mL
							PCB-1262 Peak 2	0.5 ug/mL
							PCB-1262 Peak 3	0.5 ug/mL
							PCB-1262 Peak 4	0.5 ug/mL
							PCB-1262 Peak 5	0.5 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L6_00019	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	7.5 mL	PCB-1232 Peak 1	0.75 ug/mL
							PCB-1232 Peak 2	0.75 ug/mL
							PCB-1232 Peak 3	0.75 ug/mL
							PCB-1232 Peak 4	0.75 ug/mL
							PCB-1232 Peak 5	0.75 ug/mL
							PCB-1262 Peak 1	0.75 ug/mL
							PCB-1262 Peak 2	0.75 ug/mL
							PCB-1262 Peak 3	0.75 ug/mL
							PCB-1262 Peak 4	0.75 ug/mL
							PCB-1262 Peak 5	0.75 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
.AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_4268_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1242_RESss_00010	25 uL	PCB-1242	250 ng/mL
					AR_1268_RESss_00010	25 uL	PCB-1268	250 ng/mL
.AR_1242_RESss_00010	06/06/19		RESTEK, Lot A0105175		(Purchased Reagent)		PCB-1242	1000 ug/mL
.AR_1268_RESss_00010	06/06/19		RESTEK, Lot A095820		(Purchased Reagent)		PCB-1268	1000 ug/mL
AR_4268_L1_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	0.25 mL	PCB-1242 Peak 1	0.025 ug/mL
							PCB-1242 Peak 2	0.025 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 3	0.025 ug/mL
							PCB-1242 Peak 4	0.025 ug/mL
							PCB-1242 Peak 5	0.025 ug/mL
							PCB-1268 Peak 1	0.025 ug/mL
							PCB-1268 Peak 2	0.025 ug/mL
							PCB-1268 Peak 3	0.025 ug/mL
							PCB-1268 Peak 4	0.025 ug/mL
							PCB-1268 Peak 5	0.025 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L2_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	0.5 mL	PCB-1242 Peak 1	0.05 ug/mL
							PCB-1242 Peak 2	0.05 ug/mL
							PCB-1242 Peak 3	0.05 ug/mL
							PCB-1242 Peak 4	0.05 ug/mL
							PCB-1242 Peak 5	0.05 ug/mL
							PCB-1268 Peak 1	0.05 ug/mL
							PCB-1268 Peak 2	0.05 ug/mL
							PCB-1268 Peak 3	0.05 ug/mL
							PCB-1268 Peak 4	0.05 ug/mL
							PCB-1268 Peak 5	0.05 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L3_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	1 mL	PCB-1242 Peak 1	0.1 ug/mL
							PCB-1242 Peak 2	0.1 ug/mL
							PCB-1242 Peak 3	0.1 ug/mL
							PCB-1242 Peak 4	0.1 ug/mL
							PCB-1242 Peak 5	0.1 ug/mL
							PCB-1268 Peak 1	0.1 ug/mL
							PCB-1268 Peak 2	0.1 ug/mL
							PCB-1268 Peak 3	0.1 ug/mL
							PCB-1268 Peak 4	0.1 ug/mL
							PCB-1268 Peak 5	0.1 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L4_00023	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	2.5 mL	PCB-1242 Peak 1	0.25 ug/mL
							PCB-1242 Peak 2	0.25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 3	0.25 ug/mL
							PCB-1242 Peak 4	0.25 ug/mL
							PCB-1242 Peak 5	0.25 ug/mL
							PCB-1268 Peak 1	0.25 ug/mL
							PCB-1268 Peak 2	0.25 ug/mL
							PCB-1268 Peak 3	0.25 ug/mL
							PCB-1268 Peak 4	0.25 ug/mL
							PCB-1268 Peak 5	0.25 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	5 mL	PCB-1242 Peak 1	0.5 ug/mL
							PCB-1242 Peak 2	0.5 ug/mL
							PCB-1242 Peak 3	0.5 ug/mL
							PCB-1242 Peak 4	0.5 ug/mL
							PCB-1242 Peak 5	0.5 ug/mL
							PCB-1268 Peak 1	0.5 ug/mL
							PCB-1268 Peak 2	0.5 ug/mL
							PCB-1268 Peak 3	0.5 ug/mL
							PCB-1268 Peak 4	0.5 ug/mL
							PCB-1268 Peak 5	0.5 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L6_00018	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	7.5 mL	PCB-1242 Peak 1	0.75 ug/mL
							PCB-1242 Peak 2	0.75 ug/mL
							PCB-1242 Peak 3	0.75 ug/mL
							PCB-1242 Peak 4	0.75 ug/mL
							PCB-1242 Peak 5	0.75 ug/mL
							PCB-1268 Peak 1	0.75 ug/mL
							PCB-1268 Peak 2	0.75 ug/mL
							PCB-1268 Peak 3	0.75 ug/mL
							PCB-1268 Peak 4	0.75 ug/mL
							PCB-1268 Peak 5	0.75 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
.AR_4268_RES_00001	04/22/19	RESTEK, Lot A0133093			(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
BNB IS_00012	01/26/19	07/26/18	Hexane, Lot 190112	100 mL	BNB 10000ppb_00008	10 mL	1-Bromo-2-nitrobenzene	1000 ng/mL
.BNB 10000ppb_00008	01/26/19	07/26/18	Hexane, Lot 190112	100 mL	BNB stock_00015	1 mL	1-Bromo-2-nitrobenzene	10000 ng/mL
..BNB stock_00015	07/26/19	Restek, Lot A0127264			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
CN 10ppm_00321	11/19/18	11/12/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN 10ppm_00323	11/26/18	11/19/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN CAL 1 ppm_01458	11/16/18	11/15/18	1% NaOH, Lot N/A	100 mL	CN 10ppm_00321	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00321	11/19/18	11/12/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Total	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
CN CAL 1 ppm_01461	11/22/18	11/21/18	1% NaOH, Lot N/A	100 mL	CN 10ppm_00323	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00323	11/26/18	11/19/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00062	11/30/18		Ricca, Lot 1805F17		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_01225	11/16/18	11/15/18	1% HNO3, Lot N/A	100 mL	CN ICV Int_00511	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00511	11/19/18	11/12/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00052	11/30/18		SPEX, Lot 13-66YPX		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_01228	11/22/18	11/21/18	1% HNO3, Lot N/A	100 mL	CN ICV Int_00512	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00512	11/26/18	11/19/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00052	11/30/18		SPEX, Lot 13-66YPX		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Int_00511	11/19/18	11/12/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00052	11/30/18		SPEX, Lot 13-66YPX		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN ICV Int_00512	11/26/18	11/19/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00052	11/30/18		SPEX, Lot 13-66YPX		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
Hg Biwk ICV_00261	11/26/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg ICV Stock_00010	0.4 mL	Mercury	0.4 mg/L
.Hg ICV Stock_00010	03/05/19		Inorganic Ventures, Lot H2-HG02113R		(Purchased Reagent)		Mercury	100 mg/L
Hg Daily Spk_02290	11/15/18	11/14/18	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00134	1 mL	Mercury	0.1 mg/L
.Hg Mnth Spike_00134	12/10/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00012	1 mL	Mercury	10 mg/L
..Hg Ultra Prim_00012	03/09/19		Ultra Scientific, Lot T00602		(Purchased Reagent)		Mercury	1000 mg/L
IC Cal low_00411	11/06/18	10/30/18	Di Water, Lot NA	100 mL	IC N02 CAL_00043	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00019	5 mL	Nitrate as N	50 mg/L
					IC P04 cal_00018	5 mL	Orthophosphate as P	50 mg/L
.IC N02 CAL_00043	01/31/19		RICCA, Lot 4808990		(Purchased Reagent)		Nitrite as N	1000 ppm
.IC N03 cal_00019	01/31/20		Ricca, Lot 2807e96		(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC P04 cal_00018	11/30/19		RICCA, Lot 4711L59		(Purchased Reagent)		Orthophosphate as P	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC Cal low_00412	11/09/18	11/02/18	Di Water, Lot NA	100 mL	IC N02 CAL_00043	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00019	5 mL	Nitrate as N	50 mg/L
.IC N02 CAL_00043	01/31/19		RICCA, Lot 4808990		(Purchased Reagent)		Nitrite as N	1000 ppm
.IC N03 cal_00019	01/31/20		Ricca, Lot 2807e96		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC ICV 5_00214	11/06/18	10/30/18	Di Water, Lot na	10 mL	IC NO2 ICV_00016	0.5 mL	Nitrite as N	50 mg/L
					IC NO3 ICV_00012	0.5 mL	Nitrate as N	50 mg/L
.IC NO2 ICV_00016	05/31/20		ERA, Lot 020518		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC NO3 ICV_00012	12/31/18		ERA, Lot 140616		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC LCS_01391	11/04/18	11/03/18	Di Water, Lot 27	200 mL	IC Cal low_00412	20 mL	Nitrite as N	5 mg/L
							Nitrate as N	5 mg/L
.IC Cal low_00412	11/09/18	11/02/18	Di Water, Lot NA	100 mL	IC N02 CAL_00043	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00019	5 mL	Nitrate as N	50 mg/L
..IC N02 CAL_00043	01/31/19		RICCA, Lot 4808990		(Purchased Reagent)		Nitrite as N	1000 ppm
..IC N03 cal_00019	01/31/20		Ricca, Lot 2807e96		(Purchased Reagent)		Nitrate as N	1000 mg/L
ICP CCV_00351	05/04/19	11/07/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL1A_00813	250 mL	Arsenic	1 mg/L
							Lead	1 mg/L
							Selenium	1 mg/L
							Barium	0.5 mg/L
							Cadmium	0.5 mg/L
							Chromium	0.5 mg/L
							Silver	0.5 mg/L
.ICP ICAL1A_00813	05/04/19	11/07/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	1000 As_00020	2 mL	Arsenic	2 mg/L
					1000 Pb_00023	2 mL	Lead	2 mg/L
					1000 Se_00019	2 mL	Selenium	2 mg/L
					Icp cal std 3_00018	10 mL	Barium	1 mg/L
							Cadmium	1 mg/L
							Chromium	1 mg/L
							Silver	1 mg/L
..1000 As_00020	05/04/19		Inorganic Venture, Lot M2-AS657780		(Purchased Reagent)		Arsenic	1000 mg/L
..1000 Pb_00023	06/19/19		Inorganic Ventures, Lot M2-PB656988		(Purchased Reagent)		Lead	1000 mg/L
..1000 Se_00019	08/24/19		Inorganic Ventures, Lot K2-SE02067		(Purchased Reagent)		Selenium	1000 mg/L
..Icp cal std 3_00018	08/23/19		Inorganic Ventures, Lot M2-MEB663620		(Purchased Reagent)		Barium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Silver	100 mg/L
ICP ICSA_00173	12/14/18	10/19/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	Icp stk ICSA_00024	50 mL	Al	500 mg/L
							Ca	500 mg/L
							Fe	200 mg/L
							Mg	500 mg/L
.Icp stk ICSA_00024	07/30/19		Inorganic Ventures, Lot K2-MEB643109		(Purchased Reagent)		Al	5000 mg/L
							Ca	5000 mg/L
							Fe	2000 mg/L
							Mg	5000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ICP ICSAB_00194	12/01/18	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	250 mL	10000 Si_00015	0.25 mL	Si	10 mg/L
					ANALYTES B_00014	2.5 mL	Barium	0.5 mg/L
							Be	0.5 mg/L
							Cadmium	1 mg/L
							Chromium	0.5 mg/L
							Co	0.5 mg/L
							Cu	0.5 mg/L
							Lead	1 mg/L
							Mn	0.5 mg/L
							Ni	1 mg/L
							Silver	1 mg/L
							V	0.5 mg/L
							Zn	1 mg/L
					ICP ISAB 1B_00011	2.5 mL	Tl	10 mg/L
					ICP ISAB STD1_00010	2.5 mL	Arsenic	2 mg/L
							B	2 mg/L
							K	50 mg/L
							Li	1 mg/L
							Mo	1 mg/L
							Na	50 mg/L
							P	2 mg/L
							Sb	1 mg/L
							Selenium	5 mg/L
							Sr	1 mg/L
					ICP ISAB STD2_00013	2.5 mL	Sn	10 mg/L
							Ti	1 mg/L
					Icp stk ICSA_00024	25 mL	Al	500 mg/L
							Ca	500 mg/L
							Fe	200 mg/L
							Mg	500 mg/L
.10000 Si_00015	09/24/19	Inorganic ventures, Lot M2-SI657321			(Purchased Reagent)		Si	10000 mg/L
.ANALYTES B_00014	04/01/19	SPEX, Lot 5-177MKBY			(Purchased Reagent)		Barium	50 mg/L
							Be	50 mg/L
							Cadmium	100 mg/L
							Chromium	50 mg/L
							Co	50 mg/L
							Cu	50 mg/L
							Lead	100 mg/L
							Mn	50 mg/L
							Ni	100 mg/L
							Silver	100 mg/L
							V	50 mg/L
							Zn	100 mg/L
.ICP ISAB 1B_00011	12/01/18	High Purity, Lot 1734922			(Purchased Reagent)		Tl	1000 mg/L
.ICP ISAB STD1_00010	12/01/18	High Purity, Lot 1734921			(Purchased Reagent)		Arsenic	200 mg/L
							B	200 mg/L
							K	5000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Li	100 mg/L
							Mo	100 mg/L
							Na	5000 mg/L
							P	200 mg/L
							Sb	100 mg/L
							Selenium	500 mg/L
							Sr	100 mg/L
.ICP ISAB STD2_00013	01/03/19	High Purity, Lot 1721944			(Purchased Reagent)		Sn	1000 mg/L
							Ti	100 mg/L
.Icp stk ICSA_00024	07/30/19	Inorganic Ventures, Lot K2-MEB643109			(Purchased Reagent)		Al	5000 mg/L
							Ca	5000 mg/L
							Fe	2000 mg/L
							Mg	5000 mg/L
ICP ICV_00682	04/30/19	11/13/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVL A_00014	1 mL	Arsenic	0.25 ppm
							Barium	0.25 ppm
							Cadmium	0.25 ppm
							Chromium	0.25 ppm
							Lead	0.25 ppm
							Selenium	0.5 ppm
					Icp ICVL B_00016	1 mL	Silver	0.25 ppm
.Icp ICVL A_00014	04/30/19	High Purity, Lot 1810602			(Purchased Reagent)		Arsenic	25 mg/L
							Barium	25 mg/L
							Cadmium	25 mg/L
							Chromium	25 mg/L
							Lead	25 mg/L
							Selenium	50 mg/L
.Icp ICVL B_00016	04/30/19	HIGH PURITY, Lot 1810603			(Purchased Reagent)		Silver	25 mg/L
ICP LLCCV_02398	11/14/18	11/13/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-4_00008	1 mL	Arsenic	15 ppb
							Barium	10 ppb
							Cadmium	5 ppb
							Chromium	10 ppb
							Lead	9 ppb
							Selenium	20 ppb
							Silver	10 ppb
.ICP LLCCV-4_00008	09/26/19	Inorganic Ventures, Lot M2-MEb670719			(Purchased Reagent)		Arsenic	1.5 mg/L
							Barium	1 mg/L
							Cadmium	0.5 mg/L
							Chromium	1 mg/L
							Lead	0.9 mg/L
							Selenium	2 mg/L
							Silver	1 mg/L
ICP PDS 1_00026	08/20/19	Inorganic Ventures, Lot M2-MEB659764			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	10 mg/L
							Cadmium	5 mg/L
							Chromium	5 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Lead	10 mg/L
							Selenium	20 mg/L
							Silver	5 mg/L
ICP SPK 2B_00082	11/01/19		Inorganic Ventures, Lot N2-MEB665203		(Purchased Reagent)		B	100 mg/L
							Mo	100 mg/L
							Sb	50 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sn	200 mg/L
							Sulfur	200 mg/L
							Ti	100 mg/L
							Zr	50 mg/L
ICP SPK 3A_00155	11/02/19		Inorganic Ventures, Lot N2-MEB673087		(Purchased Reagent)		Al	200 mg/L
							Arsenic	100 mg/L
							Barium	200 mg/L
							Be	5 mg/L
							Bi	200 mg/L
							Ca	5000 mg/L
							Cadmium	10 mg/L
							Chromium	20 mg/L
							Co	50 mg/L
							Cu	25 mg/L
							Fe	100 mg/L
							K	5000 mg/L
							Lead	50 mg/L
							Li	100 mg/L
							Mg	5000 mg/L
							Mn	50 mg/L
							Na	5000 mg/L
							Ni	50 mg/L
							P	1000 mg/L
							Selenium	200 mg/L
							Silver	5 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Tl	200 mg/L
							U	200 mg/L
							V	50 mg/L
							Zn	50 mg/L
MS-DFTPP_00047							Aramite, Total	
							Diallate	
							Isosafrole	
							Methyl Phenols,Total	
							Phthalic acid	
							Tentatively Identified Compound	
							Total Cresols	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							TPAH	
					MS-47548-U_00015	1 mL	4,4'-DDD	0.05 ug/mL
							4,4'-DDE	0.05 ug/mL
							4,4'-DDT	50 ug/mL
							Benzidine_T	50 ug/mL
							DFTPP	50 ug/mL
							Pentachlorophenol_T	50 ug/mL
.MS-47548-U_00015	03/31/19		Supelco, Lot XA19099V		(Purchased Reagent)		4,4'-DDD	1 ug/mL
							4,4'-DDE	1 ug/mL
							4,4'-DDT	1000 ug/mL
							Benzidine_T	1000 ug/mL
							DFTPP	1000 ug/mL
							Pentachlorophenol_T	1000 ug/mL
MS-HSLA004_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	10 uL	2,4,6-Tribromophenol (Surr)	4 ug/mL
							2-Fluorobiphenyl	4 ug/mL
							2-Fluorophenol (Surr)	4 ug/mL
							Nitrobenzene-d5 (Surr)	4 ug/mL
							Phenol-d5 (Surr)	4 ug/mL
							Terphenyl-d14 (Surr)	4 ug/mL
							Famphur	4 ug/mL
							Alachlor	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Benzoic acid	8 ug/mL
							Atrazine	4 ug/mL
							Caprolactam	4 ug/mL
							1,1'-Biphenyl	4 ug/mL
							1,2,4,5-Tetrachlorobenzene	4 ug/mL
							1,2,4-Trichlorobenzene	4 ug/mL
							1,2-Dichlorobenzene	4 ug/mL
							1,2-Diphenylhydrazine	4.0439 ug/mL
							1,3-Dichlorobenzene	4 ug/mL
							1,3-Dinitrobenzene	4 ug/mL
							1,4-Dichlorobenzene	4 ug/mL
							1,4-Dioxane	4 ug/mL
							1-Methylnaphthalene	4 ug/mL
							2,2'-oxybis[1-chloropropane]	4 ug/mL
							2,3,4,6-Tetrachlorophenol	4 ug/mL
							2,4,5-Trichlorophenol	4 ug/mL
							2,4,6-Trichlorophenol	4 ug/mL
							2,4-Dichlorophenol	4 ug/mL
							2,4-Dimethylphenol	4 ug/mL
							2,4-Dinitrophenol	8 ug/mL
							2,4-Dinitrotoluene	4 ug/mL
							2,6-Dichlorophenol	4 ug/mL
							2,6-Dinitrotoluene	4 ug/mL
							2-Chloronaphthalene	4 ug/mL
							2-Chlorophenol	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	4 ug/mL
							2-Methylphenol	4 ug/mL
							2-Nitroaniline	4 ug/mL
							2-Nitrophenol	4 ug/mL
							3 & 4 Methylphenol	4 ug/mL
							3-Nitroaniline	4 ug/mL
							4,6-Dinitro-2-methylphenol	8 ug/mL
							4-Bromophenyl phenyl ether	4 ug/mL
							4-Chloro-3-methylphenol	4 ug/mL
							4-Chloroaniline	4 ug/mL
							4-Chlorophenyl phenyl ether	4 ug/mL
							4-Nitroaniline	4 ug/mL
							4-Nitrophenol	8 ug/mL
							Acenaphthene	4 ug/mL
							Acenaphthylene	4 ug/mL
							Acetophenone	4 ug/mL
							Aniline	4 ug/mL
							Anthracene	4 ug/mL
							Azobenzene	4 ug/mL
							Benzo[a]anthracene	4 ug/mL
							Benzo[a]pyrene	4 ug/mL
							Benzo[b]fluoranthene	4 ug/mL
							Benzo[g,h,i]perylene	4 ug/mL
							Benzo[k]fluoranthene	4 ug/mL
							Benzyl alcohol	4 ug/mL
							Bis(2-chloroethoxy)methane	4 ug/mL
							Bis(2-chloroethyl)ether	4 ug/mL
							Bis(2-ethylhexyl) phthalate	4 ug/mL
							Butyl benzyl phthalate	4 ug/mL
							Carbazole	4 ug/mL
							Chrysene	4 ug/mL
							Di-n-butyl phthalate	4 ug/mL
							Di-n-octyl phthalate	4 ug/mL
							Dibenz(a,h)anthracene	4 ug/mL
							Dibenzofuran	4 ug/mL
							Diethyl phthalate	4 ug/mL
							Dimethyl phthalate	4 ug/mL
							Diphenylamine	3.4 ug/mL
							Fluoranthene	4 ug/mL
							Fluorene	4 ug/mL
							Hexachlorobenzene	4 ug/mL
							Hexachlorobutadiene	4 ug/mL
							Hexachlorocyclopentadiene	4 ug/mL
							Hexachloroethane	4 ug/mL
							Indeno[1,2,3-cd]pyrene	4 ug/mL
							Isophorone	4 ug/mL
							N-Nitrosodi-n-propylamine	4 ug/mL
							N-Nitrosodimethylamine	4 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	4 ug/mL
							Naphthalene	4 ug/mL
							Nitrobenzene	4 ug/mL
							Pentachlorophenol	8 ug/mL
							Phenanthrene	4 ug/mL
							Phenol	4 ug/mL
							Pyrene	4 ug/mL
							Pyridine	8 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA010_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	25 uL	2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
							Famphur	10 ug/mL
							Alachlor	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzoic acid	20 ug/mL
							Atrazine	10 ug/mL
							Caprolactam	10 ug/mL
							1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10.1097 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.5 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	20 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA020_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	50 uL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
							Famphur	20 ug/mL
							Alachlor	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzoic acid	40 ug/mL
							Atrazine	20 ug/mL
							Caprolactam	20 ug/mL
							1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20.2195 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA050_00038	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	125 uL	2,4,6-Tribromophenol (Surr)	50 ug/mL
							2-Fluorobiphenyl	50 ug/mL
							2-Fluorophenol (Surr)	50 ug/mL
							Nitrobenzene-d5 (Surr)	50 ug/mL
							Phenol-d5 (Surr)	50 ug/mL
							Terphenyl-d14 (Surr)	50 ug/mL
							Famphur	50 ug/mL
							Alachlor	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzoic acid	100 ug/mL
							Atrazine	50 ug/mL
							Caprolactam	50 ug/mL
							1,1'-Biphenyl	50 ug/mL
							1,2,4,5-Tetrachlorobenzene	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Diphenylhydrazine	50.5487 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	50 ug/mL
							1-Methylnaphthalene	50 ug/mL
							2,2'-oxybis[1-chloropropane]	50 ug/mL
							2,3,4,6-Tetrachlorophenol	50 ug/mL
							2,4,5-Trichlorophenol	50 ug/mL
							2,4,6-Trichlorophenol	50 ug/mL
							2,4-Dichlorophenol	50 ug/mL
							2,4-Dimethylphenol	50 ug/mL
							2,4-Dinitrophenol	100 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dichlorophenol	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Chloronaphthalene	50 ug/mL
							2-Chlorophenol	50 ug/mL
							2-Methylnaphthalene	50 ug/mL
							2-Methylphenol	50 ug/mL
							2-Nitroaniline	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	50 ug/mL
							3 & 4 Methylphenol	50 ug/mL
							3-Nitroaniline	50 ug/mL
							4,6-Dinitro-2-methylphenol	100 ug/mL
							4-Bromophenyl phenyl ether	50 ug/mL
							4-Chloro-3-methylphenol	50 ug/mL
							4-Chloroaniline	50 ug/mL
							4-Chlorophenyl phenyl ether	50 ug/mL
							4-Nitroaniline	50 ug/mL
							4-Nitrophenol	100 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	50 ug/mL
							Acetophenone	50 ug/mL
							Aniline	50 ug/mL
							Anthracene	50 ug/mL
							Azobenzene	50 ug/mL
							Benzo[a]anthracene	50 ug/mL
							Benzo[a]pyrene	50 ug/mL
							Benzo[b]fluoranthene	50 ug/mL
							Benzo[g,h,i]perylene	50 ug/mL
							Benzo[k]fluoranthene	50 ug/mL
							Benzyl alcohol	50 ug/mL
							Bis(2-chloroethoxy)methane	50 ug/mL
							Bis(2-chloroethyl)ether	50 ug/mL
							Bis(2-ethylhexyl) phthalate	50 ug/mL
							Butyl benzyl phthalate	50 ug/mL
							Carbazole	50 ug/mL
							Chrysene	50 ug/mL
							Di-n-butyl phthalate	50 ug/mL
							Di-n-octyl phthalate	50 ug/mL
							Dibenz(a,h)anthracene	50 ug/mL
							Dibenzofuran	50 ug/mL
							Diethyl phthalate	50 ug/mL
							Dimethyl phthalate	50 ug/mL
							Diphenylamine	42.5 ug/mL
							Fluoranthene	50 ug/mL
							Fluorene	50 ug/mL
							Hexachlorobenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexachlorocyclopentadiene	50 ug/mL
							Hexachloroethane	50 ug/mL
							Indeno[1,2,3-cd]pyrene	50 ug/mL
							Isophorone	50 ug/mL
							N-Nitrosodi-n-propylamine	50 ug/mL
							N-Nitrosodimethylamine	50 ug/mL
							N-Nitrosodiphenylamine	50 ug/mL
							Naphthalene	50 ug/mL
							Nitrobenzene	50 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	100 ug/mL
							Phenanthrene	50 ug/mL
							Phenol	50 ug/mL
							Pyrene	50 ug/mL
							Pyridine	100 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA080_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5 (Surr)	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14 (Surr)	80 ug/mL
							Famphur	80 ug/mL
							Alachlor	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Benzoic acid	160 ug/mL
							Atrazine	80 ug/mL
							Caprolactam	80 ug/mL
							1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,2'-oxybis[1-chloropropane]	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA120_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	300 uL	2,4,6-Tribromophenol (Surr)	120 ug/mL
							2-Fluorobiphenyl	120 ug/mL
							2-Fluorophenol (Surr)	120 ug/mL
							Nitrobenzene-d5 (Surr)	120 ug/mL
							Phenol-d5 (Surr)	120 ug/mL
							Terphenyl-d14 (Surr)	120 ug/mL
							Famphur	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Alachlor	120 ug/mL
							3,3'-Dichlorobenzidine	120 ug/mL
							Benzoic acid	240 ug/mL
							Atrazine	120 ug/mL
							Caprolactam	120 ug/mL
							1,1'-Biphenyl	120 ug/mL
							1,2,4,5-Tetrachlorobenzene	120 ug/mL
							1,2,4-Trichlorobenzene	120 ug/mL
							1,2-Dichlorobenzene	120 ug/mL
							1,2-Diphenylhydrazine	121.317 ug/mL
							1,3-Dichlorobenzene	120 ug/mL
							1,3-Dinitrobenzene	120 ug/mL
							1,4-Dichlorobenzene	120 ug/mL
							1,4-Dioxane	120 ug/mL
							1-Methylnaphthalene	120 ug/mL
							2,2'-oxybis[1-chloropropane]	120 ug/mL
							2,3,4,6-Tetrachlorophenol	120 ug/mL
							2,4,5-Trichlorophenol	120 ug/mL
							2,4,6-Trichlorophenol	120 ug/mL
							2,4-Dichlorophenol	120 ug/mL
							2,4-Dimethylphenol	120 ug/mL
							2,4-Dinitrophenol	240 ug/mL
							2,4-Dinitrotoluene	120 ug/mL
							2,6-Dichlorophenol	120 ug/mL
							2,6-Dinitrotoluene	120 ug/mL
							2-Chloronaphthalene	120 ug/mL
							2-Chlorophenol	120 ug/mL
							2-Methylnaphthalene	120 ug/mL
							2-Methylphenol	120 ug/mL
							2-Nitroaniline	120 ug/mL
							2-Nitrophenol	120 ug/mL
							3 & 4 Methylphenol	120 ug/mL
							3-Nitroaniline	120 ug/mL
							4,6-Dinitro-2-methylphenol	240 ug/mL
							4-Bromophenyl phenyl ether	120 ug/mL
							4-Chloro-3-methylphenol	120 ug/mL
							4-Chloroaniline	120 ug/mL
							4-Chlorophenyl phenyl ether	120 ug/mL
							4-Nitroaniline	120 ug/mL
							4-Nitrophenol	240 ug/mL
							Acenaphthene	120 ug/mL
							Acenaphthylene	120 ug/mL
							Acetophenone	120 ug/mL
							Aniline	120 ug/mL
							Anthracene	120 ug/mL
							Azobenzene	120 ug/mL
							Benzo[a]anthracene	120 ug/mL
							Benzo[a]pyrene	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	120 ug/mL
							Benzo[g,h,i]perylene	120 ug/mL
							Benzo[k]fluoranthene	120 ug/mL
							Benzyl alcohol	120 ug/mL
							Bis(2-chloroethoxy)methane	120 ug/mL
							Bis(2-chloroethyl)ether	120 ug/mL
							Bis(2-ethylhexyl) phthalate	120 ug/mL
							Butyl benzyl phthalate	120 ug/mL
							Carbazole	120 ug/mL
							Chrysene	120 ug/mL
							Di-n-butyl phthalate	120 ug/mL
							Di-n-octyl phthalate	120 ug/mL
							Dibenz(a,h)anthracene	120 ug/mL
							Dibenzofuran	120 ug/mL
							Diethyl phthalate	120 ug/mL
							Dimethyl phthalate	120 ug/mL
							Diphenylamine	102 ug/mL
							Fluoranthene	120 ug/mL
							Fluorene	120 ug/mL
							Hexachlorobenzene	120 ug/mL
							Hexachlorobutadiene	120 ug/mL
							Hexachlorocyclopentadiene	120 ug/mL
							Hexachloroethane	120 ug/mL
							Indeno[1,2,3-cd]pyrene	120 ug/mL
							Isophorone	120 ug/mL
							N-Nitrosodi-n-propylamine	120 ug/mL
							N-Nitrosodimethylamine	120 ug/mL
							N-Nitrosodiphenylamine	120 ug/mL
							Naphthalene	120 ug/mL
							Nitrobenzene	120 ug/mL
							Pentachlorophenol	240 ug/mL
							Phenanthrene	120 ug/mL
							Phenol	120 ug/mL
							Pyrene	120 ug/mL
							Pyridine	240 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA160_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	400 uL	2,4,6-Tribromophenol (Surr)	160 ug/mL
							2-Fluorobiphenyl	160 ug/mL
							2-Fluorophenol (Surr)	160 ug/mL
							Nitrobenzene-d5 (Surr)	160 ug/mL
							Phenol-d5 (Surr)	160 ug/mL
							Terphenyl-d14 (Surr)	160 ug/mL
							Famphur	160 ug/mL
							Alachlor	160 ug/mL
							3,3'-Dichlorobenzidine	160 ug/mL
							Benzoic acid	320 ug/mL
							Atrazine	160 ug/mL
							Caprolactam	160 ug/mL
							1,1'-Biphenyl	160 ug/mL
							1,2,4,5-Tetrachlorobenzene	160 ug/mL
							1,2,4-Trichlorobenzene	160 ug/mL
							1,2-Dichlorobenzene	160 ug/mL
							1,2-Diphenylhydrazine	161.756 ug/mL
							1,3-Dichlorobenzene	160 ug/mL
							1,3-Dinitrobenzene	160 ug/mL
							1,4-Dichlorobenzene	160 ug/mL
							1,4-Dioxane	160 ug/mL
							1-Methylnaphthalene	160 ug/mL
							2,2'-oxybis[1-chloropropane]	160 ug/mL
							2,3,4,6-Tetrachlorophenol	160 ug/mL
							2,4,5-Trichlorophenol	160 ug/mL
							2,4,6-Trichlorophenol	160 ug/mL
							2,4-Dichlorophenol	160 ug/mL
							2,4-Dimethylphenol	160 ug/mL
							2,4-Dinitrophenol	320 ug/mL
							2,4-Dinitrotoluene	160 ug/mL
							2,6-Dichlorophenol	160 ug/mL
							2,6-Dinitrotoluene	160 ug/mL
							2-Chloronaphthalene	160 ug/mL
							2-Chlorophenol	160 ug/mL
							2-Methylnaphthalene	160 ug/mL
							2-Methylphenol	160 ug/mL
							2-Nitroaniline	160 ug/mL
							2-Nitrophenol	160 ug/mL
							3 & 4 Methylphenol	160 ug/mL
							3-Nitroaniline	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	320 ug/mL
							4-Bromophenyl phenyl ether	160 ug/mL
							4-Chloro-3-methylphenol	160 ug/mL
							4-Chloroaniline	160 ug/mL
							4-Chlorophenyl phenyl ether	160 ug/mL
							4-Nitroaniline	160 ug/mL
							4-Nitrophenol	320 ug/mL
							Acenaphthene	160 ug/mL
							Acenaphthylene	160 ug/mL
							Acetophenone	160 ug/mL
							Aniline	160 ug/mL
							Anthracene	160 ug/mL
							Azobenzene	160 ug/mL
							Benzo[a]anthracene	160 ug/mL
							Benzo[a]pyrene	160 ug/mL
							Benzo[b]fluoranthene	160 ug/mL
							Benzo[g,h,i]perylene	160 ug/mL
							Benzo[k]fluoranthene	160 ug/mL
							Benzyl alcohol	160 ug/mL
							Bis(2-chloroethoxy)methane	160 ug/mL
							Bis(2-chloroethyl)ether	160 ug/mL
							Bis(2-ethylhexyl) phthalate	160 ug/mL
							Butyl benzyl phthalate	160 ug/mL
							Carbazole	160 ug/mL
							Chrysene	160 ug/mL
							Di-n-butyl phthalate	160 ug/mL
							Di-n-octyl phthalate	160 ug/mL
							Dibenz(a,h)anthracene	160 ug/mL
							Dibenzofuran	160 ug/mL
							Diethyl phthalate	160 ug/mL
							Dimethyl phthalate	160 ug/mL
							Diphenylamine	136 ug/mL
							Fluoranthene	160 ug/mL
							Fluorene	160 ug/mL
							Hexachlorobenzene	160 ug/mL
							Hexachlorobutadiene	160 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	160 ug/mL
							Indeno[1,2,3-cd]pyrene	160 ug/mL
							Isophorone	160 ug/mL
							N-Nitrosodi-n-propylamine	160 ug/mL
							N-Nitrosodimethylamine	160 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							Naphthalene	160 ug/mL
							Nitrobenzene	160 ug/mL
							Pentachlorophenol	320 ug/mL
							Phenanthrene	160 ug/mL
							Phenol	160 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	160 ug/mL
							Pyridine	320 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA200_00037	09/30/18	08/16/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00043	500 uL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
							Famphur	200 ug/mL
							Alachlor	200 ug/mL
							3,3'-Dichlorobenzidine	200 ug/mL
							Benzoic acid	400 ug/mL
							Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
							1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00043	09/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-568023_00042	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00005	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-568023_00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00173	11/30/18	10/01/18	Methylene Chloride, Lot 187286	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00173	11/30/18	10/01/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00047	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5 (Surr)	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14 (Surr)	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2-Methylphenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Pyridine	160 ug/mL
.MS-HSLA_STK_00047	11/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
					MS-571995_00002	2 mL	1,4-Dichlorobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2-Methylphenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,4-Dichlorobenzene	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Pyridine	2000 ug/mL
MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
.MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MV-568718-D_00008	03/31/21		RESTEK, Lot A0118105		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00101	01/25/19	07/25/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00027							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19		Ultra Scientific, Lot CH-3248Z		(Purchased Reagent)		BFB	2000 ug/mL
MV-MegaMain B_00004	12/31/18	11/10/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
					MV-569722.sec_00005	1000 uL	Vinyl chloride	50 ug/mL
					MV-571992.sec_00001	1000 uL	1,1-Dichloroethene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							Benzene	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Trichloroethene	50 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1-Dichloroethene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzene	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Trichloroethene	2500 ug/mL
MV-MegaMainA_00007	12/31/18	11/09/18	P&T Methanol, Lot 181124	50 mL	MV-568720_00022	1266 uL	Acrolein	500.07 ug/mL
					MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569723_00004	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-569727_00007	4000 uL	Cyclohexanone	2000 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					MV-CUS17739_00004	2500 uL	1-Chlorohexane	50 ug/mL
							2-Pentanone	200 ug/mL
							sec-Butyl Alcohol	1500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MV-568720_00022	10/31/18		RESTEK, Lot A0137497		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00004	12/31/20		RESTEK, Lot A0133302		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00007	02/29/20		RESTEK, Lot A0124672		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00004	10/31/20		Ultra, Lot CS-4707		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
pH 7.0 Buffer_00247	10/30/19		SPEX, Lot 1-190 pWX		(Purchased Reagent)		pH adj. to 25 deg C	7 SU
pH 7.0 Buffer_00248	06/30/20		Ricca, Lot 4806L38		(Purchased Reagent)		pH adj. to 25 deg C	7 SU
SFD ICV INT_01516	02/01/19	11/07/18	Di Water, Lot N/A	500 mL	50% NaOH_00015	2 mL	Sodium Hydroxide	2000 mg/L
					SFD ICV STK_00005	4.17228 g	Sulfide	1114 mg/L
.50% NaOH_00015	02/01/19		Fisher, Lot 1603D65		(Purchased Reagent)		Sodium Hydroxide	50 %

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SFD ICV STK_00005	03/26/23	Acros, Lot B0132482A			(Purchased Reagent)		Sulfide	0.1335 g/g
TCLP Spike_00017	05/24/19	Inorganic Ventures, Lot M2-MEB664260			(Purchased Reagent)		Arsenic	300 mg/L
							Barium	1000 mg/L
							Cadmium	100 mg/L
							Chromium	500 mg/L
							Cu	200 mg/L
							Lead	500 mg/L
							Selenium	100 mg/L
							Silver	100 mg/L
							Zn	200 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica St. Louis Job No.: 280-116538-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
FlashPointStd_00003	11/16/19	SCP Science, Lot F53-02			(Purchased Reagent)		Flashpoint	52 Degrees C
p-Xylene_00013	12/01/18	Sigma Aldrich, Lot SHBB3168V			(Purchased Reagent)		Flashpoint	25 Celsius

Reagent

1000 As_00020

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	M2-MO657085
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2052
Starting Material Purity:	99.9933%

4938583
ID: 1000 Mo_00013
Exp: 04/06/21 Prpd: SJS
1000 Mo IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1003 ± 6 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1005 ± 3 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **1000 ± 4 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000601	M	Eu	<	0.000301	O	Na	<	0.010370	M	Se	<	0.005110	M	Zn	<	0.111820
M	Al		0.000977	M	Fe		0.000545	M	Nb	<	0.028857	i	Si	<	0.000001	M	Zr	<	0.000301
M	As		0.006654	M	Ga	<	0.001202	i	Nd	<	0.000001	M	Sm	<	0.001202				
M	Au	<	0.001512	M	Gd	<	0.000301	M	Ni	<	0.009619	M	Sn		0.000453				
M	B	<	0.004208	M	Ge	<	0.001202	M	Os	<	0.000302	M	Sr		0.000082				
O	Ba		0.000426	M	Hf	<	0.000301	i	P	<	0.000001	M	Ta	<	0.000301				
M	Be	<	0.001503	M	Hg	<	0.002117	M	Pb	<	0.001202	M	Tb	<	0.000301				
M	Bi	<	0.000301	M	Ho	<	0.000301	M	Pd	<	0.013911	i	Te	<	0.000001				
O	Ca		0.003293	M	In	<	0.037273	M	Pr		0.002057	M	Th	<	0.001202				
O	Cd	<	0.007835	M	Ir	<	0.000302	M	Pt	<	0.025851	O	Ti	<	0.010370				
M	Ce	<	0.030059	M	K		0.012847	M	Rb	<	0.004208	M	Tl		0.000113				
M	Co	<	0.010821	M	La	<	0.000301	M	Re		0.009268	M	Tm	<	0.000301				
M	Cr		0.004042	O	Li		0.000071	M	Rh	<	0.000301	M	U	<	0.000601				
M	Cs	<	0.002405	M	Lu	<	0.000301	M	Ru	<	0.008116	M	V	<	0.006012				
M	Cu	<	0.012024	O	Mg		0.000071	i	S	<	0.000001	M	W		0.102858				
M	Dy	<	0.001202	M	Mn	<	0.015631	M	Sb	<	0.024047	M	Y	<	0.000301				
M	Er	<	0.000301	s	Mo	<		M	Sc	<	0.003006	M	Yb	<	0.000301				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 06, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 06, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Revision 1: Added 30 mL statement. 101717JB

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4] -2(chemical form as received)
Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5] -2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4] -2 chemically stable for years in 1% NH4OH in a LDPE container.
Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 06, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 06, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Revision 1: Added 30 mL statement. 101717JB

Reagent

1000 Pb_00023

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 10, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 10, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Revision 1: Added 30 mL statements. 100617JB.

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB1
Lot Number:	M2-PB656988
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	1985
Starting Material Purity:	99.9987%

4907263
ID: 1000 Pb_00023
Exp: 04/10/21 Prpd: S/S
1000 Pb IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 3 µg/mL

Density: 1.002 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **998 ± 3 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000300	M	Eu	<	0.000300	O	Na		0.000381	M	Se	<	0.002403	M	Zn		0.001443
M	Al		0.007256	O	Fe		0.000809	M	Nb	<	0.000300	O	Si		0.002695	M	Zr	<	0.000601
M	As	<	0.000300	M	Ga	<	0.000300	M	Nd	<	0.000300	M	Sm	<	0.002403				
M	Au	<	0.000897	M	Gd		0.000343	O	Ni	<	0.002756	M	Sn	<	0.001803				
O	B	<	0.002808	M	Ge	<	0.000601	M	Os	<	0.000299	O	Sr		0.000038				
M	Ba		0.000675	M	Hf	<	0.000300	O	P	<	0.041600	M	Ta	<	0.000300				
O	Be	<	0.000232	M	Hg	<	0.000299	s	Pb	<		M	Tb	<	0.000300				
O	Bi		0.004312	M	Ho	<	0.000300	M	Pd	<	0.000300	M	Te	<	0.006609				
O	Ca		0.001941	M	In	<	0.000300	M	Pr	<	0.000300	M	Th	<	0.000300				
O	Cd		0.000027	M	Ir	<	0.000299	M	Pt	<	0.000300	M	Ti		0.000156				
M	Ce	<	0.000300	O	K		0.001290	M	Rb	<	0.001202	M	Tl	<	0.006009				
M	Co	<	0.000601	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000073	O	Li		0.000045	O	Rh	<	0.009048	M	U	<	0.000300				
M	Cs	<	0.003004	M	Lu	<	0.000601	M	Ru	<	0.000299	M	V	<	0.000300				
O	Cu	<	0.002080	O	Mg		0.000169	O	S	<	0.031200	M	W	<	0.000601				
M	Dy	<	0.000601	M	Mn	<	0.000601	M	Sb	<	0.000300	M	Y	<	0.000300				
M	Er	<	0.000300	M	Mo	<	0.000300	O	Sc	<	0.000504	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 Pb(H2O)6+2
Chemical Compatibility - Soluble in HCl, HF and HNO3. Avoid H2SO4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H2O / HNO3); Oxides (The many different Pb oxides are soluble in HNO3 with the exception of PbO2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H2O / HNO3); Organic Matrices (Dry ash and dissolve in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Se_00019

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 01, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

INORGANIC VENTURES
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Christiansburg, VA 24073 - USA
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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE(4)1
Lot Number:	K2-SE02067
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Selenium
Starting Material:	Se shot
Starting Material Lot#:	1616
Starting Material Purity:	99.9996%

5225620
ID: 1000 Se_00019
Exp: 06/01/20 Prpd: SJS
1000 Se IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1006 ± 6 µg/mL
Certified Density:	1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1006 ± 5 µg/mL**
	ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007579	M	Eu	<	0.011369	O	Na		0.002654	s	Se	<		O	Zn	<	0.000200
O	Al		0.000169	O	Fe		0.000199	O	Nb	<	0.004000	O	Si	<	0.003000	O	Zr	<	0.000400
O	As	<	0.005000	M	Ga	<	0.003789	M	Nd	<	0.007579	M	Sm	<	0.003789				
M	Au	<	0.011369	M	Gd	<	0.003789	O	Ni	<	0.000900	M	Sn	<	0.018949				
O	B		0.000690	M	Ge	<	0.022739	n	Os	<		M	Sr	<	0.001894				
M	Ba	<	0.037899	M	Hf	<	0.007579	O	P	<	0.003000	M	Ta	<	0.026529				
O	Be	<	0.000090	O	Hg	<	0.014000	M	Pb	<	0.011369	M	Tb	<	0.001136				
M	Bi	<	0.001515	M	Ho	<	0.001894	M	Pd	<	0.018949	M	Te	<	0.113699				
O	Ca		0.000437	M	In	<	0.037899	M	Pr	<	0.001136	M	Th	<	0.003789				
M	Cd	<	0.011369	M	Ir	<	0.018949	M	Pt	<	0.007579	M	Ti	<	0.189499				
M	Ce	<	0.018949	O	K		0.000212	M	Rb	<	0.003789	M	Tl	<	0.003789				
M	Co	<	0.011369	M	La	<	0.001894	O	Re	<	0.009000	M	Tm	<	0.001515				
M	Cr	<	0.018949	O	Li	<	0.000030	M	Rh	<	0.003789	M	U	<	0.007579				
M	Cs	<	0.001136	M	Lu	<	0.001515	O	Ru	<	0.007000	M	V	<	0.007579				
M	Cu	<	0.022739	O	Mg		0.000066	O	S	<	0.040000	M	W	<	0.037899				
M	Dy	<	0.022739	M	Mn	<	0.015159	M	Sb	<	0.001894	M	Y	<	0.151599				
M	Er	<	0.018949	O	Mo	<	0.004000	M	Sc	<	0.037899	M	Yb	<	0.003789				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

Reagent

10000 Si_00015

INORGANIC™ VENTURES

300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI10
Lot Number:	M2-SI657321
Matrix:	1% (v/v) HNO3 1.4% (v/v) HF
Value / Analyte(s):	10 000 µg/mL ea: Silicon
Starting Material:	Fumed Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9908%

4938600
ID: 10000 Si_00015
Exp: 04/25/21 Prpd: SJS
10000 SI IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10023 ± 48 µg/mL

Density: 1.045 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3150 Lot Number: 130912

Assay Method #2 **9989 ± 57 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001488	M	Eu	<	0.000248	O	Na		0.016935	M	Se	<	0.002977	O	Zn	<	0.012935
O	Al		0.112342	M	Fe		0.026932	O	Nb	<	0.005610	s	Si	<		O	Zr	<	0.001122
M	As	<	0.003953	M	Ga	<	0.000248	M	Nd	<	0.000248	M	Sm	<	0.000248				
M	Au	<	0.029405	M	Gd	<	0.000248	M	Ni	<	0.003225	M	Sn	<	0.000744				
O	B		0.143798	M	Ge	<	0.001240	M	Os	<	0.000247	O	Sr		0.001081				
O	Ba		0.002655	M	Hf		0.001987	i	P	<	0.000001	M	Ta		0.015006				
O	Be	<	0.000336	M	Hg	<	0.001482	M	Pb	<	0.000744	M	Tb	<	0.000248				
M	Bi		0.007751	M	Ho	<	0.000248	M	Pd	<	0.000248	M	Te	<	0.000744				
O	Ca		0.211203	M	In	<	0.000496	M	Pr	<	0.000248	M	Th	<	0.007940				
M	Cd	<	0.000248	M	Ir	<	0.000247	M	Pt	<	0.000248	O	Ti		0.004305				
M	Ce	<	0.000992	O	K		0.027489	M	Rb	<	0.068983	M	Tl	<	0.007940				
M	Co	<	0.000248	M	La	<	0.000248	M	Re	<	0.000248	M	Tm	<	0.000248				
O	Cr	<	0.004488	O	Li		0.000096	M	Rh	<	0.000248	M	U	<	0.000248				
M	Cs	<	0.006451	M	Lu	<	0.000248	M	Ru	<	0.000247	M	V	<	0.005459				
O	Cu	<	0.001945	O	Mg		0.013364	O	S		1.364159	M	W	<	0.005459				
M	Dy	<	0.000248	M	Mn	<	0.002481	M	Sb	<	0.003970	M	Y	<	0.000248				
M	Er	<	0.000248	M	Mo	<	0.002233	O	Sc	<	0.000235	M	Yb	<	0.000248				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 25, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 25, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Revision1: Added 30mL statements 092217JAK

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

8081 ToxStock_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene Standard
Lot: 215011420
Solvent: Hexane
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*



Danger 2

Date Certified: Jan 30, 2015
Expiration: Jan 30, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1001	1001

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 5/16

Reagent

8081 ToxStock_00021

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene Standard
Lot: 215011420
Solvent: Hexane
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*



Danger 2

Date Certified: Jan 30, 2015
Expiration: Jan 30, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1001	1001

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 5/16

Reagent

8081/82 Surr_00105

Preliminary Report

TestAmerica Denver

Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\09281804.D				
Lims ID:	8082 Surr 105				
Client ID:					
Sample Type:	Client				
Inject. Date:	28-Sep-2018 11:22:28	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	8082 Surr 105				
Misc. Info.:	280-0074499-004				
Operator ID:	JAX/MED	Instrument ID:	SGC_P3		
Method:	\\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\PCB_P3.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	01-Oct-2018 09:58:25	Calib Date:	20-Sep-2018 22:52:41		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P3\20180920-74190.b\09201835.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0302				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	20.3	101.59
$ 15 DCB Decachlorobiphenyl	20.0	15.6	78.08

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	16.1	80.29
$ 15 DCB Decachlorobiphenyl	20.0	17.4	86.89

Reagent

8081ABResPS_00026

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #2222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415 **Lot No.:** A0129369

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2021 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	alpha-BHC		2,012.0 µg/mL	+/- 11.8075	µg/mL	Gravimetric
	CAS # 319-84-6	(Lot 0911942)		+/- 91.6450	µg/mL	Unstressed
	Purity 99%			+/- 132.3230	µg/mL	Stressed
2	gamma-BHC (Lindane)		2,010.5 µg/mL	+/- 11.7987	µg/mL	Gravimetric
	CAS # 58-89-9	(Lot 6357300)		+/- 91.5767	µg/mL	Unstressed
	Purity 99%			+/- 132.2244	µg/mL	Stressed
3	beta-BHC		2,011.9 µg/mL	+/- 11.8072	µg/mL	Gravimetric
	CAS # 319-85-7	(Lot SZBD116XV)		+/- 91.6423	µg/mL	Unstressed
	Purity 98%			+/- 132.3191	µg/mL	Stressed
4	delta-BHC		2,017.0 µg/mL	+/- 11.8369	µg/mL	Gravimetric
	CAS # 319-86-8	(Lot ER02101401)		+/- 91.8728	µg/mL	Unstressed
	Purity 99%			+/- 132.6518	µg/mL	Stressed
5	Heptachlor		2,011.5 µg/mL	+/- 11.8046	µg/mL	Gravimetric
	CAS # 76-44-8	(Lot NT056422)		+/- 91.6223	µg/mL	Unstressed
	Purity 99%			+/- 132.2901	µg/mL	Stressed
6	Aldrin		2,009.0 µg/mL	+/- 11.7899	µg/mL	Gravimetric
	CAS # 309-00-2	(Lot 5923100)		+/- 91.5084	µg/mL	Unstressed
	Purity 98%			+/- 132.1257	µg/mL	Stressed
7	Heptachlor epoxide (isomer B)		2,007.0 µg/mL	+/- 11.7782	µg/mL	Gravimetric
	CAS # 1024-57-3	(Lot ER121511-01)		+/- 91.4173	µg/mL	Unstressed
	Purity 99%			+/- 131.9942	µg/mL	Stressed

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

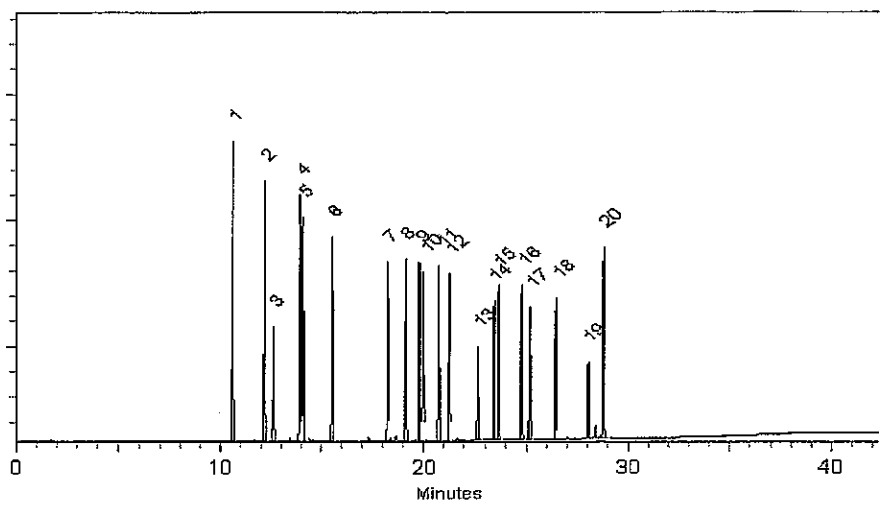
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 24-Jul-2017 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 25-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

8	trans-Chlordane		2,007.0	µg/mL	+/-	11.7782	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot ER061906-04)			+/-	91.4173	µg/mL	Unstressed
	Purity 99%				+/-	131.9942	µg/mL	Stressed
9	cis-Chlordane		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot ER062410-01)			+/-	91.3717	µg/mL	Unstressed
	Purity 99%				+/-	131.9284	µg/mL	Stressed
10	Endosulfan I		2,013.0	µg/mL	+/-	11.8134	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot ER012105-02)			+/-	91.6906	µg/mL	Unstressed
	Purity 99%				+/-	132.3888	µg/mL	Stressed
11	4,4'-DDE		2,008.5	µg/mL	+/-	11.7870	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	91.4856	µg/mL	Unstressed
	Purity 99%				+/-	132.0928	µg/mL	Stressed
12	Dieldrin		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot ER030105-03)			+/-	91.3717	µg/mL	Unstressed
	Purity 99%				+/-	131.9284	µg/mL	Stressed
13	Endrin		2,019.3	µg/mL	+/-	11.8503	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 6429800)			+/-	91.9771	µg/mL	Unstressed
	Purity 98%				+/-	132.8025	µg/mL	Stressed
14	4,4'-DDD		2,014.9	µg/mL	+/-	11.8244	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot ER061207-01)			+/-	91.7762	µg/mL	Unstressed
	Purity 98%				+/-	132.5124	µg/mL	Stressed
15	Endosulfan II		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot ER102407-02)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed
16	Endrin aldehyde		2,008.5	µg/mL	+/-	11.7870	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot ER082306-01)			+/-	91.4856	µg/mL	Unstressed
	Purity 99%				+/-	132.0928	µg/mL	Stressed
17	4,4'-DDT		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)			+/-	91.5084	µg/mL	Unstressed
	Purity 99%				+/-	132.1257	µg/mL	Stressed
18	Endosulfan sulfate		2,009.3	µg/mL	+/-	11.7916	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot SZBC213XV)			+/-	91.5211	µg/mL	Unstressed
	Purity 96%				+/-	132.1441	µg/mL	Stressed
19	Methoxychlor		2,015.4	µg/mL	+/-	11.8273	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 6429900)			+/-	91.7985	µg/mL	Unstressed
	Purity 98%				+/-	132.5446	µg/mL	Stressed
20	Endrin ketone		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 160405JLM)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ABResPS_00030

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

1 x 1mL
Received 8/13/18
AMB

Catalog No. : 32415 **Lot No.:** A0133751

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC **CAS #** 319-84-6 (Lot 0911942) **Purity** 99%	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 91.8956 µg/mL +/- 132.6847 µg/mL	Gravimetric Unstressed Stressed
2	gamma-BHC (Lindane) **CAS #** 58-89-9 (Lot 6815700) **Purity** 99%	2,010.5 µg/mL	+/- 11.7987 µg/mL +/- 91.5767 µg/mL +/- 132.2244 µg/mL	Gravimetric Unstressed Stressed
3	beta-BHC **CAS #** 319-85-7 (Lot BCBS8692V) **Purity** 98%	2,014.9 µg/mL	+/- 11.8244 µg/mL +/- 91.7762 µg/mL +/- 132.5124 µg/mL	Gravimetric Unstressed Stressed
4	delta-BHC **CAS #** 319-86-8 (Lot ER02101401) **Purity** 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 91.5539 µg/mL +/- 132.1915 µg/mL	Gravimetric Unstressed Stressed
5	Heptachlor **CAS #** 76-44-8 (Lot NT057754) **Purity** 99%	2,016.5 µg/mL	+/- 11.8340 µg/mL +/- 91.8500 µg/mL +/- 132.6190 µg/mL	Gravimetric Unstressed Stressed
6	Aldrin **CAS #** 309-00-2 (Lot 6869200) **Purity** 97%	2,010.8 µg/mL	+/- 11.8006 µg/mL +/- 91.5908 µg/mL +/- 132.2447 µg/mL	Gravimetric Unstressed Stressed
7	Heptachlor epoxide (isomer B) **CAS #** 1024-57-3 (Lot ER121511-01) **Purity** 99%	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 91.8956 µg/mL +/- 132.6847 µg/mL	Gravimetric Unstressed Stressed

8	trans-Chlordane		2,012.5	µg/mL	+/-	11.8105	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot ER061906-04)			+/-	91.6678	µg/mL	Unstressed
	Purity 99%				+/-	132.3559	µg/mL	Stressed
9	cis-Chlordane		2,014.0	µg/mL	+/-	11.8193	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot ER062410-01)			+/-	91.7361	µg/mL	Unstressed
	Purity 99%				+/-	132.4545	µg/mL	Stressed
10	Endosulfan I		2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot ER012105-02)			+/-	91.5539	µg/mL	Unstressed
	Purity 99%				+/-	132.1915	µg/mL	Stressed
11	4,4'-DDE		2,011.0	µg/mL	+/-	11.8017	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot ER011106-01)			+/-	91.5995	µg/mL	Unstressed
	Purity 99%				+/-	132.2572	µg/mL	Stressed
12	Dieldrin		2,011.0	µg/mL	+/-	11.8017	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot 5416800)			+/-	91.5995	µg/mL	Unstressed
	Purity 99%				+/-	132.2572	µg/mL	Stressed
13	Endrin		2,016.4	µg/mL	+/-	11.8331	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 6898800)			+/-	91.8432	µg/mL	Unstressed
	Purity 98%				+/-	132.6091	µg/mL	Stressed
14	4,4'-DDD		2,010.5	µg/mL	+/-	11.7987	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot HAN02-KNCK)			+/-	91.5767	µg/mL	Unstressed
	Purity 99%				+/-	132.2244	µg/mL	Stressed
15	Endosulfan II		2,009.5	µg/mL	+/-	11.7929	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot 6815600)			+/-	91.5312	µg/mL	Unstressed
	Purity 99%				+/-	132.1586	µg/mL	Stressed
16	Endrin aldehyde		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot ER082306-01)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed
17	4,4'-DDT		2,012.5	µg/mL	+/-	11.8105	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)			+/-	91.6678	µg/mL	Unstressed
	Purity 99%				+/-	132.3559	µg/mL	Stressed
18	Endosulfan sulfate		2,020.0	µg/mL	+/-	11.8545	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot BCBR9875V)			+/-	92.0094	µg/mL	Unstressed
	Purity 99%				+/-	132.8491	µg/mL	Stressed
19	Methoxychlor		2,018.5	µg/mL	+/-	11.8457	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 6736800)			+/-	91.9411	µg/mL	Unstressed
	Purity 99%				+/-	132.7505	µg/mL	Stressed
20	Endrin ketone		2,015.5	µg/mL	+/-	11.8281	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 160405JLM)			+/-	91.8045	µg/mL	Unstressed
	Purity 99%				+/-	132.5532	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

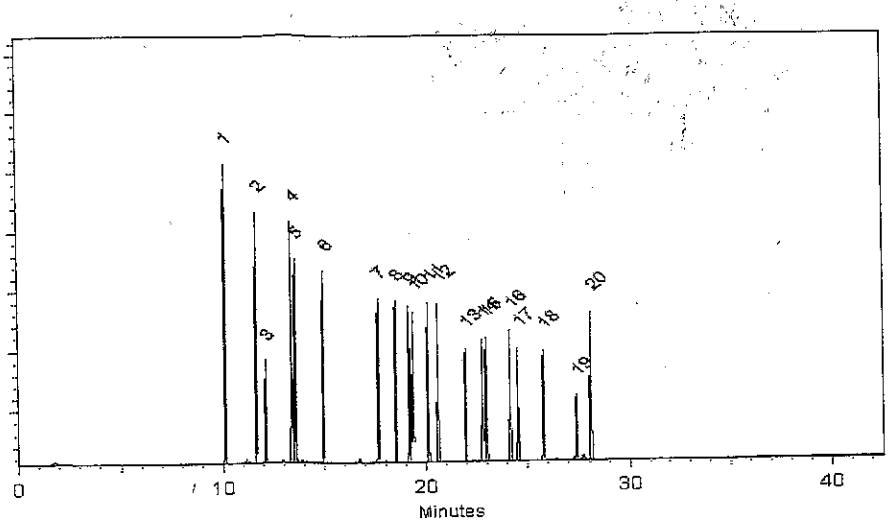
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 27-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Jan-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ABResSS_00012

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415.sec **Lot No.:** A0108854

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC **CAS #** 319-84-6.SEC (Lot 1623900) **Purity** 99%	2,009.5 µg/mL	+/- 11.7929 µg/mL +/- 78.6071 µg/mL +/- 124.7419 µg/mL	Gravimetric Unstressed Stressed
2	gamma-BHC (Lindane) **CAS #** 58-89-9.SEC (Lot LC00563V) **Purity** 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 78.6267 µg/mL +/- 124.7729 µg/mL	Gravimetric Unstressed Stressed
3	beta-BHC **CAS #** 319-85-7.SEC (Lot 1808700) **Purity** 98%	2,003.1 µg/mL	+/- 11.7554 µg/mL +/- 78.3575 µg/mL +/- 124.3458 µg/mL	Gravimetric Unstressed Stressed
4	delta-BHC **CAS #** 319-86-8.SEC (Lot 1912200) **Purity** 99%	2,003.5 µg/mL	+/- 11.7577 µg/mL +/- 78.3724 µg/mL +/- 124.3694 µg/mL	Gravimetric Unstressed Stressed
5	Heptachlor **CAS #** 76-44-8.SEC (Lot 1745400) **Purity** 99%	2,000.5 µg/mL	+/- 11.7401 µg/mL +/- 78.2551 µg/mL +/- 124.1832 µg/mL	Gravimetric Unstressed Stressed
6	Aldrin **CAS #** 309-00-2.SEC (Lot ER062311-01) **Purity** 98%	2,004.1 µg/mL	+/- 11.7612 µg/mL +/- 78.3959 µg/mL +/- 124.4067 µg/mL	Gravimetric Unstressed Stressed

8	trans-Chlordane		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 5103-74-2.SEC	(Lot LC06193V)			+/-	78.4702	µg/mL	Unstressed
	Purity 99%				+/-	124.5246	µg/mL	Stressed
9	cis-Chlordane		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 5103-71-9.SEC	(Lot 24407)			+/-	78.5876	µg/mL	Unstressed
	Purity 99%				+/-	124.7108	µg/mL	Stressed
10	Endosulfan I		2,002.1	µg/mL	+/-	11.7497	µg/mL	Gravimetric
	CAS # 959-98-8.SEC	(Lot 1710200)			+/-	78.3192	µg/mL	Unstressed
	Purity 98%				+/-	124.2850	µg/mL	Stressed
11	4,4'-DDE		2,001.5	µg/mL	+/-	11.7459	µg/mL	Gravimetric
	CAS # 72-55-9.SEC	(Lot 1833500)			+/-	78.2942	µg/mL	Unstressed
	Purity 99%				+/-	124.2453	µg/mL	Stressed
12	Dieldrin		1,995.3	µg/mL	+/-	11.7094	µg/mL	Gravimetric
	CAS # 60-57-1.SEC	(Lot 1274700)			+/-	78.0509	µg/mL	Unstressed
	Purity 98%				+/-	123.8591	µg/mL	Stressed
13	Endrin		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 72-20-8 *	(Lot LC06045V)			+/-	78.2355	µg/mL	Unstressed
	Purity 99%				+/-	124.1521	µg/mL	Stressed
14	4,4'-DDD		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 72-54-8.SEC	(Lot 1141700)			+/-	78.5876	µg/mL	Unstressed
	Purity 98%				+/-	124.7108	µg/mL	Stressed
15	Endosulfan II		2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS # 33213-65-9.SEC	(Lot 3437500)			+/-	78.6267	µg/mL	Unstressed
	Purity 99%				+/-	124.7729	µg/mL	Stressed
16	Endrin aldehyde		2,016.4	µg/mL	+/-	11.8331	µg/mL	Gravimetric
	CAS # 7421-93-4.SEC	(Lot 21752)			+/-	78.8751	µg/mL	Unstressed
	Purity 98%				+/-	125.1671	µg/mL	Stressed
17	4,4'-DDT		2,016.5	µg/mL	+/-	11.8340	µg/mL	Gravimetric
	CAS # 50-29-3.SEC	(Lot 3478000)			+/-	78.8809	µg/mL	Unstressed
	Purity 99%				+/-	125.1764	µg/mL	Stressed
18	Endosulfan sulfate		2,007.5	µg/mL	+/-	11.7813	µg/mL	Gravimetric
	CAS # 1031-07-8.SEC	(Lot 1888900)			+/-	78.5301	µg/mL	Unstressed
	Purity 98%				+/-	124.6196	µg/mL	Stressed
19	Methoxychlor		2,007.0	µg/mL	+/-	11.7782	µg/mL	Gravimetric
	CAS # 72-43-5.SEC	(Lot LC09014V)			+/-	78.5093	µg/mL	Unstressed
	Purity 99%				+/-	124.5867	µg/mL	Stressed
20	Endrin ketone		2,007.5	µg/mL	+/-	11.7813	µg/mL	Gravimetric
	CAS # 53494-70-5.SEC	(Lot 091307RD)			+/-	78.5301	µg/mL	Unstressed
	Purity 98%				+/-	124.6196	µg/mL	Stressed
Solvent:	Hexane/Toluene (50:50)							
	CAS # 110-54-3/108-88-3							
	Purity 99%							

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

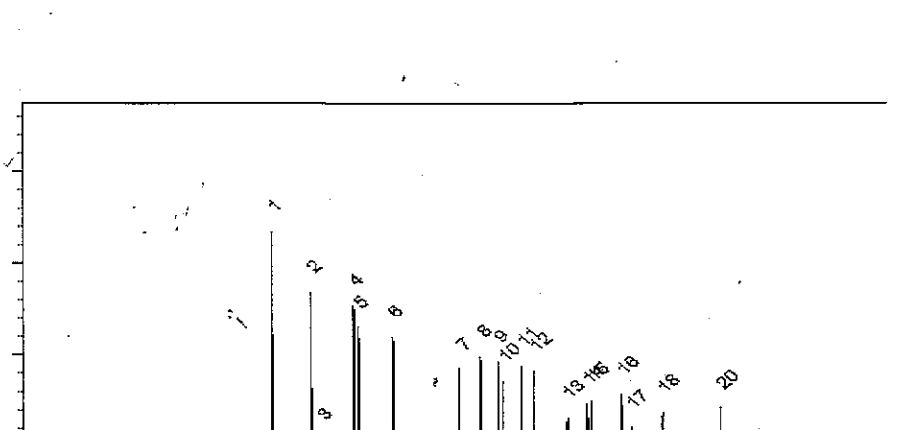
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 04-Feb-2015 **Balance:** B345965662

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 12-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

This certificated has been updated on 31January2017 for the following reasons and supersedes any pre-existing certificate: Elution order corrected to have Endosulfan 1 as peak 10 (was listed as peak 11), 4,4'-DDE as peak 11 (was listed as peak 10), 4,4'-DDT as peak 17 (was listed as 16), Endrin aldehyde as peak 16 (was listed as 17).

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ChlrStkPS_00023

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32072 **Lot No.:** A0118733

Description : Chlordane Standard

Chlordane Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Chlordane	5,032.0 µg/mL	+/- 29.5306 µg/mL	Gravimetric
	CAS # 57-74-9 (Lot 30912)		+/- 159.4840 µg/mL	Unstressed
	Purity -----%		+/- 208.3392 µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Tech Tips:
CAS #57-74-9 nomenclature is based on EPA method 8081B.

Reagent

8081ChlrStkPS_00025

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571052-FL **Lot No.:** A0128252

Description : Chlordane Standard

Chlordane Standard 5,000µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2021 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Chlordane	5,034.0 µg/mL	+/- 29.5423	µg/mL	Gravimetric
	CAS # 57-74-9 (Lot 118924)		+/- 159.5474	µg/mL	Unstressed
	Purity 99%		+/- 208.4220	µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Specific Reference Material Notes:
This material may be reported as technical chlordane, with CAS number 12789-03-6

Tech Tips:
CAS #57-74-9 nomenclature is based on EPA method 8081B.

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

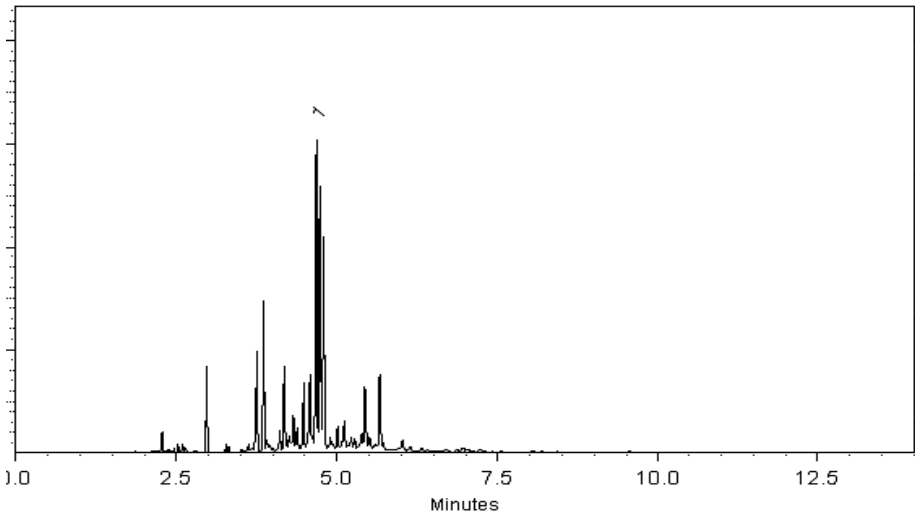
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 07-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 09-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571052-SL **Lot No.:** A0128498

Description : Chlordane Standard

Chlordane Standard 5,000µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2021 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Chlordane	4,982.0 µg/mL	+/- 29.2372 µg/mL	Gravimetric
	CAS # 57-74-9 (Lot 118924)		+/- 157.8993 µg/mL	Unstressed
	Purity 99%		+/- 206.2691 µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Specific Reference Material Notes:
This material may be reported as technical chlordane, with CAS number 12789-03-6

Tech Tips:
CAS #57-74-9 nomenclature is based on EPA method 8081B.

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

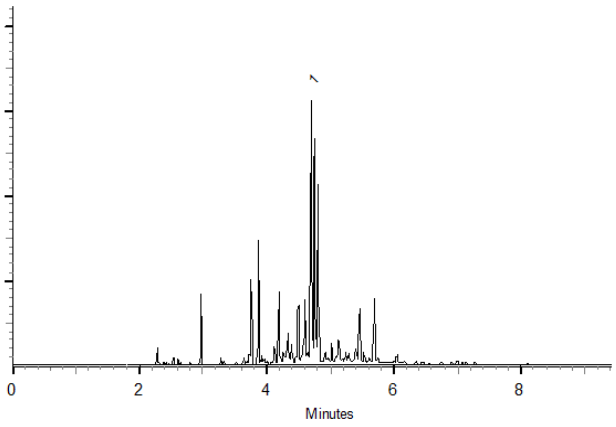
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 15-Jun-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 20-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081EvalBStk2_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 217101288
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Oct 30, 2017
Expiration: Nov 30, 2018
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
4,4'-DDT	50-29-3	98.2	200.6	197.0
Endrin	72-20-8	98.1	200.8	197.0

Received 03.28.18 KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8081HCBStkPS_00021

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112
Description: Hexachlorobenzene
Lot: 216101286
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Oct 26, 2016
Expiration: Oct 26, 2026
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Hexachlorobenzene	118-74-1	99.2	100.4	99.6

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

CERTIFICATION REPORT

1. **Quality Documentation:** This certificate is designed in accordance with ISO Guide 31 (Reference Materials - Contents of Certificates and Labels) and ISO Guide 35 (Reference Materials – General and Statistical Principles for Certification).

2. **Quality Standards:**

   ISO Guide 34 - General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   AR-1463

   ISO/IEC 17025 - General Requirements for the Competence of Testing and Calibration Laboratories ANAB Certificate Number AT-1339

   AT-1339

   ISO 9001 - Quality Management System - Requirements Eagle Registrations Certificate Number 3774

3. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11. If dilution is required, use only Class A glassware and diluent compatible with all certified analytes in this preparation. All solutions should be thoroughly mixed prior to use.

4. **Raw Materials:** Reference standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated prior to use.

5. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

6. **Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other methods consistent with the intended use of the product and by procedures that comply with the appropriate Quality System requirements, and ISO Guide 35.

7. **Stability Assessment:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container thoroughly prior to use. Care should be taken not to contaminate the contents of the original container.

8. **Analytical Quality Control:** Products are tested by validated analytical methods specified in the manufacturer's quality system.

9. **Uncertainty Statistics and Confidence Limits:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_m = \sqrt{(u(P))^2 + (u(m))^2 + (u(V))^2}$. The expanded uncertainty, U_{CRM} assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level. The U_{CRM} for organic products is ±5%, the U_{CRM} for inorganic products is ±2%.

10. **Warranties:** The manufacturer warrants that its products shall conform to the description of such products as provided in its catalog or on the specific product label. This warranty is exclusive, and the manufacturer makes no other warranty, express or implied, including any implied warranty of merchantability or fitness for any particular purpose.

11. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. Due to the hazardous nature, only trained personnel should handle this product. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

8081HCBStkSS_00038

Certificate of Analysis

Hexachlorobenzene Solution

Product Number: EPA-1125 **Page:** 1 of 1

Lot Number: CR-5129 **Lot Issue Date:** 08-Nov-2017 **Expiration Date:** 31-Dec-2021

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
hexachlorobenzene	000118-74-1	RM03125	1003 ± 5 µg/mL

Matrix: acetone

Storage: Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
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Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32071 **Lot No.:** A0123422

Description : Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Toxaphene	5,018.0 µg/mL	+/- 29.4484	µg/mL	Gravimetric
	CAS # 8001-35-2 (Lot NT054507)		+/- 159.0403	µg/mL	Unstressed
	Purity ---%		+/- 207.7596	µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

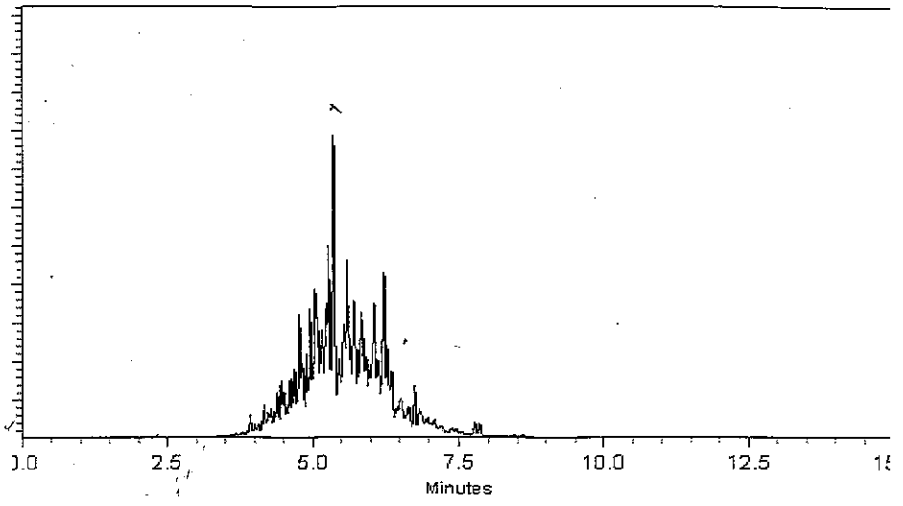
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 12-Dec-2016 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 13-Dec-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\,stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\,stability} + U^2_{shipping\,stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ToxPS_00039

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

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Catalog No. : 32071 **Lot No.:** A0128388

Description : Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2021 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Toxaphene	5,034.0 µg/mL	+/- 29.5423 µg/mL	Gravimetric
	CAS # 8001-35-2 (Lot NT057448)		+/- 159.5474 µg/mL	Unstressed
	Purity ----%		+/- 208.4220 µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

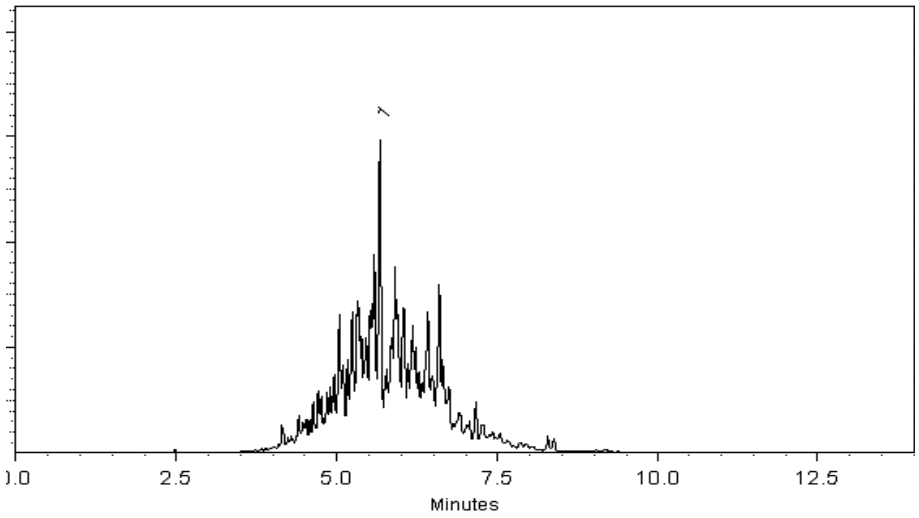
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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Joseph Jaglowski - Mix Technician

Date Mixed: 12-Jun-2017 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 03-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

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Reagent

8081ToxSS_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene
Lot: 217071319
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Jul 20, 2017
Expiration: Jul 20, 2027
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1002	1002

Received
03·28·18
KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8082 LCS_00049

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8082 LCS _ 00049

Reagent ID: 8082 LCS_00049

		Expiration Date:	08/05/2018
Description:	2 ug/mL	Lab [illegible]:	TestAmerica Denver
No. of Bottles:	2	Prep [illegible]:	Sriphuthorn, Kittiyada
Storage Location:	North Prep	Solvent:	ACETONE
Reagent Volume:	500.000 mL	Solvent Lot:	Acetone_00221
Creation Date:	07/11/2018		
Open Date:			
Container(s):	5210229, 5210230		
Comment:	Take 1mL 8082LCSStock and dilute to 500mL in Ac[illegible]ne. 6 Month expiration date. Divide into 2 bottles.		

PASS 13-July 2018

Reagent Analyte Information

Analyte	%R	%D	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
PCB-1016	95	5.0	8082LCSSTOCK_[illegible]	04/[illegible]/2022	[illegible]	[illegible]	2.[illegible]00	ug/mL
PCB-1260	92	8.3	8082LCSSTOCK_00034	04/30/2022	1000.[illegible]	ug/mL	2.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8082LCSSTOCK_00034	Aroclor 1016/1260 1000UG/ML	ASTD	04/30/22	RESTEK	A011[illegible]2	3[illegible]39	1.00000	mL

Preliminary Report

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D
Lims ID: 8082 LCS_00049
Client ID:
Sample Type: Client
Inject. Date: 13-Jul-2018 09:32:10 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 10.0000
Sample Info: 8082 LCS_00049
Misc. Info.: 280-0071939-004
Operator ID: JAX Instrument ID: SGC_P3

Method: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\PCB_P3.m
Limit Group: GCSV - 8082 - IS
Last Update: 13-Jul-2018 12:44:25 Calib Date: 20-May-2018 23:47:28
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P3\20180520-70135.b\05201835.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.832	1.834	-0.002	3364580530	1000.0	
2	1.755	1.754	0.001	914663468	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						U
1		2.750			ND	
2		2.781				
3 PCB-1221						U
1		2.967			ND	
1		3.110				
1		3.147				
2		3.097				
2		3.227				
2		3.280				
7 PCB-1232						U
1		3.145			ND	
1		3.492				
1		3.959				
1		4.099				
1		4.549				
2		3.279				
2		3.669				
2		4.126				
2		4.269				
2		4.796				

Preliminary Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
1 PCB-1016						
1	3.485	3.487	-0.002	203488343	184.8	
1	3.952	3.954	-0.002	484409114	193.2	
1	4.092	4.090	0.002	193370944	179.9	
1	4.302	4.304	-0.002	219686919	206.3	
1	4.538	4.537	0.001	208592567	186.9	
		Average of Peak Amounts =			190.2	
2	3.665	3.664	0.001	56306865	180.9	
2	4.122	4.121	0.001	130662122	182.6	
2	4.262	4.264	-0.002	49916935	174.4	
2	4.495	4.494	0.001	34467906	218.9	
2	4.785	4.787	-0.002	41291800	177.2	
		Average of Peak Amounts =			186.8	
					RPD = 1.79	
10 PCB-1242						U
1		3.492			ND	
1		3.962				
1		4.548				
1		5.038				
1		5.062				
2		3.669				
2		4.125				
2		4.269				
2		4.795				
2		4.932				
4 PCB-1248						U
1		3.952			ND	
1		4.308				
1		4.545				
1		5.295				
1		5.778				
2		4.125				
2		4.502				
2		4.792				
2		4.932				
2		6.105				

Preliminary Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.300			ND	
1		5.630				
1		5.783				
1		6.383				
1		6.750				
2		5.537				
2		5.960				
2		6.107				
2		6.657				
2		7.127				
12 PCB-1260						
1	6.005	6.007	-0.002	298207506	186.3	
1	6.732	6.730	0.002	587506377	189.6	
1	7.222	7.220	0.002	275021459	181.4	
1	7.652	7.654	-0.002	611908583	179.7	
1	8.035	8.037	-0.002	347624059	183.1	
		Average of Peak Amounts =			184.0	
2	6.645	6.647	-0.002	100659872	185.2	
2	7.115	7.114	0.001	156955927	189.0	
2	7.642	7.641	0.001	69492806	181.1	
2	8.009	8.011	-0.002	162573903	176.9	
2	8.512	8.514	-0.002	120717439	180.0	
		Average of Peak Amounts =			182.4	
					RPD = 0.87	
5 PCB-1262						U
1		6.385			ND	
1		6.909				
1		7.235				
1		7.669				
1		8.052				
2		6.656				
2		7.259				
2		7.652				
2		8.022				
2		8.526				

Reagent

8082LCSSTOCK_00034

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Catalog No. : 32039 **Lot No.:** A0116282

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016 **CAS #** 12674-11-2 (Lot W-125-01) **Purity** ----%	1,009.0 µg/mL	+/- 5.8800 µg/mL +/- 31.9716 µg/mL +/- 41.7696 µg/mL		Gravimetric Unstressed Stressed
2	Aroclor 1260 **CAS #** 11096-82-5 (Lot W-129-06) **Purity** ----%	1,004.6 µg/mL	+/- 5.8543 µg/mL +/- 31.8322 µg/mL +/- 41.5875 µg/mL		Gravimetric Unstressed Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

34-35

Reagent

8151-SurStock_00097

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Bellefonte, PA 16823-8812
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

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3 x 1mL
Received 8/13/18
AMB

Catalog No. : 567804 **Lot No.:** A0132641

Description : DCAA Standard

DCAA Standard 1,000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	2,4-dichlorophenylacetic acid CAS # 19719-28-9 (Lot S30618V) Purity 99%	1,000.8 µg/mL	+/- 5.8733 µg/mL +/- 53.2353 µg/mL +/- 53.3244 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
150mm x 4.6mm
Allure C18 Cat.(#9164565)

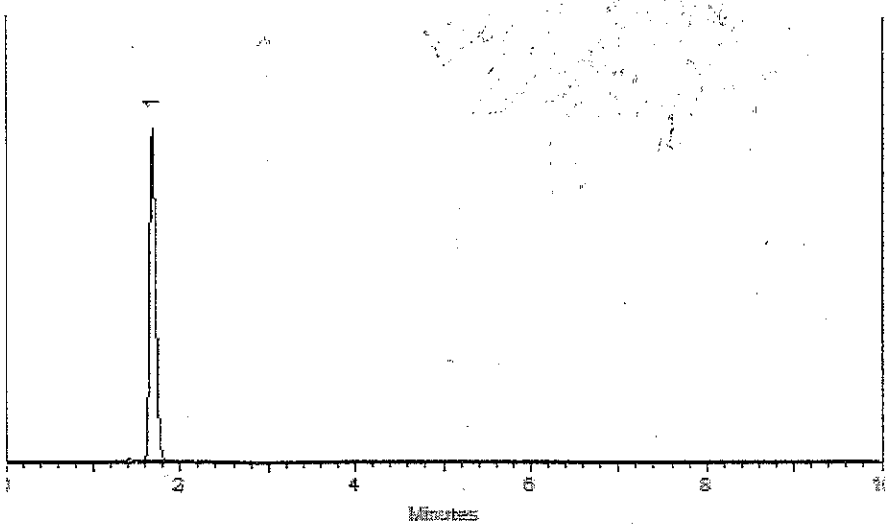
Flow Rate:
1.0 ml/min.

Mobile Phase A:
0.14% H3PO4 in water

Mobile Phase B:
acetonitrile

Mobile Phase Composition:
90%B Isocratic

Det. Type:
Wavelength: 220 & 254 nm



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Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 21-Nov-2017 **Balance:** B442140311

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 27-Nov-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

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Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8151_LCS_Stck_00037

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-66380
Description: Custom Herbicide Standard
Lot: 216111344
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Dec 6, 2016
Expiration: Dec 6, 2018
Sample Size: 1 mL
Components: 11
Storage Condition: Refrig (0-5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
2,4-D	94-75-7	99.1	1005	996
2,4-DB	94-82-6	97.8	1029*	1006
Dichlorprop	120-36-5	98.1	1009	990
Silvex	93-72-1	99.9	1002	1001
Dalapon	75-99-0	90.0	1120*	1008
2,4,5-T	93-76-5	96.5	1036*	1000
Dicamba	1918-00-9	98.0	1009	989
Dinoseb	88-85-7	100.0	1001	1001
Picloram	1918-02-1	100.0	1008	1008
MCPA acid	94-74-6	98.9	10015	9905
MCPP acid	7085-19-0	99.9	10003	9993

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 5/16

Reagent

8151_PCP_Stk_00002

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

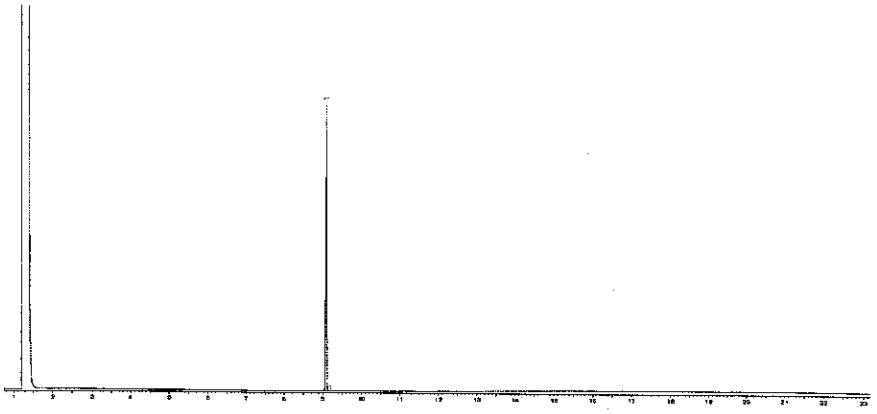
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust - Mix Technician

Date Mixed: 07-Mar-2018 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 12-Mar-2018

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31297 **Lot No.:** A0135955

Description : Pentachlorophenol Standard

Pentachlorophenol Standard 1,000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2026 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Pentachlorophenol	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 87-86-5 (Lot 170306KJA)		+/- 29.3255	µg/mL	Unstressed
	Purity 99%		+/- 35.5754	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8151PCP_Mrkr_00005

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32268 **Lot No.:** A0128694

Description : Pentachloroanisole Standard

Pentachloroanisole 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. ~(weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Pentachloroanisole	1,005.0 µg/mL	+/- 10.1241	µg/mL	Gravimetric
	CAS # 1825-21-4 (Lot 5785800)		+/- 34.6759	µg/mL	Unstressed
	Purity 99%		+/- 34.6759	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8151ResMix#1_00013

(3)

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32055 **Lot No.:** A0136598

Description : Herbicide Mix #1/ME (Methyl Ester)

Herbicide Mix #1/ME (Methyl Ester) 200 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2025 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dicamba methyl ester **CAS #** 6597-78-0 (Lot 1813500) **Purity** 98%	199.9 µg/mL	+/- 1.4176 +/- 6.7480 +/- 6.7480	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Dichlorprop methyl ester **CAS #** 57153-17-0 (Lot 3917300) **Purity** 99%	202.0 µg/mL	+/- 1.4323 +/- 6.8182 +/- 6.8182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	2,4-D methyl ester **CAS #** 1928-38-7 (Lot 5209600) **Purity** 98%	199.9 µg/mL	+/- 1.4176 +/- 6.7480 +/- 6.7480	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2,4,5-TP (silvex) methyl ester **CAS #** 4841-20-7 (Lot 504400) **Purity** 99%	202.0 µg/mL	+/- 1.4323 +/- 6.8182 +/- 6.8182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,5-T methyl ester **CAS #** 1928-37-6 (Lot 6875800) **Purity** 99%	202.0 µg/mL	+/- 1.4323 +/- 6.8182 +/- 6.8182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Dinoseb methyl ether **CAS #** 6099-79-2 (Lot 4362100) **Purity** 99%	202.0 µg/mL	+/- 1.4323 +/- 6.8182 +/- 6.8182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	2,4-DB methyl ester **CAS #** 18625-12-2 (Lot 3464700) **Purity** 99%	202.0 µg/mL	+/- 1.4323 +/- 6.8182 +/- 6.8182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

TM 8/13/18

Reagent

8151ResMix#2_00011

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32057 **Lot No.:** A0124376

Description : Herbicide Mix #2/ME (Methyl Ester)

Herbicide Mix #2/ME (Methyl Ester) 2,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dalapon methyl ester	1,988.5 µg/mL	+/- 11.8111	µg/mL	Gravimetric
	CAS # 17640-02-7 (Lot 3903800)		+/- 66.6751	µg/mL	Unstressed
	Purity 97%		+/- 66.6751	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

-9
-10
-11

Reagent

8151ResMix#3_00016

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CERTIFIED REFERENCE MATERIAL

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32059 **Lot No.:** A0130139

Description : Herbicide Mix #3/ME (Methyl Ester)

Herbicide Mix #3/ME (Methyl Ester) 20,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2024 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	MCPP (Mecoprop) methyl ester **CAS #** 2786-19-8 (Lot 5708400) **Purity** 99%	20,084.0 µg/mL	+/- 185.8611 µg/mL +/- 688.3404 µg/mL +/- 688.3404 µg/mL	Gravimetric Unstressed Stressed
2	MCPA methyl ester **CAS #** 2436-73-9 (Lot 1498500) **Purity** 99%	20,112.0 µg/mL	+/- 186.1202 µg/mL +/- 689.3001 µg/mL +/- 689.3001 µg/mL	Gravimetric Unstressed Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

-12
-13
-14
-15
-16

Reagent

8151SSStk_00031

Certificate of Analysis

Chlorinated Methylated Herbicides Mixture

Product Number: HBM-8151M **Page:** 1 of 1

Lot Number: CR-3523 **Lot Issue Date:** 07-Aug-2017 **Expiration Date:** 30-Sep-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
acifluorfen methyl ester	050594-67-7	RM03058	100.3 ± 0.5 µg/mL
bentazon methyl derivative	061592-45-8	RM03069	100.2 ± 0.5 µg/mL
chloramben methyl ester	007286-84-2	RM03055	100.0 ± 0.5 µg/mL
2,4-D methyl ester	001928-38-7	RM03040	100.1 ± 0.5 µg/mL
dalapon methyl ester	017640-02-7	RM12360	99.9 ± 0.5 µg/mL
2,4-DB methyl ester	018625-12-2	RM03029	100.4 ± 0.5 µg/mL
DCPA	001861-32-1	RM10778	100.4 ± 0.5 µg/mL
dicamba methyl ester	006597-78-0	RM03039	100.0 ± 0.5 µg/mL
methyl-3,5-dichlorobenzoate	002905-67-1	RM03048	100.2 ± 0.5 µg/mL
dichlorprop methyl ester	057153-17-0	RM00002	99.9 ± 0.5 µg/mL
dinoseb methyl ether	006099-79-2	RM03051	100.0 ± 0.5 µg/mL
MCPA methyl ester	002436-73-9	RM12882	10017 ± 50 µg/mL
MCPP methyl ester	023844-56-6	RM10542	10027 ± 50 µg/mL
4-nitroanisole	000100-17-4	RM02398	100.1 ± 0.5 µg/mL
pentachloroanisole	001825-21-4	RM02457	100.0 ± 0.5 µg/mL
picloram methyl ester	014143-55-6	RM03045	100.0 ± 0.5 µg/mL
silvex methyl ester	004841-20-7	RM03035	100.0 ± 0.5 µg/mL
2,4,5-T methyl ester	001928-37-6	RM03033	100.0 ± 0.5 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET ▪ NORTH KINGSTOWN, RHODE ISLAND 02852 ▪ WWW.ULTRASCI.COM

Reagent

8151StkSurr_00065

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
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www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-515-SS
Description: 2,4-Dichlorophenylacetic methyl ester
Lot: 215041203-02
Solvent: Methyl tert-butyl ether (MtBE)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Mar 20, 2018
Expiration: Apr 20, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Methyl-2,4-Dichlorophenylacetate	55954-23-9	98.8	100.3	99.1

RECEIVED
03.28.18
KOK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8151StkSurr_00067

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-515-SS
Description: 2,4-Dichlorophenylacetic methyl ester
Lot: 215041203-02
Solvent: Methyl tert-butyl ether (MtBE)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Mar 20, 2018
Expiration: Apr 20, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Methyl-2,4-Dichlorophenylacetate	55954-23-9	98.8	100.3	99.1

RECEIVED
03.28.18
KOK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

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Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8151Surrogate_00170

Preliminary Report

TestAmerica Denver

MB, Method Blank Report

Sample Path: \\ChromNA\Denver\ChromData\SGC_M\20181024-75433.b\10240041.D

Lims ID: 8151Surrogate_00170 Inj. Date: 25-Oct-2018 04:29:01

Worklist ID: 280-0075433-041 Instrument: SGC_M

Method: 8151_615

ok AMB 10/25/18

Detector 1: GC ECD1A

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 8151A_AP	Limits 2 8151A_AP	Limits 3 8151A_AP
$ 3 2,4-Dichlorophenylaceti	0.5000	0.4121	82.4	39-135		32-138

Detector 2: GC ECD2B

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 8151A_AP	Limits 2 8151A_AP	Limits 3 8151A_AP
$ 3 2,4-Dichlorophenylaceti	0.5000	0.4351	87.0	39-135		32-138

Samples for Limit Group: 1, Lims Prep Method: 8151A_AP

280-115606-D-1-A	280-115606-E-2-A	280-115609-D-1-A
280-115609-C-2-A	280-115702-E-3-A	280-115702-F-4-A
280-115702-F-5-A	280-115702-G-6-A	280-115702-H-7-A
280-115806-D-7-A	280-115806-B-8-A	280-115806-B-9-A
280-115806-E-10-A	280-115806-C-11-A	280-115806-A-12-A
280-115806-A-13-A	280-115818-N-1-A	280-115818-O-2-A
280-115818-O-3-A	280-115890-K-2-A	280-115733-C-75-A
280-115733-D-76-A	280-115733-E-77-A	280-115772-G-1-A

Samples for Limit Group: 2, Lims Prep Method: 8151A_AP

280-115818-N-1-A	280-115818-O-2-A	280-115818-O-3-A
280-115890-K-2-A		

Samples for Limit Group: 3, Lims Prep Method: 8151A_AP

280-115903-A-1-A

Reagent

8270 TCLP Stk_00081

Certificate of Composition

Reference Material

13 Comp at Varied Concentrations in Methanol/Dichloromethane

Product ID 22452472
Lot LRAC0996
Expiration Date October 2020
Storage Conditions Refrigerate
Solvent/Matrix METHANOL/DICHLOROMETHANE 85:15

Analyte	*Assigned Value* [1]	*Units*	*Raw Material Purity, %*	CAS
2-METHYLPHENOL	500 ± 14.6	µg/ml	99.9	95-48-7
3-METHYLPHENOL	500 ± 14.6	µg/ml	99.9	108-39-4
4-METHYLPHENOL	500 ± 14.5	µg/ml	99.9	106-44-5
2,4,5-TRICHLOROPHENOL	500 ± 14.5	µg/ml	98.4	95-95-4
HEXACHLOROBENZENE	200 ± 5.8	µg/ml	99.1	118-74-1
HEXACHLOROETHANE	500 ± 14.6	µg/ml	99.4	67-72-1
2,4,6-TRICHLOROPHENOL	500 ± 14.5	µg/ml	99.9	88-06-2
1,4-DICHLOROBENZENE	501 ± 14.6	µg/ml	99.9	106-46-7
2,4-DINITROTOLUENE	202 ± 5.9	µg/ml	97.8	121-14-2
HEXACHLOROBUTADIENE	501 ± 14.6	µg/ml	99.9	87-68-3
NITROBENZENE	501 ± 14.6	µg/ml	99.9	98-95-3
PENTACHLOROPHENOL	1000 ± 29.1	µg/ml	97.9	87-86-5
PYRIDINE	502 ± 14.6	µg/ml	99.9	110-86-1

1 Assigned value - the gravimetrically prepared value. Uncertainty is based on gravimetric preparation.

Traceability: The standard was manufactured under an ISO/IEC 17025:2005 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

Robert O'Brien - Program Manager

Mark Pooler - QA Supervisor

Certification Date October 22, 2018
Version -10222018

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

MilliporeSigma
2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-3010
www.sigma-aldrich.com

Reagent

8270Surrogate_00128

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8270Surrogate_00128

Reagent ID: 8270Surrogate_00128

Description:	8270 Surrogate 100ug/ml	Expiration Date:	07/09/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	McAleese, Maura A
Reagent Volume:	1000.000 mL	Solvent:	ACETONE
Creation Date:	10/17/2018	Solvent Lot:	Acetone_00232
Open Date:			
Container(s):	5367833, 5367834, 5367835, 5367836		
Comment:	Sonicate 8270SurrStkHL 5 mins before use. Take 20mL of 8270SurstkHL and dilute to 1000mL in acetone. One year expiration date. Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6 - Tribromophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00289	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL

Preliminary Report

TestAmerica Denver

Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_G6\20181023-75392.b\G6_35963.D
Lims ID: 8270Surrogate_00128
Client ID:
Sample Type: Client
Inject. Date: 23-Oct-2018 16:04:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 8270Surrogate_00128
Operator ID: HOEFLERA Instrument ID: SMS_G6

Method: \\ChromNA\Denver\ChromData\SMS_G6\20181023-75392.b\SMSG6_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 23-Oct-2018 16:59:20 Calib Date: 27-Sep-2018 16:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_G6\20180927-74477.b\G6_35533.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	98.7	98.69
$ 8 Phenol-d5	100.0	96.3	96.28
$ 9 Nitrobenzene-d5	100.0	92.0	92.00
$ 11 2-Fluorobiphenyl	100.0	87.8	87.81
$ 12 2,4,6-Tribromophenol	100.0	81.9	81.91
$ 13 Terphenyl-d14	100.0	92.3	92.34

Reagent

8270SurStkHL_00282

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,038.1 µg/mL	+/- 29.2918 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 147.0277 µg/mL		Unstressed
	Purity 99%			+/- 178.4124 µg/mL		Stressed
2	Phenol-d5		5,031.4 µg/mL	+/- 29.2530 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.8331 µg/mL		Unstressed
	Purity 99%			+/- 178.1763 µg/mL		Stressed
3	Nitrobenzene-d5		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
4	2-Fluorobiphenyl		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot Z20C043)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,043.2 µg/mL	+/- 29.3216 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 147.1775 µg/mL		Unstressed
	Purity 99%			+/- 178.5942 µg/mL		Stressed
6	p-Terphenyl-d14		5,030.3 µg/mL	+/- 29.2464 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.8000 µg/mL		Unstressed
	Purity 99%			+/- 178.1362 µg/mL		Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

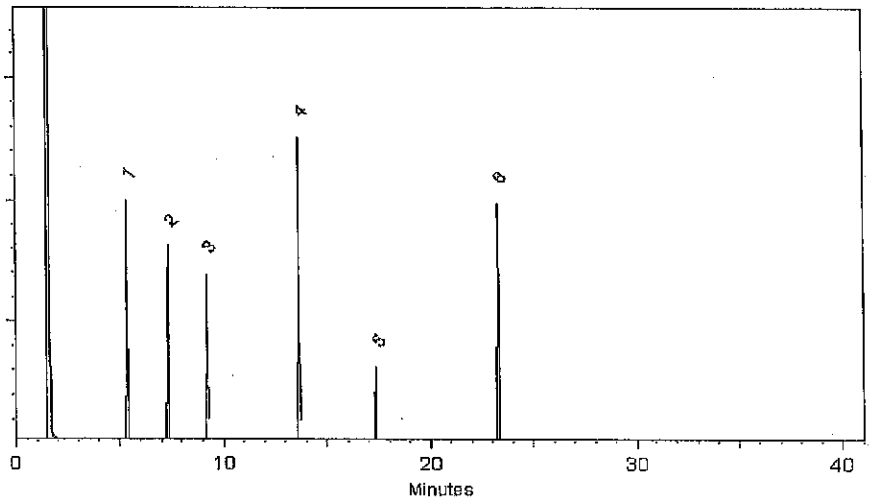
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00283

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,038.1 µg/mL	+/- 29.2918 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 147.0277 µg/mL		Unstressed
	Purity 99%			+/- 178.4124 µg/mL		Stressed
2	Phenol-d5		5,031.4 µg/mL	+/- 29.2530 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.8331 µg/mL		Unstressed
	Purity 99%			+/- 178.1763 µg/mL		Stressed
3	Nitrobenzene-d5		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
4	2-Fluorobiphenyl		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot Z20C043)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,043.2 µg/mL	+/- 29.3216 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 147.1775 µg/mL		Unstressed
	Purity 99%			+/- 178.5942 µg/mL		Stressed
6	p-Terphenyl-d14		5,030.3 µg/mL	+/- 29.2464 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.8000 µg/mL		Unstressed
	Purity 99%			+/- 178.1362 µg/mL		Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

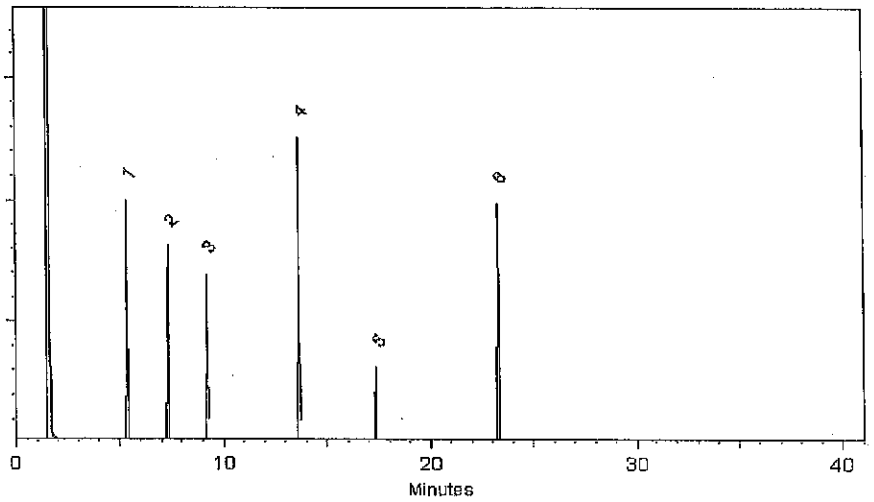
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00289

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,038.1 µg/mL	+/- 29.2918 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 147.0277 µg/mL		Unstressed
	Purity 99%			+/- 178.4124 µg/mL		Stressed
2	Phenol-d5		5,031.4 µg/mL	+/- 29.2530 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.8331 µg/mL		Unstressed
	Purity 99%			+/- 178.1763 µg/mL		Stressed
3	Nitrobenzene-d5		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
4	2-Fluorobiphenyl		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot Z20C043)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,043.2 µg/mL	+/- 29.3216 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 147.1775 µg/mL		Unstressed
	Purity 99%			+/- 178.5942 µg/mL		Stressed
6	p-Terphenyl-d14		5,030.3 µg/mL	+/- 29.2464 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.8000 µg/mL		Unstressed
	Purity 99%			+/- 178.1362 µg/mL		Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

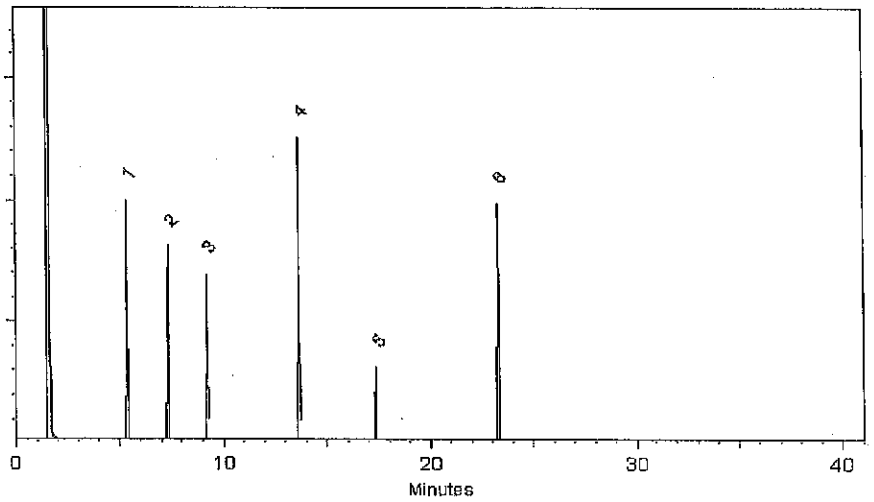
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

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- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00290

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

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Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,038.1 µg/mL	+/- 29.2918	µg/mL	Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 147.0277	µg/mL	Unstressed
	Purity 99%			+/- 178.4124	µg/mL	Stressed
2	Phenol-d5		5,031.4 µg/mL	+/- 29.2530	µg/mL	Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.8331	µg/mL	Unstressed
	Purity 99%			+/- 178.1763	µg/mL	Stressed
3	Nitrobenzene-d5		5,017.5 µg/mL	+/- 29.1720	µg/mL	Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 146.4265	µg/mL	Unstressed
	Purity 99%			+/- 177.6829	µg/mL	Stressed
4	2-Fluorobiphenyl		5,017.5 µg/mL	+/- 29.1720	µg/mL	Gravimetric
	CAS # 321-60-8	(Lot Z20C043)		+/- 146.4265	µg/mL	Unstressed
	Purity 99%			+/- 177.6829	µg/mL	Stressed
5	2,4,6-Tribromophenol		5,043.2 µg/mL	+/- 29.3216	µg/mL	Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 147.1775	µg/mL	Unstressed
	Purity 99%			+/- 178.5942	µg/mL	Stressed
6	p-Terphenyl-d14		5,030.3 µg/mL	+/- 29.2464	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.8000	µg/mL	Unstressed
	Purity 99%			+/- 178.1362	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

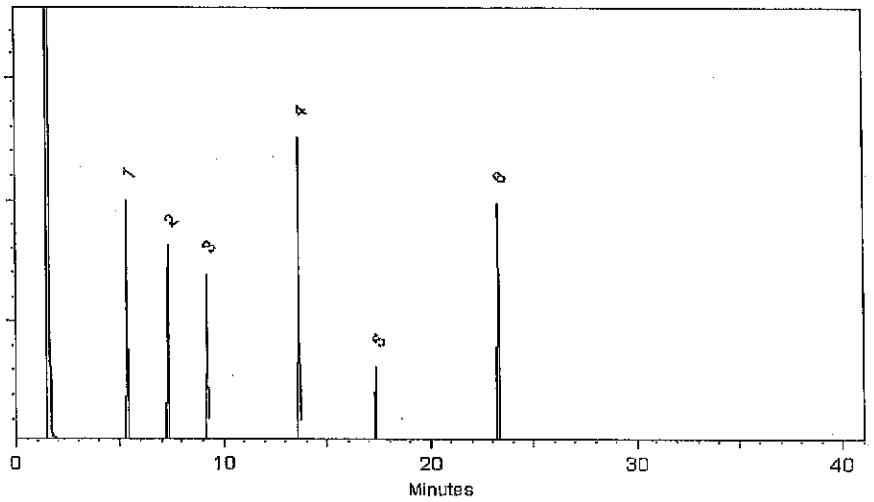
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

ANALYTES B_00014

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Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: INT-B1 **Lot No.** 5-177MKBY

Description: Analytes B

Matrix: 5% HNO_3

This **ASSURANCE®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for analytical instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3151*	Be	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3105a*
Cd	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3108*	Co	50 µg/mL	49.4 µg/mL	±0.3 µg/mL	3113*
Ni	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3136*	Cr	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3112a*
Pb	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3128*	Cu	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3114*
Zn	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3168a*	Mn	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3132*
Ba	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3104a*	V	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3165*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# 9-164YP, 12-03YP

5078581
ID: ANALYTES B_00014
Exp: 04/01/18 Prpd: SJS
ICP ANALYTES B SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified (measured) value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: APR · 2018 Certifying Officer: Kathleen Cullen

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principals for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

AR_1221_RESss_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32007.sec **Lot No.:** A0117382

Description : Aroclor® 1221 Standard

Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 11104-28-2.SEC (Lot W-126-07)		+/- 32.7345	µg/mL	Unstressed
	Purity ----%		+/- 42.2047	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1232_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32008.sec **Lot No.:** A095877

Description : Aroclor® 1232 Standard

Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1232	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11141-16-5.SEC (Lot 130604JLM)		+/- 20.8959	µg/mL	Unstressed
	Purity ----%		+/- 34.3792	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1242_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32009.SEC **Lot No.:** A0105175

Description : Aroclor® 1242 Standard

Aroclor® 1242 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 53469-21-9.SEC (Lot NTO1020)		+/- 32.1814	µg/mL	Unstressed
	Purity ----%		+/- 42.2011	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1248_RES_00012

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010 **Lot No.:** A0130978

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,001.6 µg/mL	+/- 5.8779	µg/mL	Gravimetric
	CAS # 12672-29-6 (Lot W-108-07)		+/- 31.7447	µg/mL	Unstressed
	Purity ----%		+/- 41.4691	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1248_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010.SEC **Lot No.:** A0124143

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12672-29-6.SEC (Lot 106-248)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1254_RESss_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32011.SEC **Lot No.:** A0105373

Description : Aroclor® 1254 Standard

Aroclor® 1254 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1254	1,004.0 µg/mL	+/- 10.1140	µg/mL	Gravimetric
	CAS # 11097-69-1.SEC (Lot RM00922)		+/- 32.3101	µg/mL	Unstressed
	Purity ----%		+/- 42.3699	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1262_RESss_00010

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32409.sec **Lot No.:** A094156

Description : Aroclor® 1262 Standard

Aroclor® 1262 Standard 1,000 µg/mL, 1mL/ampul, Hexane

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 2019 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1262	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 37324-23-5.SEC		+/- 20.8959	µg/mL	Unstressed
	Purity ----%		+/- 34.3792	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1268_RESss_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32410.sec **Lot No.:** A095820

Description : Aroclor® 1268 Standard

Aroclor® 1268 Standard 1,000 µg/mL, 1mL/ampul, Hexane

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1268	1,005.0 µg/mL	+/- 5.9694	µg/mL	Gravimetric
	CAS # 11100-14-4.SEC (Lot W-131-05)		+/- 21.0004	µg/mL	Unstressed
	Purity ----%		+/- 34.5511	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1660_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0134815

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016	1,001.3 µg/mL	+/- 5.8348	µg/mL	Gravimetric
	CAS # 12674-11-2 (Lot 164887)		+/- 31.7260	µg/mL	Unstressed
	Purity ----%		+/- 41.4488	µg/mL	Stressed
2	Aroclor 1260	1,000.0 µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 11096-82-5 (Lot 155463)		+/- 31.6864	µg/mL	Unstressed
	Purity ----%		+/- 41.3971	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1660_RESss_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039.SEC **Lot No.:** A0114674

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2022 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,000.7 µg/mL	+/- 5.9437	µg/mL	Gravimetric
	CAS # 12674-11-2.SEC	(Lot 129)		+/- 31.7284	µg/mL	Unstressed
	Purity ----%			+/- 41.4406	µg/mL	Stressed
2	Aroclor 1260		1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11096-82-5.SEC	(Lot NTO1023)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%			+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_2154_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569745 **Lot No.:** A0131802

Description : PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 11104-28-2 (Lot 2781200)		+/- 31.8975	µg/mL	Unstressed
	Purity ----%		+/- 41.6615	µg/mL	Stressed
2	Aroclor 1254	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 11097-69-1 (Lot 124-191-B)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_3262_RES_00001

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569746 **Lot No.:** A0132023

Description : PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Aroclor 1232		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11141-16-5	(Lot W-107-05)			+/- 31.8340	µg/mL	Unstressed
	Purity ----%				+/- 41.5787	µg/mL	Stressed
2	Aroclor 1262		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 37324-23-5	(Lot 3067100)			+/- 31.7706	µg/mL	Unstressed
	Purity ----%				+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_4268_RES_00001

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569747 **Lot No.:** A0133093

Description : PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 53469-21-9 (Lot 01141-A)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed
2	Aroclor 1268	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11100-14-4 (Lot 2743900)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%		+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_SURR_RES_00073

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0121594

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene **CAS #** 877-09-8 (Lot 0052481) **Purity** 98%	200.0 µg/mL	+/- 1.1656 +/- 6.3378 +/- 8.2802	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Decachlorobiphenyl (BZ# 209) **CAS #** 2051-24-3 (Lot ER071509-01) **Purity** 99%	201.2 µg/mL	+/- 1.1725 +/- 6.3753 +/- 8.3291	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Reagent

AR_SURR_RES_00084

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene		201.2 µg/mL	+/- 1.1725	µg/mL	Gravimetric
	CAS # 877-09-8	(Lot 0052481)		+/- 6.3751	µg/mL	Unstressed
	Purity 98%			+/- 8.3288	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)		201.5 µg/mL	+/- 1.1742	µg/mL	Gravimetric
	CAS # 2051-24-3	(Lot ER071509-01)		+/- 6.3848	µg/mL	Unstressed
	Purity 99%			+/- 8.3415	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

1-19-18

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	201.2 µg/mL	+/- 1.1725 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3751 µg/mL	Unstressed
	Purity 98%		+/- 8.3288 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	201.5 µg/mL	+/- 1.1742 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3848 µg/mL	Unstressed
	Purity 99%		+/- 8.3415 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

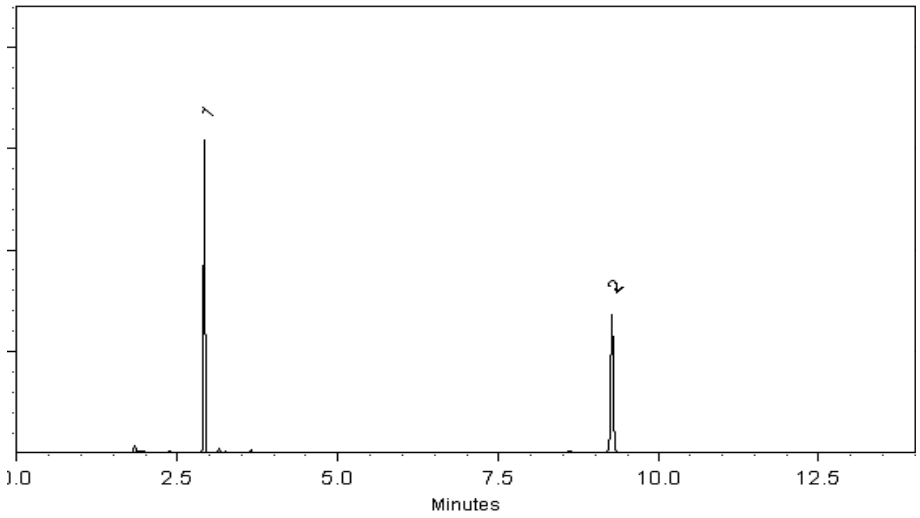
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Aug-2017 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Sep-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0136320

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	200.3 µg/mL	+/- 1.1673 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3472 µg/mL	Unstressed
	Purity 98%		+/- 8.2923 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.2 µg/mL	+/- 1.1667 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3436 µg/mL	Unstressed
	Purity 99%		+/- 8.2877 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

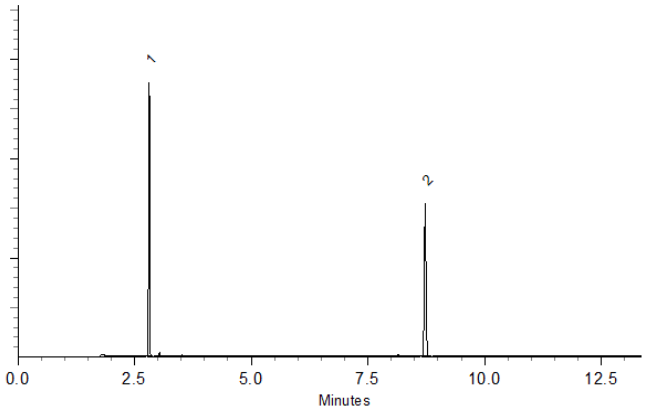
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dustin J Lidgett
Dustin Lidgett - Mix Technician

Date Mixed: 20-Mar-2018 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

AR_SURR_RES_00094

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0136320

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	200.3 µg/mL	+/- 1.1673 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3472 µg/mL	Unstressed
	Purity 98%		+/- 8.2923 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.2 µg/mL	+/- 1.1667 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3436 µg/mL	Unstressed
	Purity 99%		+/- 8.2877 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

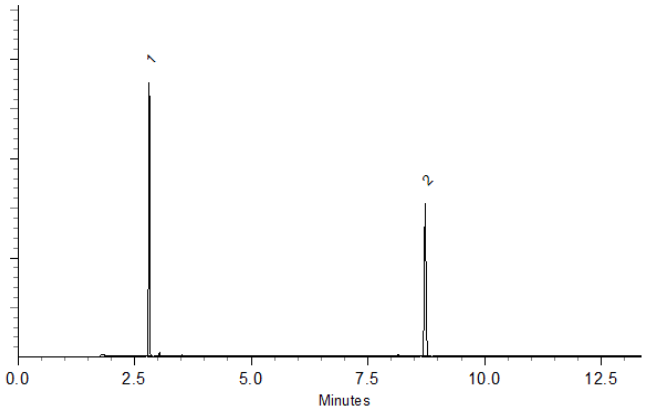
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dustin J Lidgett
Dustin Lidgett - Mix Technician

Date Mixed: 20-Mar-2018 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

BNB stock_00014

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0127264

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.3065	µg/mL	Unstressed
	Purity 99%		+/- 57.6234	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

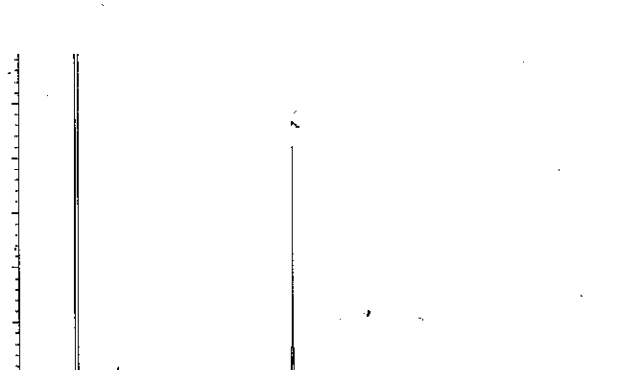
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

BNB stock_00015

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Catalog No. : 32279 **Lot No.:** A0127264

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
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Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

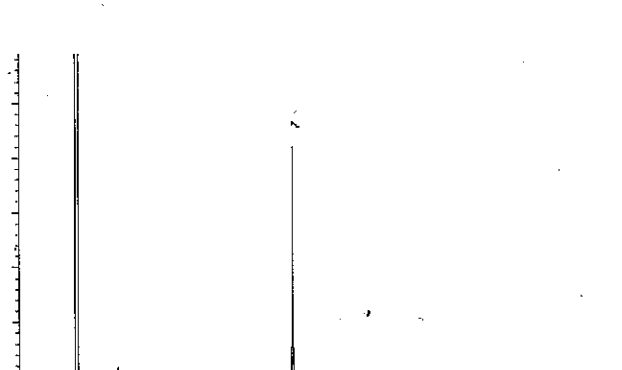
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
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Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

CN ICV Std_00052

Standard Verification Form

Standard Information			
Vendor Standard Name	5 ANION STANDARD 1000 ug/mL SIMPLE CYANIDE		
Vendor	SPEX		
Lot number	13-66YPX		
Initial Verification	☑ RK/11/11/18	Re-Verification	☑

TALS "Reagent" Information	
TALS Standard ID	CN ICV std-00052
COA Reviewed against what is in TALS	☑

Verification Information and Data			
Verified by	RK	Instrument ID	Alp-1
Verification Date	11/05/18	Method Reference	Total Cyanide
ID of Standard Used for Verification	CN ICV std-00052	Batch # / Chrom Work List #	
Attach to this form: formulary report , COA and data used for verification Attach to standard in TALS: this form and all supporting documentation including the original CoA			
See Acceptance Criteria Below:			
Approved for Use	☑	Not Approved for Use	☐
New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.			
New Expiration Date:	11/30/18		

1st Level Review RK Date: 11/05/18

2nd Level Review _____ Date: _____

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

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Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ILAC-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: RSCN9-2X **Lot No.** 13-66YPX

Description: 1000 µg/mL Simple Cyanide

Matrix: 2% KOH

This Cyanide Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for titrimetric method. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±50 µg/mL

The CRM is prepared gravimetrically using high purity Potassium Cyanide, Lot# K48260367702. See side 2 for details of certification.

Certified By:

Titration with $AgNO_3$ using Rhodanine as indicator. $AgNO_3$ standardized against NaCl NIST SRM #919b.

Uncertified Properties:

Trace Impurities in the Solution (derived from starting material):

Ion	µg/mL	Ion	µg/mL
Cl^-	<0.5	SCN^-	<0.3
$PO4^{-3}$	<0.1	$SO4^{-2}$	<0.3
S^{-2}	<0.01		

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to ±5% of certified concentration for a period of three months from the date of certification. This includes uncertainty components associated with measurements, homogeneity by the most precise method, and short-term and long-term stability. For these solutions, we use high purity reagents, 18 megohm double deionized water, and triple rinsed bottles. All glassware used is Class A. This guarantee is valid only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL - - 2018

Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Reagent

Hg ICV Stock_00010

INORGANIC VENTURES
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Christiansburg, VA 24073 - USA
inorganicventures.com

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-100PPM
Lot Number:	M2-HG659091
Matrix:	10% (v/v) HCl
Value / Analyte(s):	100 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	05214TX, R307HGA1, 1780
Starting Material Purity:	99.9994%

4964959
ID: Hg ICV Stock_00010
Exp: 06/19/21 Prpd: CDH
Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL

Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.000171	M	Eu	< 0.000203	O	Na	0.000076	M	Se	< 0.013813	O	Zn	0.000012			
O	Al	0.000016	O	Fe	0.000014	M	Nb	< 0.000203	O	Si	0.000044	M	Zr	< 0.001218			
M	As	< 0.002844	M	Ga	< 0.000203	M	Nd	< 0.000203	M	Sm	< 0.000203						
O	Au	< 0.003219	M	Gd	< 0.000203	O	Ni	< 0.001812	M	Sn	< 0.000203						
O	B	< 0.002478	M	Ge	< 0.000609	M	Os	< 0.000201	O	Sr	< 0.000152						
M	Ba	< 0.000203	M	Hf	< 0.000203	O	P	< 0.010730	M	Ta	< 0.000203						
O	Be	< 0.000321	s	Hg	<	M	Pb	< 0.000203	M	Tb	< 0.000203						
M	Bi	< 0.013001	M	Ho	< 0.000203	M	Pd	< 0.000403	M	Te	< 0.001422						
O	Ca	0.000177	M	In	< 0.004062	M	Pr	< 0.000203	M	Th	< 0.000203						
M	Cd	0.000007	M	Ir	< 0.000201	M	Pt	< 0.000203	O	Ti	< 0.000530						
M	Ce	< 0.000203	M	K	0.000043	M	Rb	< 0.001218	O	Tl	< 0.002787						
M	Co	< 0.000406	M	La	< 0.000203	M	Re	< 0.001015	M	Tm	< 0.000203						
O	Cr	0.000016	O	Li	< 0.000180	M	Rh	< 0.000203	M	U	< 0.000812						
M	Cs	< 0.000203	M	Lu	< 0.000203	M	Ru	< 0.000201	M	V	< 0.000406						
M	Cu	< 0.000406	O	Mg	0.000037	O	S	< 0.023508	M	W	< 0.000609						
M	Dy	< 0.000203	M	Mn	< 0.000203	O	Sb	< 0.009657	M	Y	< 0.000203						
M	Er	< 0.000203	O	Mo	< 0.002152	M	Sc	< 0.000406	M	Yb	< 0.000203						

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS

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INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-100PPM
Lot Number:	M2-HG659091
Matrix:	10% (v/v) HCl
Value / Analyte(s):	100 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	05214TX, R307HGA1, 1780
Starting Material Purity:	99.9994%

4964959
ID: Hg ICV Stock_00010
Exp: 06/19/21 Prpd: CDH
Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL

Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Hg Ultra Prim_00012

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Product Name: Mercury ICP Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	StartingMaterial	Lot Number	Purity (%)	Calculated Value	Traceability & Method
mercury	*mercuric nitrate	RM11214	99.999%	1002 ± 2 µg/mL	NIST SRM 3133; ICP-OES

*light sensitive

Solvent: 2% nitric acid in low TOC water (< 50 ppb)

Non-Certified Values:

Density: 1.0101 g/mL @ 20.00 ± 0.05°C

Trace Metallic Impurities in Solution Standard in µg/mL

*	Al	<0.005 ND	*	Ga	<0.005 ND	n	Nb		n	S				
*	Sb	<0.005 ND	n	Ge		n	Os		n	Ta				
*	As	<0.005 ND	n	Au		*	Pd	<0.005 ND	n	Te				
*	Ba	<0.005 ND	n	Hf		*	P	<0.005 ND	n	Tb				
*	Be	<0.005 ND	n	Ho		*	Pt	<0.005 ND	n	Tl				
*	Bi	<0.005 ND	*	In	<0.005 ND	*	K	<0.005 ND	*	Th	<0.005 ND			
*	B	<0.005 ND	n	Ir		n	Pr		n	Tm				
*	Cd	<0.005 ND	*	Fe	<0.005 ND	n	Re		*	Sn	<0.005 ND			
*	Cs	<0.005 ND	*	La	<0.005 ND	n	Rh		*	Ti	<0.005 ND			
*	Ca	<0.005 ND	*	Pb	<0.005 ND	n	Rb		n	W				
n	Ce		*	Li	<0.005 ND	n	Ru		n	U				
*	Cr	<0.005 ND	n	Lu		n	Sm		*	V	<0.005 ND			
*	Co	<0.005 ND	*	Mg	<0.005 ND	n	Sc		n	Yb				
*	Cu	<0.005 ND	*	Mn	<0.005 ND	*	Se	<0.005 ND	n	Y				
n	Dy		s	Hg		*	Si	<0.005 ND	*	Zn	<0.005 ND			
*	Er	<0.005 ND	*	Mo	<0.005 ND	*	Ag	<0.005 ND	n	Zr				
*	Eu	<0.005 ND	n	Nd		*	Na	<0.005 ND						
*	Gd	<0.005 ND	*	Ni	<0.005 ND	*	Sr	<0.005 ND						

* - element checked; i - spectral interference; n – element not checked; D – element detected; ND – element not detected; s - standard element

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001 Registered Quality System – TUV USA

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ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

John Russo
President

Monica Bourgeois
Director of QA/RA

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ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

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Reagent

IC N02 CAL_00043

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Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 4808990 **Product Number:** R5444900

Manufacture Date: AUG 02, 2018
Expiration Date: JAN 2019

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrite	7758-09-0	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Permanganate)	995-1005 ppm N	1005 ppm N	40

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
R5444900-120C	120 mL amber glass	6 months
R5444900-500C	500 mL amber glass	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Jim Gibbs (08/02/2018)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

IC N03 cal_00019

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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3)

Lot Number: 2807E96 **Product Number:** 5459

Manufacture Date: JUL 24, 2018
Expiration Date: JAN 2020

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrate	7757-79-1	High Purity
Chloroform	67-66-3	

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 A)
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 B)
Stock Nitrate Solution: 1 mL = 1.0 mg NO3-N	EPA (353.2)
Stock Nitrate Solution: 1.0 mL = 1.00 mg NO3-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5459-16	500 mL natural poly	18 months
5459-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Andy Baumgartner (07/24/2018)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Reagent

IC NO2 ICV_00016

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Nitrite as N (NO_2-N)
CATALOG NUMBER:	053 -125 mL; 990 - 500 mL
LOT NUMBER:	020518
ISSUE DATE:	May 16, 2018
REVISION DATE:	Original
STARTING MATERIAL:	Sodium Nitrite ($NaNO_2$)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	4.7%
MATRIX:	18 megohm deionized water
DENSITY:	1.0004 ± 0.0008 g/mL at 19.2°C and 752 mm Hg
TRACEABILITY[3]:	See Footnote 3
NIST/SRM:	-
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 5/2020**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009

ACCREDITED

REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005

ACCREDITED

CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

IC NO3 ICV_00012

Certificate of Analysis

PRODUCT:	1000 mg/L Nitrate as N (NO_3-N)
CATALOG NUMBER:	052 -125 mL; 991 - 500 mL
LOT NUMBER:	140616
ISSUE DATE:	June 30, 2016
REVISION DATE:	June 26, 2017
STARTING MATERIAL:	Potassium Nitrate (KNO_3)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0020 ± 0.0008 g/mL at 21.5°C and 762 mm Hg
TRACEABILITY[3]:	102%
NIST/SRM:	3185 Nitrate
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor which is equal to the student t factor at a 95% confidence interval at n-1 degrees of freedom. The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability Recovery = ((% Recovery certified standard)/(% Recovery NIST SRM))*100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

This standard **expires 12/2018**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller

ISO/IEC GUIDE 34:2009
ACCREDITED
REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005
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CERTIFICATE NO. 1539.02

Reagent

IC P04 cal_00018

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4711L59 **Product Number:** AP1KW

Manufacture Date: NOV 30, 2017
Expiration Date: NOV 2019

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certifiec value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3139.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Dihydrogen Phosphate	7722-76-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Phosphorus (P)	995-1005 ppm	1000 ppm	3139

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs (11/30/2017)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

Icp cal std 3_00018

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

[illegible]
Christiansburg, VA 24073 - USA
[illegible]
[illegible]
[illegible]

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLDEN-STD-3B
Lot Number:	M2-MEB663620
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium,
	4 000 µg/mL ea: Magnesium,
	1 000 µg/mL ea: Calcium, Sodium,
	500 µg/mL ea: Iron,
	200 µg/mL ea: Lithium, Phosphorus,
	100 µg/mL ea: Strontium, Vanadium, Zinc, Manganese, Cadmium, Cobalt, Chromium, Copper, Silver, Aluminum, Boron, Barium, Beryllium, Nickel

4888666
ID: icp cal std 3_00016
Exp: 12/05/20 Prpd: SJS
ICP CAL STD 3B IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.5 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.7 µg/mL	Boron, B	100.0 ± 0.6 µg/mL
Cadmium, Cd	100.0 ± 0.5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Chromium, Cr	100.0 ± 0.6 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.4 µg/mL	Iron, Fe	500.0 ± 2.0 µg/mL
Lithium, Li	200.0 ± 0.7 µg/mL	Magnesium, Mg	4 000 ± 16 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Phosphorus, P	200.0 ± 0.9 µg/mL	Potassium, K	10 000.0 ± 40.0 µg/mL
Silver, Ag	100.0 ± 0.4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	100.0 ± 0.4 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 °C)

Assay Information:

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Icp ICVL A_00014

HIGH PURITY STANDARDS
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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	Intrepid ICVL
Part Number:	**SM-606-062 Solution A**
Lot Number:	**1810602**
Matrix:	5% HNO_3
Purity:	99.5% - 99.9999%

5078624
ID: Icp ICVL A_00014
Exp: 04/17/18 Prpd: SJS
ICP ICVL SOLUTION A H

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Al	25.0 ± 0.1	3101a	140903	Li	25.0 ± 0.2	3129a	100714
As	25.0 ± 0.3	3103a	100818	Mg	1000 ± 5	3131a	140110
Ba	25.0 ± 0.2	3104a	140909	Mn	25.0 ± 0.3	3132	050429
Be	25.0 ± 0.3	3105a	090514	Ni	25.0 ± 0.1	3136	120619
B	25.0 ± 0.1	3107	110830	K	2000 ± 10	3141a	140813
Cd	25.0 ± 0.1	3108	130116	Se	50.0 ± 0.5	3149	100901
Ca	200 ± 1	3109a	130213	Na	200 ± 1	3152a	120715
Cr	25.0 ± 0.1	3112a	030730	Sr	25.0 ± 0.1	*	
Co	25.0 ± 0.1	3113	000630	Tl	50.0 ± 0.3	*	
Cu	25.0 ± 0.1	3114	121207	V	25.0 ± 0.2	3165	160906
Fe	25.0 ± 0.1	3126a	140812	Zn	25.0 ± 0.1	3168a	120629
Pb	25.0 ± 0.2	3128	101026				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **April 2018**

Certificate Issue Date: April 17, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

Icp ICVL B_00016

HIGH PURITY STANDARDS
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P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

Product Description:

Name:	Intrepid ICVL
Part Number:	**SM-606-062 Solution B**
Lot Number:	**1810603**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.92% - 99.999%

5078631
ID: Icp ICVL B_00016
Exp: 04/17/18 Prpd: SJS
ICP ICVL SOLUTION B HP

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sb	25.0 ± 0.2	3102a	140911	Ag	25.0 ± 0.2	3151	160729
Mo	25.0 ± 0.2	3134	130418	Sn	50.0 ± 0.3	3161a	140917
P	200 ± 1	3139a	060717	Ti	25.0 ± 0.2	3162a	130925
Si	200 ± 2	3150	130912	Zr	25.0 ± 0.2	3169	130920

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **April 2018**

Certificate Issue Date: April 17, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

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Reagent

ICP ISAB 1B_00011

HIGH-PURITY STANDARDS
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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #1
Part Number:	**SM-606-037** Solution B
Lot Number:	**1734922**
Matrix:	2% HNO_3
Purity:	99.99%

4902379
ID: ICP ISAB 1B_00011
Exp: 12/01/18 Prpd: SJS
ICP ICSAB STD 1 SOL B H

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#
Tl	1000 ± 6	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**December 2017**
Expiration Date:	**December 2018**
Certificate Issue Date:	December 15, 2017

Moven Mutuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

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The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB STD1_00010

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P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

Product Description:

Name:	ICS-AB STD#1
Part Number:	**SM-606-037**
	Solution A
Lot Number:	**1734921**
Matrix:	20% HCl
Purity:	99.999% - 99.9999%

4902371
ID: ICP ISAB STD1_00010
Exp: 12/01/18 Prpd: SJS
ICAP ICSAB STD 1 SOL A

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER
ilac-MRA
ANAB ACCREDITED TESTING LABORATORY

ide 34:2009 (RMP) Accreditation
ertificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sb	100.0 ± 0.6	3102a	140911	P	200.0 ± 1.2	3139a	060717
As	200 ± 2	3103a	100818	K	5000 ± 25	3141a	140813
B	200.0 ± 1.2	3107	110830	Se	500 ± 5	3149	100901
Li	100.0 ± 0.6	3129a	100714	Na	5000 ± 25	3152a	120715
Mo	100.0 ± 0.6	3134	130418	Sr	100.0 ± 0.5	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **December 2017**

Expiration Date: **December 2018**

Certificate Issue Date: December 15, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

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Intended Use:

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

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Reagent

ICP ISAB STD2_00013

Sample Name: ICP ISAB STD2_00011 Acquired: 7/3/2018 7:25:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%) 20x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00690**	**-.00583**	**-.00005**	**.00046**	**-.00003**	**.00889**	**.04235**	**.00044**
Stddev	.00020	.00053	.00126	.00130	.00003	.00012	.00399	.00007	.00003
%RSD	321.04	7.6209	21.545	2405.4	6.1016	392.14	44.929	.16754	6.0746
#1	.00008	-.00727	-.00494	.00086	.00048	.00005	.01172	.04230	.00042
#2	-.00021	-.00653	-.00672	-.00097	.00044	-.00011	.00607	.04240	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00034**	**.00216**	**.01862**	**-.04392**	**-.00198**	**.00334**	**.00042**	**.00066**
Stddev	.00037	.00042	.00041	.00103	.03980	.00234	.00617	.00010	.00004
%RSD	85.544	124.10	19.108	5.5287	90.616	117.88	184.52	23.313	6.6074
#1	.00017	.00064	.00187	.01935	-.01578	-.00363	.00770	.00049	.00063
#2	.00070	.00004	.00245	.01789	-.07206	-.00033	-.00102	.00035	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02159**	**.00057**	**-.00434**	F **-.00317**	**-.04238**	**-.00080**	**-.00166**	**.00671**	**.01436**
Stddev	.00014	.00044	.00114	.00110	.00159	.00456	.00058	.02387	.05109
%RSD	.64346	76.481	26.343	34.690	3.7552	568.46	34.810	355.63	355.63
#1	-.02149	.00026	-.00514	-.00239	-.04125	-.00403	-.00207	.02359	.05049
#2	-.02169	.00088	-.00353	-.00395	-.04351	.00242	-.00126	-.01017	-.02176
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit				.00900					
Low Limit				-.00300					

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **49.229**	**.00004**	**-.00191**	F **4.9283**	**-.00214**	**.00870**	**-.00054**	**.00342**	**-.00298**
Stddev	.046	.00006	.00139	.0140	.00067	.04390	.00027	.00029	.00057
%RSD	.09407	174.51	73.200	.28319	31.237	504.79	50.451	8.6155	19.050
#1	49.197	-.00001	-.00289	4.9382	-.00166	.03974	-.00074	.00321	-.00258
#2	49.262	.00008	-.00092	4.9185	-.00261	-.02235	-.00035	.00362	-.00338
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000			.01000					
Low Limit	-.10000			-.01000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2971.1**	**55500.**	**4143.0**
Stddev	4.3	184.	14.9
%RSD	.14605	.33103	.36040
#1	2968.0	55630.	4132.5
#2	2974.2	55370.	4153.6

Sample Name: ICP ISAB STD2_00011 Acquired: 7/2/2018 19:23:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**-.01595**	**-.02613**	**.00451**	**.00011**	**-.00048**	**.21371**	**.01037**	**.00138**
Stddev	.00113	.00143	.00031	.00000	.00001	.00002	.00145	.00962	.00042
%RSD	186.17	8.9974	1.1694	.04020	11.626	3.3907	.67814	92.772	30.675
#1	-.00141	-.01493	-.02592	.00451	.00011	-.00046	.21269	.00357	.00108
#2	.00019	-.01696	-.02635	.00451	.00010	-.00049	.21474	.01717	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00296**	**.00228**	**.05492**	**.01936**	**.08715**	F **-.02178**	**.00687**	**.00106**	**.00035**
Stddev	.00111	.00004	.00101	.00051	.00382	.00388	.00211	.00012	.00007
%RSD	37.565	1.6037	1.8430	2.6171	4.3864	17.824	30.758	11.120	19.271
#1	-.00217	.00225	.05564	.01900	.08986	-.01904	.00538	.00098	.00040
#2	-.00375	.00230	.05421	.01972	.08445	-.02453	.00836	.00114	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						25.000			
Low Limit						-.02000			

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02917**	**-.00052**	**-.01876**	**.00406**	**-.10075**	**.07719**	**.00456**	**.02709**	**.05798**
Stddev	.00696	.00044	.00243	.00121	.00935	.00444	.00209	.00419	.00897
%RSD	23.859	83.080	12.962	29.867	9.2760	5.7520	45.870	15.478	15.478
#1	.03409	-.00022	-.01704	.00320	-.09414	.08033	.00308	.02413	.05163
#2	.02425	-.00083	-.02048	.00491	-.10735	.07405	.00604	.03006	.06433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **619.55**	**.00010**	**.00732**	F **96.343**	**-.01120**	**-.10281**	**-.01118**	**.00211**	**-.00184**
Stddev	4.12	.00010	.00115	.638	.00088	.02135	.00080	.00006	.00099
%RSD	.66567	101.87	15.727	.66246	7.8719	20.768	7.1813	2.6625	53.824
#1	622.47	.00017	.00651	96.794	-.01182	-.08772	-.01175	.00207	-.00114
#2	616.64	.00003	.00814	95.892	-.01057	-.11791	-.01061	.00215	-.00254
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	50.000			10.000					
Low Limit	-.20000			-.02000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2883.4**	**51409.**	**4166.8**
Stddev	1.2	118.	2.3
%RSD	.04117	.22890	.05610
#1	2882.6	51326.	4168.5
#2	2884.3	51492.	4165.2

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #2
Part Number:	**SM-606-038**
Lot Number:	**1721944**
Matrix:	20% HCl
Purity:	99.98% - 99.999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#		Element	(mg/L)	SRM ID	SRM Lot#
Sn	1000 ± 10	3161a	140917		Ti	100 ± 1	3162a	130925

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **August 2017**
Expiration Date: **August 2018**
Certificate Issue Date: August 8, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

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Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP LLCCV-4_00008

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 14, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 14, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Bi	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	Calculated		See Sec. 4.2
S	Potentiometric	84L	84L
S	ICP Assay	3154	892205
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

INORGANIC VENTURES
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inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICP-LLCCV-4
Lot Number:	N2-MEB670719
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	300 mg/L ea: Potassium, 100 mg/L ea: Sodium, 20 mg/L ea: Magnesium, Calcium, 10 mg/L ea: Bismuth, Aluminum, Iron, Sulfur, 6 mg/L ea: Uranium, 4 mg/L ea: Nickel, 2 mg/L ea: Selenium, Zinc, Lithium, 1.5 mg/L ea: Copper, Arsenic, Thorium, Thallium, 1 mg/L ea: Vanadium, Strontium, Barium, Silver, Cobalt, Chromium, Manganese, 0.9 mg/L ea: Lead, 0.5 mg/L ea: Cadmium, 0.1 mg/L ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	10.00 ± 0.05 mg/L	Arsenic, As	1.500 ± 0.011 mg/L
Barium, Ba	1.000 ± 0.006 mg/L	Beryllium, Be	0.1000 ± 0.0006 mg/L
Bismuth, Bi	10.00 ± 0.07 mg/L	Cadmium, Cd	0.5000 ± 0.0037 mg/L
Calcium, Ca	20.00 ± 0.08 mg/L	Chromium, Cr	1.000 ± 0.007 mg/L
Cobalt, Co	1.000 ± 0.006 mg/L	Copper, Cu	1.500 ± 0.007 mg/L
Iron, Fe	10.00 ± 0.05 mg/L	Lead, Pb	0.900 ± 0.004 mg/L
Lithium, Li	2.001 ± 0.012 mg/L	Magnesium, Mg	19.99 ± 0.12 mg/L
Manganese, Mn	1.000 ± 0.005 mg/L	Nickel, Ni	4.000 ± 0.024 mg/L
Potassium, K	300.1 ± 1.1 mg/L	Selenium, Se	2.000 ± 0.015 mg/L
Silver, Ag	1.000 ± 0.008 mg/L	Sodium, Na	100.0 ± 0.4 mg/L
Strontium, Sr	1.000 ± 0.006 mg/L	Sulfur, S	10.00 ± 0.05 mg/L
Thallium, Tl	1.500 ± 0.012 mg/L	Thorium, Th	1.500 ± 0.009 mg/L
Uranium, U	6.000 ± 0.031 mg/L	Vanadium, V	1.000 ± 0.006 mg/L
Zinc, Zn	2.000 ± 0.012 mg/L		

Density: 1.013 g/mL (measured at 20 ± 4 °C)

Assay Information:

Reagent

ICP SPK 3A_00155

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLDEN-SPK-3A
Lot Number:	N2-MEB673087
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Phosphorus, 200 µg/mL ea: Thallium, Uranium, Selenium, Bismuth, Aluminum, Barium, 100 µg/mL ea: Arsenic, Lithium, Iron, Strontium, Thorium, 50 µg/mL ea: Vanadium, Zinc, Lead, Nickel, Cobalt, Manganese, 25 µg/mL ea: Copper, 20 µg/mL ea: Chromium, 10 µg/mL ea: Cadmium, 5 µg/mL ea: Silver, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	100.0 ± 0.7 µg/mL
Barium, Ba	200.0 ± 0.9 µg/mL	Beryllium, Be	5.000 ± 0.030 µg/mL
Bismuth, Bi	200.0 ± 1.2 µg/mL	Cadmium, Cd	10.00 ± 0.04 µg/mL
Calcium, Ca	5 000 ± 20 µg/mL	Chromium, Cr	20.00 ± 0.09 µg/mL
Cobalt, Co	49.99 ± 0.23 µg/mL	Copper, Cu	25.00 ± 0.10 µg/mL
Iron, Fe	100.0 ± 0.4 µg/mL	Lead, Pb	50.00 ± 0.27 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 21 µg/mL
Manganese, Mn	50.00 ± 0.26 µg/mL	Nickel, Ni	50.00 ± 0.26 µg/mL
Phosphorus, P	1 000 ± 5 µg/mL	Potassium, K	5 000 ± 18 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	5.000 ± 0.034 µg/mL
Sodium, Na	5 000 ± 18 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	200.0 ± 1.3 µg/mL	Thorium, Th	100.0 ± 0.5 µg/mL
Uranium, U	200.0 ± 1.1 µg/mL	Vanadium, V	50.00 ± 0.21 µg/mL
Zinc, Zn	50.03 ± 0.21 µg/mL		

Density: 1.091 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Bi	ICP Assay	3106	991212
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Tl	ICP Assay	3158	993012
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b}$ = $[(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2022**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

Icp stk ICSA_00024

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

2808 Charleston Drive
Christiansburg, VA 24073 - USA
Local: (540) 394-6178
Toll-Free: (800) 669-6178
Fax: (540) 394-6179
Email: sales@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

5108867
ID: icp stk ICSA_00024
Exp: 07/01/20 Prpd: SJS
ICP stock ICSA solution

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 22 µg/mL	Calcium, Ca	5 000 ± 20 µg/mL
Iron, Fe	2 000 ± 8 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL

Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

Reagent

MCPA&MCPP_00078

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-66380-R1
Description: Custom Herbicide Standard
Lot: 217031352
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Mar 31, 2017
Expiration: May 1, 2019
Sample Size: 1 mL
Components: 2
Storage Condition: Refrig (0-5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (mg/mL)	Certified Analyte Concentration[2] (mg/mL)
MCPA acid	94-74-6	98.9	90.01	89.02
MCPP acid	7085-19-0	99.9	90.01	89.92

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 5/16

Reagent

MS-47548-U_00015

TraceCERT®
Traceable Certified Reference Materials

SUPELCO
Solutions within.™
595 North Harrison Road · Bellefonte, PA
16823-0048 USA · Phone(814)359-3441

Certificate of Analysis

Description: EPA 8270 GC/MS Tuning Solution II, 1x1ml, 1000µg/ml in methylene chloride

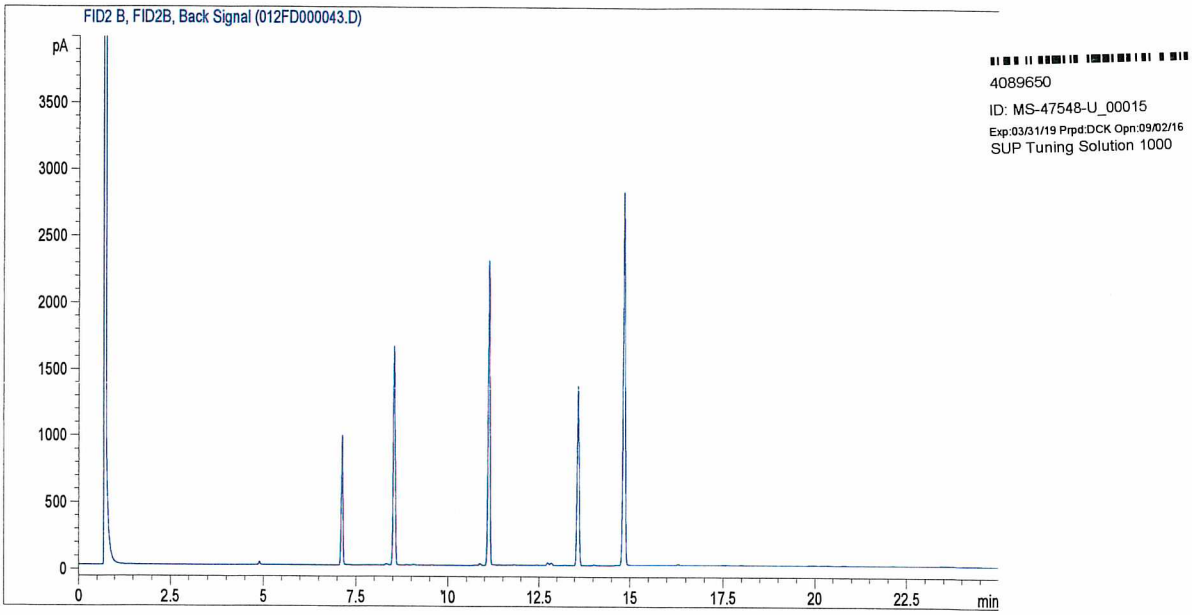
Part Number: 47548-U

Lot Number: XA19099V

Expiration Date: March 2019

Storage: Refrigerate

Analytical Method Parameters:
Column: Equity-5; 30 m x 0.53 mm, 1.5 µm df
150 °C to 280 °C (8.75 min) at 8 °C/min
Detector: FID; 310 °C
Injection Volume: 1µL



Elution	Analyte	Lot Number	CAS Number	Chromatographic Purity %	Certified Gravimetric Conc. µg/mL	Expanded Uncertainty µg/mL	Analytical Conc. µg/mL
1.	Pentachlorophenol	LC17897	87-86-5	97.5	1000.0	±38	945.6
2.	Decafluorotriphenylphosphine	LC14010	5074-71-5	98.6	986.0	±44	961.5
3.	Benzidine	LB83682	92-87-5	99.9	999.0	±38	1009.6
4.	4,4'-DDT	LA83013	50-29-3	98.0	980.8	±36	961.0
	Internal Standard	N/A	N/A	N/A	N/A	N/A	N/A

Reagent

MS-567684_00019

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

4101728
ID: MS-567684_00019
Exp: 07/31/20 Prpd: DCK
RES 8270 Internal Std Mix

Catalog No. : 567684 **Lot No.:** A0112833

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	2,014.8 µg/mL	+/- 11.7142 +/- 89.5186 +/- 98.3528	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	(Lot M-1452)	2,015.8 µg/mL	+/- 11.7202 +/- 89.5645 +/- 98.4032	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 97%	(Lot PR-21070)	2,002.0 µg/mL	+/- 11.6397 +/- 88.9491 +/- 97.7271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	(Lot PR-23065)	2,007.1 µg/mL	+/- 11.6693 +/- 89.1750 +/- 97.9753	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99%	(Lot PR-25081)	2,013.2 µg/mL	+/- 11.7047 +/- 89.4460 +/- 98.2730	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	(Lot PR-24113)	2,005.4 µg/mL	+/- 11.6598 +/- 89.1024 +/- 97.8955	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

MS-567684_00020

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

5035055
ID: MS-567684_00020
Exp: 08/31/22 Prpd: OCK
RES 8270 Internal Std Mix

Catalog No. : 567684 **Lot No.:** A0129635

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,014.1 µg/mL	+/- 11.7102 µg/mL +/- 90.7163 µg/mL +/- 100.6609 µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 (Lot M-1452) **Purity** 99%	2,004.1 µg/mL	+/- 11.6520 µg/mL +/- 90.2659 µg/mL +/- 100.1611 µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 (Lot PR-25444) **Purity** 99%	2,011.1 µg/mL	+/- 11.6927 µg/mL +/- 90.5811 µg/mL +/- 100.5110 µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 (Lot PR-27621) **Purity** 99%	2,014.5 µg/mL	+/- 11.7125 µg/mL +/- 90.7343 µg/mL +/- 100.6809 µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 (Lot PR-27952) **Purity** 99%	2,013.6 µg/mL	+/- 11.7072 µg/mL +/- 90.6938 µg/mL +/- 100.6359 µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 (Lot PR-27342) **Purity** 99%	2,012.2 µg/mL	+/- 11.6991 µg/mL +/- 90.6307 µg/mL +/- 100.5659 µg/mL	Gravimetric Unstressed Stressed

Reagent

MS-567685_00004

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0130500

4941881
ID: MS-567685_00004
Exp: 09/30/22 Prpd: DCK
8270 Surrogates 5000ug/mL

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,009.8 µg/mL	+/- 29.1274 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 146.2028 µg/mL		Unstressed
	Purity 99%			+/- 177.4114 µg/mL		Stressed
2	Phenol-d5		5,013.6 µg/mL	+/- 29.1495 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.3137 µg/mL		Unstressed
	Purity 99%			+/- 177.5460 µg/mL		Stressed
3	Nitrobenzene-d5		5,000.0 µg/mL	+/- 29.0704 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 145.9168 µg/mL		Unstressed
	Purity 99%			+/- 177.0644 µg/mL		Stressed
4	2-Fluorobiphenyl		5,001.2 µg/mL	+/- 29.0774 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot B19Z016)		+/- 145.9518 µg/mL		Unstressed
	Purity 99%			+/- 177.1069 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,002.6 µg/mL	+/- 29.0855 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 145.9926 µg/mL		Unstressed
	Purity 99%			+/- 177.1564 µg/mL		Stressed
6	p-Terphenyl-d14		5,004.0 µg/mL	+/- 29.0937 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.0335 µg/mL		Unstressed
	Purity 99%			+/- 177.2060 µg/mL		Stressed

Reagent

MS-568023_00042

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568023 **Lot No.:** A0127668

Description : 8270 Famphur Standard

8270 Famphur Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

4649426
ID: MS-568023_00042
Exp: 05/31/19 Prpd: DCK
RES HSLA Famphur 2000ug/m

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Famphur	2,010.0 µg/mL	+/- 20.2482 µg/mL	Gravimetric
	CAS # 52-85-7 (Lot 5792500)		+/- 87.7744 µg/mL	Unstressed
	Purity 99%		+/- 87.8109 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Michael J Maye

Date Mixed: 17-May-2017 **Balance:** 1128353505

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

MS-568033_00026

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Catalog No. : 568033 **Lot No.:** A0133057

4941894
ID: MS-568033_00026
Exp: 06/30/19 Prpd: DCK
RES HSLA CUSTOM MIX 4000u

Description : Denver 8270 Standard

Denver 8270 Standard 4,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use. This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,3-Dichloroaniline	4,000.0 µg/mL	+/- 37.1978 µg/mL	Gravimetric
	CAS # 608-27-5 (Lot FBV01)		+/- 55.9394 µg/mL	Unstressed
	Purity 99%		+/- 81.4485 µg/mL	Stressed
2	3,5-Dimethylphenol	4,016.0 µg/mL	+/- 37.3466 µg/mL	Gravimetric
	CAS # 108-68-9 (Lot 02801LZ)		+/- 56.1632 µg/mL	Unstressed
	Purity 99%		+/- 81.7743 µg/mL	Stressed
3	Alachlor	4,008.0 µg/mL	+/- 37.2722 µg/mL	Gravimetric
	CAS # 15972-60-8 (Lot 6104400)		+/- 56.0513 µg/mL	Unstressed
	Purity 99%		+/- 81.6114 µg/mL	Stressed
4	alpha-Methylstyrene	4,016.0 µg/mL	+/- 37.3466 µg/mL	Gravimetric
	CAS # 98-83-9 (Lot MKBS2502V)		+/- 56.1632 µg/mL	Unstressed
	Purity 99%		+/- 81.7743 µg/mL	Stressed
5	Benzo(e)pyrene	4,004.0 µg/mL	+/- 37.2350 µg/mL	Gravimetric
	CAS # 192-97-2 (Lot NT058329)		+/- 55.9953 µg/mL	Unstressed
	Purity 99%		+/- 81.5299 µg/mL	Stressed

Reagent

MS-569730 HSL_00007

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Catalog No. : 569730 **Lot No.:** A0127472

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2018 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

4941882
ID: MS-569730 AFC_00006
Exp: 11/30/18 Prpd: DCK
HSLA Amine Mix (2015) 200

4941892
ID: MS-569730 HSL_00007
Exp: 11/30/18 Prpd: DCK
HSLA Amine Mix (2015) 200

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine	2,003.5 µg/mL	+/- 11.6483 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 170428KJA)		+/- 23.9496 µg/mL	Unstressed
	Purity 99%		+/- 38.1154 µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,002.1 µg/mL	+/- 11.6402 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 170123KJA)		+/- 23.9328 µg/mL	Unstressed
	Purity 99%		+/- 38.0887 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731_00079

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4944222
ID: MS-569731_00079
Exp: 03/31/19 Prpd: DCK
HSLA Benzoic Acid (2015)

Catalog No. : 569731 **Lot No.:** A0130477

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	1,996.3 µg/mL	+/- 11.6064 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 111.9283 µg/mL	Unstressed
	Purity 98%		+/- 114.5473 µg/mL	Stressed
2	Benzoic acid	2,000.8 µg/mL	+/- 11.6328 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 112.1829 µg/mL	Unstressed
	Purity 99%		+/- 114.8078 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569732 HSL_00005

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0127580

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2018 **Storage:** 10°C or colder

Handling: This product is photosensitive.

4941911
ID: MS-569732 HSL_00005
Exp: 11/30/18 Prpd: DCK
8270 List 1/ Std 11 (2015

4941908
ID: MS-569732 BZH_00007
Exp: 11/30/18 Prpd: DCK
8270 List 1/ Std 11 (2015

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 **Purity** 99%	(Lot SHBG8690V)	2,019.2	µg/mL	+/- 11.7396 +/- 64.7257 +/- 75.2411	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 **Purity** 99%	(Lot I16X016)	2,014.2	µg/mL	+/- 11.7105 +/- 64.5654 +/- 75.0548	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 **Purity** 99%	(Lot P7XPN)	2,018.1	µg/mL	+/- 11.7333 +/- 64.6910 +/- 75.2008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-571995_00002

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

5163450
ID: MS-571995_00002
Exp: 09/30/19 Prpd: DCK
RES HSLB Mega Mix (2017)

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol CAS # 95-57-8 Purity 99%	(Lot STBF2690V)	1,007.1	µg/mL	+/- 5.8552 +/- 12.0385 +/- 19.1592	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	1,001.0	µg/mL	+/- 5.8199 +/- 11.9660 +/- 19.0437	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS4401V)	1,004.4	µg/mL	+/- 5.8397 +/- 12.0067 +/- 19.1084	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot 68996CMV)	1,001.2	µg/mL	+/- 5.8211 +/- 11.9684 +/- 19.0475	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBH6379)	1,001.6	µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 98%	(Lot 5510800)	1,006.7	µg/mL	+/- 5.8528 +/- 12.0336 +/- 19.1513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone CAS # 98-86-2 Purity 99%	(Lot STBG7113)	1,005.5	µg/mL	+/- 5.8459 +/- 12.0194 +/- 19.1287	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- 2.9196 +/- 5.9923 +/- 9.5334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	501.7	µg/mL	+/- 2.9235 +/- 6.0002 +/- 9.5461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot NOPCF)	1,003.1	µg/mL	+/- 5.8323 +/- 11.9915 +/- 19.0843	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,003.4	µg/mL	+/- 5.8339 +/- 11.9947 +/- 19.0894	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBG5577V)	1,002.3	µg/mL	+/- 5.8273 +/- 11.9812 +/- 19.0678	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 98%	(Lot MKBG2442V)	1,003.3	µg/mL	+/- 5.8334 +/- 11.9938 +/- 19.0879	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,007.7	µg/mL	+/- 5.8587 +/- 12.0457 +/- 19.1706	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,000.9	µg/mL	+/- 5.8191 +/- 11.9644 +/- 19.0412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,004.5	µg/mL	+/- 5.8401 +/- 12.0075 +/- 19.1097	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,006.0	µg/mL	+/- 5.8491 +/- 12.0260 +/- 19.1392	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,001.8	µg/mL	+/- 5.8246 +/- 11.9756 +/- 19.0590	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,003.7	µg/mL	+/- 5.8358 +/- 11.9987 +/- 19.0957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606V)	1,000.7	µg/mL	+/- 5.8183 +/- 11.9628 +/- 19.0387	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,005.9	µg/mL	+/- 5.8482 +/- 12.0242 +/- 19.1363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBF9439V)	2,008.3	µg/mL	+/- 11.6766 +/- 24.0077 +/- 38.2080	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBW2691V)	1,005.5	µg/mL	+/- 5.8463 +/- 12.0202 +/- 19.1300	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBV0501V)	2,009.3	µg/mL	+/- 11.6824 +/- 24.0197 +/- 38.2270	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,003.9	µg/mL	+/- 5.8366 +/- 12.0003 +/- 19.0983	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot B180305L)	1,001.9	µg/mL	+/- 5.8253 +/- 11.9772 +/- 19.0615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 99%	(Lot 10193329)	1,002.0	µg/mL	+/- 5.8257 +/- 11.9780 +/- 19.0628	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBG2582V)	1,001.6	µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKBV9622V)	1,003.3	µg/mL	+/- 5.8335 +/- 11.9939 +/- 19.0881	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot 012015)	1,004.6 µg/mL	+/- 5.8408 +/- 12.0091 +/- 19.1122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBZ3868V)	1,002.7 µg/mL	+/- 5.8296 +/- 11.9859 +/- 19.0754	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 6016000)	1,007.9 µg/mL	+/- 5.8602 +/- 12.0489 +/- 19.1756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot 012012B)	1,003.6 µg/mL	+/- 5.8350 +/- 11.9971 +/- 19.0932	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012017K)	1,006.2 µg/mL	+/- 5.8501 +/- 12.0282 +/- 19.1427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.1 µg/mL	+/- 5.8261 +/- 11.9788 +/- 19.0640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,004.0 µg/mL	+/- 5.8373 +/- 12.0019 +/- 19.1008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,001.9 µg/mL	+/- 5.8249 +/- 11.9764 +/- 19.0602	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER05121401)	1,000.9 µg/mL	+/- 5.8195 +/- 11.9652 +/- 19.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:
N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Reagent

MV-567650_00027

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

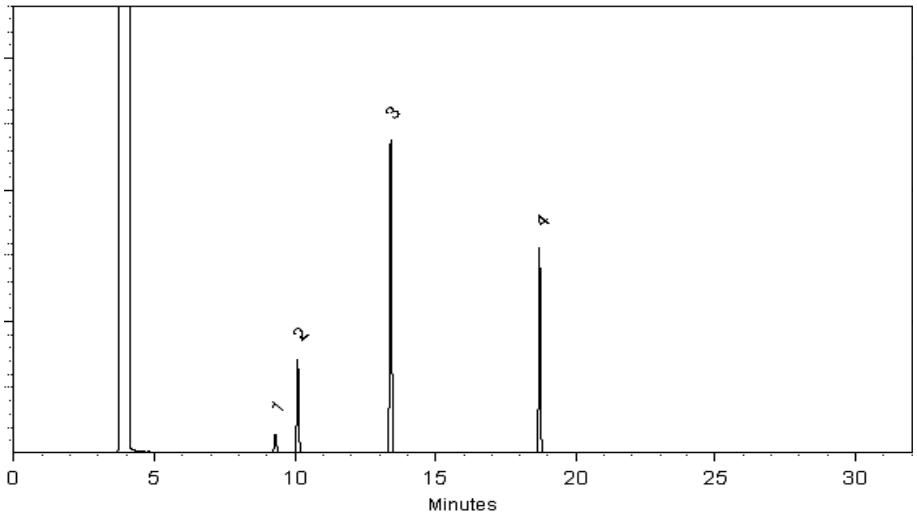
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Isaiah Harrison - Mix Technician

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00008

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0118105

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 **Purity** 99%	(Lot I201P6)	5,023.8 µg/mL	+/- 29.2073 +/- 107.5597 +/- 110.6867	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 **CAS #** 24313-50-6 **Purity** 99%	(Lot M276)	1,251.1 µg/mL	+/- 7.2740 +/- 26.7862 +/- 27.5649	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene **CAS #** 462-06-6 **Purity** 99%	(Lot BCBK8171V)	250.2 µg/mL	+/- 1.4578 +/- 5.3567 +/- 5.5123	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 **Purity** 99%	(Lot I-19239)	5,005.7 µg/mL	+/- 29.1020 +/- 107.1722 +/- 110.2879	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 **CAS #** 3114-55-4 **Purity** 99%	(Lot PR-23926)	250.1 µg/mL	+/- 1.4575 +/- 5.3556 +/- 5.5112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	250.0 µg/mL	+/- 1.4566 +/- 5.3524 +/- 5.5079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

MV-568720_00022

Reagent

MV-569721.sec_00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%		+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%		+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%		+/- 756.3834 µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

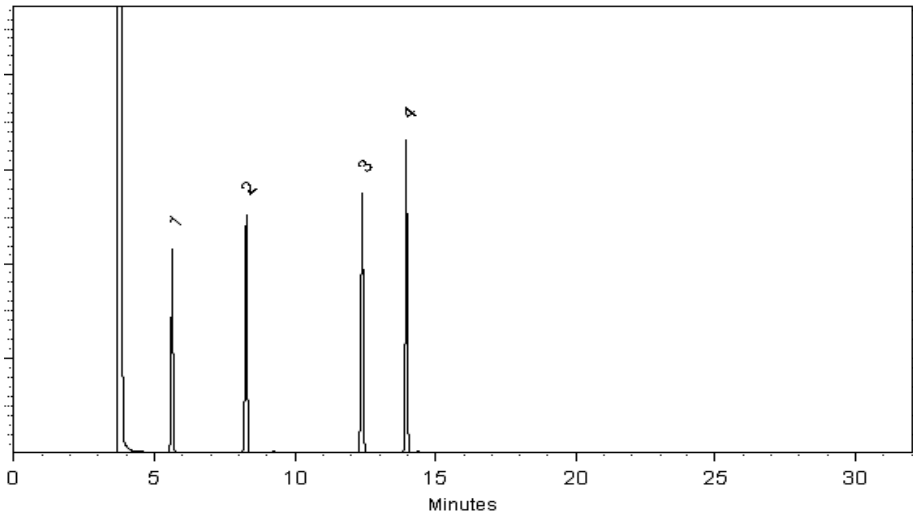
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00006

Reagent

MV-569722.sec_00005

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0128832

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,505.9 µg/mL	+/- 22.3986 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 23586)		+/- 141.5312 µg/mL	Unstressed
	Purity 99%		+/- 144.7955 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.7 µg/mL	+/- 24.8413 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.8153 µg/mL	Unstressed
	Purity 99%		+/- 145.0675 µg/mL	Stressed
3	Vinyl chloride	2,503.2 µg/mL	+/- 25.9197 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.9813 µg/mL	Unstressed
	Purity 99%		+/- 145.2285 µg/mL	Stressed
4	1,3-Butadiene	2,508.9 µg/mL	+/- 20.6969 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 141.4379 µg/mL	Unstressed
	Purity 99%		+/- 144.7121 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,502.6 µg/mL	+/- 26.2540 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 142.0076 µg/mL	Unstressed
	Purity 99%		+/- 145.2526 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,510.6 µg/mL	+/- 24.9094 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 142.2038 µg/mL	Unstressed
	Purity 99%		+/- 145.4650 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,510.9 µg/mL	+/- 25.6719 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 142.3575 µg/mL	Unstressed
	Purity 99%		+/- 145.6160 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.9	µg/mL	+/-	18.9312	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 253600)			+/-	140.9660	µg/mL	Unstressed
	Purity 99%				+/-	144.2404	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

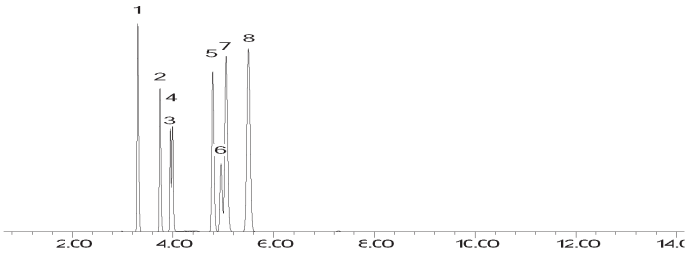
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 29-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569722_00008

Reagent

MV-569723_00004

Reagent

MV-569724_00016

Reagent

MV-569727_00007

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0124672

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2020 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,006.0 µg/mL	+/- 146.4156 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1,508.8223 µg/mL	Unstressed
	Purity 99%		+/- 1,512.4040 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

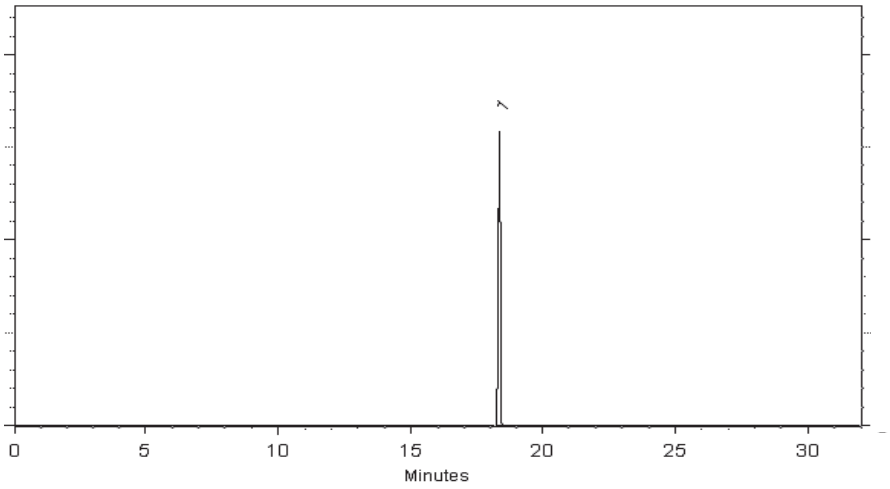
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 03-Feb-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-571992.sec_00001

Reagent

MV-571992_00001

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Vincent Wang, Ph.D.
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET • NORTH KINGSTOWN, RHODE ISLAND 02852 • WWW.ULTRASCI.COM

Reagent

pH 7.0 Buffer_00247

ACCREDITED
Reference Materials Producer
Cert# 2495.01

ACCREDITED
Chemical Testing
Cert#2495.02

SPEXertificate ®

Certificate of Reference Material

Catalog Number: PH-BUFF7-500
Description: Buffer Standard
Matrix: H2O

Lot No.: 1-190PWX

This certified material is intended primarily for use as a calibration standard or quality control standard for instrumentation employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value:

Analyte	Certified (pH units at 25°C)	Uncertainty (pH units)	NIST SRM
pH	6.98	± 0.02	185i, 186g

Refer to side 2 for certification details

Balances are calibrated regularly with weight sets traceable to NIST 32856, 32867. This CRM is guaranteed stable to ± 0.02 pH units on the certified value for a period of one year from the date of certification. This includes components of uncertainty associated with measurement, homogeneity, short and long term stability. This guarantee is valid only when the material is unopened and stored under laboratory conditions.

Date of Certification: OCT - - 2018 Certifying Officer: Kathleen Cullen

©2017 SPEX CertiPrep, LLC

Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principals for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC be liable for any loss of profits or any incidental, special, or consequential damages.

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Phone: 1-800-LAB-SPEX • Fax: 732-603-9647

Accredited to 17025 & Guide 34 ISO Certified to 9001

Reagent

SFD ICV STK_00005

1 Reagent Lane Fair Lawn, NJ 07410

Certificate of Analysis

This is to certify that units of the above mentioned lot number were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Acros Organics expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Unless otherwise stated, these products are not intended for dialysis, parenteral, or injectable use without further processing. The following are the actual analytical results obtained:

Catalog Number	**42442**	**Mfg. Date**	**8/4/2011**
Lot Number	**B0132482**		
Description	**SODIUM SULFIDE NONAHYDRATE, ACS**		
Country of Origin	**United States**		
Declaration of Origin	**Inorganic-non animal**		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless crystals
AMMONIUM (NH4)	%	<= 0.005	<0.005
ASSAY	%	Inclusive between 98.0 103.0	99.8
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	PASS/FAIL	= PASS TEST	PASS TEST
SULFITE OR THIOSULFATE	%	<= 0.1	<0.10

CERTIFIED BY

Lab Manager Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please contact your Acros Organics representative.

Reagent

FlashPointStd_00003

CONOSTAN®
Oil Analysis Standards

1618955
ID: FlashPointStd_00003
Exp:11/20/19 Prpd:JCB Opn:11/14/18
Flash Point Standard

Certificate of Analysis

1.0 DESCRIPTION: CONOSTAN Flash Point Standard, (*D93-53°C*)

Catalogue Number: **150-900-000 / 150-900-050 / 150-900-051**
Lot Number: **F53-04**
Matrix: Hydrocarbon Oil
Expiration Date: **12 months from date of shipment**
(See bottle for date of shipment)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Temperature: **52°C (± 2°C)**

Method of analysis and traceability: This standard has been tested using a Pensky-Martens closed cup flash point tester in accordance with ASTM D 93 , ISO 2719 and IP 34

3.0 REFERENCE VALUES:

None.

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval:

Alketa Mixha
Conostan Production Manager

Certification Date: November 17, 2017

5.0 INTENDED USE / *UTILISATION PRÉVUE*:

- Metallo-Organic Standards: Calibration of, including but not limited to: ICP, AA, Rotrode, XRF, DCP, flame emission. / *Étalons Métallo-Organiques : Pour l'étalonnage d'instruments de mesure tels que: ICP, AA, Rotrode, XRF, DCP et émission flame.*
- Base and Blank Oils: For blending calibration standards for spectrometric analysis. / *Huiles de base et huiles blanches: Pour le mélange d'étalons de calibration pour fins d'analyse par spectroscopie.*
- Sulfur Standards : Calibration of, including but not limited to : ICP, XRF, UV-F according to various ASTM methods such as D2622, D3246, D4294, D5453, D6334, D6443 and D3120. / *Pour l'étalonnage d'instruments de mesure tels que: ICP, XRF, Fluorescence Ultraviolet selon les méthodes ASTM telles que D2622, D3246, D4294, D5453, D6334, D6443 et D3120.*
- Chlorine standards : Calibration of, including but not limited to : ICP and XRF. / Étalons de chlorure: *Pour l'étalonnage d'instruments de mesure tels que: ICP et XRF.*
- Particle standards : Calibration and determination of performance of automatic particle counters according to ISO 11171. / *Pour l'étalonnage et l'évaluation de performance de compteurs de particules automatiques selon ISO 11171.*
- Viscosity Standards : Calibration of viscometers. / *Étalons de viscosité: Pour l'étalonnage de viscosimètres.*
- TAN/TBN Standards: Determination of Total Acid Number per method ASTM D664 / Total Base Number per ASTM D2896, typically in crude oil and lubricants. / *Détermination de l'indice d'acidité selon méthode ASTM D664 / indice de basicité selon ASTM D2896, typiquement dans des huiles brûtes et lubrifiants.*
- *Flash Point Standards: For the determination of Flash point per method ASTM D93 / Étalons Point Éclair: Pour la détermination de point éclair selon ASTM D93.*

For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter **SCP SCIENCE**.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / *Manutention et entreposage*: Store standards in their original Conostan containers at ambient laboratory temperatures, keep containers tightly sealed and avoid direct exposure to sunlight. Do not refrigerate. Moisture sensitivity varies with the element but all oil-based standards should be protected from exposure to moisture. If high humidity is a normal operating condition, minimize exposure and consider replacing standards more frequently. Prevent contamination introduced when transfers are made by using pre-cleaned or disposable droppers and pipettes. / *Stocker les étalons dans leur contenant d'origine et conserver dans des conditions normales de laboratoire, garder les contenants bien fermés et éviter le contact direct avec les rayons de soleil. Ne pas réfrigérer. La sensibilité due à l'humidité varie selon l'élément, par contre, les étalons à base d'huile ne devraient pas être gardés dans des endroits humides. Si l'humidité est un problème courant, minimiser le contact et prévoir le remplacement plus fréquent des étalons. Prévenir la contamination introduite lors de transferts en utilisant des tubes comptes-gouttes ou pipettes propres ou jettables.*

Stability / *Stabilité*: This Standard is guaranteed to be stable and accurate from the time of shipment (see date of shipment on bottle) up to the indicated expiration (see section 1.0), provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties jusqu'à l'expiration indiquée (voir section 1.0) à compter de la date d'expédition (voir date d'expédition indiquée sur la bouteille) en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

Use / *Utilisation*: Particle Standards - Degas sample under vacuum or ultrasonically. Shake sample on a mechanical shaker for at least 1 minute to disperse dust. Continue shaking sample until it is to be analyzed. Prior to analysis, run PartiStanTM Super Clean Fluid through APC to clean system. / *Étalons de particules – Dégazer l'échantillon par aspiration ou par moyen ultrasonique. Agiter l'échantillon pendant au moins 1 minute afin de disperser la poussière. Continuer l'agitation jusqu'à l'analyse. Avant l'analyse, utiliser PartiStanTM Super Clean Fluid afin de nettoyer le système.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons, when available, or a secondary source, when a suitable NIST SRM is unavailable. In addition, balances used are regularly calibrated using weights which are traceable to NIST or NRC (National Research Council of Canada) standards. Thermometers used for temperature measurements are NIST traceable. Master Viscometers have been calibrated according to ASTM method D2162 and based on the established kinematic viscosity of 1.0034mm2/s for distilled water at 20.00ºC per ISO/TR3666. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaine de comparaison ininterrompue, lorsque disponible, ou une source secondaire lors qu'une MRS applicable n'est pas disponible. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST ou au CRNC (Conseil National de Recherches Canada). Les thermomètres utilisés pour les lectures de température sont traçables au NIST. Les viscosimétres-maîtres ont été étalonnés selon la méthode ASTM D2162 et selon le viscosité cinétique établi pour l'eau distillé de 1.0034mm2/s à 20.00ºC selon ISO/TR3666.*

10.0 PREPARATION / PRÉPARATION:

These standards were produced according to internal procedures and according to the guidelines set forth in ISO Guide 34. Viscosity standards were prepared according to ASTM methods D445, D446 and corresponding ISO methods 3104 and 3105. Partistan 2806 was prepared according to Annex F, ISO 11171. / *Ces étalons ont été fabriqués selon des procédures internes et selon les lignes directrices du ISO Guide 34. Les étalons de viscosité ont été préparés selon les méthodes ASTM D445, D446 et les méthodes correspondantes ISO 3104 et 3105. Partistan 2806 a été préparé selon l'annexe F de ISO 11171.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: **SCP SCIENCE**, the manufacturer of **Conostan** standards, operates an ISO 17025 accredited laboratory (Corporate Headquarters). Please consult our web sité for a copy of the most recent revision of our certificate and scope of accreditation. / ***SCP SCIENCE**, le fabricant des étalons **Conostan**, est accrédité ISO 17025 (Siège social). Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / *Accréditation ISO 17034*: **SCP SCIENCE**, the manufacturer of **Conostan** standards, is an ISO 17034 accredited Reference Material Producer (Corporate Headquarters). Please consult our website for a copy of our most recent certificate and scope of accreditation. / ***SCP SCIENCE**, le fabricant des étalons **Conostan**, est un Fabricant de Matériaux de Référence Accrédité ISO 17034 (Siège social). Veuillez consulter notre site web afin de consulter notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS	USA	FRANCE	GERMANY
21800 Clark Graham Baie D'Urfé (Montréal), Quebec, H9X 4B6 Canada Phone: +1 (800) 361-6820 Fax: +1 (800) 253-5549	3rd Party Distribution Center 348 Route 11, Champlain, N.Y. 12919-4816 Phone: +1 (800) 361-6820 Fax: +1 (800) 253-5549	12 Ave. de Québec, Bat. Iberis SILIC 642, 91965 Courtaboeuf Phone: +33 (0) 1 69 18 71 17 Fax: +33 (0) 1 60 92 05 67	Alte Marktoberdorfer Straße 14, 87616 Marktoberdorf Phone: +49 (0) 8342-89560-61 Fax: +49 (0) 8342-89560-69

Reagent

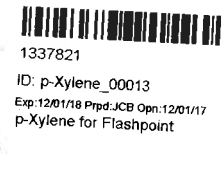
p-Xylene_00013

SIGMA-ALDRICH
sigma-aldrich.com

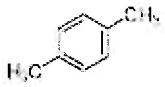
3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
p-Xylene - ReagentPlus®, 99%



Product Number:	**134449**
Lot Number:	**SHBB3168V**
Brand:	SIAL
CAS Number:	106-42-3
MDL Number:	MFCD00008556
Formula:	C8H10
Formula Weight:	106.17 g/mol
Quality Release Date:	07 JUL 2011



Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 98.5 %	99.8 %

Jamie Gleason

Jamie Gleason, Manager
Quality Control
Milwaukee, Wisconsin US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low

GC Column (1): DB-624 (60. ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
FWGIDW-181001-WW	280-116538-4	87	90	99	92
FWGqc-015-TB	280-116538-5	89	89	99	98
	LB3 280-437096/1-A	90	89	93	98
	LCS 280-437096/2-A	88	90	99	91

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	79-119
DCA = 1,2-Dichloroethane-d4 (Surr)	64-129
TOL = Toluene-d8 (Surr)	78-120
BFB = 4-Bromofluorobenzene (Surr)	78-121

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: Q75609.D

Lab ID: LCS 280-437096/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Benzene	0.0500	0.0496	99	74-135	
2-Butanone (MEK)	0.200	0.170	85	44-150	
Carbon tetrachloride	0.0500	0.0504	101	67-135	
Chlorobenzene	0.0500	0.0488	98	76-135	
Chloroform	0.0500	0.0503	101	76-120	
1,2-Dichloroethane	0.0500	0.0469	94	70-135	
1,1-Dichloroethene	0.0500	0.0498	100	71-136	
Tetrachloroethene	0.0500	0.0520	104	70-135	
Trichloroethene	0.0500	0.0498	100	73-135	
Vinyl chloride	0.0500	0.0481	96	40-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab File ID: Q75342.D BFB Injection Date: 11/12/2018

Instrument ID: VMS_Q BFB Injection Time: 13:32

Analysis Batch No.: 437259

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.1	
75	30.0 - 60.0 % of mass 95	50.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	73.1	
175	5.0 - 9.0 % of mass 174	5.6	(7.7) 1
176	95.0 - 101.0 % of mass 174	71.5	(97.8) 1
177	5.0 - 9.0 % of mass 176	5.4	(7.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-437259/12	Q75343.D	11/12/2018	14:11
	STD010 280-437259/13	Q75344.D	11/12/2018	14:32
	STD020 280-437259/14	Q75345.D	11/12/2018	14:52
	STD050 280-437259/15	Q75346.D	11/12/2018	15:13
	ICIS 280-437259/16	Q75347.D	11/12/2018	15:33
	STD30 280-437259/17	Q75348.D	11/12/2018	15:54
	STD60 280-437259/18	Q75349.D	11/12/2018	16:15
	ICV 280-437259/19	Q75351.D	11/12/2018	16:56

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab File ID: Q75366.D BFB Injection Date: 11/13/2018

Instrument ID: VMS_Q BFB Injection Time: 14:29

Analysis Batch No.: 437429

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.1	
75	30.0 - 60.0 % of mass 95	52.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	69.8	
175	5.0 - 9.0 % of mass 174	5.2	(7.4) 1
176	95.0 - 101.0 % of mass 174	67.7	(96.9) 1
177	5.0 - 9.0 % of mass 176	4.2	(6.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-437429/12	Q75367.D	11/13/2018	14:42
	STD010 280-437429/13	Q75368.D	11/13/2018	15:03
	STD020 280-437429/14	Q75369.D	11/13/2018	15:23
	STD050 280-437429/15	Q75370.D	11/13/2018	15:44
	ICIS 280-437429/16	Q75371.D	11/13/2018	16:04
	STD30 280-437429/17	Q75372.D	11/13/2018	16:25
	STD60 280-437429/18	Q75373.D	11/13/2018	16:45
	ICV 280-437429/19	Q75375.D	11/13/2018	17:26

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab File ID: Q75606.D BFB Injection Date: 11/23/2018

Instrument ID: VMS_Q BFB Injection Time: 11:53

Analysis Batch No.: 438589

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.3	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.2	(0.4) 1
174	50.0 - 120.00 % of mass 95	70.5	
175	5.0 - 9.0 % of mass 174	5.3	(7.5) 1
176	95.0 - 101.0 % of mass 174	67.3	(95.5) 1
177	5.0 - 9.0 % of mass 176	4.0	(6.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-438589/2	Q75607.D	11/23/2018	12:04
	CCV 280-438589/3	Q75608.D	11/23/2018	12:25
	LCS 280-437096/2-A	Q75609.D	11/23/2018	12:47
	LB3 280-437096/1-A	Q75610.D	11/23/2018	13:07
FWGIDW-181001-WW	280-116538-4	Q75611.D	11/23/2018	13:45
FWGqc-015-TB	280-116538-5	Q75612.D	11/23/2018	14:05
	CCVC 280-438589/37	Q75634.D	11/23/2018	21:37

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: ICIS 280-437259/16 Date Analyzed: 11/12/2018 15:33

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q75347.D Heated Purge: (Y/N) N

Calibration ID: 34287

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		259070	5.87	3190104	7.80	639343	10.03
UPPER LIMIT		518140	6.37	6380208	8.30	1278686	10.53
LOWER LIMIT		129535	5.37	1595052	7.30	319672	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437259/19		281868	5.87	3383194	7.80	704681	10.03

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: ICIS 280-437259/16 Date Analyzed: 11/12/2018 15:33

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q75347.D Heated Purge: (Y/N) N

Calibration ID: 34287

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		817000	11.87				
UPPER LIMIT		1634000	12.37				
LOWER LIMIT		408500	11.37				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437259/19		946471	11.87				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: ICIS 280-437429/16 Date Analyzed: 11/13/2018 16:04

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q75371.D Heated Purge: (Y/N) N

Calibration ID: 34299

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		239246	5.88	3071430	7.80	589968	10.03
UPPER LIMIT		478492	6.38	6142860	8.30	1179936	10.53
LOWER LIMIT		119623	5.38	1535715	7.30	294984	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437429/19		267200	5.87	3335618	7.80	630712	10.03
CCV 280-438589/2		244850	5.86	3409973	7.79	669368	10.02
CCV 280-438589/3		266689	5.87	3669654	7.80	693877	10.03
LCS 280-437096/2-A		250115	5.86	3643457	7.79	675421	10.03
LB3 280-437096/1-A		246454	5.88	3528324	7.80	695770	10.03
280-116538-4	FWGIDW-181001-WW	231679	5.86	3499652	7.79	612665	10.03
280-116538-5	FWGqc-015-TB	205162	5.87	3416183	7.79	662477	10.02
CCVC 280-438589/37		267491	5.87	3383652	7.80	684078	10.03

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: ICIS 280-437429/16 Date Analyzed: 11/13/2018 16:04

Instrument ID: VMS_Q GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): Q75371.D Heated Purge: (Y/N) N

Calibration ID: 34299

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		794860	11.86				
UPPER LIMIT		1589720	12.36				
LOWER LIMIT		397430	11.36				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437429/19		833809	11.87				
CCV 280-438589/2		980217	11.87				
CCV 280-438589/3		959839	11.86				
LCS 280-437096/2-A		945513	11.86				
LB3 280-437096/1-A		908536	11.86				
280-116538-4	FWGIDW-181001-WW	818600	11.86				
280-116538-5	FWGqc-015-TB	780175	11.87				
CCVC 280-438589/37		937356	11.86				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW | Lab Sample ID: 280-116538-4

Matrix: Water (TCLP) | Lab File ID: Q75611.D

Analysis Method: 8260B | Date Collected: 11/02/2018 15:30

Sample wt/vol: 2(mL) | Date Analyzed: 11/23/2018 13:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 438589 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.010	0.0016
78-93-3	2-Butanone (MEK)	ND		0.10	0.020
56-23-5	Carbon tetrachloride	ND		0.010	0.0019
108-90-7	Chlorobenzene	ND		0.010	0.0017
67-66-3	Chloroform	ND		0.010	0.0016
107-06-2	1,2-Dichloroethane	ND		0.010	0.0013
75-35-4	1,1-Dichloroethene	ND		0.010	0.0023
127-18-4	Tetrachloroethene	ND		0.010	0.0020
79-01-6	Trichloroethene	ND		0.010	0.0016
75-01-4	Vinyl chloride	ND		0.010	0.0010

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		78-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-129
460-00-4	4-Bromofluorobenzene (Surr)	92		78-121
1868-53-7	Dibromofluoromethane (Surr)	87		79-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75611.D
Lims ID: 280-116538-L-4-A
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 23-Nov-2018 13:45:30 ALS Bottle#: 5 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-L-4-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 14:18:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.857	5.872	-0.015	0	231679	250.0	
* 1 Fluorobenzene	96	7.788	7.795	-0.007	100	3499652	12.5	
* 149 1,4-Dioxane-d8	96		8.639				ND	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	99	612665	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	99	818600	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.237	7.251	-0.014	92	736168	11.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.530	7.545	-0.015	0	636352	12.2	
$ 7 Toluene-d8 (Surr)	98	8.953	8.960	-0.007	100	2935902	13.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	822603	12.5	
27 Vinyl chloride	62		4.577				ND	
43 1,1-Dichloroethene	96		5.628				ND	
61 2-Butanone (MEK)	43		6.873				ND	
68 Chloroform	83		7.130				ND	
74 Carbon tetrachloride	117		7.495				ND	
76 1,2-Dichloroethane	62		7.602				ND	
77 Benzene	78		7.630				ND	
79 Trichloroethene	95		8.081				ND	
97 Tetrachloroethene	164		9.418				ND	
102 Chlorobenzene	112		10.047				ND	

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added: 1.08	Units: uL	Run Reagent

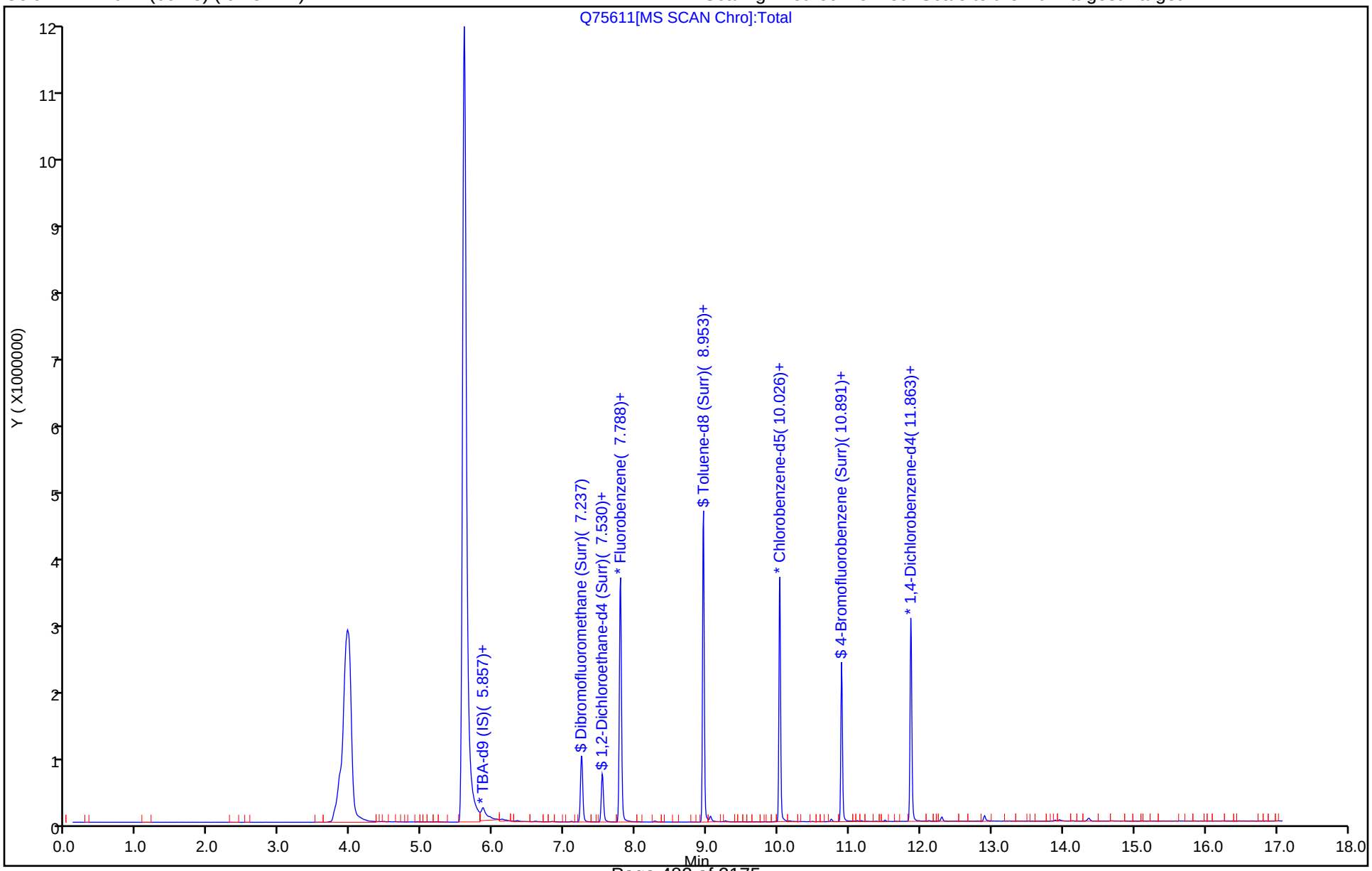
Report Date: 24-Nov-2018 09:04:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75611.D

Injection Date:	23-Nov-2018 13:45:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	280-116538-L-4-A	Lab Sample ID:	280-116538-4	Worklist Smp#:	14
Client ID:	FWGIDW-181001-WW				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75611.D
Lims ID: 280-116538-L-4-A
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 23-Nov-2018 13:45:30 ALS Bottle#: 5 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-L-4-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 14:18:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	13.5	11.8	87.28
$ 6 1,2-Dichloroethane-d4 (Surr)	13.5	12.2	90.28
$ 7 Toluene-d8 (Surr)	13.5	13.4	99.37
$ 8 4-Bromofluorobenzene (Surr)	13.5	12.5	92.41

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGqc-015-TB | Lab Sample ID: 280-116538-5

Matrix: Water (TCLP) | Lab File ID: Q75612.D

Analysis Method: 8260B | Date Collected: 11/02/2018 15:30

Sample wt/vol: 2(mL) | Date Analyzed: 11/23/2018 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 438589 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.010	0.0016
78-93-3	2-Butanone (MEK)	ND		0.10	0.020
56-23-5	Carbon tetrachloride	ND		0.010	0.0019
108-90-7	Chlorobenzene	ND		0.010	0.0017
67-66-3	Chloroform	ND		0.010	0.0016
107-06-2	1,2-Dichloroethane	ND		0.010	0.0013
75-35-4	1,1-Dichloroethene	ND		0.010	0.0023
127-18-4	Tetrachloroethene	ND		0.010	0.0020
79-01-6	Trichloroethene	ND		0.010	0.0016
75-01-4	Vinyl chloride	ND		0.010	0.0010

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		78-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		64-129
460-00-4	4-Bromofluorobenzene (Surr)	98		78-121
1868-53-7	Dibromofluoromethane (Surr)	89		79-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75612.D
Lims ID: 280-116538-A-5-A
Client ID: FWGqc-015-TB
Sample Type: Client
Inject. Date: 23-Nov-2018 14:05:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-A-5-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 14:48:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.867	5.872	-0.005	0	205162	250.0	
* 1 Fluorobenzene	96	7.791	7.795	-0.004	100	3416183	12.5	
* 149 1,4-Dioxane-d8	96		8.639				ND	
* 2 Chlorobenzene-d5	119	10.022	10.026	-0.004	98	662477	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.863	0.003	99	780175	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.247	7.251	-0.004	91	736499	12.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.540	7.545	-0.005	0	615679	12.1	
$ 7 Toluene-d8 (Surr)	98	8.949	8.960	-0.011	100	3177847	13.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.894	10.891	0.003	85	829846	13.2	
27 Vinyl chloride	62		4.577				ND	
43 1,1-Dichloroethene	96		5.628				ND	
61 2-Butanone (MEK)	43		6.873				ND	
68 Chloroform	83		7.130				ND	
74 Carbon tetrachloride	117		7.495				ND	
76 1,2-Dichloroethane	62		7.602				ND	
77 Benzene	78		7.630				ND	
79 Trichloroethene	95		8.081				ND	
97 Tetrachloroethene	164		9.418				ND	
102 Chlorobenzene	112		10.047				ND	

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added: 1.08	Units: uL	Run Reagent

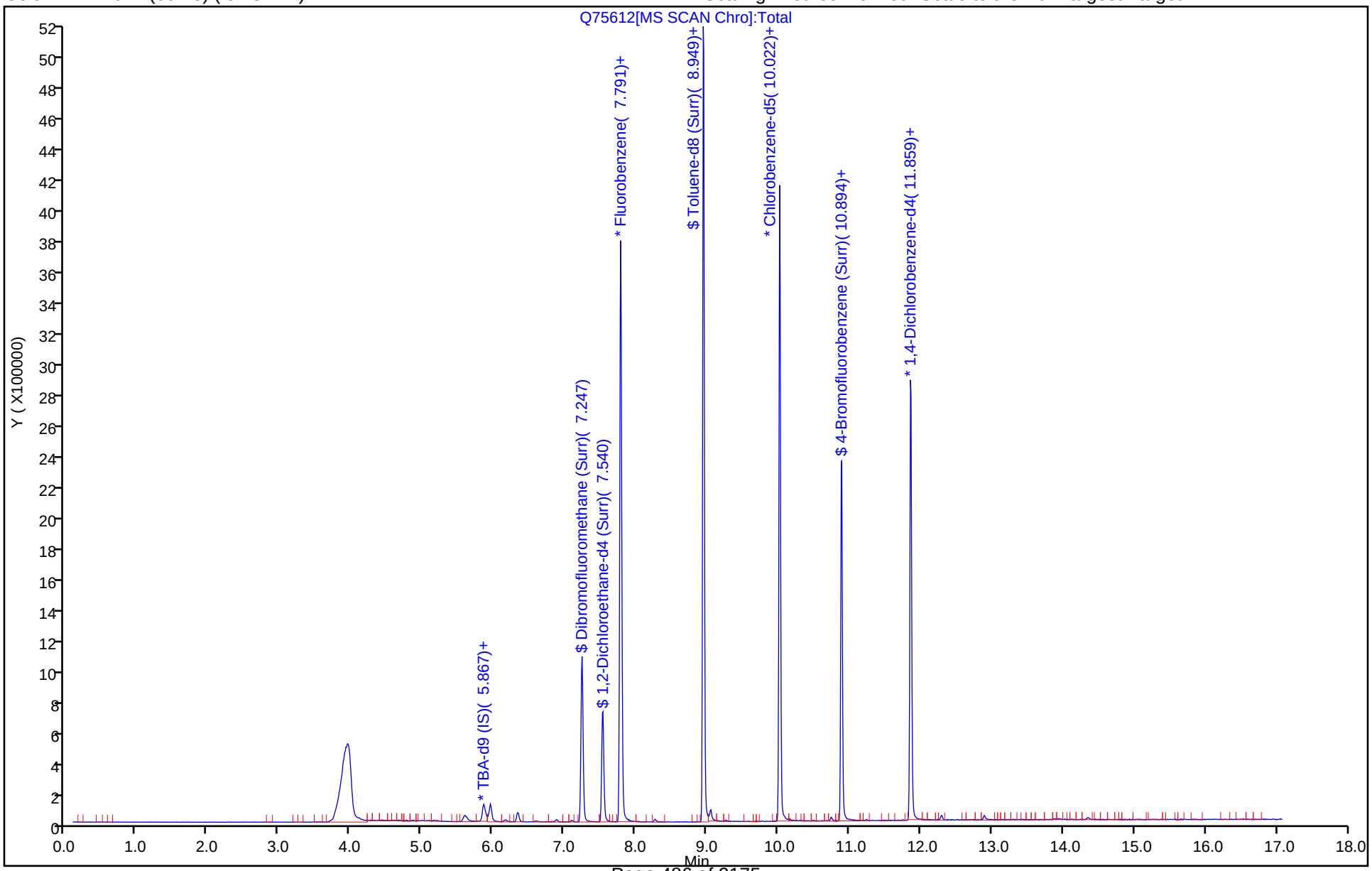
Report Date: 24-Nov-2018 09:04:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75612.D

Injection Date:	23-Nov-2018 14:05:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	280-116538-A-5-A	Lab Sample ID:	280-116538-5	Worklist Smp#:	15
Client ID:	FWGqc-015-TB				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75612.D
Lims ID: 280-116538-A-5-A
Client ID: FWGqc-015-TB
Sample Type: Client
Inject. Date: 23-Nov-2018 14:05:30 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-A-5-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 14:48:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	13.5	12.1	89.45
$ 6 1,2-Dichloroethane-d4 (Surr)	13.5	12.1	89.49
$ 7 Toluene-d8 (Surr)	13.5	13.4	99.48
$ 8 4-Bromofluorobenzene (Surr)	13.5	13.2	97.81

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-437259/12	Q75343.D
Level 2	STD010 280-437259/13	Q75344.D
Level 3	STD020 280-437259/14	Q75345.D
Level 4	STD050 280-437259/15	Q75346.D
Level 5	ICIS 280-437259/16	Q75347.D
Level 6	STD30 280-437259/17	Q75348.D
Level 7	STD60 280-437259/18	Q75349.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3471 0.4178	0.3562 0.3842	0.3111	0.4164	0.4397	Ave		0.3818				12.1		15.0			
Chloromethane	0.1427 0.1617	0.1486 0.1391	0.1496	0.1656	0.1711	Ave		0.1541			0.1000	7.9		15.0			
Vinyl chloride	0.1521 0.1732	0.1706 0.1507	0.1629	0.1833	0.1879	Ave		0.1687				8.5		30.0			
Bromomethane	0.1503 0.1522	0.1497 0.1418	0.1439	0.1533	0.1597	Ave		0.1501				4.0		15.0			
Chloroethane	0.0800 0.0820	0.0845 0.0705	0.0788	0.0842	0.0871	Ave		0.0810				6.7		15.0			
Dichlorofluoromethane	+++++ 0.2948	0.2800 0.2529	0.2741	0.3218	0.3484	Qua	-0.015	0.3354	-0.001376						0.9990		0.9900
Trichlorofluoromethane	0.4412 0.5116	0.4574 0.4724	0.4581	0.5085	0.5262	Ave		0.4822				6.8		15.0			
Ethyl ether	0.0846 0.1042	0.0989 0.0911	0.0968	0.1025	0.1061	Ave		0.0977				7.9		15.0			
Acrolein	0.0059 0.0086	0.0071 0.0078	0.0079	0.0081	0.0085	Ave		0.0077				12.2		15.0			
Acetone	0.0319 0.0144	0.0236 0.0117	0.0201	0.0179	0.0166	Qua	0.0366	0.0161	-0.000019						1.0000		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.2164	0.1807 0.2072	0.1777	0.1898	0.2046	Lin2	-0.033	0.2062							0.9970		0.9900
1,1-Dichloroethene	0.2180 0.2643	0.2623 0.2349	0.2468	0.2612	0.2643	Ave		0.2502				7.2		30.0			
Iodomethane	+++++ 0.3890	0.3443 0.3827	0.3395	0.3565	0.3734	Lin2	-0.044	0.3777							0.9980		0.9900
Methyl acetate	0.0476 0.0394	0.0487 0.0320	0.0475	0.0415	0.0422	Ave		0.0427				13.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.3614 0.4035	0.4329 0.2901	0.4256	0.4631	0.4441	Ave		0.4029				14.7		15.0			
Carbon disulfide	0.9567 1.0754	1.1069 0.8852	1.0516	1.1074	1.1094	Ave		1.0418				8.4		15.0			
t-Butyl alcohol	1.0271 1.2209	1.1392 1.2371	1.1427	1.2054	1.2648	Ave		1.1767				6.9		15.0			
Methylene Chloride	0.1992 0.2046	0.2212 0.1915	0.2031	0.2069	0.2052	Ave		0.2045				4.4		15.0			
Acrylonitrile	0.0024 0.0199	0.0117 0.0178	0.0130	0.0180	0.0189	Lin2	-0.083	0.0191							0.9950		0.9900
Methyl tert-butyl ether	0.2107 0.2538	0.2372 0.2277	0.2408	0.2479	0.2569	Ave		0.2393				6.7		15.0			
trans-1,2-Dichloroethene	0.2411 0.2878	0.2860 0.2598	0.2742	0.2807	0.2850	Ave		0.2735				6.3		15.0			
Hexane	2.6060 2.4281	2.6658 1.8177	2.4696	2.5305	2.6814	Ave		2.4570				12.1		15.0			
Vinyl acetate	0.1468 0.1821	0.1549 0.1550	0.1670	0.1788	0.1913	Ave		0.1680				9.9		15.0			
1,1-Dichloroethane	0.4499 0.4878	0.5182 0.4215	0.4976	0.5242	0.5189	Ave		0.4883			0.1000	8.0		15.0			
2-Butanone (MEK)	0.0325 0.0274	0.0328 0.0251	0.0302	0.0277	0.0292	Ave		0.0293				9.6		15.0			
sec-Butyl Alcohol	+++++ 0.9248	0.6614 0.8334	0.8245	0.9218	0.9499	Ave		0.8526				12.5		15.0			
cis-1,2-Dichloroethene	0.2352 0.2865	0.2747 0.2503	0.2619	0.2792	0.2830	Ave		0.2672				7.1		15.0			
2,2-Dichloropropane	0.3535 0.4018	0.3936 0.3580	0.3805	0.3943	0.4082	Ave		0.3843				5.5		15.0			
Bromochloromethane	0.0653 0.0844	0.0758 0.0788	0.0724	0.0790	0.0805	Ave		0.0766				8.1		15.0			
Chloroform	0.4182 0.4845	0.4538 0.4088	0.4414	0.4813	0.4854	Ave		0.4533				7.1		30.0			
Tetrahydrofuran	+++++ 0.0158	0.0146 0.0137	0.0155	0.0163	0.0168	Ave		0.0154				7.4		15.0			
Isobutyl alcohol	+++++ 0.3166	0.2347 0.3193	0.2606	0.2812	0.3121	Ave		0.2874				12.1		15.0			
1,1,1-Trichloroethane	0.3704 0.4681	0.4176 0.4275	0.4208	0.4427	0.4678	Ave		0.4307				7.8		15.0			
Cyclohexane	0.4734 0.4803	0.5263 0.3215	0.4943	0.5289	0.5310	Qua	-0.138	0.5969	-0.004549						1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4105 0.4565	0.4421 0.3443	0.4382	0.4671	0.4807	Ave		0.4342				10.5		15.0			
Carbon tetrachloride	0.3380 0.4406	0.3744 0.4114	0.3741	0.4009	0.4246	Ave		0.3949				8.9		15.0			
1,2-Dichloroethane	0.1919 0.2195	0.2090 0.1926	0.2070	0.2209	0.2310	Ave		0.2103				7.0		15.0			
Benzene	1.0377 1.0913	1.0719 0.8229	1.0537	1.0910	1.1325	Ave		1.0430				9.8		15.0			
Trichloroethene	0.2857 0.3261	0.2856 0.2852	0.2863	0.3051	0.3220	Ave		0.2994				6.1		15.0			
2-Pentanone	0.0278 0.0409	0.0323 0.0354	0.0347	0.0395	0.0418	Ave		0.0360				14.0		15.0			
1,2-Dichloropropane	0.2233 0.2182	0.2288 0.1480	0.2231	0.2360	0.2423	Ave		0.2171				14.5		30.0			
Methylcyclohexane	0.4099 0.3997	0.4422 0.2652	0.4276	0.4480	0.4547	Qua	-0.090	0.5001	-0.003890						1.0000		0.9900
1,4-Dioxane	+++++ 0.0006	0.0003 0.0006	0.0004	0.0005	0.0006	Lin2	-0.006	0.0006							0.9970		0.9900
Dibromomethane	0.0689 0.0849	0.0765 0.0812	0.0752	0.0816	0.0838	Ave		0.0789				7.2		15.0			
Bromodichloromethane	0.2351 0.2968	0.2550 0.2676	0.2598	0.2778	0.2941	Ave		0.2695				8.2		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0403	0.0235 0.0415	0.0228	0.0307	0.0358	Lin1	-0.029	0.0413							0.9970		0.9900
cis-1,3-Dichloropropene	1.2181 1.5341	1.2902 1.3471	1.3015	1.3993	1.5530	Ave		1.3776				9.2		15.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.0598	0.0537 0.0503	0.0544	0.0591	0.0614	Ave		0.0564				7.6		15.0			
Toluene	1.0471 1.0798	1.0807 0.7966	1.0589	1.1522	1.1723	Ave		1.0554				11.7		30.0			
Ethyl methacrylate	+++++ 0.5654	0.3753 0.5208	0.4076	0.4790	0.5409	Lin2	-0.184	0.5384							0.9960		0.9900
trans-1,3-Dichloropropene	+++++ 0.2167	0.1717 0.2003	0.1752	0.2046	0.2160	Ave		0.1974				10.0		15.0			
1,1,2-Trichloroethane	0.0938 0.1091	0.0949 0.1086	0.0949	0.1070	0.1091	Ave		0.1025				7.3		15.0			
2-Hexanone	+++++ 0.1847	0.1421 0.1622	0.1749	0.1727	0.1838	Ave		0.1700				9.4		15.0			
1,3-Dichloropropane	0.9024 0.9945	0.9476 0.8613	0.9242	0.9698	1.0540	Ave		0.9505				6.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.0305 1.2654	1.0378 1.1584	0.9889	1.0720	1.2134	Ave		1.1095				9.4		15.0			
Dibromochloromethane	0.5256 0.7348	0.5615 0.7399	0.5699	0.6219	0.6918	Ave		0.6351				13.8		15.0			
1,2-Dibromoethane (EDB)	0.3862 0.5008	0.4141 0.5145	0.4159	0.4512	0.4866	Ave		0.4528				10.9		15.0			
1-Chlorohexane	1.8572 2.2712	1.9401 1.7904	2.0101	2.1807	2.2940	Ave		2.0491				9.8		15.0			
Chlorobenzene	2.8360 3.2097	2.9744 2.6242	2.9124	3.0744	3.2510	Ave		2.9831			0.3000	7.3		15.0			
1,1,1,2-Tetrachloroethane	0.8093 1.0632	0.8191 0.8648	0.8354	0.9225	1.0462	Ave		0.9087				11.7		15.0			
Ethylbenzene	1.7611 2.0340	1.8187 1.5263	1.8261	1.9366	2.0971	Ave		1.8571				10.2		30.0			
m-Xylene & p-Xylene	2.1046 2.4837	2.1962 1.9952	2.2821	2.3596	2.4939	Ave		2.2736				8.3		15.0			
Styrene	+++++ 2.9531	2.3659 2.2903	2.6240	2.8690	3.0820	Ave		2.6974				12.0		15.0			
o-Xylene	1.8030 2.0481	1.9122 1.5550	1.9697	2.0719	2.1856	Ave		1.9351				10.7		15.0			
Bromoform	0.2006 0.3083	0.2138 0.3315	0.2254	0.2487	0.2846	Lin1	-0.113	0.3212			0.1000				0.9960		0.9900
Isopropylbenzene	4.0421 4.4976	4.3929 3.4765	4.4535	5.0001	4.9765	Ave		4.4056				12.0		15.0			
Cyclohexanone	0.0069 0.0089	0.0074 0.0080	0.0073	0.0081	0.0092	Ave		0.0080				10.8		15.0			
1,1,2,2-Tetrachloroethane	0.3407 0.3711	0.3640 0.3649	0.3626	0.3849	0.3838	Ave		0.3674			0.3000	4.1		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.0707	0.0427 0.0731	0.0465	0.0602	0.0653	Lin2	-0.031	0.0693							0.9930		0.9900
1,2,3-Trichloropropane	0.0744 0.0921	0.0786 0.0963	0.0831	0.0910	0.0927	Ave		0.0869				9.5		15.0			
N-Propylbenzene	1.0274 1.2771	1.1533 1.0952	1.1864	1.3189	1.3285	Ave		1.1981				9.6		15.0			
Bromobenzene	0.6583 0.7995	0.6805 0.7620	0.7126	0.7857	0.8035	Ave		0.7432				8.0		15.0			
1,3,5-Trimethylbenzene	3.1152 3.6478	3.2996 2.7432	3.4794	3.8277	3.9129	Ave		3.4322				12.1		15.0			
2-Chlorotoluene	0.8632 1.0047	0.9254 0.8705	0.9357	1.0185	1.0346	Ave		0.9504				7.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	0.8669 1.0154	0.8909 0.9461	0.9512	1.0060	1.0035	Ave		0.9543				6.1		15.0			
tert-Butylbenzene	3.2073 3.8820	3.4945 3.0632	3.5016	3.9461	4.0642	Ave		3.5941				10.6		15.0			
1,2,4-Trimethylbenzene	3.0545 3.4921	3.3546 2.7876	3.4325	3.6465	3.6967	Ave		3.3521				9.7		15.0			
sec-Butylbenzene	0.8547 1.0591	0.8819 0.9334	0.9159	1.0199	1.0666	Ave		0.9616				9.0		15.0			
4-Isopropyltoluene	3.5448 4.1408	3.8069 3.2790	3.8477	4.1114	4.2859	Ave		3.8595				9.2		15.0			
1,3-Dichlorobenzene	1.4649 1.6877	1.4921 1.5594	1.5431	1.6026	1.6888	Ave		1.5769				5.6		15.0			
1,4-Dichlorobenzene	1.5197 1.6524	1.5771 1.5322	1.5412	1.5980	1.6677	Ave		1.5840				3.7		15.0			
n-Butylbenzene	3.9067 4.2229	4.2247 3.0886	4.0402	4.4376	4.5585	Ave		4.0685				11.9		15.0			
1,2-Dichlorobenzene	1.0865 1.3459	1.1766 1.2698	1.1613	1.2451	1.3244	Ave		1.2300				7.6		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0491	0.0363 0.0511	0.0360	0.0435	0.0474	Ave		0.0439				14.8		15.0			
1,2,4-Trichlorobenzene	0.6995 0.8583	0.7086 0.8372	0.6946	0.8038	0.8537	Ave		0.7794				9.7		15.0			
Hexachlorobutadiene	0.6553 0.8311	0.6865 0.8205	0.6728	0.7841	0.8305	Ave		0.7544				10.5		15.0			
Naphthalene	0.7619 0.9532	0.7532 0.9086	0.7491	0.8826	0.9499	Ave		0.8512				11.0		15.0			
1,2,3-Trichlorobenzene	0.4962 0.5924	0.4888 0.5721	0.4812	0.5658	0.6022	Ave		0.5427				9.6		15.0			
Dibromofluoromethane (Surr)	+++++ 0.1965	0.2399 0.2211	0.2153	0.2347	0.2314	Ave		0.2232				7.1		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.1511	0.2092 0.1759	0.1882	0.2043	0.1901	Ave		0.1865				11.3		15.0			
Toluene-d8 (Surr)	+++++ 3.8791	5.1044 3.5464	4.5534	4.7340	4.9728	Ave		4.4650				13.9		15.0			
4-Bromofluorobenzene (Surr)	+++++ 0.8371	1.0648 0.9591	1.0059	1.1058	1.0687	Ave		1.0069				9.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-437259/12	Q75343.D
Level 2	STD010 280-437259/13	Q75344.D
Level 3	STD020 280-437259/14	Q75345.D
Level 4	STD050 280-437259/15	Q75346.D
Level 5	ICIS 280-437259/16	Q75347.D
Level 6	STD30 280-437259/17	Q75348.D
Level 7	STD60 280-437259/18	Q75349.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	45955 2841518	93139 6732542	156516	526582	1122163	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	18890 1100052	38844 2437244	75241	209481	436655	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	20142 1177894	44615 2641221	81936	231806	479640	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	19896 1035466	39133 2484723	72385	193878	407467	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	10597 557842	22087 1234700	39618	106522	222210	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Qua	+++++ 2005281	73219 4431416	137869	406914	889272	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	58417 3479593	119585 8278065	230449	643135	1342909	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	11196 708821	25852 1596798	48697	129680	270807	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	7824 585995	18679 1373176	39608	103025	217782	5.00 250	10.0 600	20.0	50.0	100
Acetone	FB	Qua	16911 392756	24688 818350	40525	90650	169114	2.00 100	4.00 240	8.00	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Lin2	+++++ 1471627	47244 3630209	89379	240055	522171	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethene	FB	Ave	28857 1797243	68582 4116029	124144	330390	674506	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Lin2	+++++ 2645936	90014 6706483	170809	450897	952920	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	12592 536329	25453 1121990	47789	104956	215530	1.00 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	47841 2744407	113193 5083541	214122	585614	1133316	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	126657 7313892	289405 15512435	529013	1400475	2831159	0.500 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	4929 332258	11839 778104	23142	61520	131064	5.00 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	26367 1391303	57824 3355640	102189	261654	523591	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Lin2	3181 1350100	30653 3122238	65593	227588	483176	5.00 250	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	27898 1725978	62029 3989624	121135	313548	655704	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	31924 1957100	74788 4552711	137950	354936	727435	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	64252 3320494	133018 6545228	243445	668134	1371465	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	38861 2476912	80989 5431845	168038	452324	976384	1.00 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	59558 3317450	135498 7386208	250304	662986	1324314	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	17211 744369	34263 1760232	60802	139978	297629	2.00 100	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd9	Ave	+++++ 755066	20620 1572581	50096	141132	295314	+++++ 750	30.0 1800	60.0	150	300
cis-1,2-Dichloroethene	FB	Ave	31138 1948626	71812 4386794	131762	353063	722128	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	46797 2733022	102923 6273503	191410	498664	1041718	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	8644 574147	19815 1380946	36434	99933	205392	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	55369 3295377	118650 7163260	222064	608686	1238825	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 215300	7626 478476	15554	41203	85566	+++++ 50.0	2.00 120	4.00	10.0	20.0
Isobutyl alcohol	TBAd9	Ave	+++++ 215398	6097 502087	13192	35880	80843	+++++ 625	25.0 1500	50.0	125	250
1,1,1-Trichloroethane	FB	Ave	49038 3183817	109184 7492282	211710	559872	1193948	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Qua	62672 3266441	137607 5634161	248644	668827	1355083	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	54353 3104675	115606 6034402	220436	590663	1226826	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	44743 2996767	97906 7209849	188198	507044	1083558	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	25405 1492778	54657 3375456	104138	279406	589631	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	137381 7422183	280278 14420258	530085	1379752	2890188	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	37820 2218186	74679 4998666	144020	385882	821677	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	14731 1113521	33738 2478752	69790	199720	426462	2.00 100	4.00 240	8.00	20.0	40.0
1,2-Dichloropropane	FB	Ave	29568 1484064	59816 2593139	112258	298509	618256	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Qua	54262 2718754	115608 4647780	215093	566620	1160449	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 83190	1732 213806	4155	13810	30470	+++++ 500	20.0 1200	40.0	100	200
Dibromomethane	FB	Ave	9117 577396	19991 1422968	37822	103232	213958	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	31131 2018712	66668 4690121	130702	351302	750661	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 273811	6156 727658	11460	38789	91365	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	30032 2097887	64378 4850599	128296	369461	794296	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	+++++ 1628141	56182 3524863	109384	298731	626291	+++++ 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	138629 7343807	282568 13960559	532710	1457093	2991832	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin2	+++++ 773214	18725 1875264	40176	126464	276649	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	+++++ 1474041	44900 3509960	88142	258739	551228	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	12412 742031	24818 1902306	47720	135299	278425	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	+++++ 1010284	28359 2335999	68953	182362	375949	+++++ 100	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	22248 1360043	47282 3101411	91108	256045	539105	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	25406 1730501	51785 4171117	97487	283027	620648	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Ave	12958 1004857	28019 2664410	56178	164212	353848	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	9521 684875	20661 1852694	41000	119140	248865	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	45790 3105948	96807 6446829	198151	575780	1173305	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	69922 4389324	148413 9449459	287098	811737	1662778	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	19953 1453927	40873 3114168	82350	243567	535119	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	43420 2781610	90748 5495971	180015	511322	1072627	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	51888 3396593	109585 7184473	224968	623017	1275550	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	+++++ 4038500	118053 8247042	258664	757505	1576340	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	44452 2800842	95413 5599267	194167	547049	1117888	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin1	4945 421550	10669 1193700	22216	65666	145585	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	136745 8167246	282797 15911688	571378	1562789	3252636	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	6791 485403	14710 1154430	28746	85350	188771	20.0 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	11526 673936	23433 1669919	46522	120298	250849	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin2	+++++ 128425	2746 334379	5960	18826	42692	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	2518 167222	5060 440925	10661	28435	60580	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	34758 2319032	74244 5012549	152211	412218	868321	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	22269 1451836	43810 3487736	91425	245580	525167	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	105389 6624043	212417 12555455	446402	1196350	2557449	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	29203 1824500	59573 3984085	120048	318335	676232	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	29326 1843828	57352 4330326	122044	314429	655898	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	108503 7049351	224961 14020063	449249	1233364	2656381	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	103335 6341326	215959 12758534	440384	1139729	2416160	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	28915 1923284	56772 4272092	117511	318787	697125	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437259

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:11 Calibration End Date: 11/12/2018 16:15 Calibration ID: 34287

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	119923 7519342	245072 15007913	493658	1285027	2801237	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	49557 3064710	96059 7137173	197980	500908	1103811	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	51413 3000672	101526 7012727	197739	499474	1089984	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	132165 7668385	271970 14136416	518361	1386990	2979417	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	36758 2444105	75744 5812014	148995	389150	865658	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 89171	2337 233980	4614	13606	30966	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	23666 1558659	45618 3832050	89116	251220	557947	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	22170 1509222	44193 3755310	86325	245082	542810	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	25776 1730994	48486 4158456	96106	275844	620851	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	16788 1075728	31468 2618589	61743	176844	393590	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 1603728	62729 3874952	108315	296775	590580	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 1233321	54707 3082543	94656	258416	485258	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	+++++ 6365653	254697 12770101	448867	1249927	2543471	+++++ 30.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 1824222	68548 4389555	129051	345615	698518	+++++ 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75343.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Nov-2018 14:11:30 ALS Bottle#: 1 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:09:25 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.864	5.874	-0.010	0	239941	250.0	250.0	
* 1 Fluorobenzene	96	7.788	7.797	-0.009	100	3309790	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.028	-0.002	99	616378	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.866	0.004	100	845763	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.244	7.254	-0.010	90	35750	0.5000	0.6050	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.537	7.547	-0.010	0	31451	0.5000	0.6370	
$ 7 Toluene-d8 (Surr)	98	8.953	8.956	-0.003	100	135009	0.5000	0.6132	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.893	0.005	83	46186	0.5000	0.6779	
23 Dichlorodifluoromethane	85	4.191	4.194	-0.003	99	45955	0.5000	0.4546	
26 Chloromethane	50	4.434	4.451	-0.017	90	18890	0.5000	0.4631	
27 Vinyl chloride	62	4.570	4.572	-0.002	95	20142	0.5000	0.4510	
29 Bromomethane	94	4.899	4.909	-0.010	91	19896	0.5000	0.5005	
30 Chloroethane	64	4.956	4.966	-0.010	41	10597	0.5000	0.4941	
31 Dichlorofluoromethane	67	5.085	5.109	-0.024	95	35850	0.5000	0.4495	
32 Trichlorofluoromethane	101	5.164	5.216	-0.052	95	58417	0.5000	0.4575	
35 Ethyl ether	59	5.357	5.359	-0.002	94	11196	0.5000	0.4326	
39 Acrolein	56	5.500	5.502	-0.002	97	7824	5.00	3.83	
40 1,1,2-Trichloro-1,2,2-trif	151	5.585	5.602	-0.017	94	24047	0.5000	0.6000	
41 Acetone	43	5.607	5.602	0.005	50	16911	2.00	1.70	
43 1,1-Dichloroethene	96	5.621	5.631	-0.010	96	28857	0.5000	0.4355	
44 Iodomethane	142	5.800	5.809	-0.009	97	41576	0.5000	0.5310	
45 Methyl acetate	43	5.829	5.831	-0.002	96	12592	1.00	1.11	
47 3-Chloro-1-propene	41	5.871	5.881	-0.010	82	47841	0.5000	0.4484	
48 Carbon disulfide	76	5.900	5.910	-0.010	99	126657	0.5000	0.4592	
49 2-Methyl-2-propanol	59	5.929	5.938	-0.009	91	4929	5.00	4.36	
50 Methylene Chloride	84	5.964	5.974	-0.010	94	26367	0.5000	0.4869	
52 Acrylonitrile	53	6.150	6.131	0.019	12	3181	5.00	4.98	
51 Methyl tert-butyl ether	73	6.143	6.153	-0.010	97	27898	0.5000	0.4403	
53 trans-1,2-Dichloroethene	96	6.186	6.188	-0.002	96	31924	0.5000	0.4408	
54 Hexane	57	6.343	6.353	-0.010	92	64252	0.5000	0.5303	
55 Vinyl acetate	43	6.436	6.439	-0.003	97	38861	1.00	0.8737	
57 1,1-Dichloroethane	63	6.493	6.503	-0.010	96	59558	0.5000	0.4606	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.865	6.875	-0.010	96	17211	2.00	2.22	
62 sec-Butyl Alcohol	45	6.830	6.925	-0.095	98	29929	15.0	36.6	
63 cis-1,2-Dichloroethene	96	6.923	6.932	-0.010	84	31138	0.5000	0.4400	
64 2,2-Dichloropropane	77	6.951	6.968	-0.017	88	46797	0.5000	0.4599	
67 Chlorobromomethane	128	7.116	7.125	-0.009	53	8644	0.5000	0.4262	
68 Chloroform	83	7.116	7.132	-0.016	92	55369	0.5000	0.4613	
69 Tetrahydrofuran	42		7.168				ND	ND	
70 Isobutyl alcohol	41	7.423	7.325	0.098	52	36677	12.5	133.0	
71 1,1,1-Trichloroethane	97	7.344	7.354	-0.010	98	49038	0.5000	0.4300	
72 Cyclohexane	56	7.423	7.433	-0.010	91	62672	0.5000	0.6302	
73 1,1-Dichloropropene	75	7.444	7.447	-0.003	97	54353	0.5000	0.4728	
74 Carbon tetrachloride	117	7.487	7.497	-0.010	97	44743	0.5000	0.4279	
76 1,2-Dichloroethane	62	7.595	7.604	-0.009	96	25405	0.5000	0.4563	
77 Benzene	78	7.623	7.633	-0.010	96	137381	0.5000	0.4975	
14 n-Heptane	43	7.695	7.704	-0.009	92	64935	0.5000	0.5817	
79 Trichloroethene	95	8.074	8.083	-0.009	97	37820	0.5000	0.4770	
80 2-Pentanone	43	8.131	8.119	0.012	96	14731	2.00	1.54	
83 1,2-Dichloropropane	63	8.252	8.255	-0.003	95	29568	0.5000	0.5144	
82 Methylcyclohexane	55	8.267	8.269	-0.002	95	54262	0.5000	0.5915	
84 1,4-Dioxane	88		8.312				ND	ND	
85 Dibromomethane	93	8.353	8.355	-0.002	89	9117	0.5000	0.4366	
86 Dichlorobromomethane	83	8.417	8.419	-0.002	98	31131	0.5000	0.4363	
87 2-Chloroethyl vinyl ether	63	8.553	8.562	-0.009	75	2601	0.5000	0.9295	
89 cis-1,3-Dichloropropene	75	8.731	8.734	-0.003	94	30032	0.5000	0.4421	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.784	0.005	0	23151	2.00	1.55	
91 Toluene	91	9.010	9.013	-0.003	97	138629	0.5000	0.4961	
92 Ethyl methacrylate	69	9.089	9.084	0.005	42	8601	0.5000	0.6655	
93 trans-1,3-Dichloropropene	75	9.096	9.099	-0.003	96	19716	0.5000	0.3772	
94 1,1,2-Trichloroethane	97	9.253	9.256	-0.003	89	12412	0.5000	0.4575	
95 2-Hexanone	43	9.382	9.370	0.012	42	13864	2.00	1.65	
96 1,3-Dichloropropane	76	9.389	9.392	-0.003	93	22248	0.5000	0.4747	
97 Tetrachloroethene	164	9.418	9.420	-0.002	92	25406	0.5000	0.4644	
98 Chlorodibromomethane	129	9.582	9.585	-0.003	88	12958	0.5000	0.4138	
100 Ethylene Dibromide	107	9.711	9.713	-0.002	98	9521	0.5000	0.4265	
101 1-Chlorohexane	91	9.940	9.935	0.005	97	45790	0.5000	0.4532	
102 Chlorobenzene	112	10.047	10.050	-0.003	96	69922	0.5000	0.4753	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.085	-0.002	92	19953	0.5000	0.4453	
103 Ethylbenzene	106	10.090	10.085	0.005	99	43420	0.5000	0.4741	
105 m-Xylene & p-Xylene	106	10.162	10.164	-0.002	0	51888	0.5000	0.4628	
107 o-Xylene	106	10.483	10.479	0.005	92	44452	0.5000	0.4659	
106 Styrene	104	10.483	10.479	0.005	77	55868	0.5000	0.4200	
108 Bromoform	173	10.683	10.686	-0.003	91	4945	0.5000	0.6637	
109 Isopropylbenzene	105	10.741	10.743	-0.002	96	136745	0.5000	0.4587	
111 Cyclohexanone	55	10.884	10.872	0.012	97	6791	20.0	17.3	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.943	-0.002	90	11526	0.5000	0.4636	
113 trans-1,4-Dichloro-2-buten	53		10.979				ND	ND	
114 1,2,3-Trichloropropane	110	11.020	11.015	0.005	85	2518	0.5000	0.4283	
115 N-Propylbenzene	120	11.062	11.065	-0.003	99	34758	0.5000	0.4288	
116 Bromobenzene	156	11.070	11.065	0.005	95	22269	0.5000	0.4429	
117 1,3,5-Trimethylbenzene	105	11.177	11.172	0.005	94	105389	0.5000	0.4538	
118 2-Chlorotoluene	126	11.191	11.186	0.005	94	29203	0.5000	0.4541	
119 4-Chlorotoluene	126	11.270	11.265	0.005	98	29326	0.5000	0.4542	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.477	11.472	0.005	93	108503	0.5000	0.4462	
121 1,2,4-Trimethylbenzene	105	11.506	11.501	0.005	95	103335	0.5000	0.4556	
122 sec-Butylbenzene	134	11.656	11.651	0.005	95	28915	0.5000	0.4444	
123 4-Isopropyltoluene	119	11.749	11.744	0.005	96	119923	0.5000	0.4592	
124 1,3-Dichlorobenzene	146	11.827	11.823	0.004	96	49557	0.5000	0.4645	
126 1,4-Dichlorobenzene	146	11.892	11.887	0.005	93	51413	0.5000	0.4797	
127 n-Butylbenzene	91	12.121	12.116	0.005	99	132165	0.5000	0.4801	
128 1,2-Dichlorobenzene	146	12.264	12.259	0.005	93	36758	0.5000	0.4417	
129 1,2-Dibromo-3-Chloropropan	157		13.010				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.994	13.982	0.012	92	23666	0.5000	0.4488	
131 Hexachlorobutadiene	225	14.144	14.132	0.012	96	22170	0.5000	0.4343	
132 Naphthalene	128	14.366	14.361	0.005	95	25776	0.5000	0.4476	
133 1,2,3-Trichlorobenzene	180	14.695	14.683	0.012	94	16788	0.5000	0.4572	
S 140 1,2-Dichloroethene, Total	96				0		1.00	0.8808	
S 135 Xylenes, Total (URS)	1				0		1.00	0.9287	
S 136 Total BTEX	1				0			2.40	
S 139 Xylenes, Total	106				0		1.00	0.9287	
S 138 1,2-Dichloroethene, Total	1				0		1.00	0.8808	
S 134 Trihalomethanes, Total	1				0		2.00	1.98	
S 137 1,3-Dichloropropene, Total	1				0		1.00	0.8193	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	0.20	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.04	Units: uL

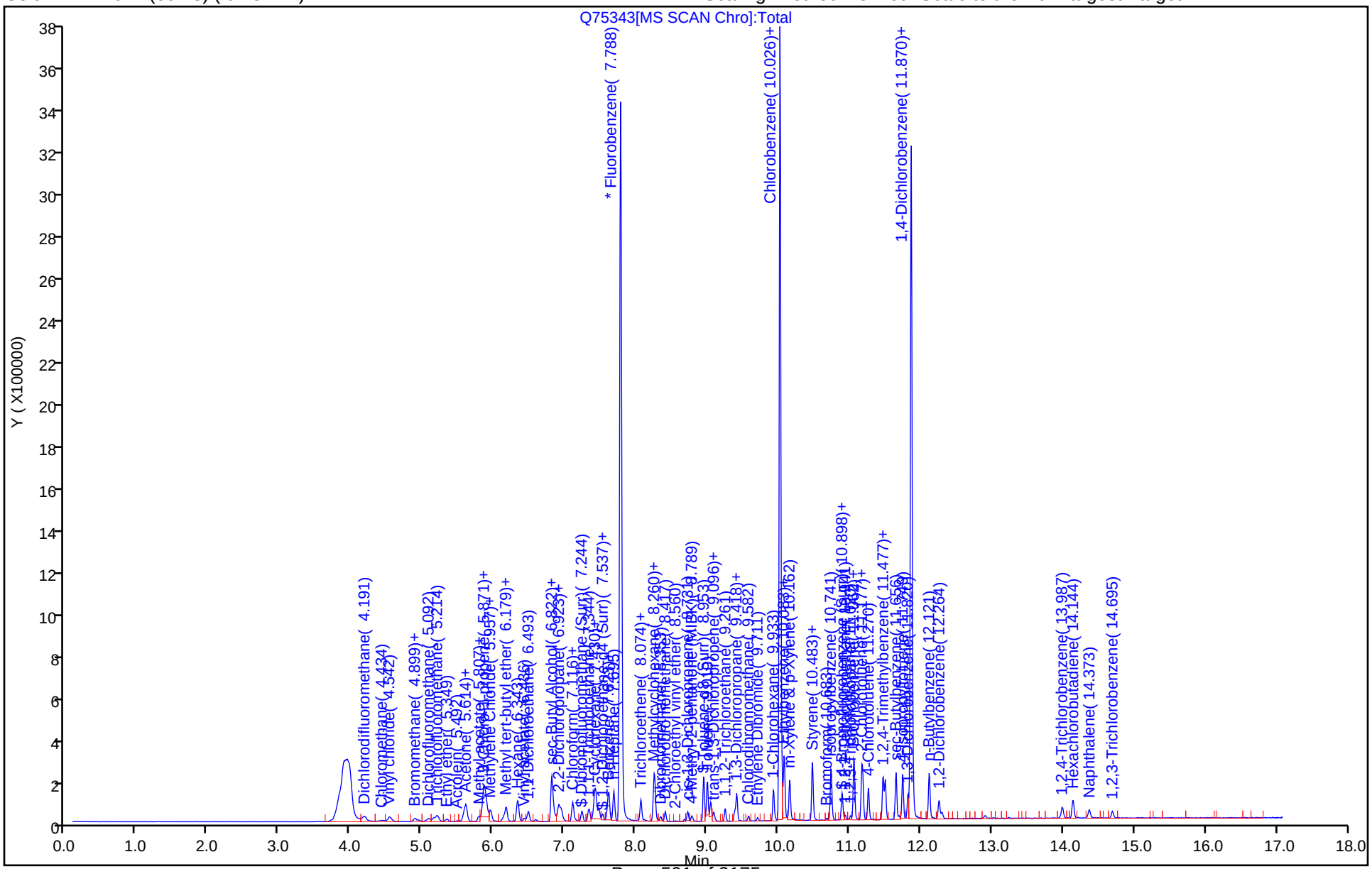
Report Date: 13-Nov-2018 10:09:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75343.D

Injection Date:	12-Nov-2018 14:11:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD005			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75344.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Nov-2018 14:32:30 ALS Bottle#: 2 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:09:39 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.874	-0.003	0	259809	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.797	-0.002	100	3268334	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.028	-0.002	99	623720	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.866	-0.003	100	804704	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.254	-0.003	91	62729	1.00	1.08	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.547	-0.002	0	54707	1.00	1.12	
$ 7 Toluene-d8 (Surr)	98	8.960	8.956	0.004	100	254697	1.00	1.14	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.893	0.005	83	68548	1.00	1.06	
23 Dichlorodifluoromethane	85	4.191	4.194	-0.003	99	93139	1.00	0.9330	
26 Chloromethane	50	4.449	4.451	-0.002	98	38844	1.00	0.9644	M
27 Vinyl chloride	62	4.570	4.572	-0.002	97	44615	1.00	1.01	
29 Bromomethane	94	4.899	4.909	-0.010	93	39133	1.00	1.00	
30 Chloroethane	64	4.963	4.966	-0.003	98	22087	1.00	1.04	
31 Dichlorofluoromethane	67	5.092	5.109	-0.017	96	73219	1.00	0.8831	
32 Trichlorofluoromethane	101	5.214	5.216	-0.002	97	119585	1.00	0.9485	
35 Ethyl ether	59	5.357	5.359	-0.002	93	25852	1.00	1.01	
39 Acrolein	56	5.507	5.502	0.005	97	18679	10.0	9.25	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.602	-0.002	97	47244	1.00	1.04	
41 Acetone	43	5.600	5.602	-0.002	45	24688	4.00	3.61	
43 1,1-Dichloroethene	96	5.621	5.631	-0.010	95	68582	1.00	1.05	
44 Iodomethane	142	5.800	5.809	-0.009	98	90014	1.00	1.03	
45 Methyl acetate	43	5.836	5.831	0.005	97	25453	2.00	2.28	
47 3-Chloro-1-propene	41	5.879	5.881	-0.002	83	113193	1.00	1.07	
48 Carbon disulfide	76	5.900	5.910	-0.010	99	289405	1.00	1.06	
49 2-Methyl-2-propanol	59	5.936	5.938	-0.002	91	11839	10.0	9.68	
50 Methylene Chloride	84	5.964	5.974	-0.010	94	57824	1.00	1.08	
52 Acrylonitrile	53	6.157	6.131	0.026	41	30653	10.0	10.5	
51 Methyl tert-butyl ether	73	6.150	6.153	-0.003	96	62029	1.00	0.99	
53 trans-1,2-Dichloroethene	96	6.186	6.188	-0.002	95	74788	1.00	1.05	
54 Hexane	57	6.350	6.353	-0.003	92	133018	1.00	1.08	
55 Vinyl acetate	43	6.443	6.439	0.004	97	80989	2.00	1.84	
57 1,1-Dichloroethane	63	6.501	6.503	-0.002	96	135498	1.00	1.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.880	6.875	0.005	98	34263	4.00	4.48	
62 sec-Butyl Alcohol	45	6.837	6.925	-0.088	26	20620	30.0	23.3	
63 cis-1,2-Dichloroethene	96	6.922	6.932	-0.010	85	71812	1.00	1.03	
64 2,2-Dichloropropane	77	6.958	6.968	-0.010	89	102923	1.00	1.02	
67 Chlorobromomethane	128	7.116	7.125	-0.009	91	19815	1.00	0.9893	
68 Chloroform	83	7.123	7.132	-0.009	93	118650	1.00	1.00	
69 Tetrahydrofuran	42	7.173	7.168	0.005	95	7626	2.00	1.89	
70 Isobutyl alcohol	41	7.344	7.325	0.019	31	6097	25.0	20.4	
71 1,1,1-Trichloroethane	97	7.351	7.354	-0.003	98	109184	1.00	0.9695	
72 Cyclohexane	56	7.423	7.433	-0.010	92	137607	1.00	1.12	
73 1,1-Dichloropropene	75	7.444	7.447	-0.003	97	115606	1.00	1.02	
74 Carbon tetrachloride	117	7.487	7.497	-0.010	98	97906	1.00	0.9483	
76 1,2-Dichloroethane	62	7.602	7.604	-0.002	97	54657	1.00	0.99	
77 Benzene	78	7.630	7.633	-0.003	96	280278	1.00	1.03	
14 n-Heptane	43	7.702	7.704	-0.002	92	134565	1.00	1.04	
79 Trichloroethene	95	8.081	8.083	-0.002	96	74679	1.00	0.9538	
80 2-Pentanone	43	8.131	8.119	0.012	99	33738	4.00	3.58	
83 1,2-Dichloropropane	63	8.260	8.255	0.005	96	59816	1.00	1.05	
82 Methylcyclohexane	55	8.267	8.269	-0.002	94	115608	1.00	1.07	
84 1,4-Dioxane	88	8.310	8.312	-0.002	21	1732	20.0	20.7	
85 Dibromomethane	93	8.360	8.355	0.005	87	19991	1.00	0.9695	
86 Dichlorobromomethane	83	8.424	8.419	0.005	99	66668	1.00	0.9462	
87 2-Chloroethyl vinyl ether	63	8.560	8.562	-0.002	88	6156	1.00	1.26	
89 cis-1,3-Dichloropropene	75	8.739	8.734	0.005	95	64378	1.00	0.9366	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.784	0.005	0	56182	4.00	3.81	
91 Toluene	91	9.010	9.013	-0.003	98	282568	1.00	1.02	
92 Ethyl methacrylate	69	9.089	9.084	0.005	89	18725	1.00	1.04	
93 trans-1,3-Dichloropropene	75	9.103	9.099	0.004	94	44900	1.00	0.8698	
94 1,1,2-Trichloroethane	97	9.261	9.256	0.005	92	24818	1.00	0.9263	
95 2-Hexanone	43	9.382	9.370	0.012	97	28359	4.00	3.34	
96 1,3-Dichloropropane	76	9.396	9.392	0.004	94	47282	1.00	1.00	
97 Tetrachloroethene	164	9.425	9.420	0.005	92	51785	1.00	0.9354	
98 Chlorodibromomethane	129	9.582	9.585	-0.003	91	28019	1.00	0.8842	
100 Ethylene Dibromide	107	9.718	9.713	0.005	96	20661	1.00	0.9146	
101 1-Chlorohexane	91	9.933	9.935	-0.002	95	96807	1.00	0.9468	
102 Chlorobenzene	112	10.054	10.050	0.004	96	148413	1.00	1.00	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.085	-0.002	89	40873	1.00	0.9015	
103 Ethylbenzene	106	10.090	10.085	0.005	99	90748	1.00	0.9793	
105 m-Xylene & p-Xylene	106	10.161	10.164	-0.003	0	109585	1.00	0.9659	
107 o-Xylene	106	10.483	10.479	0.005	91	95413	1.00	0.9882	
106 Styrene	104	10.483	10.479	0.005	81	118053	1.00	0.8771	
108 Bromoform	173	10.683	10.686	-0.003	93	10669	1.00	1.02	
109 Isopropylbenzene	105	10.741	10.743	-0.002	97	282797	1.00	1.00	
111 Cyclohexanone	55	10.891	10.872	0.019	97	14710	40.0	37.0	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.943	-0.002	92	23433	1.00	0.99	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.979	-0.002	60	2746	1.00	1.06	
114 1,2,3-Trichloropropane	110	11.012	11.015	-0.003	85	5060	1.00	0.9046	
115 N-Propylbenzene	120	11.062	11.065	-0.003	99	74244	1.00	0.9626	
116 Bromobenzene	156	11.070	11.065	0.005	95	43810	1.00	0.9157	
117 1,3,5-Trimethylbenzene	105	11.170	11.172	-0.002	94	212417	1.00	0.9614	
118 2-Chlorotoluene	126	11.184	11.186	-0.002	95	59573	1.00	0.9737	
119 4-Chlorotoluene	126	11.263	11.265	-0.002	99	57352	1.00	0.9336	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.472	-0.002	92	224961	1.00	0.9723	
121 1,2,4-Trimethylbenzene	105	11.499	11.501	-0.002	97	215959	1.00	1.00	
122 sec-Butylbenzene	134	11.656	11.651	0.005	95	56772	1.00	0.9170	
123 4-Isopropyltoluene	119	11.749	11.744	0.005	96	245072	1.00	0.9864	
124 1,3-Dichlorobenzene	146	11.820	11.823	-0.003	95	96059	1.00	0.9462	
126 1,4-Dichlorobenzene	146	11.892	11.887	0.005	93	101526	1.00	1.00	
127 n-Butylbenzene	91	12.121	12.116	0.005	98	271970	1.00	1.04	
128 1,2-Dichlorobenzene	146	12.256	12.259	-0.003	95	75744	1.00	0.9566	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.010	0.004	77	2337	1.00	0.8269	
130 1,2,4-Trichlorobenzene	180	13.980	13.982	-0.002	93	45618	1.00	0.9092	
131 Hexachlorobutadiene	225	14.137	14.132	0.005	95	44193	1.00	0.9100	
132 Naphthalene	128	14.359	14.361	-0.002	97	48486	1.00	0.8848	
133 1,2,3-Trichlorobenzene	180	14.688	14.683	0.005	92	31468	1.00	0.9007	
S 140 1,2-Dichloroethene, Total	96				0		2.00	2.07	
S 138 1,2-Dichloroethene, Total	1				0		2.00	2.07	
S 135 Xylenes, Total (URS)	1				0		2.00	1.95	
S 139 Xylenes, Total	106				0		2.00	1.95	
S 137 1,3-Dichloropropene, Total	1				0		2.00	1.81	
S 134 Trihalomethanes, Total	1				0		4.00	3.85	
S 136 Total BTEX	1				0			4.99	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	0.40	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.08	Units: uL

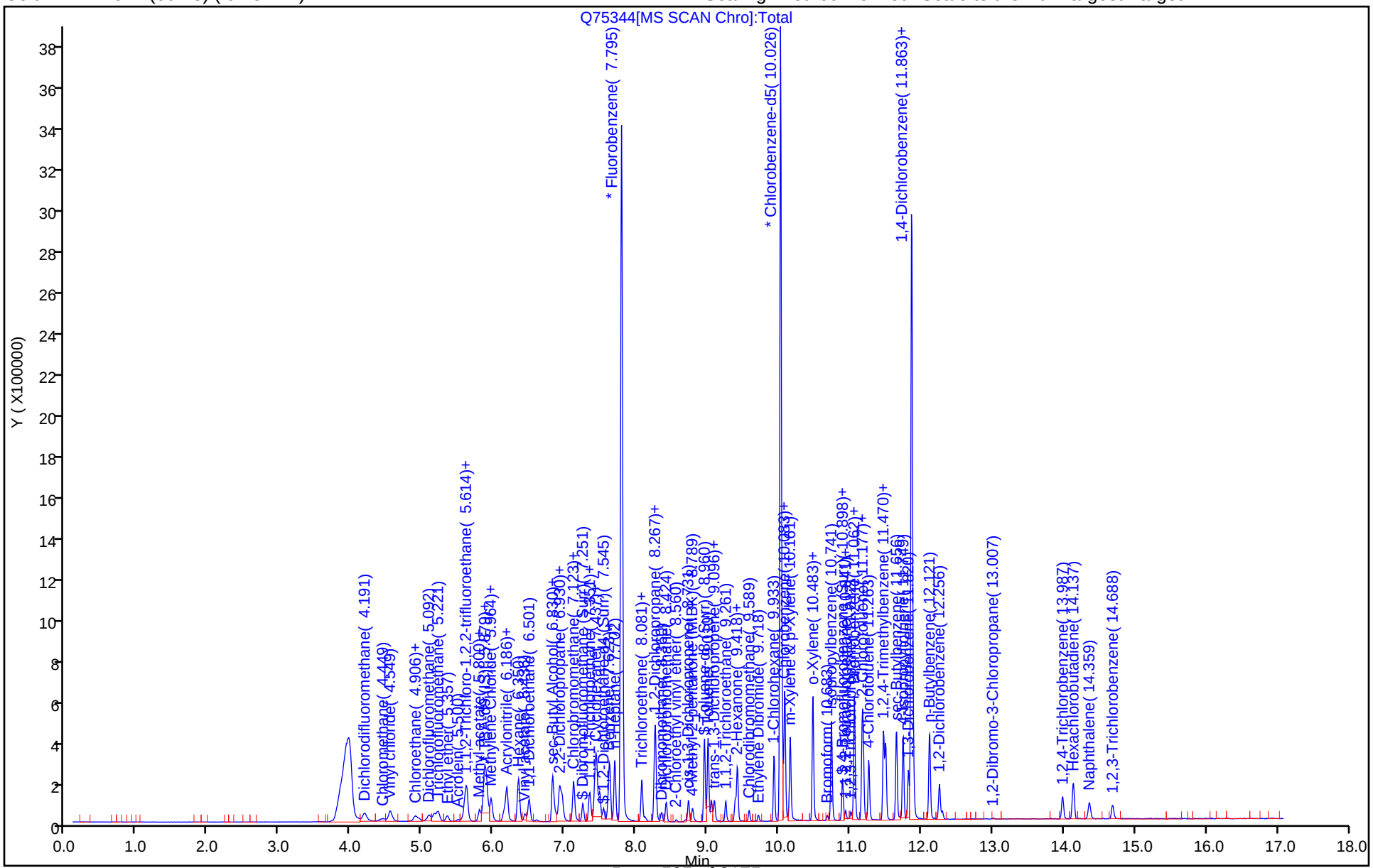
Report Date: 13-Nov-2018 10:09:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75344.D

Injection Date:	12-Nov-2018 14:32:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD010			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

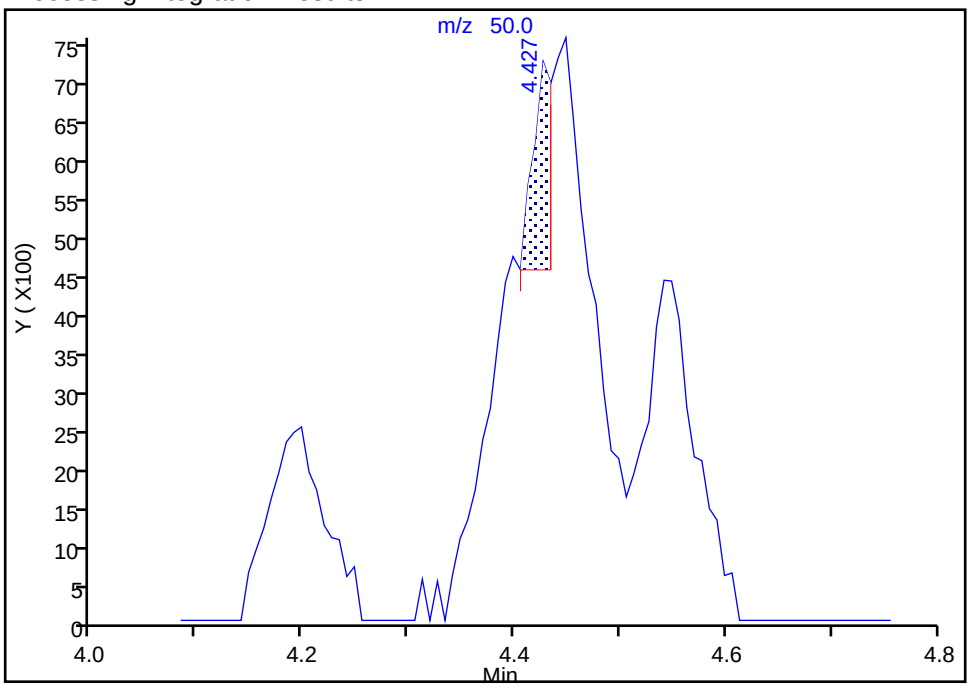
Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75344.D
Injection Date: 12-Nov-2018 14:32:30 Instrument ID: VMS_Q
Lims ID: STD010
Client ID:
Operator ID: meierg ALS Bottle#: 2 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

26 Chloromethane, CAS: 74-87-3

Signal: 1

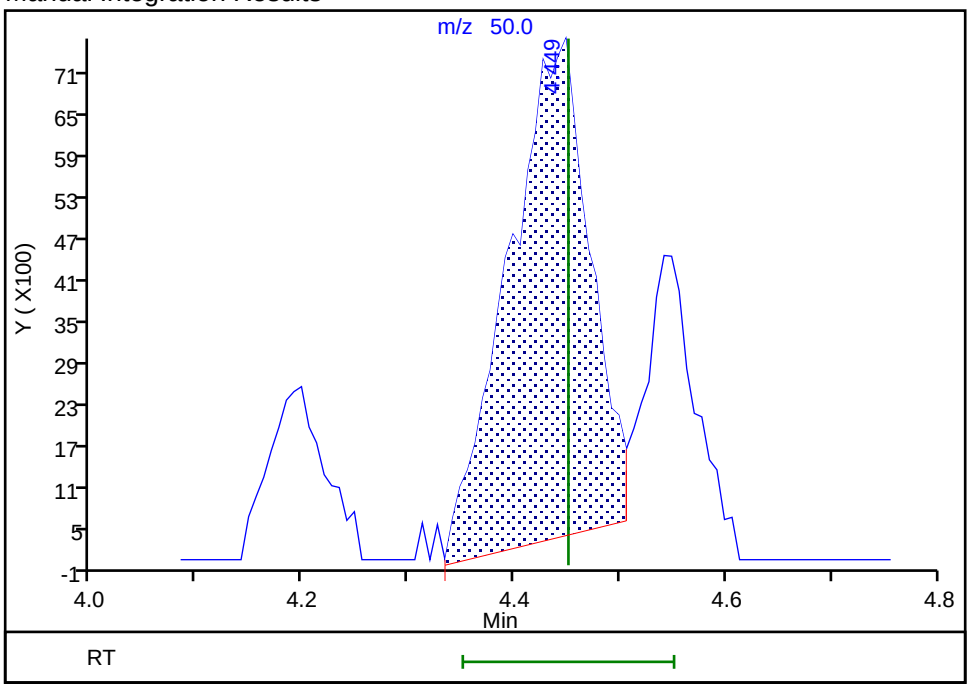
Processing Integration Results

RT: 4.43
Area: 3359
Amount: 0.512775
Amount Units: ug/l



Manual Integration Results

RT: 4.45
Area: 38844
Amount: 0.964356
Amount Units: ug/l



Reviewer: meierg, 12-Nov-2018 16:09:12
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75345.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Nov-2018 14:52:30 ALS Bottle#: 3 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:09:51 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.867	5.874	-0.007	0	253154	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.797	0.001	100	3144164	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.028	0.001	99	616109	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.866	0.000	99	801873	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.255	7.254	0.001	92	108315	2.00	1.93	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.548	7.547	0.001	0	94656	2.00	2.02	
$ 7 Toluene-d8 (Surr)	98	8.956	8.956	0.000	100	448867	2.00	2.04	
$ 8 4-Bromofluorobenzene (Surr	95	10.894	10.893	0.001	84	129051	2.00	2.00	
23 Dichlorodifluoromethane	85	4.194	4.194	0.000	99	156516	2.00	1.63	
26 Chloromethane	50	4.445	4.451	-0.006	98	75241	2.00	1.94	
27 Vinyl chloride	62	4.566	4.572	-0.006	97	81936	2.00	1.93	
29 Bromomethane	94	4.909	4.909	0.000	92	72385	2.00	1.92	
30 Chloroethane	64	4.952	4.966	-0.014	99	39618	2.00	1.94	
31 Dichlorofluoromethane	67	5.095	5.109	-0.014	96	137869	2.00	1.69	
32 Trichlorofluoromethane	101	5.181	5.216	-0.035	96	230449	2.00	1.90	
35 Ethyl ether	59	5.345	5.359	-0.014	93	48697	2.00	1.98	
39 Acrolein	56	5.503	5.502	0.001	99	39608	20.0	20.4	
40 1,1,2-Trichloro-1,2,2-trif	151	5.603	5.602	0.001	97	89379	2.00	1.88	
41 Acetone	43	5.610	5.602	0.008	41	40525	8.00	7.82	
43 1,1-Dichloroethene	96	5.624	5.631	-0.007	96	124144	2.00	1.97	
44 Iodomethane	142	5.803	5.809	-0.006	99	170809	2.00	1.91	
45 Methyl acetate	43	5.832	5.831	0.001	97	47789	4.00	4.45	
47 3-Chloro-1-propene	41	5.882	5.881	0.001	81	214122	2.00	2.11	
48 Carbon disulfide	76	5.903	5.910	-0.007	98	529013	2.00	2.02	
49 2-Methyl-2-propanol	59	5.939	5.938	0.001	92	23142	20.0	19.4	
50 Methylene Chloride	84	5.968	5.974	-0.006	96	102189	2.00	1.99	
52 Acrylonitrile	53	6.139	6.131	0.008	100	65593	20.0	18.0	
51 Methyl tert-butyl ether	73	6.153	6.153	0.000	98	121135	2.00	2.01	
53 trans-1,2-Dichloroethene	96	6.189	6.188	0.001	95	137950	2.00	2.01	
54 Hexane	57	6.346	6.353	-0.007	93	243445	2.00	2.01	
55 Vinyl acetate	43	6.439	6.439	0.000	97	168038	4.00	3.98	
57 1,1-Dichloroethane	63	6.497	6.503	-0.006	96	250304	2.00	2.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.876	6.875	0.001	99	60802	8.00	8.26	
62 sec-Butyl Alcohol	45	6.926	6.925	0.001	98	50096	60.0	58.0	
63 cis-1,2-Dichloroethene	96	6.926	6.932	-0.006	85	131762	2.00	1.96	
64 2,2-Dichloropropane	77	6.961	6.968	-0.007	90	191410	2.00	1.98	
67 Chlorobromomethane	128	7.119	7.125	-0.006	92	36434	2.00	1.89	
68 Chloroform	83	7.126	7.132	-0.006	93	222064	2.00	1.95	
69 Tetrahydrofuran	42	7.169	7.168	0.001	93	15554	4.00	4.01	
70 Isobutyl alcohol	41	7.340	7.325	0.015	30	13192	50.0	45.3	
71 1,1,1-Trichloroethane	97	7.347	7.354	-0.007	99	211710	2.00	1.95	
72 Cyclohexane	56	7.426	7.433	-0.007	92	248644	2.00	1.91	
73 1,1-Dichloropropene	75	7.448	7.447	0.001	96	220436	2.00	2.02	
74 Carbon tetrachloride	117	7.490	7.497	-0.007	97	188198	2.00	1.89	
76 1,2-Dichloroethane	62	7.605	7.604	0.001	97	104138	2.00	1.97	
77 Benzene	78	7.626	7.633	-0.007	96	530085	2.00	2.02	
14 n-Heptane	43	7.698	7.704	-0.006	93	258998	2.00	1.93	
79 Trichloroethene	95	8.084	8.083	0.001	95	144020	2.00	1.91	
80 2-Pentanone	43	8.127	8.119	0.008	98	69790	8.00	7.70	
83 1,2-Dichloropropane	63	8.256	8.255	0.001	95	112258	2.00	2.06	
82 Methylcyclohexane	55	8.270	8.269	0.001	94	215093	2.00	1.92	
84 1,4-Dioxane	88	8.320	8.312	0.008	82	4155	40.0	36.9	
85 Dibromomethane	93	8.356	8.355	0.001	89	37822	2.00	1.91	
86 Dichlorobromomethane	83	8.420	8.419	0.001	99	130702	2.00	1.93	
87 2-Chloroethyl vinyl ether	63	8.563	8.562	0.001	90	11460	2.00	1.80	
89 cis-1,3-Dichloropropene	75	8.735	8.734	0.001	95	128296	2.00	1.89	
90 4-Methyl-2-pentanone (MIBK	43	8.792	8.784	0.008	0	109384	8.00	7.71	
91 Toluene	91	9.013	9.013	0.000	98	532710	2.00	2.01	
92 Ethyl methacrylate	69	9.092	9.084	0.008	88	40176	2.00	1.86	
93 trans-1,3-Dichloropropene	75	9.099	9.099	0.000	97	88142	2.00	1.77	
94 1,1,2-Trichloroethane	97	9.257	9.256	0.001	92	47720	2.00	1.85	
95 2-Hexanone	43	9.378	9.370	0.008	95	68953	8.00	8.23	
96 1,3-Dichloropropane	76	9.392	9.392	0.000	93	91108	2.00	1.94	
97 Tetrachloroethene	164	9.421	9.420	0.001	91	97487	2.00	1.78	
98 Chlorodibromomethane	129	9.585	9.585	0.000	89	56178	2.00	1.79	
100 Ethylene Dibromide	107	9.714	9.713	0.001	99	41000	2.00	1.84	
101 1-Chlorohexane	91	9.936	9.935	0.001	97	198151	2.00	1.96	
102 Chlorobenzene	112	10.050	10.050	0.000	96	287098	2.00	1.95	
104 1,1,1,2-Tetrachloroethane	131	10.086	10.085	0.001	91	82350	2.00	1.84	
103 Ethylbenzene	106	10.086	10.085	0.001	99	180015	2.00	1.97	
105 m-Xylene & p-Xylene	106	10.165	10.164	0.001	0	224968	2.00	2.01	
107 o-Xylene	106	10.479	10.479	0.001	91	194167	2.00	2.04	
106 Styrene	104	10.479	10.479	0.001	81	258664	2.00	1.95	
108 Bromoform	173	10.687	10.686	0.001	92	22216	2.00	1.75	
109 Isopropylbenzene	105	10.744	10.743	0.001	97	571378	2.00	2.02	
111 Cyclohexanone	55	10.887	10.872	0.015	98	28746	80.0	73.2	
112 1,1,2,2-Tetrachloroethane	83	10.944	10.943	0.001	92	46522	2.00	1.97	
113 trans-1,4-Dichloro-2-buten	53	10.980	10.979	0.001	65	5960	2.00	1.79	
114 1,2,3-Trichloropropane	110	11.016	11.015	0.001	84	10661	2.00	1.91	
115 N-Propylbenzene	120	11.066	11.065	0.001	99	152211	2.00	1.98	
116 Bromobenzene	156	11.066	11.065	0.001	94	91425	2.00	1.92	
117 1,3,5-Trimethylbenzene	105	11.173	11.172	0.001	94	446402	2.00	2.03	
118 2-Chlorotoluene	126	11.187	11.186	0.001	95	120048	2.00	1.97	
119 4-Chlorotoluene	126	11.266	11.265	0.001	99	122044	2.00	1.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.473	11.472	0.001	92	449249	2.00	1.95	
121 1,2,4-Trimethylbenzene	105	11.502	11.501	0.001	98	440384	2.00	2.05	
122 sec-Butylbenzene	134	11.652	11.651	0.001	95	117511	2.00	1.90	
123 4-Isopropyltoluene	119	11.745	11.744	0.001	96	493658	2.00	1.99	
124 1,3-Dichlorobenzene	146	11.823	11.823	0.000	96	197980	2.00	1.96	
126 1,4-Dichlorobenzene	146	11.888	11.887	0.001	93	197739	2.00	1.95	
127 n-Butylbenzene	91	12.117	12.116	0.001	99	518361	2.00	1.99	
128 1,2-Dichlorobenzene	146	12.260	12.259	0.001	95	148995	2.00	1.89	
129 1,2-Dibromo-3-Chloropropan	157	13.010	13.010	0.000	74	4614	2.00	1.64	
130 1,2,4-Trichlorobenzene	180	13.983	13.982	0.001	93	89116	2.00	1.78	
131 Hexachlorobutadiene	225	14.133	14.132	0.001	96	86325	2.00	1.78	
132 Naphthalene	128	14.362	14.361	0.001	98	96106	2.00	1.76	
133 1,2,3-Trichlorobenzene	180	14.684	14.683	0.001	94	61743	2.00	1.77	
S 140 1,2-Dichloroethene, Total	96				0		4.00	3.97	
S 137 1,3-Dichloropropene, Total	1				0		4.00	3.66	
S 138 1,2-Dichloroethene, Total	1				0		4.00	3.97	
S 135 Xylenes, Total (URS)	1				0		4.00	4.04	
S 139 Xylenes, Total	106				0		4.00	4.04	
S 136 Total BTEX	1				0			10.0	
S 134 Trihalomethanes, Total	1				0		8.00	7.43	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	0.80	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.16	Units: uL

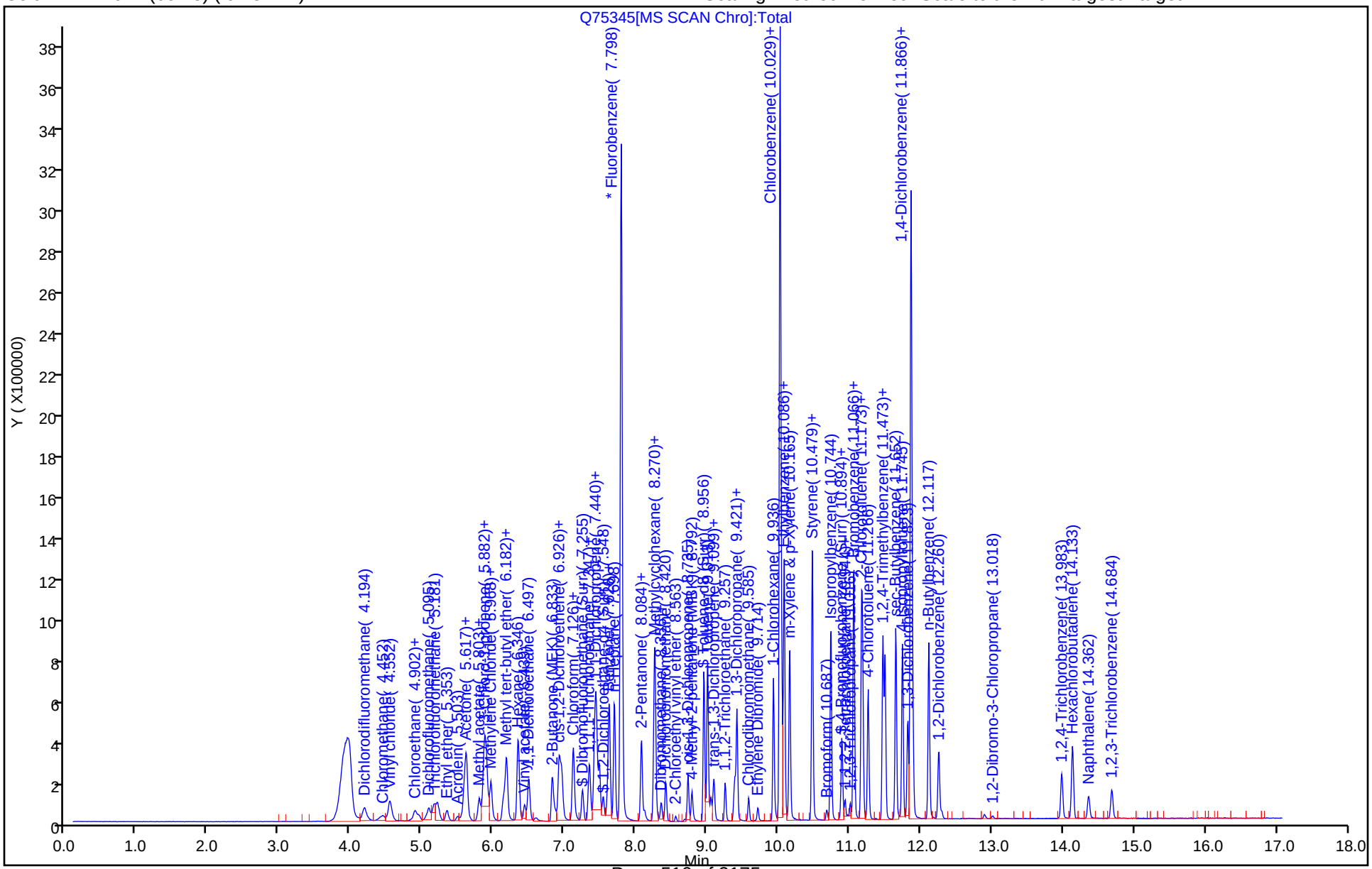
Report Date: 13-Nov-2018 10:09:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75345.D

Injection Date:	12-Nov-2018 14:52:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD020			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75346.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Nov-2018 15:13:30 ALS Bottle#: 4 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:10:02 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.874	-0.002	0	255185	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.797	-0.002	100	3161650	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.028	-0.002	100	660074	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.864	11.866	-0.002	99	781383	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.254	-0.002	92	296775	5.00	5.26	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.547	-0.002	0	258416	5.00	5.48	
$ 7 Toluene-d8 (Surr)	98	8.954	8.956	-0.002	100	1249927	5.00	5.30	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.893	0.005	85	345615	5.00	5.49	
23 Dichlorodifluoromethane	85	4.184	4.194	-0.010	100	526582	5.00	5.45	
26 Chloromethane	50	4.449	4.451	-0.002	99	209481	5.00	5.38	
27 Vinyl chloride	62	4.563	4.572	-0.009	98	231806	5.00	5.43	
29 Bromomethane	94	4.899	4.909	-0.010	92	193878	5.00	5.11	
30 Chloroethane	64	4.957	4.966	-0.009	99	106522	5.00	5.20	
31 Dichlorofluoromethane	67	5.100	5.109	-0.009	97	406914	5.00	4.94	
32 Trichlorofluoromethane	101	5.171	5.216	-0.045	98	643135	5.00	5.27	
35 Ethyl ether	59	5.350	5.359	-0.009	94	129680	5.00	5.25	
39 Acrolein	56	5.500	5.502	-0.002	100	103025	50.0	52.8	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.602	-0.002	97	240055	5.00	4.76	
41 Acetone	43	5.600	5.602	-0.002	40	90650	20.0	20.5	
43 1,1-Dichloroethene	96	5.629	5.631	-0.002	96	330390	5.00	5.22	
44 Iodomethane	142	5.800	5.809	-0.009	98	450897	5.00	4.83	
45 Methyl acetate	43	5.829	5.831	-0.002	97	104956	10.0	9.72	
47 3-Chloro-1-propene	41	5.879	5.881	-0.002	83	585614	5.00	5.75	
48 Carbon disulfide	76	5.908	5.910	-0.002	99	1400475	5.00	5.31	
49 2-Methyl-2-propanol	59	5.929	5.938	-0.009	31	61520	50.0	51.2	
50 Methylene Chloride	84	5.972	5.974	-0.002	96	261654	5.00	5.06	
52 Acrylonitrile	53	6.129	6.131	-0.002	99	227588	50.0	51.4	
51 Methyl tert-butyl ether	73	6.151	6.153	-0.002	96	313548	5.00	5.18	
53 trans-1,2-Dichloroethene	96	6.186	6.188	-0.002	95	354936	5.00	5.13	
54 Hexane	57	6.351	6.353	-0.002	93	668134	5.00	5.15	
55 Vinyl acetate	43	6.437	6.439	-0.002	97	452324	10.0	10.6	
57 1,1-Dichloroethane	63	6.501	6.503	-0.002	96	662986	5.00	5.37	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.880	6.875	0.005	99	139978	20.0	18.9	
62 sec-Butyl Alcohol	45	6.923	6.925	-0.002	97	141132	150.0	162.2	
63 cis-1,2-Dichloroethene	96	6.923	6.932	-0.009	84	353063	5.00	5.22	
64 2,2-Dichloropropane	77	6.959	6.968	-0.009	87	498664	5.00	5.13	
67 Chlorobromomethane	128	7.123	7.125	-0.002	94	99933	5.00	5.16	
68 Chloroform	83	7.123	7.132	-0.009	93	608686	5.00	5.31	
69 Tetrahydrofuran	42	7.159	7.168	-0.009	95	41203	10.0	10.6	
70 Isobutyl alcohol	41	7.331	7.325	0.005	93	35880	125.0	122.3	
71 1,1,1-Trichloroethane	97	7.352	7.354	-0.002	98	559872	5.00	5.14	
72 Cyclohexane	56	7.423	7.433	-0.010	92	668827	5.00	4.84	
73 1,1-Dichloropropene	75	7.445	7.447	-0.002	97	590663	5.00	5.38	
74 Carbon tetrachloride	117	7.488	7.497	-0.009	97	507044	5.00	5.08	
76 1,2-Dichloroethane	62	7.602	7.604	-0.002	98	279406	5.00	5.25	
77 Benzene	78	7.624	7.633	-0.009	96	1379752	5.00	5.23	
14 n-Heptane	43	7.702	7.704	-0.002	92	672859	5.00	4.84	
79 Trichloroethene	95	8.081	8.083	-0.002	95	385882	5.00	5.10	
80 2-Pentanone	43	8.117	8.119	-0.002	98	199720	20.0	21.9	
83 1,2-Dichloropropane	63	8.260	8.255	0.005	95	298509	5.00	5.44	
82 Methylcyclohexane	55	8.274	8.269	0.005	95	566620	5.00	4.84	
84 1,4-Dioxane	88	8.317	8.312	0.005	83	13810	100.0	99.1	
85 Dibromomethane	93	8.353	8.355	-0.002	90	103232	5.00	5.18	
86 Dichlorobromomethane	83	8.424	8.419	0.005	99	351302	5.00	5.15	
87 2-Chloroethyl vinyl ether	63	8.560	8.562	-0.002	90	38789	5.00	4.41	
89 cis-1,3-Dichloropropene	75	8.732	8.734	-0.002	95	369461	5.00	5.08	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.784	0.005	0	298731	20.0	20.9	
91 Toluene	91	9.011	9.013	-0.002	98	1457093	5.00	5.46	
92 Ethyl methacrylate	69	9.082	9.084	-0.002	87	126464	5.00	4.79	
93 trans-1,3-Dichloropropene	75	9.097	9.099	-0.002	96	258739	5.00	5.18	
94 1,1,2-Trichloroethane	97	9.254	9.256	-0.002	92	135299	5.00	5.22	
95 2-Hexanone	43	9.375	9.370	0.005	97	182362	20.0	20.3	
96 1,3-Dichloropropane	76	9.390	9.392	-0.002	94	256045	5.00	5.10	
97 Tetrachloroethene	164	9.418	9.420	-0.002	91	283027	5.00	4.83	
98 Chlorodibromomethane	129	9.583	9.585	-0.002	90	164212	5.00	4.90	
100 Ethylene Dibromide	107	9.719	9.713	0.006	99	119140	5.00	4.98	
101 1-Chlorohexane	91	9.933	9.935	-0.002	98	575780	5.00	5.32	
102 Chlorobenzene	112	10.055	10.050	0.005	94	811737	5.00	5.15	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.085	-0.002	94	243567	5.00	5.08	
103 Ethylbenzene	106	10.083	10.085	-0.002	99	511322	5.00	5.21	
105 m-Xylene & p-Xylene	106	10.162	10.164	-0.002	0	623017	5.00	5.19	
107 o-Xylene	106	10.477	10.479	-0.001	90	547049	5.00	5.35	
106 Styrene	104	10.477	10.479	-0.001	83	757505	5.00	5.32	
108 Bromoform	173	10.684	10.686	-0.002	94	65666	5.00	4.22	
109 Isopropylbenzene	105	10.741	10.743	-0.002	97	1562789	5.00	5.67	
111 Cyclohexanone	55	10.877	10.872	0.005	99	85350	200.0	203.0	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.943	-0.002	93	120298	5.00	5.24	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.979	-0.002	89	18826	5.00	4.79	
114 1,2,3-Trichloropropane	110	11.013	11.015	-0.002	85	28435	5.00	5.24	
115 N-Propylbenzene	120	11.063	11.065	-0.002	99	412218	5.00	5.50	
116 Bromobenzene	156	11.070	11.065	0.005	95	245580	5.00	5.29	
117 1,3,5-Trimethylbenzene	105	11.170	11.172	-0.002	95	1196350	5.00	5.58	
118 2-Chlorotoluene	126	11.184	11.186	-0.002	95	318335	5.00	5.36	
119 4-Chlorotoluene	126	11.263	11.265	-0.002	99	314429	5.00	5.27	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.472	-0.002	91	1233364	5.00	5.49	
121 1,2,4-Trimethylbenzene	105	11.499	11.501	-0.002	98	1139729	5.00	5.44	
122 sec-Butylbenzene	134	11.656	11.651	0.005	95	318787	5.00	5.30	
123 4-Isopropyltoluene	119	11.749	11.744	0.005	96	1285027	5.00	5.33	
124 1,3-Dichlorobenzene	146	11.821	11.823	-0.002	97	500908	5.00	5.08	
126 1,4-Dichlorobenzene	146	11.892	11.887	0.005	94	499474	5.00	5.04	
127 n-Butylbenzene	91	12.114	12.116	-0.002	99	1386990	5.00	5.45	
128 1,2-Dichlorobenzene	146	12.257	12.259	-0.002	96	389150	5.00	5.06	
129 1,2-Dibromo-3-Chloropropan	157	13.008	13.010	-0.002	79	13606	5.00	4.96	
130 1,2,4-Trichlorobenzene	180	13.980	13.982	-0.002	93	251220	5.00	5.16	
131 Hexachlorobutadiene	225	14.137	14.132	0.005	97	245082	5.00	5.20	
132 Naphthalene	128	14.359	14.361	-0.002	98	275844	5.00	5.18	
133 1,2,3-Trichlorobenzene	180	14.688	14.683	0.005	95	176844	5.00	5.21	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.4	
S 136 Total BTEX	1				0			26.4	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.3	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.4	
S 139 Xylenes, Total	106				0		10.0	10.5	
S 134 Trihalomethanes, Total	1				0		20.0	19.6	
S 135 Xylenes, Total (URS)	1				0		10.0	10.5	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	
MV-MegaMainA_00007	Amount Added:	2.00	Units: uL	
MV-ARCH SS A_00101	Amount Added:	0.40	Units: uL	

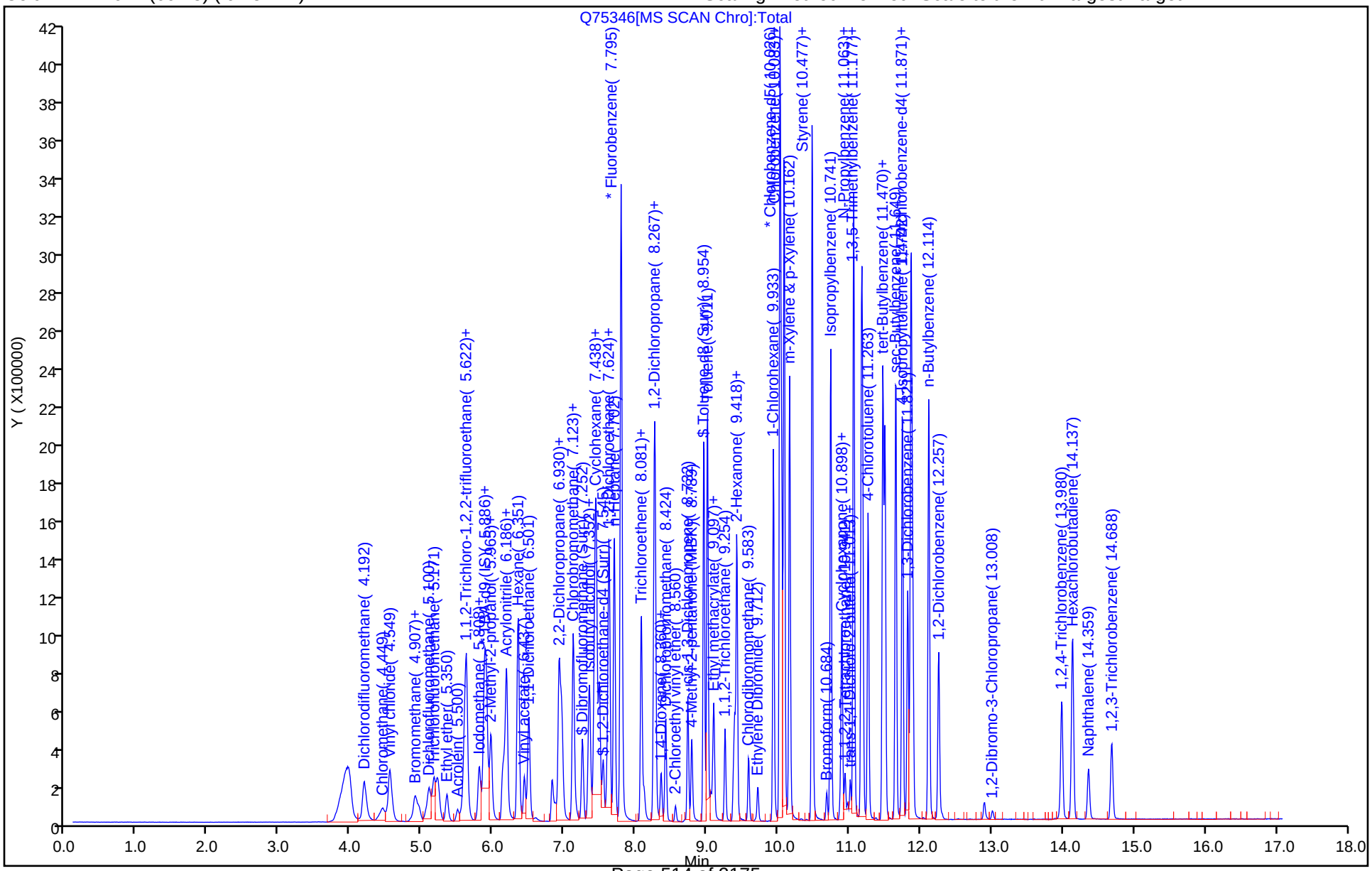
Report Date: 13-Nov-2018 10:10:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75346.D

Injection Date:	12-Nov-2018 15:13:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD050			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75347.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 12-Nov-2018 15:33:30 ALS Bottle#: 5 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:10:14 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.874	5.874	0.000	0	259070	250.0	250.0	
* 1 Fluorobenzene	96	7.797	7.797	0.000	100	3190104	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.028	10.028	0.000	99	639343	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.866	0.000	99	817000	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.254	7.254	0.000	92	590580	10.0	10.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.547	7.547	0.000	0	485258	10.0	10.2	
$ 7 Toluene-d8 (Surr)	98	8.956	8.956	0.000	100	2543471	10.0	11.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.893	10.893	0.000	86	698518	10.0	10.6	
23 Dichlorodifluoromethane	85	4.194	4.194	0.000	99	1122163	10.0	11.5	
26 Chloromethane	50	4.451	4.451	0.000	98	436655	10.0	11.1	
27 Vinyl chloride	62	4.572	4.572	0.000	98	479640	10.0	11.1	
29 Bromomethane	94	4.909	4.909	0.000	92	407467	10.0	10.6	
30 Chloroethane	64	4.966	4.966	0.000	99	222210	10.0	10.7	
31 Dichlorofluoromethane	67	5.109	5.109	0.000	97	889272	10.0	10.9	
32 Trichlorofluoromethane	101	5.216	5.216	0.000	99	1342909	10.0	10.9	
35 Ethyl ether	59	5.359	5.359	0.000	94	270807	10.0	10.9	
39 Acrolein	56	5.502	5.502	0.000	99	217782	100.0	110.5	
40 1,1,2-Trichloro-1,2,2-trif	151	5.602	5.602	0.000	96	522171	10.0	10.1	
41 Acetone	43	5.602	5.602	0.000	38	169114	40.0	41.0	
43 1,1-Dichloroethene	96	5.631	5.631	0.000	96	674506	10.0	10.6	
44 Iodomethane	142	5.809	5.809	0.000	98	952920	10.0	10.0	
45 Methyl acetate	43	5.831	5.831	0.000	97	215530	20.0	19.8	
47 3-Chloro-1-propene	41	5.881	5.881	0.000	83	1133316	10.0	11.0	
48 Carbon disulfide	76	5.910	5.910	0.000	99	2831159	10.0	10.6	
49 2-Methyl-2-propanol	59	5.938	5.938	0.000	93	131064	100.0	107.5	
50 Methylene Chloride	84	5.974	5.974	0.000	94	523591	10.0	10.0	
52 Acrylonitrile	53	6.131	6.131	0.000	99	483176	100.0	103.4	
51 Methyl tert-butyl ether	73	6.153	6.153	0.000	95	655704	10.0	10.7	
53 trans-1,2-Dichloroethene	96	6.188	6.188	0.000	97	727435	10.0	10.4	
54 Hexane	57	6.353	6.353	0.000	92	1371465	10.0	10.9	
55 Vinyl acetate	43	6.439	6.439	0.000	97	976384	20.0	22.8	
57 1,1-Dichloroethane	63	6.503	6.503	0.000	96	1324314	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.875	6.875	0.000	100	297629	40.0	39.9	
62 sec-Butyl Alcohol	45	6.925	6.925	0.000	99	295314	300.0	334.2	
63 cis-1,2-Dichloroethene	96	6.932	6.932	0.000	83	722128	10.0	10.6	
64 2,2-Dichloropropane	77	6.968	6.968	0.000	86	1041718	10.0	10.6	
67 Chlorobromomethane	128	7.125	7.125	0.000	96	205392	10.0	10.5	
68 Chloroform	83	7.132	7.132	0.000	93	1238825	10.0	10.7	
69 Tetrahydrofuran	42	7.168	7.168	0.000	94	85566	20.0	21.7	
70 Isobutyl alcohol	41	7.325	7.325	0.000	93	80843	250.0	271.4	
71 1,1,1-Trichloroethane	97	7.354	7.354	0.000	98	1193948	10.0	10.9	
72 Cyclohexane	56	7.433	7.433	0.000	91	1355083	10.0	9.87	
73 1,1-Dichloropropene	75	7.447	7.447	0.000	97	1226826	10.0	11.1	
74 Carbon tetrachloride	117	7.497	7.497	0.000	97	1083558	10.0	10.8	
76 1,2-Dichloroethane	62	7.604	7.604	0.000	98	589631	10.0	11.0	
77 Benzene	78	7.633	7.633	0.000	96	2890188	10.0	10.9	
14 n-Heptane	43	7.704	7.704	0.000	91	1377628	10.0	10.1	
79 Trichloroethene	95	8.083	8.083	0.000	96	821677	10.0	10.8	
80 2-Pentanone	43	8.119	8.119	0.000	99	426462	40.0	46.4	
83 1,2-Dichloropropane	63	8.255	8.255	0.000	97	618256	10.0	11.2	
82 Methylcyclohexane	55	8.269	8.269	0.000	93	1160449	10.0	10.1	
84 1,4-Dioxane	88	8.312	8.312	0.000	83	30470	200.0	205.0	
85 Dibromomethane	93	8.355	8.355	0.000	91	213958	10.0	10.6	
86 Dichlorobromomethane	83	8.419	8.419	0.000	99	750661	10.0	10.9	
87 2-Chloroethyl vinyl ether	63	8.562	8.562	0.000	91	91365	10.0	9.37	
89 cis-1,3-Dichloropropene	75	8.734	8.734	0.000	96	794296	10.0	11.3	
90 4-Methyl-2-pentanone (MIBK	43	8.784	8.784	0.000	0	626291	40.0	43.5	
91 Toluene	91	9.013	9.013	0.000	98	2991832	10.0	11.1	
92 Ethyl methacrylate	69	9.084	9.084	0.000	88	276649	10.0	10.4	
93 trans-1,3-Dichloropropene	75	9.099	9.099	0.000	96	551228	10.0	10.9	
94 1,1,2-Trichloroethane	97	9.256	9.256	0.000	92	278425	10.0	10.6	
95 2-Hexanone	43	9.370	9.370	0.000	95	375949	40.0	43.2	
96 1,3-Dichloropropane	76	9.392	9.392	0.000	92	539105	10.0	11.1	
97 Tetrachloroethene	164	9.420	9.420	0.000	92	620648	10.0	10.9	
98 Chlorodibromomethane	129	9.585	9.585	0.000	90	353848	10.0	10.9	
100 Ethylene Dibromide	107	9.713	9.713	0.000	99	248865	10.0	10.7	
101 1-Chlorohexane	91	9.935	9.935	0.000	98	1173305	10.0	11.2	
102 Chlorobenzene	112	10.050	10.050	0.000	94	1662778	10.0	10.9	
104 1,1,1,2-Tetrachloroethane	131	10.085	10.085	0.000	91	535119	10.0	11.5	
103 Ethylbenzene	106	10.085	10.085	0.000	99	1072627	10.0	11.3	
105 m-Xylene & p-Xylene	106	10.164	10.164	0.000	0	1275550	10.0	11.0	
107 o-Xylene	106	10.479	10.479	0.000	89	1117888	10.0	11.3	
106 Styrene	104	10.479	10.479	0.000	84	1576340	10.0	11.4	
108 Bromoform	173	10.686	10.686	0.000	96	145585	10.0	9.21	
109 Isopropylbenzene	105	10.743	10.743	0.000	97	3252636	10.0	11.3	
111 Cyclohexanone	55	10.872	10.872	0.000	100	188771	400.0	463.5	
112 1,1,2,2-Tetrachloroethane	83	10.943	10.943	0.000	92	250849	10.0	10.4	
113 trans-1,4-Dichloro-2-buten	53	10.979	10.979	0.000	88	42692	10.0	9.87	
114 1,2,3-Trichloropropane	110	11.015	11.015	0.000	85	60580	10.0	10.7	
115 N-Propylbenzene	120	11.065	11.065	0.000	99	868321	10.0	11.1	
116 Bromobenzene	156	11.065	11.065	0.000	95	525167	10.0	10.8	
117 1,3,5-Trimethylbenzene	105	11.172	11.172	0.000	95	2557449	10.0	11.4	
118 2-Chlorotoluene	126	11.186	11.186	0.000	95	676232	10.0	10.9	
119 4-Chlorotoluene	126	11.265	11.265	0.000	98	655898	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.472	11.472	0.000	91	2656381	10.0	11.3	
121 1,2,4-Trimethylbenzene	105	11.501	11.501	0.000	98	2416160	10.0	11.0	
122 sec-Butylbenzene	134	11.651	11.651	0.000	95	697125	10.0	11.1	
123 4-Isopropyltoluene	119	11.744	11.744	0.000	96	2801237	10.0	11.1	
124 1,3-Dichlorobenzene	146	11.823	11.823	0.000	96	1103811	10.0	10.7	
126 1,4-Dichlorobenzene	146	11.887	11.887	0.000	93	1089984	10.0	10.5	
127 n-Butylbenzene	91	12.116	12.116	0.000	98	2979417	10.0	11.2	
128 1,2-Dichlorobenzene	146	12.259	12.259	0.000	96	865658	10.0	10.8	
129 1,2-Dibromo-3-Chloropropan	157	13.010	13.010	0.000	79	30966	10.0	10.8	
130 1,2,4-Trichlorobenzene	180	13.982	13.982	0.000	94	557947	10.0	11.0	
131 Hexachlorobutadiene	225	14.132	14.132	0.000	97	542810	10.0	11.0	
132 Naphthalene	128	14.361	14.361	0.000	98	620851	10.0	11.2	
133 1,2,3-Trichlorobenzene	180	14.683	14.683	0.000	95	393590	10.0	11.1	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.0	
S 137 1,3-Dichloropropene, Total	1				0		20.0	22.2	
S 139 Xylenes, Total	106				0		20.0	22.3	
S 135 Xylenes, Total (URS)	1				0		20.0	22.3	
S 134 Trihalomethanes, Total	1				0		40.0	41.7	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.0	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	4.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	0.80	Units: uL

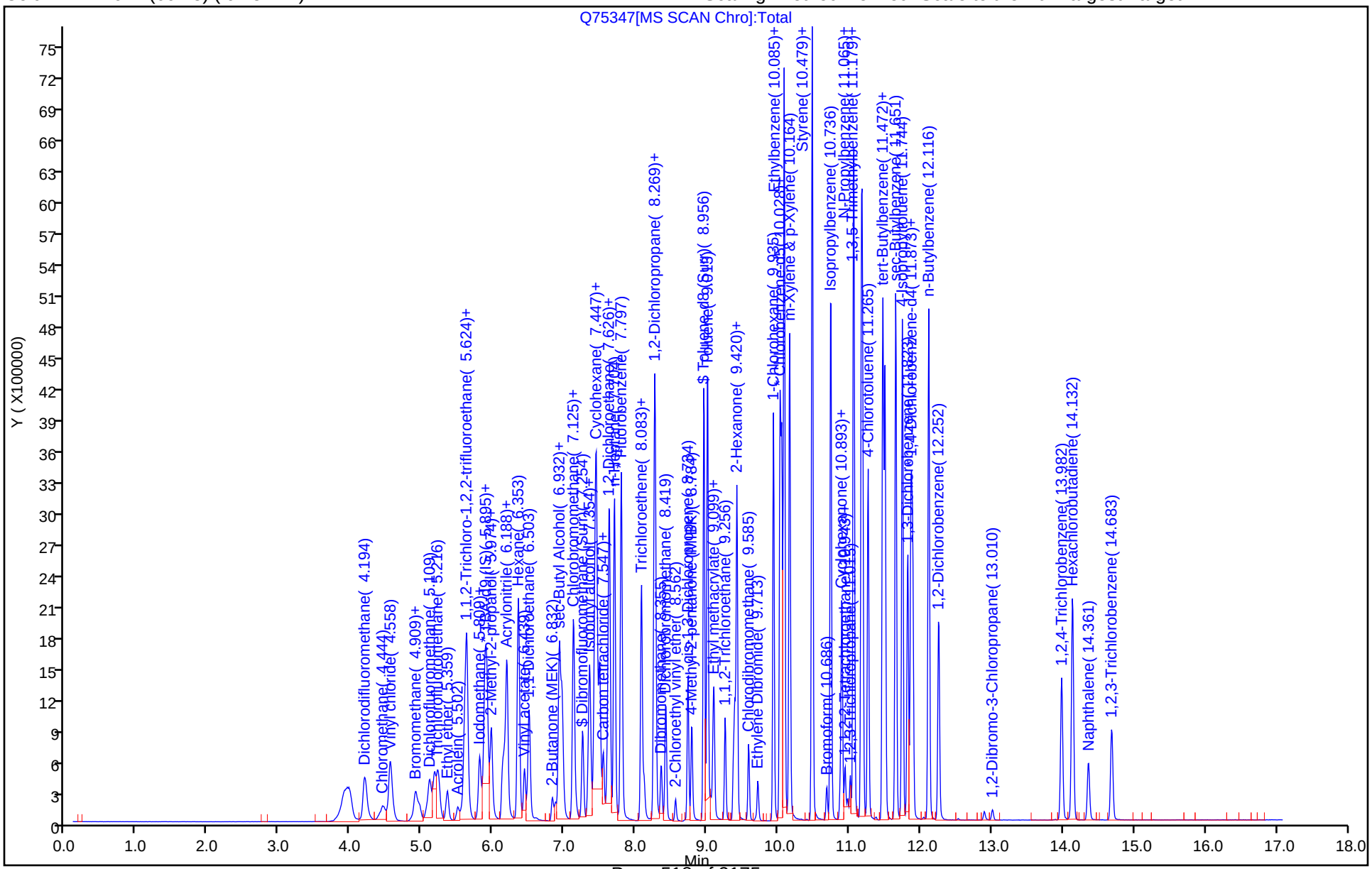
Report Date: 13-Nov-2018 10:10:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75347.D

Injection Date:	12-Nov-2018 15:33:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICIS			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75348.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Nov-2018 15:54:30 ALS Bottle#: 6 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:10:25 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.874	-0.002	0	272152	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.797	-0.002	100	3400615	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.028	0.005	99	683764	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.866	0.005	100	907962	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.254	-0.002	92	1603728	30.0	26.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.547	-0.002	0	1233321	30.0	24.3	
$ 7 Toluene-d8 (Surr)	98	8.961	8.956	0.005	100	6365653	30.0	26.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.893	0.005	88	1824222	30.0	24.9	
23 Dichlorodifluoromethane	85	4.199	4.194	0.005	99	2841518	25.0	27.4	
26 Chloromethane	50	4.456	4.451	0.005	98	1100052	25.0	26.2	
27 Vinyl chloride	62	4.570	4.572	-0.002	98	1177894	25.0	25.7	
29 Bromomethane	94	4.907	4.909	-0.002	92	1035466	25.0	25.4	
30 Chloroethane	64	4.964	4.966	-0.002	99	557842	25.0	25.3	
31 Dichlorofluoromethane	67	5.100	5.109	-0.009	96	2005281	25.0	24.5	
32 Trichlorofluoromethane	101	5.221	5.216	0.005	99	3479593	25.0	26.5	
35 Ethyl ether	59	5.357	5.359	-0.002	93	708821	25.0	26.7	
39 Acrolein	56	5.500	5.502	-0.002	99	585995	250.0	279.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.602	0.005	95	1471627	25.0	26.4	
41 Acetone	43	5.600	5.602	-0.002	37	392756	100.0	99.2	
43 1,1-Dichloroethene	96	5.629	5.631	-0.002	98	1797243	25.0	26.4	
44 Iodomethane	142	5.807	5.809	-0.002	99	2645936	25.0	25.9	
45 Methyl acetate	43	5.829	5.831	-0.002	96	536329	50.0	46.2	
47 3-Chloro-1-propene	41	5.879	5.881	-0.002	83	2744407	25.0	25.0	
48 Carbon disulfide	76	5.908	5.910	-0.002	99	7313892	25.0	25.8	
49 2-Methyl-2-propanol	59	5.936	5.938	-0.002	93	332258	250.0	259.4	
50 Methylene Chloride	84	5.972	5.974	-0.002	92	1391303	25.0	25.0	
52 Acrylonitrile	53	6.122	6.131	-0.009	99	1350100	250.0	263.9	
51 Methyl tert-butyl ether	73	6.158	6.153	0.005	95	1725978	25.0	26.5	
53 trans-1,2-Dichloroethene	96	6.194	6.188	0.006	98	1957100	25.0	26.3	
54 Hexane	57	6.351	6.353	-0.002	91	3320494	25.0	24.7	
55 Vinyl acetate	43	6.437	6.439	-0.002	97	2476912	50.0	54.2	
57 1,1-Dichloroethane	63	6.501	6.503	-0.002	96	3317450	25.0	25.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.873	6.875	-0.002	100	744369	100.0	93.5	
62 sec-Butyl Alcohol	45	6.916	6.925	-0.009	99	755066	750.0	813.5	
63 cis-1,2-Dichloroethene	96	6.930	6.932	-0.002	79	1948626	25.0	26.8	
64 2,2-Dichloropropane	77	6.966	6.968	-0.002	85	2733022	25.0	26.1	
67 Chlorobromomethane	128	7.123	7.125	-0.002	97	574147	25.0	27.6	
68 Chloroform	83	7.130	7.132	-0.002	92	3295377	25.0	26.7	
69 Tetrahydrofuran	42	7.166	7.168	-0.002	93	215300	50.0	51.3	
70 Isobutyl alcohol	41	7.323	7.325	-0.002	96	215398	625.0	688.5	
71 1,1,1-Trichloroethane	97	7.352	7.354	-0.002	98	3183817	25.0	27.2	
72 Cyclohexane	56	7.431	7.433	-0.002	89	3266441	25.0	25.2	
73 1,1-Dichloropropene	75	7.452	7.447	0.005	97	3104675	25.0	26.3	
74 Carbon tetrachloride	117	7.495	7.497	-0.002	97	2996767	25.0	27.9	
76 1,2-Dichloroethane	62	7.602	7.604	-0.002	98	1492778	25.0	26.1	
77 Benzene	78	7.631	7.633	-0.002	96	7422183	25.0	26.2	
14 n-Heptane	43	7.702	7.704	-0.002	88	3168246	25.0	25.0	
79 Trichloroethene	95	8.081	8.083	-0.002	98	2218186	25.0	27.2	
80 2-Pentanone	43	8.117	8.119	-0.002	99	1113521	100.0	113.6	
83 1,2-Dichloropropane	63	8.260	8.255	0.005	96	1484064	25.0	25.1	
82 Methylcyclohexane	55	8.274	8.269	0.005	92	2718754	25.0	25.0	
84 1,4-Dioxane	88	8.310	8.312	-0.002	90	83190	500.0	509.5	
85 Dibromomethane	93	8.360	8.355	0.005	92	577396	25.0	26.9	
86 Dichlorobromomethane	83	8.424	8.419	0.005	100	2018712	25.0	27.5	
87 2-Chloroethyl vinyl ether	63	8.560	8.562	-0.002	91	273811	25.0	25.1	
89 cis-1,3-Dichloropropene	75	8.732	8.734	-0.002	97	2097887	25.0	27.8	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.784	0.005	0	1628141	100.0	106.0	
91 Toluene	91	9.011	9.013	-0.002	99	7343807	25.0	25.6	
92 Ethyl methacrylate	69	9.082	9.084	-0.002	87	773214	25.0	26.6	
93 trans-1,3-Dichloropropene	75	9.097	9.099	-0.002	96	1474041	25.0	27.4	
94 1,1,2-Trichloroethane	97	9.254	9.256	-0.002	91	742031	25.0	26.6	
95 2-Hexanone	43	9.368	9.370	-0.002	95	1010284	100.0	108.6	
96 1,3-Dichloropropane	76	9.397	9.392	0.005	90	1360043	25.0	26.2	
97 Tetrachloroethene	164	9.425	9.420	0.005	94	1730501	25.0	28.5	
98 Chlorodibromomethane	129	9.590	9.585	0.005	90	1004857	25.0	28.9	
100 Ethylene Dibromide	107	9.719	9.713	0.006	99	684875	25.0	27.7	
101 1-Chlorohexane	91	9.940	9.935	0.005	95	3105948	25.0	27.7	
102 Chlorobenzene	112	10.055	10.050	0.005	96	4389324	25.0	26.9	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.085	-0.002	93	1453927	25.0	29.3	
103 Ethylbenzene	106	10.090	10.085	0.005	98	2781610	25.0	27.4	
105 m-Xylene & p-Xylene	106	10.162	10.164	-0.002	0	3396593	25.0	27.3	
107 o-Xylene	106	10.484	10.479	0.006	88	2800842	25.0	26.5	
106 Styrene	104	10.484	10.479	0.006	84	4038500	25.0	27.4	
108 Bromoform	173	10.684	10.686	-0.002	95	421550	25.0	24.3	
109 Isopropylbenzene	105	10.741	10.743	-0.002	97	8167246	25.0	25.5	
111 Cyclohexanone	55	10.877	10.872	0.005	99	485403	1000.0	1114.3	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.943	-0.002	94	673936	25.0	25.3	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.979	-0.002	91	128425	25.0	26.0	
114 1,2,3-Trichloropropane	110	11.013	11.015	-0.002	85	167222	25.0	26.5	
115 N-Propylbenzene	120	11.063	11.065	-0.002	98	2319032	25.0	26.6	
116 Bromobenzene	156	11.070	11.065	0.005	91	1451836	25.0	26.9	
117 1,3,5-Trimethylbenzene	105	11.170	11.172	-0.002	95	6624043	25.0	26.6	
118 2-Chlorotoluene	126	11.192	11.186	0.006	96	1824500	25.0	26.4	
119 4-Chlorotoluene	126	11.263	11.265	-0.002	98	1843828	25.0	26.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.472	-0.002	91	7049351	25.0	27.0	
121 1,2,4-Trimethylbenzene	105	11.499	11.501	-0.002	97	6341326	25.0	26.0	
122 sec-Butylbenzene	134	11.656	11.651	0.005	95	1923284	25.0	27.5	
123 4-Isopropyltoluene	119	11.749	11.744	0.005	95	7519342	25.0	26.8	
124 1,3-Dichlorobenzene	146	11.821	11.823	-0.002	97	3064710	25.0	26.8	
126 1,4-Dichlorobenzene	146	11.892	11.887	0.005	94	3000672	25.0	26.1	
127 n-Butylbenzene	91	12.114	12.116	-0.002	97	7668385	25.0	25.9	
128 1,2-Dichlorobenzene	146	12.257	12.259	-0.002	96	2444105	25.0	27.4	
129 1,2-Dibromo-3-Chloropropan	157	13.008	13.010	-0.002	82	89171	25.0	28.0	
130 1,2,4-Trichlorobenzene	180	13.980	13.982	-0.002	94	1558659	25.0	27.5	
131 Hexachlorobutadiene	225	14.137	14.132	0.005	98	1509222	25.0	27.5	
132 Naphthalene	128	14.359	14.361	-0.002	97	1730994	25.0	28.0	
133 1,2,3-Trichlorobenzene	180	14.688	14.683	0.005	95	1075728	25.0	27.3	
S 140 1,2-Dichloroethene, Total	96				0		50.0	53.1	
S 135 Xylenes, Total (URS)	1				0		50.0	53.8	
S 136 Total BTEX	1				0			132.9	
S 139 Xylenes, Total	106				0		50.0	53.8	
S 138 1,2-Dichloroethene, Total	1				0		50.0	53.1	
S 134 Trihalomethanes, Total	1				0		100.0	107.5	
S 137 1,3-Dichloropropene, Total	1				0		50.0	55.3	

Reagents:

MV-568718-D_00008	Amount Added: 1.00	Units: uL
MV-MegaMainA_00007	Amount Added: 10.00	Units: uL
MV-ARCH SS A_00101	Amount Added: 2.40	Units: uL

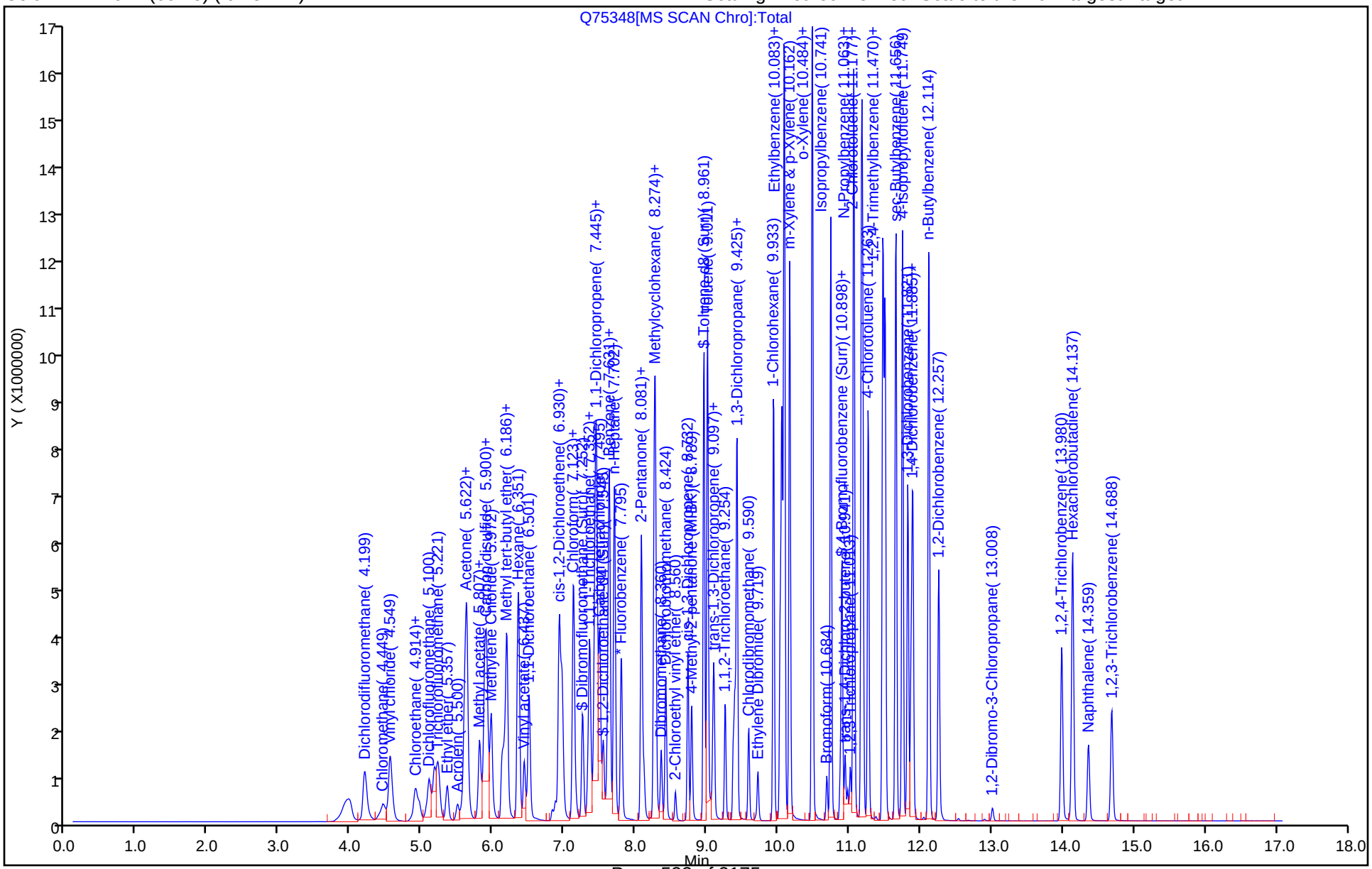
Report Date: 13-Nov-2018 10:10:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75348.D

Injection Date:	12-Nov-2018 15:54:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD30			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 12-Nov-2018 16:15:30 ALS Bottle#: 7 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:10:37 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.874	-0.003	0	262062	250.0	250.0	
* 1 Fluorobenzene	96	7.794	7.797	-0.003	100	3650867	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.028	-0.003	98	750179	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.866	0.004	98	953532	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.258	7.254	0.004	93	3874952	60.0	59.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.547	-0.003	0	3082543	60.0	56.6	
$ 7 Toluene-d8 (Surr)	98	8.960	8.956	0.004	98	12770101	60.0	47.7	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.893	0.005	93	4389555	60.0	57.1	
23 Dichlorodifluoromethane	85	4.191	4.194	-0.003	99	6732542	60.0	60.4	
26 Chloromethane	50	4.448	4.451	-0.003	98	2437244	60.0	54.2	
27 Vinyl chloride	62	4.570	4.572	-0.002	97	2641221	60.0	53.6	
29 Bromomethane	94	4.899	4.909	-0.010	91	2484723	60.0	56.7	
30 Chloroethane	64	4.956	4.966	-0.010	99	1234700	60.0	52.2	
31 Dichlorofluoromethane	67	5.099	5.109	-0.010	96	4431416	60.0	60.1	
32 Trichlorofluoromethane	101	5.213	5.216	-0.003	99	8278065	60.0	58.8	
35 Ethyl ether	59	5.349	5.359	-0.010	90	1596798	60.0	55.9	
39 Acrolein	56	5.499	5.502	-0.003	100	1373176	600.1	608.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.599	5.602	-0.003	93	3630209	60.0	60.4	
41 Acetone	43	5.592	5.602	-0.010	100	818350	240.0	240.2	
43 1,1-Dichloroethene	96	5.628	5.631	-0.003	98	4116029	60.0	56.3	
44 Iodomethane	142	5.807	5.809	-0.002	99	6706483	60.0	60.9	
45 Methyl acetate	43	5.828	5.831	-0.003	96	1121990	120.0	90.0	
47 3-Chloro-1-propene	41	5.878	5.881	-0.003	80	5083541	60.0	43.2	
48 Carbon disulfide	76	5.907	5.910	-0.003	99	15512435	60.0	51.0	
49 2-Methyl-2-propanol	59	5.935	5.938	-0.003	94	778104	600.0	630.8	
50 Methylene Chloride	84	5.971	5.974	-0.003	88	3355640	60.0	56.2	
52 Acrylonitrile	53	6.121	6.131	-0.010	98	3122238	600.0	563.4	
51 Methyl tert-butyl ether	73	6.157	6.153	0.004	94	3989624	60.0	57.1	
53 trans-1,2-Dichloroethene	96	6.193	6.188	0.005	97	4552711	60.0	57.0	
54 Hexane	57	6.350	6.353	-0.003	89	6545228	60.0	44.4	
55 Vinyl acetate	43	6.436	6.439	-0.003	97	5431845	120.0	110.7	
57 1,1-Dichloroethane	63	6.500	6.503	-0.003	96	7386208	60.0	51.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.872	6.875	-0.003	100	1760232	240.0	206.0	
62 sec-Butyl Alcohol	45	6.908	6.925	-0.017	97	1572581	1800.0	1759.5	
63 cis-1,2-Dichloroethene	96	6.929	6.932	-0.003	76	4386794	60.0	56.2	
64 2,2-Dichloropropane	77	6.965	6.968	-0.003	86	6273503	60.0	55.9	
67 Chlorobromomethane	128	7.122	7.125	-0.003	85	1380946	60.0	61.7	
68 Chloroform	83	7.129	7.132	-0.003	92	7163260	60.0	54.1	
69 Tetrahydrofuran	42	7.158	7.168	-0.010	92	478476	120.0	106.2	
70 Isobutyl alcohol	41	7.322	7.325	-0.003	94	502087	1500.0	1666.6	
71 1,1,1-Trichloroethane	97	7.351	7.354	-0.003	97	7492282	60.0	59.6	
72 Cyclohexane	56	7.423	7.433	-0.010	86	5634161	60.0	59.8	
73 1,1-Dichloropropene	75	7.451	7.447	0.004	96	6034402	60.0	47.6	
74 Carbon tetrachloride	117	7.494	7.497	-0.003	97	7209849	60.0	62.5	
76 1,2-Dichloroethane	62	7.601	7.604	-0.003	98	3375456	60.0	55.0	
77 Benzene	78	7.630	7.633	-0.003	97	14420258	60.0	47.3	
14 n-Heptane	43	7.701	7.704	-0.003	79	5172455	60.0	59.7	
79 Trichloroethene	95	8.080	8.083	-0.003	99	4998666	60.0	57.2	
80 2-Pentanone	43	8.116	8.119	-0.003	98	2478752	240.0	235.5	
83 1,2-Dichloropropane	63	8.252	8.255	-0.003	94	2593139	60.0	40.9	
82 Methylcyclohexane	55	8.273	8.269	0.004	89	4647780	60.0	59.9	
84 1,4-Dioxane	88	8.309	8.312	-0.003	91	213806	1200.0	1206.0	
85 Dibromomethane	93	8.359	8.355	0.004	96	1422968	60.0	61.8	
86 Dichlorobromomethane	83	8.424	8.419	0.005	99	4690121	60.0	59.6	
87 2-Chloroethyl vinyl ether	63	8.552	8.562	-0.010	91	727658	60.0	61.1	
89 cis-1,3-Dichloropropene	75	8.731	8.734	-0.003	98	4850599	60.0	58.7	
90 4-Methyl-2-pentanone (MIBK	43	8.781	8.784	-0.003	0	3524863	240.0	213.8	
91 Toluene	91	9.010	9.013	-0.003	97	13960559	60.0	45.3	
92 Ethyl methacrylate	69	9.081	9.084	-0.003	86	1875264	60.0	58.4	
93 trans-1,3-Dichloropropene	75	9.096	9.099	-0.003	94	3509960	60.0	60.9	
94 1,1,2-Trichloroethane	97	9.253	9.256	-0.003	91	1902306	60.0	63.6	
95 2-Hexanone	43	9.367	9.370	-0.003	95	2335999	240.0	228.9	
96 1,3-Dichloropropane	76	9.389	9.392	-0.003	88	3101411	60.0	54.4	
97 Tetrachloroethene	164	9.425	9.420	0.005	95	4171117	60.0	62.6	
98 Chlorodibromomethane	129	9.589	9.585	0.004	90	2664410	60.0	69.9	
100 Ethylene Dibromide	107	9.711	9.713	-0.002	98	1852694	60.0	68.2	
101 1-Chlorohexane	91	9.932	9.935	-0.003	90	6446829	60.0	52.4	
102 Chlorobenzene	112	10.054	10.050	0.004	96	9449459	60.0	52.8	
104 1,1,1,2-Tetrachloroethane	131	10.082	10.085	-0.003	93	3114168	60.0	57.1	
103 Ethylbenzene	106	10.090	10.085	0.005	97	5495971	60.0	49.3	
105 m-Xylene & p-Xylene	106	10.161	10.164	-0.003	0	7184473	60.0	52.7	
107 o-Xylene	106	10.476	10.479	-0.002	86	5599267	60.0	48.2	
106 Styrene	104	10.476	10.479	-0.002	85	8247042	60.0	50.9	
108 Bromoform	173	10.683	10.686	-0.003	96	1193700	60.0	62.3	
109 Isopropylbenzene	105	10.740	10.743	-0.003	96	15911688	60.0	47.3	e
111 Cyclohexanone	55	10.869	10.872	-0.003	94	1154430	2400.0	2415.6	
112 1,1,2,2-Tetrachloroethane	83	10.940	10.943	-0.003	94	1669919	60.0	59.6	
113 trans-1,4-Dichloro-2-buten	53	10.976	10.979	-0.003	91	334379	60.0	63.7	
114 1,2,3-Trichloropropane	110	11.012	11.015	-0.003	86	440925	60.0	66.5	
115 N-Propylbenzene	120	11.062	11.065	-0.003	97	5012549	60.0	54.8	
116 Bromobenzene	156	11.069	11.065	0.004	92	3487736	60.0	61.5	
117 1,3,5-Trimethylbenzene	105	11.169	11.172	-0.003	96	12555455	60.0	48.0	
118 2-Chlorotoluene	126	11.191	11.186	0.005	97	3984085	60.0	55.0	
119 4-Chlorotoluene	126	11.262	11.265	-0.003	96	4330326	60.0	59.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.472	-0.002	90	14020063	60.0	51.1	
121 1,2,4-Trimethylbenzene	105	11.505	11.501	0.004	96	12758534	60.0	49.9	
122 sec-Butylbenzene	134	11.655	11.651	0.004	95	4272092	60.0	58.2	
123 4-Isopropyltoluene	119	11.748	11.744	0.004	93	15007913	60.0	51.0	
124 1,3-Dichlorobenzene	146	11.820	11.823	-0.003	96	7137173	60.0	59.3	
126 1,4-Dichlorobenzene	146	11.891	11.887	0.004	94	7012727	60.0	58.0	
127 n-Butylbenzene	91	12.113	12.116	-0.003	94	14136416	60.0	45.5	
128 1,2-Dichlorobenzene	146	12.256	12.259	-0.003	96	5812014	60.0	61.9	
129 1,2-Dibromo-3-Chloropropan	157	13.007	13.010	-0.003	85	233980	60.0	69.9	
130 1,2,4-Trichlorobenzene	180	13.979	13.982	-0.003	94	3832050	60.0	64.5	
131 Hexachlorobutadiene	225	14.137	14.132	0.005	98	3755310	60.0	65.3	
132 Naphthalene	128	14.358	14.361	-0.003	97	4158456	60.0	64.0	
133 1,2,3-Trichlorobenzene	180	14.687	14.683	0.004	95	2618589	60.0	63.3	
S 140 1,2-Dichloroethene, Total	96				0		120.0	113.2	
S 138 1,2-Dichloroethene, Total	1				0		120.0	113.2	
S 135 Xylenes, Total (URS)	1				0		120.0	100.9	
S 139 Xylenes, Total	106				0		120.0	100.9	
S 137 1,3-Dichloropropene, Total	1				0		120.0	119.5	
S 134 Trihalomethanes, Total	1				0		240.0	245.9	
S 136 Total BTEX	1				0			242.8	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	24.00	Units: uL
MV-ARCH SS A_00101	Amount Added:	4.80	Units: uL

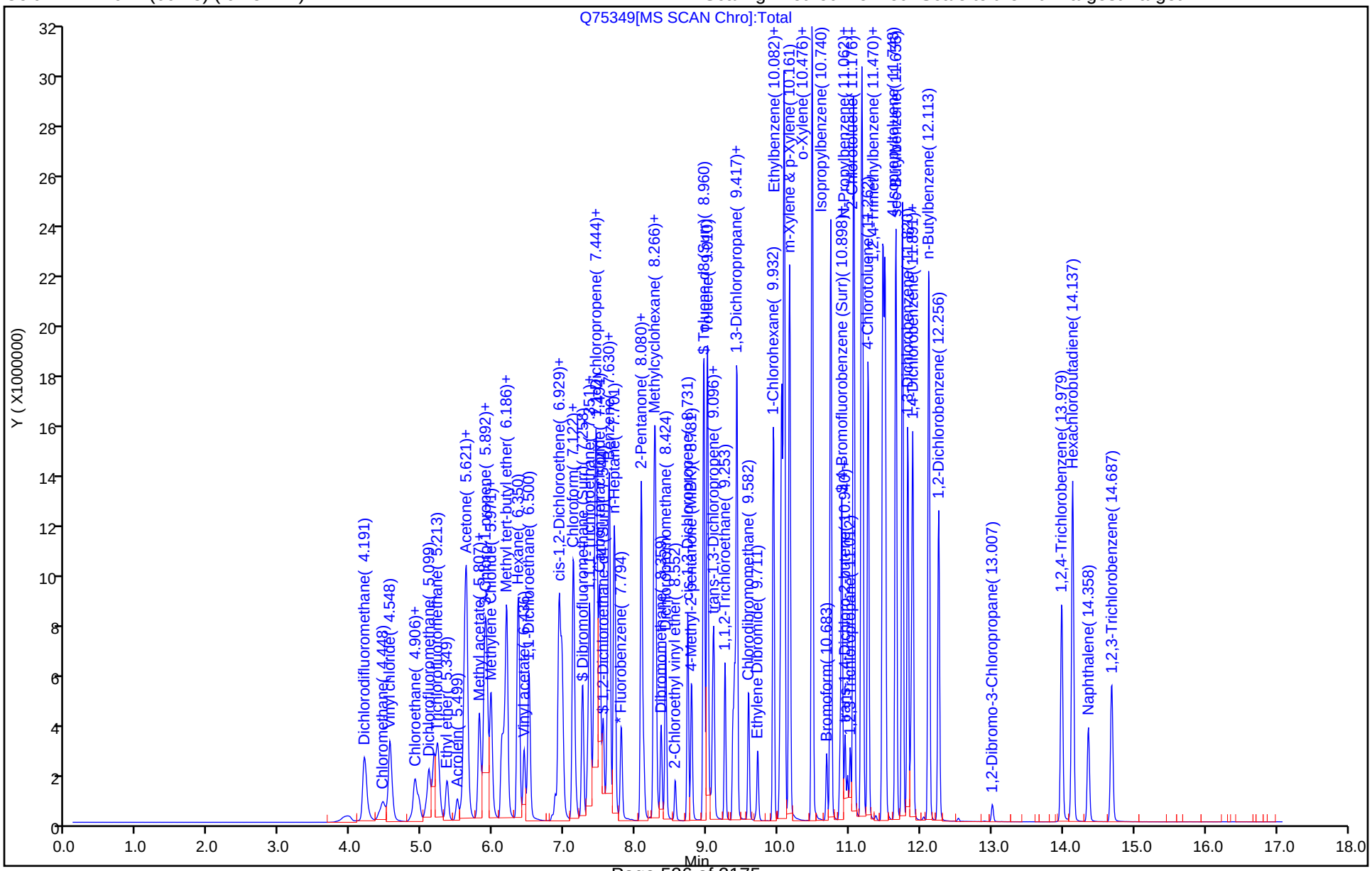
Report Date: 13-Nov-2018 10:10:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Injection Date:	12-Nov-2018 16:15:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD60			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-437429/12	Q75367.D
Level 2	STD010 280-437429/13	Q75368.D
Level 3	STD020 280-437429/14	Q75369.D
Level 4	STD050 280-437429/15	Q75370.D
Level 5	ICIS 280-437429/16	Q75371.D
Level 6	STD30 280-437429/17	Q75372.D
Level 7	STD60 280-437429/18	Q75373.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4320 0.5449	0.4721 0.4963	0.4858	0.5279	0.5444	Ave		0.5005				8.3		15.0			
Chloromethane	0.0115 0.2966	0.2815 0.2627	0.2746	0.2830	0.2885	Lin1	-0.064	0.2779			0.1000				0.9940		0.9900
Vinyl chloride	+++++ 0.3128	0.3007 0.2757	0.3097	0.3076	0.3106	Ave		0.3028				4.6		30.0			
Bromomethane	0.2318 0.2382	0.2254 0.2258	0.2542	0.2336	0.2394	Ave		0.2355				4.2		15.0			
Chloroethane	0.1317 0.1462	0.1382 0.1301	0.1552	0.1454	0.1500	Ave		0.1424				6.6		15.0			
Dichlorofluoromethane	0.3938 0.4554	0.4316 0.4410	0.5120	0.4586	0.4867	Ave		0.4541				8.4		15.0			
Trichlorofluoromethane	0.5416 0.6885	0.6148 0.6451	0.7113	0.6640	0.6899	Ave		0.6507				8.9		15.0			
Ethyl ether	0.1098 0.1361	0.1309 0.1242	0.1422	0.1330	0.1364	Ave		0.1304				8.1		15.0			
Acrolein	0.0079 0.0115	0.0093 0.0103	0.0115	0.0108	0.0106	Ave		0.0103				12.7		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2217 0.2520	0.2270 0.2483	0.2611	0.2347	0.2501	Ave		0.2421				6.0		15.0			
Acetone	+++++ 0.0215	0.0274 +++++	0.0274	0.0229	0.0232	Lin	0.0442	0.0212							0.9990		0.9900
1,1-Dichloroethene	0.2619 0.3252	0.3093 0.2909	0.3454	0.3252	0.3105	Ave		0.3098				8.7		30.0			
Iodomethane	0.3755 0.4694	0.4128 0.4445	0.4614	0.4424	0.4354	Ave		0.4345				7.3		15.0			
Methyl acetate	0.0613 0.0577	0.0683 0.0493	0.0638	0.0571	0.0583	Ave		0.0594				10.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.5143 0.6223	0.6542 0.4856	0.7483	0.6886	0.6466	Ave		0.6228				15.0		15.0			
Carbon disulfide	1.1749 1.3702	1.3182 1.1274	1.4837	1.4244	1.3491	Ave		1.3211				9.7		15.0			
t-Butyl alcohol	1.2754 1.6922	1.4756 1.6711	1.9480	1.6702	1.7328	Ave		1.6379				12.9		15.0			
Methylene Chloride	0.2816 0.2569	0.2913 0.2351	0.2845	0.2635	0.2480	Ave		0.2659				7.8		15.0			
Acrylonitrile	0.0116 0.0269	0.0151 0.0245	0.0240	0.0228	0.0249	Lin2	-0.074	0.0255							0.9930		0.9900
Methyl tert-butyl ether	0.2865 0.3305	0.3114 0.2992	0.3487	0.3281	0.3294	Ave		0.3191				6.7		15.0			
trans-1,2-Dichloroethene	0.2879 0.3544	0.3557 0.3262	0.3911	0.3523	0.3416	Ave		0.3442				9.2		15.0			
Hexane	3.7603 3.2421	4.1057 2.6940	4.2842	3.5500	3.6165	Ave		3.6075				14.8		15.0			
Vinyl acetate	0.1858 0.2647	0.2623 0.2401	0.2827	0.2553	0.2668	Ave		0.2511				12.6		15.0			
1,1-Dichloroethane	0.5656 0.6584	0.6819 0.5801	0.7576	0.6835	0.6662	Ave		0.6562			0.1000	10.0		15.0			
2-Butanone (MEK)	0.0323 0.0405	0.0380 0.0370	0.0427	0.0389	0.0406	Ave		0.0385				8.7		15.0			
sec-Butyl Alcohol	0.7747 1.3393	1.0520 1.2559	1.2978	1.2034	1.2755	Lin2	-7.780	1.3141							0.9970		0.9900
cis-1,2-Dichloroethene	0.2768 0.3433	0.3409 0.3211	0.3707	0.3347	0.3367	Ave		0.3320				8.6		15.0			
2,2-Dichloropropane	0.4470 0.5495	0.5127 0.4883	0.5900	0.5360	0.5514	Ave		0.5250				8.9		15.0			
Bromochloromethane	0.0736 0.0994	0.0902 0.0979	0.1012	0.0926	0.0945	Ave		0.0928				10.0		15.0			
Chloroform	0.4970 0.6105	0.5977 0.5504	0.6684	0.5948	0.6038	Ave		0.5889				9.1		30.0			
Tetrahydrofuran	+++++ 0.0231	0.0202 0.0200	0.0237	0.0205	0.0221	Ave		0.0216				7.4		15.0			
Isobutyl alcohol	+++++ 0.4701	0.3871 0.4796	0.4320	0.4120	0.4269	Ave		0.4346				8.0		15.0			
1,1,1-Trichloroethane	0.4677 0.6146	0.5496 0.5616	0.6267	0.5880	0.5957	Ave		0.5720				9.3		15.0			
Cyclohexane	0.5997 0.6569	0.6888 0.5001	0.7754	0.7081	0.7087	Ave		0.6625				13.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.5080 0.5907	0.5820 0.4985	0.6600	0.5778	0.5986	Ave		0.5736				9.7		15.0			
Carbon tetrachloride	0.4195 0.5718	0.4845 0.5265	0.5631	0.5296	0.5415	Ave		0.5195				10.1		15.0			
1,2-Dichloroethane	0.2647 0.3006	0.3038 0.2773	0.3339	0.2890	0.3029	Ave		0.2960				7.5		15.0			
Benzene	1.2132 1.2993	1.3668 1.0779	1.5165	1.3108	1.3629	Ave		1.3068				10.5		15.0			
Trichloroethene	0.3460 0.3919	0.3685 0.3712	0.4172	0.3592	0.3783	Ave		0.3760				6.2		15.0			
2-Pentanone	0.0339 0.0598	0.0486 0.0539	0.0561	0.0539	0.0553	Lin2	-0.044	0.0577							0.9970		0.9900
1,2-Dichloropropane	0.2669 0.2820	0.3057 0.2294	0.3409	0.2869	0.3017	Ave		0.2876				12.1		30.0			
Methylcyclohexane	0.5163 0.5622	0.5865 0.4205	0.6697	0.6101	0.6070	Ave		0.5675				14.1		15.0			
1,4-Dioxane	+++++ 0.0008	0.0005 0.0007	0.0007	0.0007	0.0007	Lin2	-0.005	0.0007							0.9960		0.9900
Dibromomethane	0.0859 0.1038	0.0978 0.1019	0.1104	0.0948	0.0999	Ave		0.0992				7.7		15.0			
Bromodichloromethane	0.2873 0.3761	0.3306 0.3560	0.3860	0.3414	0.3526	Ave		0.3472				9.4		15.0			
2-Chloroethyl vinyl ether	0.0222 0.0457	0.0310 0.0502	0.0383	0.0334	0.0407	Lin1	-0.020	0.0481							0.9930		0.9900
cis-1,3-Dichloropropene	1.6080 1.9144	1.9134 1.7853	2.2011	1.7520	1.9289	Ave		1.8719				9.9		15.0			
4-Methyl-2-pentanone (MIBK)	0.0608 0.0880	0.0754 0.0763	0.0894	0.0820	0.0829	Ave		0.0792				12.2		15.0			
Toluene	1.2158 1.2950	1.3542 1.0268	1.5365	1.2868	1.3245	Ave		1.2914				11.9		30.0			
Ethyl methacrylate	0.4239 0.7082	0.5077 0.6970	0.6267	0.5821	0.6266	Lin2	-0.129	0.6673							0.9950		0.9900
trans-1,3-Dichloropropene	0.1837 0.2760	0.2310 0.2640	0.2759	0.2468	0.2559	Ave		0.2476				13.1		15.0			
1,1,2-Trichloroethane	0.1036 0.1324	0.1196 0.1292	0.1355	0.1189	0.1233	Ave		0.1232				8.7		15.0			
2-Hexanone	0.2008 0.2755	0.2465 0.2540	0.2719	0.2538	0.2681	Ave		0.2530				10.0		15.0			
1,3-Dichloropropane	1.1397 1.2365	1.2998 1.1406	1.5000	1.1966	1.2604	Ave		1.2534				9.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.2593 1.4311	1.4220 1.4516	1.5883	1.2735	1.3742	Ave		1.4000				8.0		15.0			
Dibromochloromethane	0.6389 0.8734	0.7506 0.9002	0.8863	0.7712	0.8339	Ave		0.8078				11.6		15.0			
1,2-Dibromoethane (EDB)	0.5140 0.6047	0.5972 0.6135	0.6378	0.5596	0.5863	Ave		0.5876				6.9		15.0			
1-Chlorohexane	2.3953 2.7940	2.6388 2.4447	3.0531	2.6551	2.7361	Ave		2.6739				8.3		15.0			
Chlorobenzene	3.4789 3.8339	3.8491 3.4308	4.3607	3.6681	3.7574	Ave		3.7684			0.3000	8.2		15.0			
1,1,1,2-Tetrachloroethane	1.0149 1.2847	1.1698 1.1807	1.3640	1.1497	1.2627	Ave		1.2038				9.3		15.0			
Ethylbenzene	2.2242 2.4636	2.3726 2.1052	2.6842	2.3604	2.4791	Ave		2.3842				7.8		30.0			
m-Xylene & p-Xylene	2.6824 2.9989	2.7351 2.1052	3.2660	2.8174	2.9252	Ave		2.7900				12.9		15.0			
o-Xylene	2.3072 2.5791	2.5131 2.2139	2.9051	2.5255	2.6520	Ave		2.5280				9.0		15.0			
Styrene	2.9618 3.6987	3.1793 3.1667	3.7582	3.5104	3.7968	Ave		3.4388				9.7		15.0			
Bromoform	0.2506 0.3708	0.2704 0.3828	0.3356	0.3034	0.3476	Lin2	-0.060	0.3559			0.1000				0.9930		0.9900
Isopropylbenzene	5.1656 5.8585	5.6914 4.2072	6.8948	5.7911	5.8485	Ave		5.6367				14.4		15.0			
Cyclohexanone	0.0124 0.0127	0.0129 0.0120	0.0135	0.0124	0.0135	Ave		0.0128				4.6		15.0			
1,1,2,2-Tetrachloroethane	0.4420 0.4778	0.4511 0.4489	0.5369	0.4534	0.4549	Ave		0.4664			0.3000	7.1		15.0			
trans-1,4-Dichloro-2-butene	0.0476 0.1031	0.0547 0.1102	0.0835	0.0780	0.0862	Lin1	-0.047	0.1065							0.9940		0.9900
1,2,3-Trichloropropane	0.0987 0.1211	0.1048 0.1174	0.1311	0.1137	0.1148	Ave		0.1145				9.2		15.0			
N-Propylbenzene	1.3973 1.6743	1.4763 1.5291	1.8086	1.5357	1.6096	Ave		1.5758				8.6		15.0			
Bromobenzene	0.8755 1.0090	0.8889 0.9892	1.0566	0.8926	0.9490	Ave		0.9515				7.3		15.0			
1,3,5-Trimethylbenzene	4.1880 4.7807	4.4680 3.6985	5.3677	4.6498	4.7368	Ave		4.5556				11.4		15.0			
2-Chlorotoluene	1.1273 1.3034	1.1819 1.1751	1.3714	1.1873	1.2404	Ave		1.2267				6.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	1.0818 1.2810	1.1865 1.2019	1.4143	1.1749	1.2320	Ave		1.2246				8.4		15.0			
tert-Butylbenzene	4.1024 4.9876	4.7081 4.1423	5.5117	4.7061	4.8925	Ave		4.7215				10.4		15.0			
1,2,4-Trimethylbenzene	4.1335 4.6033	4.4317 3.7527	5.2210	4.4745	4.5998	Ave		4.4595				10.1		15.0			
sec-Butylbenzene	1.1056 1.3348	1.1875 1.2510	1.3779	1.2001	1.2518	Ave		1.2441				7.4		15.0			
4-Isopropyltoluene	4.6938 5.3229	5.0835 4.0978	5.9773	5.1247	5.2951	Ave		5.0850				11.4		15.0			
1,3-Dichlorobenzene	1.9154 2.0835	1.9959 1.9945	2.2634	1.9291	2.0056	Ave		2.0268				5.8		15.0			
1,4-Dichlorobenzene	1.8373 2.0238	1.9996 1.9270	2.2540	1.8850	1.9650	Ave		1.9845				6.8		15.0			
n-Butylbenzene	5.1034 5.4093	5.7489 4.1393	6.6590	5.5637	5.5564	Ave		5.4543				13.8		15.0			
1,2-Dichlorobenzene	1.3960 1.6077	1.5479 1.5761	1.7375	1.4791	1.5421	Ave		1.5552				6.8		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0586	0.0344 0.0588	0.0576	0.0465	0.0508	Lin1	-0.024	0.0585							0.9970		0.9900
1,2,4-Trichlorobenzene	0.9157 1.0190	0.9349 0.9815	1.0674	0.9148	0.9550	Ave		0.9698				5.9		15.0			
Hexachlorobutadiene	0.8521 1.0256	0.9444 0.9758	1.0839	0.8990	0.9523	Ave		0.9619				8.0		15.0			
Naphthalene	1.0677 1.1568	1.0475 1.0797	1.1404	1.0047	1.0557	Ave		1.0789				4.9		15.0			
1,2,3-Trichlorobenzene	0.6526 0.7123	0.6804 0.6652	0.7501	0.6488	0.6721	Ave		0.6831				5.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-437429/12	Q75367.D
Level 2	STD010 280-437429/13	Q75368.D
Level 3	STD020 280-437429/14	Q75369.D
Level 4	STD050 280-437429/15	Q75370.D
Level 5	ICIS 280-437429/16	Q75371.D
Level 6	STD30 280-437429/17	Q75372.D
Level 7	STD60 280-437429/18	Q75373.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	57362 3340658	118150 7964652	236569	638403	1337608	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Lin1	1524 1818436	70447 4216926	133730	342255	708966	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	+++++ 1918058	75272 4424411	150822	371970	763100	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	30781 1460515	56412 3623470	123818	282554	588205	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	17487 896154	34582 2087864	75589	175864	368457	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	52283 2791857	108020 7077724	249372	554549	1195877	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	71909 4221391	153869 10353668	346437	802973	1695220	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	14579 834197	32757 1993678	69263	160880	335111	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	10444 705832	23200 1661305	55833	130714	261222	5.00 250	10.0 600	20.0	50.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	29441 1544815	56826 3984422	127142	283860	614580	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Lin	+++++ 527867	27433 +++++	53379	110757	228268	+++++ 100	4.00 +++++	8.00	20.0	40.0
1,1-Dichloroethene	FB	Ave	34769 1993788	77404 4669039	168217	393302	762984	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	49859 2877670	103325 7134519	224707	534965	1069932	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	16280 707875	34199 1581839	62151	138036	286689	1.00 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	68290 3815037	163727 7793457	364442	832717	1588805	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	155999 8400928	329928 18093931	722608	1722586	3314892	0.500 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	6927 410264	14780 978682	35967	81920	165828	5.00 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	37396 1575008	72903 3773736	138558	318709	609307	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Lin2	15463 1649269	37695 3924658	116969	276228	611794	5.00 250	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	38039 2026321	77949 4802700	169813	396793	809498	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	38225 2173046	89035 5235774	190464	426020	839397	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	87336 4039395	179589 8730701	377677	827632	1706902	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	49336 3246088	131322 7705637	275394	617379	1311182	1.00 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	75105 4036842	170657 9310912	368946	826567	1636925	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	17140 993395	38011 2373544	83093	188129	398745	2.00 100	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd9	Lin2	12623 974085	31610 2206560	71886	177078	366186	15.0 750	30.0 1800	60.0	150	300
cis-1,2-Dichloroethene	FB	Ave	36749 2104619	85314 5153538	180527	404719	827437	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	59351 3369039	128325 7836680	287348	648192	1354820	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	9774 609428	22575 1570672	49272	111999	232192	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	65991 3743097	149590 8834048	325528	719342	1483582	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 283001	10120 642192	23125	49526	108582	+++++ 50.0	2.00 120	4.00	10.0	20.0
Isobutyl alcohol	TBAd9	Ave	+++++ 284931	9694 702219	19939	50515	102133	+++++ 625	25.0 1500	50.0	125	250
1,1,1-Trichloroethane	FB	Ave	62101 3768189	137558 9013172	305211	711054	1463825	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	79630 4027356	172395 8025821	377628	856362	1741438	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	67452 3621590	145666 7999787	321407	698805	1470775	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	55697 3505731	121271 8449414	274221	640429	1330577	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	35145 1842822	76044 4451019	162624	349461	744255	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	161081 7966057	342078 17299848	738550	1585194	3348726	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	45946 2402907	92239 5956947	203167	434414	929450	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Lin2	17979 1466254	48660 3459895	109361	260880	543238	2.00 100	4.00 240	8.00	20.0	40.0
1,2-Dichloropropane	FB	Ave	35435 1729199	76511 3681139	166018	346922	741342	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	68552 3446811	146780 6748023	326173	737764	1491570	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 92520	2286 227666	6336	17118	32365	+++++ 500	20.0 1200	40.0	100	200
Dibromomethane	FB	Ave	11408 636679	24474 1636117	53751	114668	245578	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	38151 2306132	82748 5713526	187992	412863	866426	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	2944 280019	7757 805037	18664	40365	99888	0.500 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	37348 2385138	83697 5785747	194034	408450	910369	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	32266 2157007	75458 4900805	174141	396827	814426	2.00 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	161430 7939400	338937 16479607	748281	1556240	3254516	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin2	9846 882331	22207 2258892	55246	135705	295738	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	24392 1692353	57815 4237632	134351	298440	628818	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	13751 811666	29933 2074226	65981	143816	302975	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	18658 1373148	43129 3293269	95868	236721	506133	2.00 100	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	26471 1540519	56855 3696633	132233	278963	594900	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	29249 1783073	62199 4704372	140018	296895	648587	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Ave	14838 1088193	32834 2917548	78134	179791	393575	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	11938 753395	26121 1988104	56226	130456	276711	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	55633 3481114	115425 7922938	269149	619001	1291370	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	80800 4776720	168365 11118561	384414	855167	1773403	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	23571 1600666	51169 3826542	120241	268035	595970	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	51658 3069443	103779 6822642	236626	550289	1170088	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	62302 3736317	119636 6822642	287912	656826	1380617	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	53586 3213345	109929 7174987	256098	588775	1251686	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	68791 4608265	139066 10262694	331305	818396	1791973	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin2	5820 462027	11827 1240607	29583	70739	164057	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	166835 9233868	327247 17514078	756529	1772816	3718986	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	11496 630869	22512 1550880	47491	115585	255370	20.0 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	14276 753049	25937 1868908	58907	138788	289283	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	1537 162443	3144 458874	9157	23871	54788	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	3187 190852	6024 488743	14382	34822	73017	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	45128 2638907	84883 6365445	198449	470125	1023538	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	28275 1590333	51110 4118037	115939	273249	603462	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	135261 7535212	256905 15396286	588966	1423422	3012058	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	36409 2054411	67956 4891651	150476	363451	788768	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	34939 2018995	68221 5003385	155181	359684	783430	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	132496 7861237	270708 17243683	604772	1440661	3111069	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	133501 7255573	254814 15622077	572871	1369773	2924930	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	35709 2103850	68277 5207646	151193	367372	795984	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 437429

SDG No.:

Instrument ID: VMS_Q GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2018 14:42 Calibration End Date: 11/13/2018 16:45 Calibration ID: 34299

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	151598 8389699	292294 17058703	655859	1568812	3367091	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	61861 3283904	114762 8302703	248345	590541	1275348	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	59340 3189812	114972 8021831	247321	577051	1249505	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	164824 8525975	330553 17231216	730650	1703205	3533278	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	45088 2533994	89004 6561204	190643	452795	980599	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	+++++ 92301	1976 244931	6315	14223	32288	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	29576 1606181	53754 4085915	117115	280047	607260	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	27522 1616454	54302 4062273	118934	275221	605558	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	34485 1823247	60227 4494800	125130	307559	671318	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	21078 1122751	39123 2769307	82306	198610	427361	0.500 25.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75367.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Nov-2018 14:42:30 ALS Bottle#: 1 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:03:12 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.878	-0.007	0	271554	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	3319470	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.033	-0.007	98	580645	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	98	807429	12.5	12.5	
23 Dichlorodifluoromethane	85	4.191	4.198	-0.007	99	57362	0.5000	0.4316	
26 Chloromethane	50	4.427	4.448	-0.021	62	1524	0.5000	0.2511	
27 Vinyl chloride	62	4.563	4.570	-0.007	96	21333	0.5000	0.2653	
29 Bromomethane	94	4.906	4.906	0.000	93	30781	0.5000	0.4922	
30 Chloroethane	64	4.956	4.970	-0.014	99	17487	0.5000	0.4625	
31 Dichlorofluoromethane	67	5.085	5.099	-0.014	95	52283	0.5000	0.4335	
32 Trichlorofluoromethane	101	5.206	5.178	0.028	96	71909	0.5000	0.4161	
35 Ethyl ether	59	5.349	5.356	-0.007	96	14579	0.5000	0.4211	
39 Acrolein	56	5.507	5.507	0.001	95	10444	5.00	3.83	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.607	-0.007	94	29441	0.5000	0.4579	
41 Acetone	43	5.600	5.607	-0.007	41	16229	2.00	0.7980	
43 1,1-Dichloroethene	96	5.614	5.635	-0.021	95	34769	0.5000	0.4227	
44 Iodomethane	142	5.800	5.807	-0.007	97	49859	0.5000	0.4321	
45 Methyl acetate	43	5.828	5.828	0.000	97	16280	1.00	1.03	
47 3-Chloro-1-propene	41	5.879	5.885	-0.007	60	68290	0.5000	0.4129	
48 Carbon disulfide	76	5.900	5.907	-0.007	100	155999	0.5000	0.4446	
49 2-Methyl-2-propanol	59	5.929	5.936	-0.007	91	6927	5.00	3.89	
50 Methylene Chloride	84	5.964	5.971	-0.007	97	37396	0.5000	0.5297	
52 Acrylonitrile	53	6.157	6.129	0.028	29	15463	5.00	5.20	
51 Methyl tert-butyl ether	73	6.150	6.157	-0.007	98	38039	0.5000	0.4489	
53 trans-1,2-Dichloroethene	96	6.186	6.193	-0.007	94	38225	0.5000	0.4182	
54 Hexane	57	6.350	6.350	0.000	95	87336	0.5000	0.5212	
55 Vinyl acetate	43	6.443	6.436	0.007	98	49336	1.00	0.7399	
57 1,1-Dichloroethane	63	6.501	6.508	-0.007	96	75105	0.5000	0.4310	
61 2-Butanone (MEK)	43	6.894	6.879	0.015	98	17140	2.00	1.67	
62 sec-Butyl Alcohol	45	6.944	6.922	0.022	94	12623	15.0	14.8	
63 cis-1,2-Dichloroethene	96	6.922	6.929	-0.007	85	36749	0.5000	0.4168	
64 2,2-Dichloropropane	77	6.958	6.965	-0.007	91	59351	0.5000	0.4257	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.115	7.122	-0.007	51	9774	0.5000	0.3968	
68 Chloroform	83	7.123	7.130	-0.007	93	65991	0.5000	0.4219	
69 Tetrahydrofuran	42		7.165				ND	ND	
70 Isobutyl alcohol	41	7.423	7.330	0.093	49	53509	12.5	113.3	
71 1,1,1-Trichloroethane	97	7.351	7.351	0.000	97	62101	0.5000	0.4088	
72 Cyclohexane	56	7.423	7.430	-0.007	91	79630	0.5000	0.4526	
73 1,1-Dichloropropene	75	7.444	7.451	-0.007	94	67452	0.5000	0.4428	
74 Carbon tetrachloride	117	7.487	7.494	-0.007	97	55697	0.5000	0.4037	
76 1,2-Dichloroethane	62	7.602	7.601	0.001	95	35145	0.5000	0.4471	
77 Benzene	78	7.623	7.630	-0.007	97	161081	0.5000	0.4642	
14 n-Heptane	43	7.695	7.702	-0.007	96	90461	0.5000	0.4115	
79 Trichloroethene	95	8.081	8.081	0.000	92	45946	0.5000	0.4601	
80 2-Pentanone	43	8.131	8.123	0.008	95	17979	2.00	1.94	
83 1,2-Dichloropropane	63	8.252	8.259	-0.007	90	35435	0.5000	0.4639	
82 Methylcyclohexane	55	8.267	8.274	-0.007	94	68552	0.5000	0.4549	
84 1,4-Dioxane	88		8.317				ND	ND	
85 Dibromomethane	93	8.352	8.359	-0.007	87	11408	0.5000	0.4329	
86 Dichlorobromomethane	83	8.417	8.424	-0.007	98	38151	0.5000	0.4138	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	77	2944	0.5000	0.6372	
89 cis-1,3-Dichloropropene	75	8.731	8.738	-0.007	92	37348	0.5000	0.4295	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.788	0.001	0	32266	2.00	1.53	
91 Toluene	91	9.010	9.010	0.000	97	161430	0.5000	0.4707	
92 Ethyl methacrylate	69	9.089	9.089	0.000	44	9846	0.5000	0.5114	
93 trans-1,3-Dichloropropene	75	9.103	9.103	0.000	98	24392	0.5000	0.3709	
94 1,1,2-Trichloroethane	97	9.261	9.260	0.001	91	13751	0.5000	0.4203	
95 2-Hexanone	43	9.389	9.375	0.014	41	18658	2.00	1.59	
96 1,3-Dichloropropane	76	9.396	9.396	0.000	96	26471	0.5000	0.4547	
97 Tetrachloroethene	164	9.418	9.425	-0.007	89	29249	0.5000	0.4498	
98 Chlorodibromomethane	129	9.589	9.589	0.000	91	14838	0.5000	0.3954	
100 Ethylene Dibromide	107	9.718	9.718	0.000	96	11938	0.5000	0.4374	
101 1-Chlorohexane	91	9.940	9.940	0.000	91	55633	0.5000	0.4479	
102 Chlorobenzene	112	10.054	10.054	0.000	96	80800	0.5000	0.4616	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	88	23571	0.5000	0.4215	
103 Ethylbenzene	106	10.090	10.090	0.000	99	51658	0.5000	0.4664	
105 m-Xylene & p-Xylene	106	10.161	10.161	0.000	0	62302	0.5000	0.4807	
107 o-Xylene	106	10.483	10.483	0.000	91	53586	0.5000	0.4563	
106 Styrene	104	10.483	10.483	0.000	79	68791	0.5000	0.4306	
108 Bromoform	173	10.683	10.683	0.000	89	5820	0.5000	0.5198	
109 Isopropylbenzene	105	10.741	10.740	0.001	97	166835	0.5000	0.4582	
111 Cyclohexanone	55	10.891	10.876	0.015	97	11496	20.0	19.4	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.941	0.000	89	14276	0.5000	0.4738	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.976	0.001	1	1537	0.5000	0.6668	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	86	3187	0.5000	0.4309	
115 N-Propylbenzene	120	11.062	11.062	0.000	99	45128	0.5000	0.4433	
116 Bromobenzene	156	11.070	11.069	0.001	92	28275	0.5000	0.4600	
117 1,3,5-Trimethylbenzene	105	11.170	11.169	0.001	93	135261	0.5000	0.4597	
118 2-Chlorotoluene	126	11.191	11.184	0.007	94	36409	0.5000	0.4595	
119 4-Chlorotoluene	126	11.270	11.262	0.008	99	34939	0.5000	0.4417	
120 tert-Butylbenzene	119	11.470	11.470	0.000	92	132496	0.5000	0.4344	
121 1,2,4-Trimethylbenzene	105	11.506	11.498	0.008	97	133501	0.5000	0.4635	
122 sec-Butylbenzene	134	11.656	11.656	0.000	96	35709	0.5000	0.4444	
123 4-Isopropyltoluene	119	11.749	11.741	0.008	96	151598	0.5000	0.4615	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	97	61861	0.5000	0.4725	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	91	59340	0.5000	0.4629	
127 n-Butylbenzene	91	12.121	12.113	0.008	99	164824	0.5000	0.4678	
128 1,2-Dichlorobenzene	146	12.256	12.256	0.000	93	45088	0.5000	0.4488	
129 1,2-Dibromo-3-Chloropropan	157		13.014				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.987	13.979	0.008	92	29576	0.5000	0.4722	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	95	27522	0.5000	0.4430	
132 Naphthalene	128	14.366	14.358	0.008	97	34485	0.5000	0.4948	
133 1,2,3-Trichlorobenzene	180	14.687	14.680	0.007	93	21078	0.5000	0.4777	
S 140 1,2-Dichloroethene, Total	96				0		1.00	0.8350	
S 137 1,3-Dichloropropene, Total	1				0		1.00	0.8005	
S 138 1,2-Dichloroethene, Total	1				0		1.00	0.8350	
S 135 Xylenes, Total (URS)	1				0		1.00	0.9370	
S 136 Total BTEX	1				0			2.34	
S 134 Trihalomethanes, Total	1				0		2.00	1.75	
S 139 Xylenes, Total	106				0		1.00	0.9370	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	0.20	Units: uL

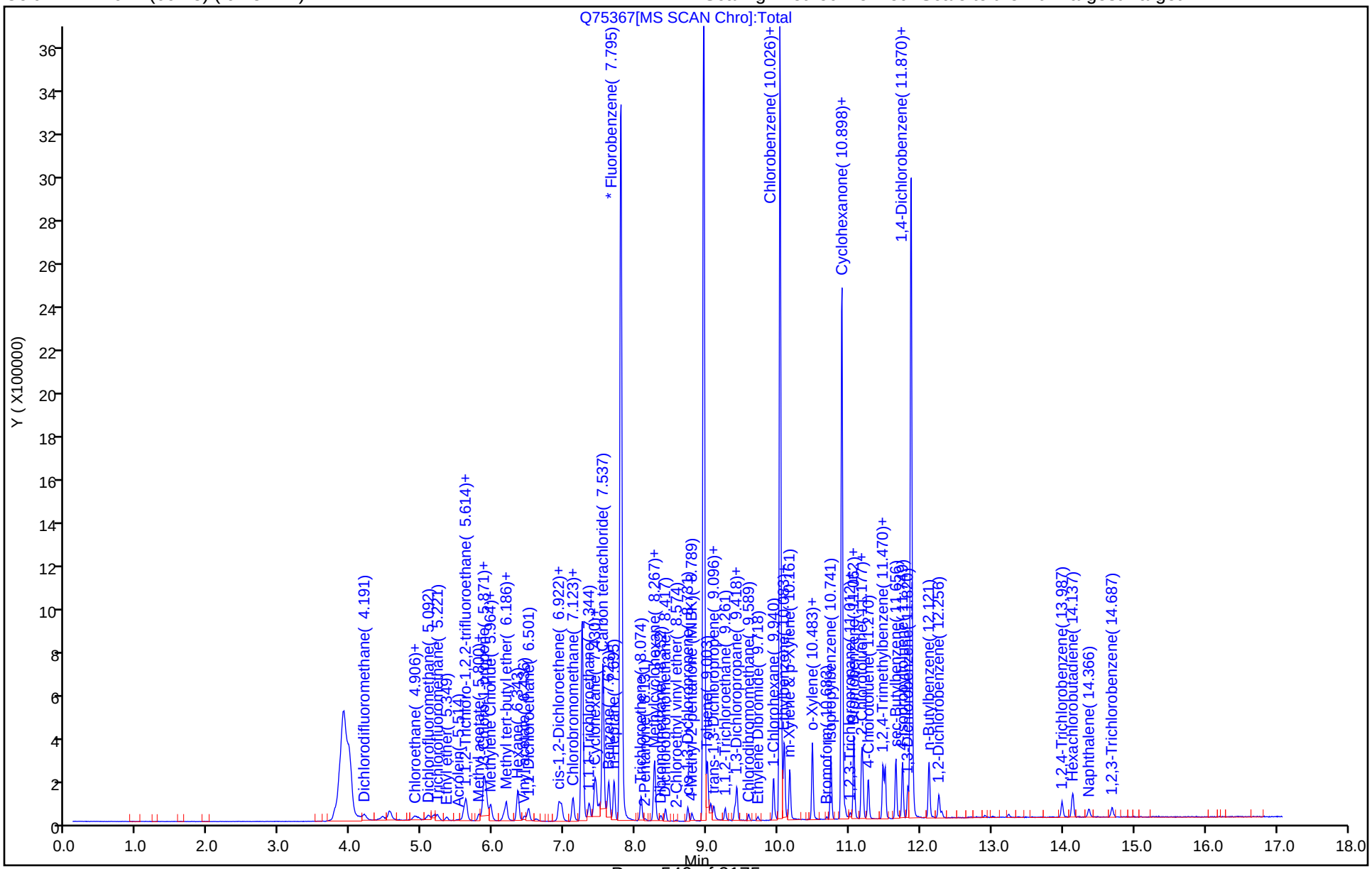
Report Date: 14-Nov-2018 11:03:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75367.D

Injection Date:	13-Nov-2018 14:42:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD005			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75368.D
Lims ID: STD010
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Nov-2018 15:03:30 ALS Bottle#: 2 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:03:27 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.878	-0.003	0	250407	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.802	-0.004	99	3128541	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.033	-0.004	97	546769	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.867	11.863	0.004	98	718732	12.5	12.5	
23 Dichlorodifluoromethane	85	4.194	4.198	-0.004	99	118150	1.00	0.9433	
26 Chloromethane	50	4.445	4.448	-0.003	98	70447	1.00	1.24	
27 Vinyl chloride	62	4.566	4.570	-0.004	94	75272	1.00	0.99	
29 Bromomethane	94	4.909	4.906	0.003	92	56412	1.00	0.9571	
30 Chloroethane	64	4.959	4.970	-0.011	97	34582	1.00	0.9704	
31 Dichlorofluoromethane	67	5.102	5.099	0.003	97	108020	1.00	0.9503	
32 Trichlorofluoromethane	101	5.181	5.178	0.003	97	153869	1.00	0.9447	
35 Ethyl ether	59	5.353	5.356	-0.003	95	32757	1.00	1.00	
39 Acrolein	56	5.510	5.507	0.004	96	23200	10.0	9.03	
40 1,1,2-Trichloro-1,2,2-trif	151	5.603	5.607	-0.004	96	56826	1.00	0.9377	
41 Acetone	43	5.610	5.607	0.003	41	27433	4.00	3.09	
43 1,1-Dichloroethene	96	5.624	5.635	-0.011	94	77404	1.00	1.00	
44 Iodomethane	142	5.810	5.807	0.003	97	103325	1.00	0.9502	
45 Methyl acetate	43	5.839	5.828	0.011	96	34199	2.00	2.30	
47 3-Chloro-1-propene	41	5.882	5.885	-0.003	80	163727	1.00	1.05	
48 Carbon disulfide	76	5.910	5.907	0.003	100	329928	1.00	1.00	
49 2-Methyl-2-propanol	59	5.946	5.936	0.010	91	14780	10.0	9.01	
50 Methylene Chloride	84	5.968	5.971	-0.003	98	72903	1.00	1.10	
52 Acrylonitrile	53	6.146	6.129	0.017	44	37695	10.0	8.82	
51 Methyl tert-butyl ether	73	6.154	6.157	-0.003	98	77949	1.00	0.9759	
53 trans-1,2-Dichloroethene	96	6.189	6.193	-0.004	94	89035	1.00	1.03	
54 Hexane	57	6.354	6.350	0.004	96	179589	1.00	1.14	
55 Vinyl acetate	43	6.447	6.436	0.011	97	131322	2.00	2.09	
57 1,1-Dichloroethane	63	6.504	6.508	-0.004	96	170657	1.00	1.04	
61 2-Butanone (MEK)	43	6.883	6.879	0.004	99	38011	4.00	3.94	
62 sec-Butyl Alcohol	45	6.933	6.922	0.011	95	31610	30.0	29.9	
63 cis-1,2-Dichloroethene	96	6.926	6.929	-0.003	85	85314	1.00	1.03	
64 2,2-Dichloropropane	77	6.969	6.965	0.004	90	128325	1.00	0.9766	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.126	7.122	0.004	87	22575	1.00	0.9723	
68 Chloroform	83	7.126	7.130	-0.004	93	149590	1.00	1.01	
69 Tetrahydrofuran	42	7.176	7.165	0.011	88	10120	2.00	1.87	
70 Isobutyl alcohol	41	7.348	7.330	0.018	31	9694	25.0	22.3	
71 1,1,1-Trichloroethane	97	7.355	7.351	0.004	98	137558	1.00	0.9609	
72 Cyclohexane	56	7.433	7.430	0.003	95	172395	1.00	1.04	
73 1,1-Dichloropropene	75	7.448	7.451	-0.003	93	145666	1.00	1.01	
74 Carbon tetrachloride	117	7.491	7.494	-0.003	94	121271	1.00	0.9327	
76 1,2-Dichloroethane	62	7.605	7.601	0.004	96	76044	1.00	1.03	
77 Benzene	78	7.626	7.630	-0.004	97	342078	1.00	1.05	
14 n-Heptane	43	7.705	7.702	0.003	95	197258	1.00	0.9749	
79 Trichloroethene	95	8.084	8.081	0.003	93	92239	1.00	0.9800	
80 2-Pentanone	43	8.127	8.123	0.004	97	48660	4.00	4.13	
83 1,2-Dichloropropane	63	8.263	8.259	0.004	92	76511	1.00	1.06	
82 Methylcyclohexane	55	8.270	8.274	-0.004	94	146780	1.00	1.03	
84 1,4-Dioxane	88	8.320	8.317	0.004	19	2286	20.0	19.4	
85 Dibromomethane	93	8.356	8.359	-0.003	87	24474	1.00	0.9854	
86 Dichlorobromomethane	83	8.420	8.424	-0.004	99	82748	1.00	0.9524	
87 2-Chloroethyl vinyl ether	63	8.563	8.560	0.003	91	7757	1.00	1.05	
89 cis-1,3-Dichloropropene	75	8.735	8.738	-0.003	92	83697	1.00	1.02	
90 4-Methyl-2-pentanone (MIBK	43	8.792	8.788	0.004	0	75458	4.00	3.80	
91 Toluene	91	9.014	9.010	0.004	97	338937	1.00	1.05	
92 Ethyl methacrylate	69	9.092	9.089	0.003	88	22207	1.00	0.9546	
93 trans-1,3-Dichloropropene	75	9.107	9.103	0.004	99	57815	1.00	0.9329	
94 1,1,2-Trichloroethane	97	9.257	9.260	-0.003	93	29933	1.00	0.9706	
95 2-Hexanone	43	9.385	9.375	0.010	61	43129	4.00	3.90	
96 1,3-Dichloropropane	76	9.393	9.396	-0.003	96	56855	1.00	1.04	
97 Tetrachloroethene	164	9.421	9.425	-0.004	89	62199	1.00	1.02	
98 Chlorodibromomethane	129	9.586	9.589	-0.003	90	32834	1.00	0.9292	
100 Ethylene Dibromide	107	9.721	9.718	0.003	96	26121	1.00	1.02	
101 1-Chlorohexane	91	9.936	9.940	-0.004	92	115425	1.00	0.9869	
102 Chlorobenzene	112	10.050	10.054	-0.004	96	168365	1.00	1.02	
104 1,1,1,2-Tetrachloroethane	131	10.086	10.083	0.003	73	51169	1.00	0.9718	
103 Ethylbenzene	106	10.086	10.090	-0.004	100	103779	1.00	1.00	
105 m-Xylene & p-Xylene	106	10.165	10.161	0.004	0	119636	1.00	0.9803	
107 o-Xylene	106	10.479	10.483	-0.004	91	109929	1.00	0.99	
106 Styrene	104	10.479	10.483	-0.004	79	139066	1.00	0.9245	
108 Bromoform	173	10.687	10.683	0.004	90	11827	1.00	0.9275	
109 Isopropylbenzene	105	10.744	10.740	0.004	97	327247	1.00	1.01	
111 Cyclohexanone	55	10.887	10.876	0.011	97	22512	40.0	40.4	
112 1,1,2,2-Tetrachloroethane	83	10.937	10.941	-0.004	90	25937	1.00	0.9671	
113 trans-1,4-Dichloro-2-buten	53	10.980	10.976	0.004	59	3144	1.00	0.9570	
114 1,2,3-Trichloropropane	110	11.016	11.012	0.004	86	6024	1.00	0.9149	
115 N-Propylbenzene	120	11.059	11.062	-0.003	99	84883	1.00	0.9368	
116 Bromobenzene	156	11.073	11.069	0.004	91	51110	1.00	0.9342	
117 1,3,5-Trimethylbenzene	105	11.173	11.169	0.004	93	256905	1.00	0.9808	
118 2-Chlorotoluene	126	11.187	11.184	0.003	95	67956	1.00	0.9635	
119 4-Chlorotoluene	126	11.266	11.262	0.004	100	68221	1.00	0.9688	
120 tert-Butylbenzene	119	11.473	11.470	0.003	92	270708	1.00	1.00	
121 1,2,4-Trimethylbenzene	105	11.502	11.498	0.004	98	254814	1.00	0.99	
122 sec-Butylbenzene	134	11.652	11.656	-0.004	96	68277	1.00	0.9545	
123 4-Isopropyltoluene	119	11.745	11.741	0.004	97	292294	1.00	1.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.824	11.820	0.004	95	114762	1.00	0.9848	
126 1,4-Dichlorobenzene	146	11.888	11.892	-0.004	94	114972	1.00	1.01	
127 n-Butylbenzene	91	12.117	12.113	0.004	99	330553	1.00	1.05	
128 1,2-Dichlorobenzene	146	12.260	12.256	0.004	94	89004	1.00	1.00	
129 1,2-Dibromo-3-Chloropropan	157	13.018	13.014	0.004	68	1976	1.00	1.00	
130 1,2,4-Trichlorobenzene	180	13.983	13.979	0.004	93	53754	1.00	0.9640	
131 Hexachlorobutadiene	225	14.133	14.137	-0.004	94	54302	1.00	0.9818	
132 Naphthalene	128	14.362	14.358	0.004	97	60227	1.00	0.9708	
133 1,2,3-Trichlorobenzene	180	14.691	14.680	0.011	93	39123	1.00	1.00	
S 140 1,2-Dichloroethene, Total	96				0		2.00	2.06	
S 136 Total BTEX	1				0			5.06	
S 137 1,3-Dichloropropene, Total	1				0		2.00	1.96	
S 138 1,2-Dichloroethene, Total	1				0		2.00	2.06	
S 135 Xylenes, Total (URS)	1				0		2.00	1.97	
S 139 Xylenes, Total	106				0		2.00	1.97	
S 134 Trihalomethanes, Total	1				0		4.00	3.82	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00007 Amount Added: 0.40 Units: uL

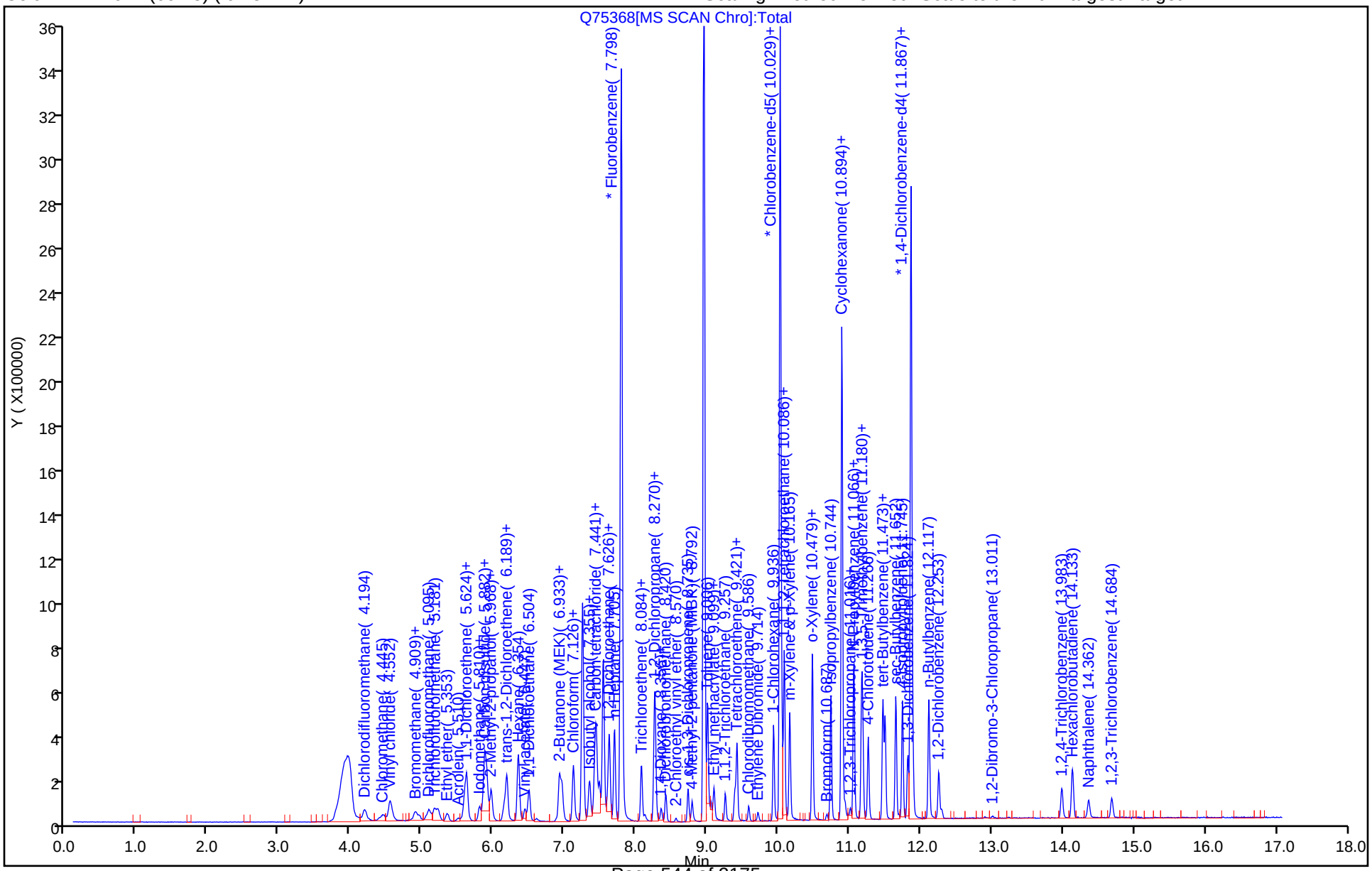
Report Date: 14-Nov-2018 11:03:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75368.D

Injection Date:	13-Nov-2018 15:03:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD010			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75369.D
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Nov-2018 15:23:30 ALS Bottle#: 3 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:03:38 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.875	5.878	-0.004	0	230798	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.802	-0.004	99	3043842	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.033	-0.004	98	550968	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.866	11.863	0.003	98	685777	12.5	12.5	
23 Dichlorodifluoromethane	85	4.194	4.198	-0.004	99	236569	2.00	1.94	
26 Chloromethane	50	4.444	4.448	-0.004	98	133730	2.00	2.21	
27 Vinyl chloride	62	4.573	4.570	0.003	98	150822	2.00	2.05	
29 Bromomethane	94	4.902	4.906	-0.004	92	123818	2.00	2.16	
30 Chloroethane	64	4.959	4.970	-0.011	98	75589	2.00	2.18	
31 Dichlorofluoromethane	67	5.095	5.099	-0.004	97	249372	2.00	2.25	
32 Trichlorofluoromethane	101	5.174	5.178	-0.004	98	346437	2.00	2.19	
35 Ethyl ether	59	5.353	5.356	-0.003	97	69263	2.00	2.18	
39 Acrolein	56	5.517	5.507	0.011	99	55833	20.0	22.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.603	5.607	-0.004	96	127142	2.00	2.16	
41 Acetone	43	5.610	5.607	0.003	49	53379	8.00	8.25	
43 1,1-Dichloroethene	96	5.631	5.635	-0.004	95	168217	2.00	2.23	
44 Iodomethane	142	5.810	5.807	0.003	97	224707	2.00	2.12	
45 Methyl acetate	43	5.839	5.828	0.011	97	62151	4.00	4.30	
47 3-Chloro-1-propene	41	5.882	5.885	-0.003	83	364442	2.00	2.40	
48 Carbon disulfide	76	5.910	5.907	0.003	100	722608	2.00	2.25	
49 2-Methyl-2-propanol	59	5.946	5.936	0.010	92	35967	20.0	23.8	
50 Methylene Chloride	84	5.975	5.971	0.004	99	138558	2.00	2.14	
52 Acrylonitrile	53	6.146	6.129	0.017	63	116969	20.0	21.8	
51 Methyl tert-butyl ether	73	6.153	6.157	-0.004	98	169813	2.00	2.19	
53 trans-1,2-Dichloroethene	96	6.189	6.193	-0.004	93	190464	2.00	2.27	
54 Hexane	57	6.354	6.350	0.004	95	377677	2.00	2.38	
55 Vinyl acetate	43	6.439	6.436	0.003	97	275394	4.00	4.50	
57 1,1-Dichloroethane	63	6.504	6.508	-0.004	96	368946	2.00	2.31	
61 2-Butanone (MEK)	43	6.890	6.879	0.011	99	83093	8.00	8.85	
62 sec-Butyl Alcohol	45	6.933	6.922	0.011	94	71886	60.0	65.2	
63 cis-1,2-Dichloroethene	96	6.926	6.929	-0.003	86	180527	2.00	2.23	
64 2,2-Dichloropropane	77	6.961	6.965	-0.004	90	287348	2.00	2.25	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.119	7.122	-0.003	87	49272	2.00	2.18	
68 Chloroform	83	7.126	7.130	-0.004	95	325528	2.00	2.27	
69 Tetrahydrofuran	42	7.169	7.165	0.004	94	23125	4.00	4.40	
70 Isobutyl alcohol	41	7.333	7.330	0.003	31	19939	50.0	49.7	
71 1,1,1-Trichloroethane	97	7.355	7.351	0.004	98	305211	2.00	2.19	
72 Cyclohexane	56	7.433	7.430	0.003	95	377628	2.00	2.34	
73 1,1-Dichloropropene	75	7.448	7.451	-0.003	93	321407	2.00	2.30	
74 Carbon tetrachloride	117	7.490	7.494	-0.004	97	274221	2.00	2.17	
76 1,2-Dichloroethane	62	7.605	7.601	0.004	97	162624	2.00	2.26	
77 Benzene	78	7.626	7.630	-0.004	97	738550	2.00	2.32	
14 n-Heptane	43	7.705	7.702	0.003	96	430529	2.00	2.22	
79 Trichloroethene	95	8.084	8.081	0.003	93	203167	2.00	2.22	
80 2-Pentanone	43	8.127	8.123	0.004	98	109361	8.00	8.55	
83 1,2-Dichloropropane	63	8.263	8.259	0.004	93	166018	2.00	2.37	
82 Methylcyclohexane	55	8.270	8.274	-0.004	96	326173	2.00	2.36	
84 1,4-Dioxane	88	8.320	8.317	0.004	27	6336	40.0	42.4	
85 Dibromomethane	93	8.356	8.359	-0.003	89	53751	2.00	2.22	
86 Dichlorobromomethane	83	8.420	8.424	-0.004	99	187992	2.00	2.22	
87 2-Chloroethyl vinyl ether	63	8.563	8.560	0.003	92	18664	2.00	2.00	
89 cis-1,3-Dichloropropene	75	8.735	8.738	-0.003	92	194034	2.00	2.35	
90 4-Methyl-2-pentanone (MIBK	43	8.792	8.788	0.004	0	174141	8.00	9.02	
91 Toluene	91	9.013	9.010	0.003	97	748281	2.00	2.38	
92 Ethyl methacrylate	69	9.092	9.089	0.003	89	55246	2.00	2.07	
93 trans-1,3-Dichloropropene	75	9.099	9.103	-0.004	98	134351	2.00	2.23	
94 1,1,2-Trichloroethane	97	9.257	9.260	-0.003	95	65981	2.00	2.20	
95 2-Hexanone	43	9.378	9.375	0.003	98	95868	8.00	8.60	
96 1,3-Dichloropropane	76	9.392	9.396	-0.004	97	132233	2.00	2.39	
97 Tetrachloroethene	164	9.421	9.425	-0.004	89	140018	2.00	2.27	
98 Chlorodibromomethane	129	9.585	9.589	-0.004	90	78134	2.00	2.19	
100 Ethylene Dibromide	107	9.714	9.718	-0.004	100	56226	2.00	2.17	
101 1-Chlorohexane	91	9.936	9.940	-0.004	90	269149	2.00	2.28	
102 Chlorobenzene	112	10.050	10.054	-0.004	95	384414	2.00	2.31	
104 1,1,1,2-Tetrachloroethane	131	10.086	10.083	0.003	90	120241	2.00	2.27	
103 Ethylbenzene	106	10.086	10.090	-0.004	99	236626	2.00	2.25	
105 m-Xylene & p-Xylene	106	10.165	10.161	0.004	0	287912	2.00	2.34	
107 o-Xylene	106	10.479	10.483	-0.004	90	256098	2.00	2.30	
106 Styrene	104	10.479	10.483	-0.004	80	331305	2.00	2.19	
108 Bromoform	173	10.687	10.683	0.004	92	29583	2.00	2.05	
109 Isopropylbenzene	105	10.744	10.740	0.004	97	756529	2.00	2.45	
111 Cyclohexanone	55	10.880	10.876	0.004	97	47491	80.0	84.5	
112 1,1,2,2-Tetrachloroethane	83	10.944	10.941	0.003	94	58907	2.00	2.30	
113 trans-1,4-Dichloro-2-buten	53	10.980	10.976	0.004	66	9157	2.00	2.01	
114 1,2,3-Trichloropropane	110	11.015	11.012	0.003	86	14382	2.00	2.29	
115 N-Propylbenzene	120	11.065	11.062	0.003	99	198449	2.00	2.30	
116 Bromobenzene	156	11.065	11.069	-0.004	95	115939	2.00	2.22	
117 1,3,5-Trimethylbenzene	105	11.173	11.169	0.004	93	588966	2.00	2.36	
118 2-Chlorotoluene	126	11.187	11.184	0.003	94	150476	2.00	2.24	
119 4-Chlorotoluene	126	11.266	11.262	0.004	99	155181	2.00	2.31	
120 tert-Butylbenzene	119	11.473	11.470	0.003	92	604772	2.00	2.33	
121 1,2,4-Trimethylbenzene	105	11.502	11.498	0.004	98	572871	2.00	2.34	
122 sec-Butylbenzene	134	11.652	11.656	-0.004	96	151193	2.00	2.22	
123 4-Isopropyltoluene	119	11.745	11.741	0.004	97	655859	2.00	2.35	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.823	11.820	0.003	95	248345	2.00	2.23	
126 1,4-Dichlorobenzene	146	11.888	11.892	-0.004	94	247321	2.00	2.27	
127 n-Butylbenzene	91	12.117	12.113	0.004	99	730650	2.00	2.44	
128 1,2-Dichlorobenzene	146	12.260	12.256	0.004	94	190643	2.00	2.23	
129 1,2-Dibromo-3-Chloropropan	157	13.017	13.014	0.003	70	6315	2.00	2.38	
130 1,2,4-Trichlorobenzene	180	13.983	13.979	0.004	93	117115	2.00	2.20	
131 Hexachlorobutadiene	225	14.133	14.137	-0.004	95	118934	2.00	2.25	
132 Naphthalene	128	14.362	14.358	0.004	98	125130	2.00	2.11	
133 1,2,3-Trichlorobenzene	180	14.683	14.680	0.003	94	82306	2.00	2.20	
S 140 1,2-Dichloroethene, Total	96				0		4.00	4.51	
S 139 Xylenes, Total	106				0		4.00	4.64	
S 136 Total BTEX	1				0			11.6	
S 137 1,3-Dichloropropene, Total	1				0		4.00	4.58	
S 135 Xylenes, Total (URS)	1				0		4.00	4.64	
S 134 Trihalomethanes, Total	1				0		8.00	8.74	
S 138 1,2-Dichloroethene, Total	1				0		4.00	4.51	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00007 Amount Added: 0.80 Units: uL

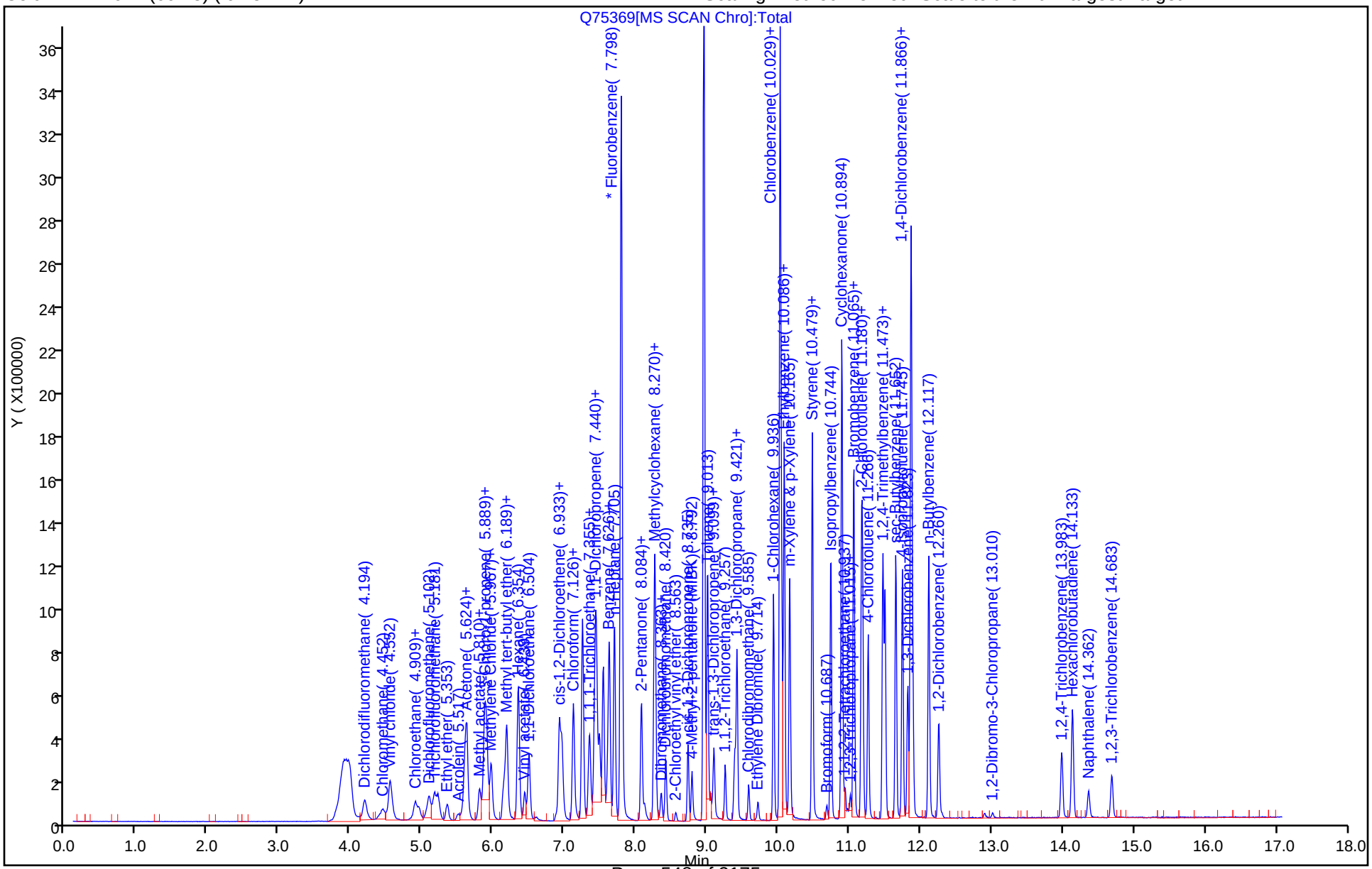
Report Date: 14-Nov-2018 11:03:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75369.D

Injection Date:	13-Nov-2018 15:23:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD020			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75370.D
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Nov-2018 15:44:30 ALS Bottle#: 4 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:03:49 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.871	5.878	-0.007	0	245244	250.0	250.0	
* 1 Fluorobenzene	96	7.794	7.802	-0.008	99	3023368	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.033	-0.008	97	582840	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.863	0.007	98	765319	12.5	12.5	
23 Dichlorodifluoromethane	85	4.191	4.198	-0.007	99	638403	5.00	5.27	
26 Chloromethane	50	4.441	4.448	-0.007	98	342255	5.00	5.32	
27 Vinyl chloride	62	4.555	4.570	-0.015	74	371970	5.00	5.08	
29 Bromomethane	94	4.899	4.906	-0.007	92	282554	5.00	4.96	
30 Chloroethane	64	4.956	4.970	-0.014	99	175864	5.00	5.11	
31 Dichlorofluoromethane	67	5.092	5.099	-0.007	97	554549	5.00	5.05	
32 Trichlorofluoromethane	101	5.170	5.178	-0.008	98	802973	5.00	5.10	
35 Ethyl ether	59	5.356	5.356	0.000	96	160880	5.00	5.10	
39 Acrolein	56	5.499	5.507	-0.007	99	130714	50.0	52.6	
40 1,1,2-Trichloro-1,2,2-trif	151	5.599	5.607	-0.008	97	283860	5.00	4.85	
41 Acetone	43	5.599	5.607	-0.008	41	110757	20.0	19.5	
43 1,1-Dichloroethene	96	5.628	5.635	-0.007	93	393302	5.00	5.25	
44 Iodomethane	142	5.799	5.807	-0.008	97	534965	5.00	5.09	
45 Methyl acetate	43	5.835	5.828	0.007	98	138036	10.0	9.61	
47 3-Chloro-1-propene	41	5.878	5.885	-0.007	82	832717	5.00	5.53	
48 Carbon disulfide	76	5.900	5.907	-0.007	100	1722586	5.00	5.39	
49 2-Methyl-2-propanol	59	5.935	5.936	-0.001	93	81920	50.0	51.0	
50 Methylene Chloride	84	5.971	5.971	0.000	99	318709	5.00	4.96	
52 Acrylonitrile	53	6.128	6.129	-0.001	99	276228	50.0	47.7	
51 Methyl tert-butyl ether	73	6.150	6.157	-0.007	97	396793	5.00	5.14	
53 trans-1,2-Dichloroethene	96	6.186	6.193	-0.007	93	426020	5.00	5.12	
54 Hexane	57	6.350	6.350	0.000	95	827632	5.00	4.92	
55 Vinyl acetate	43	6.436	6.436	0.000	96	617379	10.0	10.2	
57 1,1-Dichloroethane	63	6.500	6.508	-0.008	96	826567	5.00	5.21	
61 2-Butanone (MEK)	43	6.879	6.879	0.000	98	188129	20.0	20.2	
62 sec-Butyl Alcohol	45	6.922	6.922	0.000	95	177078	150.0	143.3	
63 cis-1,2-Dichloroethene	96	6.922	6.929	-0.007	88	404719	5.00	5.04	
64 2,2-Dichloropropane	77	6.965	6.965	0.000	89	648192	5.00	5.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.122	7.122	0.000	92	111999	5.00	4.99	
68 Chloroform	83	7.129	7.130	-0.001	94	719342	5.00	5.05	
69 Tetrahydrofuran	42	7.165	7.165	0.000	93	49526	10.0	9.48	
70 Isobutyl alcohol	41	7.330	7.330	0.000	91	50515	125.0	118.5	
71 1,1,1-Trichloroethane	97	7.351	7.351	0.000	98	711054	5.00	5.14	
72 Cyclohexane	56	7.430	7.430	0.000	96	856362	5.00	5.34	
73 1,1-Dichloropropene	75	7.451	7.451	0.000	94	698805	5.00	5.04	
74 Carbon tetrachloride	117	7.487	7.494	-0.007	97	640429	5.00	5.10	
76 1,2-Dichloroethane	62	7.601	7.601	0.000	97	349461	5.00	4.88	
77 Benzene	78	7.630	7.630	0.000	98	1585194	5.00	5.02	
14 n-Heptane	43	7.701	7.702	-0.001	96	893053	5.00	4.73	
79 Trichloroethene	95	8.080	8.081	-0.001	93	434414	5.00	4.78	
80 2-Pentanone	43	8.123	8.123	0.000	98	260880	20.0	19.4	
83 1,2-Dichloropropane	63	8.259	8.259	0.000	93	346922	5.00	4.99	
82 Methylcyclohexane	55	8.273	8.274	-0.001	95	737764	5.00	5.38	
84 1,4-Dioxane	88	8.316	8.317	0.000	96	17118	100.0	103.2	
85 Dibromomethane	93	8.359	8.359	0.000	88	114668	5.00	4.78	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	412863	5.00	4.92	
87 2-Chloroethyl vinyl ether	63	8.559	8.560	-0.001	92	40365	5.00	3.87	
89 cis-1,3-Dichloropropene	75	8.731	8.738	-0.007	92	408450	5.00	4.68	
90 4-Methyl-2-pentanone (MIBK	43	8.788	8.788	0.000	0	396827	20.0	20.7	
91 Toluene	91	9.010	9.010	0.000	97	1556240	5.00	4.98	
92 Ethyl methacrylate	69	9.089	9.089	-0.001	91	135705	5.00	4.56	
93 trans-1,3-Dichloropropene	75	9.103	9.103	0.000	99	298440	5.00	4.98	
94 1,1,2-Trichloroethane	97	9.260	9.260	0.000	94	143816	5.00	4.83	
95 2-Hexanone	43	9.375	9.375	-0.001	99	236721	20.0	20.1	
96 1,3-Dichloropropane	76	9.396	9.396	0.000	97	278963	5.00	4.77	
97 Tetrachloroethene	164	9.425	9.425	0.000	90	296895	5.00	4.55	
98 Chlorodibromomethane	129	9.589	9.589	0.000	90	179791	5.00	4.77	
100 Ethylene Dibromide	107	9.718	9.718	0.000	97	130456	5.00	4.76	
101 1-Chlorohexane	91	9.932	9.940	-0.008	91	619001	5.00	4.96	
102 Chlorobenzene	112	10.054	10.054	0.000	94	855167	5.00	4.87	
104 1,1,1,2-Tetrachloroethane	131	10.082	10.083	-0.001	90	268035	5.00	4.78	
103 Ethylbenzene	106	10.090	10.090	0.000	99	550289	5.00	4.95	
105 m-Xylene & p-Xylene	106	10.161	10.161	0.000	0	656826	5.00	5.05	
107 o-Xylene	106	10.483	10.483	0.000	90	588775	5.00	4.99	
106 Styrene	104	10.483	10.483	0.000	82	818396	5.00	5.10	
108 Bromoform	173	10.683	10.683	0.000	93	70739	5.00	4.43	
109 Isopropylbenzene	105	10.740	10.740	0.000	97	1772816	5.00	5.14	
111 Cyclohexanone	55	10.876	10.876	0.000	96	115585	200.0	194.4	
112 1,1,2,2-Tetrachloroethane	83	10.940	10.941	-0.001	93	138788	5.00	4.86	
113 trans-1,4-Dichloro-2-buten	53	10.976	10.976	0.000	87	23871	5.00	4.11	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	88	34822	5.00	4.97	
115 N-Propylbenzene	120	11.062	11.062	0.000	99	470125	5.00	4.87	
116 Bromobenzene	156	11.069	11.069	0.000	97	273249	5.00	4.69	
117 1,3,5-Trimethylbenzene	105	11.169	11.169	0.000	94	1423422	5.00	5.10	
118 2-Chlorotoluene	126	11.184	11.184	0.000	95	363451	5.00	4.84	
119 4-Chlorotoluene	126	11.262	11.262	0.000	99	359684	5.00	4.80	
120 tert-Butylbenzene	119	11.470	11.470	0.000	92	1440661	5.00	4.98	
121 1,2,4-Trimethylbenzene	105	11.498	11.498	0.000	98	1369773	5.00	5.02	
122 sec-Butylbenzene	134	11.655	11.656	-0.001	96	367372	5.00	4.82	
123 4-Isopropyltoluene	119	11.748	11.741	0.007	96	1568812	5.00	5.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	95	590541	5.00	4.76	
126 1,4-Dichlorobenzene	146	11.891	11.892	-0.001	91	577051	5.00	4.75	
127 n-Butylbenzene	91	12.113	12.113	0.000	99	1703205	5.00	5.10	
128 1,2-Dichlorobenzene	146	12.256	12.256	0.000	94	452795	5.00	4.76	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.014	0.000	72	14223	5.00	4.38	
130 1,2,4-Trichlorobenzene	180	13.979	13.979	0.000	93	280047	5.00	4.72	
131 Hexachlorobutadiene	225	14.137	14.137	-0.001	96	275221	5.00	4.67	
132 Naphthalene	128	14.358	14.358	0.000	98	307559	5.00	4.66	
133 1,2,3-Trichlorobenzene	180	14.687	14.680	0.007	94	198610	5.00	4.75	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.2	
S 139 Xylenes, Total	106				0		10.0	10.0	
S 136 Total BTEX	1				0			25.0	
S 135 Xylenes, Total (URS)	1				0		10.0	10.0	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.2	
S 134 Trihalomethanes, Total	1				0		20.0	19.2	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.66	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	2.00	Units: uL

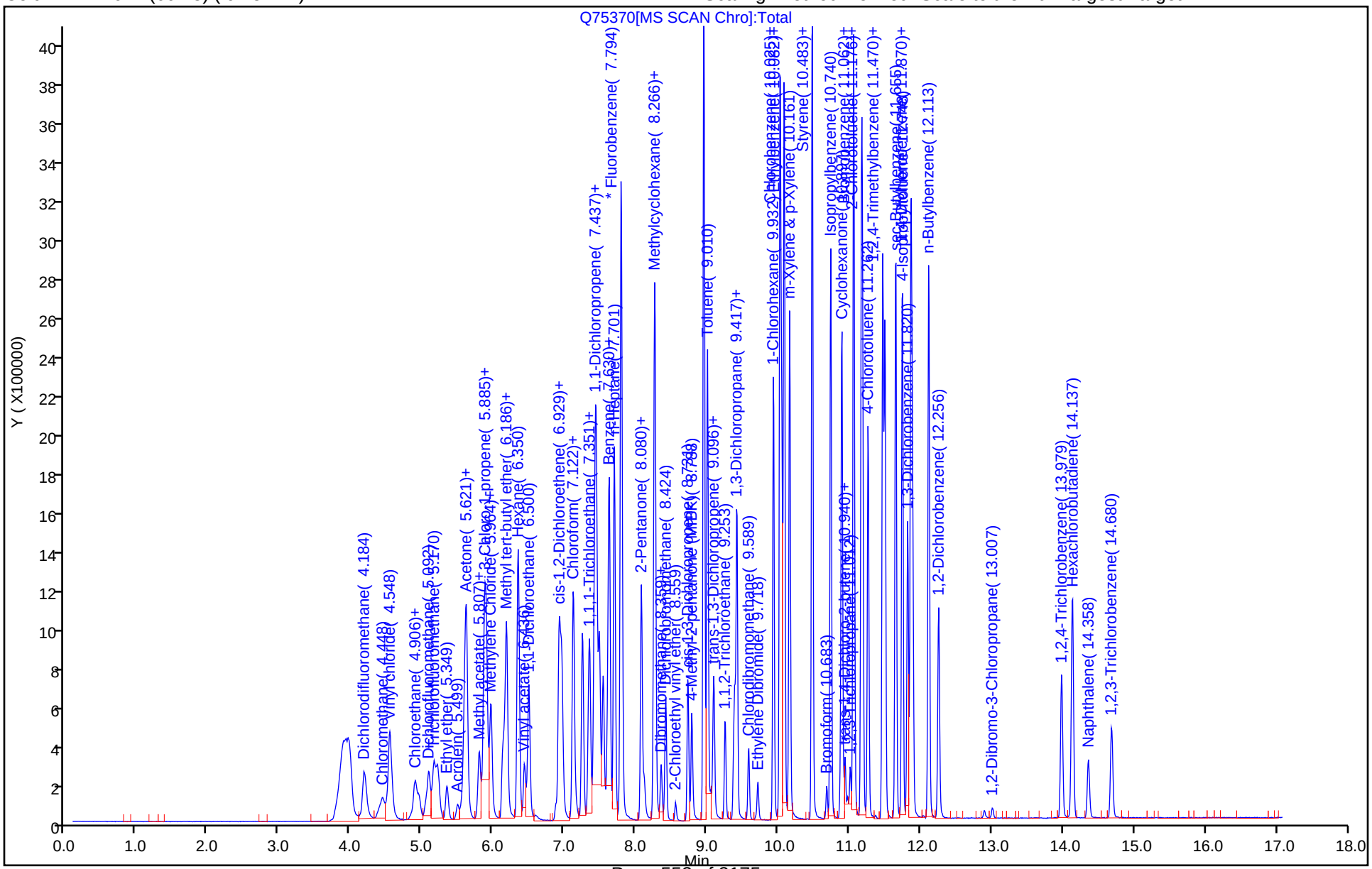
Report Date: 14-Nov-2018 11:03:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75370.D

Injection Date:	13-Nov-2018 15:44:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD050			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75371.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 13-Nov-2018 16:04:30 ALS Bottle#: 5 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:03:59 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.878	5.878	0.000	0	239246	250.0	250.0	
* 1 Fluorobenzene	96	7.802	7.802	0.000	99	3071430	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	97	589968	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	97	794860	12.5	12.5	
23 Dichlorodifluoromethane	85	4.198	4.198	0.000	99	1337608	10.0	10.9	
26 Chloromethane	50	4.448	4.448	0.000	98	708966	10.0	10.6	
27 Vinyl chloride	62	4.570	4.570	0.000	98	763100	10.0	10.3	
29 Bromomethane	94	4.906	4.906	0.000	92	588205	10.0	10.2	
30 Chloroethane	64	4.970	4.970	0.000	99	368457	10.0	10.5	
31 Dichlorofluoromethane	67	5.099	5.099	0.000	96	1195877	10.0	10.7	
32 Trichlorofluoromethane	101	5.178	5.178	0.000	99	1695220	10.0	10.6	
35 Ethyl ether	59	5.356	5.356	0.000	97	335111	10.0	10.5	
39 Acrolein	56	5.507	5.507	0.000	99	261222	100.0	103.5	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.607	0.000	96	614580	10.0	10.3	
41 Acetone	43	5.607	5.607	0.000	40	228268	40.0	41.7	
43 1,1-Dichloroethene	96	5.635	5.635	0.000	94	762984	10.0	10.0	
44 Iodomethane	142	5.807	5.807	0.000	97	1069932	10.0	10.0	
45 Methyl acetate	43	5.828	5.828	0.000	99	286689	20.0	19.6	
47 3-Chloro-1-propene	41	5.885	5.885	0.000	82	1588805	10.0	10.4	
48 Carbon disulfide	76	5.907	5.907	0.000	100	3314892	10.0	10.2	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	93	165828	100.0	105.8	
50 Methylene Chloride	84	5.971	5.971	0.000	99	609307	10.0	9.33	
52 Acrylonitrile	53	6.129	6.129	0.000	98	611794	100.0	100.6	
51 Methyl tert-butyl ether	73	6.157	6.157	0.000	97	809498	10.0	10.3	
53 trans-1,2-Dichloroethene	96	6.193	6.193	0.000	94	839397	10.0	9.93	
54 Hexane	57	6.350	6.350	0.000	95	1706902	10.0	10.0	
55 Vinyl acetate	43	6.436	6.436	0.000	96	1311182	20.0	21.3	
57 1,1-Dichloroethane	63	6.508	6.508	0.000	96	1636925	10.0	10.2	
61 2-Butanone (MEK)	43	6.879	6.879	0.000	98	398745	40.0	42.1	
62 sec-Butyl Alcohol	45	6.922	6.922	0.000	97	366186	300.0	297.1	
63 cis-1,2-Dichloroethene	96	6.929	6.929	0.000	86	827437	10.0	10.1	
64 2,2-Dichloropropane	77	6.965	6.965	0.000	88	1354820	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.122	7.122	0.000	92	232192	10.0	10.2	
68 Chloroform	83	7.130	7.130	0.000	93	1483582	10.0	10.3	
69 Tetrahydrofuran	42	7.165	7.165	0.000	94	108582	20.0	20.5	
70 Isobutyl alcohol	41	7.330	7.330	0.000	94	102133	250.0	245.6	
71 1,1,1-Trichloroethane	97	7.351	7.351	0.000	98	1463825	10.0	10.4	
72 Cyclohexane	56	7.430	7.430	0.000	95	1741438	10.0	10.7	
73 1,1-Dichloropropene	75	7.451	7.451	0.000	93	1470775	10.0	10.4	
74 Carbon tetrachloride	117	7.494	7.494	0.000	97	1330577	10.0	10.4	
76 1,2-Dichloroethane	62	7.601	7.601	0.000	97	744255	10.0	10.2	
77 Benzene	78	7.630	7.630	0.000	97	3348726	10.0	10.4	
14 n-Heptane	43	7.702	7.702	0.000	95	1889893	10.0	10.2	
79 Trichloroethene	95	8.081	8.081	0.000	94	929450	10.0	10.1	
80 2-Pentanone	43	8.123	8.123	0.000	98	543238	40.0	39.1	
83 1,2-Dichloropropane	63	8.259	8.259	0.000	94	741342	10.0	10.5	
82 Methylcyclohexane	55	8.274	8.274	0.000	95	1491570	10.0	10.7	
84 1,4-Dioxane	88	8.317	8.317	0.000	83	32365	200.0	186.0	
85 Dibromomethane	93	8.359	8.359	0.000	88	245578	10.0	10.1	
86 Dichlorobromomethane	83	8.424	8.424	0.000	98	866426	10.0	10.2	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	92	99888	10.0	8.85	
89 cis-1,3-Dichloropropene	75	8.738	8.738	0.000	92	910369	10.0	10.3	
90 4-Methyl-2-pentanone (MIBK	43	8.788	8.788	0.000	0	814426	40.0	41.8	
91 Toluene	91	9.010	9.010	0.000	98	3254516	10.0	10.3	
92 Ethyl methacrylate	69	9.089	9.089	0.000	90	295738	10.0	9.58	
93 trans-1,3-Dichloropropene	75	9.103	9.103	0.000	99	628818	10.0	10.3	
94 1,1,2-Trichloroethane	97	9.260	9.260	0.000	93	302975	10.0	10.0	
95 2-Hexanone	43	9.375	9.375	0.000	97	506133	40.0	42.4	
96 1,3-Dichloropropane	76	9.396	9.396	0.000	96	594900	10.0	10.1	
97 Tetrachloroethene	164	9.425	9.425	0.000	93	648587	10.0	9.82	
98 Chlorodibromomethane	129	9.589	9.589	0.000	91	393575	10.0	10.3	
100 Ethylene Dibromide	107	9.718	9.718	0.000	98	276711	10.0	9.98	
101 1-Chlorohexane	91	9.940	9.940	0.000	93	1291370	10.0	10.2	
102 Chlorobenzene	112	10.054	10.054	0.000	92	1773403	10.0	9.97	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	90	595970	10.0	10.5	
103 Ethylbenzene	106	10.090	10.090	0.000	99	1170088	10.0	10.4	
105 m-Xylene & p-Xylene	106	10.161	10.161	0.000	0	1380617	10.0	10.5	
107 o-Xylene	106	10.483	10.483	0.000	89	1251686	10.0	10.5	
106 Styrene	104	10.483	10.483	0.000	83	1791973	10.0	11.0	
108 Bromoform	173	10.683	10.683	0.000	93	164057	10.0	9.93	
109 Isopropylbenzene	105	10.740	10.740	0.000	98	3718986	10.0	10.4	
111 Cyclohexanone	55	10.876	10.876	0.000	97	255370	400.0	424.4	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.941	0.000	92	289283	10.0	9.75	
113 trans-1,4-Dichloro-2-buten	53	10.976	10.976	0.000	91	54788	10.0	8.54	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	87	73017	10.0	10.0	
115 N-Propylbenzene	120	11.062	11.062	0.000	99	1023538	10.0	10.2	
116 Bromobenzene	156	11.069	11.069	0.000	95	603462	10.0	9.97	
117 1,3,5-Trimethylbenzene	105	11.169	11.169	0.000	94	3012058	10.0	10.4	
118 2-Chlorotoluene	126	11.184	11.184	0.000	95	788768	10.0	10.1	
119 4-Chlorotoluene	126	11.262	11.262	0.000	99	783430	10.0	10.1	
120 tert-Butylbenzene	119	11.470	11.470	0.000	92	3111069	10.0	10.4	
121 1,2,4-Trimethylbenzene	105	11.498	11.498	0.000	99	2924930	10.0	10.3	
122 sec-Butylbenzene	134	11.656	11.656	0.000	96	795984	10.0	10.1	
123 4-Isopropyltoluene	119	11.741	11.741	0.000	96	3367091	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	95	1275348	10.0	9.90	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	94	1249505	10.0	9.90	
127 n-Butylbenzene	91	12.113	12.113	0.000	99	3533278	10.0	10.2	
128 1,2-Dichlorobenzene	146	12.256	12.256	0.000	95	980599	10.0	9.92	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.014	0.000	73	32288	10.0	9.09	
130 1,2,4-Trichlorobenzene	180	13.979	13.979	0.000	93	607260	10.0	9.85	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	96	605558	10.0	9.90	
132 Naphthalene	128	14.358	14.358	0.000	98	671318	10.0	9.78	
133 1,2,3-Trichlorobenzene	180	14.680	14.680	0.000	93	427361	10.0	9.84	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.1	
S 139 Xylenes, Total	106				0		20.0	21.0	
S 135 Xylenes, Total (URS)	1				0		20.0	21.0	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.6	
S 134 Trihalomethanes, Total	1				0		40.0	40.7	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00007 Amount Added: 4.00 Units: uL

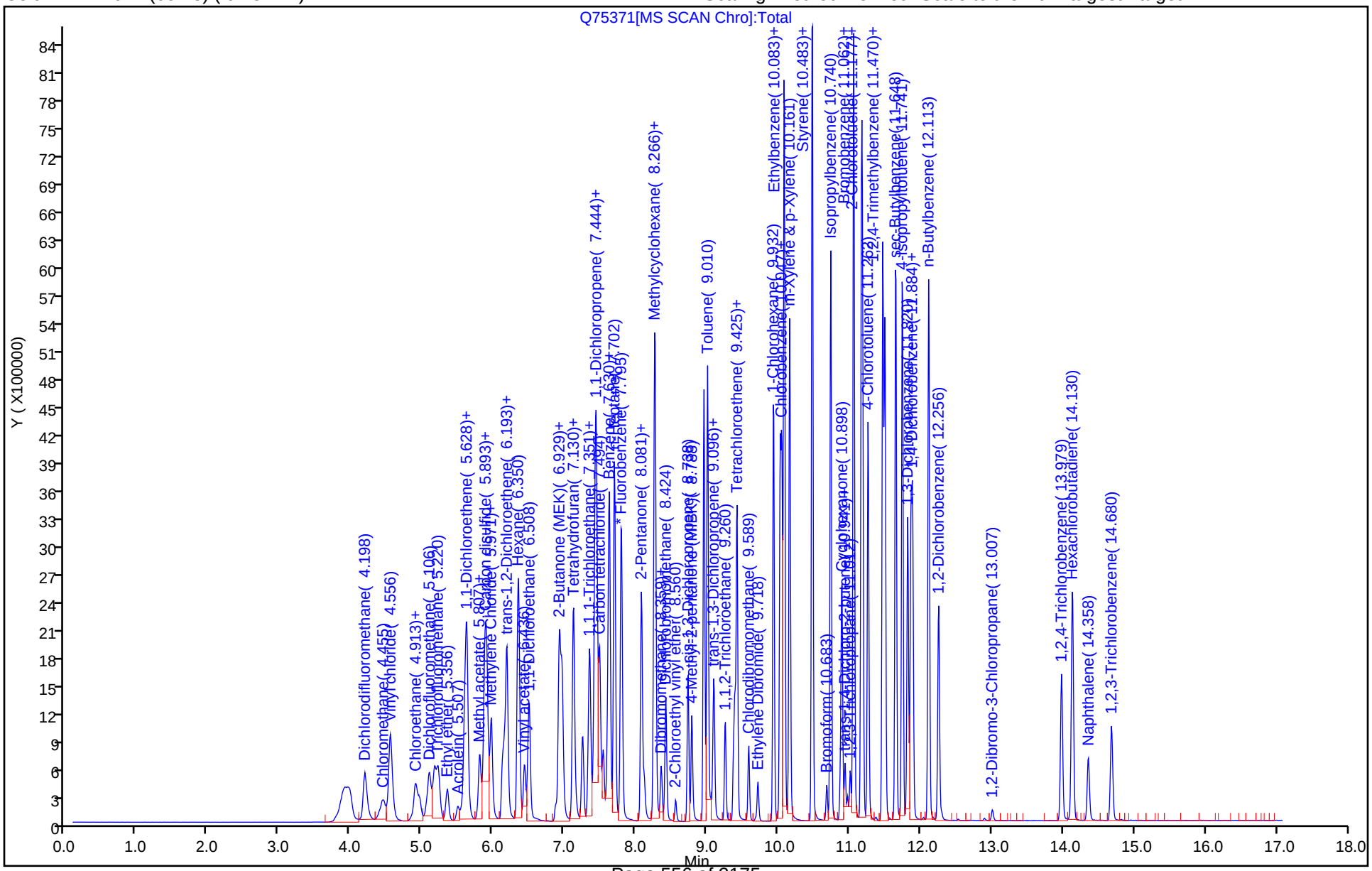
Report Date: 14-Nov-2018 11:04:00 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75371.D

Injection Date:	13-Nov-2018 16:04:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICIS			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75372.D
Lims ID: STD30
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Nov-2018 16:25:30 ALS Bottle#: 6 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:04:08 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.868	5.878	-0.010	0	242440	250.0	250.0	
* 1 Fluorobenzene	96	7.798	7.802	-0.004	100	3065511	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.029	10.033	-0.004	97	622958	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.867	11.863	0.004	99	788079	12.5	12.5	
23 Dichlorodifluoromethane	85	4.188	4.198	-0.010	99	3340658	25.0	27.2	
26 Chloromethane	50	4.445	4.448	-0.003	99	1818436	25.0	26.9	
27 Vinyl chloride	62	4.567	4.570	-0.003	98	1918058	25.0	25.8	
29 Bromomethane	94	4.903	4.906	-0.003	91	1460515	25.0	25.3	
30 Chloroethane	64	4.960	4.970	-0.010	99	896154	25.0	25.7	
31 Dichlorofluoromethane	67	5.096	5.099	-0.003	97	2791857	25.0	25.1	
32 Trichlorofluoromethane	101	5.174	5.178	-0.004	99	4221391	25.0	26.5	
35 Ethyl ether	59	5.346	5.356	-0.010	96	834197	25.0	26.1	
39 Acrolein	56	5.496	5.507	-0.010	99	705832	250.0	280.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.603	5.607	-0.004	96	1544815	25.0	26.0	
41 Acetone	43	5.596	5.607	-0.011	98	527867	100.0	99.4	
43 1,1-Dichloroethene	96	5.625	5.635	-0.010	95	1993788	25.0	26.2	
44 Iodomethane	142	5.804	5.807	-0.003	97	2877670	25.0	27.0	
45 Methyl acetate	43	5.825	5.828	-0.003	99	707875	50.0	48.6	
47 3-Chloro-1-propene	41	5.875	5.885	-0.010	85	3815037	25.0	25.0	
48 Carbon disulfide	76	5.904	5.907	-0.003	100	8400928	25.0	25.9	
49 2-Methyl-2-propanol	59	5.932	5.936	-0.004	94	410264	250.0	258.3	
50 Methylene Chloride	84	5.968	5.971	-0.003	97	1575008	25.0	24.2	
52 Acrylonitrile	53	6.118	6.129	-0.011	98	1649269	250.0	266.6	
51 Methyl tert-butyl ether	73	6.154	6.157	-0.003	96	2026321	25.0	25.9	
53 trans-1,2-Dichloroethene	96	6.190	6.193	-0.003	95	2173046	25.0	25.7	
54 Hexane	57	6.347	6.350	-0.003	95	4039395	25.0	22.5	
55 Vinyl acetate	43	6.433	6.436	-0.003	97	3246088	50.0	52.7	
57 1,1-Dichloroethane	63	6.504	6.508	-0.004	96	4036842	25.0	25.1	
61 2-Butanone (MEK)	43	6.869	6.879	-0.010	99	993395	100.0	105.1	
62 sec-Butyl Alcohol	45	6.912	6.922	-0.010	97	974085	750.0	770.3	
63 cis-1,2-Dichloroethene	96	6.926	6.929	-0.003	83	2104619	25.0	25.8	
64 2,2-Dichloropropane	77	6.962	6.965	-0.003	87	3369039	25.0	26.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.119	7.122	-0.003	94	609428	25.0	26.8	
68 Chloroform	83	7.126	7.130	-0.004	93	3743097	25.0	25.9	
69 Tetrahydrofuran	42	7.162	7.165	-0.003	93	283001	50.0	53.4	
70 Isobutyl alcohol	41	7.327	7.330	-0.003	93	284931	625.0	676.0	
71 1,1,1-Trichloroethane	97	7.355	7.351	0.004	98	3768189	25.0	26.9	
72 Cyclohexane	56	7.427	7.430	-0.003	93	4027356	25.0	24.8	
73 1,1-Dichloropropene	75	7.448	7.451	-0.003	95	3621590	25.0	25.7	
74 Carbon tetrachloride	117	7.491	7.494	-0.003	97	3505731	25.0	27.5	
76 1,2-Dichloroethane	62	7.598	7.601	-0.003	98	1842822	25.0	25.4	
77 Benzene	78	7.627	7.630	-0.003	98	7966057	25.0	24.9	
14 n-Heptane	43	7.698	7.702	-0.004	92	4148328	25.0	24.9	
79 Trichloroethene	95	8.077	8.081	-0.004	95	2402907	25.0	26.1	
80 2-Pentanone	43	8.113	8.123	-0.010	98	1466254	100.0	104.3	
83 1,2-Dichloropropane	63	8.256	8.259	-0.003	93	1729199	25.0	24.5	
82 Methylcyclohexane	55	8.270	8.274	-0.004	94	3446811	25.0	24.8	
84 1,4-Dioxane	88	8.306	8.317	-0.010	98	92520	500.0	519.7	
85 Dibromomethane	93	8.356	8.359	-0.003	89	636679	25.0	26.2	
86 Dichlorobromomethane	83	8.420	8.424	-0.004	99	2306132	25.0	27.1	
87 2-Chloroethyl vinyl ether	63	8.556	8.560	-0.004	92	280019	25.0	24.1	
89 cis-1,3-Dichloropropene	75	8.735	8.738	-0.003	93	2385138	25.0	25.6	
90 4-Methyl-2-pentanone (MIBK	43	8.785	8.788	-0.003	0	2157007	100.0	111.0	
91 Toluene	91	9.007	9.010	-0.003	98	7939400	25.0	25.1	
92 Ethyl methacrylate	69	9.085	9.089	-0.004	90	882331	25.0	26.7	
93 trans-1,3-Dichloropropene	75	9.100	9.103	-0.003	99	1692353	25.0	27.9	
94 1,1,2-Trichloroethane	97	9.257	9.260	-0.003	93	811666	25.0	26.9	
95 2-Hexanone	43	9.371	9.375	-0.004	96	1373148	100.0	108.9	
96 1,3-Dichloropropane	76	9.393	9.396	-0.003	94	1540519	25.0	24.7	
97 Tetrachloroethene	164	9.422	9.425	-0.003	91	1783073	25.0	25.6	
98 Chlorodibromomethane	129	9.586	9.589	-0.003	90	1088193	25.0	27.0	
100 Ethylene Dibromide	107	9.715	9.718	-0.003	98	753395	25.0	25.7	
101 1-Chlorohexane	91	9.936	9.940	-0.004	97	3481114	25.0	26.1	
102 Chlorobenzene	112	10.051	10.054	-0.003	93	4776720	25.0	25.4	
104 1,1,1,2-Tetrachloroethane	131	10.086	10.083	0.003	93	1600666	25.0	26.7	
103 Ethylbenzene	106	10.086	10.090	-0.004	98	3069443	25.0	25.8	
105 m-Xylene & p-Xylene	106	10.158	10.161	-0.003	0	3736317	25.0	26.9	
107 o-Xylene	106	10.480	10.483	-0.003	88	3213345	25.0	25.5	
106 Styrene	104	10.480	10.483	-0.003	84	4608265	25.0	26.9	
108 Bromoform	173	10.680	10.683	-0.003	93	462027	25.0	26.2	
109 Isopropylbenzene	105	10.737	10.740	-0.003	98	9233868	25.0	26.0	
111 Cyclohexanone	55	10.873	10.876	-0.003	98	630869	1000.0	992.8	
112 1,1,2,2-Tetrachloroethane	83	10.937	10.941	-0.004	94	753049	25.0	25.6	
113 trans-1,4-Dichloro-2-buten	53	10.973	10.976	-0.003	91	162443	25.0	24.6	
114 1,2,3-Trichloropropane	110	11.016	11.012	0.004	85	190852	25.0	26.4	
115 N-Propylbenzene	120	11.059	11.062	-0.003	97	2638907	25.0	26.6	
116 Bromobenzene	156	11.066	11.069	-0.003	96	1590333	25.0	26.5	
117 1,3,5-Trimethylbenzene	105	11.173	11.169	0.004	95	7535212	25.0	26.2	
118 2-Chlorotoluene	126	11.188	11.184	0.004	95	2054411	25.0	26.6	
119 4-Chlorotoluene	126	11.266	11.262	0.004	99	2018995	25.0	26.1	
120 tert-Butylbenzene	119	11.474	11.470	0.004	91	7861237	25.0	26.4	
121 1,2,4-Trimethylbenzene	105	11.502	11.498	0.004	99	7255573	25.0	25.8	
122 sec-Butylbenzene	134	11.652	11.656	-0.004	96	2103850	25.0	26.8	
123 4-Isopropyltoluene	119	11.745	11.741	0.004	95	8389699	25.0	26.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.824	11.820	0.004	95	3283904	25.0	25.7	
126 1,4-Dichlorobenzene	146	11.888	11.892	-0.004	91	3189812	25.0	25.5	
127 n-Butylbenzene	91	12.117	12.113	0.004	97	8525975	25.0	24.8	
128 1,2-Dichlorobenzene	146	12.253	12.256	-0.003	95	2533994	25.0	25.8	
129 1,2-Dibromo-3-Chloropropan	157	13.011	13.014	-0.003	75	92301	25.0	25.4	
130 1,2,4-Trichlorobenzene	180	13.983	13.979	0.004	94	1606181	25.0	26.3	
131 Hexachlorobutadiene	225	14.133	14.137	-0.004	97	1616454	25.0	26.7	
132 Naphthalene	128	14.355	14.358	-0.003	98	1823247	25.0	26.8	
133 1,2,3-Trichlorobenzene	180	14.684	14.680	0.004	94	1122751	25.0	26.1	
S 140 1,2-Dichloroethene, Total	96				0		50.0	51.6	
S 137 1,3-Dichloropropene, Total	1				0		50.0	53.4	
S 138 1,2-Dichloroethene, Total	1				0		50.0	51.6	
S 135 Xylenes, Total (URS)	1				0		50.0	52.4	
S 136 Total BTEX	1				0			128.1	
S 134 Trihalomethanes, Total	1				0		100.0	106.2	
S 139 Xylenes, Total	106				0		50.0	52.4	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMainA_00007 Amount Added: 10.00 Units: uL

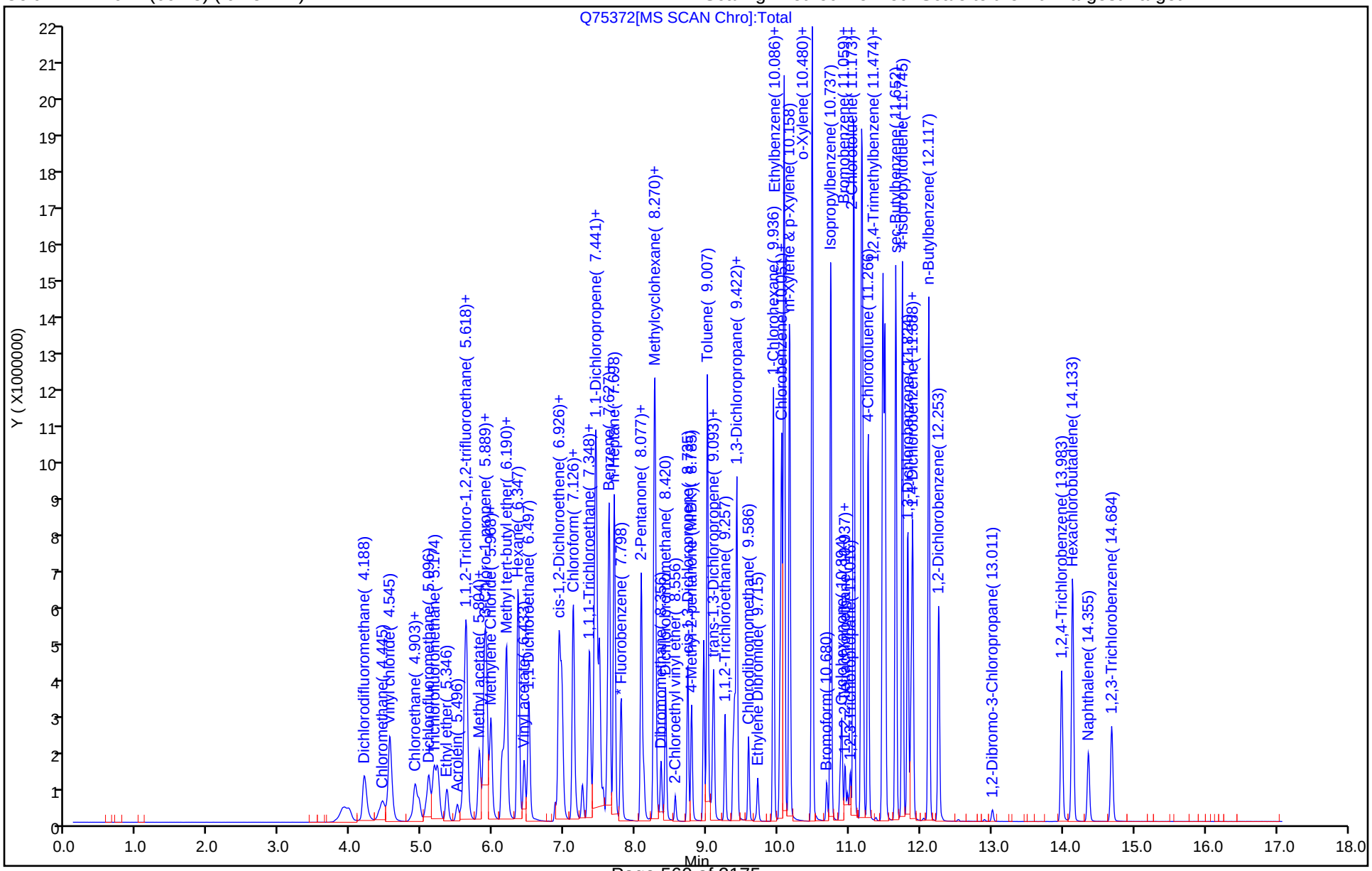
Report Date: 14-Nov-2018 11:04:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75372.D

Injection Date:	13-Nov-2018 16:25:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD30			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 13-Nov-2018 16:45:30 ALS Bottle#: 7 Worklist Smp#: 18
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: IC
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:04:17 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.864	5.878	-0.014	0	244025	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	3343600	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.033	-0.007	98	675175	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.863	0.008	99	867262	12.5	12.5	
23 Dichlorodifluoromethane	85	4.198	4.198	0.000	99	7964652	60.0	59.5	
26 Chloromethane	50	4.449	4.448	0.001	98	4216926	60.0	57.0	
27 Vinyl chloride	62	4.570	4.570	0.000	98	4424411	60.0	54.6	
29 Bromomethane	94	4.906	4.906	0.000	91	3623470	60.0	57.5	
30 Chloroethane	64	4.964	4.970	-0.006	99	2087864	60.0	54.8	
31 Dichlorofluoromethane	67	5.099	5.099	0.000	96	7077724	60.0	58.3	
32 Trichlorofluoromethane	101	5.214	5.178	0.036	99	10353668	60.0	59.5	
35 Ethyl ether	59	5.350	5.356	-0.006	94	1993678	60.0	57.2	
39 Acrolein	56	5.500	5.507	-0.006	99	1661305	600.1	604.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.607	-0.007	95	3984422	60.0	61.5	
41 Acetone	43	5.600	5.607	-0.007	99	1127899	240.0	196.8	
43 1,1-Dichloroethene	96	5.628	5.635	-0.007	97	4669039	60.0	56.3	
44 Iodomethane	142	5.807	5.807	0.000	97	7134519	60.0	61.4	
45 Methyl acetate	43	5.829	5.828	0.001	97	1581839	120.0	99.5	
47 3-Chloro-1-propene	41	5.879	5.885	-0.006	84	7793457	60.0	46.8	
48 Carbon disulfide	76	5.907	5.907	0.000	99	18093931	60.0	51.2	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	94	978682	600.0	612.2	
50 Methylene Chloride	84	5.972	5.971	0.001	94	3773736	60.0	53.1	
52 Acrylonitrile	53	6.122	6.129	-0.007	98	3924658	600.0	578.3	
51 Methyl tert-butyl ether	73	6.158	6.157	0.001	96	4802700	60.0	56.3	
53 trans-1,2-Dichloroethene	96	6.186	6.193	-0.007	97	5235774	60.0	56.9	
54 Hexane	57	6.351	6.350	0.001	93	8730701	60.0	44.8	
55 Vinyl acetate	43	6.436	6.436	0.000	97	7705637	120.0	114.7	
57 1,1-Dichloroethane	63	6.501	6.508	-0.007	96	9310912	60.0	53.0	
61 2-Butanone (MEK)	43	6.873	6.879	-0.006	100	2373544	240.0	230.2	
62 sec-Butyl Alcohol	45	6.908	6.922	-0.014	99	2206560	1800.0	1726.2	
63 cis-1,2-Dichloroethene	96	6.930	6.929	0.001	80	5153538	60.0	58.0	
64 2,2-Dichloropropane	77	6.966	6.965	0.001	89	7836680	60.0	55.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.123	7.122	0.001	96	1570672	60.0	63.3	
68 Chloroform	83	7.130	7.130	0.000	92	8834048	60.0	56.1	
69 Tetrahydrofuran	42	7.159	7.165	-0.006	94	642192	120.0	111.1	
70 Isobutyl alcohol	41	7.323	7.330	-0.007	93	702219	1500.0	1655.3	
71 1,1,1-Trichloroethane	97	7.352	7.351	0.001	98	9013172	60.0	58.9	
72 Cyclohexane	56	7.430	7.430	0.000	90	8025821	60.0	45.3	
73 1,1-Dichloropropene	75	7.452	7.451	0.001	95	7999787	60.0	52.1	
74 Carbon tetrachloride	117	7.495	7.494	0.001	97	8449414	60.0	60.8	
76 1,2-Dichloroethane	62	7.602	7.601	0.001	98	4451019	60.0	56.2	
77 Benzene	78	7.631	7.630	0.000	99	17299848	60.0	49.5	
14 n-Heptane	43	7.702	7.702	0.000	86	8123964	60.0	60.0	
79 Trichloroethene	95	8.081	8.081	0.000	97	5956947	60.0	59.2	
80 2-Pentanone	43	8.110	8.123	-0.013	98	3459895	240.0	224.8	
83 1,2-Dichloropropane	63	8.253	8.259	-0.006	92	3681139	60.0	47.8	
82 Methylcyclohexane	55	8.274	8.274	0.000	92	6748023	60.0	44.5	
84 1,4-Dioxane	88	8.310	8.317	-0.006	95	227666	1200.0	1163.7	
85 Dibromomethane	93	8.360	8.359	0.001	91	1636117	60.0	61.6	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	5713526	60.0	61.5	
87 2-Chloroethyl vinyl ether	63	8.553	8.560	-0.007	92	805037	60.0	62.9	
89 cis-1,3-Dichloropropene	75	8.732	8.738	-0.006	95	5785747	60.0	57.2	
90 4-Methyl-2-pentanone (MIBK	43	8.782	8.788	-0.006	0	4900805	240.0	231.2	
91 Toluene	91	9.003	9.010	-0.007	94	16479607	60.0	47.7	e
92 Ethyl methacrylate	69	9.082	9.089	-0.007	89	2258892	60.0	62.9	
93 trans-1,3-Dichloropropene	75	9.096	9.103	-0.007	98	4237632	60.0	64.0	
94 1,1,2-Trichloroethane	97	9.254	9.260	-0.006	93	2074226	60.0	62.9	
95 2-Hexanone	43	9.368	9.375	-0.007	97	3293269	240.0	241.0	
96 1,3-Dichloropropane	76	9.389	9.396	-0.007	93	3696633	60.0	54.6	
97 Tetrachloroethene	164	9.418	9.425	-0.007	92	4704372	60.0	62.2	
98 Chlorodibromomethane	129	9.582	9.589	-0.007	90	2917548	60.0	66.9	
100 Ethylene Dibromide	107	9.711	9.718	-0.007	98	1988104	60.0	62.6	
101 1-Chlorohexane	91	9.933	9.940	-0.007	95	7922938	60.0	54.9	
102 Chlorobenzene	112	10.054	10.054	0.000	93	11118561	60.0	54.6	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	94	3826542	60.0	58.9	
103 Ethylbenzene	106	10.083	10.090	-0.007	96	6822642	60.0	53.0	e
105 m-Xylene & p-Xylene	106	10.083	10.161	-0.078	0	6822642	60.0	45.3	e
107 o-Xylene	106	10.476	10.483	-0.007	84	7174987	60.0	52.5	
106 Styrene	104	10.476	10.483	-0.007	84	10262694	60.0	55.3	
108 Bromoform	173	10.684	10.683	0.001	95	1240607	60.0	64.7	
109 Isopropylbenzene	105	10.734	10.740	-0.006	95	17514078	60.0	44.8	e
111 Cyclohexanone	55	10.870	10.876	-0.006	98	1550880	2400.0	2251.9	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.941	0.000	95	1868908	60.0	57.8	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.976	0.001	90	458874	60.0	62.6	
114 1,2,3-Trichloropropane	110	11.013	11.012	0.000	86	488743	60.0	61.5	
115 N-Propylbenzene	120	11.063	11.062	0.001	89	6365445	60.0	58.2	
116 Bromobenzene	156	11.063	11.069	-0.006	72	4118037	60.0	62.4	
117 1,3,5-Trimethylbenzene	105	11.170	11.169	0.001	97	15396286	60.0	48.7	e
118 2-Chlorotoluene	126	11.184	11.184	0.000	96	4891651	60.0	57.5	
119 4-Chlorotoluene	126	11.263	11.262	0.001	97	5003385	60.0	58.9	
120 tert-Butylbenzene	119	11.470	11.470	0.000	90	17243683	60.0	52.6	
121 1,2,4-Trimethylbenzene	105	11.499	11.498	0.001	95	15622077	60.0	50.5	
122 sec-Butylbenzene	134	11.656	11.656	0.000	95	5207646	60.0	60.3	
123 4-Isopropyltoluene	119	11.742	11.741	0.001	90	17058703	60.0	48.4	e

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	96	8302703	60.0	59.0	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	92	8021831	60.0	58.3	
127 n-Butylbenzene	91	12.114	12.113	0.001	93	17231216	60.0	45.5	e
128 1,2-Dichlorobenzene	146	12.257	12.256	0.001	95	6561204	60.0	60.8	
129 1,2-Dibromo-3-Chloropropan	157	13.007	13.014	-0.007	79	244931	60.0	60.7	
130 1,2,4-Trichlorobenzene	180	13.980	13.979	0.001	94	4085915	60.0	60.7	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	98	4062273	60.0	60.9	
132 Naphthalene	128	14.359	14.358	0.001	98	4494800	60.0	60.0	
133 1,2,3-Trichlorobenzene	180	14.688	14.680	0.008	95	2769307	60.0	58.4	
S 140 1,2-Dichloroethene, Total	96				0		120.0	114.9	
S 136 Total BTEX	1				0			248.0	
S 137 1,3-Dichloropropene, Total	1				0		120.0	121.2	
S 138 1,2-Dichloroethene, Total	1				0		120.0	114.9	
S 135 Xylenes, Total (URS)	1				0		120.0	97.8	
S 139 Xylenes, Total	106				0		120.0	97.8	
S 134 Trihalomethanes, Total	1				0		240.0	249.2	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL
MV-MegaMainA_00007	Amount Added:	24.00	Units: uL

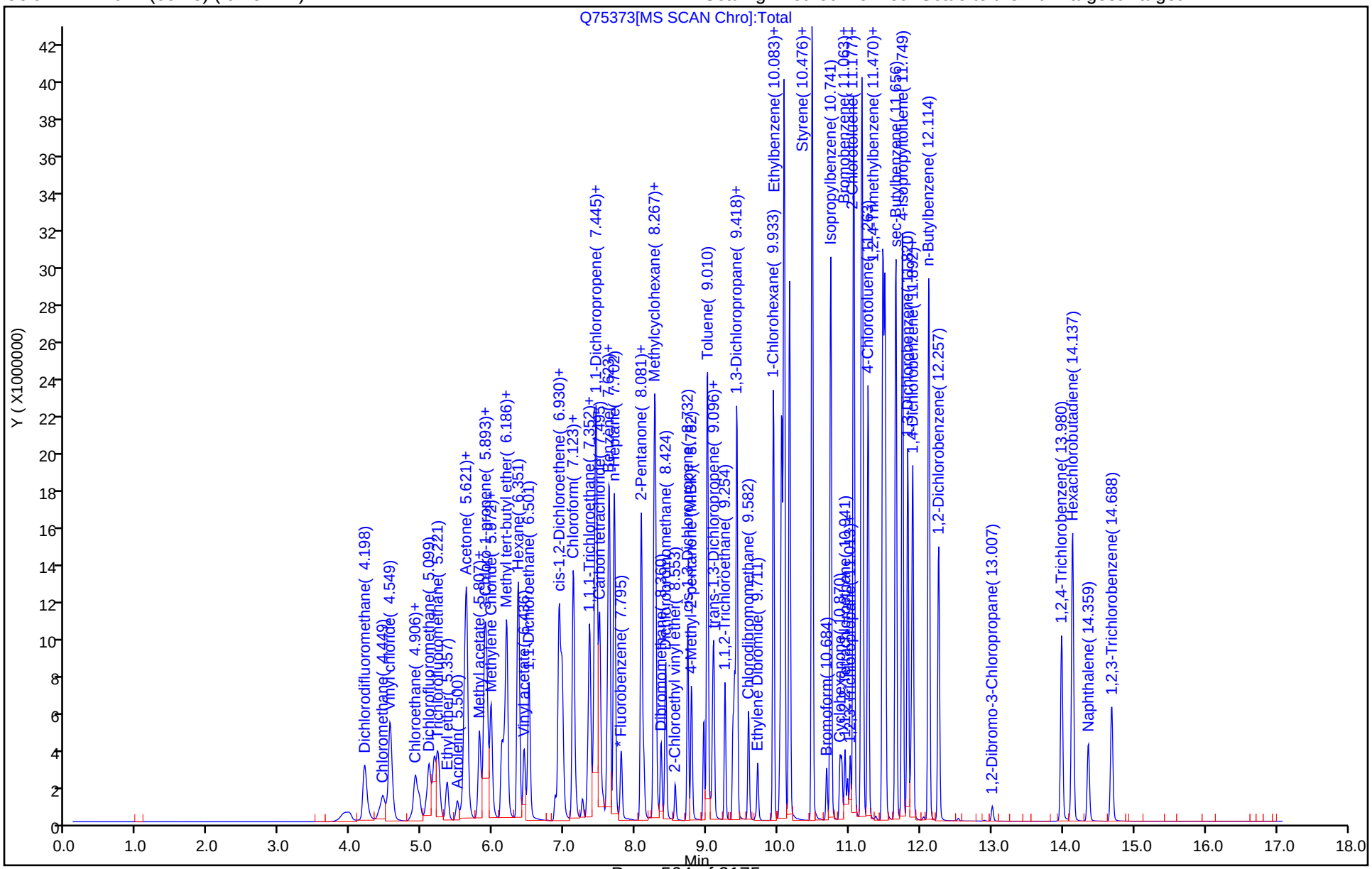
Report Date: 14-Nov-2018 11:04:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Injection Date:	13-Nov-2018 16:45:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	STD60			Worklist Smp#:	18
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-437259/19 Calibration Date: 11/12/2018 16:56

Instrument ID: VMS_Q Calib Start Date: 11/12/2018 14:11

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/12/2018 16:15

Lab File ID: Q75351.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3818	0.3766		0.00986	0.0100	-1.4	20.0
Chloromethane	Ave	0.1541	0.1409	0.1000	0.00915	0.0100	-8.5	20.0
Vinyl chloride	Ave	0.1687	0.1678		0.00995	0.0100	-0.5	20.0
Bromomethane	Ave	0.1501	0.1531		0.0102	0.0100	2.0	20.0
Chloroethane	Ave	0.0810	0.0822		0.0101	0.0100	1.5	20.0
Dichlorofluoromethane	Qua		0.4202		0.0133	0.0100	33.0*	20.0
Trichlorofluoromethane	Ave	0.4822	0.5559		0.0115	0.0100	15.3	20.0
Ethyl ether	Ave	0.0977	0.1088		0.0111	0.0100	11.3	20.0
Acrolein	Ave	0.0077	0.0084		0.109	0.100	8.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.2348		0.0115	0.0100	15.5	20.0
Acetone	Qua		0.0153		0.0376	0.0400	-6.0	20.0
1,1-Dichloroethene	Ave	0.2502	0.2926		0.0117	0.0100	16.9	20.0
Iodomethane	Lin2		0.4514		0.0121	0.0100	20.7*	20.0
Methyl acetate	Ave	0.0427	0.0391		0.0183	0.0200	-8.4	20.0
3-Chloro-1-propene	Ave	0.4029	0.4038		0.0100	0.0100	0.2	20.0
Carbon disulfide	Ave	1.042	1.139		0.0109	0.0100	9.3	20.0
t-Butyl alcohol	Ave	1.177	1.259		0.107	0.100	7.0	
Methylene Chloride	Ave	0.2045	0.2197		0.0107	0.0100	7.4	20.0
Acrylonitrile	Lin2		0.0186		0.102	0.100	1.6	20.0
Methyl tert-butyl ether	Ave	0.2393	0.2659		0.0111	0.0100	11.1	20.0
trans-1,2-Dichloroethene	Ave	0.2735	0.3157		0.0115	0.0100	15.4	20.0
Hexane	Ave	2.457	2.315		0.00942	0.0100	-5.8	20.0
Vinyl acetate	Ave	0.1680	0.1557		0.0185	0.0200	-7.3	20.0
1,1-Dichloroethane	Ave	0.4883	0.5057	0.1000	0.0104	0.0100	3.6	20.0
2-Butanone (MEK)	Ave	0.0293	0.0251		0.0343	0.0400	-14.3	20.0
cis-1,2-Dichloroethene	Ave	0.2672	0.2989		0.0112	0.0100	11.8	20.0
2,2-Dichloropropane	Ave	0.3843	0.3995		0.0104	0.0100	3.9	20.0
Bromochloromethane	Ave	0.0766	0.0902		0.0118	0.0100	17.7	20.0
Chloroform	Ave	0.4533	0.4864		0.0107	0.0100	7.3	20.0
Tetrahydrofuran	Ave	0.0154	0.0138		0.0178	0.0200	-10.9	20.0
Isobutyl alcohol	Ave	0.2874	0.2695		0.234	0.250	-6.2	20.0
1,1,1-Trichloroethane	Ave	0.4307	0.4905		0.0114	0.0100	13.9	20.0
Cyclohexane	Qua		0.5059		0.00938	0.0100	-6.2	20.0
1,1-Dichloropropene	Ave	0.4342	0.4505		0.0104	0.0100	3.8	20.0
Carbon tetrachloride	Ave	0.3949	0.4518		0.0114	0.0100	14.4	20.0
1,2-Dichloroethane	Ave	0.2103	0.2078		0.00988	0.0100	-1.2	20.0
Benzene	Ave	1.043	1.087		0.0104	0.0100	4.2	20.0
Trichloroethene	Ave	0.2994	0.3185		0.0106	0.0100	6.4	20.0
2-Pentanone	Ave	0.0360	0.0370		0.0411	0.0400	2.6	20.0
1,2-Dichloropropane	Ave	0.2171	0.2224		0.0102	0.0100	2.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-437259/19 Calibration Date: 11/12/2018 16:56

Instrument ID: VMS_Q Calib Start Date: 11/12/2018 14:11

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/12/2018 16:15

Lab File ID: Q75351.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Qua		0.4076		0.00895	0.0100	-10.5	20.0
1,4-Dioxane	Lin2		0.0006		0.218	0.200	8.8	20.0
Dibromomethane	Ave	0.0789	0.0820		0.0104	0.0100	4.0	20.0
Bromodichloromethane	Ave	0.2695	0.2812		0.0104	0.0100	4.4	20.0
2-Chloroethyl vinyl ether	Lin1		0.0327		0.00862	0.0100	-13.8	20.0
cis-1,3-Dichloropropene	Ave	1.378	1.470		0.0107	0.0100	6.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0564	0.0566		0.0401	0.0400	0.2	20.0
Toluene	Ave	1.055	1.137		0.0108	0.0100	7.7	20.0
Ethyl methacrylate	Lin2		0.5150		0.00991	0.0100	-0.9	20.0
trans-1,3-Dichloropropene	Ave	0.1974	0.2064		0.0105	0.0100	4.5	20.0
1,1,2-Trichloroethane	Ave	0.1025	0.1144		0.0112	0.0100	11.6	20.0
2-Hexanone	Ave	0.1700	0.1661		0.0391	0.0400	-2.3	20.0
1,3-Dichloropropane	Ave	0.9505	0.9548		0.0100	0.0100	0.4	20.0
Tetrachloroethene	Ave	1.109	1.206		0.0109	0.0100	8.7	20.0
Dibromochloromethane	Ave	0.6351	0.7140		0.0112	0.0100	12.4	20.0
1,2-Dibromoethane (EDB)	Ave	0.4528	0.4897		0.0108	0.0100	8.2	20.0
1-Chlorohexane	Ave	2.049	2.161		0.0105	0.0100	5.4	20.0
Chlorobenzene	Ave	2.983	3.160	0.3000	0.0106	0.0100	5.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9087	1.026		0.0113	0.0100	12.9	20.0
Ethylbenzene	Ave	1.857	1.972		0.0106	0.0100	6.2	20.0
m-Xylene & p-Xylene	Ave	2.274	2.425		0.0107	0.0100	6.7	20.0
o-Xylene	Ave	1.935	2.101		0.0109	0.0100	8.6	20.0
Styrene	Ave	2.697	2.950		0.0109	0.0100	9.4	20.0
Bromoform	Lin1		0.3081	0.1000	0.00994	0.0100	-0.6	20.0
Isopropylbenzene	Ave	4.406	4.589		0.0104	0.0100	4.2	20.0
Cyclohexanone	Ave	0.0080	0.0086		0.430	0.400	7.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.3674	0.3635	0.3000	0.00989	0.0100	-1.1	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.0588		0.00893	0.0100	-10.7	20.0
1,2,3-Trichloropropane	Ave	0.0869	0.0946		0.0109	0.0100	8.9	20.0
N-Propylbenzene	Ave	1.198	1.280		0.0107	0.0100	6.8	20.0
Bromobenzene	Ave	0.7432	0.8054		0.0108	0.0100	8.4	20.0
1,3,5-Trimethylbenzene	Ave	3.432	3.669		0.0107	0.0100	6.9	20.0
2-Chlorotoluene	Ave	0.9504	1.003		0.0106	0.0100	5.5	20.0
4-Chlorotoluene	Ave	0.9543	0.9939		0.0104	0.0100	4.1	20.0
tert-Butylbenzene	Ave	3.594	3.845		0.0107	0.0100	7.0	20.0
1,2,4-Trimethylbenzene	Ave	3.352	3.490		0.0104	0.0100	4.1	20.0
sec-Butylbenzene	Ave	0.9616	1.018		0.0106	0.0100	5.8	20.0
4-Isopropyltoluene	Ave	3.859	4.186		0.0108	0.0100	8.5	20.0
1,3-Dichlorobenzene	Ave	1.577	1.700		0.0108	0.0100	7.8	20.0
1,4-Dichlorobenzene	Ave	1.584	1.691		0.0107	0.0100	6.7	20.0
n-Butylbenzene	Ave	4.068	4.144		0.0102	0.0100	1.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-437259/19 Calibration Date: 11/12/2018 16:56

Instrument ID: VMS_Q Calib Start Date: 11/12/2018 14:11

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/12/2018 16:15

Lab File ID: Q75351.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.230	1.320		0.0107	0.0100	7.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0439	0.0475		0.0108	0.0100	8.1	20.0
1,2,4-Trichlorobenzene	Ave	0.7794	0.8569		0.0110	0.0100	9.9	20.0
Hexachlorobutadiene	Ave	0.7544	0.8195		0.0109	0.0100	8.6	20.0
Naphthalene	Ave	0.8512	0.9587		0.0113	0.0100	12.6	20.0
1,2,3-Trichlorobenzene	Ave	0.5427	0.6188		0.0114	0.0100	14.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2232	0.2400		0.0134	0.0125	7.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1865	0.1865		0.0125	0.0125	0.0	20.0
Toluene-d8 (Surr)	Ave	4.465	4.590		0.0129	0.0125	2.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.007	1.018		0.0126	0.0125	1.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75351.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Nov-2018 16:56:30 ALS Bottle#: 9 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: meierg Instrument ID: VMS_Q
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 10:10:51 Calib Date: 12-Nov-2018 16:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.874	-0.002	0	281868	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.797	-0.002	100	3383194	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.028	0.005	99	704681	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.871	11.866	0.005	98	946471	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.254	-0.002	93	812082	12.5	13.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.547	-0.002	0	631095	12.5	12.5	
$ 7 Toluene-d8 (Surr)	98	8.961	8.956	0.005	100	3234694	12.5	12.9	
$ 8 4-Bromofluorobenzene (Surr	95	10.898	10.893	0.005	89	963376	12.5	12.6	
23 Dichlorodifluoromethane	85	4.192	4.194	-0.002	99	1019160	10.0	9.86	
26 Chloromethane	50	4.442	4.451	-0.009	98	381435	10.0	9.15	
27 Vinyl chloride	62	4.571	4.572	-0.001	98	454188	10.0	9.95	
29 Bromomethane	94	4.907	4.909	-0.002	91	414406	10.0	10.2	
30 Chloroethane	64	4.964	4.966	-0.002	99	222513	10.0	10.1	
31 Dichlorofluoromethane	67	5.100	5.109	-0.009	97	1137402	10.0	13.3	
32 Trichlorofluoromethane	101	5.221	5.216	0.005	98	1504598	10.0	11.5	
35 Ethyl ether	59	5.350	5.359	-0.009	91	294341	10.0	11.1	
39 Acrolein	56	5.500	5.502	-0.002	99	227075	100.0	108.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.600	5.602	-0.002	95	635580	10.0	11.5	
41 Acetone	43	5.600	5.602	-0.002	36	166049	40.0	37.6	
43 1,1-Dichloroethene	96	5.629	5.631	-0.002	99	791790	10.0	11.7	
44 Iodomethane	142	5.800	5.809	-0.009	100	1221705	10.0	12.1	
45 Methyl acetate	43	5.829	5.831	-0.002	96	211758	20.0	18.3	
47 3-Chloro-1-propene	41	5.879	5.881	-0.002	83	1092814	10.0	10.0	
48 Carbon disulfide	76	5.908	5.910	-0.002	98	3082744	10.0	10.9	
49 2-Methyl-2-propanol	59	5.929	5.938	-0.009	93	141910	100.0	107.0	
50 Methylene Chloride	84	5.972	5.974	-0.002	89	594648	10.0	10.7	
52 Acrylonitrile	53	6.122	6.131	-0.009	98	503373	100.0	101.6	
51 Methyl tert-butyl ether	73	6.151	6.153	-0.002	94	719775	10.0	11.1	
53 trans-1,2-Dichloroethene	96	6.186	6.188	-0.002	99	854447	10.0	11.5	
54 Hexane	57	6.351	6.353	-0.002	90	1305242	10.0	9.42	
55 Vinyl acetate	43	6.437	6.439	-0.002	97	842610	20.0	18.5	
57 1,1-Dichloroethane	63	6.501	6.503	-0.002	96	1368671	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.873	6.875	-0.002	99	271370	40.0	34.3	
62 sec-Butyl Alcohol	45	6.916	6.925	-0.009	99	279832	300.0	291.1	
63 cis-1,2-Dichloroethene	96	6.923	6.932	-0.009	79	808847	10.0	11.2	
64 2,2-Dichloropropane	77	6.959	6.968	-0.009	85	1081125	10.0	10.4	
67 Chlorobromomethane	128	7.123	7.125	-0.002	95	244129	10.0	11.8	
68 Chloroform	83	7.130	7.132	-0.002	92	1316506	10.0	10.7	
69 Tetrahydrofuran	42	7.166	7.168	-0.002	93	74413	20.0	17.8	
70 Isobutyl alcohol	41	7.323	7.325	-0.002	92	75969	250.0	234.4	
71 1,1,1-Trichloroethane	97	7.352	7.354	-0.002	97	1327660	10.0	11.4	
72 Cyclohexane	56	7.431	7.433	-0.002	91	1369201	10.0	9.38	
73 1,1-Dichloropropene	75	7.452	7.447	0.005	98	1219424	10.0	10.4	
74 Carbon tetrachloride	117	7.495	7.497	-0.002	97	1222813	10.0	11.4	
76 1,2-Dichloroethane	62	7.602	7.604	-0.002	98	562422	10.0	9.88	
77 Benzene	78	7.631	7.633	-0.002	95	2942254	10.0	10.4	
14 n-Heptane	43	7.702	7.704	-0.002	88	1195258	10.0	8.16	
79 Trichloroethene	95	8.081	8.083	-0.002	99	861932	10.0	10.6	
80 2-Pentanone	43	8.117	8.119	-0.002	99	400553	40.0	41.1	
83 1,2-Dichloropropane	63	8.260	8.255	0.005	97	602015	10.0	10.2	
82 Methylcyclohexane	55	8.274	8.269	0.005	91	1103243	10.0	8.95	
84 1,4-Dioxane	88	8.317	8.312	0.005	92	34409	200.0	217.6	
85 Dibromomethane	93	8.360	8.355	0.005	94	221935	10.0	10.4	
86 Dichlorobromomethane	83	8.424	8.419	0.005	99	761165	10.0	10.4	
87 2-Chloroethyl vinyl ether	63	8.560	8.562	-0.002	91	88586	10.0	8.62	
89 cis-1,3-Dichloropropene	75	8.732	8.734	-0.002	97	828903	10.0	10.7	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.784	0.005	0	612428	40.0	40.1	
91 Toluene	91	9.011	9.013	-0.002	99	3077267	10.0	10.8	
92 Ethyl methacrylate	69	9.089	9.084	0.005	87	290325	10.0	9.91	
93 trans-1,3-Dichloropropene	75	9.104	9.099	0.005	95	558640	10.0	10.5	
94 1,1,2-Trichloroethane	97	9.261	9.256	0.005	91	309496	10.0	11.2	
95 2-Hexanone	43	9.375	9.370	0.005	96	374547	40.0	39.1	
96 1,3-Dichloropropane	76	9.397	9.392	0.005	89	538248	10.0	10.0	
97 Tetrachloroethene	164	9.425	9.420	0.005	95	679717	10.0	10.9	
98 Chlorodibromomethane	129	9.590	9.585	0.005	90	402505	10.0	11.2	
100 Ethylene Dibromide	107	9.719	9.713	0.006	99	276045	10.0	10.8	
101 1-Chlorohexane	91	9.940	9.935	0.005	96	1218061	10.0	10.5	
102 Chlorobenzene	112	10.055	10.050	0.005	97	1781614	10.0	10.6	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.085	-0.002	93	578536	10.0	11.3	
103 Ethylbenzene	106	10.090	10.085	0.005	98	1111835	10.0	10.6	
105 m-Xylene & p-Xylene	106	10.162	10.164	-0.002	0	1367179	10.0	10.7	
107 o-Xylene	106	10.484	10.479	0.006	89	1184457	10.0	10.9	
106 Styrene	104	10.484	10.479	0.006	84	1663207	10.0	10.9	
108 Bromoform	173	10.684	10.686	-0.002	96	173672	10.0	9.94	
109 Isopropylbenzene	105	10.741	10.743	-0.002	96	3474815	10.0	10.4	
111 Cyclohexanone	55	10.877	10.872	0.005	98	193217	400.0	430.4	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.943	-0.002	93	275262	10.0	9.89	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.979	-0.002	95	44486	10.0	8.93	
114 1,2,3-Trichloropropane	110	11.020	11.015	0.005	85	71643	10.0	10.9	
115 N-Propylbenzene	120	11.063	11.065	-0.002	99	969213	10.0	10.7	
116 Bromobenzene	156	11.070	11.065	0.005	93	609858	10.0	10.8	
117 1,3,5-Trimethylbenzene	105	11.170	11.172	-0.002	95	2778236	10.0	10.7	
118 2-Chlorotoluene	126	11.192	11.186	0.006	96	759448	10.0	10.6	
119 4-Chlorotoluene	126	11.270	11.265	0.005	98	752527	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.472	-0.002	91	2911087	10.0	10.7	
121 1,2,4-Trimethylbenzene	105	11.506	11.501	0.005	98	2642411	10.0	10.4	
122 sec-Butylbenzene	134	11.656	11.651	0.005	95	770468	10.0	10.6	
123 4-Isopropyltoluene	119	11.749	11.744	0.005	96	3169323	10.0	10.8	
124 1,3-Dichlorobenzene	146	11.821	11.823	-0.002	97	1286857	10.0	10.8	
126 1,4-Dichlorobenzene	146	11.892	11.887	0.005	94	1280222	10.0	10.7	
127 n-Butylbenzene	91	12.121	12.116	0.005	98	3138114	10.0	10.2	
128 1,2-Dichlorobenzene	146	12.257	12.259	-0.002	97	999187	10.0	10.7	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.010	0.005	83	35941	10.0	10.8	
130 1,2,4-Trichlorobenzene	180	13.987	13.982	0.005	94	648829	10.0	11.0	
131 Hexachlorobutadiene	225	14.137	14.132	0.005	98	620474	10.0	10.9	
132 Naphthalene	128	14.359	14.361	-0.002	97	725913	10.0	11.3	
133 1,2,3-Trichlorobenzene	180	14.688	14.683	0.005	94	468531	10.0	11.4	
S 140 1,2-Dichloroethene, Total	96				0		20.0	22.7	
S 137 1,3-Dichloropropene, Total	1				0		20.0	21.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	22.7	
S 135 Xylenes, Total (URS)	1				0		20.0	21.5	
S 139 Xylenes, Total	106				0		20.0	21.5	
S 134 Trihalomethanes, Total	1				0		40.0	42.4	

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	
MV-MegaMain B_00004	Amount Added:	4.00	Units: uL	
MV-ARCH SS A_00101	Amount Added:	1.00	Units: uL	

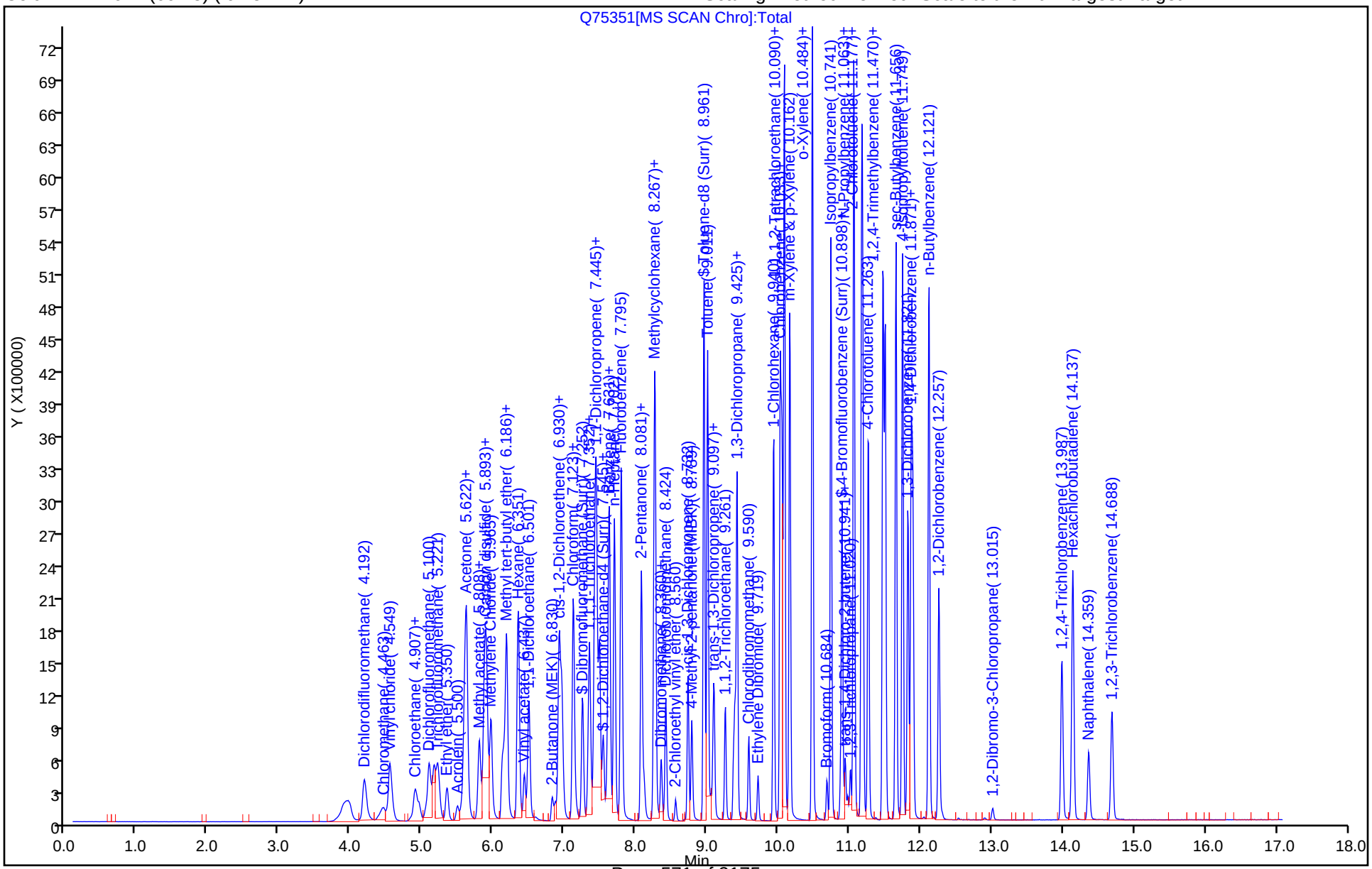
Report Date: 13-Nov-2018 10:10:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75351.D

Injection Date:	12-Nov-2018 16:56:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICV			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-437429/19 Calibration Date: 11/13/2018 17:26

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75375.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5005	0.4503		0.00900	0.0100	-10.0	20.0
Chloromethane	Lin1		0.2535	0.1000	0.00935	0.0100	-6.5	20.0
Vinyl chloride	Ave	0.3028	0.2815		0.00929	0.0100	-7.1	20.0
Bromomethane	Ave	0.2355	0.2224		0.00945	0.0100	-5.5	20.0
Chloroethane	Ave	0.1424	0.1407		0.00988	0.0100	-1.2	20.0
Dichlorofluoromethane	Ave	0.4541	0.4721		0.0104	0.0100	3.9	20.0
Trichlorofluoromethane	Ave	0.6507	0.6528		0.0100	0.0100	0.3	20.0
Ethyl ether	Ave	0.1304	0.1346		0.0103	0.0100	3.2	20.0
Acrolein	Ave	0.0103	0.0104		0.101	0.100	1.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2421	0.2474		0.0102	0.0100	2.2	20.0
Acetone	Lin		0.0185		0.0328	0.0400	-18.1	20.0
1,1-Dichloroethene	Ave	0.3098	0.3056		0.00987	0.0100	-1.3	20.0
Iodomethane	Ave	0.4345	0.4421		0.0102	0.0100	1.8	20.0
Methyl acetate	Ave	0.0594	0.0543		0.0183	0.0200	-8.6	20.0
3-Chloro-1-propene	Ave	0.6228	0.5916		0.00950	0.0100	-5.0	20.0
Carbon disulfide	Ave	1.321	1.274		0.00965	0.0100	-3.5	20.0
t-Butyl alcohol	Ave	1.638	1.480		0.0904	0.100	-9.6	
Methylene Chloride	Ave	0.2659	0.2416		0.00909	0.0100	-9.1	20.0
Acrylonitrile	Lin2		0.0237		0.0958	0.100	-4.2	20.0
Methyl tert-butyl ether	Ave	0.3191	0.3100		0.00971	0.0100	-2.9	20.0
trans-1,2-Dichloroethene	Ave	0.3442	0.3393		0.00986	0.0100	-1.4	20.0
Hexane	Ave	3.608	3.426		0.00950	0.0100	-5.0	20.0
Vinyl acetate	Ave	0.2511	0.2517		0.0201	0.0200	0.3	20.0
1,1-Dichloroethane	Ave	0.6562	0.6268	0.1000	0.00955	0.0100	-4.5	20.0
2-Butanone (MEK)	Ave	0.0385	0.0366		0.0380	0.0400	-5.1	20.0
cis-1,2-Dichloroethene	Ave	0.3320	0.3312		0.00998	0.0100	-0.2	20.0
2,2-Dichloropropane	Ave	0.5250	0.4956		0.00944	0.0100	-5.6	20.0
Bromochloromethane	Ave	0.0928	0.0958		0.0103	0.0100	3.2	20.0
Chloroform	Ave	0.5889	0.5859		0.00995	0.0100	-0.5	20.0
Tetrahydrofuran	Ave	0.0216	0.0194		0.0180	0.0200	-10.1	20.0
Isobutyl alcohol	Ave	0.4346	0.3863		0.222	0.250	-11.1	20.0
1,1,1-Trichloroethane	Ave	0.5720	0.5672		0.00992	0.0100	-0.8	20.0
Cyclohexane	Ave	0.6625	0.6372		0.00962	0.0100	-3.8	20.0
1,1-Dichloropropene	Ave	0.5736	0.5639		0.00983	0.0100	-1.7	20.0
Carbon tetrachloride	Ave	0.5195	0.5030		0.00968	0.0100	-3.2	20.0
1,2-Dichloroethane	Ave	0.2960	0.2815		0.00951	0.0100	-4.9	20.0
Benzene	Ave	1.307	1.302		0.00997	0.0100	-0.3	20.0
Trichloroethene	Ave	0.3760	0.3710		0.00987	0.0100	-1.3	20.0
2-Pentanone	Lin2		0.0522		0.0369	0.0400	-7.8	20.0
1,2-Dichloropropane	Ave	0.2876	0.2893		0.0101	0.0100	0.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-437429/19 Calibration Date: 11/13/2018 17:26

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75375.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5675	0.5260		0.00927	0.0100	-7.3	20.0
1,4-Dioxane	Lin2		0.0006		0.182	0.200	-9.2	20.0
Dibromomethane	Ave	0.0992	0.0952		0.00960	0.0100	-4.0	20.0
Bromodichloromethane	Ave	0.3472	0.3398		0.00979	0.0100	-2.1	20.0
2-Chloroethyl vinyl ether	Lin1		0.0390		0.00851	0.0100	-14.9	20.0
cis-1,3-Dichloropropene	Ave	1.872	2.028		0.0108	0.0100	8.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0792	0.0765		0.0386	0.0400	-3.4	20.0
Toluene	Ave	1.291	1.320		0.0102	0.0100	2.2	20.0
Ethyl methacrylate	Lin2		0.6502		0.00994	0.0100	-0.6	20.0
trans-1,3-Dichloropropene	Ave	0.2476	0.2572		0.0104	0.0100	3.9	20.0
1,1,2-Trichloroethane	Ave	0.1232	0.1269		0.0103	0.0100	3.0	20.0
2-Hexanone	Ave	0.2530	0.2460		0.0389	0.0400	-2.8	20.0
1,3-Dichloropropane	Ave	1.253	1.258		0.0100	0.0100	0.4	20.0
Tetrachloroethene	Ave	1.400	1.402		0.0100	0.0100	0.2	20.0
Dibromochloromethane	Ave	0.8078	0.8546		0.0106	0.0100	5.8	20.0
1,2-Dibromoethane (EDB)	Ave	0.5876	0.6078		0.0103	0.0100	3.4	20.0
1-Chlorohexane	Ave	2.674	2.728		0.0102	0.0100	2.0	20.0
Chlorobenzene	Ave	3.768	3.760	0.3000	0.00998	0.0100	-0.2	20.0
1,1,1,2-Tetrachloroethane	Ave	1.204	1.256		0.0104	0.0100	4.3	20.0
Ethylbenzene	Ave	2.384	2.417		0.0101	0.0100	1.4	20.0
m-Xylene & p-Xylene	Ave	2.790	2.931		0.0105	0.0100	5.0	20.0
o-Xylene	Ave	2.528	2.566		0.0101	0.0100	1.5	20.0
Styrene	Ave	3.439	3.588		0.0104	0.0100	4.3	20.0
Bromoform	Lin2		0.3552	0.1000	0.0101	0.0100	1.5	20.0
Isopropylbenzene	Ave	5.637	5.839		0.0104	0.0100	3.6	20.0
Cyclohexanone	Ave	0.0128	0.0113		0.355	0.400	-11.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4664	0.4609	0.3000	0.00988	0.0100	-1.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0898		0.00888	0.0100	-11.2	20.0
1,2,3-Trichloropropane	Ave	0.1145	0.1191		0.0104	0.0100	4.0	20.0
N-Propylbenzene	Ave	1.576	1.574		0.00999	0.0100	-0.1	20.0
Bromobenzene	Ave	0.9515	0.9553		0.0100	0.0100	0.4	20.0
1,3,5-Trimethylbenzene	Ave	4.556	4.600		0.0101	0.0100	1.0	20.0
2-Chlorotoluene	Ave	1.227	1.225		0.00999	0.0100	-0.1	20.0
4-Chlorotoluene	Ave	1.225	1.218		0.00995	0.0100	-0.5	20.0
tert-Butylbenzene	Ave	4.722	4.851		0.0103	0.0100	2.7	20.0
1,2,4-Trimethylbenzene	Ave	4.460	4.415		0.00990	0.0100	-1.0	20.0
sec-Butylbenzene	Ave	1.244	1.268		0.0102	0.0100	1.9	20.0
4-Isopropyltoluene	Ave	5.085	5.204		0.0102	0.0100	2.3	20.0
1,3-Dichlorobenzene	Ave	2.027	1.985		0.00980	0.0100	-2.0	20.0
1,4-Dichlorobenzene	Ave	1.985	1.988		0.0100	0.0100	0.2	20.0
n-Butylbenzene	Ave	5.454	5.468		0.0100	0.0100	0.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-437429/19 Calibration Date: 11/13/2018 17:26

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75375.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.555	1.552		0.00998	0.0100	-0.2	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0543		0.00969	0.0100	-3.1	20.0
1,2,4-Trichlorobenzene	Ave	0.9698	0.9813		0.0101	0.0100	1.2	20.0
Hexachlorobutadiene	Ave	0.9619	0.9626		0.0100	0.0100	0.0	20.0
Naphthalene	Ave	1.079	1.117		0.0104	0.0100	3.5	20.0
1,2,3-Trichlorobenzene	Ave	0.6831	0.7112		0.0104	0.0100	4.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75375.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 13-Nov-2018 17:26:30 ALS Bottle#: 9 Worklist Smp#: 19
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: meierg Instrument ID: VMS_Q
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 11:04:25 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.878	-0.006	0	267200	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.802	-0.007	100	3335618	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.033	10.033	0.000	98	630712	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.870	11.863	0.007	97	833809	12.5	12.5	
23 Dichlorodifluoromethane	85	4.198	4.198	0.000	100	1201541	10.0	9.00	
26 Chloromethane	50	4.449	4.448	0.001	99	676433	10.0	9.35	
27 Vinyl chloride	62	4.577	4.570	0.007	98	751119	10.0	9.29	
29 Bromomethane	94	4.906	4.906	0.000	91	593547	10.0	9.45	
30 Chloroethane	64	4.963	4.970	-0.007	100	375552	10.0	9.88	
31 Dichlorofluoromethane	67	5.099	5.099	0.000	96	1259693	10.0	10.4	
32 Trichlorofluoromethane	101	5.221	5.178	0.043	97	1742039	10.0	10.0	
35 Ethyl ether	59	5.357	5.356	0.001	96	359046	10.0	10.3	
39 Acrolein	56	5.500	5.507	-0.006	99	277796	100.0	101.4	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.607	0.000	96	660054	10.0	10.2	
41 Acetone	43	5.607	5.607	0.000	47	197185	40.0	32.8	
43 1,1-Dichloroethene	96	5.628	5.635	-0.007	95	815460	10.0	9.87	
44 Iodomethane	142	5.807	5.807	0.000	98	1179792	10.0	10.2	
45 Methyl acetate	43	5.829	5.828	0.001	98	289755	20.0	18.3	
47 3-Chloro-1-propene	41	5.879	5.885	-0.006	86	1578694	10.0	9.50	
48 Carbon disulfide	76	5.907	5.907	0.000	99	3400604	10.0	9.65	
49 2-Methyl-2-propanol	59	5.936	5.936	0.000	92	158176	100.0	90.4	
50 Methylene Chloride	84	5.972	5.971	0.001	97	644823	10.0	9.09	
52 Acrylonitrile	53	6.129	6.129	0.000	98	632282	100.0	95.8	
51 Methyl tert-butyl ether	73	6.158	6.157	0.001	97	827118	10.0	9.71	
53 trans-1,2-Dichloroethene	96	6.193	6.193	0.000	95	905345	10.0	9.86	
54 Hexane	57	6.351	6.350	0.001	95	1728680	10.0	9.50	
55 Vinyl acetate	43	6.436	6.436	0.000	97	1343515	20.0	20.1	
57 1,1-Dichloroethane	63	6.501	6.508	-0.007	96	1672501	10.0	9.55	
61 2-Butanone (MEK)	43	6.880	6.879	0.001	100	390659	40.0	38.0	
62 sec-Butyl Alcohol	45	6.923	6.922	0.001	99	360900	300.0	262.9	
63 cis-1,2-Dichloroethene	96	6.930	6.929	0.001	84	883819	10.0	9.98	
64 2,2-Dichloropropane	77	6.965	6.965	0.000	87	1322529	10.0	9.44	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.123	7.122	0.001	94	255569	10.0	10.3	
68 Chloroform	83	7.130	7.130	0.000	93	1563478	10.0	9.95	
69 Tetrahydrofuran	42	7.166	7.165	0.001	95	103703	20.0	18.0	
70 Isobutyl alcohol	41	7.330	7.330	0.000	94	103208	250.0	222.2	
71 1,1,1-Trichloroethane	97	7.352	7.351	0.001	98	1513533	10.0	9.92	
72 Cyclohexane	56	7.430	7.430	0.000	94	1700397	10.0	9.62	
73 1,1-Dichloropropene	75	7.452	7.451	0.001	95	1504737	10.0	9.83	
74 Carbon tetrachloride	117	7.495	7.494	0.001	97	1342293	10.0	9.68	
76 1,2-Dichloroethane	62	7.602	7.601	0.001	98	751187	10.0	9.51	
77 Benzene	78	7.630	7.630	0.000	97	3475211	10.0	9.97	
14 n-Heptane	43	7.702	7.702	0.000	94	1856099	10.0	9.19	
79 Trichloroethene	95	8.081	8.081	0.000	95	990115	10.0	9.87	
80 2-Pentanone	43	8.117	8.123	-0.006	98	556684	40.0	36.9	
83 1,2-Dichloropropane	63	8.260	8.259	0.001	94	772037	10.0	10.1	
82 Methylcyclohexane	55	8.274	8.274	0.000	95	1403582	10.0	9.27	
84 1,4-Dioxane	88	8.317	8.317	0.001	89	34272	200.0	181.5	
85 Dibromomethane	93	8.360	8.359	0.001	90	254119	10.0	9.60	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	906849	10.0	9.79	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	92	104013	10.0	8.51	
89 cis-1,3-Dichloropropene	75	8.732	8.738	-0.006	94	1023271	10.0	10.8	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.788	0.001	0	816714	40.0	38.6	
91 Toluene	91	9.010	9.010	0.000	98	3522891	10.0	10.2	
92 Ethyl methacrylate	69	9.089	9.089	0.000	90	328073	10.0	9.94	
93 trans-1,3-Dichloropropene	75	9.103	9.103	0.000	98	686343	10.0	10.4	
94 1,1,2-Trichloroethane	97	9.261	9.260	0.001	92	338535	10.0	10.3	
95 2-Hexanone	43	9.375	9.375	0.000	96	496498	40.0	38.9	
96 1,3-Dichloropropane	76	9.397	9.396	0.001	94	634761	10.0	10.0	
97 Tetrachloroethene	164	9.425	9.425	0.000	91	707613	10.0	10.0	
98 Chlorodibromomethane	129	9.590	9.589	0.001	90	431178	10.0	10.6	
100 Ethylene Dibromide	107	9.718	9.718	0.000	98	306696	10.0	10.3	
101 1-Chlorohexane	91	9.940	9.940	0.000	96	1376642	10.0	10.2	
102 Chlorobenzene	112	10.054	10.054	0.000	94	1897391	10.0	9.98	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	93	633636	10.0	10.4	
103 Ethylbenzene	106	10.090	10.090	0.000	99	1219378	10.0	10.1	
105 m-Xylene & p-Xylene	106	10.162	10.161	0.001	0	1478764	10.0	10.5	
107 o-Xylene	106	10.483	10.483	0.000	90	1294678	10.0	10.1	
106 Styrene	104	10.483	10.483	0.000	83	1810583	10.0	10.4	
108 Bromoform	173	10.684	10.683	0.001	93	179240	10.0	10.1	
109 Isopropylbenzene	105	10.741	10.740	0.001	97	3894749	10.0	10.4	
111 Cyclohexanone	55	10.877	10.876	0.001	98	228309	400.0	354.9	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.941	0.000	92	307427	10.0	9.88	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.976	0.001	90	59896	10.0	8.88	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	87	79463	10.0	10.4	
115 N-Propylbenzene	120	11.063	11.062	0.001	99	1050059	10.0	9.99	
116 Bromobenzene	156	11.070	11.069	0.001	96	637213	10.0	10.0	
117 1,3,5-Trimethylbenzene	105	11.170	11.169	0.001	95	3068148	10.0	10.1	
118 2-Chlorotoluene	126	11.191	11.184	0.007	95	817108	10.0	9.99	
119 4-Chlorotoluene	126	11.270	11.262	0.008	99	812404	10.0	9.95	
120 tert-Butylbenzene	119	11.470	11.470	0.000	93	3235823	10.0	10.3	
121 1,2,4-Trimethylbenzene	105	11.506	11.498	0.008	99	2945153	10.0	9.90	
122 sec-Butylbenzene	134	11.656	11.656	0.000	96	845740	10.0	10.2	
123 4-Isopropyltoluene	119	11.749	11.741	0.008	96	3471146	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	96	1324408	10.0	9.80	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	92	1326364	10.0	10.0	
127 n-Butylbenzene	91	12.121	12.113	0.008	99	3647665	10.0	10.0	
128 1,2-Dichlorobenzene	146	12.257	12.256	0.001	95	1034988	10.0	9.98	
129 1,2-Dibromo-3-Chloropropan	157	13.015	13.014	0.000	77	36213	10.0	9.69	
130 1,2,4-Trichlorobenzene	180	13.987	13.979	0.008	94	654559	10.0	10.1	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	97	642126	10.0	10.0	
132 Naphthalene	128	14.359	14.358	0.001	98	744936	10.0	10.4	
133 1,2,3-Trichlorobenzene	180	14.688	14.680	0.008	94	474395	10.0	10.4	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.8	
S 139 Xylenes, Total	106				0		20.0	20.7	
S 137 1,3-Dichloropropene, Total	1				0		20.0	21.2	
S 135 Xylenes, Total (URS)	1				0		20.0	20.7	
S 134 Trihalomethanes, Total	1				0		40.0	40.5	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.8	

Reagents:

MV-568718-D_00008 Amount Added: 1.00 Units: uL
MV-MegaMain B_00004 Amount Added: 4.00 Units: uL

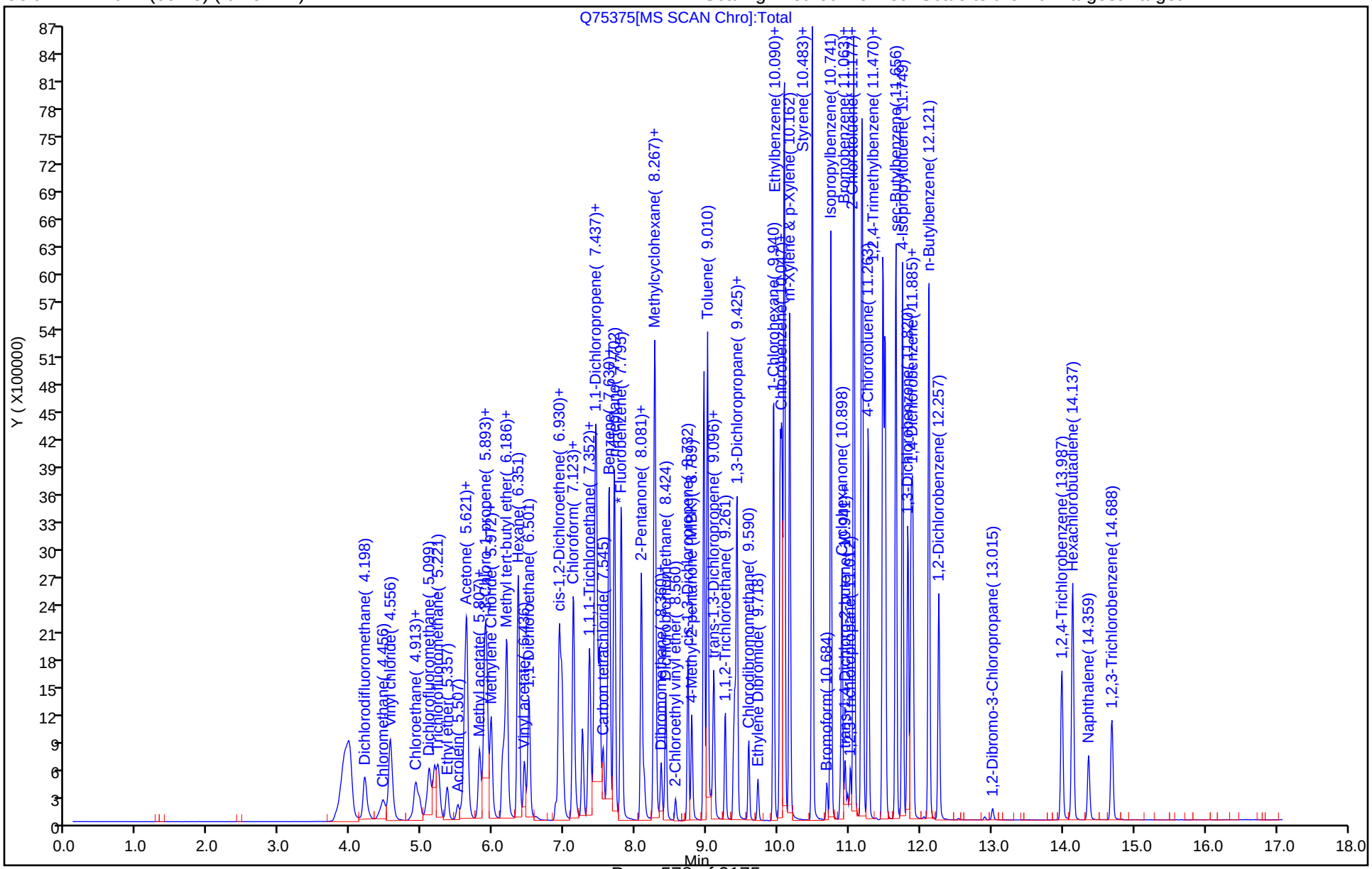
Report Date: 14-Nov-2018 11:04:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75375.D

Injection Date:	13-Nov-2018 17:26:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ICV			Worklist Smp#:	19
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/2 Calibration Date: 11/23/2018 12:04

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75607.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5005	0.3572		0.00714	0.0100	-28.6*	20.0
Chloromethane	Lin1		0.2583	0.1000	0.00952	0.0100	-4.8	20.0
Vinyl chloride	Ave	0.3028	0.2973		0.00982	0.0100	-1.8	20.0
Bromomethane	Ave	0.2355	0.2582		0.0110	0.0100	9.6	20.0
Chloroethane	Ave	0.1424	0.1522		0.0107	0.0100	6.9	20.0
Dichlorofluoromethane	Ave	0.4541	0.5058		0.0111	0.0100	11.4	20.0
Trichlorofluoromethane	Ave	0.6507	0.7155		0.0110	0.0100	9.9	20.0
Ethyl ether	Ave	0.1304	0.1193		0.00915	0.0100	-8.5	20.0
Acrolein	Ave	0.0103	0.0088		0.0857	0.100	-14.3	20.0
Acetone	Lin		0.0197		0.0352	0.0400	-12.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2421	0.2738		0.0113	0.0100	13.1	20.0
1,1-Dichloroethene	Ave	0.3098	0.2999		0.00968	0.0100	-3.2	20.0
Iodomethane	Ave	0.4345	0.4476		0.0103	0.0100	3.0	20.0
Methyl acetate	Ave	0.0594	0.0492		0.0166	0.0200	-17.2	20.0
3-Chloro-1-propene	Ave	0.6228	0.5198		0.00835	0.0100	-16.5	20.0
Carbon disulfide	Ave	1.321	1.279		0.00968	0.0100	-3.2	20.0
t-Butyl alcohol	Ave	1.638	1.502		0.0917	0.100	-8.3	35.0
Methylene Chloride	Ave	0.2659	0.2332		0.00877	0.0100	-12.3	20.0
Acrylonitrile	Lin2		0.0209		0.0850	0.100	-15.0	20.0
Methyl tert-butyl ether	Ave	0.3191	0.3098		0.00971	0.0100	-2.9	20.0
trans-1,2-Dichloroethene	Ave	0.3442	0.3225		0.00937	0.0100	-6.3	20.0
Hexane	Ave	3.608	3.253		0.00902	0.0100	-9.8	20.0
Vinyl acetate	Ave	0.2511	0.2322		0.0185	0.0200	-7.5	20.0
1,1-Dichloroethane	Ave	0.6562	0.6071	0.1000	0.00925	0.0100	-7.5	20.0
2-Butanone (MEK)	Ave	0.0385	0.0324		0.0336	0.0400	-15.9	20.0
cis-1,2-Dichloroethene	Ave	0.3320	0.3228		0.00972	0.0100	-2.8	20.0
2,2-Dichloropropane	Ave	0.5250	0.5669		0.0108	0.0100	8.0	20.0
Bromochloromethane	Ave	0.0928	0.0916		0.00987	0.0100	-1.3	20.0
Chloroform	Ave	0.5889	0.5911		0.0100	0.0100	0.4	20.0
Tetrahydrofuran	Ave	0.0216	0.0179		0.0165	0.0200	-17.4	20.0
Isobutyl alcohol	Ave	0.4346	0.3260		0.188	0.250	-25.0*	20.0
1,1,1-Trichloroethane	Ave	0.5720	0.6117		0.0107	0.0100	6.9	20.0
Cyclohexane	Ave	0.6625	0.6534		0.00986	0.0100	-1.4	20.0
1,1-Dichloropropene	Ave	0.5736	0.5949		0.0104	0.0100	3.7	20.0
Carbon tetrachloride	Ave	0.5195	0.5485		0.0106	0.0100	5.6	20.0
1,2-Dichloroethane	Ave	0.2960	0.2872		0.00970	0.0100	-3.0	20.0
Benzene	Ave	1.307	1.320		0.0101	0.0100	1.0	20.0
Trichloroethene	Ave	0.3760	0.3982		0.0106	0.0100	5.9	20.0
2-Pentanone	Lin2		0.0438		0.0311	0.0400	-22.2*	20.0
1,2-Dichloropropane	Ave	0.2876	0.2891		0.0100	0.0100	0.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/2 Calibration Date: 11/23/2018 12:04

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75607.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5675	0.5587		0.00985	0.0100	-1.5	20.0
1,4-Dioxane	Lin2		0.0007		0.184	0.200	-7.9	20.0
Dibromomethane	Ave	0.0992	0.1011		0.0102	0.0100	1.9	20.0
Bromodichloromethane	Ave	0.3472	0.3668		0.0106	0.0100	5.7	20.0
2-Chloroethyl vinyl ether	Lin1		0.0247		0.00554	0.0100	-44.6*	20.0
cis-1,3-Dichloropropene	Ave	1.872	1.870		0.00999	0.0100	-0.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0792	0.0644		0.0325	0.0400	-18.7	20.0
Toluene	Ave	1.291	1.361		0.0105	0.0100	5.4	20.0
Ethyl methacrylate	Lin2		0.4692		0.00723	0.0100	-27.7*	20.0
trans-1,3-Dichloropropene	Ave	0.2476	0.2558		0.0103	0.0100	3.3	20.0
1,1,2-Trichloroethane	Ave	0.1232	0.1239		0.0101	0.0100	0.6	20.0
2-Hexanone	Ave	0.2530	0.2074		0.0328	0.0400	-18.0	20.0
1,3-Dichloropropane	Ave	1.253	1.174		0.00937	0.0100	-6.3	20.0
Tetrachloroethene	Ave	1.400	1.488		0.0106	0.0100	6.3	20.0
Dibromochloromethane	Ave	0.8078	0.8196		0.0101	0.0100	1.5	20.0
1,2-Dibromoethane (EDB)	Ave	0.5876	0.5676		0.00966	0.0100	-3.4	20.0
1-Chlorohexane	Ave	2.674	2.704		0.0101	0.0100	1.1	20.0
Chlorobenzene	Ave	3.768	3.683	0.3000	0.00977	0.0100	-2.3	20.0
1,1,1,2-Tetrachloroethane	Ave	1.204	1.274		0.0106	0.0100	5.8	20.0
Ethylbenzene	Ave	2.384	2.460		0.0103	0.0100	3.2	20.0
m-Xylene & p-Xylene	Ave	2.790	2.878		0.0103	0.0100	3.1	20.0
o-Xylene	Ave	2.528	2.579		0.0102	0.0100	2.0	20.0
Styrene	Ave	3.439	3.346		0.00973	0.0100	-2.7	20.0
Bromoform	Lin2		0.3477	0.1000	0.00993	0.0100	-0.7	20.0
Isopropylbenzene	Ave	5.637	5.375		0.00954	0.0100	-4.6	20.0
Cyclohexanone	Ave	0.0128	0.0162		0.509	0.400	27.3*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4664	0.3995	0.3000	0.00857	0.0100	-14.3	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.0665		0.00669	0.0100	-33.1*	20.0
1,2,3-Trichloropropane	Ave	0.1145	0.1038		0.00906	0.0100	-9.4	20.0
Bromobenzene	Ave	0.9515	0.8958		0.00941	0.0100	-5.9	20.0
N-Propylbenzene	Ave	1.576	1.469		0.00932	0.0100	-6.8	20.0
1,3,5-Trimethylbenzene	Ave	4.556	4.251		0.00933	0.0100	-6.7	20.0
2-Chlorotoluene	Ave	1.227	1.145		0.00933	0.0100	-6.7	20.0
4-Chlorotoluene	Ave	1.225	1.112		0.00908	0.0100	-9.2	20.0
tert-Butylbenzene	Ave	4.722	4.331		0.00917	0.0100	-8.3	20.0
1,2,4-Trimethylbenzene	Ave	4.460	4.120		0.00924	0.0100	-7.6	20.0
sec-Butylbenzene	Ave	1.244	1.193		0.00959	0.0100	-4.1	20.0
4-Isopropyltoluene	Ave	5.085	4.983		0.00980	0.0100	-2.0	20.0
1,3-Dichlorobenzene	Ave	2.027	1.904		0.00939	0.0100	-6.1	20.0
1,4-Dichlorobenzene	Ave	1.985	1.866		0.00940	0.0100	-6.0	20.0
n-Butylbenzene	Ave	5.454	5.387		0.00988	0.0100	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/2 Calibration Date: 11/23/2018 12:04

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75607.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.555	1.431		0.00920	0.0100	-8.0	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0505		0.00904	0.0100	-9.6	20.0
1,2,4-Trichlorobenzene	Ave	0.9698	0.9231		0.00952	0.0100	-4.8	20.0
Hexachlorobutadiene	Ave	0.9619	0.9626		0.0100	0.0100	0.0	20.0
Naphthalene	Ave	1.079	0.9660		0.00895	0.0100	-10.5	20.0
1,2,3-Trichlorobenzene	Ave	0.6831	0.6202		0.00908	0.0100	-9.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75607.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 12:04:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub103

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:27 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.861	5.861	0.000	0	244850	250.0	250.0	
* 1 Fluorobenzene	96	7.792	7.792	0.000	100	3409973	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.022	10.022	0.000	98	669368	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.867	11.867	0.000	98	980217	12.5	12.5	
23 Dichlorodifluoromethane	85	4.188	4.188	0.000	99	974313	10.0	7.14	
26 Chloromethane	50	4.438	4.438	0.000	98	704492	10.0	9.52	
27 Vinyl chloride	62	4.553	4.553	0.000	98	810939	10.0	9.82	
29 Bromomethane	94	4.896	4.896	0.000	92	704293	10.0	11.0	
30 Chloroethane	64	4.953	4.953	0.000	99	415147	10.0	10.7	
31 Dichlorofluoromethane	67	5.089	5.089	0.000	96	1379793	10.0	11.1	
32 Trichlorofluoromethane	101	5.167	5.167	0.000	98	1951756	10.0	11.0	
35 Ethyl ether	59	5.346	5.346	0.000	95	325303	10.0	9.15	
39 Acrolein	56	5.496	5.496	0.000	99	240161	100.0	85.7	
41 Acetone	43	5.589	5.589	0.000	37	215431	40.0	35.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.596	5.596	0.000	96	746914	10.0	11.3	
43 1,1-Dichloroethene	96	5.618	5.618	0.000	95	818130	10.0	9.68	
44 Iodomethane	142	5.797	5.797	0.000	98	1220964	10.0	10.3	
45 Methyl acetate	43	5.818	5.818	0.000	98	268412	20.0	16.6	
47 3-Chloro-1-propene	41	5.868	5.868	0.000	82	1418046	10.0	8.35	
48 Carbon disulfide	76	5.897	5.897	0.000	99	3487911	10.0	9.68	
49 2-Methyl-2-propanol	59	5.933	5.933	0.000	93	147071	100.0	91.7	
50 Methylene Chloride	84	5.961	5.961	0.000	95	636101	10.0	8.77	
52 Acrylonitrile	53	6.118	6.118	0.000	98	571163	100.0	85.0	
51 Methyl tert-butyl ether	73	6.147	6.147	0.000	96	845113	10.0	9.71	
53 trans-1,2-Dichloroethene	96	6.183	6.183	0.000	96	879652	10.0	9.37	
54 Hexane	57	6.340	6.340	0.000	94	1741831	10.0	9.02	
55 Vinyl acetate	43	6.426	6.426	0.000	97	1266612	20.0	18.5	
57 1,1-Dichloroethane	63	6.490	6.490	0.000	96	1656124	10.0	9.25	
61 2-Butanone (MEK)	43	6.869	6.869	0.000	100	353600	40.0	33.6	
62 sec-Butyl Alcohol	45		6.923				ND	ND	
63 cis-1,2-Dichloroethene	96	6.919	6.919	0.000	81	880528	10.0	9.72	
64 2,2-Dichloropropane	77	6.955	6.955	0.000	86	1546489	10.0	10.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 Chlorobromomethane	128	7.112	7.112	0.000	96	249882	10.0	9.87	
68 Chloroform	83	7.119	7.119	0.000	93	1612411	10.0	10.0	
69 Tetrahydrofuran	42	7.155	7.155	0.000	97	97369	20.0	16.5	
70 Isobutyl alcohol	41	7.327	7.327	0.000	91	79815	250.0	187.5	
71 1,1,1-Trichloroethane	97	7.348	7.348	0.000	98	1668576	10.0	10.7	
72 Cyclohexane	56	7.420	7.420	0.000	91	1782399	10.0	9.86	
73 1,1-Dichloropropene	75	7.441	7.441	0.000	95	1622831	10.0	10.4	
74 Carbon tetrachloride	117	7.484	7.484	0.000	97	1496373	10.0	10.6	
76 1,2-Dichloroethane	62	7.591	7.591	0.000	98	783492	10.0	9.70	
77 Benzene	78	7.620	7.620	0.000	97	3601548	10.0	10.1	
14 n-Heptane	43	7.691	7.691	0.000	92	1915832	10.0	9.28	
79 Trichloroethene	95	8.070	8.070	0.000	95	1086247	10.0	10.6	
80 2-Pentanone	43	8.113	8.113	0.000	99	478166	40.0	31.1	
83 1,2-Dichloropropane	63	8.249	8.249	0.000	94	788539	10.0	10.0	
82 Methylcyclohexane	55	8.263	8.263	0.000	95	1524138	10.0	9.85	
84 1,4-Dioxane	88	8.306	8.306	0.000	86	35554	200.0	184.1	
85 Dibromomethane	93	8.349	8.349	0.000	90	275767	10.0	10.2	
86 Dichlorobromomethane	83	8.414	8.414	0.000	99	1000732	10.0	10.6	
87 2-Chloroethyl vinyl ether	63	8.557	8.557	0.000	92	67338	10.0	5.54	
89 cis-1,3-Dichloropropene	75	8.728	8.728	0.000	94	1001132	10.0	9.99	
90 4-Methyl-2-pentanone (MIBK	43	8.785	8.785	0.000	0	702655	40.0	32.5	
91 Toluene	91	9.000	9.000	0.000	98	3711877	10.0	10.5	
92 Ethyl methacrylate	69	9.079	9.079	0.000	89	251259	10.0	7.23	
93 trans-1,3-Dichloropropene	75	9.093	9.093	0.000	96	697862	10.0	10.3	
94 1,1,2-Trichloroethane	97	9.250	9.250	0.000	92	338078	10.0	10.1	
95 2-Hexanone	43	9.372	9.372	0.000	96	444205	40.0	32.8	
96 1,3-Dichloropropane	76	9.386	9.386	0.000	93	628787	10.0	9.37	
97 Tetrachloroethene	164	9.415	9.415	0.000	92	796980	10.0	10.6	
98 Chlorodibromomethane	129	9.579	9.579	0.000	90	438885	10.0	10.1	
100 Ethylene Dibromide	107	9.708	9.708	0.000	98	303954	10.0	9.66	
101 1-Chlorohexane	91	9.929	9.929	0.000	98	1447883	10.0	10.1	
102 Chlorobenzene	112	10.051	10.051	0.000	93	1971967	10.0	9.77	
104 1,1,1,2-Tetrachloroethane	131	10.080	10.080	0.000	93	682022	10.0	10.6	
103 Ethylbenzene	106	10.080	10.080	0.000	99	1317545	10.0	10.3	
105 m-Xylene & p-Xylene	106	10.158	10.158	0.000	0	1540944	10.0	10.3	
107 o-Xylene	106	10.473	10.473	0.000	91	1381210	10.0	10.2	
106 Styrene	104	10.473	10.473	0.000	81	1791785	10.0	9.73	
108 Bromoform	173	10.680	10.680	0.000	94	186168	10.0	9.93	
109 Isopropylbenzene	105	10.737	10.737	0.000	97	4214849	10.0	9.54	
111 Cyclohexanone	55	10.873	10.873	0.000	99	347569	400.0	509.1	
112 1,1,2,2-Tetrachloroethane	83	10.938	10.938	0.000	94	313289	10.0	8.57	
113 trans-1,4-Dichloro-2-buten	53	10.973	10.973	0.000	87	52147	10.0	6.69	
114 1,2,3-Trichloropropane	110	11.009	11.009	0.000	86	81368	10.0	9.06	
116 Bromobenzene	156	11.059	11.059	0.000	96	702471	10.0	9.41	
115 N-Propylbenzene	120	11.059	11.059	0.000	99	1151702	10.0	9.32	
117 1,3,5-Trimethylbenzene	105	11.166	11.166	0.000	94	3333901	10.0	9.33	
118 2-Chlorotoluene	126	11.181	11.181	0.000	95	897589	10.0	9.33	
119 4-Chlorotoluene	126	11.259	11.259	0.000	99	871850	10.0	9.08	
120 tert-Butylbenzene	119	11.467	11.467	0.000	91	3396533	10.0	9.17	
121 1,2,4-Trimethylbenzene	105	11.495	11.495	0.000	98	3230774	10.0	9.24	
122 sec-Butylbenzene	134	11.653	11.653	0.000	96	935892	10.0	9.59	
123 4-Isopropyltoluene	119	11.746	11.746	0.000	96	3907332	10.0	9.80	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,3-Dichlorobenzene	146	11.817	11.817	0.000	96	1492848	10.0	9.39	
126 1,4-Dichlorobenzene	146	11.889	11.889	0.000	95	1463444	10.0	9.40	
127 n-Butylbenzene	91	12.110	12.110	0.000	98	4224601	10.0	9.88	
128 1,2-Dichlorobenzene	146	12.253	12.253	0.000	96	1122366	10.0	9.20	
129 1,2-Dibromo-3-Chloropropan	157	13.004	13.004	0.000	80	39605	10.0	9.04	
130 1,2,4-Trichlorobenzene	180	13.984	13.984	0.000	94	723884	10.0	9.52	
131 Hexachlorobutadiene	225	14.134	14.134	0.000	97	754865	10.0	10.0	
132 Naphthalene	128	14.355	14.355	0.000	97	757490	10.0	8.95	
133 1,2,3-Trichlorobenzene	180	14.684	14.684	0.000	94	486371	10.0	9.08	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.1	
S 139 Xylenes, Total	106				0		20.0	20.5	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.3	
S 135 Xylenes, Total (URS)	1				0		20.0	20.5	
S 134 Trihalomethanes, Total	1				0		40.0	40.7	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-MegaMainA_00007	Amount Added:	4.00	Units: uL
MV-568718-D_00008	Amount Added:	1.00	Units: uL

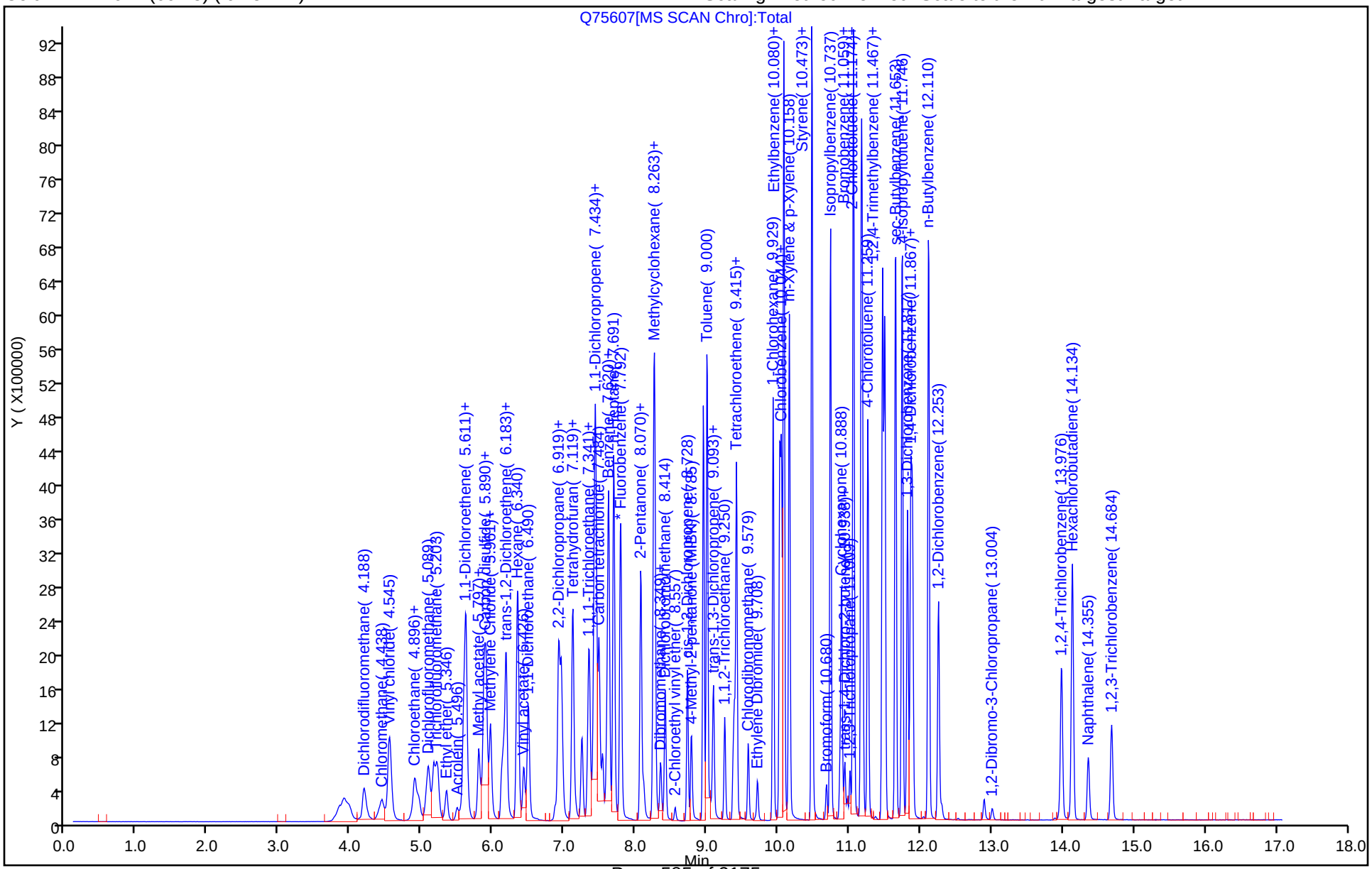
Report Date: 24-Nov-2018 09:05:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75607.D

Injection Date:	23-Nov-2018 12:04:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/3 Calibration Date: 11/23/2018 12:25

Instrument ID: VMS_Q Calib Start Date: 06/22/2017 02:52

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 06/22/2017 04:37

Lab File ID: Q75608.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butanol	Ave	0.3936	0.1166			0.250	-70.4*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 12:25:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:30 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 12:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.865	5.865	0.000	0	266689	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3669654	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	99	693877	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.864	11.864	0.000	99	959839	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.252	0.000	92	774732	13.5	11.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	639991	13.5	11.7	
$ 7 Toluene-d8 (Surr)	98	8.954	8.954	0.000	100	3244785	13.5	13.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	941933	13.5	12.2	
28 Ethylene oxide	43	4.835	4.835	0.000	0	272744	1000.0	1403.1	
33 Ethanol	45	5.221	5.221	0.000	0	119790	600.0	0	
38 Propene oxide	58	5.450	5.450	0.000	0	2870678	1000.0	978.0	
42 Isopropyl alcohol	45	5.615	5.615	0.000	99	85893	100.0	97.1	
46 Acetonitrile	41	5.865	5.865	0.000	0	123414	100.0	73.3	
56 Isopropyl ether	87	6.451	6.451	0.000	0	477331	10.0	10.1	
58 2-Chloro-1,3-butadiene	53	6.566	6.566	0.000	0	1819035	10.0	12.5	
59 Tert-butyl ethyl ether	59	6.730	6.730	0.000	0	1443731	10.0	9.95	
60 Ethyl acetate	43	6.859	6.859	0.000	0	419003	20.0	22.0	
65 Propionitrile	54	6.937	6.937	0.000	0	157982	100.0	78.4	
66 Methacrylonitrile	41	7.052	7.052	0.000	0	1367771	100.0	94.4	
75 Tert-amyl methyl ether	73	7.610	7.610	0.000	0	1073830	10.0	9.88	
78 n-Butanol	56	7.795	7.795	0.000	100	31094	250.0	0	
81 Methyl methacrylate	100	8.203	8.203	0.000	0	100892	20.0	19.1	
88 2-Nitropropane	41	8.553	8.553	0.000	0	82763	20.0	21.0	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	6526	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.763	10.763	0.000	0	69452	20.0	19.8	
125 1,2,3-Trimethylbenzene	105	11.885	11.885	0.000	0	2898854	10.0	12.0	
16 1,3,5-Trichlorobenzene	180	13.230	13.230	0.000	0	1129784	10.0	13.7	

Reagents:

MV-Supp A_00033	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

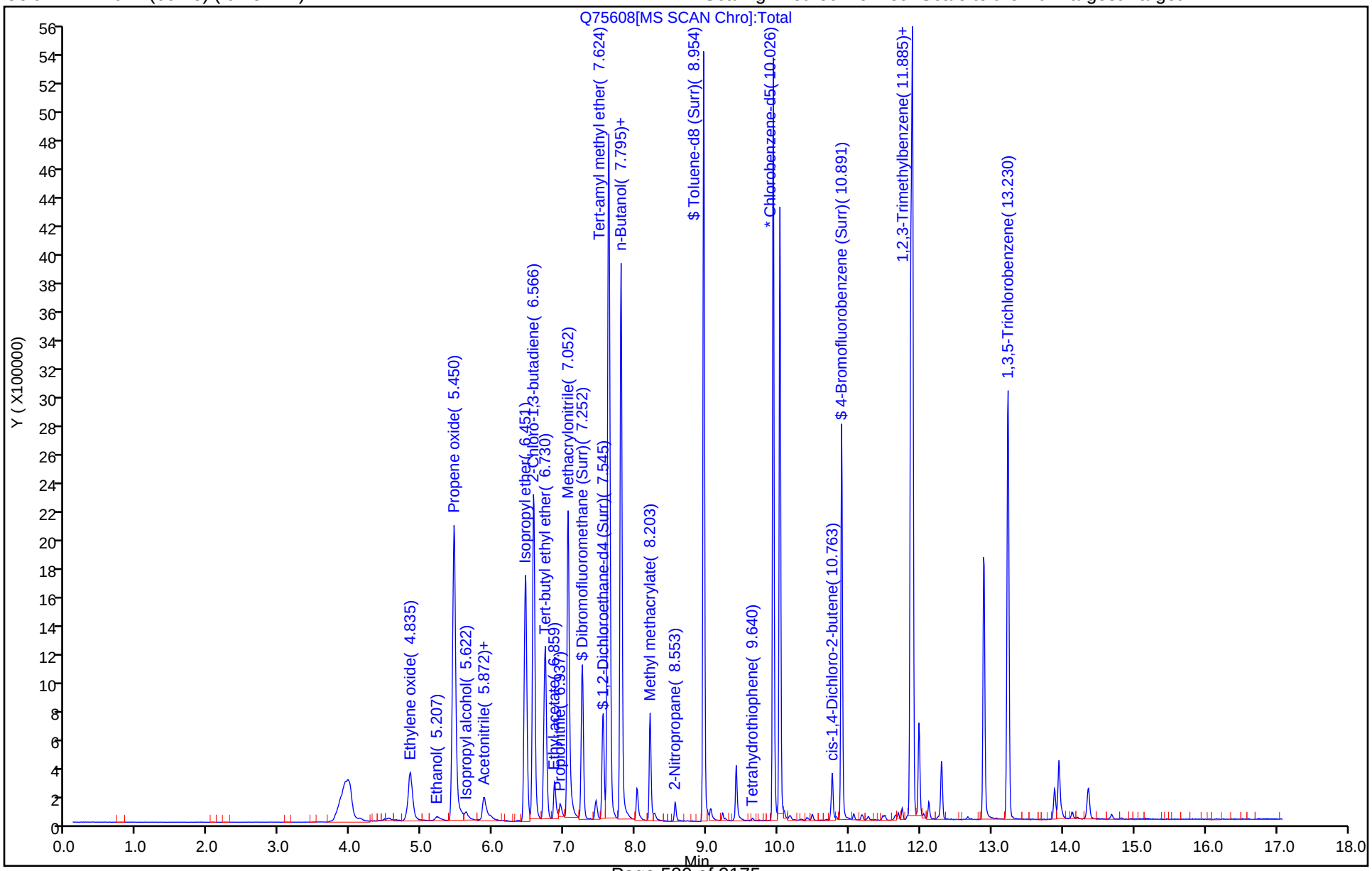
Report Date: 24-Nov-2018 09:05:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D

Injection Date:	23-Nov-2018 12:25:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/3 Calibration Date: 11/23/2018 12:25

Instrument ID: VMS_Q Calib Start Date: 08/29/2018 22:06

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/30/2018 00:00

Lab File ID: Q75608.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.1353	0.1872			0.600	38.3*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 12:25:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:30 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 12:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.865	5.865	0.000	0	266689	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3669654	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	99	693877	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.864	11.864	0.000	99	959839	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.252	0.000	92	774732	13.5	11.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	639991	13.5	11.7	
$ 7 Toluene-d8 (Surr)	98	8.954	8.954	0.000	100	3244785	13.5	13.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	941933	13.5	12.2	
28 Ethylene oxide	43	4.835	4.835	0.000	0	272744	1000.0	1403.1	
33 Ethanol	45	5.221	5.221	0.000	0	119790	600.0	0	
38 Propene oxide	58	5.450	5.450	0.000	0	2870678	1000.0	978.0	
42 Isopropyl alcohol	45	5.615	5.615	0.000	99	85893	100.0	97.1	
46 Acetonitrile	41	5.865	5.865	0.000	0	123414	100.0	73.3	
56 Isopropyl ether	87	6.451	6.451	0.000	0	477331	10.0	10.1	
58 2-Chloro-1,3-butadiene	53	6.566	6.566	0.000	0	1819035	10.0	12.5	
59 Tert-butyl ethyl ether	59	6.730	6.730	0.000	0	1443731	10.0	9.95	
60 Ethyl acetate	43	6.859	6.859	0.000	0	419003	20.0	22.0	
65 Propionitrile	54	6.937	6.937	0.000	0	157982	100.0	78.4	
66 Methacrylonitrile	41	7.052	7.052	0.000	0	1367771	100.0	94.4	
75 Tert-amyl methyl ether	73	7.610	7.610	0.000	0	1073830	10.0	9.88	
78 n-Butanol	56	7.795	7.795	0.000	100	31094	250.0	0	
81 Methyl methacrylate	100	8.203	8.203	0.000	0	100892	20.0	19.1	
88 2-Nitropropane	41	8.553	8.553	0.000	0	82763	20.0	21.0	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	6526	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.763	10.763	0.000	0	69452	20.0	19.8	
125 1,2,3-Trimethylbenzene	105	11.885	11.885	0.000	0	2898854	10.0	12.0	
16 1,3,5-Trichlorobenzene	180	13.230	13.230	0.000	0	1129784	10.0	13.7	

Reagents:

MV-Supp A_00033	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

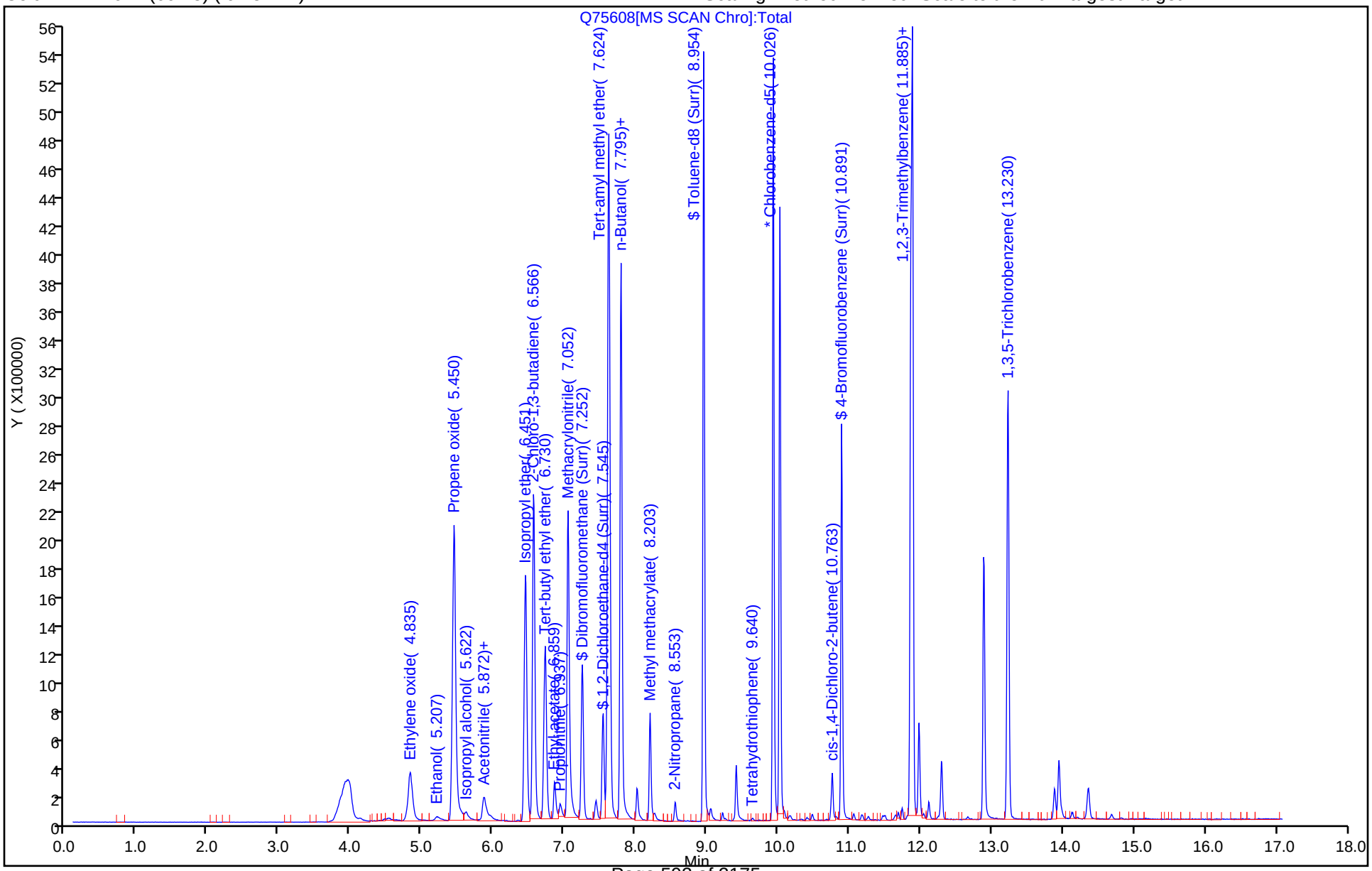
Report Date: 24-Nov-2018 09:05:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D

Injection Date:	23-Nov-2018 12:25:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/3 Calibration Date: 11/23/2018 12:25

Instrument ID: VMS_Q Calib Start Date: 10/20/2018 13:58

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/20/2018 15:41

Lab File ID: Q75608.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Ave	0.8295	0.8052		0.0971	0.100	-2.9	20.0
Acetonitrile	Lin		0.0042		0.0733	0.100	-26.7*	20.0
Isopropyl ether	Ave	0.1613	0.1626		0.0101	0.0100	0.8	20.0
2-Chloro-1,3-butadiene	Ave	0.4964	0.6196		0.0125	0.0100	24.8*	20.0
Tert-butyl ethyl ether	Ave	0.4941	0.4918		0.00995	0.0100	-0.5	20.0
Ethyl acetate	Lin2		0.0714		0.0220	0.0200	10.1	20.0
Propionitrile	Lin1		0.0054		0.0784	0.100	-21.6*	20.0
Methacrylonitrile	Ave	0.0494	0.0466		0.0944	0.100	-5.6	20.0
Tert-amyl methyl ether	Ave	0.3701	0.3658		0.00988	0.0100	-1.2	20.0
Methyl methacrylate	Ave	0.0180	0.0172		0.0191	0.0200	-4.6	20.0
2-Nitropropane	Ave	0.0134	0.0141		0.0210	0.0200	5.1	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0458	0.0452		0.0198	0.0200	-1.2	20.0
1,2,3-Trimethylbenzene	Ave	3.133	3.775		0.0120	0.0100	20.5*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 12:25:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:30 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 12:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.865	5.865	0.000	0	266689	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3669654	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	99	693877	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.864	11.864	0.000	99	959839	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.252	0.000	92	774732	13.5	11.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	639991	13.5	11.7	
$ 7 Toluene-d8 (Surr)	98	8.954	8.954	0.000	100	3244785	13.5	13.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	941933	13.5	12.2	
28 Ethylene oxide	43	4.835	4.835	0.000	0	272744	1000.0	1403.1	
33 Ethanol	45	5.221	5.221	0.000	0	119790	600.0	0	
38 Propene oxide	58	5.450	5.450	0.000	0	2870678	1000.0	978.0	
42 Isopropyl alcohol	45	5.615	5.615	0.000	99	85893	100.0	97.1	
46 Acetonitrile	41	5.865	5.865	0.000	0	123414	100.0	73.3	
56 Isopropyl ether	87	6.451	6.451	0.000	0	477331	10.0	10.1	
58 2-Chloro-1,3-butadiene	53	6.566	6.566	0.000	0	1819035	10.0	12.5	
59 Tert-butyl ethyl ether	59	6.730	6.730	0.000	0	1443731	10.0	9.95	
60 Ethyl acetate	43	6.859	6.859	0.000	0	419003	20.0	22.0	
65 Propionitrile	54	6.937	6.937	0.000	0	157982	100.0	78.4	
66 Methacrylonitrile	41	7.052	7.052	0.000	0	1367771	100.0	94.4	
75 Tert-amyl methyl ether	73	7.610	7.610	0.000	0	1073830	10.0	9.88	
78 n-Butanol	56	7.795	7.795	0.000	100	31094	250.0	0	
81 Methyl methacrylate	100	8.203	8.203	0.000	0	100892	20.0	19.1	
88 2-Nitropropane	41	8.553	8.553	0.000	0	82763	20.0	21.0	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	6526	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.763	10.763	0.000	0	69452	20.0	19.8	
125 1,2,3-Trimethylbenzene	105	11.885	11.885	0.000	0	2898854	10.0	12.0	
16 1,3,5-Trichlorobenzene	180	13.230	13.230	0.000	0	1129784	10.0	13.7	

Reagents:

MV-Supp A_00033	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

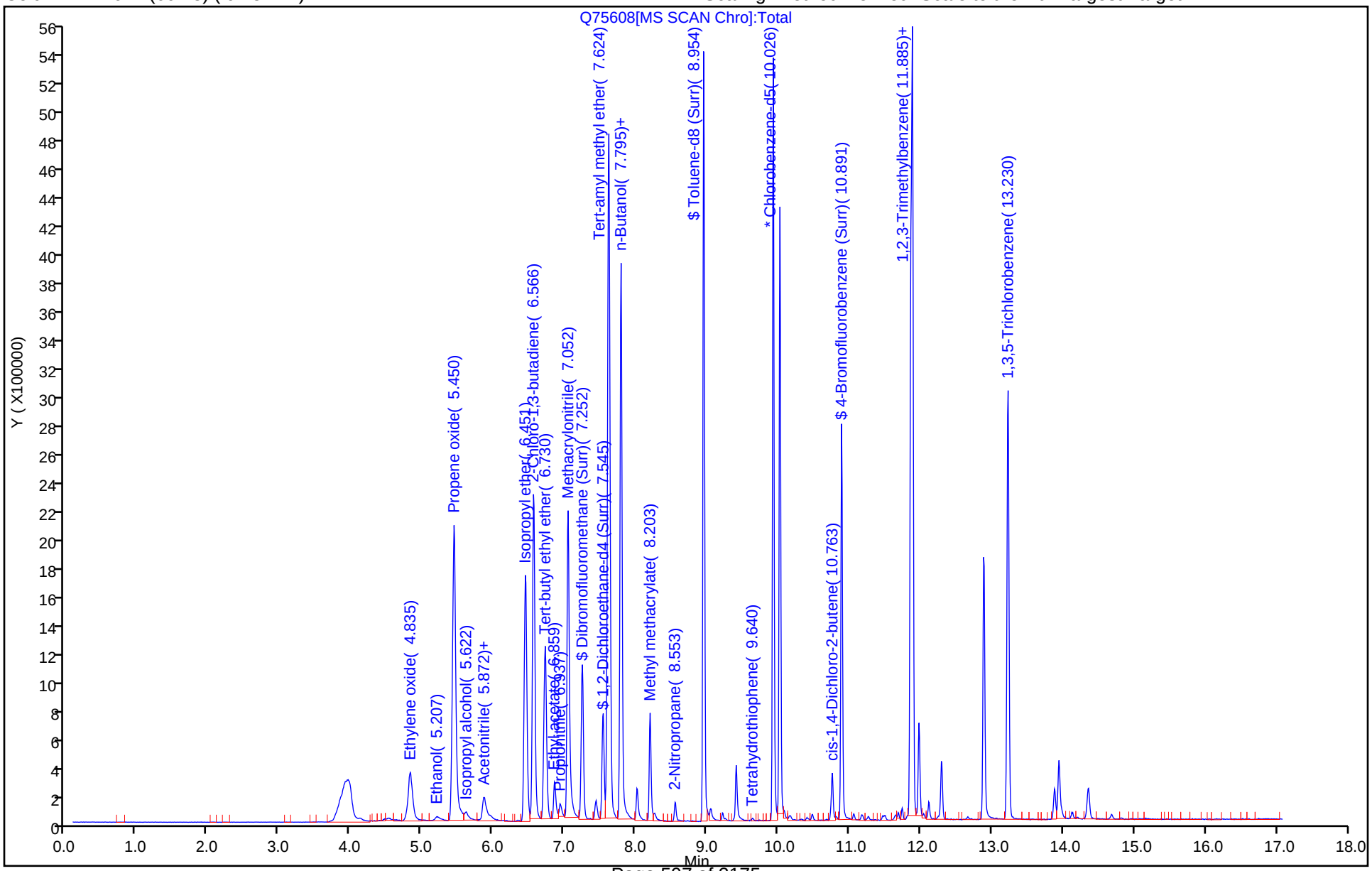
Report Date: 24-Nov-2018 09:05:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D

Injection Date:	23-Nov-2018 12:25:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438589/3 Calibration Date: 11/23/2018 12:25

Instrument ID: VMS_Q Calib Start Date: 11/12/2018 14:11

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/12/2018 16:15

Lab File ID: Q75608.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2232	0.1955		0.0118	0.0135	-12.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1865	0.1615		0.0117	0.0135	-13.4	20.0
Toluene-d8 (Surr)	Ave	4.465	4.330		0.0131	0.0135	-3.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.007	0.9087		0.0122	0.0135	-9.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 12:25:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub135

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:30 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 12:46:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.865	5.865	0.000	0	266689	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3669654	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	99	693877	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.864	11.864	0.000	99	959839	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.252	7.252	0.000	92	774732	13.5	11.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	639991	13.5	11.7	
$ 7 Toluene-d8 (Surr)	98	8.954	8.954	0.000	100	3244785	13.5	13.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	941933	13.5	12.2	
28 Ethylene oxide	43	4.835	4.835	0.000	0	272744	1000.0	1403.1	
33 Ethanol	45	5.221	5.221	0.000	0	119790	600.0	0	
38 Propene oxide	58	5.450	5.450	0.000	0	2870678	1000.0	978.0	
42 Isopropyl alcohol	45	5.615	5.615	0.000	99	85893	100.0	97.1	
46 Acetonitrile	41	5.865	5.865	0.000	0	123414	100.0	73.3	
56 Isopropyl ether	87	6.451	6.451	0.000	0	477331	10.0	10.1	
58 2-Chloro-1,3-butadiene	53	6.566	6.566	0.000	0	1819035	10.0	12.5	
59 Tert-butyl ethyl ether	59	6.730	6.730	0.000	0	1443731	10.0	9.95	
60 Ethyl acetate	43	6.859	6.859	0.000	0	419003	20.0	22.0	
65 Propionitrile	54	6.937	6.937	0.000	0	157982	100.0	78.4	
66 Methacrylonitrile	41	7.052	7.052	0.000	0	1367771	100.0	94.4	
75 Tert-amyl methyl ether	73	7.610	7.610	0.000	0	1073830	10.0	9.88	
78 n-Butanol	56	7.795	7.795	0.000	100	31094	250.0	0	
81 Methyl methacrylate	100	8.203	8.203	0.000	0	100892	20.0	19.1	
88 2-Nitropropane	41	8.553	8.553	0.000	0	82763	20.0	21.0	
99 Tetrahydrothiophene	60	9.647	9.647	0.000	0	6526	20.0	0	
110 cis-1,4-Dichloro-2-butene	53	10.763	10.763	0.000	0	69452	20.0	19.8	
125 1,2,3-Trimethylbenzene	105	11.885	11.885	0.000	0	2898854	10.0	12.0	
16 1,3,5-Trichlorobenzene	180	13.230	13.230	0.000	0	1129784	10.0	13.7	

Reagents:

MV-Supp A_00033	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

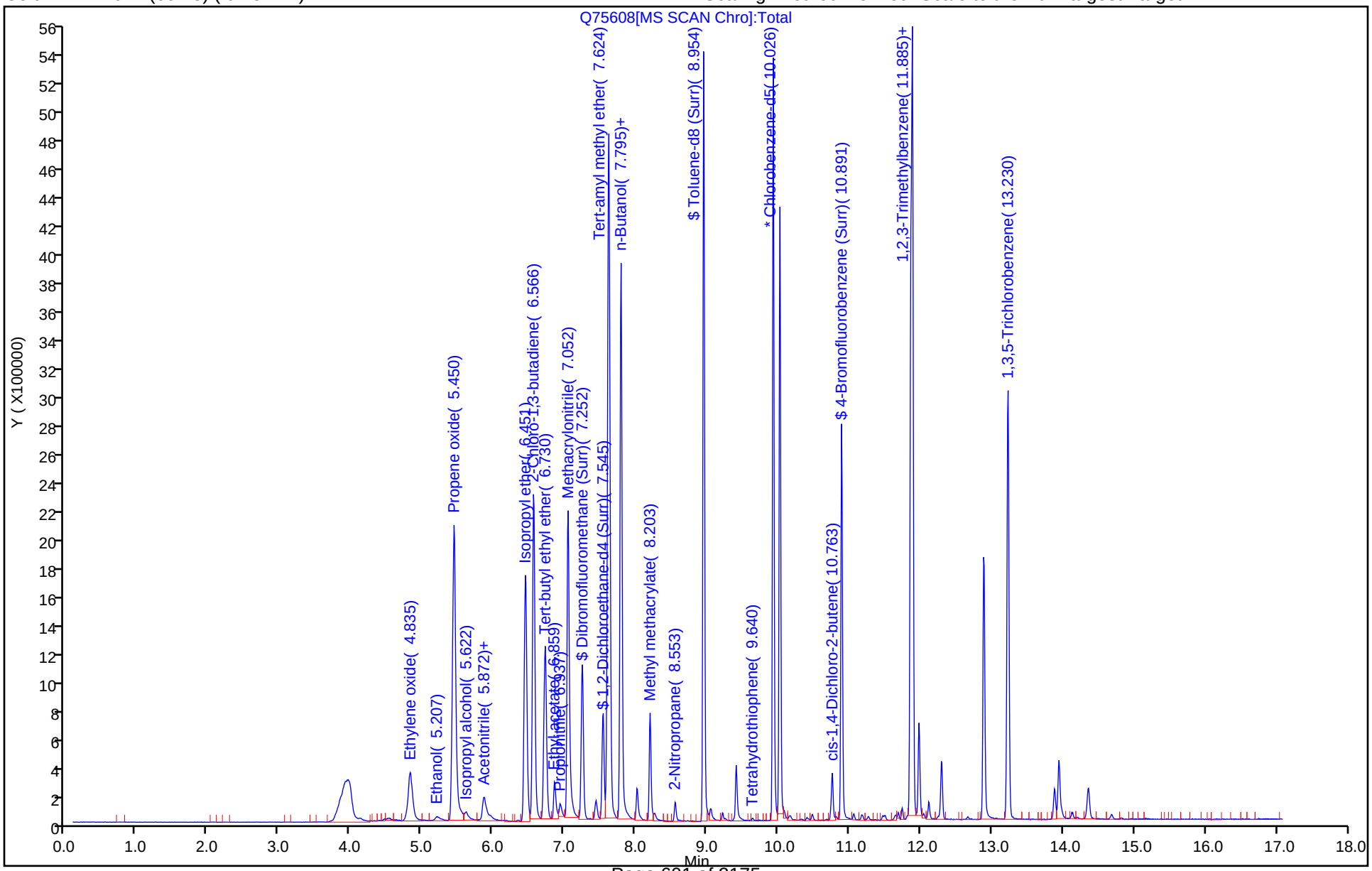
Report Date: 24-Nov-2018 09:05:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75608.D

Injection Date:	23-Nov-2018 12:25:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-438589/37 Calibration Date: 11/23/2018 21:37

Instrument ID: VMS_Q Calib Start Date: 11/12/2018 14:11

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/12/2018 16:15

Lab File ID: Q75634.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2232	0.2091		0.0506	0.0540	-6.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1865	0.1857		0.0538	0.0540	-0.4	50.0
Toluene-d8 (Surr)	Ave	4.465	4.345		0.0526	0.0540	-2.7	50.0
4-Bromofluorobenzene (Surr)	Ave	1.007	0.9025		0.0484	0.0540	-10.4	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75634.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 21:37:30 ALS Bottle#: 28 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:22 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	267491	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3383652	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	98	684078	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	98	937356	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.251	0.000	91	764279	13.5	12.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	678575	13.5	13.4	
$ 7 Toluene-d8 (Surr)	98	8.960	8.960	0.000	100	3210255	13.5	13.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	85	913678	13.5	12.1	
23 Dichlorodifluoromethane	85	4.191	4.191	0.000	99	970865	10.0	7.17	
26 Chloromethane	50	4.449	4.449	0.000	99	747189	10.0	10.2	
27 Vinyl chloride	62	4.577	4.577	0.000	98	821654	10.0	10.0	
29 Bromomethane	94	4.906	4.906	0.000	91	717116	10.0	11.2	
30 Chloroethane	64	4.963	4.963	0.000	99	426911	10.0	11.1	
31 Dichlorofluoromethane	67	5.099	5.099	0.000	96	1728866	10.0	14.1	
32 Trichlorofluoromethane	101	5.221	5.221	0.000	99	1951635	10.0	11.1	
35 Ethyl ether	59	5.357	5.357	0.000	96	356225	10.0	10.1	
39 Acrolein	56	5.500	5.500	0.000	99	265306	100.0	95.4	
41 Acetone	43	5.600	5.600	0.000	39	228497	40.0	37.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.607	0.000	96	717412	10.0	10.9	
43 1,1-Dichloroethene	96	5.628	5.628	0.000	95	906128	10.0	10.8	
44 Iodomethane	142	5.807	5.807	0.000	97	1292226	10.0	11.0	
45 Methyl acetate	43	5.829	5.829	0.000	98	294010	20.0	18.3	
47 3-Chloro-1-propene	41	5.879	5.879	0.000	82	1639736	10.0	9.73	
48 Carbon disulfide	76	5.907	5.907	0.000	99	3731924	10.0	10.4	
49 2-Methyl-2-propanol	59	5.929	5.929	0.000	94	161021	100.0	91.9	
50 Methylene Chloride	84	5.972	5.972	0.000	97	728598	10.0	10.1	
52 Acrylonitrile	53	6.129	6.129	0.000	98	663830	100.0	99.1	
51 Methyl tert-butyl ether	73	6.150	6.150	0.000	96	898413	10.0	10.4	
53 trans-1,2-Dichloroethene	96	6.186	6.186	0.000	95	985961	10.0	10.6	
54 Hexane	57	6.351	6.351	0.000	94	1813798	10.0	9.19	
55 Vinyl acetate	43	6.436	6.436	0.000	97	1231689	20.0	18.1	
57 1,1-Dichloroethane	63	6.501	6.501	0.000	96	1857250	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.873	6.873	0.000	100	383618	40.0	36.8	
62 sec-Butyl Alcohol	45	6.923	6.923	0.000	97	335251	300.0	244.4	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	84	965652	10.0	10.7	
64 2,2-Dichloropropane	77	6.965	6.965	0.000	86	1479398	10.0	10.4	
67 Chlorobromomethane	128	7.123	7.123	0.000	94	276941	10.0	11.0	
68 Chloroform	83	7.130	7.130	0.000	93	1757885	10.0	11.0	
69 Tetrahydrofuran	42	7.166	7.166	0.000	94	113736	20.0	19.4	
70 Isobutyl alcohol	41	7.330	7.330	0.000	89	108256	250.0	232.8	
71 1,1,1-Trichloroethane	97	7.352	7.352	0.000	98	1767298	10.0	11.4	
72 Cyclohexane	56	7.430	7.430	0.000	93	1853041	10.0	10.3	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	96	1649608	10.0	10.6	
74 Carbon tetrachloride	117	7.495	7.495	0.000	98	1561014	10.0	11.1	
76 1,2-Dichloroethane	62	7.602	7.602	0.000	98	820867	10.0	10.2	
77 Benzene	78	7.630	7.630	0.000	97	3741974	10.0	10.6	
14 n-Heptane	43	7.702	7.702	0.000	92	1850122	10.0	9.02	
79 Trichloroethene	95	8.081	8.081	0.000	95	1081261	10.0	10.6	
80 2-Pentanone	43	8.117	8.117	0.000	98	554359	40.0	36.2	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	94	822103	10.0	10.6	
82 Methylcyclohexane	55	8.274	8.274	0.000	94	1592693	10.0	10.4	
84 1,4-Dioxane	88	8.310	8.310	0.000	84	35833	200.0	186.9	
85 Dibromomethane	93	8.360	8.360	0.000	89	282601	10.0	10.5	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	1025937	10.0	10.9	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	157536	10.0	12.5	
89 cis-1,3-Dichloropropene	75	8.732	8.732	0.000	94	1019049	10.0	9.95	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	841546	40.0	39.2	
91 Toluene	91	9.010	9.010	0.000	98	3894155	10.0	11.1	
92 Ethyl methacrylate	69	9.082	9.082	0.000	91	338691	10.0	9.47	
93 trans-1,3-Dichloropropene	75	9.096	9.096	0.000	96	727225	10.0	10.8	
94 1,1,2-Trichloroethane	97	9.254	9.254	0.000	93	362876	10.0	10.9	
95 2-Hexanone	43	9.368	9.368	0.000	96	502703	40.0	36.3	
96 1,3-Dichloropropane	76	9.389	9.389	0.000	94	685363	10.0	10.0	
97 Tetrachloroethene	164	9.418	9.418	0.000	91	795481	10.0	10.4	
98 Chlorodibromomethane	129	9.582	9.582	0.000	90	463158	10.0	10.5	
100 Ethylene Dibromide	107	9.718	9.718	0.000	98	330467	10.0	10.3	
101 1-Chlorohexane	91	9.933	9.933	0.000	97	1465367	10.0	10.0	
102 Chlorobenzene	112	10.047	10.047	0.000	93	2092718	10.0	10.1	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	90	710175	10.0	10.8	
103 Ethylbenzene	106	10.083	10.083	0.000	99	1371644	10.0	10.5	
105 m-Xylene & p-Xylene	106	10.162	10.162	0.000	0	1616857	10.0	10.6	
107 o-Xylene	106	10.476	10.476	0.000	90	1457730	10.0	10.5	
106 Styrene	104	10.476	10.476	0.000	83	2025804	10.0	10.8	
108 Bromoform	173	10.684	10.684	0.000	94	189544	10.0	9.90	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	4270022	10.0	10.1	
111 Cyclohexanone	55	10.877	10.877	0.000	99	318569	400.0	456.5	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.941	0.000	94	327382	10.0	9.36	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	87	54585	10.0	7.28	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	86	82116	10.0	9.56	
116 Bromobenzene	156	11.063	11.063	0.000	94	705369	10.0	9.89	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	1127919	10.0	9.54	
117 1,3,5-Trimethylbenzene	105	11.170	11.170	0.000	93	3423011	10.0	10.0	
118 2-Chlorotoluene	126	11.184	11.184	0.000	95	898136	10.0	9.76	
119 4-Chlorotoluene	126	11.263	11.263	0.000	99	872880	10.0	9.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.470	0.000	91	3571074	10.0	10.1	
121 1,2,4-Trimethylbenzene	105	11.499	11.499	0.000	98	3296680	10.0	9.86	
122 sec-Butylbenzene	134	11.649	11.649	0.000	96	904955	10.0	9.70	
123 4-Isopropyltoluene	119	11.742	11.742	0.000	96	3764845	10.0	9.87	
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	96	1486766	10.0	9.78	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	93	1440994	10.0	9.68	
127 n-Butylbenzene	91	12.114	12.114	0.000	99	3958250	10.0	9.68	
128 1,2-Dichlorobenzene	146	12.257	12.257	0.000	95	1145019	10.0	9.82	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.014	0.000	77	36559	10.0	8.74	
130 1,2,4-Trichlorobenzene	180	13.980	13.980	0.000	94	680341	10.0	9.36	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	98	692566	10.0	9.60	
132 Naphthalene	128	14.359	14.359	0.000	98	747918	10.0	9.24	
133 1,2,3-Trichlorobenzene	180	14.680	14.680	0.000	94	478899	10.0	9.35	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.3	
S 139 Xylenes, Total	106				0		20.0	21.1	
S 136 Total BTEX	1				0			53.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.8	
S 135 Xylenes, Total (URS)	1				0		20.0	21.1	
S 134 Trihalomethanes, Total	1				0		40.0	42.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.3	

Reagents:

MV-MegaMainA_00007	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

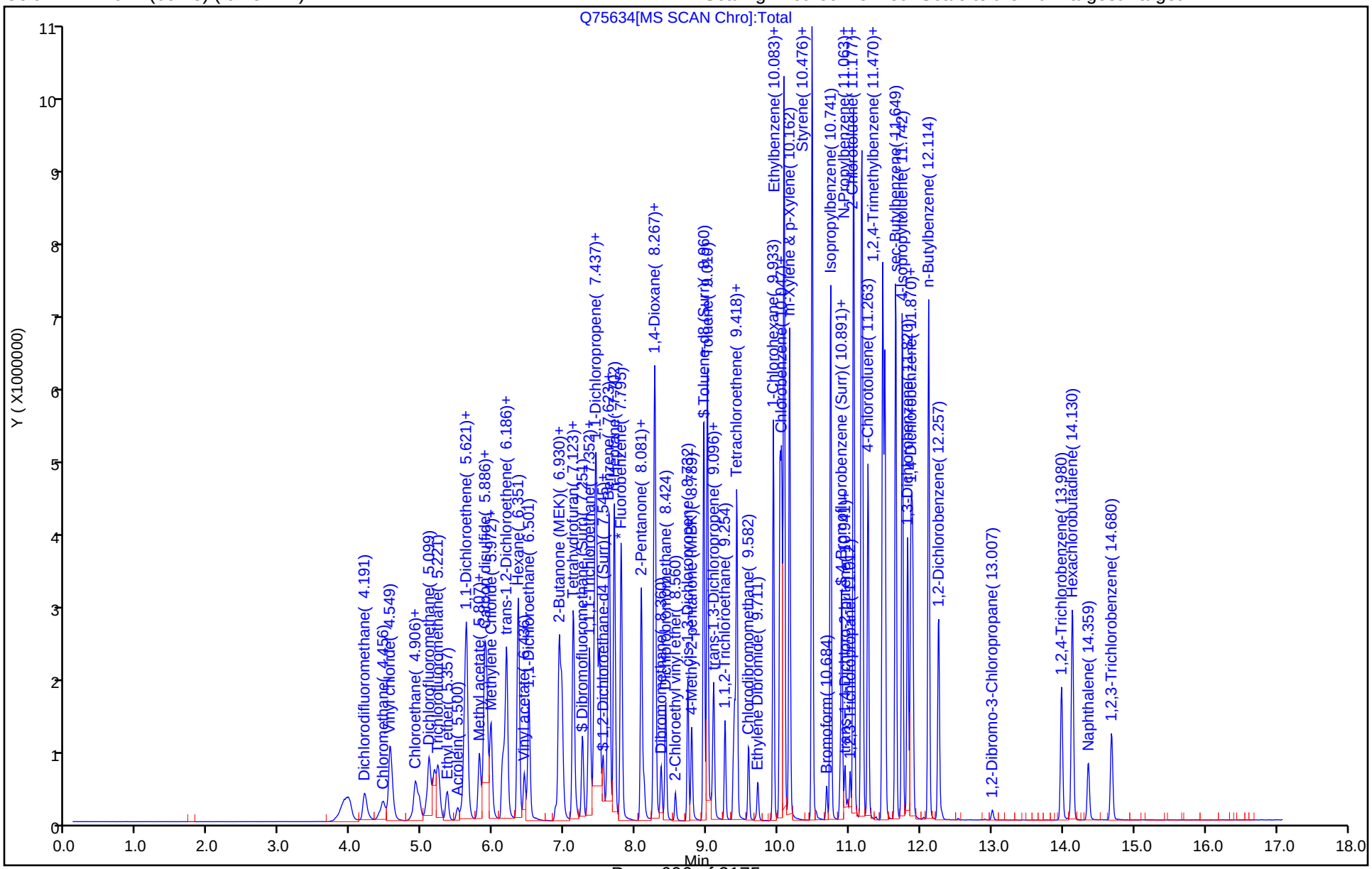
Report Date: 24-Nov-2018 09:05:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75634.D

Injection Date:	23-Nov-2018 21:37:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccv			Worklist Smp#:	37
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-438589/37 Calibration Date: 11/23/2018 21:37

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75634.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5005	0.3587		0.0287	0.0400	-28.3	50.0
Chloromethane	Lin1		0.2760	0.1000	0.0406	0.0400	1.6	50.0
Vinyl chloride	Ave	0.3028	0.3035		0.0401	0.0400	0.2	50.0
Bromomethane	Ave	0.2355	0.2649		0.0450	0.0400	12.5	50.0
Chloroethane	Ave	0.1424	0.1577		0.0443	0.0400	10.8	50.0
Dichlorofluoromethane	Ave	0.4541	0.6387		0.0563	0.0400	40.6	50.0
Trichlorofluoromethane	Ave	0.6507	0.7210		0.0443	0.0400	10.8	50.0
Ethyl ether	Ave	0.1304	0.1316		0.0404	0.0400	0.9	50.0
Acrolein	Ave	0.0103	0.0098		0.382	0.400	-4.6	50.0
Acetone	Lin		0.0211		0.151	0.160	-5.7	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2421	0.2650		0.0438	0.0400	9.5	50.0
1,1-Dichloroethene	Ave	0.3098	0.3347		0.0432	0.0400	8.1	50.0
Iodomethane	Ave	0.4345	0.4774		0.0439	0.0400	9.9	50.0
Methyl acetate	Ave	0.0594	0.0543		0.0731	0.0800	-8.6	50.0
3-Chloro-1-propene	Ave	0.6228	0.6058		0.0389	0.0400	-2.7	50.0
Carbon disulfide	Ave	1.321	1.379		0.0417	0.0400	4.4	50.0
t-Butyl alcohol	Ave	1.638	1.505		0.368	0.400	-8.1	50.0
Methylene Chloride	Ave	0.2659	0.2692		0.0405	0.0400	1.2	50.0
Acrylonitrile	Lin2		0.0245		0.396	0.400	-0.9	50.0
Methyl tert-butyl ether	Ave	0.3191	0.3319		0.0416	0.0400	4.0	50.0
trans-1,2-Dichloroethene	Ave	0.3442	0.3642		0.0423	0.0400	5.8	50.0
Hexane	Ave	3.608	3.314		0.0367	0.0400	-8.1	50.0
Vinyl acetate	Ave	0.2511	0.2275		0.0725	0.0800	-9.4	50.0
1,1-Dichloroethane	Ave	0.6562	0.6861	0.1000	0.0418	0.0400	4.6	50.0
2-Butanone (MEK)	Ave	0.0385	0.0354		0.147	0.160	-8.1	50.0
cis-1,2-Dichloroethene	Ave	0.3320	0.3567		0.0430	0.0400	7.4	50.0
2,2-Dichloropropane	Ave	0.5250	0.5465		0.0416	0.0400	4.1	50.0
Bromochloromethane	Ave	0.0928	0.1023		0.0441	0.0400	10.3	50.0
Chloroform	Ave	0.5889	0.6494		0.0441	0.0400	10.3	50.0
Tetrahydrofuran	Ave	0.0216	0.0210		0.0778	0.0800	-2.8	50.0
Isobutyl alcohol	Ave	0.4346	0.4047		0.931	1.00	-6.9	50.0
1,1,1-Trichloroethane	Ave	0.5720	0.6529		0.0457	0.0400	14.1	50.0
Cyclohexane	Ave	0.6625	0.6846		0.0413	0.0400	3.3	50.0
1,1-Dichloropropene	Ave	0.5736	0.6094		0.0425	0.0400	6.2	50.0
Carbon tetrachloride	Ave	0.5195	0.5767		0.0444	0.0400	11.0	50.0
1,2-Dichloroethane	Ave	0.2960	0.3033		0.0410	0.0400	2.4	50.0
Benzene	Ave	1.307	1.382		0.0423	0.0400	5.8	50.0
Trichloroethene	Ave	0.3760	0.3994		0.0425	0.0400	6.2	50.0
2-Pentanone	Lin2		0.0512		0.145	0.160	-9.4	50.0
1,2-Dichloropropane	Ave	0.2876	0.3037		0.0422	0.0400	5.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-438589/37 Calibration Date: 11/23/2018 21:37

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75634.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5675	0.5884		0.0415	0.0400	3.7	50.0
1,4-Dioxane	Lin2		0.0007		0.748	0.800	-6.6	50.0
Dibromomethane	Ave	0.0992	0.1044		0.0421	0.0400	5.2	50.0
Bromodichloromethane	Ave	0.3472	0.3790		0.0437	0.0400	9.2	50.0
2-Chloroethyl vinyl ether	Lin1		0.0582		0.0500	0.0400	25.0	50.0
cis-1,3-Dichloropropene	Ave	1.872	1.862		0.0398	0.0400	-0.5	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0792	0.0777		0.157	0.160	-1.9	50.0
Toluene	Ave	1.291	1.439		0.0446	0.0400	11.4	50.0
Ethyl methacrylate	Lin2		0.6189		0.0379	0.0400	-5.3	50.0
trans-1,3-Dichloropropene	Ave	0.2476	0.2687		0.0434	0.0400	8.5	50.0
1,1,2-Trichloroethane	Ave	0.1232	0.1341		0.0435	0.0400	8.8	50.0
2-Hexanone	Ave	0.2530	0.2296		0.145	0.160	-9.2	50.0
1,3-Dichloropropane	Ave	1.253	1.252		0.0400	0.0400	-0.0	50.0
Tetrachloroethene	Ave	1.400	1.454		0.0415	0.0400	3.8	50.0
Dibromochloromethane	Ave	0.8078	0.8463		0.0419	0.0400	4.8	50.0
1,2-Dibromoethane (EDB)	Ave	0.5876	0.6039		0.0411	0.0400	2.8	50.0
1-Chlorohexane	Ave	2.674	2.678		0.0401	0.0400	0.1	50.0
Chlorobenzene	Ave	3.768	3.824	0.3000	0.0406	0.0400	1.5	50.0
1,1,1,2-Tetrachloroethane	Ave	1.204	1.298		0.0431	0.0400	7.8	50.0
Ethylbenzene	Ave	2.384	2.506		0.0421	0.0400	5.1	50.0
m-Xylene & p-Xylene	Ave	2.790	2.954		0.0424	0.0400	5.9	50.0
o-Xylene	Ave	2.528	2.664		0.0421	0.0400	5.4	50.0
Styrene	Ave	3.439	3.702		0.0431	0.0400	7.6	50.0
Bromoform	Lin2		0.3464	0.1000	0.0396	0.0400	-1.0	50.0
Isopropylbenzene	Ave	5.637	5.694		0.0404	0.0400	1.0	50.0
Cyclohexanone	Ave	0.0128	0.0146		1.83	1.60	14.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4664	0.4366	0.3000	0.0374	0.0400	-6.4	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.0728		0.0291	0.0400	-27.2	50.0
1,2,3-Trichloropropane	Ave	0.1145	0.1095		0.0383	0.0400	-4.4	50.0
Bromobenzene	Ave	0.9515	0.9406		0.0395	0.0400	-1.1	50.0
N-Propylbenzene	Ave	1.576	1.504		0.0382	0.0400	-4.6	50.0
1,3,5-Trimethylbenzene	Ave	4.556	4.565		0.0401	0.0400	0.2	50.0
2-Chlorotoluene	Ave	1.227	1.198		0.0391	0.0400	-2.4	50.0
4-Chlorotoluene	Ave	1.225	1.164		0.0380	0.0400	-4.9	50.0
tert-Butylbenzene	Ave	4.722	4.762		0.0403	0.0400	0.9	50.0
1,2,4-Trimethylbenzene	Ave	4.460	4.396		0.0394	0.0400	-1.4	50.0
sec-Butylbenzene	Ave	1.244	1.207		0.0388	0.0400	-3.0	50.0
4-Isopropyltoluene	Ave	5.085	5.021		0.0395	0.0400	-1.3	50.0
1,3-Dichlorobenzene	Ave	2.027	1.983		0.0391	0.0400	-2.2	50.0
1,4-Dichlorobenzene	Ave	1.985	1.922		0.0387	0.0400	-3.2	50.0
n-Butylbenzene	Ave	5.454	5.278		0.0387	0.0400	-3.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-438589/37 Calibration Date: 11/23/2018 21:37

Instrument ID: VMS_Q Calib Start Date: 11/13/2018 14:42

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 11/13/2018 16:45

Lab File ID: Q75634.D Conc. Units: mg/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.555	1.527		0.0393	0.0400	-1.8	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0488		0.0350	0.0400	-12.6	50.0
1,2,4-Trichlorobenzene	Ave	0.9698	0.9073		0.0374	0.0400	-6.4	50.0
Hexachlorobutadiene	Ave	0.9619	0.9236		0.0384	0.0400	-4.0	50.0
Naphthalene	Ave	1.079	0.997		0.0370	0.0400	-7.6	50.0
1,2,3-Trichlorobenzene	Ave	0.6831	0.6386		0.0374	0.0400	-6.5	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75634.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 21:37:30 ALS Bottle#: 28 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: meierg Instrument ID: VMS_Q
Sublist: chrom-AQ_VMSQ_8260*sub114

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:22 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.872	5.872	0.000	0	267491	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3383652	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.026	10.026	0.000	98	684078	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	98	937356	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.251	0.000	91	764279	13.5	12.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.545	7.545	0.000	0	678575	13.5	13.4	
$ 7 Toluene-d8 (Surr)	98	8.960	8.960	0.000	100	3210255	13.5	13.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	85	913678	13.5	12.1	
23 Dichlorodifluoromethane	85	4.191	4.191	0.000	99	970865	10.0	7.17	
26 Chloromethane	50	4.449	4.449	0.000	99	747189	10.0	10.2	
27 Vinyl chloride	62	4.577	4.577	0.000	98	821654	10.0	10.0	
29 Bromomethane	94	4.906	4.906	0.000	91	717116	10.0	11.2	
30 Chloroethane	64	4.963	4.963	0.000	99	426911	10.0	11.1	
31 Dichlorofluoromethane	67	5.099	5.099	0.000	96	1728866	10.0	14.1	
32 Trichlorofluoromethane	101	5.221	5.221	0.000	99	1951635	10.0	11.1	
35 Ethyl ether	59	5.357	5.357	0.000	96	356225	10.0	10.1	
39 Acrolein	56	5.500	5.500	0.000	99	265306	100.0	95.4	
41 Acetone	43	5.600	5.600	0.000	39	228497	40.0	37.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.607	5.607	0.000	96	717412	10.0	10.9	
43 1,1-Dichloroethene	96	5.628	5.628	0.000	95	906128	10.0	10.8	
44 Iodomethane	142	5.807	5.807	0.000	97	1292226	10.0	11.0	
45 Methyl acetate	43	5.829	5.829	0.000	98	294010	20.0	18.3	
47 3-Chloro-1-propene	41	5.879	5.879	0.000	82	1639736	10.0	9.73	
48 Carbon disulfide	76	5.907	5.907	0.000	99	3731924	10.0	10.4	
49 2-Methyl-2-propanol	59	5.929	5.929	0.000	94	161021	100.0	91.9	
50 Methylene Chloride	84	5.972	5.972	0.000	97	728598	10.0	10.1	
52 Acrylonitrile	53	6.129	6.129	0.000	98	663830	100.0	99.1	
51 Methyl tert-butyl ether	73	6.150	6.150	0.000	96	898413	10.0	10.4	
53 trans-1,2-Dichloroethene	96	6.186	6.186	0.000	95	985961	10.0	10.6	
54 Hexane	57	6.351	6.351	0.000	94	1813798	10.0	9.19	
55 Vinyl acetate	43	6.436	6.436	0.000	97	1231689	20.0	18.1	
57 1,1-Dichloroethane	63	6.501	6.501	0.000	96	1857250	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.873	6.873	0.000	100	383618	40.0	36.8	
62 sec-Butyl Alcohol	45	6.923	6.923	0.000	97	335251	300.0	244.4	
63 cis-1,2-Dichloroethene	96	6.930	6.930	0.000	84	965652	10.0	10.7	
64 2,2-Dichloropropane	77	6.965	6.965	0.000	86	1479398	10.0	10.4	
67 Chlorobromomethane	128	7.123	7.123	0.000	94	276941	10.0	11.0	
68 Chloroform	83	7.130	7.130	0.000	93	1757885	10.0	11.0	
69 Tetrahydrofuran	42	7.166	7.166	0.000	94	113736	20.0	19.4	
70 Isobutyl alcohol	41	7.330	7.330	0.000	89	108256	250.0	232.8	
71 1,1,1-Trichloroethane	97	7.352	7.352	0.000	98	1767298	10.0	11.4	
72 Cyclohexane	56	7.430	7.430	0.000	93	1853041	10.0	10.3	
73 1,1-Dichloropropene	75	7.452	7.452	0.000	96	1649608	10.0	10.6	
74 Carbon tetrachloride	117	7.495	7.495	0.000	98	1561014	10.0	11.1	
76 1,2-Dichloroethane	62	7.602	7.602	0.000	98	820867	10.0	10.2	
77 Benzene	78	7.630	7.630	0.000	97	3741974	10.0	10.6	
14 n-Heptane	43	7.702	7.702	0.000	92	1850122	10.0	9.02	
79 Trichloroethene	95	8.081	8.081	0.000	95	1081261	10.0	10.6	
80 2-Pentanone	43	8.117	8.117	0.000	98	554359	40.0	36.2	
83 1,2-Dichloropropane	63	8.260	8.260	0.000	94	822103	10.0	10.6	
82 Methylcyclohexane	55	8.274	8.274	0.000	94	1592693	10.0	10.4	
84 1,4-Dioxane	88	8.310	8.310	0.000	84	35833	200.0	186.9	
85 Dibromomethane	93	8.360	8.360	0.000	89	282601	10.0	10.5	
86 Dichlorobromomethane	83	8.424	8.424	0.000	99	1025937	10.0	10.9	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	157536	10.0	12.5	
89 cis-1,3-Dichloropropene	75	8.732	8.732	0.000	94	1019049	10.0	9.95	
90 4-Methyl-2-pentanone (MIBK	43	8.789	8.789	0.000	0	841546	40.0	39.2	
91 Toluene	91	9.010	9.010	0.000	98	3894155	10.0	11.1	
92 Ethyl methacrylate	69	9.082	9.082	0.000	91	338691	10.0	9.47	
93 trans-1,3-Dichloropropene	75	9.096	9.096	0.000	96	727225	10.0	10.8	
94 1,1,2-Trichloroethane	97	9.254	9.254	0.000	93	362876	10.0	10.9	
95 2-Hexanone	43	9.368	9.368	0.000	96	502703	40.0	36.3	
96 1,3-Dichloropropane	76	9.389	9.389	0.000	94	685363	10.0	10.0	
97 Tetrachloroethene	164	9.418	9.418	0.000	91	795481	10.0	10.4	
98 Chlorodibromomethane	129	9.582	9.582	0.000	90	463158	10.0	10.5	
100 Ethylene Dibromide	107	9.718	9.718	0.000	98	330467	10.0	10.3	
101 1-Chlorohexane	91	9.933	9.933	0.000	97	1465367	10.0	10.0	
102 Chlorobenzene	112	10.047	10.047	0.000	93	2092718	10.0	10.1	
104 1,1,1,2-Tetrachloroethane	131	10.083	10.083	0.000	90	710175	10.0	10.8	
103 Ethylbenzene	106	10.083	10.083	0.000	99	1371644	10.0	10.5	
105 m-Xylene & p-Xylene	106	10.162	10.162	0.000	0	1616857	10.0	10.6	
107 o-Xylene	106	10.476	10.476	0.000	90	1457730	10.0	10.5	
106 Styrene	104	10.476	10.476	0.000	83	2025804	10.0	10.8	
108 Bromoform	173	10.684	10.684	0.000	94	189544	10.0	9.90	
109 Isopropylbenzene	105	10.741	10.741	0.000	97	4270022	10.0	10.1	
111 Cyclohexanone	55	10.877	10.877	0.000	99	318569	400.0	456.5	
112 1,1,2,2-Tetrachloroethane	83	10.941	10.941	0.000	94	327382	10.0	9.36	
113 trans-1,4-Dichloro-2-buten	53	10.977	10.977	0.000	87	54585	10.0	7.28	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	86	82116	10.0	9.56	
116 Bromobenzene	156	11.063	11.063	0.000	94	705369	10.0	9.89	
115 N-Propylbenzene	120	11.063	11.063	0.000	99	1127919	10.0	9.54	
117 1,3,5-Trimethylbenzene	105	11.170	11.170	0.000	93	3423011	10.0	10.0	
118 2-Chlorotoluene	126	11.184	11.184	0.000	95	898136	10.0	9.76	
119 4-Chlorotoluene	126	11.263	11.263	0.000	99	872880	10.0	9.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.470	0.000	91	3571074	10.0	10.1	
121 1,2,4-Trimethylbenzene	105	11.499	11.499	0.000	98	3296680	10.0	9.86	
122 sec-Butylbenzene	134	11.649	11.649	0.000	96	904955	10.0	9.70	
123 4-Isopropyltoluene	119	11.742	11.742	0.000	96	3764845	10.0	9.87	
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	96	1486766	10.0	9.78	
126 1,4-Dichlorobenzene	146	11.892	11.892	0.000	93	1440994	10.0	9.68	
127 n-Butylbenzene	91	12.114	12.114	0.000	99	3958250	10.0	9.68	
128 1,2-Dichlorobenzene	146	12.257	12.257	0.000	95	1145019	10.0	9.82	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.014	0.000	77	36559	10.0	8.74	
130 1,2,4-Trichlorobenzene	180	13.980	13.980	0.000	94	680341	10.0	9.36	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	98	692566	10.0	9.60	
132 Naphthalene	128	14.359	14.359	0.000	98	747918	10.0	9.24	
133 1,2,3-Trichlorobenzene	180	14.680	14.680	0.000	94	478899	10.0	9.35	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.3	
S 139 Xylenes, Total	106				0		20.0	21.1	
S 136 Total BTEX	1				0			53.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.8	
S 135 Xylenes, Total (URS)	1				0		20.0	21.1	
S 134 Trihalomethanes, Total	1				0		40.0	42.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.3	

Reagents:

MV-MegaMainA_00007	Amount Added:	4.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

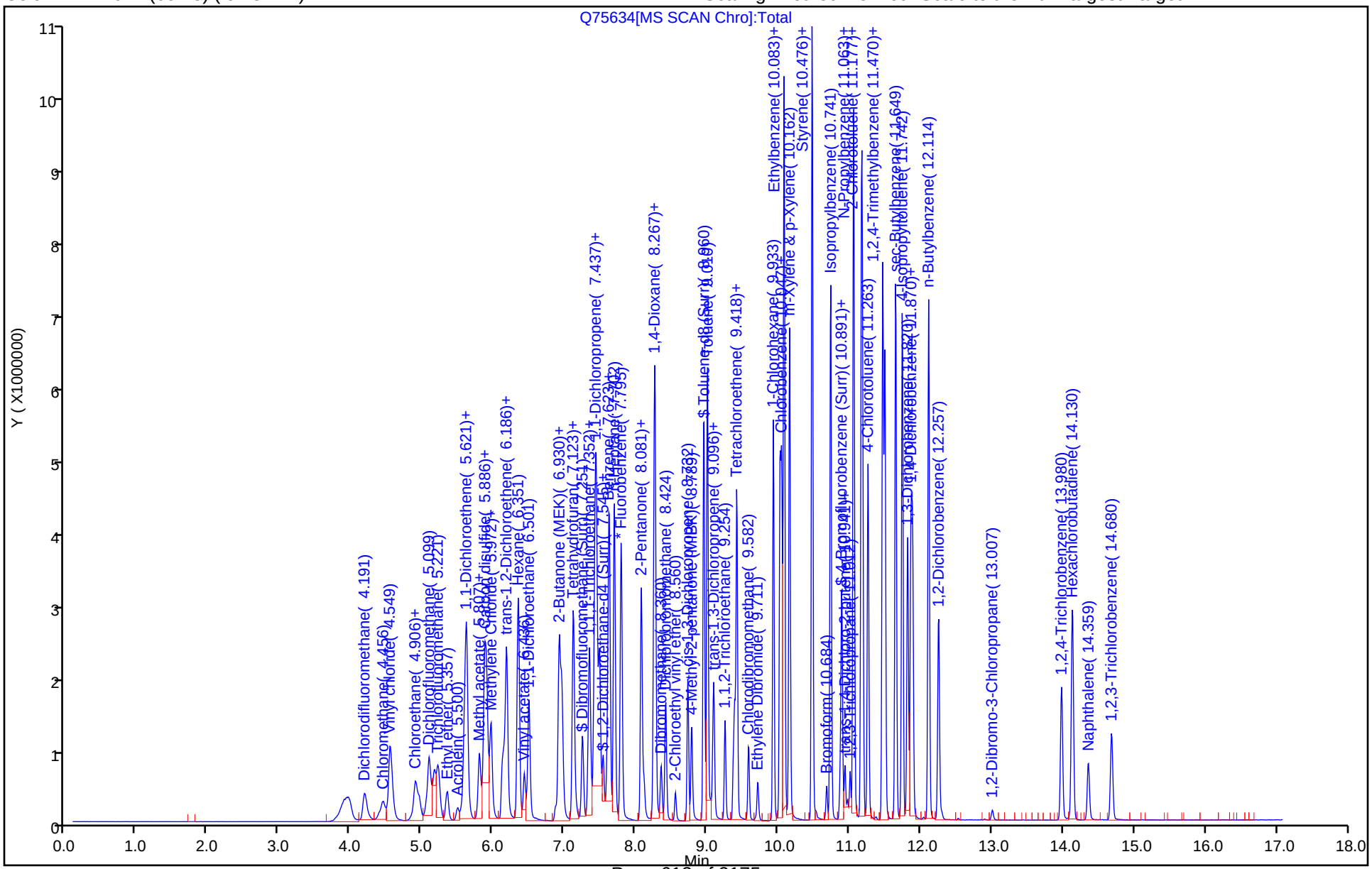
Report Date: 24-Nov-2018 09:05:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75634.D

Injection Date:	23-Nov-2018 21:37:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	ccv			Worklist Smp#:	37
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75342.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	12-Nov-2018 13:32:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	meierg	Instrument ID:	VMS_Q		
Method:	\\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\AQ_VMSQ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	13-Nov-2018 10:03:42	Calib Date:	12-Nov-2018 16:15:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75349.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0311				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.988	4.988	0.000	0	132461	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

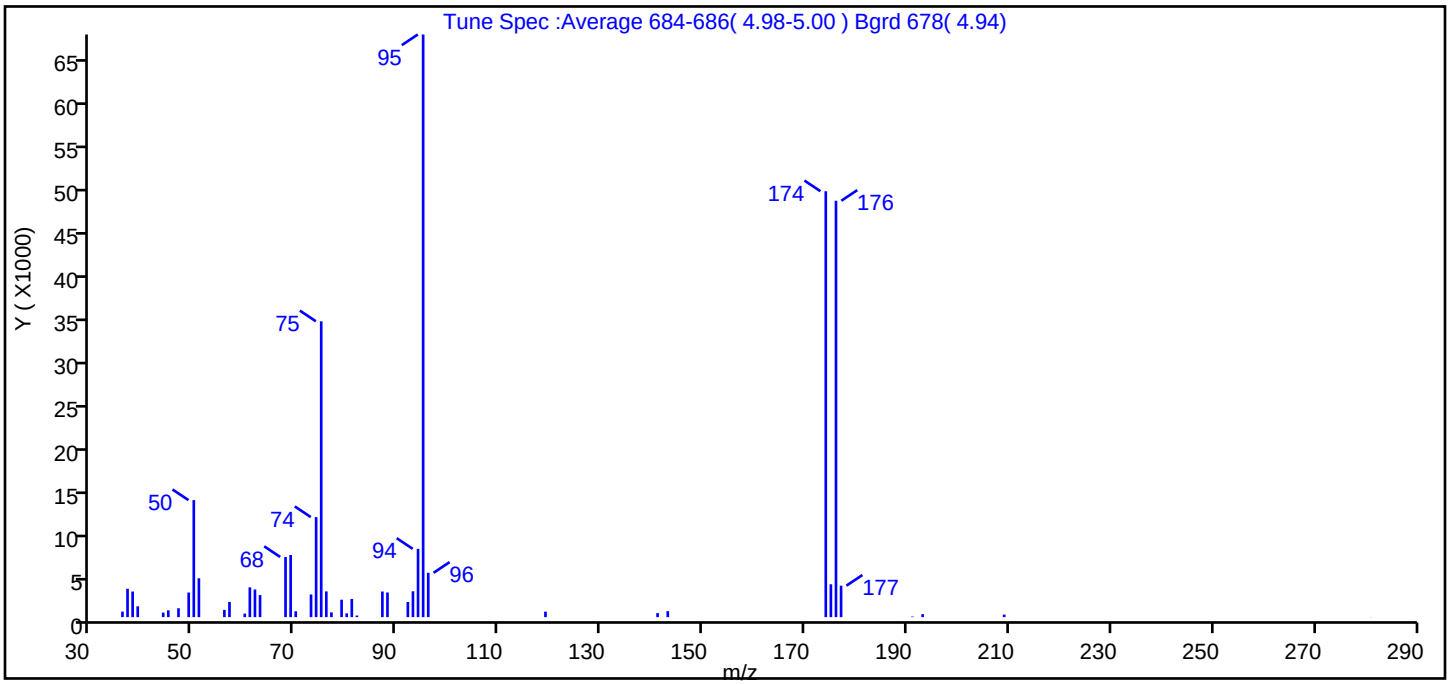
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75342.D
Injection Date: 12-Nov-2018 13:32:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.1
75	30 to 60% of m/z 95	50.8
96	5 to 9% of m/z 95	7.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	5.6 (7.7)
176	Greater than 95% but less than 101% of m/z 174	71.5 (97.8)
177	5 to 9% of m/z 176	5.4 (7.6)

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75342.D\AQ_VMSQ_8260.rslt\spectra.d
Injection Date: 12-Nov-2018 13:32:30
Spectrum: Tune Spec :Average 684-686(4.98-5.00) Bgrd 678(4.94)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 46

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	640	60.00	407	79.00	2007	141.00	465
37.00	3265	61.00	3429	80.00	434	143.00	691
38.00	2950	62.00	3186	81.00	2092	174.00	49040
39.00	1243	63.00	2546	82.00	186	175.00	3783
44.00	525	68.00	6927	87.00	2953	176.00	47944
45.00	782	69.00	7153	88.00	2838	177.00	3623
47.00	1022	70.00	676	92.00	1745	191.00	65
49.00	2832	73.00	2613	93.00	2979	193.00	344
50.00	13475	74.00	11521	94.00	7863	209.00	296
51.00	4477	75.00	34064	95.00	67088	281.00	11
56.00	838	76.00	2963	96.00	5106		
57.00	1754	77.00	554	119.00	631		

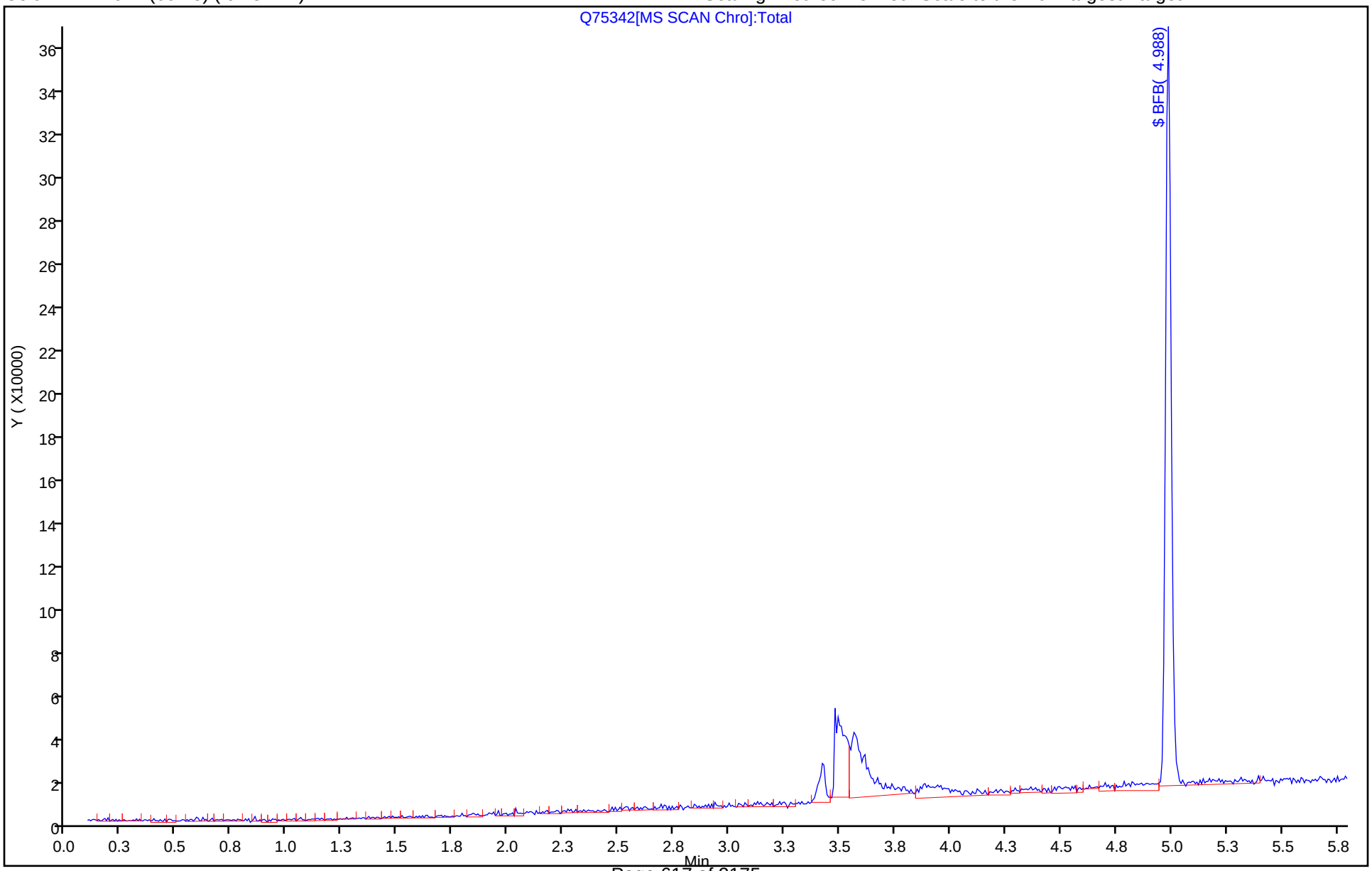
Report Date: 13-Nov-2018 10:03:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181112-76093.b\Q75342.D

Injection Date:	12-Nov-2018 13:32:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75366.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	13-Nov-2018 14:29:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	meierg	Instrument ID:	VMS_Q		
Method:	\\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\AQ_VMSQ_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	14-Nov-2018 09:05:21	Calib Date:	13-Nov-2018 16:45:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0327				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.998	4.998	0.000	0	171728	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

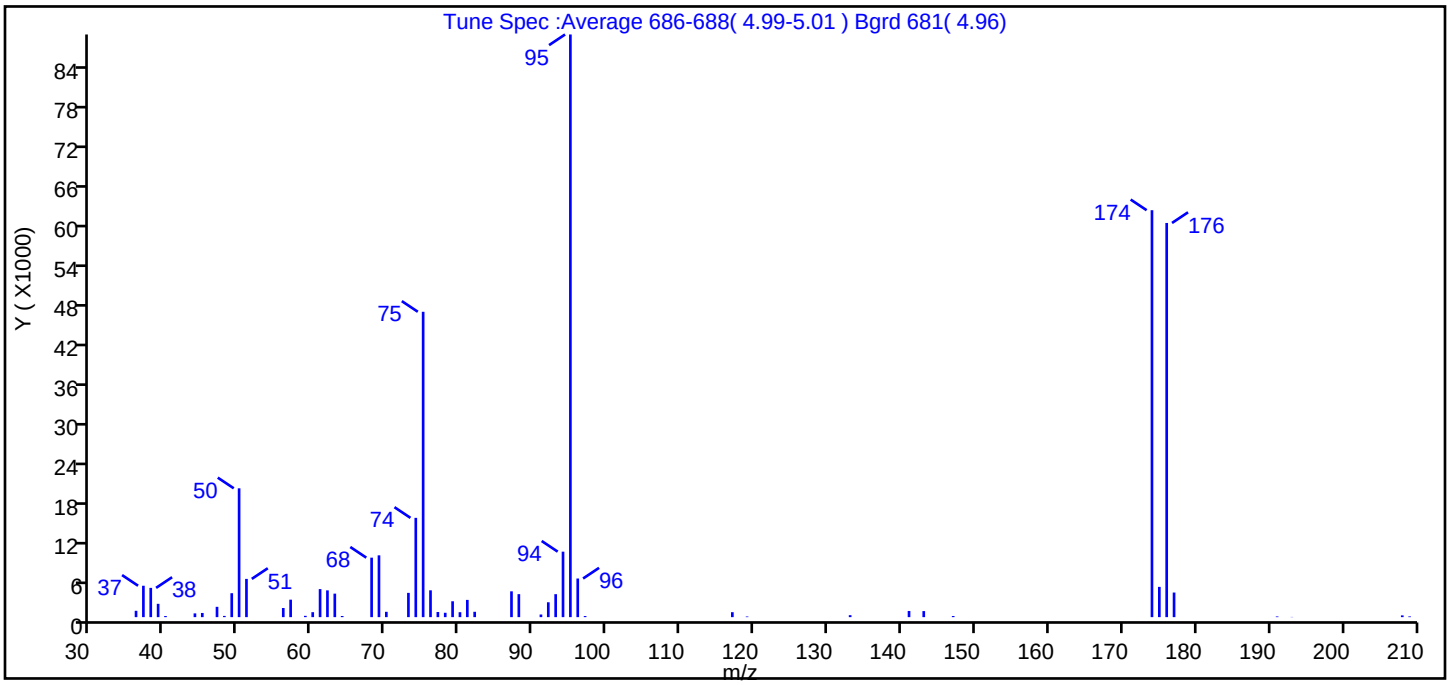
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75366.D
Injection Date: 13-Nov-2018 14:29:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.1
75	30 to 60% of m/z 95	52.4
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.8
175	5 to 9% of m/z 174	5.2 (7.4)
176	Greater than 95% but less than 101% of m/z 174	67.7 (96.9)
177	5 to 9% of m/z 176	4.2 (6.2)

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75366.D\AQ_VMSQ_8260.rslt\spectra.d
Injection Date: 13-Nov-2018 14:29:30
Spectrum: Tune Spec :Average 686-688(4.99-5.01) Bgrd 681(4.96)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 56

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	959	59.00	198	78.00	662	117.00	750
37.00	4745	60.00	752	79.00	2401	119.00	97
38.00	4424	61.00	4239	80.00	748	133.00	297
39.00	2014	62.00	4047	81.00	2607	141.00	933
40.00	168	63.00	3552	82.00	809	143.00	916
44.00	568	64.00	172	87.00	3902	147.00	168
45.00	629	68.00	8991	88.00	3476	174.00	61504
47.00	1560	69.00	9341	91.00	400	175.00	4574
48.00	187	70.00	807	92.00	2248	176.00	59576
49.00	3618	73.00	3669	93.00	3472	177.00	3718
50.00	19472	74.00	15006	94.00	9897	191.00	104
51.00	5780	75.00	46152	95.00	88064	193.00	31
56.00	1381	76.00	4055	96.00	5838	208.00	266
57.00	2642	77.00	776	97.00	167	209.00	110

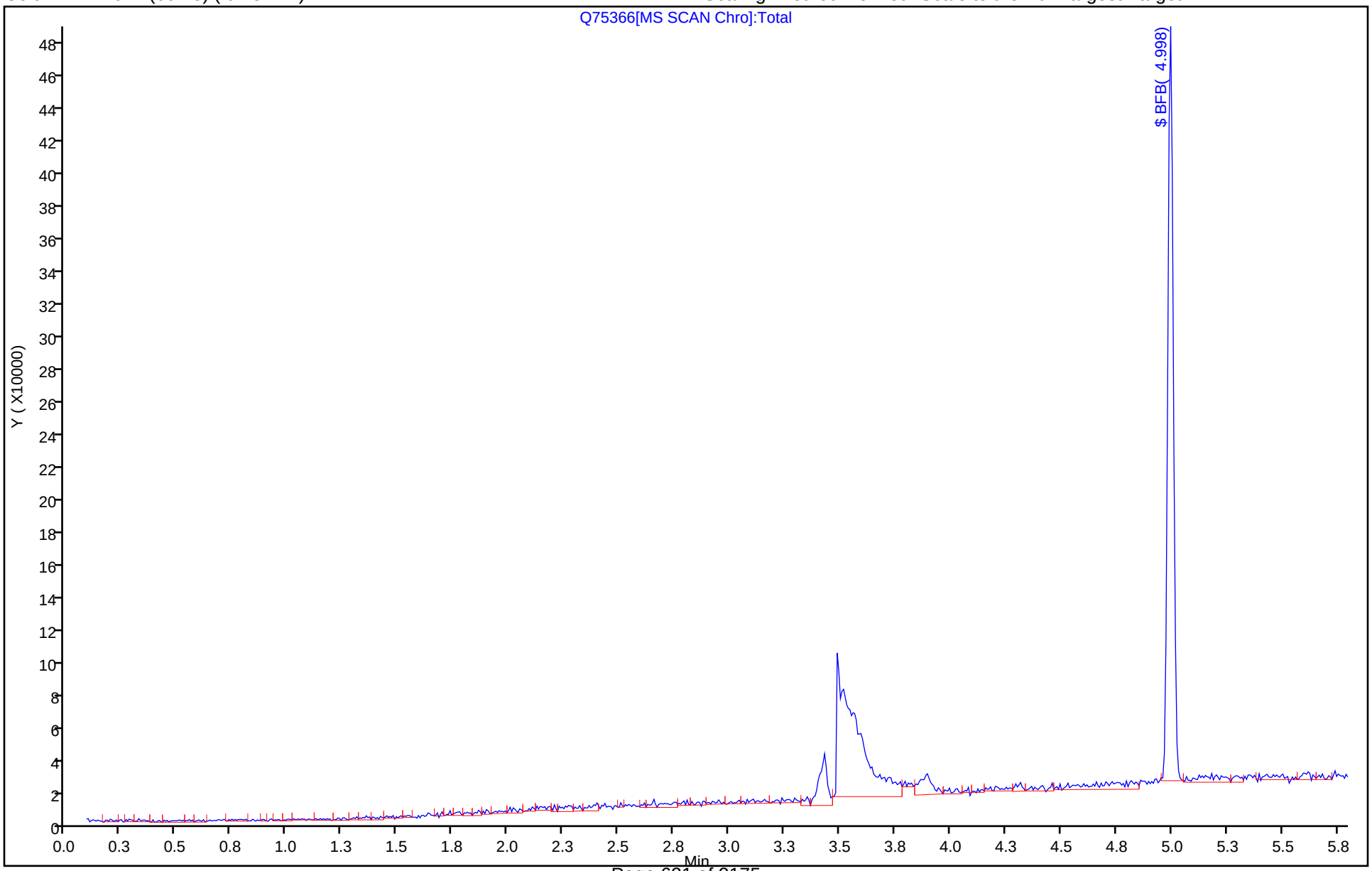
Report Date: 14-Nov-2018 09:05:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75366.D

Injection Date:	13-Nov-2018 14:29:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75606.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 23-Nov-2018 11:53:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 09:05:25 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 12:23:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.999	4.999	0.000	0	187832	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

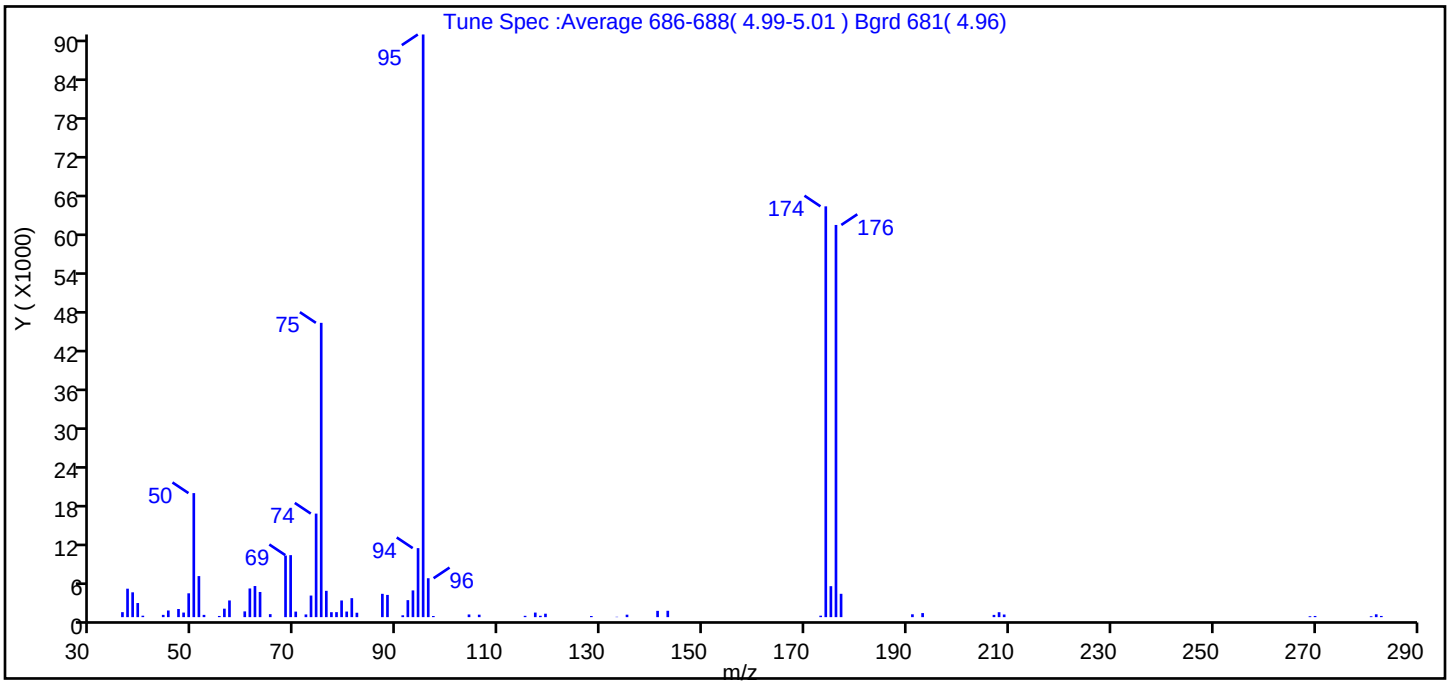
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75606.D
Injection Date: 23-Nov-2018 11:53:30 Instrument ID: VMS_Q
Lims ID: BFB
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSQ_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.3
75	30 to 60% of m/z 95	50.5
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.2 (0.4)
174	50 to 120% of m/z 95	70.5
175	5 to 9% of m/z 174	5.3 (7.5)
176	Greater than 95% but less than 101% of m/z 174	67.3 (95.5)
177	5 to 9% of m/z 176	4.0 (6.0)

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75606.D\AQ_VMSQ_8260.rslt\spe
Injection Date: 23-Nov-2018 11:53:30
Spectrum: Tune Spec :Average 686-688(4.99-5.01) Bgrd 681(4.96)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	778	62.00	4854	88.00	3469	143.00	994
37.00	4440	63.00	3925	91.00	287	173.00	227
38.00	3874	65.00	468	92.00	2652	174.00	64096
39.00	2202	68.00	9610	93.00	4171	175.00	4833
40.00	224	69.00	9674	94.00	10769	176.00	61192
44.00	356	70.00	866	95.00	90912	177.00	3641
45.00	1038	72.00	422	96.00	6072	191.00	446
47.00	1269	73.00	3369	97.00	176	193.00	634
48.00	714	74.00	16156	104.00	417	207.00	353
49.00	3719	75.00	45920	106.00	386	208.00	769
50.00	19352	76.00	4107	115.00	207	209.00	410
51.00	6405	77.00	774	117.00	713	269.00	140
52.00	353	78.00	781	118.00	211	270.00	183
55.00	184	79.00	2601	119.00	537	281.00	137
56.00	1321	80.00	873	128.00	175	282.00	445
57.00	2606	81.00	2962	133.00	53	283.00	187
60.00	898	82.00	688	135.00	385		
61.00	4475	87.00	3639	141.00	981		

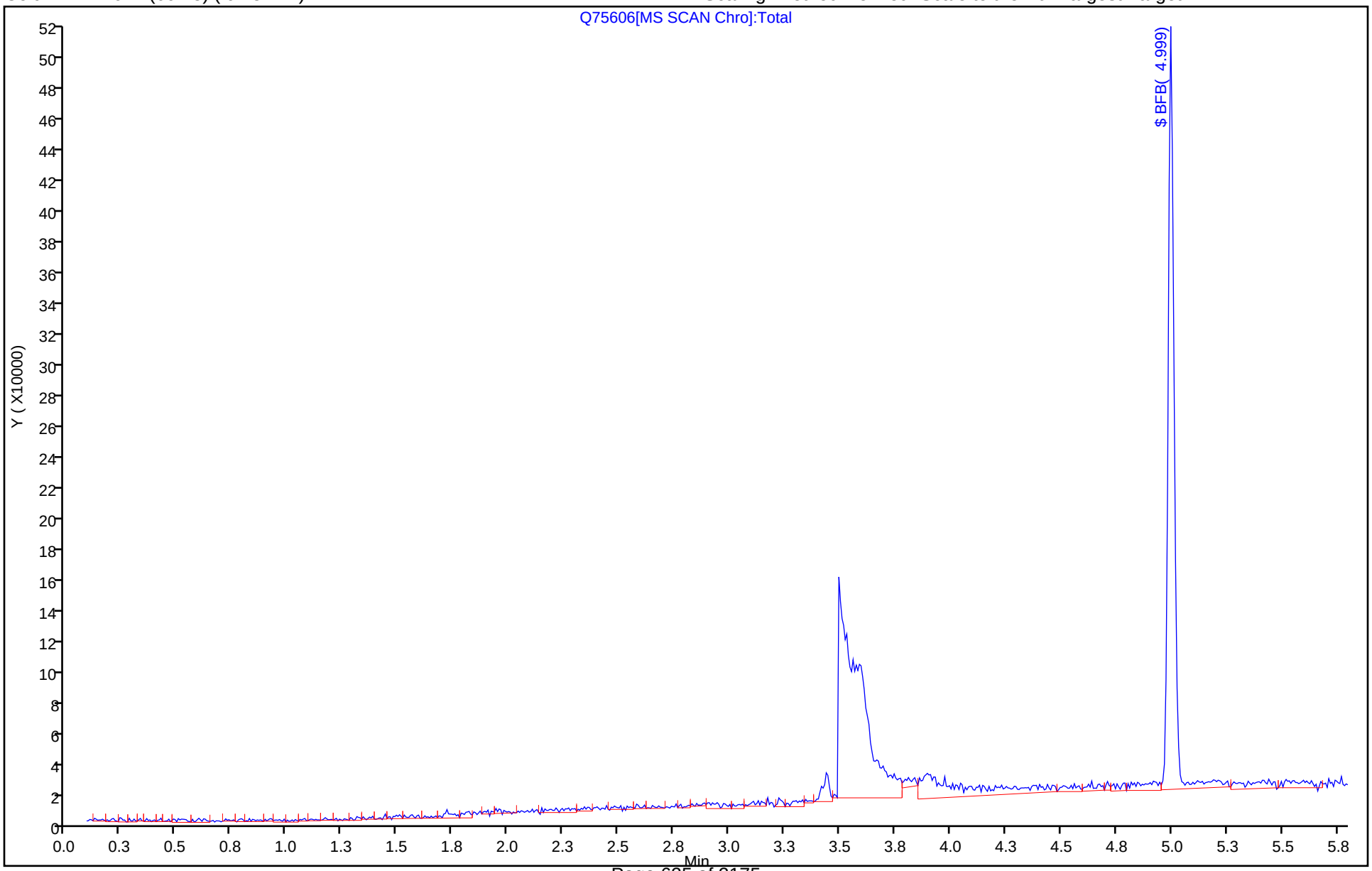
Report Date: 24-Nov-2018 09:05:26 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75606.D

Injection Date:	23-Nov-2018 11:53:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LB3 280-437096/1-A

Matrix: Water (TCLP) | Lab File ID: Q75610.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 2(mL) | Date Analyzed: 11/23/2018 13:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 438589 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.010	0.0016
78-93-3	2-Butanone (MEK)	ND		0.10	0.020
56-23-5	Carbon tetrachloride	ND		0.010	0.0019
108-90-7	Chlorobenzene	ND		0.010	0.0017
67-66-3	Chloroform	ND		0.010	0.0016
107-06-2	1,2-Dichloroethane	ND		0.010	0.0013
75-35-4	1,1-Dichloroethene	ND		0.010	0.0023
127-18-4	Tetrachloroethene	ND		0.010	0.0020
79-01-6	Trichloroethene	ND		0.010	0.0016
75-01-4	Vinyl chloride	ND		0.010	0.0010

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	93		78-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		64-129
460-00-4	4-Bromofluorobenzene (Surr)	98		78-121
1868-53-7	Dibromofluoromethane (Surr)	90		79-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75610.D
Lims ID: LB3 280-437096/1-A
Client ID:
Sample Type: LB3
Inject. Date: 23-Nov-2018 13:07:30 ALS Bottle#: 4 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LB3 280-437096/1-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 13:28:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.878	5.872	0.006	0	246454	250.0	250.0	
* 1 Fluorobenzene	96	7.795	7.795	0.000	100	3528324	12.5	12.5	
* 149 1,4-Dioxane-d8	96		8.639					ND	
* 2 Chlorobenzene-d5	119	10.025	10.026	-0.001	98	695770	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	99	908536	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.251	7.251	0.000	92	762388	13.5	12.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.544	7.545	-0.001	0	631987	13.5	12.0	
$ 7 Toluene-d8 (Surr)	98	8.960	8.960	0.000	100	3116604	13.5	12.5	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	964375	13.5	13.2	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		4.999					ND	
23 Dichlorodifluoromethane	85		4.191					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.391					ND	
26 Chloromethane	50		4.449					ND	
27 Vinyl chloride	62		4.577					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.655					ND	
28 Ethylene oxide	43		4.835					ND	
29 Bromomethane	94		4.906					ND	
30 Chloroethane	64		4.963					ND	
31 Dichlorofluoromethane	67		5.099					ND	
32 Trichlorofluoromethane	101		5.221					ND	
33 Ethanol	45		5.221					ND	
35 Ethyl ether	59		5.357					ND	
38 Propene oxide	58		5.450					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.463					ND	
22 Chlorotrifluoroethene	116		5.463					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.499					ND	
39 Acrolein	56		5.500					ND	
41 Acetone	43		5.600					ND	U
40 1,1,2-Trichloro-1,2,2-trif	151		5.607					ND	
42 Isopropyl alcohol	45		5.615					ND	U
43 1,1-Dichloroethene	96		5.628					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.807					ND	
45 Methyl acetate	43		5.829					ND	
46 Acetonitrile	41		5.865					ND	
47 3-Chloro-1-propene	41		5.879					ND	
48 Carbon disulfide	76		5.907					ND	U
49 2-Methyl-2-propanol	59		5.929					ND	U
50 Methylene Chloride	84	5.978	5.972	0.006	95	16972		0.2262	
52 Acrylonitrile	53		6.129					ND	
51 Methyl tert-butyl ether	73		6.150					ND	
53 trans-1,2-Dichloroethene	96		6.186					ND	
54 Hexane	57		6.351					ND	
55 Vinyl acetate	43		6.436					ND	
56 Isopropyl ether	87		6.451					ND	
57 1,1-Dichloroethane	63		6.501					ND	
58 2-Chloro-1,3-butadiene	53		6.566					ND	
59 Tert-butyl ethyl ether	59		6.730					ND	
60 Ethyl acetate	43		6.859					ND	
61 2-Butanone (MEK)	43		6.873					ND	
62 sec-Butyl Alcohol	45		6.923					ND	
63 cis-1,2-Dichloroethene	96		6.930					ND	
65 Propionitrile	54		6.937					ND	
64 2,2-Dichloropropane	77		6.965					ND	
66 Methacrylonitrile	41		7.052					ND	
67 Chlorobromomethane	128		7.123					ND	
68 Chloroform	83		7.130					ND	
69 Tetrahydrofuran	42		7.166					ND	
70 Isobutyl alcohol	41		7.330					ND	
71 1,1,1-Trichloroethane	97		7.352					ND	
72 Cyclohexane	56		7.430					ND	
73 1,1-Dichloropropene	75		7.452					ND	
74 Carbon tetrachloride	117		7.495					ND	
76 1,2-Dichloroethane	62		7.602					ND	
75 Tert-amyl methyl ether	73		7.610					ND	
77 Benzene	78		7.630					ND	
14 n-Heptane	43		7.702					ND	
78 n-Butanol	56		7.795					ND	
79 Trichloroethene	95		8.081					ND	
80 2-Pentanone	43		8.117					ND	
81 Methyl methacrylate	100		8.203					ND	
83 1,2-Dichloropropane	63		8.260					ND	
82 Methylcyclohexane	55		8.274					ND	
84 1,4-Dioxane	88		8.310					ND	
85 Dibromomethane	93		8.360					ND	
86 Dichlorobromomethane	83		8.424					ND	
88 2-Nitropropane	41		8.553					ND	
87 2-Chloroethyl vinyl ether	63		8.560					ND	
89 cis-1,3-Dichloropropene	75		8.732					ND	
90 4-Methyl-2-pentanone (MIBK	43		8.789					ND	
91 Toluene	91		9.010					ND	
92 Ethyl methacrylate	69		9.082					ND	
93 trans-1,3-Dichloropropene	75		9.096					ND	
94 1,1,2-Trichloroethane	97		9.254					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.368					ND	
96 1,3-Dichloropropane	76		9.389					ND	
97 Tetrachloroethene	164		9.418					ND	
98 Chlorodibromomethane	129		9.582					ND	
99 Tetrahydrothiophene	60		9.647					ND	
100 Ethylene Dibromide	107		9.718					ND	
101 1-Chlorohexane	91		9.933					ND	
102 Chlorobenzene	112		10.047					ND	
104 1,1,1,2-Tetrachloroethane	131		10.083					ND	
103 Ethylbenzene	106		10.083					ND	
105 m-Xylene & p-Xylene	106		10.162					ND	
107 o-Xylene	106		10.476					ND	
106 Styrene	104		10.476					ND	
108 Bromoform	173		10.684					ND	
109 Isopropylbenzene	105		10.741					ND	
110 cis-1,4-Dichloro-2-butene	53		10.763					ND	
111 Cyclohexanone	55		10.877					ND	U
112 1,1,2,2-Tetrachloroethane	83		10.941					ND	
113 trans-1,4-Dichloro-2-buten	53		10.977					ND	
114 1,2,3-Trichloropropane	110		11.012					ND	
116 Bromobenzene	156		11.063					ND	
115 N-Propylbenzene	120		11.063					ND	
117 1,3,5-Trimethylbenzene	105		11.170					ND	
118 2-Chlorotoluene	126		11.184					ND	
119 4-Chlorotoluene	126		11.263					ND	
120 tert-Butylbenzene	119		11.470					ND	
121 1,2,4-Trimethylbenzene	105		11.499					ND	
143 Pentachloroethane	167		11.528					ND	
122 sec-Butylbenzene	134		11.649					ND	
123 4-Isopropyltoluene	119		11.742					ND	
124 1,3-Dichlorobenzene	146		11.820					ND	
125 1,2,3-Trimethylbenzene	105		11.885					ND	
126 1,4-Dichlorobenzene	146		11.892					ND	
127 n-Butylbenzene	91		12.114					ND	
128 1,2-Dichlorobenzene	146		12.257					ND	
129 1,2-Dibromo-3-Chloropropan	157		13.014					ND	
16 1,3,5-Trichlorobenzene	180		13.230					ND	
130 1,2,4-Trichlorobenzene	180	13.987	13.980	0.007	89	8207		0.1164	
131 Hexachlorobutadiene	225		14.137					ND	
132 Naphthalene	128		14.359					ND	
133 1,2,3-Trichlorobenzene	180	14.687	14.680	0.007	90	7881		0.1587	
19 3-Methylhexane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
17 3-Ethylpentane	1		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
S 140 1,2-Dichloroethene, Total	96		2.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 139 Xylenes, Total	106		0.000				ND		
S 136 Total BTEX	1		0.000				ND		
S 137 1,3-Dichloropropene, Total	1		0.000				ND		
S 135 Xylenes, Total (URS)	1		0.000				ND		
S 152 TAH	1				0			0	7
S 134 Trihalomethanes, Total	1		0.000				ND		
S 138 1,2-Dichloroethene, Total	1		0.000				ND		

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

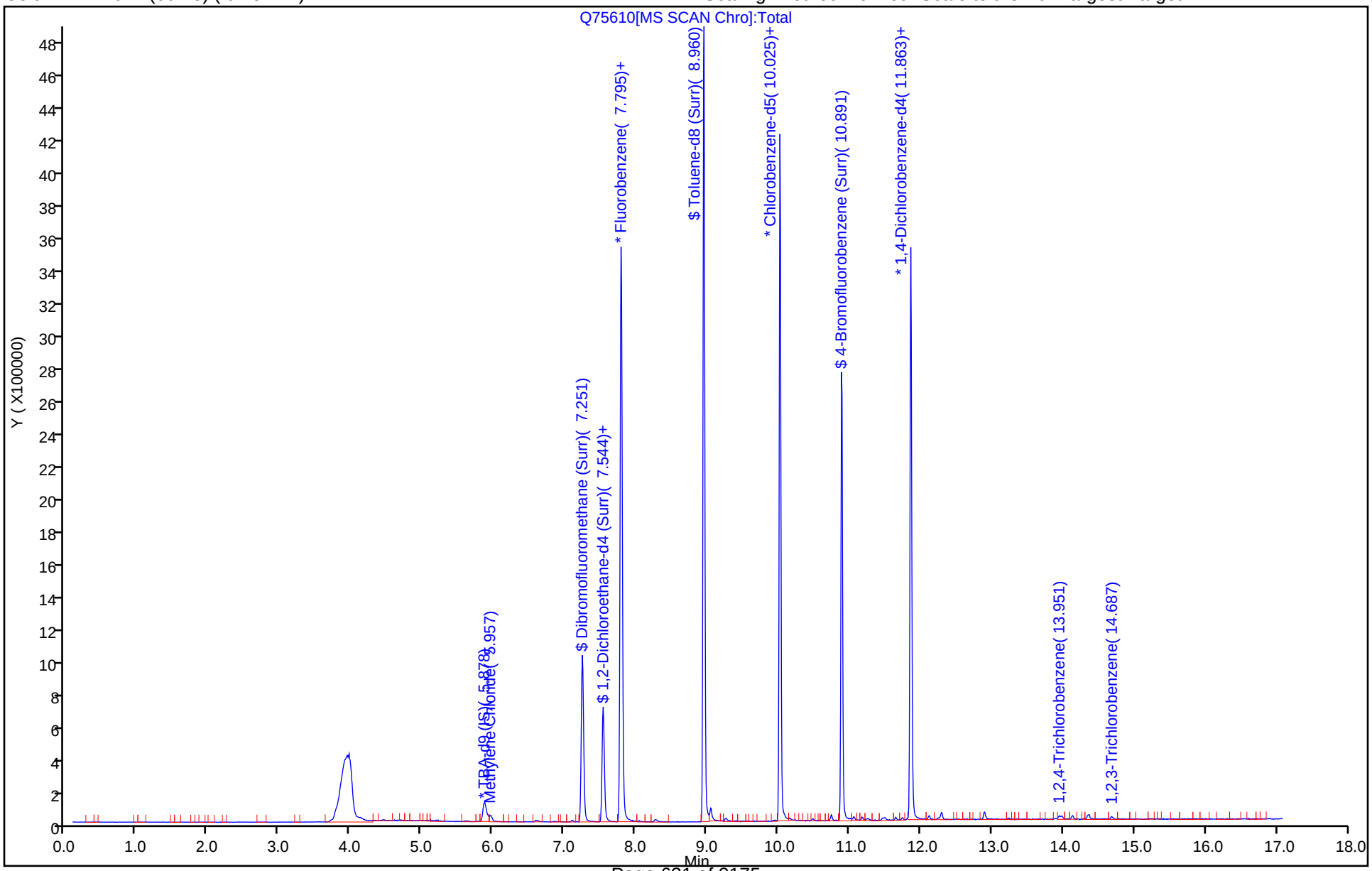
Report Date: 24-Nov-2018 09:04:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75610.D

Injection Date:	23-Nov-2018 13:07:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	LB3 280-437096/1-A			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75610.D
Lims ID: LB3 280-437096/1-A
Client ID:
Sample Type: LB3
Inject. Date: 23-Nov-2018 13:07:30 ALS Bottle#: 4 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LB3 280-437096/1-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 13:28:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	13.5	12.1	89.66
$ 6 1,2-Dichloroethane-d4 (Surr)	13.5	12.0	88.94
$ 7 Toluene-d8 (Surr)	13.5	12.5	92.89
$ 8 4-Bromofluorobenzene (Surr)	13.5	13.2	97.61

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437096/2-A

Matrix: Water (TCLP) | Lab File ID: Q75609.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 2(mL) | Date Analyzed: 11/23/2018 12:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 438589 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	0.0496		0.010	0.0016
78-93-3	2-Butanone (MEK)	0.170		0.10	0.020
56-23-5	Carbon tetrachloride	0.0504		0.010	0.0019
108-90-7	Chlorobenzene	0.0488		0.010	0.0017
67-66-3	Chloroform	0.0503		0.010	0.0016
107-06-2	1,2-Dichloroethane	0.0469		0.010	0.0013
75-35-4	1,1-Dichloroethene	0.0498		0.010	0.0023
127-18-4	Tetrachloroethene	0.0520		0.010	0.0020
79-01-6	Trichloroethene	0.0498		0.010	0.0016
75-01-4	Vinyl chloride	0.0481		0.010	0.0010

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		78-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-129
460-00-4	4-Bromofluorobenzene (Surr)	91		78-121
1868-53-7	Dibromofluoromethane (Surr)	88		79-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75609.D
Lims ID: LCS 280-437096/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-Nov-2018 12:47:30 ALS Bottle#: 3 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS 280-437096/2-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 13:27:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.864	5.872	-0.008	0	250115	250.0	250.0	
* 1 Fluorobenzene	96	7.787	7.795	-0.008	100	3643457	12.5	12.5	
* 2 Chlorobenzene-d5	119	10.025	10.026	-0.001	99	675421	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.863	11.863	0.000	99	945513	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.244	7.251	-0.007	92	772744	13.5	11.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.537	7.545	-0.008	0	664010	13.5	12.2	
$ 7 Toluene-d8 (Surr)	98	8.953	8.960	-0.007	100	3228268	13.5	13.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.891	10.891	0.000	84	932636	13.5	12.2	
23 Dichlorodifluoromethane	85	4.184	4.191	-0.007	99	426112	5.00	2.92	
26 Chloromethane	50	4.427	4.449	-0.022	98	344490	5.00	4.48	
27 Vinyl chloride	62	4.548	4.577	-0.029	97	424580	5.00	4.81	
29 Bromomethane	94	4.899	4.906	-0.007	91	368151	5.00	5.36	
30 Chloroethane	64	4.949	4.963	-0.014	99	216268	5.00	5.21	
31 Dichlorofluoromethane	67	5.085	5.099	-0.014	97	785436	5.00	5.93	
32 Trichlorofluoromethane	101	5.163	5.221	-0.058	98	1018418	5.00	5.37	
35 Ethyl ether	59	5.342	5.357	-0.015	96	178704	5.00	4.70	
39 Acrolein	56	5.492	5.500	-0.008	100	128936	50.0	43.1	
41 Acetone	43	5.599	5.600	-0.001	36	116102	20.0	16.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.592	5.607	-0.015	96	373163	5.00	5.29	
43 1,1-Dichloroethene	96	5.621	5.628	-0.007	95	449810	5.00	4.98	
44 Iodomethane	142	5.793	5.807	-0.014	98	652921	5.00	5.16	
45 Methyl acetate	43	5.821	5.829	-0.008	97	148823	10.0	8.59	
47 3-Chloro-1-propene	41	5.871	5.879	-0.008	82	812250	5.00	4.47	
48 Carbon disulfide	76	5.900	5.907	-0.007	99	1871658	5.00	4.86	
49 2-Methyl-2-propanol	59	5.928	5.929	-0.001	93	86984	50.0	53.1	
50 Methylene Chloride	84	5.964	5.972	-0.008	96	358120	5.00	4.62	
52 Acrylonitrile	53	6.121	6.129	-0.008	95	278002	50.0	40.3	
51 Methyl tert-butyl ether	73	6.150	6.150	0.000	96	413631	5.00	4.45	
53 trans-1,2-Dichloroethene	96	6.179	6.186	-0.007	95	499061	5.00	4.97	
54 Hexane	57	6.343	6.351	-0.008	94	930694	5.00	4.77	
55 Vinyl acetate	43	6.429	6.436	-0.007	97	627911	10.0	8.58	
57 1,1-Dichloroethane	63	6.493	6.501	-0.008	96	912656	5.00	4.77	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.872	6.873	-0.001	100	190742	20.0	17.0	
62 sec-Butyl Alcohol	45		6.923				ND	ND	
63 cis-1,2-Dichloroethene	96	6.915	6.930	-0.015	82	477291	5.00	4.93	
64 2,2-Dichloropropane	77	6.958	6.965	-0.007	88	792976	5.00	5.18	
67 Chlorobromomethane	128	7.115	7.123	-0.008	94	133285	5.00	4.93	
68 Chloroform	83	7.115	7.130	-0.015	93	863506	5.00	5.03	
69 Tetrahydrofuran	42	7.158	7.166	-0.008	96	54749	10.0	8.69	
70 Isobutyl alcohol	41	7.330	7.330	0.000	94	41145	125.0	94.6	
71 1,1,1-Trichloroethane	97	7.344	7.352	-0.008	98	862313	5.00	5.17	
72 Cyclohexane	56	7.423	7.430	-0.007	93	953038	5.00	4.94	
73 1,1-Dichloropropene	75	7.444	7.452	-0.008	96	858844	5.00	5.14	
74 Carbon tetrachloride	117	7.487	7.495	-0.008	96	762403	5.00	5.04	
76 1,2-Dichloroethane	62	7.594	7.602	-0.008	97	404830	5.00	4.69	
77 Benzene	78	7.623	7.630	-0.007	97	1889019	5.00	4.96	
14 n-Heptane	43	7.694	7.702	-0.008	93	977942	5.00	4.29	
79 Trichloroethene	95	8.073	8.081	-0.008	95	545400	5.00	4.98	
80 2-Pentanone	43	8.116	8.117	-0.001	99	241517	20.0	15.1	
83 1,2-Dichloropropane	63	8.252	8.260	-0.008	95	424753	5.00	5.07	
82 Methylcyclohexane	55	8.266	8.274	-0.008	95	785098	5.00	4.75	
84 1,4-Dioxane	88	8.309	8.310	-0.001	95	20284	100.0	101.6	
85 Dibromomethane	93	8.352	8.360	-0.008	89	137139	5.00	4.74	
86 Dichlorobromomethane	83	8.417	8.424	-0.007	99	499409	5.00	4.94	
87 2-Chloroethyl vinyl ether	63	8.560	8.560	0.000	91	33241	5.00	2.78	
89 cis-1,3-Dichloropropene	75	8.731	8.732	-0.001	95	510193	5.00	5.04	
90 4-Methyl-2-pentanone (MIBK	43	8.781	8.789	-0.008	0	361174	20.0	15.6	
91 Toluene	91	9.003	9.010	-0.007	98	1933636	5.00	5.14	
92 Ethyl methacrylate	69	9.082	9.082	0.000	90	121029	5.00	3.55	
93 trans-1,3-Dichloropropene	75	9.096	9.096	0.000	96	336455	5.00	4.66	
94 1,1,2-Trichloroethane	97	9.253	9.254	-0.001	93	174315	5.00	4.85	
95 2-Hexanone	43	9.368	9.368	0.000	97	217984	20.0	15.9	
96 1,3-Dichloropropane	76	9.389	9.389	0.000	93	319253	5.00	4.71	
97 Tetrachloroethene	164	9.418	9.418	0.000	91	393561	5.00	5.20	
98 Chlorodibromomethane	129	9.582	9.582	0.000	90	210989	5.00	4.83	
100 Ethylene Dibromide	107	9.711	9.718	-0.007	98	149292	5.00	4.70	
101 1-Chlorohexane	91	9.932	9.933	-0.001	98	737885	5.00	5.11	
102 Chlorobenzene	112	10.047	10.047	0.000	94	993973	5.00	4.88	
104 1,1,1,2-Tetrachloroethane	131	10.075	10.083	-0.008	89	331024	5.00	5.09	
103 Ethylbenzene	106	10.083	10.083	0.000	99	640041	5.00	4.97	
105 m-Xylene & p-Xylene	106	10.161	10.162	-0.001	0	773842	5.00	5.13	
107 o-Xylene	106	10.476	10.476	0.000	91	691344	5.00	5.06	
106 Styrene	104	10.476	10.476	0.000	81	863371	5.00	4.65	
108 Bromoform	173	10.676	10.684	-0.008	94	86393	5.00	4.66	
109 Isopropylbenzene	105	10.733	10.741	-0.008	97	2108619	5.00	4.95	
111 Cyclohexanone	55	10.876	10.877	-0.001	99	143238	200.0	207.9	
112 1,1,2,2-Tetrachloroethane	83	10.933	10.941	-0.008	94	151312	5.00	4.29	
113 trans-1,4-Dichloro-2-buten	53	10.976	10.977	-0.001	64	22249	5.00	3.21	
114 1,2,3-Trichloropropane	110	11.012	11.012	0.000	85	38947	5.00	4.50	
116 Bromobenzene	156	11.062	11.063	0.000	94	338251	5.00	4.70	
115 N-Propylbenzene	120	11.055	11.063	-0.007	99	567921	5.00	4.76	
117 1,3,5-Trimethylbenzene	105	11.169	11.170	-0.001	93	1659064	5.00	4.81	
118 2-Chlorotoluene	126	11.184	11.184	0.000	95	446167	5.00	4.81	
119 4-Chlorotoluene	126	11.262	11.263	-0.001	99	431279	5.00	4.66	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.470	11.470	0.000	91	1687906	5.00	4.73	
121 1,2,4-Trimethylbenzene	105	11.498	11.499	-0.001	98	1598095	5.00	4.74	
122 sec-Butylbenzene	134	11.649	11.649	-0.001	96	455327	5.00	4.84	
123 4-Isopropyltoluene	119	11.741	11.742	-0.001	96	1929006	5.00	5.02	
124 1,3-Dichlorobenzene	146	11.820	11.820	0.000	96	731901	5.00	4.77	
126 1,4-Dichlorobenzene	146	11.884	11.892	-0.008	93	706256	5.00	4.70	
127 n-Butylbenzene	91	12.113	12.114	-0.001	99	2031360	5.00	4.92	
128 1,2-Dichlorobenzene	146	12.249	12.257	-0.008	95	557507	5.00	4.74	
129 1,2-Dibromo-3-Chloropropan	157	13.014	13.014	0.000	74	17520	5.00	4.37	
130 1,2,4-Trichlorobenzene	180	13.979	13.980	-0.001	94	341942	5.00	4.66	
131 Hexachlorobutadiene	225	14.137	14.137	0.000	97	363333	5.00	4.99	
132 Naphthalene	128	14.358	14.359	-0.001	97	343492	5.00	4.21	
133 1,2,3-Trichlorobenzene	180	14.687	14.680	0.007	94	225113	5.00	4.36	
S 140 1,2-Dichloroethene, Total	96				0		10.0	9.91	
S 139 Xylenes, Total	106				0		10.0	10.2	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.71	
S 135 Xylenes, Total (URS)	1				0		10.0	10.2	
S 134 Trihalomethanes, Total	1				0		20.0	19.5	
S 138 1,2-Dichloroethene, Total	1				0		10.0	9.91	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-MegaMain B_00004	Amount Added:	2.00	Units: uL	
MV-568718-D_00008	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00101	Amount Added:	1.08	Units: uL	Run Reagent

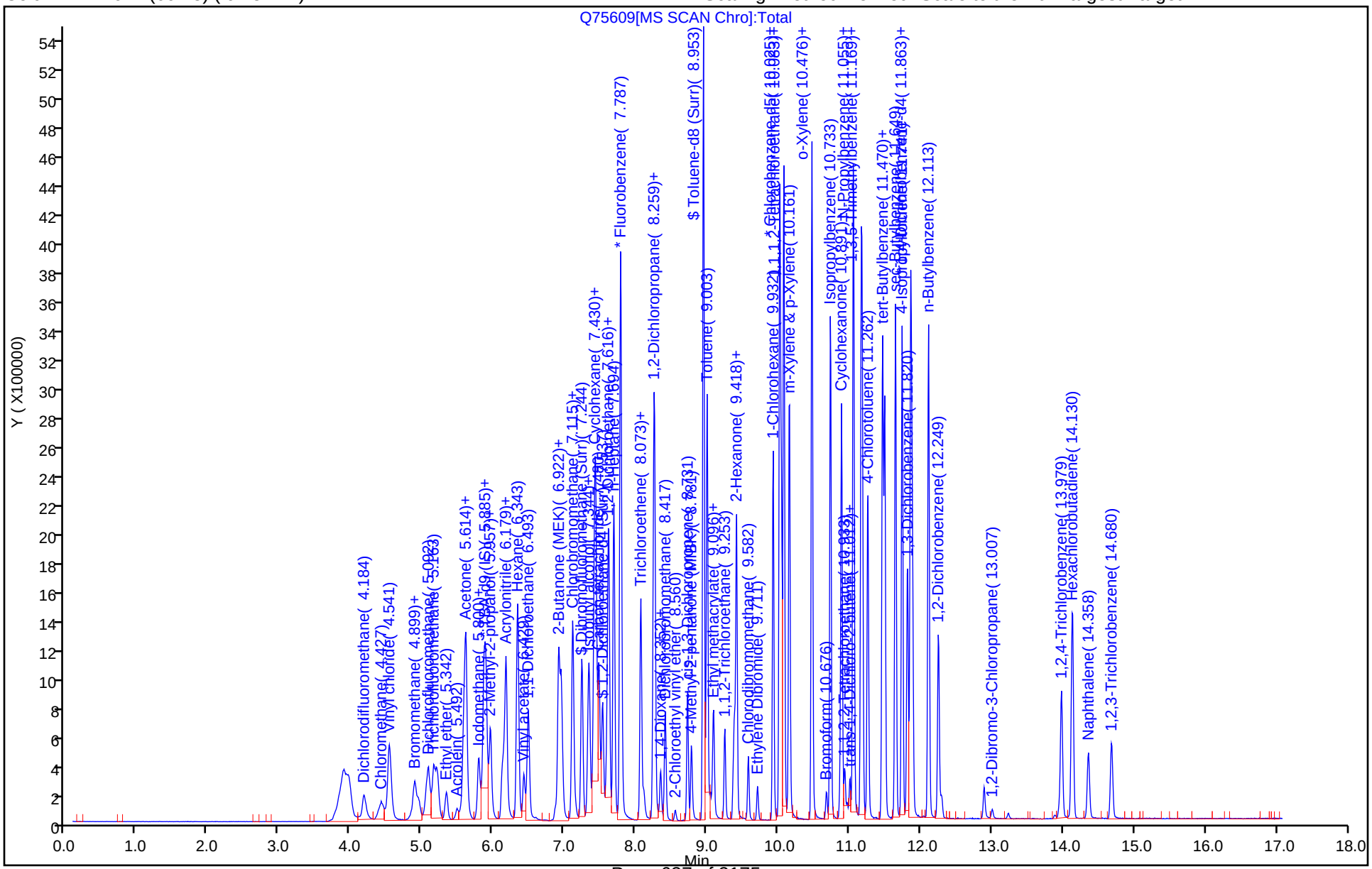
Report Date: 24-Nov-2018 09:04:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75609.D

Injection Date:	23-Nov-2018 12:47:30	Instrument ID:	VMS_Q	Operator ID:	meierg
Lims ID:	LCS 280-437096/2-A			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSQ_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\Q75609.D
Lims ID: LCS 280-437096/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-Nov-2018 12:47:30 ALS Bottle#: 3 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS 280-437096/2-A
Operator ID: meierg Instrument ID: VMS_Q

Method: \\chromdocs2018\q3\Denver\ChromData\VMS_Q\20181123-76486.b\AQ_VMSQ_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 24-Nov-2018 07:44:52 Calib Date: 13-Nov-2018 16:45:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_Q\20181113-76160.b\Q75373.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0308

First Level Reviewer: meierg Date: 23-Nov-2018 13:27:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	13.5	11.9	88.00
$ 6 1,2-Dichloroethane-d4 (Surr)	13.5	12.2	90.49
$ 7 Toluene-d8 (Surr)	13.5	13.4	99.12
$ 8 4-Bromofluorobenzene (Surr)	13.5	12.2	90.71

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: VMS_Q Start Date: 11/12/2018 13:32

Analysis Batch Number: 437259 End Date: 11/12/2018 16:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-437259/1		11/12/2018 13:32	1	Q75342.D	DB-624 (60.25) 0.25(mm)
STD005 280-437259/12 IC		11/12/2018 14:11	1	Q75343.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 14:11	1		DB-624 (60.25) 0.25(mm)
STD010 280-437259/13 IC		11/12/2018 14:32	1	Q75344.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 14:32	1		DB-624 (60.25) 0.25(mm)
STD020 280-437259/14 IC		11/12/2018 14:52	1	Q75345.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 14:52	1		DB-624 (60.25) 0.25(mm)
STD050 280-437259/15 IC		11/12/2018 15:13	1	Q75346.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 15:13	1		DB-624 (60.25) 0.25(mm)
ICIS 280-437259/16		11/12/2018 15:33	1	Q75347.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 15:33	1		DB-624 (60.25) 0.25(mm)
STD30 280-437259/17 IC		11/12/2018 15:54	1	Q75348.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 15:54	1		DB-624 (60.25) 0.25(mm)
STD60 280-437259/18 IC		11/12/2018 16:15	1	Q75349.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 16:15	1		DB-624 (60.25) 0.25(mm)
ICV 280-437259/19		11/12/2018 16:56	1	Q75351.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 16:56	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: VMS_Q Start Date: 11/13/2018 14:29

Analysis Batch Number: 437429 End Date: 11/13/2018 17:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-437429/1		11/13/2018 14:29	1	Q75366.D	DB-624 (60.25) 0.25(mm)
STD005 280-437429/12 IC		11/13/2018 14:42	1	Q75367.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 14:42	1		DB-624 (60.25) 0.25(mm)
STD010 280-437429/13 IC		11/13/2018 15:03	1	Q75368.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 15:03	1		DB-624 (60.25) 0.25(mm)
STD020 280-437429/14 IC		11/13/2018 15:23	1	Q75369.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 15:23	1		DB-624 (60.25) 0.25(mm)
STD050 280-437429/15 IC		11/13/2018 15:44	1	Q75370.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 15:44	1		DB-624 (60.25) 0.25(mm)
ICIS 280-437429/16		11/13/2018 16:04	1	Q75371.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 16:04	1		DB-624 (60.25) 0.25(mm)
STD30 280-437429/17 IC		11/13/2018 16:25	1	Q75372.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 16:25	1		DB-624 (60.25) 0.25(mm)
STD60 280-437429/18 IC		11/13/2018 16:45	1	Q75373.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 16:45	1		DB-624 (60.25) 0.25(mm)
ICV 280-437429/19		11/13/2018 17:26	1	Q75375.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/13/2018 17:26	1		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: VMS_Q Start Date: 11/23/2018 11:53

Analysis Batch Number: 438589 End Date: 11/23/2018 21:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-438589/1		11/23/2018 11:53	1	Q75606.D	DB-624 (60.25) 0.25(mm)
CCV 280-438589/2		11/23/2018 12:04	1	Q75607.D	DB-624 (60.25) 0.25(mm)
CCV 280-438589/3		11/23/2018 12:25	1	Q75608.D	DB-624 (60.25) 0.25(mm)
LCS 280-437096/2-A		11/23/2018 12:47	1	Q75609.D	DB-624 (60.25) 0.25(mm)
LB3 280-437096/1-A		11/23/2018 13:07	1	Q75610.D	DB-624 (60.25) 0.25(mm)
280-116538-4		11/23/2018 13:45	1	Q75611.D	DB-624 (60.25) 0.25(mm)
280-116538-5		11/23/2018 14:05	1	Q75612.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 14:26	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 14:46	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 15:07	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 15:27	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 15:47	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 16:08	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 16:28	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 16:49	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 17:09	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 17:30	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 17:50	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 18:11	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 18:31	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 18:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 19:12	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 19:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 19:54	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 20:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 20:35	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 20:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/23/2018 21:16	1		DB-624 (60.25) 0.25(mm)
CCVC 280-438589/37		11/23/2018 21:37	1	Q75634.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437096 Batch Start Date: 11/09/18 15:44 Batch Analyst: Bourgery, David F

Batch Method: 1311 Batch End Date: 11/09/18 19:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	ExtractFluid	AnalysisComment				
LB3 280-437096/1		1311, 8260B		milliq					
LCS 280-437096/2		1311, 8260B		milliq					
280-116538-L-4	FWGIDW-181001-WW	1311, 8260B	P	milliq	Used M too				
280-116538-A-5	FWGqc-015-TB	1311, 8260B	P	milliq	Used B too				

Batch Notes	
First End time	11/09/18 19:04
First Start time	11/09/18 15:44

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Analyst: DB

Date: 11.06.18

DV-IP-0012

TCLP/SPLP Worksheet No. 1

Sample Description

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116538	116610	116610	116610	116610	116610	116621	116621	116621	116538
Sample No.	4	1	2	3	5	6	2	3	4	5
A. Sample Description										
Number of phases	2	2	2	2	2	2	2	2	2	2
1. Solid	X	X	X	X	X	X	X	X	X	X
2. Liquid	X	X	X	X	X	X	X	X	X	X
a. lighter than water										
b. water	X	X	X	X	X	X	X	X	X	X
c. heavier than water										
B. Percent Solid Phase										
Balance ID	24950431	24950431	24950431	24950431	24950431	24950431	24950431	24950431	24950431	NCM
1. Weight of filter (g)	1.19	1.2	1.21	1.19	1.22	1.22	1.21	1.20	1.18	
2. Weight of subsample										
a. gross weight (g)	1441.03	1261.62	938.05	1213.42	1631.69	1565.16	1560.50	1475.15	1571.57	
b. tare weight (g)	483.28	504.15	505.38	503.50	505.45	504.81	502.69	503.47	503.57	
c. net weight (g)	957.75	757.47	432.67	709.92	1126.24	1060.35	1057.81	971.68	1068.00	0.00
3. Weight of filtrate										
a. gross weight (g)	1598.56	1273.36	1020.29	1354.39	1751.97	1687.92	1702.08	1614.65	1678.50	
b. tare weight (g)	652.67	653.21	653.90	653.45	652.62	653.82	651.88	651.88	653.34	
c. net weight (g)	945.89	620.15	366.39	700.94	1099.35	1034.10	1050.20	962.77	1025.16	0.00
d. density of filtrate (g/mL)			1.00							
4. Total weight wet solids (g)	11.86	137.32	66.28	8.98	26.89	26.25	7.61	8.91	42.84	0.00
5. Weight percent solids (wet) (%)	1.24	18.13	15.32	1.26	2.39	2.48	0.72	0.92	4.01	#DIV/0!
6. Weight percent solids (dry)										
a. gross dry weight 1 (g)	7.06	6.46	55.41	6.66	4.63	13.71	5.48	7.53	19.05	
b. gross dry weight 2 (g)	1.22	1.22		1.31	1.84	3.51	1.25	1.33	3.56	
c. percent dry solids (%)	0.00	0.00	12.53	0.02	0.06	0.22	0.00	0.01	0.22	
d. Oven Temp (observed) (^{o}C)										
Thermometer Correction Factor	0									
Oven Temp Actual (^{o}C)	0	0	0	0	0	0	0	0	0	0
7. Vol. of initial aqueous filtrate (mL)	#DIV/0!	#DIV/0!	366.8302	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8. Vol. of initial organic filtrate (mL)										

Comments:

$$(\text{Weight percent dry solids, B.6.c}) = 100 \times \frac{(\text{Gross dry weight 2 or 1, B.6.b or B.6.a if B.6.a is blank}) - (\text{Weight of filter, B.1})}{(\text{Weight of subsample .B.2.c})}$$

(Net Weight of Subsample, B.2.c) = (gross weight, B.2.a) - (tare weight, B.2.b)

(Net Weight of Filtrate, B.3.c) = (gross weight, B.3.a) - (tare weight, B.3.b)

(Total weight wet solids, B.4) = (Weight subsample, B.2.c) - (Weight filtrate, B.3.c)

(Vol of initail filtrate, B.7) = (Weight of filtrate, B.3.c) / (Denisity of filtrate, B.3.d)

(Weight percent wet solids, B.5.) = 100 X (Total weight wet solids, B.4.) / (Weight of subsample, B.2.c.)

Analyst: DB

DV-IP-0012
TCLP Worksheet No. 2
Selection of Leach Fluid

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116538	116610	116610	116610	116610	116610	116621	116621	116621	116538
Sample No.	4	1	2	3	5	6	2	3	4	5
C. Leach Fluid Determination- Does not apply to determination of volatile organic components or SPLP.										
1. Particle size reduction? (<1mm) Yes/No			**N**							
If yes, write NCM descibing how.										
2. Balance ID			24950431							
3. Sample weight, 5.0 +/- 0.1g			4.99							
4. Add 96.5 (+/- 2% or 94.57mL to 98.43mL)										
a. Pipette ID or Grad Cylinder ID			TCLP BT							
5. Initial pH (after 5 min. mixing time)										
a. Start Time for Mixing			17:55							
b. Stop Time for Mixing			18:00							
c. pH reading after mixing			8.25							
6. If pH > 5.0, then add 3.5 mL 1N HCL & mark **"X"**			X							
a. HCL Lot# used			1N HCl_00039							
b. Pipette ID			TCLP#2							
7. Secondary pH (after 10min at 50C to 55C)										
a. Thermometer ID			311846							
Termometer Correction Factor			0							
b. Start Time			18:25							
c. Start Temperature (Observed)			50							
Start Temperature (Actual)	0	0	50	0	0	0	0	0	0	0
d. Finish Time			18:35							
e. Finish Temperature (Observed)			53							
Finish Temperature (Actual)	0	0	53	0	0	0	0	0	0	0
f. pH reading after heating (temperature corrected)			2.16							
D. Selection of Leach Fluid										
1. If pH from C.5. or C.7.f. is <5.0 use Leach Fluid #1			Fluid 1							
2. If pH from C.7.f is > 5.0, use Leach Fluid #2										
3. SPLP Fluid 1: Soils- East of the Mississippi River; Wastewates; or Wastewaters										
4. SPLP Fluid 2: Soils- West of Mississippi River										
5. SPLP Fluid 3: If VOCs or Cyanide containing wastes.										
6. **X** if filtrate and fluid are miscible										

Analyst: DB

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

DV-IP-0012
TCLP/SPLP Worksheet No. 3
Bottle Leach Procedure for Metals and Semi-Volatile Organic Components

Login No.	116538	116610	116610	116610	116610	116610	116621	116621	116621	116538
Sample No.	4	1	2	3	5	6	2	3	4	5
E. Determination of Sample Size										
1. Particle size reduction? Yes/no			N							
If yes, write NCM descibing how.										
2. Balance ID			24950431							
3. Weight of wet solids after filtration (g)			44.95							
F. Determination of Amount of Leach Fluid										
Fluid Type from Wksht 2	#VALUE!	#VALUE!	TCLP 1	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1. TCLP Fluid 1 Lot #		T1_00257	T1_00268	T1_00257	T1_00257	T1_00257				
2. TCLP Fluid 2 Lot #										
3. SPLP 1 (East) Lot #										
4. SPLP 2 (West) Lot #										
5. pH of leach fluid			4.92							
6. Vol of Fluid = wet solids x 20 (mL)			899							
G. Record of Leach - leach period is 16 to 20 hours										
1. Rotator checked to be rotating between 28 and 32 RPM?			Y							
2. Leach start date and time			11/7/18 19:46							
3. Leach stop date and time			11/8/18 13:16							
4. Room temperature										
Thermometer Correction Factor			0.0							
a.Temp Min (Observed) (^oC)			20.8							
b.Temp Max (Observed) (^oC)			23.0							
c.Temp Min (Actual) (^oC)	0.0	0.0	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
d.Temp Max (Actual) (^oC)	0.0	0.0	23.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. pH of leachate			5.26							
Was the sample multiphasic?	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	#DIV/0!
6. Volume of leachate (mL)			802							
a. Oil recovered from leachate (mL)										
7. Volume of initial filtrate for recombination (mL)	#DIV/0!	#DIV/0!	222	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8. Combined initial filtrate + leachate (mL)	#DIV/0!	#DIV/0!	1024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
COMMENTS:										

(Volume of Fluid, F.4) = (Weight of wet solids, E.3) X 20

(Vol. of Combined Filtrate and Leachate, G.8) = (Vol of Leachate, G.6) + (Vol of Filtrate, G.7)

$$(\text{Vol. of Inital Filtrate for Recombinat ion, G.7}) = \frac{(\text{Solids Leachated, E.3})}{(\text{Tot. Wet Solids, B.4})} \times \frac{(\text{LeachateRe covered, G.6})}{(\text{FluidAdded , F.6})} \times (\text{InitialFil trat, B.7})$$

Analyst: DB

DV-IP-0012
TCLP/SPLP Worksheet No. 4
ZHE Leach

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116538	116610	116610	116610	116610	116610	116621	116621	116621	116538
Sample No.	4	1	2	3	5	6	2	3	4	5
H.Determination of Amount of Leach Fluid										
1. Balance ID	24950431				24950431	24950431	24950431	24950431	24950431	24950431
2. ZHE vessel number	3				7	7A	AAA	CCC	EEE	Jim
3. Weight of material added to ZHE (g)										
"X" if there was headspace in container.										
4. Weight of filtrate in syringe										
a. gross weight (g)										
b. tare weight (g)										
c. net weight (g)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Volume of filtrate in syringe (mL)										
6. Wet solids in ZHE (g)										
7. Weight of fluid to add (g)	0	0	0	0	0	0	0	0	0	0
a. TCLP Fluid 1 Lot #										
b. SPLP Fluid 3 Lot #										
c. pH of Blank Fluid										
8. Percent Wet Solids (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
I. Record of ZHE Leach - the Leach period is 16 to 20 hours.										
1. Leak Check										
a. Reading #1 (psi)										
b. Reading #2 (psi)										
2. Rotator checked to be rotating between 28 and 32 RPM?										
3. Leach start date & time										
4. Leach stop date & time										
5. Room temperature										
Thermometer Correction Factor										
a.Temp Min (Observed) (^oC)										
b.Temp Max (Observed) (^oC)										
c.Temp Min (Actual) (^oC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
d. Temp Max (Actual) (^oC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. **X** if still under positive pressure after leaching										
7. Volume of leachate recovered (mL)										
a. Volume of oil recovered after leaching										
8. Vol. of initial aqueous filtrate for recombination										
a. Calculated from Worksheet 1 (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
b. Calculated from Worksheet 4 (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

(Net Weight of Filtrate, H.4.c) = (Gross weight, H.4.a.) - (Tare weight, H.4.b.)

(Percent Wet Solids, H.8.) = 100 X **[** (Wet Solids in ZHE, H.6) / (Weight of material added to ZHE, H.3) **]**

(Wet Solids in ZHE, H.6) = (Weight of material added to ZHE, H.3.) - (net weight of filtrate, H.4.c.)

(Vol of Filtrate for recombination, I.7.b) = (Vol of Leachate Recvd, I.6) X (Weight of Filtrate, H.4.c) / (Vol Fluid Added, H.7.)

(Weight of Fluid to add, H.7.) = (Wet Solids in ZHE, H.6) X 20

(Vol of Filtrate for recombination, I.7.a) = **[** (Wet Solids in ZHE, H.6.) / (Tot Wet Solids, B.4) **]** X **[** (Vol Leachate Recvd, I.6.) / (Vol Fluid Add, H.7.) **]** X (Vol Filtrate, B.7.)

COMMENTS:

Analyst: DB

Date: 11.09.18

DV-IP-0012
TCLP/SPLP Worksheet No. 1
Sample Description

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116636	116707	116707	LB3						
Sample No.	1	1	2							
A. Sample Description										
Number of phases	2	2	2							
1. Solid	X	X	X							
2. Liquid	X	X	X							
a. lighter than water										
b. water	X	X	X							
c. heavier than water										
B. Percent Solid Phase										
Balance ID	24950431	24950431	24950431							
1. Weight of filter (g)	1.21	1.2	1.17							
2. Weight of subsample										
a. gross weight (g)	1619.91	1529.36	1559.01							
b. tare weight (g)	566.94		500.46							
c. net weight (g)	1052.97	1529.36	1058.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Weight of filtrate										
a. gross weight (g)	1694.15		1688.70							
b. tare weight (g)	653.00	652.5	650.69							
c. net weight (g)	1041.15	-652.50	1038.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d. density of filtrate (g/mL)										
4. Total weight wet solids (g)	11.82	2181.86	20.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Weight percent solids (wet) (%)	1.12	142.66	1.94	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
6. Weight percent solids (dry)										
a. gross dry weight 1 (g)	7.49		7.71							
b. gross dry weight 2 (g)	1.27		1.27							
c. percent dry solids (%)	0.01		0.01							
d. Oven Temp (observed) (^{o}C)										
Thermometer Correction Factor	0									
Oven Temp Actual (^{o}C)	0	0	0	0	0	0	0	0	0	0
7. Vol. of initial aqueous filtrate (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8. Vol. of initial organic filtrate (mL)										

Comments:

$$(\text{Weight percent dry solids, B.6.c}) = 100 \times \frac{(\text{Gross dry weight 2 or 1, B.6.b or B.6.a if B.6.a is blank}) - (\text{Weight of filter, B.1})}{(\text{Weight of subsample .B.2.c})}$$

(Net Weight of Subsample, B.2.c) = (gross weight, B.2.a) - (tare weight, B.2.b)

(Net Weight of Filtrate, B.3.c) = (gross weight, B.3.a) - (tare weight, B.3.b)

(Total weight wet solids, B.4) = (Weight subsample, B.2.c) - (Weight filtrate, B.3.c)

(Vol of initail filtrate, B.7) = (Weight of filtrate, B.3.c) / (Denisity of filtrate, B.3.d)

(Weight percent wet solids, B.5.) = 100 X (Total weight wet solids, B.4.) / (Weight of subsample, B.2.c.)

Analyst: DB

DV-IP-0012
TCLP Worksheet No. 2
Selection of Leach Fluid

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116636	116707	116707	LB3						
Sample No.	1	1	2							
C. Leach Fluid Determination- Does not apply to determination of volatile organic components or SPLP.										
1. Particle size reduction? (<1mm) Yes/No	**N**									
If yes, write NCM descibing how.										
2. Balance ID	24950431									
3. Sample weight, 5.0 +/- 0.1g	5.1									
4. Add 96.5 (+/- 2% or 94.57mL to 98.43mL)										
a. Pipette ID or Grad Cylinder ID	TCLP BT									
5. Initial pH (after 5 min. mixing time)										
a. Start Time for Mixing										
b. Stop Time for Mixing										
c. pH reading after mixing										
6. If pH > 5.0, then add 3.5 mL 1N HCL & mark **"X"**										
a. HCL Lot# used										
b. Pipette ID										
7. Secondary pH (after 10min at 50C to 55C)										
a. Thermometer ID										
Termometer Correction Factor										
b. Start Time										
c. Start Temperature (Observed)										
Start Temperature (Actual)	0	0	0	0	0	0	0	0	0	0
d. Finish Time										
e. Finish Temperature (Observed)										
Finish Temperature (Actual)	0	0	0	0	0	0	0	0	0	0
f. pH reading after heating (temperature corrected)										
D. Selection of Leach Fluid										
1. If pH from C.5. or C.7.f. is <5.0 use Leach Fluid #1										
2. If pH from C.7.f is > 5.0, use Leach Fluid #2										
3. SPLP Fluid 1: Soils- East of the Mississippi River; Wastewates; or Wastewaters										
4. SPLP Fluid 2: Soils- West of Mississippi River										
5. SPLP Fluid 3: If VOCs or Cyanide containing wastes.										
6. **X** if filtrate and fluid are miscible										

Analyst: DB

DV-IP-0012

TCLP/SPLP Worksheet No. 3

Bottle Leach Procedure for Metals and Semi-Volatile Organic Components

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116636	116707	116707	LB3						
Sample No.	1	1	2							
E. Determination of Sample Size										
1. Particle size reduction? Yes/no										
If yes, write NCM descibing how.										
2. Balance ID										
3. Weight of wet solids after filtration (g)										
F. Determination of Amount of Leach Fluid										
Fluid Type from Wksht 2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1. TCLP Fluid 1 Lot #		11-002-57	11-002-57	11-002-57	11-002-57	11-002-57				
2. TCLP Fluid 2 Lot #										
3. SPLP 1 (East) Lot #										
4. SPLP 2 (West) Lot #										
5. pH of leach fluid										
6. Vol of Fluid = wet solids x 20 (mL)										
G. Record of Leach - leach period is 16 to 20 hours										
1. Rotator checked to be rotating between 28 and 32 RPM?										
2. Leach start date and time										
3. Leach stop date and time										
4. Room temperature										
Thermometer Correction Factor										
a.Temp Min (Observed) (^oC)										
b.Temp Max (Observed) (^oC)										
c.Temp Min (Actual) (^oC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
d.Temp Max (Actual) (^oC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. pH of leachate										
Was the sample multiphasic?	FALSE	TRUE	FALSE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
6. Volume of leachate (mL)										
a. Oil recovered from leachate (mL)										
7. Volume of initial filtrate for recombination (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8. Combined initial filtrate + leachate (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
COMMENTS:										

(Volume of Fluid, F.4) = (Weight of wet solids, E.3) X 20

(Vol. of Combined Filtrate and Leachate, G.8) = (Vol of Leachate, G.6) + (Vol of Filtrate, G.7)

$$(\text{Vol. of Inital Filtrate for Recombinat ion, G.7}) = \frac{(\text{Solids Leachated, E.3})}{(\text{Tot. Wet Solids, B.4})} \times \frac{(\text{LeachateRe covered, G.6})}{(\text{FluidAdded , F.6})} \times (\text{InitialFil trat, B.7})$$

Analyst: DB

DV-IP-0012
TCLP/SPLP Worksheet No. 4
ZHE Leach

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login No.	116636	116707	116707	LB3						
Sample No.	1	1	2							
H.Determination of Amount of Leach Fluid										
1. Balance ID	24950431		24950431							
2. ZHE vessel number	Rachael		Shelly	3						
3. Weight of material added to ZHE (g)										
"X" if there was headspace in container.										
4. Weight of filtrate in syringe										
a. gross weight (g)										
b. tare weight (g)										
c. net weight (g)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Volume of filtrate in syringe (mL)										
6. Wet solids in ZHE (g)										
7. Weight of fluid to add (g)	0	0	0	0	0	0	0	0	0	0
a. TCLP Fluid 1 Lot #										
b. SPLP Fluid 3 Lot #										
c. pH of Blank Fluid										
8. Percent Wet Solids (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
I. Record of ZHE Leach - the Leach period is 16 to 20 hours.										
1. Leak Check										
a. Reading #1 (psi)										
b. Reading #2 (psi)										
2. Rotator checked to be rotating between 28 and 32 RPM?										
3. Leach start date & time										
4. Leach stop date & time										
5. Room temperature										
Thermometer Correction Factor										
a.Temp Min (Observed) (^oC)										
b.Temp Max (Observed) (^oC)										
c.Temp Min (Actual) (^oC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
d. Temp Max (Actual) (^oC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6. **X** if still under positive pressure after leaching										
7. Volume of leachate recovered (mL)										
a. Volume of oil recovered after leaching										
8. Vol. of initial aqueous filtrate for recombination										
a. Calculated from Worksheet 1 (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
b. Calculated from Worksheet 4 (mL)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

(Net Weight of Filtrate, H.4.c) = (Gross weight, H.4.a.) - (Tare weight, H.4.b.)

(Percent Wet Solids, H.8.) = 100 X **[** (Wet Solids in ZHE, H.6) / (Weight of material added to ZHE, H.3) **]**

(Wet Solids in ZHE, H.6) = (Weight of material added to ZHE, H.3.) - (net weight of filtrate, H.4.c.)

(Vol of Filtrate for recombination, I.7.b) = (Vol of Leachate Recvd, I.6) X (Weight of Filtrate, H.4.c) / (Vol Fluid Added, H.7.)

(Weight of Fluid to add, H.7.) = (Wet Solids in ZHE, H.6) X 20

(Vol of Filtrate for recombination, I.7.a) = **[** (Wet Solids in ZHE, H.6.) / (Tot Wet Solids, B.4) **]** X **[** (Vol Leachate Recvd, I.6.) / (Vol Fluid Add, H.7.) **]** X (Vol Filtrate, B.7.)

COMMENTS:

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437259 Batch Start Date: 11/12/18 13:32 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00008	MV-ARCH SS A 00101	MV-BFB 00027	MV-MegaMain B 00004
BFB 280-437259/1		8260B		1 uL	1 uL			1 uL	
STD005 280-437259/12 IC		8260B		20 mL	20 mL	1 uL	0.04 uL		
STD010 280-437259/13 IC		8260B		20 mL	20 mL	1 uL	0.08 uL		
STD020 280-437259/14 IC		8260B		20 mL	20 mL	1 uL	0.16 uL		
STD050 280-437259/15 IC		8260B		20 mL	20 mL	1 uL	0.4 uL		
ICIS 280-437259/16		8260B		20 mL	20 mL	1 uL	0.8 uL		
STD30 280-437259/17 IC		8260B		20 mL	20 mL	1 uL	2.4 uL		
STD60 280-437259/18 IC		8260B		20 mL	20 mL	1 uL	4.8 uL		
ICV 280-437259/19		8260B		20 mL	20 mL	1 uL	1 uL		4 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00007					
BFB 280-437259/1		8260B							
STD005 280-437259/12 IC		8260B		0.2 uL					
STD010 280-437259/13 IC		8260B		0.4 uL					
STD020 280-437259/14 IC		8260B		0.8 uL					
STD050 280-437259/15 IC		8260B		2 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437259 Batch Start Date: 11/12/18 13:32 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00007					
ICIS 280-437259/16		8260B		4 uL					
STD30 280-437259/17 IC		8260B		10 uL					
STD60 280-437259/18 IC		8260B		24 uL					
ICV 280-437259/19		8260B							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437429 Batch Start Date: 11/13/18 14:29 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00008	MV-BFB 00027	MV-MegaMain B 00004	MV-MegaMainA 00007
BFB 280-437429/1		8260B		1 uL	1 uL		1 uL		
STD005 280-437429/12 IC		8260B		20 mL	20 mL	1 uL			0.2 uL
STD010 280-437429/13 IC		8260B		20 mL	20 mL	1 uL			0.4 uL
STD020 280-437429/14 IC		8260B		20 mL	20 mL	1 uL			0.8 uL
STD050 280-437429/15 IC		8260B		20 mL	20 mL	1 uL			2 uL
ICIS 280-437429/16		8260B		20 mL	20 mL	1 uL			4 uL
STD30 280-437429/17 IC		8260B		20 mL	20 mL	1 uL			10 uL
STD60 280-437429/18 IC		8260B		20 mL	20 mL	1 uL			24 uL
ICV 280-437429/19		8260B		20 mL	20 mL	1 uL		4 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438589 Batch Start Date: 11/23/18 11:53 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00008	MV-ARCH SS A 00101	MV-BFB 00027	MV-MegaMain B 00004
BFB 280-438589/1		8260B		1 uL	1 uL			1 uL	
CCV 280-438589/2		8260B		20 mL	20 mL	1 uL			
CCV 280-438589/3		8260B		20 mL	20 mL	1 uL	1.08 uL		
LCS 280-437096/2-A		8260B		2 mL	20 mL	1 uL	1.08 uL		2 uL
LB3 280-437096/1-A		8260B		2 mL	20 mL	1 uL	1.08 uL		
280-116538-L-4-A	FWGIDW-181001-WW	8260B	P	2 mL	20 mL	1 uL	1.08 uL		
280-116538-A-5-A	FWGqc-015-TB	8260B	P	2 mL	20 mL	1 uL	1.08 uL		
CCVC 280-438589/37		8260B		5 mL	20 mL	1 uL	1.08 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00007	MV-Supp A 00033				
BFB 280-438589/1		8260B							
CCV 280-438589/2		8260B		4 uL					
CCV 280-438589/3		8260B			4 uL				
LCS 280-437096/2-A		8260B							
LB3 280-437096/1-A		8260B							
280-116538-L-4-A	FWGIDW-181001-WW	8260B	P						
280-116538-A-5-A	FWGqc-015-TB	8260B	P						
CCVC 280-438589/37		8260B		4 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438589 Batch Start Date: 11/23/18 11:53 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270D_DOD5

Semivolatile Organic Compounds (GC/MS)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
FWGIDW-181001-WW	280-116538-4	60	51	71	73	77	70
	LB3 280-436732/1-G	69	57	77	84	78	88
	LCS 280-436732/3-B	73	59	80	86	83	88
FWGIDW-181001-WW MS	280-116538-4 MS	64	53	75	78	81	67
FWGIDW-181001-WW MSD	280-116538-4 MSD	70	61	83	89	89	70

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	50-120
PHL = Phenol-d5 (Surr)	47-120
NBZ = Nitrobenzene-d5 (Surr)	51-120
FBP = 2-Fluorobiphenyl	49-120
TBP = 2,4,6-Tribromophenol (Surr)	51-120
TPHL = Terphenyl-d14 (Surr)	56-120

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: D30221.D

Lab ID: LCS 280-436732/3-B Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-Methylphenol	0.250	0.176	70	45-120	
3 & 4 Methylphenol	0.500	0.350	70	44-120	
1,4-Dichlorobenzene	0.250	0.174	69	36-120	
2,4-Dinitrotoluene	0.100	0.0694	69	36-120	
Hexachlorobenzene	0.100	0.0778	78	52-120	
Hexachlorobutadiene	0.250	0.168	67	35-120	
Hexachloroethane	0.250	0.169	68	35-120	
Nitrobenzene	0.250	0.189	75	50-120	
Pentachlorophenol	0.500	0.256	51	39-120	
Pyridine	0.250	0.102	41	10-121	
2,4,5-Trichlorophenol	0.250	0.191	76	46-120	
2,4,6-Trichlorophenol	0.250	0.194	77	43-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: D30233.D

Lab ID: 280-116538-4 MS Client ID: FWGIDW-181001-WW MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-Methylphenol	0.250	ND	0.160	64	45-120	
3 & 4 Methylphenol	0.500	ND	0.328	66	44-120	
1,4-Dichlorobenzene	0.250	ND	0.161	64	36-120	
2,4-Dinitrotoluene	0.100	ND	0.0693	69	36-120	
Hexachlorobenzene	0.100	ND	0.0676	68	52-120	
Hexachlorobutadiene	0.250	ND	0.152	61	35-120	
Hexachloroethane	0.250	ND	0.156	62	35-120	
Nitrobenzene	0.250	ND	0.177	71	50-120	
Pentachlorophenol	0.500	ND	0.299	60	39-120	
Pyridine	0.250	ND	0.127	51	10-121	
2,4,5-Trichlorophenol	0.250	ND	0.184	74	46-120	
2,4,6-Trichlorophenol	0.250	ND	0.179	72	43-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: D30234.D

Lab ID: 280-116538-4 MSD Client ID: FWGIDW-181001-WW MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-Methylphenol	0.250	0.185	74	15	30	45-120	
3 & 4 Methylphenol	0.500	0.374	75	13	30	44-120	
1,4-Dichlorobenzene	0.250	0.174	70	8	30	36-120	
2,4-Dinitrotoluene	0.100	0.0751	75	8	30	36-120	
Hexachlorobenzene	0.100	0.0736	74	9	30	52-120	
Hexachlorobutadiene	0.250	0.168	67	10	30	35-120	
Hexachloroethane	0.250	0.167	67	7	30	35-120	
Nitrobenzene	0.250	0.199	80	11	30	50-120	
Pentachlorophenol	0.500	0.330	66	10	30	39-120	
Pyridine	0.250	0.136	54	7	30	10-121	
2,4,5-Trichlorophenol	0.250	0.204	82	10	30	46-120	
2,4,6-Trichlorophenol	0.250	0.207	83	15	30	43-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab File ID: D29295.D DFTPP Injection Date: 09/18/2018

Instrument ID: SMS_D DFTPP Injection Time: 12:37

Analysis Batch No.: 430035

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	38.8	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	44.4	
70	Less than 2.0 % of mass 69	0.0	(0.0) 1
127	40.0 - 60.0 % of mass 198	48.9	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.4	
275	10.0 - 30.0 % of mass 198	23.4	
365	Greater than 1.0 % of mass 198	3.1	
441	Present but less than mass 443	13.3	(80.8) 3
442	Greater than 40.0 % of mass 198	86.9	
443	17.0 - 23.0 % of mass 442	16.4	(18.9) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 280-430035/3	D29296.D	09/18/2018	12:53
	STD004 280-430035/4	D29297.D	09/18/2018	13:22
	STD010 280-430035/5	D29298.D	09/18/2018	13:52
	STD020 280-430035/6	D29299.D	09/18/2018	14:21
	STD050 280-430035/7	D29300.D	09/18/2018	14:51
	STD120 280-430035/8	D29301.D	09/18/2018	15:21
	STD160 280-430035/9	D29302.D	09/18/2018	15:51
	STD200 280-430035/10	D29303.D	09/18/2018	16:20

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab File ID: D30211.D DFTPP Injection Date: 11/15/2018

Instrument ID: SMS_D DFTPP Injection Time: 15:42

Analysis Batch No.: 437797

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	43.0	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	49.8	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	53.5	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.2	
275	10.0 - 30.0 % of mass 198	22.4	
365	Greater than 1.0 % of mass 198	3.2	
441	Present but less than mass 443	12.1	(77.1) 3
442	Greater than 40.0 % of mass 198	76.5	
443	17.0 - 23.0 % of mass 442	15.7	(20.5) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-437797/3	D30212.D	11/15/2018	15:55
	LB3 280-436732/1-G	D30220.D	11/15/2018	19:52
	LCS 280-436732/3-B	D30221.D	11/15/2018	20:22
FWGIDW-181001-WW	280-116538-4	D30232.D	11/16/2018	01:29
FWGIDW-181001-WW MS	280-116538-4 MS	D30233.D	11/16/2018	01:54
FWGIDW-181001-WW MSD	280-116538-4 MSD	D30234.D	11/16/2018	02:19
	CCVC 280-437797/26	D30235.D	11/16/2018	02:44

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: ICIS 280-430035/3 Date Analyzed: 09/18/2018 12:53

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): D29296.D Heated Purge: (Y/N) N

Calibration ID: 33718

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		158296	4.73	656973	5.94	376087	7.70
UPPER LIMIT		316592	5.23	1313946	6.44	752174	8.20
LOWER LIMIT		79148	4.23	328487	5.44	188044	7.20
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 280-437797/3		147875	4.66	603246	5.90	355656	7.65
LB3 280-436732/1-G		129961	4.67	536931	5.90	315753	7.65
LCS 280-436732/3-B		131545	4.67	538294	5.90	306057	7.65
280-116538-4	FWGIDW-181001-WW	135976	4.67	563404	5.90	332178	7.65
280-116538-4 MS	FWGIDW-181001-WW MS	130576	4.67	536264	5.91	312572	7.65
280-116538-4 MSD	FWGIDW-181001-WW MSD	140915	4.67	573234	5.91	338961	7.65
CCVC 280-437797/26		135555	4.67	567733	5.90	340079	7.66

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: ICIS 280-430035/3 Date Analyzed: 09/18/2018 12:53

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): D29296.D Heated Purge: (Y/N) N

Calibration ID: 33718

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		741941	9.20	749845	13.41	807447	17.44
UPPER LIMIT		1483882	9.70	1499690	13.91	1614894	17.94
LOWER LIMIT		370971	8.70	374923	12.91	403724	16.94
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 280-437797/3		706362	9.14	651600	13.28	614474	17.26
LB3 280-436732/1-G		642364	9.14	609097	13.27	603242	17.26
LCS 280-436732/3-B		624278	9.14	592904	13.27	599943	17.26
280-116538-4	FWGIDW-181001-WW	672238	9.14	634986	13.28	628312	17.26
280-116538-4 MS	FWGIDW-181001-WW MS	628508	9.14	610988	13.28	622846	17.26
280-116538-4 MSD	FWGIDW-181001-WW MSD	686177	9.14	648075	13.28	630009	17.26
CCVC 280-437797/26		682231	9.15	654010	13.29	618644	17.27

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW | Lab Sample ID: 280-116538-4

Matrix: Water (TCLP) | Lab File ID: D30232.D

Analysis Method: 8270D | Date Collected: 11/02/2018 15:30

Extract. Method: 3510C | Date Extracted: 11/12/2018 13:36

Sample wt/vol: 200(mL) | Date Analyzed: 11/16/2018 01:29

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437797 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-48-7	2-Methylphenol	ND		0.050	0.0049
15831-10-4	3 & 4 Methylphenol	ND		0.050	0.0013
106-46-7	1,4-Dichlorobenzene	ND		0.020	0.0016
121-14-2	2,4-Dinitrotoluene	ND		0.050	0.0083
118-74-1	Hexachlorobenzene	ND		0.050	0.0033
87-68-3	Hexachlorobutadiene	ND		0.050	0.017
67-72-1	Hexachloroethane	ND		0.050	0.011
98-95-3	Nitrobenzene	ND		0.050	0.0041
87-86-5	Pentachlorophenol	ND		0.25	0.10
110-86-1	Pyridine	ND		0.10	0.0057
95-95-4	2,4,5-Trichlorophenol	ND		0.050	0.0022
88-06-2	2,4,6-Trichlorophenol	ND		0.025	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	73		49-120
367-12-4	2-Fluorophenol (Surr)	60		50-120
118-79-6	2,4,6-Tribromophenol (Surr)	77		51-120
4165-60-0	Nitrobenzene-d5 (Surr)	71		51-120
4165-62-2	Phenol-d5 (Surr)	51		47-120
1718-51-0	Terphenyl-d14 (Surr)	70		56-120

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30232.D
Lims ID: 280-116538-A-4-H
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 16-Nov-2018 01:29:30 ALS Bottle#: 22 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-H
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:06:16

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.670	4.664	0.006	98	135976	40.0	
*	2 Naphthalene-d8	136	5.904	5.903	0.001	100	563404	40.0	
*	3 Acenaphthene-d10	164	7.651	7.650	0.001	98	332178	40.0	
*	4 Phenanthrene-d10	188	9.141	9.141	0.000	100	672238	40.0	
*	5 Chrysene-d12	240	13.276	13.281	-0.005	82	634986	40.0	
*	6 Perylene-d12	264	17.261	17.261	0.000	99	628312	40.0	
$	7 2-Fluorophenol	112	3.479	3.478	0.000	97	311582	60.4	
$	8 Phenol-d5	99	4.317	4.317	0.000	98	354815	50.9	
$	9 Nitrobenzene-d5	82	5.188	5.188	0.000	96	473273	71.4	
$	10 2,4,6-Trichlorophenol-d2	198		6.863				ND	
$	11 2-Fluorobiphenyl	172	6.962	6.961	0.001	98	905696	73.1	
$	12 2,4,6-Tribromophenol	330	8.441	8.441	0.000	92	134707	77.2	
$	13 Terphenyl-d14	244	11.118	11.112	0.006	100	1078165	69.8	
	14 Triethyl amine	86		1.815				ND	
	15 2-Ethoxyethanol	59		1.996				ND	
	16 1,4-Dioxane	88		2.025				ND	
	17 N-Nitrosodimethylamine	74		2.265				ND	
	18 Pyridine	79		2.324				ND	
	19 Dimethylformamide	73		2.573				ND	
	20 2-Picoline	93		2.910				ND	
	21 N-Nitrosomethylethylamine	88		2.985				ND	
	22 Acrylamide	71		3.246				ND	
	23 Methyl methanesulfonate	80		3.246				ND	
	24 N-Nitrosodiethylamine	102		3.615				ND	
	25 Pentachlorophenol_T	266		3.788				ND	
	26 Ethyl methanesulfonate	79		3.877				ND	
	27 Benzaldehyde	106		4.167				ND	
	28 Phenol	94		4.328				ND	
	29 Phenylmercaptan	110		4.249				ND	
	30 Aniline	93		4.349				ND	
	31 Alpha Methyl Styrene	118		4.402				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
32 Bis(2-chloroethyl)ether	93		4.392				ND	
33 Pentachloroethane	117		4.363				ND	
34 Methyl styrene	118		4.445				ND	
35 n-Decane	43		4.498				ND	
36 2-Chlorophenol	128		4.477				ND	
37 1,3-Dichlorobenzene	146		4.616				ND	
38 1,4-Dichlorobenzene	146		4.685				ND	
39 Benzyl alcohol	108		4.782				ND	
40 1,2-Dichlorobenzene	146		4.835				ND	
41 2-Methylphenol	108		4.894				ND	
42 Benzidine_T	184		4.862				ND	
43 2,2'-oxybis[1-chloropropan	45		4.904				ND	
44 Indene	116		4.921				ND	
45 3-Methylphenol	108		5.038				ND	
46 3 & 4 Methylphenol	108		5.038				ND	
47 4-Methylphenol	108		5.038				ND	
48 N-Nitrosodi-n-propylamine	70		5.033				ND	
49 N-Nitrosopyrrolidine	100		4.967				ND	
50 Acetophenone	105		5.038				ND	
51 N-Nitrosomorpholine	116		4.999				ND	
52 2-Toluidine	106		5.036				ND	
53 Hexachloroethane	117		5.161				ND	
54 Nitrobenzene	77		5.209				ND	
55 Triethyl phosphate	99		5.287				ND	
56 N-Nitrosopiperidine	114		5.303				ND	
57 Isophorone	82		5.433				ND	
58 4-Methylacetophenone	119		5.330				ND	
59 2-Nitrophenol	139		5.519				ND	
60 2,4-Dimethylphenol	107		5.551				ND	
61 Benzyl dichloride	125		5.543				ND	
62 o,o',o''-Triethylphosphoro	198		5.559				ND	
63 Bis(2-chloroethoxy)methane	93		5.631				ND	
64 Benzoic acid	105		5.684				ND	
65 3,5-Dimethylphenol	107		5.684				ND	
66 alpha,alpha-Dimethyl phene	58		5.741				ND	
67 2,4-Xylidine	121		5.685				ND	
68 2,4-Dichlorophenol	162		5.765				ND	
69 o-Anisidine	80		5.723				ND	
70 1,2,4-Trichlorobenzene	180		5.845				ND	
71 Alpha-Terpineol	59		5.868				ND	
72 Naphthalene	128		5.925				ND	
73 4-Chloroaniline	127		5.962				ND	
74 2,6-Dichlorophenol	162		5.984				ND	
75 Hexachloropropene	213		5.976				ND	
76 Hexachlorobutadiene	225		6.048				ND	
77 4-chlorobenzenethiol	144		5.976				ND	
78 Quinoline	129		6.201				ND	
79 N-Nitrosodi-n-butylamine	84		6.243				ND	
80 Caprolactam	55		6.304				ND	
81 p-Phenylene diamine	108		6.259				ND	
82 5-Methyl-o-Anisidine	122		6.337				ND	
83 4-Chloro-3-methylphenol	107		6.448				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
84 Safrole, Total	162		6.462				ND	
85 Carbofuran phenol	164		6.510				ND	
86 1,3-phenylenediamine	108		6.460				ND	
87 2-Methylnaphthalene	142		6.609				ND	
88 Phthalic anhydride	76		6.595				ND	
89 1-Methylnaphthalene	142		6.705				ND	
90 Hexachlorocyclopentadiene	237		6.774				ND	
91 1,2,4,5-Tetrachlorobenzene	216		6.780				ND	
92 Isosafrole Peak 1	162		6.751				ND	
93 Methyl 4-chlorophenyl sulf	158		6.685				ND	
94 2,4,6-Trichlorophenol	196		6.886				ND	
95 2,3-Dichlorobenzenamine	161		6.886				ND	
96 2,4,5-Trichlorophenol	196		6.935				ND	
97 1,3-Dimethyl-2,4-Dinitrobe	77		7.652				ND	
98 Isosafrole Peak 2	104		6.975				ND	
99 Toluene diamine (2,4- + 2,	122		7.039				ND	
100 1,1'-Biphenyl	154		7.063				ND	
101 1,3-Dimethyl-2,5-Dinitrobe	179		7.764				ND	
102 2-Chloronaphthalene	162		7.095				ND	
103 1-Chloronaphthalene	162		7.077				ND	
104 1,4-Dimethyl-2,3-Dinitrobe	77		7.887				ND	
105 2-Nitroaniline	65		7.186				ND	
106 1,4-Dimethyl-2,6-Dinitrobe	179		7.951				ND	
107 1,4-Dimethyl-2,5-Dinitrobe	149		7.988				ND	
108 1,4-Naphthoquinone	158		7.210				ND	
109 1,4-Dinitrobenzene	168		7.264				ND	
110 1,2-Dimethyl-3,6-Dinitrobe	179		8.052				ND	
111 Dimethyl phthalate	163		7.351				ND	
112 1,3-Dinitrobenzene	168		7.383				ND	
113 2,6-Dinitrotoluene	165		7.415				ND	
114 1,5-Dimethyl-2,4-Dinitrobe	179		8.213				ND	
115 Acenaphthylene	152		7.511				ND	
116 1,5-Dimethyl-2,3-Dinitrobe	179		8.309				ND	
117 3-Nitroaniline	138		7.592				ND	
118 1,2-Dimethyl-3,5-Dinitrobe	179		8.421				ND	
119 Acenaphthene	153		7.682				ND	
120 2,4-Dinitrophenol	184		7.693				ND	
121 4-Nitrophenol	109		7.779				ND	
122 1,2-Dimethyl-3,4-Dinitrobe	179		8.571				ND	
123 Pentachlorobenzene	250		7.782				ND	
124 2,4-Dinitrotoluene	165		7.821				ND	
125 Dibenzofuran	168		7.853				ND	
126 n-hydroxymethylphthalimide	147		7.439				ND	
127 1-Naphthylamine	143		7.883				ND	
128 1,2-Dimethyl-4,5-Dinitrobe	91		8.806				ND	
129 2,3,4,6-Tetrachlorophenol	232		7.982				ND	
130 2-Naphthylamine	143		7.963				ND	
131 Hexadecane	57		8.067				ND	
132 Diethyl phthalate	149		8.051				ND	
133 Thionazin	97		8.092				ND	
134 4-Chlorophenyl phenyl ethe	204		8.179				ND	
135 Fluorene	166		8.201				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
136 Tributyl phosphate	99		8.236				ND	
137 N-Nitro-o-toluidine	152		8.156				ND	
138 4-Nitroaniline	138		8.211				ND	
139 4,6-Dinitro-2-methylphenol	198		8.238				ND	
140 Diphenylamine	169		8.297				ND	
141 N-Nitrosodiphenylamine	169		8.297				ND	
142 1,2-Diphenylhydrazine	77		8.345				ND	
143 Azobenzene	77		8.345				ND	
144 Sulfotepp	97		8.396				ND	
145 2,4,6 - Tribromophenol	330		8.441				ND	U
146 Phenyl sulfide	186		8.390				ND	
147 Diallate Peak 1	86		8.540				ND	
148 1,3,5-Trinitrobenzene	213		8.503				ND	
149 Phorate	121		8.551				ND	
150 Phenacetin	108		8.562				ND	
151 Diallate Peak 2	86		8.631				ND	
152 4-Bromophenyl phenyl ether	248		8.671				ND	
153 Hexachlorobenzene	284		8.767				ND	
154 Dimethoate	87		8.722				ND	
155 Atrazine	200		8.820				ND	
156 n-Octadecane	85		8.986				ND	
157 Pentachlorophenol	266		8.959				ND	
158 4-Aminobiphenyl	169		8.893				ND	
159 Pentachloronitrobenzene	237		8.925				ND	
160 Pronamide	173		8.946				ND	
161 Disulfoton	88		9.075				ND	
162 Dinoseb	211		9.080				ND	
163 Phenanthrene	178		9.168				ND	
164 Anthracene	178		9.216				ND	
165 Carbazole	167		9.371				ND	
166 Alachlor	188		9.499				ND	
167 Methyl parathion	109		9.449				ND	
168 Phenyl disulfide	109		9.661				ND	
169 Di-n-butyl phthalate	149		9.702				ND	
170 Diphenylsulfone	125		9.667				ND	
171 Ethyl Parathion	109		9.876				ND	
172 4-Nitroquinoline-1-oxide	190		9.935				ND	
173 Methapyrilene	97		10.015				ND	
174 Octachlorostyrene	308		10.118				ND	
175 Isodrin	193		10.293				ND	
176 Fluoranthene	202		10.551				ND	
177 4,4-Dichlorobenzil	139		10.439				ND	
178 Benzidine	184		10.690				ND	
180 Pyrene	202		10.893				ND	
181 p-chlorophenyl sulfone	159		10.893				ND	
182 Aramite Peak 1	185		10.998				ND	
183 Aramite Peak 2	185		11.126				ND	
184 p-Dimethylamino azobenzene	120		11.286				ND	
185 Chlorobenzilate	251		11.366				ND	
186 Famphur	218		11.892				ND	
187 Butyl benzyl phthalate	149		12.015				ND	
188 3,3'-Dimethylbenzidine	212		11.911				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
189 2-Acetylaminofluorene	181		12.451				ND	
190 3,3'-Dichlorobenzidine	252		13.206				ND	
191 4,4'-Methylene bis(2-chlor	231		13.119				ND	
192 Benzo[a]anthracene	228		13.254				ND	
193 Bis(2-ethylhexyl) phthalat	149		13.398				ND	
194 Chrysene	228		13.345				ND	
195 6-Methylchrysene	242		14.417				ND	
196 Hexachlorophene	196		17.001				ND	
197 Di-n-octyl phthalate	149		15.220				ND	
198 Benzo[b]fluoranthene	252		16.160				ND	
199 7,12-Dimethylbenz(a)anthra	256		16.035				ND	
200 Benzo[k]fluoranthene	252		16.240				ND	
201 Benzo[e]pyrene	252		16.951				ND	
202 Benzo[a]pyrene	252		17.101				ND	
203 Perylene	252		17.301				ND	
204 3-Methylcholanthrene	268		18.055				ND	
205 Tris(2,3-dibromopropyl)pho	119		18.754				ND	
206 Dibenz[a,h]acridine	279		19.641				ND	
207 Dibenz[a,j]acridine	279		19.796				ND	
208 Indeno[1,2,3-cd]pyrene	276		20.407				ND	
209 Dibenz(a,h)anthracene	278		20.498				ND	
210 Benzo[g,h,i]perylene	276		21.155				ND	
211 Dibenzo[a,e]pyrene	302		25.549				ND	
S 219 Total Cresols	108		15.341				ND	
S 220 Methyl Phenols,Total	108		15.341				ND	
S 221 Isosafrole	162		15.341				ND	
S 222 Diallate	86		15.341				ND	
S 223 Aramite, Total	185		15.341				ND	
S 224 Phthalic acid	148		19.492				ND	
212 1,2,3,4-Tetrahydronaphthal	1		0.000				ND	
213 2-Butoxyethanol	1		0.000				ND	
214 2-Phenoxyethanol	1		0.000				ND	
216 4,4'-DDE	246		4.998				ND	
217 4,4'-DDD	235		5.282				ND	
218 4,4'-DDT	235		5.503				ND	
S 225 TPAH	1		0.000				ND	
T 226 Tetrachlorodibenzo-p-dioxi	1		0.000				ND	
T 227 Hexachlorodibenzofurans TI	1		0.000				ND	
T 228 Tetrachlorodibenzofurans T	1		0.000				ND	
T 229 Pentachlorodibenzofurans T	1		0.000				ND	
T 230 Octadecane (TIC)	1		0.000				ND	
T 231 2,6-Dimethylphenol	1		0.000				ND	
T 232 Pentachlorodibenzo-p-dioxi	1		0.000				ND	
T 233 Hexachlorodibenzo-p-dioxin	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

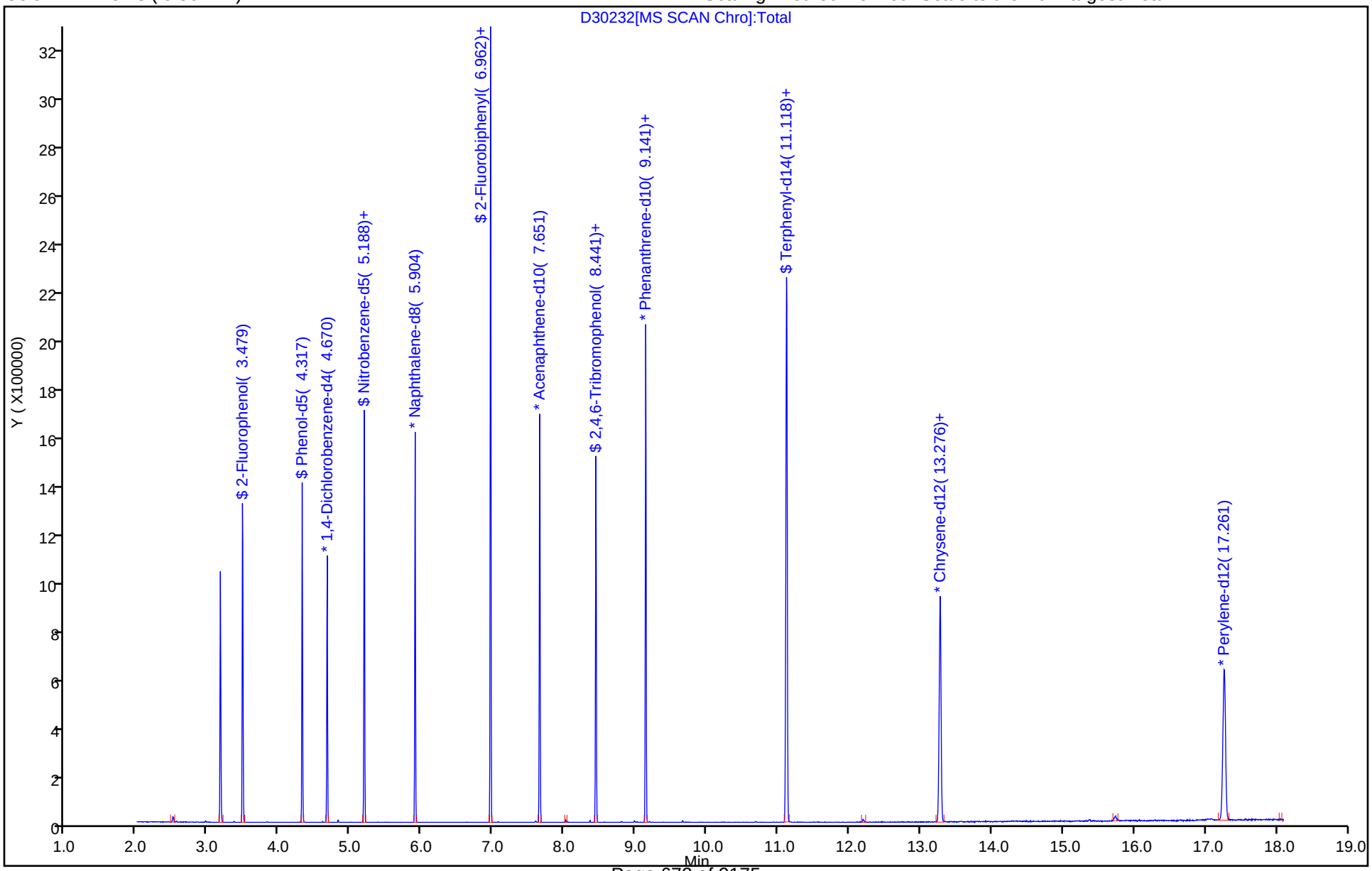
Report Date: 16-Nov-2018 11:29:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30232.D

Injection Date:	16-Nov-2018 01:29:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	280-116538-A-4-H	Lab Sample ID:	280-116538-4	Worklist Smp#:	23
Client ID:	FWGIDW-181001-WW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30232.D
Lims ID: 280-116538-A-4-H
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 16-Nov-2018 01:29:30 ALS Bottle#: 22 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-H
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:06:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	60.4	60.44
$ 8 Phenol-d5	100.0	50.9	50.90
$ 9 Nitrobenzene-d5	100.0	71.4	71.41
$ 11 2-Fluorobiphenyl	100.0	73.1	73.11
$ 12 2,4,6-Tribromophenol	100.0	77.2	77.17
$ 13 Terphenyl-d14	100.0	69.8	69.84

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-430035/4	D29297.D
Level 2	STD010 280-430035/5	D29298.D
Level 3	STD020 280-430035/6	D29299.D
Level 4	STD050 280-430035/7	D29300.D
Level 5	ICIS 280-430035/3	D29296.D
Level 6	STD120 280-430035/8	D29301.D
Level 7	STD160 280-430035/9	D29302.D
Level 8	STD200 280-430035/10	D29303.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.6848 0.7195	0.6833 0.6867	0.6547 0.6721	0.6996	0.7518	Ave		0.6941				4.3		15.0			
N-Nitrosodimethylamine	1.1374 1.1305	1.1228 1.1281	1.0979 1.1046	1.1321	1.1962	Ave		1.1312				2.6		15.0			
Pyridine	2.0350 1.8860	1.9119 1.8783	1.9114 1.8487	1.9875	1.9999	Ave		1.9323				3.4		15.0			
Phenol	2.2043 2.1829	2.1669 2.1634	2.1281 2.1227	2.2407	2.2746	Ave		2.1855				2.4		15.0			
Aniline	2.8075 2.6523	2.6820 2.6513	2.6203 2.5871	2.7249	2.7560	Ave		2.6852				2.7		15.0			
Bis(2-chloroethyl)ether	1.7268 1.6187	1.6201 1.6209	1.5597 1.6309	1.6455	1.6766	Ave		1.6374				3.0		15.0			
2-Chlorophenol	1.6076 1.5858	1.5909 1.5651	1.5482 1.5210	1.6161	1.6664	Ave		1.5876				2.8		15.0			
1,3-Dichlorobenzene	1.7702 1.6371	1.6632 1.5984	1.6289 1.5420	1.6930	1.7233	Ave		1.6570				4.4		15.0			
1,4-Dichlorobenzene	1.7989 1.6673	1.7043 1.6276	1.6508 1.5751	1.7310	1.7650	Ave		1.6900				4.4		15.0			
Benzyl alcohol	1.1740 1.1908	1.1460 1.1916	1.1318 1.1656	1.2117	1.2301	Ave		1.1802				2.8		15.0			
1,2-Dichlorobenzene	1.7138 1.5942	1.6196 1.5647	1.5654 1.5140	1.6312	1.6610	Ave		1.6080				3.9		15.0			
2-Methylphenol	1.6508 1.6114	1.6042 1.5991	1.5442 1.5709	1.6512	1.6536	Ave		1.6107				2.5		15.0			
2,2'-oxybis[1-chloropropane]	2.1449 2.1223	2.0776 2.1136	2.0496 2.0502	2.1542	2.1683	Ave		2.1101				2.2		15.0			
3 & 4 Methylphenol	1.7195 1.6928	1.6879 1.6810	1.6565 1.6134	1.7440	1.7593	Ave		1.6943				2.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
N-Nitrosodi-n-propylamine	1.3619 1.3095	1.3287 1.2839	1.3052 1.2378	1.3516	1.3433	Ave		1.3152			0.0500	3.1		15.0			
Acetophenone	2.4115 2.3238	2.4048 2.2708	2.3473 2.1784	2.4492	2.4372	Ave		2.3529				4.0		15.0			
Hexachloroethane	0.6643 0.6363	0.6330 0.6252	0.6170 0.6038	0.6366	0.6548	Ave		0.6339				3.1		15.0			
Nitrobenzene	0.4969 0.4633	0.4713 0.4558	0.4767 0.4526	0.4690	0.4849	Ave		0.4713				3.1		15.0			
Isophorone	0.8706 0.8377	0.8368 0.8279	0.8491 0.8079	0.8542	0.8516	Ave		0.8420				2.3		15.0			
2-Nitrophenol	0.2123 0.2132	0.2119 0.2138	0.2083 0.2101	0.2165	0.2220	Ave		0.2135				2.0		15.0			
2,4-Dimethylphenol	0.4467 0.4129	0.4160 0.4068	0.4226 0.3989	0.4290	0.4302	Ave		0.4204				3.6		15.0			
Bis(2-chloroethoxy)methane	0.5268 0.4829	0.4843 0.4775	0.4926 0.4675	0.4959	0.4955	Ave		0.4904				3.6		15.0			
Benzoic acid	+++++ 0.3737	0.2933 0.3778	0.3252 0.3829	0.3605	0.3740	Lin2	-1.888	0.3826							1.0000		0.9900
2,4-Dichlorophenol	0.3301 0.3252	0.3290 0.3240	0.3252 0.3155	0.3363	0.3368	Ave		0.3278				2.1		15.0			
1,2,4-Trichlorobenzene	0.3781 0.3552	0.3589 0.3500	0.3690 0.3428	0.3668	0.3714	Ave		0.3615				3.3		15.0			
Naphthalene	1.2323 1.0867	1.1368 1.0524	1.1467 1.0229	1.1445	1.1373	Ave		1.1200				5.8		15.0			
4-Chloroaniline	0.5482 0.4950	0.4992 0.4875	0.5041 0.4764	0.5143	0.5132	Ave		0.5047				4.3		15.0			
2,6-Dichlorophenol	0.3361 0.3225	0.3303 0.3185	0.3266 0.3040	0.3317	0.3356	Ave		0.3257				3.3		15.0			
Hexachlorobutadiene	0.1947 0.1919	0.1891 0.1885	0.1943 0.1837	0.1909	0.1980	Ave		0.1914				2.3		15.0			
Caprolactam	0.2072 0.2024	0.1909 0.2023	0.1947 0.2014	0.1920	0.1931	Ave		0.1980				3.1		15.0			
4-Chloro-3-methylphenol	0.3920 0.3689	0.3702 0.3609	0.3813 0.3564	0.3761	0.3737	Ave		0.3724				3.0		15.0			
2-Methylnaphthalene	0.8524 0.7490	0.7742 0.7291	0.7860 0.7059	0.7867	0.7801	Ave		0.7704				5.7		15.0			
1-Methylnaphthalene	0.7847 0.7143	0.7469 0.6862	0.7596 0.6678	0.7498	0.7434	Ave		0.7316				5.4		15.0			
Hexachlorocyclopentadiene	0.3791 0.3955	0.3705 0.3858	0.3850 0.3707	0.4042	0.4148	Ave		0.3882			0.0500	4.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,2,4,5-Tetrachlorobenzene	0.3948 0.3502	0.3670 0.3389	0.3687 0.3315	0.3659	0.3580	Ave		0.3594				5.5		15.0			
2,4,6-Trichlorophenol	0.4411 0.4200	0.4360 0.3966	0.4319 0.3825	0.4439	0.4466	Ave		0.4248				5.6		15.0			
2,4,5-Trichlorophenol	0.4886 0.4755	0.4735 0.4614	0.4583 0.4523	0.4810	0.4874	Ave		0.4722				2.9		15.0			
1,1'-Biphenyl	1.7541 1.5379	1.6559 1.4645	1.6183 1.4253	1.6265	1.6173	Ave		1.5875				6.7		15.0			
2-Chloronaphthalene	1.3419 1.2319	1.2883 1.1937	1.2716 1.1582	1.2865	1.2957	Ave		1.2585				4.8		15.0			
2-Nitroaniline	0.4523 0.4654	0.4572 0.4532	0.4514 0.4488	0.4688	0.4703	Ave		0.4584				1.8		15.0			
Dimethyl phthalate	1.5656 1.4035	1.4774 1.3941	1.4485 1.3546	1.4643	1.4468	Ave		1.4444				4.4		15.0			
1,3-Dinitrobenzene	0.2361 0.2735	0.2465 0.2749	0.2515 0.2691	0.2723	0.2746	Ave		0.2623				5.8		15.0			
2,6-Dinitrotoluene	0.3611 0.3661	0.3555 0.3594	0.3553 0.3536	0.3711	0.3689	Ave		0.3614				1.8		15.0			
Acenaphthylene	2.0645 1.9046	1.9728 1.8246	1.9664 1.7694	2.0122	1.9803	Ave		1.9369				5.1		15.0			
3-Nitroaniline	0.3948 0.4146	0.4102 0.4060	0.4043 0.4060	0.4185	0.4263	Ave		0.4101				2.4		15.0			
Acenaphthene	1.3875 1.1890	1.3238 1.1418	1.2916 1.1118	1.2617	1.2587	Ave		1.2457				7.5		15.0			
2,4-Dinitrophenol	+++++ 0.2722	0.2338 0.2686	0.2513 0.2682	0.2656	0.2731	Lin2	-0.804	0.2734			0.0500				1.0000		0.9900
4-Nitrophenol	0.2260 0.2273	0.2288 0.2229	0.2292 0.2230	0.2308	0.2365	Ave		0.2281			0.0500	2.0		15.0			
2,4-Dinitrotoluene	0.4628 0.5003	0.5027 0.4857	0.4877 0.4885	0.5086	0.5137	Ave		0.4937				3.3		15.0			
Dibenzofuran	2.0526 1.8338	1.9518 1.7646	1.8920 1.7117	1.9113	1.9148	Ave		1.8791				5.7		15.0			
2,3,4,6-Tetrachlorophenol	0.3886 0.3973	0.3898 0.3839	0.3896 0.3718	0.4035	0.4079	Ave		0.3915				2.9		15.0			
Diethyl phthalate	1.5490 1.4219	1.4939 1.3454	1.4812 1.2822	1.4816	1.4526	Ave		1.4385				6.0		15.0			
4-Chlorophenyl phenyl ether	0.7593 0.7402	0.7349 0.7127	0.7340 0.6948	0.7522	0.7508	Ave		0.7349				2.9		15.0			
Fluorene	1.7012 1.4568	1.5912 1.4030	1.5391 1.3623	1.5293	1.5095	Ave		1.5115				7.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
4-Nitroaniline	0.4306 0.4363	0.4438 0.4285	0.4409 0.4325	0.4430	0.4492	Ave		0.4381				1.7		15.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1592	0.1412 0.1555	0.1489 0.1541	0.1572	0.1614	Lin2	-0.357	0.1591							0.9990		0.9900
Diphenylamine	1.4119 1.2956	1.3421 1.2493	1.3309 1.2225	1.3406	1.3485	Ave		1.3177				4.6		15.0			
N-Nitrosodiphenylamine	0.6031 0.5525	0.5635 0.5342	0.5641 0.5194	0.5717	0.5810	Ave		0.5612				4.7		15.0			
1,2-Diphenylhydrazine	1.7809 1.6617	1.6865 1.5945	1.6858 1.5532	1.6896	1.6966	Ave		1.6686				4.1		15.0			
Azobenzene	1.8004 1.6799	1.7050 1.6119	1.7043 1.5702	1.7081	1.7152	Ave		1.6869				4.1		15.0			
4-Bromophenyl phenyl ether	0.2266 0.2210	0.2139 0.2177	0.2108 0.2102	0.2216	0.2262	Ave		0.2185				3.0		15.0			
Hexachlorobenzene	0.2262 0.2136	0.2074 0.2109	0.2103 0.2055	0.2168	0.2158	Ave		0.2133				3.0		15.0			
Atrazine	0.2040 0.1411	0.2035 +++++	0.1963 +++++	0.1886	0.1774	Ave		0.1852				12.8		15.0			
Pentachlorophenol	+++++ 0.1504	0.1420 0.1446	0.1464 0.1411	0.1577	0.1556	Lin2	-0.130	0.1501							0.9970		0.9900
Phenanthrene	1.2681 1.0948	1.1530 1.0457	1.1385 1.0130	1.1451	1.1533	Ave		1.1264				6.9		15.0			
Anthracene	1.2876 1.1378	1.2001 1.0913	1.1868 1.0503	1.1980	1.2036	Ave		1.1694				6.3		15.0			
Carbazole	1.2432 1.0815	1.1628 1.0414	1.1270 1.0197	1.1409	1.1522	Ave		1.1211				6.4		15.0			
Alachlor	0.1620 0.1543	0.1482 0.1494	0.1520 0.1461	0.1549	0.1550	Ave		0.1527				3.3		15.0			
Di-n-butyl phthalate	1.2965 1.2388	1.2433 1.1885	1.2391 1.1419	1.2685	1.2597	Ave		1.2346				3.9		15.0			
Fluoranthene	1.3731 1.2803	1.3256 1.2345	1.2902 1.2196	1.3168	1.3337	Ave		1.2967				4.0		15.0			
Pyrene	1.4587 1.3694	1.3543 1.3315	1.3952 1.2607	1.3941	1.3545	Ave		1.3648				4.2		15.0			
Famphur	0.5181 0.3759	0.4784 0.3177	0.4714 +++++	0.4637	0.4350	Qua	-0.582	0.5537	-0.001448						1.0000		0.9900
Butyl benzyl phthalate	0.6343 0.6235	0.5704 0.6153	0.5986 0.5877	0.6246	0.6079	Ave		0.6078				3.5		15.0			
3,3'-Dichlorobenzidine	0.4920 0.4610	0.4672 0.4344	0.4836 0.4237	0.5067	0.5012	Ave		0.4712				6.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Benzo[a]anthracene	1.4251 1.3567	1.3541 1.3361	1.3379 1.3166	1.3727	1.3780	Ave		1.3596				2.4		15.0			
Chrysene	1.3242 1.2981	1.2812 1.2639	1.2699 1.2563	1.3084	1.3187	Ave		1.2901				2.0		15.0			
Bis(2-ethylhexyl) phthalate	0.8170 0.8372	0.7505 0.8371	0.7767 0.8018	0.8173	0.7999	Ave		0.8047				3.7		15.0			
Di-n-octyl phthalate	1.4090 1.4917	1.3386 1.4664	1.3853 1.4398	1.4656	1.4582	Ave		1.4318				3.5		15.0			
Benzo[b]fluoranthene	1.2780 1.3139	1.2361 1.3204	1.2764 1.3469	1.2927	1.2955	Ave		1.2950				2.6		15.0			
Benzo[k]fluoranthene	1.3145 1.3160	1.2746 1.3035	1.2648 1.2320	1.3234	1.3174	Ave		1.2933				2.5		15.0			
Benzo[a]pyrene	1.2824 1.3139	1.2328 1.2910	1.2431 1.2697	1.2968	1.3099	Ave		1.2799				2.3		15.0			
Indeno[1,2,3-cd]pyrene	1.1603 1.1972	1.1323 1.1872	1.0915 1.1855	1.1692	1.1899	Ave		1.1641				3.1		15.0			
Dibenz(a,h)anthracene	1.1438 1.1978	1.1223 1.1853	1.1014 1.1761	1.1656	1.1885	Ave		1.1601				3.0		15.0			
Benzo[g,h,i]perylene	1.2799 1.2344	1.2003 1.2125	1.1658 1.1992	1.2312	1.2535	Ave		1.2221				2.9		15.0			
2-Fluorophenol (Surr)	1.5471 1.5208	1.5079 1.5039	1.4534 1.4659	1.5399	1.5929	Ave		1.5165				3.0		15.0			
Phenol-d5 (Surr)	2.1268 2.0352	2.0129 2.0275	1.9742 2.0078	2.0862	2.1332	Ave		2.0505				2.8		15.0			
Nitrobenzene-d5 (Surr)	0.5347 0.4514	0.4692 0.4532	0.4665 0.4486	0.4672	0.4736	Ave		0.4705				5.9		15.0			
2-Fluorobiphenyl	1.6278 1.4537	1.5300 1.4024	1.5164 1.3623	1.5192	1.5231	Ave		1.4918				5.6		15.0			
2,4,6-Tribromophenol (Surr)	0.2051 0.2174	0.1977 0.2129	0.2046 0.2127	0.2170	0.2143	Ave		0.2102				3.3		15.0			
Terphenyl-d14 (Surr)	1.0223 0.9917	0.9308 0.9785	0.9768 0.9196	0.9947	0.9650	Ave		0.9724				3.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-430035/4	D29297.D
Level 2	STD010 280-430035/5	D29298.D
Level 3	STD020 280-430035/6	D29299.D
Level 4	STD050 280-430035/7	D29300.D
Level 5	ICIS 280-430035/3	D29296.D
Level 6	STD120 280-430035/8	D29301.D
Level 7	STD160 280-430035/9	D29302.D
Level 8	STD200 280-430035/10	D29303.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCBd 4	Ave	11268 374125	28454 491029	57964 580991	162040	238018	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodimethylamine	DCBd 4	Ave	18715 587788	46754 806631	97203 954840	262208	378712	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyridine	DCBd 4	Ave	66969 1961292	159222 2686127	338453 3196171	920619	1266300	8.00 240	20.0 320	40.0 400	100	160
Phenol	DCBd 4	Ave	36271 1135035	90231 1546933	188409 1834906	518967	720122	4.00 120	10.0 160	20.0 200	50.0	80.0
Aniline	DCBd 4	Ave	46197 1379056	111676 1895796	231992 2236379	631108	872523	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethyl)ether	DCBd 4	Ave	28414 841670	67462 1159056	138085 1409804	381107	530786	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chlorophenol	DCBd 4	Ave	26452 824552	66243 1119132	137068 1314786	374305	527583	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dichlorobenzene	DCBd 4	Ave	29128 851200	69256 1142951	144217 1332950	392106	545572	4.00 120	10.0 160	20.0 200	50.0	80.0
1,4-Dichlorobenzene	DCBd 4	Ave	29600 866906	70967 1163821	146154 1361580	400912	558797	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzyl alcohol	DCBd 4	Ave	19318 619153	47720 852085	100204 1007564	280649	389442	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Dichlorobenzene	DCBd 4	Ave	28200 828931	67441 1118823	138597 1308756	377789	525858	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylphenol	DCBd 4	Ave	27163 837865	66800 1143429	136714 1357929	382440	523523	4.00 120	10.0 160	20.0 200	50.0	80.0
2,2'-oxybis[1-chloropropane]	DCBd 4	Ave	35294 1103507	86511 1511342	181460 1772210	498939	686474	4.00 120	10.0 160	20.0 200	50.0	80.0
3 & 4 Methylphenol	DCBd 4	Ave	28294 880180	70285 1202033	146658 1394650	403915	556990	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodi-n-propylamine	DCBd 4	Ave	22410 680870	55326 918078	115553 1070004	313044	425270	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Acetophenone	DCBd 4	Ave	39681 1208295	100134 1623749	207818 1883061	567253	771598	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachloroethane	DCBd 4	Ave	10931 330857	26359 447050	54624 521907	147431	207298	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene	NPT	Ave	32677 1005877	80704 1366869	168621 1624294	453393	637143	4.00 120	10.0 160	20.0 200	50.0	80.0
Isophorone	NPT	Ave	57256 1818826	143283 2482763	300381 2899697	825778	1118943	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitrophenol	NPT	Ave	13962 462887	36284 641149	73695 754038	209289	291742	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dimethylphenol	NPT	Ave	29380 896467	71239 1219915	149506 1431656	414751	565235	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethoxy)methane	NPT	Ave	34644 1048352	82934 1431938	174278 1678026	479424	651017	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzoic acid	NPT	Lin2	+++++ 1622653	100446 2266057	230076 2748404	697018	982710	+++++ 240	20.0 320	40.0 400	100	160
2,4-Dichlorophenol	NPT	Ave	21708 706087	56334 971529	115037 1132350	325131	442564	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4-Trichlorobenzene	NPT	Ave	24864 771200	61456 1049699	130549 1230188	354556	488023	4.00 120	10.0 160	20.0 200	50.0	80.0
Naphthalene	NPT	Ave	81045 2359524	194668 3156076	405652 3671140	1106481	1494383	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloroaniline	NPT	Ave	36055 1074644	85476 1462001	178322 1709945	497174	674302	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dichlorophenol	NPT	Ave	22106 700232	56560 955103	115530 1091099	320644	440999	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobutadiene	NPT	Ave	12802 416715	32383 565183	68731 659263	184539	260107	4.00 120	10.0 160	20.0 200	50.0	80.0
Caprolactam	NPT	Ave	13624 439552	32683 606766	68873 722767	185622	253746	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloro-3-methylphenol	NPT	Ave	25781 800848	63394 1082298	134880 1279165	363626	491014	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylnaphthalene	NPT	Ave	56055 1626290	132569 2186387	278054 2533360	760563	1025000	4.00 120	10.0 160	20.0 200	50.0	80.0
1-Methylnaphthalene	NPT	Ave	51609 1550917	127893 2057803	268714 2396856	724837	976723	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorocyclopentadiene	ANT	Ave	14723 499015	36702 678145	80715 779691	227333	312039	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4,5-Tetrachlorobenzene	NPT	Ave	25961 760415	62839 1016299	130447 1189912	353747	470356	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Trichlorophenol	ANT	Ave	17131 529843	43182 697052	90540 804541	249671	335920	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2,4,5-Trichlorophenol	ANT	Ave	18979 599883	46902 810978	96081 951329	270522	366585	4.00 120	10.0 160	20.0 200	50.0	80.0
1,1'-Biphenyl	ANT	Ave	68130 1940291	164021 2574260	339231 2997981	914731	1216515	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chloronaphthalene	ANT	Ave	52119 1554254	127603 2098310	266568 2436287	723524	974586	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitroaniline	ANT	Ave	17569 587126	45284 796684	94630 944115	263656	353710	4.00 120	10.0 160	20.0 200	50.0	80.0
Dimethyl phthalate	ANT	Ave	60810 1770755	146334 2450601	303642 2849356	823515	1088231	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dinitrobenzene	ANT	Ave	9172 344999	24415 483266	52726 566010	153157	206547	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dinitrotoluene	ANT	Ave	14025 461857	35217 631740	74487 743691	208718	277473	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthylene	ANT	Ave	80187 2402985	195410 3207332	412211 3721864	1131679	1489521	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Nitroaniline	ANT	Ave	15335 523016	40635 713713	84754 854095	235370	320686	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthene	ANT	Ave	53890 1500146	131127 2006995	270751 2338641	709573	946753	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dinitrophenol	ANT	Lin2	+++++ 686739	46307 944432	105343 1128187	298791	410896	+++++ 240	20.0 320	40.0 400	100	160
4-Nitrophenol	ANT	Ave	17557 573446	45328 783452	96094 937949	259622	355773	8.00 240	20.0 320	40.0 400	100	160
2,4-Dinitrotoluene	ANT	Ave	17974 631257	49791 853790	102236 1027465	286035	386373	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenzofuran	ANT	Ave	79723 2313661	193325 3101745	396625 3600455	1074883	1440230	4.00 120	10.0 160	20.0 200	50.0	80.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	15093 501287	38609 674895	81664 782092	226925	306775	4.00 120	10.0 160	20.0 200	50.0	80.0
Diethyl phthalate	ANT	Ave	60165 1793912	147969 2364931	310490 2696953	833250	1092598	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chlorophenyl phenyl ether	ANT	Ave	29493 933895	72792 1252733	153875 1461562	423050	564715	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluorene	ANT	Ave	66075 1837908	157606 2466152	322643 2865542	860082	1135405	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Nitroaniline	ANT	Ave	16724 550478	43956 753258	92435 909812	249126	337853	4.00 120	10.0 160	20.0 200	50.0	80.0
4,6-Dinitro-2-methylphenol	PHN	Lin2	+++++ 800538	56622 1086291	125187 1297309	352446	479117	+++++ 240	20.0 320	40.0 400	100	160
Diphenylamine	ANT	Ave	46613 1389362	112999 1866584	237151 2185773	640834	862182	3.40 102	8.50 136	17.0 170	42.5	68.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
N-Nitrosodiphenylamine	PHN	Ave	46613 1389362	112999 1866584	237151 2185773	640834	862182	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Diphenylhydrazine	ANT	Ave	69930 2119469	168879 2833465	357270 3302836	960634	1290150	4.04 121	10.1 162	20.2 202	50.5	80.9
Azobenzene	ANT	Ave	69930 2119469	168879 2833465	357270 3302836	960634	1290150	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Bromophenyl phenyl ether	PHN	Ave	17514 555887	42887 760558	88632 884536	248373	335622	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobenzene	PHN	Ave	17479 537185	41584 736908	88392 864828	242970	320234	4.00 120	10.0 160	20.0 200	50.0	80.0
Atrazine	PHN	Ave	15768 354950	40816 +++++	82508 +++++	211444	263294	4.00 120	10.0 +++++	20.0 +++++	50.0	80.0
Pentachlorophenol	PHN	Lin2	+++++ 756550	56956 1010471	123102 1187235	353556	461729	+++++ 240	20.0 320	40.0 400	100	160
Phenanthrene	PHN	Ave	98008 2753124	231221 3653492	478608 4263240	1283600	1711365	4.00 120	10.0 160	20.0 200	50.0	80.0
Anthracene	PHN	Ave	99516 2861281	240680 3812692	498901 4420308	1342878	1786020	4.00 120	10.0 160	20.0 200	50.0	80.0
Carbazole	PHN	Ave	96085 2719694	233193 3638496	473777 4291528	1278889	1709657	4.00 120	10.0 160	20.0 200	50.0	80.0
Alachlor	PHN	Ave	12517 387928	29719 522061	63881 614723	173620	230027	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-butyl phthalate	PHN	Ave	100207 3115262	249340 4152460	520912 4805875	1421985	1869174	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluoranthene	PHN	Ave	106126 3219560	265840 4313013	542372 5132695	1476083	1979103	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyrene	CRY	Ave	111173 3319220	276532 4427936	563476 5342640	1516548	2031262	4.00 120	10.0 160	20.0 200	50.0	80.0
Famphur	CRY	Qua	39488 911158	97690 1056617	190367 +++++	504393	652420	4.00 120	10.0 160	20.0 +++++	50.0	80.0
Butyl benzyl phthalate	CRY	Ave	48346 1511179	116472 2046119	241745 2490558	679430	911673	4.00 120	10.0 160	20.0 200	50.0	80.0
3,3'-Dichlorobenzidine	CRY	Ave	37495 1117265	95398 1444422	195305 1795647	551172	751712	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]anthracene	CRY	Ave	108612 3288484	276497 4443046	540339 5579415	1493254	2066500	4.00 120	10.0 160	20.0 200	50.0	80.0
Chrysene	CRY	Ave	100921 3146399	261603 4203147	512867 5323838	1423375	1977668	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	62269 2029277	153243 2783763	313673 3397627	889069	1199555	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-octyl phthalate	CRY	Ave	107385 3615524	273330 4876489	559482 6101612	1594353	2186909	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 430035

SDG No.:

Instrument ID: SMS_D GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2018 12:53 Calibration End Date: 09/18/2018 16:20 Calibration ID: 33718

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzo[b]fluoranthene	PRY	Ave	101203 3185265	270107 4287770	514800 5824976	1416120	2092038	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[k]fluoranthene	PRY	Ave	104096 3190374	278526 4232751	510132 5327889	1449721	2127527	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]pyrene	PRY	Ave	101557 3185098	269395 4192134	501367 5490923	1420588	2115344	4.00 120	10.0 160	20.0 200	50.0	80.0
Indeno[1,2,3-cd]pyrene	PRY	Ave	91884 2902225	247426 3855232	440246 5126872	1280859	1921587	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenz(a,h)anthracene	PRY	Ave	90574 2903775	245257 3849064	444216 5086268	1276921	1919224	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[g,h,i]perylene	PRY	Ave	101358 2992425	262287 3937431	470224 5186252	1348821	2024270	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorophenol (Surr)	DCBd 4	Ave	25457 790750	62788 1075335	128679 1267182	356662	504300	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol-d5 (Surr)	DCBd 4	Ave	34996 1058199	83817 1449737	174784 1735577	483176	675362	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene-d5 (Surr)	NPT	Ave	35165 980104	80336 1358947	165024 1609877	451689	622343	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorobiphenyl	ANT	Ave	63224 1833997	151545 2465083	317871 2865413	854415	1145616	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	7965 274232	19578 374198	42893 447327	122060	161203	4.00 120	10.0 160	20.0 200	50.0	80.0
Terphenyl-d14 (Surr)	CRY	Ave	77913 2403670	190055 3253913	394494 3897109	1082100	1447180	4.00 120	10.0 160	20.0 200	50.0	80.0

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29296.D
Lims ID: ICIS HSL
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 18-Sep-2018 12:53:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICIS HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:06 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 18-Sep-2018 13:23:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.726	4.726	0.000	98	158296	40.0	40.0	
* 2 Naphthalene-d8	136	5.944	5.944	0.000	100	656973	40.0	40.0	
* 3 Acenaphthene-d10	164	7.702	7.702	0.000	98	376087	40.0	40.0	
* 4 Phenanthrene-d10	188	9.203	9.203	0.000	99	741941	40.0	40.0	
* 5 Chrysene-d12	240	13.413	13.413	0.000	97	749845	40.0	40.0	
* 6 Perylene-d12	264	17.435	17.435	0.000	100	807447	40.0	40.0	
$ 7 2-Fluorophenol	112	3.562	3.562	0.000	98	504300	80.0	84.0	
$ 8 Phenol-d5	99	4.347	4.347	0.000	99	675362	80.0	83.2	
$ 9 Nitrobenzene-d5	82	5.234	5.234	0.000	95	622343	80.0	80.5	
$ 11 2-Fluorobiphenyl	172	7.007	7.007	0.000	98	1145616	80.0	81.7	
$ 12 2,4,6-Tribromophenol	330	8.498	8.498	0.000	96	161203	80.0	81.6	
$ 13 Terphenyl-d14	244	11.217	11.217	0.000	98	1447180	80.0	79.4	
16 1,4-Dioxane	88	2.269	2.269	0.000	97	238018	80.0	86.7	
17 N-Nitrosodimethylamine	74	2.477	2.477	0.000	92	378712	80.0	84.6	
18 Pyridine	79	2.525	2.525	0.000	94	1266300	160.0	165.6	
28 Phenol	94	4.363	4.363	0.000	90	720122	80.0	83.3	
30 Aniline	93	4.411	4.411	0.000	100	872523	80.0	82.1	
31 Alpha Methyl Styrene	118	4.464	4.464	0.000	71	527023	80.0	84.0	
32 Bis(2-chloroethyl)ether	93	4.454	4.454	0.000	95	530786	80.0	81.9	
35 n-Decane	43	4.561	4.561	0.000	98	484701	80.0	82.0	
36 2-Chlorophenol	128	4.534	4.534	0.000	98	527583	80.0	84.0	
37 1,3-Dichlorobenzene	146	4.678	4.678	0.000	97	545572	80.0	83.2	
38 1,4-Dichlorobenzene	146	4.742	4.742	0.000	98	558797	80.0	83.6	
39 Benzyl alcohol	108	4.828	4.828	0.000	97	389442	80.0	83.4	
40 1,2-Dichlorobenzene	146	4.887	4.887	0.000	98	525858	80.0	82.6	
41 2-Methylphenol	108	4.924	4.924	0.000	76	523523	80.0	82.1	
43 2,2'-oxybis[1-chloropropan	45	4.956	4.956	0.000	97	686474	80.0	82.2	
44 Indene	116	4.972	4.972	0.000	99	1668138	160.0	164.5	
45 3-Methylphenol	108	5.068	5.068	0.000	92	556990	80.0	83.1	
46 3 & 4 Methylphenol	108	5.068	5.068	0.000	92	556990	80.0	83.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.068	5.068	0.000	92	556990	80.0	83.1	
48 N-Nitrosodi-n-propylamine	70	5.079	5.079	0.000	93	425270	80.0	81.7	
50 Acetophenone	105	5.084	5.084	0.000	75	771598	80.0	82.9	
53 Hexachloroethane	117	5.212	5.212	0.000	97	207298	80.0	82.6	
54 Nitrobenzene	77	5.255	5.255	0.000	94	637143	80.0	82.3	
57 Isophorone	82	5.480	5.480	0.000	98	1118943	80.0	80.9	
59 2-Nitrophenol	139	5.565	5.565	0.000	97	291742	80.0	83.2	
60 2,4-Dimethylphenol	107	5.581	5.581	0.000	98	565235	80.0	81.9	
63 Bis(2-chloroethoxy)methane	93	5.672	5.672	0.000	98	651017	80.0	80.8	
64 Benzoic acid	105	5.704	5.704	0.000	88	982710	160.0	161.3	
65 3,5-Dimethylphenol	107	5.709	5.709	0.000	96	566615	80.0	81.3	
68 2,4-Dichlorophenol	162	5.795	5.795	0.000	97	442564	80.0	82.2	
70 1,2,4-Trichlorobenzene	180	5.885	5.885	0.000	98	488023	80.0	82.2	
72 Naphthalene	128	5.966	5.966	0.000	100	1494383	80.0	81.2	
73 4-Chloroaniline	127	6.003	6.003	0.000	100	674302	80.0	81.3	
74 2,6-Dichlorophenol	162	6.019	6.019	0.000	97	440999	80.0	82.4	
76 Hexachlorobutadiene	225	6.094	6.094	0.000	99	260107	80.0	82.8	
80 Caprolactam	55	6.334	6.334	0.000	97	253746	80.0	78.0	M
83 4-Chloro-3-methylphenol	107	6.473	6.473	0.000	97	491014	80.0	80.3	
87 2-Methylnaphthalene	142	6.649	6.649	0.000	100	1025000	80.0	81.0	
89 1-Methylnaphthalene	142	6.751	6.751	0.000	99	976723	80.0	81.3	
90 Hexachlorocyclopentadiene	237	6.820	6.820	0.000	99	312039	80.0	85.5	
91 1,2,4,5-Tetrachlorobenzene	216	6.826	6.826	0.000	97	470356	80.0	79.7	
94 2,4,6-Trichlorophenol	196	6.927	6.927	0.000	88	335920	80.0	84.1	
95 2,3-Dichlorobenzenamine	161	6.927	6.927	0.000	87	513885	80.0	83.0	
96 2,4,5-Trichlorophenol	196	6.965	6.965	0.000	99	366585	80.0	82.6	
100 1,1'-Biphenyl	154	7.109	7.109	0.000	96	1216515	80.0	81.5	
102 2-Chloronaphthalene	162	7.141	7.141	0.000	100	974586	80.0	82.4	
105 2-Nitroaniline	65	7.226	7.226	0.000	95	353710	80.0	82.1	
111 Dimethyl phthalate	163	7.403	7.403	0.000	99	1088231	80.0	80.1	
112 1,3-Dinitrobenzene	168	7.429	7.429	0.000	87	206547	80.0	83.7	
113 2,6-Dinitrotoluene	165	7.461	7.461	0.000	97	277473	80.0	81.7	
115 Acenaphthylene	152	7.558	7.558	0.000	100	1489521	80.0	81.8	
117 3-Nitroaniline	138	7.638	7.638	0.000	97	320686	80.0	83.2	
119 Acenaphthene	153	7.734	7.734	0.000	96	946753	80.0	80.8	
120 2,4-Dinitrophenol	184	7.739	7.739	0.000	94	410896	160.0	162.8	
121 4-Nitrophenol	109	7.798	7.798	0.000	97	355773	160.0	165.9	
124 2,4-Dinitrotoluene	165	7.873	7.873	0.000	97	386373	80.0	83.2	
125 Dibenzofuran	168	7.905	7.905	0.000	99	1440230	80.0	81.5	
129 2,3,4,6-Tetrachlorophenol	232	8.028	8.028	0.000	72	306775	80.0	83.3	
131 Hexadecane	57	8.124	8.124	0.000	96	669240	80.0	81.6	
132 Diethyl phthalate	149	8.108	8.108	0.000	100	1092598	80.0	80.8	
134 4-Chlorophenyl phenyl ethe	204	8.236	8.236	0.000	98	564715	80.0	81.7	
135 Fluorene	166	8.252	8.252	0.000	99	1135405	80.0	79.9	
138 4-Nitroaniline	138	8.257	8.257	0.000	95	337853	80.0	82.0	
139 4,6-Dinitro-2-methylphenol	198	8.289	8.289	0.000	95	479117	160.0	164.6	
140 Diphenylamine	169	8.354	8.354	0.000	95	862182	68.0	69.6	
141 N-Nitrosodiphenylamine	169	8.354	8.354	0.000	98	862182	80.0	82.8	
142 1,2-Diphenylhydrazine	77	8.396	8.396	0.000	95	1290150	80.9	82.2	
143 Azobenzene	77	8.396	8.396	0.000	95	1290150	80.0	81.3	
145 2,4,6 - Tribromophenol	330	8.498	8.498	0.000	96	161167	80.0	81.5	
152 4-Bromophenyl phenyl ether	248	8.733	8.733	0.000	98	335622	80.0	82.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.824	8.824	0.000	97	320234	80.0	80.9	
155 Atrazine	200	8.877	8.877	0.000	96	263294	80.0	76.7	
156 n-Octadecane	85	9.053	9.053	0.000	96	324134	80.0	82.0	
157 Pentachlorophenol	266	9.011	9.011	0.000	97	461729	160.0	166.7	
163 Phenanthrene	178	9.224	9.224	0.000	100	1711365	80.0	81.9	
164 Anthracene	178	9.278	9.278	0.000	100	1786020	80.0	82.3	
165 Carbazole	167	9.427	9.427	0.000	100	1709657	80.0	82.2	
166 Alachlor	188	9.566	9.566	0.000	96	230027	80.0	81.2	
169 Di-n-butyl phthalate	149	9.775	9.775	0.000	100	1869174	80.0	81.6	
176 Fluoranthene	202	10.640	10.640	0.000	100	1979103	80.0	82.3	
180 Pyrene	202	10.987	10.987	0.000	99	2031262	80.0	79.4	
186 Famphur	218	12.013	12.013	0.000	99	652420	80.0	81.1	
187 Butyl benzyl phthalate	149	12.136	12.136	0.000	95	911673	80.0	80.0	
190 3,3'-Dichlorobenzidine	252	13.338	13.338	0.000	99	751712	80.0	85.1	
192 Benzo[a]anthracene	228	13.386	13.386	0.000	100	2066500	80.0	81.1	
193 Bis(2-ethylhexyl) phthalat	149	13.551	13.551	0.000	99	1199555	80.0	79.5	
194 Chrysene	228	13.477	13.477	0.000	99	1977668	80.0	81.8	
197 Di-n-octyl phthalate	149	15.405	15.405	0.000	100	2186909	80.0	81.5	
198 Benzo[b]fluoranthene	252	16.329	16.329	0.000	100	2092038	80.0	80.0	
200 Benzo[k]fluoranthene	252	16.410	16.410	0.000	100	2127527	80.0	81.5	
201 Benzo[e]pyrene	252	17.131	17.131	0.000	98	1944629	80.0	81.4	
202 Benzo[a]pyrene	252	17.280	17.280	0.000	100	2115344	80.0	81.9	
208 Indeno[1,2,3-cd]pyrene	276	20.614	20.614	0.000	74	1921587	80.0	81.8	
209 Dibenz(a,h)anthracene	278	20.705	20.705	0.000	74	1919224	80.0	82.0	
210 Benzo[g,h,i]perylene	276	21.367	21.367	0.000	100	2024270	80.0	82.1	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA080_00037 Amount Added: 200.00 Units: uL

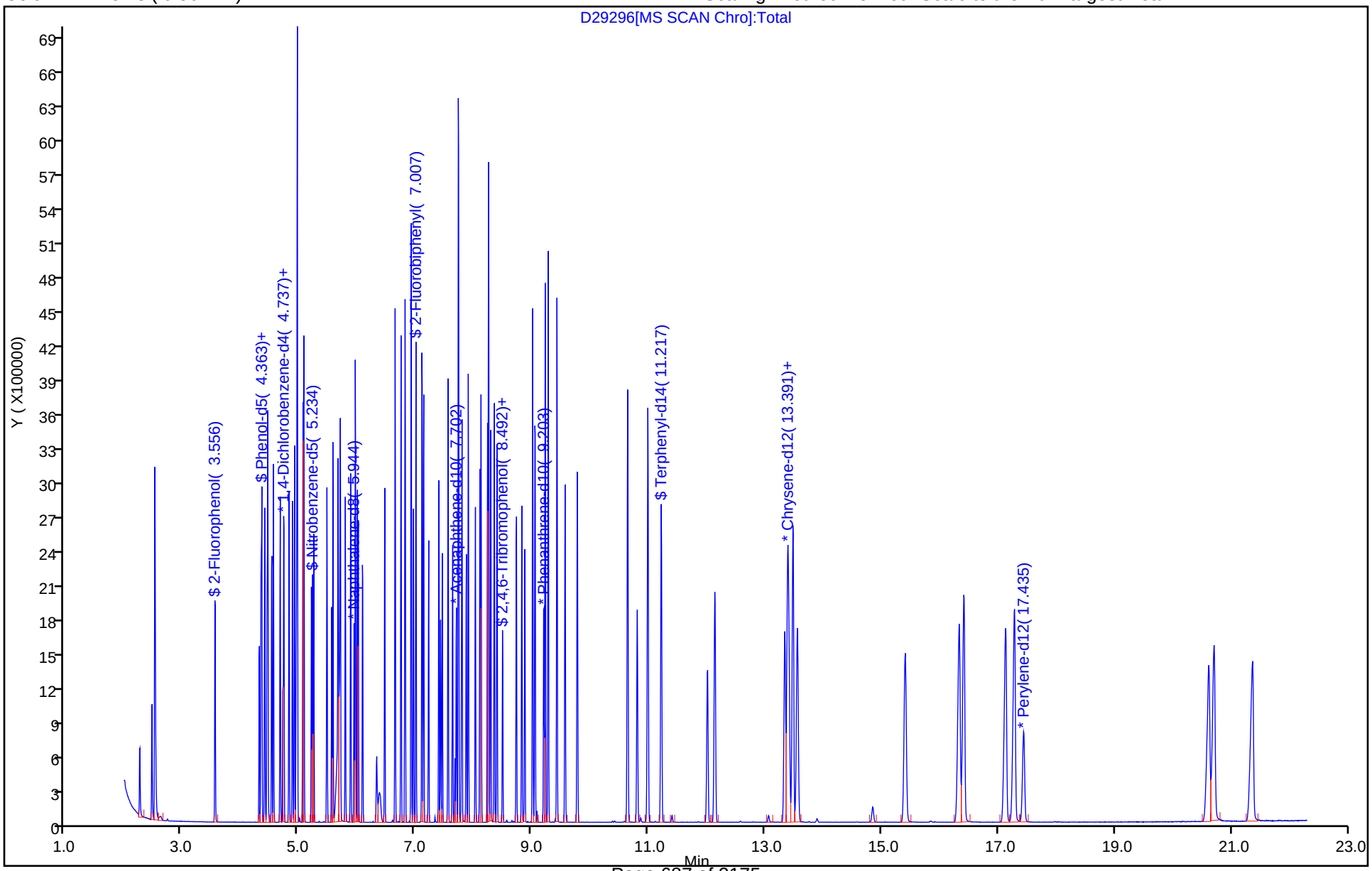
Report Date: 19-Sep-2018 09:58:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29296.D

Injection Date:	18-Sep-2018 12:53:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	ICIS HSL			Worklist Smp#:	3
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

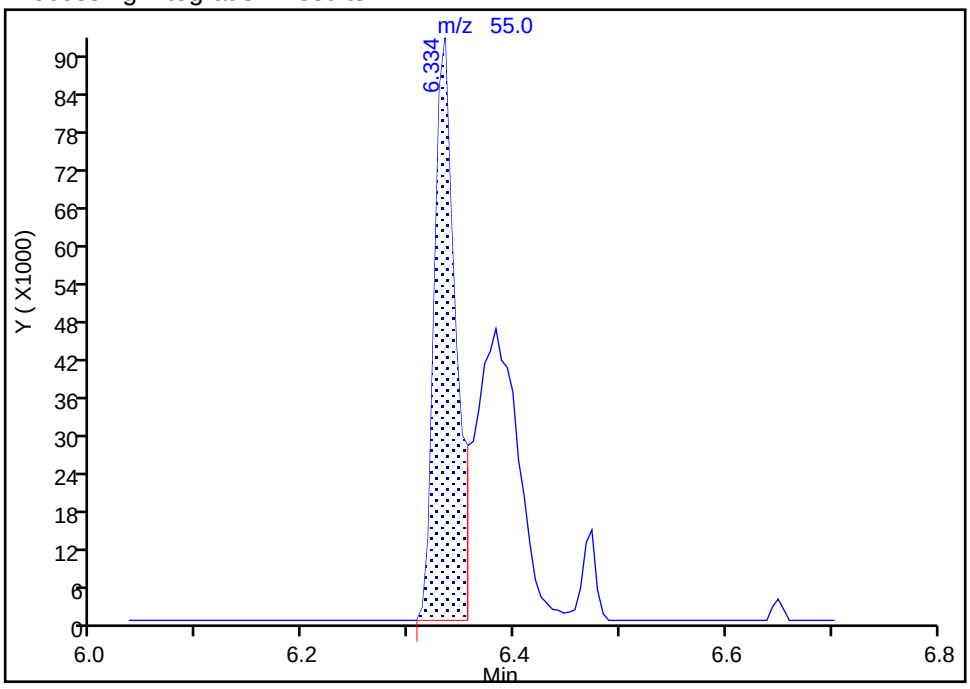
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29296.D
Injection Date: 18-Sep-2018 12:53:30 Instrument ID: SMS_D
Lims ID: ICIS HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

80 Caprolactam, CAS: 105-60-2

Signal: 1

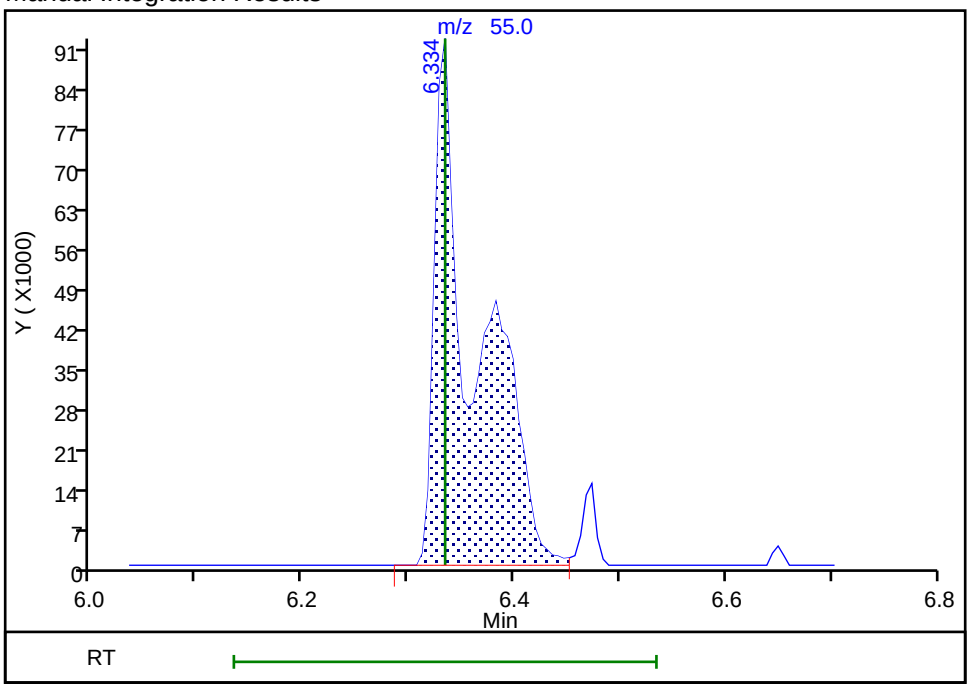
Processing Integration Results

RT: 6.33
Area: 130373
Amount: 80.000000
Amount Units: ug/ml



Manual Integration Results

RT: 6.33
Area: 253746
Amount: 78.026839
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 13:24:57
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29297.D
Lims ID: STD004 HSL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Sep-2018 13:22:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD004 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:08 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 18-Sep-2018 13:50:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.723	4.726	-0.003	98	164546	40.0	40.0	
* 2 Naphthalene-d8	136	5.941	5.944	-0.003	99	657650	40.0	40.0	
* 3 Acenaphthene-d10	164	7.693	7.702	-0.009	98	388406	40.0	40.0	
* 4 Phenanthrene-d10	188	9.194	9.203	-0.009	99	772881	40.0	40.0	
* 5 Chrysene-d12	240	13.393	13.413	-0.020	83	762146	40.0	40.0	
* 6 Perylene-d12	264	17.421	17.435	-0.014	100	791902	40.0	40.0	
$ 7 2-Fluorophenol	112	3.558	3.562	-0.004	97	25457	4.00	4.08	
$ 8 Phenol-d5	99	4.344	4.347	-0.003	97	34996	4.00	4.15	
$ 9 Nitrobenzene-d5	82	5.230	5.234	-0.004	96	35165	4.00	4.55	
$ 11 2-Fluorobiphenyl	172	7.004	7.007	-0.003	97	63224	4.00	4.36	
$ 12 2,4,6-Tribromophenol	330	8.489	8.498	-0.009	91	7965	4.00	3.90	
$ 13 Terphenyl-d14	244	11.208	11.217	-0.009	98	77913	4.00	4.21	
16 1,4-Dioxane	88	2.266	2.269	-0.003	97	11268	4.00	3.95	
17 N-Nitrosodimethylamine	74	2.474	2.477	-0.003	92	18715	4.00	4.02	
18 Pyridine	79	2.527	2.525	0.002	94	66969	8.00	8.42	
28 Phenol	94	4.354	4.363	-0.009	90	36271	4.00	4.03	
30 Aniline	93	4.408	4.411	-0.003	99	46197	4.00	4.18	
31 Alpha Methyl Styrene	118	4.461	4.464	-0.003	70	28265	4.00	4.33	
32 Bis(2-chloroethyl)ether	93	4.445	4.454	-0.009	92	28414	4.00	4.22	
35 n-Decane	43	4.557	4.561	-0.004	98	26005	4.00	4.23	
36 2-Chlorophenol	128	4.525	4.534	-0.009	97	26452	4.00	4.05	
37 1,3-Dichlorobenzene	146	4.675	4.678	-0.003	97	29128	4.00	4.27	
38 1,4-Dichlorobenzene	146	4.734	4.742	-0.008	96	29600	4.00	4.26	
39 Benzyl alcohol	108	4.824	4.828	-0.004	96	19318	4.00	3.98	
40 1,2-Dichlorobenzene	146	4.883	4.887	-0.004	97	28200	4.00	4.26	
41 2-Methylphenol	108	4.921	4.924	-0.003	76	27163	4.00	4.10	
43 2,2'-oxybis[1-chloropropan	45	4.953	4.956	-0.003	96	35294	4.00	4.07	
44 Indene	116	4.963	4.972	-0.009	99	92914	8.00	8.81	
45 3-Methylphenol	108	5.060	5.068	-0.008	90	28294	4.00	4.06	
46 3 & 4 Methylphenol	108	5.060	5.068	-0.008	90	28294	4.00	4.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.060	5.068	-0.008	90	28294	4.00	4.06	
48 N-Nitrosodi-n-propylamine	70	5.070	5.079	-0.009	94	22410	4.00	4.14	
50 Acetophenone	105	5.081	5.084	-0.003	75	39681	4.00	4.10	
53 Hexachloroethane	117	5.209	5.212	-0.003	95	10931	4.00	4.19	
54 Nitrobenzene	77	5.246	5.255	-0.009	93	32677	4.00	4.22	
57 Isophorone	82	5.471	5.480	-0.009	98	57256	4.00	4.14	
59 2-Nitrophenol	139	5.556	5.565	-0.009	96	13962	4.00	3.98	
60 2,4-Dimethylphenol	107	5.578	5.581	-0.003	96	29380	4.00	4.25	
63 Bis(2-chloroethoxy)methane	93	5.669	5.672	-0.003	89	34644	4.00	4.30	
64 Benzoic acid	105	5.615	5.704	-0.089	95	34186	8.00	10.4	
65 3,5-Dimethylphenol	107	5.706	5.709	-0.003	95	28844	4.00	4.14	
68 2,4-Dichlorophenol	162	5.791	5.795	-0.004	96	21708	4.00	4.03	
70 1,2,4-Trichlorobenzene	180	5.882	5.885	-0.003	98	24864	4.00	4.18	
72 Naphthalene	128	5.962	5.966	-0.004	99	81045	4.00	4.40	
73 4-Chloroaniline	127	5.994	6.003	-0.009	98	36055	4.00	4.34	
74 2,6-Dichlorophenol	162	6.010	6.019	-0.009	96	22106	4.00	4.13	
76 Hexachlorobutadiene	225	6.091	6.094	-0.003	96	12802	4.00	4.07	
80 Caprolactam	55	6.299	6.334	-0.035	95	13624	4.00	4.19	
83 4-Chloro-3-methylphenol	107	6.464	6.473	-0.009	96	25781	4.00	4.21	
87 2-Methylnaphthalene	142	6.646	6.649	-0.003	99	56055	4.00	4.43	
89 1-Methylnaphthalene	142	6.748	6.751	-0.003	100	51609	4.00	4.29	
90 Hexachlorocyclopentadiene	237	6.812	6.820	-0.008	97	14723	4.00	3.91	
91 1,2,4,5-Tetrachlorobenzene	216	6.817	6.826	-0.009	97	25961	4.00	4.39	
94 2,4,6-Trichlorophenol	196	6.919	6.927	-0.008	85	17131	4.00	4.15	
95 2,3-Dichlorobenzenamine	161	6.919	6.927	-0.008	89	27398	4.00	4.29	
96 2,4,5-Trichlorophenol	196	6.956	6.965	-0.009	97	18979	4.00	4.14	
100 1,1'-Biphenyl	154	7.106	7.109	-0.003	95	68130	4.00	4.42	
102 2-Chloronaphthalene	162	7.132	7.141	-0.009	99	52119	4.00	4.27	
105 2-Nitroaniline	65	7.218	7.226	-0.008	95	17569	4.00	3.95	
111 Dimethyl phthalate	163	7.389	7.403	-0.014	99	60810	4.00	4.34	
112 1,3-Dinitrobenzene	168	7.421	7.429	-0.008	86	9172	4.00	3.60	
113 2,6-Dinitrotoluene	165	7.453	7.461	-0.008	94	14025	4.00	4.00	
115 Acenaphthylene	152	7.554	7.558	-0.004	99	80187	4.00	4.26	
117 3-Nitroaniline	138	7.624	7.638	-0.014	95	15335	4.00	3.85	
119 Acenaphthene	153	7.725	7.734	-0.009	99	53890	4.00	4.46	
120 2,4-Dinitrophenol	184	7.731	7.739	-0.008	91	15920	8.00	8.94	
121 4-Nitrophenol	109	7.779	7.798	-0.019	96	17557	8.00	7.93	
124 2,4-Dinitrotoluene	165	7.864	7.873	-0.009	94	17974	4.00	3.75	
125 Dibenzofuran	168	7.902	7.905	-0.003	99	79723	4.00	4.37	
129 2,3,4,6-Tetrachlorophenol	232	8.019	8.028	-0.009	70	15093	4.00	3.97	
131 Hexadecane	57	8.115	8.124	-0.009	96	36785	4.00	4.34	
132 Diethyl phthalate	149	8.099	8.108	-0.009	100	60165	4.00	4.31	
134 4-Chlorophenyl phenyl ethe	204	8.233	8.236	-0.003	94	29493	4.00	4.13	
135 Fluorene	166	8.243	8.252	-0.009	98	66075	4.00	4.50	
138 4-Nitroaniline	138	8.238	8.257	-0.019	94	16724	4.00	3.93	
139 4,6-Dinitro-2-methylphenol	198	8.275	8.289	-0.014	93	20855	8.00	9.03	
140 Diphenylamine	169	8.345	8.354	-0.009	97	46613	3.40	3.64	
141 N-Nitrosodiphenylamine	169	8.345	8.354	-0.009	99	46613	4.00	4.30	
142 1,2-Diphenylhydrazine	77	8.393	8.396	-0.003	95	69930	4.04	4.32	
143 Azobenzene	77	8.393	8.396	-0.003	95	69930	4.00	4.27	
145 2,4,6 - Tribromophenol	330	8.489	8.498	-0.009	91	7965	4.00	3.90	
152 4-Bromophenyl phenyl ether	248	8.724	8.733	-0.009	96	17514	4.00	4.15	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.815	8.824	-0.009	96	17479	4.00	4.24	
155 Atrazine	200	8.863	8.877	-0.014	93	15768	4.00	4.41	
156 n-Octadecane	85	9.045	9.053	-0.008	96	16877	4.00	4.10	
157 Pentachlorophenol	266	9.002	9.011	-0.009	95	21719	8.00	8.35	
163 Phenanthrene	178	9.216	9.224	-0.008	99	98008	4.00	4.50	
164 Anthracene	178	9.269	9.278	-0.009	99	99516	4.00	4.40	
165 Carbazole	167	9.419	9.427	-0.008	100	96085	4.00	4.44	
166 Alachlor	188	9.558	9.566	-0.008	94	12517	4.00	4.24	
169 Di-n-butyl phthalate	149	9.771	9.775	-0.004	100	100207	4.00	4.20	
176 Fluoranthene	202	10.631	10.640	-0.009	100	106126	4.00	4.24	
180 Pyrene	202	10.973	10.987	-0.014	99	111173	4.00	4.28	
186 Famphur	218	11.994	12.013	-0.019	97	39488	4.00	4.86	
187 Butyl benzyl phthalate	149	12.122	12.136	-0.014	94	48346	4.00	4.17	
190 3,3'-Dichlorobenzidine	252	13.313	13.338	-0.025	96	37495	4.00	4.18	
192 Benzo[a]anthracene	228	13.367	13.386	-0.019	100	108612	4.00	4.19	
193 Bis(2-ethylhexyl) phthalat	149	13.537	13.551	-0.014	97	62269	4.00	4.06	
194 Chrysene	228	13.452	13.477	-0.025	99	100921	4.00	4.11	
197 Di-n-octyl phthalate	149	15.386	15.405	-0.019	99	107385	4.00	3.94	
198 Benzo[b]fluoranthene	252	16.289	16.329	-0.040	98	101203	4.00	3.95	
200 Benzo[k]fluoranthene	252	16.374	16.410	-0.036	99	104096	4.00	4.07	
201 Benzo[e]pyrene	252	17.085	17.131	-0.046	97	95032	4.00	4.05	
202 Benzo[a]pyrene	252	17.234	17.280	-0.046	99	101557	4.00	4.01	
208 Indeno[1,2,3-cd]pyrene	276	20.557	20.614	-0.057	73	91884	4.00	3.99	a
209 Dibenz(a,h)anthracene	278	20.653	20.705	-0.052	72	90574	4.00	3.94	
210 Benzo[g,h,i]perylene	276	21.300	21.367	-0.067	99	101358	4.00	4.19	
S 219 Total Cresols	108				0			8.16	
S 220 Methyl Phenols,Total	108				0			8.16	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA004_00037 Amount Added: 200.00 Units: uL

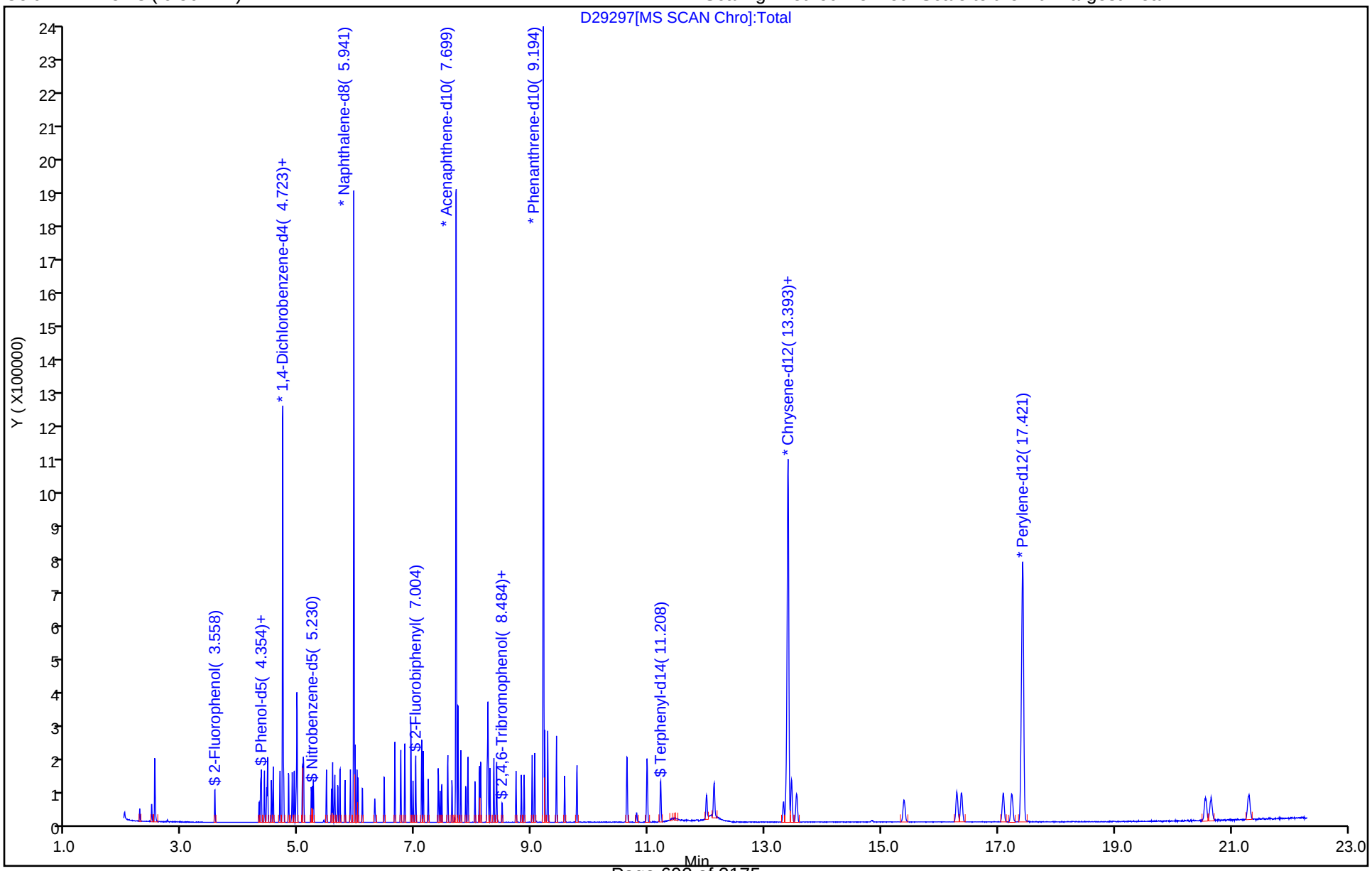
Report Date: 19-Sep-2018 09:58:08 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29297.D

Injection Date:	18-Sep-2018 13:22:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD004 HSL			Worklist Smp#:	4
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

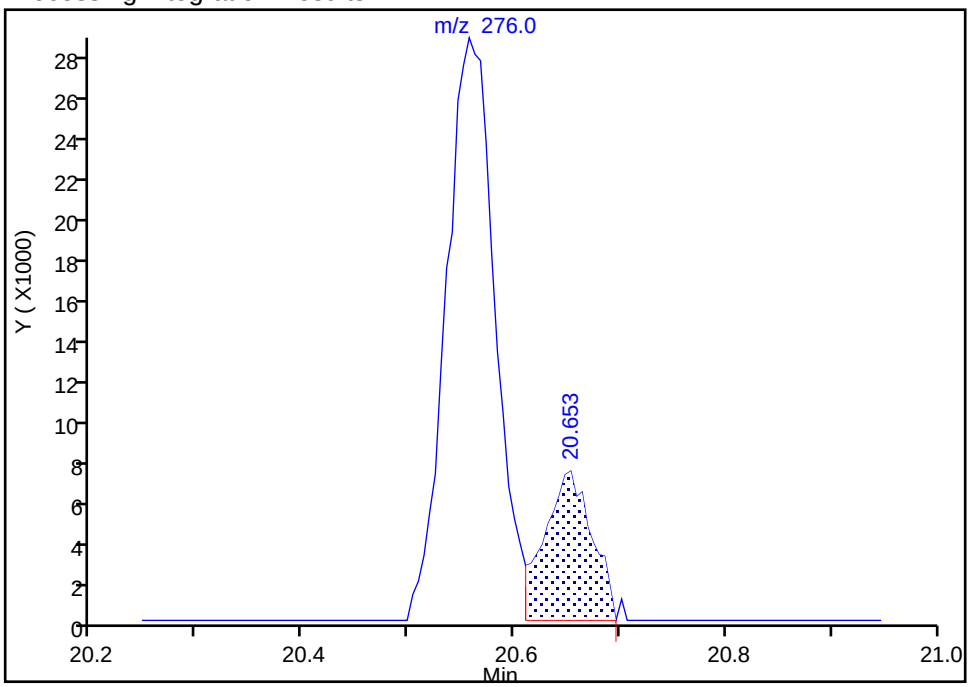
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29297.D
Injection Date: 18-Sep-2018 13:22:30 Instrument ID: SMS_D
Lims ID: STD004 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

208 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

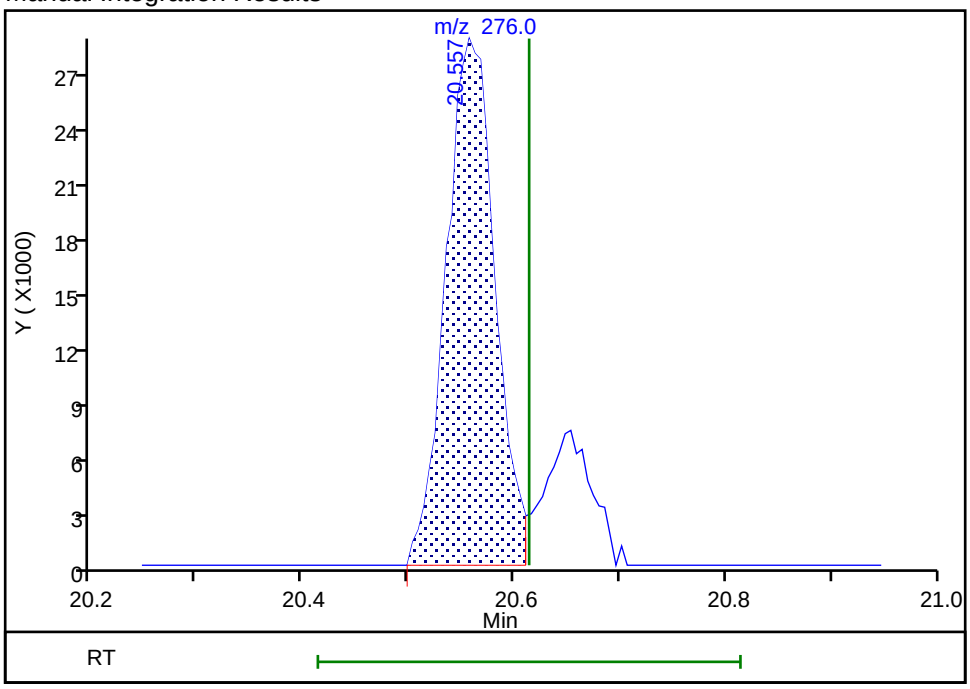
Processing Integration Results

RT: 20.65
Area: 23001
Amount: 4.000000
Amount Units: ug/ml



Manual Integration Results

RT: 20.56
Area: 91884
Amount: 3.986784
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 13:48:57
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 19-Sep-2018 09:58:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29298.D
Lims ID: STD010 HSL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Sep-2018 13:52:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD010 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:09 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 18-Sep-2018 15:12:28

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.721	4.726	-0.005	98	166559	40.0	40.0	
*	2 Naphthalene-d8	136	5.939	5.944	-0.005	100	684939	40.0	40.0	
*	3 Acenaphthene-d10	164	7.697	7.702	-0.005	98	396204	40.0	40.0	
*	4 Phenanthrene-d10	188	9.193	9.203	-0.010	99	802188	40.0	40.0	
*	5 Chrysene-d12	240	13.397	13.413	-0.016	83	816749	40.0	40.0	
*	6 Perylene-d12	264	17.420	17.435	-0.015	100	874095	40.0	40.0	
$	7 2-Fluorophenol	112	3.557	3.562	-0.005	97	62788	10.0	9.94	
$	8 Phenol-d5	99	4.342	4.347	-0.005	98	83817	10.0	9.82	
$	9 Nitrobenzene-d5	82	5.229	5.234	-0.005	95	80336	10.0	9.97	
$	11 2-Fluorobiphenyl	172	7.002	7.007	-0.005	98	151545	10.0	10.3	
$	12 2,4,6-Tribromophenol	330	8.488	8.498	-0.010	93	19578	10.0	9.40	
$	13 Terphenyl-d14	244	11.207	11.217	-0.010	99	190055	10.0	9.57	
	16 1,4-Dioxane	88	2.264	2.269	-0.005	99	28454	10.0	9.85	
	17 N-Nitrosodimethylamine	74	2.472	2.477	-0.005	93	46754	10.0	9.93	
	18 Pyridine	79	2.526	2.525	0.001	94	159222	20.0	19.8	
	28 Phenol	94	4.353	4.363	-0.010	91	90231	10.0	9.92	
	30 Aniline	93	4.406	4.411	-0.005	100	111676	10.0	9.99	
	31 Alpha Methyl Styrene	118	4.460	4.464	-0.004	71	65899	10.0	9.98	
	32 Bis(2-chloroethyl)ether	93	4.444	4.454	-0.010	94	67462	10.0	9.89	
	35 n-Decane	43	4.556	4.561	-0.005	97	62498	10.0	10.1	
	36 2-Chlorophenol	128	4.529	4.534	-0.005	97	66243	10.0	10.0	
	37 1,3-Dichlorobenzene	146	4.673	4.678	-0.005	97	69256	10.0	10.0	
	38 1,4-Dichlorobenzene	146	4.737	4.742	-0.005	97	70967	10.0	10.1	
	39 Benzyl alcohol	108	4.823	4.828	-0.005	96	47720	10.0	9.71	
	40 1,2-Dichlorobenzene	146	4.887	4.887	0.000	98	67441	10.0	10.1	
	41 2-Methylphenol	108	4.919	4.924	-0.005	76	66800	10.0	9.96	
	43 2,2'-oxybis[1-chloropropan	45	4.951	4.956	-0.005	97	86511	10.0	9.85	
	44 Indene	116	4.967	4.972	-0.005	99	225028	20.0	21.1	
	45 3-Methylphenol	108	5.058	5.068	-0.010	91	70285	10.0	9.96	
	46 3 & 4 Methylphenol	108	5.058	5.068	-0.010	91	70285	10.0	9.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.058	5.068	-0.010	91	70285	10.0	9.96	
48 N-Nitrosodi-n-propylamine	70	5.069	5.079	-0.010	94	55326	10.0	10.1	
50 Acetophenone	105	5.079	5.084	-0.005	76	100134	10.0	10.2	
53 Hexachloroethane	117	5.213	5.212	0.001	96	26359	10.0	9.99	
54 Nitrobenzene	77	5.245	5.255	-0.010	94	80704	10.0	10.0	
57 Isophorone	82	5.469	5.480	-0.011	98	143283	10.0	9.94	
59 2-Nitrophenol	139	5.560	5.565	-0.005	97	36284	10.0	9.92	
60 2,4-Dimethylphenol	107	5.576	5.581	-0.005	96	71239	10.0	9.90	
63 Bis(2-chloroethoxy)methane	93	5.667	5.672	-0.005	90	82934	10.0	9.88	
64 Benzoic acid	105	5.630	5.704	-0.074	96	100446	20.0	20.3	a
65 3,5-Dimethylphenol	107	5.704	5.709	-0.005	97	72722	10.0	10.0	
68 2,4-Dichlorophenol	162	5.790	5.795	-0.005	97	56334	10.0	10.0	
70 1,2,4-Trichlorobenzene	180	5.881	5.885	-0.004	97	61456	10.0	9.93	
72 Naphthalene	128	5.961	5.966	-0.005	100	194668	10.0	10.2	
73 4-Chloroaniline	127	5.998	6.003	-0.005	98	85476	10.0	9.89	
74 2,6-Dichlorophenol	162	6.014	6.019	-0.005	96	56560	10.0	10.1	
76 Hexachlorobutadiene	225	6.089	6.094	-0.005	98	32383	10.0	9.88	
80 Caprolactam	55	6.303	6.334	-0.031	95	32683	10.0	9.64	
83 4-Chloro-3-methylphenol	107	6.463	6.473	-0.010	98	63394	10.0	9.94	
87 2-Methylnaphthalene	142	6.645	6.649	-0.005	99	132569	10.0	10.0	
89 1-Methylnaphthalene	142	6.746	6.751	-0.005	99	127893	10.0	10.2	
90 Hexachlorocyclopentadiene	237	6.815	6.820	-0.005	99	36702	10.0	9.54	
91 1,2,4,5-Tetrachlorobenzene	216	6.821	6.826	-0.005	97	62839	10.0	10.2	
94 2,4,6-Trichlorophenol	196	6.922	6.927	-0.005	85	43182	10.0	10.3	
95 2,3-Dichlorobenzenamine	161	6.922	6.927	-0.005	90	67861	10.0	10.4	
96 2,4,5-Trichlorophenol	196	6.960	6.965	-0.005	98	46902	10.0	10.0	
100 1,1'-Biphenyl	154	7.104	7.109	-0.005	95	164021	10.0	10.4	
102 2-Chloronaphthalene	162	7.131	7.141	-0.010	99	127603	10.0	10.2	
105 2-Nitroaniline	65	7.216	7.226	-0.010	94	45284	10.0	9.97	
111 Dimethyl phthalate	163	7.392	7.403	-0.011	99	146334	10.0	10.2	
112 1,3-Dinitrobenzene	168	7.419	7.429	-0.010	86	24415	10.0	9.40	
113 2,6-Dinitrotoluene	165	7.451	7.461	-0.010	94	35217	10.0	9.84	
115 Acenaphthylene	152	7.553	7.558	-0.005	100	195410	10.0	10.2	
117 3-Nitroaniline	138	7.627	7.638	-0.011	97	40635	10.0	10.0	
119 Acenaphthene	153	7.729	7.734	-0.005	94	131127	10.0	10.6	
120 2,4-Dinitrophenol	184	7.729	7.739	-0.010	90	46307	20.0	20.0	
121 4-Nitrophenol	109	7.777	7.798	-0.021	96	45328	20.0	20.1	
124 2,4-Dinitrotoluene	165	7.863	7.873	-0.010	98	49791	10.0	10.2	
125 Dibenzofuran	168	7.900	7.905	-0.005	99	193325	10.0	10.4	
129 2,3,4,6-Tetrachlorophenol	232	8.023	8.028	-0.005	72	38609	10.0	9.96	
131 Hexadecane	57	8.119	8.124	-0.005	96	84192	10.0	9.74	
132 Diethyl phthalate	149	8.098	8.108	-0.010	100	147969	10.0	10.4	
134 4-Chlorophenyl phenyl ethe	204	8.231	8.236	-0.005	96	72792	10.0	10.0	
135 Fluorene	166	8.247	8.252	-0.005	99	157606	10.0	10.5	
138 4-Nitroaniline	138	8.242	8.257	-0.015	94	43956	10.0	10.1	
139 4,6-Dinitro-2-methylphenol	198	8.279	8.289	-0.010	94	56622	20.0	20.0	
140 Diphenylamine	169	8.343	8.354	-0.011	95	112999	8.50	8.66	
141 N-Nitrosodiphenylamine	169	8.343	8.354	-0.011	98	112999	10.0	10.0	
142 1,2-Diphenylhydrazine	77	8.391	8.396	-0.005	95	168879	10.1	10.2	
143 Azobenzene	77	8.391	8.396	-0.005	95	168879	10.0	10.1	
145 2,4,6 - Tribromophenol	330	8.488	8.498	-0.010	93	19578	10.0	9.40	
152 4-Bromophenyl phenyl ether	248	8.728	8.733	-0.005	97	42887	10.0	9.79	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.819	8.824	-0.005	96	41584	10.0	9.72	
155 Atrazine	200	8.867	8.877	-0.010	96	40816	10.0	11.0	
156 n-Octadecane	85	9.043	9.053	-0.010	97	40181	10.0	9.40	
157 Pentachlorophenol	266	9.000	9.011	-0.011	96	56956	20.0	19.8	
163 Phenanthrene	178	9.219	9.224	-0.005	100	231221	10.0	10.2	
164 Anthracene	178	9.267	9.278	-0.011	100	240680	10.0	10.3	
165 Carbazole	167	9.417	9.427	-0.010	100	233193	10.0	10.4	
166 Alachlor	188	9.561	9.566	-0.005	95	29719	10.0	9.70	
169 Di-n-butyl phthalate	149	9.770	9.775	-0.005	100	249340	10.0	10.1	
176 Fluoranthene	202	10.630	10.640	-0.010	100	265840	10.0	10.2	
180 Pyrene	202	10.977	10.987	-0.010	99	276532	10.0	9.92	
186 Famphur	218	11.997	12.013	-0.016	99	97690	10.0	9.95	
187 Butyl benzyl phthalate	149	12.126	12.136	-0.010	95	116472	10.0	9.39	
190 3,3'-Dichlorobenzidine	252	13.317	13.338	-0.021	98	95398	10.0	9.91	
192 Benzo[a]anthracene	228	13.370	13.386	-0.016	100	276497	10.0	9.96	
193 Bis(2-ethylhexyl) phthalat	149	13.541	13.551	-0.010	98	153243	10.0	9.33	
194 Chrysene	228	13.456	13.477	-0.021	100	261603	10.0	9.93	
197 Di-n-octyl phthalate	149	15.384	15.405	-0.021	100	273330	10.0	9.35	
198 Benzo[b]fluoranthene	252	16.298	16.329	-0.031	99	270107	10.0	9.54	
200 Benzo[k]fluoranthene	252	16.373	16.410	-0.037	100	278526	10.0	9.86	
201 Benzo[e]pyrene	252	17.088	17.131	-0.043	98	253603	10.0	9.80	
202 Benzo[a]pyrene	252	17.233	17.280	-0.047	100	269395	10.0	9.63	
208 Indeno[1,2,3-cd]pyrene	276	20.561	20.614	-0.053	74	247426	10.0	9.73	a
209 Dibenz(a,h)anthracene	278	20.662	20.705	-0.043	72	245257	10.0	9.67	
210 Benzo[g,h,i]perylene	276	21.309	21.367	-0.058	100	262287	10.0	9.82	
S 219 Total Cresols	108				0			19.9	
S 220 Methyl Phenols,Total	108				0			19.9	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA010_00037 Amount Added: 200.00 Units: uL

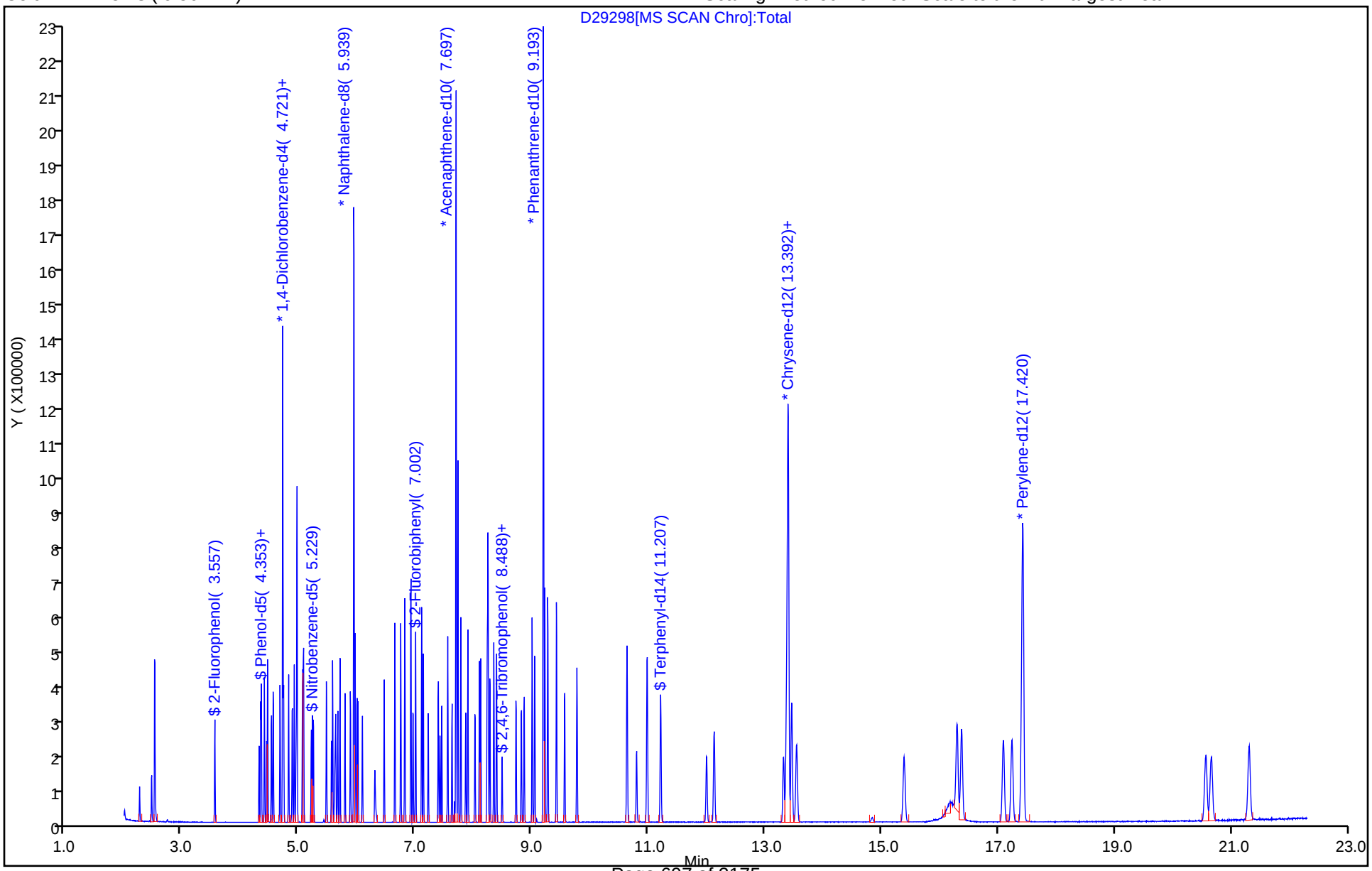
Report Date: 19-Sep-2018 09:58:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29298.D

Injection Date:	18-Sep-2018 13:52:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD010 HSL			Worklist Smp#:	5
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

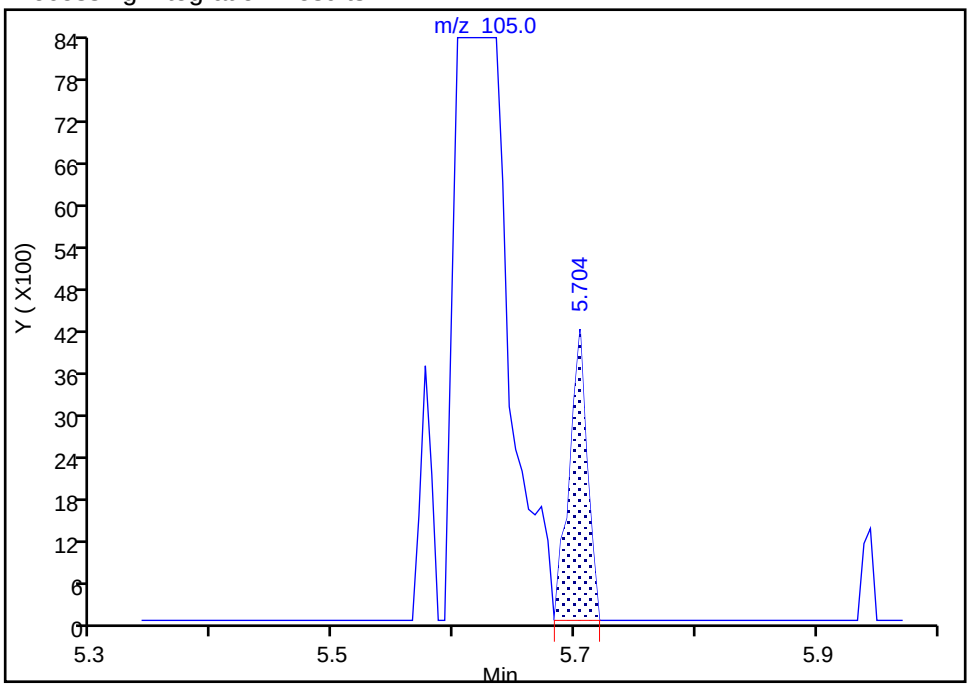
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29298.D
Injection Date: 18-Sep-2018 13:52:30 Instrument ID: SMS_D
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

64 Benzoic acid, CAS: 65-85-0

Signal: 1

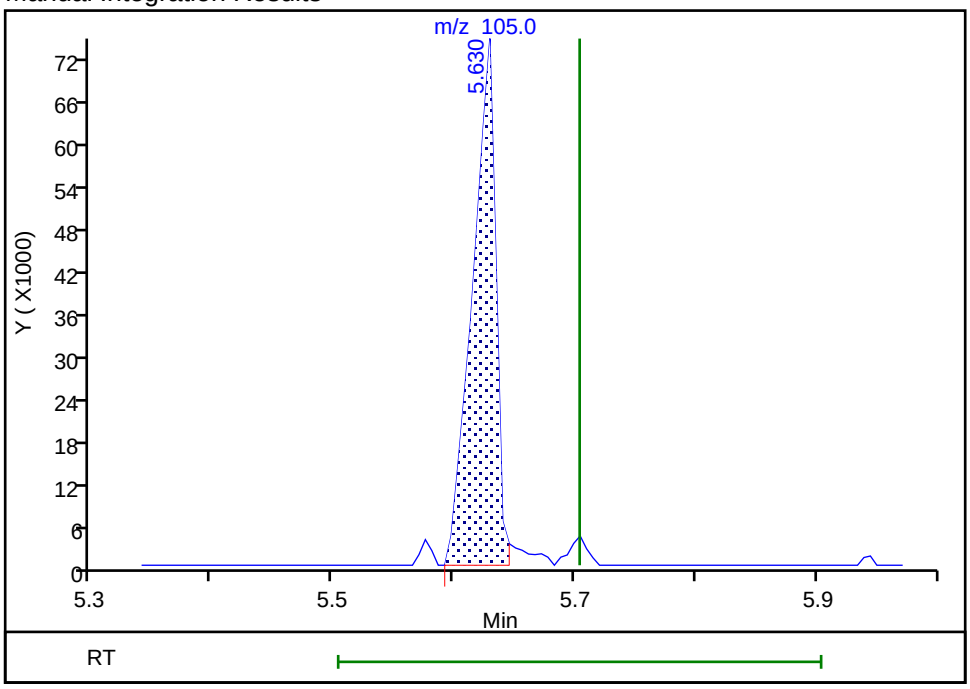
Processing Integration Results

RT: 5.70
Area: 4254
Amount: 36.412859
Amount Units: ug/ml



Manual Integration Results

RT: 5.63
Area: 100446
Amount: 20.267100
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 15:11:57
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

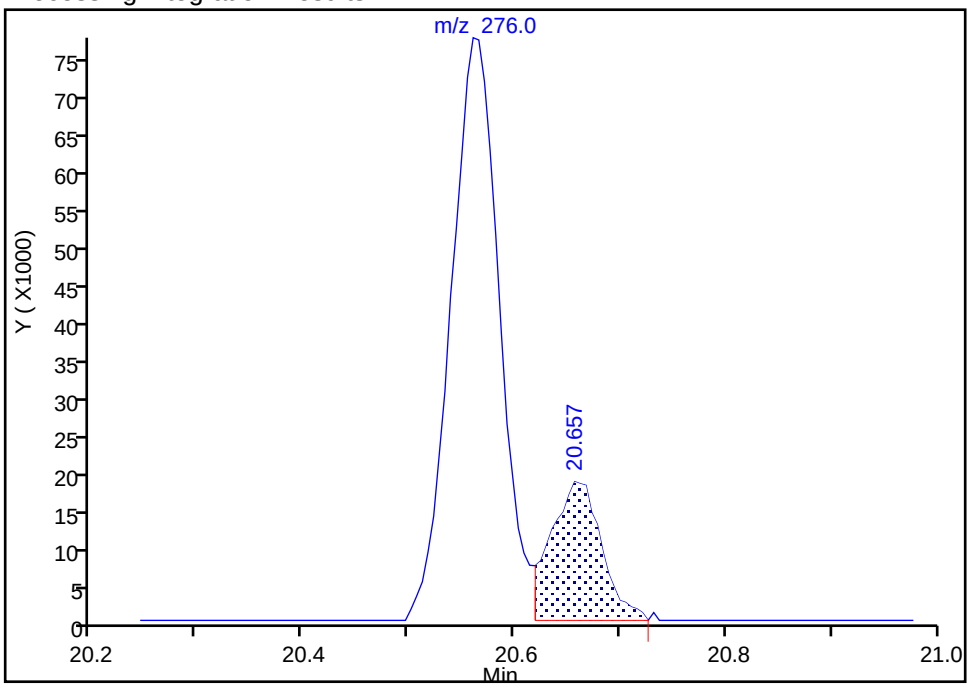
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29298.D
Injection Date: 18-Sep-2018 13:52:30 Instrument ID: SMS_D
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

208 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

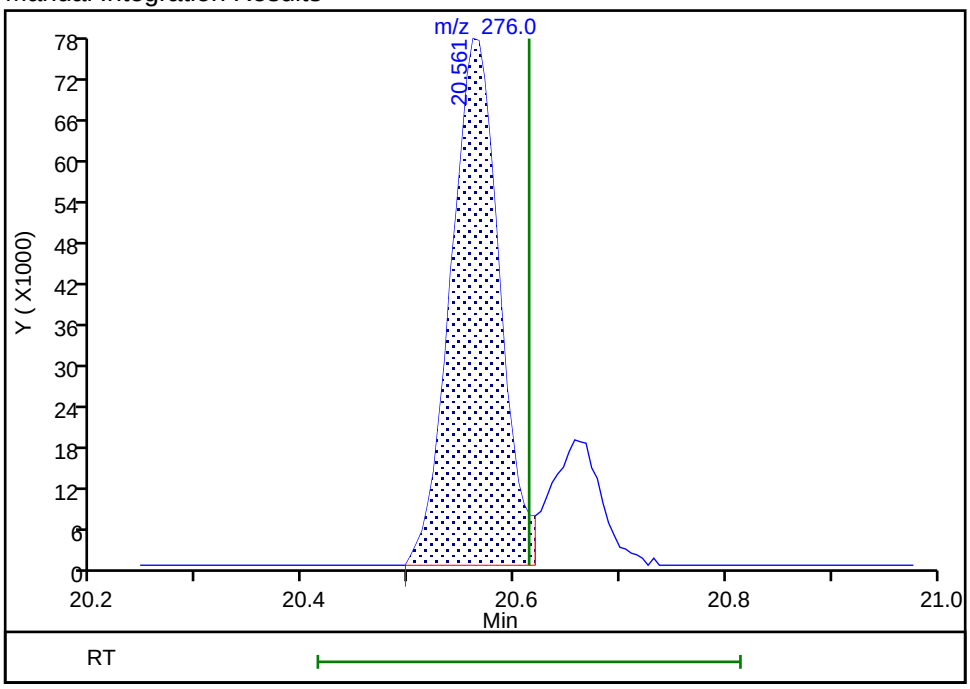
Processing Integration Results

RT: 20.66
Area: 61602
Amount: 5.695684
Amount Units: ug/ml



Manual Integration Results

RT: 20.56
Area: 247426
Amount: 9.726149
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 15:12:21
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29299.D
Lims ID: STD020 HSL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Sep-2018 14:21:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD020 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:11 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 18-Sep-2018 15:15:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.722	4.726	-0.004	97	177071	40.0	40.0	
* 2 Naphthalene-d8	136	5.940	5.944	-0.004	100	707521	40.0	40.0	
* 3 Acenaphthene-d10	164	7.698	7.702	-0.004	98	419255	40.0	40.0	
* 4 Phenanthrene-d10	188	9.193	9.203	-0.010	99	840759	40.0	40.0	
* 5 Chrysene-d12	240	13.398	13.413	-0.015	86	807729	40.0	40.0	
* 6 Perylene-d12	264	17.420	17.435	-0.015	100	806668	40.0	40.0	
$ 7 2-Fluorophenol	112	3.557	3.562	-0.005	98	128679	20.0	19.2	
$ 8 Phenol-d5	99	4.343	4.347	-0.004	98	174784	20.0	19.3	
$ 9 Nitrobenzene-d5	82	5.230	5.234	-0.004	96	165024	20.0	19.8	
$ 11 2-Fluorobiphenyl	172	7.003	7.007	-0.004	98	317871	20.0	20.3	
$ 12 2,4,6-Tribromophenol	330	8.488	8.498	-0.010	94	42893	20.0	19.5	
$ 13 Terphenyl-d14	244	11.207	11.217	-0.010	98	394494	20.0	20.1	
16 1,4-Dioxane	88	2.270	2.269	0.001	99	57964	20.0	18.9	
17 N-Nitrosodimethylamine	74	2.473	2.477	-0.004	93	97203	20.0	19.4	
18 Pyridine	79	2.526	2.525	0.001	94	338453	40.0	39.6	
28 Phenol	94	4.353	4.363	-0.010	92	188409	20.0	19.5	
30 Aniline	93	4.407	4.411	-0.004	100	231992	20.0	19.5	
31 Alpha Methyl Styrene	118	4.460	4.464	-0.004	70	136447	20.0	19.4	
32 Bis(2-chloroethyl)ether	93	4.450	4.454	-0.004	94	138085	20.0	19.1	
35 n-Decane	43	4.556	4.561	-0.005	98	129519	20.0	19.6	
36 2-Chlorophenol	128	4.530	4.534	-0.004	98	137068	20.0	19.5	
37 1,3-Dichlorobenzene	146	4.674	4.678	-0.004	97	144217	20.0	19.7	
38 1,4-Dichlorobenzene	146	4.738	4.742	-0.004	97	146154	20.0	19.5	
39 Benzyl alcohol	108	4.824	4.828	-0.004	97	100204	20.0	19.2	
40 1,2-Dichlorobenzene	146	4.888	4.887	0.001	97	138597	20.0	19.5	
41 2-Methylphenol	108	4.920	4.924	-0.004	76	136714	20.0	19.2	
43 2,2'-oxybis[1-chloropropan	45	4.952	4.956	-0.004	96	181460	20.0	19.4	
44 Indene	116	4.968	4.972	-0.004	99	461207	40.0	40.6	
45 3-Methylphenol	108	5.064	5.068	-0.004	93	146658	20.0	19.6	
46 3 & 4 Methylphenol	108	5.064	5.068	-0.004	93	146658	20.0	19.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.064	5.068	-0.004	93	146658	20.0	19.6	
48 N-Nitrosodi-n-propylamine	70	5.069	5.079	-0.010	93	115553	20.0	19.8	
50 Acetophenone	105	5.080	5.084	-0.004	75	207818	20.0	20.0	
53 Hexachloroethane	117	5.213	5.212	0.001	97	54624	20.0	19.5	
54 Nitrobenzene	77	5.246	5.255	-0.009	94	168621	20.0	20.2	
57 Isophorone	82	5.470	5.480	-0.010	98	300381	20.0	20.2	
59 2-Nitrophenol	139	5.561	5.565	-0.004	95	73695	20.0	19.5	
60 2,4-Dimethylphenol	107	5.577	5.581	-0.004	97	149506	20.0	20.1	
63 Bis(2-chloroethoxy)methane	93	5.668	5.672	-0.004	90	174278	20.0	20.1	
64 Benzoic acid	105	5.646	5.704	-0.058	95	230076	40.0	38.9	a
65 3,5-Dimethylphenol	107	5.705	5.709	-0.004	97	153726	20.0	20.5	
68 2,4-Dichlorophenol	162	5.790	5.795	-0.005	97	115037	20.0	19.8	
70 1,2,4-Trichlorobenzene	180	5.881	5.885	-0.004	97	130549	20.0	20.4	
72 Naphthalene	128	5.961	5.966	-0.005	100	405652	20.0	20.5	
73 4-Chloroaniline	127	5.999	6.003	-0.004	99	178322	20.0	20.0	
74 2,6-Dichlorophenol	162	6.015	6.019	-0.004	96	115530	20.0	20.1	
76 Hexachlorobutadiene	225	6.090	6.094	-0.004	98	68731	20.0	20.3	
80 Caprolactam	55	6.309	6.334	-0.025	96	68873	20.0	19.7	
83 4-Chloro-3-methylphenol	107	6.464	6.473	-0.009	97	134880	20.0	20.5	
87 2-Methylnaphthalene	142	6.645	6.649	-0.004	99	278054	20.0	20.4	
89 1-Methylnaphthalene	142	6.747	6.751	-0.004	100	268714	20.0	20.8	
90 Hexachlorocyclopentadiene	237	6.816	6.820	-0.004	99	80715	20.0	19.8	
91 1,2,4,5-Tetrachlorobenzene	216	6.816	6.826	-0.010	98	130447	20.0	20.5	
94 2,4,6-Trichlorophenol	196	6.923	6.927	-0.004	87	90540	20.0	20.3	
95 2,3-Dichlorobenzenamine	161	6.923	6.927	-0.004	89	141547	20.0	20.5	
96 2,4,5-Trichlorophenol	196	6.955	6.965	-0.010	98	96081	20.0	19.4	
100 1,1'-Biphenyl	154	7.105	7.109	-0.004	95	339231	20.0	20.4	
102 2-Chloronaphthalene	162	7.131	7.141	-0.010	100	266568	20.0	20.2	
105 2-Nitroaniline	65	7.217	7.226	-0.009	95	94630	20.0	19.7	
111 Dimethyl phthalate	163	7.393	7.403	-0.010	99	303642	20.0	20.1	
112 1,3-Dinitrobenzene	168	7.420	7.429	-0.009	86	52726	20.0	19.2	
113 2,6-Dinitrotoluene	165	7.452	7.461	-0.009	95	74487	20.0	19.7	
115 Acenaphthylene	152	7.553	7.558	-0.005	100	412211	20.0	20.3	
117 3-Nitroaniline	138	7.628	7.638	-0.010	97	84754	20.0	19.7	
119 Acenaphthene	153	7.730	7.734	-0.004	94	270751	20.0	20.7	
120 2,4-Dinitrophenol	184	7.730	7.739	-0.009	91	105343	40.0	39.7	
121 4-Nitrophenol	109	7.783	7.798	-0.015	97	96094	40.0	40.2	
124 2,4-Dinitrotoluene	165	7.863	7.873	-0.010	96	102236	20.0	19.8	
125 Dibenzofuran	168	7.901	7.905	-0.004	100	396625	20.0	20.1	
129 2,3,4,6-Tetrachlorophenol	232	8.018	8.028	-0.010	73	81664	20.0	19.9	
131 Hexadecane	57	8.120	8.124	-0.004	96	185381	20.0	20.3	
132 Diethyl phthalate	149	8.098	8.108	-0.010	100	310490	20.0	20.6	
134 4-Chlorophenyl phenyl ethe	204	8.232	8.236	-0.004	96	153875	20.0	20.0	
135 Fluorene	166	8.248	8.252	-0.004	99	322643	20.0	20.4	
138 4-Nitroaniline	138	8.242	8.257	-0.015	95	92435	20.0	20.1	
139 4,6-Dinitro-2-methylphenol	198	8.280	8.289	-0.009	95	125187	40.0	39.7	
140 Diphenylamine	169	8.344	8.354	-0.010	95	237151	17.0	17.2	
141 N-Nitrosodiphenylamine	169	8.344	8.354	-0.010	98	237151	20.0	20.1	
142 1,2-Diphenylhydrazine	77	8.392	8.396	-0.004	95	357270	20.2	20.4	
143 Azobenzene	77	8.392	8.396	-0.004	95	357270	20.0	20.2	
145 2,4,6 - Tribromophenol	330	8.488	8.498	-0.010	94	42893	20.0	19.5	
152 4-Bromophenyl phenyl ether	248	8.729	8.733	-0.004	97	88632	20.0	19.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.819	8.824	-0.005	97	88392	20.0	19.7	
155 Atrazine	200	8.867	8.877	-0.010	96	82508	20.0	21.2	
156 n-Octadecane	85	9.044	9.053	-0.009	96	88755	20.0	19.8	
157 Pentachlorophenol	266	9.001	9.011	-0.010	96	123102	40.0	39.9	
163 Phenanthrene	178	9.220	9.224	-0.004	100	478608	20.0	20.2	
164 Anthracene	178	9.268	9.278	-0.010	100	498901	20.0	20.3	
165 Carbazole	167	9.423	9.427	-0.004	100	473777	20.0	20.1	
166 Alachlor	188	9.562	9.566	-0.004	95	63881	20.0	19.9	
169 Di-n-butyl phthalate	149	9.770	9.775	-0.005	100	520912	20.0	20.1	
176 Fluoranthene	202	10.630	10.640	-0.010	100	542372	20.0	19.9	
180 Pyrene	202	10.978	10.987	-0.009	99	563476	20.0	20.4	
186 Famphur	218	11.998	12.013	-0.015	99	190367	20.0	19.0	
187 Butyl benzyl phthalate	149	12.126	12.136	-0.010	95	241745	20.0	19.7	
190 3,3'-Dichlorobenzidine	252	13.317	13.338	-0.021	99	195305	20.0	20.5	
192 Benzo[a]anthracene	228	13.371	13.386	-0.015	100	540339	20.0	19.7	
193 Bis(2-ethylhexyl) phthalat	149	13.542	13.551	-0.009	98	313673	20.0	19.3	
194 Chrysene	228	13.456	13.477	-0.021	100	512867	20.0	19.7	
197 Di-n-octyl phthalate	149	15.390	15.405	-0.015	100	559482	20.0	19.4	
198 Benzo[b]fluoranthene	252	16.293	16.329	-0.036	100	514800	20.0	19.7	
200 Benzo[k]fluoranthene	252	16.379	16.410	-0.031	100	510132	20.0	19.6	
201 Benzo[e]pyrene	252	17.094	17.131	-0.037	98	466358	20.0	19.5	
202 Benzo[a]pyrene	252	17.239	17.280	-0.041	100	501367	20.0	19.4	
208 Indeno[1,2,3-cd]pyrene	276	20.572	20.614	-0.042	74	440246	20.0	18.8	
209 Dibenz(a,h)anthracene	278	20.668	20.705	-0.037	73	444216	20.0	19.0	
210 Benzo[g,h,i]perylene	276	21.315	21.367	-0.052	100	470224	20.0	19.1	
S 219 Total Cresols	108				0			38.7	
S 220 Methyl Phenols,Total	108				0			38.7	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA020_00037 Amount Added: 200.00 Units: uL

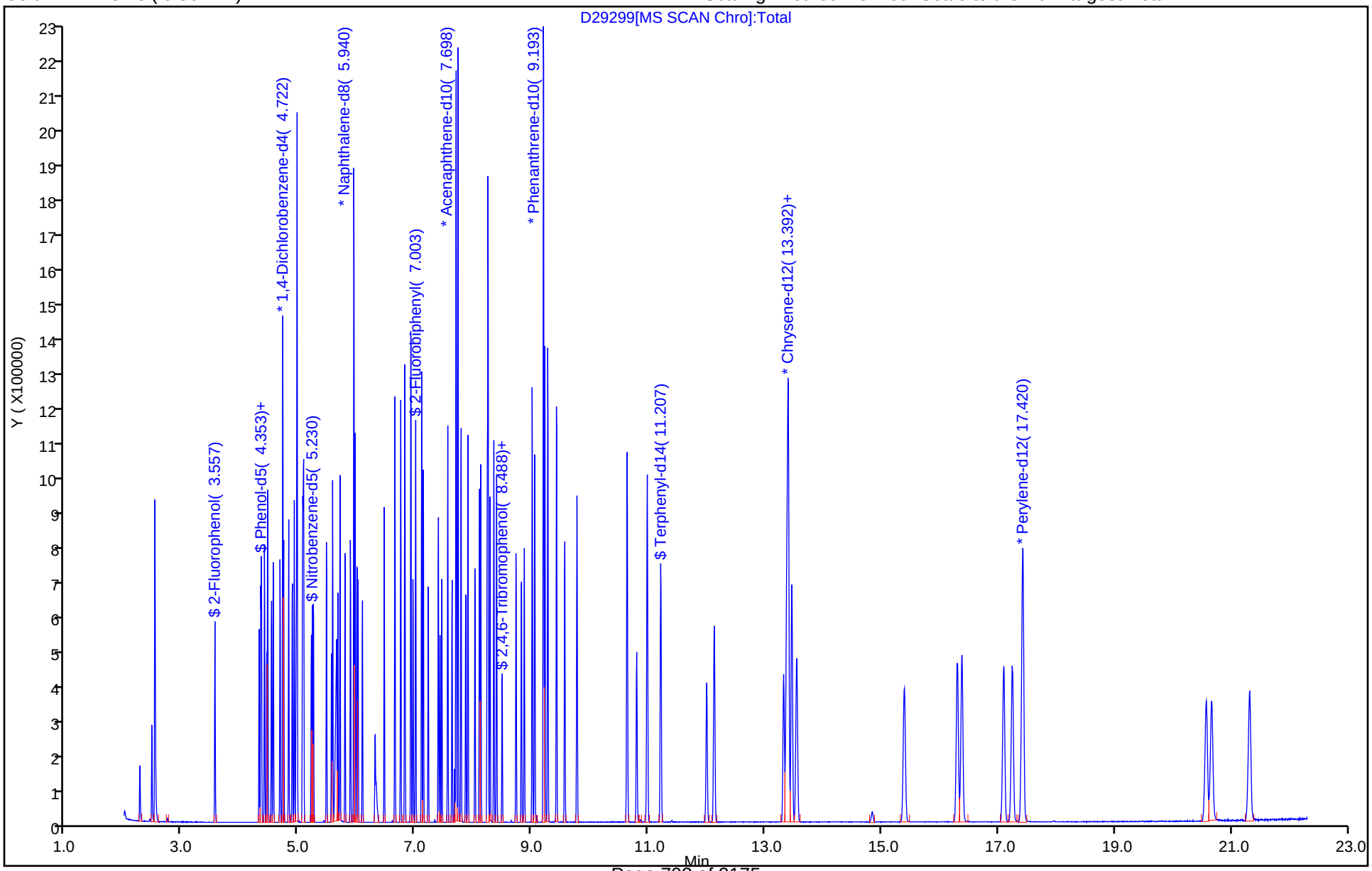
Report Date: 19-Sep-2018 09:58:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29299.D

Injection Date:	18-Sep-2018 14:21:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD020 HSL			Worklist Smp#:	6
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

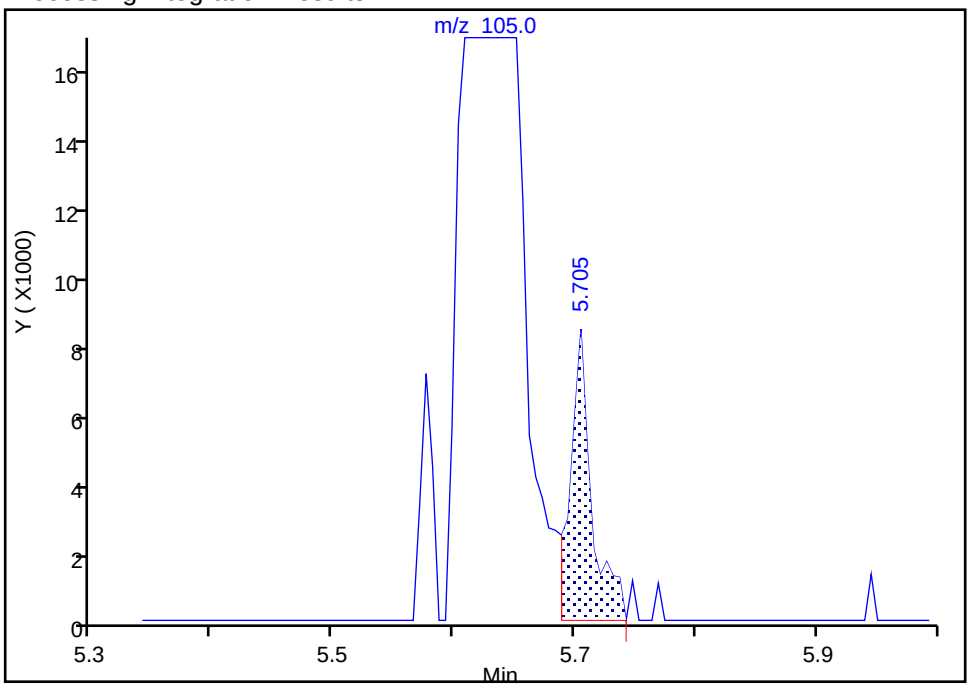
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29299.D
Injection Date: 18-Sep-2018 14:21:30 Instrument ID: SMS_D
Lims ID: STD020 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

64 Benzoic acid, CAS: 65-85-0

Signal: 1

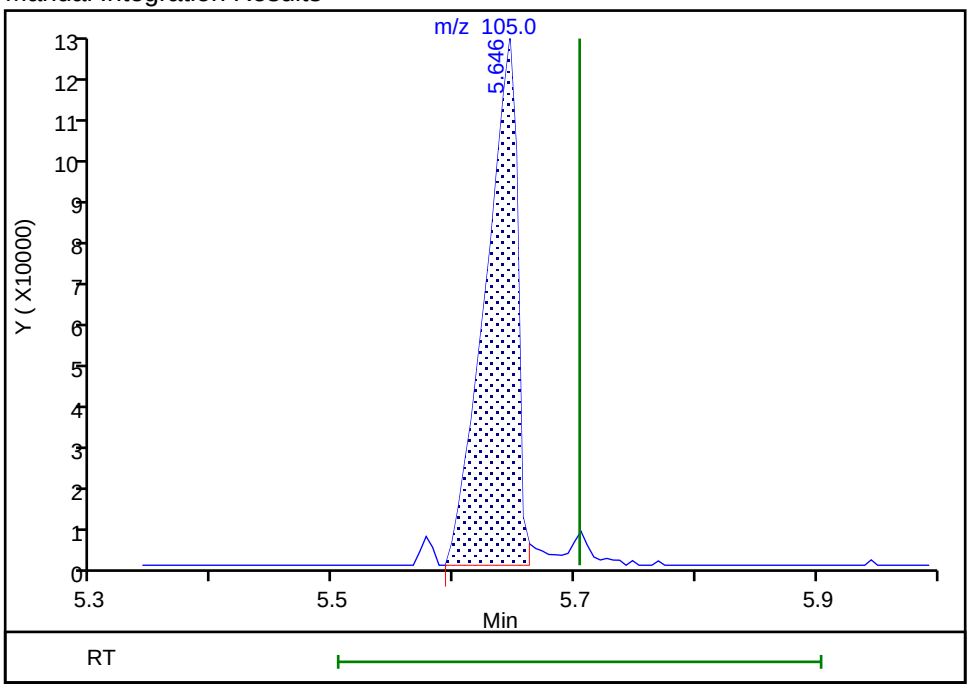
Processing Integration Results

RT: 5.70
Area: 9948
Amount: NaN
Amount Units: ug/ml



Manual Integration Results

RT: 5.65
Area: 230076
Amount: 38.933477
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 15:12:52
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 19-Sep-2018 09:58:13 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29300.D
Lims ID: STD050 HSL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Sep-2018 14:51:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD050 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:12 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 18-Sep-2018 15:59:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.724	4.726	-0.002	98	185286	40.0	40.0	
* 2 Naphthalene-d8	136	5.942	5.944	-0.002	100	773392	40.0	40.0	
* 3 Acenaphthene-d10	164	7.695	7.702	-0.007	98	449917	40.0	40.0	
* 4 Phenanthrene-d10	188	9.196	9.203	-0.007	100	896764	40.0	40.0	
* 5 Chrysene-d12	240	13.405	13.413	-0.008	84	870273	40.0	40.0	
* 6 Perylene-d12	264	17.423	17.435	-0.012	100	876393	40.0	40.0	
$ 7 2-Fluorophenol	112	3.560	3.562	-0.002	98	356662	50.0	50.8	
$ 8 Phenol-d5	99	4.345	4.347	-0.002	99	483176	50.0	50.9	
$ 9 Nitrobenzene-d5	82	5.232	5.234	-0.002	96	451689	50.0	49.6	
$ 11 2-Fluorobiphenyl	172	7.005	7.007	-0.002	98	854415	50.0	50.9	
$ 12 2,4,6-Tribromophenol	330	8.491	8.498	-0.007	95	122060	50.0	51.6	
$ 13 Terphenyl-d14	244	11.210	11.217	-0.007	99	1082100	50.0	51.1	
16 1,4-Dioxane	88	2.267	2.269	-0.002	98	162040	50.0	50.4	
17 N-Nitrosodimethylamine	74	2.475	2.477	-0.002	93	262208	50.0	50.0	
18 Pyridine	79	2.529	2.525	0.004	94	920619	100.0	102.9	
28 Phenol	94	4.361	4.363	-0.002	91	518967	50.0	51.3	
30 Aniline	93	4.409	4.411	-0.002	100	631108	50.0	50.7	
31 Alpha Methyl Styrene	118	4.463	4.464	-0.001	71	370726	50.0	50.5	
32 Bis(2-chloroethyl)ether	93	4.447	4.454	-0.007	95	381107	50.0	50.2	
35 n-Decane	43	4.559	4.561	-0.002	98	349272	50.0	50.5	
36 2-Chlorophenol	128	4.532	4.534	-0.002	98	374305	50.0	50.9	
37 1,3-Dichlorobenzene	146	4.676	4.678	-0.002	98	392106	50.0	51.1	
38 1,4-Dichlorobenzene	146	4.740	4.742	-0.002	98	400912	50.0	51.2	
39 Benzyl alcohol	108	4.826	4.828	-0.002	97	280649	50.0	51.3	
40 1,2-Dichlorobenzene	146	4.885	4.887	-0.002	98	377789	50.0	50.7	
41 2-Methylphenol	108	4.922	4.924	-0.002	76	382440	50.0	51.3	
43 2,2'-oxybis[1-chloropropan	45	4.954	4.956	-0.002	97	498939	50.0	51.0	
44 Indene	116	4.970	4.972	-0.002	99	1229591	100.0	103.6	
45 3-Methylphenol	108	5.066	5.068	-0.002	93	403915	50.0	51.5	
46 3 & 4 Methylphenol	108	5.066	5.068	-0.002	93	403915	50.0	51.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.066	5.068	-0.002	93	403915	50.0	51.5	
48 N-Nitrosodi-n-propylamine	70	5.077	5.079	-0.002	93	313044	50.0	51.4	
50 Acetophenone	105	5.082	5.084	-0.002	76	567253	50.0	52.0	
53 Hexachloroethane	117	5.210	5.212	-0.002	97	147431	50.0	50.2	
54 Nitrobenzene	77	5.248	5.255	-0.007	94	453393	50.0	49.8	
57 Isophorone	82	5.478	5.480	-0.002	98	825778	50.0	50.7	
59 2-Nitrophenol	139	5.558	5.565	-0.007	96	209289	50.0	50.7	
60 2,4-Dimethylphenol	107	5.579	5.581	-0.002	97	414751	50.0	51.0	
63 Bis(2-chloroethoxy)methane	93	5.670	5.672	-0.002	97	479424	50.0	50.6	
64 Benzoic acid	105	5.686	5.704	-0.018	96	697018	100.0	99.2	a
65 3,5-Dimethylphenol	107	5.707	5.709	-0.002	97	422086	50.0	51.5	
68 2,4-Dichlorophenol	162	5.793	5.795	-0.002	98	325131	50.0	51.3	
70 1,2,4-Trichlorobenzene	180	5.884	5.885	-0.001	97	354556	50.0	50.7	
72 Naphthalene	128	5.964	5.966	-0.002	100	1106481	50.0	51.1	
73 4-Chloroaniline	127	5.996	6.003	-0.007	99	497174	50.0	50.9	
74 2,6-Dichlorophenol	162	6.017	6.019	-0.002	97	320644	50.0	50.9	
76 Hexachlorobutadiene	225	6.087	6.094	-0.007	99	184539	50.0	49.9	
80 Caprolactam	55	6.322	6.334	-0.012	98	185622	50.0	48.5	M
83 4-Chloro-3-methylphenol	107	6.466	6.473	-0.007	97	363626	50.0	50.5	
87 2-Methylnaphthalene	142	6.648	6.649	-0.001	100	760563	50.0	51.1	
89 1-Methylnaphthalene	142	6.749	6.751	-0.002	99	724837	50.0	51.2	
90 Hexachlorocyclopentadiene	237	6.813	6.820	-0.007	99	227333	50.0	52.1	
91 1,2,4,5-Tetrachlorobenzene	216	6.818	6.826	-0.008	97	353747	50.0	50.9	
94 2,4,6-Trichlorophenol	196	6.925	6.927	-0.002	88	249671	50.0	52.3	
95 2,3-Dichlorobenzenamine	161	6.920	6.927	-0.007	88	379883	50.0	51.3	
96 2,4,5-Trichlorophenol	196	6.957	6.965	-0.008	98	270522	50.0	50.9	
100 1,1'-Biphenyl	154	7.107	7.109	-0.002	95	914731	50.0	51.2	
102 2-Chloronaphthalene	162	7.134	7.141	-0.007	99	723524	50.0	51.1	
105 2-Nitroaniline	65	7.219	7.226	-0.007	95	263656	50.0	51.1	
111 Dimethyl phthalate	163	7.395	7.403	-0.008	99	823515	50.0	50.7	
112 1,3-Dinitrobenzene	168	7.427	7.429	-0.002	88	153157	50.0	51.9	
113 2,6-Dinitrotoluene	165	7.454	7.461	-0.007	95	208718	50.0	51.3	
115 Acenaphthylene	152	7.556	7.558	-0.002	100	1131679	50.0	51.9	
117 3-Nitroaniline	138	7.630	7.638	-0.008	96	235370	50.0	51.0	
119 Acenaphthene	153	7.732	7.734	-0.002	94	709573	50.0	50.6	
120 2,4-Dinitrophenol	184	7.737	7.739	-0.002	94	298791	100.0	100.1	
121 4-Nitrophenol	109	7.791	7.798	-0.007	97	259622	100.0	101.2	
124 2,4-Dinitrotoluene	165	7.866	7.873	-0.007	96	286035	50.0	51.5	
125 Dibenzofuran	168	7.903	7.905	-0.002	100	1074883	50.0	50.9	
129 2,3,4,6-Tetrachlorophenol	232	8.026	8.028	-0.002	73	226925	50.0	51.5	
131 Hexadecane	57	8.122	8.124	-0.002	96	503223	50.0	51.3	
132 Diethyl phthalate	149	8.101	8.108	-0.007	100	833250	50.0	51.5	
134 4-Chlorophenyl phenyl ethe	204	8.234	8.236	-0.002	98	423050	50.0	51.2	
135 Fluorene	166	8.250	8.252	-0.002	99	860082	50.0	50.6	
138 4-Nitroaniline	138	8.250	8.257	-0.007	95	249126	50.0	50.6	
139 4,6-Dinitro-2-methylphenol	198	8.288	8.289	-0.001	95	352446	100.0	101.1	
140 Diphenylamine	169	8.346	8.354	-0.008	95	640834	42.5	43.2	
141 N-Nitrosodiphenylamine	169	8.346	8.354	-0.008	98	640834	50.0	50.9	
142 1,2-Diphenylhydrazine	77	8.394	8.396	-0.002	95	960634	50.5	51.2	
143 Azobenzene	77	8.394	8.396	-0.002	95	960634	50.0	50.6	
145 2,4,6 - Tribromophenol	330	8.491	8.498	-0.007	95	122060	50.0	51.6	
152 4-Bromophenyl phenyl ether	248	8.726	8.733	-0.007	98	248373	50.0	50.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.822	8.824	-0.002	98	242970	50.0	50.8	
155 Atrazine	200	8.870	8.877	-0.007	96	211444	50.0	50.9	
156 n-Octadecane	85	9.046	9.053	-0.007	97	248576	50.0	52.0	
157 Pentachlorophenol	266	9.003	9.011	-0.008	97	353556	100.0	105.9	
163 Phenanthrene	178	9.222	9.224	-0.002	100	1283600	50.0	50.8	
164 Anthracene	178	9.276	9.278	-0.002	100	1342878	50.0	51.2	
165 Carbazole	167	9.425	9.427	-0.002	100	1278889	50.0	50.9	
166 Alachlor	188	9.564	9.566	-0.002	96	173620	50.0	50.7	
169 Di-n-butyl phthalate	149	9.773	9.775	-0.002	100	1421985	50.0	51.4	
176 Fluoranthene	202	10.633	10.640	-0.007	100	1476083	50.0	50.8	
180 Pyrene	202	10.980	10.987	-0.007	99	1516548	50.0	51.1	
186 Famphur	218	12.000	12.013	-0.013	99	504393	50.0	49.3	
187 Butyl benzyl phthalate	149	12.129	12.136	-0.007	94	679430	50.0	51.4	
190 3,3'-Dichlorobenzidine	252	13.325	13.338	-0.013	99	551172	50.0	53.8	
192 Benzo[a]anthracene	228	13.379	13.386	-0.007	100	1493254	50.0	50.5	
193 Bis(2-ethylhexyl) phthalat	149	13.544	13.551	-0.007	99	889069	50.0	50.8	
194 Chrysene	228	13.464	13.477	-0.013	99	1423375	50.0	50.7	
197 Di-n-octyl phthalate	149	15.393	15.405	-0.012	100	1594353	50.0	51.2	
198 Benzo[b]fluoranthene	252	16.311	16.329	-0.018	100	1416120	50.0	49.9	
200 Benzo[k]fluoranthene	252	16.392	16.410	-0.018	100	1449721	50.0	51.2	
201 Benzo[e]pyrene	252	17.107	17.131	-0.024	98	1315465	50.0	50.7	
202 Benzo[a]pyrene	252	17.257	17.280	-0.023	100	1420588	50.0	50.7	
208 Indeno[1,2,3-cd]pyrene	276	20.590	20.614	-0.024	74	1280859	50.0	50.2	
209 Dibenz(a,h)anthracene	278	20.687	20.705	-0.018	72	1276921	50.0	50.2	
210 Benzo[g,h,i]perylene	276	21.344	21.367	-0.023	100	1348821	50.0	50.4	
S 219 Total Cresols	108				0			102.7	
S 220 Methyl Phenols,Total	108				0			102.7	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MS-HSLA050_00038 Amount Added: 200.00 Units: uL

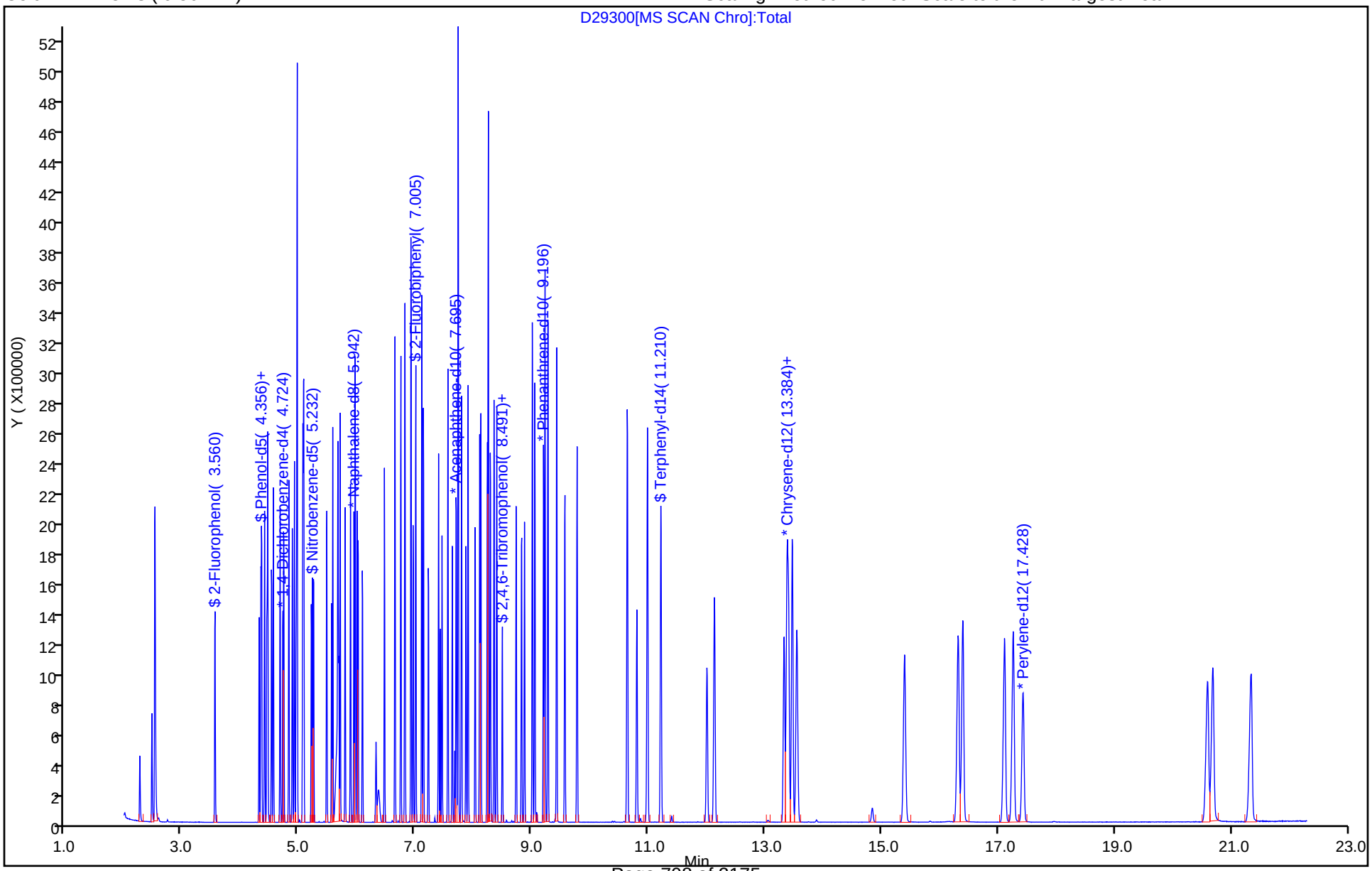
Report Date: 19-Sep-2018 09:58:13 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29300.D

Injection Date:	18-Sep-2018 14:51:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD050 HSL			Worklist Smp#:	7
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

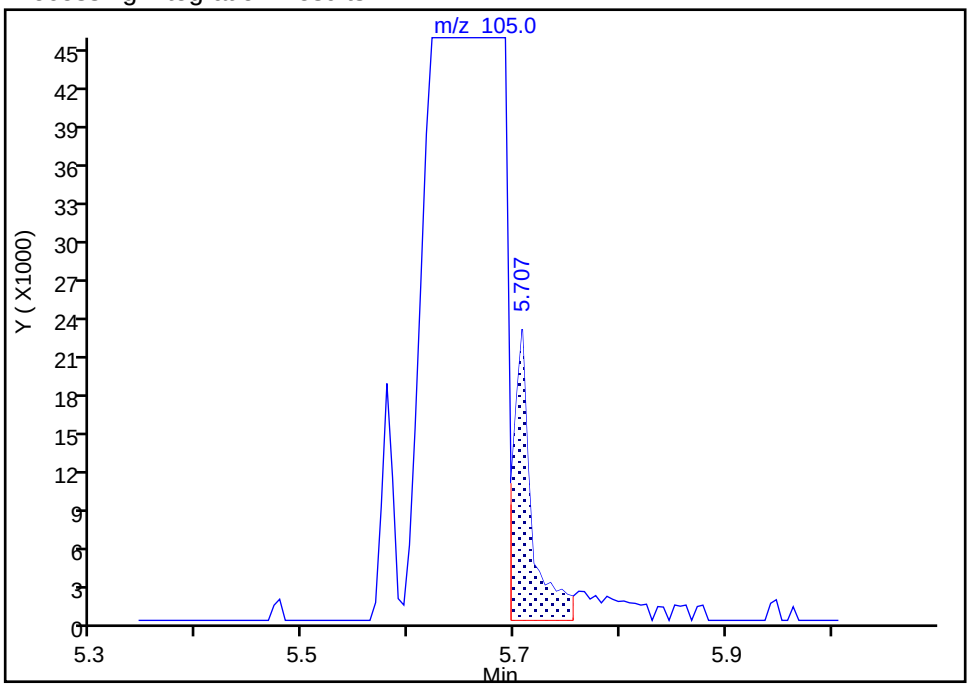
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29300.D
Injection Date: 18-Sep-2018 14:51:30 Instrument ID: SMS_D
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

64 Benzoic acid, CAS: 65-85-0

Signal: 1

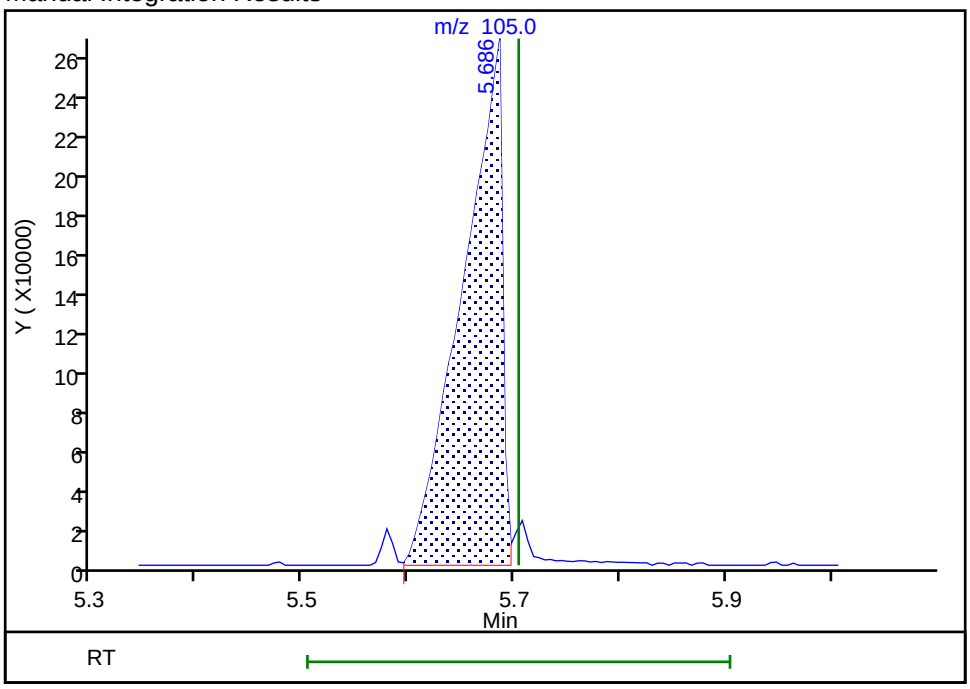
Processing Integration Results

RT: 5.71
Area: 27503
Amount: -2.562813
Amount Units: ug/ml



Manual Integration Results

RT: 5.69
Area: 697018
Amount: 99.161975
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 15:15:28
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

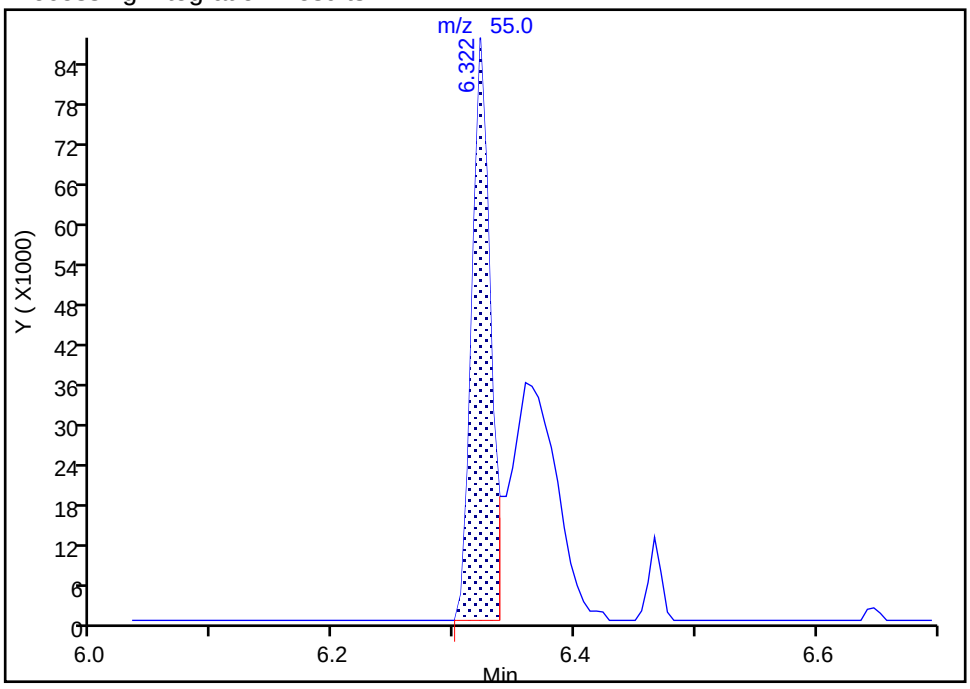
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29300.D
Injection Date: 18-Sep-2018 14:51:30 Instrument ID: SMS_D
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

80 Caprolactam, CAS: 105-60-2

Signal: 1

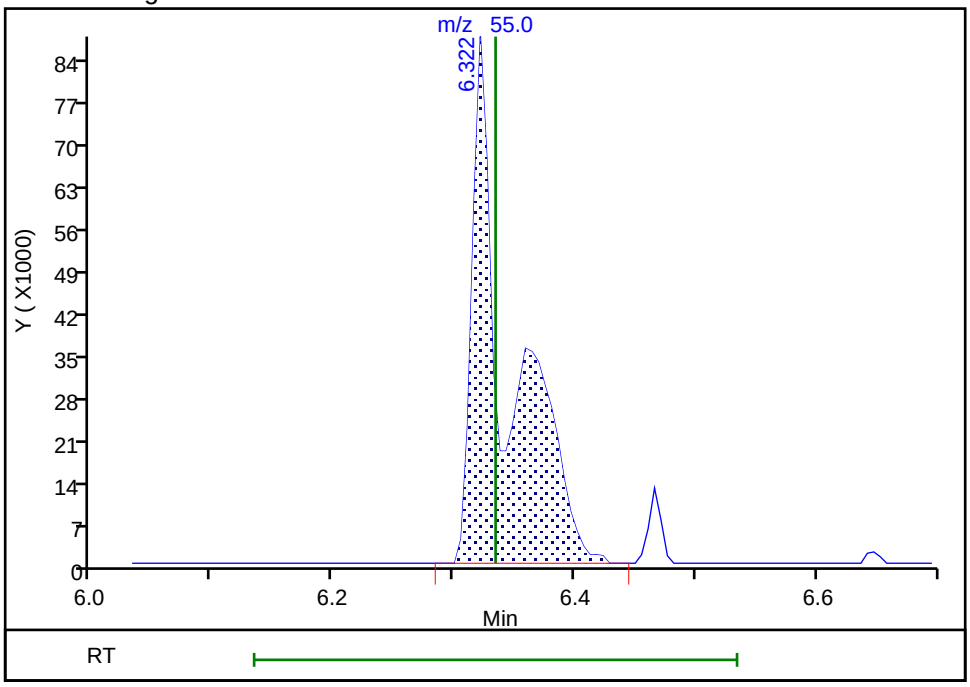
Processing Integration Results

RT: 6.32
Area: 93701
Amount: 27.449372
Amount Units: ug/ml



Manual Integration Results

RT: 6.32
Area: 185622
Amount: 48.486641
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 15:15:44
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29301.D
Lims ID: STD120 HSL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Sep-2018 15:21:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD120 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:14 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 18-Sep-2018 16:00:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.724	4.726	-0.002	98	173319	40.0	40.0	
* 2 Naphthalene-d8	136	5.948	5.944	0.004	100	723725	40.0	40.0	
* 3 Acenaphthene-d10	164	7.700	7.702	-0.002	98	420548	40.0	40.0	
* 4 Phenanthrene-d10	188	9.201	9.203	-0.002	99	838259	40.0	40.0	
* 5 Chrysene-d12	240	13.410	13.413	-0.003	97	807932	40.0	40.0	
* 6 Perylene-d12	264	17.438	17.435	0.003	100	808071	40.0	40.0	
$ 7 2-Fluorophenol	112	3.560	3.562	-0.002	98	790750	120.0	120.3	
$ 8 Phenol-d5	99	4.350	4.347	0.003	99	1058199	120.0	119.1	
$ 9 Nitrobenzene-d5	82	5.237	5.234	0.003	96	980104	120.0	115.1	
$ 11 2-Fluorobiphenyl	172	7.005	7.007	-0.002	98	1833997	120.0	116.9	
$ 12 2,4,6-Tribromophenol	330	8.496	8.498	-0.002	98	274232	120.0	124.1	
$ 13 Terphenyl-d14	244	11.215	11.217	-0.002	99	2403670	120.0	122.4	
16 1,4-Dioxane	88	2.267	2.269	-0.002	98	374125	120.0	124.4	
17 N-Nitrosodimethylamine	74	2.480	2.477	0.003	92	587788	120.0	119.9	
18 Pyridine	79	2.529	2.525	0.004	94	1961292	240.0	234.2	
28 Phenol	94	4.366	4.363	0.003	92	1135035	120.0	119.9	
30 Aniline	93	4.414	4.411	0.003	100	1379056	120.0	118.5	
31 Alpha Methyl Styrene	118	4.468	4.464	0.004	71	811396	120.0	118.1	
32 Bis(2-chloroethyl)ether	93	4.452	4.454	-0.002	96	841670	120.0	118.6	
35 n-Decane	43	4.559	4.561	-0.002	98	772946	120.0	119.5	
36 2-Chlorophenol	128	4.532	4.534	-0.002	98	824552	120.0	119.9	
37 1,3-Dichlorobenzene	146	4.676	4.678	-0.002	97	851200	120.0	118.6	
38 1,4-Dichlorobenzene	146	4.740	4.742	-0.002	98	866906	120.0	118.4	
39 Benzyl alcohol	108	4.831	4.828	0.003	97	619153	120.0	121.1	
40 1,2-Dichlorobenzene	146	4.890	4.887	0.003	98	828931	120.0	119.0	
41 2-Methylphenol	108	4.927	4.924	0.003	76	837865	120.0	120.1	
43 2,2'-oxybis[1-chloropropan	45	4.954	4.956	-0.002	98	1103507	120.0	120.7	
44 Indene	116	4.970	4.972	-0.002	99	2576451	240.0	232.0	
45 3-Methylphenol	108	5.071	5.068	0.003	93	880180	120.0	119.9	
46 3 & 4 Methylphenol	108	5.071	5.068	0.003	93	880180	120.0	119.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.071	5.068	0.003	93	880180	120.0	119.9	
48 N-Nitrosodi-n-propylamine	70	5.082	5.079	0.003	95	680870	120.0	119.5	
50 Acetophenone	105	5.087	5.084	0.003	76	1208295	120.0	118.5	
53 Hexachloroethane	117	5.210	5.212	-0.002	97	330857	120.0	120.5	
54 Nitrobenzene	77	5.253	5.255	-0.002	94	1005877	120.0	118.0	
57 Isophorone	82	5.483	5.480	0.003	98	1818826	120.0	119.4	
59 2-Nitrophenol	139	5.563	5.565	-0.002	96	462887	120.0	119.8	
60 2,4-Dimethylphenol	107	5.584	5.581	0.003	98	896467	120.0	117.9	
63 Bis(2-chloroethoxy)methane	93	5.670	5.672	-0.002	96	1048352	120.0	118.2	
64 Benzoic acid	105	5.728	5.704	0.024	96	1622653	240.0	239.3	
65 3,5-Dimethylphenol	107	5.712	5.709	0.003	96	907368	120.0	118.2	
68 2,4-Dichlorophenol	162	5.798	5.795	0.003	98	706087	120.0	119.1	
70 1,2,4-Trichlorobenzene	180	5.889	5.885	0.004	98	771200	120.0	117.9	
72 Naphthalene	128	5.969	5.966	0.003	100	2359524	120.0	116.4	
73 4-Chloroaniline	127	6.001	6.003	-0.002	99	1074644	120.0	117.7	
74 2,6-Dichlorophenol	162	6.017	6.019	-0.002	97	700232	120.0	118.8	
76 Hexachlorobutadiene	225	6.092	6.094	-0.002	99	416715	120.0	120.3	
80 Caprolactam	55	6.348	6.334	0.014	96	439552	120.0	122.7	M
83 4-Chloro-3-methylphenol	107	6.476	6.473	0.003	98	800848	120.0	118.8	
87 2-Methylnaphthalene	142	6.647	6.649	-0.002	100	1626290	120.0	116.7	
89 1-Methylnaphthalene	142	6.749	6.751	-0.002	100	1550917	120.0	117.2	
90 Hexachlorocyclopentadiene	237	6.818	6.820	-0.002	98	499015	120.0	122.3	
91 1,2,4,5-Tetrachlorobenzene	216	6.824	6.826	-0.002	97	760415	120.0	116.9	
94 2,4,6-Trichlorophenol	196	6.925	6.927	-0.002	89	529843	120.0	118.6	
95 2,3-Dichlorobenzenamine	161	6.925	6.927	-0.002	87	811670	120.0	117.3	
96 2,4,5-Trichlorophenol	196	6.963	6.965	-0.003	99	599883	120.0	120.8	
100 1,1'-Biphenyl	154	7.112	7.109	0.003	95	1940291	120.0	116.3	
102 2-Chloronaphthalene	162	7.139	7.141	-0.002	99	1554254	120.0	117.5	
105 2-Nitroaniline	65	7.224	7.226	-0.002	95	587126	120.0	121.8	
111 Dimethyl phthalate	163	7.406	7.403	0.003	99	1770755	120.0	116.6	
112 1,3-Dinitrobenzene	168	7.433	7.429	0.004	87	344999	120.0	125.1	
113 2,6-Dinitrotoluene	165	7.459	7.461	-0.002	96	461857	120.0	121.6	
115 Acenaphthylene	152	7.561	7.558	0.003	100	2402985	120.0	118.0	
117 3-Nitroaniline	138	7.641	7.638	0.003	96	523016	120.0	121.3	
119 Acenaphthene	153	7.732	7.734	-0.002	98	1500146	120.0	114.5	
120 2,4-Dinitrophenol	184	7.742	7.739	0.003	94	686739	240.0	241.8	
121 4-Nitrophenol	109	7.807	7.798	0.009	97	573446	240.0	239.2	
124 2,4-Dinitrotoluene	165	7.876	7.873	0.003	97	631257	120.0	121.6	
125 Dibenzofuran	168	7.908	7.905	0.003	100	2313661	120.0	117.1	
129 2,3,4,6-Tetrachlorophenol	232	8.026	8.028	-0.002	72	501287	120.0	121.8	
131 Hexadecane	57	8.122	8.124	-0.002	96	1104375	120.0	120.3	
132 Diethyl phthalate	149	8.106	8.108	-0.002	100	1793912	120.0	118.6	
134 4-Chlorophenyl phenyl ethe	204	8.234	8.236	-0.002	98	933895	120.0	120.9	
135 Fluorene	166	8.250	8.252	-0.002	100	1837908	120.0	115.7	
138 4-Nitroaniline	138	8.266	8.257	0.009	96	550478	120.0	119.5	
139 4,6-Dinitro-2-methylphenol	198	8.293	8.289	0.004	95	800538	240.0	242.4	
140 Diphenylamine	169	8.351	8.354	-0.003	95	1389362	102.0	100.3	
141 N-Nitrosodiphenylamine	169	8.351	8.354	-0.003	98	1389362	120.0	118.1	
142 1,2-Diphenylhydrazine	77	8.400	8.396	0.004	96	2119469	121.3	120.8	
143 Azobenzene	77	8.400	8.396	0.004	96	2119469	120.0	119.5	
145 2,4,6 - Tribromophenol	330	8.496	8.498	-0.002	98	274232	120.0	124.1	
152 4-Bromophenyl phenyl ether	248	8.731	8.733	-0.002	98	555887	120.0	121.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.822	8.824	-0.002	97	537185	120.0	120.2	
155 Atrazine	200	8.875	8.877	-0.002	96	354950	120.0	91.5	
156 n-Octadecane	85	9.051	9.053	-0.002	96	543961	120.0	121.8	
157 Pentachlorophenol	266	9.014	9.011	0.003	98	756550	240.0	241.3	
163 Phenanthrene	178	9.228	9.224	0.004	99	2753124	120.0	116.6	
164 Anthracene	178	9.276	9.278	-0.002	100	2861281	120.0	116.8	
165 Carbazole	167	9.431	9.427	0.004	100	2719694	120.0	115.8	
166 Alachlor	188	9.564	9.566	-0.002	96	387928	120.0	121.2	
169 Di-n-butyl phthalate	149	9.778	9.775	0.003	100	3115262	120.0	120.4	
176 Fluoranthene	202	10.638	10.640	-0.002	100	3219560	120.0	118.5	
180 Pyrene	202	10.990	10.987	0.003	99	3319220	120.0	120.4	
186 Famphur	218	12.011	12.013	-0.002	99	911158	120.0	120.5	
187 Butyl benzyl phthalate	149	12.139	12.136	0.003	94	1511179	120.0	123.1	
190 3,3'-Dichlorobenzidine	252	13.341	13.338	0.003	99	1117265	120.0	117.4	
192 Benzo[a]anthracene	228	13.389	13.386	0.003	100	3288484	120.0	119.7	
193 Bis(2-ethylhexyl) phthalat	149	13.549	13.551	-0.002	99	2029277	120.0	124.9	
194 Chrysene	228	13.480	13.477	0.003	100	3146399	120.0	120.7	
197 Di-n-octyl phthalate	149	15.403	15.405	-0.002	100	3615524	120.0	125.0	
198 Benzo[b]fluoranthene	252	16.333	16.329	0.004	100	3185265	120.0	121.8	
200 Benzo[k]fluoranthene	252	16.418	16.410	0.008	100	3190374	120.0	122.1	
201 Benzo[e]pyrene	252	17.134	17.131	0.003	98	2905199	120.0	121.4	
202 Benzo[a]pyrene	252	17.289	17.280	0.009	100	3185098	120.0	123.2	
208 Indeno[1,2,3-cd]pyrene	276	20.622	20.614	0.008	74	2902225	120.0	123.4	
209 Dibenz(a,h)anthracene	278	20.718	20.705	0.013	75	2903775	120.0	123.9	
210 Benzo[g,h,i]perylene	276	21.376	21.367	0.009	100	2992425	120.0	121.2	
S 219 Total Cresols	108				0			239.9	
S 220 Methyl Phenols,Total	108				0			239.9	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA120_00037 Amount Added: 200.00 Units: uL

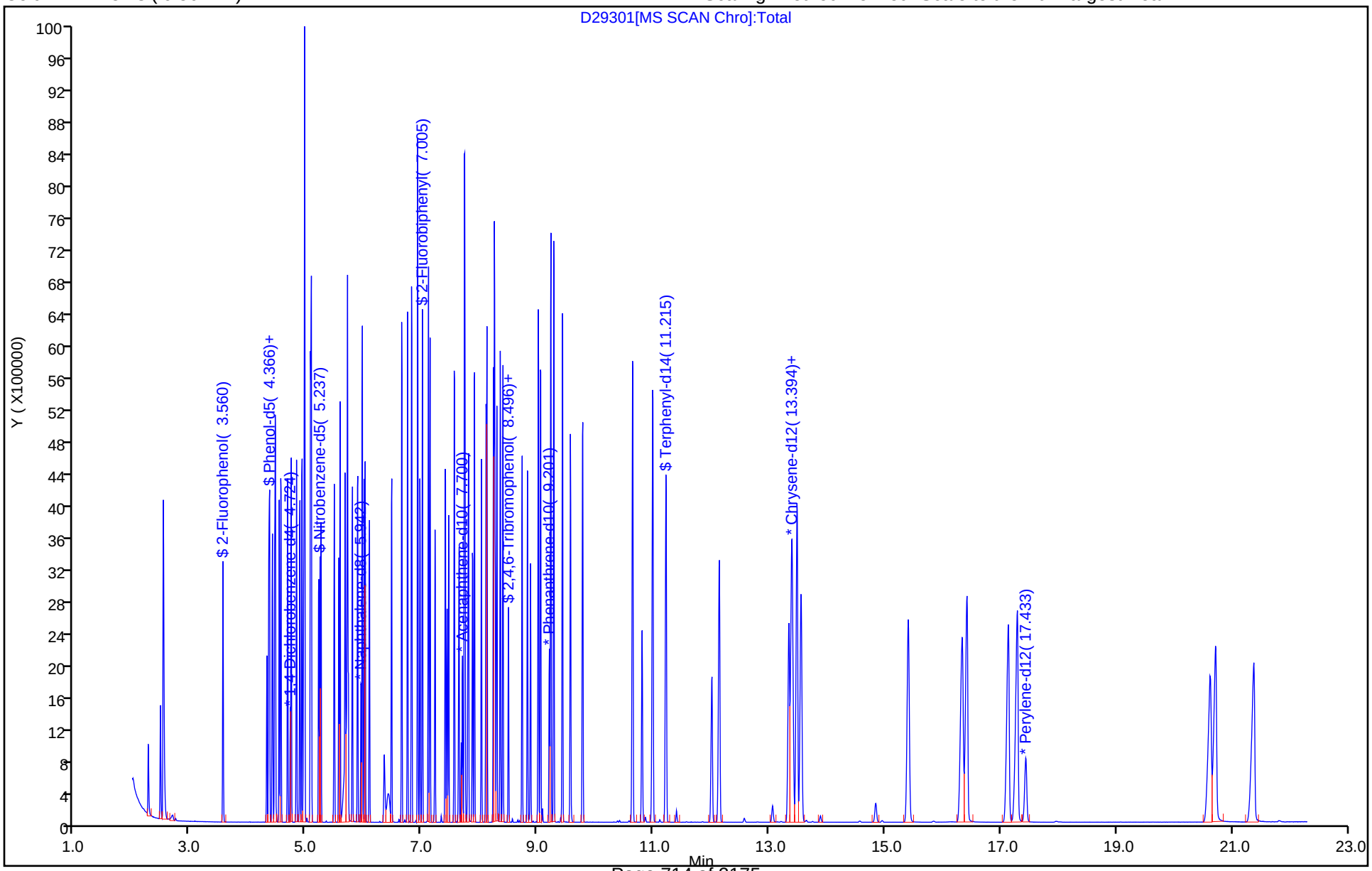
Report Date: 19-Sep-2018 09:58:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29301.D

Injection Date:	18-Sep-2018 15:21:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD120 HSL			Worklist Smp#:	8
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

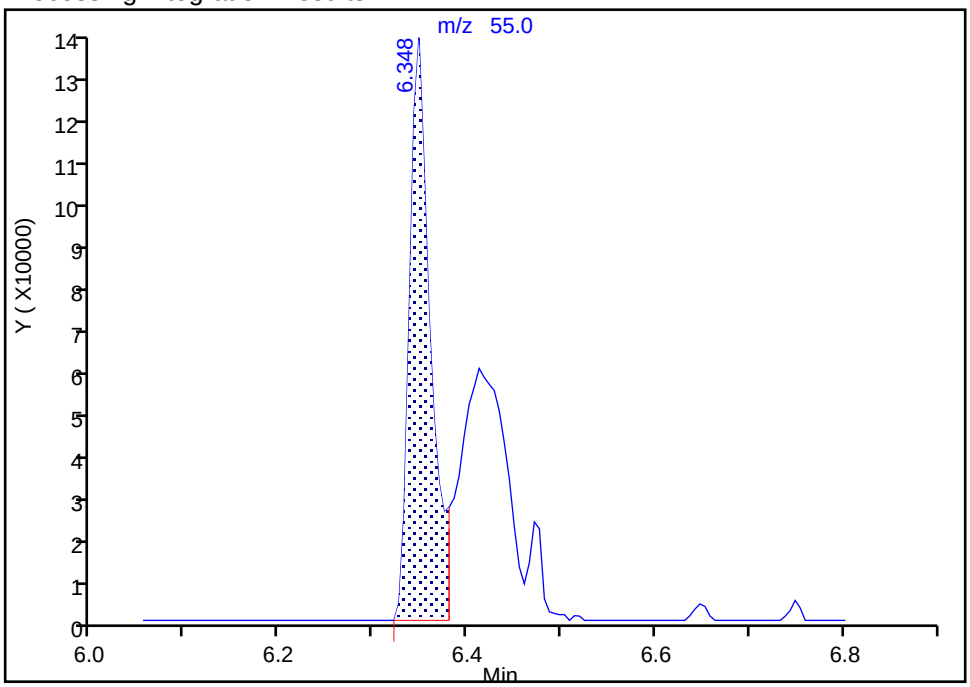
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29301.D
Injection Date: 18-Sep-2018 15:21:30 Instrument ID: SMS_D
Lims ID: STD120 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

80 Caprolactam, CAS: 105-60-2

Signal: 1

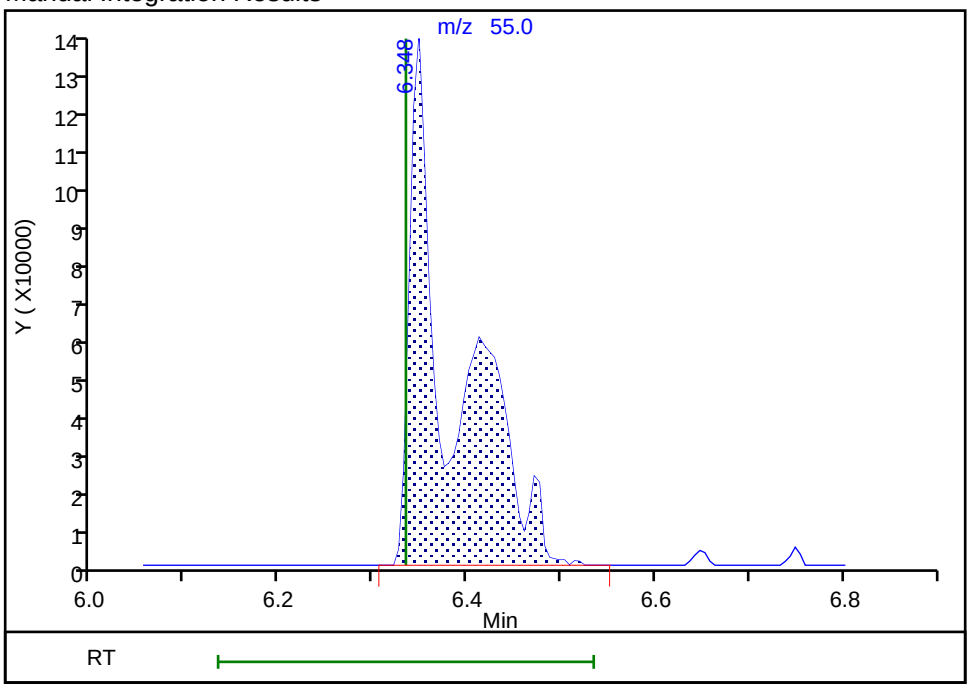
Processing Integration Results

RT: 6.35
Area: 218322
Amount: 67.136148
Amount Units: ug/ml



Manual Integration Results

RT: 6.35
Area: 439552
Amount: 122.6956
Amount Units: ug/ml



Reviewer: kiekeld, 18-Sep-2018 15:59:36
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29302.D
Lims ID: STD160 HSL
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-Sep-2018 15:51:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD160 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:15 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 19-Sep-2018 09:23:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.724	4.726	-0.002	98	178763	40.0	40.0	
* 2 Naphthalene-d8	136	5.947	5.944	0.003	99	749699	40.0	40.0	
* 3 Acenaphthene-d10	164	7.699	7.702	-0.003	98	439447	40.0	40.0	
* 4 Phenanthrene-d10	188	9.201	9.203	-0.002	99	873464	40.0	40.0	
* 5 Chrysene-d12	240	13.421	13.413	0.008	92	831358	40.0	40.0	
* 6 Perylene-d12	264	17.438	17.435	0.003	100	811810	40.0	40.0	
$ 7 2-Fluorophenol	112	3.565	3.562	0.003	98	1075335	160.0	158.7	
$ 8 Phenol-d5	99	4.355	4.347	0.008	98	1449737	160.0	158.2	
$ 9 Nitrobenzene-d5	82	5.237	5.234	0.003	96	1358947	160.0	154.1	
$ 11 2-Fluorobiphenyl	172	7.010	7.007	0.003	98	2465083	160.0	150.4	
$ 12 2,4,6-Tribromophenol	330	8.501	8.498	0.003	96	374198	160.0	162.0	
$ 13 Terphenyl-d14	244	11.220	11.217	0.003	99	3253913	160.0	161.0	
16 1,4-Dioxane	88	2.272	2.269	0.003	98	491029	160.0	158.3	
17 N-Nitrosodimethylamine	74	2.480	2.477	0.003	92	806631	160.0	159.6	
18 Pyridine	79	2.534	2.525	0.009	94	2686127	320.0	311.0	
28 Phenol	94	4.371	4.363	0.008	91	1546933	160.0	158.4	
30 Aniline	93	4.414	4.411	0.003	100	1895796	160.0	158.0	
31 Alpha Methyl Styrene	118	4.467	4.464	0.003	72	1097774	160.0	155.0	
32 Bis(2-chloroethyl)ether	93	4.457	4.454	0.003	95	1159056	160.0	158.4	
35 n-Decane	43	4.564	4.561	0.003	98	1036215	160.0	155.3	
36 2-Chlorophenol	128	4.537	4.534	0.003	97	1119132	160.0	157.7	
37 1,3-Dichlorobenzene	146	4.681	4.678	0.003	97	1142951	160.0	154.3	
38 1,4-Dichlorobenzene	146	4.740	4.742	-0.002	97	1163821	160.0	154.1	
39 Benzyl alcohol	108	4.836	4.828	0.008	97	852085	160.0	161.5	
40 1,2-Dichlorobenzene	146	4.889	4.887	0.002	98	1118823	160.0	155.7	
41 2-Methylphenol	108	4.927	4.924	0.003	76	1143429	160.0	158.8	
43 2,2'-oxybis[1-chloropropan	45	4.959	4.956	0.003	97	1511342	160.0	160.3	
44 Indene	116	4.975	4.972	0.003	99	3360749	320.0	293.4	
45 3-Methylphenol	108	5.076	5.068	0.008	95	1202033	160.0	158.7	
46 3 & 4 Methylphenol	108	5.076	5.068	0.008	95	1202033	160.0	158.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.076	5.068	0.008	95	1202033	160.0	158.7	
48 N-Nitrosodi-n-propylamine	70	5.087	5.079	0.008	93	918078	160.0	156.2	
50 Acetophenone	105	5.092	5.084	0.008	75	1623749	160.0	154.4	
53 Hexachloroethane	117	5.215	5.212	0.003	98	447050	160.0	157.8	
54 Nitrobenzene	77	5.258	5.255	0.003	94	1366869	160.0	154.7	
57 Isophorone	82	5.488	5.480	0.008	98	2482763	160.0	157.3	
59 2-Nitrophenol	139	5.563	5.565	-0.002	95	641149	160.0	160.2	
60 2,4-Dimethylphenol	107	5.589	5.581	0.008	98	1219915	160.0	154.8	
63 Bis(2-chloroethoxy)methane	93	5.675	5.672	0.003	94	1431938	160.0	155.8	
64 Benzoic acid	105	5.750	5.704	0.046	96	2266057	320.0	321.0	
65 3,5-Dimethylphenol	107	5.717	5.709	0.008	97	1234067	160.0	155.2	
68 2,4-Dichlorophenol	162	5.798	5.795	0.003	98	971529	160.0	158.2	
70 1,2,4-Trichlorobenzene	180	5.888	5.885	0.003	98	1049699	160.0	154.9	
72 Naphthalene	128	5.969	5.966	0.003	100	3156076	160.0	150.4	
73 4-Chloroaniline	127	6.006	6.003	0.003	99	1462001	160.0	154.5	
74 2,6-Dichlorophenol	162	6.022	6.019	0.003	97	955103	160.0	156.5	
76 Hexachlorobutadiene	225	6.091	6.094	-0.003	99	565183	160.0	157.6	
80 Caprolactam	55	6.364	6.334	0.030	97	606766	160.0	163.5	M
83 4-Chloro-3-methylphenol	107	6.476	6.473	0.003	97	1082298	160.0	155.0	
87 2-Methylnaphthalene	142	6.652	6.649	0.003	100	2186387	160.0	151.4	
89 1-Methylnaphthalene	142	6.754	6.751	0.003	100	2057803	160.0	150.1	
90 Hexachlorocyclopentadiene	237	6.818	6.820	-0.002	98	678145	160.0	159.0	
91 1,2,4,5-Tetrachlorobenzene	216	6.823	6.826	-0.003	97	1016299	160.0	150.9	
94 2,4,6-Trichlorophenol	196	6.930	6.927	0.003	92	697052	160.0	149.4	
95 2,3-Dichlorobenzenamine	161	6.925	6.927	-0.002	89	1076384	160.0	148.9	
96 2,4,5-Trichlorophenol	196	6.968	6.965	0.003	99	810978	160.0	156.3	
100 1,1'-Biphenyl	154	7.112	7.109	0.003	96	2574260	160.0	147.6	
102 2-Chloronaphthalene	162	7.144	7.141	0.003	99	2098310	160.0	151.8	
105 2-Nitroaniline	65	7.229	7.226	0.003	95	796684	160.0	158.2	
111 Dimethyl phthalate	163	7.411	7.403	0.008	99	2450601	160.0	154.4	
112 1,3-Dinitrobenzene	168	7.438	7.429	0.009	88	483266	160.0	167.7	
113 2,6-Dinitrotoluene	165	7.464	7.461	0.003	94	631740	160.0	159.1	
115 Acenaphthylene	152	7.561	7.558	0.003	99	3207332	160.0	150.7	
117 3-Nitroaniline	138	7.646	7.638	0.008	96	713713	160.0	158.4	
119 Acenaphthene	153	7.737	7.734	0.003	98	2006995	160.0	146.6	
120 2,4-Dinitrophenol	184	7.747	7.739	0.008	95	944432	320.0	317.3	
121 4-Nitrophenol	109	7.812	7.798	0.014	96	783452	320.0	312.7	
124 2,4-Dinitrotoluene	165	7.881	7.873	0.008	97	853790	160.0	157.4	
125 Dibenzofuran	168	7.908	7.905	0.003	99	3101745	160.0	150.3	
129 2,3,4,6-Tetrachlorophenol	232	8.031	8.028	0.003	72	674895	160.0	156.9	
131 Hexadecane	57	8.121	8.124	-0.003	96	1479524	160.0	154.3	
132 Diethyl phthalate	149	8.111	8.108	0.003	100	2364931	160.0	149.6	
134 4-Chlorophenyl phenyl ethe	204	8.239	8.236	0.003	98	1252733	160.0	155.2	
135 Fluorene	166	8.255	8.252	0.003	99	2466152	160.0	148.5	
138 4-Nitroaniline	138	8.276	8.257	0.019	96	753258	160.0	156.5	
139 4,6-Dinitro-2-methylphenol	198	8.303	8.289	0.014	97	1086291	320.0	315.0	
140 Diphenylamine	169	8.357	8.354	0.002	95	1866584	136.0	128.9	
141 N-Nitrosodiphenylamine	169	8.357	8.354	0.002	98	1866584	160.0	152.3	
142 1,2-Diphenylhydrazine	77	8.399	8.396	0.003	96	2833465	161.8	154.6	
143 Azobenzene	77	8.399	8.396	0.003	96	2833465	160.0	152.9	
145 2,4,6 - Tribromophenol	330	8.501	8.498	0.003	96	374198	160.0	162.0	
152 4-Bromophenyl phenyl ether	248	8.736	8.733	0.003	97	760558	160.0	159.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.827	8.824	0.003	98	736908	160.0	158.2	
155 Atrazine	200	8.880	8.877	0.003	97	425593	160.0	105.3	
156 n-Octadecane	85	9.051	9.053	-0.002	96	748161	160.0	160.8	
157 Pentachlorophenol	266	9.014	9.011	0.003	98	1010471	320.0	309.1	
163 Phenanthrene	178	9.227	9.224	0.003	99	3653492	160.0	148.5	
164 Anthracene	178	9.281	9.278	0.003	100	3812692	160.0	149.3	
165 Carbazole	167	9.430	9.427	0.003	100	3638496	160.0	148.6	
166 Alachlor	188	9.569	9.566	0.003	96	522061	160.0	156.5	
169 Di-n-butyl phthalate	149	9.778	9.775	0.003	100	4152460	160.0	154.0	
176 Fluoranthene	202	10.643	10.640	0.003	100	4313013	160.0	152.3	
180 Pyrene	202	10.996	10.987	0.009	99	4427936	160.0	156.1	
186 Famphur	218	12.016	12.013	0.003	99	1056617	160.0	158.8	
187 Butyl benzyl phthalate	149	12.139	12.136	0.003	94	2046119	160.0	162.0	
190 3,3'-Dichlorobenzidine	252	13.346	13.338	0.008	99	1444422	160.0	147.5	
192 Benzo[a]anthracene	228	13.399	13.386	0.013	100	4443046	160.0	157.2	
193 Bis(2-ethylhexyl) phthalat	149	13.554	13.551	0.003	99	2783763	160.0	166.4	
194 Chrysene	228	13.490	13.477	0.013	99	4203147	160.0	156.8	
197 Di-n-octyl phthalate	149	15.408	15.405	0.003	100	4876489	160.0	163.9	
198 Benzo[b]fluoranthene	252	16.348	16.329	0.019	100	4287770	160.0	163.1	
200 Benzo[k]fluoranthene	252	16.434	16.410	0.024	99	4232751	160.0	161.3	
201 Benzo[e]pyrene	252	17.144	17.131	0.013	98	3853046	160.0	160.3	
202 Benzo[a]pyrene	252	17.299	17.280	0.019	100	4192134	160.0	161.4	
208 Indeno[1,2,3-cd]pyrene	276	20.633	20.614	0.019	74	3855232	160.0	163.2	M
209 Dibenz(a,h)anthracene	278	20.729	20.705	0.024	73	3849064	160.0	163.5	
210 Benzo[g,h,i]perylene	276	21.391	21.367	0.024	100	3937431	160.0	158.7	
S 219 Total Cresols	108				0			317.6	
S 220 Methyl Phenols,Total	108				0			317.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA160_00037 Amount Added: 200.00 Units: uL

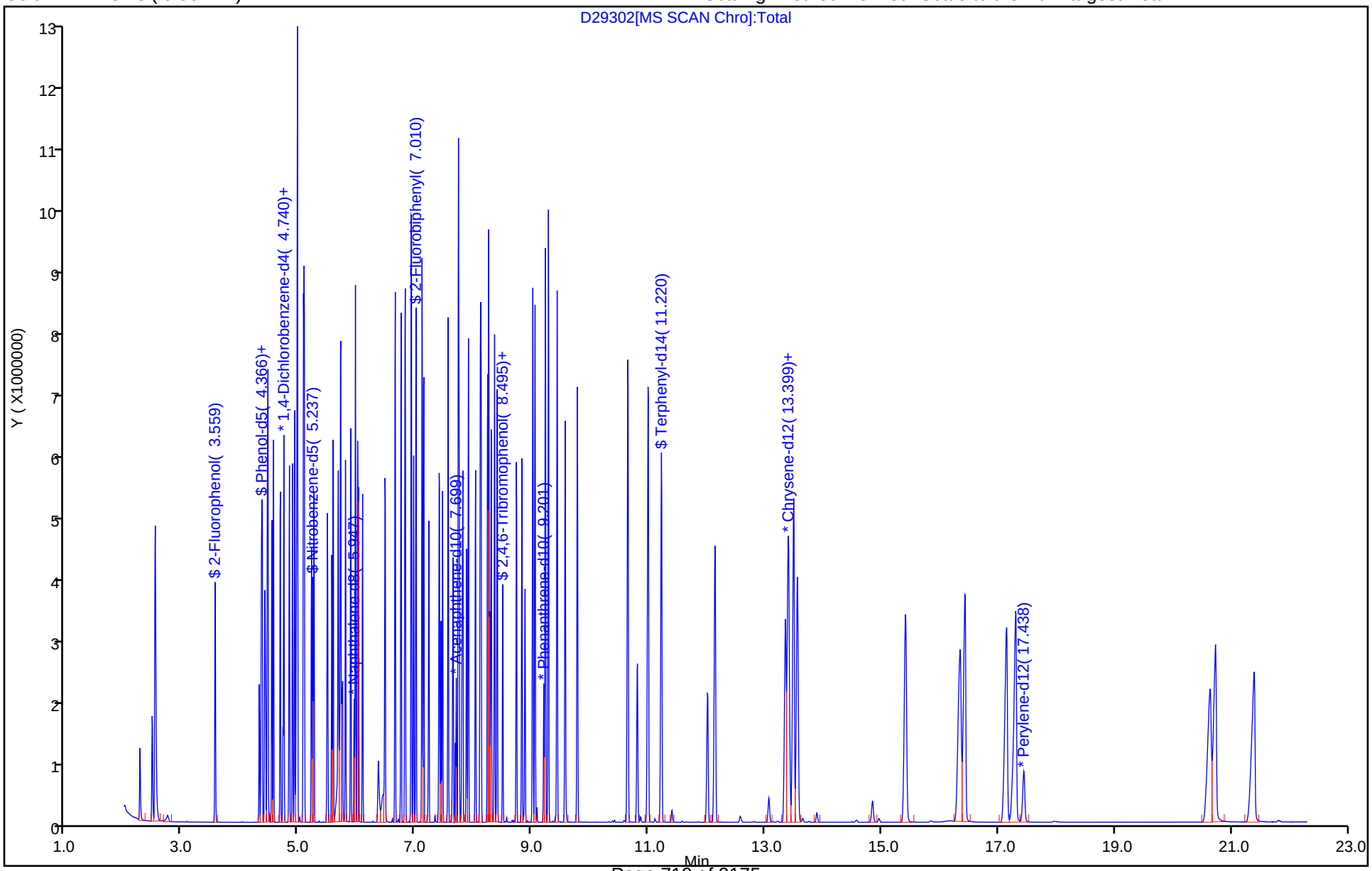
Report Date: 19-Sep-2018 09:58:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29302.D

Injection Date:	18-Sep-2018 15:51:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD160 HSL			Worklist Smp#:	9
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

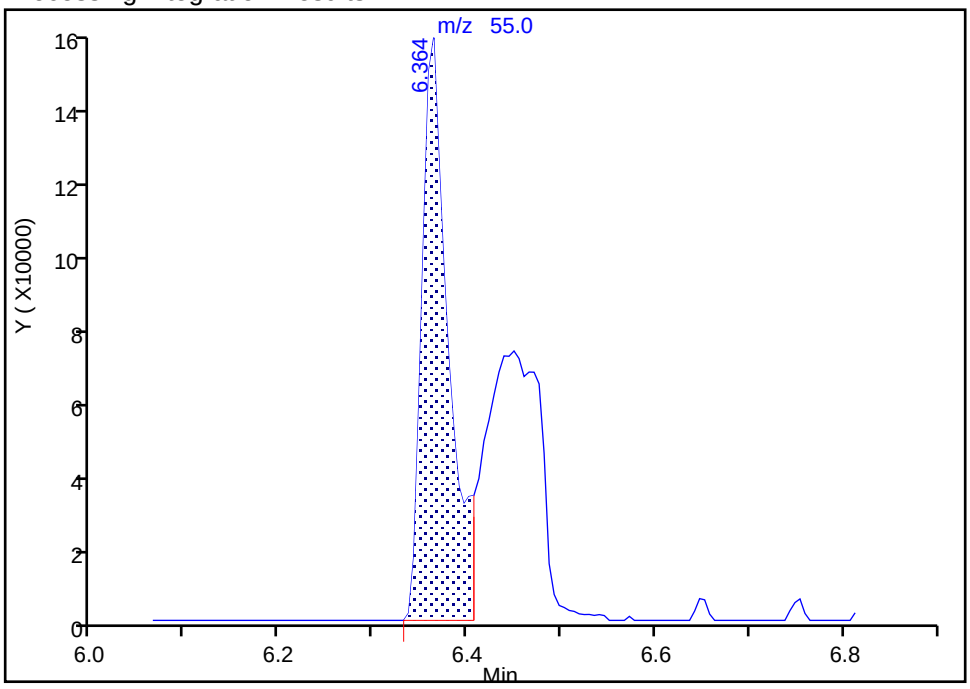
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29302.D
Injection Date: 18-Sep-2018 15:51:30 Instrument ID: SMS_D
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

80 Caprolactam, CAS: 105-60-2

Signal: 1

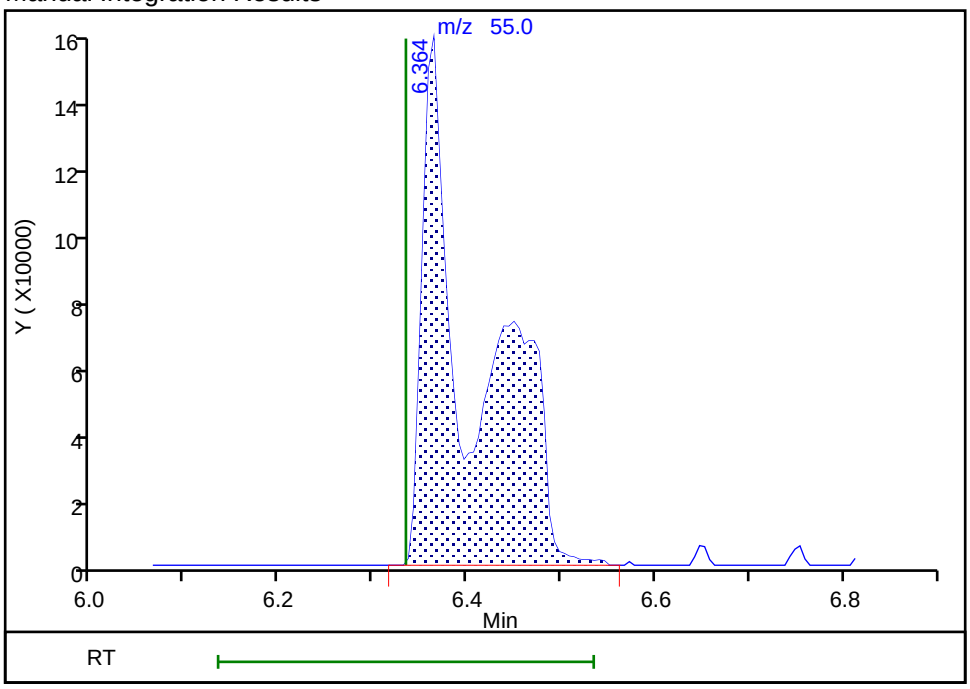
Processing Integration Results

RT: 6.36
Area: 312764
Amount: 96.538550
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Area: 606766
Amount: 163.5033
Amount Units: ug/ml



Reviewer: kiekeld, 19-Sep-2018 09:23:04
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

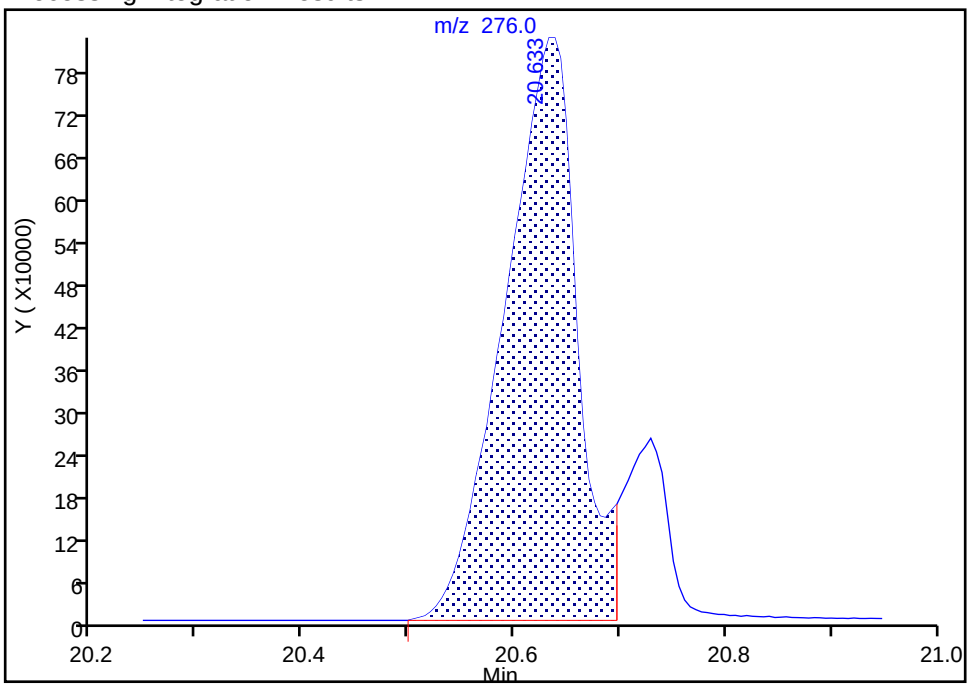
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29302.D
Injection Date: 18-Sep-2018 15:51:30 Instrument ID: SMS_D
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

208 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

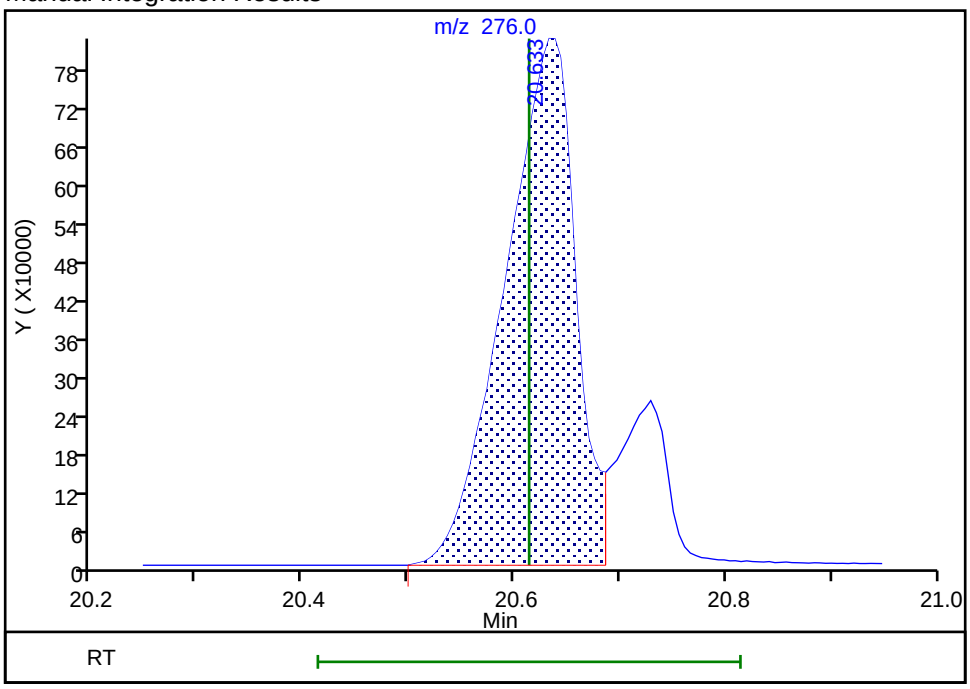
Processing Integration Results

RT: 20.63
Area: 3957992
Amount: 162.8137
Amount Units: ug/ml



Manual Integration Results

RT: 20.63
Area: 3855232
Amount: 163.1738
Amount Units: ug/ml



Reviewer: kiekeld, 19-Sep-2018 09:23:29
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

Report Date: 19-Sep-2018 09:58:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29303.D
Lims ID: STD200 HSL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-Sep-2018 16:20:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD200 HSL
Operator ID: KIEKELD Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 19-Sep-2018 09:58:17 Calib Date: 18-Sep-2018 21:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 19-Sep-2018 09:30:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.723	4.726	-0.003	98	172884	40.0	40.0	
* 2 Naphthalene-d8	136	5.946	5.944	0.002	100	717810	40.0	40.0	
* 3 Acenaphthene-d10	164	7.698	7.702	-0.004	98	420687	40.0	40.0	
* 4 Phenanthrene-d10	188	9.199	9.203	-0.004	99	841705	40.0	40.0	
* 5 Chrysene-d12	240	13.425	13.413	0.012	96	847552	40.0	40.0	
* 6 Perylene-d12	264	17.448	17.435	0.013	100	864917	40.0	40.0	
$ 7 2-Fluorophenol	112	3.564	3.562	0.002	98	1267182	200.0	193.3	
$ 8 Phenol-d5	99	4.360	4.347	0.013	97	1735577	200.0	195.8	
$ 9 Nitrobenzene-d5	82	5.241	5.234	0.007	96	1609877	200.0	190.7	
$ 11 2-Fluorobiphenyl	172	7.009	7.007	0.002	98	2865413	200.0	182.6	
$ 12 2,4,6-Tribromophenol	330	8.500	8.498	0.002	99	447327	200.0	202.3	
$ 13 Terphenyl-d14	244	11.224	11.217	0.007	99	3897109	200.0	189.1	
16 1,4-Dioxane	88	2.265	2.269	-0.004	97	580991	200.0	193.7	
17 N-Nitrosodimethylamine	74	2.479	2.477	0.002	92	954840	200.0	195.3	
18 Pyridine	79	2.527	2.525	0.002	94	3196171	400.0	382.7	
28 Phenol	94	4.370	4.363	0.007	92	1834906	200.0	194.3	
30 Aniline	93	4.413	4.411	0.002	100	2236379	200.0	192.7	
31 Alpha Methyl Styrene	118	4.466	4.464	0.002	74	1277833	200.0	186.5	
32 Bis(2-chloroethyl)ether	93	4.456	4.454	0.002	95	1409804	200.0	199.2	
35 n-Decane	43	4.563	4.561	0.001	98	1233056	200.0	191.1	
36 2-Chlorophenol	128	4.536	4.534	0.002	97	1314786	200.0	191.6	
37 1,3-Dichlorobenzene	146	4.680	4.678	0.002	97	1332950	200.0	186.1	
38 1,4-Dichlorobenzene	146	4.739	4.742	-0.003	96	1361580	200.0	186.4	
39 Benzyl alcohol	108	4.835	4.828	0.007	97	1007564	200.0	197.5	
40 1,2-Dichlorobenzene	146	4.888	4.887	0.001	97	1308756	200.0	188.3	
41 2-Methylphenol	108	4.931	4.924	0.007	76	1357929	200.0	195.1	
43 2,2'-oxybis[1-chloropropan	45	4.958	4.956	0.002	98	1772210	200.0	194.3	
44 Indene	116	4.974	4.972	0.002	99	3903779	400.0	352.4	
45 3-Methylphenol	108	5.081	5.068	0.013	93	1394650	200.0	190.4	
46 3 & 4 Methylphenol	108	5.081	5.068	0.013	93	1394650	200.0	190.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.081	5.068	0.013	93	1394650	200.0	190.4	
48 N-Nitrosodi-n-propylamine	70	5.091	5.079	0.012	55	1070004	200.0	188.2	
50 Acetophenone	105	5.091	5.084	0.007	75	1883061	200.0	185.2	
53 Hexachloroethane	117	5.214	5.212	0.002	98	521907	200.0	190.5	
54 Nitrobenzene	77	5.257	5.255	0.002	94	1624294	200.0	192.1	
57 Isophorone	82	5.492	5.480	0.012	98	2899697	200.0	191.9	
59 2-Nitrophenol	139	5.567	5.565	0.002	97	754038	200.0	196.8	
60 2,4-Dimethylphenol	107	5.588	5.581	0.007	98	1431656	200.0	189.8	
63 Bis(2-chloroethoxy)methane	93	5.674	5.672	0.002	95	1678026	200.0	190.7	
64 Benzoic acid	105	5.764	5.704	0.060	96	2748404	400.0	405.3	
65 3,5-Dimethylphenol	107	5.716	5.709	0.007	96	1431851	200.0	188.1	
68 2,4-Dichlorophenol	162	5.802	5.795	0.007	98	1132350	200.0	192.5	
70 1,2,4-Trichlorobenzene	180	5.887	5.885	0.002	97	1230188	200.0	189.6	
72 Naphthalene	128	5.967	5.966	0.001	100	3671140	200.0	182.7	
73 4-Chloroaniline	127	6.010	6.003	0.007	98	1709945	200.0	188.8	
74 2,6-Dichlorophenol	162	6.021	6.019	0.002	96	1091099	200.0	186.7	
76 Hexachlorobutadiene	225	6.090	6.094	-0.004	99	659263	200.0	192.0	
80 Caprolactam	55	6.368	6.334	0.034	97	722767	200.0	203.4	M
83 4-Chloro-3-methylphenol	107	6.480	6.473	0.007	97	1279165	200.0	191.4	
87 2-Methylnaphthalene	142	6.651	6.649	0.002	100	2533360	200.0	183.2	
89 1-Methylnaphthalene	142	6.753	6.751	0.002	100	2396856	200.0	182.6	
90 Hexachlorocyclopentadiene	237	6.817	6.820	-0.003	98	779691	200.0	191.0	
91 1,2,4,5-Tetrachlorobenzene	216	6.828	6.826	0.002	97	1189912	200.0	184.5	
94 2,4,6-Trichlorophenol	196	6.929	6.927	0.002	91	804541	200.0	180.1	
95 2,3-Dichlorobenzenamine	161	6.929	6.927	0.002	85	1231219	200.0	177.9	
96 2,4,5-Trichlorophenol	196	6.966	6.965	0.001	98	951329	200.0	191.5	
100 1,1'-Biphenyl	154	7.116	7.109	0.007	96	2997981	200.0	179.6	
102 2-Chloronaphthalene	162	7.143	7.141	0.002	99	2436287	200.0	184.1	
105 2-Nitroaniline	65	7.228	7.226	0.002	95	944115	200.0	195.8	
111 Dimethyl phthalate	163	7.410	7.403	0.007	99	2849356	200.0	187.6	
112 1,3-Dinitrobenzene	168	7.442	7.429	0.013	88	566010	200.0	205.2	
113 2,6-Dinitrotoluene	165	7.469	7.461	0.008	97	743691	200.0	195.7	
115 Acenaphthylene	152	7.559	7.558	0.001	99	3721864	200.0	182.7	
117 3-Nitroaniline	138	7.650	7.638	0.012	96	854095	200.0	198.0	
119 Acenaphthene	153	7.736	7.734	0.002	98	2338641	200.0	178.5	
120 2,4-Dinitrophenol	184	7.752	7.739	0.013	96	1128187	400.0	395.3	
121 4-Nitrophenol	109	7.816	7.798	0.018	97	937949	400.0	391.1	
124 2,4-Dinitrotoluene	165	7.880	7.873	0.007	97	1027465	200.0	197.9	
125 Dibenzofuran	168	7.907	7.905	0.002	99	3600455	200.0	182.2	
129 2,3,4,6-Tetrachlorophenol	232	8.030	8.028	0.002	72	782092	200.0	189.9	
131 Hexadecane	57	8.126	8.124	0.002	96	1681639	200.0	183.2	
132 Diethyl phthalate	149	8.115	8.108	0.007	100	2696953	200.0	178.3	
134 4-Chlorophenyl phenyl ethe	204	8.238	8.236	0.002	98	1461562	200.0	189.1	
135 Fluorene	166	8.254	8.252	0.002	99	2865542	200.0	180.3	
138 4-Nitroaniline	138	8.281	8.257	0.024	96	909812	200.0	197.5	
139 4,6-Dinitro-2-methylphenol	198	8.307	8.289	0.018	96	1297309	400.0	389.8	
140 Diphenylamine	169	8.361	8.354	0.007	95	2185773	170.0	157.7	
141 N-Nitrosodiphenylamine	169	8.361	8.354	0.007	98	2185773	200.0	185.1	
142 1,2-Diphenylhydrazine	77	8.404	8.396	0.008	96	3302836	202.2	188.2	
143 Azobenzene	77	8.404	8.396	0.008	96	3302836	200.0	186.2	
145 2,4,6 - Tribromophenol	330	8.500	8.498	0.002	99	447718	200.0	202.5	
152 4-Bromophenyl phenyl ether	248	8.735	8.733	0.002	97	884536	200.0	192.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.826	8.824	0.002	98	864828	200.0	192.7	
155 Atrazine	200	8.879	8.877	0.002	96	432917	200.0	111.1	
156 n-Octadecane	85	9.050	9.053	-0.003	96	859032	200.0	191.6	
157 Pentachlorophenol	266	9.013	9.011	0.001	98	1187235	400.0	376.7	
163 Phenanthrene	178	9.232	9.224	0.008	99	4263240	200.0	179.9	
164 Anthracene	178	9.285	9.278	0.007	100	4420308	200.0	179.6	
165 Carbazole	167	9.435	9.427	0.008	100	4291528	200.0	181.9	
166 Alachlor	188	9.568	9.566	0.002	96	614723	200.0	191.3	
169 Di-n-butyl phthalate	149	9.776	9.775	0.001	100	4805875	200.0	185.0	
176 Fluoranthene	202	10.647	10.640	0.007	100	5132695	200.0	188.1	
180 Pyrene	202	10.994	10.987	0.007	99	5342640	200.0	184.7	
186 Famphur	218	12.015	12.013	0.002	100	1248502	200.0	NQ	
187 Butyl benzyl phthalate	149	12.143	12.136	0.007	95	2490558	200.0	193.4	
190 3,3'-Dichlorobenzidine	252	13.356	13.338	0.018	99	1795647	200.0	179.8	
192 Benzo[a]anthracene	228	13.404	13.386	0.018	100	5579415	200.0	193.7	
193 Bis(2-ethylhexyl) phthalat	149	13.559	13.551	0.008	99	3397627	200.0	199.3	
194 Chrysene	228	13.500	13.477	0.023	99	5323838	200.0	194.8	
197 Di-n-octyl phthalate	149	15.412	15.405	0.007	100	6101612	200.0	201.1	
198 Benzo[b]fluoranthene	252	16.358	16.329	0.029	100	5824976	200.0	208.0	
200 Benzo[k]fluoranthene	252	16.443	16.410	0.033	99	5327889	200.0	190.5	
201 Benzo[e]pyrene	252	17.154	17.131	0.023	98	5042639	200.0	196.9	
202 Benzo[a]pyrene	252	17.320	17.280	0.040	100	5490923	200.0	198.4	
208 Indeno[1,2,3-cd]pyrene	276	20.648	20.614	0.034	73	5126872	200.0	203.7	M
209 Dibenz(a,h)anthracene	278	20.749	20.705	0.044	86	5086268	200.0	202.8	
210 Benzo[g,h,i]perylene	276	21.412	21.367	0.045	100	5186252	200.0	196.3	
S 219 Total Cresols	108				0			385.5	
S 220 Methyl Phenols,Total	108				0			385.5	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA200_00037 Amount Added: 200.00 Units: uL

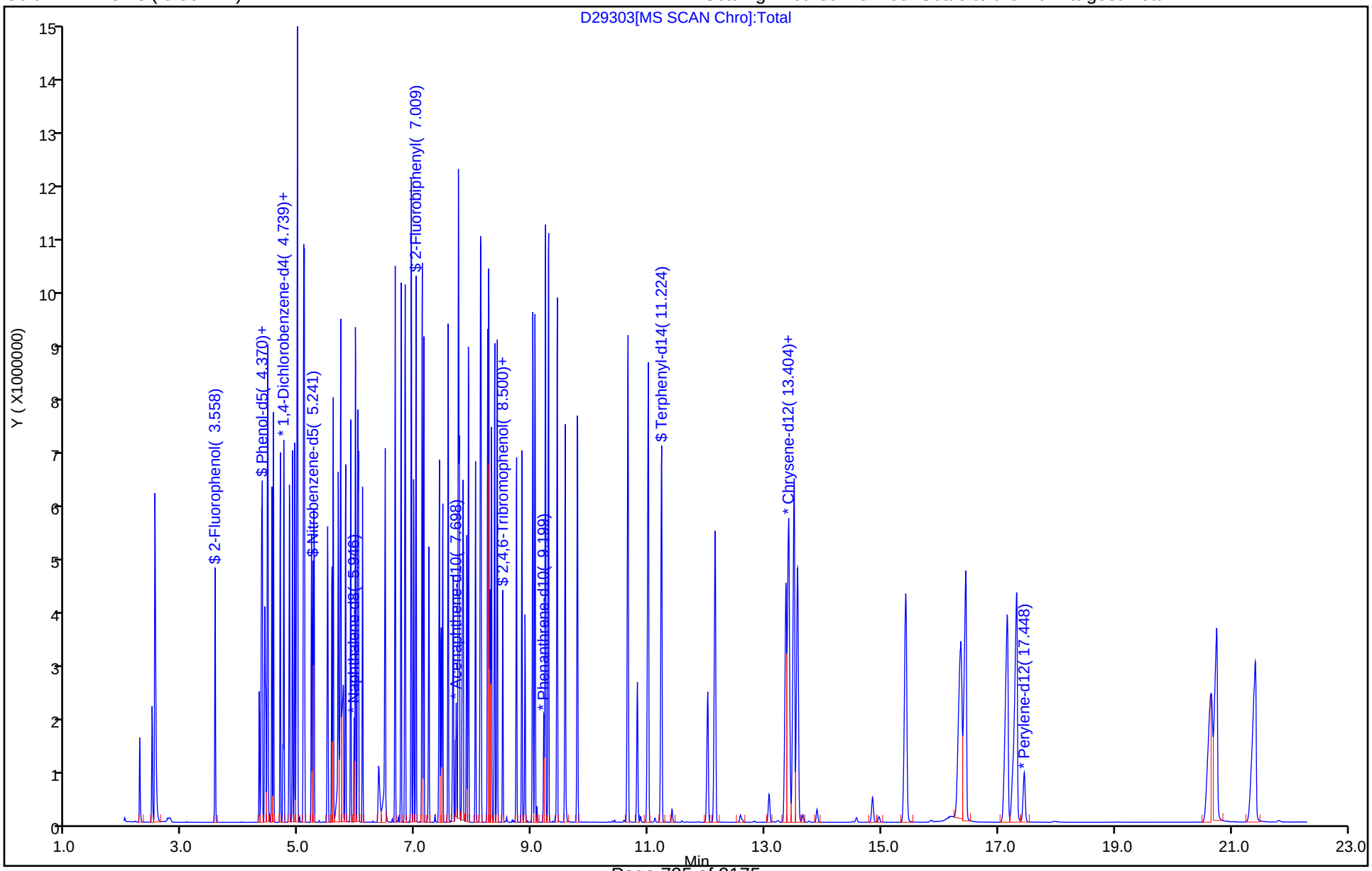
Report Date: 19-Sep-2018 09:58:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29303.D

Injection Date:	18-Sep-2018 16:20:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	STD200 HSL			Worklist Smp#:	10
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

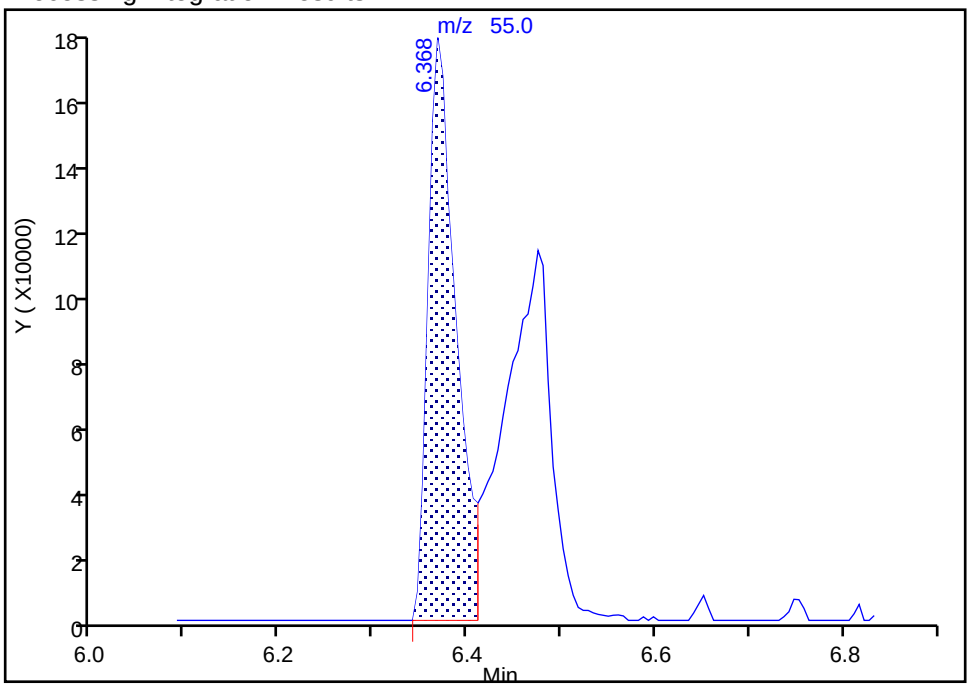
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29303.D
Injection Date: 18-Sep-2018 16:20:30 Instrument ID: SMS_D
Lims ID: STD200 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

80 Caprolactam, CAS: 105-60-2

Signal: 1

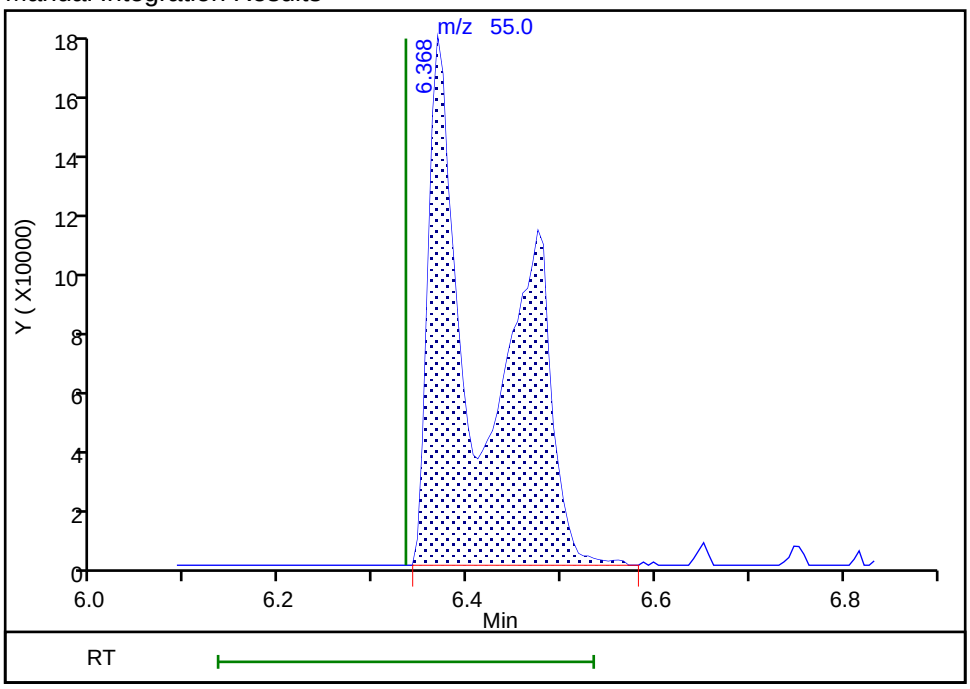
Processing Integration Results

RT: 6.37
Area: 352713
Amount: 106.1782
Amount Units: ug/ml



Manual Integration Results

RT: 6.37
Area: 722767
Amount: 203.4141
Amount Units: ug/ml



Reviewer: kiekeld, 19-Sep-2018 09:24:35
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

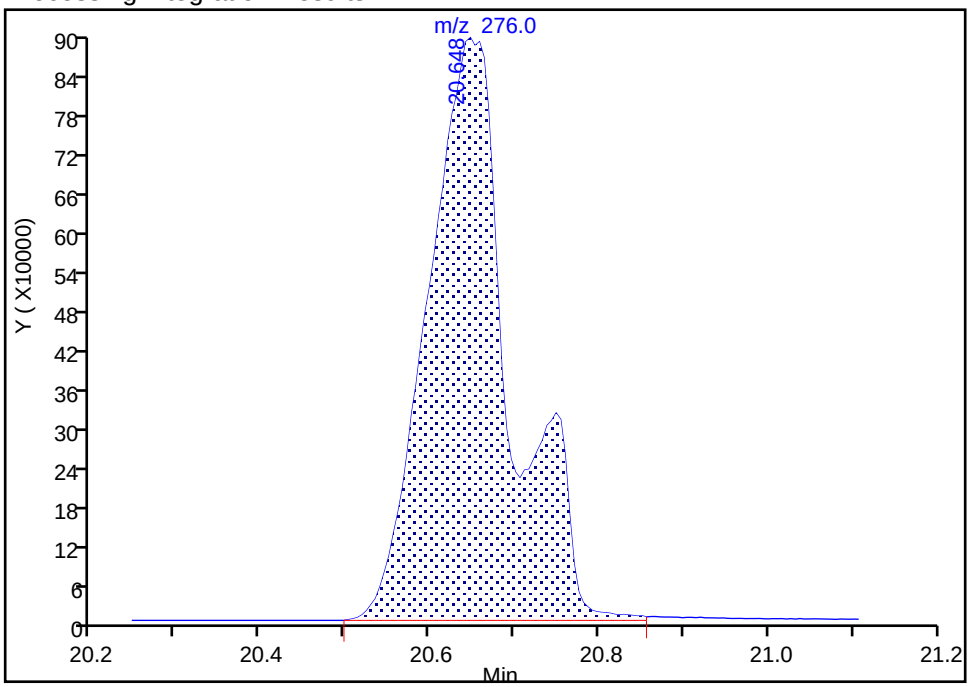
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29303.D
Injection Date: 18-Sep-2018 16:20:30 Instrument ID: SMS_D
Lims ID: STD200 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

208 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

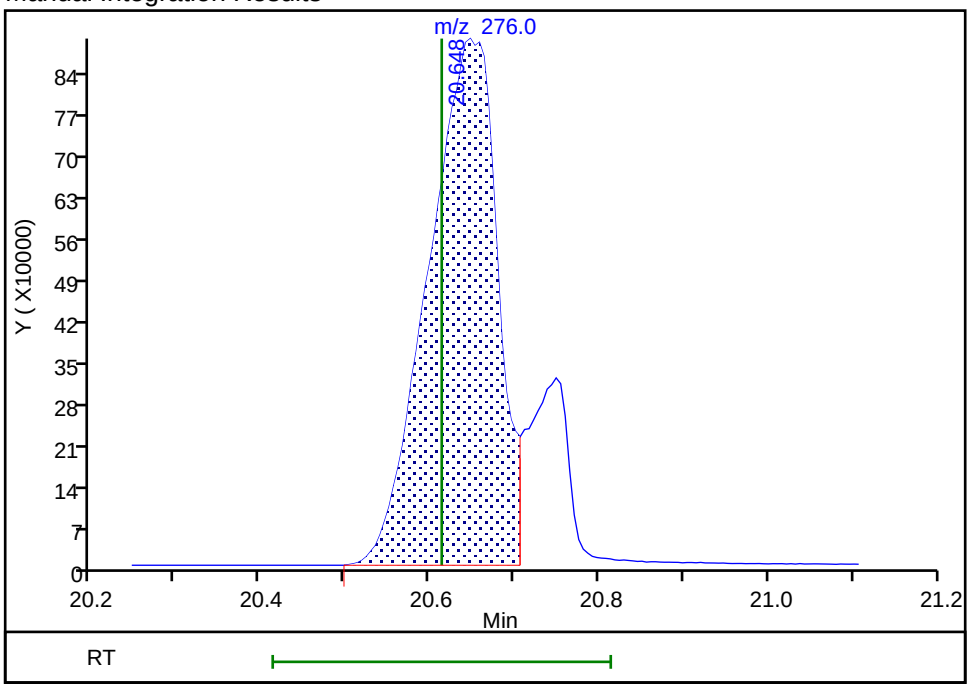
Processing Integration Results

RT: 20.65
Area: 6154999
Amount: 238.4298
Amount Units: ug/ml



Manual Integration Results

RT: 20.65
Area: 5126872
Amount: 203.6724
Amount Units: ug/ml



Reviewer: kiekeld, 19-Sep-2018 09:23:59
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437797/3 | Calibration Date: 11/15/2018 15:55

Instrument ID: SMS_D | Calib Start Date: 09/18/2018 12:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) | Calib End Date: 09/18/2018 16:20

Lab File ID: D30212.D | Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6941	0.6199		71.4	80.0	-10.7	20.0
N-Nitrosodimethylamine	Ave	1.131	0.996		70.4	80.0	-11.9	20.0
Pyridine	Ave	1.932	1.687		140	160	-12.7	20.0
Phenol	Ave	2.185	2.096	0.8000	76.7	80.0	-4.1	20.0
Aniline	Ave	2.685	2.548		75.9	80.0	-5.1	20.0
Bis(2-chloroethyl)ether	Ave	1.637	1.534	0.7000	75.0	80.0	-6.3	20.0
2-Chlorophenol	Ave	1.588	1.519	0.8000	76.5	80.0	-4.3	20.0
1,3-Dichlorobenzene	Ave	1.657	1.620		78.2	80.0	-2.2	20.0
1,4-Dichlorobenzene	Ave	1.690	1.655		78.3	80.0	-2.1	20.0
Benzyl alcohol	Ave	1.180	1.085		73.6	80.0	-8.0	20.0
1,2-Dichlorobenzene	Ave	1.608	1.586		78.9	80.0	-1.4	20.0
2-Methylphenol	Ave	1.611	1.512	0.7000	75.1	80.0	-6.1	20.0
2,2'-oxybis[1-chloropropane]	Ave	2.110	2.007	0.0100	76.1	80.0	-4.9	20.0
Indene	Ave	2.563	2.634		164	160	2.8	35.0
N-Nitrosodi-n-propylamine	Ave	1.315	1.317	0.5000	80.1	80.0	0.1	20.0
3 & 4 Methylphenol	Ave	1.694	1.638		77.3	80.0	-3.3	20.0
3-Methylphenol	Ave	1.694	1.638		77.3	80.0	-3.3	20.0
4-Methylphenol	Ave	1.694	1.638	0.6000	77.3	80.0	-3.3	35.0
Acetophenone	Ave	2.353	2.350	0.0100	79.9	80.0	-0.1	20.0
Hexachloroethane	Ave	0.6339	0.6232	0.3000	78.7	80.0	-1.7	20.0
Nitrobenzene	Ave	0.4713	0.4711		80.0	80.0	-0.0	20.0
Isophorone	Ave	0.8420	0.8569	0.4000	81.4	80.0	1.8	20.0
2-Nitrophenol	Ave	0.2135	0.2073	0.1000	77.7	80.0	-2.9	20.0
2,4-Dimethylphenol	Ave	0.4204	0.4260	0.2000	81.1	80.0	1.3	20.0
Bis(2-chloroethoxy)methane	Ave	0.4904	0.4692	0.3000	76.5	80.0	-4.3	20.0
Benzoic acid	Lin2		0.3472		150	160	-6.2	20.0
2,4-Dichlorophenol	Ave	0.3278	0.3255	0.2000	79.5	80.0	-0.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3615	0.3556		78.7	80.0	-1.7	20.0
Naphthalene	Ave	1.120	1.126	0.7000	80.4	80.0	0.5	20.0
4-Chloroaniline	Ave	0.5047	0.4920	0.0100	78.0	80.0	-2.5	20.0
2,6-Dichlorophenol	Ave	0.3257	0.3284		80.7	80.0	0.8	20.0
Hexachlorobutadiene	Ave	0.1914	0.1957	0.0100	81.8	80.0	2.2	20.0
Caprolactam	Ave	0.1980	0.1785		72.1	80.0	-9.9	20.0
4-Chloro-3-methylphenol	Ave	0.3724	0.3743	0.2000	80.4	80.0	0.5	20.0
2-Methylnaphthalene	Ave	0.7704	0.7826	0.4000	81.3	80.0	1.6	20.0
1-Methylnaphthalene	Ave	0.7316	0.7345		80.3	80.0	0.4	20.0
Hexachlorocyclopentadiene	Ave	0.3882	0.4132	0.0500	85.1	80.0	6.4	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3594	0.3663	0.0100	81.5	80.0	1.9	20.0
2,4,6-Trichlorophenol	Ave	0.4248	0.4348	0.2000	81.9	80.0	2.4	20.0
2,4,5-Trichlorophenol	Ave	0.4722	0.4585	0.2000	77.7	80.0	-2.9	20.0
1,1'-Biphenyl	Ave	1.587	1.618		81.5	80.0	1.9	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437797/3 Calibration Date: 11/15/2018 15:55

Instrument ID: SMS_D Calib Start Date: 09/18/2018 12:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 09/18/2018 16:20

Lab File ID: D30212.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloronaphthalene	Ave	1.258	1.242	0.8000	78.9	80.0	-1.3	20.0
2-Nitroaniline	Ave	0.4584	0.4536	0.0100	79.2	80.0	-1.1	20.0
Dimethyl phthalate	Ave	1.444	1.462	0.0100	81.0	80.0	1.2	20.0
1,3-Dinitrobenzene	Ave	0.2623	0.2601		79.3	80.0	-0.8	20.0
2,6-Dinitrotoluene	Ave	0.3614	0.3573	0.2000	79.1	80.0	-1.1	20.0
Acenaphthylene	Ave	1.937	2.053	0.9000	84.8	80.0	6.0	20.0
3-Nitroaniline	Ave	0.4101	0.3948	0.0100	77.0	80.0	-3.7	20.0
Acenaphthene	Ave	1.246	1.288	0.9000	82.7	80.0	3.4	20.0
2,4-Dinitrophenol	Lin2		0.2491	0.0100	149	160	-7.1	20.0
4-Nitrophenol	Ave	0.2281	0.2341	0.0100	164	160	2.7	20.0
2,4-Dinitrotoluene	Ave	0.4937	0.4892	0.2000	79.3	80.0	-0.9	20.0
Dibenzofuran	Ave	1.879	1.906	0.8000	81.1	80.0	1.4	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3915	0.3859	0.0100	78.8	80.0	-1.4	20.0
Diethyl phthalate	Ave	1.438	1.486	0.0100	82.6	80.0	3.3	20.0
Hexadecane	Ave	0.8728	0.9048		82.9	80.0	3.7	35.0
4-Chlorophenyl phenyl ether	Ave	0.7349	0.7332	0.4000	79.8	80.0	-0.2	20.0
Fluorene	Ave	1.512	1.541	0.9000	81.6	80.0	2.0	20.0
4-Nitroaniline	Ave	0.4381	0.4322	0.0100	78.9	80.0	-1.3	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1476	0.0100	151	160	-5.8	20.0
Diphenylamine	Ave	1.318	1.319		68.1	68.0	0.1	20.0
N-Nitrosodiphenylamine	Ave	0.5612	0.5646	0.0100	80.5	80.0	0.6	20.0
1,2-Diphenylhydrazine	Ave	1.669	1.683		81.6	80.9	0.8	20.0
Azobenzene	Ave	1.687	1.701		80.7	80.0	0.8	20.0
4-Bromophenyl phenyl ether	Ave	0.2185	0.2196	0.1000	80.4	80.0	0.5	20.0
Hexachlorobenzene	Ave	0.2133	0.2094	0.1000	78.5	80.0	-1.8	20.0
Atrazine	Ave	0.1852	0.2177		94.1	80.0	17.6	20.0
Pentachlorophenol	Lin2		0.1316	0.0500	141	160	-11.8	20.0
Phenanthrene	Ave	1.126	1.129	0.7000	80.2	80.0	0.2	20.0
Anthracene	Ave	1.169	1.175	0.7000	80.4	80.0	0.5	20.0
Carbazole	Ave	1.121	1.087	0.0100	77.6	80.0	-3.0	20.0
Alachlor	Ave	0.1527	0.1584		83.0	80.0	3.7	20.0
Di-n-butyl phthalate	Ave	1.235	1.280	0.0100	82.9	80.0	3.6	20.0
Fluoranthene	Ave	1.297	1.269	0.6000	78.3	80.0	-2.1	20.0
Pyrene	Ave	1.365	1.407	0.6000	82.5	80.0	3.1	20.0
Famphur	Qua		0.3531		62.2	80.0	-22.3*	20.0
Butyl benzyl phthalate	Ave	0.6078	0.6335	0.0100	83.4	80.0	4.2	20.0
3,3'-Dichlorobenzidine	Ave	0.4712	0.4614	0.0100	78.3	80.0	-2.1	20.0
Benzo[a]anthracene	Ave	1.360	1.334	0.8000	78.5	80.0	-1.9	20.0
Chrysene	Ave	1.290	1.260	0.7000	78.1	80.0	-2.3	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8047	0.8568	0.0100	85.2	80.0	6.5	20.0
Di-n-octyl phthalate	Ave	1.432	1.480	0.0100	82.7	80.0	3.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437797/3 Calibration Date: 11/15/2018 15:55

Instrument ID: SMS_D Calib Start Date: 09/18/2018 12:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 09/18/2018 16:20

Lab File ID: D30212.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[b]fluoranthene	Ave	1.295	1.263	0.7000	78.0	80.0	-2.4	20.0
Benzo[k]fluoranthene	Ave	1.293	1.331	0.7000	82.3	80.0	2.9	20.0
Benzo[a]pyrene	Ave	1.280	1.282	0.7000	80.1	80.0	0.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.164	1.102	0.5000	75.8	80.0	-5.3	20.0
Dibenz(a,h)anthracene	Ave	1.160	1.128	0.4000	77.8	80.0	-2.8	20.0
Benzo[g,h,i]perylene	Ave	1.222	1.161	0.5000	76.0	80.0	-5.0	20.0
2-Fluorophenol (Surr)	Ave	1.516	1.453		76.6	80.0	-4.2	20.0
Phenol-d5 (Surr)	Ave	2.050	1.966		76.7	80.0	-4.1	20.0
Nitrobenzene-d5 (Surr)	Ave	0.4705	0.4665		79.3	80.0	-0.9	20.0
2-Fluorobiphenyl	Ave	1.492	1.540		82.6	80.0	3.2	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2102	0.2025		77.1	80.0	-3.6	20.0
Terphenyl-d14 (Surr)	Ave	0.9724	1.037		85.3	80.0	6.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30212.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 15-Nov-2018 15:55:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: HOEFLERA Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 15-Nov-2018 16:29:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.664	4.664	0.000	96	147875	40.0	40.0	
* 2 Naphthalene-d8	136	5.903	5.903	0.000	100	603246	40.0	40.0	
* 3 Acenaphthene-d10	164	7.650	7.650	0.000	98	355656	40.0	40.0	
* 4 Phenanthrene-d10	188	9.141	9.141	0.000	100	706362	40.0	40.0	
* 5 Chrysene-d12	240	13.281	13.281	0.000	82	651600	40.0	40.0	
* 6 Perylene-d12	264	17.261	17.261	0.000	99	614474	40.0	40.0	
$ 7 2-Fluorophenol	112	3.478	3.478	0.000	97	429623	80.0	76.6	
$ 8 Phenol-d5	99	4.317	4.317	0.000	98	581441	80.0	76.7	
$ 9 Nitrobenzene-d5	82	5.188	5.188	0.000	96	562875	80.0	79.3	a
$ 11 2-Fluorobiphenyl	172	6.961	6.961	0.000	98	1095607	80.0	82.6	
$ 12 2,4,6-Tribromophenol	330	8.441	8.441	0.000	92	144070	80.0	77.1	
$ 13 Terphenyl-d14	244	11.112	11.112	0.000	98	1351608	80.0	85.3	
16 1,4-Dioxane	88	2.025	2.025	0.000	99	183328	80.0	71.4	
17 N-Nitrosodimethylamine	74	2.265	2.265	0.000	96	294592	80.0	70.4	
18 Pyridine	79	2.324	2.324	0.000	95	997647	160.0	139.7	
28 Phenol	94	4.328	4.328	0.000	91	619809	80.0	76.7	
30 Aniline	93	4.349	4.349	0.000	99	753503	80.0	75.9	a
31 Alpha Methyl Styrene	118	4.402	4.402	0.000	73	477191	80.0	81.4	
32 Bis(2-chloroethyl)ether	93	4.392	4.392	0.000	95	453707	80.0	75.0	
35 n-Decane	43	4.498	4.498	0.000	98	418188	80.0	75.8	
36 2-Chlorophenol	128	4.477	4.477	0.000	96	449263	80.0	76.5	
37 1,3-Dichlorobenzene	146	4.616	4.616	0.000	96	479084	80.0	78.2	
38 1,4-Dichlorobenzene	146	4.685	4.685	0.000	97	489384	80.0	78.3	
39 Benzyl alcohol	108	4.782	4.782	0.000	96	320958	80.0	73.6	
40 1,2-Dichlorobenzene	146	4.835	4.835	0.000	98	469112	80.0	78.9	
41 2-Methylphenol	108	4.894	4.894	0.000	83	447285	80.0	75.1	
43 2,2'-oxybis[1-chloropropan	45	4.904	4.904	0.000	98	593467	80.0	76.1	
44 Indene	116	4.921	4.921	0.000	99	1558297	160.0	164.5	
45 3-Methylphenol	108	5.038	5.038	0.000	68	484456	80.0	77.3	
46 3 & 4 Methylphenol	108	5.038	5.038	0.000	68	484456	80.0	77.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.038	5.038	0.000	68	484456	80.0	77.3	
48 N-Nitrosodi-n-propylamine	70	5.033	5.033	0.000	93	389465	80.0	80.1	
50 Acetophenone	105	5.038	5.038	0.000	96	695030	80.0	79.9	
53 Hexachloroethane	117	5.161	5.161	0.000	99	184307	80.0	78.7	
54 Nitrobenzene	77	5.209	5.209	0.000	94	568320	80.0	80.0	
57 Isophorone	82	5.433	5.433	0.000	98	1033891	80.0	81.4	
59 2-Nitrophenol	139	5.519	5.519	0.000	92	250052	80.0	77.7	
60 2,4-Dimethylphenol	107	5.551	5.551	0.000	98	514003	80.0	81.1	
63 Bis(2-chloroethoxy)methane	93	5.631	5.631	0.000	95	566045	80.0	76.5	
64 Benzoic acid	105	5.684	5.684	0.000	70	837716	160.0	150.1	
65 3,5-Dimethylphenol	107	5.684	5.684	0.000	93	535501	80.0	83.7	
68 2,4-Dichlorophenol	162	5.765	5.765	0.000	96	392751	80.0	79.5	
70 1,2,4-Trichlorobenzene	180	5.845	5.845	0.000	97	428970	80.0	78.7	
72 Naphthalene	128	5.925	5.925	0.000	100	1358049	80.0	80.4	
73 4-Chloroaniline	127	5.962	5.962	0.000	99	593608	80.0	78.0	
74 2,6-Dichlorophenol	162	5.984	5.984	0.000	97	396254	80.0	80.7	
76 Hexachlorobutadiene	225	6.048	6.048	0.000	99	236046	80.0	81.8	
80 Caprolactam	55	6.304	6.304	0.000	97	215339	80.0	72.1	
83 4-Chloro-3-methylphenol	107	6.448	6.448	0.000	97	451595	80.0	80.4	
87 2-Methylnaphthalene	142	6.609	6.609	0.000	99	944146	80.0	81.3	
89 1-Methylnaphthalene	142	6.705	6.705	0.000	99	886109	80.0	80.3	
90 Hexachlorocyclopentadiene	237	6.774	6.774	0.000	99	293875	80.0	85.1	
91 1,2,4,5-Tetrachlorobenzene	216	6.780	6.780	0.000	98	441875	80.0	81.5	
94 2,4,6-Trichlorophenol	196	6.886	6.886	0.000	92	309308	80.0	81.9	
95 2,3-Dichlorobenzenamine	161	6.886	6.886	0.000	88	492599	80.0	84.2	
96 2,4,5-Trichlorophenol	196	6.935	6.935	0.000	98	326104	80.0	77.7	
100 1,1'-Biphenyl	154	7.063	7.063	0.000	96	1151064	80.0	81.5	
102 2-Chloronaphthalene	162	7.095	7.095	0.000	99	883112	80.0	78.9	
105 2-Nitroaniline	65	7.186	7.186	0.000	95	322648	80.0	79.2	
111 Dimethyl phthalate	163	7.351	7.351	0.000	98	1039815	80.0	81.0	
112 1,3-Dinitrobenzene	168	7.383	7.383	0.000	86	185012	80.0	79.3	
113 2,6-Dinitrotoluene	165	7.415	7.415	0.000	95	254154	80.0	79.1	
115 Acenaphthylene	152	7.511	7.511	0.000	100	1460360	80.0	84.8	
117 3-Nitroaniline	138	7.592	7.592	0.000	97	280814	80.0	77.0	
119 Acenaphthene	153	7.682	7.682	0.000	98	916034	80.0	82.7	
120 2,4-Dinitrophenol	184	7.693	7.693	0.000	92	354317	160.0	148.7	
121 4-Nitrophenol	109	7.779	7.779	0.000	95	333080	160.0	164.3	
124 2,4-Dinitrotoluene	165	7.821	7.821	0.000	95	347972	80.0	79.3	
125 Dibenzofuran	168	7.853	7.853	0.000	100	1355686	80.0	81.1	
129 2,3,4,6-Tetrachlorophenol	232	7.982	7.982	0.000	74	274492	80.0	78.8	
131 Hexadecane	57	8.067	8.067	0.000	97	643568	80.0	82.9	
132 Diethyl phthalate	149	8.051	8.051	0.000	99	1056901	80.0	82.6	
134 4-Chlorophenyl phenyl ethe	204	8.179	8.179	0.000	96	521531	80.0	79.8	
135 Fluorene	166	8.201	8.201	0.000	99	1096301	80.0	81.6	
138 4-Nitroaniline	138	8.211	8.211	0.000	96	307435	80.0	78.9	
139 4,6-Dinitro-2-methylphenol	198	8.238	8.238	0.000	93	416895	160.0	150.7	
140 Diphenylamine	169	8.297	8.297	0.000	95	797567	68.0	68.1	
141 N-Nitrosodiphenylamine	169	8.297	8.297	0.000	98	797567	80.0	80.5	
142 1,2-Diphenylhydrazine	77	8.345	8.345	0.000	96	1210078	80.9	81.6	
143 Azobenzene	77	8.345	8.345	0.000	96	1210078	80.0	80.7	
145 2,4,6 - Tribromophenol	330	8.441	8.441	0.000	92	144070	80.0	77.1	
152 4-Bromophenyl phenyl ether	248	8.671	8.671	0.000	96	310251	80.0	80.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.767	8.767	0.000	97	295827	80.0	78.5	
155 Atrazine	200	8.820	8.820	0.000	97	307538	80.0	94.1	
156 n-Octadecane	85	8.986	8.986	0.000	97	325995	80.0	86.6	
157 Pentachlorophenol	266	8.959	8.959	0.000	96	371865	160.0	141.1	
163 Phenanthrene	178	9.168	9.168	0.000	100	1594316	80.0	80.2	
164 Anthracene	178	9.216	9.216	0.000	100	1660016	80.0	80.4	
165 Carbazole	167	9.371	9.371	0.000	100	1535600	80.0	77.6	
166 Alachlor	188	9.499	9.499	0.000	99	223750	80.0	83.0	
169 Di-n-butyl phthalate	149	9.702	9.702	0.000	100	1807650	80.0	82.9	
176 Fluoranthene	202	10.551	10.551	0.000	100	1793434	80.0	78.3	
180 Pyrene	202	10.893	10.893	0.000	99	1834060	80.0	82.5	
186 Famphur	218	11.892	11.892	0.000	99	460123	80.0	62.2	
187 Butyl benzyl phthalate	149	12.015	12.015	0.000	95	825590	80.0	83.4	
190 3,3'-Dichlorobenzidine	252	13.206	13.206	0.000	99	601248	80.0	78.3	
192 Benzo[a]anthracene	228	13.254	13.254	0.000	100	1738218	80.0	78.5	
193 Bis(2-ethylhexyl) phthalat	149	13.398	13.398	0.000	99	1116579	80.0	85.2	
194 Chrysene	228	13.345	13.345	0.000	100	1642370	80.0	78.1	
197 Di-n-octyl phthalate	149	15.220	15.220	0.000	100	1929052	80.0	82.7	
198 Benzo[b]fluoranthene	252	16.160	16.160	0.000	100	1552525	80.0	78.0	
200 Benzo[k]fluoranthene	252	16.240	16.240	0.000	100	1635658	80.0	82.3	
201 Benzo[e]pyrene	252	16.951	16.951	0.000	98	1462233	80.0	80.4	
202 Benzo[a]pyrene	252	17.101	17.101	0.000	100	1575906	80.0	80.1	
208 Indeno[1,2,3-cd]pyrene	276	20.407	20.407	0.000	74	1354709	80.0	75.8	
209 Dibenz(a,h)anthracene	278	20.498	20.498	0.000	73	1385874	80.0	77.8	a
210 Benzo[g,h,i]perylene	276	21.155	21.155	0.000	100	1427139	80.0	76.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

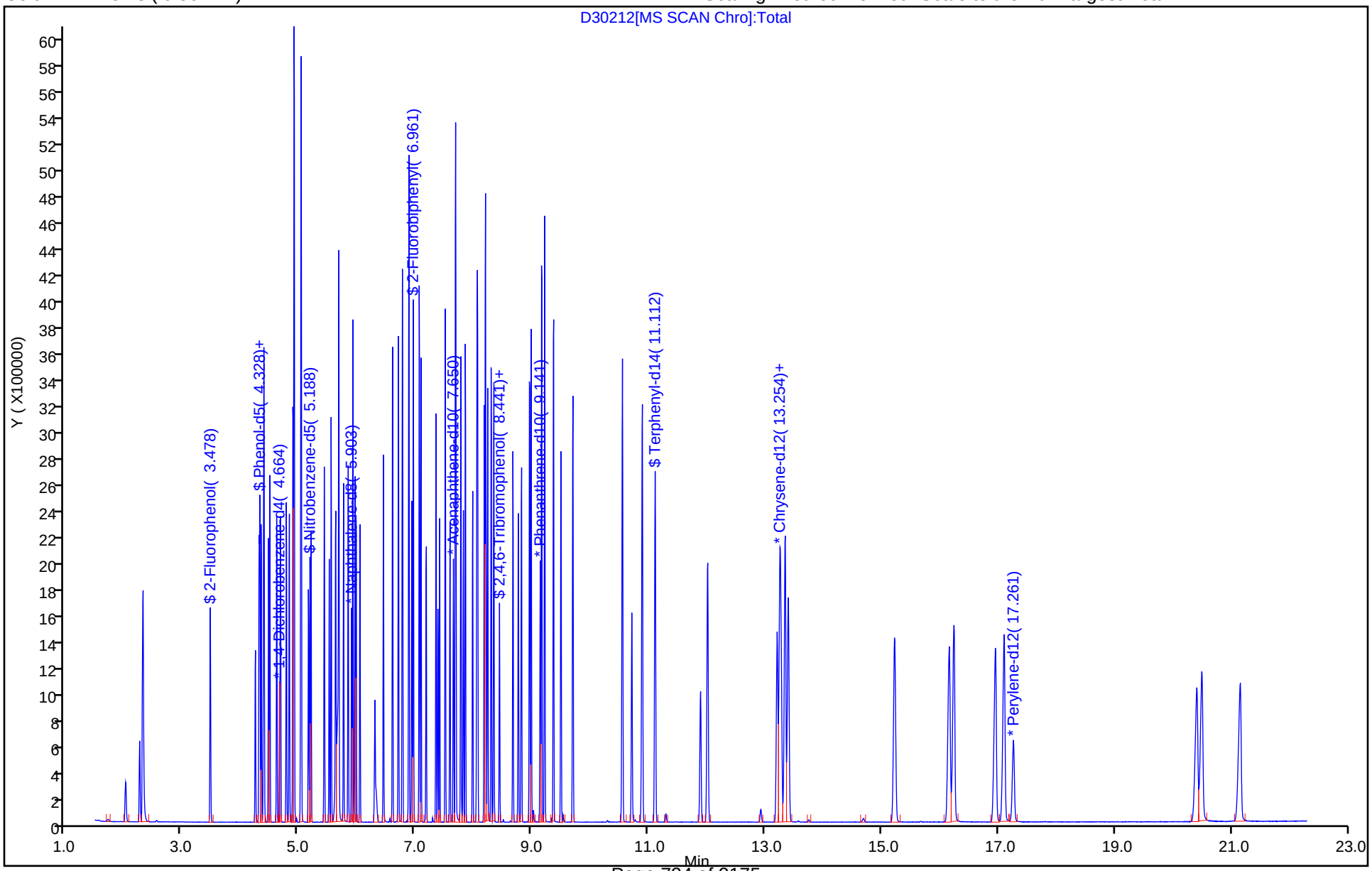
Report Date: 16-Nov-2018 11:28:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30212.D

Injection Date:	15-Nov-2018 15:55:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	CCV HSL			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

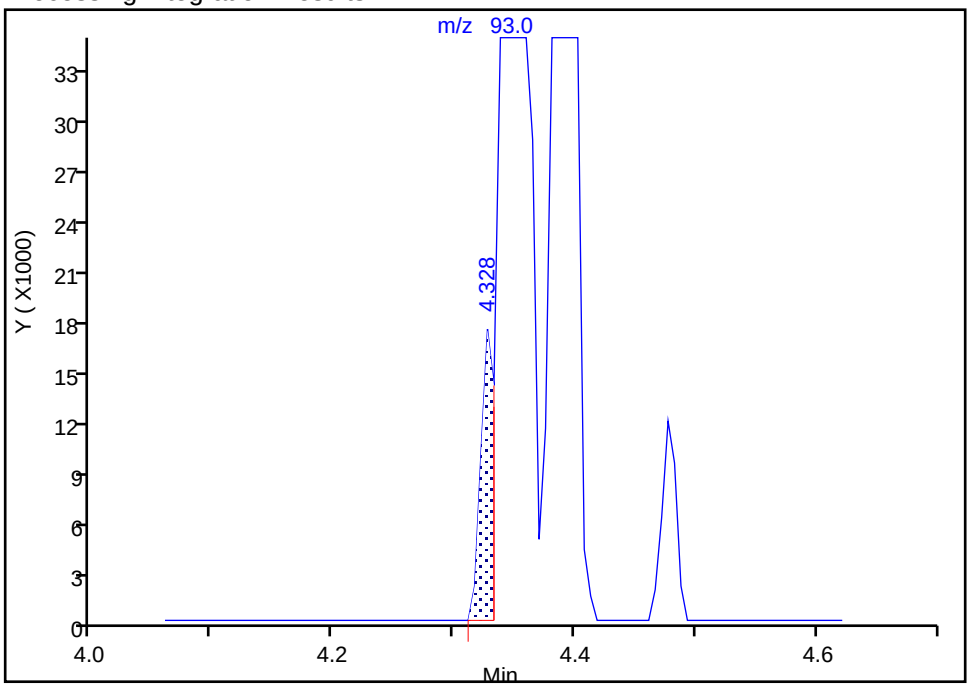
Data File:	\\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30212.D				
Injection Date:	15-Nov-2018 15:55:30	Instrument ID:	SMS_D		
Lims ID:	CCV HSL				
Client ID:					
Operator ID:	HOEFLERA	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

30 Aniline, CAS: 62-53-3

Signal: 1

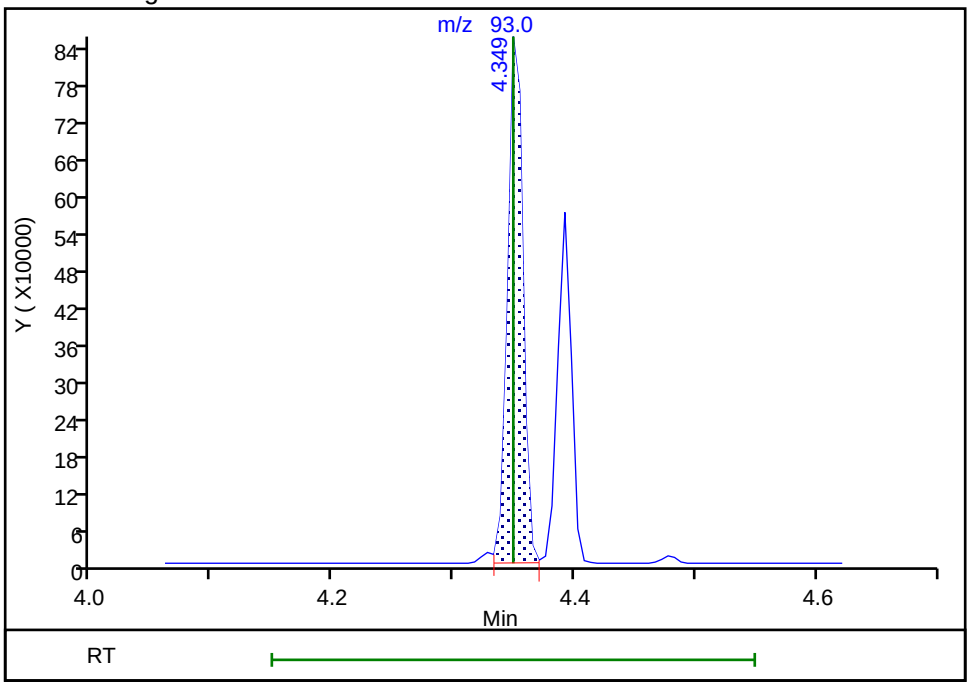
Processing Integration Results

RT: 4.33
Area: 14008
Amount: 1.411137
Amount Units: ug/ml



Manual Integration Results

RT: 4.35
Area: 753503
Amount: 75.906336
Amount Units: ug/ml



Reviewer: hoeflera, 15-Nov-2018 16:19:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Denver

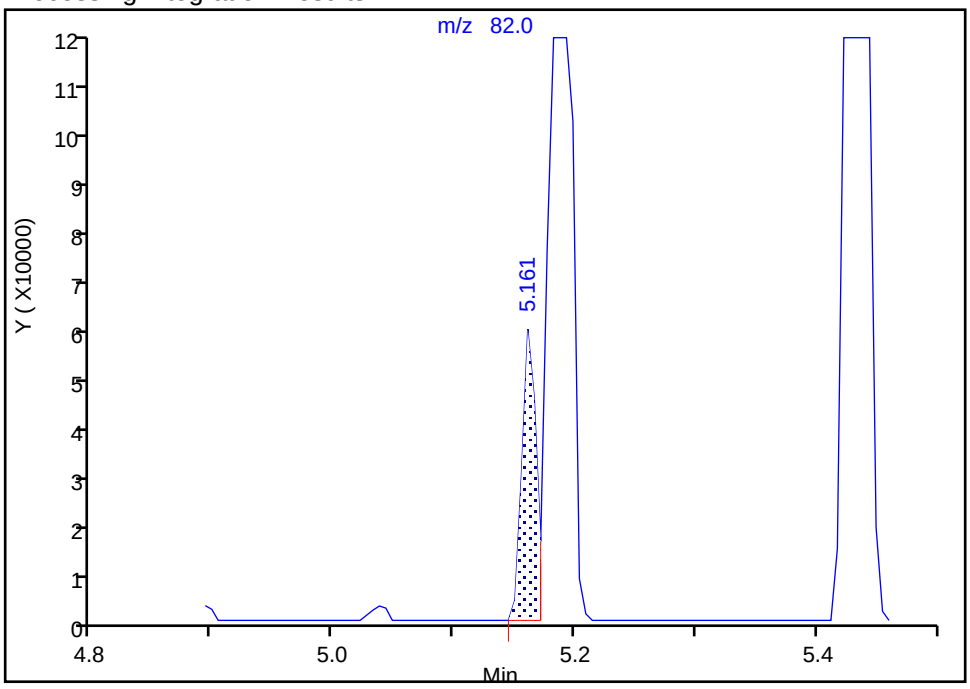
Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30212.D
Injection Date: 15-Nov-2018 15:55:30 Instrument ID: SMS_D
Lims ID: CCV HSL
Client ID:
Operator ID: HOEFLERA ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

$ 9 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

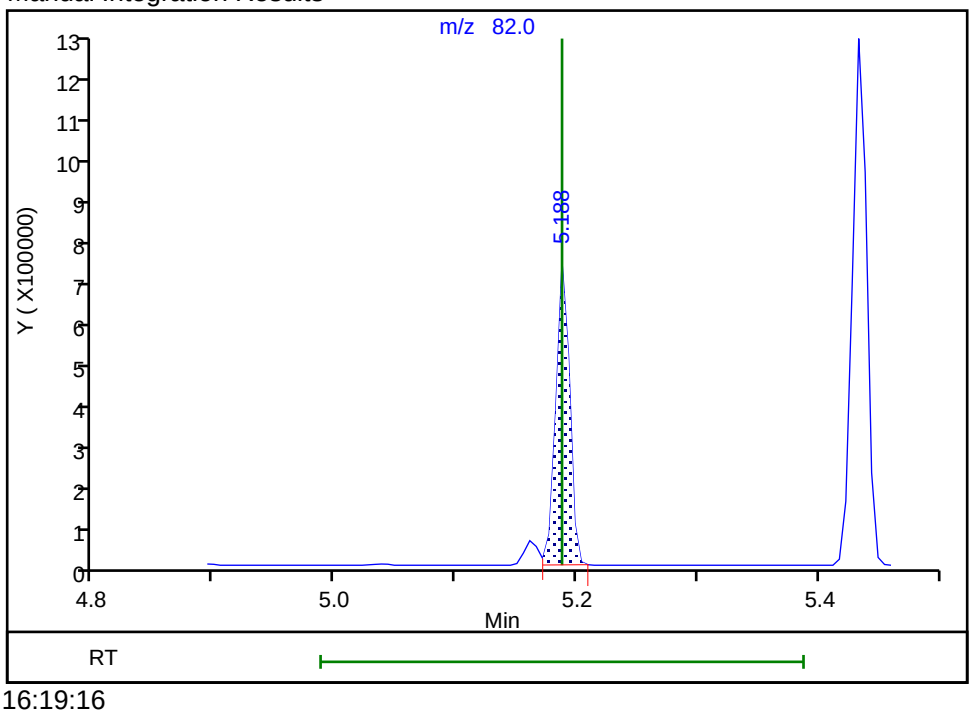
Processing Integration Results

RT: 5.16
Area: 48095
Amount: 6.777427
Amount Units: ug/ml



Manual Integration Results

RT: 5.19
Area: 562875
Amount: 79.318933
Amount Units: ug/ml



Reviewer: hoeflera, 15-Nov-2018 16:19:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Denver

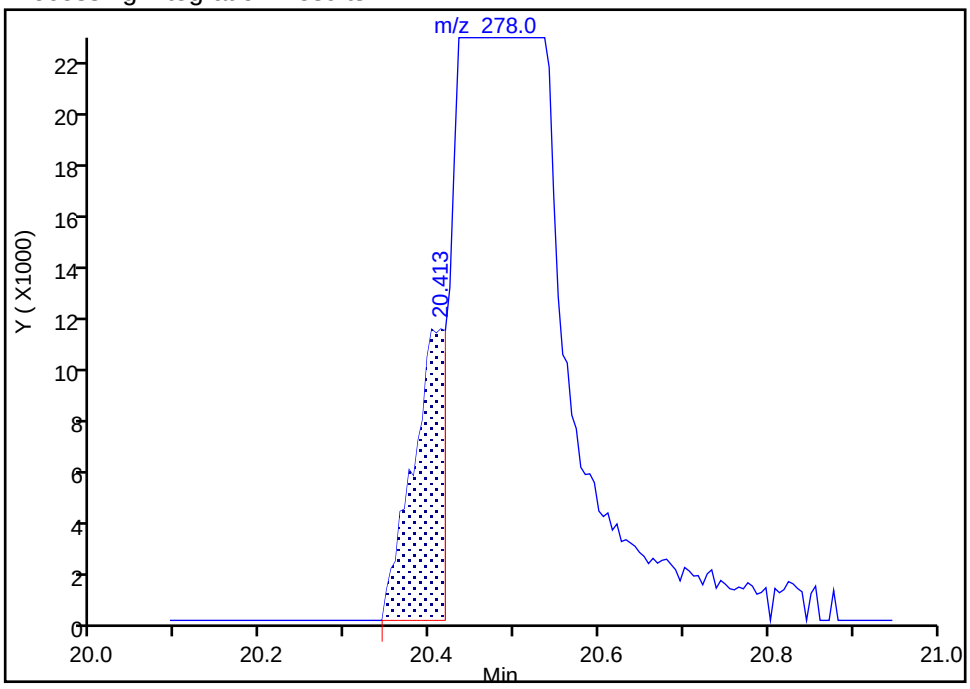
Data File:	\\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30212.D				
Injection Date:	15-Nov-2018 15:55:30	Instrument ID:	SMS_D		
Lims ID:	CCV HSL				
Client ID:					
Operator ID:	HOEFLERA	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

209 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

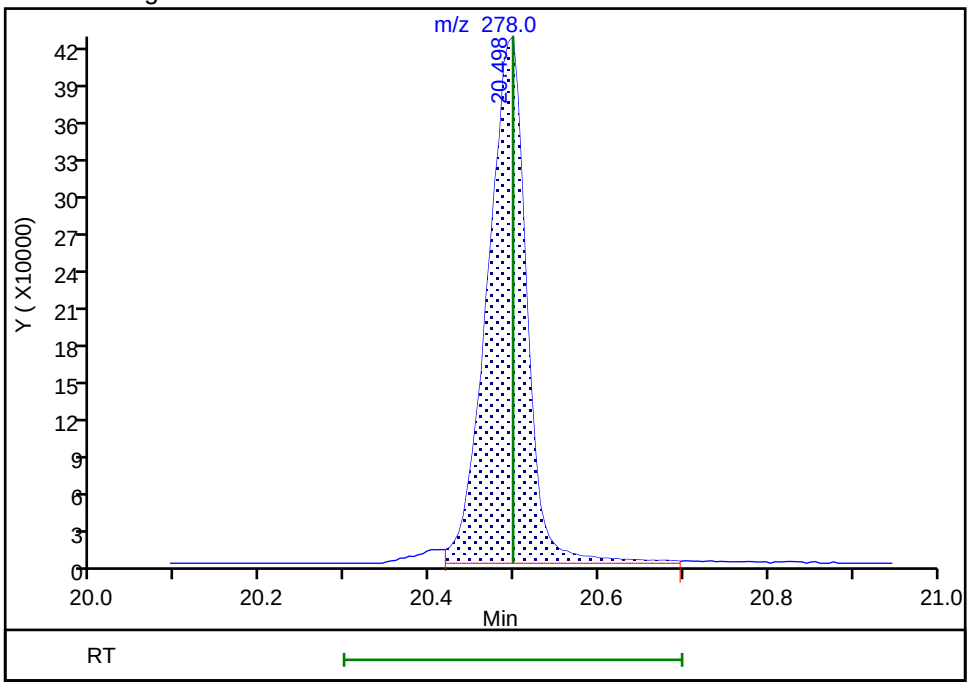
Processing Integration Results

RT: 20.41
Area: 30186
Amount: 1.693818
Amount Units: ug/ml



Manual Integration Results

RT: 20.50
Area: 1385874
Amount: 77.765114
Amount Units: ug/ml



Reviewer: hoeflera, 15-Nov-2018 16:20:19

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-437797/26 Calibration Date: 11/16/2018 02:44

Instrument ID: SMS_D Calib Start Date: 09/18/2018 12:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 09/18/2018 16:20

Lab File ID: D30235.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6941	0.6113		70.5	80.0	-11.9	50.0
N-Nitrosodimethylamine	Ave	1.131	0.9865		69.8	80.0	-12.8	50.0
Pyridine	Ave	1.932	1.620		134	160	-16.2	50.0
Phenol	Ave	2.185	2.009	0.8000	73.5	80.0	-8.1	50.0
Aniline	Ave	2.685	2.405		71.7	80.0	-10.4	50.0
Bis(2-chloroethyl)ether	Ave	1.637	1.449	0.7000	70.8	80.0	-11.5	50.0
2-Chlorophenol	Ave	1.588	1.461	0.8000	73.6	80.0	-8.0	50.0
1,3-Dichlorobenzene	Ave	1.657	1.555		75.1	80.0	-6.2	50.0
1,4-Dichlorobenzene	Ave	1.690	1.578		74.7	80.0	-6.6	50.0
Benzyl alcohol	Ave	1.180	1.065		72.2	80.0	-9.7	50.0
1,2-Dichlorobenzene	Ave	1.608	1.519		75.6	80.0	-5.6	50.0
2-Methylphenol	Ave	1.611	1.479	0.7000	73.4	80.0	-8.2	50.0
2,2'-oxybis[1-chloropropane]	Ave	2.110	1.964	0.0100	74.5	80.0	-6.9	50.0
Indene	Ave	2.563	2.531		158	160	-1.2	
N-Nitrosodi-n-propylamine	Ave	1.315	1.244	0.5000	75.7	80.0	-5.4	50.0
3 & 4 Methylphenol	Ave	1.694	1.557		73.5	80.0	-8.1	50.0
3-Methylphenol	Ave	1.694	1.557		73.5	80.0	-8.1	
4-Methylphenol	Ave	1.694	1.557	0.6000	73.5	80.0	-8.1	
Acetophenone	Ave	2.353	2.211	0.0100	75.2	80.0	-6.0	50.0
Hexachloroethane	Ave	0.6339	0.5972	0.3000	75.4	80.0	-5.8	50.0
Nitrobenzene	Ave	0.4713	0.4408		74.8	80.0	-6.5	50.0
Isophorone	Ave	0.8420	0.7955	0.4000	75.6	80.0	-5.5	50.0
2-Nitrophenol	Ave	0.2135	0.1991	0.1000	74.6	80.0	-6.7	50.0
2,4-Dimethylphenol	Ave	0.4204	0.3908	0.2000	74.4	80.0	-7.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4904	0.4422	0.3000	72.1	80.0	-9.8	50.0
Benzoic acid	Lin2		0.3241		140	160	-12.2	50.0
2,4-Dichlorophenol	Ave	0.3278	0.3031	0.2000	74.0	80.0	-7.5	50.0
1,2,4-Trichlorobenzene	Ave	0.3615	0.3215		71.1	80.0	-11.1	50.0
Naphthalene	Ave	1.120	1.052	0.7000	75.2	80.0	-6.0	50.0
4-Chloroaniline	Ave	0.5047	0.4583	0.0100	72.6	80.0	-9.2	50.0
2,6-Dichlorophenol	Ave	0.3257	0.2996		73.6	80.0	-8.0	50.0
Hexachlorobutadiene	Ave	0.1914	0.1740	0.0100	72.7	80.0	-9.1	50.0
Caprolactam	Ave	0.1980	0.1686		68.1	80.0	-14.9	50.0
4-Chloro-3-methylphenol	Ave	0.3724	0.3487	0.2000	74.9	80.0	-6.4	50.0
2-Methylnaphthalene	Ave	0.7704	0.7203	0.4000	74.8	80.0	-6.5	50.0
1-Methylnaphthalene	Ave	0.7316	0.6745		73.8	80.0	-7.8	50.0
Hexachlorocyclopentadiene	Ave	0.3882	0.3478	0.0500	71.7	80.0	-10.4	50.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3594	0.3304	0.0100	73.5	80.0	-8.1	50.0
2,4,6-Trichlorophenol	Ave	0.4248	0.3850	0.2000	72.5	80.0	-9.4	50.0
2,4,5-Trichlorophenol	Ave	0.4722	0.4118	0.2000	69.8	80.0	-12.8	50.0
1,1'-Biphenyl	Ave	1.587	1.453		73.2	80.0	-8.5	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-437797/26 Calibration Date: 11/16/2018 02:44

Instrument ID: SMS_D Calib Start Date: 09/18/2018 12:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 09/18/2018 16:20

Lab File ID: D30235.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloronaphthalene	Ave	1.258	1.120	0.8000	71.2	80.0	-11.0	50.0
2-Nitroaniline	Ave	0.4584	0.4180	0.0100	72.9	80.0	-8.8	50.0
Dimethyl phthalate	Ave	1.444	1.300	0.0100	72.0	80.0	-10.0	50.0
1,3-Dinitrobenzene	Ave	0.2623	0.2358		71.9	80.0	-10.1	50.0
2,6-Dinitrotoluene	Ave	0.3614	0.3197	0.2000	70.8	80.0	-11.5	50.0
Acenaphthylene	Ave	1.937	1.853	0.9000	76.6	80.0	-4.3	50.0
3-Nitroaniline	Ave	0.4101	0.3629	0.0100	70.8	80.0	-11.5	50.0
Acenaphthene	Ave	1.246	1.163	0.9000	74.7	80.0	-6.7	50.0
2,4-Dinitrophenol	Lin2		0.2198	0.0100	132	160	-17.8	50.0
4-Nitrophenol	Ave	0.2281	0.2085	0.0100	146	160	-8.6	50.0
2,4-Dinitrotoluene	Ave	0.4937	0.4429	0.2000	71.8	80.0	-10.3	50.0
Dibenzofuran	Ave	1.879	1.689	0.8000	71.9	80.0	-10.1	50.0
2,3,4,6-Tetrachlorophenol	Ave	0.3915	0.3399	0.0100	69.4	80.0	-13.2	50.0
Diethyl phthalate	Ave	1.438	1.327	0.0100	73.8	80.0	-7.8	50.0
Hexadecane	Ave	0.8728	0.8277		75.9	80.0	-5.2	
4-Chlorophenyl phenyl ether	Ave	0.7349	0.6492	0.4000	70.7	80.0	-11.7	50.0
Fluorene	Ave	1.512	1.377	0.9000	72.9	80.0	-8.9	50.0
4-Nitroaniline	Ave	0.4381	0.3973	0.0100	72.5	80.0	-9.3	50.0
4,6-Dinitro-2-methylphenol	Lin2		0.1247	0.0100	128	160	-20.2	50.0
Diphenylamine	Ave	1.318	1.194		61.6	68.0	-9.4	50.0
N-Nitrosodiphenylamine	Ave	0.5612	0.5057	0.0100	72.1	80.0	-9.9	50.0
1,2-Diphenylhydrazine	Ave	1.669	1.510		73.2	80.9	-9.5	50.0
Azobenzene	Ave	1.687	1.527		72.4	80.0	-9.5	50.0
4-Bromophenyl phenyl ether	Ave	0.2185	0.1915	0.1000	70.1	80.0	-12.4	50.0
Hexachlorobenzene	Ave	0.2133	0.1800	0.1000	67.5	80.0	-15.6	50.0
Atrazine	Ave	0.1852	0.1985		85.7	80.0	7.2	50.0
Pentachlorophenol	Lin2		0.1110	0.0500	119	160	-25.5	50.0
Phenanthrene	Ave	1.126	0.9933	0.7000	70.5	80.0	-11.8	50.0
Anthracene	Ave	1.169	1.037	0.7000	71.0	80.0	-11.3	50.0
Carbazole	Ave	1.121	0.9779	0.0100	69.8	80.0	-12.8	50.0
Alachlor	Ave	0.1527	0.1396		73.1	80.0	-8.6	50.0
Di-n-butyl phthalate	Ave	1.235	1.146	0.0100	74.3	80.0	-7.2	50.0
Fluoranthene	Ave	1.297	1.135	0.6000	70.0	80.0	-12.4	50.0
Pyrene	Ave	1.365	1.217	0.6000	71.3	80.0	-10.8	50.0
Famphur	Qua		0.3747		66.9	80.0	-16.4	50.0
Butyl benzyl phthalate	Ave	0.6078	0.5667	0.0100	74.6	80.0	-6.8	50.0
3,3'-Dichlorobenzidine	Ave	0.4712	0.3827	0.0100	65.0	80.0	-18.8	50.0
Benzo[a]anthracene	Ave	1.360	1.165	0.8000	68.5	80.0	-14.3	50.0
Chrysene	Ave	1.290	1.103	0.7000	68.4	80.0	-14.5	50.0
Bis(2-ethylhexyl) phthalate	Ave	0.8047	0.7620	0.0100	75.8	80.0	-5.3	50.0
Di-n-octyl phthalate	Ave	1.432	1.331	0.0100	74.4	80.0	-7.1	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVC 280-437797/26 Calibration Date: 11/16/2018 02:44

Instrument ID: SMS_D Calib Start Date: 09/18/2018 12:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 09/18/2018 16:20

Lab File ID: D30235.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[b]fluoranthene	Ave	1.295	1.118	0.7000	69.0	80.0	-13.7	50.0
Benzo[k]fluoranthene	Ave	1.293	1.177	0.7000	72.8	80.0	-9.0	50.0
Benzo[a]pyrene	Ave	1.280	1.111	0.7000	69.5	80.0	-13.2	50.0
Indeno[1,2,3-cd]pyrene	Ave	1.164	0.9688	0.5000	66.6	80.0	-16.8	50.0
Dibenz(a,h)anthracene	Ave	1.160	0.9794	0.4000	67.5	80.0	-15.6	50.0
Benzo[g,h,i]perylene	Ave	1.222	1.016	0.5000	66.5	80.0	-16.9	50.0
2-Fluorophenol (Surr)	Ave	1.516	1.385		73.1	80.0	-8.7	50.0
Phenol-d5 (Surr)	Ave	2.050	1.886		73.6	80.0	-8.0	50.0
Nitrobenzene-d5 (Surr)	Ave	0.4705	0.4252		72.3	80.0	-9.6	50.0
2-Fluorobiphenyl	Ave	1.492	1.356		72.7	80.0	-9.1	50.0
2,4,6-Tribromophenol (Surr)	Ave	0.2102	0.1779		67.7	80.0	-15.4	50.0
Terphenyl-d14 (Surr)	Ave	0.9724	0.8757		72.0	80.0	-9.9	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30235.D
Lims ID: CCVC HSL
Client ID:
Sample Type: CCVC
Inject. Date: 16-Nov-2018 02:44:30 ALS Bottle#: 25 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVC HSL
Operator ID: HOEFLERA Instrument ID: SMS_D
Sublist: chrom-SMSD_8270C*sub30

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:29:34 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:21:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.669	4.664	0.005	97	135555	40.0	40.0	
* 2 Naphthalene-d8	136	5.904	5.903	0.001	100	567733	40.0	40.0	
* 3 Acenaphthene-d10	164	7.656	7.650	0.006	98	340079	40.0	40.0	
* 4 Phenanthrene-d10	188	9.146	9.141	0.005	100	682231	40.0	40.0	
* 5 Chrysene-d12	240	13.286	13.281	0.005	97	654010	40.0	40.0	
* 6 Perylene-d12	264	17.272	17.261	0.011	100	618644	40.0	40.0	
$ 7 2-Fluorophenol	112	3.478	3.478	0.000	96	375499	80.0	73.1	
$ 8 Phenol-d5	99	4.317	4.317	0.000	99	511222	80.0	73.6	
$ 9 Nitrobenzene-d5	82	5.193	5.188	0.005	96	482849	80.0	72.3	
$ 11 2-Fluorobiphenyl	172	6.967	6.961	0.006	98	922059	80.0	72.7	
$ 12 2,4,6-Tribromophenol	330	8.446	8.441	0.005	93	121018	80.0	67.7	
$ 13 Terphenyl-d14	244	11.117	11.112	0.005	98	1145398	80.0	72.0	
16 1,4-Dioxane	88	2.020	2.025	-0.005	99	165741	80.0	70.5	
17 N-Nitrosodimethylamine	74	2.260	2.265	-0.005	95	267448	80.0	69.8	
18 Pyridine	79	2.319	2.324	-0.005	95	878536	160.0	134.2	
28 Phenol	94	4.333	4.328	0.005	91	544654	80.0	73.5	
30 Aniline	93	4.354	4.349	0.005	99	652051	80.0	71.7	
31 Alpha Methyl Styrene	118	4.402	4.402	0.000	78	418060	80.0	77.8	
32 Bis(2-chloroethyl)ether	93	4.392	4.392	0.000	95	392765	80.0	70.8	
35 n-Decane	43	4.499	4.498	0.001	98	383322	80.0	75.8	
36 2-Chlorophenol	128	4.483	4.477	0.006	96	396157	80.0	73.6	
37 1,3-Dichlorobenzene	146	4.621	4.616	0.005	98	421517	80.0	75.1	
38 1,4-Dichlorobenzene	146	4.686	4.685	0.001	97	427912	80.0	74.7	
39 Benzyl alcohol	108	4.787	4.782	0.005	97	288811	80.0	72.2	
40 1,2-Dichlorobenzene	146	4.835	4.835	0.000	97	411745	80.0	75.6	
41 2-Methylphenol	108	4.899	4.894	0.005	89	400883	80.0	73.4	
43 2,2'-oxybis[1-chloropropan	45	4.910	4.904	0.006	99	532566	80.0	74.5	
44 Indene	116	4.921	4.921	0.001	99	1372550	160.0	158.0	
45 3-Methylphenol	108	5.043	5.038	0.005	72	422130	80.0	73.5	
46 3 & 4 Methylphenol	108	5.043	5.038	0.005	72	422130	80.0	73.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
47 4-Methylphenol	108	5.043	5.038	0.005	72	422130	80.0	73.5	
48 N-Nitrosodi-n-propylamine	70	5.033	5.033	0.000	93	337300	80.0	75.7	
50 Acetophenone	105	5.043	5.038	0.005	95	599522	80.0	75.2	
53 Hexachloroethane	117	5.166	5.161	0.005	98	161892	80.0	75.4	
54 Nitrobenzene	77	5.209	5.209	0.000	94	500463	80.0	74.8	
57 Isophorone	82	5.439	5.433	0.006	98	903244	80.0	75.6	
59 2-Nitrophenol	139	5.524	5.519	0.005	96	226104	80.0	74.6	
60 2,4-Dimethylphenol	107	5.556	5.551	0.005	98	443790	80.0	74.4	
63 Bis(2-chloroethoxy)methane	93	5.631	5.631	0.000	95	502074	80.0	72.1	
64 Benzoic acid	105	5.685	5.684	0.000	88	736089	160.0	140.5	
65 3,5-Dimethylphenol	107	5.685	5.684	0.000	96	459800	80.0	76.4	
68 2,4-Dichlorophenol	162	5.770	5.765	0.005	98	344128	80.0	74.0	
70 1,2,4-Trichlorobenzene	180	5.845	5.845	0.000	97	365030	80.0	71.1	
72 Naphthalene	128	5.925	5.925	0.000	100	1194833	80.0	75.2	
73 4-Chloroaniline	127	5.968	5.962	0.006	99	520326	80.0	72.6	
74 2,6-Dichlorophenol	162	5.984	5.984	0.000	96	340158	80.0	73.6	
76 Hexachlorobutadiene	225	6.048	6.048	0.000	98	197535	80.0	72.7	
80 Caprolactam	55	6.310	6.304	0.006	97	191382	80.0	68.1	
83 4-Chloro-3-methylphenol	107	6.454	6.448	0.006	97	395886	80.0	74.9	
87 2-Methylnaphthalene	142	6.609	6.609	0.000	99	817914	80.0	74.8	
89 1-Methylnaphthalene	142	6.710	6.705	0.005	100	765888	80.0	73.8	
90 Hexachlorocyclopentadiene	237	6.774	6.774	0.000	98	236539	80.0	71.7	
91 1,2,4,5-Tetrachlorobenzene	216	6.780	6.780	0.000	98	375101	80.0	73.5	
94 2,4,6-Trichlorophenol	196	6.892	6.886	0.006	95	261830	80.0	72.5	
95 2,3-Dichlorobenzenamine	161	6.886	6.886	0.000	95	414481	80.0	74.1	
96 2,4,5-Trichlorophenol	196	6.940	6.935	0.006	98	280055	80.0	69.8	
100 1,1'-Biphenyl	154	7.068	7.063	0.005	95	987963	80.0	73.2	
102 2-Chloronaphthalene	162	7.095	7.095	0.000	99	761675	80.0	71.2	
105 2-Nitroaniline	65	7.186	7.186	0.000	94	284288	80.0	72.9	
111 Dimethyl phthalate	163	7.357	7.351	0.006	99	884296	80.0	72.0	
112 1,3-Dinitrobenzene	168	7.389	7.383	0.006	86	160390	80.0	71.9	
113 2,6-Dinitrotoluene	165	7.415	7.415	0.000	94	217418	80.0	70.8	
115 Acenaphthylene	152	7.517	7.511	0.006	100	1260570	80.0	76.6	
117 3-Nitroaniline	138	7.597	7.592	0.005	96	246836	80.0	70.8	
119 Acenaphthene	153	7.688	7.682	0.006	99	790746	80.0	74.7	
120 2,4-Dinitrophenol	184	7.698	7.693	0.005	93	299021	160.0	131.6	
121 4-Nitrophenol	109	7.784	7.779	0.005	96	283634	160.0	146.3	
124 2,4-Dinitrotoluene	165	7.827	7.821	0.006	96	301247	80.0	71.8	
125 Dibenzofuran	168	7.859	7.853	0.006	100	1148885	80.0	71.9	
129 2,3,4,6-Tetrachlorophenol	232	7.987	7.982	0.005	74	231173	80.0	69.4	
131 Hexadecane	57	8.067	8.067	0.000	97	562959	80.0	75.9	
132 Diethyl phthalate	149	8.056	8.051	0.005	100	902532	80.0	73.8	
134 4-Chlorophenyl phenyl ethe	204	8.185	8.179	0.006	98	441532	80.0	70.7	
135 Fluorene	166	8.201	8.201	0.000	99	936781	80.0	72.9	
138 4-Nitroaniline	138	8.211	8.211	0.000	96	270221	80.0	72.5	
139 4,6-Dinitro-2-methylphenol	198	8.243	8.238	0.005	94	340157	160.0	127.6	
140 Diphenylamine	169	8.302	8.297	0.005	96	690047	68.0	61.6	
141 N-Nitrosodiphenylamine	169	8.302	8.297	0.005	98	690047	80.0	72.1	
142 1,2-Diphenylhydrazine	77	8.345	8.345	0.000	96	1038499	80.9	73.2	
143 Azobenzene	77	8.345	8.345	0.000	96	1038499	80.0	72.4	
145 2,4,6 - Tribromophenol	330	8.446	8.441	0.005	93	121018	80.0	67.7	
152 4-Bromophenyl phenyl ether	248	8.676	8.671	0.005	96	261245	80.0	70.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
153 Hexachlorobenzene	284	8.767	8.767	0.000	95	245636	80.0	67.5	
155 Atrazine	200	8.820	8.820	0.000	96	270793	80.0	85.7	
156 n-Octadecane	85	8.986	8.986	0.000	97	279342	80.0	76.9	
157 Pentachlorophenol	266	8.959	8.959	0.000	95	302812	160.0	119.1	
163 Phenanthrene	178	9.168	9.168	0.000	100	1355323	80.0	70.5	
164 Anthracene	178	9.221	9.216	0.005	100	1415191	80.0	71.0	
165 Carbazole	167	9.371	9.371	0.001	100	1334368	80.0	69.8	
166 Alachlor	188	9.499	9.499	0.000	95	190501	80.0	73.1	
169 Di-n-butyl phthalate	149	9.707	9.702	0.005	100	1563866	80.0	74.3	
176 Fluoranthene	202	10.557	10.551	0.006	100	1549090	80.0	70.0	
180 Pyrene	202	10.898	10.893	0.005	99	1591723	80.0	71.3	
186 Famphur	218	11.903	11.892	0.011	99	490055	80.0	66.9	
187 Butyl benzyl phthalate	149	12.020	12.015	0.005	95	741251	80.0	74.6	
190 3,3'-Dichlorobenzidine	252	13.217	13.206	0.011	99	500622	80.0	65.0	
192 Benzo[a]anthracene	228	13.260	13.254	0.006	100	1523387	80.0	68.5	
193 Bis(2-ethylhexyl) phthalat	149	13.404	13.398	0.006	99	996687	80.0	75.8	
194 Chrysene	228	13.350	13.345	0.005	100	1442561	80.0	68.4	
197 Di-n-octyl phthalate	149	15.231	15.220	0.011	100	1740783	80.0	74.4	
198 Benzo[b]fluoranthene	252	16.171	16.160	0.011	100	1382771	80.0	69.0	
200 Benzo[k]fluoranthene	252	16.251	16.240	0.011	100	1456855	80.0	72.8	
201 Benzo[e]pyrene	252	16.962	16.951	0.011	98	1293115	80.0	70.6	
202 Benzo[a]pyrene	252	17.111	17.101	0.010	100	1375055	80.0	69.5	
208 Indeno[1,2,3-cd]pyrene	276	20.418	20.407	0.011	74	1198657	80.0	66.6	
209 Dibenz(a,h)anthracene	278	20.504	20.498	0.006	79	1211842	80.0	67.5	
210 Benzo[g,h,i]perylene	276	21.161	21.155	0.006	100	1257093	80.0	66.5	
S 219 Total Cresols	108				0			147.0	
S 220 Methyl Phenols,Total	108				0			147.0	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

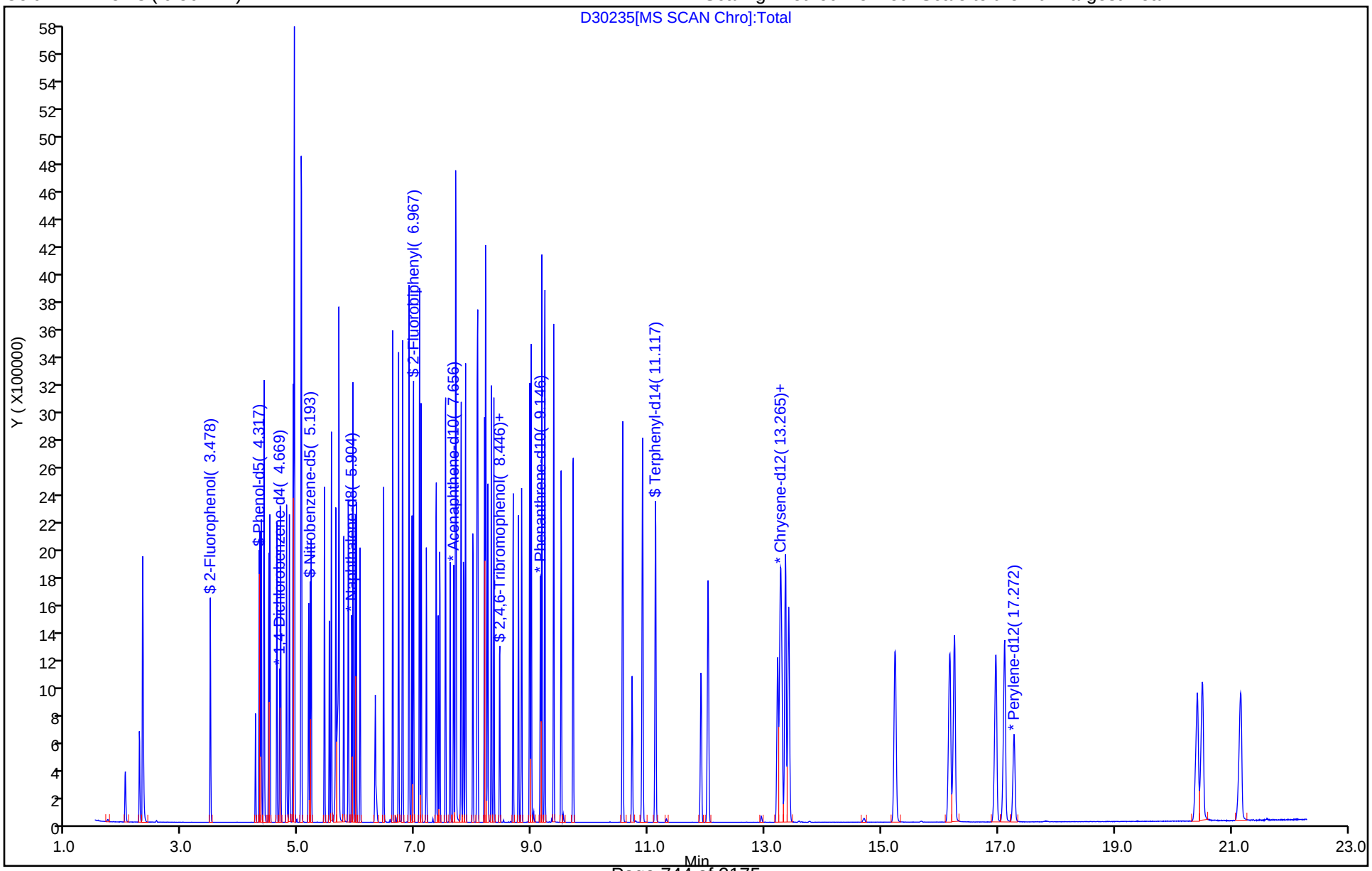
Report Date: 16-Nov-2018 11:29:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30235.D

Injection Date:	16-Nov-2018 02:44:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	CCVC HSL			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D				
Lims ID:	DFTPP				
Client ID:					
Sample Type:	DFTPP				
Inject. Date:	18-Sep-2018 12:37:30	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Sample Info:	DFTPP				
Operator ID:	KIEKELD	Instrument ID:	SMS_D		
Method:	\\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\SMSD_8270C.m				
Limit Group:	MSSV - 8270C_625				
Method Label:	8270C / 625				
Last Update:	19-Sep-2018 09:58:04	Calib Date:	18-Sep-2018 21:17:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29313.D				
Column 1 :	VF-5ms (0.50 mm)		Det: MS SCAN		
Process Host:	CTX0310				
First Level Reviewer: kiekeld		Date:	18-Sep-2018 13:18:49		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
25 Pentachlorophenol_T	266	3.856	3.856	0.000	92	95612	NR	NR	
42 Benzidine_T	184	4.939	4.939	0.000	100	664636	NR	NR	
215 DFTPP									
216 4,4'-DDE	246		5.066				ND	ND	
217 4,4'-DDD	235	5.381	5.381	0.000	90	3265	NR	NR	a
218 4,4'-DDT	235	5.608	5.608	0.000	97	267433	NR	NR	a

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- ND - Not Detected or Marked ND

Review Flags
- a - User Assigned ID

Reagents:

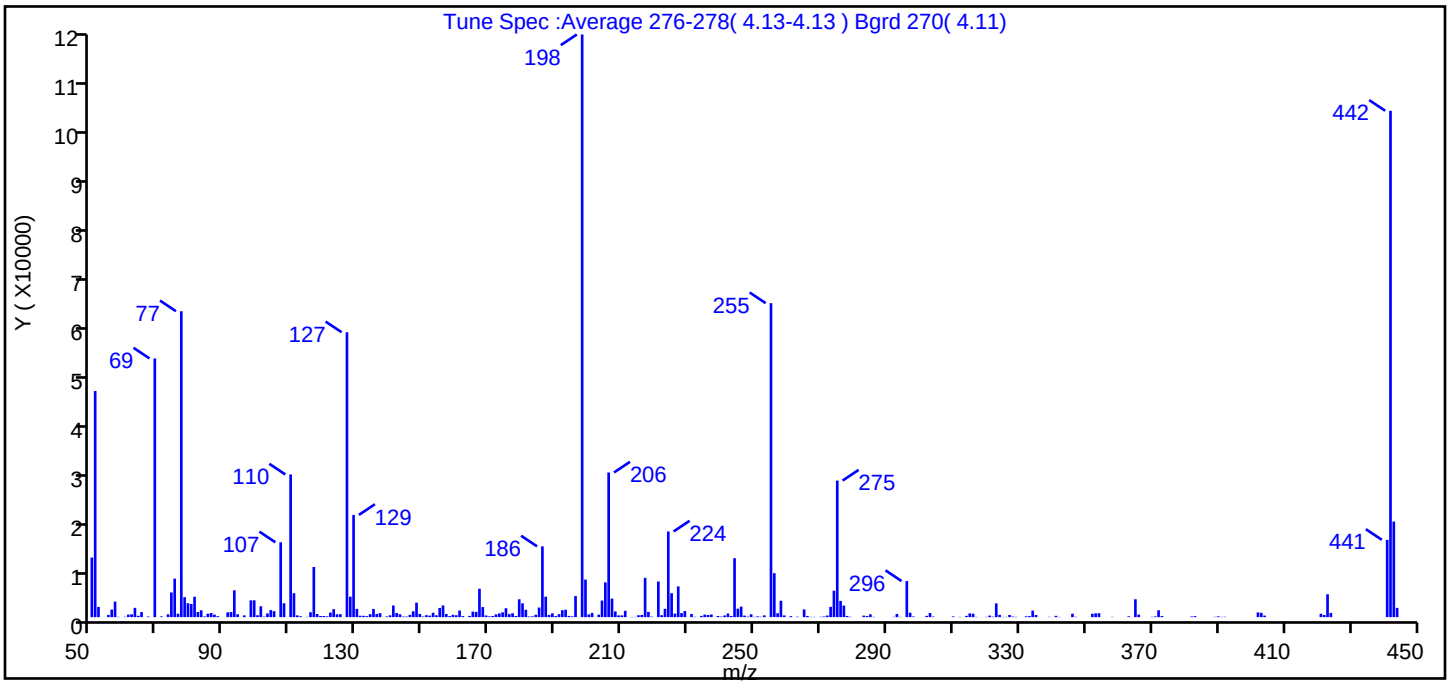
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D
Injection Date: 18-Sep-2018 12:37:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

215 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	38.8
68	<2% of mass 69	0.0 (0.0)
69	Present	44.4
70	<2% of mass 69	0.0 (0.0)
127	40-60% of mass 198	48.9
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.4
275	10-30% of mass 198	23.4
365	>1% of mass 198	3.1
441	Present but less than mass 443	13.3 (80.8)
442	>40% of mass 198	86.9
443	17-23% of mass 442	16.4 (18.9)

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D\SMSD_8270C.rslt\spectra.d
Injection Date: 18-Sep-2018 12:37:30
Spectrum: Tune Spec :Average 276-278(4.13-4.13) Bgrd 270(4.11)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 268

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	12042	131.00	287	201.00	850	279.00	63
51.00	45720	132.00	275	203.00	497	283.00	309
52.00	2058	133.00	202	204.00	3356	284.00	223
55.00	442	134.00	601	205.00	7025	285.00	574
56.00	1534	135.00	1656	206.00	29240	286.00	60
57.00	3136	136.00	637	207.00	3750	292.00	63
58.00	64	137.00	803	208.00	1158	293.00	647
60.00	71	139.00	132	209.00	357	294.00	53
61.00	514	140.00	365	210.00	357	296.00	7298
62.00	574	141.00	2348	211.00	1277	297.00	895
63.00	1874	142.00	828	213.00	50	298.00	132
64.00	283	143.00	582	214.00	52	302.00	262
65.00	1030	144.00	120	215.00	385	303.00	829
67.00	129	145.00	107	216.00	448	304.00	118
69.00	52288	146.00	459	217.00	7938	310.00	147
71.00	153	147.00	1181	218.00	1060	312.00	59
73.00	572	148.00	2932	219.00	100	314.00	265
74.00	4989	149.00	648	221.00	7200	315.00	752
75.00	7790	150.00	123	222.00	395	316.00	692
76.00	691	151.00	400	223.00	1680	317.00	56
77.00	61832	152.00	307	224.00	17320	320.00	57
78.00	4032	153.00	892	225.00	4838	321.00	312
79.00	2812	154.00	376	226.00	706	322.00	102
80.00	2665	155.00	1861	227.00	6213	323.00	2777
81.00	4126	156.00	2369	228.00	819	324.00	464
82.00	1035	157.00	638	229.00	1245	325.00	55
83.00	1387	158.00	218	231.00	641	326.00	57
84.00	132	159.00	473	232.00	70	327.00	445
85.00	690	160.00	384	234.00	260	328.00	121
86.00	827	161.00	1334	235.00	509	329.00	61
87.00	506	162.00	208	236.00	447	332.00	171
88.00	196	164.00	252	237.00	534	333.00	218
91.00	965	165.00	1120	239.00	233	334.00	1324

Report Date: 19-Sep-2018 09:58:04 Chrom Revision: 2.3 19-Jul-2018 15:14:50
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D\SMSD_8270C.rslt\spectra.d
Injection Date: 18-Sep-2018 12:37:30
Spectrum: Tune Spec :Average 276-278(4.13-4.13) Bgrd 270(4.11)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 268

m/z	Y	m/z	Y	m/z	Y	m/z	Y
92.00	1029	166.00	1062	240.00	98	335.00	437
93.00	5419	167.00	5733	241.00	339	339.00	63
94.00	587	168.00	2039	242.00	737	341.00	267
95.00	13	169.00	337	243.00	228	342.00	50
96.00	357	170.00	154	244.00	11917	346.00	692
98.00	3397	171.00	240	245.00	1719	347.00	74
99.00	3407	172.00	564	246.00	2129	352.00	679
100.00	382	173.00	754	247.00	315	353.00	770
101.00	2190	174.00	972	248.00	100	354.00	792
102.00	111	175.00	1798	249.00	575	358.00	62
103.00	751	176.00	615	250.00	57	363.00	168
104.00	1433	177.00	783	251.00	155	365.00	3612
105.00	1207	178.00	230	252.00	73	366.00	512
107.00	15131	179.00	3609	253.00	359	370.00	69
108.00	2808	180.00	2791	255.00	63464	371.00	147
110.00	28840	181.00	1493	256.00	8885	372.00	1382
111.00	4833	182.00	134	257.00	788	373.00	236
112.00	361	183.00	160	258.00	3315	382.00	142
113.00	184	184.00	483	259.00	348	383.00	208
115.00	56	185.00	1942	261.00	205	389.00	65
116.00	986	186.00	14305	263.00	93	390.00	166
117.00	10143	187.00	4135	265.00	1567	391.00	52
118.00	633	188.00	443	266.00	239	392.00	77
119.00	241	189.00	777	267.00	56	402.00	956
120.00	231	190.00	215	268.00	53	403.00	875
121.00	157	191.00	591	270.00	77	404.00	314
122.00	931	192.00	1408	271.00	137	421.00	690
123.00	1611	193.00	1502	272.00	327	422.00	435
124.00	586	194.00	250	273.00	2080	423.00	4621
125.00	600	195.00	151	274.00	5344	424.00	843
127.00	57584	196.00	4255	275.00	27600	441.00	15626
128.00	4144	198.00	117768	276.00	3279	442.00	102352
129.00	20664	199.00	7593	277.00	2336	443.00	19328
130.00	1670	200.00	546	278.00	247	444.00	1874

m/z	Y	m/z	Y	m/z	Y	m/z	Y
92.00	1029	166.00	1062	240.00	98	335.00	437
93.00	5419	167.00	5733	241.00	339	339.00	63
94.00	587	168.00	2039	242.00	737	341.00	267
95.00	13	169.00	337	243.00	228	342.00	50
96.00	357	170.00	154	244.00	11917	346.00	692
98.00	3397	171.00	240	245.00	1719	347.00	74
99.00	3407	172.00	564	246.00	2129	352.00	679
100.00	382	173.00	754	247.00	315	353.00	770
101.00	2190	174.00	972	248.00	100	354.00	792
102.00	111	175.00	1798	249.00	575	358.00	62
103.00	751	176.00	615	250.00	57	363.00	168
104.00	1433	177.00	783	251.00	155	365.00	3612
105.00	1207	178.00	230	252.00	73	366.00	512
107.00	15131	179.00	3609	253.00	359	370.00	69
108.00	2808	180.00	2791	255.00	63464	371.00	147
110.00	28840	181.00	1493	256.00	8885	372.00	1382
111.00	4833	182.00	134	257.00	788	373.00	236
112.00	361	183.00	160	258.00	3315	382.00	142
113.00	184	184.00	483	259.00	348	383.00	208
115.00	56	185.00	1942	261.00	205	389.00	65
116.00	986	186.00	14305	263.00	93	390.00	166
117.00	10143	187.00	4135	265.00	1567	391.00	52
118.00	633	188.00	443	266.00	239	392.00	77
119.00	241	189.00	777	267.00	56	402.00	956
120.00	231	190.00	215	268.00	53	403.00	875
121.00	157	191.00	591	270.00	77	404.00	314
122.00	931	192.00	1408	271.00	137	421.00	690
123.00	1611	193.00	1502	272.00	327	422.00	435
124.00	586	194.00	250	273.00	2080	423.00	4621
125.00	600	195.00	151	274.00	5344	424.00	843
127.00	57584	196.00	4255	275.00	27600	441.00	15626
128.00	4144	198.00	117768	276.00	3279	442.00	102352
129.00	20664	199.00	7593	277.00	2336	443.00	19328
130.00	1670	200.00	546	278.00	247	444.00	1874

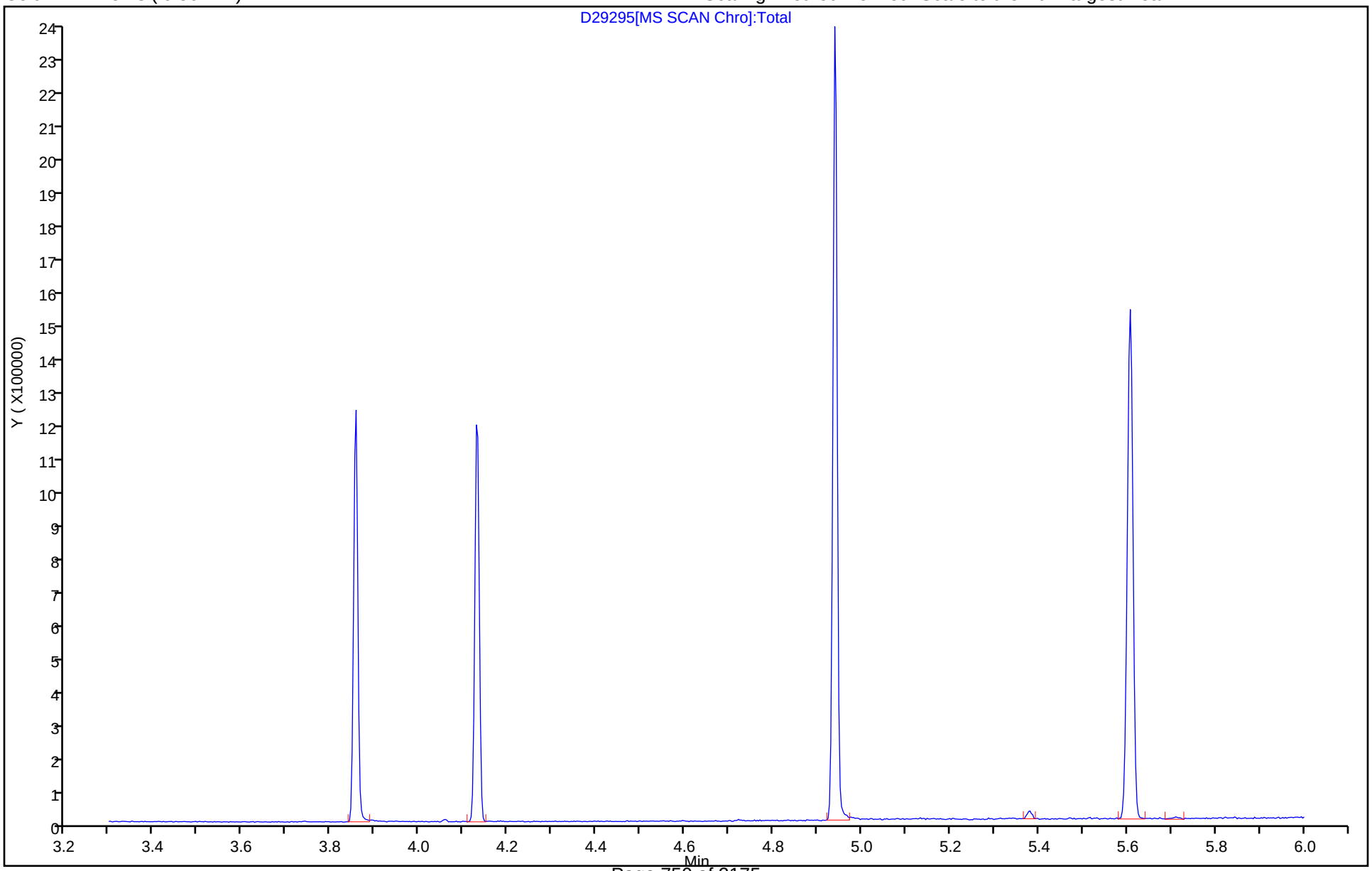
Report Date: 19-Sep-2018 09:58:04 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D

Injection Date:	18-Sep-2018 12:37:30	Instrument ID:	SMS_D	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

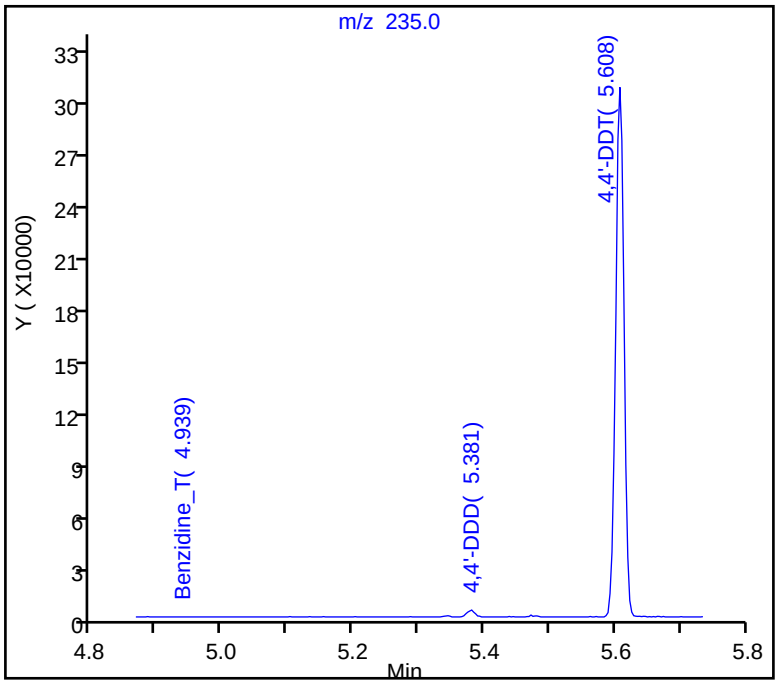


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D
Injection Date: 18-Sep-2018 12:37:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625

218 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

218 4,4'-DDT, Area = 267433
217 4,4'-DDD, Area = 3265
216 4,4'-DDE, Area = 0

%Breakdown: 1.21%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

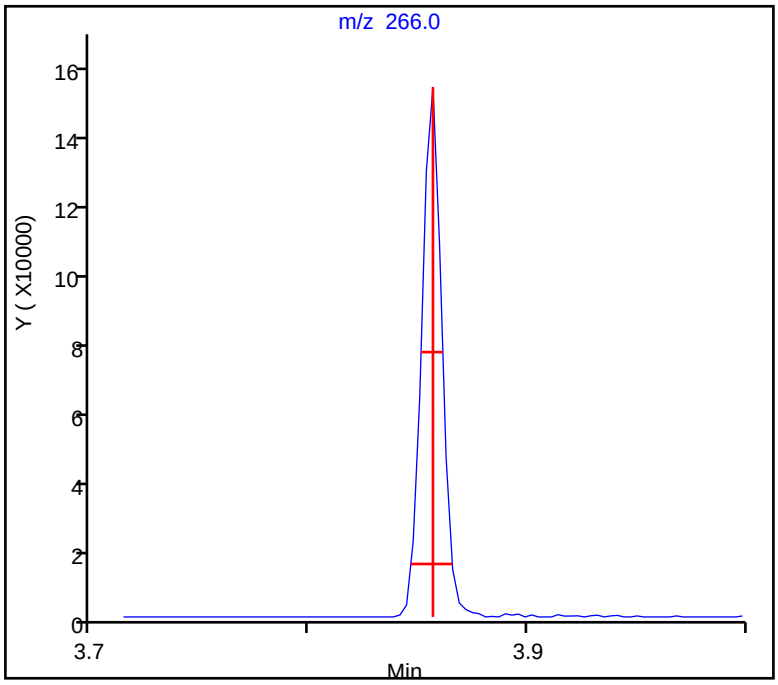
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D
Injection Date: 18-Sep-2018 12:37:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625

25 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 0.9, Max. Tailing < 5.00
Passed



Peak Tailing Report

TestAmerica Denver

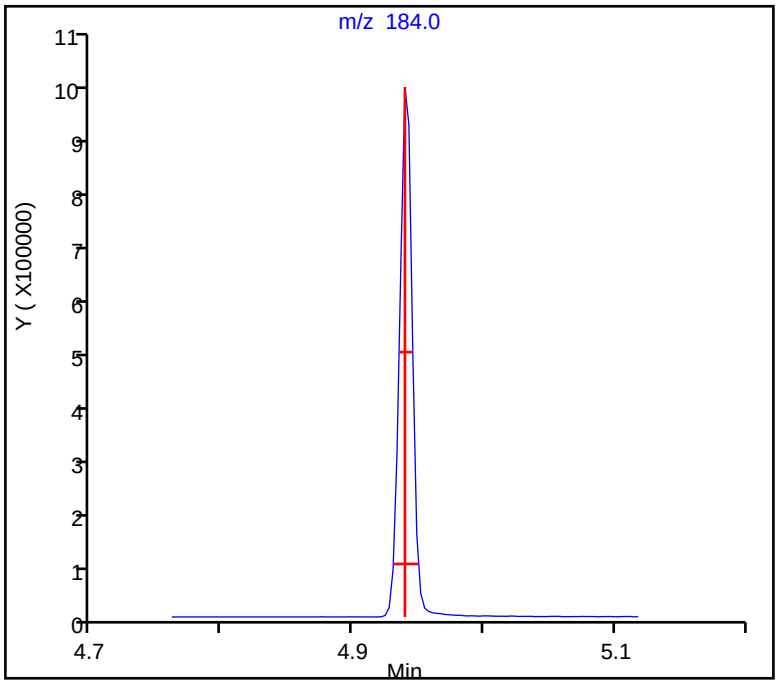
Data File: \\ChromNA\Denver\ChromData\SMS_D\20180918-74110.b\D29295.D
Injection Date: 18-Sep-2018 12:37:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625

42 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.009 (min.)

Tailing Factor = 1.2, Max. Tailing < 3.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 15-Nov-2018 15:42:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:39 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 15-Nov-2018 15:50:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
25 Pentachlorophenol_T	266	3.788	3.788	0.000	90	71009	NR	NR	
42 Benzidine_T	184	4.862	4.862	0.000	99	626012	NR	NR	
215 DFTPP									
216 4,4'-DDE	246	4.998	4.998	0.000	1	339	NR	NR	a
217 4,4'-DDD	235	5.282	5.282	0.000	95	3081	NR	NR	a
218 4,4'-DDT	235	5.503	5.503	0.000	98	260391	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

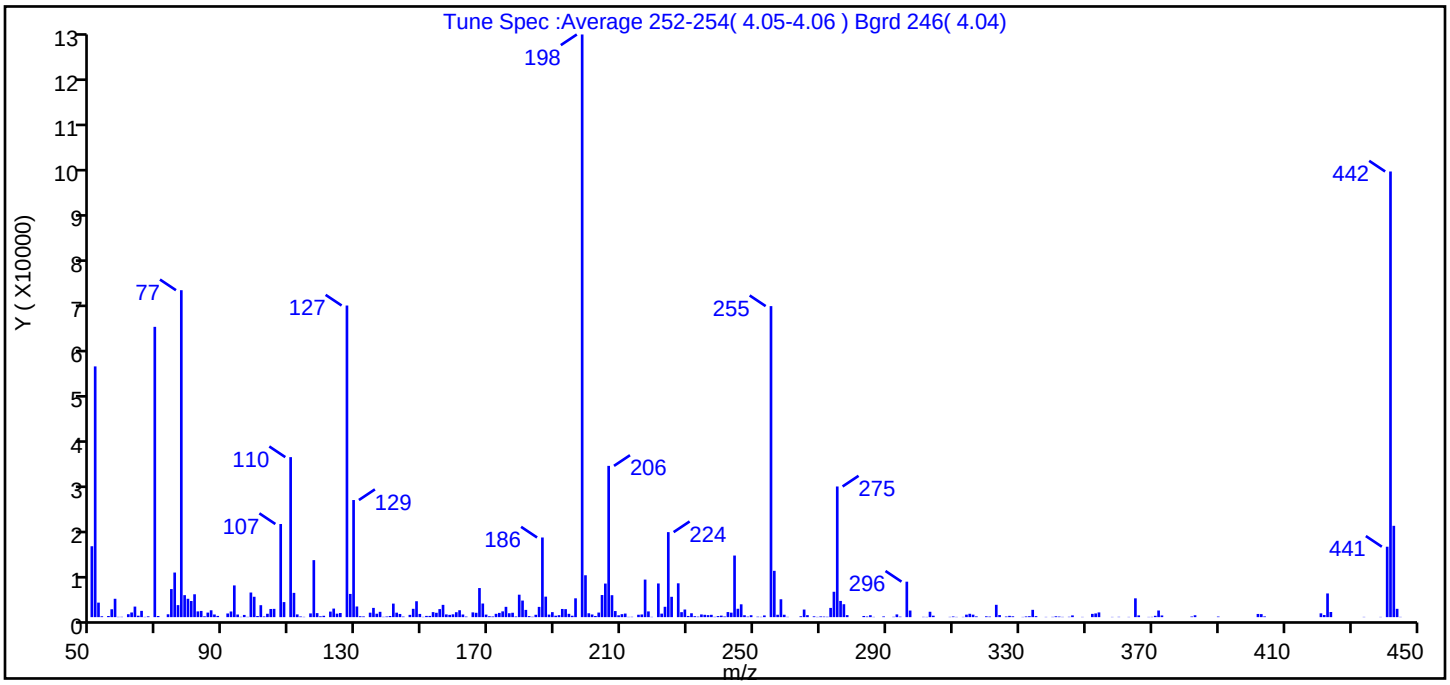
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D
Injection Date: 15-Nov-2018 15:42:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: HOEFLERA ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

215 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	43.0
68	<2% of mass 69	0.0 (0.0)
69	Present	49.8
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	53.5
197	<1% of mass 198	0.0
199	5-9% of mass 198	7.2
275	10-30% of mass 198	22.4
365	>1% of mass 198	3.2
441	Present but less than mass 443	12.1 (77.1)
442	>40% of mass 198	76.5
443	17-23% of mass 442	15.7 (20.5)

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D\SMSD_8270C.rslt\spectra.d
Injection Date: 15-Nov-2018 15:42:30
Spectrum: Tune Spec :Average 252-254(4.05-4.06) Bgrd 246(4.04)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	15112	131.00	189	204.00	4710	286.00	54
51.00	53440	132.00	157	205.00	7158	289.00	153
52.00	3093	134.00	948	206.00	32240	292.00	77
53.00	186	135.00	1973	207.00	4677	293.00	583
55.00	244	136.00	729	208.00	1297	294.00	105
56.00	1681	137.00	1136	209.00	394	296.00	7560
57.00	3915	138.00	69	210.00	636	297.00	1406
58.00	64	139.00	134	211.00	761	301.00	66
59.00	72	140.00	248	212.00	61	302.00	51
61.00	622	141.00	2887	213.00	74	303.00	1149
62.00	994	142.00	953	215.00	513	304.00	307
63.00	2250	143.00	677	216.00	572	309.00	59
64.00	305	144.00	121	217.00	8005	310.00	143
65.00	1339	146.00	484	218.00	1223	311.00	53
66.00	54	147.00	1775	219.00	61	313.00	57
67.00	170	148.00	3391	221.00	7179	314.00	534
69.00	61872	149.00	685	222.00	751	315.00	715
70.00	244	150.00	60	223.00	2207	316.00	533
73.00	610	151.00	266	224.00	18120	317.00	161
74.00	5983	152.00	262	225.00	4334	320.00	179
75.00	9505	153.00	1071	227.00	7212	321.00	123
76.00	2561	154.00	928	228.00	1062	323.00	2629
77.00	69680	155.00	1714	229.00	1626	324.00	450
78.00	4685	156.00	2617	230.00	254	326.00	133
79.00	3913	157.00	584	231.00	829	327.00	277
80.00	3440	158.00	488	232.00	199	328.00	180
81.00	4875	159.00	604	233.00	109	331.00	51
82.00	1228	160.00	1050	234.00	578	332.00	148
83.00	1328	161.00	1471	235.00	500	333.00	205
84.00	173	162.00	565	236.00	423	334.00	1559
85.00	968	163.00	118	237.00	495	335.00	215
86.00	1460	165.00	1015	238.00	68	338.00	54
87.00	567	166.00	926	239.00	232	340.00	63

Report Date: 16-Nov-2018 11:28:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D\SMSD_8270C.rslt\spectra.d
Injection Date: 15-Nov-2018 15:42:30
Spectrum: Tune Spec :Average 252-254(4.05-4.06) Bgrd 246(4.04)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	264	167.00	6200	240.00	325	341.00	184
91.00	781	168.00	2904	241.00	132	342.00	123
92.00	1208	169.00	542	242.00	1083	343.00	58
93.00	6761	170.00	197	243.00	955	345.00	75
94.00	558	171.00	143	244.00	13129	346.00	370
95.00	66	172.00	711	245.00	1786	349.00	52
96.00	470	173.00	907	246.00	2736	352.00	697
97.00	63	174.00	1232	247.00	407	353.00	789
98.00	5248	175.00	2198	248.00	115	354.00	1006
99.00	4344	176.00	834	249.00	410	358.00	51
100.00	238	177.00	936	251.00	98	360.00	66
101.00	2547	178.00	137	252.00	63	363.00	52
102.00	150	179.00	4784	253.00	365	365.00	4009
103.00	721	180.00	3534	255.00	66288	366.00	371
104.00	1741	181.00	1546	256.00	9872	369.00	50
105.00	1765	182.00	223	257.00	506	370.00	59
107.00	19848	183.00	82	258.00	3812	371.00	287
108.00	3209	184.00	505	259.00	509	372.00	1414
110.00	34104	185.00	2185	260.00	64	373.00	359
111.00	5175	186.00	16976	264.00	183	382.00	134
112.00	584	187.00	4369	265.00	1620	383.00	401
113.00	141	188.00	544	266.00	420	390.00	126
114.00	63	189.00	1067	268.00	174	402.00	680
116.00	797	190.00	303	269.00	54	403.00	646
117.00	12150	191.00	418	270.00	155	404.00	154
118.00	856	192.00	1743	271.00	119	421.00	811
119.00	177	193.00	1706	272.00	82	422.00	451
120.00	290	194.00	706	273.00	1969	423.00	5053
122.00	1184	195.00	298	274.00	5409	424.00	1096
123.00	1825	196.00	4013	275.00	27848	434.00	53
124.00	741	198.00	124184	276.00	3458	439.00	51
125.00	883	199.00	8926	277.00	2754	441.00	15010
127.00	66416	200.00	826	278.00	429	442.00	94984
128.00	4949	201.00	565	283.00	248	443.00	19464

Report Date: 16-Nov-2018 11:28:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D\SMSD_8270C.rslt\spectra.d
Injection Date: 15-Nov-2018 15:42:30
Spectrum: Tune Spec :Average 252-254(4.05-4.06) Bgrd 246(4.04)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
129.00	24960	202.00	252	284.00	131	444.00	1773
130.00	2271	203.00	975	285.00	412	445.00	54

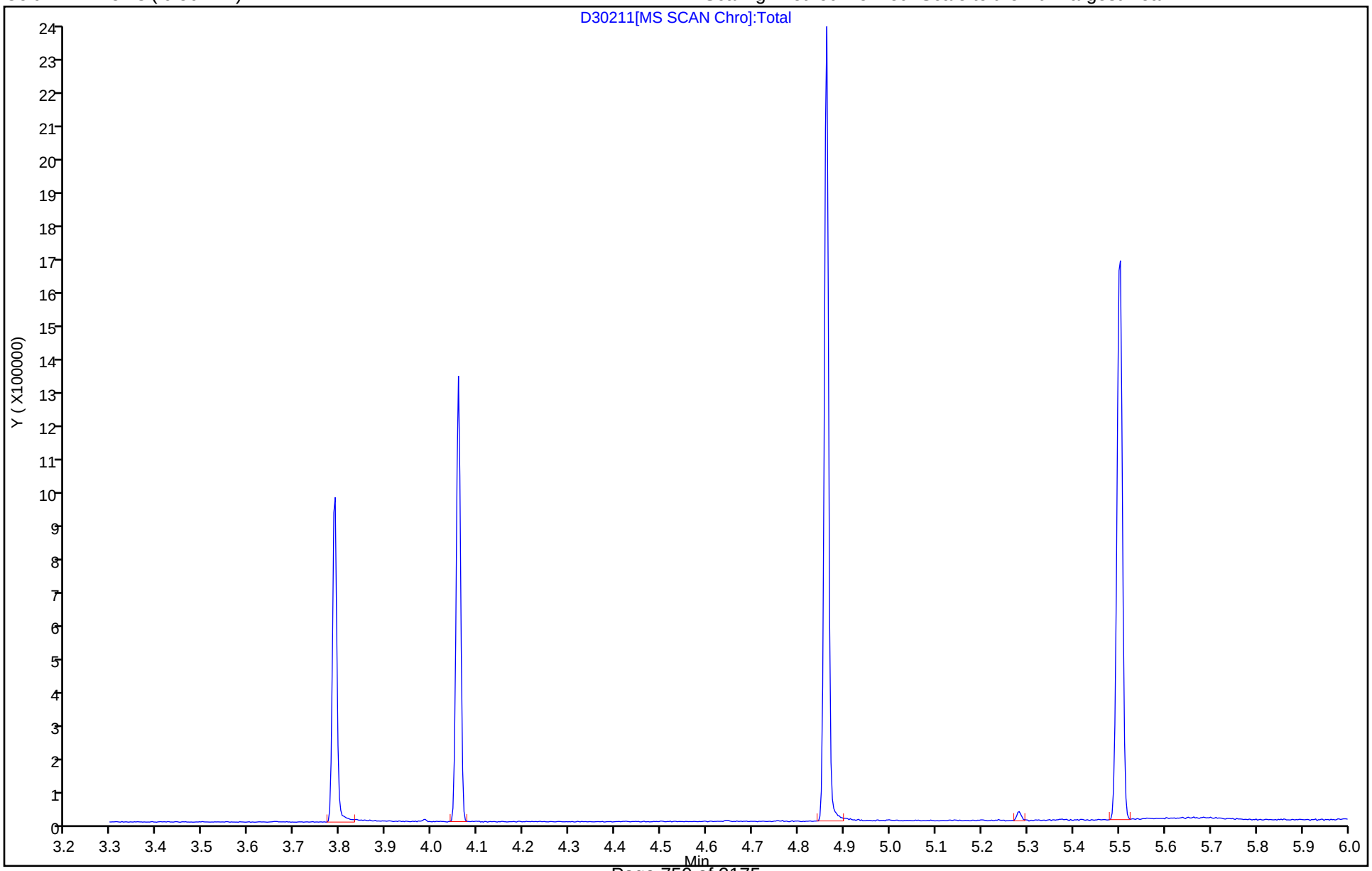
Report Date: 16-Nov-2018 11:28:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D

Injection Date:	15-Nov-2018 15:42:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

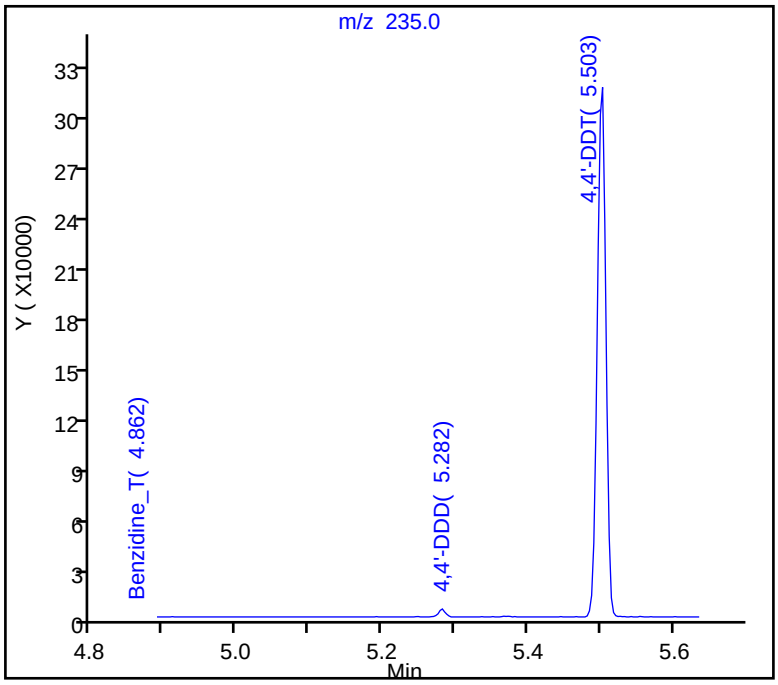


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D
Injection Date: 15-Nov-2018 15:42:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: HOEFLERA ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625

218 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

218 4,4'-DDT, Area = 260391
217 4,4'-DDD, Area = 3081
216 4,4'-DDE, Area = 339

%Breakdown: 1.30%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

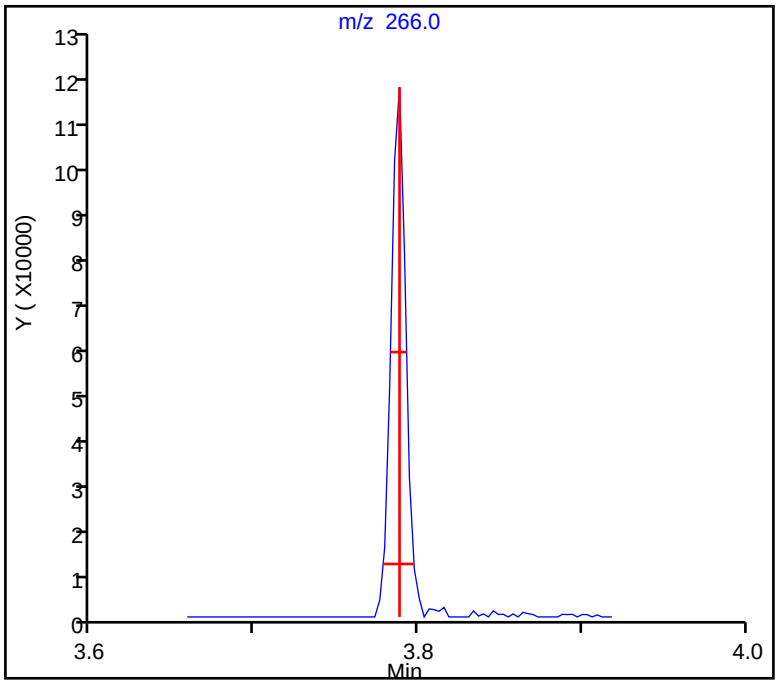
Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D
Injection Date: 15-Nov-2018 15:42:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: HOEFLERA ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625

25 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 0.9, Max. Tailing < 5.00
Passed



Peak Tailing Report

TestAmerica Denver

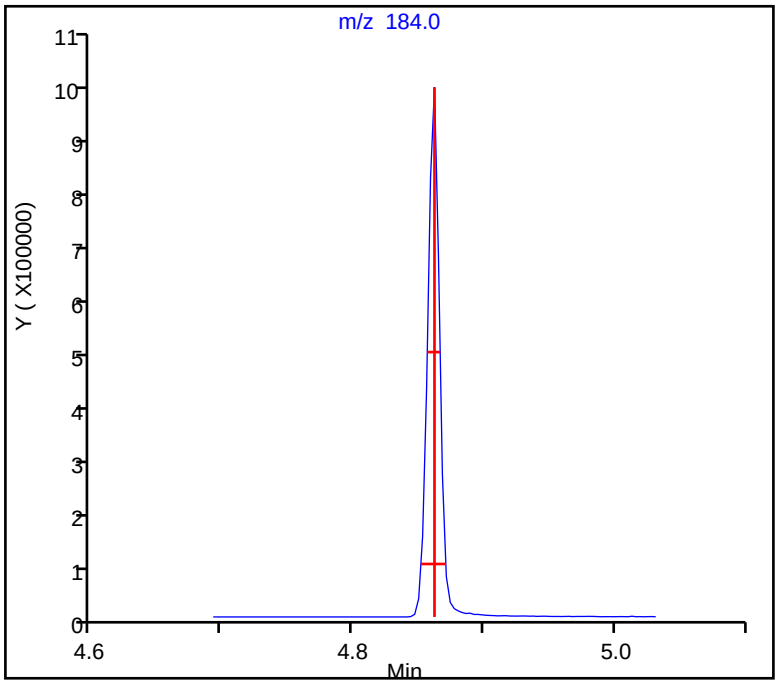
Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30211.D
Injection Date: 15-Nov-2018 15:42:30 Instrument ID: SMS_D
Lims ID: DFTPP
Client ID:
Operator ID: HOEFLERA ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSD_8270C Limit Group: MSSV - 8270C_625

42 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 0.8, Max. Tailing < 3.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LB3 280-436732/1-G

Matrix: Water (TCLP) | Lab File ID: D30220.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 11/12/2018 13:36

Sample wt/vol: 200(mL) | Date Analyzed: 11/15/2018 19:52

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437797 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-48-7	2-Methylphenol	ND		0.050	0.0049
15831-10-4	3 & 4 Methylphenol	ND		0.050	0.0013
106-46-7	1,4-Dichlorobenzene	ND		0.020	0.0016
121-14-2	2,4-Dinitrotoluene	ND		0.050	0.0083
118-74-1	Hexachlorobenzene	ND		0.050	0.0033
87-68-3	Hexachlorobutadiene	ND		0.050	0.017
67-72-1	Hexachloroethane	ND		0.050	0.011
98-95-3	Nitrobenzene	ND		0.050	0.0041
87-86-5	Pentachlorophenol	ND		0.25	0.10
110-86-1	Pyridine	ND		0.10	0.0057
95-95-4	2,4,5-Trichlorophenol	ND		0.050	0.0022
88-06-2	2,4,6-Trichlorophenol	ND		0.025	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	84		49-120
367-12-4	2-Fluorophenol (Surr)	69		50-120
118-79-6	2,4,6-Tribromophenol (Surr)	78		51-120
4165-60-0	Nitrobenzene-d5 (Surr)	77		51-120
4165-62-2	Phenol-d5 (Surr)	57		47-120
1718-51-0	Terphenyl-d14 (Surr)	88		56-120

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30220.D
Lims ID: LB3 280-436732/1-G
Client ID:
Sample Type: LB3
Inject. Date: 15-Nov-2018 19:52:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LB3280-436732_1-G
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 10:36:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.666	4.664	0.002	98	129961	40.0	40.0	
* 2 Naphthalene-d8	136	5.900	5.903	-0.003	100	536931	40.0	40.0	
* 3 Acenaphthene-d10	164	7.653	7.650	0.003	98	315753	40.0	40.0	
* 4 Phenanthrene-d10	188	9.138	9.141	-0.003	100	642364	40.0	40.0	
* 5 Chrysene-d12	240	13.273	13.281	-0.008	82	609097	40.0	40.0	
* 6 Perylene-d12	264	17.258	17.261	-0.003	99	603242	40.0	40.0	
$ 7 2-Fluorophenol	112	3.481	3.478	0.002	97	338850	100.0	68.8	
$ 8 Phenol-d5	99	4.314	4.317	-0.003	98	381544	100.0	57.3	
$ 9 Nitrobenzene-d5	82	5.190	5.188	0.002	96	488771	100.0	77.4	
$ 10 2,4,6-Trichlorophenol-d2	198		6.863					ND	
$ 11 2-Fluorobiphenyl	172	6.964	6.961	0.003	98	986653	100.0	83.8	
$ 12 2,4,6-Tribromophenol	330	8.443	8.441	0.002	96	130127	100.0	78.4	
$ 13 Terphenyl-d14	244	11.120	11.112	0.008	100	1299804	100.0	87.8	
14 Triethyl amine	86		1.815					ND	
15 2-Ethoxyethanol	59		1.996					ND	
16 1,4-Dioxane	88		2.025					ND	
17 N-Nitrosodimethylamine	74		2.265					ND	
18 Pyridine	79		2.324					ND	
19 Dimethylformamide	73		2.573					ND	
20 2-Picoline	93		2.910					ND	
21 N-Nitrosomethylethylamine	88		2.985					ND	
22 Acrylamide	71		3.246					ND	
23 Methyl methanesulfonate	80		3.246					ND	
24 N-Nitrosodiethylamine	102		3.615					ND	
25 Pentachlorophenol_T	266		3.788					ND	
26 Ethyl methanesulfonate	79		3.877					ND	
27 Benzaldehyde	106		4.167					ND	
28 Phenol	94		4.328					ND	
29 Phenylmercaptan	110		4.249					ND	
30 Aniline	93		4.349					ND	
31 Alpha Methyl Styrene	118		4.402					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
32 Bis(2-chloroethyl)ether	93		4.392					ND	
33 Pentachloroethane	117		4.363					ND	
34 Methyl styrene	118		4.445					ND	
35 n-Decane	43		4.498					ND	
36 2-Chlorophenol	128		4.477					ND	
37 1,3-Dichlorobenzene	146		4.616					ND	
38 1,4-Dichlorobenzene	146		4.685					ND	
39 Benzyl alcohol	108		4.782					ND	
40 1,2-Dichlorobenzene	146		4.835					ND	
41 2-Methylphenol	108		4.894					ND	
42 Benzidine_T	184		4.862					ND	
43 2,2'-oxybis[1-chloropropan	45		4.904					ND	
44 Indene	116		4.921					ND	
45 3-Methylphenol	108		5.038					ND	
46 3 & 4 Methylphenol	108		5.038					ND	
47 4-Methylphenol	108		5.038					ND	
48 N-Nitrosodi-n-propylamine	70		5.033					ND	
49 N-Nitrosopyrrolidine	100		4.967					ND	
50 Acetophenone	105		5.038					ND	
51 N-Nitrosomorpholine	116		4.999					ND	
52 2-Toluidine	106		5.036					ND	
53 Hexachloroethane	117		5.161					ND	
54 Nitrobenzene	77		5.209					ND	
55 Triethyl phosphate	99		5.287					ND	
56 N-Nitrosopiperidine	114		5.303					ND	
57 Isophorone	82		5.433					ND	
58 4-Methylacetophenone	119		5.330					ND	
59 2-Nitrophenol	139		5.519					ND	
60 2,4-Dimethylphenol	107		5.551					ND	
61 Benzyl dichloride	125		5.543					ND	
62 o,o',o''-Triethylphosphoro	198		5.559					ND	
63 Bis(2-chloroethoxy)methane	93		5.631					ND	
64 Benzoic acid	105		5.684					ND	
65 3,5-Dimethylphenol	107		5.684					ND	
66 alpha,alpha-Dimethyl phene	58		5.741					ND	
67 2,4-Xylidine	121		5.685					ND	
68 2,4-Dichlorophenol	162		5.765					ND	
69 o-Anisidine	80		5.723					ND	
70 1,2,4-Trichlorobenzene	180		5.845					ND	
71 Alpha-Terpineol	59		5.868					ND	
72 Naphthalene	128		5.925					ND	
73 4-Chloroaniline	127		5.962					ND	
74 2,6-Dichlorophenol	162		5.984					ND	
75 Hexachloropropene	213		5.976					ND	
76 Hexachlorobutadiene	225		6.048					ND	
77 4-chlorobenzenethiol	144		5.976					ND	
78 Quinoline	129		6.201					ND	
79 N-Nitrosodi-n-butylamine	84		6.243					ND	
80 Caprolactam	55		6.304					ND	
81 p-Phenylene diamine	108		6.259					ND	
82 5-Methyl-o-Anisidine	122		6.337					ND	
83 4-Chloro-3-methylphenol	107		6.448					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
84 Safrole, Total	162		6.462					ND	
85 Carbofuran phenol	164		6.510					ND	
86 1,3-phenylenediamine	108		6.460					ND	
87 2-Methylnaphthalene	142		6.609					ND	
88 Phthalic anhydride	76		6.595					ND	
89 1-Methylnaphthalene	142		6.705					ND	
90 Hexachlorocyclopentadiene	237		6.774					ND	
91 1,2,4,5-Tetrachlorobenzene	216		6.780					ND	
92 Isosafrole Peak 1	162		6.751					ND	
93 Methyl 4-chlorophenyl sulf	158		6.685					ND	
94 2,4,6-Trichlorophenol	196		6.886					ND	
95 2,3-Dichlorobenzenamine	161		6.886					ND	
96 2,4,5-Trichlorophenol	196		6.935					ND	
97 1,3-Dimethyl-2,4-Dinitrobe	77		7.652					ND	
98 Isosafrole Peak 2	104		6.975					ND	
99 Toluene diamine (2,4- + 2,	122		7.039					ND	
100 1,1'-Biphenyl	154		7.063					ND	
101 1,3-Dimethyl-2,5-Dinitrobe	179		7.764					ND	
102 2-Chloronaphthalene	162		7.095					ND	
103 1-Chloronaphthalene	162		7.077					ND	
104 1,4-Dimethyl-2,3-Dinitrobe	77		7.887					ND	
105 2-Nitroaniline	65		7.186					ND	
106 1,4-Dimethyl-2,6-Dinitrobe	179		7.951					ND	
107 1,4-Dimethyl-2,5-Dinitrobe	149		7.988					ND	
108 1,4-Naphthoquinone	158		7.210					ND	
109 1,4-Dinitrobenzene	168		7.264					ND	
110 1,2-Dimethyl-3,6-Dinitrobe	179		8.052					ND	
111 Dimethyl phthalate	163		7.351					ND	
112 1,3-Dinitrobenzene	168		7.383					ND	
113 2,6-Dinitrotoluene	165		7.415					ND	
114 1,5-Dimethyl-2,4-Dinitrobe	179		8.213					ND	
115 Acenaphthylene	152		7.511					ND	
116 1,5-Dimethyl-2,3-Dinitrobe	179		8.309					ND	
117 3-Nitroaniline	138		7.592					ND	
118 1,2-Dimethyl-3,5-Dinitrobe	179		8.421					ND	
119 Acenaphthene	153		7.682					ND	
120 2,4-Dinitrophenol	184		7.693					ND	
121 4-Nitrophenol	109		7.779					ND	
122 1,2-Dimethyl-3,4-Dinitrobe	179		8.571					ND	
123 Pentachlorobenzene	250		7.782					ND	
124 2,4-Dinitrotoluene	165		7.821					ND	
125 Dibenzofuran	168		7.853					ND	
126 n-hydroxymethylphthalimide	147		7.439					ND	
127 1-Naphthylamine	143		7.883					ND	
128 1,2-Dimethyl-4,5-Dinitrobe	91		8.806					ND	
129 2,3,4,6-Tetrachlorophenol	232		7.982					ND	
130 2-Naphthylamine	143		7.963					ND	
131 Hexadecane	57		8.067					ND	
132 Diethyl phthalate	149		8.051					ND	
133 Thionazin	97		8.092					ND	
134 4-Chlorophenyl phenyl ethe	204		8.179					ND	
135 Fluorene	166		8.201					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Tributyl phosphate	99		8.236					ND	
137 N-Nitro-o-toluidine	152		8.156					ND	
138 4-Nitroaniline	138		8.211					ND	
139 4,6-Dinitro-2-methylphenol	198		8.238					ND	
140 Diphenylamine	169		8.297					ND	
141 N-Nitrosodiphenylamine	169		8.297					ND	
142 1,2-Diphenylhydrazine	77		8.345					ND	
143 Azobenzene	77		8.345					ND	
144 Sulfotepp	97		8.396					ND	
145 2,4,6 - Tribromophenol	330		8.441				ND	ND	U
146 Phenyl sulfide	186		8.390					ND	
147 Diallate Peak 1	86		8.540					ND	
148 1,3,5-Trinitrobenzene	213		8.503					ND	
149 Phorate	121		8.551					ND	
150 Phenacetin	108		8.562					ND	
151 Diallate Peak 2	86		8.631					ND	
152 4-Bromophenyl phenyl ether	248		8.671					ND	
153 Hexachlorobenzene	284		8.767					ND	
154 Dimethoate	87		8.722					ND	
155 Atrazine	200		8.820					ND	
156 n-Octadecane	85		8.986					ND	
157 Pentachlorophenol	266		8.959					ND	
158 4-Aminobiphenyl	169		8.893					ND	
159 Pentachloronitrobenzene	237		8.925					ND	
160 Pronamide	173		8.946					ND	
161 Disulfoton	88		9.075					ND	U
162 Dinoseb	211		9.080					ND	
163 Phenanthrene	178		9.168					ND	
164 Anthracene	178		9.216					ND	
165 Carbazole	167		9.371					ND	
166 Alachlor	188		9.499					ND	
167 Methyl parathion	109		9.449					ND	
168 Phenyl disulfide	109		9.661					ND	
169 Di-n-butyl phthalate	149		9.702					ND	
170 Diphenylsulfone	125		9.667					ND	
171 Ethyl Parathion	109		9.876					ND	
172 4-Nitroquinoline-1-oxide	190		9.935					ND	
173 Methapyrilene	97		10.015					ND	
174 Octachlorostyrene	308		10.118					ND	
175 Isodrin	193		10.293					ND	
176 Fluoranthene	202		10.551					ND	
177 4,4-Dichlorobenzil	139		10.439					ND	
178 Benzidine	184		10.690					ND	
180 Pyrene	202		10.893					ND	
181 p-chlorophenyl sulfone	159		10.893					ND	
182 Aramite Peak 1	185		10.998					ND	
183 Aramite Peak 2	185		11.126					ND	
184 p-Dimethylamino azobenzene	120		11.286					ND	
185 Chlorobenzilate	251		11.366					ND	
186 Famphur	218		11.892					ND	
187 Butyl benzyl phthalate	149		12.015					ND	
188 3,3'-Dimethylbenzidine	212		11.911					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
189 2-Acetylaminofluorene	181		12.451					ND	
190 3,3'-Dichlorobenzidine	252		13.206					ND	
191 4,4'-Methylene bis(2-chlor	231		13.119					ND	
192 Benzo[a]anthracene	228		13.254					ND	
193 Bis(2-ethylhexyl) phthalat	149		13.398					ND	
194 Chrysene	228		13.345					ND	
195 6-Methylchrysene	242		14.417					ND	
196 Hexachlorophene	196		17.001					ND	
197 Di-n-octyl phthalate	149		15.220					ND	
198 Benzo[b]fluoranthene	252		16.160					ND	
199 7,12-Dimethylbenz(a)anthra	256		16.035					ND	
200 Benzo[k]fluoranthene	252		16.240					ND	
201 Benzo[e]pyrene	252		16.951					ND	
202 Benzo[a]pyrene	252		17.101					ND	
203 Perylene	252		17.301					ND	
204 3-Methylcholanthrene	268		18.055					ND	
205 Tris(2,3-dibromopropyl)pho	119		18.754					ND	
206 Dibenz[a,h]acridine	279		19.641					ND	
207 Dibenz[a,j]acridine	279		19.796					ND	
208 Indeno[1,2,3-cd]pyrene	276		20.407					ND	
209 Dibenz(a,h)anthracene	278		20.498					ND	
210 Benzo[g,h,i]perylene	276		21.155					ND	
211 Dibenzo[a,e]pyrene	302		25.549					ND	
S 219 Total Cresols	108		15.341					ND	
S 220 Methyl Phenols,Total	108		15.341					ND	
S 221 Isosafrole	162		15.341					ND	
S 222 Diallate	86		15.341					ND	
S 223 Aramite, Total	185		15.341					ND	
S 224 Phthalic acid	148		19.492					ND	
212 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
213 2-Butoxyethanol	1		0.000					ND	
214 2-Phenoxyethanol	1		0.000					ND	
216 4,4'-DDE	246		4.998					ND	
217 4,4'-DDD	235		5.282					ND	
218 4,4'-DDT	235		5.503					ND	
S 225 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

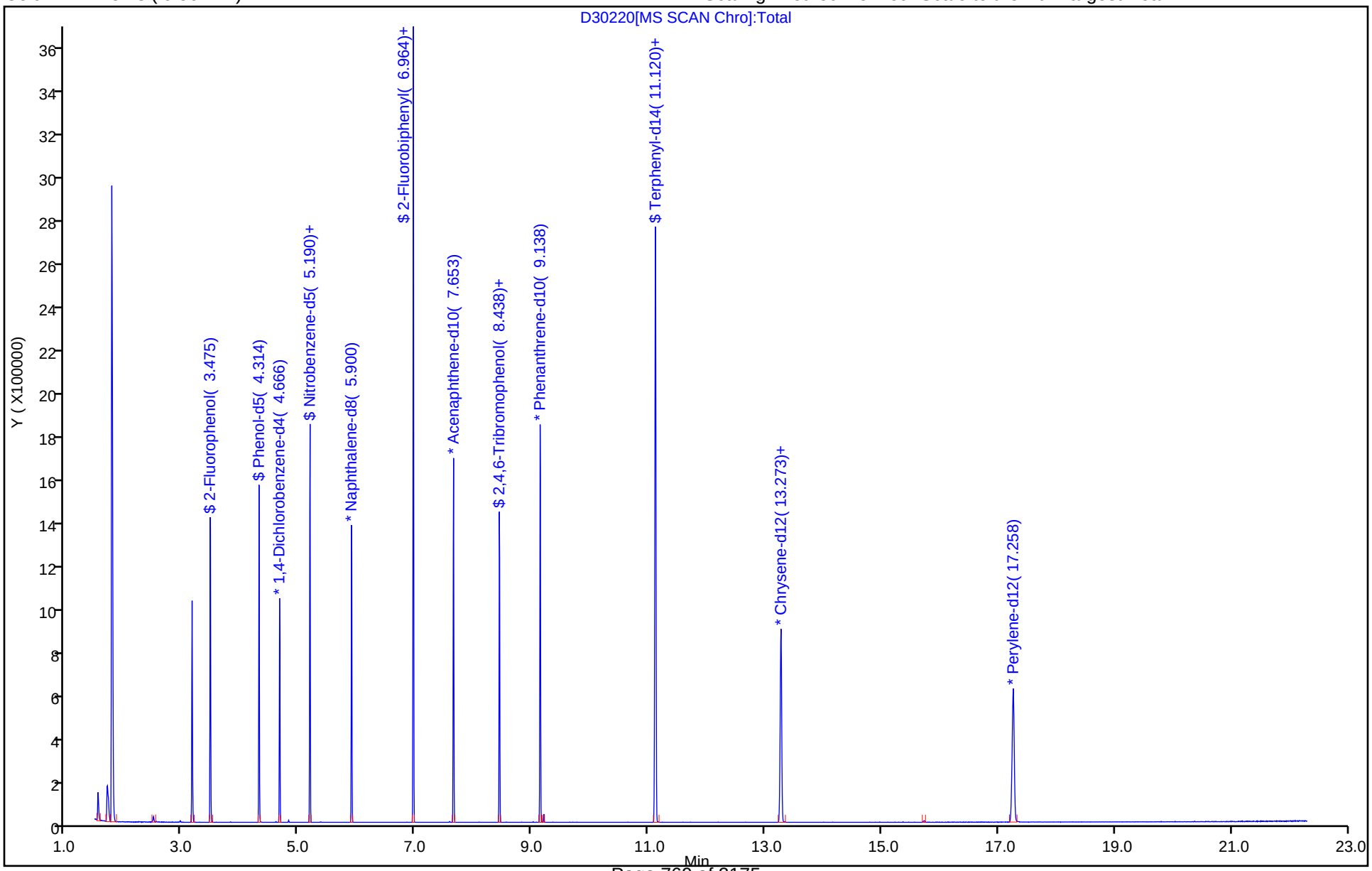
Report Date: 16-Nov-2018 11:29:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30220.D

Injection Date:	15-Nov-2018 19:52:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	LB3 280-436732/1-G			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30220.D
Lims ID: LB3 280-436732/1-G
Client ID:
Sample Type: LB3
Inject. Date: 15-Nov-2018 19:52:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LB3280-436732_1-G
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 10:36:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	68.8	68.77
$ 8 Phenol-d5	100.0	57.3	57.27
$ 9 Nitrobenzene-d5	100.0	77.4	77.38
$ 11 2-Fluorobiphenyl	100.0	83.8	83.78
$ 12 2,4,6-Tribromophenol	100.0	78.4	78.42
$ 13 Terphenyl-d14	100.0	87.8	87.78

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436732/3-B

Matrix: Water (TCLP) | Lab File ID: D30221.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 11/12/2018 13:36

Sample wt/vol: 200(mL) | Date Analyzed: 11/15/2018 20:22

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437797 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-48-7	2-Methylphenol	0.176		0.050	0.0049
15831-10-4	3 & 4 Methylphenol	0.350		0.050	0.0013
106-46-7	1,4-Dichlorobenzene	0.174		0.020	0.0016
121-14-2	2,4-Dinitrotoluene	0.0694		0.050	0.0083
118-74-1	Hexachlorobenzene	0.0778		0.050	0.0033
87-68-3	Hexachlorobutadiene	0.168		0.050	0.017
67-72-1	Hexachloroethane	0.169		0.050	0.011
98-95-3	Nitrobenzene	0.189		0.050	0.0041
87-86-5	Pentachlorophenol	0.256		0.25	0.10
110-86-1	Pyridine	0.102		0.10	0.0057
95-95-4	2,4,5-Trichlorophenol	0.191		0.050	0.0022
88-06-2	2,4,6-Trichlorophenol	0.194		0.025	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	86		49-120
367-12-4	2-Fluorophenol (Surr)	73		50-120
118-79-6	2,4,6-Tribromophenol (Surr)	83		51-120
4165-60-0	Nitrobenzene-d5 (Surr)	80		51-120
4165-62-2	Phenol-d5 (Surr)	59		47-120
1718-51-0	Terphenyl-d14 (Surr)	88		56-120

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30221.D
Lims ID: LCS 280-436732/3-B
Client ID:
Sample Type: LCS
Inject. Date: 15-Nov-2018 20:22:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS280-436732_3-B
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 10:36:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.669	4.664	0.004	98	131545	40.0	40.0	
* 2 Naphthalene-d8	136	5.903	5.903	0.000	100	538294	40.0	40.0	
* 3 Acenaphthene-d10	164	7.649	7.650	-0.001	98	306057	40.0	40.0	
* 4 Phenanthrene-d10	188	9.140	9.141	-0.001	100	624278	40.0	40.0	
* 5 Chrysene-d12	240	13.269	13.281	-0.012	82	592904	40.0	40.0	
* 6 Perylene-d12	264	17.260	17.261	-0.001	99	599943	40.0	40.0	
$ 7 2-Fluorophenol	112	3.477	3.478	-0.001	97	364230	100.0	73.0	
$ 8 Phenol-d5	99	4.316	4.317	-0.001	98	400384	100.0	59.4	
$ 9 Nitrobenzene-d5	82	5.187	5.188	-0.001	96	508740	100.0	80.3	
$ 11 2-Fluorobiphenyl	172	6.966	6.961	0.005	98	983360	100.0	86.1	
$ 12 2,4,6-Tribromophenol	330	8.440	8.441	-0.001	92	133451	100.0	83.0	
$ 13 Terphenyl-d14	244	11.116	11.112	0.004	100	1266347	100.0	87.9	
18 Pyridine	79	2.313	2.324	-0.011	95	129288	50.0	20.3	
38 1,4-Dichlorobenzene	146	4.685	4.685	0.000	97	193097	50.0	34.7	
41 2-Methylphenol	108	4.893	4.894	-0.001	77	186185	50.0	35.1	
45 3-Methylphenol	108	5.037	5.038	-0.001	93	390371	100.0	70.1	
46 3 & 4 Methylphenol	108	5.037	5.038	-0.001	93	390371	100.0	70.1	
47 4-Methylphenol	108	5.037	5.038	-0.001	93	390371	100.0	70.1	
53 Hexachloroethane	117	5.165	5.161	0.004	96	70525	50.0	33.8	
54 Nitrobenzene	77	5.208	5.209	-0.001	95	239151	50.0	37.7	
76 Hexachlorobutadiene	225	6.047	6.048	-0.001	98	86706	50.0	33.7	
94 2,4,6-Trichlorophenol	196	6.885	6.886	-0.001	82	125836	50.0	38.7	
96 2,4,5-Trichlorophenol	196	6.934	6.935	0.000	97	138187	50.0	38.2	
124 2,4-Dinitrotoluene	165	7.820	7.821	-0.001	95	52420	20.0	13.9	
145 2,4,6 - Tribromophenol	330		8.441				ND	ND	U
153 Hexachlorobenzene	284	8.766	8.767	-0.001	96	51774	20.0	15.6	
157 Pentachlorophenol	266	8.958	8.959	-0.001	94	117745	100.0	51.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014	Amount Added:	20.00	Units: uL	Run Reagent

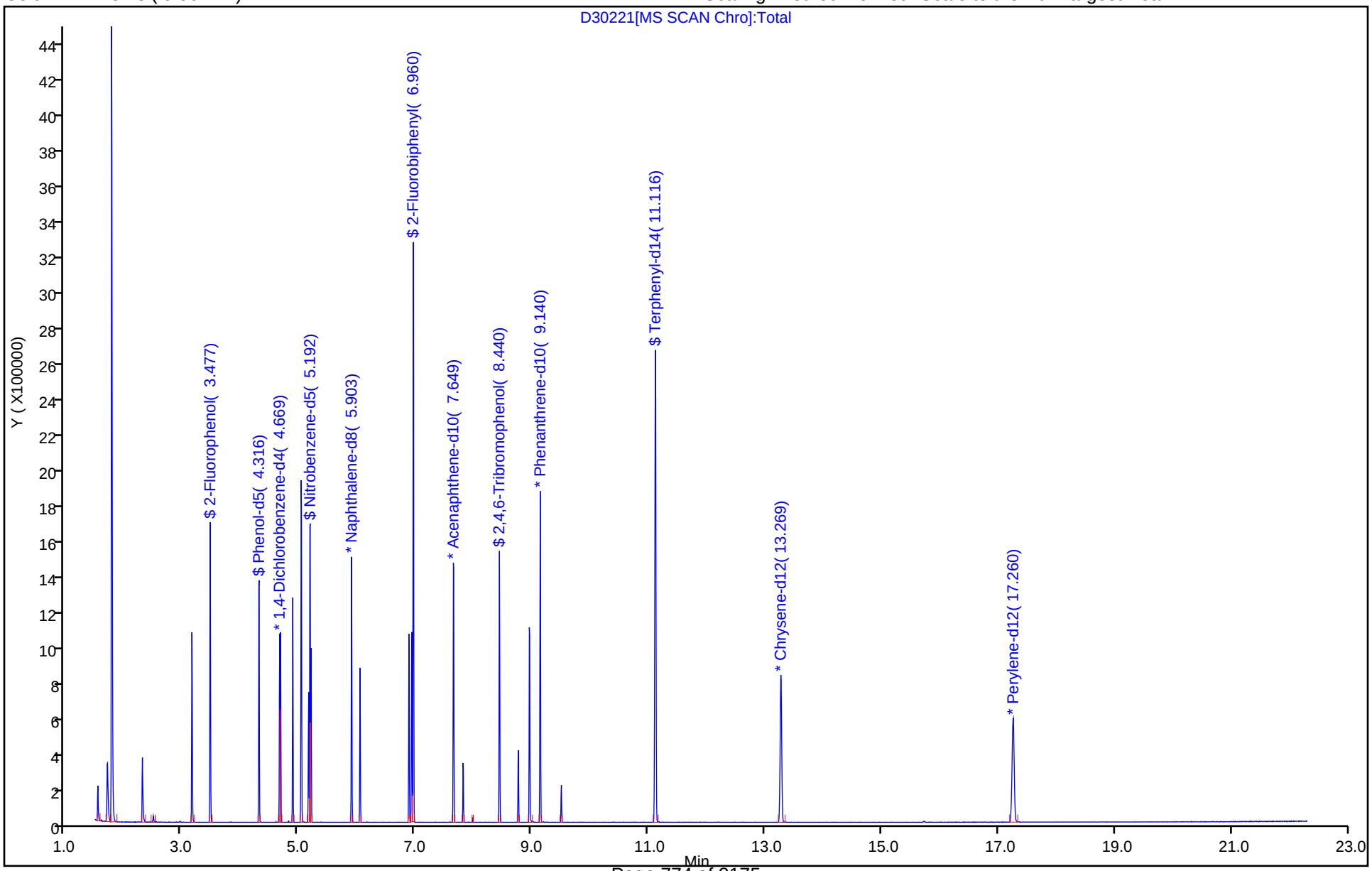
Report Date: 16-Nov-2018 11:29:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30221.D

Injection Date:	15-Nov-2018 20:22:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	LCS 280-436732/3-B			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30221.D
Lims ID: LCS 280-436732/3-B
Client ID:
Sample Type: LCS
Inject. Date: 15-Nov-2018 20:22:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS280-436732_3-B
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 10:36:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	73.0	73.03
$ 8 Phenol-d5	100.0	59.4	59.38
$ 9 Nitrobenzene-d5	100.0	80.3	80.34
$ 11 2-Fluorobiphenyl	100.0	86.1	86.15
$ 12 2,4,6-Tribromophenol	100.0	83.0	82.98
$ 13 Terphenyl-d14	100.0	87.9	87.86

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MS | Lab Sample ID: 280-116538-4 MS

Matrix: Water (TCLP) | Lab File ID: D30233.D

Analysis Method: 8270D | Date Collected: 11/02/2018 15:30

Extract. Method: 3510C | Date Extracted: 11/12/2018 13:36

Sample wt/vol: 200(mL) | Date Analyzed: 11/16/2018 01:54

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437797 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-48-7	2-Methylphenol	0.160		0.050	0.0049
15831-10-4	3 & 4 Methylphenol	0.328		0.050	0.0013
106-46-7	1,4-Dichlorobenzene	0.161		0.020	0.0016
121-14-2	2,4-Dinitrotoluene	0.0693		0.050	0.0083
118-74-1	Hexachlorobenzene	0.0676		0.050	0.0033
87-68-3	Hexachlorobutadiene	0.152		0.050	0.017
67-72-1	Hexachloroethane	0.156		0.050	0.011
98-95-3	Nitrobenzene	0.177		0.050	0.0041
87-86-5	Pentachlorophenol	0.299		0.25	0.10
110-86-1	Pyridine	0.127		0.10	0.0057
95-95-4	2,4,5-Trichlorophenol	0.184		0.050	0.0022
88-06-2	2,4,6-Trichlorophenol	0.179		0.025	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	78		49-120
367-12-4	2-Fluorophenol (Surr)	64		50-120
118-79-6	2,4,6-Tribromophenol (Surr)	81		51-120
4165-60-0	Nitrobenzene-d5 (Surr)	75		51-120
4165-62-2	Phenol-d5 (Surr)	53		47-120
1718-51-0	Terphenyl-d14 (Surr)	67		56-120

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30233.D
Lims ID: 280-116538-A-4-I MS
Client ID:
Sample Type: MS
Inject. Date: 16-Nov-2018 01:54:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-IMS
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:09:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.671	4.664	0.007	97	130576	40.0	40.0	
* 2 Naphthalene-d8	136	5.905	5.903	0.002	100	536264	40.0	40.0	
* 3 Acenaphthene-d10	164	7.651	7.650	0.001	98	312572	40.0	40.0	
* 4 Phenanthrene-d10	188	9.142	9.141	0.001	99	628508	40.0	40.0	
* 5 Chrysene-d12	240	13.277	13.281	-0.004	82	610988	40.0	40.0	
* 6 Perylene-d12	264	17.262	17.261	0.001	99	622846	40.0	40.0	
$ 7 2-Fluorophenol	112	3.479	3.478	0.001	96	317311	100.0	64.1	
$ 8 Phenol-d5	99	4.318	4.317	0.001	98	357000	100.0	53.3	
$ 9 Nitrobenzene-d5	82	5.189	5.188	0.001	96	473771	100.0	75.1	
$ 10 2,4,6-Trichlorophenol-d2	198		6.863					ND	
$ 11 2-Fluorobiphenyl	172	6.962	6.961	0.001	98	913648	100.0	78.4	
$ 12 2,4,6-Tribromophenol	330	8.442	8.441	0.001	91	132758	100.0	80.8	
$ 13 Terphenyl-d14	244	11.119	11.112	0.006	100	1000723	100.0	67.4	
14 Triethyl amine	86		1.815					ND	
15 2-Ethoxyethanol	59		1.996					ND	
16 1,4-Dioxane	88		2.025					ND	
17 N-Nitrosodimethylamine	74		2.265					ND	
18 Pyridine	79	2.320	2.324	-0.004	96	160476	50.0	25.4	
19 Dimethylformamide	73		2.573					ND	
20 2-Picoline	93		2.910					ND	
21 N-Nitrosomethylethylamine	88		2.985					ND	
22 Acrylamide	71		3.246					ND	
23 Methyl methanesulfonate	80		3.246					ND	
24 N-Nitrosodiethylamine	102		3.615					ND	
25 Pentachlorophenol_T	266		3.788					ND	
26 Ethyl methanesulfonate	79		3.877					ND	
27 Benzaldehyde	106		4.167					ND	
28 Phenol	94		4.328					ND	
29 Phenylmercaptan	110		4.249					ND	
30 Aniline	93		4.349					ND	
31 Alpha Methyl Styrene	118		4.402					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
32 Bis(2-chloroethyl)ether	93		4.392					ND	
33 Pentachloroethane	117		4.363					ND	
34 Methyl styrene	118		4.445					ND	
35 n-Decane	43		4.498					ND	
36 2-Chlorophenol	128		4.477					ND	
37 1,3-Dichlorobenzene	146		4.616					ND	
38 1,4-Dichlorobenzene	146	4.687	4.685	0.002	96	177495	50.0	32.2	
39 Benzyl alcohol	108		4.782					ND	
40 1,2-Dichlorobenzene	146		4.835					ND	
41 2-Methylphenol	108	4.895	4.894	0.001	77	167806	50.0	31.9	
42 Benzidine_T	184		4.862					ND	
43 2,2'-oxybis[1-chloropropan	45		4.904					ND	
44 Indene	116		4.921					ND	
45 3-Methylphenol	108	5.045	5.038	0.006	94	362707	100.0	65.6	
46 3 & 4 Methylphenol	108	5.045	5.038	0.006	94	362707	100.0	65.6	
47 4-Methylphenol	108	5.045	5.038	0.006	94	362707	100.0	65.6	
48 N-Nitrosodi-n-propylamine	70		5.033					ND	
49 N-Nitrosopyrrolidine	100		4.967					ND	
50 Acetophenone	105		5.038					ND	
51 N-Nitrosomorpholine	116		4.999					ND	
52 2-Toluidine	106		5.036					ND	
53 Hexachloroethane	117	5.162	5.161	0.001	97	64654	50.0	31.2	
54 Nitrobenzene	77	5.210	5.209	0.001	94	224221	50.0	35.5	
55 Triethyl phosphate	99		5.287					ND	
56 N-Nitrosopiperidine	114		5.303					ND	
57 Isophorone	82		5.433					ND	
58 4-Methylacetophenone	119		5.330					ND	
59 2-Nitrophenol	139		5.519					ND	
60 2,4-Dimethylphenol	107		5.551					ND	
61 Benzyl dichloride	125		5.543					ND	
62 o,o',o''-Triethylphosphoro	198		5.559					ND	
63 Bis(2-chloroethoxy)methane	93		5.631					ND	
64 Benzoic acid	105		5.684					ND	
65 3,5-Dimethylphenol	107		5.684					ND	
66 alpha,alpha-Dimethyl phene	58		5.741					ND	
67 2,4-Xylidine	121		5.685					ND	
68 2,4-Dichlorophenol	162		5.765					ND	
69 o-Anisidine	80		5.723					ND	
70 1,2,4-Trichlorobenzene	180		5.845					ND	
71 Alpha-Terpineol	59		5.868					ND	
72 Naphthalene	128		5.925					ND	
73 4-Chloroaniline	127		5.962					ND	
74 2,6-Dichlorophenol	162		5.984					ND	
75 Hexachloropropene	213		5.976					ND	
76 Hexachlorobutadiene	225	6.049	6.048	0.001	97	78016	50.0	30.4	
77 4-chlorobenzenethiol	144		5.976					ND	
78 Quinoline	129		6.201					ND	
79 N-Nitrosodi-n-butylamine	84		6.243					ND	
80 Caprolactam	55		6.304					ND	
81 p-Phenylene diamine	108		6.259					ND	
82 5-Methyl-o-Anisidine	122		6.337					ND	
83 4-Chloro-3-methylphenol	107		6.448					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
84 Safrole, Total	162		6.462					ND	
85 Carbofuran phenol	164		6.510					ND	
86 1,3-phenylenediamine	108		6.460					ND	
87 2-Methylnaphthalene	142		6.609					ND	
88 Phthalic anhydride	76		6.595					ND	
89 1-Methylnaphthalene	142		6.705					ND	
90 Hexachlorocyclopentadiene	237		6.774					ND	
91 1,2,4,5-Tetrachlorobenzene	216		6.780					ND	
92 Isosafrole Peak 1	162		6.751					ND	
93 Methyl 4-chlorophenyl sulf	158		6.685					ND	
94 2,4,6-Trichlorophenol	196	6.888	6.886	0.002	82	118678	50.0	35.8	
95 2,3-Dichlorobenzenamine	161		6.886					ND	
96 2,4,5-Trichlorophenol	196	6.936	6.935	0.002	97	135923	50.0	36.8	
97 1,3-Dimethyl-2,4-Dinitrobe	77		7.652					ND	
98 Isosafrole Peak 2	104		6.975					ND	
99 Toluene diamine (2,4- + 2,	122		7.039					ND	
100 1,1'-Biphenyl	154		7.063					ND	
101 1,3-Dimethyl-2,5-Dinitrobe	179		7.764					ND	
102 2-Chloronaphthalene	162		7.095					ND	
103 1-Chloronaphthalene	162		7.077					ND	
104 1,4-Dimethyl-2,3-Dinitrobe	77		7.887					ND	
105 2-Nitroaniline	65		7.186					ND	
106 1,4-Dimethyl-2,6-Dinitrobe	179		7.951					ND	
107 1,4-Dimethyl-2,5-Dinitrobe	149		7.988					ND	
108 1,4-Naphthoquinone	158		7.210					ND	
109 1,4-Dinitrobenzene	168		7.264					ND	
110 1,2-Dimethyl-3,6-Dinitrobe	179		8.052					ND	
111 Dimethyl phthalate	163		7.351					ND	
112 1,3-Dinitrobenzene	168		7.383					ND	
113 2,6-Dinitrotoluene	165		7.415					ND	
114 1,5-Dimethyl-2,4-Dinitrobe	179		8.213					ND	
115 Acenaphthylene	152		7.511					ND	
116 1,5-Dimethyl-2,3-Dinitrobe	179		8.309					ND	
117 3-Nitroaniline	138		7.592					ND	
118 1,2-Dimethyl-3,5-Dinitrobe	179		8.421					ND	
119 Acenaphthene	153		7.682					ND	
120 2,4-Dinitrophenol	184		7.693					ND	
121 4-Nitrophenol	109		7.779					ND	
122 1,2-Dimethyl-3,4-Dinitrobe	179		8.571					ND	
123 Pentachlorobenzene	250		7.782					ND	
124 2,4-Dinitrotoluene	165	7.817	7.821	-0.004	94	53488	20.0	13.9	
125 Dibenzofuran	168		7.853					ND	
126 n-hydroxymethylphthalimide	147		7.439					ND	
127 1-Naphthylamine	143		7.883					ND	
128 1,2-Dimethyl-4,5-Dinitrobe	91		8.806					ND	
129 2,3,4,6-Tetrachlorophenol	232		7.982					ND	
130 2-Naphthylamine	143		7.963					ND	
131 Hexadecane	57		8.067					ND	
132 Diethyl phthalate	149		8.051					ND	
133 Thionazin	97		8.092					ND	
134 4-Chlorophenyl phenyl ethe	204		8.179					ND	
135 Fluorene	166		8.201					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Tributyl phosphate	99		8.236					ND	
137 N-Nitro-o-toluidine	152		8.156					ND	
138 4-Nitroaniline	138		8.211					ND	
139 4,6-Dinitro-2-methylphenol	198		8.238					ND	
140 Diphenylamine	169		8.297					ND	
141 N-Nitrosodiphenylamine	169		8.297					ND	
142 1,2-Diphenylhydrazine	77		8.345					ND	
143 Azobenzene	77		8.345					ND	
144 Sulfotepp	97		8.396					ND	
145 2,4,6 - Tribromophenol	330		8.441				ND	ND	U
146 Phenyl sulfide	186		8.390					ND	
147 Diallate Peak 1	86		8.540					ND	
148 1,3,5-Trinitrobenzene	213		8.503					ND	
149 Phorate	121		8.551					ND	
150 Phenacetin	108		8.562					ND	
151 Diallate Peak 2	86		8.631					ND	
152 4-Bromophenyl phenyl ether	248		8.671					ND	
153 Hexachlorobenzene	284	8.763	8.767	-0.004	96	45293	20.0	13.5	
154 Dimethoate	87		8.722					ND	
155 Atrazine	200		8.820					ND	
156 n-Octadecane	85		8.986					ND	
157 Pentachlorophenol	266	8.955	8.959	-0.004	93	138885	100.0	59.7	
158 4-Aminobiphenyl	169		8.893					ND	
159 Pentachloronitrobenzene	237		8.925					ND	
160 Pronamide	173		8.946					ND	
161 Disulfoton	88		9.075					ND	
162 Dinoseb	211		9.080					ND	
163 Phenanthrene	178		9.168					ND	
164 Anthracene	178		9.216					ND	
165 Carbazole	167		9.371					ND	
166 Alachlor	188		9.499					ND	
167 Methyl parathion	109		9.449					ND	
168 Phenyl disulfide	109		9.661					ND	
169 Di-n-butyl phthalate	149		9.702					ND	
170 Diphenylsulfone	125		9.667					ND	
171 Ethyl Parathion	109		9.876					ND	
172 4-Nitroquinoline-1-oxide	190		9.935					ND	
173 Methapyrilene	97		10.015					ND	
174 Octachlorostyrene	308		10.118					ND	
175 Isodrin	193		10.293					ND	
176 Fluoranthene	202		10.551					ND	
177 4,4-Dichlorobenzil	139		10.439					ND	
178 Benzidine	184		10.690					ND	
179 Bis(4-chlorophenyl)disulfi	143		10.723					ND	
180 Pyrene	202		10.893					ND	
181 p-chlorophenyl sulfone	159		10.893					ND	
182 Aramite Peak 1	185		10.998					ND	
183 Aramite Peak 2	185		11.126					ND	
184 p-Dimethylamino azobenzene	120		11.286					ND	
185 Chlorobenzilate	251		11.366					ND	
186 Famphur	218		11.892					ND	
187 Butyl benzyl phthalate	149		12.015					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
188 3,3'-Dimethylbenzidine	212		11.911					ND	
189 2-Acetylaminofluorene	181		12.451					ND	
190 3,3'-Dichlorobenzidine	252		13.206					ND	
191 4,4'-Methylene bis(2-chlor	231		13.119					ND	
192 Benzo[a]anthracene	228		13.254					ND	
193 Bis(2-ethylhexyl) phthalat	149		13.398					ND	
194 Chrysene	228		13.345					ND	
195 6-Methylchrysene	242		14.417					ND	
196 Hexachlorophene	196		17.001					ND	
197 Di-n-octyl phthalate	149		15.220					ND	
198 Benzo[b]fluoranthene	252		16.160					ND	
199 7,12-Dimethylbenz(a)anthra	256		16.035					ND	
200 Benzo[k]fluoranthene	252		16.240					ND	
201 Benzo[e]pyrene	252		16.951					ND	
202 Benzo[a]pyrene	252		17.101					ND	
203 Perylene	252		17.301					ND	
204 3-Methylcholanthrene	268		18.055					ND	
205 Tris(2,3-dibromopropyl)pho	119		18.754					ND	
206 Dibenz[a,h]acridine	279		19.641					ND	
207 Dibenz[a,j]acridine	279		19.796					ND	
208 Indeno[1,2,3-cd]pyrene	276		20.407					ND	
209 Dibenz(a,h)anthracene	278		20.498					ND	
210 Benzo[g,h,i]perylene	276		21.155					ND	
211 Dibenzo[a,e]pyrene	302		25.549					ND	
S 219 Total Cresols	108				0				97.5
S 220 Methyl Phenols,Total	108				0				97.5
S 221 Isosafrole	162		15.341					ND	
S 222 Diallate	86		15.341					ND	
S 223 Aramite, Total	185		15.341					ND	
S 224 Phthalic acid	148		19.492					ND	
212 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
213 2-Butoxyethanol	1		0.000					ND	
214 2-Phenoxyethanol	1		0.000					ND	
216 4,4'-DDE	246		4.998					ND	
217 4,4'-DDD	235		5.282					ND	
218 4,4'-DDT	235		5.503					ND	
S 225 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

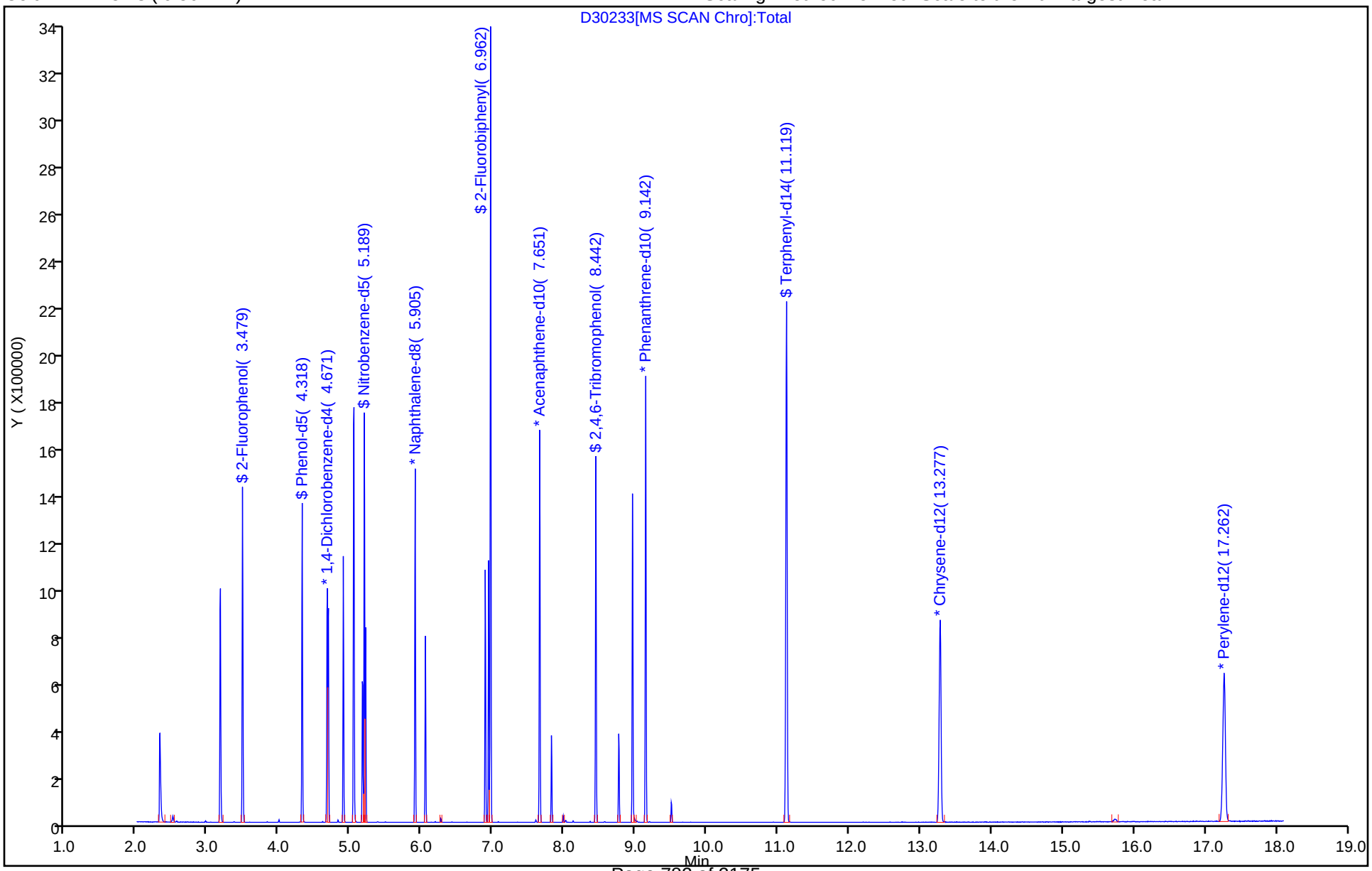
Report Date: 16-Nov-2018 11:29:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30233.D

Injection Date:	16-Nov-2018 01:54:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	280-116538-A-4-I MS			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30233.D
Lims ID: 280-116538-A-4-I MS
Client ID:
Sample Type: MS
Inject. Date: 16-Nov-2018 01:54:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-IMS
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:09:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	64.1	64.10
$ 8 Phenol-d5	100.0	53.3	53.34
$ 9 Nitrobenzene-d5	100.0	75.1	75.10
$ 11 2-Fluorobiphenyl	100.0	78.4	78.37
$ 12 2,4,6-Tribromophenol	100.0	80.8	80.82
$ 13 Terphenyl-d14	100.0	67.4	67.37

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MSD | Lab Sample ID: 280-116538-4 MSD

Matrix: Water (TCLP) | Lab File ID: D30234.D

Analysis Method: 8270D | Date Collected: 11/02/2018 15:30

Extract. Method: 3510C | Date Extracted: 11/12/2018 13:36

Sample wt/vol: 200(mL) | Date Analyzed: 11/16/2018 02:19

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437797 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-48-7	2-Methylphenol	0.185		0.050	0.0049
15831-10-4	3 & 4 Methylphenol	0.374		0.050	0.0013
106-46-7	1,4-Dichlorobenzene	0.174		0.020	0.0016
121-14-2	2,4-Dinitrotoluene	0.0751		0.050	0.0083
118-74-1	Hexachlorobenzene	0.0736		0.050	0.0033
87-68-3	Hexachlorobutadiene	0.168		0.050	0.017
67-72-1	Hexachloroethane	0.167		0.050	0.011
98-95-3	Nitrobenzene	0.199		0.050	0.0041
87-86-5	Pentachlorophenol	0.330		0.25	0.10
110-86-1	Pyridine	0.136		0.10	0.0057
95-95-4	2,4,5-Trichlorophenol	0.204		0.050	0.0022
88-06-2	2,4,6-Trichlorophenol	0.207		0.025	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	89		49-120
367-12-4	2-Fluorophenol (Surr)	70		50-120
118-79-6	2,4,6-Tribromophenol (Surr)	89		51-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		51-120
4165-62-2	Phenol-d5 (Surr)	61		47-120
1718-51-0	Terphenyl-d14 (Surr)	70		56-120

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30234.D
Lims ID: 280-116538-A-4-J MSD
Client ID:
Sample Type: MSD
Inject. Date: 16-Nov-2018 02:19:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-JMSD
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:10:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.671	4.664	0.007	98	140915	40.0	40.0	
* 2 Naphthalene-d8	136	5.905	5.903	0.002	100	573234	40.0	40.0	
* 3 Acenaphthene-d10	164	7.652	7.650	0.002	98	338961	40.0	40.0	
* 4 Phenanthrene-d10	188	9.142	9.141	0.001	99	686177	40.0	40.0	
* 5 Chrysene-d12	240	13.277	13.281	-0.004	82	648075	40.0	40.0	
* 6 Perylene-d12	264	17.262	17.261	0.001	99	630009	40.0	40.0	
$ 7 2-Fluorophenol	112	3.480	3.478	0.002	97	374550	100.0	70.1	
$ 8 Phenol-d5	99	4.318	4.317	0.001	98	440853	100.0	61.0	
$ 9 Nitrobenzene-d5	82	5.189	5.188	0.001	96	559293	100.0	82.9	
$ 10 2,4,6-Trichlorophenol-d2	198		6.863					ND	
$ 11 2-Fluorobiphenyl	172	6.963	6.961	0.002	98	1126678	100.0	89.1	
$ 12 2,4,6-Tribromophenol	330	8.442	8.441	0.001	91	158287	100.0	88.9	
$ 13 Terphenyl-d14	244	11.119	11.112	0.007	100	1095009	100.0	69.5	
14 Triethyl amine	86		1.815					ND	
15 2-Ethoxyethanol	59		1.996					ND	
16 1,4-Dioxane	88		2.025					ND	
17 N-Nitrosodimethylamine	74		2.265					ND	
18 Pyridine	79	2.320	2.324	-0.004	95	185000	50.0	27.2	
19 Dimethylformamide	73		2.573					ND	
20 2-Picoline	93		2.910					ND	
21 N-Nitrosomethylethylamine	88		2.985					ND	
22 Acrylamide	71		3.246					ND	
23 Methyl methanesulfonate	80		3.246					ND	
24 N-Nitrosodiethylamine	102		3.615					ND	
25 Pentachlorophenol_T	266		3.788					ND	
26 Ethyl methanesulfonate	79		3.877					ND	
27 Benzaldehyde	106		4.167					ND	
28 Phenol	94		4.328					ND	
29 Phenylmercaptan	110		4.249					ND	
30 Aniline	93		4.349					ND	
31 Alpha Methyl Styrene	118		4.402					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
32 Bis(2-chloroethyl)ether	93		4.392					ND	
33 Pentachloroethane	117		4.363					ND	
34 Methyl styrene	118		4.445					ND	
35 n-Decane	43		4.498					ND	
36 2-Chlorophenol	128		4.477					ND	
37 1,3-Dichlorobenzene	146		4.616					ND	
38 1,4-Dichlorobenzene	146	4.687	4.685	0.002	97	207057	50.0	34.8	
39 Benzyl alcohol	108		4.782					ND	
40 1,2-Dichlorobenzene	146		4.835					ND	
41 2-Methylphenol	108	4.895	4.894	0.001	76	210200	50.0	37.0	
42 Benzidine_T	184		4.862					ND	
43 2,2'-oxybis[1-chloropropan	45		4.904					ND	
44 Indene	116		4.921					ND	
45 3-Methylphenol	108	5.039	5.038	0.001	93	447009	100.0	74.9	
46 3 & 4 Methylphenol	108	5.039	5.038	0.001	93	447009	100.0	74.9	
47 4-Methylphenol	108	5.039	5.038	0.001	93	447009	100.0	74.9	
48 N-Nitrosodi-n-propylamine	70		5.033					ND	
49 N-Nitrosopyrrolidine	100		4.967					ND	
50 Acetophenone	105		5.038					ND	
51 N-Nitrosomorpholine	116		4.999					ND	
52 2-Toluidine	106		5.036					ND	
53 Hexachloroethane	117	5.162	5.161	0.001	97	74732	50.0	33.5	
54 Nitrobenzene	77	5.210	5.209	0.001	94	268778	50.0	39.8	
55 Triethyl phosphate	99		5.287					ND	
56 N-Nitrosopiperidine	114		5.303					ND	
57 Isophorone	82		5.433					ND	
58 4-Methylacetophenone	119		5.330					ND	
59 2-Nitrophenol	139		5.519					ND	
60 2,4-Dimethylphenol	107		5.551					ND	
61 Benzyl dichloride	125		5.543					ND	
62 o,o',o''-Triethylphosphoro	198		5.559					ND	
63 Bis(2-chloroethoxy)methane	93		5.631					ND	
64 Benzoic acid	105		5.684					ND	
65 3,5-Dimethylphenol	107		5.684					ND	
66 alpha,alpha-Dimethyl phene	58		5.741					ND	
67 2,4-Xylidine	121		5.685					ND	
68 2,4-Dichlorophenol	162		5.765					ND	
69 o-Anisidine	80		5.723					ND	
70 1,2,4-Trichlorobenzene	180		5.845					ND	
71 Alpha-Terpineol	59		5.868					ND	
72 Naphthalene	128		5.925					ND	
73 4-Chloroaniline	127		5.962					ND	
74 2,6-Dichlorophenol	162		5.984					ND	
75 Hexachloropropene	213		5.976					ND	
76 Hexachlorobutadiene	225	6.049	6.048	0.001	96	92383	50.0	33.7	
77 4-chlorobenzenethiol	144		5.976					ND	
78 Quinoline	129		6.201					ND	
79 N-Nitrosodi-n-butylamine	84		6.243					ND	
80 Caprolactam	55		6.304					ND	
81 p-Phenylene diamine	108		6.259					ND	
82 5-Methyl-o-Anisidine	122		6.337					ND	
83 4-Chloro-3-methylphenol	107		6.448					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
84 Safrole, Total	162		6.462					ND	
85 Carbofuran phenol	164		6.510					ND	
86 1,3-phenylenediamine	108		6.460					ND	
87 2-Methylnaphthalene	142		6.609					ND	
88 Phthalic anhydride	76		6.595					ND	
89 1-Methylnaphthalene	142		6.705					ND	
90 Hexachlorocyclopentadiene	237		6.774					ND	
91 1,2,4,5-Tetrachlorobenzene	216		6.780					ND	
92 Isosafrole Peak 1	162		6.751					ND	
93 Methyl 4-chlorophenyl sulf	158		6.685					ND	
94 2,4,6-Trichlorophenol	196	6.888	6.886	0.002	82	149134	50.0	41.4	
95 2,3-Dichlorobenzenamine	161		6.886					ND	
96 2,4,5-Trichlorophenol	196	6.936	6.935	0.002	97	163357	50.0	40.8	
97 1,3-Dimethyl-2,4-Dinitrobe	77		7.652					ND	
98 Isosafrole Peak 2	104		6.975					ND	
99 Toluene diamine (2,4- + 2,	122		7.039					ND	
100 1,1'-Biphenyl	154		7.063					ND	
101 1,3-Dimethyl-2,5-Dinitrobe	179		7.764					ND	
102 2-Chloronaphthalene	162		7.095					ND	
103 1-Chloronaphthalene	162		7.077					ND	
104 1,4-Dimethyl-2,3-Dinitrobe	77		7.887					ND	
105 2-Nitroaniline	65		7.186					ND	
106 1,4-Dimethyl-2,6-Dinitrobe	179		7.951					ND	
107 1,4-Dimethyl-2,5-Dinitrobe	149		7.988					ND	
108 1,4-Naphthoquinone	158		7.210					ND	
109 1,4-Dinitrobenzene	168		7.264					ND	
110 1,2-Dimethyl-3,6-Dinitrobe	179		8.052					ND	
111 Dimethyl phthalate	163		7.351					ND	
112 1,3-Dinitrobenzene	168		7.383					ND	
113 2,6-Dinitrotoluene	165		7.415					ND	
114 1,5-Dimethyl-2,4-Dinitrobe	179		8.213					ND	
115 Acenaphthylene	152		7.511					ND	
116 1,5-Dimethyl-2,3-Dinitrobe	179		8.309					ND	
117 3-Nitroaniline	138		7.592					ND	
118 1,2-Dimethyl-3,5-Dinitrobe	179		8.421					ND	
119 Acenaphthene	153		7.682					ND	
120 2,4-Dinitrophenol	184		7.693					ND	
121 4-Nitrophenol	109		7.779					ND	
122 1,2-Dimethyl-3,4-Dinitrobe	179		8.571					ND	
123 Pentachlorobenzene	250		7.782					ND	
124 2,4-Dinitrotoluene	165	7.817	7.821	-0.004	95	62819	20.0	15.0	
125 Dibenzofuran	168		7.853					ND	
126 n-hydroxymethylphthalimide	147		7.439					ND	
127 1-Naphthylamine	143		7.883					ND	
128 1,2-Dimethyl-4,5-Dinitrobe	91		8.806					ND	
129 2,3,4,6-Tetrachlorophenol	232		7.982					ND	
130 2-Naphthylamine	143		7.963					ND	
131 Hexadecane	57		8.067					ND	
132 Diethyl phthalate	149		8.051					ND	
133 Thionazin	97		8.092					ND	
134 4-Chlorophenyl phenyl ethe	204		8.179					ND	
135 Fluorene	166		8.201					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
136 Tributyl phosphate	99		8.236					ND	
137 N-Nitro-o-toluidine	152		8.156					ND	
138 4-Nitroaniline	138		8.211					ND	
139 4,6-Dinitro-2-methylphenol	198		8.238					ND	
140 Diphenylamine	169		8.297					ND	
141 N-Nitrosodiphenylamine	169		8.297					ND	
142 1,2-Diphenylhydrazine	77		8.345					ND	
143 Azobenzene	77		8.345					ND	
144 Sulfotepp	97		8.396					ND	
145 2,4,6 - Tribromophenol	330		8.441				ND	ND	U
146 Phenyl sulfide	186		8.390					ND	
147 Diallate Peak 1	86		8.540					ND	
148 1,3,5-Trinitrobenzene	213		8.503					ND	
149 Phorate	121		8.551					ND	
150 Phenacetin	108		8.562					ND	
151 Diallate Peak 2	86		8.631					ND	
152 4-Bromophenyl phenyl ether	248		8.671					ND	
153 Hexachlorobenzene	284	8.768	8.767	0.001	96	53864	20.0	14.7	
154 Dimethoate	87		8.722					ND	
155 Atrazine	200		8.820					ND	
156 n-Octadecane	85		8.986					ND	
157 Pentachlorophenol	266	8.955	8.959	-0.004	94	167815	100.0	66.0	
158 4-Aminobiphenyl	169		8.893					ND	
159 Pentachloronitrobenzene	237		8.925					ND	
160 Pronamide	173		8.946					ND	
161 Disulfoton	88		9.075					ND	
162 Dinoseb	211		9.080					ND	
163 Phenanthrene	178		9.168					ND	
164 Anthracene	178		9.216					ND	
165 Carbazole	167		9.371					ND	
166 Alachlor	188		9.499					ND	
167 Methyl parathion	109		9.449					ND	
168 Phenyl disulfide	109		9.661					ND	
169 Di-n-butyl phthalate	149		9.702					ND	
170 Diphenylsulfone	125		9.667					ND	
171 Ethyl Parathion	109		9.876					ND	
172 4-Nitroquinoline-1-oxide	190		9.935					ND	
173 Methapyrilene	97		10.015					ND	
174 Octachlorostyrene	308		10.118					ND	
175 Isodrin	193		10.293					ND	
176 Fluoranthene	202		10.551					ND	
177 4,4-Dichlorobenzil	139		10.439					ND	
178 Benzidine	184		10.690					ND	
179 Bis(4-chlorophenyl)disulfi	143		10.723					ND	
180 Pyrene	202		10.893					ND	
181 p-chlorophenyl sulfone	159		10.893					ND	
182 Aramite Peak 1	185		10.998					ND	
183 Aramite Peak 2	185		11.126					ND	
184 p-Dimethylamino azobenzene	120		11.286					ND	
185 Chlorobenzilate	251		11.366					ND	
186 Famphur	218		11.892					ND	
187 Butyl benzyl phthalate	149		12.015					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
188 3,3'-Dimethylbenzidine	212		11.911					ND	
189 2-Acetylaminofluorene	181		12.451					ND	
190 3,3'-Dichlorobenzidine	252		13.206					ND	
191 4,4'-Methylene bis(2-chlor	231		13.119					ND	
192 Benzo[a]anthracene	228		13.254					ND	
193 Bis(2-ethylhexyl) phthalat	149		13.398					ND	
194 Chrysene	228		13.345					ND	
195 6-Methylchrysene	242		14.417					ND	
196 Hexachlorophene	196		17.001					ND	
197 Di-n-octyl phthalate	149		15.220					ND	
198 Benzo[b]fluoranthene	252		16.160					ND	
199 7,12-Dimethylbenz(a)anthra	256		16.035					ND	
200 Benzo[k]fluoranthene	252		16.240					ND	
201 Benzo[e]pyrene	252		16.951					ND	
202 Benzo[a]pyrene	252		17.101					ND	
203 Perylene	252		17.301					ND	
204 3-Methylcholanthrene	268		18.055					ND	
205 Tris(2,3-dibromopropyl)pho	119		18.754					ND	
206 Dibenz[a,h]acridine	279		19.641					ND	
207 Dibenz[a,j]acridine	279		19.796					ND	
208 Indeno[1,2,3-cd]pyrene	276		20.407					ND	
209 Dibenz(a,h)anthracene	278		20.498					ND	
210 Benzo[g,h,i]perylene	276		21.155					ND	
211 Dibenzo[a,e]pyrene	302		25.549					ND	
S 219 Total Cresols	108				0			111.9	
S 220 Methyl Phenols,Total	108				0			111.9	
S 221 Isosafrole	162		15.341					ND	
S 222 Diallate	86		15.341					ND	
S 223 Aramite, Total	185		15.341					ND	
S 224 Phthalic acid	148		19.492					ND	
212 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
213 2-Butoxyethanol	1		0.000					ND	
214 2-Phenoxyethanol	1		0.000					ND	
216 4,4'-DDE	246		4.998					ND	
217 4,4'-DDD	235		5.282					ND	
218 4,4'-DDT	235		5.503					ND	
S 225 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

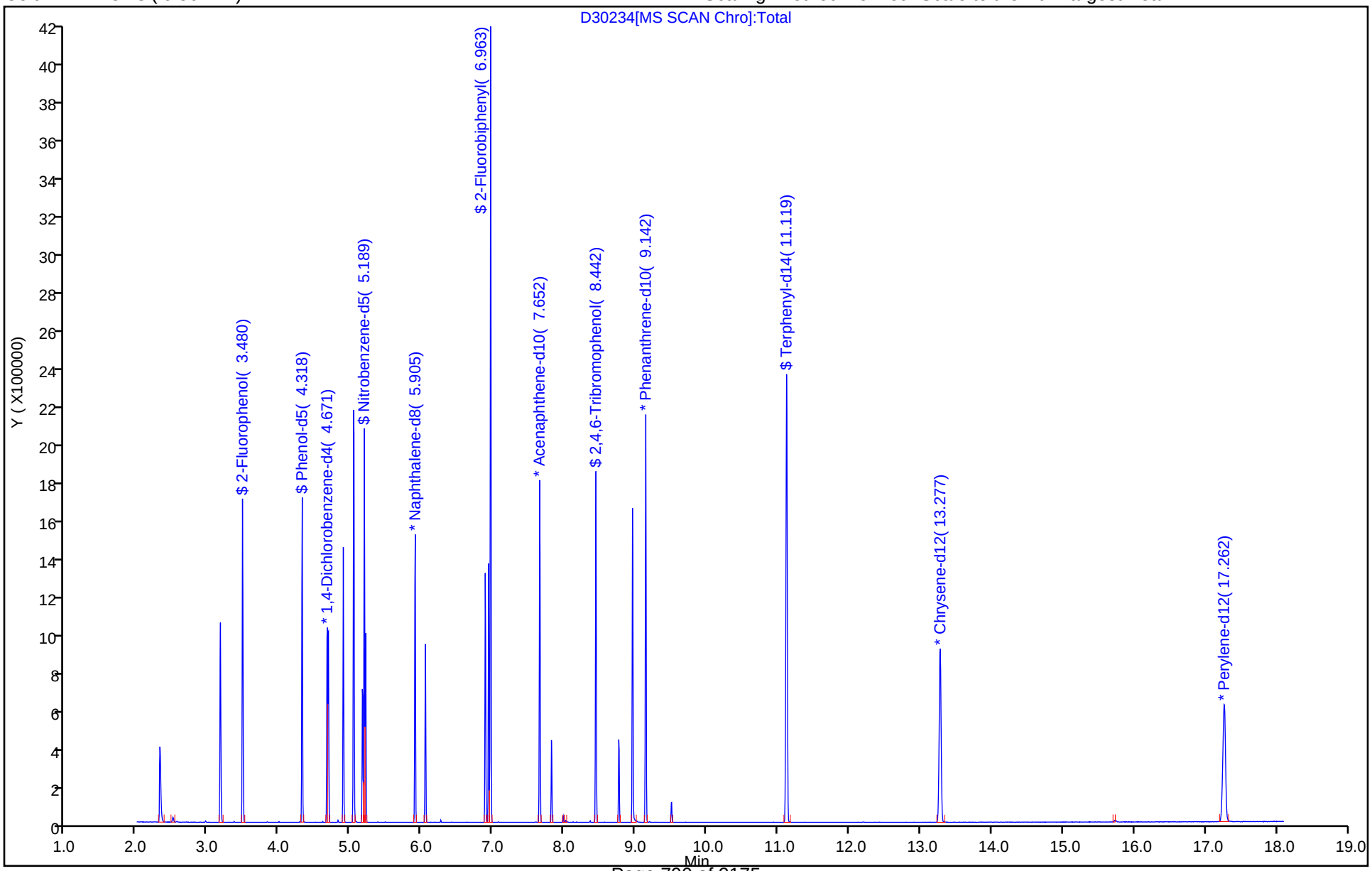
Report Date: 16-Nov-2018 11:29:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30234.D

Injection Date:	16-Nov-2018 02:19:30	Instrument ID:	SMS_D	Operator ID:	HOEFLERA
Lims ID:	280-116538-A-4-J MSD			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	SMSD_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\D30234.D
Lims ID: 280-116538-A-4-J MSD
Client ID:
Sample Type: MSD
Inject. Date: 16-Nov-2018 02:19:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-JMSD
Operator ID: HOEFLERA Instrument ID: SMS_D

Method: \\ChromNA\Denver\ChromData\SMS_D\20181115-76254.b\SMSD_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 16-Nov-2018 11:28:41 Calib Date: 18-Oct-2018 17:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_D\20181018-75241.b\D29769.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: hoeflera Date: 16-Nov-2018 11:10:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	70.1	70.11
$ 8 Phenol-d5	100.0	61.0	61.03
$ 9 Nitrobenzene-d5	100.0	82.9	82.94
$ 11 2-Fluorobiphenyl	100.0	89.1	89.12
$ 12 2,4,6-Tribromophenol	100.0	88.9	88.86
$ 13 Terphenyl-d14	100.0	69.5	69.50

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SMS_D Start Date: 09/18/2018 12:37

Analysis Batch Number: 430035 End Date: 09/18/2018 17:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-430035/2		09/18/2018 12:37	1	D29295.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-430035/3		09/18/2018 12:53	1	D29296.D	Rxi-5Sil MS 0.25(mm)
STD004 280-430035/4 IC		09/18/2018 13:22	1	D29297.D	Rxi-5Sil MS 0.25(mm)
STD010 280-430035/5 IC		09/18/2018 13:52	1	D29298.D	Rxi-5Sil MS 0.25(mm)
STD020 280-430035/6 IC		09/18/2018 14:21	1	D29299.D	Rxi-5Sil MS 0.25(mm)
STD050 280-430035/7 IC		09/18/2018 14:51	1	D29300.D	Rxi-5Sil MS 0.25(mm)
STD120 280-430035/8 IC		09/18/2018 15:21	1	D29301.D	Rxi-5Sil MS 0.25(mm)
STD160 280-430035/9 IC		09/18/2018 15:51	1	D29302.D	Rxi-5Sil MS 0.25(mm)
STD200 280-430035/10 IC		09/18/2018 16:20	1	D29303.D	Rxi-5Sil MS 0.25(mm)
ICV 280-430035/11		09/18/2018 16:50	1		Rxi-5Sil MS 0.25(mm)
ICV 280-430035/12		09/18/2018 17:20	1		Rxi-5Sil MS 0.25(mm)
ICV 280-430035/13		09/18/2018 17:50	1		Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SMS_D Start Date: 11/15/2018 15:42

Analysis Batch Number: 437797 End Date: 11/16/2018 03:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-437797/2		11/15/2018 15:42	1	D30211.D	Rxi-5Sil MS 0.25(mm)
CCV 280-437797/3		11/15/2018 15:55	1	D30212.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 16:25	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 16:55	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 17:24	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 17:54	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 18:24	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 18:53	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 19:23	1		Rxi-5Sil MS 0.25(mm)
LB3 280-436732/1-G		11/15/2018 19:52	1	D30220.D	Rxi-5Sil MS 0.25(mm)
LCS 280-436732/3-B		11/15/2018 20:22	1	D30221.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 20:52	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 21:21	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 21:51	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 22:20	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 22:50	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 23:20	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 23:49	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/16/2018 00:14	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/16/2018 00:39	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/16/2018 01:04	1		Rxi-5Sil MS 0.25(mm)
280-116538-4		11/16/2018 01:29	1	D30232.D	Rxi-5Sil MS 0.25(mm)
280-116538-4 MS		11/16/2018 01:54	1	D30233.D	Rxi-5Sil MS 0.25(mm)
280-116538-4 MSD		11/16/2018 02:19	1	D30234.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-437797/26		11/16/2018 02:44	1	D30235.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/16/2018 03:13	4		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/16/2018 03:38	1		Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436732 Batch Start Date: 11/07/18 09:48 Batch Analyst: Bourgery, David F

Batch Method: 1311 Batch End Date: 11/10/18 10:17

Lab Sample ID	Client Sample ID	Method Chain	Basis	ExtractFluid	AnalysisComment				
LB3 280-436732/1		1311, 3510C, 8270D		milliq					
LCS 280-436732/3		1311, 3510C, 8270D		milliq	TOX				
280-116538-A-4	FWGIDW-181001-WW	1311, 3510C, 8270D	P	milliq	TOX used d too				

Batch Notes	
First End time	11/07/18 19:48
First Start time	11/07/18 9:48

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437243 Batch Start Date: 11/12/18 13:36 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/13/18 13:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	SecondAdjustpH	8270Surrogate 00128
LB3 280-436732/1-A		3510C, 8270D		200 mL	1 mL	5 SU	1 SU	14 SU	1 mL
LCS 280-436732/3-A		3510C, 8270D		200 mL	1 mL	5 SU	1 SU	14 SU	1 mL
280-116538-A-4-A	FWGIDW-181001-WW	3510C, 8270D	P	200 mL	1 mL	8 SU	1 SU	14 SU	1 mL
280-116538-A-4-A MS	FWGIDW-181001-WW	3510C, 8270D	P	200 mL	1 mL	8 SU	1 SU	14 SU	1 mL
280-116538-A-4-A MSD	FWGIDW-181001-WW	3510C, 8270D	P	200 mL	1 mL	8 SU	1 SU	14 SU	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	8270TCLPSpike 00062	AnalysisComment				
LB3 280-436732/1-A		3510C, 8270D			shared QC w/437251				
LCS 280-436732/3-A		3510C, 8270D		1 mL	shared QC w/437251				
280-116538-A-4-A	FWGIDW-181001-WW	3510C, 8270D	P						
280-116538-A-4-A MS	FWGIDW-181001-WW	3510C, 8270D	P	1 mL					
280-116538-A-4-A MSD	FWGIDW-181001-WW	3510C, 8270D	P	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437243 Batch Start Date: 11/12/18 13:36 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/13/18 13:12

Batch Notes	
Acid Used for pH Adjustment ID	1:1 H2SO4_00075
Balance ID	24750399
Base Used to Adjust pH ID	10N_NaOH_00133
Batch Comment	DV-OP-0006/0007
Analyst ID - Concentration	MF
Concentration 1 Corrected Temperature	84 Degrees C
Equipment ID - Concentration 1	B
Analyst ID - Extraction	KS(trainee)+AAG(trainer)
Method/Fraction	3510C/8270D_DOD5
Na2SO4 ID	0000205461_000010
NaCl ID	173831
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00412/413
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	KS
Analyst ID - Spike Witness Analyst	Reviewer:JZ
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	83 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8081B_DOD5

Organochlorine Pesticides (GC)

FORM II
PESTICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low

GC Column (2): CLP2 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCX2 #	DCBP2 #
FWGIDW-181001-WW	280-116538-4	87	87
	LB3 280-436732/1-I	88	101
	LCS 280-436732/3-E	90	103
	LCS 280-436732/3-F	89	115
FWGIDW-181001-WW MS	280-116538-4 MS	89	92
FWGIDW-181001-WW MS	280-116538-4 MS	88	106
FWGIDW-181001-WW MSD	280-116538-4 MSD	88	94
FWGIDW-181001-WW MSD	280-116538-4 MSD	82	100

	QC LIMITS
TCX = Tetrachloro-m-xylene	28-115
DCBP = DCB Decachlorobiphenyl	34-122

Column to be used to flag recovery values

FORM II 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11210016.D

Lab ID: LCS 280-436732/3-E Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Endrin	0.00500	0.00514	103	66-143	
Heptachlor	0.00500	0.00484	97	59-143	
Heptachlor epoxide	0.00500	0.00481	96	37-142	
gamma-BHC (Lindane)	0.00500	0.00474	95	68-142	
Methoxychlor	0.00500	0.00560	112	30-150	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11210017.D

Lab ID: LCS 280-436732/3-F Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Toxaphene	0.200	0.219	109	63-142	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11210020.D

Lab ID: 280-116538-4 MS Client ID: FWGIDW-181001-WW MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Endrin	0.00500	ND	0.00505	101	66-143	
Heptachlor	0.00500	ND	0.00494	99	59-143	
Heptachlor epoxide	0.00500	ND	0.00481	96	37-142	
gamma-BHC (Lindane)	0.00500	ND	0.00484	97	68-142	
Methoxychlor	0.00500	ND	0.00532	106	30-150	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11210022.D

Lab ID: 280-116538-4 MS Client ID: FWGIDW-181001-WW MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Toxaphene	0.200	ND	0.205	102	63-142	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11210021.D

Lab ID: 280-116538-4 MSD Client ID: FWGIDW-181001-WW MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Endrin	0.00500	0.00490	98	3	30	66-143	
Heptachlor	0.00500	0.00489	98	1	30	59-143	
Heptachlor epoxide	0.00500	0.00468	94	3	30	37-142	
gamma-BHC (Lindane)	0.00500	0.00474	95	2	30	68-142	
Methoxychlor	0.00500	0.00535	107	1	30	30-150	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11210023.D

Lab ID: 280-116538-4 MSD Client ID: FWGIDW-181001-WW MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Toxaphene	0.200	0.200	100	2	30	63-142	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: STD4 280-433303/29 Date Analyzed: 10/13/2018 19:57

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 024F3201.D Heated Purge: (Y/N) N

Calibration ID: 33989

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1639866372	3.02				
UPPER LIMIT		3279732744	3.52				
LOWER LIMIT		819933186	2.52				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-433303/33		1735793263	3.02				
ICV 280-433303/34		1963980017	3.02				
ICV 280-433303/35		1776097136	3.02				
ICV 280-433303/36		1833818877	3.02				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: STD4 280-433303/29 Date Analyzed: 10/13/2018 19:57

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 024F3201.D Heated Purge: (Y/N) N

Calibration ID: 33990

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		184249474	2.84				
UPPER LIMIT		368498948	3.34				
LOWER LIMIT		92124737	2.34				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-433303/33		195320590	2.84				
ICV 280-433303/34		209759075	2.84				
ICV 280-433303/35		196652802	2.84				
ICV 280-433303/36		196779319	2.84				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: CCVIS 280-438443/13 Date Analyzed: 11/21/2018 15:22

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11210013.D Heated Purge: (Y/N) N

Calibration ID: 33989

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1637310131	3.00				
UPPER LIMIT		3274620262	3.50				
LOWER LIMIT		818655066	2.50				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LB3 280-436732/1-I		1647706577	3.00				
LCS 280-436732/3-E		1651005801	3.00				
LCS 280-436732/3-F		1626761580	3.00				
280-116538-4	FWGIDW-181001-WW	1734198553	3.00				
280-116538-4 MS	FWGIDW-181001-WW MS	1682111455	3.00				
280-116538-4 MSD	FWGIDW-181001-WW MSD	1694614309	3.01				
280-116538-4 MS	FWGIDW-181001-WW MS	1638626068	3.00				
280-116538-4 MSD	FWGIDW-181001-WW MSD	1637987992	3.00				
CCV 280-438443/35		1728722549	3.00				
CCV 280-438443/36		1808120236	3.00				
CCV 280-438443/37		1613450730	3.00				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: CCVIS 280-438443/13 Date Analyzed: 11/21/2018 15:22

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11210013.D Heated Purge: (Y/N) N

Calibration ID: 33990

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		216780072	2.81				
UPPER LIMIT		433560144	3.31				
LOWER LIMIT		108390036	2.31				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LB3 280-436732/1-I		212901053	2.80				
LCS 280-436732/3-E		214808985	2.81				
LCS 280-436732/3-F		217042001	2.81				
280-116538-4	FWGIDW-181001-WW	226552725	2.81				
280-116538-4 MS	FWGIDW-181001-WW MS	221650496	2.81				
280-116538-4 MSD	FWGIDW-181001-WW MSD	221964220	2.81				
280-116538-4 MS	FWGIDW-181001-WW MS	216228957	2.81				
280-116538-4 MSD	FWGIDW-181001-WW MSD	218068003	2.81				
CCV 280-438443/35		228216066	2.81				
CCV 280-438443/36		240912953	2.81				
CCV 280-438443/37		216395080	2.80				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MS Lab Sample ID: 280-116538-4 MS

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/21/2018 17:25 Date Analyzed (2): 11/21/2018 17:25

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
gamma-BHC (Lindane)	1		4.77	4.75	4.78	0.00497		2.7
	2		4.73	4.71	4.74	0.00484		
Heptachlor	1		5.17	5.15	5.18	0.00505		2.3
	2		5.08	5.06	5.09	0.00494		
Heptachlor epoxide	1		6.04	6.03	6.05	0.00508		5.4
	2		5.88	5.87	5.89	0.00481		
Endrin	1		6.97	6.95	6.98	0.00541		6.7
	2		6.90	6.89	6.91	0.00505		
Methoxychlor	1		7.83	7.81	7.84	0.00571		7.0
	2		8.09	8.08	8.10	0.00532		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MS Lab Sample ID: 280-116538-4 MS

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/21/2018 18:00 Date Analyzed (2): 11/21/2018 18:00

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Toxaphene	1	1	6.20	6.20	6.22	0.106	0.238	15.0
		2	6.82	6.80	6.83	0.169		
		3	7.49	7.48	7.50	0.217		
		4	7.85	7.84	7.86	0.271		
		5	8.17	8.15	8.18	0.426		
	2	1	5.73	5.71	5.74	0.144	0.205	
		2	7.08	7.07	7.09	0.150		
		3	7.22	7.21	7.23	0.143		
		4	7.72	7.72	7.74	0.336		
		5	8.03	8.01	8.04	0.250		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MSD Lab Sample ID: 280-116538-4 MSD

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/21/2018 17:43 Date Analyzed (2): 11/21/2018 17:43

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
gamma-BHC (Lindane)	1		4.77	4.75	4.78	0.00485		2.4
	2		4.73	4.71	4.74	0.00474		
Heptachlor	1		5.17	5.15	5.18	0.00501		2.3
	2		5.08	5.06	5.09	0.00489		
Heptachlor epoxide	1		6.04	6.03	6.05	0.00493		5.2
	2		5.88	5.87	5.89	0.00468		
Endrin	1		6.96	6.95	6.98	0.00521		6.1
	2		6.90	6.89	6.91	0.00490		
Methoxychlor	1		7.83	7.81	7.84	0.00561		4.8
	2		8.09	8.08	8.10	0.00535		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MSD Lab Sample ID: 280-116538-4 MSD

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/21/2018 18:18 Date Analyzed (2): 11/21/2018 18:18

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Toxaphene	1	1	6.20	6.20	6.22	0.101	0.220	9.4
		2	6.82	6.80	6.83	0.154		
		3	7.48	7.48	7.50	0.193		
		4	7.85	7.84	7.86	0.259		
		5	8.17	8.15	8.18	0.393		
	2	1	5.73	5.71	5.74	0.153	0.200	
		2	7.08	7.07	7.09	0.144		
		3	7.22	7.21	7.23	0.135		
		4	7.72	7.72	7.74	0.335		
		5	8.03	8.01	8.04	0.234		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436732/3-E

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/21/2018 16:15 Date Analyzed (2): 11/21/2018 16:15

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
gamma-BHC (Lindane)	1		4.77	4.75	4.78	0.00482		1.8
	2		4.72	4.71	4.74	0.00474		
Heptachlor	1		5.17	5.15	5.18	0.00487		0.7
	2		5.07	5.06	5.09	0.00484		
Heptachlor epoxide	1		6.04	6.03	6.05	0.00498		3.5
	2		5.88	5.87	5.89	0.00481		
Endrin	1		6.96	6.95	6.98	0.00540		5.0
	2		6.90	6.89	6.91	0.00514		
Methoxychlor	1		7.82	7.81	7.84	0.00591		5.3
	2		8.09	8.08	8.10	0.00560		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436732/3-F

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/21/2018 16:32 Date Analyzed (2): 11/21/2018 16:32

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Toxaphene	1	1	6.20	6.20	6.22	0.114	0.246	11.6
		2	6.82	6.80	6.83	0.176		
		3	7.48	7.48	7.50	0.211		
		4	7.85	7.84	7.86	0.286		
		5	8.17	8.15	8.18	0.442		
	2	1	5.73	5.71	5.74	0.171	0.219	
		2	7.08	7.07	7.09	0.155		
		3	7.22	7.21	7.23	0.150		
		4	7.72	7.72	7.74	0.359		
		5	8.03	8.01	8.04	0.260		

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW | Lab Sample ID: 280-116538-4

Matrix: Water (TCLP) | Lab File ID: 11210019.D

Analysis Method: 8081B | Date Collected: 11/02/2018 15:30

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 17:07

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-20-8	Endrin	ND		0.00050	0.000079
76-44-8	Heptachlor	ND		0.00050	0.000077
1024-57-3	Heptachlor epoxide	ND		0.00050	0.000075
58-89-9	gamma-BHC (Lindane)	ND		0.00050	0.000069
72-43-5	Methoxychlor	ND		0.0010	0.00013
8001-35-2	Toxaphene	ND		0.020	0.0037
12789-03-6	Chlordane (technical)	ND		0.0050	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	87		28-115
2051-24-3	DCB Decachlorobiphenyl	87		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210019.D
Lims ID: 280-116538-A-4-K
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 21-Nov-2018 17:07:55 ALS Bottle#: 13 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-K
Misc. Info.: 280-0076442-019
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 21:06:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical						
1		1.000			ND	
2		0.000				
* 2 1-Bromo-2-nitrobenzene						
1	3.003	3.002	0.001	1734198553	150.0	
2	2.805	2.805	0.000	226552725	150.0	
$ 4 Tetrachloro-m-xylene						
1	3.898	3.899	-0.001	220336991	17.5	
2	3.788	3.786	0.002	32953090	17.5	
					RPD = 0.36	
5 Hexachlorobenzene						
1		4.306			ND	
2		4.265				
6 Diallate						
1		4.331			ND	
2		4.217				
7 Propachlor						
1		4.472			ND	
2		4.096				
8 alpha-BHC						
1		4.477			ND	
2		4.410				
9 gamma-BHC (Lindane)						
1		4.766			ND	
2		4.724				
10 beta-BHC						
1		4.842			ND	
2		4.801				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
11 2,4,5-Trichlorophenol						
1		4.861			ND	
2		4.772				
12 delta-BHC						
1		4.991			ND	
2		5.033				
14 Chlordane (technical)						
1		5.097			ND	
1		5.562				
1		6.172				
1		6.311				
1		7.125				
2		4.960				
2		5.479				
2		6.074				
2		6.231				
2		7.174				
13 Technical Chlordane						
1		5.097			ND	
1		5.562				
1		6.172				
1		6.311				
1		7.125				
2		4.960				
2		5.479				
2		6.074				
2		6.231				
2		7.174				
15 Heptachlor						
1		5.165			ND	
2		5.075				
16 Aldrin						
1		5.433			ND	
2		5.341				
17 Chlorpyrifos						
1		5.664			ND	
2		5.561				
18 Isodrin						
1		5.756			ND	
2		5.700				
19 Dicofol						
1		5.796			ND	
2		5.659				
20 2,4'-DDE						
1		6.024			ND	
2		6.081				
21 Heptachlor epoxide						
1		6.041			ND	
2		5.877				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
22 trans-Chlordane						
1	6.172				ND	
2	6.076					
28 Toxaphene						
1	6.210				ND	
1	6.815					
1	7.488					
1	7.847					
1	8.164					
2	5.725					
2	7.077					
2	7.218					
2	7.732					
2	8.026					
23 cis-Chlordane						
1	6.314				ND	
2	6.231					
24 4,4'-DDE						
1	6.391				ND	
2	6.415					
25 Endosulfan I						
1	6.462				ND	
2	6.290					
26 2,4'-DDD						
1	6.574				ND	
2	6.626					
27 Dieldrin						
1	6.716				ND	
2	6.580					
29 2,4'-DDT						
1	6.842				ND	
2	6.948					
30 Endrin						
1	6.963				ND	
2	6.901					
31 Kepone						
1	7.005				ND	
2	7.016					
32 4,4'-DDD						
1	7.025				ND	
2	7.029					
33 Chlorobenzilate						
1	7.038				ND	
2	6.896					
34 Endosulfan II						
1	7.199				ND	
2	7.127					
35 4,4'-DDT						
1	7.319				ND	
2	7.360					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
36 Endrin aldehyde						
1		7.645			ND	
2		7.486				
37 Methoxychlor						
1		7.823			ND	
2		8.090				
38 Mirex						
1		7.981			ND	
2		8.280				
39 Endosulfan sulfate						
1		8.102			ND	
2		7.778				
40 Endrin ketone						
1		8.394			ND	
2		8.331				
$ 41 DCB Decachlorobiphenyl						
1	9.408	9.407	0.001	130104986	19.7	
2	9.600	9.600	0.000	19649315	17.4	
					RPD = 12.34	
42 Tris(2,3-dibromopropyl)phosphate						
1		11.197			ND	
2		11.371				
S 3 Endosulfan, Total						
1		0.000			ND	
2		0.000				

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

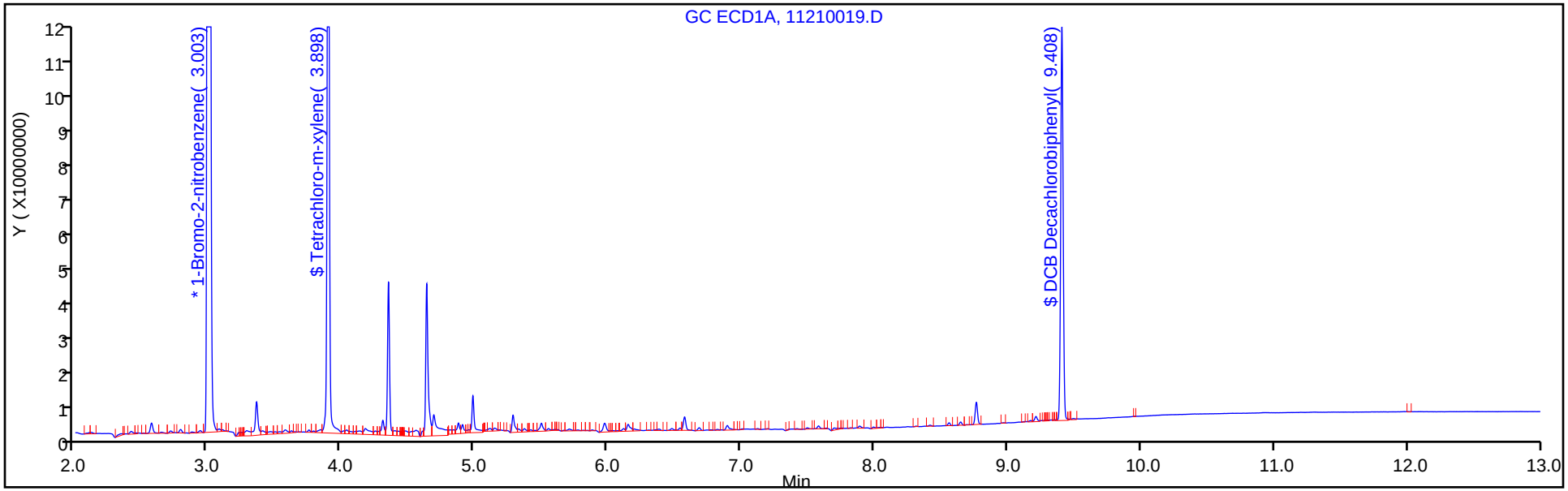
Report Date: 25-Nov-2018 21:25:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

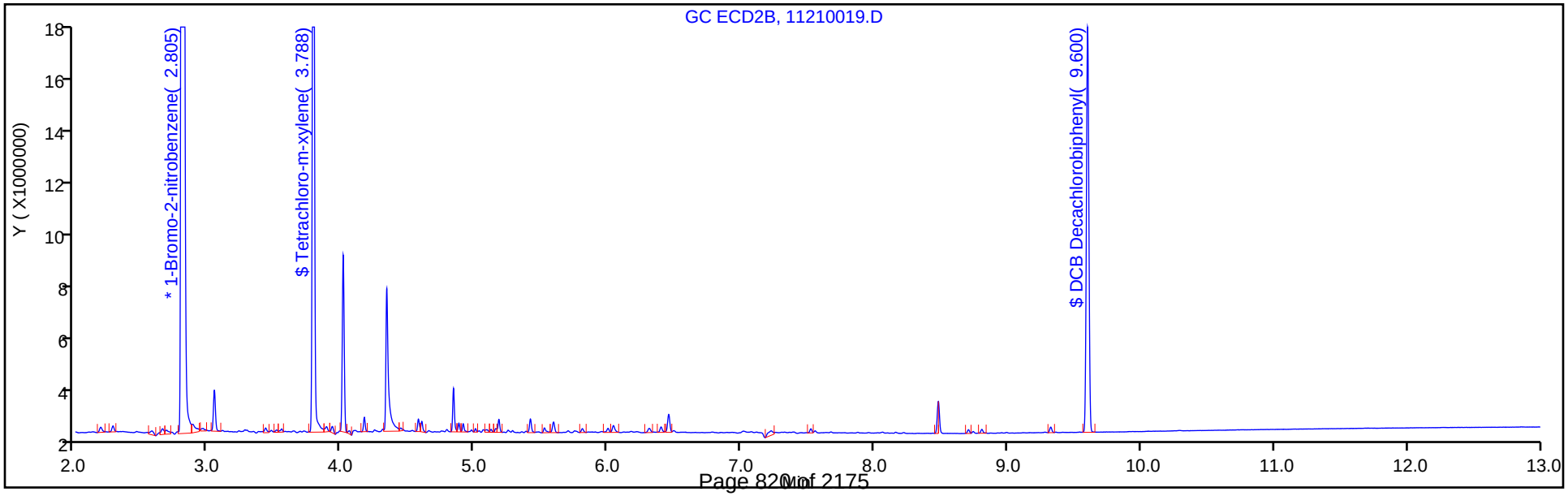
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210019.D

Injection Date:	21-Nov-2018 17:07:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-A-4-K	Lab Sample ID:	280-116538-4	Worklist Smp#:	19
Client ID:	FWGIDW-181001-WW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210019.D				
Lims ID:	280-116538-A-4-K				
Client ID:	FWGIDW-181001-WW				
Sample Type:	Client				
Inject. Date:	21-Nov-2018 17:07:55	ALS Bottle#:	13	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-K				
Misc. Info.:	280-0076442-019				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 21:06:55		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.5	87.72
$ 41 DCB Decachlorobiphenyl	20.0	19.7	98.41

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.5	87.40
$ 41 DCB Decachlorobiphenyl	20.0	17.4	86.97

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33997

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0059 0.0071	0.0062	0.0067	0.0068	0.0071	Lin2	-0.239	0.0070							0.9990		0.9900
Toxaphene Peak 2	0.0143 0.0181	0.0151	0.0166	0.0176	0.0185	Lin2	-0.823	0.0179							0.9980		0.9900
Toxaphene Peak 3	0.0141 0.0205	0.0164	0.0179	0.0201	0.0204	Lin2	-1.318	0.0202							0.9980		0.9900
Toxaphene Peak 4	0.0054 0.0083	0.0062	0.0073	0.0079	0.0083	Lin2	-0.605	0.0081							0.9970		0.9900
Toxaphene Peak 5	0.0045 0.0085	0.0056	0.0071	0.0079	0.0086	Lin2	-0.840	0.0083							0.9930		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33997

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	BNB	Lin2	13484316 984914164	36757841	77218443	157400259	444953077	200 10000	500	1000	2000	5000
Toxaphene Peak 2	BNB	Lin2	32829722 2531832439	89263703	193181281	408359221	1162405972	200 10000	500	1000	2000	5000
Toxaphene Peak 3	BNB	Lin2	32415828 2860362835	96759589	207813969	466543962	1283190101	200 10000	500	1000	2000	5000
Toxaphene Peak 4	BNB	Lin2	12391302 1164606715	36941603	84522297	184785693	519294161	200 10000	500	1000	2000	5000
Toxaphene Peak 5	BNB	Lin2	10296721 1187453780	33168067	82441591	182989462	541962755	200 10000	500	1000	2000	5000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D
Lims ID: STD6 TOX
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 16:10:51 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:12 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:36:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	2093632714	150.0	150.0	
2	2.840	2.839	0.000	210457864	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	984914164	10000	10176	
1	6.853	6.854	-0.001	2531832439	10000	10174	
1	7.528	7.528	0.000	2860362835	10000	10232	
1	7.885	7.886	-0.001	1164606715	10000	10334	
1	8.203	8.204	-0.001	1187453780	10000	10397	
		Average of Peak Amounts =				10263	
2	5.776	5.778	-0.002	60549286	10000	9540.5	M
2	7.143	7.145	-0.002	273869350	10000	9445.5	M
2	7.284	7.286	-0.002	756947570	10000	9410.3	M
2	7.798	7.800	-0.002	219585664	10000	9519.4	M
2	8.094	8.096	-0.002	429283014	10000	9559.5	M
		Average of Peak Amounts =				9495.0	
						RPD = 7.77	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL6_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

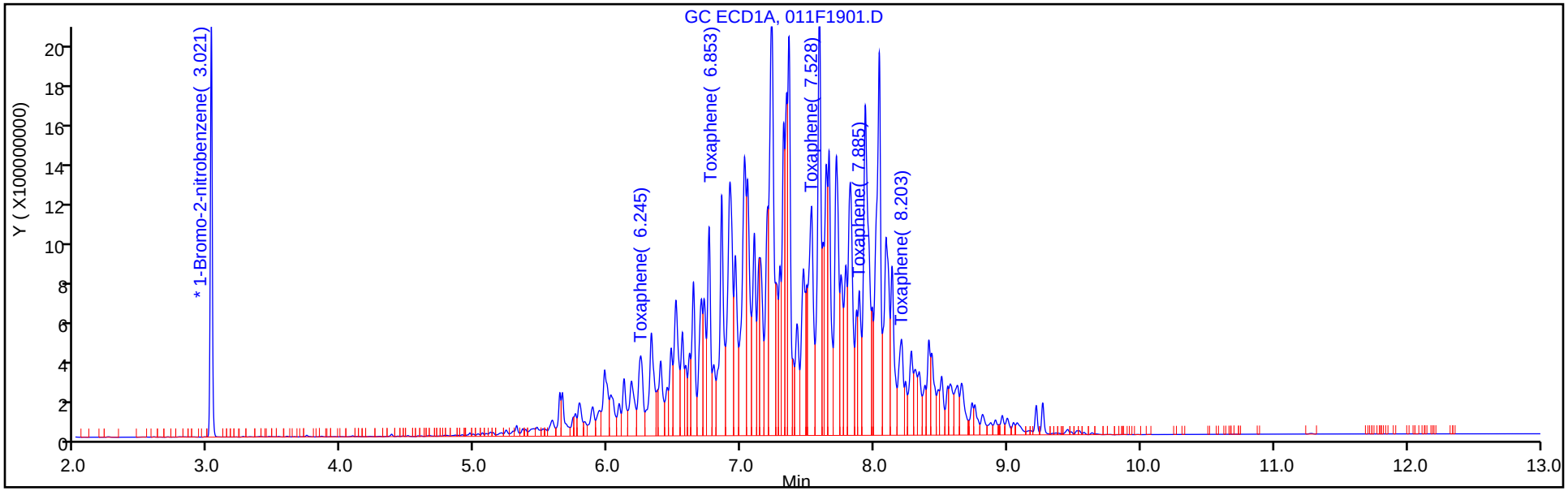
Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

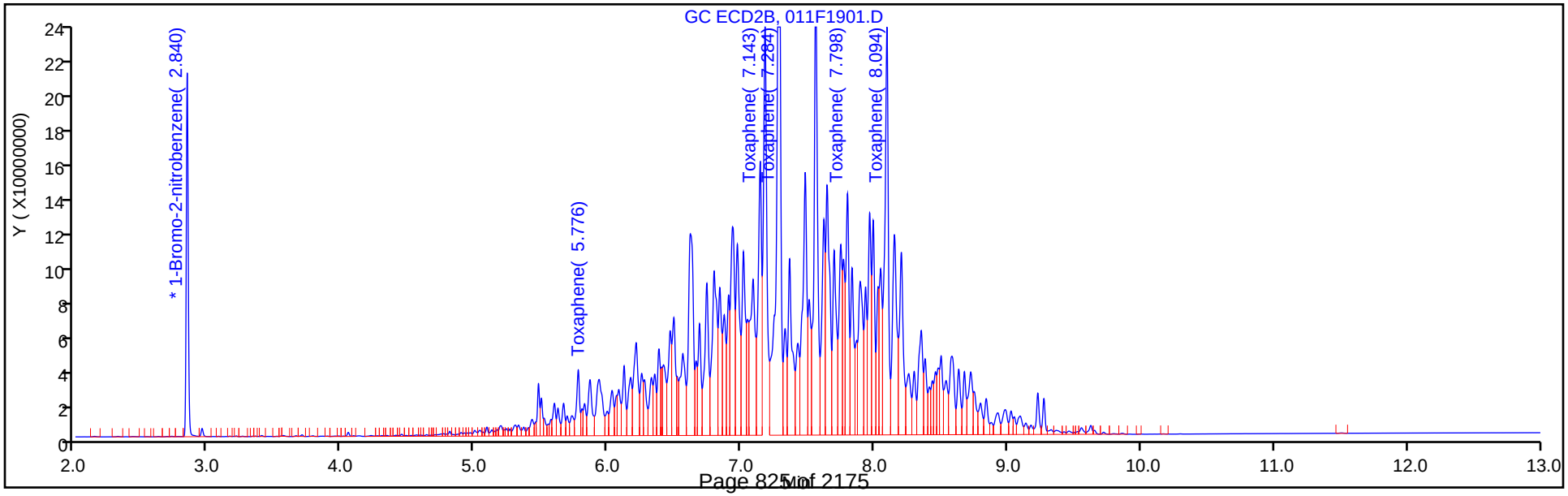
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date:	13-Oct-2018 16:10:51	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 TOX			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D
Lims ID: STD5 TOX
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 16:28:15 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:15 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	1887409806	150.0	150.0	
2	2.840	2.839	0.001	194682264	150.0	150.0	
28 Toxaphene							
1	6.246	6.246	0.000	444953077	5000.0	5116.5	
1	6.853	6.854	-0.001	1162405972	5000.0	5203.9	
1	7.526	7.528	-0.002	1283190101	5000.0	5124.6	
1	7.886	7.886	0.000	519294161	5000.0	5149.2	
1	8.204	8.204	0.000	541962755	5000.0	5314.1	
		Average of Peak Amounts =				5181.6	
2	5.777	5.778	-0.001	30052469	5000.0	5094.6	
2	7.143	7.145	-0.002	136167822	5000.0	5072.1	
2	7.284	7.286	-0.002	377922017	5000.0	5079.7	
2	7.799	7.800	-0.001	110390772	5000.0	5177.3	
2	8.095	8.096	-0.001	210568110	5000.0	5070.0	
		Average of Peak Amounts =				5098.7	
						RPD = 1.61	

Reagents:

8081ToxL5_00021 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

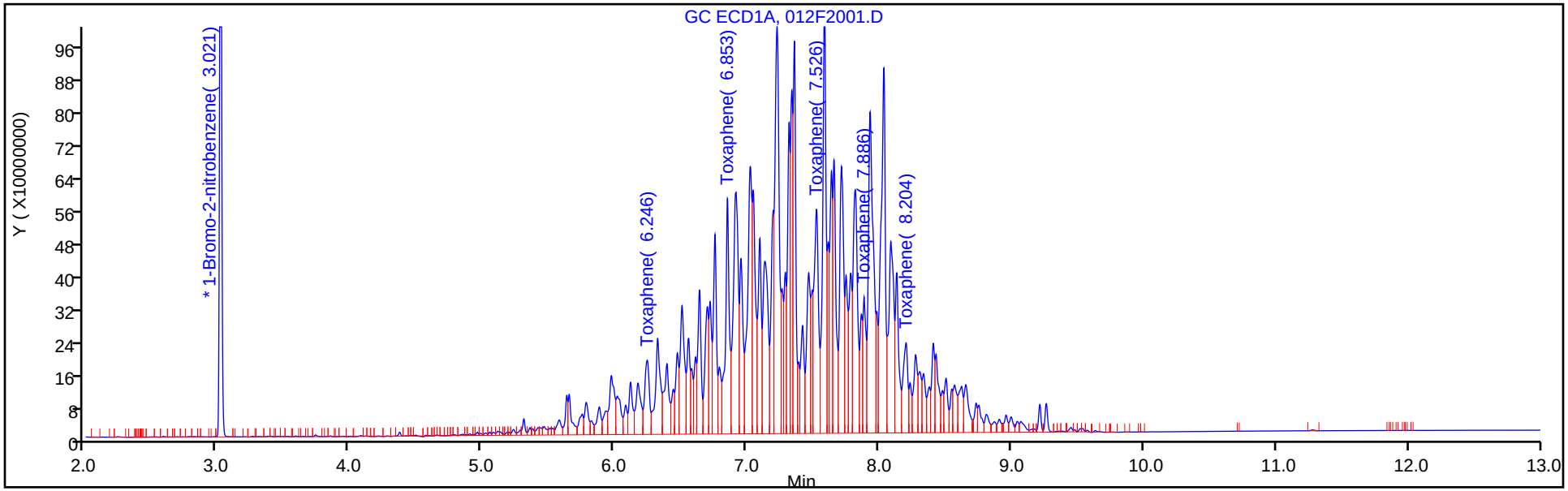
Report Date: 14-Oct-2018 22:11:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

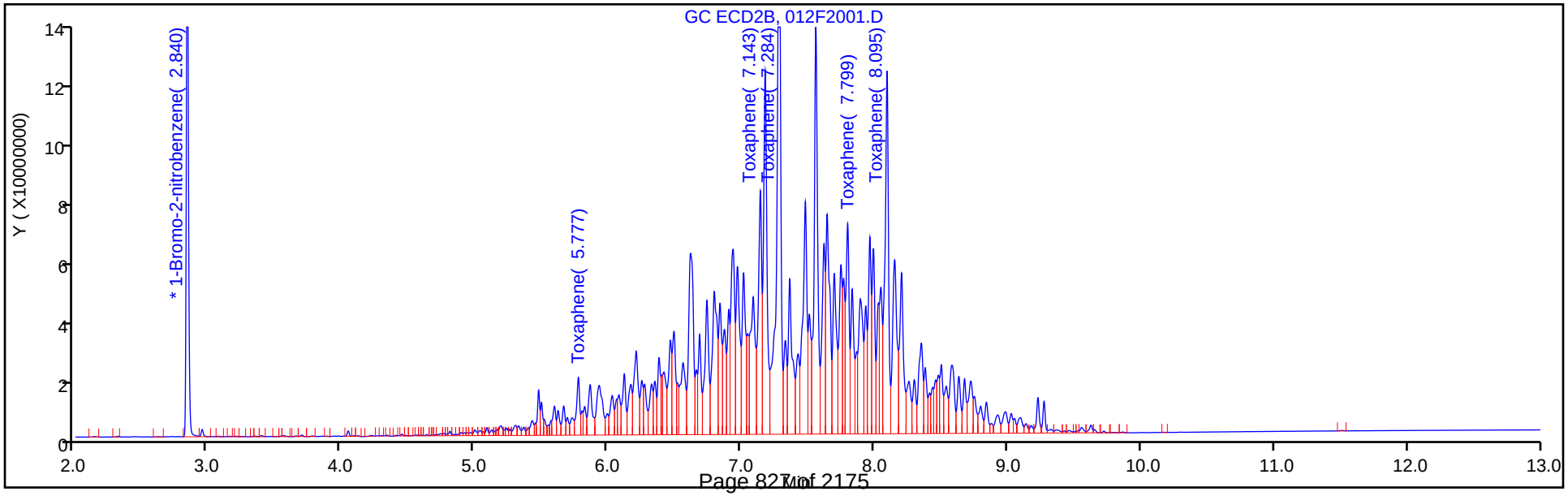
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D

Injection Date:	13-Oct-2018 16:28:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 TOX			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D
Lims ID: STD4 TOX
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 16:45:38 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:18 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	0.000	1744551294	150.0	150.0	
2	2.841	2.841	0.000	183459712	150.0	150.0	
28 Toxaphene							M
1	6.246	6.246	0.000	157400259	2000.0	1979.4	M
1	6.854	6.854	0.000	408359221	2000.0	2006.3	M
1	7.528	7.528	0.000	466543962	2000.0	2055.4	M
1	7.886	7.886	0.000	184785693	2000.0	2028.0	M
1	8.204	8.204	0.000	182989462	2000.0	2005.7	M
		Average of Peak Amounts =				2015.0	
2	5.778	5.778	0.000	12064651	2000.0	2140.2	M
2	7.145	7.145	0.000	52352055	2000.0	2063.3	M
2	7.286	7.286	0.000	145561454	2000.0	2077.1	M
2	7.800	7.800	0.000	41885928	2000.0	2089.7	M
2	8.096	8.096	0.000	80317017	2000.0	2053.4	M
		Average of Peak Amounts =				2084.7	
						RPD = 3.40	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00014 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

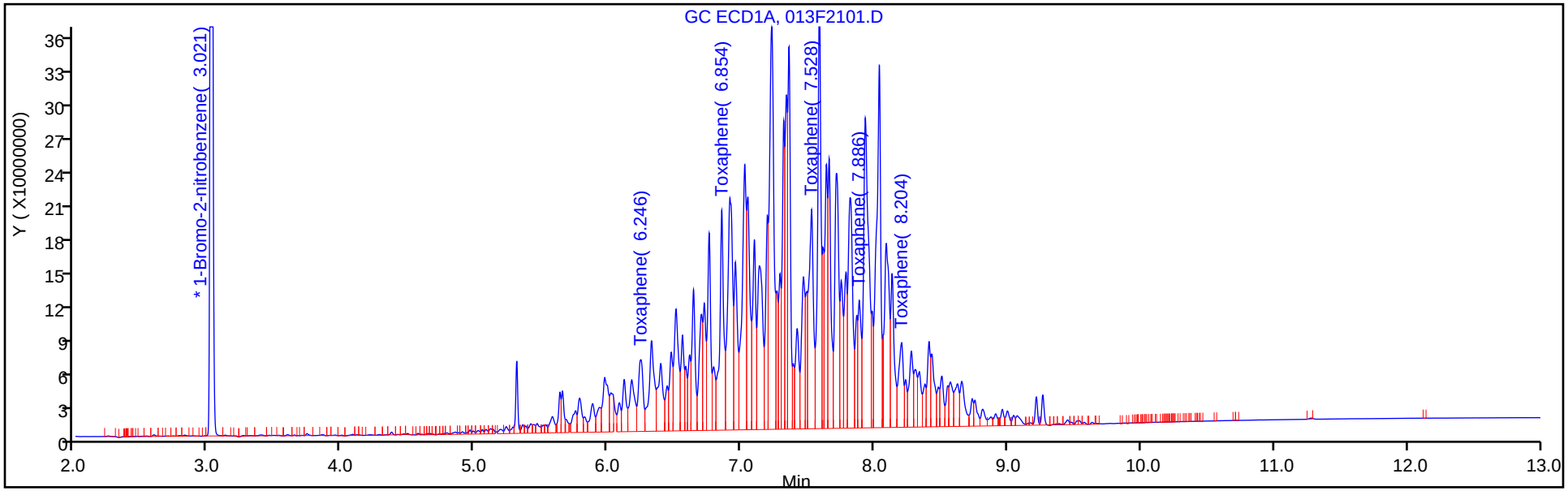
Report Date: 14-Oct-2018 22:11:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

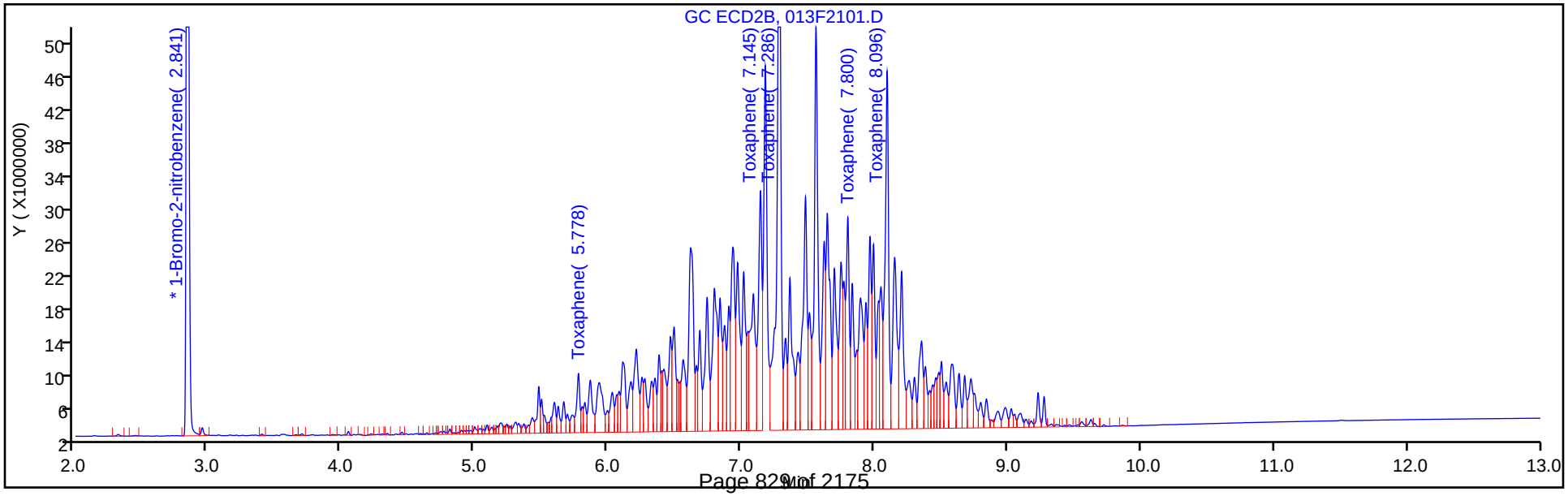
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 TOX			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date: 13-Oct-2018 16:45:38 Instrument ID: SGC_P2

Lims ID: STD4 TOX

Client ID:

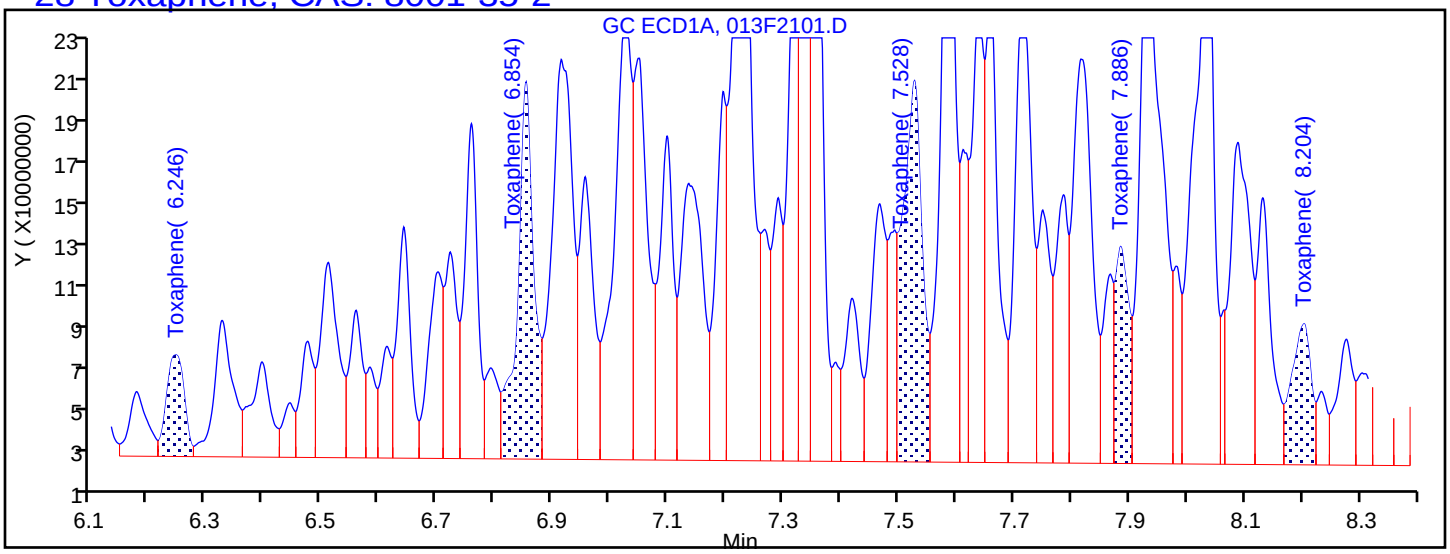
Operator ID: TEM ALS Bottle#: 13 Worklist Smp#: 18

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

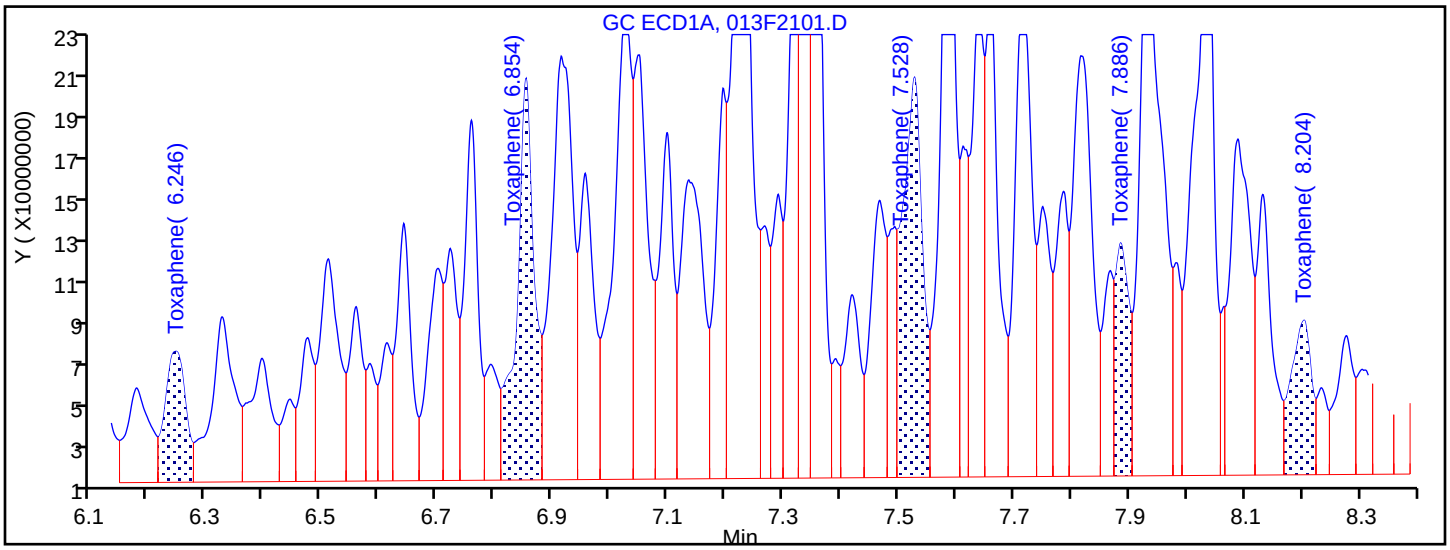
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.246	Response = 105015082
6.854	Response = 357524871
7.528	Response = 434898456
7.886	Response = 170048760
8.204	Response = 161011474



Manual Integration Results

6.246	Response = 157400259	M
6.854	Response = 408359221	M
7.528	Response = 466543962	M
7.886	Response = 184785693	M
8.204	Response = 182989462	M

Reviewer: mooret, 14-Oct-2018 21:37:36

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D
Lims ID: STD3 TOX
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 17:03:01 ALS Bottle#: 14 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:21 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	-0.001	1741058857	150.0	150.0	
2	2.841	2.841	-0.001	184005886	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	77218443	1000.0	990.5	M
1	6.854	6.854	0.000	193181281	1000.0	975.2	M
1	7.527	7.528	-0.001	207813969	1000.0	953.6	M
1	7.887	7.886	0.001	84522297	1000.0	969.8	M
1	8.204	8.204	0.000	82441591	1000.0	961.2	M
		Average of Peak Amounts =				970.0	
2	5.777	5.778	-0.001	5366684	1000.0	919.9	
2	7.143	7.145	-0.002	26089503	1000.0	1020.0	
2	7.285	7.286	-0.001	72036294	1000.0	1025.7	
2	7.800	7.800	0.000	19681560	1000.0	983.5	
2	8.095	8.096	-0.001	40124523	1000.0	1023.9	
		Average of Peak Amounts =				994.6	
						RPD = 2.50	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL3_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

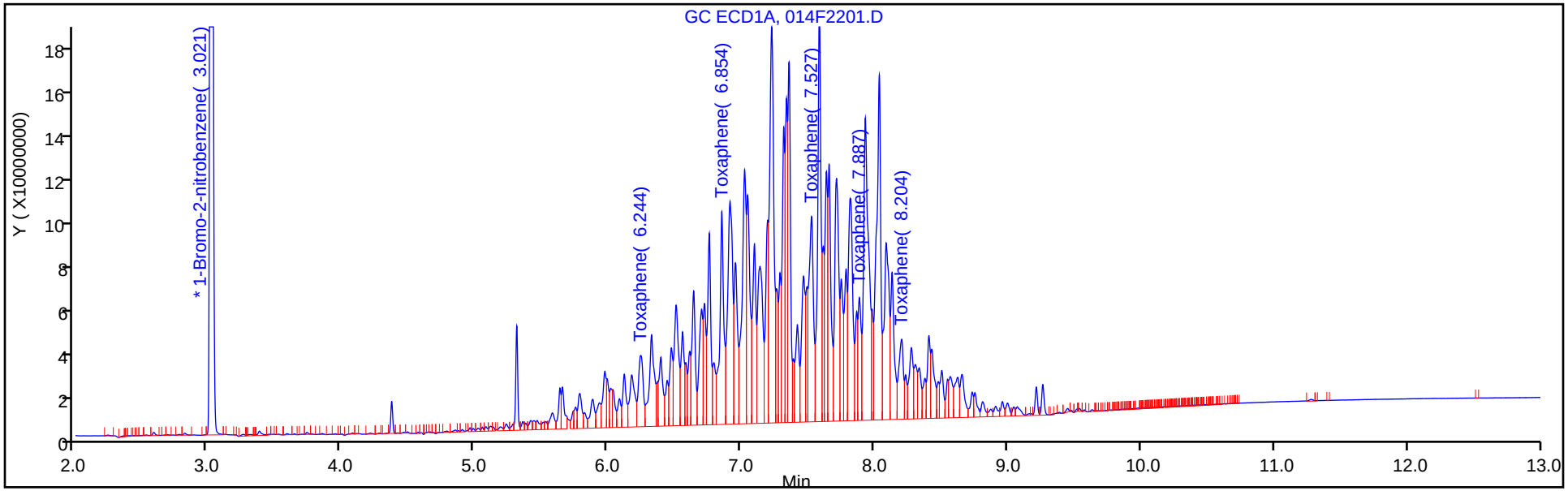
Report Date: 14-Oct-2018 22:11:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

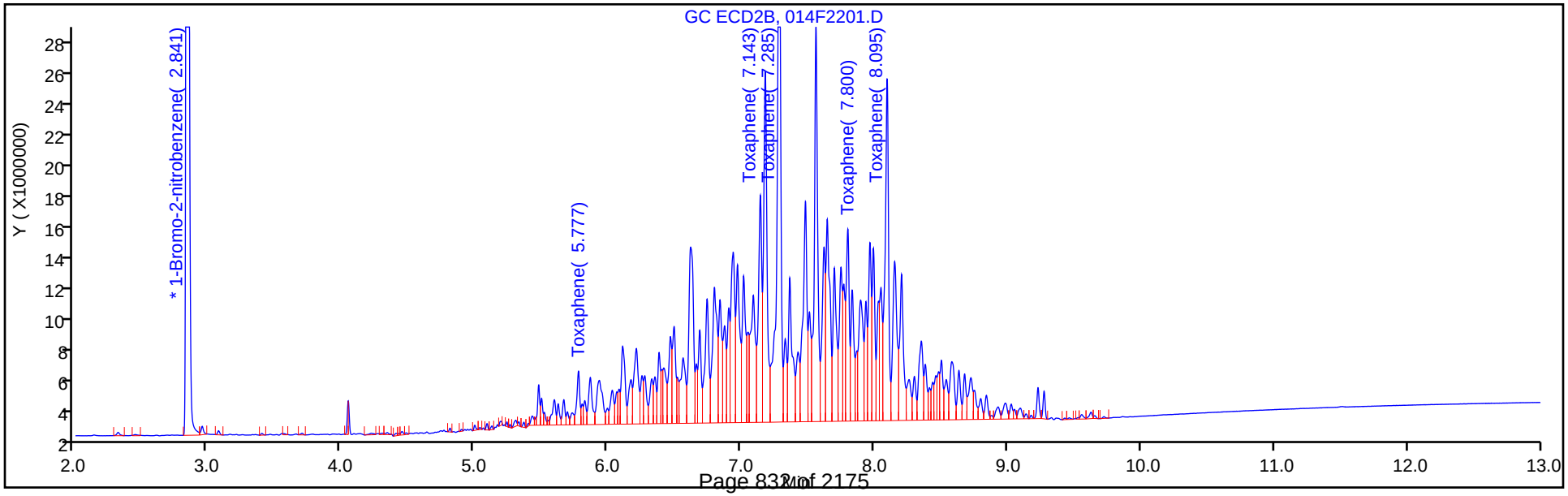
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date:	13-Oct-2018 17:03:01	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 TOX			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date: 13-Oct-2018 17:03:01 Instrument ID: SGC_P2

Lims ID: STD3 TOX

Client ID:

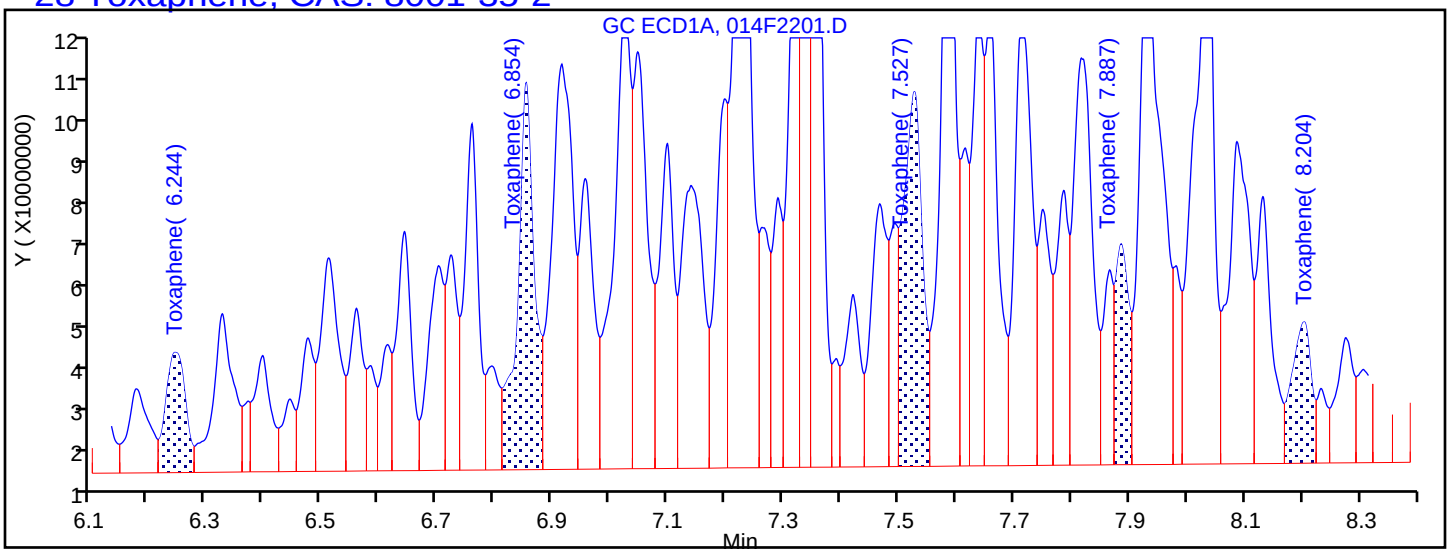
Operator ID: TEM ALS Bottle#: 14 Worklist Smp#: 19

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

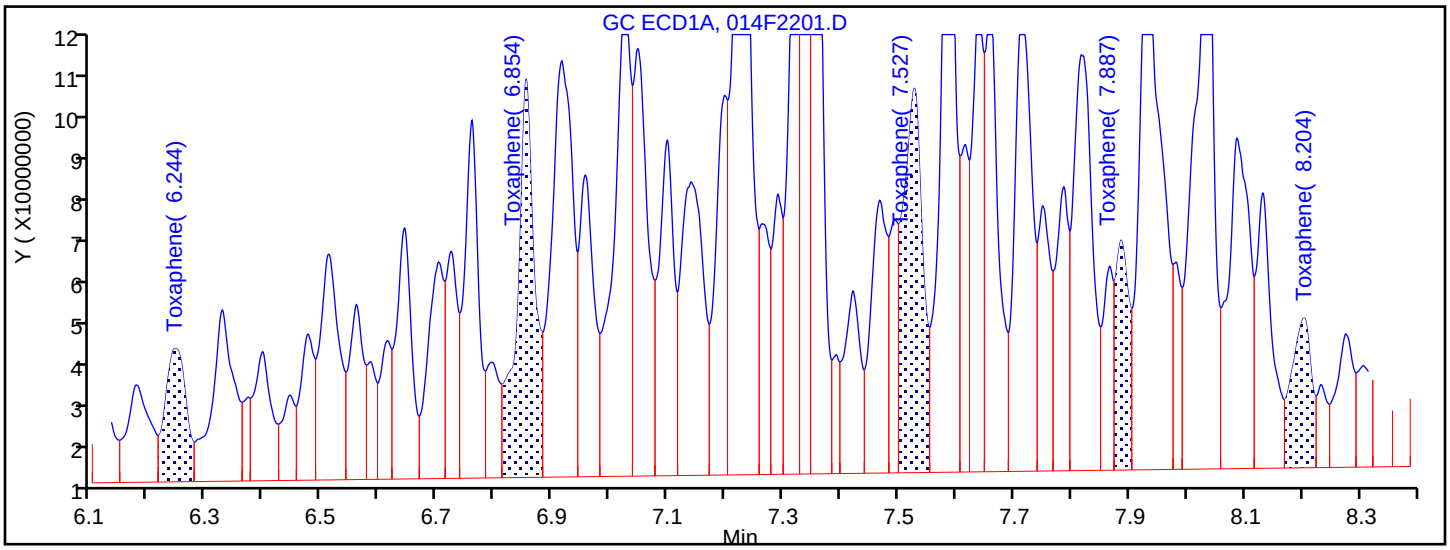
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.244	Response = 65861941
6.854	Response = 181685271
7.527	Response = 200210988
7.887	Response = 80538237
8.204	Response = 75933852



Manual Integration Results

6.244	Response = 77218443	M
6.854	Response = 193181281	M
7.527	Response = 207813969	M
7.887	Response = 84522297	M
8.204	Response = 82441591	M

Reviewer: mooret, 14-Oct-2018 21:33:21

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D
Lims ID: STD2 TOX
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 17:20:32 ALS Bottle#: 15 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:24 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.000	1773925252	150.0	150.0	
2	2.841	2.841	0.000	187588077	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	36757841	500.0	481.1	M
1	6.854	6.854	0.000	89263703	500.0	467.4	M
1	7.528	7.528	0.000	96759589	500.0	471.3	M
1	7.887	7.886	0.001	36941603	500.0	458.5	M
1	8.204	8.204	0.000	33168067	500.0	441.0	M
		Average of Peak Amounts =				463.8	
2	5.778	5.778	0.000	3239492	500.0	523.2	M
2	7.144	7.145	-0.001	13088271	500.0	496.7	M
2	7.284	7.286	-0.002	34980187	500.0	489.4	M
2	7.799	7.800	-0.001	9872826	500.0	488.2	M
2	8.095	8.096	-0.001	19482419	500.0	488.8	M
		Average of Peak Amounts =				497.3	
						RPD = 6.96	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL2_00021	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

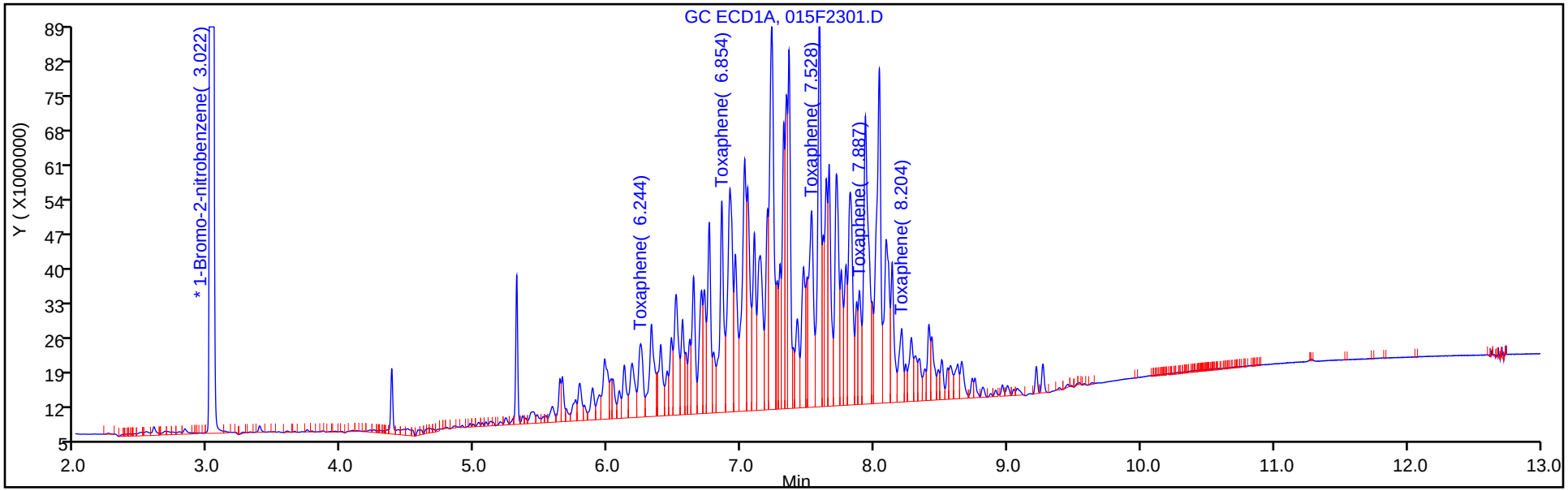
Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

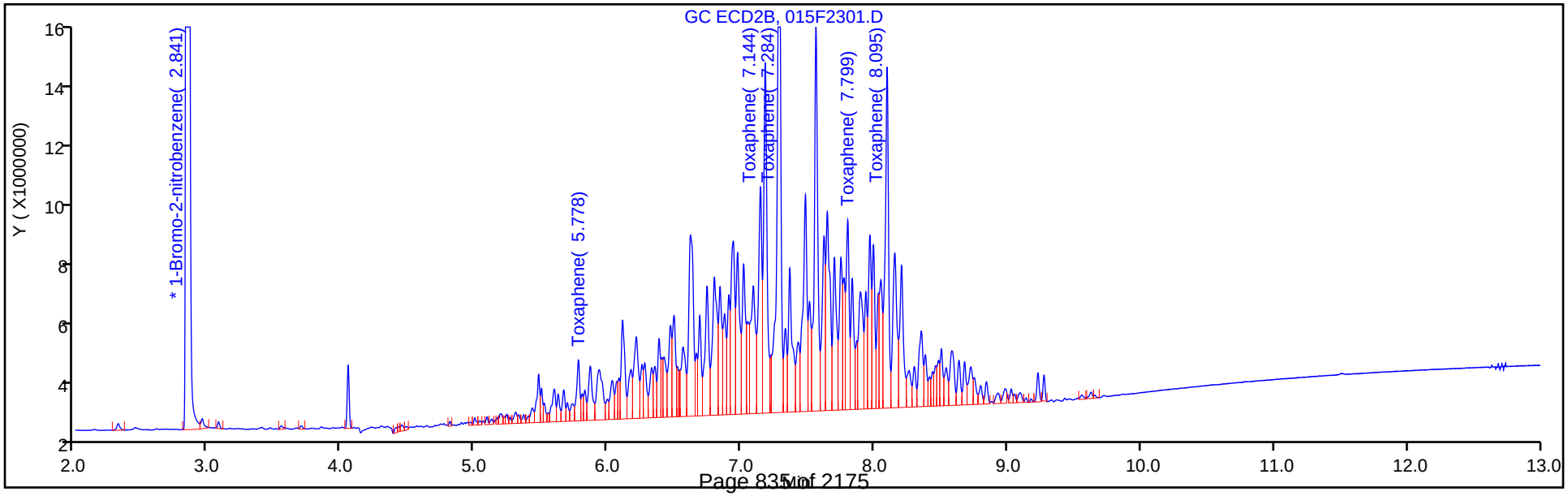
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date:	13-Oct-2018 17:20:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 TOX			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date: 13-Oct-2018 17:20:32 Instrument ID: SGC_P2

Lims ID: STD2 TOX

Client ID:

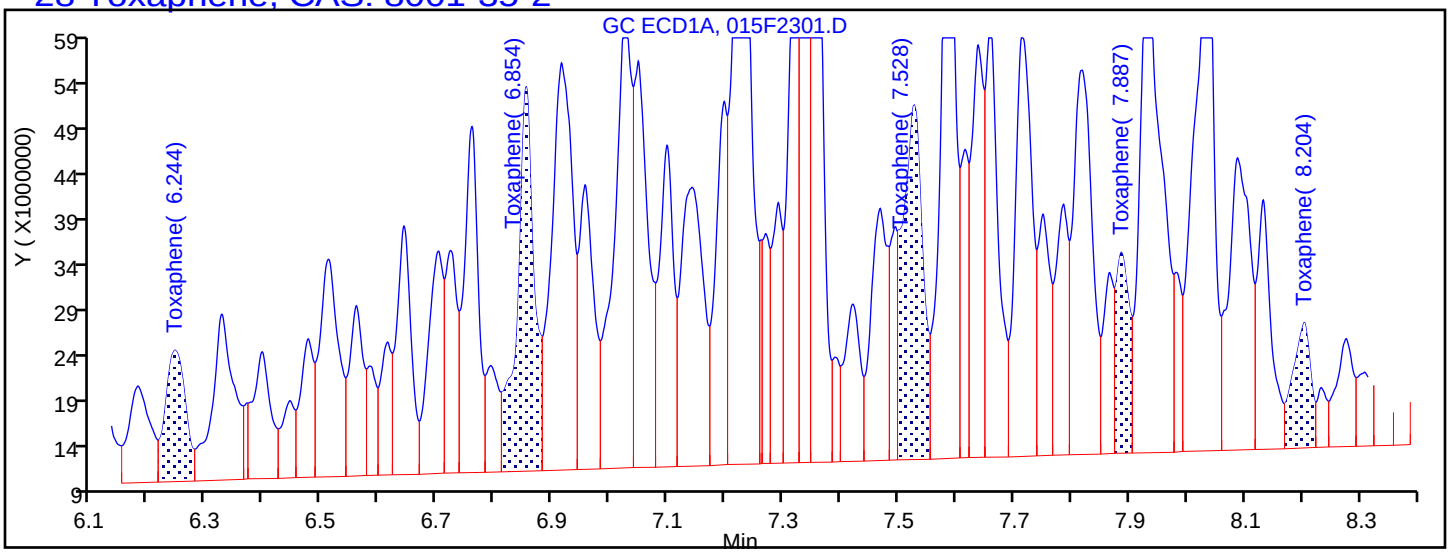
Operator ID: TEM ALS Bottle#: 15 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

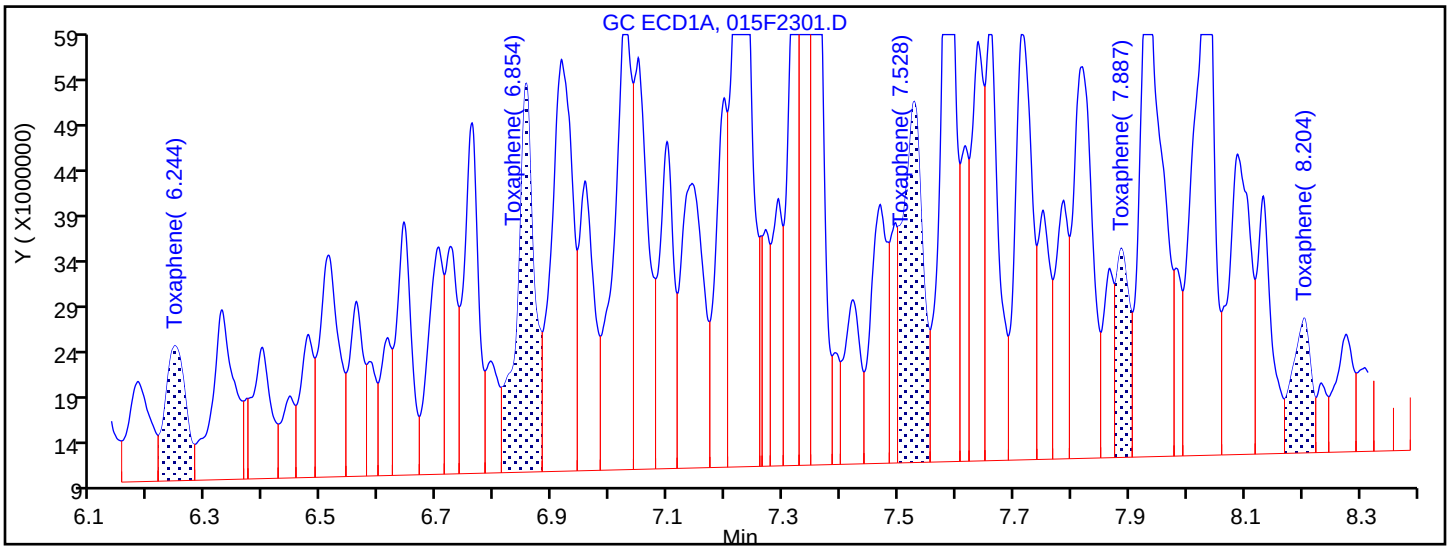
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.244	Response = 35050970
6.854	Response = 86556064
7.528	Response = 93843579
7.887	Response = 35112670
8.204	Response = 29712914



Manual Integration Results

6.244	Response = 36757841	M
6.854	Response = 89263703	M
7.528	Response = 96759589	M
7.887	Response = 36941603	M
8.204	Response = 33168067	M

Reviewer: mooret, 14-Oct-2018 21:33:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D
Lims ID: STD1 TOX
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 17:37:55 ALS Bottle#: 16 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:27 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:34:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.001	1720287810	150.0	150.0	
2	2.842	2.841	0.001	182087225	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	13484316	200.0	203.4	M
1	6.854	6.854	0.000	32829722	200.0	205.8	M
1	7.528	7.528	0.000	32415828	200.0	205.6	M
1	7.887	7.886	0.001	12391302	200.0	207.2	M
1	8.204	8.204	0.000	10296721	200.0	210.3	M
		Average of Peak Amounts =				206.4	
2	5.778	5.778	0.000	1369118	200.0	198.1	M
2	7.144	7.145	-0.001	5249471	200.0	199.2	M
2	7.284	7.286	-0.002	13813356	200.0	200.0	M
2	7.800	7.800	0.000	3856571	200.0	201.6	M
2	8.095	8.096	-0.001	7701963	200.0	200.4	M
		Average of Peak Amounts =				199.8	
						RPD = 3.24	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL1_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

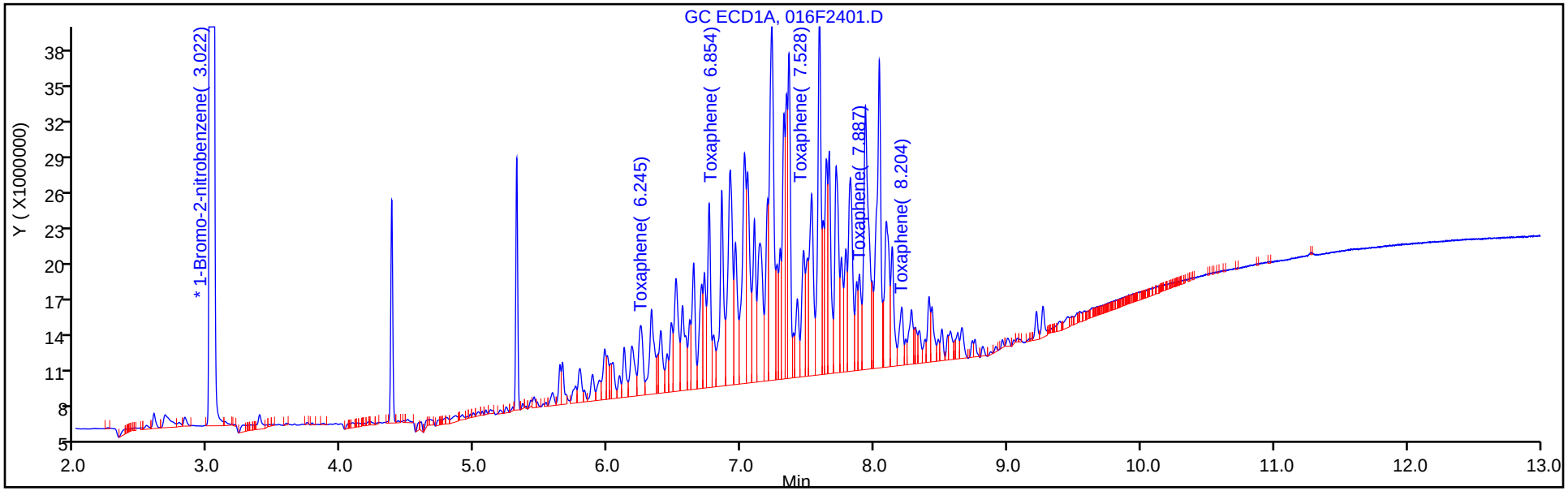
Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

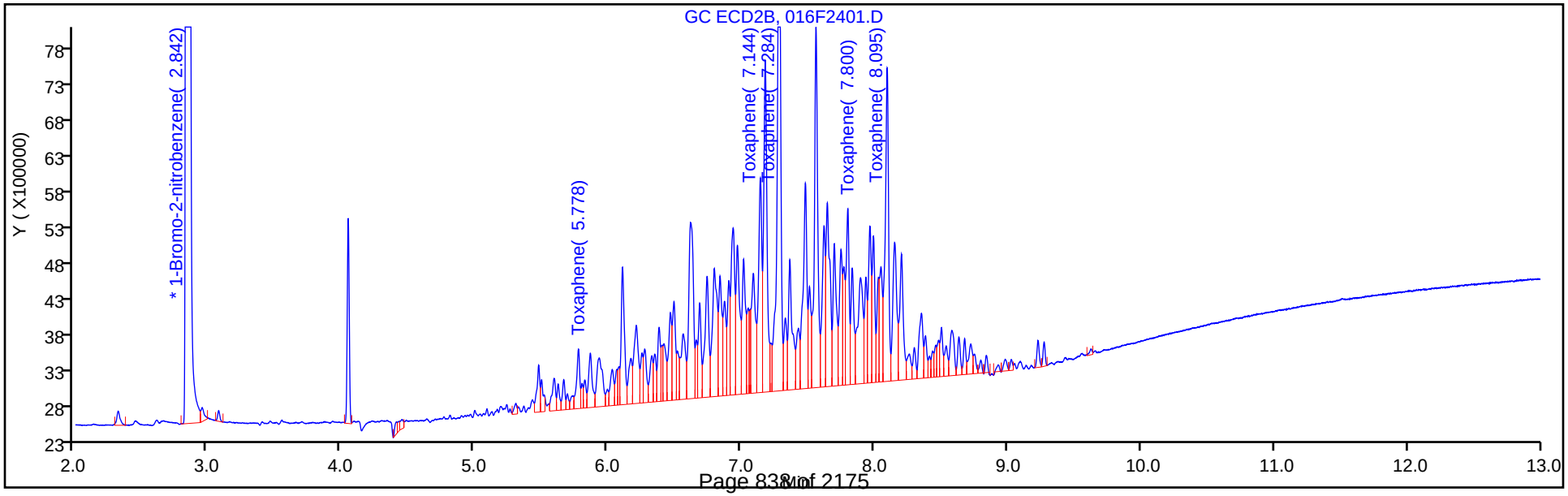
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date:	13-Oct-2018 17:37:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 TOX			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date: 13-Oct-2018 17:37:55 Instrument ID: SGC_P2

Lims ID: STD1 TOX

Client ID:

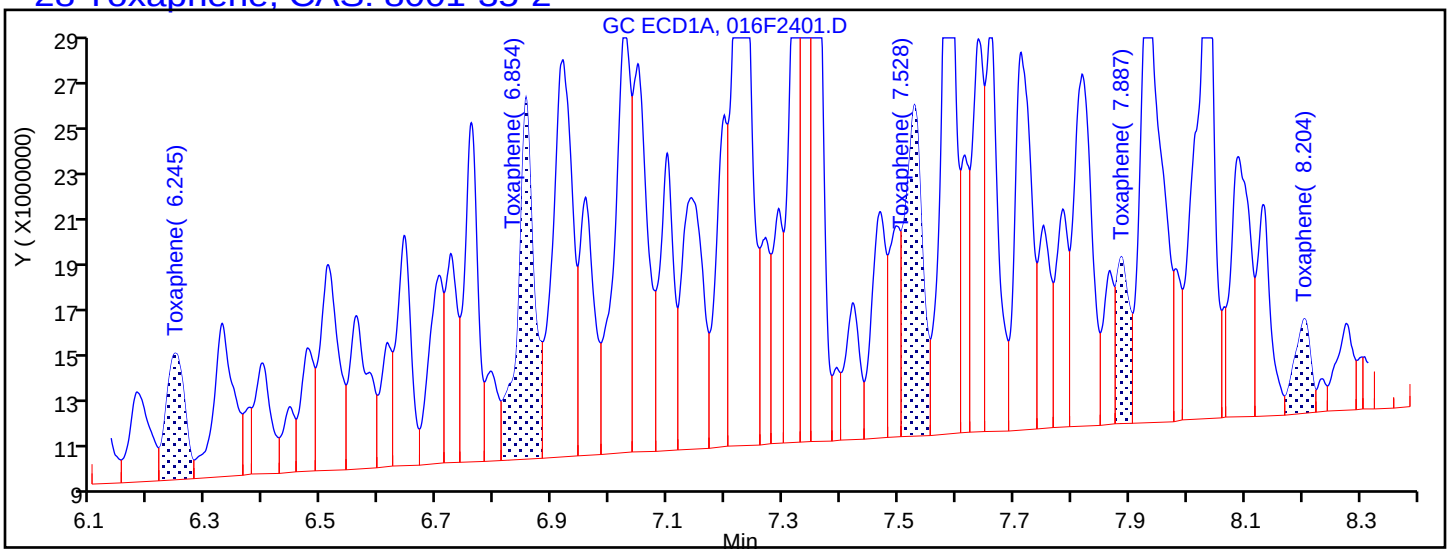
Operator ID: TEM ALS Bottle#: 16 Worklist Smp#: 21

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

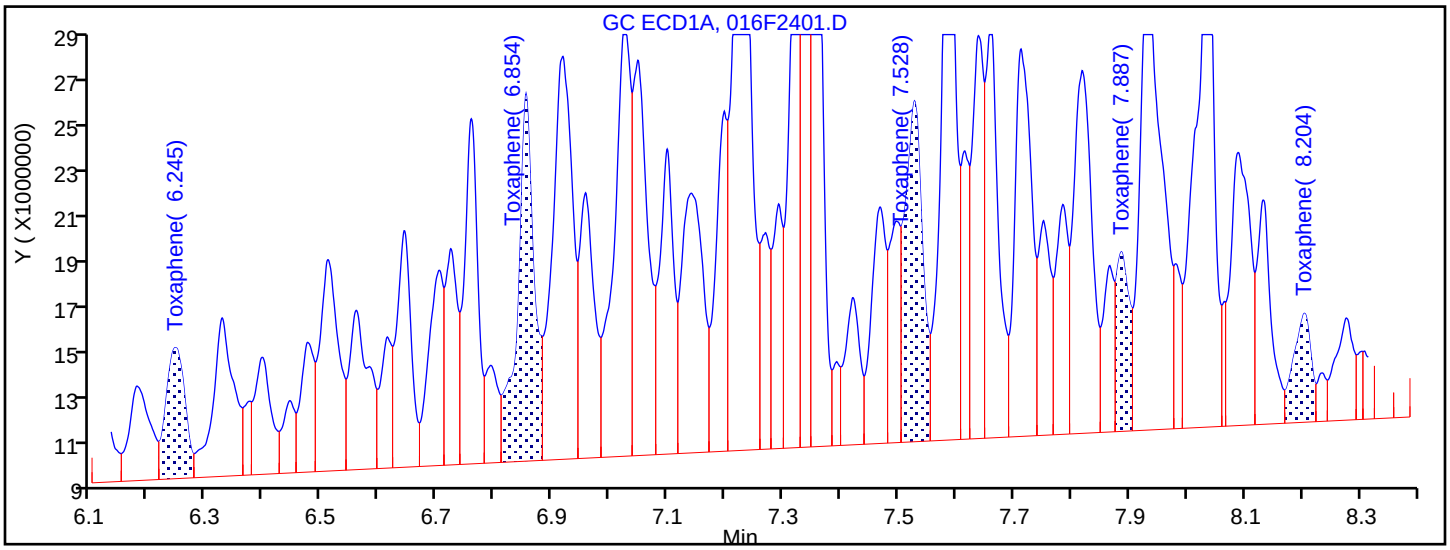
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.245	Response = 12595640
6.854	Response = 31226336
7.528	Response = 30814368
7.887	Response = 11278282
8.204	Response = 8153489



Manual Integration Results

6.245	Response = 13484316	M
6.854	Response = 32829722	M
7.528	Response = 32415828	M
7.887	Response = 12391302	M
8.204	Response = 10296721	M

Reviewer: mooret, 14-Oct-2018 21:34:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33998

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0056 0.0043	0.0052	0.0044	0.0049	0.0046	Lin2	0.2366	0.0045							0.9950		0.9900
Toxaphene Peak 2	0.0216 0.0195	0.0209	0.0213	0.0214	0.0210	Lin2	0.2123	0.0206							0.9990		0.9900
Toxaphene Peak 3	0.0569 0.0540	0.0559	0.0587	0.0595	0.0582	Lin2	-0.090	0.0573							0.9980		0.9900
Toxaphene Peak 4	0.0159 0.0157	0.0158	0.0160	0.0171	0.0170	Lin2	-0.140	0.0165							0.9980		0.9900
Toxaphene Peak 5	0.0317 0.0306	0.0312	0.0327	0.0328	0.0324	Lin2	-0.070	0.0320							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33998

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	BNB	Lin2	1369118 60549286	3239492	5366684	12064651	30052469	200 10000	500	1000	2000	5000
Toxaphene Peak 2	BNB	Lin2	5249471 273869350	13088271	26089503	52352055	136167822	200 10000	500	1000	2000	5000
Toxaphene Peak 3	BNB	Lin2	13813356 756947570	34980187	72036294	145561454	377922017	200 10000	500	1000	2000	5000
Toxaphene Peak 4	BNB	Lin2	3856571 219585664	9872826	19681560	41885928	110390772	200 10000	500	1000	2000	5000
Toxaphene Peak 5	BNB	Lin2	7701963 429283014	19482419	40124523	80317017	210568110	200 10000	500	1000	2000	5000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D
Lims ID: STD6 TOX
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 16:10:51 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:12 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:36:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	2093632714	150.0	150.0	
2	2.840	2.839	0.000	210457864	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	984914164	10000	10176	
1	6.853	6.854	-0.001	2531832439	10000	10174	
1	7.528	7.528	0.000	2860362835	10000	10232	
1	7.885	7.886	-0.001	1164606715	10000	10334	
1	8.203	8.204	-0.001	1187453780	10000	10397	
		Average of Peak Amounts =				10263	
2	5.776	5.778	-0.002	60549286	10000	9540.5	M
2	7.143	7.145	-0.002	273869350	10000	9445.5	M
2	7.284	7.286	-0.002	756947570	10000	9410.3	M
2	7.798	7.800	-0.002	219585664	10000	9519.4	M
2	8.094	8.096	-0.002	429283014	10000	9559.5	M
		Average of Peak Amounts =				9495.0	
						RPD = 7.77	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL6_00023 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

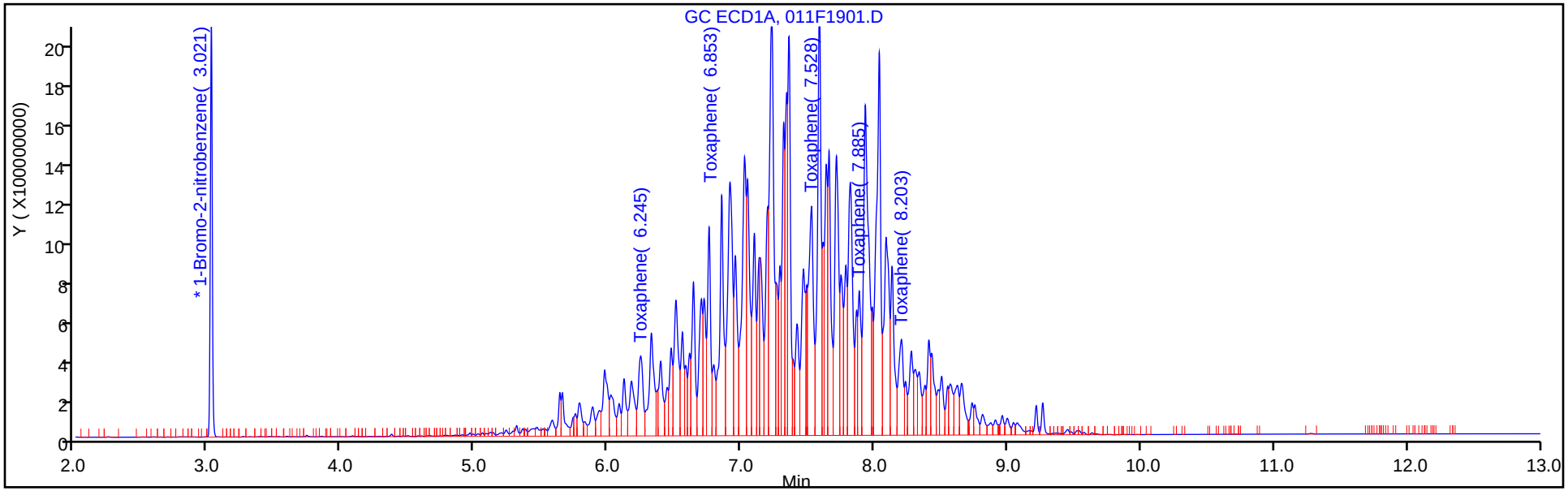
Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

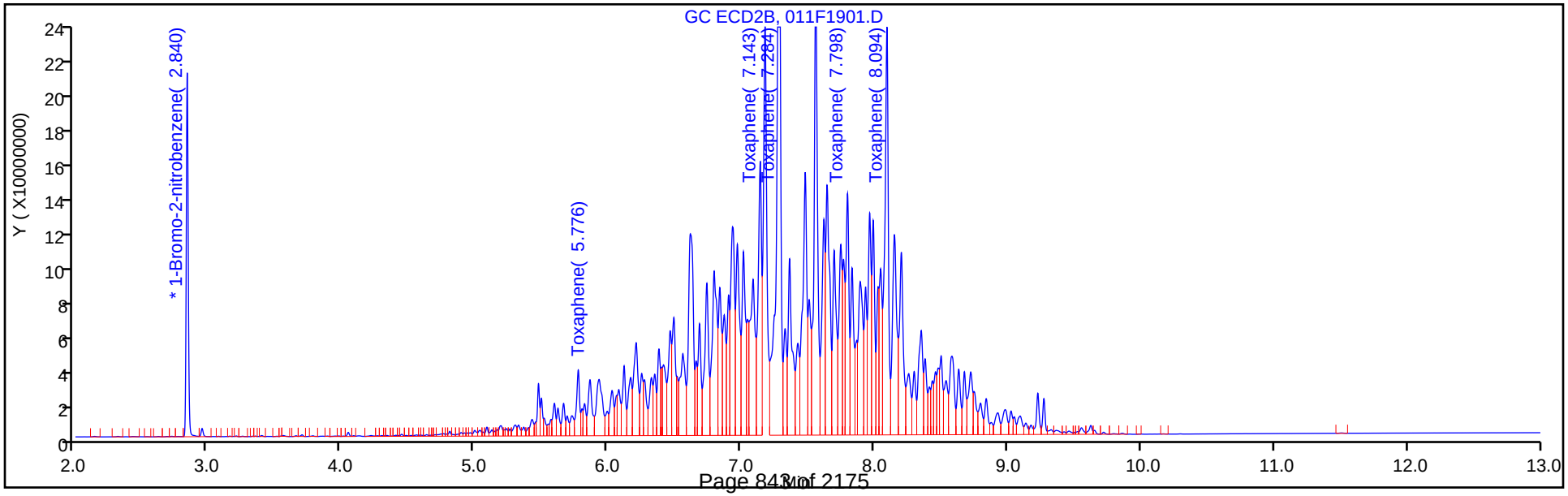
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date:	13-Oct-2018 16:10:51	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 TOX			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date: 13-Oct-2018 16:10:51 Instrument ID: SGC_P2

Lims ID: STD6 TOX

Client ID:

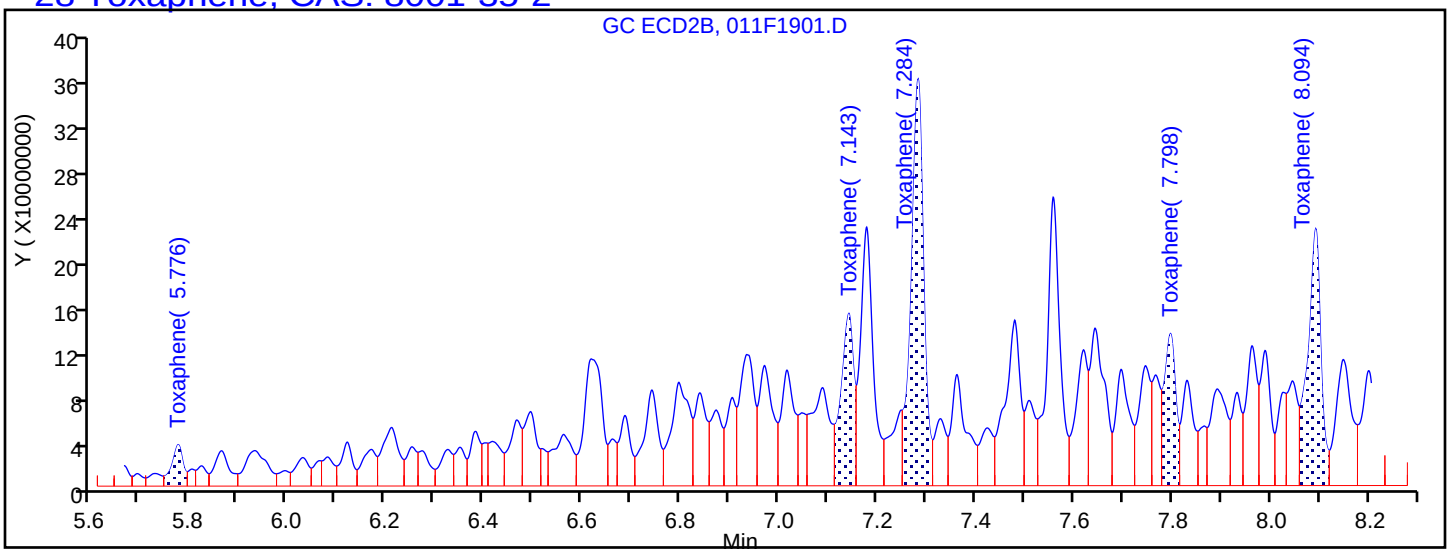
Operator ID: TEM ALS Bottle#: 11 Worklist Smp#: 16

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

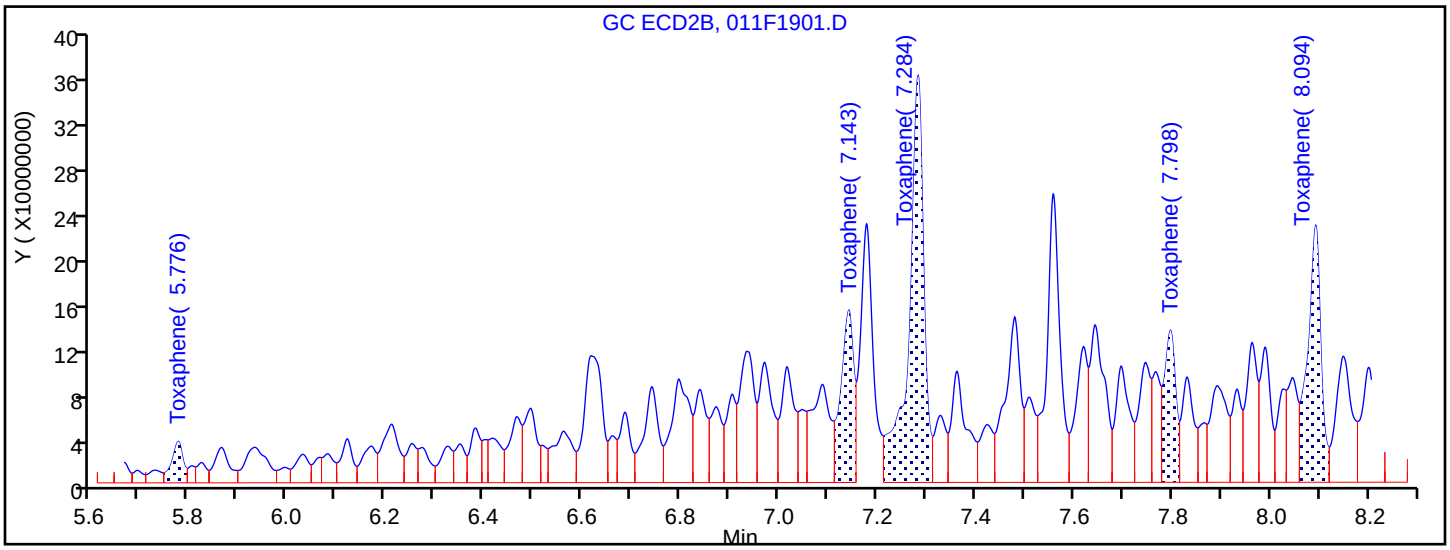
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.776	Response = 60552821
7.143	Response = 273886955
7.284	Response = 640399513
7.798	Response = 219597728
8.094	Response = 429322900



Manual Integration Results

5.776	Response = 60549286	M
7.143	Response = 273869350	M
7.284	Response = 756947570	M
7.798	Response = 219585664	M
8.094	Response = 429283014	M

Reviewer: mooret, 14-Oct-2018 21:36:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D
Lims ID: STD5 TOX
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 16:28:15 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:15 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	1887409806	150.0	150.0	
2	2.840	2.839	0.001	194682264	150.0	150.0	
28 Toxaphene							
1	6.246	6.246	0.000	444953077	5000.0	5116.5	
1	6.853	6.854	-0.001	1162405972	5000.0	5203.9	
1	7.526	7.528	-0.002	1283190101	5000.0	5124.6	
1	7.886	7.886	0.000	519294161	5000.0	5149.2	
1	8.204	8.204	0.000	541962755	5000.0	5314.1	
		Average of Peak Amounts =				5181.6	
2	5.777	5.778	-0.001	30052469	5000.0	5094.6	
2	7.143	7.145	-0.002	136167822	5000.0	5072.1	
2	7.284	7.286	-0.002	377922017	5000.0	5079.7	
2	7.799	7.800	-0.001	110390772	5000.0	5177.3	
2	8.095	8.096	-0.001	210568110	5000.0	5070.0	
		Average of Peak Amounts =				5098.7	
						RPD = 1.61	

Reagents:

8081ToxL5_00021 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

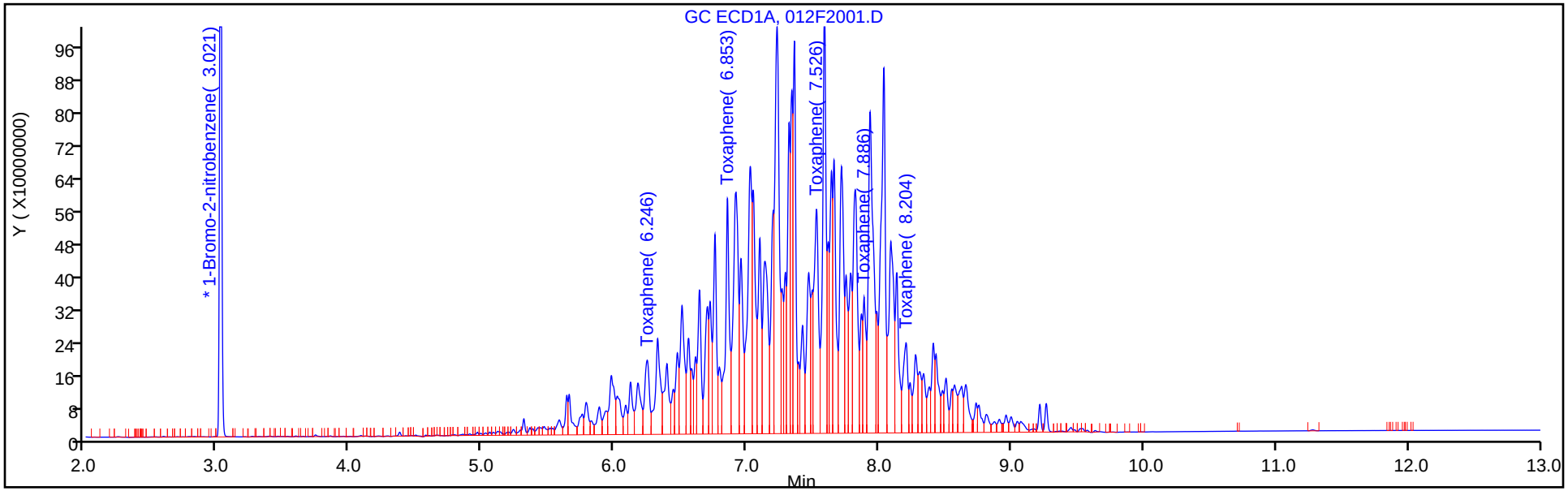
Report Date: 14-Oct-2018 22:11:17 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

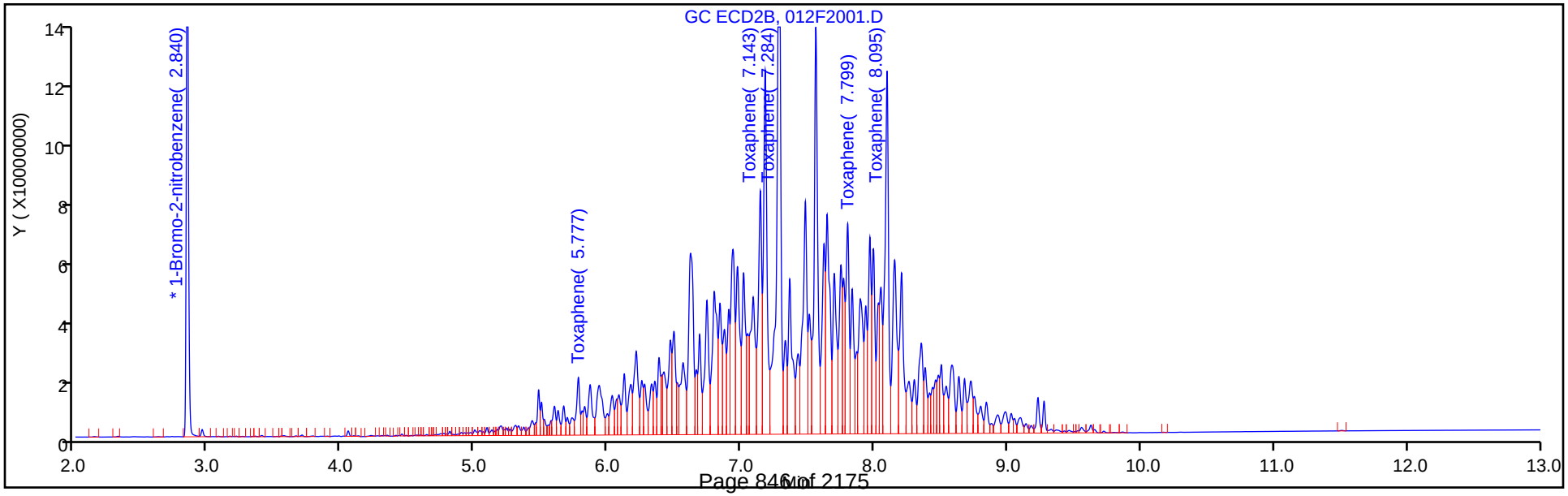
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D

Injection Date:	13-Oct-2018 16:28:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 TOX			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D
Lims ID: STD4 TOX
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 16:45:38 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:18 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	0.000	1744551294	150.0	150.0	
2	2.841	2.841	0.000	183459712	150.0	150.0	
28 Toxaphene							M
1	6.246	6.246	0.000	157400259	2000.0	1979.4	M
1	6.854	6.854	0.000	408359221	2000.0	2006.3	M
1	7.528	7.528	0.000	466543962	2000.0	2055.4	M
1	7.886	7.886	0.000	184785693	2000.0	2028.0	M
1	8.204	8.204	0.000	182989462	2000.0	2005.7	M
		Average of Peak Amounts =				2015.0	
2	5.778	5.778	0.000	12064651	2000.0	2140.2	M
2	7.145	7.145	0.000	52352055	2000.0	2063.3	M
2	7.286	7.286	0.000	145561454	2000.0	2077.1	M
2	7.800	7.800	0.000	41885928	2000.0	2089.7	M
2	8.096	8.096	0.000	80317017	2000.0	2053.4	M
		Average of Peak Amounts =				2084.7	
						RPD = 3.40	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00014 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

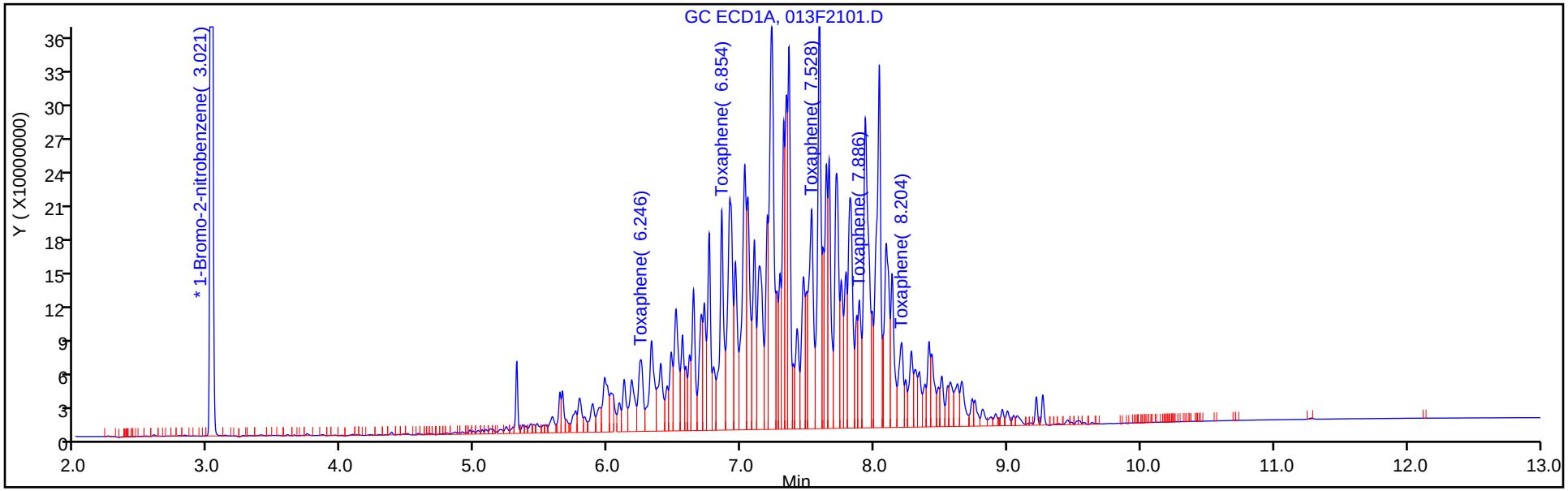
Report Date: 14-Oct-2018 22:11:20 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

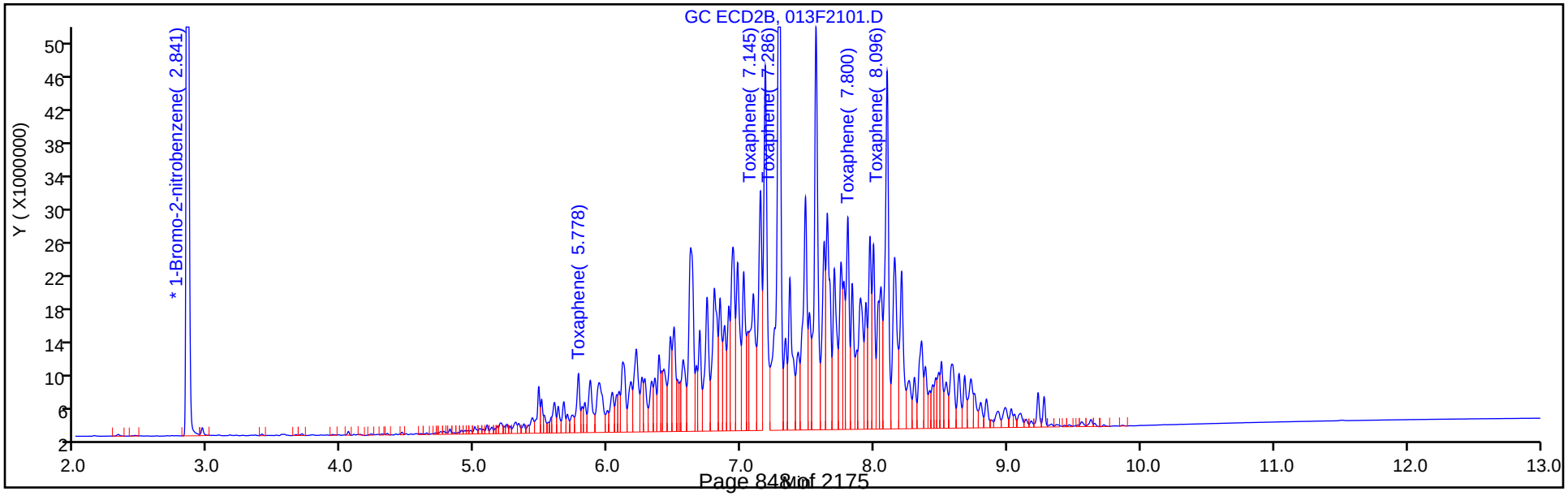
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 TOX			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:20 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date: 13-Oct-2018 16:45:38 Instrument ID: SGC_P2

Lims ID: STD4 TOX

Client ID:

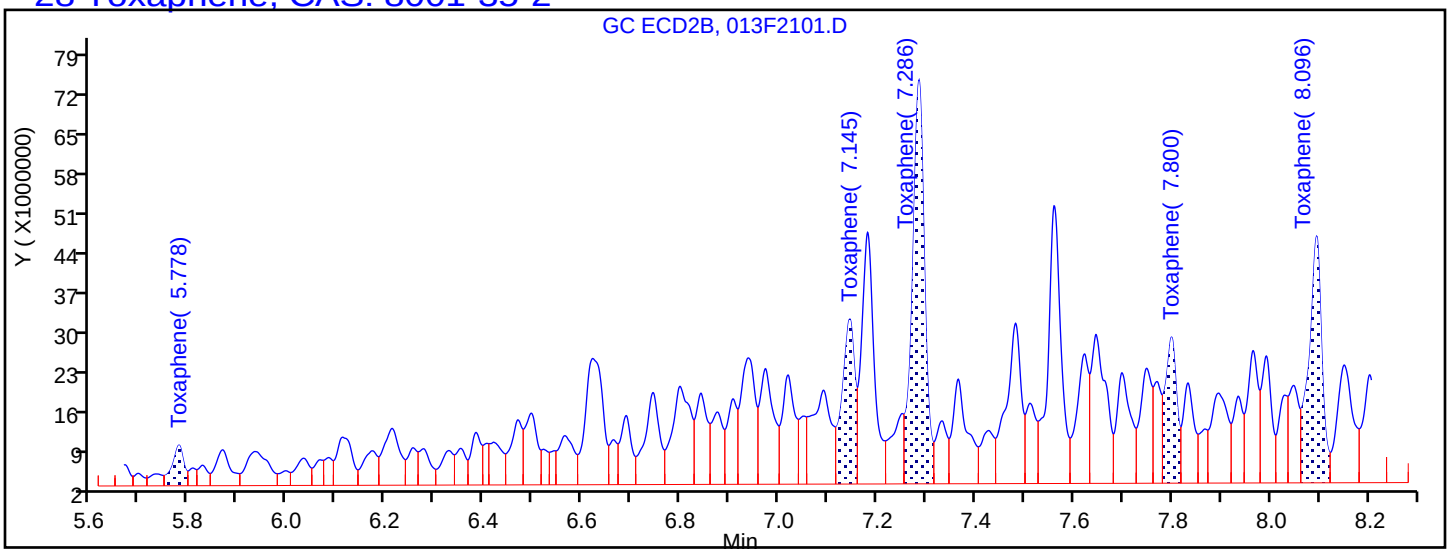
Operator ID: TEM ALS Bottle#: 13 Worklist Smp#: 18

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

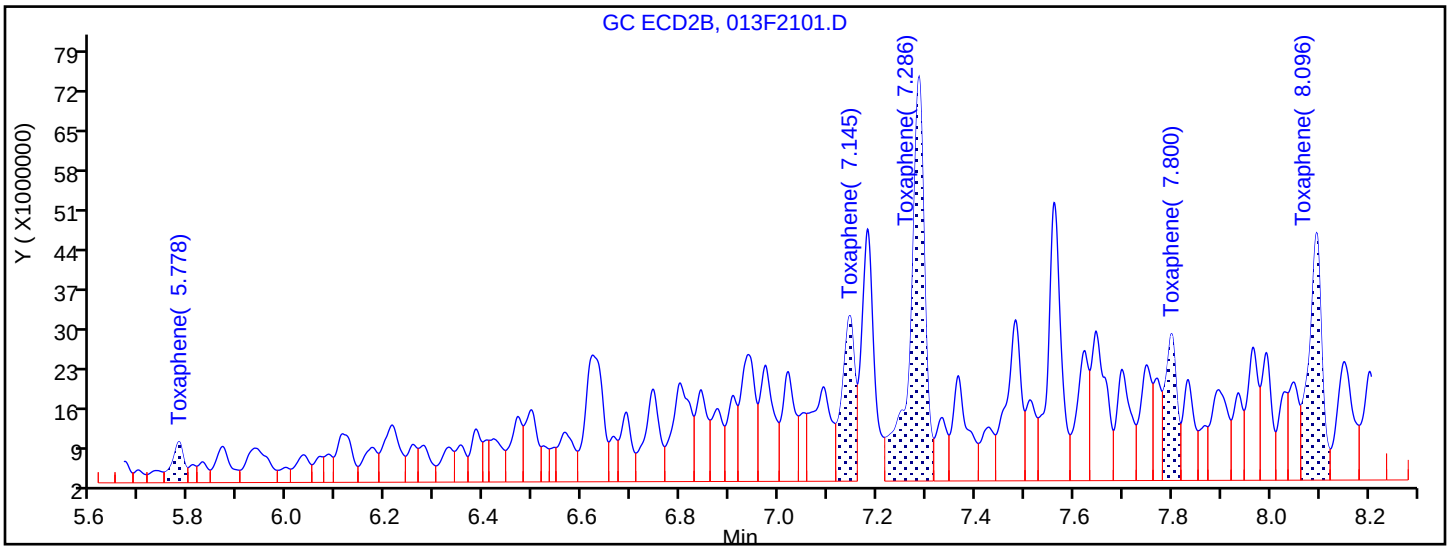
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 11889868
7.145	Response = 52091638
7.286	Response = 122916584
7.800	Response = 41613365
8.096	Response = 79867523



Manual Integration Results

5.778	Response = 12064651	M
7.145	Response = 52352055	M
7.286	Response = 145561454	M
7.800	Response = 41885928	M
8.096	Response = 80317017	M

Reviewer: mooret, 14-Oct-2018 21:37:56

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D
Lims ID: STD3 TOX
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 17:03:01 ALS Bottle#: 14 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:21 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	-0.001	1741058857	150.0	150.0	
2	2.841	2.841	-0.001	184005886	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	77218443	1000.0	990.5	M
1	6.854	6.854	0.000	193181281	1000.0	975.2	M
1	7.527	7.528	-0.001	207813969	1000.0	953.6	M
1	7.887	7.886	0.001	84522297	1000.0	969.8	M
1	8.204	8.204	0.000	82441591	1000.0	961.2	M
		Average of Peak Amounts =				970.0	
2	5.777	5.778	-0.001	5366684	1000.0	919.9	
2	7.143	7.145	-0.002	26089503	1000.0	1020.0	
2	7.285	7.286	-0.001	72036294	1000.0	1025.7	
2	7.800	7.800	0.000	19681560	1000.0	983.5	
2	8.095	8.096	-0.001	40124523	1000.0	1023.9	
		Average of Peak Amounts =				994.6	
					RPD =	2.50	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL3_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

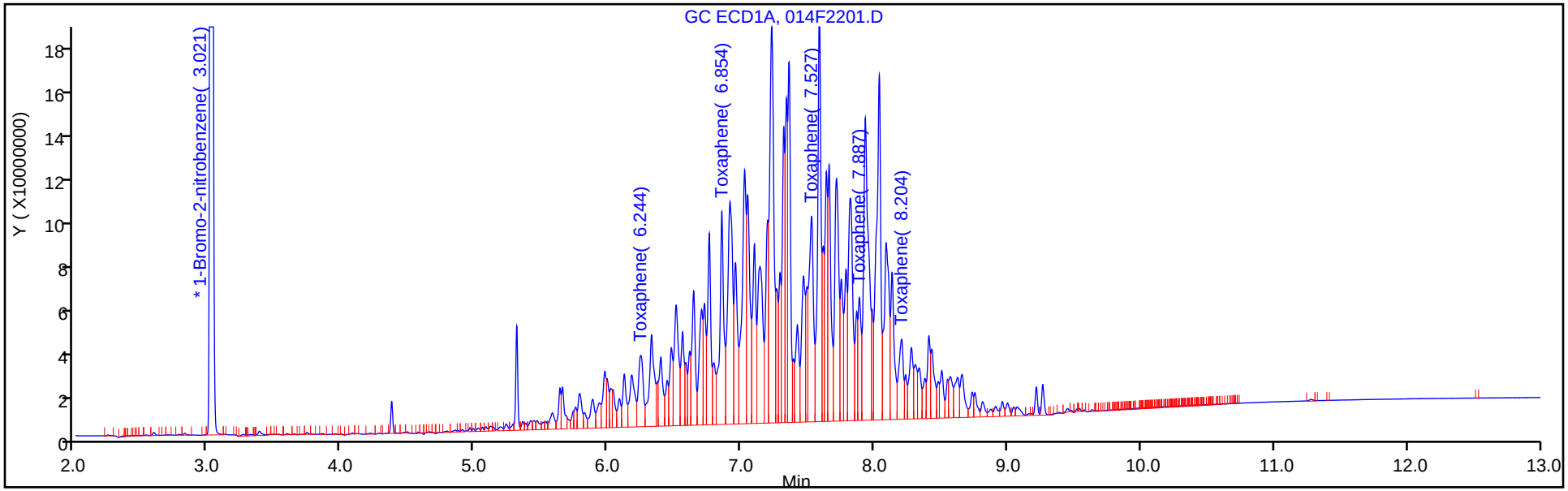
Report Date: 14-Oct-2018 22:11:23 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

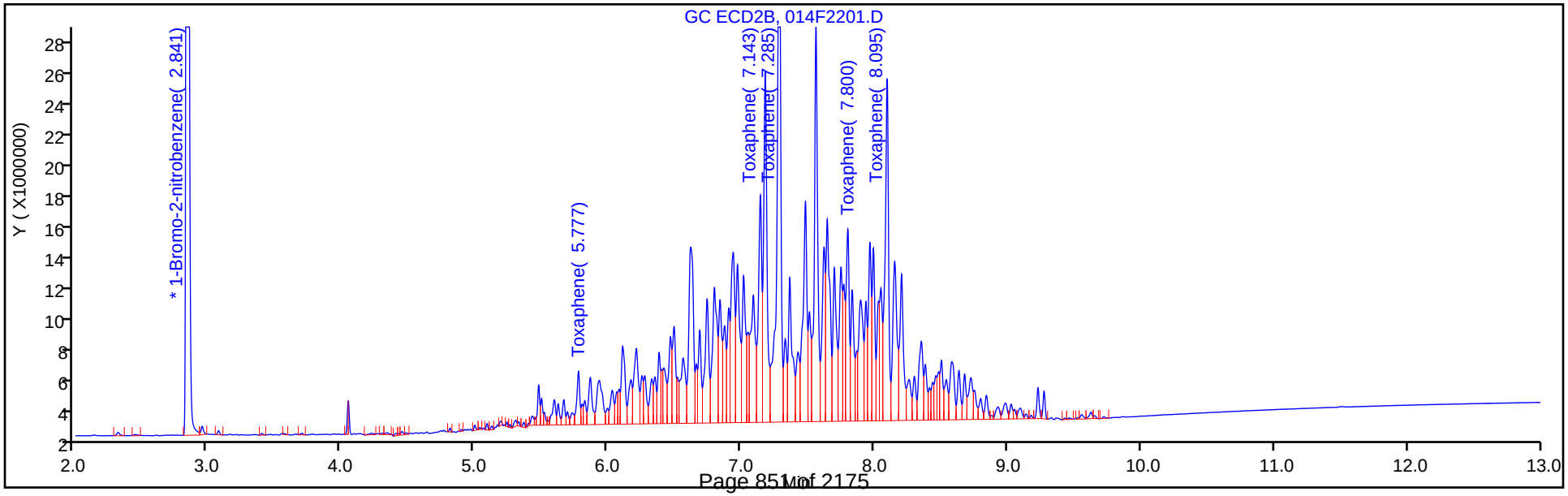
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date:	13-Oct-2018 17:03:01	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 TOX			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D
Lims ID: STD2 TOX
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 17:20:32 ALS Bottle#: 15 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:24 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.000	1773925252	150.0	150.0	
2	2.841	2.841	0.000	187588077	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	36757841	500.0	481.1	M
1	6.854	6.854	0.000	89263703	500.0	467.4	M
1	7.528	7.528	0.000	96759589	500.0	471.3	M
1	7.887	7.886	0.001	36941603	500.0	458.5	M
1	8.204	8.204	0.000	33168067	500.0	441.0	M
		Average of Peak Amounts =				463.8	
2	5.778	5.778	0.000	3239492	500.0	523.2	M
2	7.144	7.145	-0.001	13088271	500.0	496.7	M
2	7.284	7.286	-0.002	34980187	500.0	489.4	M
2	7.799	7.800	-0.001	9872826	500.0	488.2	M
2	8.095	8.096	-0.001	19482419	500.0	488.8	M
		Average of Peak Amounts =				497.3	
						RPD = 6.96	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL2_00021	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

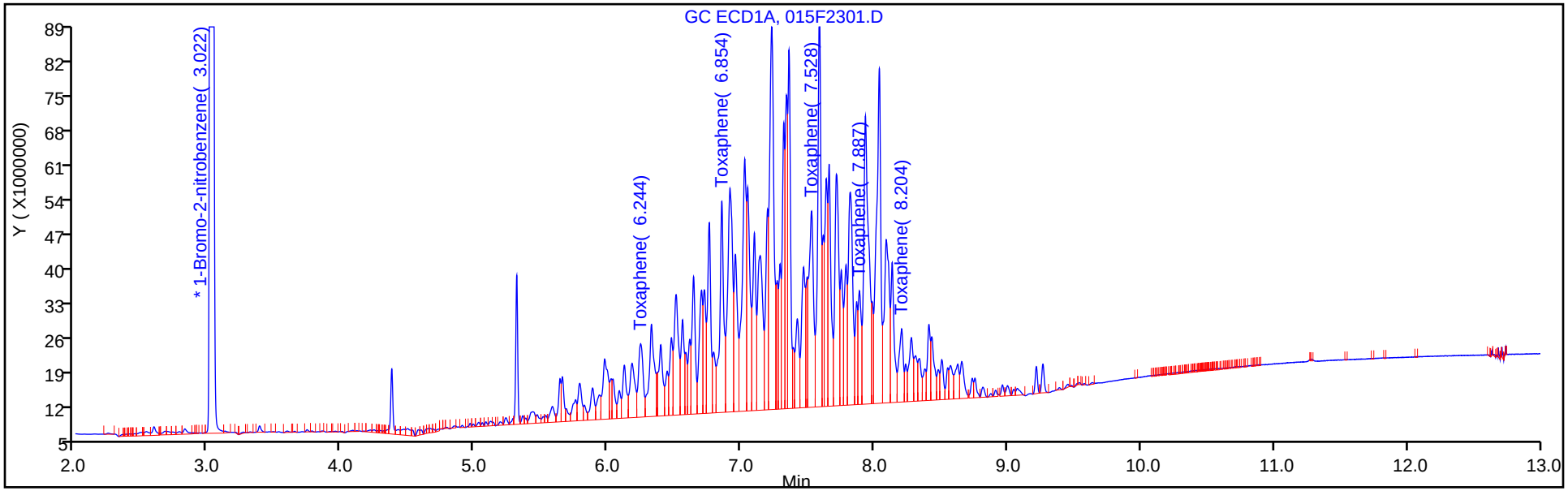
Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

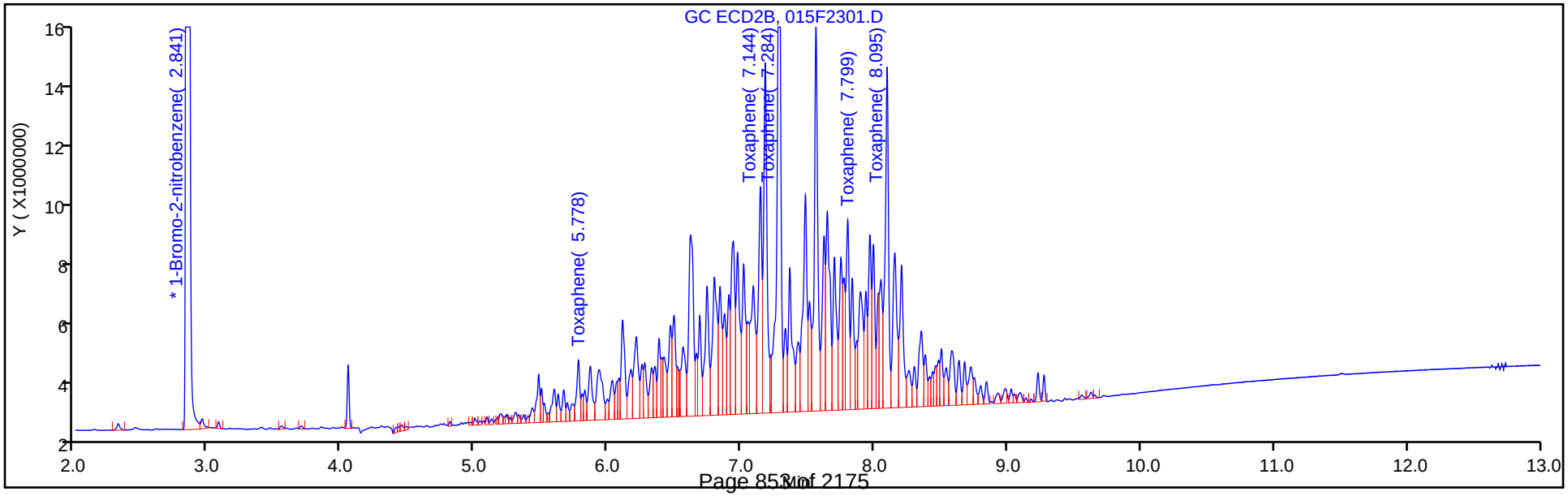
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date:	13-Oct-2018 17:20:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 TOX			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date: 13-Oct-2018 17:20:32 Instrument ID: SGC_P2

Lims ID: STD2 TOX

Client ID:

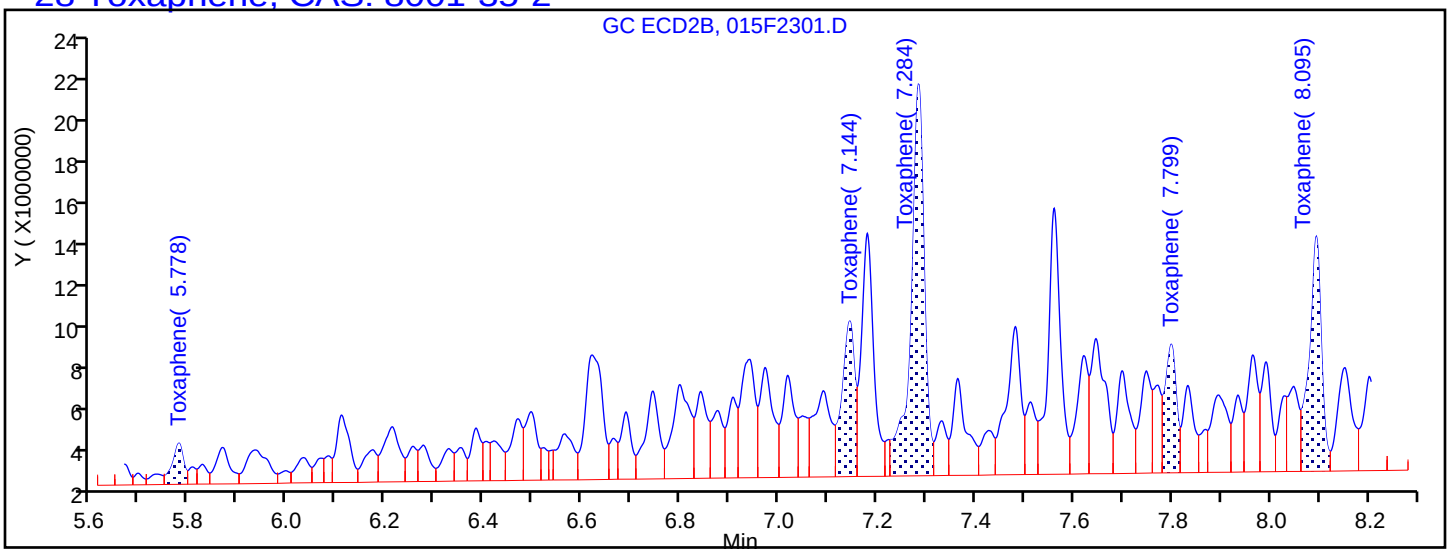
Operator ID: TEM ALS Bottle#: 15 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

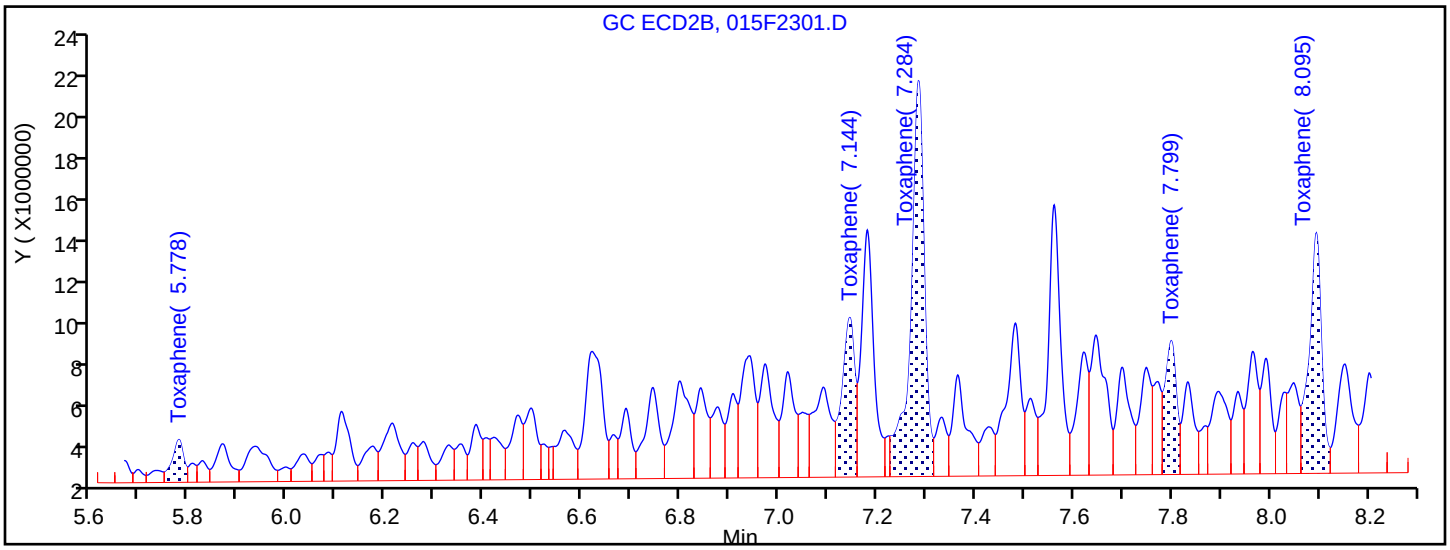
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 3020122
7.144	Response = 12594706
7.284	Response = 33926133
7.799	Response = 9338992
8.095	Response = 18544525



Manual Integration Results

5.778	Response = 3239492	M
7.144	Response = 13088271	M
7.284	Response = 34980187	M
7.799	Response = 9872826	M
8.095	Response = 19482419	M

Reviewer: mooret, 14-Oct-2018 21:33:47

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D
Lims ID: STD1 TOX
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 17:37:55 ALS Bottle#: 16 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:27 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:34:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.001	1720287810	150.0	150.0	
2	2.842	2.841	0.001	182087225	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	13484316	200.0	203.4	M
1	6.854	6.854	0.000	32829722	200.0	205.8	M
1	7.528	7.528	0.000	32415828	200.0	205.6	M
1	7.887	7.886	0.001	12391302	200.0	207.2	M
1	8.204	8.204	0.000	10296721	200.0	210.3	M
		Average of Peak Amounts =				206.4	
2	5.778	5.778	0.000	1369118	200.0	198.1	M
2	7.144	7.145	-0.001	5249471	200.0	199.2	M
2	7.284	7.286	-0.002	13813356	200.0	200.0	M
2	7.800	7.800	0.000	3856571	200.0	201.6	M
2	8.095	8.096	-0.001	7701963	200.0	200.4	M
		Average of Peak Amounts =				199.8	
						RPD = 3.24	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL1_00020 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

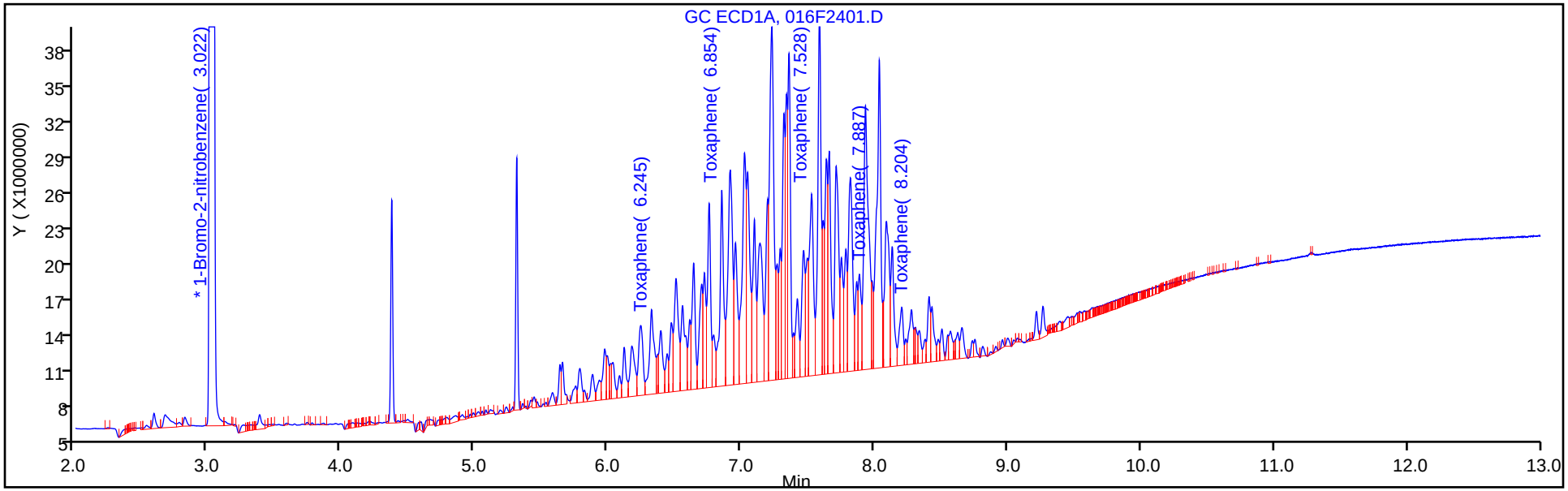
Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

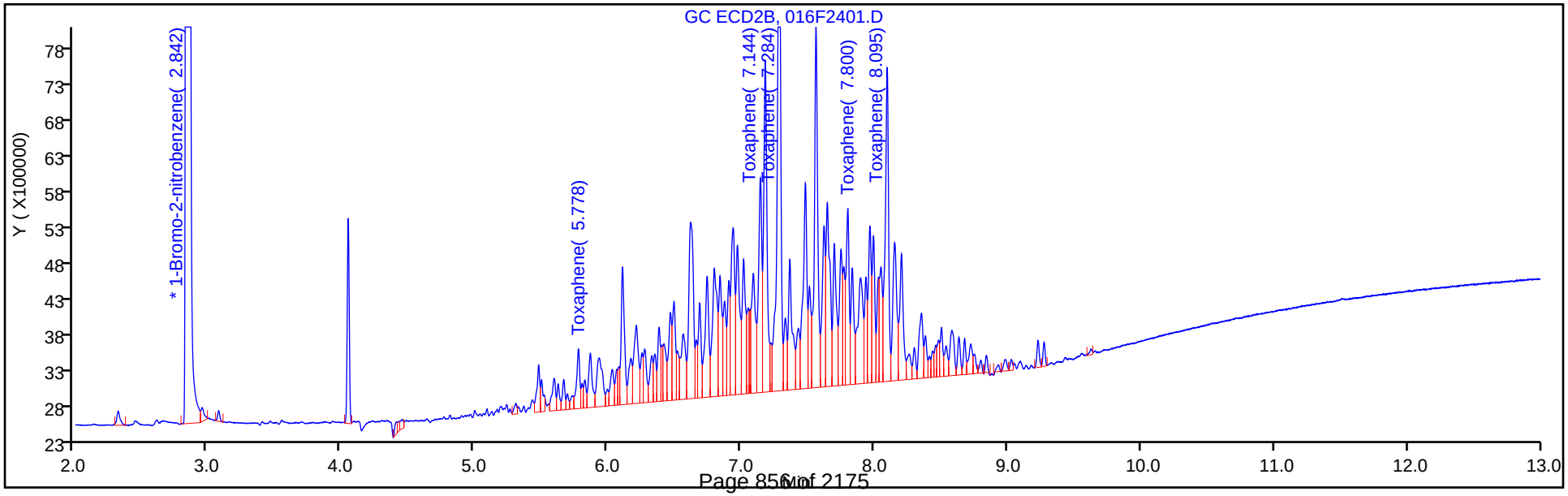
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date:	13-Oct-2018 17:37:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 TOX			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date: 13-Oct-2018 17:37:55 Instrument ID: SGC_P2

Lims ID: STD1 TOX

Client ID:

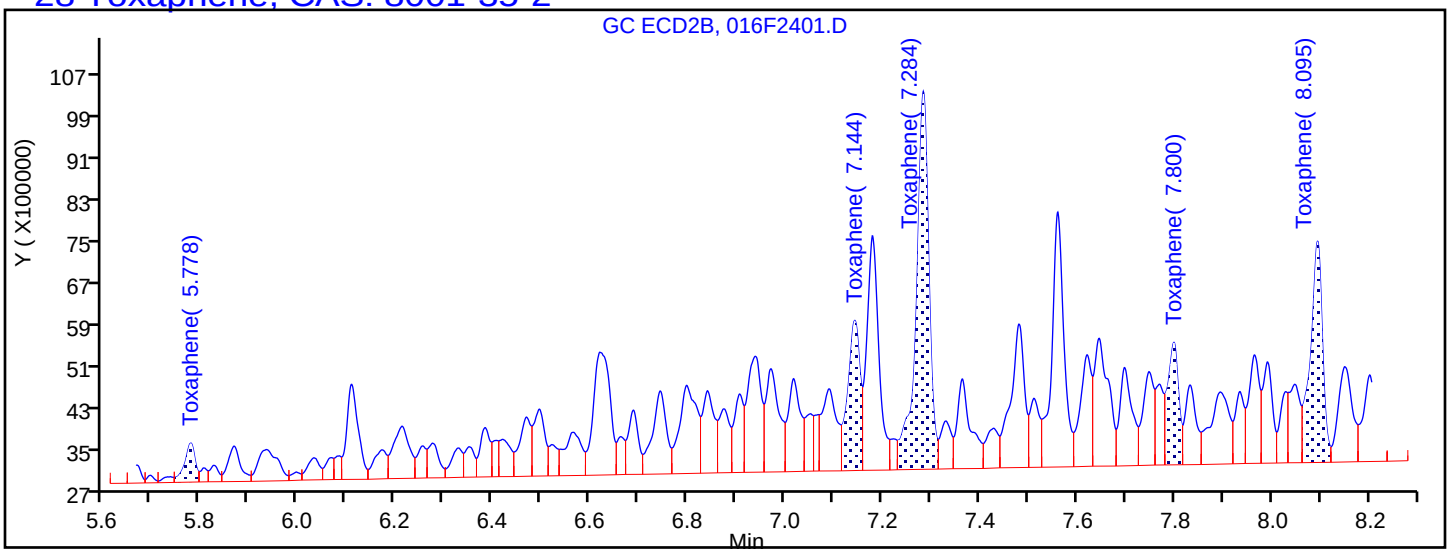
Operator ID: TEM ALS Bottle#: 16 Worklist Smp#: 21

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

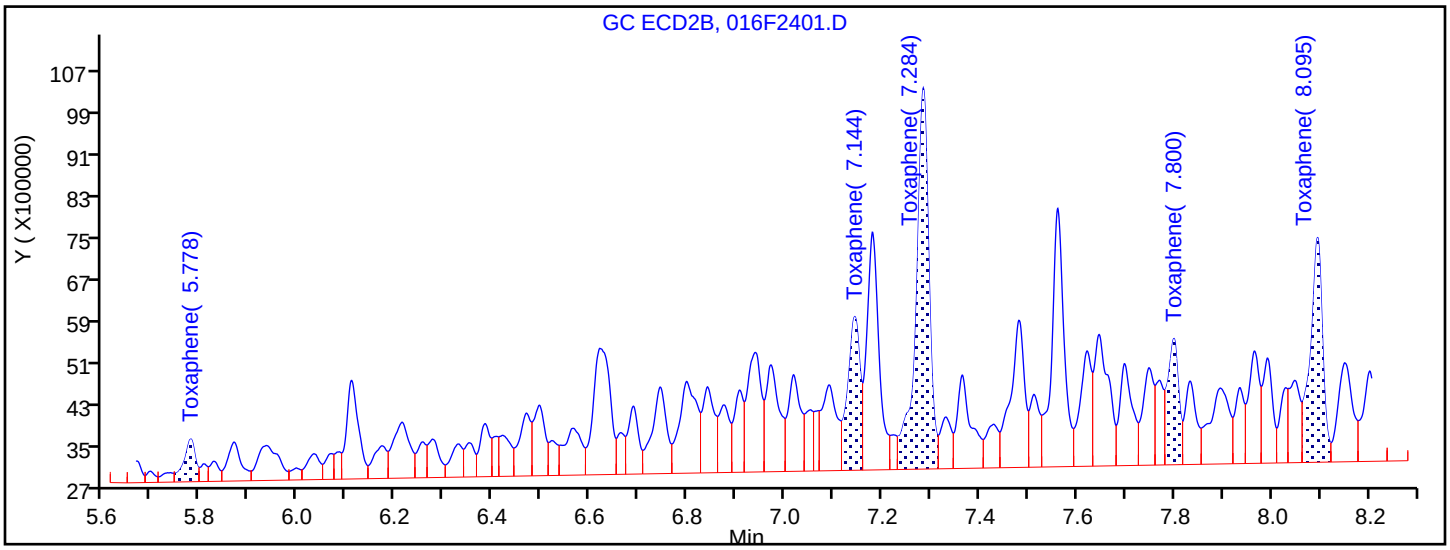
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 1148796
7.144	Response = 5058493
7.284	Response = 13437843
7.800	Response = 3687052
8.095	Response = 7436624



Manual Integration Results

5.778	Response = 1369118	M
7.144	Response = 5249471	M
7.284	Response = 13813356	M
7.800	Response = 3856571	M
8.095	Response = 7701963	M

Reviewer: mooret, 14-Oct-2018 21:34:13

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 17:55 Calibration End Date: 10/13/2018 19:05 Calibration ID: 34001

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/26	021F2901.D
Level 2	STD2 280-433303/25	020F2801.D
Level 3	STD3 280-433303/24	019F2701.D
Level 4	STD4 280-433303/23	018F2601.D
Level 5	STD5 280-433303/22	017F2501.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlordane (technical) Peak 1	0.0322	0.0338	0.0341	0.0360	0.0356	Lin2	-0.164	0.0353							0.9990		0.9900
Technical Chlordane Peak 1	0.0322	0.0338	0.0341	0.0360	0.0356	Lin2	-0.164	0.0353							0.9990		0.9900
Chlordane (technical) Peak 2	0.0340	0.0365	0.0364	0.0381	0.0371	Lin2	-0.172	0.0374							1.0000		0.9900
Technical Chlordane Peak 2	0.0340	0.0365	0.0364	0.0381	0.0371	Lin2	-0.172	0.0374							1.0000		0.9900
Chlordane (technical) Peak 3	0.1306	0.1398	0.1509	0.1588	0.1526	Lin2	-1.224	0.1535							0.9990		0.9900
Technical Chlordane Peak 3	0.1306	0.1398	0.1509	0.1588	0.1526	Lin2	-1.224	0.1535							0.9990		0.9900
Chlordane (technical) Peak 4	0.0720	0.0773	0.0788	0.0832	0.0774	Lin2	-0.411	0.0801							0.9990		0.9900
Technical Chlordane Peak 4	0.0720	0.0773	0.0788	0.0832	0.0774	Lin2	-0.411	0.0801							0.9990		0.9900
Chlordane (technical) Peak 5	0.0327	0.0341	0.0361	0.0396	0.0390	Lin2	-0.296	0.0380							0.9970		0.9900
Technical Chlordane Peak 5	0.0327	0.0341	0.0361	0.0396	0.0390	Lin2	-0.296	0.0380							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 17:55 Calibration End Date: 10/13/2018 19:05 Calibration ID: 34001

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/26	021F2901.D
Level 2	STD2 280-433303/25	020F2801.D
Level 3	STD3 280-433303/24	019F2701.D
Level 4	STD4 280-433303/23	018F2601.D
Level 5	STD5 280-433303/22	017F2501.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Chlordane (technical) Peak 1	BNB	Lin2	19370753	78374074	195369276	416816514	849918020	50.0	200	500	1000	2000
Technical Chlordane Peak 1	BNB	Lin2	19370753	78374074	195369276	416816514	849918020	50.0	200	500	1000	2000
Chlordane (technical) Peak 2	BNB	Lin2	20476770	84511213	208444420	440938157	887485084	50.0	200	500	1000	2000
Technical Chlordane Peak 2	BNB	Lin2	20476770	84511213	208444420	440938157	887485084	50.0	200	500	1000	2000
Chlordane (technical) Peak 3	BNB	Lin2	78672924	323796830	864974558	1837584042	3648104361	50.0	200	500	1000	2000
Technical Chlordane Peak 3	BNB	Lin2	78672924	323796830	864974558	1837584042	3648104361	50.0	200	500	1000	2000
Chlordane (technical) Peak 4	BNB	Lin2	43342241	179013253	451529633	963217886	1850061127	50.0	200	500	1000	2000
Technical Chlordane Peak 4	BNB	Lin2	43342241	179013253	451529633	963217886	1850061127	50.0	200	500	1000	2000
Chlordane (technical) Peak 5	BNB	Lin2	19673397	79003566	207172184	458177516	931508590	50.0	200	500	1000	2000
Technical Chlordane Peak 5	BNB	Lin2	19673397	79003566	207172184	458177516	931508590	50.0	200	500	1000	2000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\017F2501.D
Lims ID: STD5 CHL
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 17:55:18 ALS Bottle#: 17 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5 CHL
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:30 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:25:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.023	3.021	0.001	1792682143	150.0	150.0	
2	2.843	2.841	0.001	190697667	150.0	150.0	
14 Chlordane (technical)							
1	5.123	5.122	0.001	849918020	2000.0	2021.1	
1	5.593	5.593	0.000	887485084	2000.0	1990.4	
1	6.210	6.209	0.001	3648104361	2000.0	1996.2	
1	6.349	6.346	0.003	1850061127	2000.0	1938.4	
1	7.166	7.164	0.002	931508590	2000.0	2059.9	
		Average of Peak Amounts =				2001.2	
2	5.000	4.999	0.001	92575954	2000.0	1909.9	
2	5.527	5.527	0.000	85937217	2000.0	1889.3	
2	6.135	6.134	0.001	335784683	2000.0	1891.0	
2	6.292	6.291	0.001	253808651	2000.0	1915.5	
2	7.243	7.242	0.001	99297838	2000.0	2002.0	
		Average of Peak Amounts =				1921.5	
						RPD = 4.06	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.123	5.122	0.001	849918020	2000.0	2021.1	
1	5.593	5.593	0.000	887485084	2000.0	1990.4	
1	6.210	6.209	0.001	3648104361	2000.0	1996.2	
1	6.349	6.346	0.003	1850061127	2000.0	1938.4	
1	7.166	7.164	0.002	931508590	2000.0	2059.9	
		Average of Peak Amounts =				2001.2	
2	5.000	4.999	0.001	92575954	2000.0	1909.9	
2	5.527	5.527	0.000	85937217	2000.0	1889.3	
2	6.135	6.134	0.001	335784683	2000.0	1891.0	
2	6.292	6.291	0.001	253808651	2000.0	1915.5	
2	7.243	7.242	0.001	99297838	2000.0	2002.0	
		Average of Peak Amounts =				1921.5	
						RPD = 4.06	

Reagents:

8081ChlorL5_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

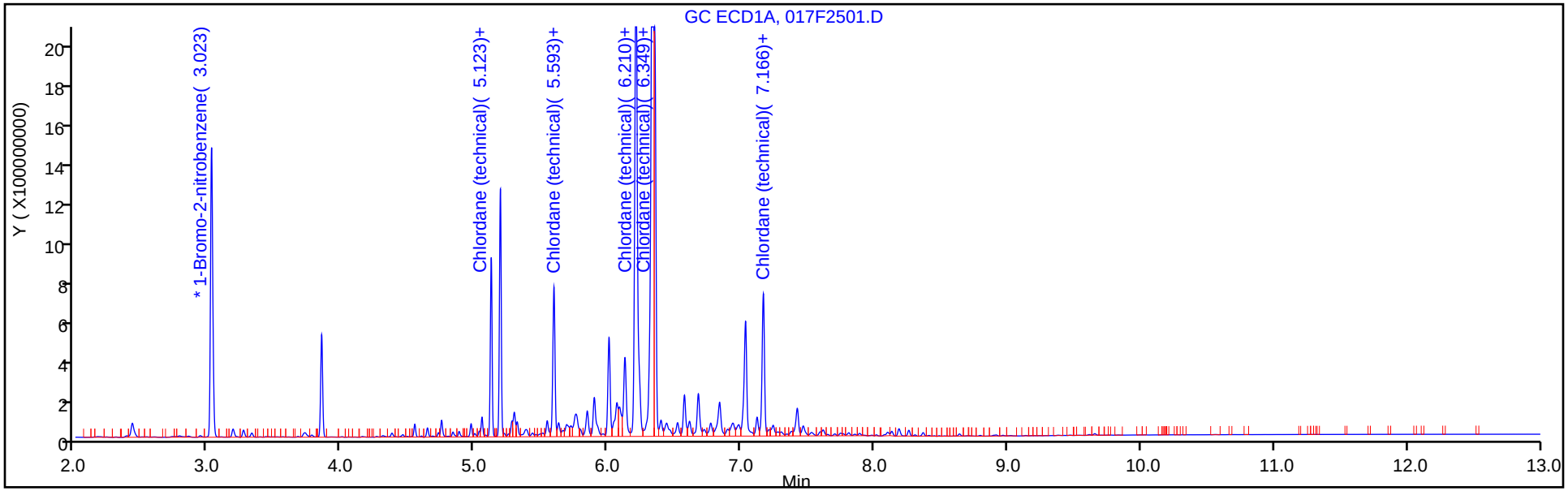
Report Date: 14-Oct-2018 22:11:31 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

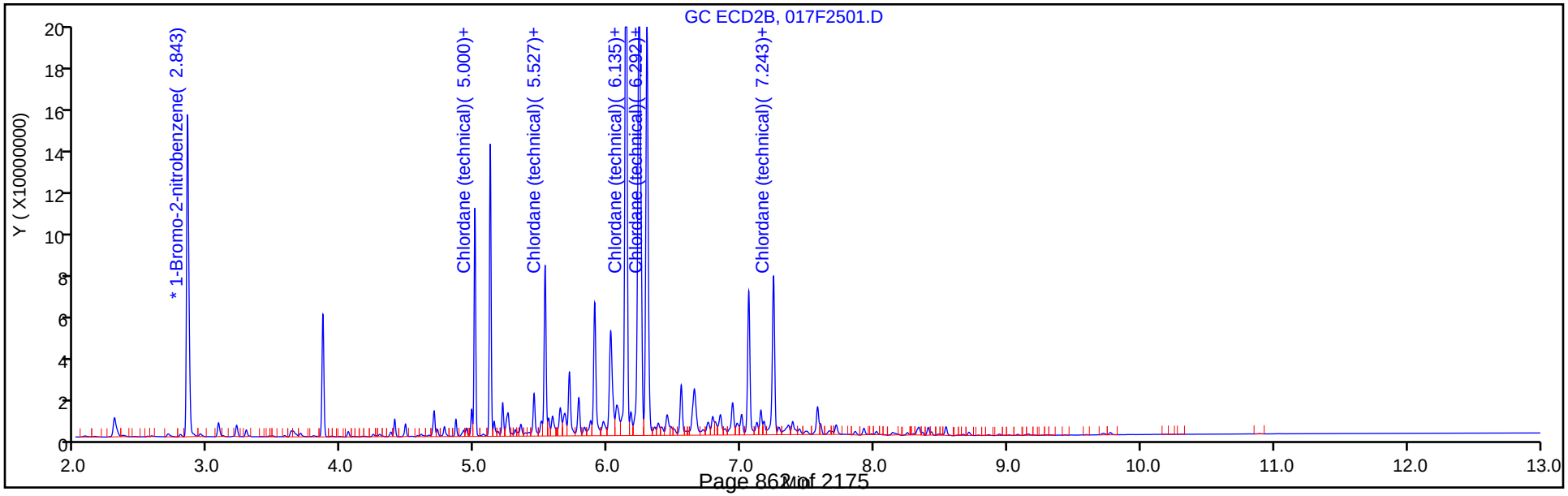
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\017F2501.D

Injection Date:	13-Oct-2018 17:55:18	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 CHL			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\018F2601.D
Lims ID: STD4 CHL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 18:12:41 ALS Bottle#: 18 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:33 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:22:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.023	3.023	0.000	1735982050	150.0	150.0	
2	2.842	2.842	0.000	184261712	150.0	150.0	
13 Technical Chlordane							M
1	5.122	5.122	0.000	416816514	1000.0	1025.8	
1	5.593	5.593	0.000	440938157	1000.0	1023.4	
1	6.209	6.209	0.000	1837584042	1000.0	1042.2	
1	6.346	6.346	0.000	963217886	1000.0	1044.5	M
1	7.164	7.164	0.000	458177516	1000.0	1050.1	
		Average of Peak Amounts =				1037.2	
2	4.999	4.999	0.000	47834001	1000.0	1017.9	
2	5.527	5.527	0.000	45476888	1000.0	1028.3	
2	6.134	6.134	0.000	177529223	1000.0	1033.3	
2	6.291	6.291	0.000	132798793	1000.0	1034.5	
2	7.242	7.242	0.000	49043713	1000.0	1025.1	
		Average of Peak Amounts =				1027.8	
						RPD = 0.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
14 Chlordane (technical)							M
1	5.122	5.122	0.000	416816514	1000.0	1025.8	
1	5.593	5.593	0.000	440938157	1000.0	1023.4	
1	6.209	6.209	0.000	1837584042	1000.0	1042.2	
1	6.346	6.346	0.000	963217886	1000.0	1044.5	M
1	7.164	7.164	0.000	458177516	1000.0	1050.1	
		Average of Peak Amounts =				1037.2	
2	4.999	4.999	0.000	47834001	1000.0	1017.9	
2	5.527	5.527	0.000	45476888	1000.0	1028.3	
2	6.134	6.134	0.000	177529223	1000.0	1033.3	
2	6.291	6.291	0.000	132798793	1000.0	1034.5	
2	7.242	7.242	0.000	49043713	1000.0	1025.1	
		Average of Peak Amounts =				1027.8	
						RPD = 0.91	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081ChlorL4_00022	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

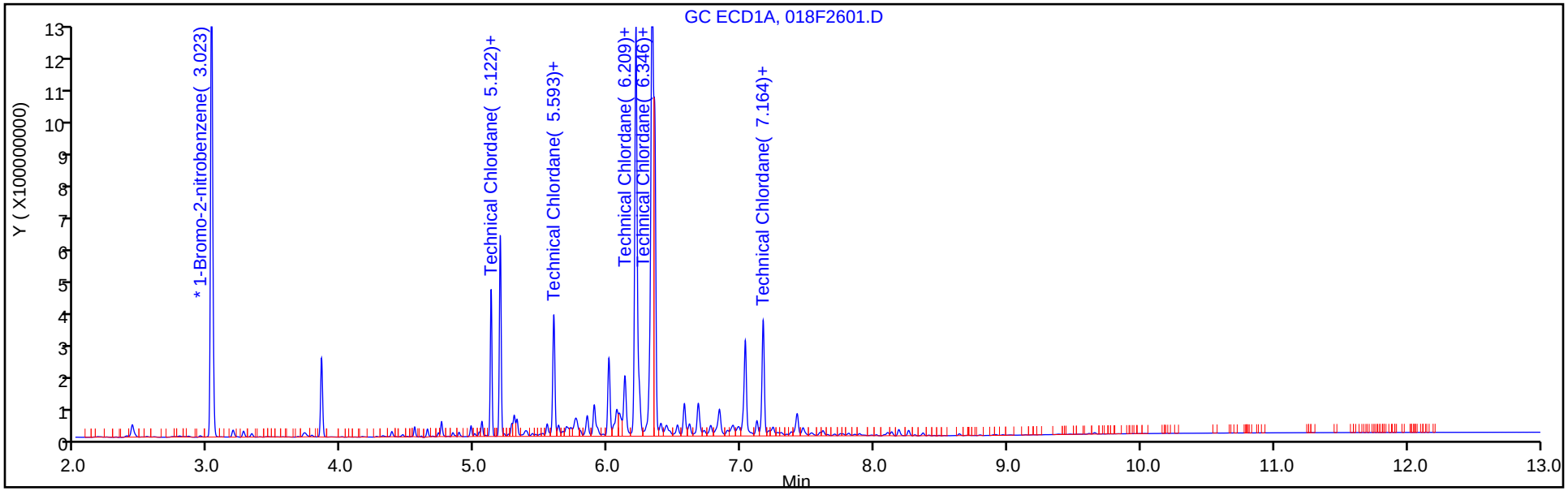
Report Date: 14-Oct-2018 22:11:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

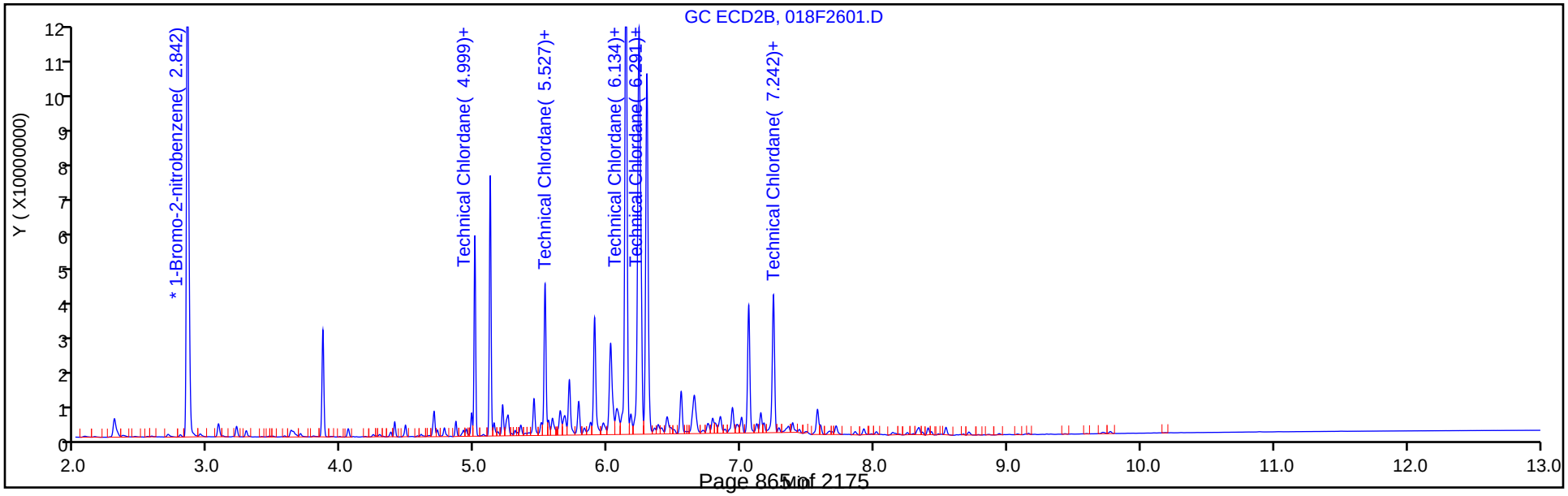
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\018F2601.D

Injection Date:	13-Oct-2018 18:12:41	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 CHL			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\018F2601.D

Injection Date: 13-Oct-2018 18:12:41 Instrument ID: SGC_P2

Lims ID: STD4 CHL

Client ID:

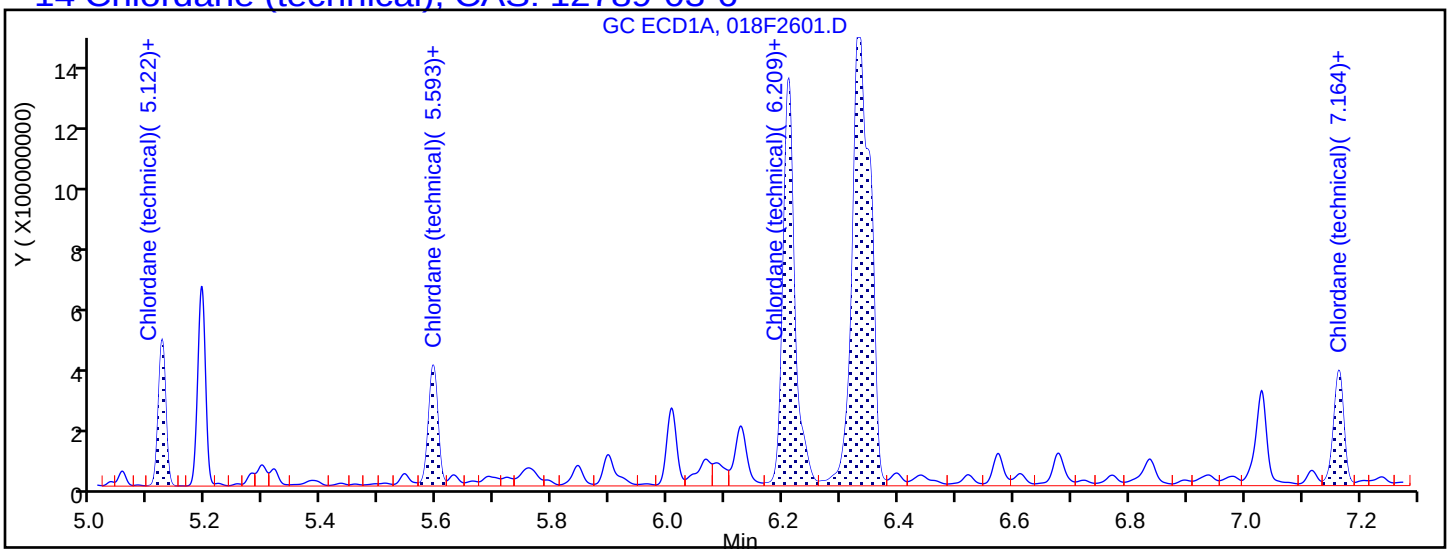
Operator ID: TEM ALS Bottle#: 18 Worklist Smp#: 23

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

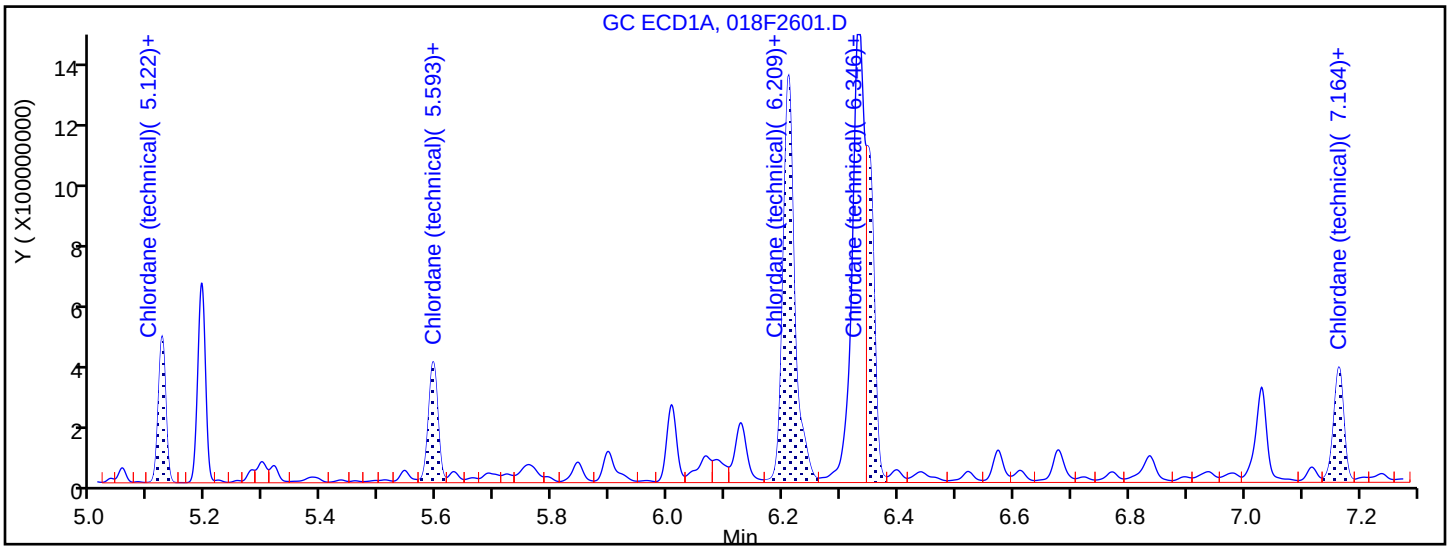
Column: CLP1 (0.32 mm) Detector GC ECD1A

14 Chlordane (technical), CAS: 12789-03-6



Processing Integration Results

5.122	Response = 416816514
5.593	Response = 440938157
6.209	Response = 1837584042
6.331	Response = 3177498339
7.164	Response = 458177516



Manual Integration Results

5.122	Response = 416816514	
5.593	Response = 440938157	
6.209	Response = 1837584042	
6.346	Response = 963217886	M
7.164	Response = 458177516	

Reviewer: mooret, 14-Oct-2018 21:24:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 14-Oct-2018 22:11:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\018F2601.D

Injection Date: 13-Oct-2018 18:12:41 Instrument ID: SGC_P2

Lims ID: STD4 CHL

Client ID:

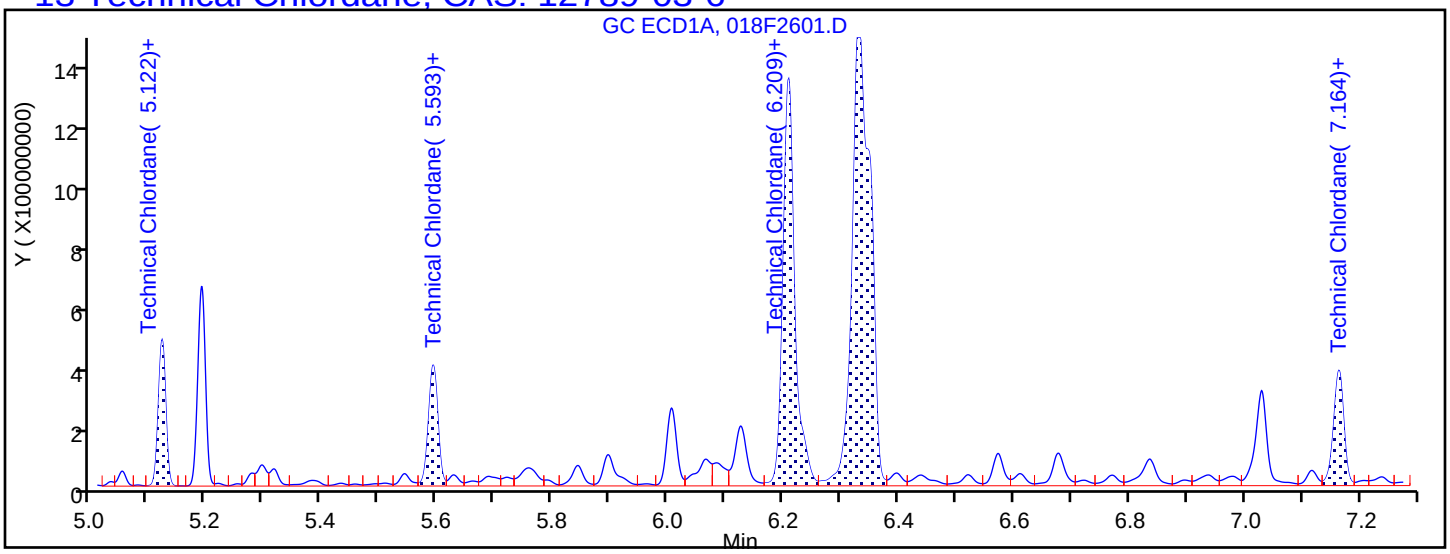
Operator ID: TEM ALS Bottle#: 18 Worklist Smp#: 23

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

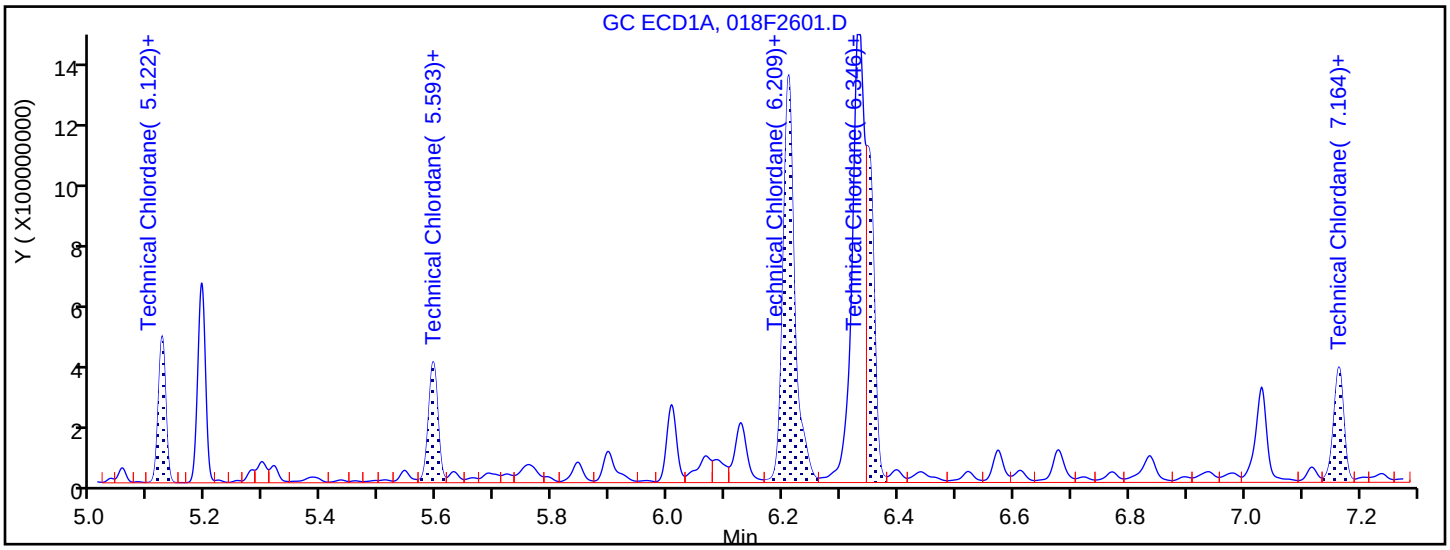
Column: CLP1 (0.32 mm) Detector GC ECD1A

13 Technical Chlordane, CAS: 12789-03-6



Processing Integration Results

5.122	Response = 416816514
5.593	Response = 440938157
6.209	Response = 1837584042
6.331	Response = 3177498339
7.164	Response = 458177516



Manual Integration Results

5.122	Response = 416816514	
5.593	Response = 440938157	
6.209	Response = 1837584042	
6.346	Response = 963217886	M
7.164	Response = 458177516	

Reviewer: mooret, 14-Oct-2018 21:24:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\019F2701.D
Lims ID: STD3 CHL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 18:30:13 ALS Bottle#: 19 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:37 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:22:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.023	-0.001	1719593058	150.0	150.0	
2	2.841	2.842	-0.001	182694175	150.0	150.0	
14 Chlordane (technical)							
1	5.120	5.122	-0.002	195369276	500.0	487.9	
1	5.591	5.593	-0.002	208444420	500.0	490.8	
1	6.207	6.209	-0.002	864974558	500.0	499.4	
1	6.346	6.346	0.000	451529633	500.0	497.0	
1	7.163	7.164	-0.001	207172184	500.0	483.6	
		Average of Peak Amounts =				491.7	
2	4.999	4.999	0.000	24097209	500.0	513.5	
2	5.525	5.527	-0.002	22669170	500.0	509.9	
2	6.133	6.134	-0.001	88705636	500.0	519.2	
2	6.290	6.291	-0.001	65018621	500.0	507.8	
2	7.241	7.242	-0.001	23403131	500.0	495.3	
		Average of Peak Amounts =				509.1	
						RPD = 3.48	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.120	5.122	-0.002	195369276	500.0	487.9	
1	5.591	5.593	-0.002	208444420	500.0	490.8	
1	6.207	6.209	-0.002	864974558	500.0	499.4	
1	6.346	6.346	0.000	451529633	500.0	497.0	
1	7.163	7.164	-0.001	207172184	500.0	483.6	
		Average of Peak Amounts =				491.7	
2	4.999	4.999	0.000	24097209	500.0	513.5	
2	5.525	5.527	-0.002	22669170	500.0	509.9	
2	6.133	6.134	-0.001	88705636	500.0	519.2	
2	6.290	6.291	-0.001	65018621	500.0	507.8	
2	7.241	7.242	-0.001	23403131	500.0	495.3	
		Average of Peak Amounts =				509.1	
						RPD = 3.48	

Reagents:

8081ChlorL3_00022	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

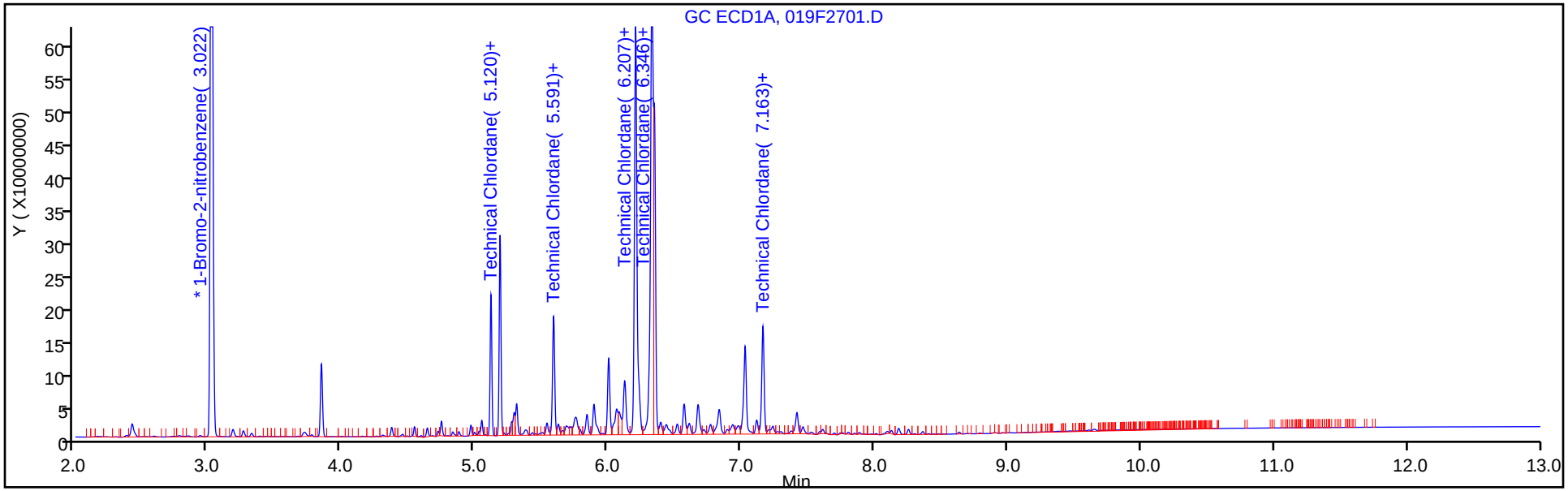
Report Date: 14-Oct-2018 22:11:38 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

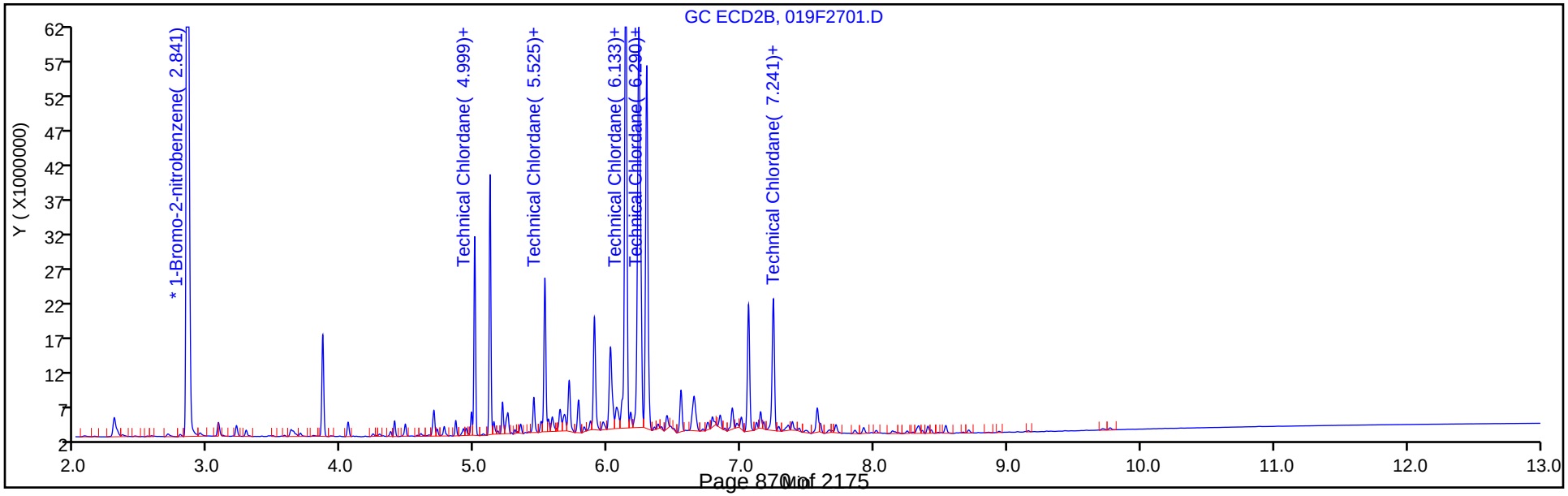
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\019F2701.D

Injection Date:	13-Oct-2018 18:30:13	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 CHL			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\020F2801.D
Lims ID: STD2 CHL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 18:47:37 ALS Bottle#: 20 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:40 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:25:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.023	-0.001	1737150721	150.0	150.0	
2	2.841	2.842	-0.001	184868960	150.0	150.0	
13 Technical Chlordane							
1	5.119	5.122	-0.003	78374074	200.0	196.5	
1	5.590	5.593	-0.003	84511213	200.0	199.7	
1	6.205	6.209	-0.004	323796830	200.0	190.1	
1	6.346	6.346	0.000	179013253	200.0	198.2	
1	7.162	7.164	-0.002	79003566	200.0	187.4	
		Average of Peak Amounts =				194.4	
2	4.998	4.999	-0.001	9742240	200.0	200.7	
2	5.524	5.527	-0.003	9485535	200.0	202.5	
2	6.132	6.134	-0.002	34311534	200.0	196.5	
2	6.289	6.291	-0.002	26175420	200.0	198.5	
2	7.239	7.242	-0.003	9249180	200.0	195.7	
		Average of Peak Amounts =				198.8	
						RPD = 2.23	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
14 Chlordane (technical)							
1	5.119	5.122	-0.003	78374074	200.0	196.5	
1	5.590	5.593	-0.003	84511213	200.0	199.7	
1	6.205	6.209	-0.004	323796830	200.0	190.1	
1	6.346	6.346	0.000	179013253	200.0	198.2	
1	7.162	7.164	-0.002	79003566	200.0	187.4	
		Average of Peak Amounts =				194.4	
2	4.998	4.999	-0.001	9742240	200.0	200.7	
2	5.524	5.527	-0.003	9485535	200.0	202.5	
2	6.132	6.134	-0.002	34311534	200.0	196.5	
2	6.289	6.291	-0.002	26175420	200.0	198.5	
2	7.239	7.242	-0.003	9249180	200.0	195.7	
		Average of Peak Amounts =				198.8	
						RPD = 2.23	

Reagents:

8081ChlorL2_00024	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

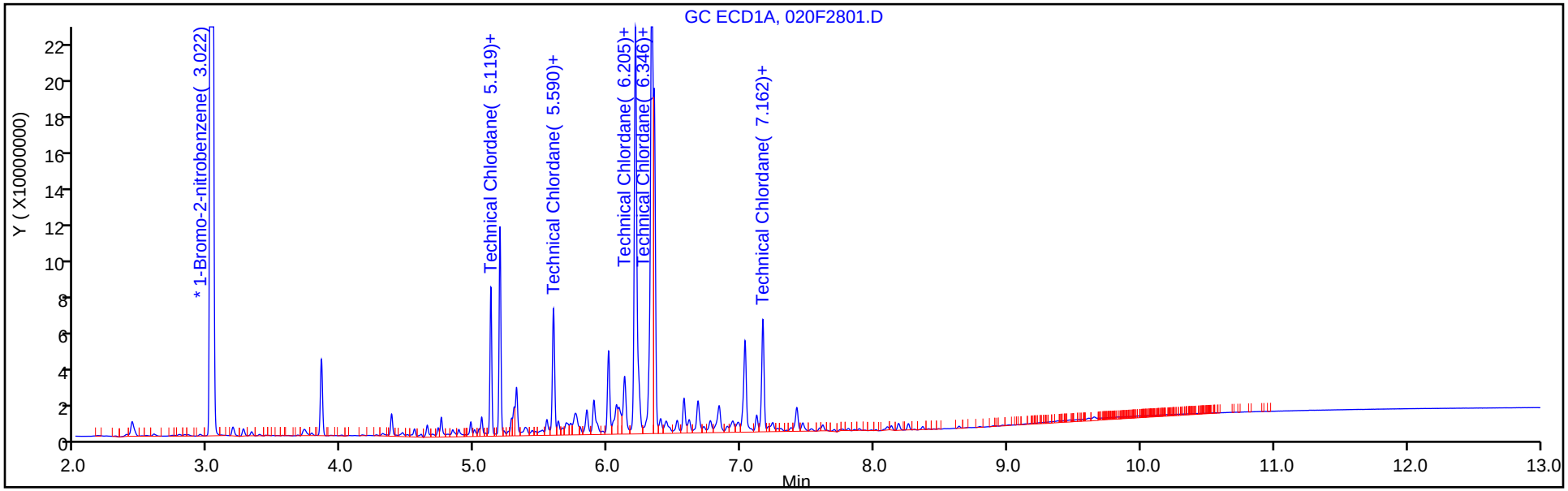
Report Date: 14-Oct-2018 22:11:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

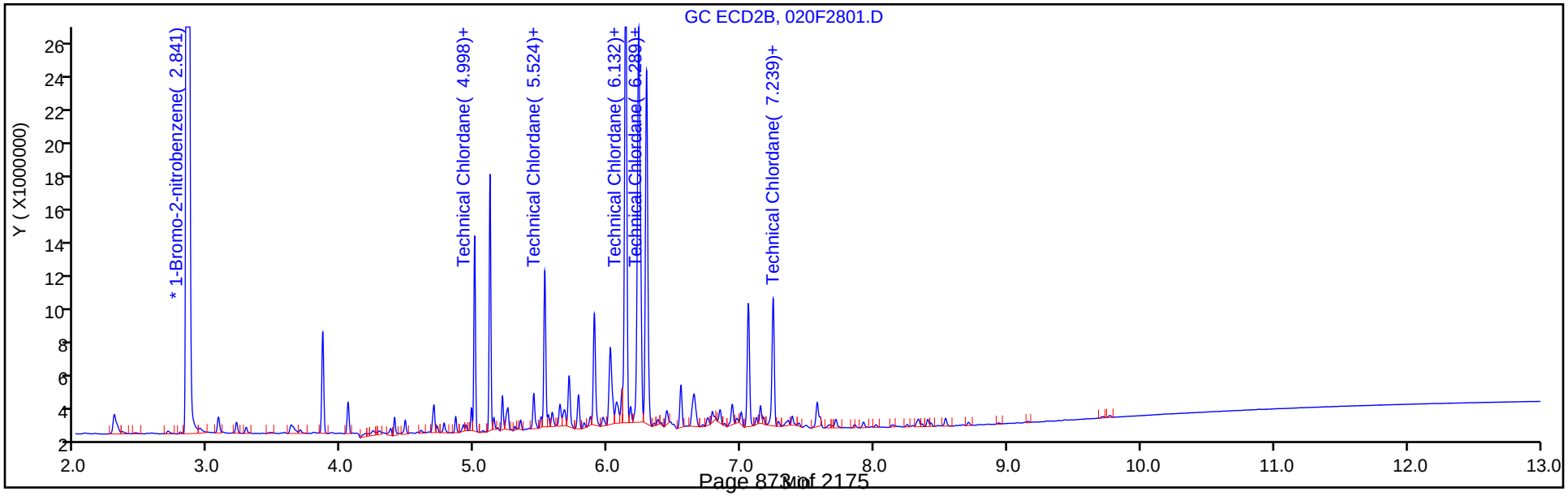
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\020F2801.D

Injection Date:	13-Oct-2018 18:47:37	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 CHL			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\021F2901.D
Lims ID: STD1 CHL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 19:05:03 ALS Bottle#: 21 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:23:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1806535354	150.0	150.0	
2	2.840	2.842	-0.002	191131239	150.0	150.0	
14 Chlordane (technical)							
1	5.119	5.122	-0.003	19370753	50.0	50.3	
1	5.590	5.593	-0.003	20476770	50.0	50.1	
1	6.205	6.209	-0.004	78672924	50.0	50.5	
1	6.345	6.346	-0.001	43342241	50.0	50.1	
1	7.161	7.164	-0.003	19673397	50.0	50.8	
		Average of Peak Amounts =				50.3	
2	4.997	4.999	-0.002	2771372	50.0	49.8	
2	5.523	5.527	-0.004	2895667	50.0	49.7	
2	6.131	6.134	-0.003	9438344	50.0	50.0	
2	6.288	6.291	-0.003	7401086	50.0	50.0	
2	7.238	7.242	-0.004	2321299	50.0	50.3	
		Average of Peak Amounts =				50.0	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.119	5.122	-0.003	19370753	50.0	50.3	
1	5.590	5.593	-0.003	20476770	50.0	50.1	
1	6.205	6.209	-0.004	78672924	50.0	50.5	
1	6.345	6.346	-0.001	43342241	50.0	50.1	
1	7.161	7.164	-0.003	19673397	50.0	50.8	
		Average of Peak Amounts =				50.3	
2	4.997	4.999	-0.002	2771372	50.0	49.8	
2	5.523	5.527	-0.004	2895667	50.0	49.7	
2	6.131	6.134	-0.003	9438344	50.0	50.0	
2	6.288	6.291	-0.003	7401086	50.0	50.0	
2	7.238	7.242	-0.004	2321299	50.0	50.3	
		Average of Peak Amounts =				50.0	
						RPD = 0.75	

Reagents:

8081ChlorL1_00023	Amount Added:	1.00	Units: mL	
8081_IS_00008	Amount Added:	75.00	Units: uL	Run Reagent

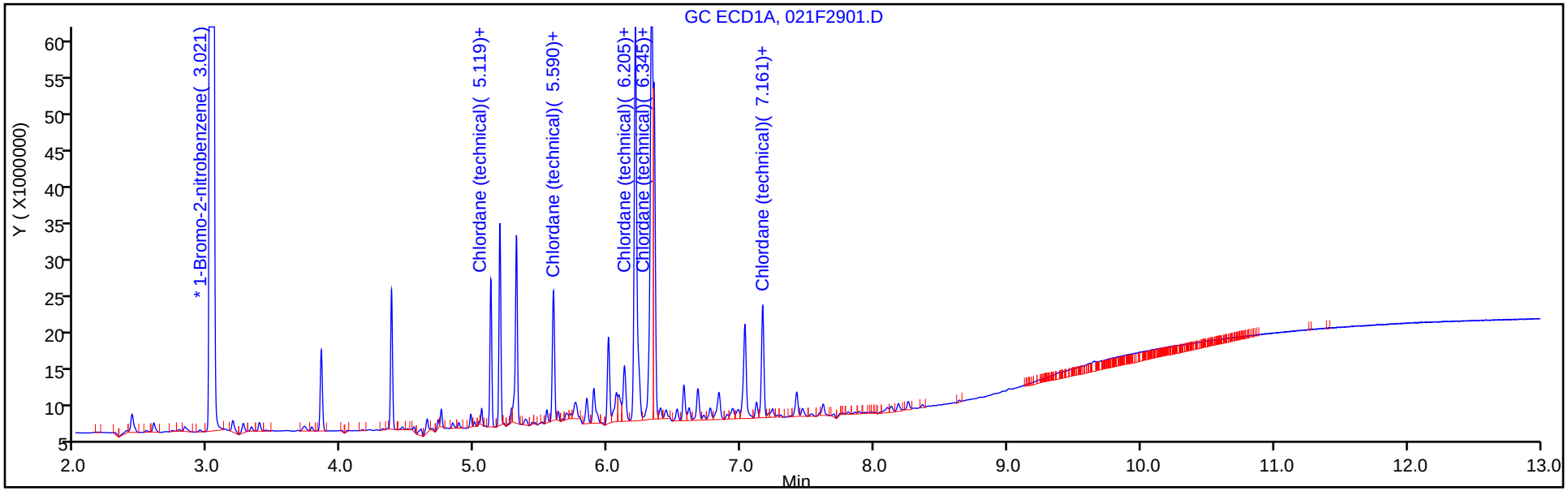
Report Date: 14-Oct-2018 22:11:45 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

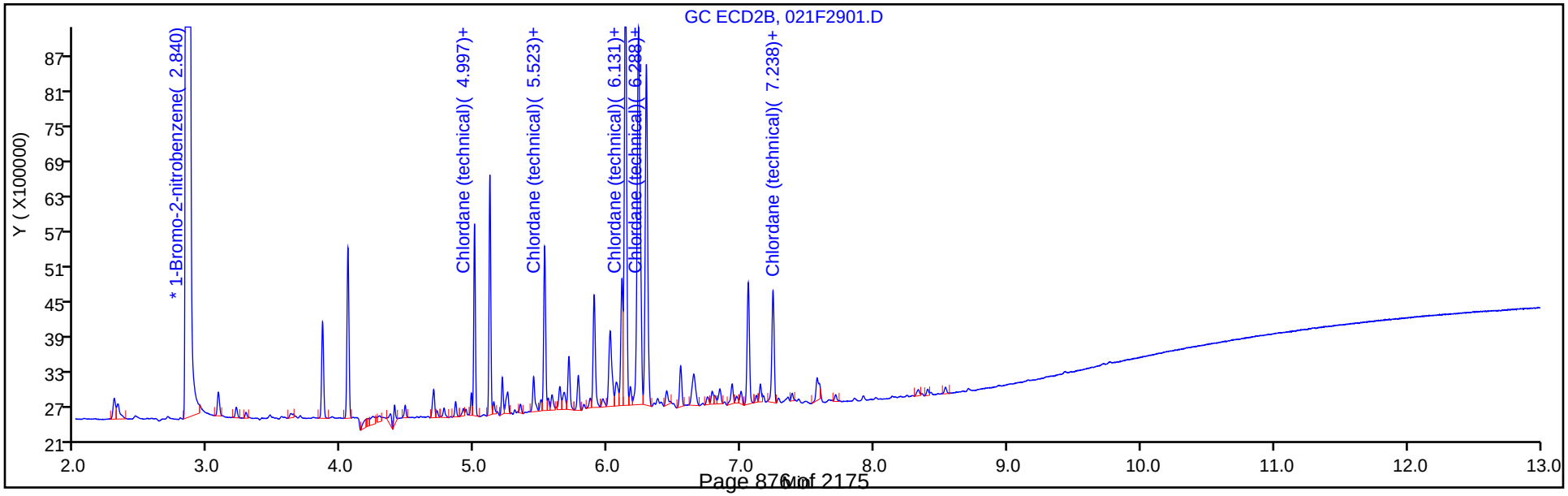
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\021F2901.D

Injection Date:	13-Oct-2018 19:05:03	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 CHL			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 17:55 Calibration End Date: 10/13/2018 19:05 Calibration ID: 34002

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/26	021F2901.D
Level 2	STD2 280-433303/25	020F2801.D
Level 3	STD3 280-433303/24	019F2701.D
Level 4	STD4 280-433303/23	018F2601.D
Level 5	STD5 280-433303/22	017F2501.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlordane (technical) Peak 1	0.0435	0.0395	0.0396	0.0389	0.0364	Lin2	0.2824	0.0380							0.9990		0.9900
Technical Chlordane Peak 1	0.0435	0.0395	0.0396	0.0389	0.0364	Lin2	0.2824	0.0380							0.9990		0.9900
Chlordane (technical) Peak 2	0.0455	0.0385	0.0372	0.0370	0.0338	Lin2	0.5061	0.0355							0.9990		0.9900
Technical Chlordane Peak 2	0.0455	0.0385	0.0372	0.0370	0.0338	Lin2	0.5061	0.0355							0.9990		0.9900
Chlordane (technical) Peak 3	0.1481	0.1392	0.1457	0.1445	0.1321	Lin2	0.4336	0.1394							0.9980		0.9900
Technical Chlordane Peak 3	0.1481	0.1392	0.1457	0.1445	0.1321	Lin2	0.4336	0.1394							0.9980		0.9900
Chlordane (technical) Peak 4	0.1162	0.1062	0.1068	0.1081	0.0998	Lin2	0.6149	0.1039							0.9990		0.9900
Technical Chlordane Peak 4	0.1162	0.1062	0.1068	0.1081	0.0998	Lin2	0.6149	0.1039							0.9990		0.9900
Chlordane (technical) Peak 5	0.0364	0.0375	0.0384	0.0399	0.0391	Lin2	-0.142	0.0391							1.0000		0.9900
Technical Chlordane Peak 5	0.0364	0.0375	0.0384	0.0399	0.0391	Lin2	-0.142	0.0391							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 17:55 Calibration End Date: 10/13/2018 19:05 Calibration ID: 34002

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/26	021F2901.D
Level 2	STD2 280-433303/25	020F2801.D
Level 3	STD3 280-433303/24	019F2701.D
Level 4	STD4 280-433303/23	018F2601.D
Level 5	STD5 280-433303/22	017F2501.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Chlordane (technical) Peak 1	BNB	Lin2	2771372	9742240	24097209	47834001	92575954	50.0	200	500	1000	2000
Technical Chlordane Peak 1	BNB	Lin2	2771372	9742240	24097209	47834001	92575954	50.0	200	500	1000	2000
Chlordane (technical) Peak 2	BNB	Lin2	2895667	9485535	22669170	45476888	85937217	50.0	200	500	1000	2000
Technical Chlordane Peak 2	BNB	Lin2	2895667	9485535	22669170	45476888	85937217	50.0	200	500	1000	2000
Chlordane (technical) Peak 3	BNB	Lin2	9438344	34311534	88705636	177529223	335784683	50.0	200	500	1000	2000
Technical Chlordane Peak 3	BNB	Lin2	9438344	34311534	88705636	177529223	335784683	50.0	200	500	1000	2000
Chlordane (technical) Peak 4	BNB	Lin2	7401086	26175420	65018621	132798793	253808651	50.0	200	500	1000	2000
Technical Chlordane Peak 4	BNB	Lin2	7401086	26175420	65018621	132798793	253808651	50.0	200	500	1000	2000
Chlordane (technical) Peak 5	BNB	Lin2	2321299	9249180	23403131	49043713	99297838	50.0	200	500	1000	2000
Technical Chlordane Peak 5	BNB	Lin2	2321299	9249180	23403131	49043713	99297838	50.0	200	500	1000	2000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\017F2501.D
Lims ID: STD5 CHL
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 17:55:18 ALS Bottle#: 17 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5 CHL
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:30 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:25:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.023	3.021	0.001	1792682143	150.0	150.0	
2	2.843	2.841	0.001	190697667	150.0	150.0	
14 Chlordane (technical)							
1	5.123	5.122	0.001	849918020	2000.0	2021.1	
1	5.593	5.593	0.000	887485084	2000.0	1990.4	
1	6.210	6.209	0.001	3648104361	2000.0	1996.2	
1	6.349	6.346	0.003	1850061127	2000.0	1938.4	
1	7.166	7.164	0.002	931508590	2000.0	2059.9	
		Average of Peak Amounts =				2001.2	
2	5.000	4.999	0.001	92575954	2000.0	1909.9	
2	5.527	5.527	0.000	85937217	2000.0	1889.3	
2	6.135	6.134	0.001	335784683	2000.0	1891.0	
2	6.292	6.291	0.001	253808651	2000.0	1915.5	
2	7.243	7.242	0.001	99297838	2000.0	2002.0	
		Average of Peak Amounts =				1921.5	
						RPD = 4.06	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.123	5.122	0.001	849918020	2000.0	2021.1	
1	5.593	5.593	0.000	887485084	2000.0	1990.4	
1	6.210	6.209	0.001	3648104361	2000.0	1996.2	
1	6.349	6.346	0.003	1850061127	2000.0	1938.4	
1	7.166	7.164	0.002	931508590	2000.0	2059.9	
		Average of Peak Amounts =				2001.2	
2	5.000	4.999	0.001	92575954	2000.0	1909.9	
2	5.527	5.527	0.000	85937217	2000.0	1889.3	
2	6.135	6.134	0.001	335784683	2000.0	1891.0	
2	6.292	6.291	0.001	253808651	2000.0	1915.5	
2	7.243	7.242	0.001	99297838	2000.0	2002.0	
		Average of Peak Amounts =				1921.5	
						RPD = 4.06	

Reagents:

8081ChlorL5_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

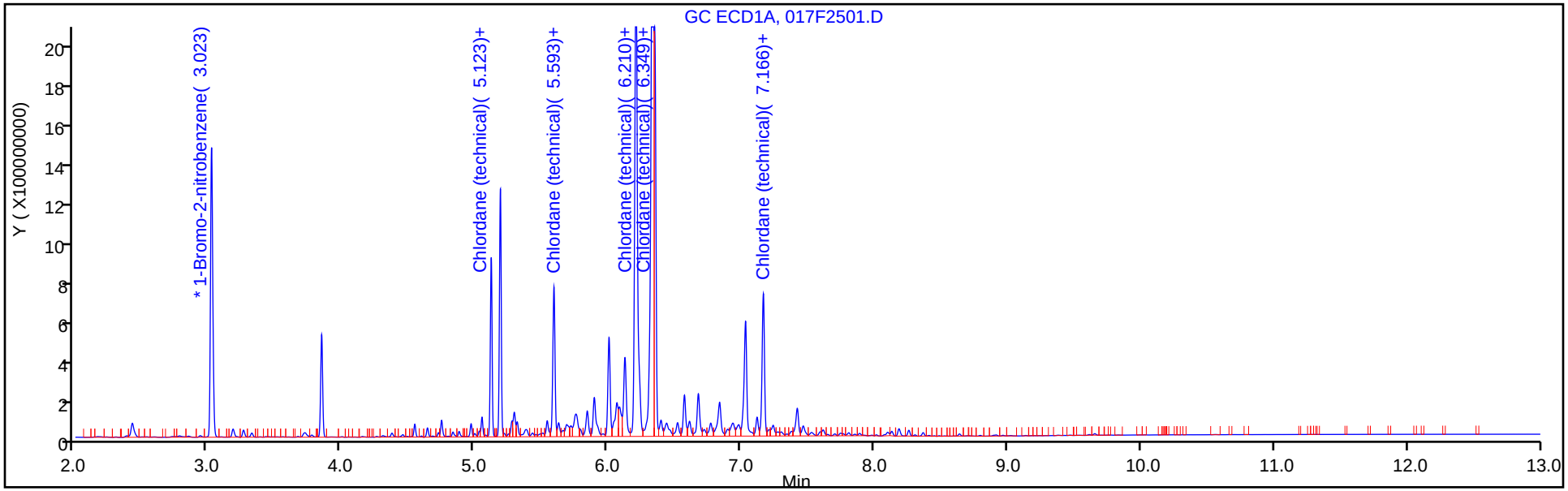
Report Date: 14-Oct-2018 22:11:32 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

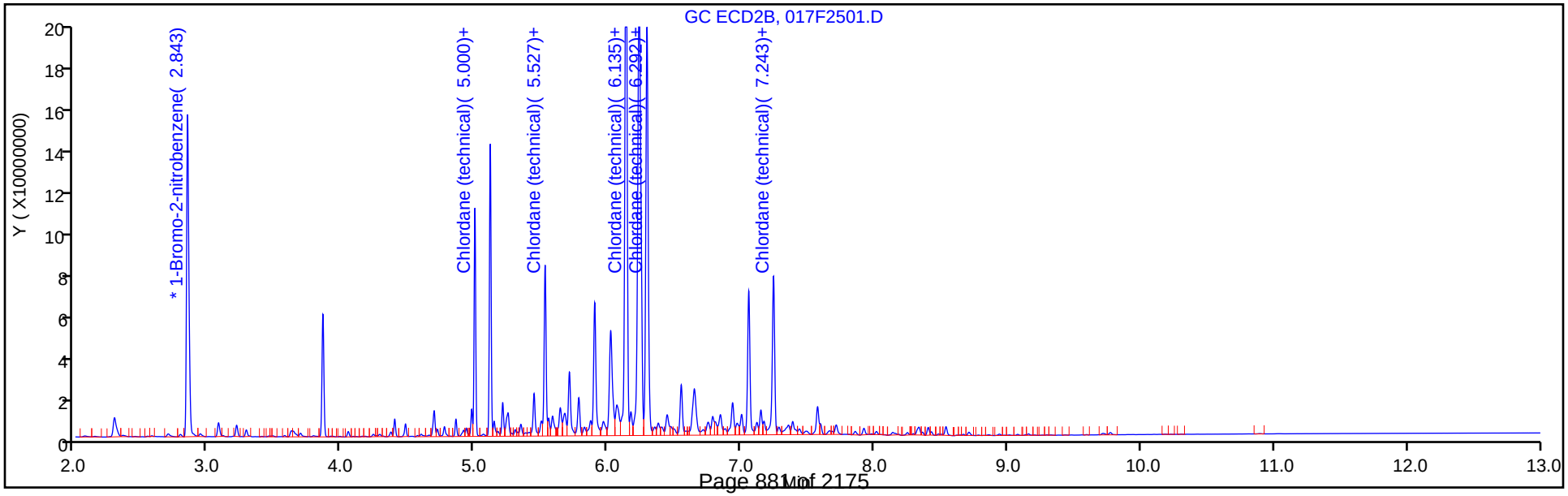
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\017F2501.D

Injection Date:	13-Oct-2018 17:55:18	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 CHL			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\018F2601.D
Lims ID: STD4 CHL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 18:12:41 ALS Bottle#: 18 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:33 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:22:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.023	3.023	0.000	1735982050	150.0	150.0	
2	2.842	2.842	0.000	184261712	150.0	150.0	
13 Technical Chlordane							M
1	5.122	5.122	0.000	416816514	1000.0	1025.8	
1	5.593	5.593	0.000	440938157	1000.0	1023.4	
1	6.209	6.209	0.000	1837584042	1000.0	1042.2	
1	6.346	6.346	0.000	963217886	1000.0	1044.5	M
1	7.164	7.164	0.000	458177516	1000.0	1050.1	
		Average of Peak Amounts =				1037.2	
2	4.999	4.999	0.000	47834001	1000.0	1017.9	
2	5.527	5.527	0.000	45476888	1000.0	1028.3	
2	6.134	6.134	0.000	177529223	1000.0	1033.3	
2	6.291	6.291	0.000	132798793	1000.0	1034.5	
2	7.242	7.242	0.000	49043713	1000.0	1025.1	
		Average of Peak Amounts =				1027.8	
						RPD = 0.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
14 Chlordane (technical)							M
1	5.122	5.122	0.000	416816514	1000.0	1025.8	
1	5.593	5.593	0.000	440938157	1000.0	1023.4	
1	6.209	6.209	0.000	1837584042	1000.0	1042.2	
1	6.346	6.346	0.000	963217886	1000.0	1044.5	M
1	7.164	7.164	0.000	458177516	1000.0	1050.1	
		Average of Peak Amounts =				1037.2	
2	4.999	4.999	0.000	47834001	1000.0	1017.9	
2	5.527	5.527	0.000	45476888	1000.0	1028.3	
2	6.134	6.134	0.000	177529223	1000.0	1033.3	
2	6.291	6.291	0.000	132798793	1000.0	1034.5	
2	7.242	7.242	0.000	49043713	1000.0	1025.1	
		Average of Peak Amounts =				1027.8	
						RPD = 0.91	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081ChlorL4_00022	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

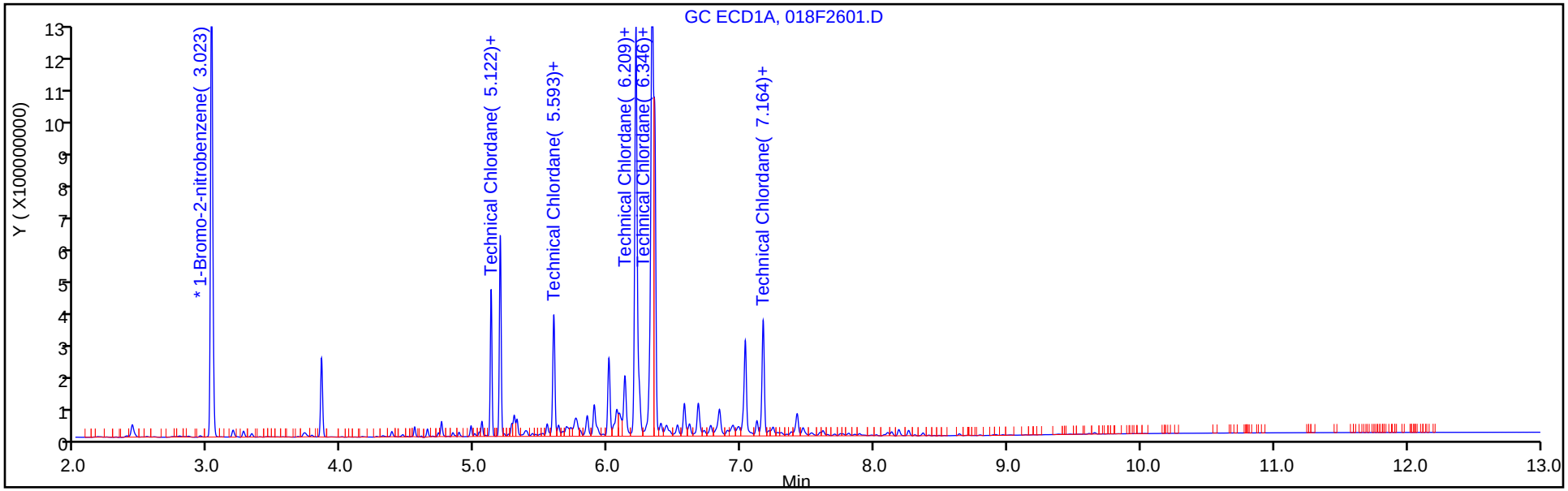
Report Date: 14-Oct-2018 22:11:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

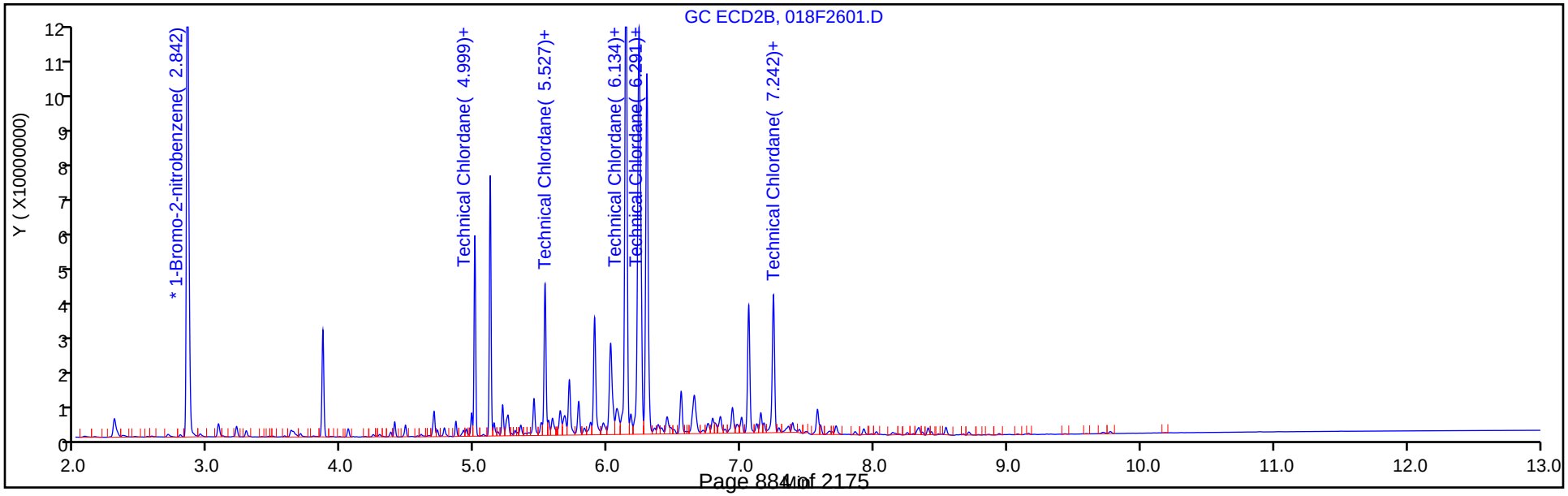
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\018F2601.D

Injection Date:	13-Oct-2018 18:12:41	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 CHL			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\019F2701.D
Lims ID: STD3 CHL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 18:30:13 ALS Bottle#: 19 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:37 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:22:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.023	-0.001	1719593058	150.0	150.0	
2	2.841	2.842	-0.001	182694175	150.0	150.0	
14 Chlordane (technical)							
1	5.120	5.122	-0.002	195369276	500.0	487.9	
1	5.591	5.593	-0.002	208444420	500.0	490.8	
1	6.207	6.209	-0.002	864974558	500.0	499.4	
1	6.346	6.346	0.000	451529633	500.0	497.0	
1	7.163	7.164	-0.001	207172184	500.0	483.6	
		Average of Peak Amounts =				491.7	
2	4.999	4.999	0.000	24097209	500.0	513.5	
2	5.525	5.527	-0.002	22669170	500.0	509.9	
2	6.133	6.134	-0.001	88705636	500.0	519.2	
2	6.290	6.291	-0.001	65018621	500.0	507.8	
2	7.241	7.242	-0.001	23403131	500.0	495.3	
		Average of Peak Amounts =				509.1	
						RPD = 3.48	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.120	5.122	-0.002	195369276	500.0	487.9	
1	5.591	5.593	-0.002	208444420	500.0	490.8	
1	6.207	6.209	-0.002	864974558	500.0	499.4	
1	6.346	6.346	0.000	451529633	500.0	497.0	
1	7.163	7.164	-0.001	207172184	500.0	483.6	
		Average of Peak Amounts =				491.7	
2	4.999	4.999	0.000	24097209	500.0	513.5	
2	5.525	5.527	-0.002	22669170	500.0	509.9	
2	6.133	6.134	-0.001	88705636	500.0	519.2	
2	6.290	6.291	-0.001	65018621	500.0	507.8	
2	7.241	7.242	-0.001	23403131	500.0	495.3	
		Average of Peak Amounts =				509.1	
						RPD = 3.48	

Reagents:

8081ChlorL3_00022	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

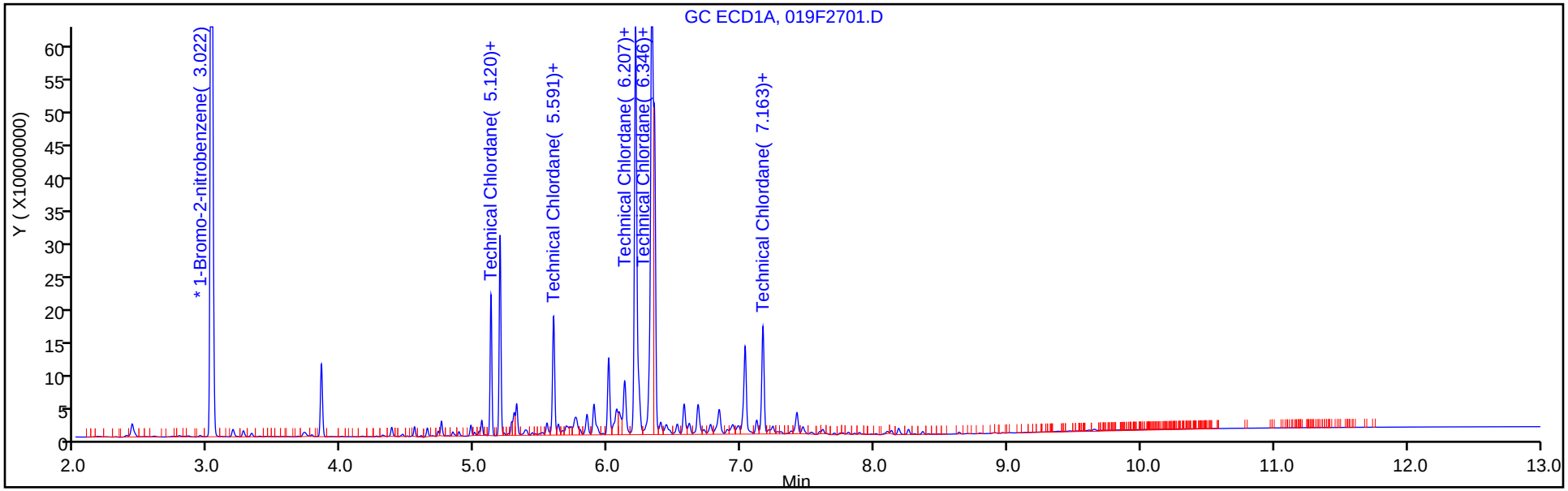
Report Date: 14-Oct-2018 22:11:39 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

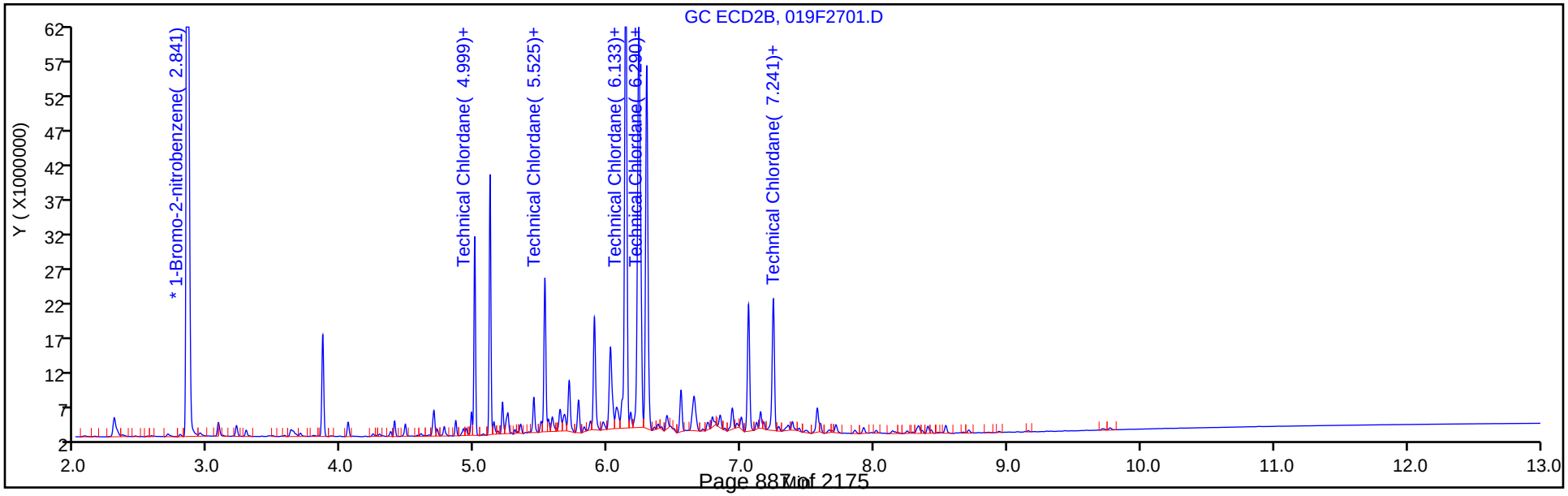
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\019F2701.D

Injection Date:	13-Oct-2018 18:30:13	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 CHL			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\020F2801.D
Lims ID: STD2 CHL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 18:47:37 ALS Bottle#: 20 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:40 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:25:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.023	-0.001	1737150721	150.0	150.0	
2	2.841	2.842	-0.001	184868960	150.0	150.0	
13 Technical Chlordane							
1	5.119	5.122	-0.003	78374074	200.0	196.5	
1	5.590	5.593	-0.003	84511213	200.0	199.7	
1	6.205	6.209	-0.004	323796830	200.0	190.1	
1	6.346	6.346	0.000	179013253	200.0	198.2	
1	7.162	7.164	-0.002	79003566	200.0	187.4	
		Average of Peak Amounts =				194.4	
2	4.998	4.999	-0.001	9742240	200.0	200.7	
2	5.524	5.527	-0.003	9485535	200.0	202.5	
2	6.132	6.134	-0.002	34311534	200.0	196.5	
2	6.289	6.291	-0.002	26175420	200.0	198.5	
2	7.239	7.242	-0.003	9249180	200.0	195.7	
		Average of Peak Amounts =				198.8	
						RPD = 2.23	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
14 Chlordane (technical)							
1	5.119	5.122	-0.003	78374074	200.0	196.5	
1	5.590	5.593	-0.003	84511213	200.0	199.7	
1	6.205	6.209	-0.004	323796830	200.0	190.1	
1	6.346	6.346	0.000	179013253	200.0	198.2	
1	7.162	7.164	-0.002	79003566	200.0	187.4	
		Average of Peak Amounts =				194.4	
2	4.998	4.999	-0.001	9742240	200.0	200.7	
2	5.524	5.527	-0.003	9485535	200.0	202.5	
2	6.132	6.134	-0.002	34311534	200.0	196.5	
2	6.289	6.291	-0.002	26175420	200.0	198.5	
2	7.239	7.242	-0.003	9249180	200.0	195.7	
		Average of Peak Amounts =				198.8	
						RPD = 2.23	

Reagents:

8081ChlorL2_00024	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

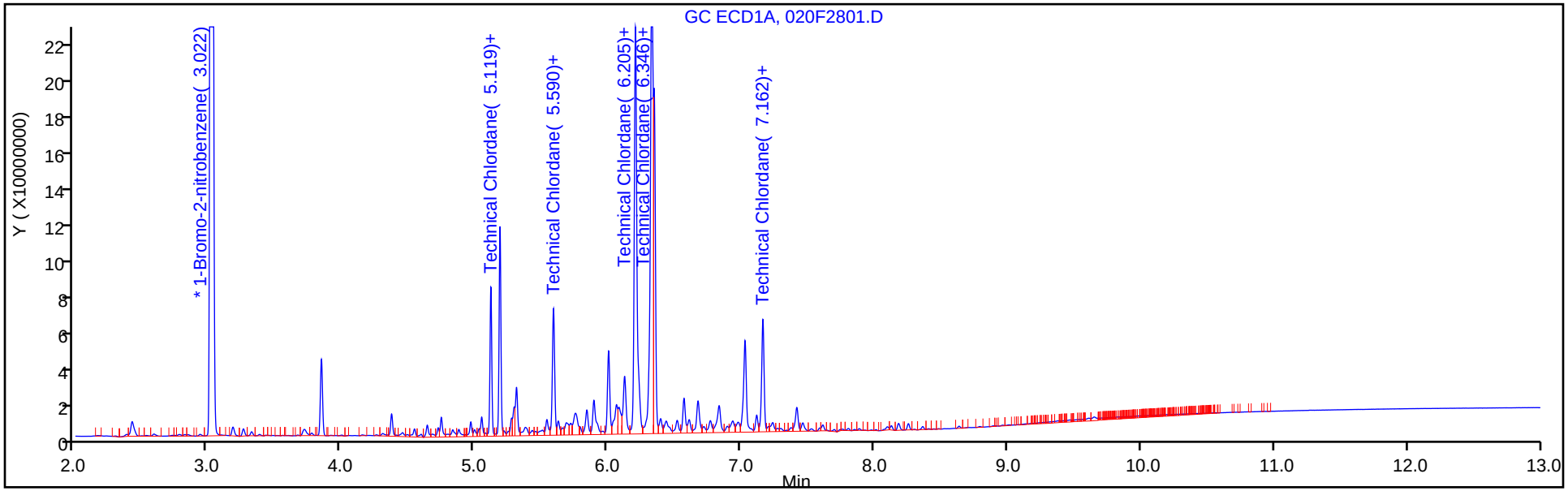
Report Date: 14-Oct-2018 22:11:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

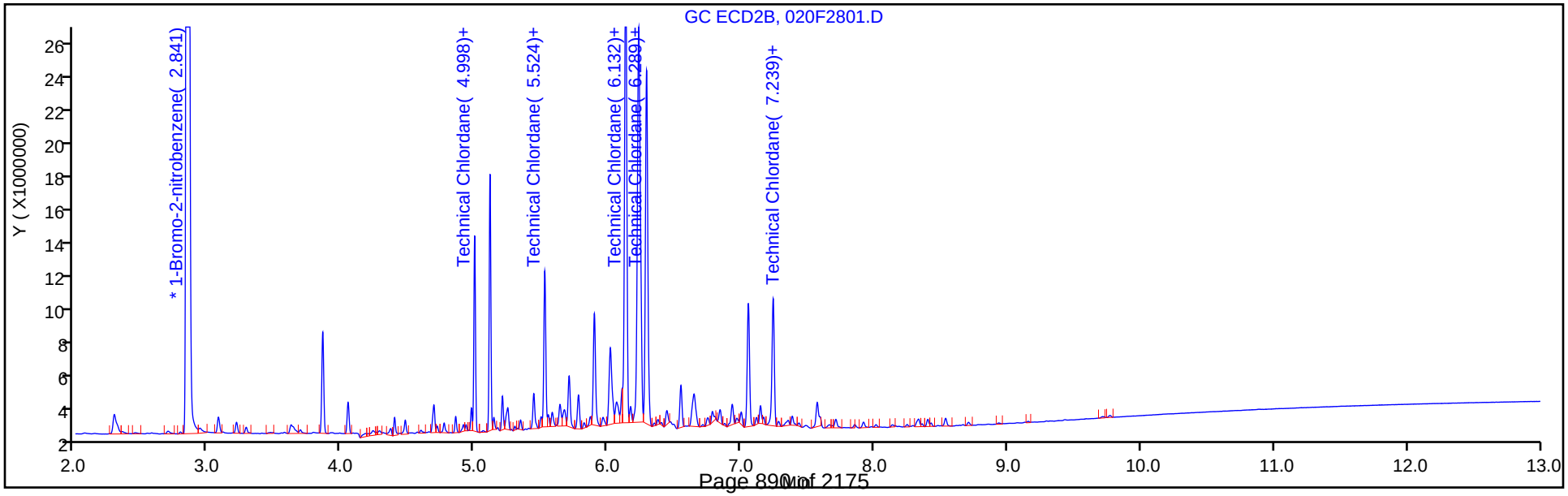
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\020F2801.D

Injection Date:	13-Oct-2018 18:47:37	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 CHL			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\021F2901.D
Lims ID: STD1 CHL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 19:05:03 ALS Bottle#: 21 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:23:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1806535354	150.0	150.0	
2	2.840	2.842	-0.002	191131239	150.0	150.0	
14 Chlordane (technical)							
1	5.119	5.122	-0.003	19370753	50.0	50.3	
1	5.590	5.593	-0.003	20476770	50.0	50.1	
1	6.205	6.209	-0.004	78672924	50.0	50.5	
1	6.345	6.346	-0.001	43342241	50.0	50.1	
1	7.161	7.164	-0.003	19673397	50.0	50.8	
		Average of Peak Amounts =				50.3	
2	4.997	4.999	-0.002	2771372	50.0	49.8	
2	5.523	5.527	-0.004	2895667	50.0	49.7	
2	6.131	6.134	-0.003	9438344	50.0	50.0	
2	6.288	6.291	-0.003	7401086	50.0	50.0	
2	7.238	7.242	-0.004	2321299	50.0	50.3	
		Average of Peak Amounts =				50.0	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.119	5.122	-0.003	19370753	50.0	50.3	
1	5.590	5.593	-0.003	20476770	50.0	50.1	
1	6.205	6.209	-0.004	78672924	50.0	50.5	
1	6.345	6.346	-0.001	43342241	50.0	50.1	
1	7.161	7.164	-0.003	19673397	50.0	50.8	
		Average of Peak Amounts =				50.3	
2	4.997	4.999	-0.002	2771372	50.0	49.8	
2	5.523	5.527	-0.004	2895667	50.0	49.7	
2	6.131	6.134	-0.003	9438344	50.0	50.0	
2	6.288	6.291	-0.003	7401086	50.0	50.0	
2	7.238	7.242	-0.004	2321299	50.0	50.3	
		Average of Peak Amounts =				50.0	
						RPD = 0.75	

Reagents:

8081ChlorL1_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

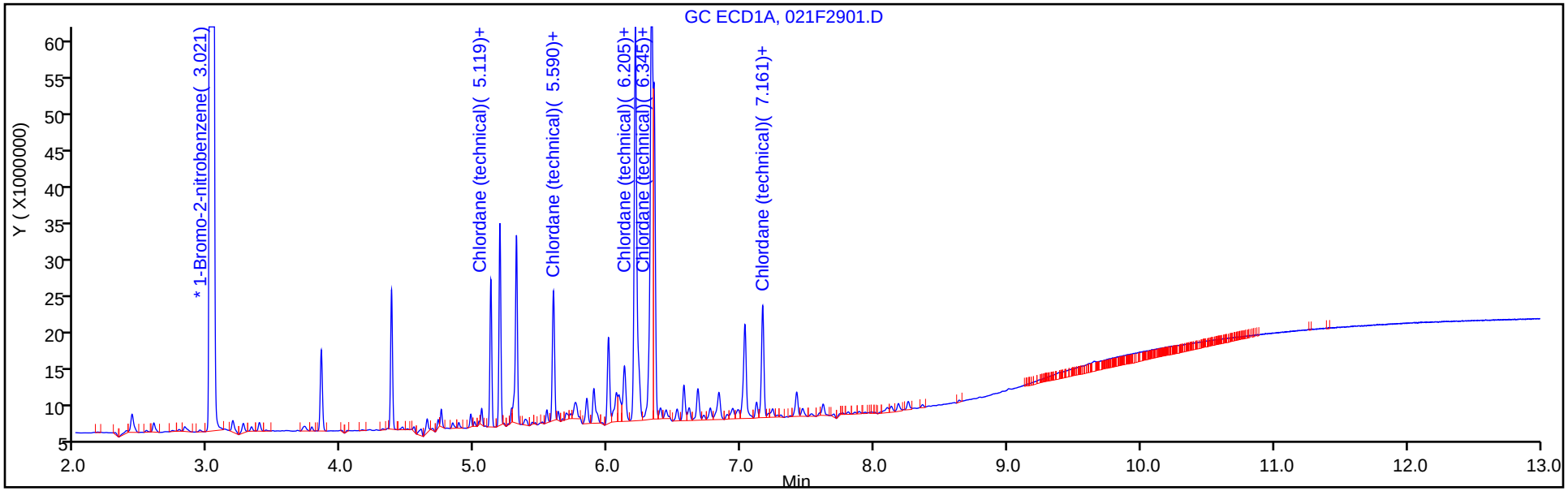
Report Date: 14-Oct-2018 22:11:45 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

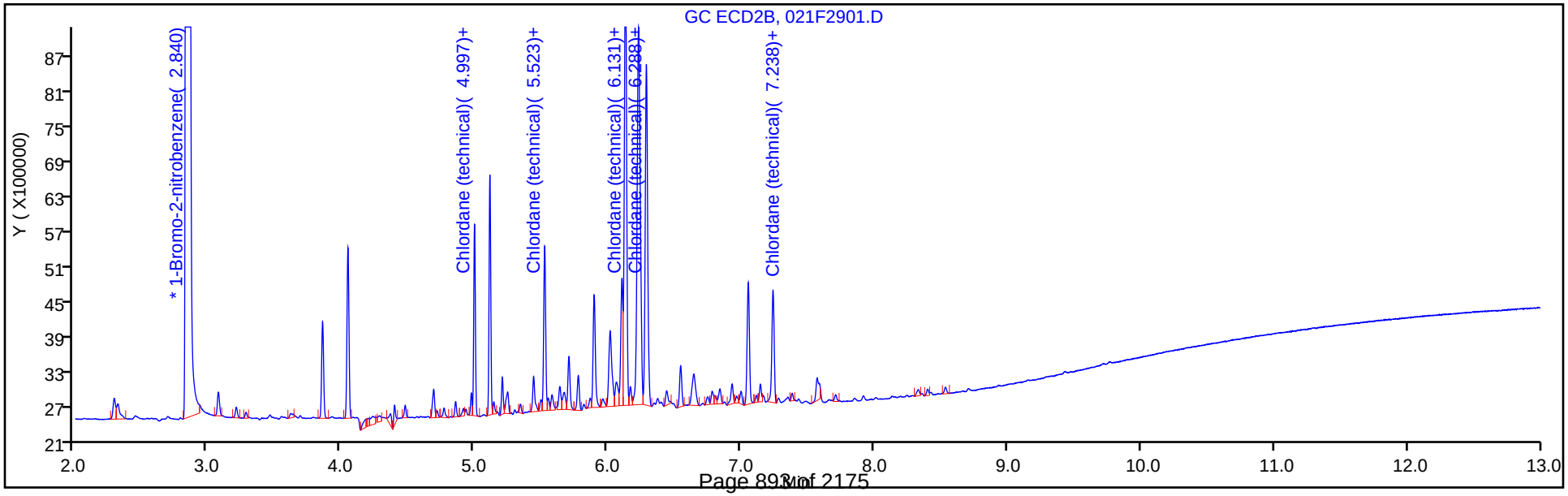
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\021F2901.D

Injection Date:	13-Oct-2018 19:05:03	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 CHL			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobenzene	1.0899 1.1788	1.0948	1.1161	1.1873	1.1486	Lin2	-0.340	1.1605							0.9990		0.9900
alpha-BHC	1.4325 1.7413	1.5151	1.5784	1.6732	1.7082	Lin2	-1.160	1.6919							0.9990		0.9900
gamma-BHC (Lindane)	1.2873 1.4841	1.3050	1.3541	1.4304	1.4566	Lin2	-0.721	1.4383							0.9980		0.9900
beta-BHC	0.6083 0.5624	0.5533	0.5269	0.5489	0.5547	Lin2	0.2347	0.5421							0.9990		0.9900
delta-BHC	1.2688 1.5059	1.3116	1.3789	1.4639	1.4777	Lin2	-0.911	1.4669							0.9990		0.9900
Heptachlor	1.1423 1.2700	1.1822	1.2288	1.2809	1.2874	Lin2	-0.584	1.2741							1.0000		0.9900
Aldrin	1.2062 1.3690	1.2570	1.3026	1.3742	1.3613	Lin2	-0.684	1.3611							0.9990		0.9900
Heptachlor epoxide	1.0838 1.1495	1.1012	1.1263	1.1655	1.1463	Lin2	-0.297	1.1502							1.0000		0.9900
trans-Chlordane	1.1384 1.2781	1.1281	1.1791	1.2485	1.2502	Lin2	-0.520	1.2413							0.9980		0.9900
cis-Chlordane	1.0735 1.2119	1.0963	1.1287	1.1934	1.1895	Lin2	-0.525	1.1868							0.9990		0.9900
4,4'-DDE	1.1109 1.2600	1.1411	1.1961	1.2683	1.2373	Lin2	-0.618	1.2469							0.9990		0.9900
Endosulfan I	1.0381 1.0827	1.0434	1.0691	1.1110	1.0759	Lin2	-0.222	1.0861							1.0000		0.9900
Dieldrin	1.1146 1.2115	1.1397	1.1784	1.2379	1.1993	Lin2	-0.433	1.2115							1.0000		0.9900
Endrin	0.9402 1.0666	0.9630	1.0117	1.0737	1.0470	Lin2	-0.524	1.0549							0.9990		0.9900
4,4'-DDD	0.8803 1.0077	0.8683	0.9102	0.9844	0.9556	Lin2	-0.439	0.9661							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endosulfan II	0.9353 0.9815	0.9307	0.9610	1.0302	0.9720	Lin2	-0.252	0.9867							0.9990		0.9900
4,4'-DDT	0.7293 0.8991	0.7495	0.8019	0.8780	0.8772	Lin2	-0.663	0.8704							0.9970		0.9900
Endrin aldehyde	0.7328 0.7638	0.7096	0.7263	0.7800	0.7505	Lin2	-0.135	0.7536							0.9990		0.9900
Methoxychlor	0.3876 0.3901	0.3754	0.3827	0.4082	0.3892	Lin2	-0.035	0.3914							0.9990		0.9900
Endosulfan sulfate	0.8217 0.8872	0.8075	0.8371	0.9081	0.8647	Lin2	-0.276	0.8743							0.9980		0.9900
Endrin ketone	0.8782 0.9231	0.8495	0.8861	0.9671	0.9038	Lin2	-0.230	0.9179							0.9980		0.9900
Tetrachloro-m-xylene	1.0173 1.1251	1.0386	1.0634	1.1370	1.0977	Lin2	-0.428	1.1107							0.9990		0.9900
DCB Decachlorobiphenyl	0.6003 0.5770	0.5495	0.5594	0.5991	0.5570	Lin2	0.0911	0.5671							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobenzene	BNB	Lin2	47816993 1380707359	126156548	317851410	649000706	1019295562	4.00 100	10.0	25.0	50.0	75.0
alpha-BHC	BNB	Lin2	62852215 2039469973	174586944	449507972	914630685	1515867171	4.00 100	10.0	25.0	50.0	75.0
gamma-BHC (Lindane)	BNB	Lin2	56481667 1738294623	150377013	385635283	781888254	1292559350	4.00 100	10.0	25.0	50.0	75.0
beta-BHC	BNB	Lin2	26687989 658730126	63756954	150050051	300049327	492255043	4.00 100	10.0	25.0	50.0	75.0
delta-BHC	BNB	Lin2	55669358 1763800464	151129545	392697114	800211131	1311307456	4.00 100	10.0	25.0	50.0	75.0
Heptachlor	BNB	Lin2	50118465 1487484474	136220069	349955154	700142171	1142416982	4.00 100	10.0	25.0	50.0	75.0
Aldrin	BNB	Lin2	52919960 1603385174	144846582	370973392	751162048	1208042264	4.00 100	10.0	25.0	50.0	75.0
Heptachlor epoxide	BNB	Lin2	47553101 1346353314	126886425	320747071	637075296	1017236841	4.00 100	10.0	25.0	50.0	75.0
trans-Chlordane	BNB	Lin2	49944652 1496975406	129991480	335790425	682439750	1109387779	4.00 100	10.0	25.0	50.0	75.0
cis-Chlordane	BNB	Lin2	47100490 1419377556	126327949	321433079	652320568	1055599184	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDE	BNB	Lin2	48738148 1475769541	131488025	340651862	693292530	1097991084	4.00 100	10.0	25.0	50.0	75.0
Endosulfan I	BNB	Lin2	45543940 1268053177	120234528	304465713	607276774	954735604	4.00 100	10.0	25.0	50.0	75.0
Dieldrin	BNB	Lin2	48904591 1418985077	131325618	335595524	676681392	1064216521	4.00 100	10.0	25.0	50.0	75.0
Endrin	BNB	Lin2	41251930 1249259754	110965652	288123020	586918822	929144470	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDD	BNB	Lin2	38622027 1180309263	100049743	259223669	538092520	848012397	4.00 100	10.0	25.0	50.0	75.0
Endosulfan II	BNB	Lin2	41034933 1149629449	107239359	273685389	563151672	862538061	4.00 100	10.0	25.0	50.0	75.0

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	BNB	Lin2	31997998 1053113637	86360678	228369137	479927441	778459968	4.00 100	10.0	25.0	50.0	75.0
Endrin aldehyde	BNB	Lin2	32150414 894620553	81761942	206854248	426357889	665966546	4.00 100	10.0	25.0	50.0	75.0
Methoxychlor	BNB	Lin2	17004835 456885819	43260093	108979408	223151920	345420332	4.00 100	10.0	25.0	50.0	75.0
Endosulfan sulfate	BNB	Lin2	36051087 1039104153	93045319	238398480	496366994	767321325	4.00 100	10.0	25.0	50.0	75.0
Endrin ketone	BNB	Lin2	38530653 1081196479	97881347	252349419	528619675	802034011	4.00 100	10.0	25.0	50.0	75.0
Tetrachloro-m-xylene	BNB	Lin2	44633037 1317820866	119672981	302832702	621494359	974117175	4.00 100	10.0	25.0	50.0	75.0
DCB Decachlorobiphenyl	BNB	Lin2	26336210 675825077	63321098	159322167	327463502	494311523	4.00 100	10.0	25.0	50.0	75.0

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D
Lims ID: STD6 AB
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 19:22:28 ALS Bottle#: 22 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:21:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						413.9	
2						393.8	
						RPD = 4.96	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1756870840	150.0	150.0	
2	2.840	2.842	-0.002	195021437	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.921	3.919	0.002	1317820866	100.0	101.7	
2	3.823	3.823	0.000	151651222	100.0	96.2	
						RPD = 5.52	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	1380707359	100.0	101.9	
2	4.302	4.302	0.000	160717643	100.0	96.5	
						RPD = 5.38	
8 alpha-BHC							
1	4.498	4.497	0.001	2039469973	100.0	103.6	
2	4.447	4.448	-0.001	213039488	100.0	98.9	
						RPD = 4.64	
9 gamma-BHC (Lindane)							
1	4.787	4.785	0.002	1738294623	100.0	103.7	
2	4.762	4.761	0.001	184996515	100.0	98.6	
						RPD = 4.99	
10 beta-BHC							
1	4.863	4.862	0.001	658730126	100.0	103.3	
2	4.837	4.837	0.000	77780555	100.0	97.6	
						RPD = 5.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.012	5.010	0.002	1763800464	100.0	103.3	
2	5.070	5.069	0.001	187730350	100.0	98.7	
						RPD = 4.51	
15 Heptachlor							
1	5.188	5.187	0.001	1487484474	100.0	100.1	
2	5.112	5.112	0.000	157743006	100.0	97.5	
						RPD = 2.69	
16 Aldrin							
1	5.458	5.457	0.001	1603385174	100.0	101.1	
2	5.384	5.383	0.001	171135300	100.0	98.1	
						RPD = 3.03	
18 Isodrin							
1	5.785	5.783	0.002	1276942983	100.0	101.0	
2	5.749	5.749	0.000	144685541	100.0	97.8	
						RPD = 3.17	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	1346353314	100.0	100.2	
2	5.932	5.931	0.001	153345134	100.0	96.9	
						RPD = 3.39	
22 trans-Chlordane							
1	6.204	6.204	0.000	1496975406	100.0	103.4	
2	6.131	6.130	0.001	163709394	100.0	98.3	
						RPD = 5.07	
23 cis-Chlordane							
1	6.346	6.344	0.002	1419377556	100.0	102.6	
2	6.287	6.286	0.001	154077138	100.0	97.9	
						RPD = 4.60	
24 4,4'-DDE							
1	6.422	6.421	0.001	1475769541	100.0	101.5	
2	6.470	6.469	0.001	160552956	100.0	97.9	
						RPD = 3.65	
25 Endosulfan I							
1	6.495	6.494	0.001	1268053177	100.0	99.9	
2	6.347	6.346	0.001	144373306	100.0	96.8	
						RPD = 3.18	
27 Dieldrin							
1	6.750	6.748	0.002	1418985077	100.0	100.4	
2	6.640	6.639	0.001	161178584	100.0	97.7	
						RPD = 2.73	
30 Endrin							
1	6.998	6.997	0.001	1249259754	100.0	101.6	
2	6.964	6.963	0.001	142775347	100.0	97.9	
						RPD = 3.71	
32 4,4'-DDD							
1	7.059	7.058	0.001	1180309263	100.0	104.8	
2	7.089	7.089	0.000	131149227	100.0	98.3	
						RPD = 6.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.235	7.234	0.001	1149629449	100.0	99.7	
2	7.191	7.190	0.001	134900820	100.0	95.9	
						RPD = 3.88	
35 4,4'-DDT							
1	7.353	7.352	0.001	1053113637	100.0	104.1	
2	7.420	7.419	0.001	115525218	100.0	99.4	
						RPD = 4.57	
36 Endrin aldehyde							
1	7.680	7.679	0.001	894620553	100.0	101.5	
2	7.551	7.550	0.001	109276534	100.0	96.9	
						RPD = 4.65	
37 Methoxychlor							
1	7.857	7.857	0.000	456885819	100.0	99.8	
2	8.151	8.150	0.001	54922574	100.0	96.4	
						RPD = 3.44	
38 Mirex							
1	8.017	8.016	0.001	761678556	100.0	103.8	
2	8.346	8.344	0.002	90852521	100.0	95.7	
						RPD = 8.10	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	1039104153	100.0	101.8	
2	7.842	7.841	0.001	124525276	100.0	96.7	
						RPD = 5.17	
40 Endrin ketone							
1	8.431	8.429	0.002	1081196479	100.0	100.8	
2	8.398	8.396	0.002	136381981	100.0	96.1	
						RPD = 4.74	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	675825077	100.0	101.6	
2	9.669	9.668	0.001	88747472	100.0	95.6	
						RPD = 6.08	
S 3 Endosulfan, Total							
1						301.4	
2						289.4	
						RPD = 4.08	

Reagents:

8081IcalL6_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

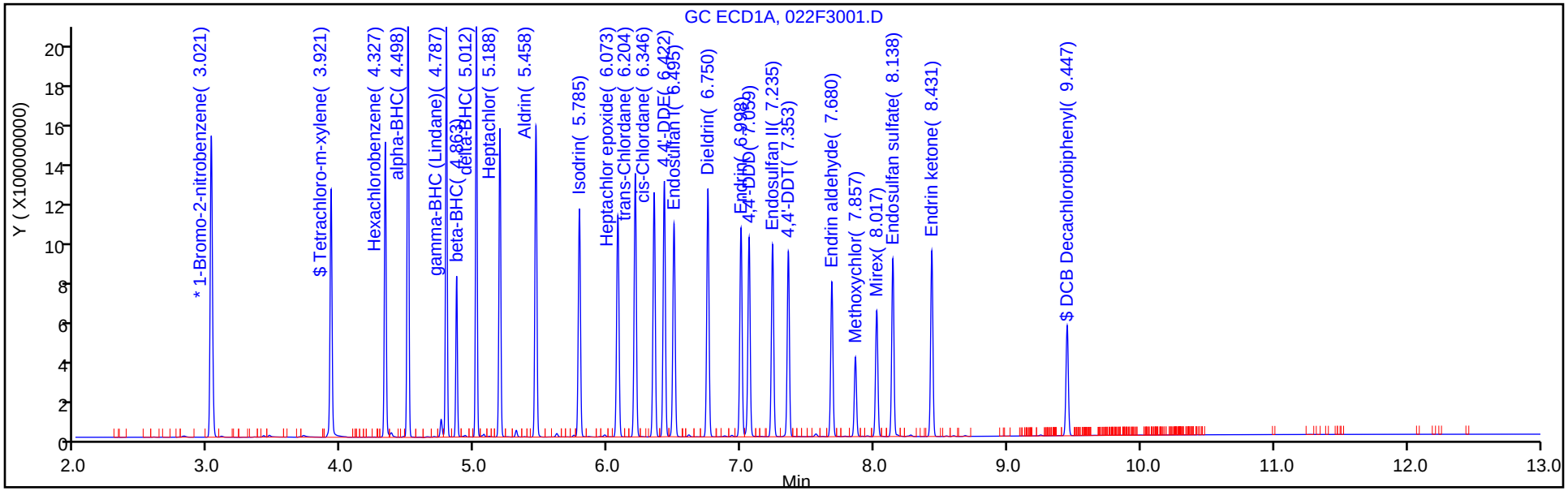
Report Date: 14-Oct-2018 22:11:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

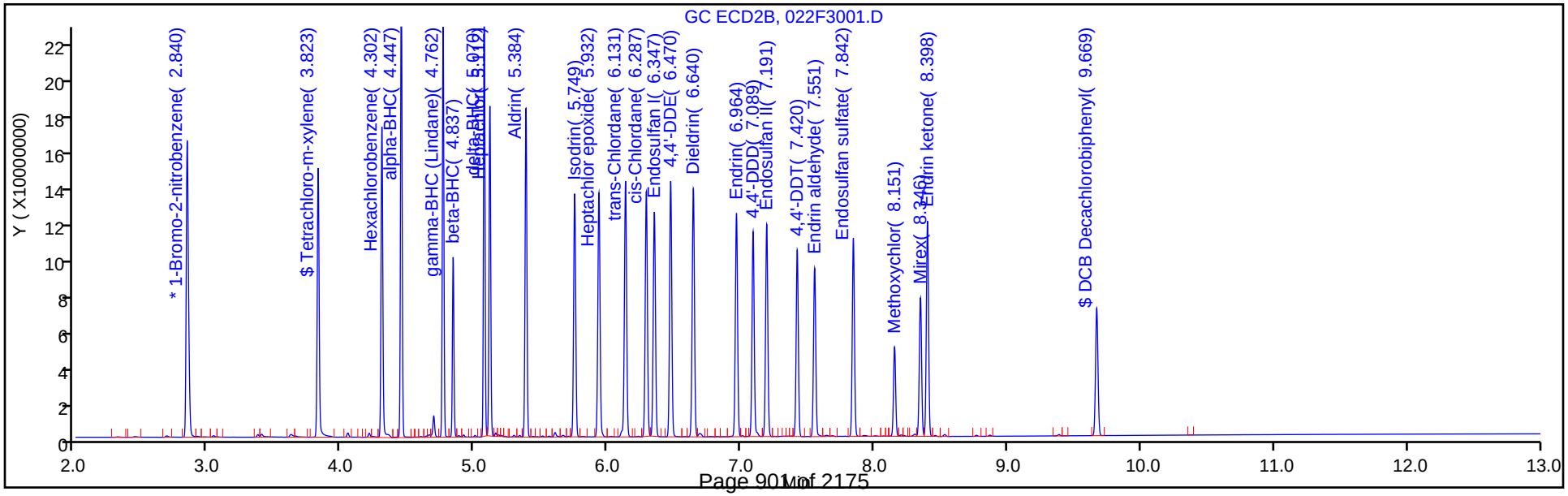
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D

Injection Date:	13-Oct-2018 19:22:28	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 AB			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D
Lims ID: STD5 AB
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 19:39:58 ALS Bottle#: 23 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:49 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						305.3	
2						297.4	
						RPD = 2.65	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.023	-0.002	1774800139	150.0	150.0	
2	2.840	2.842	-0.002	196975139	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.920	3.919	0.001	974117175	75.0	74.5	
2	3.823	3.823	0.000	115355955	75.0	72.3	
						RPD = 2.99	
5 Hexachlorobenzene							
1	4.328	4.326	0.002	1019295562	75.0	74.5	
2	4.302	4.302	0.000	120451736	75.0	71.5	
						RPD = 4.17	
8 alpha-BHC							
1	4.498	4.497	0.001	1515867171	75.0	76.4	
2	4.448	4.448	0.000	162579162	75.0	74.7	
						RPD = 2.33	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	1292559350	75.0	76.5	
2	4.761	4.761	0.000	141300627	75.0	74.5	
						RPD = 2.52	
10 beta-BHC							
1	4.862	4.862	0.000	492255043	75.0	76.3	
2	4.837	4.837	0.000	59596054	75.0	73.8	
						RPD = 3.31	
12 delta-BHC							
1	5.011	5.010	0.001	1311307456	75.0	76.2	
2	5.070	5.069	0.001	142822500	75.0	74.3	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.188	5.187	0.001	1142416982	75.0	76.2	
2	5.113	5.112	0.001	122155556	75.0	74.7	
						RPD = 2.10	
16 Aldrin							
1	5.458	5.457	0.001	1208042264	75.0	75.5	
2	5.384	5.383	0.001	130679943	75.0	74.1	
						RPD = 1.93	
18 Isodrin							
1	5.785	5.783	0.002	961672330	75.0	75.3	
2	5.750	5.749	0.001	109763292	75.0	73.3	
						RPD = 2.72	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	1017236841	75.0	75.0	
2	5.932	5.931	0.001	117794987	75.0	73.5	
						RPD = 1.98	
22 trans-Chlordane							
1	6.205	6.204	0.001	1109387779	75.0	76.0	
2	6.131	6.130	0.001	123500639	75.0	73.3	
						RPD = 3.54	
23 cis-Chlordane							
1	6.346	6.344	0.002	1055599184	75.0	75.6	
2	6.288	6.286	0.002	116906799	75.0	73.4	
						RPD = 2.90	
24 4,4'-DDE							
1	6.422	6.421	0.001	1097991084	75.0	74.9	
2	6.470	6.469	0.001	121439906	75.0	73.3	
						RPD = 2.23	
25 Endosulfan I							
1	6.495	6.494	0.001	954735604	75.0	74.5	
2	6.348	6.346	0.002	110310449	75.0	73.0	
						RPD = 1.99	
27 Dieldrin							
1	6.750	6.748	0.002	1064216521	75.0	74.6	
2	6.640	6.639	0.001	122303746	75.0	73.3	
						RPD = 1.77	
30 Endrin							
1	6.998	6.997	0.001	929144470	75.0	74.9	
2	6.965	6.963	0.002	108615513	75.0	73.7	
						RPD = 1.66	
32 4,4'-DDD							
1	7.059	7.058	0.001	848012397	75.0	74.6	
2	7.090	7.089	0.001	98409444	75.0	73.0	
						RPD = 2.25	
34 Endosulfan II							
1	7.235	7.234	0.001	862538061	75.0	74.1	
2	7.191	7.190	0.001	103131602	75.0	72.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.353	7.352	0.001	778459968	75.0	76.4	
2	7.420	7.419	0.001	88104638	75.0	75.1	
						RPD = 1.66	
36 Endrin aldehyde							
1	7.680	7.679	0.001	665966546	75.0	74.9	
2	7.551	7.550	0.001	82965198	75.0	72.7	
						RPD = 2.96	
37 Methoxychlor							
1	7.857	7.857	0.000	345420332	75.0	74.7	
2	8.151	8.150	0.001	42337805	75.0	73.5	
						RPD = 1.63	
38 Mirex							
1	8.016	8.016	0.000	537010702	75.0	72.4	
2	8.345	8.344	0.001	69265800	75.0	71.9	
						RPD = 0.66	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	767321325	75.0	74.5	
2	7.843	7.841	0.002	94443160	75.0	72.4	
						RPD = 2.83	
40 Endrin ketone							
1	8.430	8.429	0.001	802034011	75.0	74.1	
2	8.398	8.396	0.002	103818155	75.0	72.3	
						RPD = 2.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	494311523	75.0	73.5	
2	9.669	9.668	0.001	67193439	75.0	71.4	
						RPD = 2.91	
S 3 Endosulfan, Total							
1						223.1	
2						217.9	
						RPD = 2.38	

Reagents:

8081IcalL5_00026	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

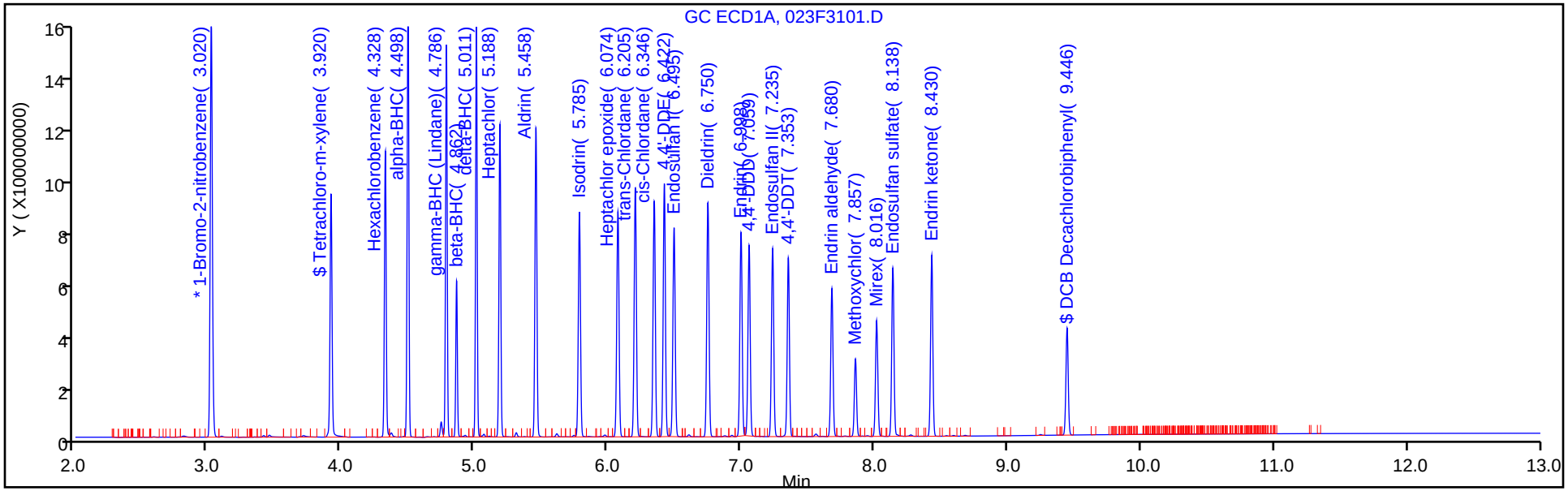
Report Date: 14-Oct-2018 22:11:51 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

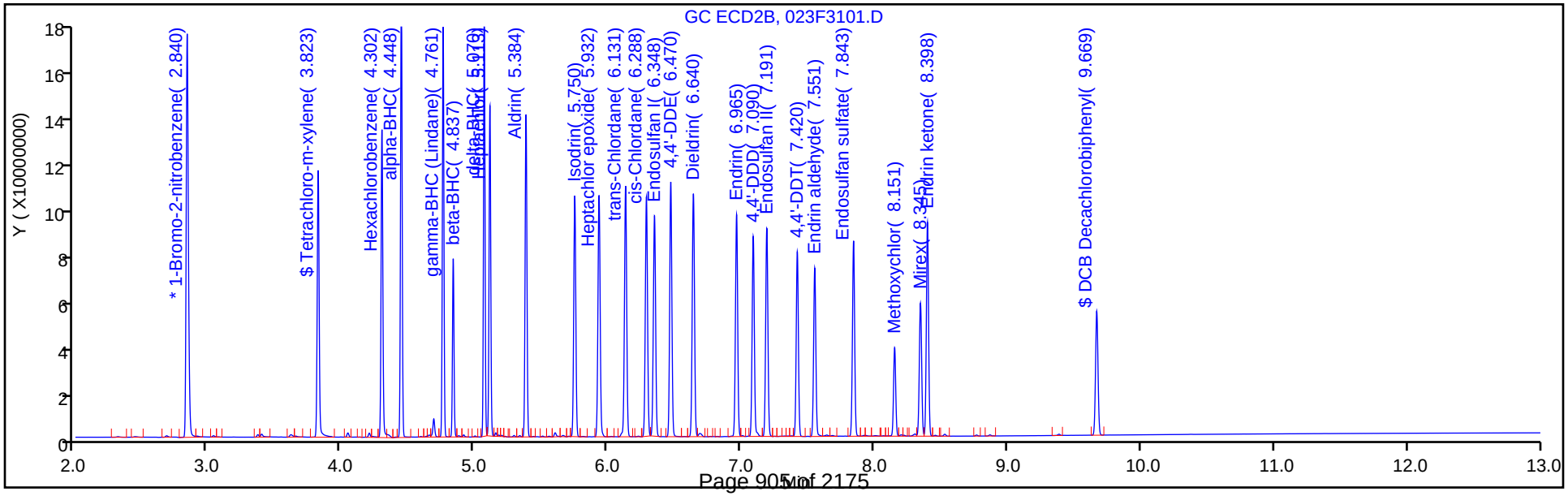
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D

Injection Date:	13-Oct-2018 19:39:58	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 AB			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D
Lims ID: STD4 AB
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 13-Oct-2018 19:57:23 ALS Bottle#: 24 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:53 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:15:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1639866372	150.0	150.0	
2	2.839	2.839	0.000	184249474	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	621494359	50.0	51.6	
2	3.823	3.823	0.000	77802319	50.0	52.0	
						RPD = 0.76	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	649000706	50.0	51.4	
2	4.302	4.302	0.000	82080999	50.0	51.9	
						RPD = 0.91	
8 alpha-BHC							
1	4.497	4.497	0.000	914630685	50.0	50.1	
2	4.448	4.448	0.000	102825287	50.0	50.4	
						RPD = 0.46	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	781888254	50.0	50.2	
2	4.761	4.761	0.000	89108339	50.0	50.2	
						RPD = 0.06	
10 beta-BHC							
1	4.862	4.862	0.000	300049327	50.0	50.2	
2	4.837	4.837	0.000	38193156	50.0	50.3	
						RPD = 0.27	
12 delta-BHC							
1	5.010	5.010	0.000	800211131	50.0	50.5	
2	5.069	5.069	0.000	90510020	50.0	50.3	
						RPD = 0.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.187	5.187	0.000	700142171	50.0	50.7	
2	5.112	5.112	0.000	76652553	50.0	50.0	
						RPD = 1.50	
16 Aldrin							
1	5.457	5.457	0.000	751162048	50.0	51.0	
2	5.383	5.383	0.000	83229214	50.0	50.3	
						RPD = 1.26	
18 Isodrin							
1	5.783	5.783	0.000	601057788	50.0	51.1	
2	5.749	5.749	0.000	70720524	50.0	50.3	
						RPD = 1.47	
21 Heptachlor epoxide							
1	6.072	6.072	0.000	637075296	50.0	50.9	
2	5.931	5.931	0.000	75919068	50.0	50.5	
						RPD = 0.86	
22 trans-Chlordane							
1	6.204	6.204	0.000	682439750	50.0	50.7	
2	6.130	6.130	0.000	79344564	50.0	50.2	
						RPD = 0.91	
23 cis-Chlordane							
1	6.344	6.344	0.000	652320568	50.0	50.7	
2	6.286	6.286	0.000	75318619	50.0	50.4	
						RPD = 0.57	
24 4,4'-DDE							
1	6.421	6.421	0.000	693292530	50.0	51.4	
2	6.469	6.469	0.000	79191054	50.0	51.0	
						RPD = 0.68	
25 Endosulfan I							
1	6.494	6.494	0.000	607276774	50.0	51.4	
2	6.346	6.346	0.000	71761841	50.0	50.6	
						RPD = 1.49	
27 Dieldrin							
1	6.748	6.748	0.000	676681392	50.0	51.4	
2	6.639	6.639	0.000	79630835	50.0	50.9	
						RPD = 1.01	
30 Endrin							
1	6.997	6.997	0.000	586918822	50.0	51.4	
2	6.963	6.963	0.000	70123187	50.0	50.8	
						RPD = 1.13	
32 4,4'-DDD							
1	7.058	7.058	0.000	538092520	50.0	51.4	
2	7.089	7.089	0.000	64688838	50.0	51.2	
						RPD = 0.39	
34 Endosulfan II							
1	7.234	7.234	0.000	563151672	50.0	52.5	
2	7.190	7.190	0.000	69296907	50.0	51.8	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.352	7.352	0.000	479927441	50.0	51.2	
2	7.419	7.419	0.000	55899373	50.0	51.0	
						RPD = 0.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	426357889	50.0	51.9	
2	7.550	7.550	0.000	55206907	50.0	51.5	
						RPD = 0.80	
37 Methoxychlor							
1	7.857	7.857	0.000	223151920	50.0	52.2	
2	8.150	8.150	0.000	27972236	50.0	51.8	
						RPD = 0.89	
38 Mirex							
1	8.016	8.016	0.000	349932979	50.0	51.1	
2	8.344	8.344	0.000	46808816	50.0	51.7	
						RPD = 1.13	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	496366994	50.0	52.2	
2	7.841	7.841	0.000	63414174	50.0	51.8	
						RPD = 0.87	
40 Endrin ketone							
1	8.429	8.429	0.000	528619675	50.0	52.9	
2	8.396	8.396	0.000	70279476	50.0	52.2	
						RPD = 1.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	327463502	50.0	52.7	
2	9.668	9.668	0.000	46374378	50.0	52.4	
						RPD = 0.46	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

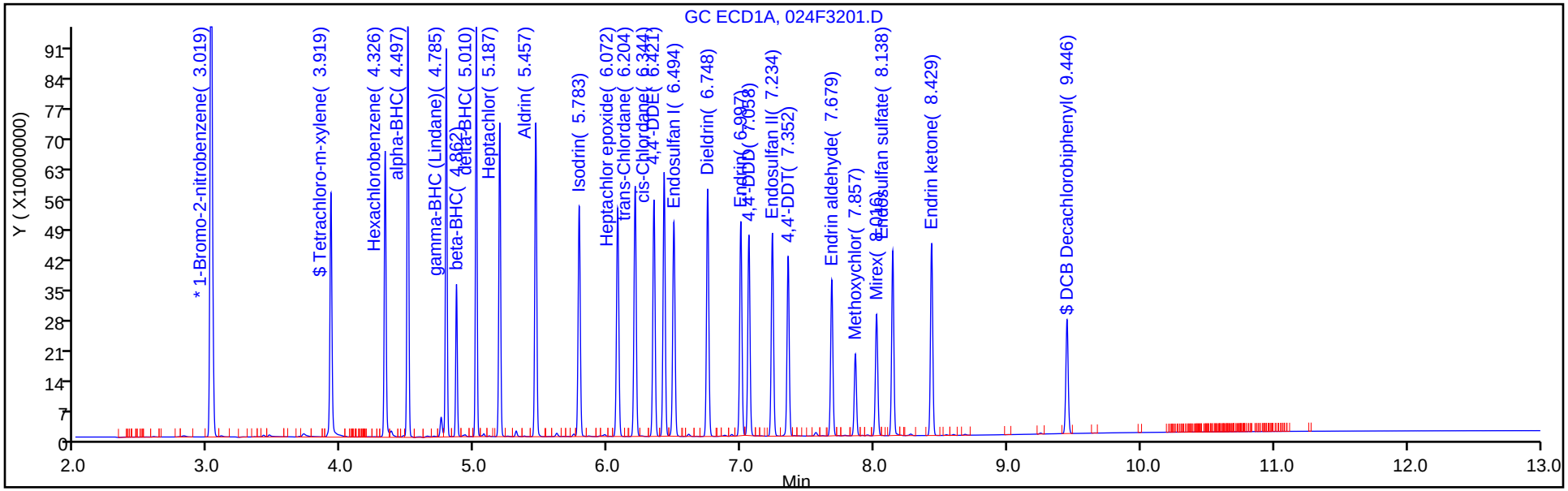
Report Date: 14-Oct-2018 22:11:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

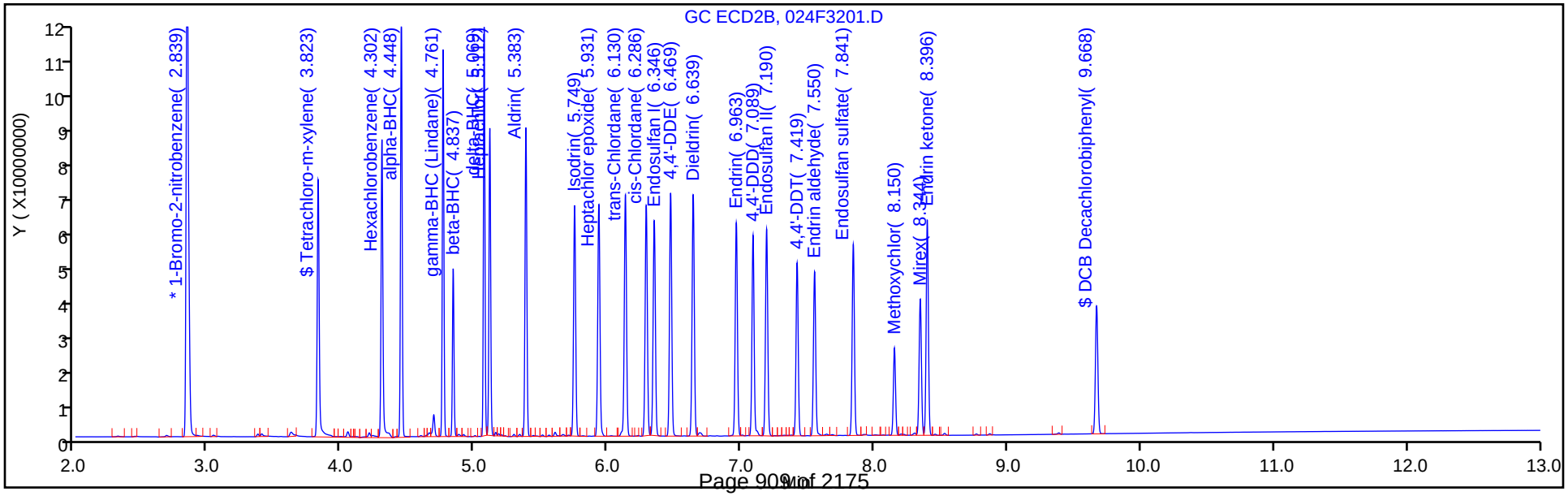
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D

Injection Date:	13-Oct-2018 19:57:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 AB			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D
Lims ID: STD3 AB
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 20:14:49 ALS Bottle#: 25 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:56 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						96.0	
2						100.5	
						RPD = 4.51	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1708743357	150.0	150.0	
2	2.839	2.839	0.000	189250238	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	302832702	25.0	24.3	
2	3.823	3.823	0.000	39633690	25.0	25.4	
						RPD = 4.54	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	317851410	25.0	24.3	
2	4.301	4.302	-0.001	42722842	25.0	26.0	
						RPD = 6.71	
8 alpha-BHC							
1	4.497	4.497	0.000	449507972	25.0	24.0	
2	4.447	4.448	-0.001	52885133	25.0	25.1	
						RPD = 4.26	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	385635283	25.0	24.0	
2	4.761	4.761	0.000	45850109	25.0	25.1	
						RPD = 4.13	
10 beta-BHC							
1	4.862	4.862	0.000	150050051	25.0	23.9	
2	4.836	4.837	-0.001	19996794	25.0	25.3	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	392697114	25.0	24.1	
2	5.069	5.069	0.000	46474767	25.0	25.1	
						RPD = 3.96	
15 Heptachlor							
1	5.187	5.187	0.000	349955154	25.0	24.6	
2	5.111	5.112	-0.001	40161455	25.0	25.3	
						RPD = 3.00	
16 Aldrin							
1	5.457	5.457	0.000	370973392	25.0	24.4	
2	5.383	5.383	0.000	42909032	25.0	25.1	
						RPD = 2.83	
18 Isodrin							
1	5.783	5.783	0.000	298789524	25.0	24.5	
2	5.748	5.749	-0.001	36890552	25.0	25.3	
						RPD = 3.01	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	320747071	25.0	24.7	
2	5.930	5.931	-0.001	39660540	25.0	25.4	
						RPD = 2.64	
22 trans-Chlordane							
1	6.203	6.204	-0.001	335790425	25.0	24.2	
2	6.129	6.130	-0.001	41653596	25.0	25.5	
						RPD = 5.41	
23 cis-Chlordane							
1	6.344	6.344	0.000	321433079	25.0	24.2	
2	6.285	6.286	-0.001	39100281	25.0	25.2	
						RPD = 4.13	
24 4,4'-DDE							
1	6.421	6.421	0.000	340651862	25.0	24.5	
2	6.469	6.469	0.000	40427222	25.0	25.2	
						RPD = 3.05	
25 Endosulfan I							
1	6.494	6.494	0.000	304465713	25.0	24.8	
2	6.346	6.346	0.000	37660075	25.0	25.5	
						RPD = 2.80	
27 Dieldrin							
1	6.748	6.748	0.000	335595524	25.0	24.7	
2	6.638	6.639	-0.001	40874216	25.0	25.3	
						RPD = 2.54	
30 Endrin							
1	6.997	6.997	0.000	288123020	25.0	24.5	
2	6.963	6.963	0.000	35861993	25.0	25.2	
						RPD = 2.96	
32 4,4'-DDD							
1	7.058	7.058	0.000	259223669	25.0	24.0	
2	7.088	7.089	-0.001	32918226	25.0	25.2	
						RPD = 4.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	273685389	25.0	24.6	
2	7.190	7.190	0.000	35501572	25.0	25.5	
						RPD = 3.40	
35 4,4'-DDT							
1	7.352	7.352	0.000	228369137	25.0	23.8	
2	7.419	7.419	0.000	27647840	25.0	24.6	
						RPD = 3.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	206854248	25.0	24.3	
2	7.550	7.550	0.000	28263198	25.0	25.3	
						RPD = 4.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	108979408	25.0	24.5	
2	8.150	8.150	0.000	14155118	25.0	25.3	
						RPD = 3.13	
38 Mirex							
1	8.015	8.016	-0.001	172426127	25.0	24.2	
2	8.344	8.344	0.000	24325156	25.0	25.6	
						RPD = 5.67	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	238398480	25.0	24.3	
2	7.841	7.841	0.000	32381376	25.0	25.4	
						RPD = 4.66	
40 Endrin ketone							
1	8.429	8.429	0.000	252349419	25.0	24.4	
2	8.396	8.396	0.000	35593065	25.0	25.4	
						RPD = 4.25	
$ 41 DCB Decachlorobiphenyl							
1	9.445	9.446	-0.001	159322167	25.0	24.5	
2	9.668	9.668	0.000	23709545	25.0	25.6	
						RPD = 4.30	
S 3 Endosulfan, Total							
1						73.7	
2						76.4	
						RPD = 3.61	

Reagents:

8081IcalL3_00028	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

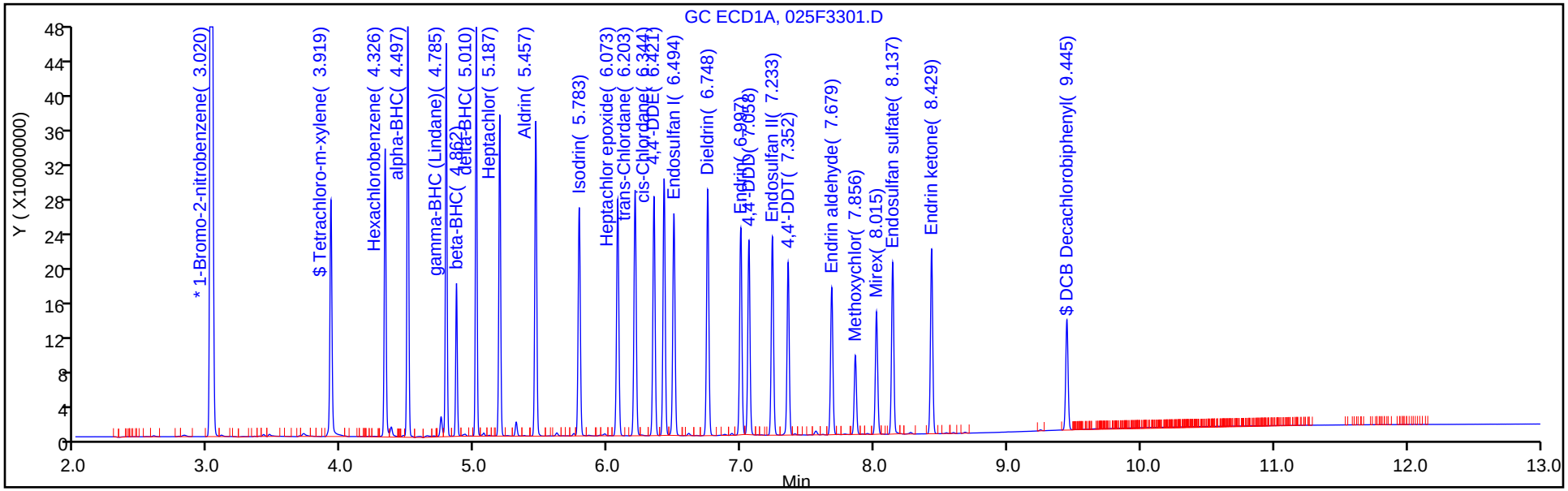
Report Date: 14-Oct-2018 22:11:58 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

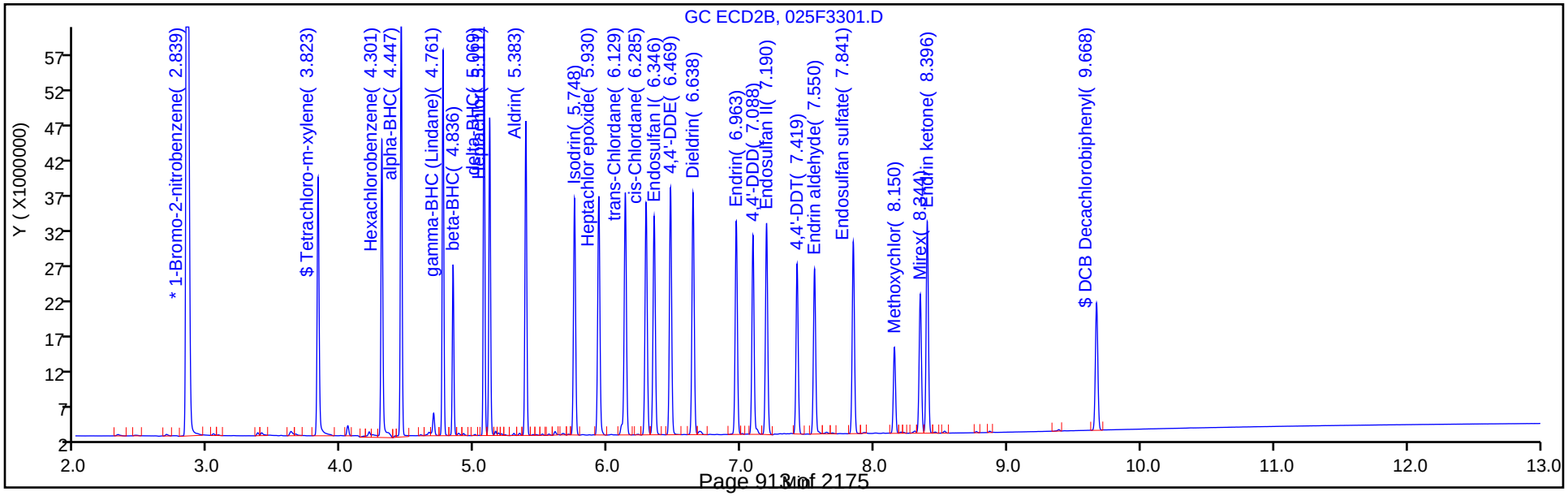
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D

Injection Date:	13-Oct-2018 20:14:49	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 AB			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Lims ID: STD2 AB
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 20:32:15 ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:00 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						38.6	
2						40.9	
						RPD = 5.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1728425275	150.0	150.0	
2	2.839	2.839	0.000	187345459	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	119672981	10.0	9.74	
2	3.822	3.823	-0.001	16477394	10.0	10.3	
						RPD = 5.80	
5 Hexachlorobenzene							
1	4.325	4.326	-0.001	126156548	10.0	9.73	
2	4.301	4.302	-0.001	17019247	10.0	10.1	
						RPD = 4.06	
8 alpha-BHC							
1	4.496	4.497	-0.001	174586944	10.0	9.64	
2	4.446	4.448	-0.002	21525266	10.0	10.1	
						RPD = 4.69	
9 gamma-BHC (Lindane)							
1	4.784	4.785	-0.001	150377013	10.0	9.57	
2	4.760	4.761	-0.001	18724325	10.0	10.2	
						RPD = 6.55	
10 beta-BHC							
1	4.861	4.862	-0.001	63756954	10.0	9.77	
2	4.836	4.837	-0.001	8495816	10.0	10.4	
						RPD = 6.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	151129545	10.0	9.56	
2	5.068	5.069	-0.001	18818212	10.0	10.2	
						RPD = 6.40	
15 Heptachlor							
1	5.186	5.187	-0.001	136220069	10.0	9.74	
2	5.111	5.112	-0.001	16505122	10.0	10.3	
						RPD = 5.70	
16 Aldrin							
1	5.456	5.457	-0.001	144846582	10.0	9.74	
2	5.382	5.383	-0.001	17731926	10.0	10.3	
						RPD = 5.89	
18 Isodrin							
1	5.783	5.783	0.000	117749615	10.0	9.72	
2	5.748	5.749	-0.001	15625487	10.0	10.5	
						RPD = 7.33	
21 Heptachlor epoxide							M
1	6.071	6.072	-0.001	126886425	10.0	9.83	
2	5.929	5.931	-0.002	16641254	10.0	10.4	M
						RPD = 5.98	
22 trans-Chlordane							
1	6.202	6.204	-0.002	129991480	10.0	9.51	
2	6.129	6.130	-0.001	16929113	10.0	10.3	
						RPD = 7.70	
23 cis-Chlordane							
1	6.344	6.344	0.000	126327949	10.0	9.68	
2	6.286	6.286	0.000	16380093	10.0	10.4	
						RPD = 7.07	
24 4,4'-DDE							
1	6.420	6.421	-0.001	131488025	10.0	9.65	
2	6.468	6.469	-0.001	16485248	10.0	10.3	
						RPD = 6.16	
25 Endosulfan I							
1	6.493	6.494	-0.001	120234528	10.0	9.81	
2	6.346	6.346	0.000	15849043	10.0	10.5	
						RPD = 6.40	
27 Dieldrin							
1	6.747	6.748	-0.001	131325618	10.0	9.76	
2	6.638	6.639	-0.001	16696805	10.0	10.3	
						RPD = 5.11	
30 Endrin							
1	6.996	6.997	-0.001	110965652	10.0	9.63	
2	6.962	6.963	-0.001	14572762	10.0	10.2	
						RPD = 6.20	
32 4,4'-DDD							
1	7.057	7.058	-0.001	100049743	10.0	9.44	
2	7.088	7.089	-0.001	13387732	10.0	10.2	
						RPD = 7.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	107239359	10.0	9.69	
2	7.189	7.190	-0.001	14939909	10.0	10.4	
						RPD = 6.87	
35 4,4'-DDT							
1	7.352	7.352	0.000	86360678	10.0	9.37	
2	7.418	7.419	-0.001	11005760	10.0	9.98	
						RPD = 6.32	
36 Endrin aldehyde							
1	7.679	7.679	0.000	81761942	10.0	9.60	
2	7.550	7.550	0.000	11820141	10.0	10.3	
						RPD = 7.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	43260093	10.0	9.68	
2	8.149	8.150	-0.001	5763013	10.0	10.2	
						RPD = 5.03	
38 Mirex							
1	8.015	8.016	-0.001	69898898	10.0	9.68	
2	8.343	8.344	-0.001	10513875	10.0	10.5	
						RPD = 8.20	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	93045319	10.0	9.55	
2	7.840	7.841	-0.001	13487473	10.0	10.3	
						RPD = 7.54	
40 Endrin ketone							
1	8.428	8.429	-0.001	97881347	10.0	9.50	
2	8.396	8.396	0.000	14668648	10.0	10.3	
						RPD = 7.65	
$ 41 DCB Decachlorobiphenyl							
1	9.443	9.446	-0.003	63321098	10.0	9.53	
2	9.668	9.668	0.000	10078459	10.0	10.4	
						RPD = 8.76	
S 3 Endosulfan, Total							
1						29.1	
2						31.1	
						RPD = 6.93	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081IcalL2_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

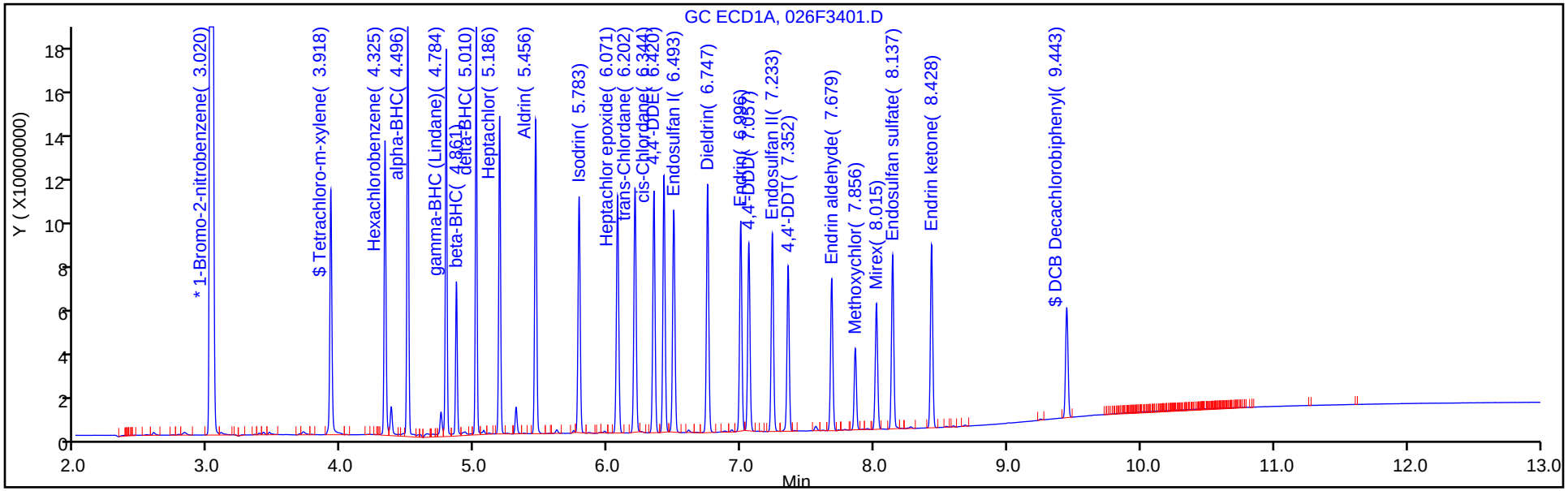
Report Date: 14-Oct-2018 22:12:01 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

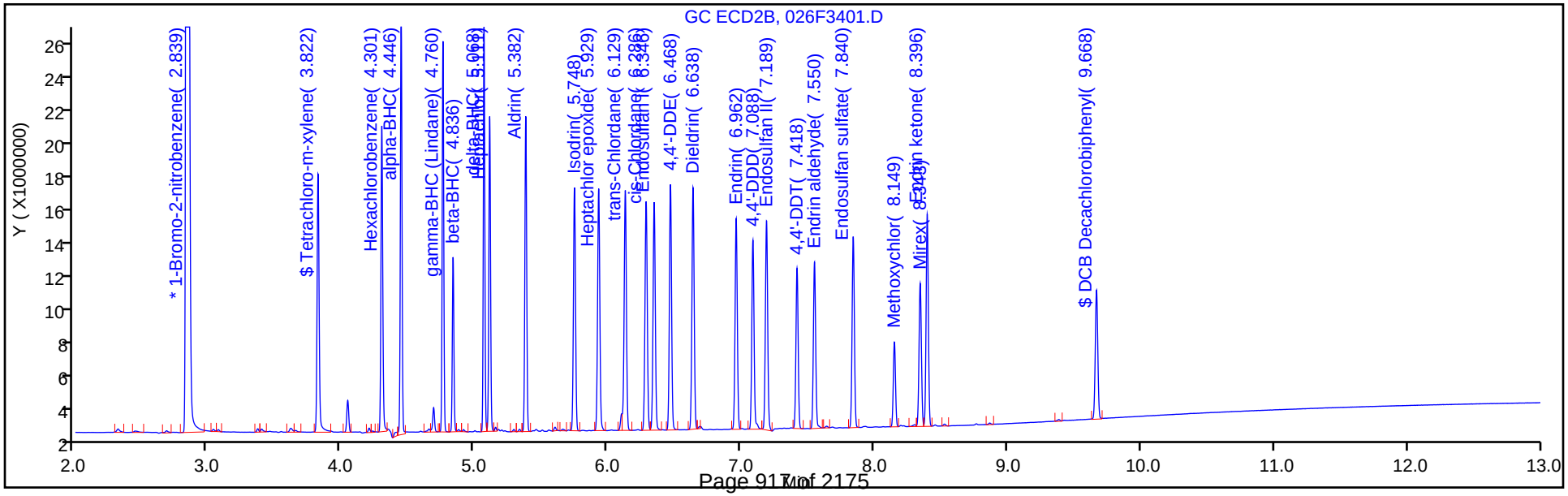
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D

Injection Date:	13-Oct-2018 20:32:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 AB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D
Lims ID: STD1 AB
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:49:46 ALS Bottle#: 27 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						16.3	
2						15.9	
						RPD = 2.72	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.019	0.002	1645292180	150.0	150.0	
2	2.839	2.839	0.000	186440198	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	44633037	4.00	4.05	
2	3.823	3.823	0.000	6851543	4.00	3.94	
						RPD = 2.74	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	47816993	4.00	4.05	
2	4.302	4.302	0.000	7168590	4.00	3.96	
						RPD = 2.34	
8 alpha-BHC							
1	4.497	4.497	0.000	62852215	4.00	4.07	
2	4.447	4.448	-0.001	8858523	4.00	3.98	
						RPD = 2.23	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	56481667	4.00	4.08	
2	4.761	4.761	0.000	7435354	4.00	3.97	
						RPD = 2.89	
10 beta-BHC							
1	4.862	4.862	0.000	26687989	4.00	4.06	
2	4.837	4.837	0.000	3576692	4.00	3.94	
						RPD = 2.98	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	55669358	4.00	4.08	
2	5.069	5.069	0.000	7424235	4.00	3.97	
						RPD = 2.79	
15 Heptachlor							
1	5.187	5.187	0.000	50118465	4.00	4.04	
2	5.112	5.112	0.000	6621110	4.00	3.95	
						RPD = 2.42	
16 Aldrin							
1	5.457	5.457	0.000	52919960	4.00	4.05	
2	5.383	5.383	0.000	7030048	4.00	3.95	
						RPD = 2.49	
18 Isodrin							
1	5.784	5.783	0.001	44705372	4.00	4.05	
2	5.748	5.749	-0.001	6366004	4.00	3.93	
						RPD = 3.06	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	47553101	4.00	4.03	
2	5.930	5.931	-0.001	6762032	4.00	3.93	
						RPD = 2.56	
22 trans-Chlordane							
1	6.203	6.204	-0.001	49944652	4.00	4.09	
2	6.130	6.130	0.000	6819666	4.00	3.95	
						RPD = 3.42	
23 cis-Chlordane							
1	6.344	6.344	0.000	47100490	4.00	4.06	
2	6.286	6.286	0.000	6646251	4.00	3.94	
						RPD = 3.11	
24 4,4'-DDE							
1	6.421	6.421	0.000	48738148	4.00	4.06	
2	6.469	6.469	0.000	6542674	4.00	3.95	
						RPD = 2.61	
25 Endosulfan I							
1	6.494	6.494	0.000	45543940	4.00	4.03	
2	6.347	6.346	0.001	6507441	4.00	3.92	
						RPD = 2.71	
27 Dieldrin							
1	6.748	6.748	0.000	48904591	4.00	4.04	
2	6.638	6.639	-0.001	6664239	4.00	3.95	
						RPD = 2.17	
30 Endrin							
1	6.997	6.997	0.000	41251930	4.00	4.06	
2	6.963	6.963	0.000	5757882	4.00	3.96	
						RPD = 2.60	
32 4,4'-DDD							
1	7.058	7.058	0.000	38622027	4.00	4.10	
2	7.088	7.089	-0.001	5391187	4.00	3.96	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.234	7.234	0.000	41034933	4.00	4.05	
2	7.191	7.190	0.001	6270548	4.00	3.93	
						RPD = 2.93	
35 4,4'-DDT							
1	7.352	7.352	0.000	31997998	4.00	4.11	
2	7.419	7.419	0.000	4302693	4.00	4.01	
						RPD = 2.63	
36 Endrin aldehyde							
1	7.678	7.679	-0.001	32150414	4.00	4.07	
2	7.551	7.550	0.001	4932964	4.00	3.94	
						RPD = 3.18	
37 Methoxychlor							
1	7.857	7.857	0.000	17004835	4.00	4.05	
2	8.150	8.150	0.000	2361021	4.00	3.96	
						RPD = 2.20	
38 Mirex							
1	8.016	8.016	0.000	28621709	4.00	4.16	
2	8.344	8.344	0.000	4546008	4.00	3.91	
						RPD = 6.31	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	36051087	4.00	4.08	
2	7.841	7.841	0.000	5646467	4.00	3.94	
						RPD = 3.30	
40 Endrin ketone							
1	8.429	8.429	0.000	38530653	4.00	4.08	
2	8.397	8.396	0.001	6086476	4.00	3.95	
						RPD = 3.26	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	26336210	4.00	4.07	
2	9.668	9.668	0.000	4339575	4.00	3.92	
						RPD = 3.76	
S 3 Endosulfan, Total							
1						12.1	
2						11.8	
						RPD = 2.98	

Reagents:

8081IcalL1_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

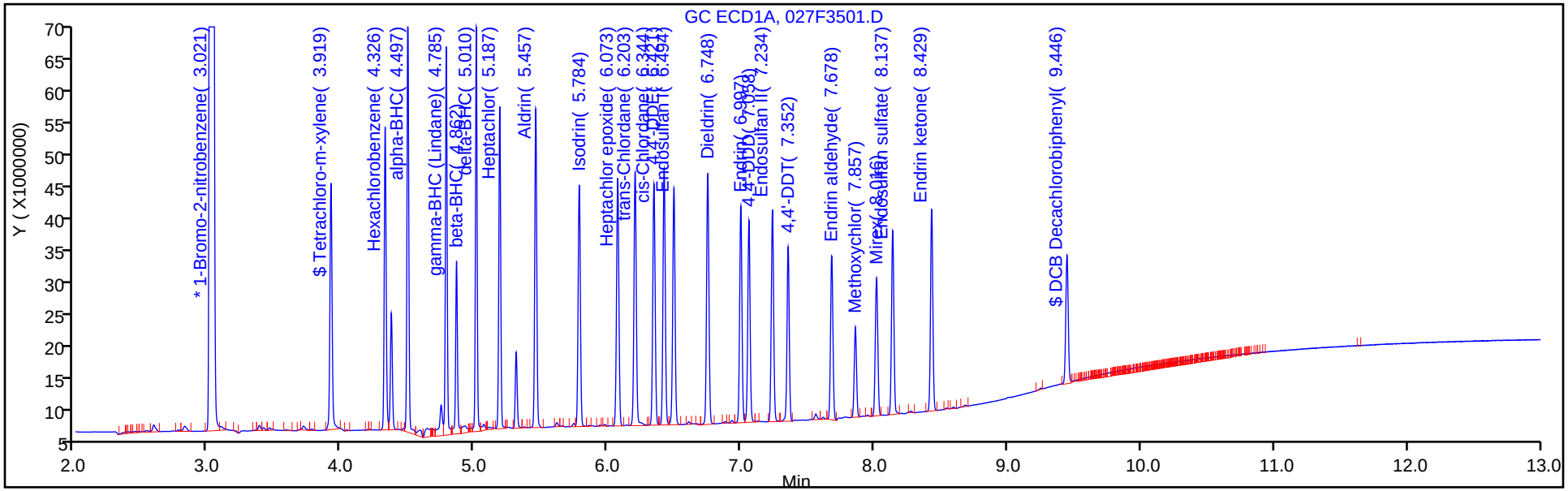
Report Date: 14-Oct-2018 22:12:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

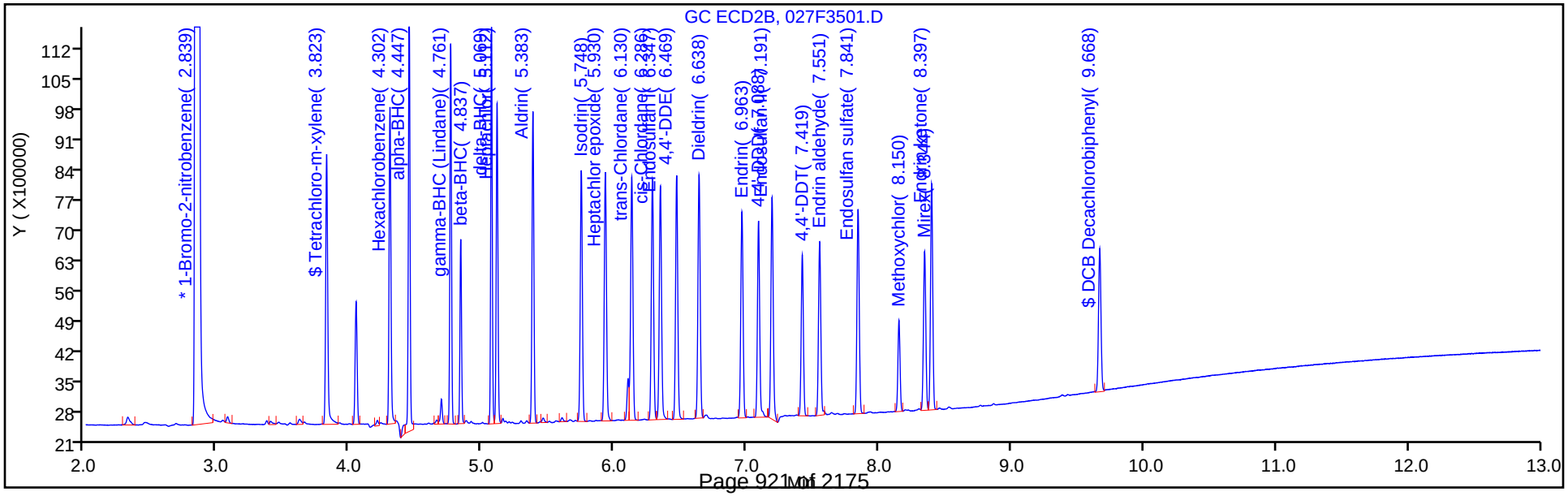
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Injection Date:	13-Oct-2018 20:49:46	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 AB			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobenzene	1.4419 1.2362	1.3627	1.3545	1.3365	1.2230	Lin2	0.7315	1.2729							0.9980		0.9900
alpha-BHC	1.7818 1.6386	1.7234	1.6767	1.6742	1.6508	Lin2	0.5521	1.6510							1.0000		0.9900
gamma-BHC (Lindane)	1.4955 1.4229	1.4992	1.4536	1.4509	1.4347	Lin2	0.2733	1.4397							1.0000		0.9900
beta-BHC	0.7194 0.5982	0.6802	0.6340	0.6219	0.6051	Lin2	0.4836	0.6082							0.9990		0.9900
delta-BHC	1.4933 1.4439	1.5067	1.4734	1.4737	1.4502	Lin2	0.1758	1.4608							1.0000		0.9900
Heptachlor	1.3317 1.2133	1.3215	1.2733	1.2481	1.2403	Lin2	0.4306	1.2403							0.9990		0.9900
Aldrin	1.4140 1.3163	1.4197	1.3604	1.3552	1.3269	Lin2	0.3719	1.3385							0.9990		0.9900
Heptachlor epoxide	1.3601 1.1794	1.3324	1.2574	1.2361	1.1960	Lin2	0.6880	1.2106							0.9990		0.9900
trans-Chlordane	1.3717 1.2592	1.3554	1.3206	1.2919	1.2540	Lin2	0.4438	1.2767							0.9990		0.9900
cis-Chlordane	1.3368 1.1851	1.3115	1.2396	1.2264	1.1870	Lin2	0.6085	1.2038							0.9990		0.9900
Endosulfan I	1.3089 1.1104	1.2690	1.1940	1.1684	1.1200	Lin2	0.7681	1.1397							0.9990		0.9900
4,4'-DDE	1.3160 1.2349	1.3199	1.2817	1.2894	1.2330	Lin2	0.2882	1.2583							0.9990		0.9900
Dieldrin	1.3404 1.2397	1.3368	1.2959	1.2966	1.2418	Lin2	0.3611	1.2658							0.9990		0.9900
Endrin	1.1581 1.0982	1.1668	1.1370	1.1418	1.1028	Lin2	0.2016	1.1195							0.9990		0.9900
4,4'-DDD	1.0844 1.0087	1.0719	1.0436	1.0533	0.9992	Lin2	0.2831	1.0231							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endosulfan II	1.2612 1.0376	1.1962	1.1255	1.1283	1.0472	Lin2	0.8286	1.0728							0.9980		0.9900
4,4'-DDT	0.8654 0.8886	0.8812	0.8765	0.9102	0.8946	Lin2	-0.124	0.8951							1.0000		0.9900
Endrin aldehyde	0.9922 0.8405	0.9464	0.8961	0.8989	0.8424	Lin2	0.5740	0.8613							0.9990		0.9900
Endosulfan sulfate	1.1357 0.9578	1.0799	1.0266	1.0325	0.9589	Lin2	0.6631	0.9840							0.9990		0.9900
Methoxychlor	0.4749 0.4224	0.4614	0.4488	0.4555	0.4299	Lin2	0.1701	0.4365							0.9990		0.9900
Endrin ketone	1.2242 1.0490	1.1745	1.1284	1.1443	1.0541	Lin2	0.6163	1.0846							0.9980		0.9900
Tetrachloro-m-xylene	1.3781 1.1664	1.3193	1.2565	1.2668	1.1713	Lin2	0.7692	1.2042							0.9980		0.9900
DCB Decachlorobiphenyl	0.8728 0.6826	0.8069	0.7517	0.7551	0.6823	Lin2	0.7195	0.7066							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobenzene	BNB	Lin2	7168590 160717643	17019247	42722842	82080999	120451736	4.00 100	10.0	25.0	50.0	75.0
alpha-BHC	BNB	Lin2	8858523 213039488	21525266	52885133	102825287	162579162	4.00 100	10.0	25.0	50.0	75.0
gamma-BHC (Lindane)	BNB	Lin2	7435354 184996515	18724325	45850109	89108339	141300627	4.00 100	10.0	25.0	50.0	75.0
beta-BHC	BNB	Lin2	3576692 77780555	8495816	19996794	38193156	59596054	4.00 100	10.0	25.0	50.0	75.0
delta-BHC	BNB	Lin2	7424235 187730350	18818212	46474767	90510020	142822500	4.00 100	10.0	25.0	50.0	75.0
Heptachlor	BNB	Lin2	6621110 157743006	16505122	40161455	76652553	122155556	4.00 100	10.0	25.0	50.0	75.0
Aldrin	BNB	Lin2	7030048 171135300	17731926	42909032	83229214	130679943	4.00 100	10.0	25.0	50.0	75.0
Heptachlor epoxide	BNB	Lin2	6762032 153345134	16641254	39660540	75919068	117794987	4.00 100	10.0	25.0	50.0	75.0
trans-Chlordane	BNB	Lin2	6819666 163709394	16929113	41653596	79344564	123500639	4.00 100	10.0	25.0	50.0	75.0
cis-Chlordane	BNB	Lin2	6646251 154077138	16380093	39100281	75318619	116906799	4.00 100	10.0	25.0	50.0	75.0
Endosulfan I	BNB	Lin2	6507441 144373306	15849043	37660075	71761841	110310449	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDE	BNB	Lin2	6542674 160552956	16485248	40427222	79191054	121439906	4.00 100	10.0	25.0	50.0	75.0
Dieldrin	BNB	Lin2	6664239 161178584	16696805	40874216	79630835	122303746	4.00 100	10.0	25.0	50.0	75.0
Endrin	BNB	Lin2	5757882 142775347	14572762	35861993	70123187	108615513	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDD	BNB	Lin2	5391187 131149227	13387732	32918226	64688838	98409444	4.00 100	10.0	25.0	50.0	75.0
Endosulfan II	BNB	Lin2	6270548 134900820	14939909	35501572	69296907	103131602	4.00 100	10.0	25.0	50.0	75.0

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	BNB	Lin2	4302693 115525218	11005760	27647840	55899373	88104638	4.00 100	10.0	25.0	50.0	75.0
Endrin aldehyde	BNB	Lin2	4932964 109276534	11820141	28263198	55206907	82965198	4.00 100	10.0	25.0	50.0	75.0
Endosulfan sulfate	BNB	Lin2	5646467 124525276	13487473	32381376	63414174	94443160	4.00 100	10.0	25.0	50.0	75.0
Methoxychlor	BNB	Lin2	2361021 54922574	5763013	14155118	27972236	42337805	4.00 100	10.0	25.0	50.0	75.0
Endrin ketone	BNB	Lin2	6086476 136381981	14668648	35593065	70279476	103818155	4.00 100	10.0	25.0	50.0	75.0
Tetrachloro-m-xylene	BNB	Lin2	6851543 151651222	16477394	39633690	77802319	115355955	4.00 100	10.0	25.0	50.0	75.0
DCB Decachlorobiphenyl	BNB	Lin2	4339575 88747472	10078459	23709545	46374378	67193439	4.00 100	10.0	25.0	50.0	75.0

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D
Lims ID: STD6 AB
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 19:22:28 ALS Bottle#: 22 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:21:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						413.9	
2						393.8	
						RPD = 4.96	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1756870840	150.0	150.0	
2	2.840	2.842	-0.002	195021437	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.921	3.919	0.002	1317820866	100.0	101.7	
2	3.823	3.823	0.000	151651222	100.0	96.2	
						RPD = 5.52	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	1380707359	100.0	101.9	
2	4.302	4.302	0.000	160717643	100.0	96.5	
						RPD = 5.38	
8 alpha-BHC							
1	4.498	4.497	0.001	2039469973	100.0	103.6	
2	4.447	4.448	-0.001	213039488	100.0	98.9	
						RPD = 4.64	
9 gamma-BHC (Lindane)							
1	4.787	4.785	0.002	1738294623	100.0	103.7	
2	4.762	4.761	0.001	184996515	100.0	98.6	
						RPD = 4.99	
10 beta-BHC							
1	4.863	4.862	0.001	658730126	100.0	103.3	
2	4.837	4.837	0.000	77780555	100.0	97.6	
						RPD = 5.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.012	5.010	0.002	1763800464	100.0	103.3	
2	5.070	5.069	0.001	187730350	100.0	98.7	
						RPD = 4.51	
15 Heptachlor							
1	5.188	5.187	0.001	1487484474	100.0	100.1	
2	5.112	5.112	0.000	157743006	100.0	97.5	
						RPD = 2.69	
16 Aldrin							
1	5.458	5.457	0.001	1603385174	100.0	101.1	
2	5.384	5.383	0.001	171135300	100.0	98.1	
						RPD = 3.03	
18 Isodrin							
1	5.785	5.783	0.002	1276942983	100.0	101.0	
2	5.749	5.749	0.000	144685541	100.0	97.8	
						RPD = 3.17	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	1346353314	100.0	100.2	
2	5.932	5.931	0.001	153345134	100.0	96.9	
						RPD = 3.39	
22 trans-Chlordane							
1	6.204	6.204	0.000	1496975406	100.0	103.4	
2	6.131	6.130	0.001	163709394	100.0	98.3	
						RPD = 5.07	
23 cis-Chlordane							
1	6.346	6.344	0.002	1419377556	100.0	102.6	
2	6.287	6.286	0.001	154077138	100.0	97.9	
						RPD = 4.60	
24 4,4'-DDE							
1	6.422	6.421	0.001	1475769541	100.0	101.5	
2	6.470	6.469	0.001	160552956	100.0	97.9	
						RPD = 3.65	
25 Endosulfan I							
1	6.495	6.494	0.001	1268053177	100.0	99.9	
2	6.347	6.346	0.001	144373306	100.0	96.8	
						RPD = 3.18	
27 Dieldrin							
1	6.750	6.748	0.002	1418985077	100.0	100.4	
2	6.640	6.639	0.001	161178584	100.0	97.7	
						RPD = 2.73	
30 Endrin							
1	6.998	6.997	0.001	1249259754	100.0	101.6	
2	6.964	6.963	0.001	142775347	100.0	97.9	
						RPD = 3.71	
32 4,4'-DDD							
1	7.059	7.058	0.001	1180309263	100.0	104.8	
2	7.089	7.089	0.000	131149227	100.0	98.3	
						RPD = 6.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.235	7.234	0.001	1149629449	100.0	99.7	
2	7.191	7.190	0.001	134900820	100.0	95.9	
						RPD = 3.88	
35 4,4'-DDT							
1	7.353	7.352	0.001	1053113637	100.0	104.1	
2	7.420	7.419	0.001	115525218	100.0	99.4	
						RPD = 4.57	
36 Endrin aldehyde							
1	7.680	7.679	0.001	894620553	100.0	101.5	
2	7.551	7.550	0.001	109276534	100.0	96.9	
						RPD = 4.65	
37 Methoxychlor							
1	7.857	7.857	0.000	456885819	100.0	99.8	
2	8.151	8.150	0.001	54922574	100.0	96.4	
						RPD = 3.44	
38 Mirex							
1	8.017	8.016	0.001	761678556	100.0	103.8	
2	8.346	8.344	0.002	90852521	100.0	95.7	
						RPD = 8.10	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	1039104153	100.0	101.8	
2	7.842	7.841	0.001	124525276	100.0	96.7	
						RPD = 5.17	
40 Endrin ketone							
1	8.431	8.429	0.002	1081196479	100.0	100.8	
2	8.398	8.396	0.002	136381981	100.0	96.1	
						RPD = 4.74	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	675825077	100.0	101.6	
2	9.669	9.668	0.001	88747472	100.0	95.6	
						RPD = 6.08	
S 3 Endosulfan, Total							
1						301.4	
2						289.4	
						RPD = 4.08	

Reagents:

8081IcalL6_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

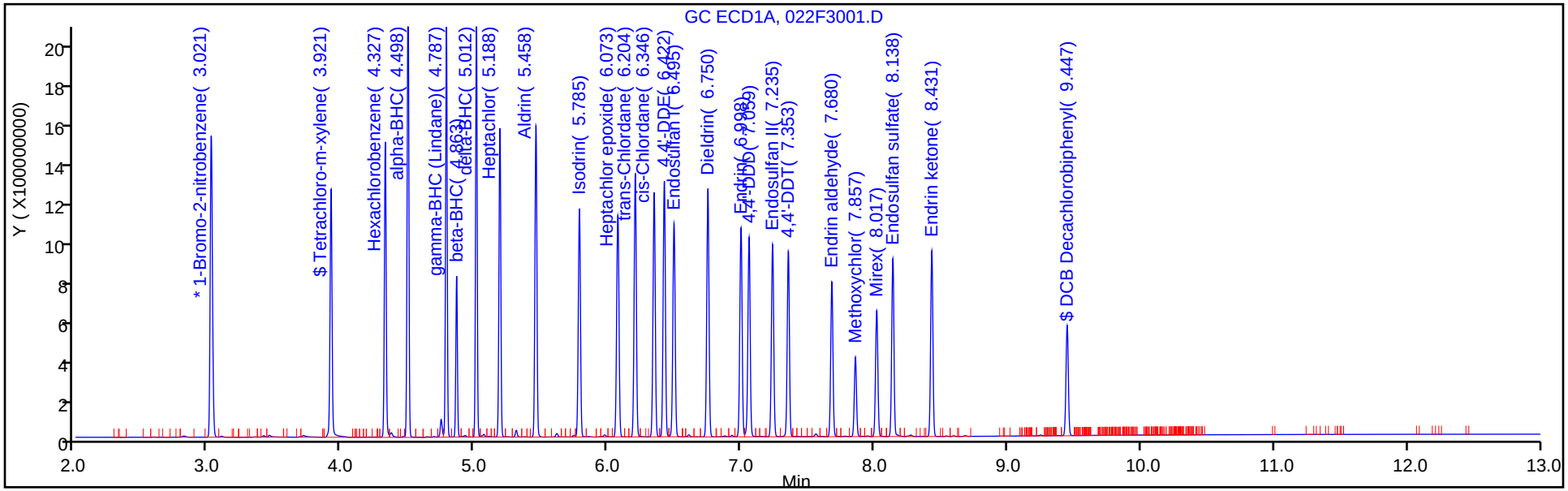
Report Date: 14-Oct-2018 22:11:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

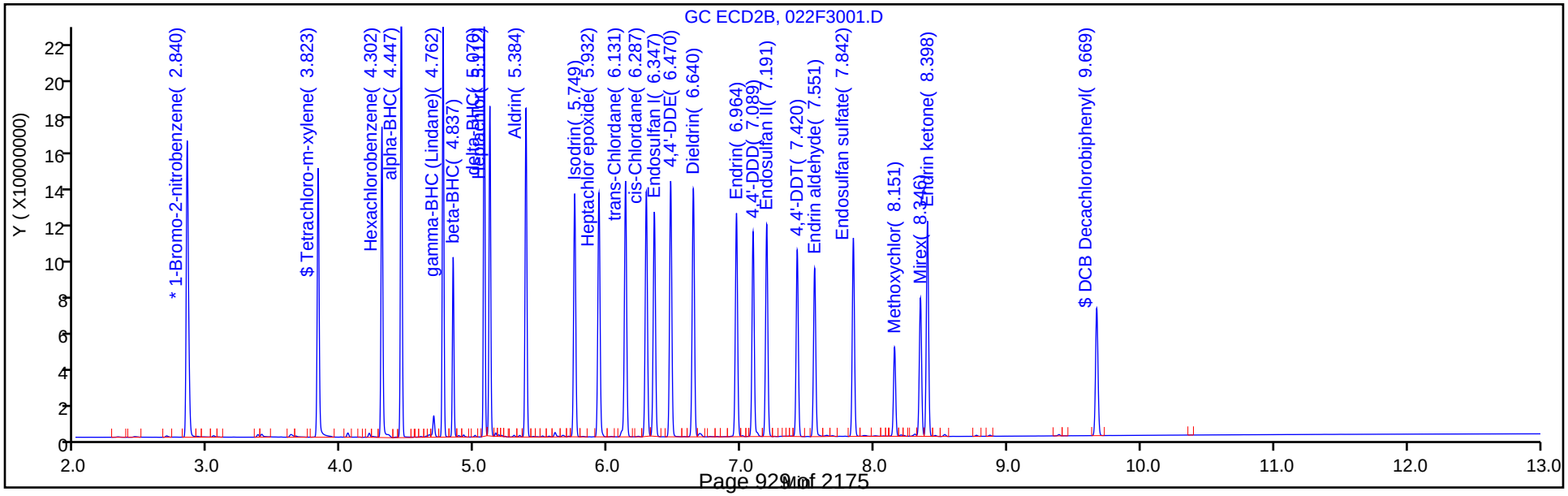
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D

Injection Date:	13-Oct-2018 19:22:28	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 AB			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D
Lims ID: STD5 AB
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 19:39:58 ALS Bottle#: 23 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:49 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						305.3	
2						297.4	
						RPD = 2.65	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.023	-0.002	1774800139	150.0	150.0	
2	2.840	2.842	-0.002	196975139	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.920	3.919	0.001	974117175	75.0	74.5	
2	3.823	3.823	0.000	115355955	75.0	72.3	
						RPD = 2.99	
5 Hexachlorobenzene							
1	4.328	4.326	0.002	1019295562	75.0	74.5	
2	4.302	4.302	0.000	120451736	75.0	71.5	
						RPD = 4.17	
8 alpha-BHC							
1	4.498	4.497	0.001	1515867171	75.0	76.4	
2	4.448	4.448	0.000	162579162	75.0	74.7	
						RPD = 2.33	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	1292559350	75.0	76.5	
2	4.761	4.761	0.000	141300627	75.0	74.5	
						RPD = 2.52	
10 beta-BHC							
1	4.862	4.862	0.000	492255043	75.0	76.3	
2	4.837	4.837	0.000	59596054	75.0	73.8	
						RPD = 3.31	
12 delta-BHC							
1	5.011	5.010	0.001	1311307456	75.0	76.2	
2	5.070	5.069	0.001	142822500	75.0	74.3	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.188	5.187	0.001	1142416982	75.0	76.2	
2	5.113	5.112	0.001	122155556	75.0	74.7	
						RPD = 2.10	
16 Aldrin							
1	5.458	5.457	0.001	1208042264	75.0	75.5	
2	5.384	5.383	0.001	130679943	75.0	74.1	
						RPD = 1.93	
18 Isodrin							
1	5.785	5.783	0.002	961672330	75.0	75.3	
2	5.750	5.749	0.001	109763292	75.0	73.3	
						RPD = 2.72	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	1017236841	75.0	75.0	
2	5.932	5.931	0.001	117794987	75.0	73.5	
						RPD = 1.98	
22 trans-Chlordane							
1	6.205	6.204	0.001	1109387779	75.0	76.0	
2	6.131	6.130	0.001	123500639	75.0	73.3	
						RPD = 3.54	
23 cis-Chlordane							
1	6.346	6.344	0.002	1055599184	75.0	75.6	
2	6.288	6.286	0.002	116906799	75.0	73.4	
						RPD = 2.90	
24 4,4'-DDE							
1	6.422	6.421	0.001	1097991084	75.0	74.9	
2	6.470	6.469	0.001	121439906	75.0	73.3	
						RPD = 2.23	
25 Endosulfan I							
1	6.495	6.494	0.001	954735604	75.0	74.5	
2	6.348	6.346	0.002	110310449	75.0	73.0	
						RPD = 1.99	
27 Dieldrin							
1	6.750	6.748	0.002	1064216521	75.0	74.6	
2	6.640	6.639	0.001	122303746	75.0	73.3	
						RPD = 1.77	
30 Endrin							
1	6.998	6.997	0.001	929144470	75.0	74.9	
2	6.965	6.963	0.002	108615513	75.0	73.7	
						RPD = 1.66	
32 4,4'-DDD							
1	7.059	7.058	0.001	848012397	75.0	74.6	
2	7.090	7.089	0.001	98409444	75.0	73.0	
						RPD = 2.25	
34 Endosulfan II							
1	7.235	7.234	0.001	862538061	75.0	74.1	
2	7.191	7.190	0.001	103131602	75.0	72.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.353	7.352	0.001	778459968	75.0	76.4	
2	7.420	7.419	0.001	88104638	75.0	75.1	
						RPD = 1.66	
36 Endrin aldehyde							
1	7.680	7.679	0.001	665966546	75.0	74.9	
2	7.551	7.550	0.001	82965198	75.0	72.7	
						RPD = 2.96	
37 Methoxychlor							
1	7.857	7.857	0.000	345420332	75.0	74.7	
2	8.151	8.150	0.001	42337805	75.0	73.5	
						RPD = 1.63	
38 Mirex							
1	8.016	8.016	0.000	537010702	75.0	72.4	
2	8.345	8.344	0.001	69265800	75.0	71.9	
						RPD = 0.66	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	767321325	75.0	74.5	
2	7.843	7.841	0.002	94443160	75.0	72.4	
						RPD = 2.83	
40 Endrin ketone							
1	8.430	8.429	0.001	802034011	75.0	74.1	
2	8.398	8.396	0.002	103818155	75.0	72.3	
						RPD = 2.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	494311523	75.0	73.5	
2	9.669	9.668	0.001	67193439	75.0	71.4	
						RPD = 2.91	
S 3 Endosulfan, Total							
1						223.1	
2						217.9	
						RPD = 2.38	

Reagents:

8081IcalL5_00026	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

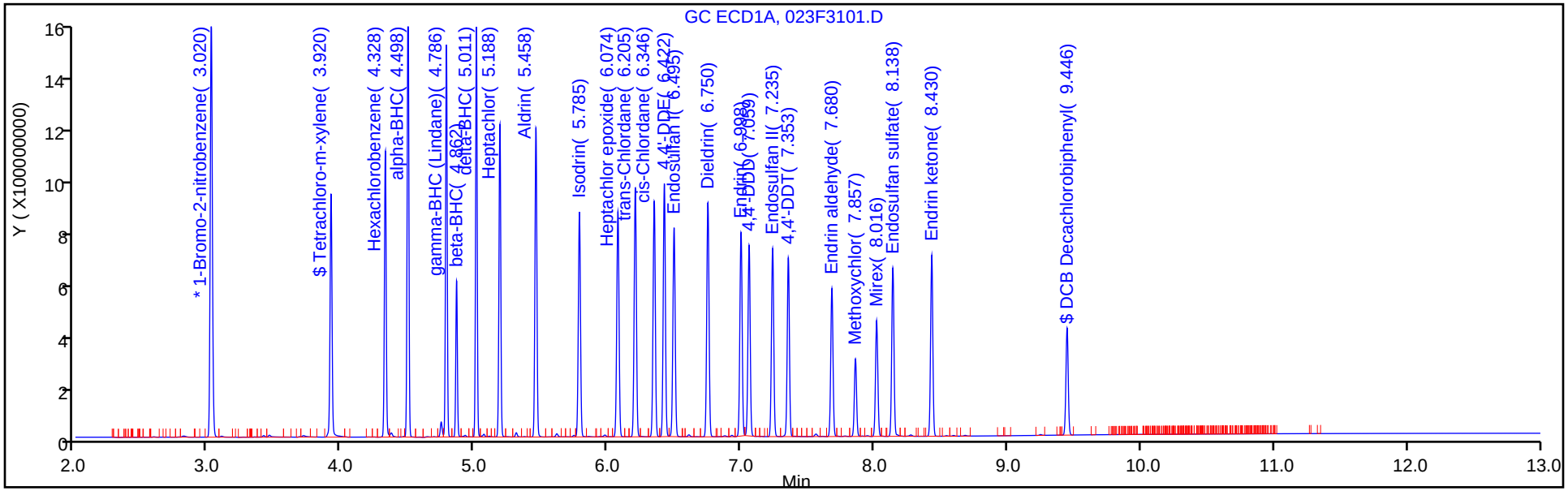
Report Date: 14-Oct-2018 22:11:52 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

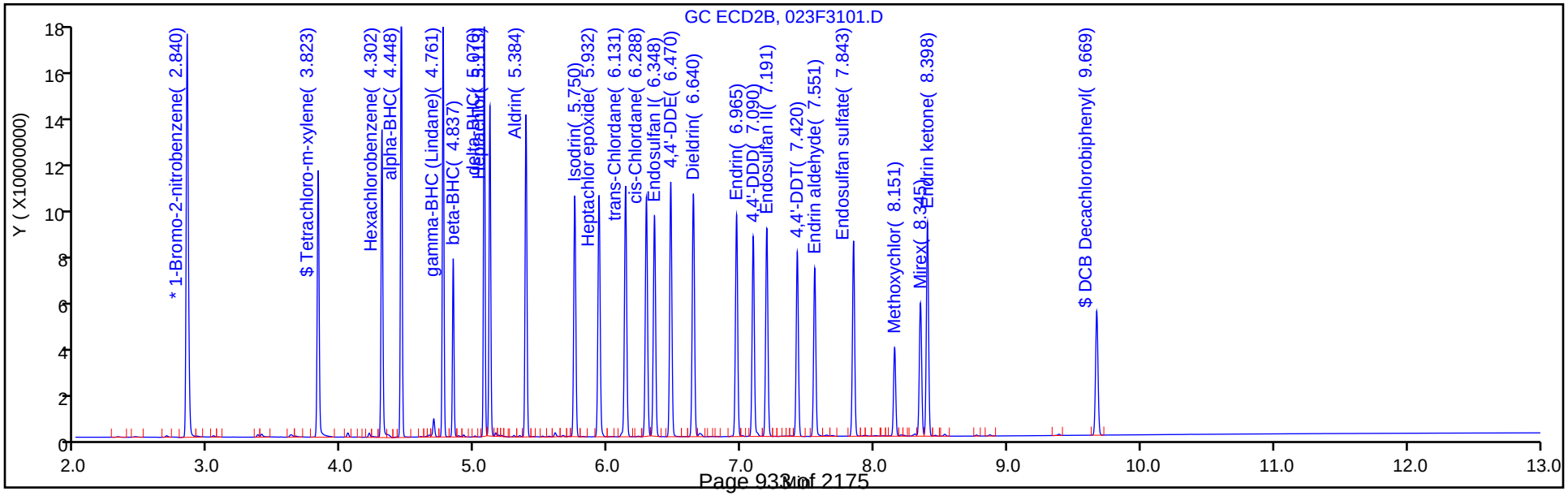
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D

Injection Date:	13-Oct-2018 19:39:58	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 AB			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D
Lims ID: STD4 AB
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 13-Oct-2018 19:57:23 ALS Bottle#: 24 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:53 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:15:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1639866372	150.0	150.0	
2	2.839	2.839	0.000	184249474	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	621494359	50.0	51.6	
2	3.823	3.823	0.000	77802319	50.0	52.0	
						RPD = 0.76	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	649000706	50.0	51.4	
2	4.302	4.302	0.000	82080999	50.0	51.9	
						RPD = 0.91	
8 alpha-BHC							
1	4.497	4.497	0.000	914630685	50.0	50.1	
2	4.448	4.448	0.000	102825287	50.0	50.4	
						RPD = 0.46	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	781888254	50.0	50.2	
2	4.761	4.761	0.000	89108339	50.0	50.2	
						RPD = 0.06	
10 beta-BHC							
1	4.862	4.862	0.000	300049327	50.0	50.2	
2	4.837	4.837	0.000	38193156	50.0	50.3	
						RPD = 0.27	
12 delta-BHC							
1	5.010	5.010	0.000	800211131	50.0	50.5	
2	5.069	5.069	0.000	90510020	50.0	50.3	
						RPD = 0.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.187	5.187	0.000	700142171	50.0	50.7	
2	5.112	5.112	0.000	76652553	50.0	50.0	
						RPD = 1.50	
16 Aldrin							
1	5.457	5.457	0.000	751162048	50.0	51.0	
2	5.383	5.383	0.000	83229214	50.0	50.3	
						RPD = 1.26	
18 Isodrin							
1	5.783	5.783	0.000	601057788	50.0	51.1	
2	5.749	5.749	0.000	70720524	50.0	50.3	
						RPD = 1.47	
21 Heptachlor epoxide							
1	6.072	6.072	0.000	637075296	50.0	50.9	
2	5.931	5.931	0.000	75919068	50.0	50.5	
						RPD = 0.86	
22 trans-Chlordane							
1	6.204	6.204	0.000	682439750	50.0	50.7	
2	6.130	6.130	0.000	79344564	50.0	50.2	
						RPD = 0.91	
23 cis-Chlordane							
1	6.344	6.344	0.000	652320568	50.0	50.7	
2	6.286	6.286	0.000	75318619	50.0	50.4	
						RPD = 0.57	
24 4,4'-DDE							
1	6.421	6.421	0.000	693292530	50.0	51.4	
2	6.469	6.469	0.000	79191054	50.0	51.0	
						RPD = 0.68	
25 Endosulfan I							
1	6.494	6.494	0.000	607276774	50.0	51.4	
2	6.346	6.346	0.000	71761841	50.0	50.6	
						RPD = 1.49	
27 Dieldrin							
1	6.748	6.748	0.000	676681392	50.0	51.4	
2	6.639	6.639	0.000	79630835	50.0	50.9	
						RPD = 1.01	
30 Endrin							
1	6.997	6.997	0.000	586918822	50.0	51.4	
2	6.963	6.963	0.000	70123187	50.0	50.8	
						RPD = 1.13	
32 4,4'-DDD							
1	7.058	7.058	0.000	538092520	50.0	51.4	
2	7.089	7.089	0.000	64688838	50.0	51.2	
						RPD = 0.39	
34 Endosulfan II							
1	7.234	7.234	0.000	563151672	50.0	52.5	
2	7.190	7.190	0.000	69296907	50.0	51.8	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.352	7.352	0.000	479927441	50.0	51.2	
2	7.419	7.419	0.000	55899373	50.0	51.0	
						RPD = 0.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	426357889	50.0	51.9	
2	7.550	7.550	0.000	55206907	50.0	51.5	
						RPD = 0.80	
37 Methoxychlor							
1	7.857	7.857	0.000	223151920	50.0	52.2	
2	8.150	8.150	0.000	27972236	50.0	51.8	
						RPD = 0.89	
38 Mirex							
1	8.016	8.016	0.000	349932979	50.0	51.1	
2	8.344	8.344	0.000	46808816	50.0	51.7	
						RPD = 1.13	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	496366994	50.0	52.2	
2	7.841	7.841	0.000	63414174	50.0	51.8	
						RPD = 0.87	
40 Endrin ketone							
1	8.429	8.429	0.000	528619675	50.0	52.9	
2	8.396	8.396	0.000	70279476	50.0	52.2	
						RPD = 1.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	327463502	50.0	52.7	
2	9.668	9.668	0.000	46374378	50.0	52.4	
						RPD = 0.46	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

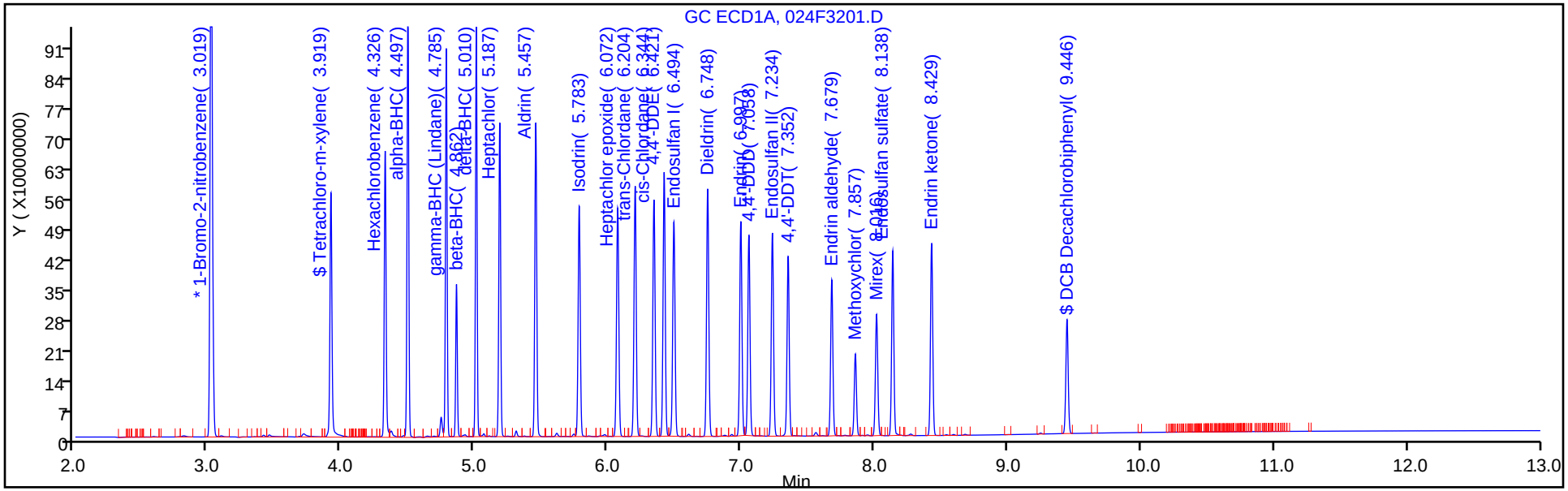
Report Date: 14-Oct-2018 22:11:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

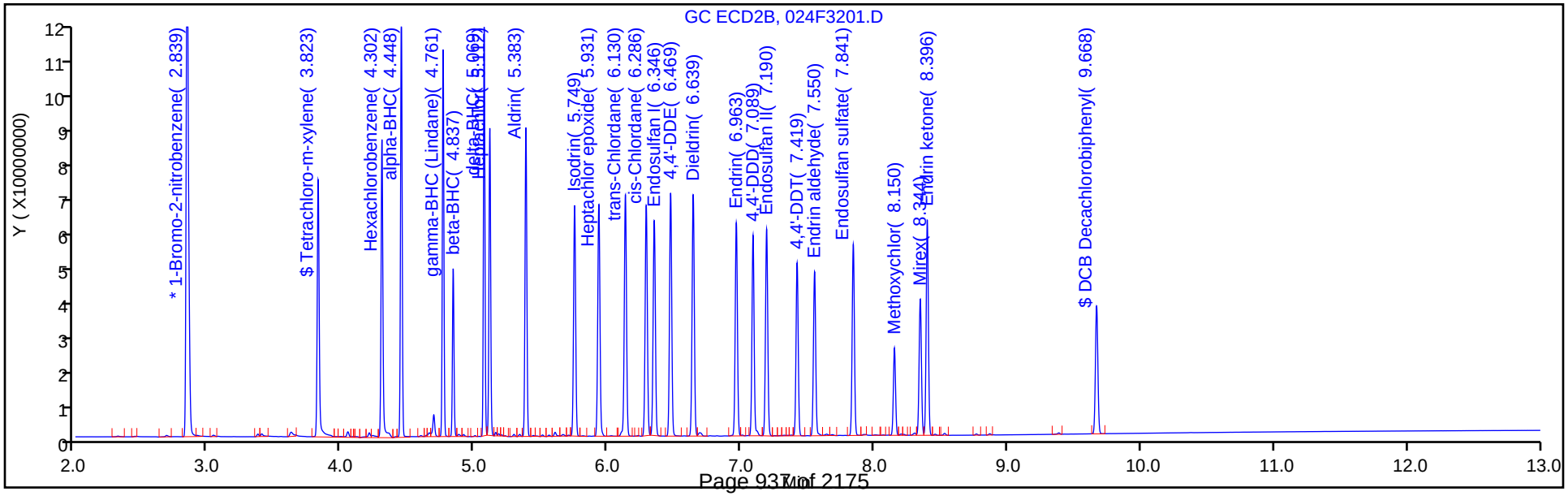
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D

Injection Date:	13-Oct-2018 19:57:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 AB			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D
Lims ID: STD3 AB
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 20:14:49 ALS Bottle#: 25 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:56 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						96.0	
2						100.5	
						RPD = 4.51	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1708743357	150.0	150.0	
2	2.839	2.839	0.000	189250238	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	302832702	25.0	24.3	
2	3.823	3.823	0.000	39633690	25.0	25.4	
						RPD = 4.54	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	317851410	25.0	24.3	
2	4.301	4.302	-0.001	42722842	25.0	26.0	
						RPD = 6.71	
8 alpha-BHC							
1	4.497	4.497	0.000	449507972	25.0	24.0	
2	4.447	4.448	-0.001	52885133	25.0	25.1	
						RPD = 4.26	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	385635283	25.0	24.0	
2	4.761	4.761	0.000	45850109	25.0	25.1	
						RPD = 4.13	
10 beta-BHC							
1	4.862	4.862	0.000	150050051	25.0	23.9	
2	4.836	4.837	-0.001	19996794	25.0	25.3	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	392697114	25.0	24.1	
2	5.069	5.069	0.000	46474767	25.0	25.1	
						RPD = 3.96	
15 Heptachlor							
1	5.187	5.187	0.000	349955154	25.0	24.6	
2	5.111	5.112	-0.001	40161455	25.0	25.3	
						RPD = 3.00	
16 Aldrin							
1	5.457	5.457	0.000	370973392	25.0	24.4	
2	5.383	5.383	0.000	42909032	25.0	25.1	
						RPD = 2.83	
18 Isodrin							
1	5.783	5.783	0.000	298789524	25.0	24.5	
2	5.748	5.749	-0.001	36890552	25.0	25.3	
						RPD = 3.01	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	320747071	25.0	24.7	
2	5.930	5.931	-0.001	39660540	25.0	25.4	
						RPD = 2.64	
22 trans-Chlordane							
1	6.203	6.204	-0.001	335790425	25.0	24.2	
2	6.129	6.130	-0.001	41653596	25.0	25.5	
						RPD = 5.41	
23 cis-Chlordane							
1	6.344	6.344	0.000	321433079	25.0	24.2	
2	6.285	6.286	-0.001	39100281	25.0	25.2	
						RPD = 4.13	
24 4,4'-DDE							
1	6.421	6.421	0.000	340651862	25.0	24.5	
2	6.469	6.469	0.000	40427222	25.0	25.2	
						RPD = 3.05	
25 Endosulfan I							
1	6.494	6.494	0.000	304465713	25.0	24.8	
2	6.346	6.346	0.000	37660075	25.0	25.5	
						RPD = 2.80	
27 Dieldrin							
1	6.748	6.748	0.000	335595524	25.0	24.7	
2	6.638	6.639	-0.001	40874216	25.0	25.3	
						RPD = 2.54	
30 Endrin							
1	6.997	6.997	0.000	288123020	25.0	24.5	
2	6.963	6.963	0.000	35861993	25.0	25.2	
						RPD = 2.96	
32 4,4'-DDD							
1	7.058	7.058	0.000	259223669	25.0	24.0	
2	7.088	7.089	-0.001	32918226	25.0	25.2	
						RPD = 4.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	273685389	25.0	24.6	
2	7.190	7.190	0.000	35501572	25.0	25.5	
						RPD = 3.40	
35 4,4'-DDT							
1	7.352	7.352	0.000	228369137	25.0	23.8	
2	7.419	7.419	0.000	27647840	25.0	24.6	
						RPD = 3.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	206854248	25.0	24.3	
2	7.550	7.550	0.000	28263198	25.0	25.3	
						RPD = 4.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	108979408	25.0	24.5	
2	8.150	8.150	0.000	14155118	25.0	25.3	
						RPD = 3.13	
38 Mirex							
1	8.015	8.016	-0.001	172426127	25.0	24.2	
2	8.344	8.344	0.000	24325156	25.0	25.6	
						RPD = 5.67	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	238398480	25.0	24.3	
2	7.841	7.841	0.000	32381376	25.0	25.4	
						RPD = 4.66	
40 Endrin ketone							
1	8.429	8.429	0.000	252349419	25.0	24.4	
2	8.396	8.396	0.000	35593065	25.0	25.4	
						RPD = 4.25	
$ 41 DCB Decachlorobiphenyl							
1	9.445	9.446	-0.001	159322167	25.0	24.5	
2	9.668	9.668	0.000	23709545	25.0	25.6	
						RPD = 4.30	
S 3 Endosulfan, Total							
1						73.7	
2						76.4	
						RPD = 3.61	

Reagents:

8081IcalL3_00028	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

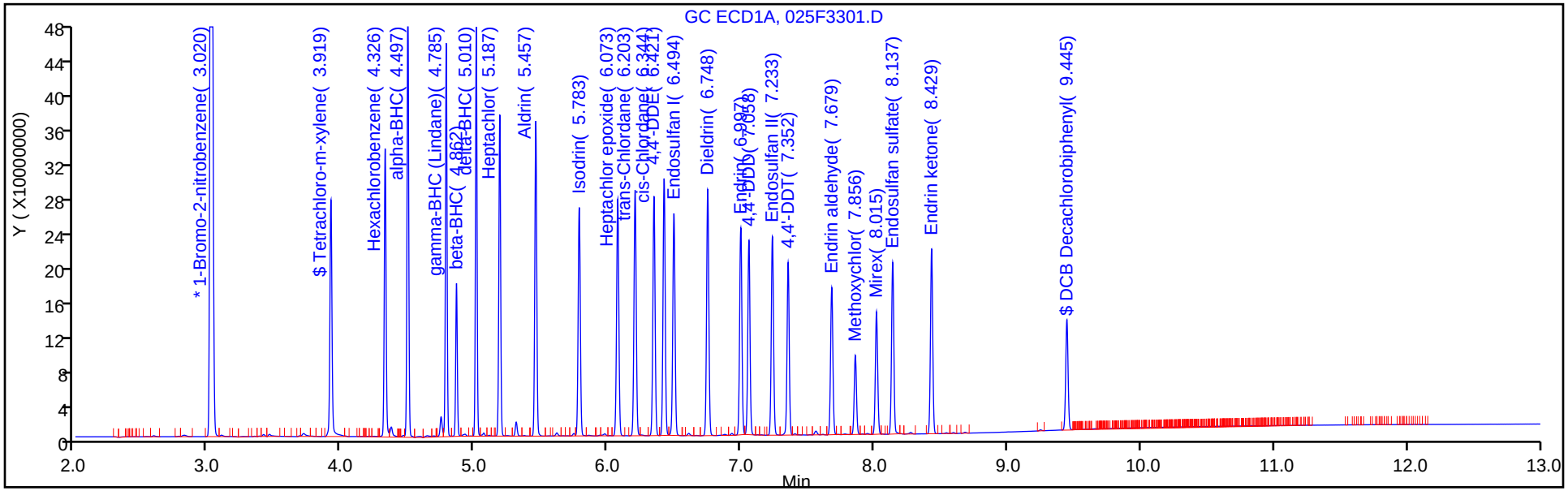
Report Date: 14-Oct-2018 22:11:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

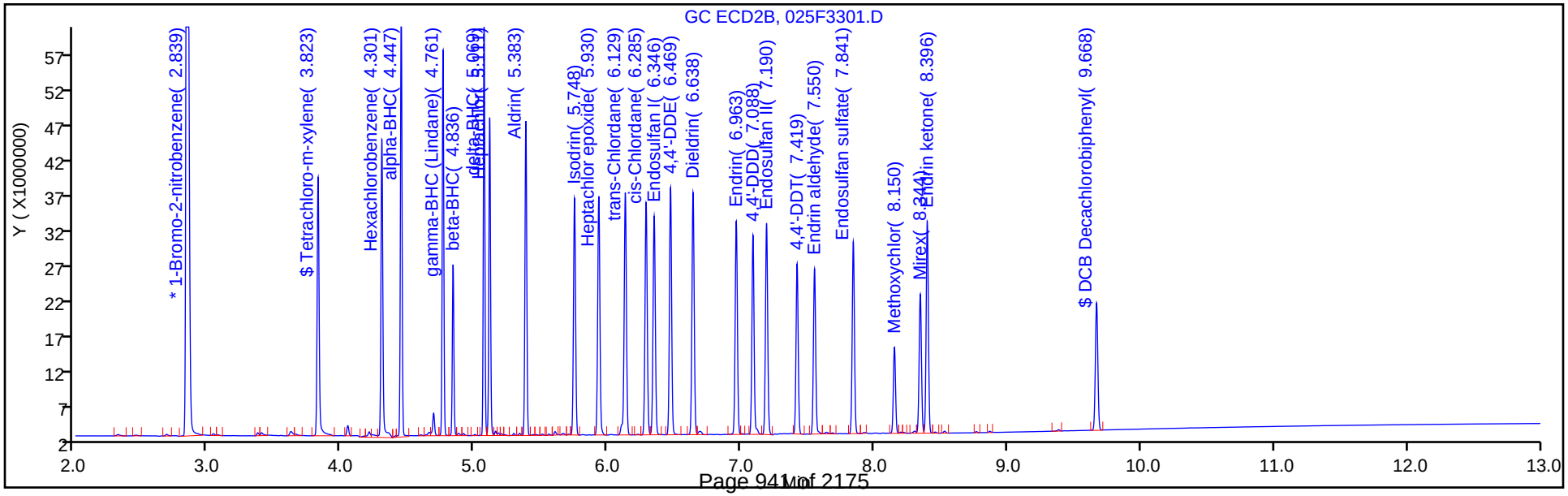
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D

Injection Date:	13-Oct-2018 20:14:49	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 AB			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Lims ID: STD2 AB
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 20:32:15 ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:00 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						38.6	
2						40.9	
						RPD = 5.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1728425275	150.0	150.0	
2	2.839	2.839	0.000	187345459	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	119672981	10.0	9.74	
2	3.822	3.823	-0.001	16477394	10.0	10.3	
						RPD = 5.80	
5 Hexachlorobenzene							
1	4.325	4.326	-0.001	126156548	10.0	9.73	
2	4.301	4.302	-0.001	17019247	10.0	10.1	
						RPD = 4.06	
8 alpha-BHC							
1	4.496	4.497	-0.001	174586944	10.0	9.64	
2	4.446	4.448	-0.002	21525266	10.0	10.1	
						RPD = 4.69	
9 gamma-BHC (Lindane)							
1	4.784	4.785	-0.001	150377013	10.0	9.57	
2	4.760	4.761	-0.001	18724325	10.0	10.2	
						RPD = 6.55	
10 beta-BHC							
1	4.861	4.862	-0.001	63756954	10.0	9.77	
2	4.836	4.837	-0.001	8495816	10.0	10.4	
						RPD = 6.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	151129545	10.0	9.56	
2	5.068	5.069	-0.001	18818212	10.0	10.2	
						RPD = 6.40	
15 Heptachlor							
1	5.186	5.187	-0.001	136220069	10.0	9.74	
2	5.111	5.112	-0.001	16505122	10.0	10.3	
						RPD = 5.70	
16 Aldrin							
1	5.456	5.457	-0.001	144846582	10.0	9.74	
2	5.382	5.383	-0.001	17731926	10.0	10.3	
						RPD = 5.89	
18 Isodrin							
1	5.783	5.783	0.000	117749615	10.0	9.72	
2	5.748	5.749	-0.001	15625487	10.0	10.5	
						RPD = 7.33	
21 Heptachlor epoxide							M
1	6.071	6.072	-0.001	126886425	10.0	9.83	
2	5.929	5.931	-0.002	16641254	10.0	10.4	M
						RPD = 5.98	
22 trans-Chlordane							
1	6.202	6.204	-0.002	129991480	10.0	9.51	
2	6.129	6.130	-0.001	16929113	10.0	10.3	
						RPD = 7.70	
23 cis-Chlordane							
1	6.344	6.344	0.000	126327949	10.0	9.68	
2	6.286	6.286	0.000	16380093	10.0	10.4	
						RPD = 7.07	
24 4,4'-DDE							
1	6.420	6.421	-0.001	131488025	10.0	9.65	
2	6.468	6.469	-0.001	16485248	10.0	10.3	
						RPD = 6.16	
25 Endosulfan I							
1	6.493	6.494	-0.001	120234528	10.0	9.81	
2	6.346	6.346	0.000	15849043	10.0	10.5	
						RPD = 6.40	
27 Dieldrin							
1	6.747	6.748	-0.001	131325618	10.0	9.76	
2	6.638	6.639	-0.001	16696805	10.0	10.3	
						RPD = 5.11	
30 Endrin							
1	6.996	6.997	-0.001	110965652	10.0	9.63	
2	6.962	6.963	-0.001	14572762	10.0	10.2	
						RPD = 6.20	
32 4,4'-DDD							
1	7.057	7.058	-0.001	100049743	10.0	9.44	
2	7.088	7.089	-0.001	13387732	10.0	10.2	
						RPD = 7.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	107239359	10.0	9.69	
2	7.189	7.190	-0.001	14939909	10.0	10.4	
						RPD = 6.87	
35 4,4'-DDT							
1	7.352	7.352	0.000	86360678	10.0	9.37	
2	7.418	7.419	-0.001	11005760	10.0	9.98	
						RPD = 6.32	
36 Endrin aldehyde							
1	7.679	7.679	0.000	81761942	10.0	9.60	
2	7.550	7.550	0.000	11820141	10.0	10.3	
						RPD = 7.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	43260093	10.0	9.68	
2	8.149	8.150	-0.001	5763013	10.0	10.2	
						RPD = 5.03	
38 Mirex							
1	8.015	8.016	-0.001	69898898	10.0	9.68	
2	8.343	8.344	-0.001	10513875	10.0	10.5	
						RPD = 8.20	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	93045319	10.0	9.55	
2	7.840	7.841	-0.001	13487473	10.0	10.3	
						RPD = 7.54	
40 Endrin ketone							
1	8.428	8.429	-0.001	97881347	10.0	9.50	
2	8.396	8.396	0.000	14668648	10.0	10.3	
						RPD = 7.65	
$ 41 DCB Decachlorobiphenyl							
1	9.443	9.446	-0.003	63321098	10.0	9.53	
2	9.668	9.668	0.000	10078459	10.0	10.4	
						RPD = 8.76	
S 3 Endosulfan, Total							
1						29.1	
2						31.1	
						RPD = 6.93	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081IcalL2_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

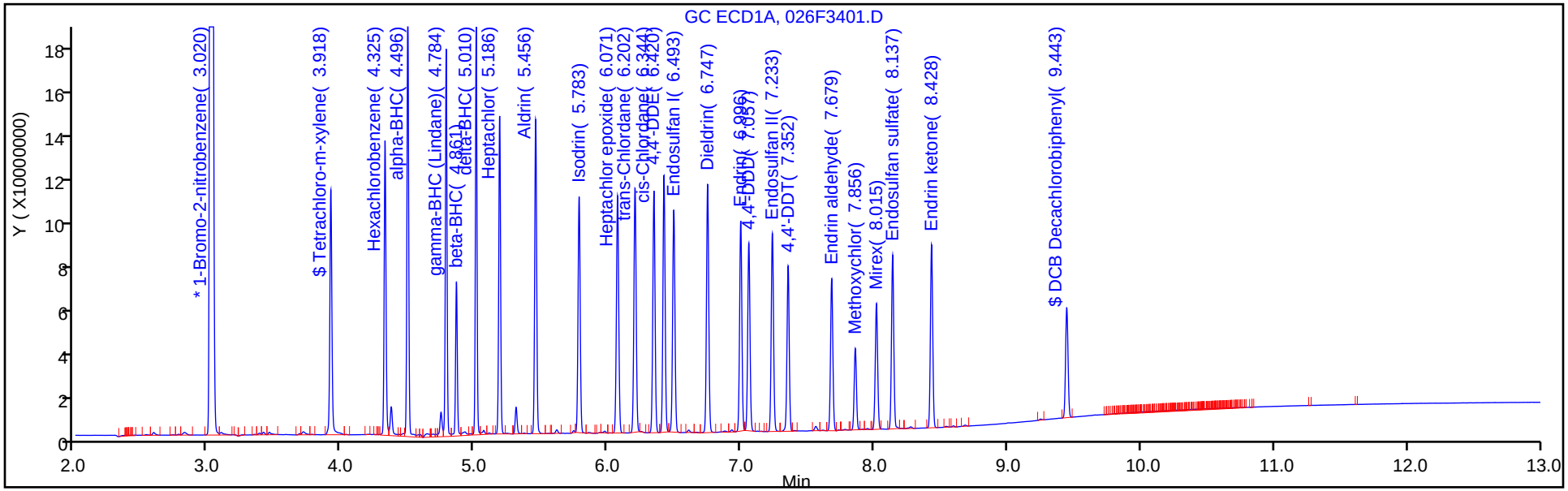
Report Date: 14-Oct-2018 22:12:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

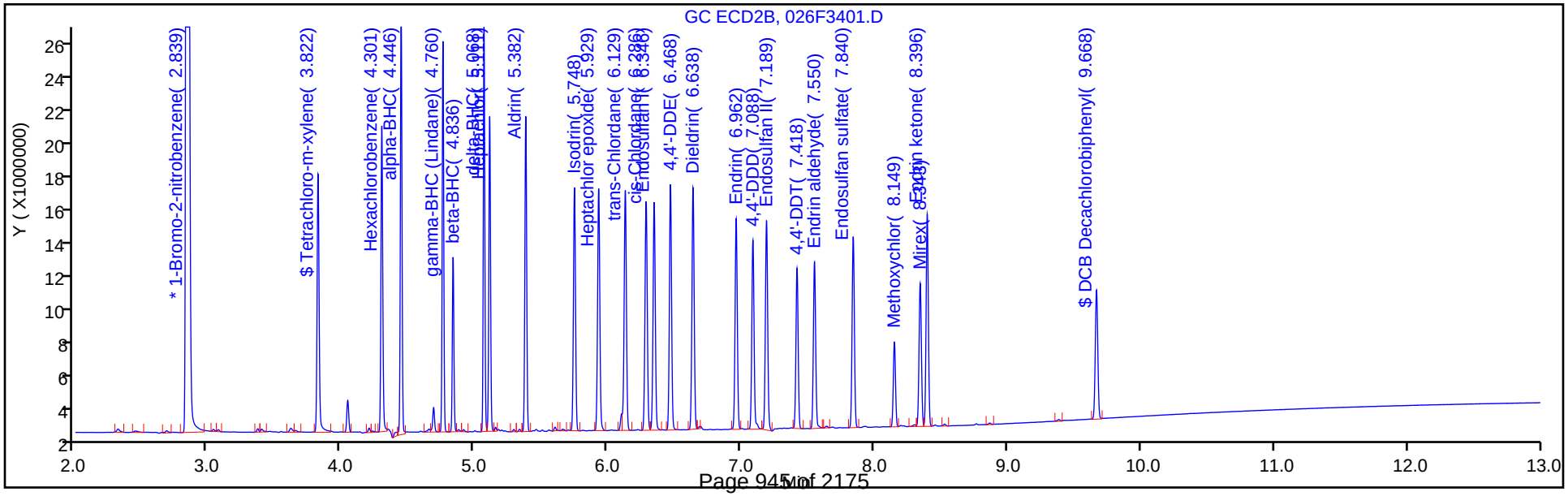
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D

Injection Date:	13-Oct-2018 20:32:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 AB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Manual Integration/User Assign Peak Report

TestAmerica Denver

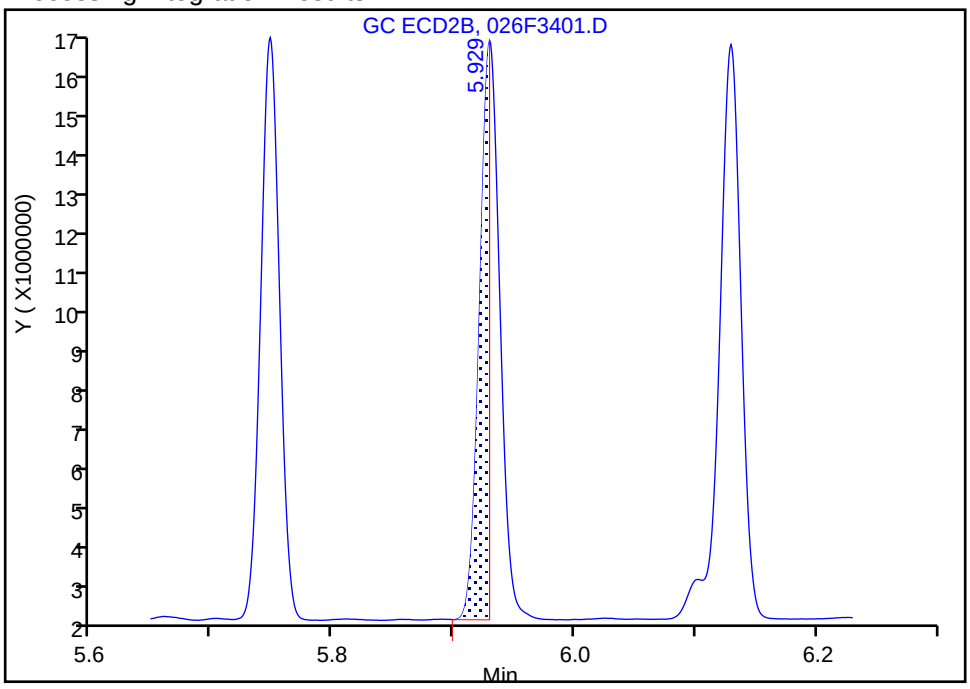
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Injection Date: 13-Oct-2018 20:32:15 Instrument ID: SGC_P2
Lims ID: STD2 AB
Client ID:
Operator ID: TEM ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: P2 8081 IS Limit Group: GCSV - 8081A - IS
Column: CLP2 (0.32 mm) Detector GC ECD2B

21 Heptachlor epoxide, CAS: 1024-57-3

Signal: 2

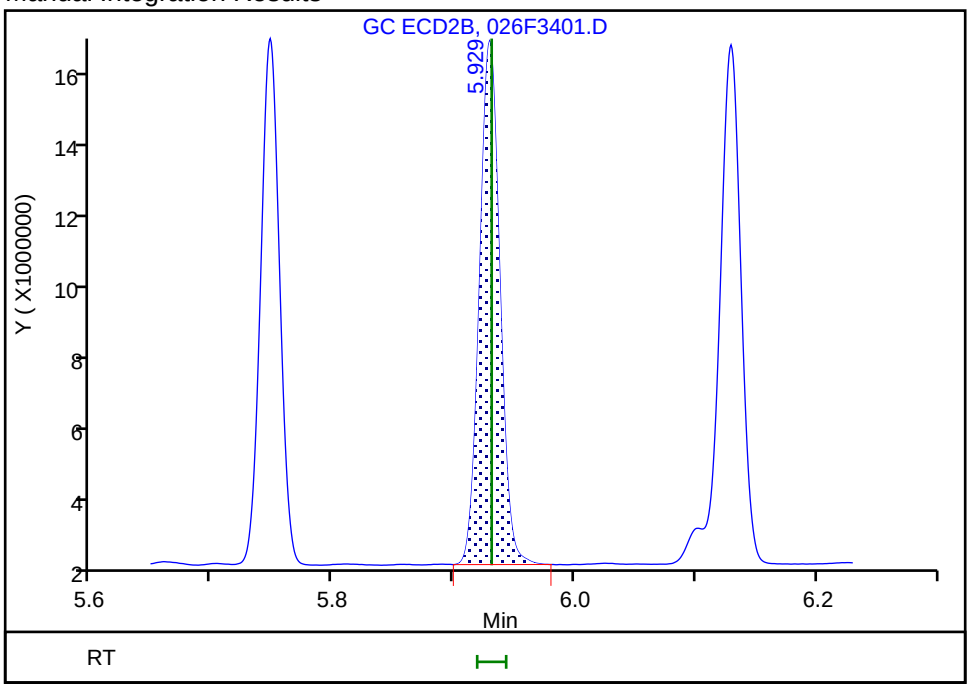
Processing Integration Results

RT: 5.93
Area: 8040349
Amount: 6.830396
Amount Units: ng/mL



Manual Integration Results

RT: 5.93
Area: 16641254
Amount: 10.438106
Amount Units: ng/mL



Reviewer: mooret, 14-Oct-2018 09:17:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D
Lims ID: STD1 AB
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:49:46 ALS Bottle#: 27 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						16.3	
2						15.9	
						RPD = 2.72	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.019	0.002	1645292180	150.0	150.0	
2	2.839	2.839	0.000	186440198	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	44633037	4.00	4.05	
2	3.823	3.823	0.000	6851543	4.00	3.94	
						RPD = 2.74	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	47816993	4.00	4.05	
2	4.302	4.302	0.000	7168590	4.00	3.96	
						RPD = 2.34	
8 alpha-BHC							
1	4.497	4.497	0.000	62852215	4.00	4.07	
2	4.447	4.448	-0.001	8858523	4.00	3.98	
						RPD = 2.23	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	56481667	4.00	4.08	
2	4.761	4.761	0.000	7435354	4.00	3.97	
						RPD = 2.89	
10 beta-BHC							
1	4.862	4.862	0.000	26687989	4.00	4.06	
2	4.837	4.837	0.000	3576692	4.00	3.94	
						RPD = 2.98	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	55669358	4.00	4.08	
2	5.069	5.069	0.000	7424235	4.00	3.97	
						RPD = 2.79	
15 Heptachlor							
1	5.187	5.187	0.000	50118465	4.00	4.04	
2	5.112	5.112	0.000	6621110	4.00	3.95	
						RPD = 2.42	
16 Aldrin							
1	5.457	5.457	0.000	52919960	4.00	4.05	
2	5.383	5.383	0.000	7030048	4.00	3.95	
						RPD = 2.49	
18 Isodrin							
1	5.784	5.783	0.001	44705372	4.00	4.05	
2	5.748	5.749	-0.001	6366004	4.00	3.93	
						RPD = 3.06	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	47553101	4.00	4.03	
2	5.930	5.931	-0.001	6762032	4.00	3.93	
						RPD = 2.56	
22 trans-Chlordane							
1	6.203	6.204	-0.001	49944652	4.00	4.09	
2	6.130	6.130	0.000	6819666	4.00	3.95	
						RPD = 3.42	
23 cis-Chlordane							
1	6.344	6.344	0.000	47100490	4.00	4.06	
2	6.286	6.286	0.000	6646251	4.00	3.94	
						RPD = 3.11	
24 4,4'-DDE							
1	6.421	6.421	0.000	48738148	4.00	4.06	
2	6.469	6.469	0.000	6542674	4.00	3.95	
						RPD = 2.61	
25 Endosulfan I							
1	6.494	6.494	0.000	45543940	4.00	4.03	
2	6.347	6.346	0.001	6507441	4.00	3.92	
						RPD = 2.71	
27 Dieldrin							
1	6.748	6.748	0.000	48904591	4.00	4.04	
2	6.638	6.639	-0.001	6664239	4.00	3.95	
						RPD = 2.17	
30 Endrin							
1	6.997	6.997	0.000	41251930	4.00	4.06	
2	6.963	6.963	0.000	5757882	4.00	3.96	
						RPD = 2.60	
32 4,4'-DDD							
1	7.058	7.058	0.000	38622027	4.00	4.10	
2	7.088	7.089	-0.001	5391187	4.00	3.96	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.234	7.234	0.000	41034933	4.00	4.05	
2	7.191	7.190	0.001	6270548	4.00	3.93	
						RPD = 2.93	
35 4,4'-DDT							
1	7.352	7.352	0.000	31997998	4.00	4.11	
2	7.419	7.419	0.000	4302693	4.00	4.01	
						RPD = 2.63	
36 Endrin aldehyde							
1	7.678	7.679	-0.001	32150414	4.00	4.07	
2	7.551	7.550	0.001	4932964	4.00	3.94	
						RPD = 3.18	
37 Methoxychlor							
1	7.857	7.857	0.000	17004835	4.00	4.05	
2	8.150	8.150	0.000	2361021	4.00	3.96	
						RPD = 2.20	
38 Mirex							
1	8.016	8.016	0.000	28621709	4.00	4.16	
2	8.344	8.344	0.000	4546008	4.00	3.91	
						RPD = 6.31	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	36051087	4.00	4.08	
2	7.841	7.841	0.000	5646467	4.00	3.94	
						RPD = 3.30	
40 Endrin ketone							
1	8.429	8.429	0.000	38530653	4.00	4.08	
2	8.397	8.396	0.001	6086476	4.00	3.95	
						RPD = 3.26	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	26336210	4.00	4.07	
2	9.668	9.668	0.000	4339575	4.00	3.92	
						RPD = 3.76	
S 3 Endosulfan, Total							
1						12.1	
2						11.8	
						RPD = 2.98	

Reagents:

8081IcalL1_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

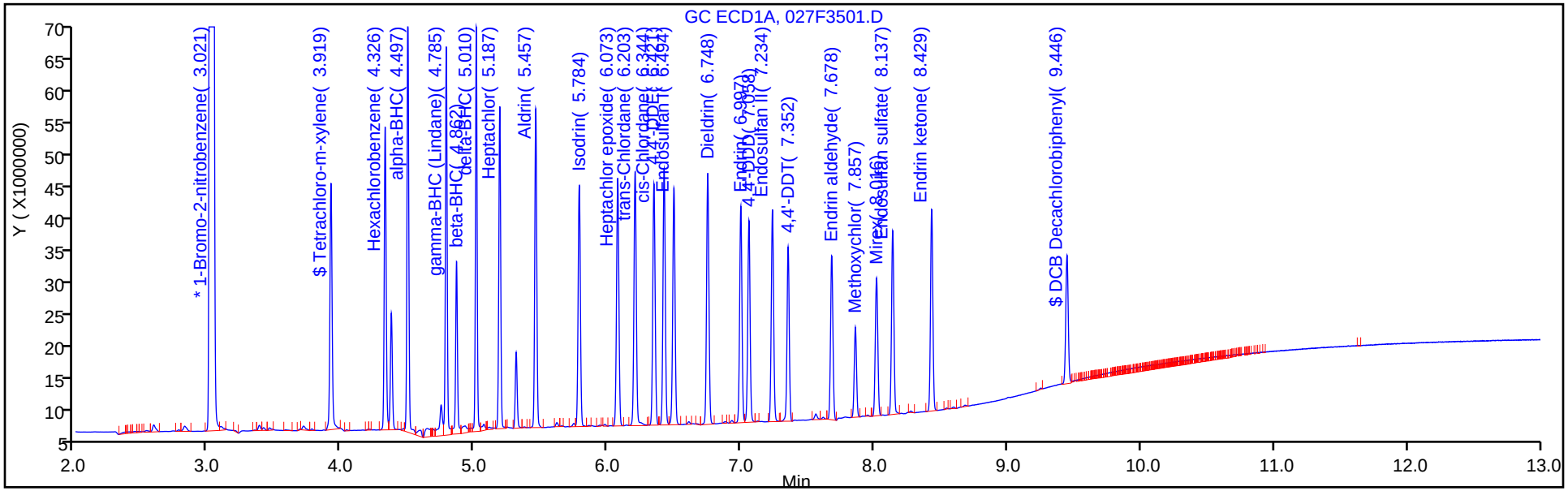
Report Date: 14-Oct-2018 22:12:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

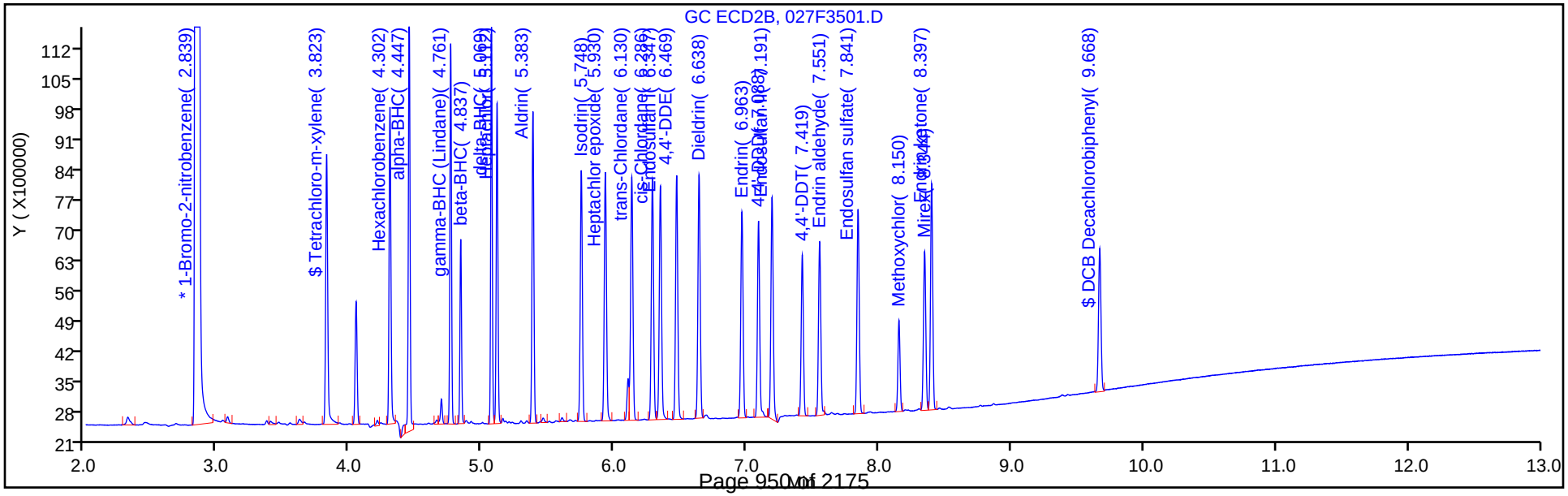
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Injection Date:	13-Oct-2018 20:49:46	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 AB			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: PEM 280-438443/7 Calibration Date: 11/21/2018 13:36

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210007.D Conc. Units: ng/mL

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	6.97	510872918	1.84	15	
Endrin aldehyde	7.65	4863094			
Endrin ketone	8.40	4710444			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.32	391197664	1.29	15	
4,4'-DDD	7.03	3842995			
4,4'-DDE	6.39	1274576			

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210007.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 21-Nov-2018 13:36:53 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Misc. Info.: 280-0076442-007
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:31 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:14:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.002	0.001	1641185169	150.0	150.0	
2	2.806	2.805	0.001	214982256	150.0	150.0	
24 4,4'-DDE							
1	6.392	6.391	0.001	1274576		0.5888	
2	6.417	6.415	0.002	154072		-0.1436	
						RPD = 328.97	
30 Endrin							
1	6.965	6.963	0.002	510872918	40.0	44.8	
2	6.903	6.901	0.002	68798616	40.0	42.7	
						RPD = 4.71	
32 4,4'-DDD							
1	7.027	7.025	0.002	3842995		0.8182	
2	7.017	7.029	-0.012	2814376		1.64	
						RPD = 67.00	
35 4,4'-DDT							
1	7.320	7.319	0.001	391197664	40.0	41.8	
2	7.362	7.360	0.002	58247188	40.0	45.5	
						RPD = 8.48	
36 Endrin aldehyde							
1	7.647	7.645	0.002	4863094		0.7691	
2	7.490	7.486	0.004	666351		-0.1267	
						RPD = 278.86	
40 Endrin ketone							
1	8.395	8.394	0.001	4710444		0.7195	
2	8.334	8.331	0.003	437243		-0.2869	
						RPD = 465.35	

Reagents:

8081_EvalBPEM_00013	Amount Added:	1.00	Units: ml	
8081_IS_00008	Amount Added:	75.00	Units: uL	Run Reagent

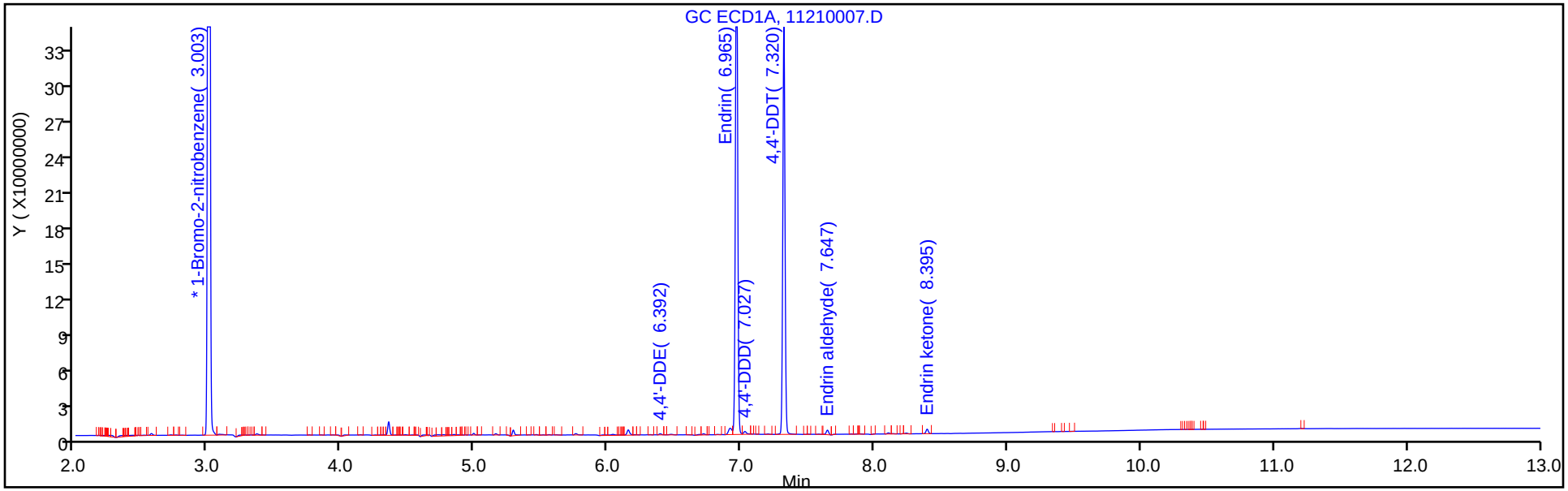
Report Date: 25-Nov-2018 21:26:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

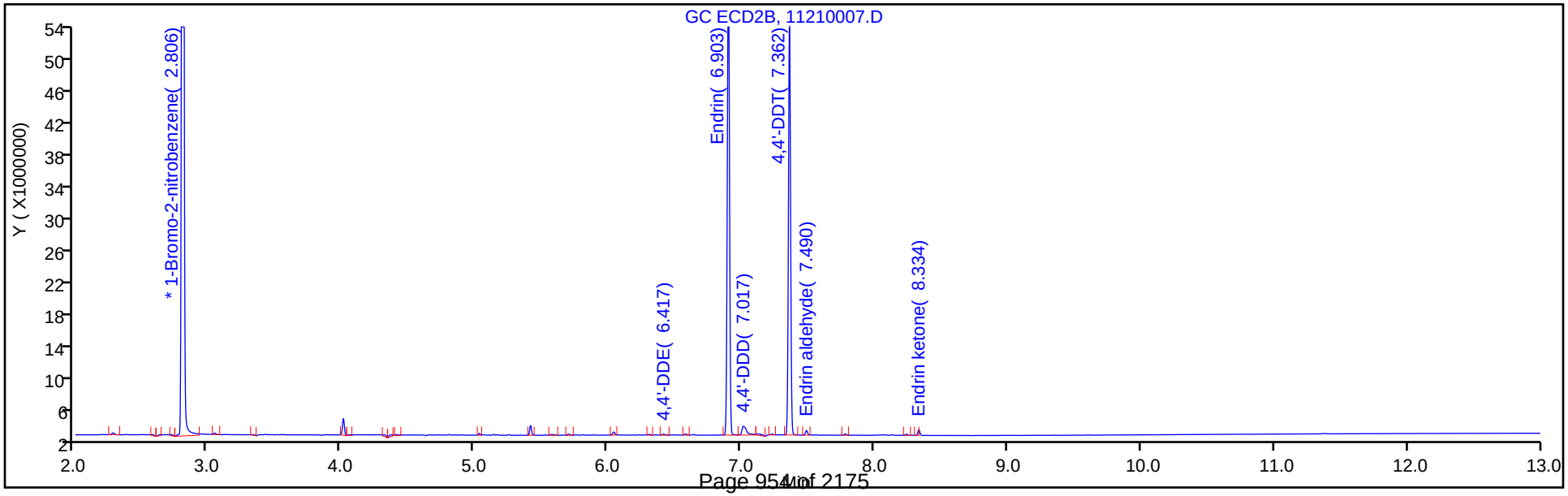
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210007.D

Injection Date:	21-Nov-2018 13:36:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	PEM			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: PEM 280-438443/7 Calibration Date: 11/21/2018 13:36

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210007.D Conc. Units: ng/mL

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	6.90	68798616	1.58	15	
Endrin aldehyde	7.49	666351			
Endrin ketone	8.33	437243			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.36	58247188	4.85	15	
4,4'-DDD	7.02	2814376			
4,4'-DDE	6.42	154072			

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210007.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 21-Nov-2018 13:36:53 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Misc. Info.: 280-0076442-007
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:31 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:14:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.002	0.001	1641185169	150.0	150.0	
2	2.806	2.805	0.001	214982256	150.0	150.0	
24 4,4'-DDE							
1	6.392	6.391	0.001	1274576		0.5888	
2	6.417	6.415	0.002	154072		-0.1436	
						RPD = 328.97	
30 Endrin							
1	6.965	6.963	0.002	510872918	40.0	44.8	
2	6.903	6.901	0.002	68798616	40.0	42.7	
						RPD = 4.71	
32 4,4'-DDD							
1	7.027	7.025	0.002	3842995		0.8182	
2	7.017	7.029	-0.012	2814376		1.64	
						RPD = 67.00	
35 4,4'-DDT							
1	7.320	7.319	0.001	391197664	40.0	41.8	
2	7.362	7.360	0.002	58247188	40.0	45.5	
						RPD = 8.48	
36 Endrin aldehyde							
1	7.647	7.645	0.002	4863094		0.7691	
2	7.490	7.486	0.004	666351		-0.1267	
						RPD = 278.86	
40 Endrin ketone							
1	8.395	8.394	0.001	4710444		0.7195	
2	8.334	8.331	0.003	437243		-0.2869	
						RPD = 465.35	

Reagents:

8081_EvalBPEM_00013	Amount Added:	1.00	Units: ml	
8081_IS_00008	Amount Added:	75.00	Units: uL	Run Reagent

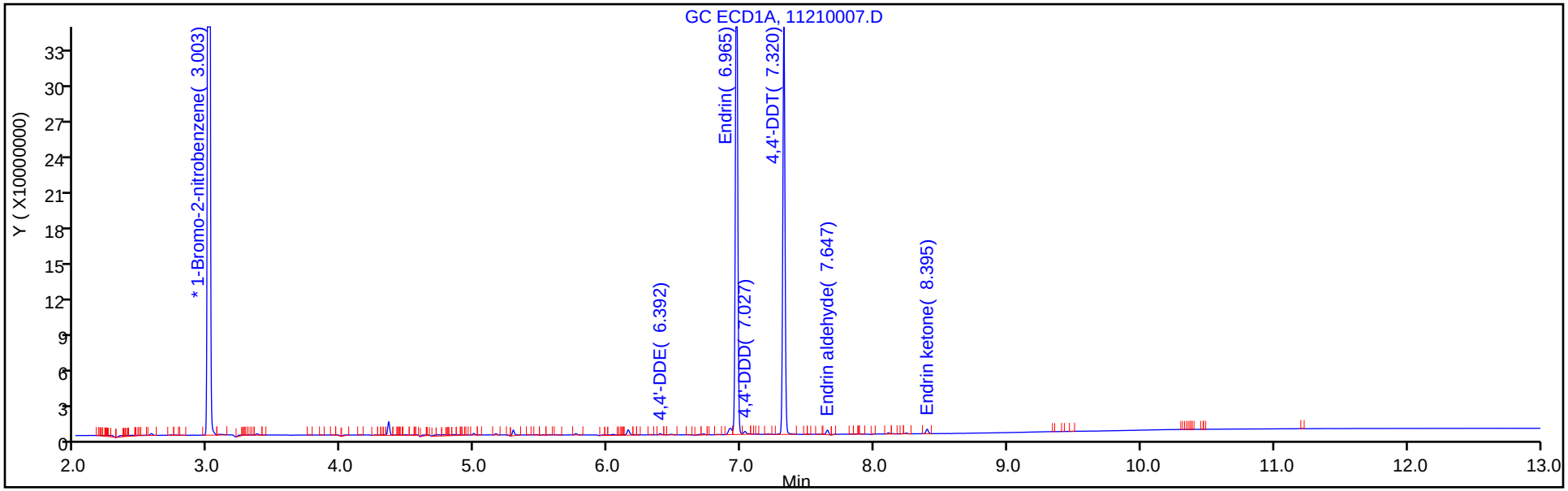
Report Date: 25-Nov-2018 21:26:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

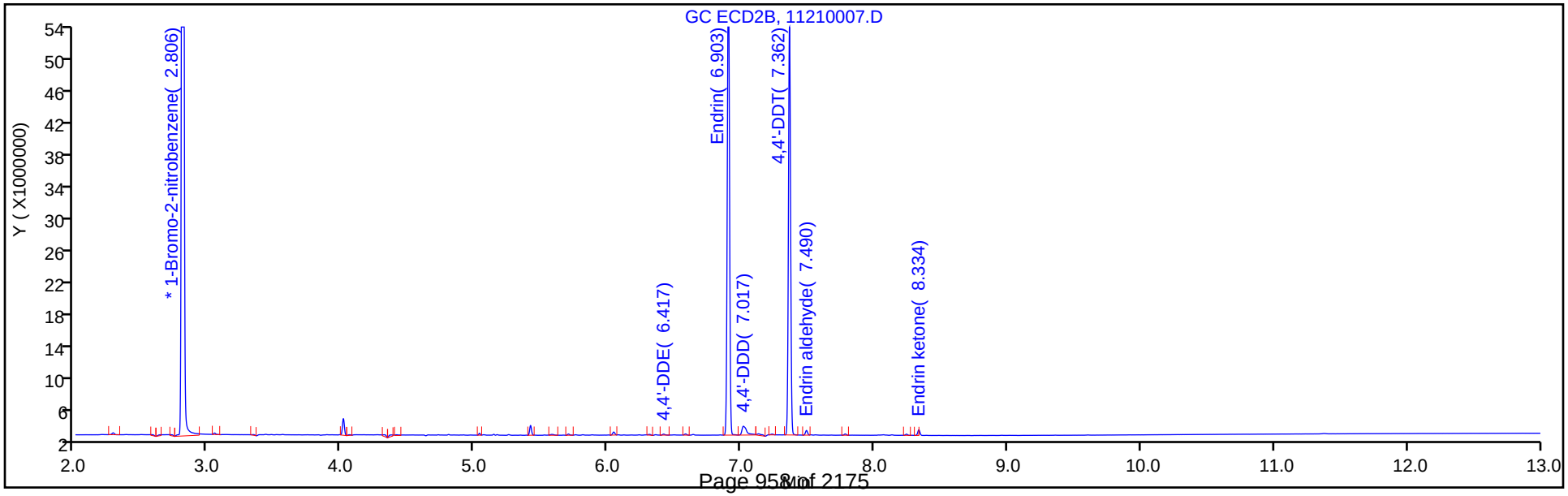
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210007.D

Injection Date:	21-Nov-2018 13:36:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	PEM			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0030		464	1000	-53.6*	20.0
Toxaphene Peak 2	Lin2		0.0110		660	1000	-34.0*	20.0
Toxaphene Peak 3	Lin2		0.0151		815	1000	-18.5	20.0
Toxaphene Peak 4	Lin2		0.0082		1080	1000	8.3	20.0
Toxaphene Peak 5	Lin2		0.0114		1480	1000	48.4*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.23	6.23	6.26
Toxaphene Peak 2	6.85	6.84	6.87
Toxaphene Peak 3	7.52	7.52	7.54
Toxaphene Peak 4	7.89	7.87	7.90
Toxaphene Peak 5	8.20	8.19	8.22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D
Lims ID: ICV TOX
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:24:35 ALS Bottle#: 29 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.018	3.019	-0.001	1963980017	150.0	150.0	
2	2.838	2.839	-0.002	209759075	150.0	150.0	
28 Toxaphene							Ma
1	6.230	6.246	-0.016	39169071	1000.0	464.3	M
1	6.848	6.854	-0.006	144072882	1000.0	660.3	M
1	7.516	7.528	-0.012	197948260	1000.0	815.4	M
1	7.886	7.886	0.000	107438429	1000.0	1083.4	M
1	8.203	8.204	-0.001	149524851	1000.0	1483.7	M
		Average of Peak Amounts =				901.4	
2	5.774	5.778	-0.004	6074445	1000.0	913.0	M
2	7.136	7.145	-0.009	18826032	1000.0	641.9	M
2	7.278	7.286	-0.008	62348552	1000.0	779.1	M
2	7.783	7.800	-0.017	34844907	1000.0	1522.8	M
2	8.088	8.096	-0.008	50429097	1000.0	1128.6	M
		Average of Peak Amounts =				997.1	
					RPD =	10.08	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8081ToxICVL3_00013 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

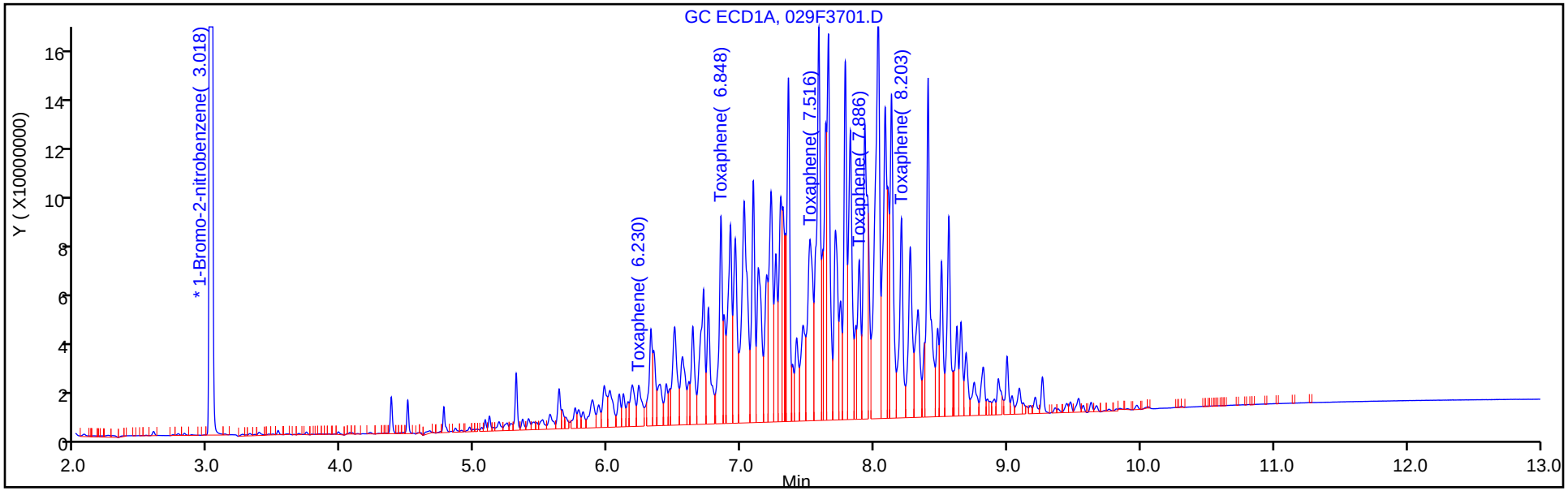
Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

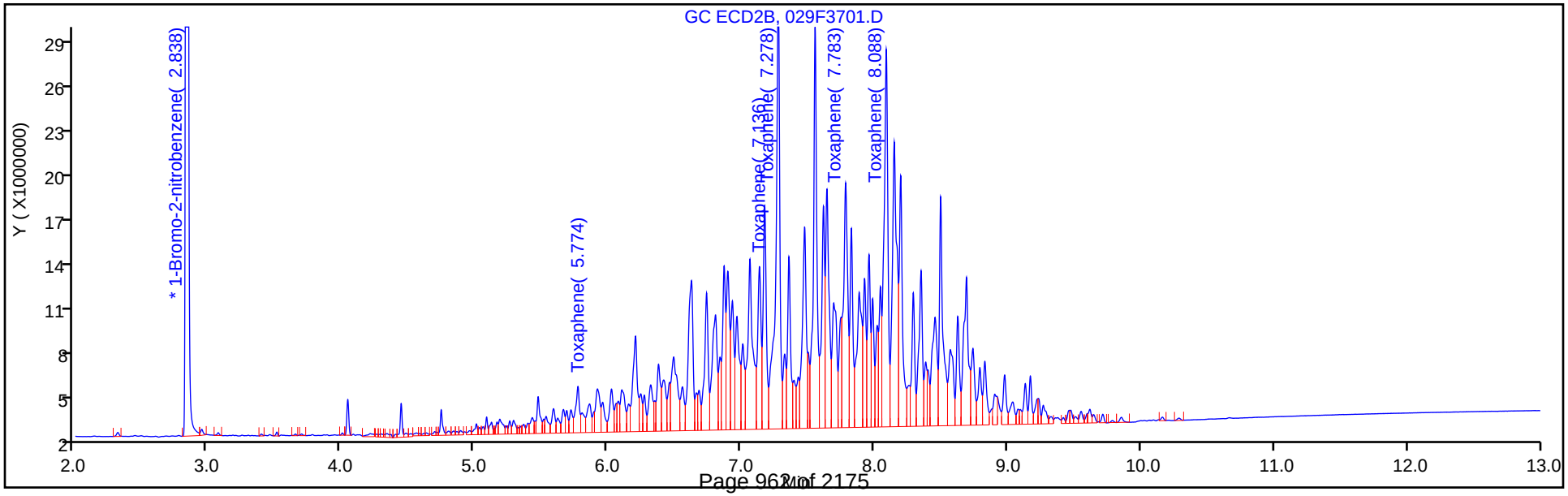
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date:	13-Oct-2018 21:24:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date: 13-Oct-2018 21:24:35 Instrument ID: SGC_P2

Lims ID: ICV TOX

Client ID:

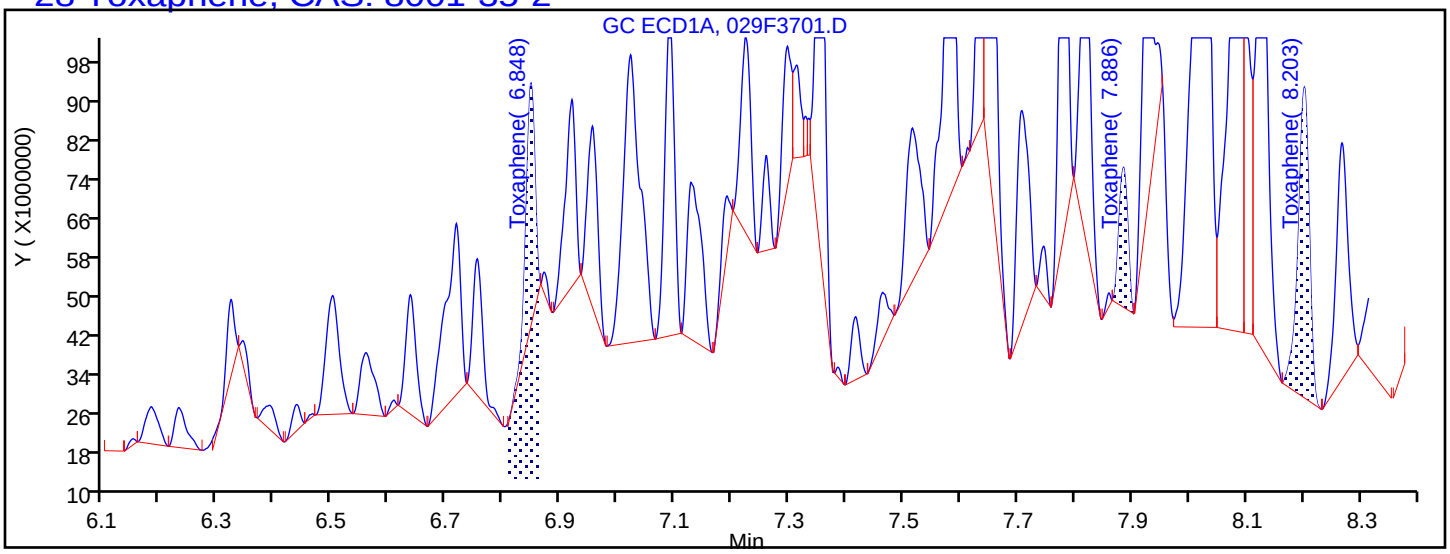
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

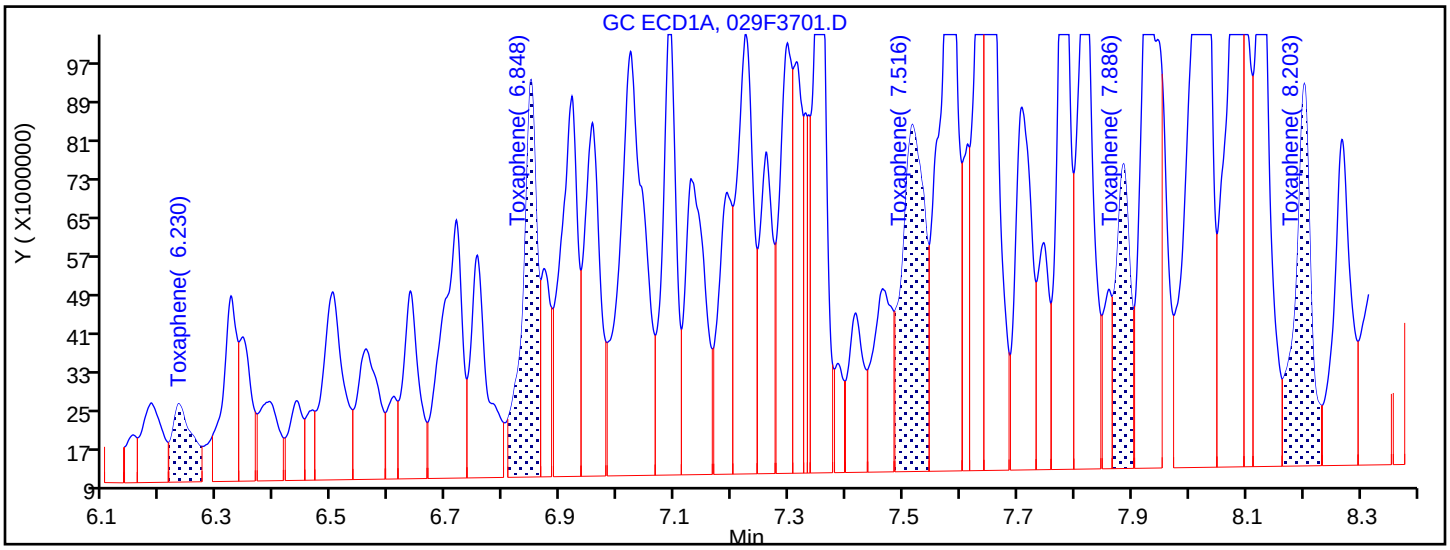
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.246	Response = 0
6.848	Response = 54735220
7.528	Response = 0
7.886	Response = 30855926
8.203	Response = 87461515



Manual Integration Results

6.230	Response = 39169071	M
6.848	Response = 144072882	M
7.516	Response = 197948260	M
7.886	Response = 107438429	M
8.203	Response = 149524851	M

Reviewer: mooret, 14-Oct-2018 21:40:44

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0043		913	1000	-8.7	20.0
Toxaphene Peak 2	Lin2		0.0135		642	1000	-35.8*	20.0
Toxaphene Peak 3	Lin2		0.0446		779	1000	-22.1*	20.0
Toxaphene Peak 4	Lin2		0.0249		1520	1000	52.3*	20.0
Toxaphene Peak 5	Lin2		0.0361		1130	1000	12.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.77	5.77	5.79
Toxaphene Peak 2	7.14	7.13	7.16
Toxaphene Peak 3	7.28	7.27	7.30
Toxaphene Peak 4	7.78	7.79	7.81
Toxaphene Peak 5	8.09	8.08	8.11

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D
Lims ID: ICV TOX
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:24:35 ALS Bottle#: 29 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.018	3.019	-0.001	1963980017	150.0	150.0	
2	2.838	2.839	-0.002	209759075	150.0	150.0	
28 Toxaphene							Ma
1	6.230	6.246	-0.016	39169071	1000.0	464.3	M
1	6.848	6.854	-0.006	144072882	1000.0	660.3	M
1	7.516	7.528	-0.012	197948260	1000.0	815.4	M
1	7.886	7.886	0.000	107438429	1000.0	1083.4	M
1	8.203	8.204	-0.001	149524851	1000.0	1483.7	M
		Average of Peak Amounts =				901.4	
2	5.774	5.778	-0.004	6074445	1000.0	913.0	M
2	7.136	7.145	-0.009	18826032	1000.0	641.9	M
2	7.278	7.286	-0.008	62348552	1000.0	779.1	M
2	7.783	7.800	-0.017	34844907	1000.0	1522.8	M
2	8.088	8.096	-0.008	50429097	1000.0	1128.6	M
		Average of Peak Amounts =				997.1	
					RPD =	10.08	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8081ToxICVL3_00013 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

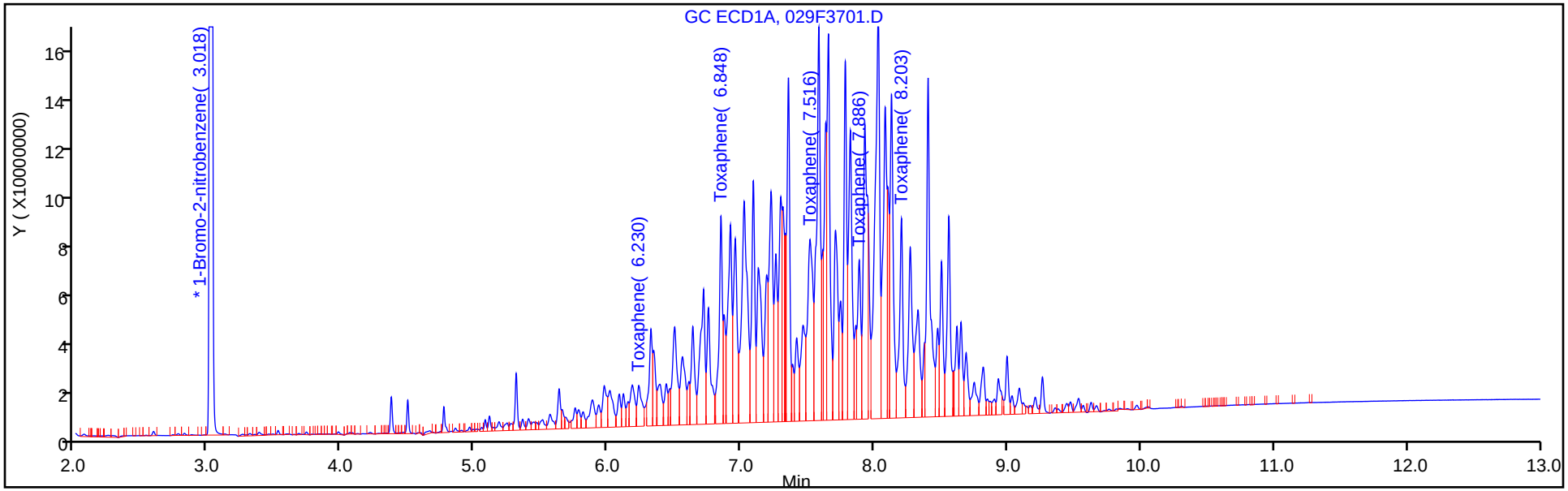
Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

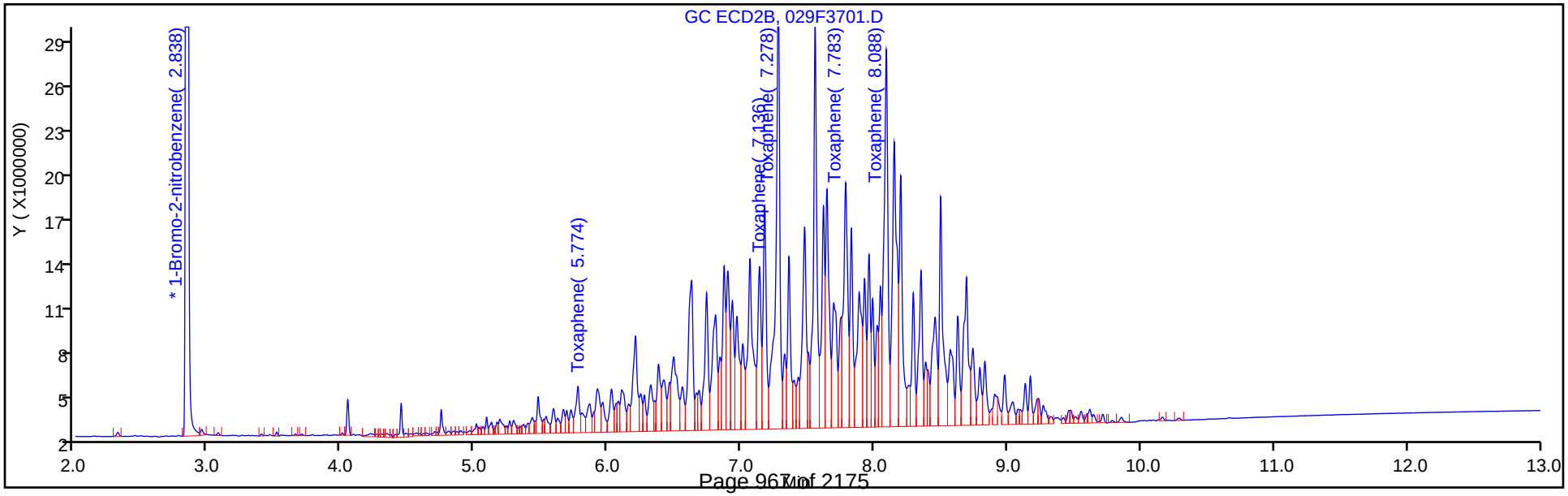
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date:	13-Oct-2018 21:24:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:12:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date: 13-Oct-2018 21:24:35 Instrument ID: SGC_P2

Lims ID: ICV TOX

Client ID:

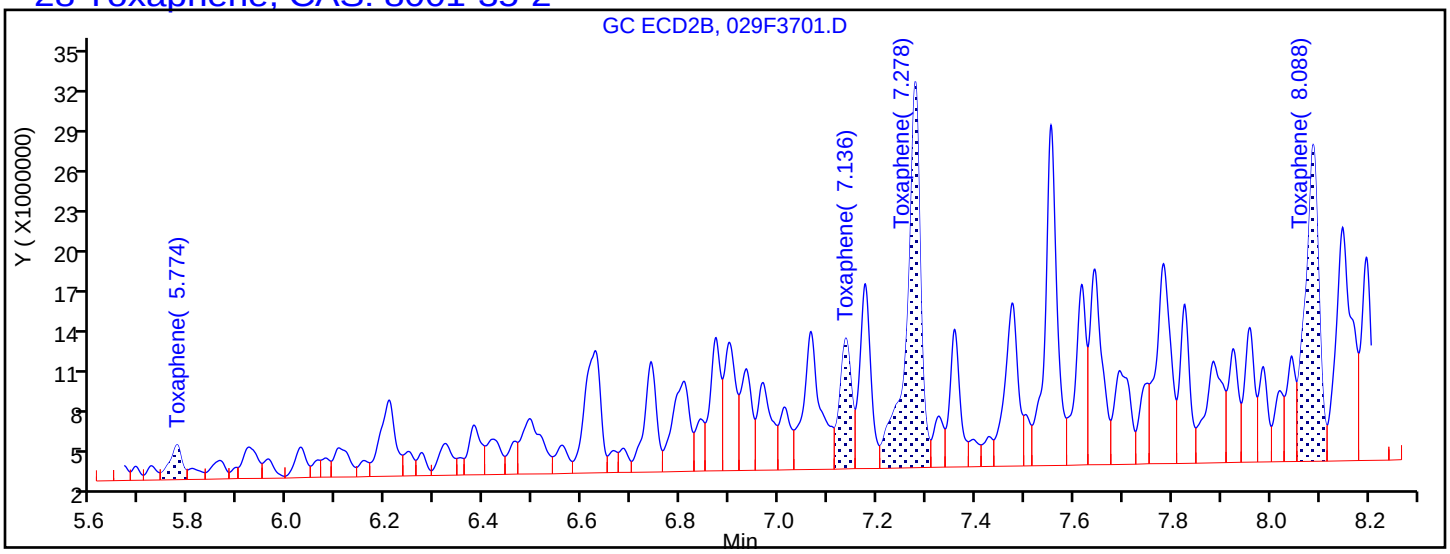
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

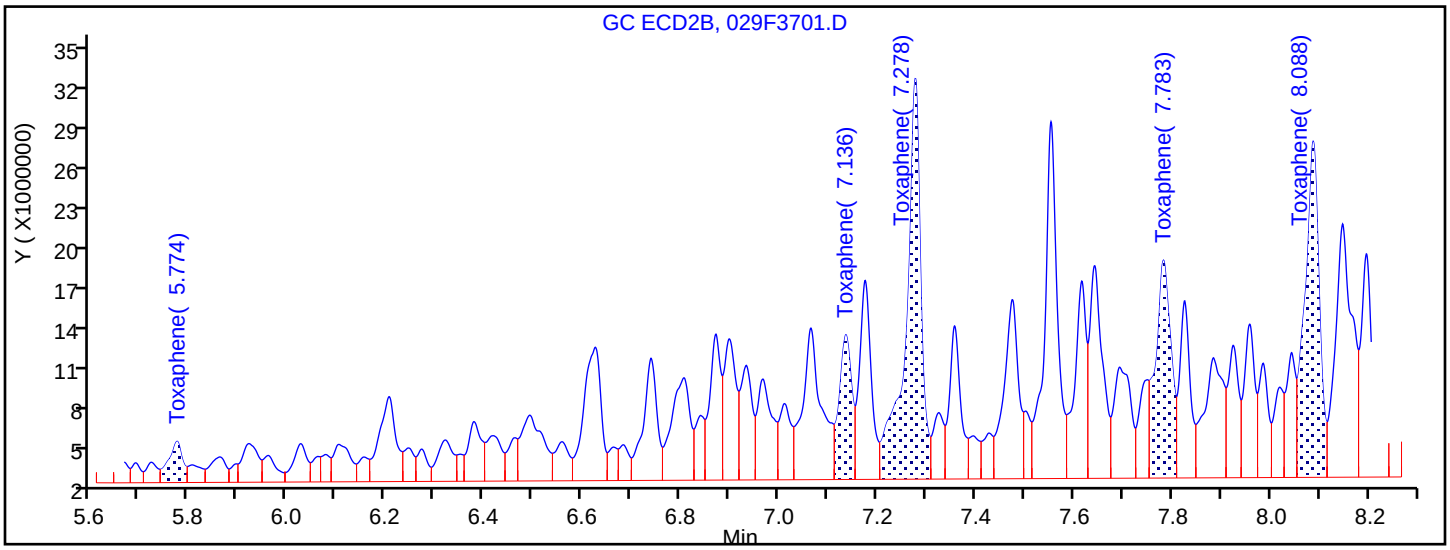
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.774	Response = 4545269
7.136	Response = 16204546
7.278	Response = 55594865
7.800	Response = 0
8.088	Response = 45157495



Manual Integration Results

5.774	Response = 6074445	M
7.136	Response = 18826032	M
7.278	Response = 62348552	M
7.783	Response = 34844907	M
8.088	Response = 50429097	M

Reviewer: mooret, 14-Oct-2018 21:40:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/35 Calibration Date: 10/13/2018 21:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 030F3801.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlordane (technical) Peak 1	Lin2		0.0320		459	500	-8.2	20.0
Technical Chlordane Peak 1	Lin2		0.0320		459	500	-8.2	20.0
Chlordane (technical) Peak 2	Lin2		0.0339		457	500	-8.6	20.0
Technical Chlordane Peak 2	Lin2		0.0339		457	500	-8.6	20.0
Chlordane (technical) Peak 3	Lin2		0.1394		462	500	-7.6	20.0
Technical Chlordane Peak 3	Lin2		0.1394		462	500	-7.6	20.0
Chlordane (technical) Peak 4	Lin2		0.0703		444	500	-11.2	20.0
Technical Chlordane Peak 4	Lin2		0.0703		444	500	-11.2	20.0
Chlordane (technical) Peak 5	Lin2		0.0341		456	500	-8.8	20.0
Technical Chlordane Peak 5	Lin2		0.0341		456	500	-8.8	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/35 Calibration Date: 10/13/2018 21:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 030F3801.D

Analyte	RT	RT WINDOW	
		FROM	TO
Chlordane (technical) Peak 1	5.12	5.11	5.13
Technical Chlordane Peak 1	5.12	5.11	5.13
Chlordane (technical) Peak 2	5.59	5.58	5.61
Technical Chlordane Peak 2	5.59	5.58	5.61
Chlordane (technical) Peak 3	6.20	6.20	6.22
Technical Chlordane Peak 3	6.20	6.20	6.22
Chlordane (technical) Peak 4	6.34	6.33	6.36
Technical Chlordane Peak 4	6.34	6.33	6.36
Chlordane (technical) Peak 5	7.16	7.15	7.18
Technical Chlordane Peak 5	7.16	7.15	7.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\030F3801.D
Lims ID: ICV CHL
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:41:57 ALS Bottle#: 30 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV CHL
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:43:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1776097136	150.0	150.0	
2	2.838	2.839	-0.001	196652802	150.0	150.0	
13 Technical Chlordane							
1	5.118	5.122	-0.004	189670723	500.0	458.8	
1	5.587	5.593	-0.006	200383277	500.0	457.1	
1	6.203	6.209	-0.006	825125907	500.0	461.9	
1	6.343	6.346	-0.003	415930812	500.0	443.8	
1	7.159	7.164	-0.005	201652015	500.0	456.2	
		Average of Peak Amounts =				455.6	
2	4.996	4.999	-0.003	24331362	500.0	481.2	
2	5.522	5.527	-0.005	23531874	500.0	491.2	
2	6.130	6.134	-0.004	87306607	500.0	474.5	
2	6.287	6.291	-0.004	66792058	500.0	484.4	
2	7.237	7.242	-0.005	24136139	500.0	474.7	
		Average of Peak Amounts =				481.2	
						RPD = 5.47	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
14 Chlordane (technical)							
1	5.118	5.122	-0.004	189670723	500.0	458.8	
1	5.587	5.593	-0.006	200383277	500.0	457.1	
1	6.203	6.209	-0.006	825125907	500.0	461.9	
1	6.343	6.346	-0.003	415930812	500.0	443.8	
1	7.159	7.164	-0.005	201652015	500.0	456.2	
		Average of Peak Amounts =				455.6	
2	4.996	4.999	-0.003	24331362	500.0	481.2	
2	5.522	5.527	-0.005	23531874	500.0	491.2	
2	6.130	6.134	-0.004	87306607	500.0	474.5	
2	6.287	6.291	-0.004	66792058	500.0	484.4	
2	7.237	7.242	-0.005	24136139	500.0	474.7	
		Average of Peak Amounts =				481.2	
						RPD = 5.47	

Reagents:

8081ChlSSL3_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

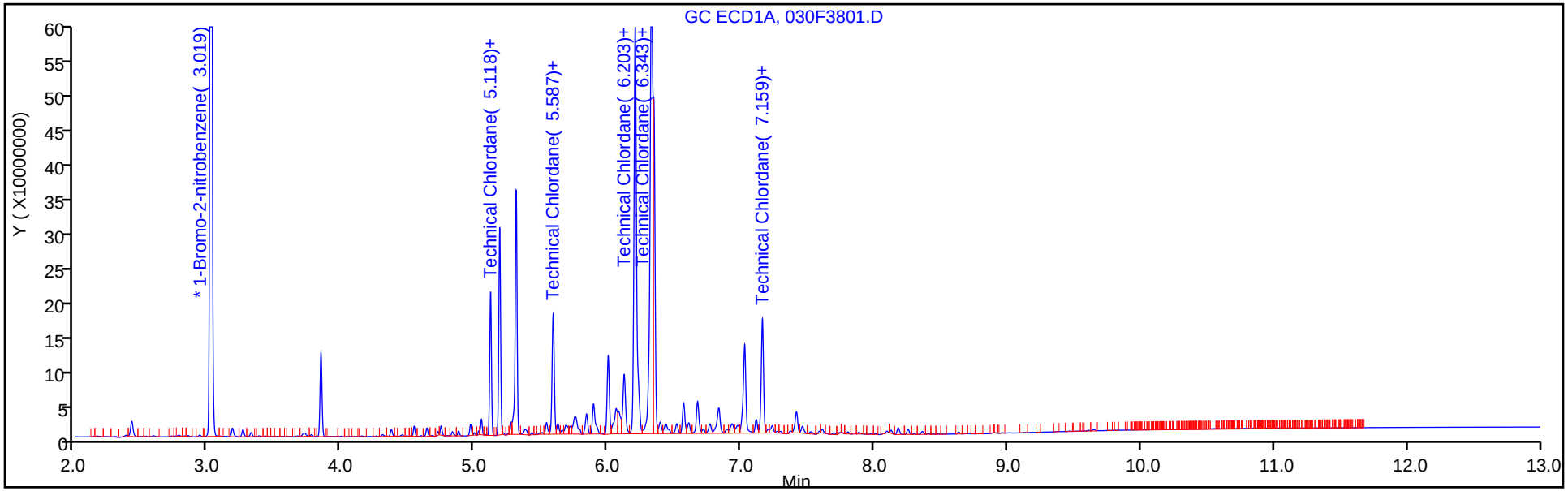
Report Date: 14-Oct-2018 22:12:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

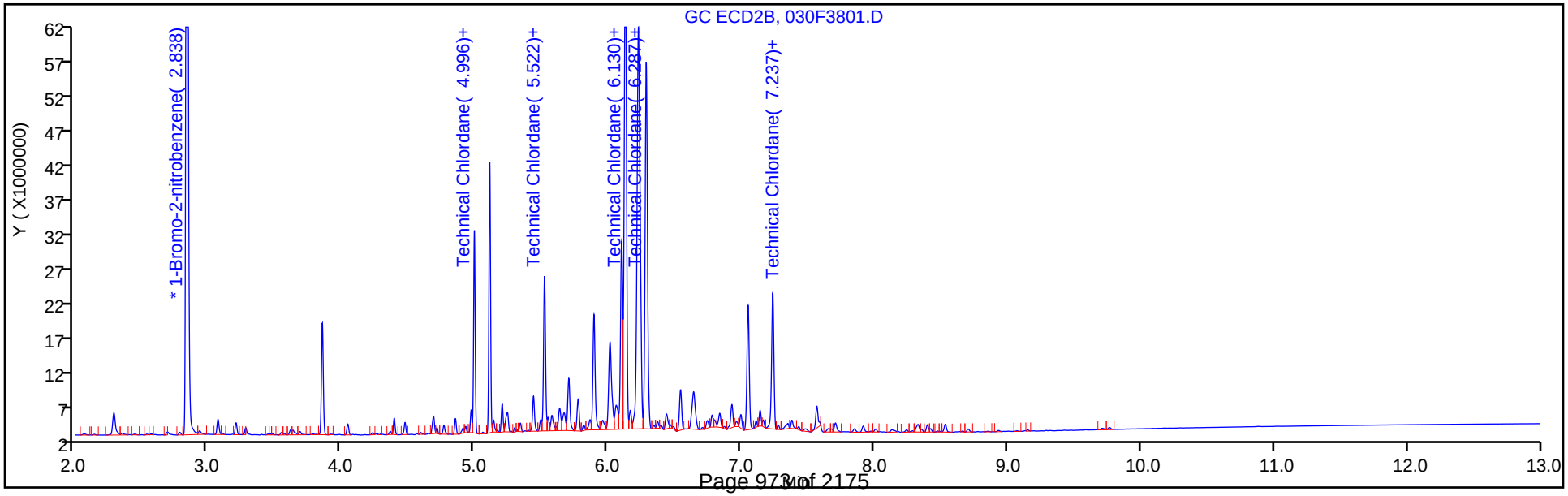
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\030F3801.D

Injection Date:	13-Oct-2018 21:41:57	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV CHL			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/35 Calibration Date: 10/13/2018 21:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 030F3801.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlordane (technical) Peak 1	Lin2		0.0371		481	500	-3.8	20.0
Technical Chlordane Peak 1	Lin2		0.0371		481	500	-3.8	20.0
Chlordane (technical) Peak 2	Lin2		0.0359		491	500	-1.8	20.0
Technical Chlordane Peak 2	Lin2		0.0359		491	500	-1.8	20.0
Chlordane (technical) Peak 3	Lin2		0.1332		474	500	-5.1	20.0
Technical Chlordane Peak 3	Lin2		0.1332		474	500	-5.1	20.0
Chlordane (technical) Peak 4	Lin2		0.1019		484	500	-3.1	20.0
Technical Chlordane Peak 4	Lin2		0.1019		484	500	-3.1	20.0
Chlordane (technical) Peak 5	Lin2		0.0368		475	500	-5.1	20.0
Technical Chlordane Peak 5	Lin2		0.0368		475	500	-5.1	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/35 Calibration Date: 10/13/2018 21:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 030F3801.D

Analyte	RT	RT WINDOW	
		FROM	TO
Chlordane (technical) Peak 1	5.00	4.99	5.01
Technical Chlordane Peak 1	5.00	4.99	5.01
Chlordane (technical) Peak 2	5.52	5.52	5.54
Technical Chlordane Peak 2	5.52	5.52	5.54
Chlordane (technical) Peak 3	6.13	6.12	6.15
Technical Chlordane Peak 3	6.13	6.12	6.15
Chlordane (technical) Peak 4	6.29	6.28	6.30
Technical Chlordane Peak 4	6.29	6.28	6.30
Chlordane (technical) Peak 5	7.24	7.23	7.25
Technical Chlordane Peak 5	7.24	7.23	7.25

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\030F3801.D
Lims ID: ICV CHL
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:41:57 ALS Bottle#: 30 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV CHL
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:43:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1776097136	150.0	150.0	
2	2.838	2.839	-0.001	196652802	150.0	150.0	
13 Technical Chlordane							
1	5.118	5.122	-0.004	189670723	500.0	458.8	
1	5.587	5.593	-0.006	200383277	500.0	457.1	
1	6.203	6.209	-0.006	825125907	500.0	461.9	
1	6.343	6.346	-0.003	415930812	500.0	443.8	
1	7.159	7.164	-0.005	201652015	500.0	456.2	
		Average of Peak Amounts =				455.6	
2	4.996	4.999	-0.003	24331362	500.0	481.2	
2	5.522	5.527	-0.005	23531874	500.0	491.2	
2	6.130	6.134	-0.004	87306607	500.0	474.5	
2	6.287	6.291	-0.004	66792058	500.0	484.4	
2	7.237	7.242	-0.005	24136139	500.0	474.7	
		Average of Peak Amounts =				481.2	
						RPD = 5.47	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
14 Chlordane (technical)							
1	5.118	5.122	-0.004	189670723	500.0	458.8	
1	5.587	5.593	-0.006	200383277	500.0	457.1	
1	6.203	6.209	-0.006	825125907	500.0	461.9	
1	6.343	6.346	-0.003	415930812	500.0	443.8	
1	7.159	7.164	-0.005	201652015	500.0	456.2	
		Average of Peak Amounts =				455.6	
2	4.996	4.999	-0.003	24331362	500.0	481.2	
2	5.522	5.527	-0.005	23531874	500.0	491.2	
2	6.130	6.134	-0.004	87306607	500.0	474.5	
2	6.287	6.291	-0.004	66792058	500.0	484.4	
2	7.237	7.242	-0.005	24136139	500.0	474.7	
		Average of Peak Amounts =				481.2	
						RPD = 5.47	

Reagents:

8081ChlSSL3_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

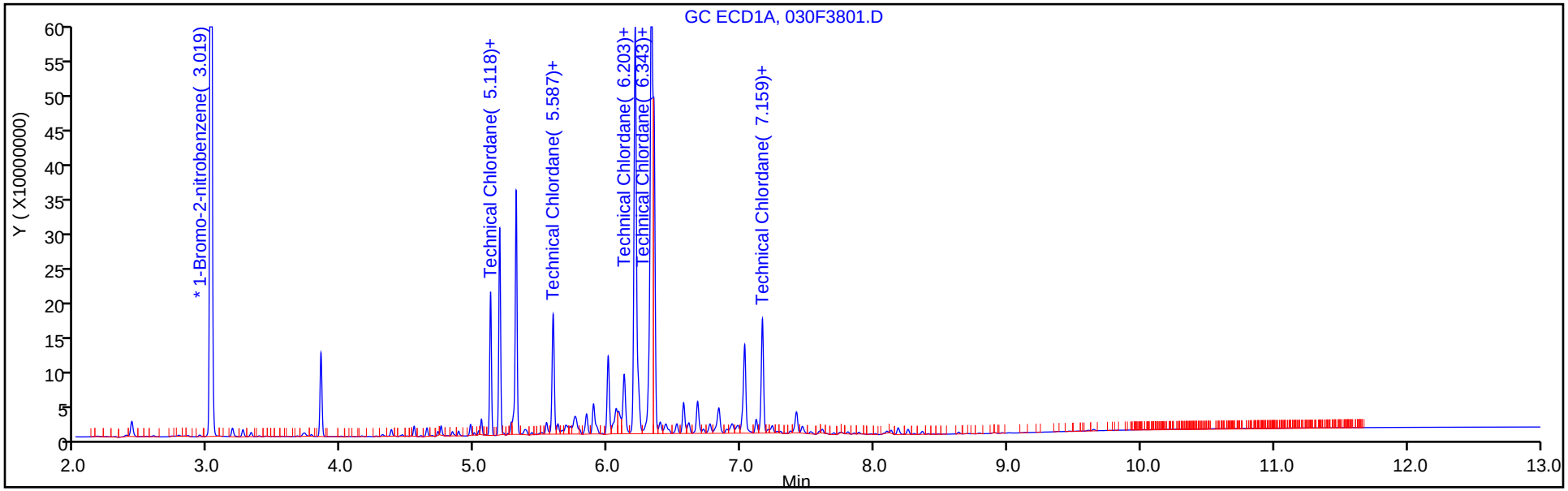
Report Date: 14-Oct-2018 22:12:15 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

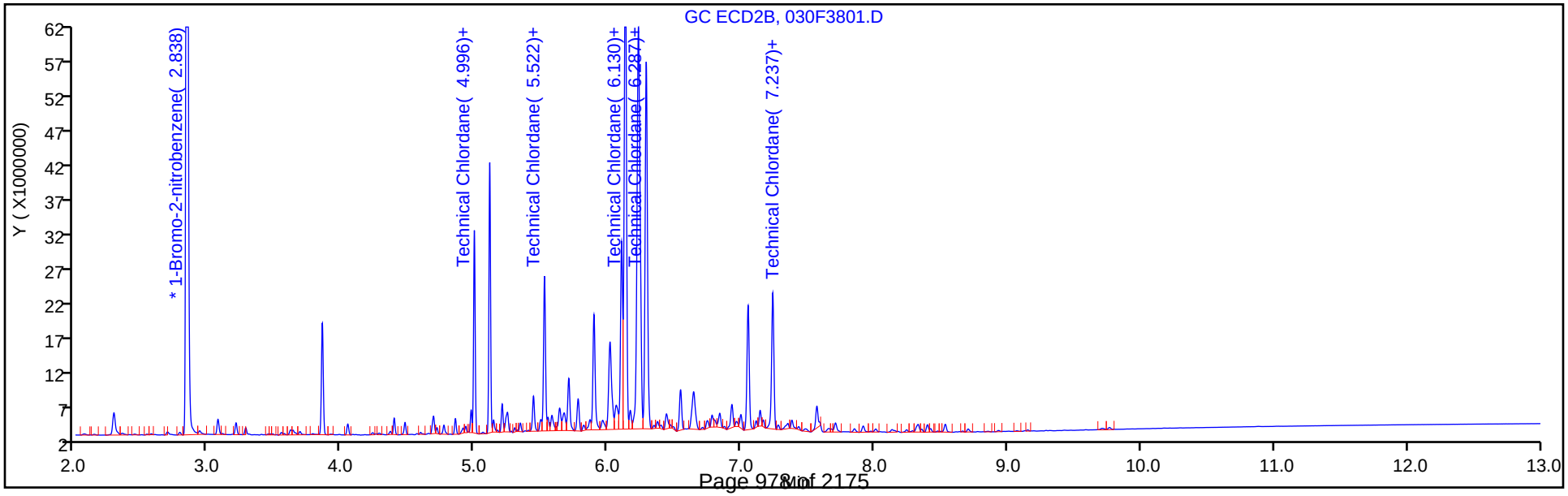
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\030F3801.D

Injection Date:	13-Oct-2018 21:41:57	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV CHL			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Lin2		1.602		24.4	25.0	-2.6	20.0
gamma-BHC (Lindane)	Lin2		1.376		24.4	25.0	-2.4	20.0
beta-BHC	Lin2		0.5291		24.0	25.0	-4.1	20.0
delta-BHC	Lin2		1.370		24.0	25.0	-4.1	20.0
Heptachlor	Lin2		1.251		25.0	25.0	0.0	20.0
Aldrin	Lin2		1.323		24.8	25.0	-0.8	20.0
Heptachlor epoxide	Lin2		1.117		24.5	25.0	-1.8	20.0
trans-Chlordane	Lin2		1.168		24.0	25.0	-4.2	20.0
cis-Chlordane	Lin2		1.114		23.9	25.0	-4.4	20.0
4,4'-DDE	Lin2		1.153		23.6	25.0	-5.6	20.0
Endosulfan I	Lin2		1.049		24.3	25.0	-2.6	20.0
Dieldrin	Lin2		1.192		25.0	25.0	-0.2	20.0
Endrin	Lin2		0.9895		23.9	25.0	-4.2	20.0
4,4'-DDD	Lin2		0.8973		23.7	25.0	-5.3	20.0
Endosulfan II	Lin2		0.9210		23.6	25.0	-5.6	20.0
4,4'-DDT	Lin2		0.7862		23.3	25.0	-6.6	20.0
Endrin aldehyde	Lin2		0.7035		23.5	25.0	-5.9	20.0
Methoxychlor	Lin2		0.3555		22.8	25.0	-8.8	20.0
Endosulfan sulfate	Lin2		0.8083		23.4	25.0	-6.3	20.0
Endrin ketone	Lin2		0.8377		23.1	25.0	-7.7	20.0
Tetrachloro-m-xylene	Lin2		1.029		23.5	25.0	-5.9	20.0
DCB Decachlorobiphenyl	Lin2		0.5203		22.8	25.0	-8.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	4.50	4.49	4.51
gamma-BHC (Lindane)	4.79	4.77	4.80
beta-BHC	4.86	4.85	4.87
delta-BHC	5.01	5.00	5.02
Heptachlor	5.19	5.18	5.20
Aldrin	5.46	5.45	5.47
Heptachlor epoxide	6.07	6.06	6.08
trans-Chlordane	6.20	6.19	6.22
cis-Chlordane	6.35	6.33	6.36
4,4'-DDE	6.42	6.41	6.43
Endosulfan I	6.50	6.48	6.51
Dieldrin	6.75	6.74	6.76
Endrin	7.00	6.99	7.01
4,4'-DDD	7.06	7.05	7.07
Endosulfan II	7.24	7.22	7.25
4,4'-DDT	7.35	7.34	7.36
Endrin aldehyde	7.68	7.67	7.69
Methoxychlor	7.86	7.85	7.87
Endosulfan sulfate	8.14	8.13	8.15
Endrin ketone	8.43	8.42	8.44
Tetrachloro-m-xylene	3.92	3.91	3.93
DCB Decachlorobiphenyl	9.45	9.43	9.46

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D
Lims ID: ICV AB
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:59:26 ALS Bottle#: 31 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1					100.0	96.7	
2					100.0	103.8	
						RPD = 7.09	
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1833818877	150.0	150.0	
2	2.837	2.839	-0.002	196779319	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	314378706	25.0	23.5	
2	3.822	3.823	-0.001	40975324	25.0	25.3	
						RPD = 7.22	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	344758382	25.0	24.6	
2	4.302	4.302	0.000	43428441	25.0	25.4	
						RPD = 3.35	
8 alpha-BHC							
1	4.497	4.497	0.000	489570974	25.0	24.4	
2	4.447	4.448	-0.001	57087109	25.0	26.0	
						RPD = 6.62	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	420459219	25.0	24.4	
2	4.762	4.761	0.001	50008117	25.0	26.3	
						RPD = 7.40	
10 beta-BHC							
1	4.862	4.862	0.000	161705438	25.0	24.0	
2	4.837	4.837	0.000	21403256	25.0	26.0	
						RPD = 8.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.011	5.010	0.001	418721510	25.0	24.0	
2	5.070	5.069	0.001	49051008	25.0	25.5	
						RPD = 6.09	
15 Heptachlor							
1	5.187	5.187	0.000	382406575	25.0	25.0	
2	5.112	5.112	0.000	43506261	25.0	26.4	
						RPD = 5.38	
16 Aldrin							
1	5.458	5.457	0.001	404243124	25.0	24.8	
2	5.384	5.383	0.001	46807354	25.0	26.4	
						RPD = 6.18	
18 Isodrin							
1	5.785	5.783	0.002	312070496	25.0	23.9	
2	5.750	5.749	0.001	38025211	25.0	25.0	
						RPD = 4.80	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	341495179	25.0	24.5	
2	5.932	5.931	0.001	42252977	25.0	26.0	
						RPD = 5.91	
22 trans-Chlordane							
1	6.204	6.204	0.000	357105555	25.0	24.0	
2	6.132	6.130	0.002	43276821	25.0	25.5	
						RPD = 6.23	
23 cis-Chlordane							
1	6.347	6.344	0.003	340403751	25.0	23.9	
2	6.287	6.286	0.001	41538812	25.0	25.8	
						RPD = 7.62	
24 4,4'-DDE							
1	6.422	6.421	0.001	352295573	25.0	23.6	
2	6.471	6.469	0.002	42170047	25.0	25.3	
						RPD = 6.99	
25 Endosulfan I							
1	6.496	6.494	0.002	320496682	25.0	24.3	
2	6.348	6.346	0.002	39747580	25.0	25.9	
						RPD = 6.24	
27 Dieldrin							
1	6.750	6.748	0.002	364318480	25.0	25.0	
2	6.641	6.639	0.002	44056375	25.0	26.2	
						RPD = 5.04	
30 Endrin							
1	6.998	6.997	0.001	302410533	25.0	23.9	
2	6.964	6.963	0.001	37475292	25.0	25.3	
						RPD = 5.64	
32 4,4'-DDD							
1	7.058	7.058	0.000	274241112	25.0	23.7	
2	7.089	7.089	0.000	33960824	25.0	25.0	
						RPD = 5.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.236	7.234	0.002	281476331	25.0	23.6	
2	7.192	7.190	0.002	36361969	25.0	25.1	
						RPD = 6.06	
35 4,4'-DDT							
1	7.353	7.352	0.001	240280393	25.0	23.3	
2	7.421	7.419	0.002	30504127	25.0	26.1	
						RPD = 11.22	
36 Endrin aldehyde							
1	7.681	7.679	0.002	215019147	25.0	23.5	
2	7.552	7.550	0.002	29378162	25.0	25.3	
						RPD = 7.44	
37 Methoxychlor							
1	7.857	7.857	0.000	108660913	25.0	22.8	
2	8.152	8.150	0.002	14100142	25.0	24.2	
						RPD = 6.10	
38 Mirex							
1	8.017	8.016	0.001	154479193	25.0	20.2	
2	8.346	8.344	0.002	24486294	25.0	24.7	
						RPD = 20.27	
39 Endosulfan sulfate							
1	8.139	8.138	0.001	247058157	25.0	23.4	
2	7.843	7.841	0.002	33389158	25.0	25.2	
						RPD = 7.25	
40 Endrin ketone							
1	8.432	8.429	0.003	256015167	25.0	23.1	
2	8.398	8.396	0.002	36099125	25.0	24.8	
						RPD = 7.26	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	159008498	25.0	22.8	
2	9.669	9.668	0.001	23458218	25.0	24.3	
						RPD = 6.44	
S 3 Endosulfan, Total							
1					75.0	71.4	
2					75.0	76.2	
						RPD = 6.51	

Reagents:

8081ABICVL3_00035	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

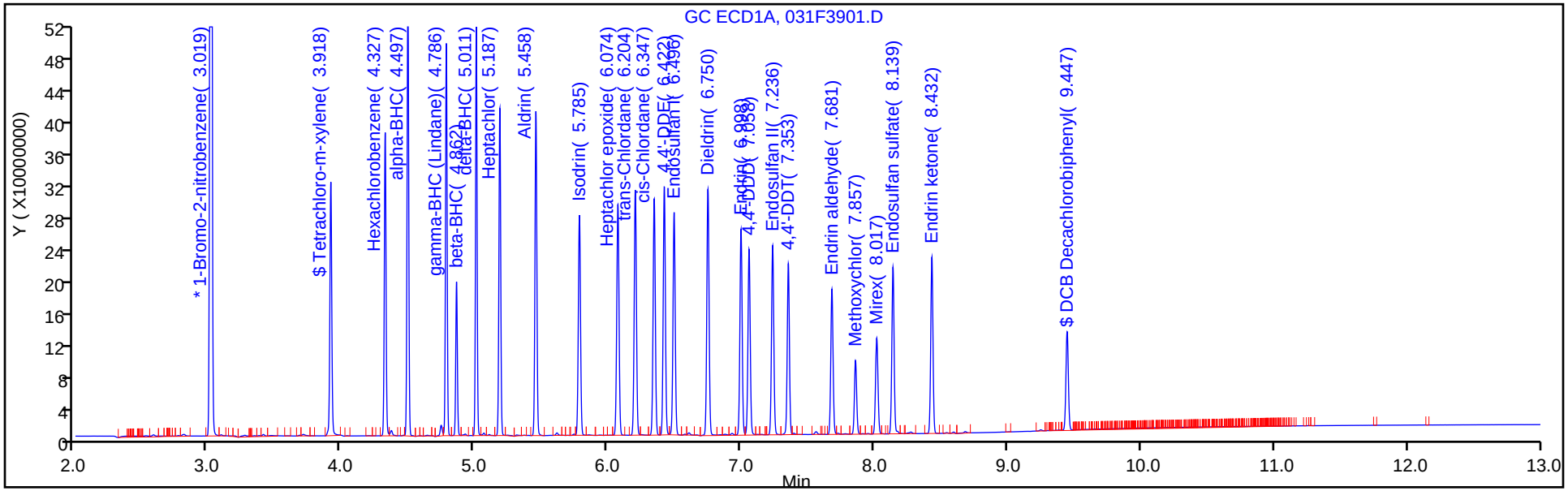
Report Date: 14-Oct-2018 22:12:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

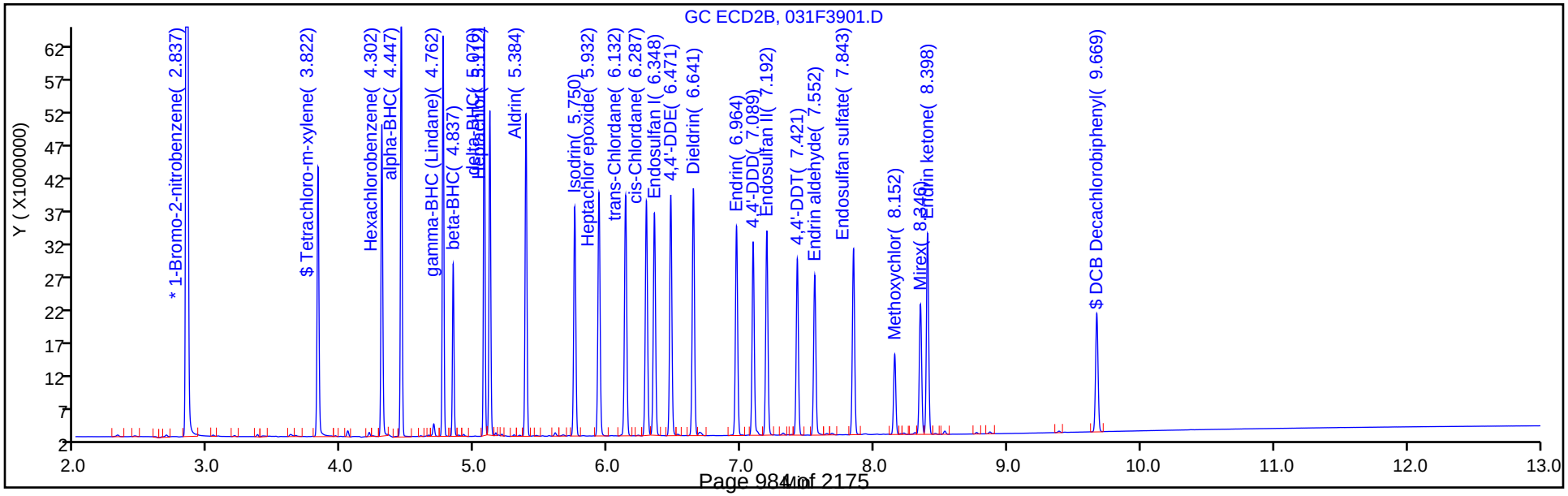
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D

Injection Date:	13-Oct-2018 21:59:26	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Lin2		1.741		26.0	25.0	4.1	20.0
gamma-BHC (Lindane)	Lin2		1.525		26.3	25.0	5.1	20.0
beta-BHC	Lin2		0.6526		26.0	25.0	4.1	20.0
delta-BHC	Lin2		1.496		25.5	25.0	1.9	20.0
Heptachlor	Lin2		1.327		26.4	25.0	5.6	20.0
Aldrin	Lin2		1.427		26.4	25.0	5.5	20.0
Heptachlor epoxide	Lin2		1.288		26.0	25.0	4.2	20.0
trans-Chlordane	Lin2		1.320		25.5	25.0	2.0	20.0
cis-Chlordane	Lin2		1.267		25.8	25.0	3.2	20.0
Endosulfan I	Lin2		1.212		25.9	25.0	3.6	20.0
4,4'-DDE	Lin2		1.286		25.3	25.0	1.3	20.0
Dieldrin	Lin2		1.343		26.2	25.0	5.0	20.0
Endrin	Lin2		1.143		25.3	25.0	1.3	20.0
4,4'-DDD	Lin2		1.036		25.0	25.0	0.1	20.0
Endosulfan II	Lin2		1.109		25.1	25.0	0.3	20.0
4,4'-DDT	Lin2		0.9301		26.1	25.0	4.5	20.0
Endrin aldehyde	Lin2		0.8958		25.3	25.0	1.3	20.0
Endosulfan sulfate	Lin2		1.018		25.2	25.0	0.8	20.0
Methoxychlor	Lin2		0.4299		24.2	25.0	-3.1	20.0
Endrin ketone	Lin2		1.101		24.8	25.0	-0.8	20.0
Tetrachloro-m-xylene	Lin2		1.249		25.3	25.0	1.2	20.0
DCB Decachlorobiphenyl	Lin2		0.7153		24.3	25.0	-2.8	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	4.45	4.44	4.46
gamma-BHC (Lindane)	4.76	4.75	4.77
beta-BHC	4.84	4.83	4.85
delta-BHC	5.07	5.06	5.08
Heptachlor	5.11	5.10	5.12
Aldrin	5.38	5.37	5.40
Heptachlor epoxide	5.93	5.92	5.94
trans-Chlordane	6.13	6.12	6.14
cis-Chlordane	6.29	6.27	6.30
Endosulfan I	6.35	6.33	6.36
4,4'-DDE	6.47	6.46	6.48
Dieldrin	6.64	6.63	6.65
Endrin	6.96	6.95	6.98
4,4'-DDD	7.09	7.08	7.10
Endosulfan II	7.19	7.18	7.20
4,4'-DDT	7.42	7.41	7.43
Endrin aldehyde	7.55	7.54	7.56
Endosulfan sulfate	7.84	7.83	7.85
Methoxychlor	8.15	8.14	8.16
Endrin ketone	8.40	8.38	8.41
Tetrachloro-m-xylene	3.82	3.81	3.84
DCB Decachlorobiphenyl	9.67	9.66	9.68

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D
Lims ID: ICV AB
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:59:26 ALS Bottle#: 31 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1					100.0	96.7	
2					100.0	103.8	
						RPD = 7.09	
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1833818877	150.0	150.0	
2	2.837	2.839	-0.002	196779319	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	314378706	25.0	23.5	
2	3.822	3.823	-0.001	40975324	25.0	25.3	
						RPD = 7.22	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	344758382	25.0	24.6	
2	4.302	4.302	0.000	43428441	25.0	25.4	
						RPD = 3.35	
8 alpha-BHC							
1	4.497	4.497	0.000	489570974	25.0	24.4	
2	4.447	4.448	-0.001	57087109	25.0	26.0	
						RPD = 6.62	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	420459219	25.0	24.4	
2	4.762	4.761	0.001	50008117	25.0	26.3	
						RPD = 7.40	
10 beta-BHC							
1	4.862	4.862	0.000	161705438	25.0	24.0	
2	4.837	4.837	0.000	21403256	25.0	26.0	
						RPD = 8.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.011	5.010	0.001	418721510	25.0	24.0	
2	5.070	5.069	0.001	49051008	25.0	25.5	
						RPD = 6.09	
15 Heptachlor							
1	5.187	5.187	0.000	382406575	25.0	25.0	
2	5.112	5.112	0.000	43506261	25.0	26.4	
						RPD = 5.38	
16 Aldrin							
1	5.458	5.457	0.001	404243124	25.0	24.8	
2	5.384	5.383	0.001	46807354	25.0	26.4	
						RPD = 6.18	
18 Isodrin							
1	5.785	5.783	0.002	312070496	25.0	23.9	
2	5.750	5.749	0.001	38025211	25.0	25.0	
						RPD = 4.80	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	341495179	25.0	24.5	
2	5.932	5.931	0.001	42252977	25.0	26.0	
						RPD = 5.91	
22 trans-Chlordane							
1	6.204	6.204	0.000	357105555	25.0	24.0	
2	6.132	6.130	0.002	43276821	25.0	25.5	
						RPD = 6.23	
23 cis-Chlordane							
1	6.347	6.344	0.003	340403751	25.0	23.9	
2	6.287	6.286	0.001	41538812	25.0	25.8	
						RPD = 7.62	
24 4,4'-DDE							
1	6.422	6.421	0.001	352295573	25.0	23.6	
2	6.471	6.469	0.002	42170047	25.0	25.3	
						RPD = 6.99	
25 Endosulfan I							
1	6.496	6.494	0.002	320496682	25.0	24.3	
2	6.348	6.346	0.002	39747580	25.0	25.9	
						RPD = 6.24	
27 Dieldrin							
1	6.750	6.748	0.002	364318480	25.0	25.0	
2	6.641	6.639	0.002	44056375	25.0	26.2	
						RPD = 5.04	
30 Endrin							
1	6.998	6.997	0.001	302410533	25.0	23.9	
2	6.964	6.963	0.001	37475292	25.0	25.3	
						RPD = 5.64	
32 4,4'-DDD							
1	7.058	7.058	0.000	274241112	25.0	23.7	
2	7.089	7.089	0.000	33960824	25.0	25.0	
						RPD = 5.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.236	7.234	0.002	281476331	25.0	23.6	
2	7.192	7.190	0.002	36361969	25.0	25.1	
						RPD = 6.06	
35 4,4'-DDT							
1	7.353	7.352	0.001	240280393	25.0	23.3	
2	7.421	7.419	0.002	30504127	25.0	26.1	
						RPD = 11.22	
36 Endrin aldehyde							
1	7.681	7.679	0.002	215019147	25.0	23.5	
2	7.552	7.550	0.002	29378162	25.0	25.3	
						RPD = 7.44	
37 Methoxychlor							
1	7.857	7.857	0.000	108660913	25.0	22.8	
2	8.152	8.150	0.002	14100142	25.0	24.2	
						RPD = 6.10	
38 Mirex							
1	8.017	8.016	0.001	154479193	25.0	20.2	
2	8.346	8.344	0.002	24486294	25.0	24.7	
						RPD = 20.27	
39 Endosulfan sulfate							
1	8.139	8.138	0.001	247058157	25.0	23.4	
2	7.843	7.841	0.002	33389158	25.0	25.2	
						RPD = 7.25	
40 Endrin ketone							
1	8.432	8.429	0.003	256015167	25.0	23.1	
2	8.398	8.396	0.002	36099125	25.0	24.8	
						RPD = 7.26	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	159008498	25.0	22.8	
2	9.669	9.668	0.001	23458218	25.0	24.3	
						RPD = 6.44	
S 3 Endosulfan, Total							
1					75.0	71.4	
2					75.0	76.2	
						RPD = 6.51	

Reagents:

8081ABICVL3_00035	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

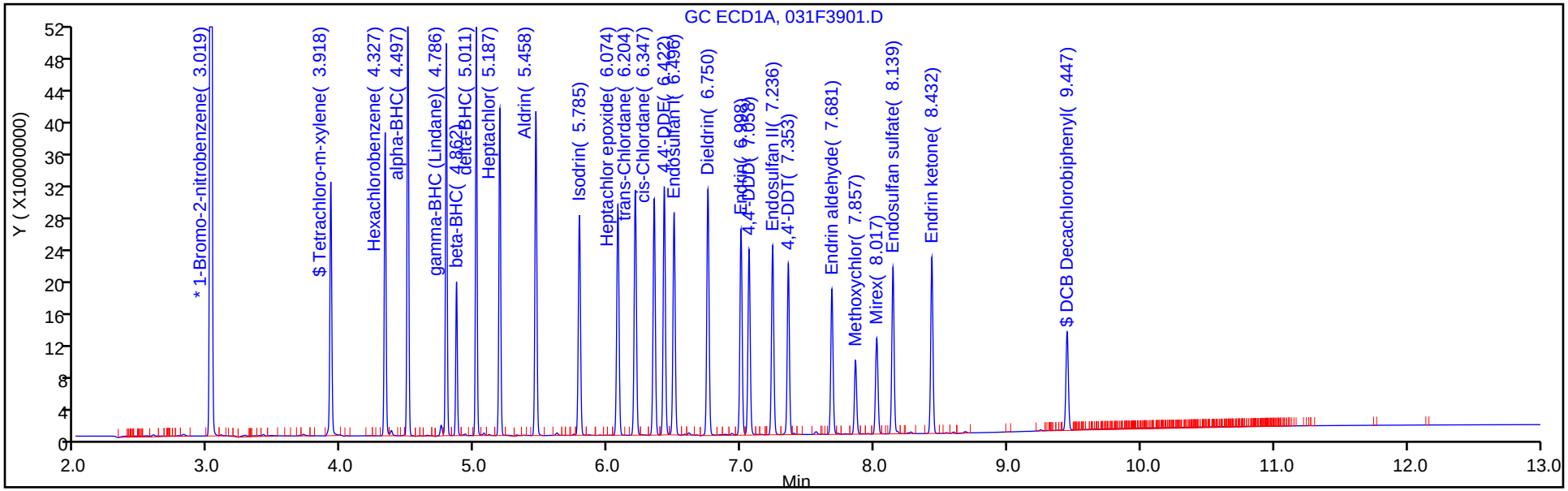
Report Date: 14-Oct-2018 22:12:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

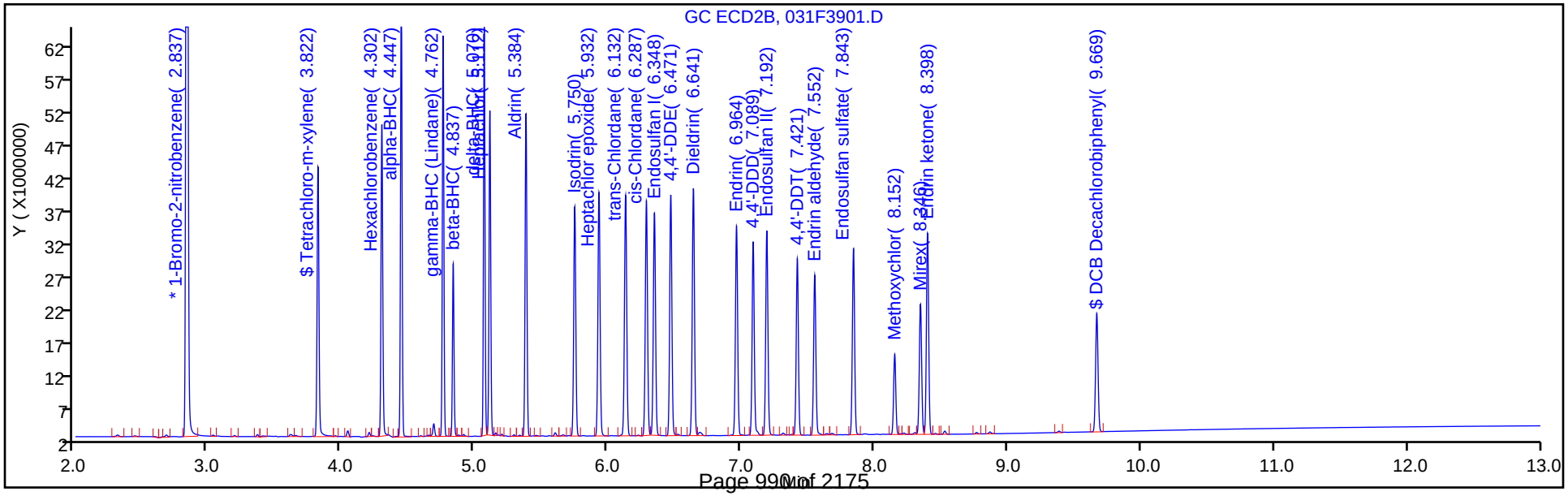
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D

Injection Date:	13-Oct-2018 21:59:26	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/11 Calibration Date: 11/21/2018 14:47

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210011.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0069		2010	2000	0.7	20.0
Toxaphene Peak 2	Lin2		0.0179		2050	2000	2.4	20.0
Toxaphene Peak 3	Lin2		0.0234		2390	2000	19.4	20.0
Toxaphene Peak 4	Lin2		0.0092		2340	2000	16.8	20.0
Toxaphene Peak 5	Lin2		0.0103		2590	2000	29.6*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/11 Calibration Date: 11/21/2018 14:47

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.21	6.20	6.22
Toxaphene Peak 2	6.82	6.80	6.83
Toxaphene Peak 3	7.49	7.48	7.50
Toxaphene Peak 4	7.85	7.84	7.86
Toxaphene Peak 5	8.16	8.15	8.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210011.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 14:47:19 ALS Bottle#: 5 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076442-011
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:33 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:16:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1640372383	150.0	150.0	
2	2.805	2.805	0.000	214552845	150.0	150.0	
28 Toxaphene							M
1	6.210	6.210	0.000	150587113	2000.0	2013.4	M
1	6.815	6.815	0.000	392045043	2000.0	2047.5	M
1	7.488	7.488	0.000	512011410	2000.0	2388.1	M
1	7.847	7.847	0.000	201172874	2000.0	2336.4	M
1	8.164	8.164	0.000	225082418	2000.0	2592.4	M
		Average of Peak Amounts =				2275.6	
2	5.725	5.725	0.000	12723192	2000.0	1924.7	
2	7.077	7.077	0.000	62171597	2000.0	2095.3	
2	7.218	7.218	0.000	140901415	2000.0	1719.5	
2	7.732	7.732	0.000	48863815	2000.0	2084.5	
2	8.026	8.026	0.000	93792199	2000.0	2050.5	
		Average of Peak Amounts =				1974.9	
						RPD = 14.15	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

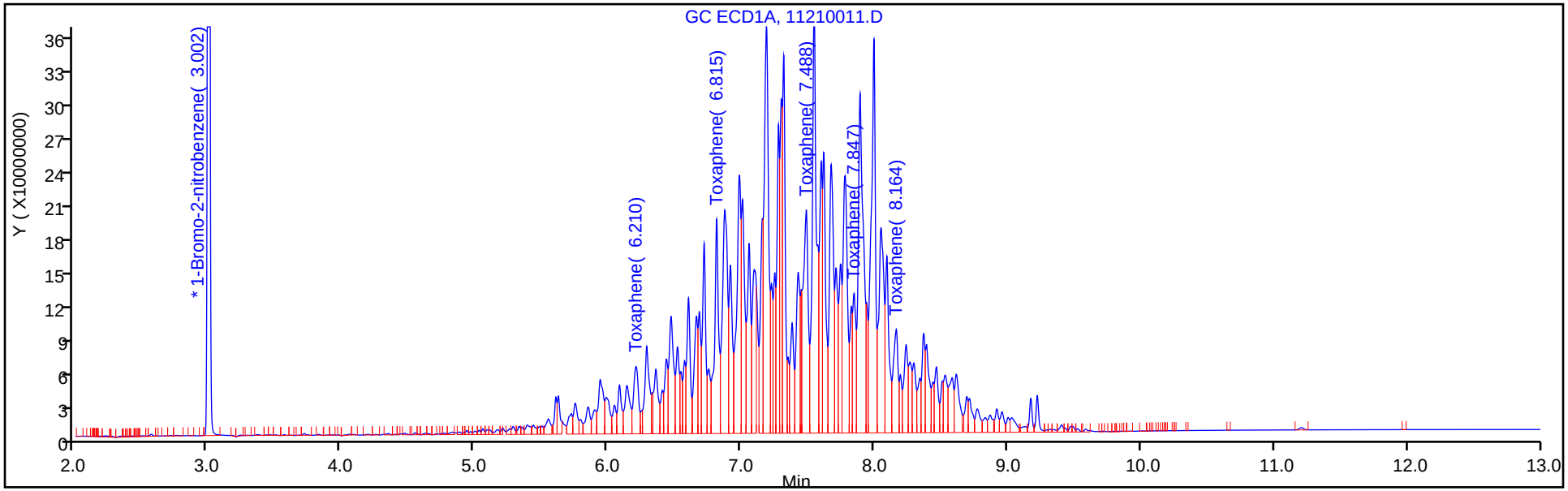
Report Date: 25-Nov-2018 21:25:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

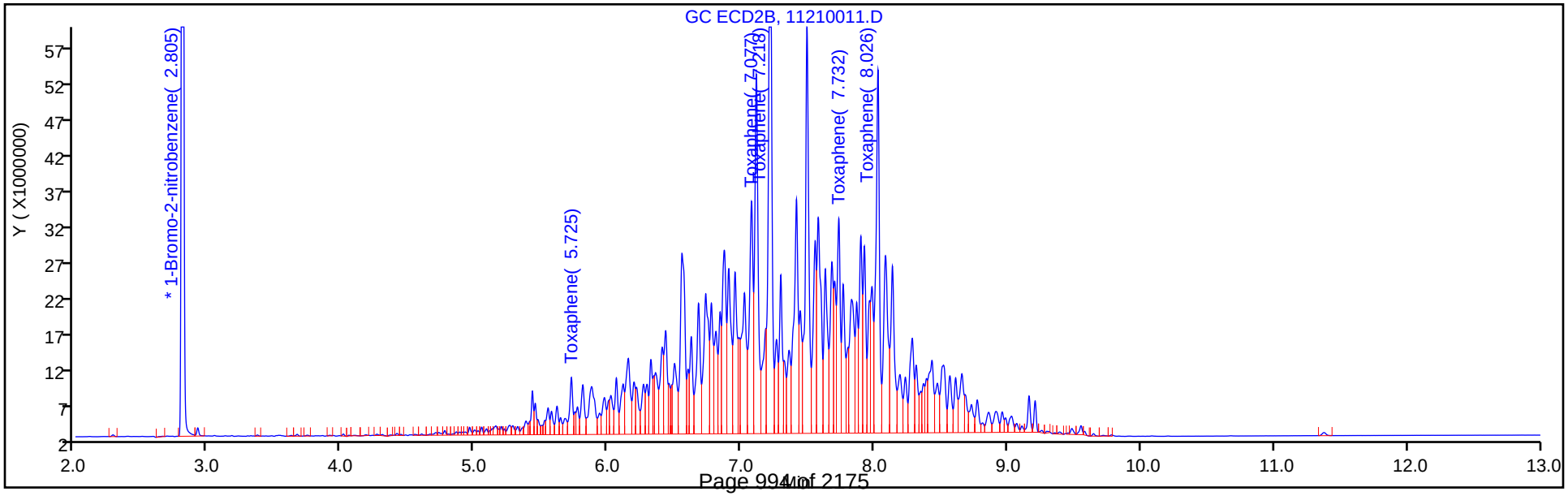
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210011.D

Injection Date:	21-Nov-2018 14:47:19	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



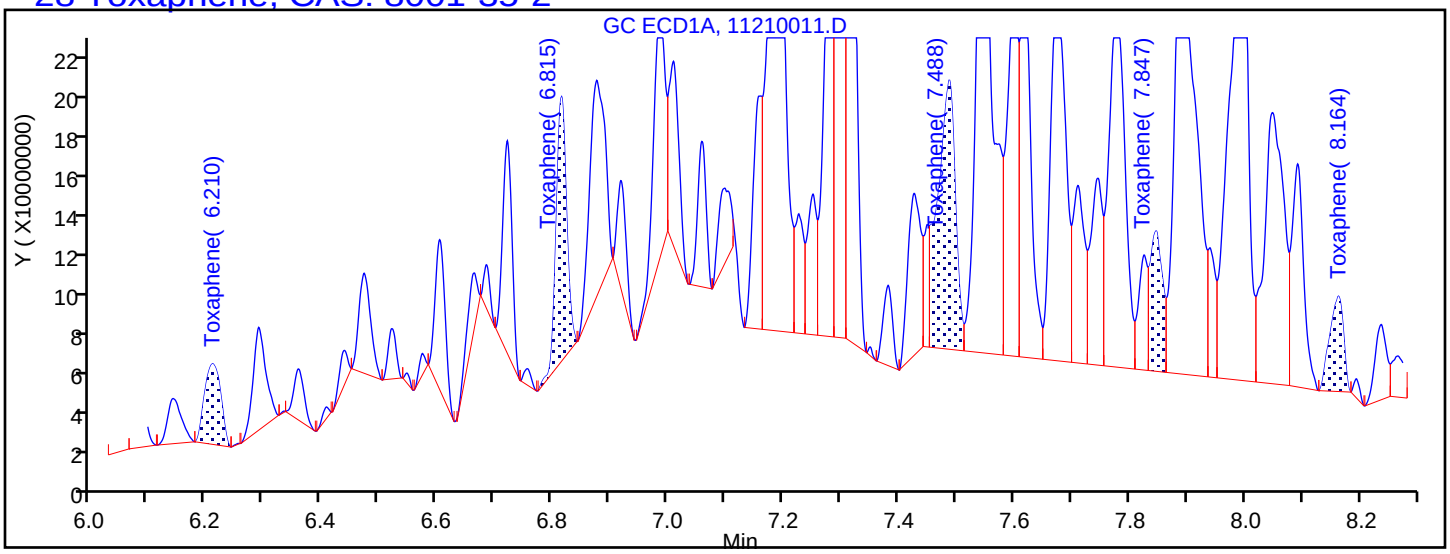
Report Date: 25-Nov-2018 21:25:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210011.D

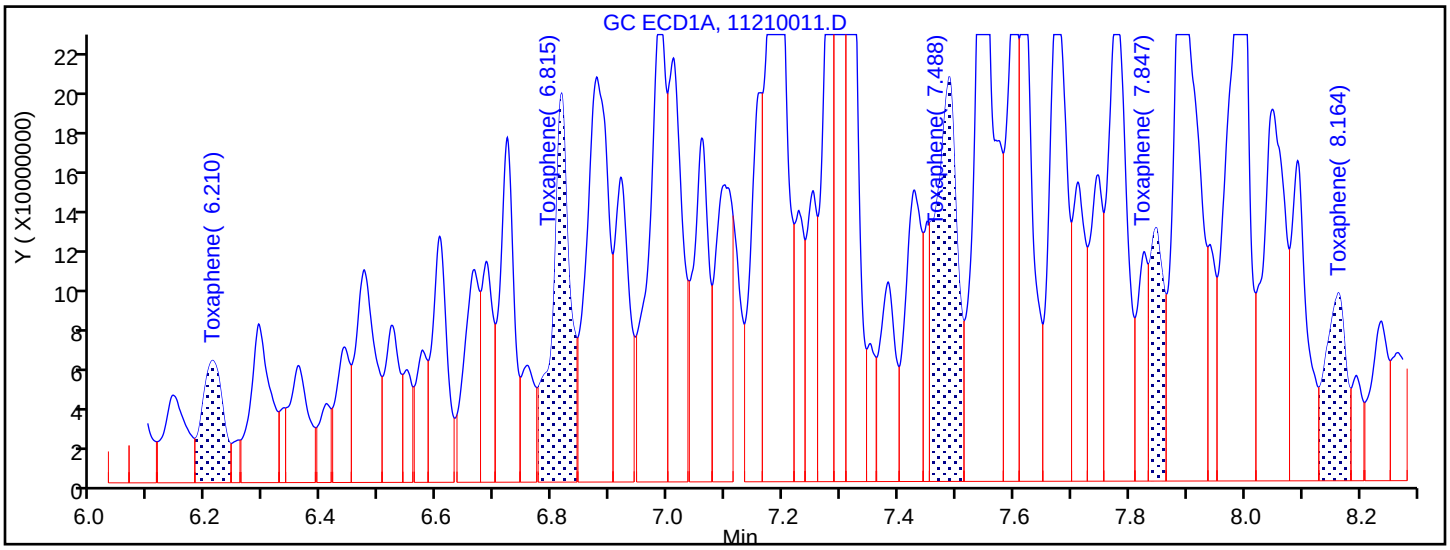
Injection Date:	21-Nov-2018 14:47:19	Instrument ID:	SGC_P2		
Lims ID:	CCV TOX				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	5	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP1 (0.32 mm)	Detector	GC ECD1A		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.210	Response = 75273774
6.815	Response = 159617270
7.488	Response = 276523604
7.847	Response = 100484301
8.164	Response = 75395564



Manual Integration Results

6.210	Response = 150587113	M
6.815	Response = 392045043	M
7.488	Response = 512011410	M
7.847	Response = 201172874	M
8.164	Response = 225082418	M

Reviewer: mooret, 25-Nov-2018 21:03:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/11 Calibration Date: 11/21/2018 14:47

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210011.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0045		1920	2000	-3.8	20.0
Toxaphene Peak 2	Lin2		0.0217		2100	2000	4.8	20.0
Toxaphene Peak 3	Lin2		0.0493		1720	2000	-14.0	20.0
Toxaphene Peak 4	Lin2		0.0171		2080	2000	4.2	20.0
Toxaphene Peak 5	Lin2		0.0328		2050	2000	2.5	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/11 Calibration Date: 11/21/2018 14:47

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.73	5.71	5.74
Toxaphene Peak 2	7.08	7.07	7.09
Toxaphene Peak 3	7.22	7.21	7.23
Toxaphene Peak 4	7.73	7.72	7.74
Toxaphene Peak 5	8.03	8.01	8.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210011.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 14:47:19 ALS Bottle#: 5 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076442-011
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:33 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:16:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1640372383	150.0	150.0	
2	2.805	2.805	0.000	214552845	150.0	150.0	
28 Toxaphene							M
1	6.210	6.210	0.000	150587113	2000.0	2013.4	M
1	6.815	6.815	0.000	392045043	2000.0	2047.5	M
1	7.488	7.488	0.000	512011410	2000.0	2388.1	M
1	7.847	7.847	0.000	201172874	2000.0	2336.4	M
1	8.164	8.164	0.000	225082418	2000.0	2592.4	M
		Average of Peak Amounts =				2275.6	
2	5.725	5.725	0.000	12723192	2000.0	1924.7	
2	7.077	7.077	0.000	62171597	2000.0	2095.3	
2	7.218	7.218	0.000	140901415	2000.0	1719.5	
2	7.732	7.732	0.000	48863815	2000.0	2084.5	
2	8.026	8.026	0.000	93792199	2000.0	2050.5	
		Average of Peak Amounts =				1974.9	
						RPD = 14.15	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

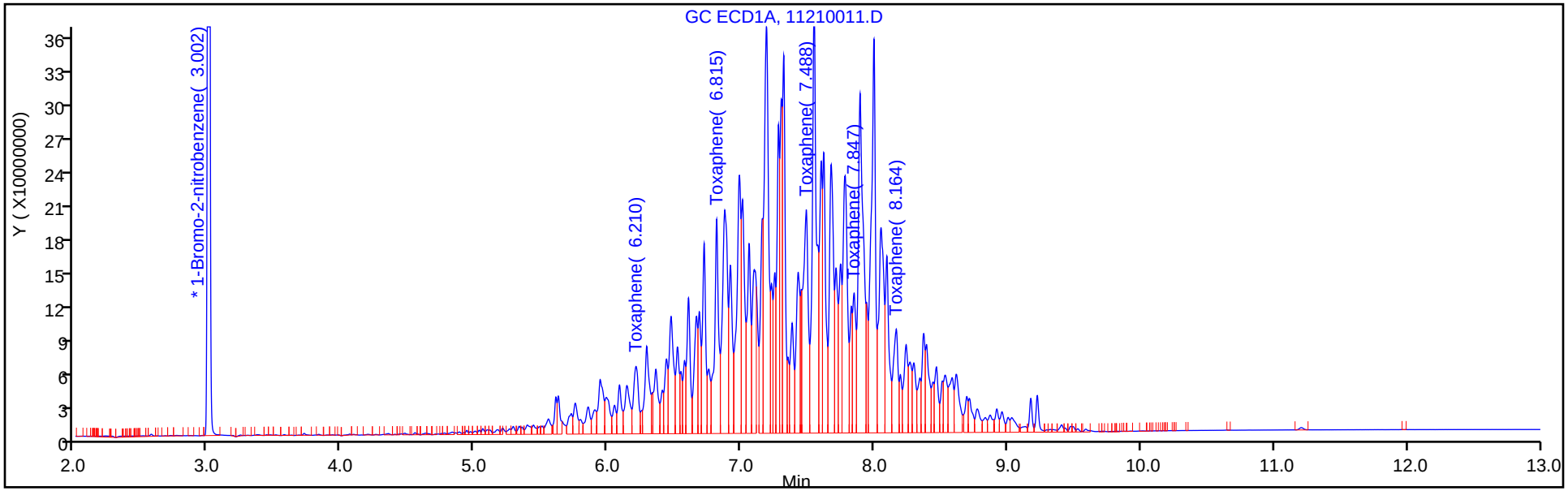
Report Date: 25-Nov-2018 21:25:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

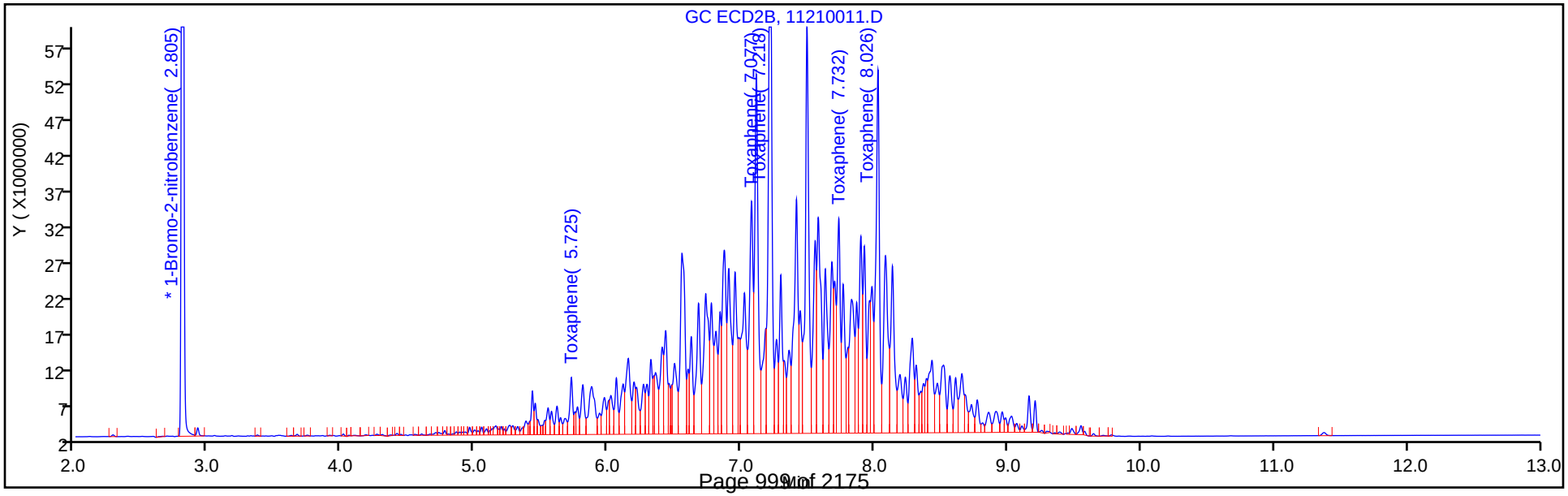
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210011.D

Injection Date:	21-Nov-2018 14:47:19	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/12 Calibration Date: 11/21/2018 15:04

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210012.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlordane (technical) Peak 1	Lin2		0.0361		1030	1000	2.8	20.0
Technical Chlordane Peak 1	Lin2		0.0361		1030	1000	2.8	20.0
Chlordane (technical) Peak 2	Lin2		0.0380		1020	1000	2.2	20.0
Technical Chlordane Peak 2	Lin2		0.0380		1020	1000	2.2	20.0
Chlordane (technical) Peak 3	Lin2		0.1553		1020	1000	2.0	20.0
Technical Chlordane Peak 3	Lin2		0.1553		1020	1000	2.0	20.0
Chlordane (technical) Peak 4	Lin2		0.0800		1000	1000	0.4	20.0
Technical Chlordane Peak 4	Lin2		0.0800		1000	1000	0.4	20.0
Chlordane (technical) Peak 5	Lin2		0.0427		1130	1000	13.2	20.0
Technical Chlordane Peak 5	Lin2		0.0427		1130	1000	13.2	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/12 Calibration Date: 11/21/2018 15:04

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Chlordane (technical) Peak 1	5.10	5.09	5.11
Technical Chlordane Peak 1	5.10	5.09	5.11
Chlordane (technical) Peak 2	5.56	5.55	5.57
Technical Chlordane Peak 2	5.56	5.55	5.57
Chlordane (technical) Peak 3	6.17	6.16	6.18
Technical Chlordane Peak 3	6.17	6.16	6.18
Chlordane (technical) Peak 4	6.31	6.30	6.32
Technical Chlordane Peak 4	6.31	6.30	6.32
Chlordane (technical) Peak 5	7.13	7.11	7.14
Technical Chlordane Peak 5	7.13	7.11	7.14

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210012.D
Lims ID: CCV CHL
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 15:04:53 ALS Bottle#: 6 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV CHL
Misc. Info.: 280-0076442-012
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:38 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:17:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1623525182	150.0	150.0	
2	2.805	2.805	0.000	211524365	150.0	150.0	
14 Chlordane (technical)							Ma
1	5.097	5.097	0.000	390516504	1000.0	1027.7	
1	5.562	5.562	0.000	411639748	1000.0	1021.6	
1	6.172	6.172	0.000	1681294519	1000.0	1019.8	
1	6.311	6.311	0.000	865776846	1000.0	1004.1	M
1	7.125	7.125	0.000	462345975	1000.0	1132.5	
		Average of Peak Amounts =				1041.1	
2	4.960	4.960	0.000	55178023	1000.0	1022.8	
2	5.479	5.479	0.000	51860371	1000.0	1021.4	
2	6.074	6.074	0.000	198662947	1000.0	1007.2	
2	6.231	6.231	0.000	150988307	1000.0	1024.5	
2	7.174	7.174	0.000	64067808	1000.0	1166.0	
		Average of Peak Amounts =				1048.4	
						RPD = 0.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							Ma
1	5.097	5.097	0.000	390516504	1000.0	1027.7	
1	5.562	5.562	0.000	411639748	1000.0	1021.6	
1	6.172	6.172	0.000	1681294519	1000.0	1019.8	
1	6.311	6.311	0.000	865776846	1000.0	1004.1	M
1	7.125	7.125	0.000	462345975	1000.0	1132.5	
		Average of Peak Amounts =				1041.1	
2	4.960	4.960	0.000	55178023	1000.0	1022.8	
2	5.479	5.479	0.000	51860371	1000.0	1021.4	
2	6.074	6.074	0.000	198662947	1000.0	1007.2	
2	6.231	6.231	0.000	150988307	1000.0	1024.5	
2	7.174	7.174	0.000	64067808	1000.0	1166.0	
		Average of Peak Amounts =				1048.4	
						RPD = 0.70	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8081ChlorL4_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

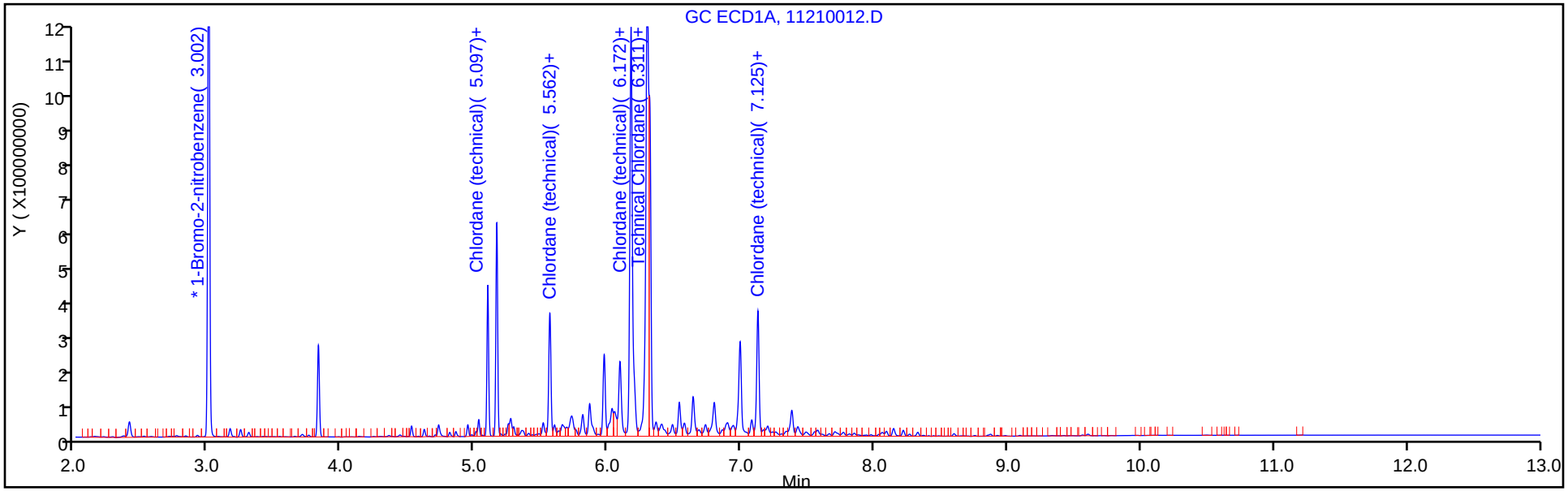
Report Date: 25-Nov-2018 21:25:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

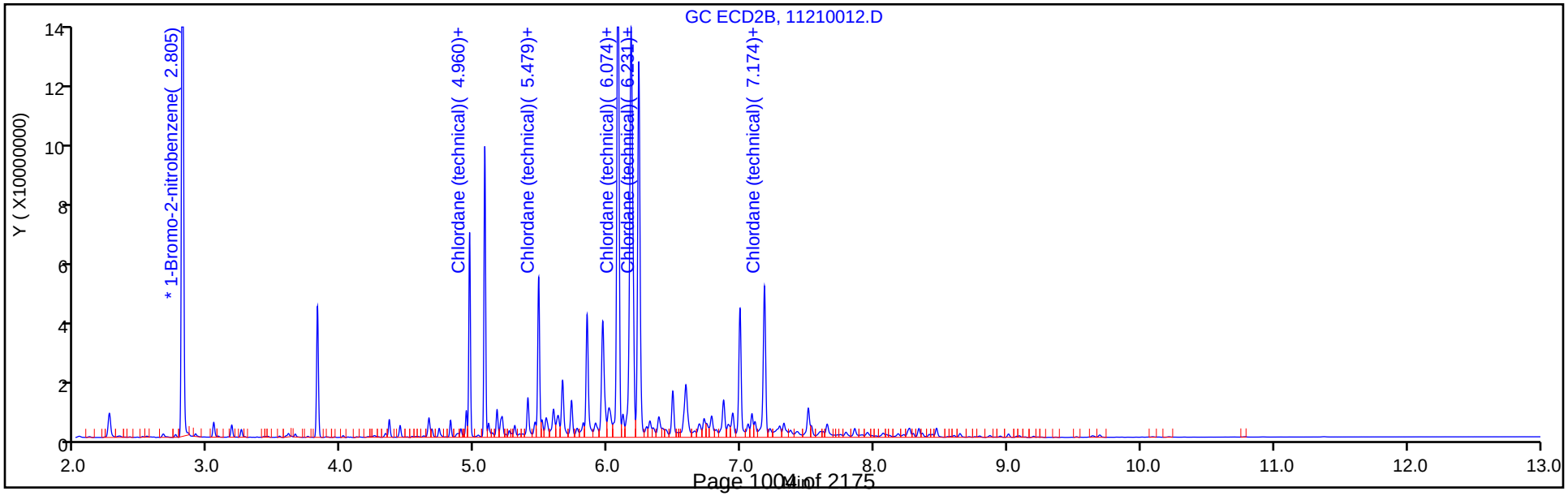
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210012.D

Injection Date:	21-Nov-2018 15:04:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV CHL			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



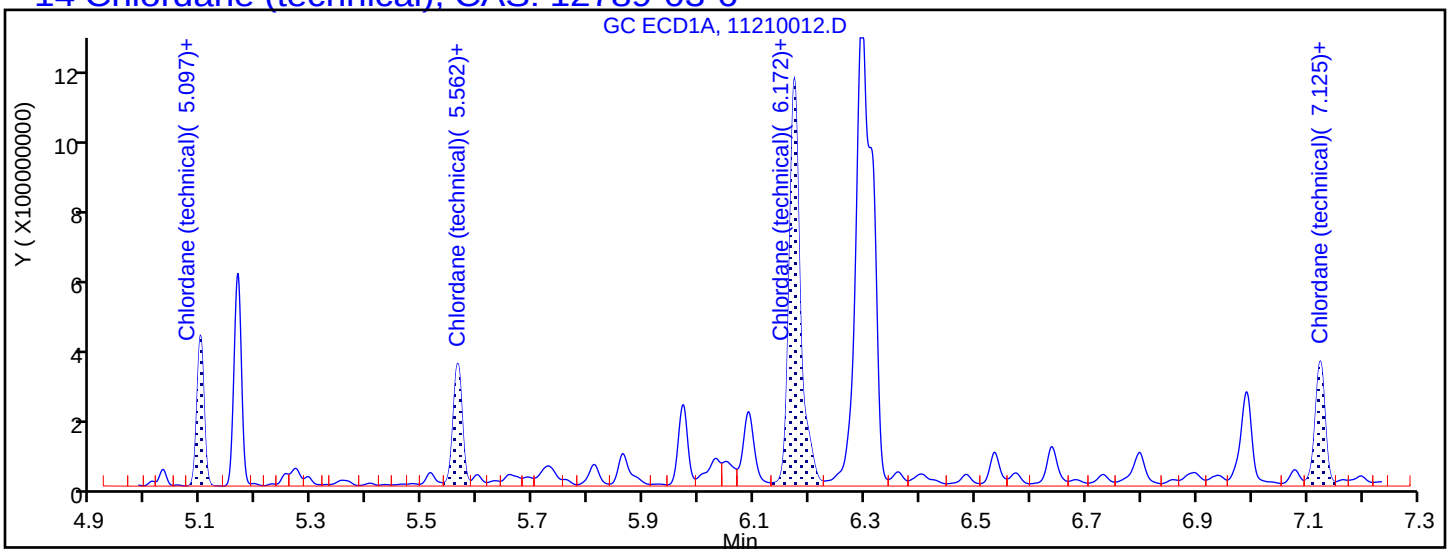
Report Date: 25-Nov-2018 21:25:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210012.D

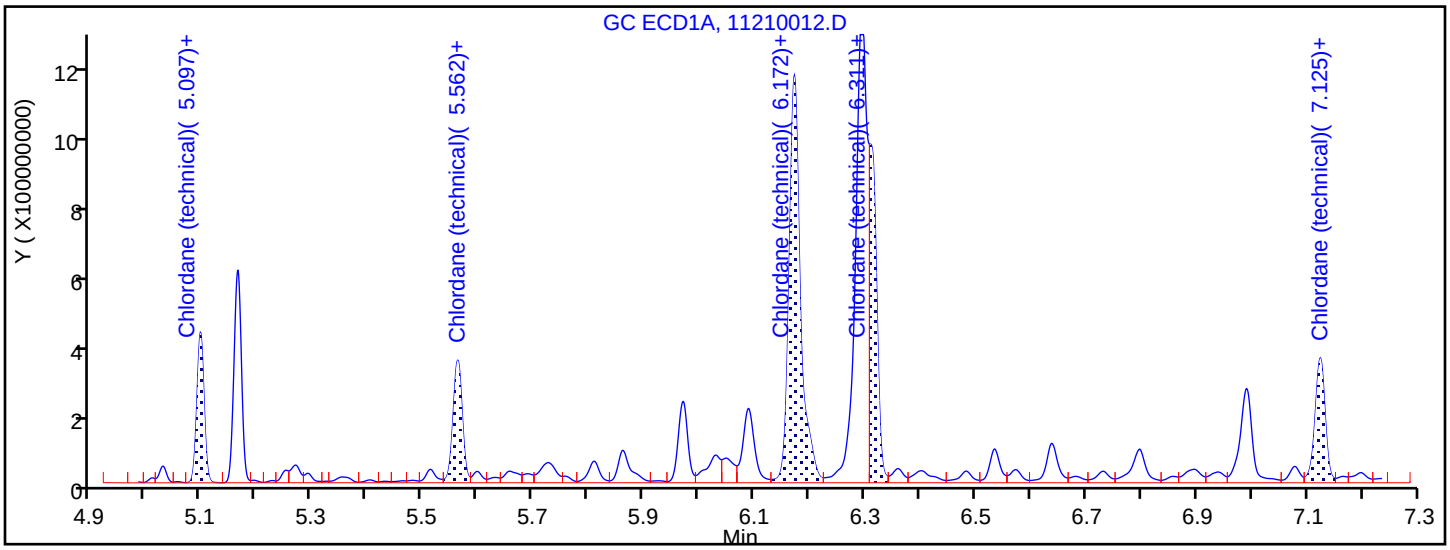
Injection Date:	21-Nov-2018 15:04:53	Instrument ID:	SGC_P2		
Lims ID:	CCV CHL				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	6	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP1 (0.32 mm)	Detector	GC ECD1A		

14 Chlordane (technical), CAS: 12789-03-6



Processing Integration Results

5.097	Response = 390516504
5.562	Response = 411639748
6.172	Response = 1681294519
6.311	Response = 0
7.125	Response = 462345975



Manual Integration Results

5.097	Response = 390516504	
5.562	Response = 411639748	
6.172	Response = 1681294519	
6.311	Response = 865776846	M
7.125	Response = 462345975	

Reviewer: mooret, 25-Nov-2018 21:04:32

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

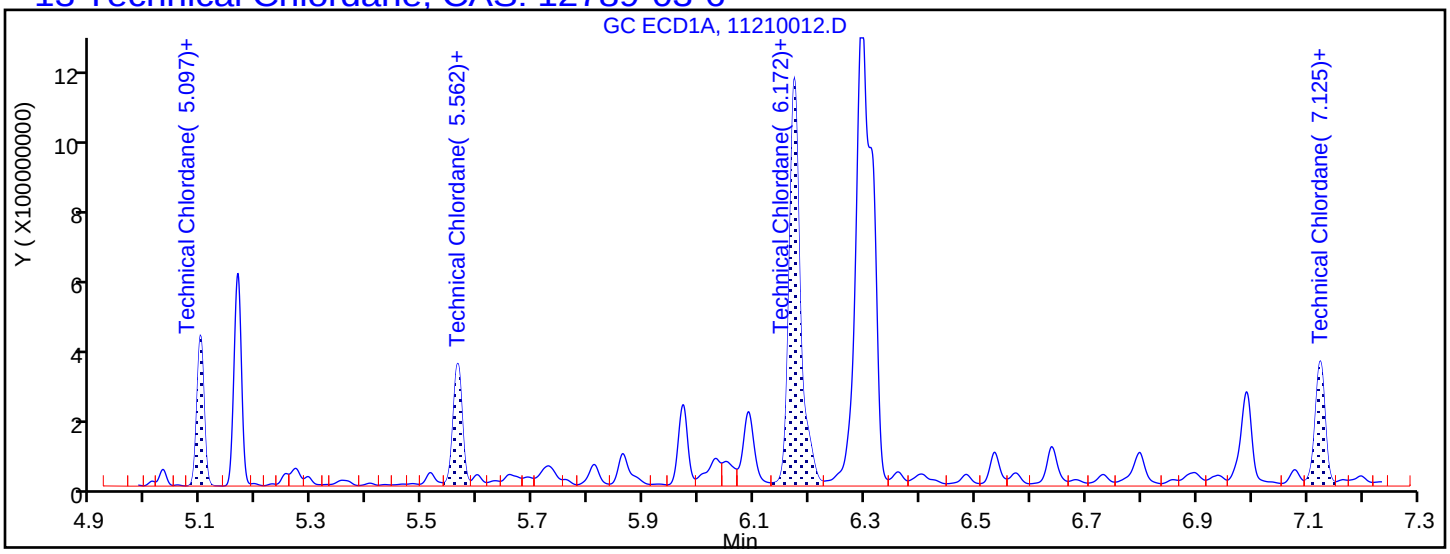
Report Date: 25-Nov-2018 21:25:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210012.D

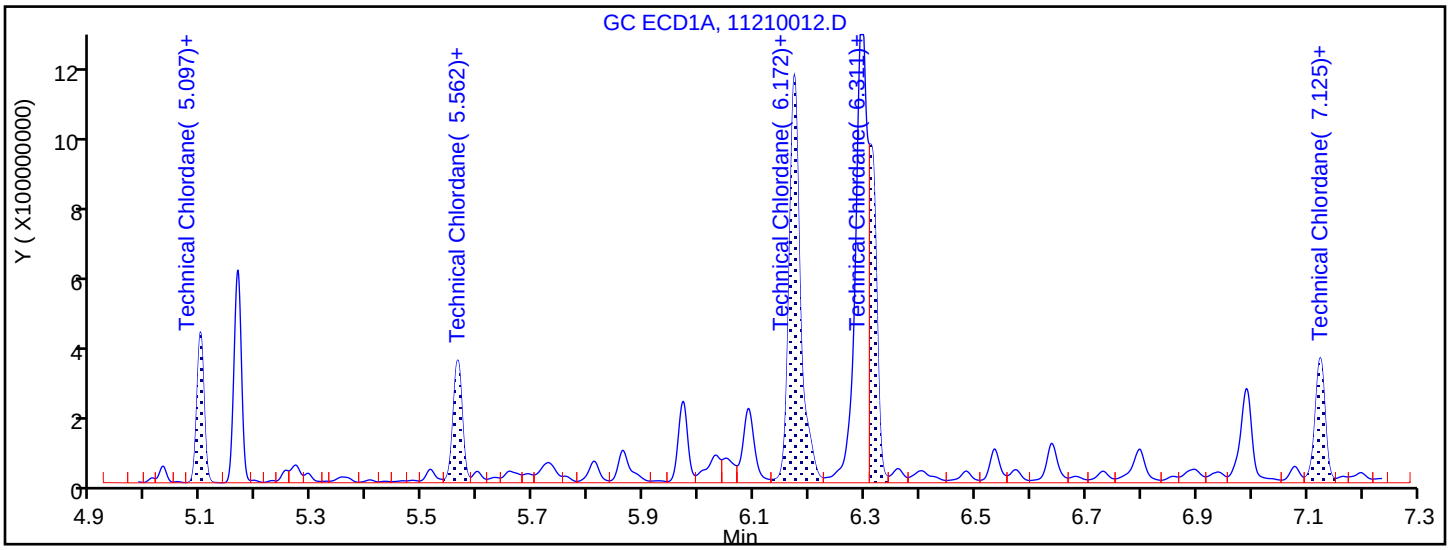
Injection Date:	21-Nov-2018 15:04:53	Instrument ID:	SGC_P2		
Lims ID:	CCV CHL				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	6	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP1 (0.32 mm)	Detector	GC ECD1A		

13 Technical Chlordane, CAS: 12789-03-6



Processing Integration Results

5.097	Response = 390516504
5.562	Response = 411639748
6.172	Response = 1681294519
6.311	Response = 0
7.125	Response = 462345975



Manual Integration Results

5.097	Response = 390516504	
5.562	Response = 411639748	
6.172	Response = 1681294519	
6.311	Response = 865776846	M
7.125	Response = 462345975	

Reviewer: mooret, 25-Nov-2018 21:04:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/12 Calibration Date: 11/21/2018 15:04

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210012.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlordane (technical) Peak 1	Lin2		0.0391		1020	1000	2.3	20.0
Technical Chlordane Peak 1	Lin2		0.0391		1020	1000	2.3	20.0
Chlordane (technical) Peak 2	Lin2		0.0368		1020	1000	2.1	20.0
Technical Chlordane Peak 2	Lin2		0.0368		1020	1000	2.1	20.0
Chlordane (technical) Peak 3	Lin2		0.1409		1010	1000	0.7	20.0
Technical Chlordane Peak 3	Lin2		0.1409		1010	1000	0.7	20.0
Chlordane (technical) Peak 4	Lin2		0.1071		1020	1000	2.5	20.0
Technical Chlordane Peak 4	Lin2		0.1071		1020	1000	2.5	20.0
Chlordane (technical) Peak 5	Lin2		0.0454		1170	1000	16.6	20.0
Technical Chlordane Peak 5	Lin2		0.0454		1170	1000	16.6	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/12 Calibration Date: 11/21/2018 15:04

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Chlordane (technical) Peak 1	4.96	4.95	4.97
Technical Chlordane Peak 1	4.96	4.95	4.97
Chlordane (technical) Peak 2	5.48	5.47	5.49
Technical Chlordane Peak 2	5.48	5.47	5.49
Chlordane (technical) Peak 3	6.07	6.06	6.09
Technical Chlordane Peak 3	6.07	6.06	6.09
Chlordane (technical) Peak 4	6.23	6.22	6.24
Technical Chlordane Peak 4	6.23	6.22	6.24
Chlordane (technical) Peak 5	7.17	7.16	7.19
Technical Chlordane Peak 5	7.17	7.16	7.19

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210012.D
Lims ID: CCV CHL
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 15:04:53 ALS Bottle#: 6 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV CHL
Misc. Info.: 280-0076442-012
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:38 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:17:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1623525182	150.0	150.0	
2	2.805	2.805	0.000	211524365	150.0	150.0	
14 Chlordane (technical)							Ma
1	5.097	5.097	0.000	390516504	1000.0	1027.7	
1	5.562	5.562	0.000	411639748	1000.0	1021.6	
1	6.172	6.172	0.000	1681294519	1000.0	1019.8	
1	6.311	6.311	0.000	865776846	1000.0	1004.1	M
1	7.125	7.125	0.000	462345975	1000.0	1132.5	
		Average of Peak Amounts =				1041.1	
2	4.960	4.960	0.000	55178023	1000.0	1022.8	
2	5.479	5.479	0.000	51860371	1000.0	1021.4	
2	6.074	6.074	0.000	198662947	1000.0	1007.2	
2	6.231	6.231	0.000	150988307	1000.0	1024.5	
2	7.174	7.174	0.000	64067808	1000.0	1166.0	
		Average of Peak Amounts =				1048.4	
						RPD = 0.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							Ma
1	5.097	5.097	0.000	390516504	1000.0	1027.7	
1	5.562	5.562	0.000	411639748	1000.0	1021.6	
1	6.172	6.172	0.000	1681294519	1000.0	1019.8	
1	6.311	6.311	0.000	865776846	1000.0	1004.1	M
1	7.125	7.125	0.000	462345975	1000.0	1132.5	
		Average of Peak Amounts =				1041.1	
2	4.960	4.960	0.000	55178023	1000.0	1022.8	
2	5.479	5.479	0.000	51860371	1000.0	1021.4	
2	6.074	6.074	0.000	198662947	1000.0	1007.2	
2	6.231	6.231	0.000	150988307	1000.0	1024.5	
2	7.174	7.174	0.000	64067808	1000.0	1166.0	
		Average of Peak Amounts =				1048.4	
						RPD = 0.70	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8081ChlorL4_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

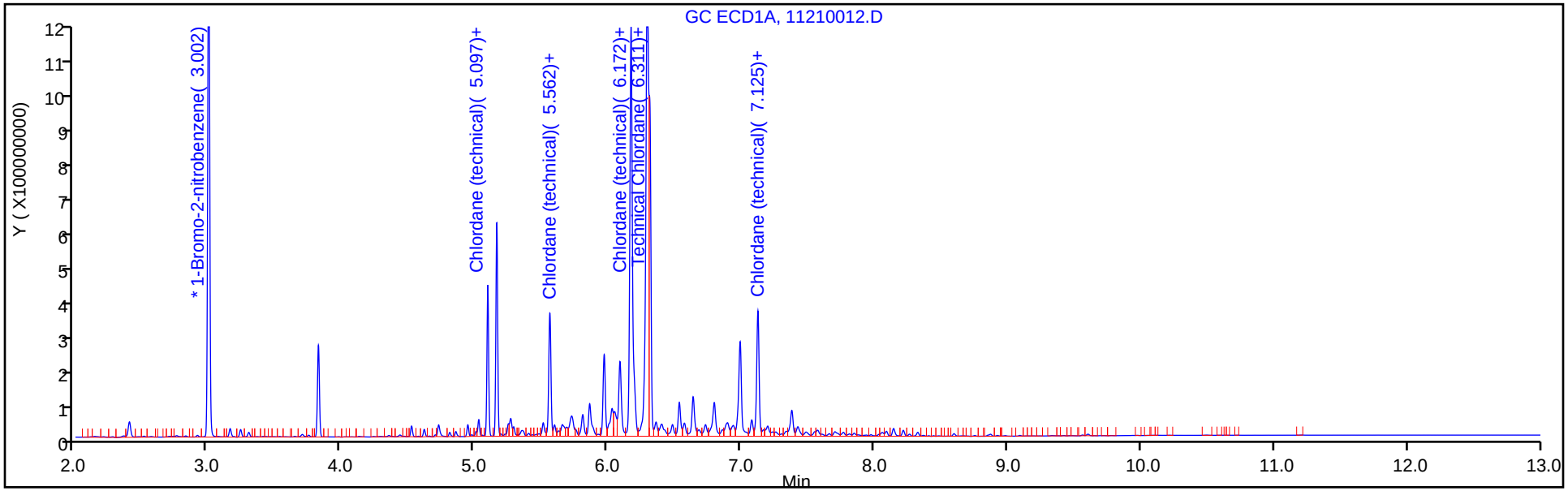
Report Date: 25-Nov-2018 21:25:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

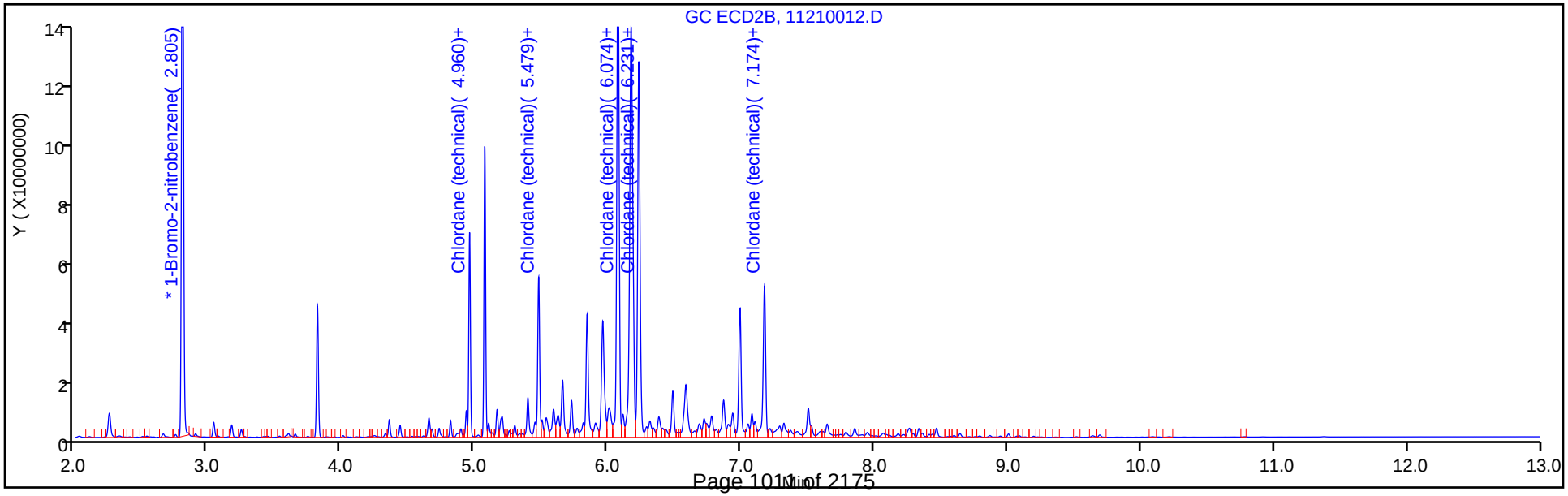
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210012.D

Injection Date:	21-Nov-2018 15:04:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV CHL			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-438443/13 Calibration Date: 11/21/2018 15:22

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Lin2		1.650		49.4	50.0	-1.1	20.0
gamma-BHC (Lindane)	Lin2		1.429		50.2	50.0	0.4	20.0
beta-BHC	Lin2		0.5479		50.1	50.0	0.2	20.0
delta-BHC	Lin2		1.454		50.2	50.0	0.4	20.0
Heptachlor	Lin2		1.289		51.1	50.0	2.1	20.0
Aldrin	Lin2		1.386		51.4	50.0	2.8	20.0
Heptachlor epoxide	Lin2		1.168		51.0	50.0	2.1	20.0
trans-Chlordane	Lin2		1.255		51.0	50.0	2.0	20.0
cis-Chlordane	Lin2		1.200		51.0	50.0	2.0	20.0
4,4'-DDE	Lin2		1.215		49.2	50.0	-1.6	20.0
Endosulfan I	Lin2		1.127		52.1	50.0	4.2	20.0
Dieldrin	Lin2		1.262		52.4	50.0	4.9	20.0
Endrin	Lin2		1.190		56.9	50.0	13.8	20.0
4,4'-DDD	Lin2		1.004		52.4	50.0	4.9	20.0
Endosulfan II	Lin2		1.077		54.8	50.0	9.7	20.0
4,4'-DDT	Lin2		0.998		58.1	50.0	16.2	20.0
Endrin aldehyde	Lin2		0.8577		57.1	50.0	14.2	20.0
Methoxychlor	Lin2		0.4824		61.7	50.0	23.4*	20.0
Endosulfan sulfate	Lin2		1.043		60.0	50.0	19.9	20.0
Endrin ketone	Lin2		1.098		60.0	50.0	20.1*	20.0
Tetrachloro-m-xylene	Lin2		1.071		48.6	50.0	-2.8	20.0
DCB Decachlorobiphenyl	Lin2		0.6915		60.8	50.0	21.6*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-438443/13 Calibration Date: 11/21/2018 15:22

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210013.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.75	4.78
beta-BHC	4.84	4.83	4.85
delta-BHC	4.99	4.98	5.00
Heptachlor	5.17	5.15	5.18
Aldrin	5.43	5.42	5.45
Heptachlor epoxide	6.04	6.03	6.05
trans-Chlordane	6.17	6.16	6.18
cis-Chlordane	6.31	6.30	6.33
4,4'-DDE	6.39	6.38	6.40
Endosulfan I	6.46	6.45	6.47
Dieldrin	6.72	6.70	6.73
Endrin	6.96	6.95	6.98
4,4'-DDD	7.03	7.01	7.04
Endosulfan II	7.20	7.19	7.21
4,4'-DDT	7.32	7.31	7.33
Endrin aldehyde	7.65	7.63	7.66
Methoxychlor	7.82	7.81	7.84
Endosulfan sulfate	8.10	8.09	8.11
Endrin ketone	8.39	8.38	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.41	9.40	9.42

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 21-Nov-2018 15:22:35 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076442-013
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:18:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1637310131	150.0	150.0	
2	2.805	2.805	0.000	216780072	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.899	3.899	0.000	584592009	50.0	48.6	
2	3.786	3.786	0.000	86095511	50.0	48.8	
						RPD = 0.47	
5 Hexachlorobenzene							
1	4.306	4.306	0.000	620781996	50.0	49.3	
2	4.265	4.265	0.000	91114443	50.0	49.0	
						RPD = 0.71	
8 alpha-BHC							
1	4.477	4.477	0.000	900406425	50.0	49.4	
2	4.410	4.410	0.000	119099529	50.0	49.6	
						RPD = 0.28	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	779935593	50.0	50.2	
2	4.724	4.724	0.000	103019252	50.0	49.3	
						RPD = 1.72	
10 beta-BHC							
1	4.842	4.842	0.000	299039133	50.0	50.1	
2	4.801	4.801	0.000	43298766	50.0	48.5	
						RPD = 3.32	
12 delta-BHC							
1	4.991	4.991	0.000	793785867	50.0	50.2	
2	5.033	5.033	0.000	103544569	50.0	48.9	
						RPD = 2.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.165	5.165	0.000	703609428	50.0	51.1	
2	5.075	5.075	0.000	92136343	50.0	51.1	
						RPD = 0.01	
16 Aldrin							
1	5.433	5.433	0.000	756221171	50.0	51.4	
2	5.341	5.341	0.000	98327056	50.0	50.6	
						RPD = 1.67	
18 Isodrin							
1	5.756	5.756	0.000	615367284	50.0	52.4	
2	5.700	5.700	0.000	81693891	50.0	49.4	
						RPD = 5.82	
21 Heptachlor epoxide							
1	6.041	6.041	0.000	637613400	50.0	51.0	
2	5.877	5.877	0.000	87722169	50.0	49.6	
						RPD = 2.92	
22 trans-Chlordane							
1	6.172	6.172	0.000	685135373	50.0	51.0	
2	6.076	6.076	0.000	90618912	50.0	48.8	
						RPD = 4.45	
23 cis-Chlordane							
1	6.314	6.314	0.000	654815059	50.0	51.0	
2	6.231	6.231	0.000	87584212	50.0	49.8	
						RPD = 2.28	
24 4,4'-DDE							
1	6.391	6.391	0.000	662884316	50.0	49.2	
2	6.415	6.415	0.000	89351243	50.0	48.9	
						RPD = 0.60	
25 Endosulfan I							
1	6.462	6.462	0.000	615340873	50.0	52.1	
2	6.290	6.290	0.000	83416333	50.0	50.0	
						RPD = 4.19	
27 Dieldrin							
1	6.716	6.716	0.000	688680934	50.0	52.4	
2	6.580	6.580	0.000	92663063	50.0	50.4	
						RPD = 4.02	
30 Endrin							
1	6.963	6.963	0.000	649717809	50.0	56.9	
2	6.901	6.901	0.000	87931407	50.0	54.2	
						RPD = 4.96	
32 4,4'-DDD							
1	7.025	7.025	0.000	548155922	50.0	52.4	
2	7.029	7.029	0.000	74440113	50.0	50.1	
						RPD = 4.61	
34 Endosulfan II							
1	7.199	7.199	0.000	587898673	50.0	54.8	
2	7.127	7.127	0.000	79949428	50.0	50.8	
						RPD = 7.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.319	7.319	0.000	544691836	50.0	58.1	
2	7.360	7.360	0.000	73839118	50.0	57.2	
						RPD = 1.51	
36 Endrin aldehyde							
1	7.645	7.645	0.000	468078903	50.0	57.1	
2	7.486	7.486	0.000	64593171	50.0	51.2	
						RPD = 10.81	
37 Methoxychlor							
1	7.823	7.823	0.000	263267073	50.0	61.7	
2	8.090	8.090	0.000	36966638	50.0	58.2	
						RPD = 5.85	
38 Mirex							
1	7.981	7.981	0.000	401062319	50.0	58.6	
2	8.280	8.280	0.000	55305122	50.0	51.9	
						RPD = 12.22	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	569241375	50.0	60.0	
2	7.778	7.778	0.000	75194158	50.0	52.2	
						RPD = 13.84	
40 Endrin ketone							
1	8.394	8.394	0.000	598995315	50.0	60.0	
2	8.331	8.331	0.000	82608759	50.0	52.1	
						RPD = 14.09	
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.407	0.000	377397249	50.0	60.8	
2	9.600	9.600	0.000	53223725	50.0	51.1	
						RPD = 17.34	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

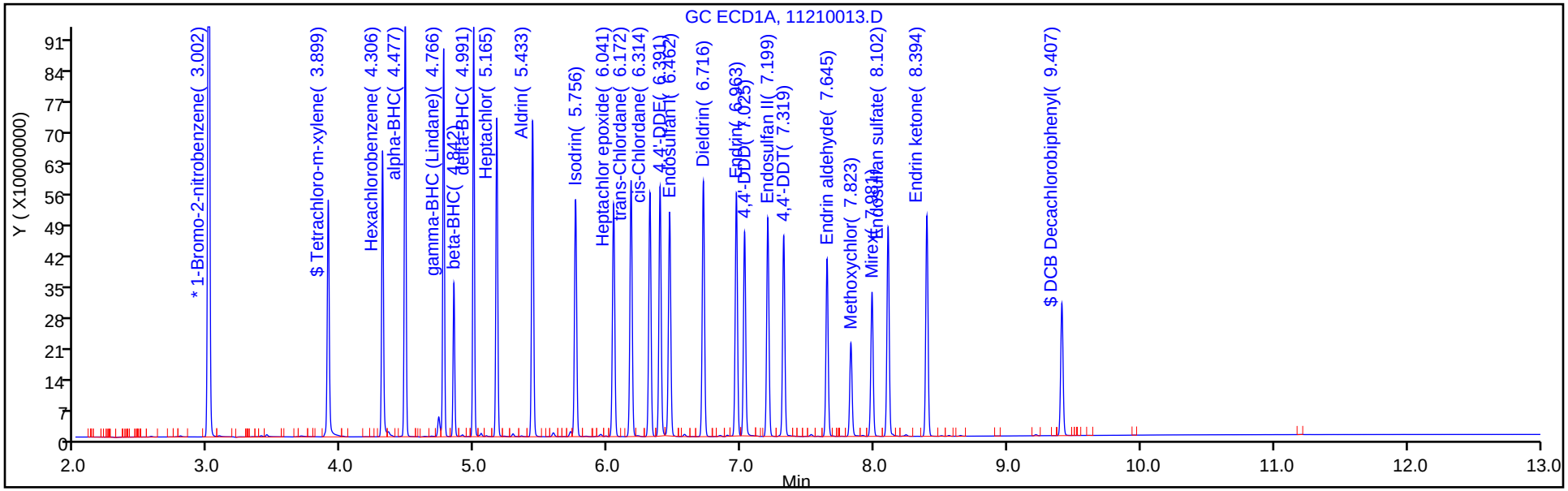
Report Date: 25-Nov-2018 21:25:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

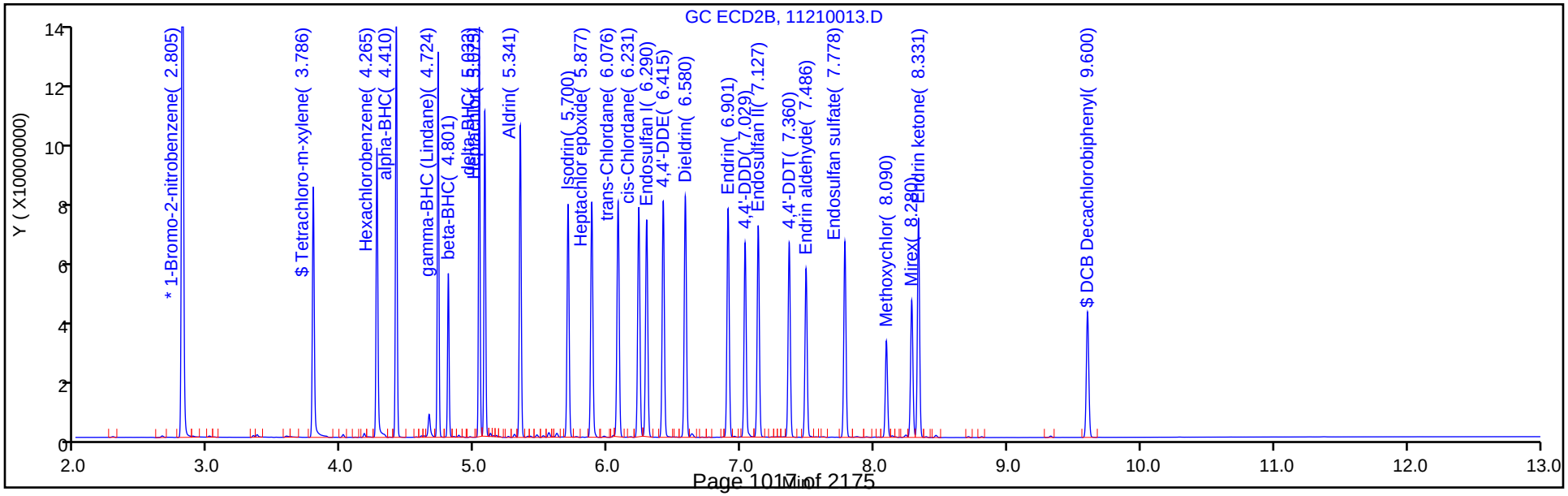
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210013.D

Injection Date:	21-Nov-2018 15:22:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-438443/13 Calibration Date: 11/21/2018 15:22

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Lin2		1.648		49.6	50.0	-0.8	20.0
gamma-BHC (Lindane)	Lin2		1.426		49.3	50.0	-1.4	20.0
beta-BHC	Lin2		0.5992		48.5	50.0	-3.1	20.0
delta-BHC	Lin2		1.433		48.9	50.0	-2.2	20.0
Heptachlor	Lin2		1.275		51.1	50.0	2.1	20.0
Aldrin	Lin2		1.361		50.6	50.0	1.1	20.0
Heptachlor epoxide	Lin2		1.214		49.6	50.0	-0.9	20.0
trans-Chlordane	Lin2		1.254		48.8	50.0	-2.5	20.0
cis-Chlordane	Lin2		1.212		49.8	50.0	-0.3	20.0
Endosulfan I	Lin2		1.154		50.0	50.0	-0.0	20.0
4,4'-DDE	Lin2		1.237		48.9	50.0	-2.2	20.0
Dieldrin	Lin2		1.282		50.4	50.0	0.7	20.0
Endrin	Lin2		1.217		54.2	50.0	8.3	20.0
4,4'-DDD	Lin2		1.030		50.1	50.0	0.1	20.0
Endosulfan II	Lin2		1.106		50.8	50.0	1.6	20.0
4,4'-DDT	Lin2		1.022		57.2	50.0	14.4	20.0
Endrin aldehyde	Lin2		0.8939		51.2	50.0	2.5	20.0
Endosulfan sulfate	Lin2		1.041		52.2	50.0	4.4	20.0
Methoxychlor	Lin2		0.5116		58.2	50.0	16.4	20.0
Endrin ketone	Lin2		1.143		52.1	50.0	4.3	20.0
Tetrachloro-m-xylene	Lin2		1.191		48.8	50.0	-2.3	20.0
DCB Decachlorobiphenyl	Lin2		0.7366		51.1	50.0	2.2	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-438443/13 Calibration Date: 11/21/2018 15:22

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210013.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	4.41	4.40	4.42
gamma-BHC (Lindane)	4.72	4.71	4.74
beta-BHC	4.80	4.79	4.81
delta-BHC	5.03	5.02	5.05
Heptachlor	5.08	5.06	5.09
Aldrin	5.34	5.33	5.35
Heptachlor epoxide	5.88	5.87	5.89
trans-Chlordane	6.08	6.06	6.09
cis-Chlordane	6.23	6.22	6.24
Endosulfan I	6.29	6.28	6.30
4,4'-DDE	6.42	6.40	6.43
Dieldrin	6.58	6.57	6.59
Endrin	6.90	6.89	6.91
4,4'-DDD	7.03	7.02	7.04
Endosulfan II	7.13	7.12	7.14
4,4'-DDT	7.36	7.35	7.37
Endrin aldehyde	7.49	7.47	7.50
Endosulfan sulfate	7.78	7.77	7.79
Methoxychlor	8.09	8.08	8.10
Endrin ketone	8.33	8.32	8.34
Tetrachloro-m-xylene	3.79	3.77	3.80
DCB Decachlorobiphenyl	9.60	9.59	9.61

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 21-Nov-2018 15:22:35 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076442-013
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:18:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1637310131	150.0	150.0	
2	2.805	2.805	0.000	216780072	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.899	3.899	0.000	584592009	50.0	48.6	
2	3.786	3.786	0.000	86095511	50.0	48.8	
						RPD = 0.47	
5 Hexachlorobenzene							
1	4.306	4.306	0.000	620781996	50.0	49.3	
2	4.265	4.265	0.000	91114443	50.0	49.0	
						RPD = 0.71	
8 alpha-BHC							
1	4.477	4.477	0.000	900406425	50.0	49.4	
2	4.410	4.410	0.000	119099529	50.0	49.6	
						RPD = 0.28	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	779935593	50.0	50.2	
2	4.724	4.724	0.000	103019252	50.0	49.3	
						RPD = 1.72	
10 beta-BHC							
1	4.842	4.842	0.000	299039133	50.0	50.1	
2	4.801	4.801	0.000	43298766	50.0	48.5	
						RPD = 3.32	
12 delta-BHC							
1	4.991	4.991	0.000	793785867	50.0	50.2	
2	5.033	5.033	0.000	103544569	50.0	48.9	
						RPD = 2.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.165	5.165	0.000	703609428	50.0	51.1	
2	5.075	5.075	0.000	92136343	50.0	51.1	
						RPD = 0.01	
16 Aldrin							
1	5.433	5.433	0.000	756221171	50.0	51.4	
2	5.341	5.341	0.000	98327056	50.0	50.6	
						RPD = 1.67	
18 Isodrin							
1	5.756	5.756	0.000	615367284	50.0	52.4	
2	5.700	5.700	0.000	81693891	50.0	49.4	
						RPD = 5.82	
21 Heptachlor epoxide							
1	6.041	6.041	0.000	637613400	50.0	51.0	
2	5.877	5.877	0.000	87722169	50.0	49.6	
						RPD = 2.92	
22 trans-Chlordane							
1	6.172	6.172	0.000	685135373	50.0	51.0	
2	6.076	6.076	0.000	90618912	50.0	48.8	
						RPD = 4.45	
23 cis-Chlordane							
1	6.314	6.314	0.000	654815059	50.0	51.0	
2	6.231	6.231	0.000	87584212	50.0	49.8	
						RPD = 2.28	
24 4,4'-DDE							
1	6.391	6.391	0.000	662884316	50.0	49.2	
2	6.415	6.415	0.000	89351243	50.0	48.9	
						RPD = 0.60	
25 Endosulfan I							
1	6.462	6.462	0.000	615340873	50.0	52.1	
2	6.290	6.290	0.000	83416333	50.0	50.0	
						RPD = 4.19	
27 Dieldrin							
1	6.716	6.716	0.000	688680934	50.0	52.4	
2	6.580	6.580	0.000	92663063	50.0	50.4	
						RPD = 4.02	
30 Endrin							
1	6.963	6.963	0.000	649717809	50.0	56.9	
2	6.901	6.901	0.000	87931407	50.0	54.2	
						RPD = 4.96	
32 4,4'-DDD							
1	7.025	7.025	0.000	548155922	50.0	52.4	
2	7.029	7.029	0.000	74440113	50.0	50.1	
						RPD = 4.61	
34 Endosulfan II							
1	7.199	7.199	0.000	587898673	50.0	54.8	
2	7.127	7.127	0.000	79949428	50.0	50.8	
						RPD = 7.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.319	7.319	0.000	544691836	50.0	58.1	
2	7.360	7.360	0.000	73839118	50.0	57.2	
						RPD = 1.51	
36 Endrin aldehyde							
1	7.645	7.645	0.000	468078903	50.0	57.1	
2	7.486	7.486	0.000	64593171	50.0	51.2	
						RPD = 10.81	
37 Methoxychlor							
1	7.823	7.823	0.000	263267073	50.0	61.7	
2	8.090	8.090	0.000	36966638	50.0	58.2	
						RPD = 5.85	
38 Mirex							
1	7.981	7.981	0.000	401062319	50.0	58.6	
2	8.280	8.280	0.000	55305122	50.0	51.9	
						RPD = 12.22	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	569241375	50.0	60.0	
2	7.778	7.778	0.000	75194158	50.0	52.2	
						RPD = 13.84	
40 Endrin ketone							
1	8.394	8.394	0.000	598995315	50.0	60.0	
2	8.331	8.331	0.000	82608759	50.0	52.1	
						RPD = 14.09	
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.407	0.000	377397249	50.0	60.8	
2	9.600	9.600	0.000	53223725	50.0	51.1	
						RPD = 17.34	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

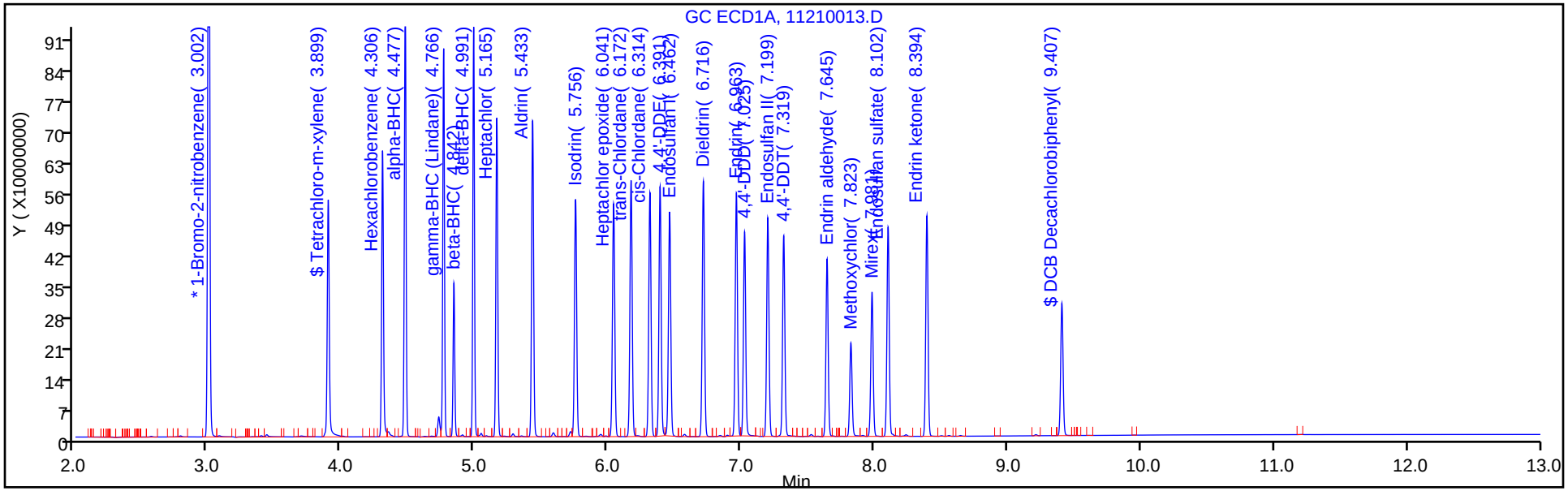
Report Date: 25-Nov-2018 21:25:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

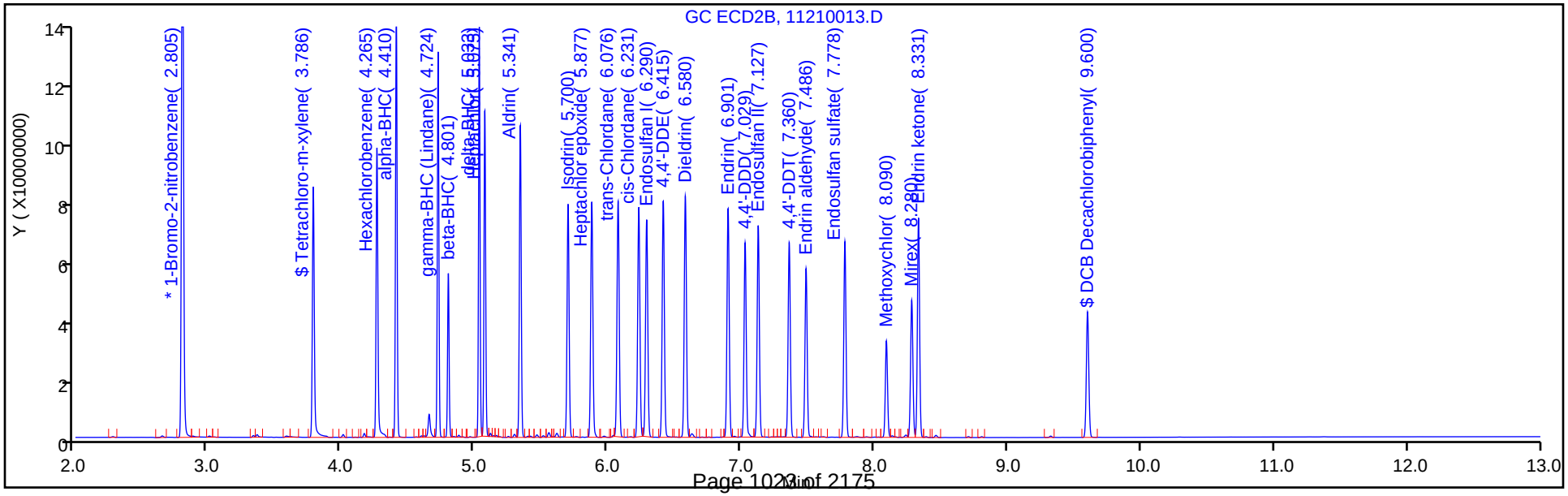
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210013.D

Injection Date:	21-Nov-2018 15:22:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/35 Calibration Date: 11/21/2018 20:20

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210035.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0069		2030	2000	1.5	20.0
Toxaphene Peak 2	Lin2		0.0179		2040	2000	2.2	20.0
Toxaphene Peak 3	Lin2		0.0213		2180	2000	8.8	20.0
Toxaphene Peak 4	Lin2		0.0092		2330	2000	16.3	20.0
Toxaphene Peak 5	Lin2		0.0099		2490	2000	24.5*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/35 Calibration Date: 11/21/2018 20:20

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210035.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.21	6.20	6.22
Toxaphene Peak 2	6.82	6.80	6.83
Toxaphene Peak 3	7.49	7.48	7.50
Toxaphene Peak 4	7.85	7.84	7.86
Toxaphene Peak 5	8.16	8.15	8.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210035.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 20:20:53 ALS Bottle#: 29 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076442-035
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:26 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:24:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.002	0.001	1728722549	150.0	150.0	
2	2.805	2.805	0.000	228216066	150.0	150.0	
28 Toxaphene							M
1	6.211	6.210	0.001	160028186	2000.0	2030.0	M
1	6.816	6.815	0.001	412309133	2000.0	2043.4	M
1	7.489	7.488	0.001	490370564	2000.0	2176.2	M
1	7.847	7.847	0.000	210976016	2000.0	2325.4	M
1	8.164	8.164	0.000	227362236	2000.0	2489.1	M
		Average of Peak Amounts =				2212.8	
2	5.725	5.725	0.000	13125252	2000.0	1865.1	
2	7.078	7.077	0.001	60242087	2000.0	1907.8	
2	7.218	7.218	0.000	171645559	2000.0	1969.1	
2	7.733	7.732	0.001	48975514	2000.0	1964.7	
2	8.027	8.026	0.001	93563589	2000.0	1923.1	
		Average of Peak Amounts =				1926.0	
						RPD = 13.86	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

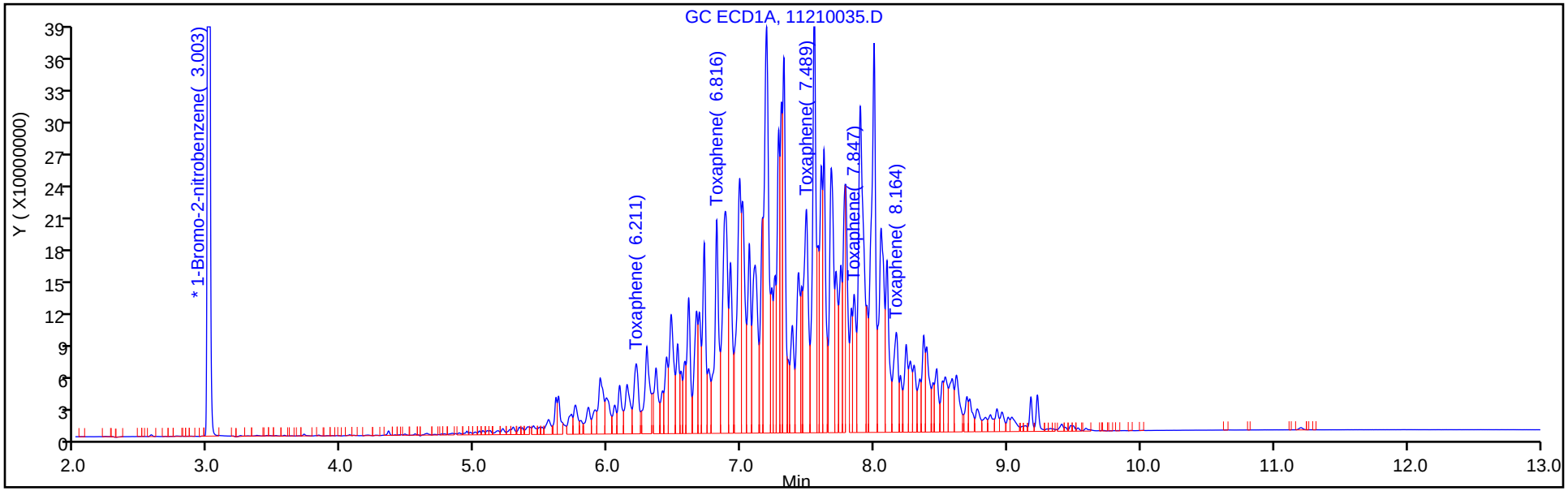
Report Date: 25-Nov-2018 21:26:27 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

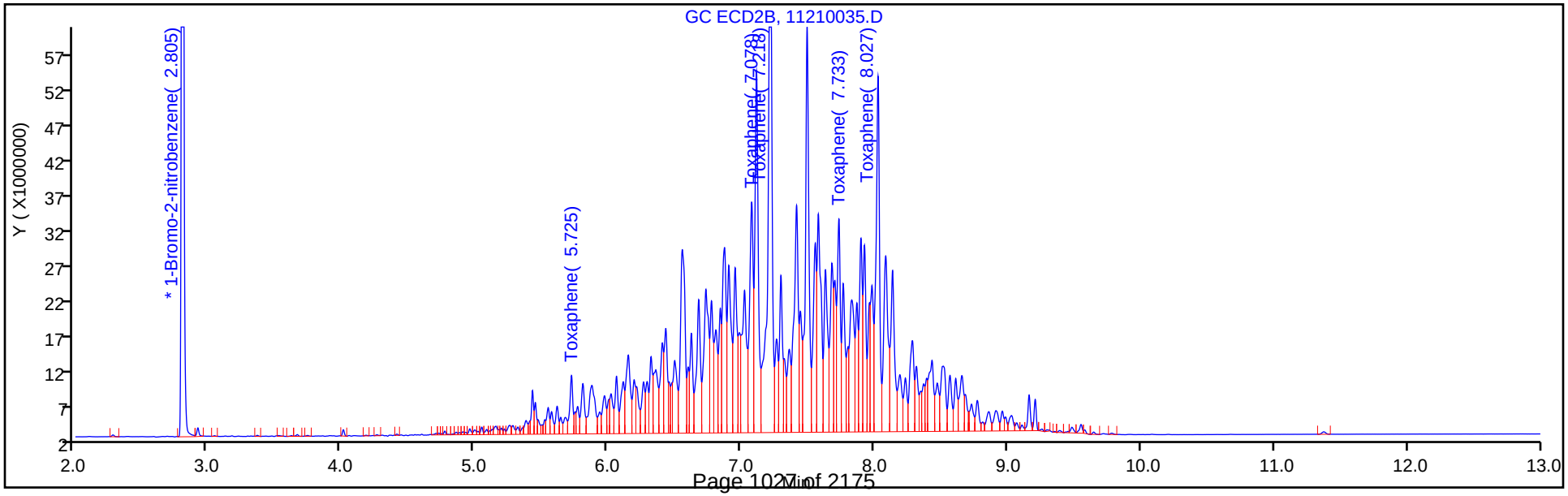
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210035.D

Injection Date:	21-Nov-2018 20:20:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 25-Nov-2018 21:26:27 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210035.D

Injection Date: 21-Nov-2018 20:20:53 Instrument ID: SGC_P2

Lims ID: CCV TOX

Client ID:

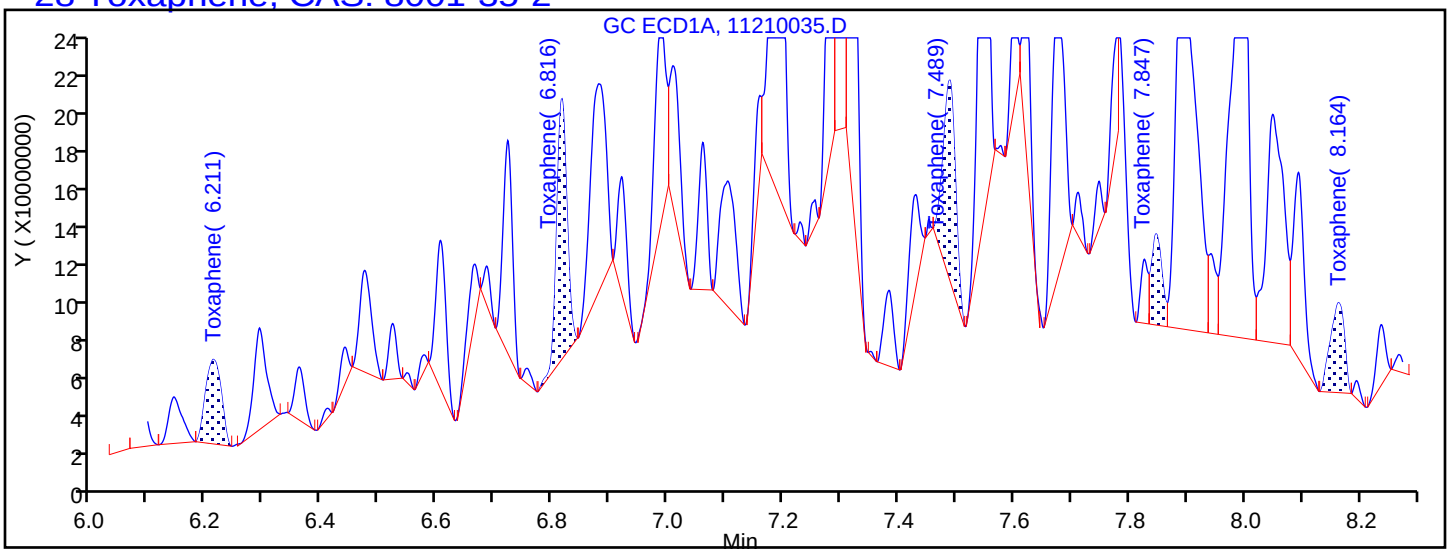
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 35

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

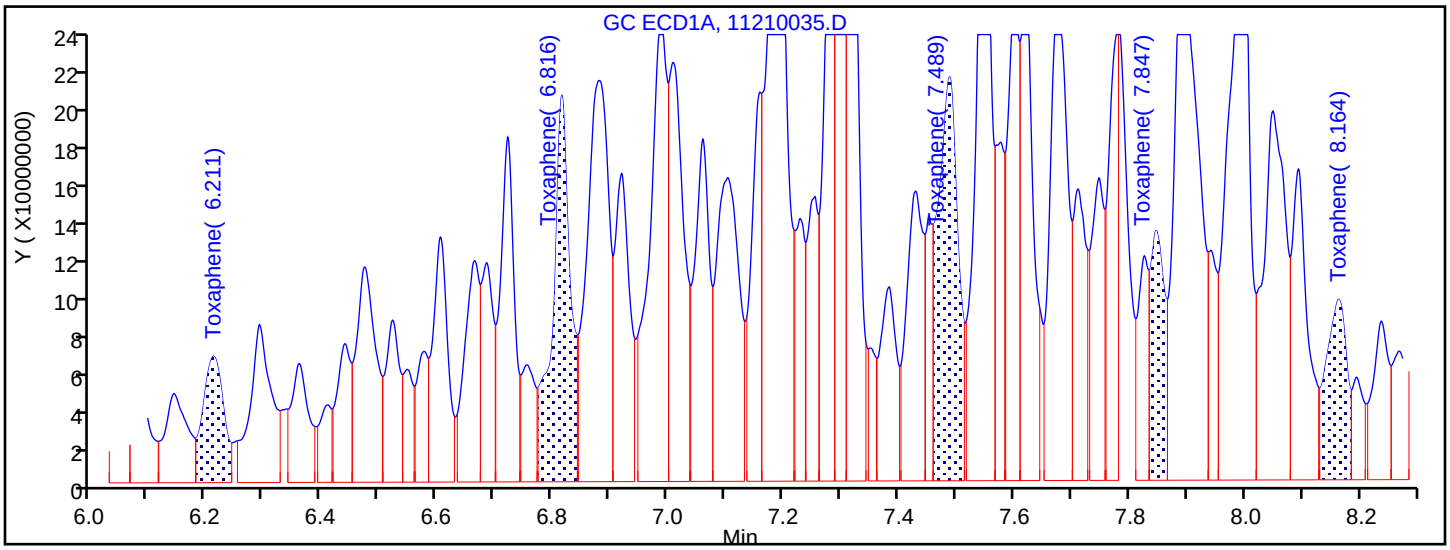
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.211	Response = 80147850
6.816	Response = 163155212
7.489	Response = 150101739
7.847	Response = 58932829
8.164	Response = 75943805



Manual Integration Results

6.211	Response = 160028186	M
6.816	Response = 412309133	M
7.489	Response = 490370564	M
7.847	Response = 210976016	M
8.164	Response = 227362236	M

Reviewer: mooret, 25-Nov-2018 21:12:35

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/35 Calibration Date: 11/21/2018 20:20

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210035.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0043		1870	2000	-6.7	20.0
Toxaphene Peak 2	Lin2		0.0198		1910	2000	-4.6	20.0
Toxaphene Peak 3	Lin2		0.0564		1970	2000	-1.5	20.0
Toxaphene Peak 4	Lin2		0.0161		1960	2000	-1.8	20.0
Toxaphene Peak 5	Lin2		0.0308		1920	2000	-3.8	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/35 Calibration Date: 11/21/2018 20:20

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11210035.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.73	5.71	5.74
Toxaphene Peak 2	7.08	7.07	7.09
Toxaphene Peak 3	7.22	7.21	7.23
Toxaphene Peak 4	7.73	7.72	7.74
Toxaphene Peak 5	8.03	8.01	8.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210035.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 20:20:53 ALS Bottle#: 29 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076442-035
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:26 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:24:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.002	0.001	1728722549	150.0	150.0	
2	2.805	2.805	0.000	228216066	150.0	150.0	
28 Toxaphene							M
1	6.211	6.210	0.001	160028186	2000.0	2030.0	M
1	6.816	6.815	0.001	412309133	2000.0	2043.4	M
1	7.489	7.488	0.001	490370564	2000.0	2176.2	M
1	7.847	7.847	0.000	210976016	2000.0	2325.4	M
1	8.164	8.164	0.000	227362236	2000.0	2489.1	M
		Average of Peak Amounts =				2212.8	
2	5.725	5.725	0.000	13125252	2000.0	1865.1	
2	7.078	7.077	0.001	60242087	2000.0	1907.8	
2	7.218	7.218	0.000	171645559	2000.0	1969.1	
2	7.733	7.732	0.001	48975514	2000.0	1964.7	
2	8.027	8.026	0.001	93563589	2000.0	1923.1	
		Average of Peak Amounts =				1926.0	
						RPD = 13.86	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

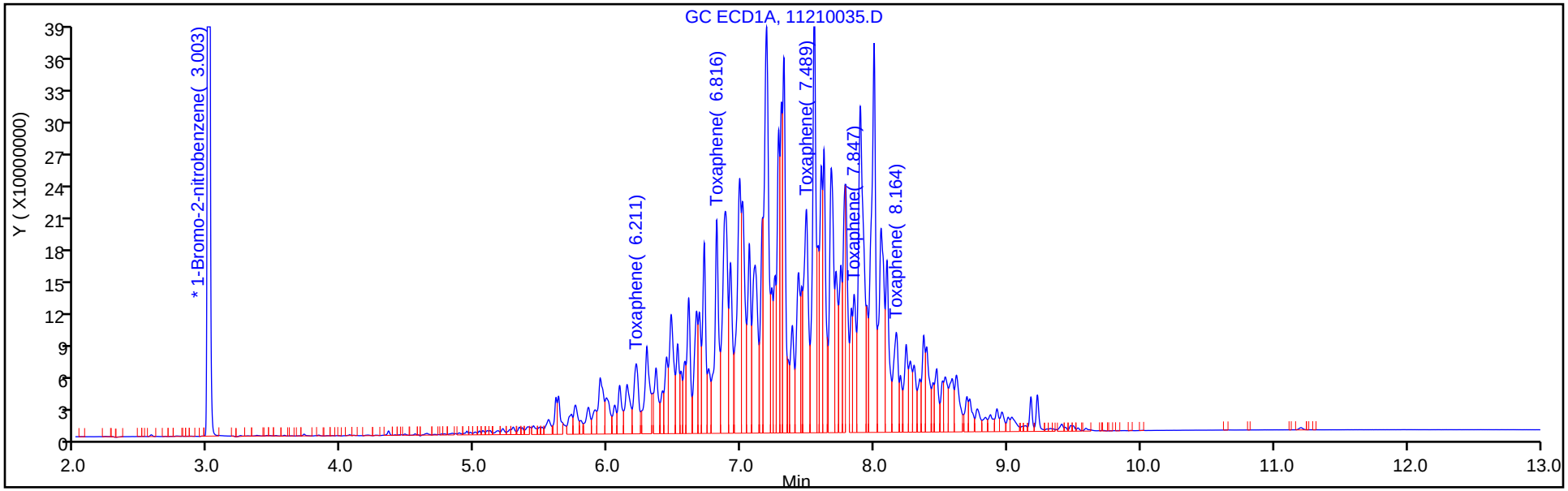
Report Date: 25-Nov-2018 21:26:27 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

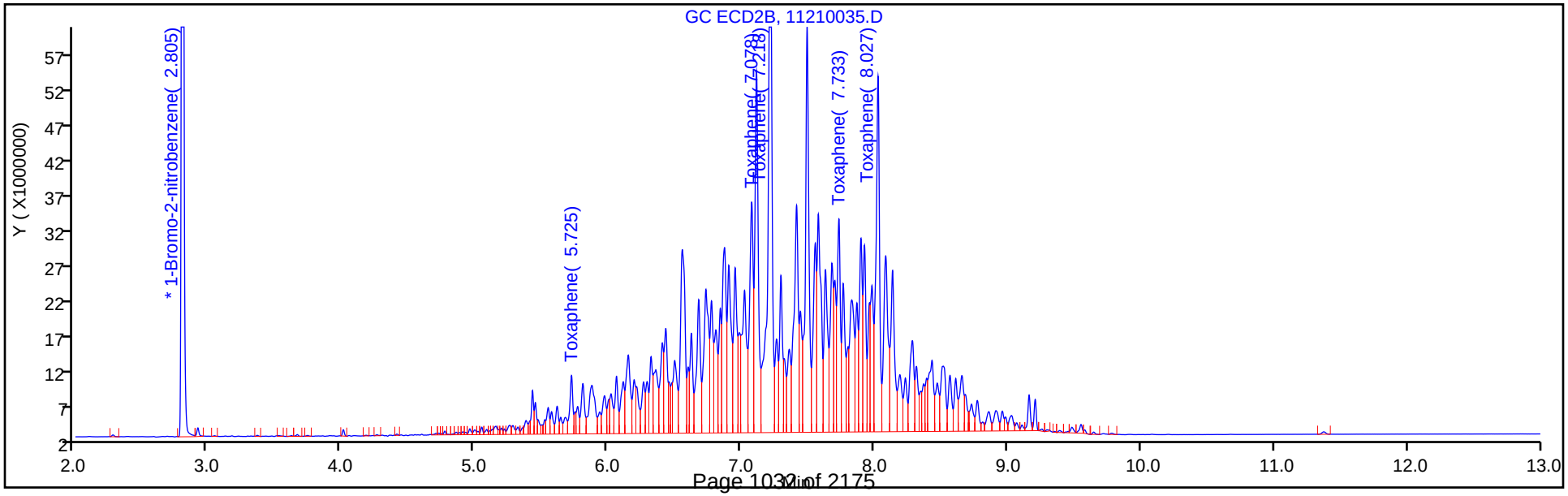
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210035.D

Injection Date:	21-Nov-2018 20:20:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/36 Calibration Date: 11/21/2018 20:38

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210036.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlordane (technical) Peak 1	Lin2		0.0329		937	1000	-6.3	20.0
Technical Chlordane Peak 1	Lin2		0.0329		937	1000	-6.3	20.0
Chlordane (technical) Peak 2	Lin2		0.0349		938	1000	-6.2	20.0
Technical Chlordane Peak 2	Lin2		0.0349		938	1000	-6.2	20.0
Chlordane (technical) Peak 3	Lin2		0.1422		934	1000	-6.6	20.0
Technical Chlordane Peak 3	Lin2		0.1422		934	1000	-6.6	20.0
Chlordane (technical) Peak 4	Lin2		0.0782		982	1000	-1.8	20.0
Technical Chlordane Peak 4	Lin2		0.0782		982	1000	-1.8	20.0
Chlordane (technical) Peak 5	Lin2		0.0388		1030	1000	2.8	20.0
Technical Chlordane Peak 5	Lin2		0.0388		1030	1000	2.8	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/36 Calibration Date: 11/21/2018 20:38

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210036.D

Analyte	RT	RT WINDOW	
		FROM	TO
Chlordane (technical) Peak 1	5.10	5.09	5.11
Technical Chlordane Peak 1	5.10	5.09	5.11
Chlordane (technical) Peak 2	5.57	5.55	5.57
Technical Chlordane Peak 2	5.57	5.55	5.57
Chlordane (technical) Peak 3	6.17	6.16	6.18
Technical Chlordane Peak 3	6.17	6.16	6.18
Chlordane (technical) Peak 4	6.31	6.30	6.32
Technical Chlordane Peak 4	6.31	6.30	6.32
Chlordane (technical) Peak 5	7.13	7.11	7.14
Technical Chlordane Peak 5	7.13	7.11	7.14

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210036.D
Lims ID: CCV CHL
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 20:38:24 ALS Bottle#: 30 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV CHL
Misc. Info.: 280-0076442-036
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:28 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 21:12:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.001	1808120236	150.0	150.0	
2	2.805	2.805	0.001	240912953	150.0	150.0	
14 Chlordane (technical)							
1	5.098	5.097	0.001	396560964	1000.0	937.5	
1	5.565	5.562	0.003	420798737	1000.0	938.1	
1	6.174	6.172	0.002	1713955054	1000.0	934.1	
1	6.312	6.311	0.001	942740716	1000.0	981.8	
1	7.127	7.125	0.002	467235041	1000.0	1028.3	
		Average of Peak Amounts =				964.0	
2	4.960	4.960	0.000	54852682	1000.0	891.8	
2	5.480	5.479	0.001	52265163	1000.0	902.1	
2	6.075	6.074	0.001	199621955	1000.0	888.2	
2	6.231	6.231	0.000	151009739	1000.0	899.0	
2	7.175	7.174	0.001	60653788	1000.0	969.9	
		Average of Peak Amounts =				910.2	
						RPD = 5.74	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.098	5.097	0.001	396560964	1000.0	937.5	
1	5.565	5.562	0.003	420798737	1000.0	938.1	
1	6.174	6.172	0.002	1713955054	1000.0	934.1	
1	6.312	6.311	0.001	942740716	1000.0	981.8	
1	7.127	7.125	0.002	467235041	1000.0	1028.3	
		Average of Peak Amounts =				964.0	
2	4.960	4.960	0.000	54852682	1000.0	891.8	
2	5.480	5.479	0.001	52265163	1000.0	902.1	
2	6.075	6.074	0.001	199621955	1000.0	888.2	
2	6.231	6.231	0.000	151009739	1000.0	899.0	
2	7.175	7.174	0.001	60653788	1000.0	969.9	
		Average of Peak Amounts =				910.2	
						RPD = 5.74	

Reagents:

8081ChlorL4_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

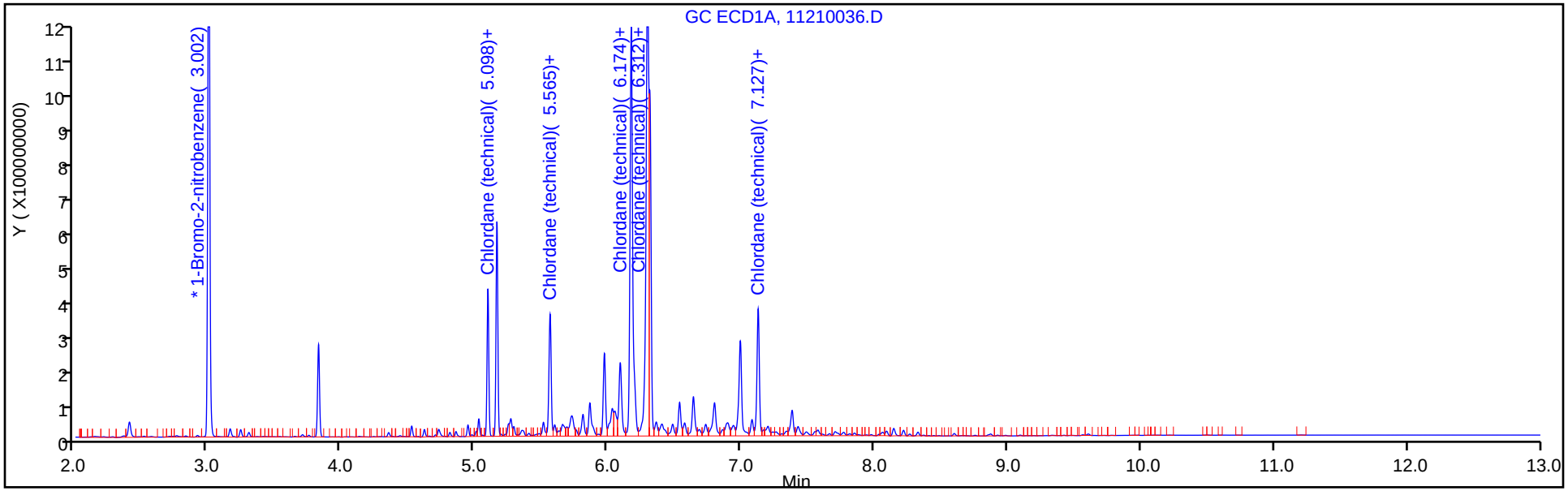
Report Date: 25-Nov-2018 21:26:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

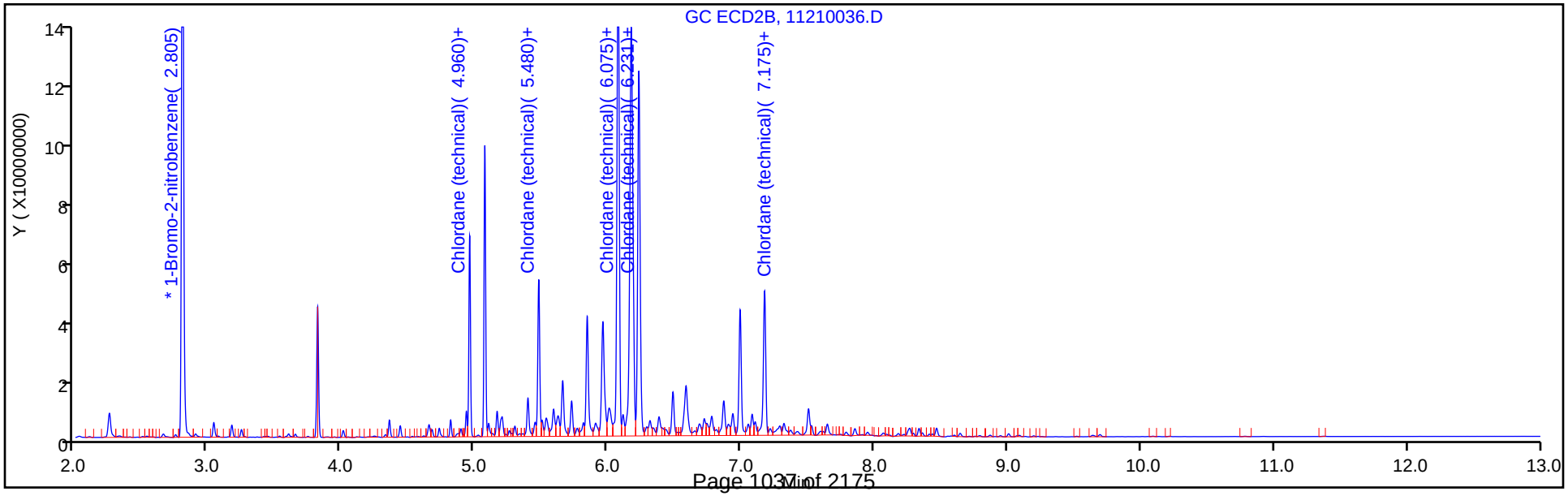
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210036.D

Injection Date:	21-Nov-2018 20:38:24	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV CHL			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/36 Calibration Date: 11/21/2018 20:38

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210036.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlordane (technical) Peak 1	Lin2		0.0342		892	1000	-10.8	20.0
Technical Chlordane Peak 1	Lin2		0.0342		892	1000	-10.8	20.0
Chlordane (technical) Peak 2	Lin2		0.0325		902	1000	-9.8	20.0
Technical Chlordane Peak 2	Lin2		0.0325		902	1000	-9.8	20.0
Chlordane (technical) Peak 3	Lin2		0.1243		888	1000	-11.2	20.0
Technical Chlordane Peak 3	Lin2		0.1243		888	1000	-11.2	20.0
Chlordane (technical) Peak 4	Lin2		0.0940		899	1000	-10.1	20.0
Technical Chlordane Peak 4	Lin2		0.0940		899	1000	-10.1	20.0
Chlordane (technical) Peak 5	Lin2		0.0378		970	1000	-3.0	20.0
Technical Chlordane Peak 5	Lin2		0.0378		970	1000	-3.0	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/36 Calibration Date: 11/21/2018 20:38

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 17:55

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 19:05

Lab File ID: 11210036.D

Analyte	RT	RT WINDOW	
		FROM	TO
Chlordane (technical) Peak 1	4.96	4.95	4.97
Technical Chlordane Peak 1	4.96	4.95	4.97
Chlordane (technical) Peak 2	5.48	5.47	5.49
Technical Chlordane Peak 2	5.48	5.47	5.49
Chlordane (technical) Peak 3	6.08	6.06	6.09
Technical Chlordane Peak 3	6.08	6.06	6.09
Chlordane (technical) Peak 4	6.23	6.22	6.24
Technical Chlordane Peak 4	6.23	6.22	6.24
Chlordane (technical) Peak 5	7.18	7.16	7.19
Technical Chlordane Peak 5	7.18	7.16	7.19

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210036.D
Lims ID: CCV CHL
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 20:38:24 ALS Bottle#: 30 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV CHL
Misc. Info.: 280-0076442-036
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:28 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 21:12:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.001	1808120236	150.0	150.0	
2	2.805	2.805	0.001	240912953	150.0	150.0	
14 Chlordane (technical)							
1	5.098	5.097	0.001	396560964	1000.0	937.5	
1	5.565	5.562	0.003	420798737	1000.0	938.1	
1	6.174	6.172	0.002	1713955054	1000.0	934.1	
1	6.312	6.311	0.001	942740716	1000.0	981.8	
1	7.127	7.125	0.002	467235041	1000.0	1028.3	
		Average of Peak Amounts =				964.0	
2	4.960	4.960	0.000	54852682	1000.0	891.8	
2	5.480	5.479	0.001	52265163	1000.0	902.1	
2	6.075	6.074	0.001	199621955	1000.0	888.2	
2	6.231	6.231	0.000	151009739	1000.0	899.0	
2	7.175	7.174	0.001	60653788	1000.0	969.9	
		Average of Peak Amounts =				910.2	
						RPD = 5.74	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
13 Technical Chlordane							
1	5.098	5.097	0.001	396560964	1000.0	937.5	
1	5.565	5.562	0.003	420798737	1000.0	938.1	
1	6.174	6.172	0.002	1713955054	1000.0	934.1	
1	6.312	6.311	0.001	942740716	1000.0	981.8	
1	7.127	7.125	0.002	467235041	1000.0	1028.3	
		Average of Peak Amounts =				964.0	
2	4.960	4.960	0.000	54852682	1000.0	891.8	
2	5.480	5.479	0.001	52265163	1000.0	902.1	
2	6.075	6.074	0.001	199621955	1000.0	888.2	
2	6.231	6.231	0.000	151009739	1000.0	899.0	
2	7.175	7.174	0.001	60653788	1000.0	969.9	
		Average of Peak Amounts =				910.2	
						RPD = 5.74	

Reagents:

8081ChlorL4_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

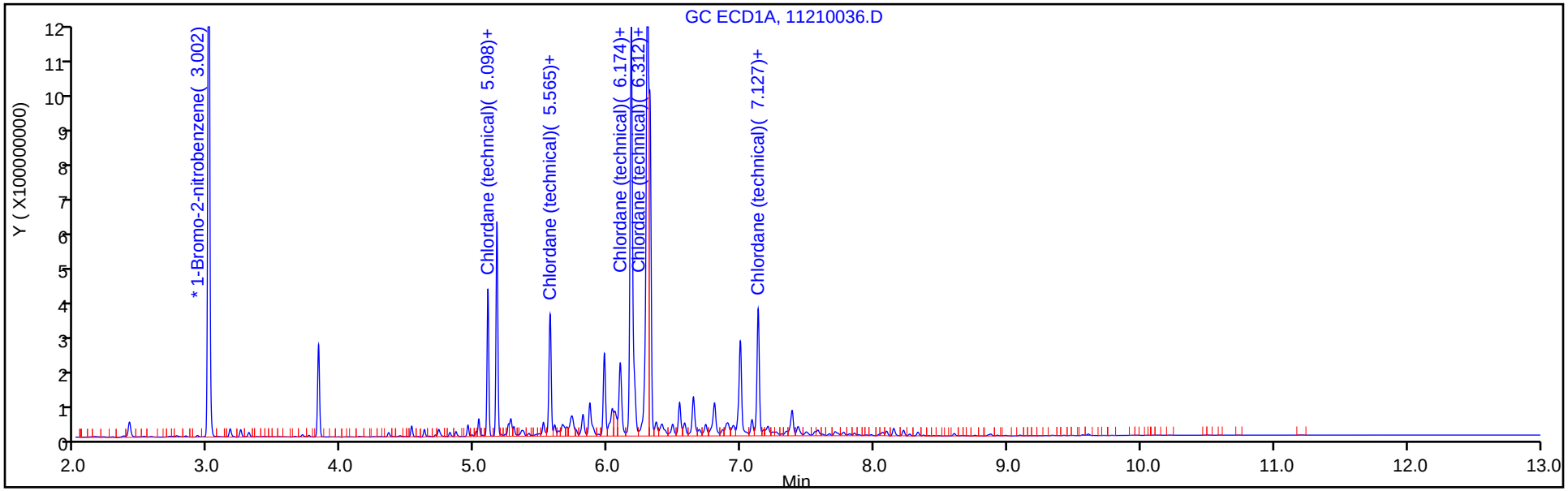
Report Date: 25-Nov-2018 21:26:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

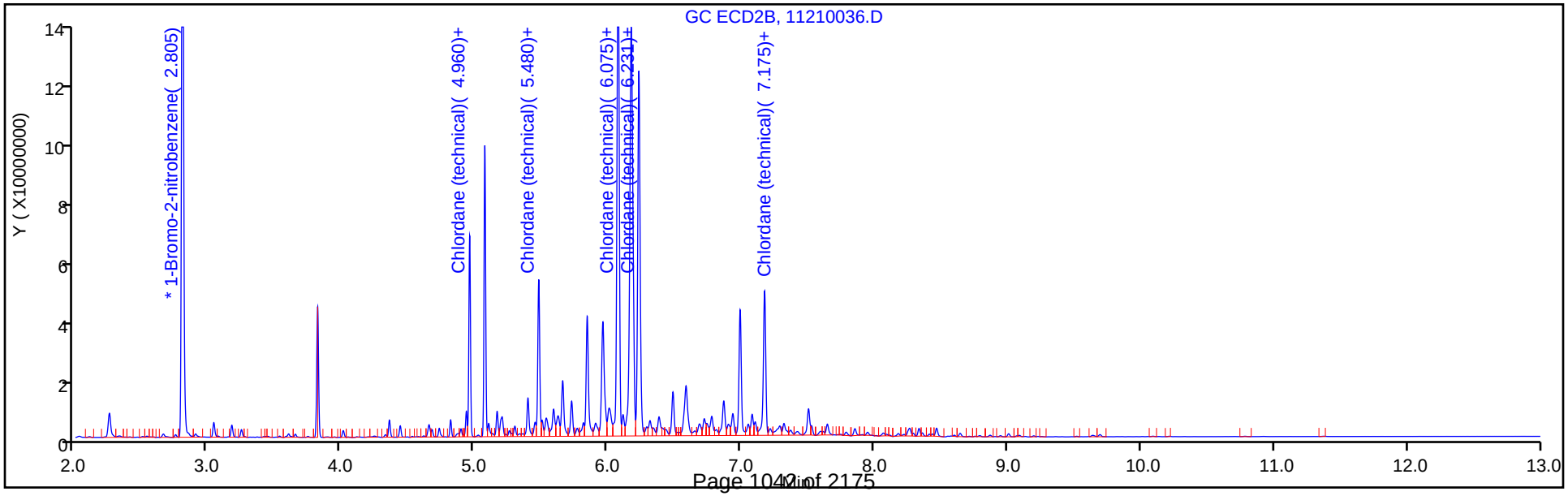
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210036.D

Injection Date:	21-Nov-2018 20:38:24	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV CHL			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/37 Calibration Date: 11/21/2018 20:55

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210037.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Lin2		1.676		50.2	50.0	0.4	20.0
gamma-BHC (Lindane)	Lin2		1.433		50.3	50.0	0.7	20.0
beta-BHC	Lin2		0.5441		49.8	50.0	-0.5	20.0
delta-BHC	Lin2		1.456		50.3	50.0	0.5	20.0
Heptachlor	Lin2		1.297		51.3	50.0	2.7	20.0
Aldrin	Lin2		1.400		51.9	50.0	3.8	20.0
Heptachlor epoxide	Lin2		1.182		51.7	50.0	3.3	20.0
trans-Chlordane	Lin2		1.274		51.8	50.0	3.5	20.0
cis-Chlordane	Lin2		1.219		51.8	50.0	3.6	20.0
4,4'-DDE	Lin2		1.241		50.3	50.0	0.5	20.0
Endosulfan I	Lin2		1.151		53.2	50.0	6.4	20.0
Dieldrin	Lin2		1.259		52.3	50.0	4.6	20.0
Endrin	Lin2		1.203		57.5	50.0	15.0	20.0
4,4'-DDD	Lin2		1.008		52.6	50.0	5.2	20.0
Endosulfan II	Lin2		1.065		54.2	50.0	8.4	20.0
4,4'-DDT	Lin2		1.007		58.6	50.0	17.2	20.0
Endrin aldehyde	Lin2		0.8426		56.1	50.0	12.2	20.0
Methoxychlor	Lin2		0.4889		62.5	50.0	25.1*	20.0
Endosulfan sulfate	Lin2		1.047		60.2	50.0	20.4*	20.0
Endrin ketone	Lin2		1.103		60.3	50.0	20.6*	20.0
Tetrachloro-m-xylene	Lin2		1.074		48.7	50.0	-2.5	20.0
DCB Decachlorobiphenyl	Lin2		0.6937		61.0	50.0	22.0*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/37 Calibration Date: 11/21/2018 20:55

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210037.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.75	4.78
beta-BHC	4.84	4.83	4.85
delta-BHC	4.99	4.98	5.00
Heptachlor	5.17	5.15	5.18
Aldrin	5.43	5.42	5.45
Heptachlor epoxide	6.04	6.03	6.05
trans-Chlordane	6.17	6.16	6.18
cis-Chlordane	6.31	6.30	6.33
4,4'-DDE	6.39	6.38	6.40
Endosulfan I	6.46	6.45	6.47
Dieldrin	6.72	6.70	6.73
Endrin	6.96	6.95	6.98
4,4'-DDD	7.03	7.01	7.04
Endosulfan II	7.20	7.19	7.21
4,4'-DDT	7.32	7.31	7.33
Endrin aldehyde	7.65	7.63	7.66
Methoxychlor	7.82	7.81	7.84
Endosulfan sulfate	8.10	8.09	8.11
Endrin ketone	8.39	8.38	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.41	9.40	9.42

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210037.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 20:55:56 ALS Bottle#: 31 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076442-037
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:31 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:08:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						200.5	
2						193.5	
						RPD = 3.60	
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1613450730	150.0	150.0	
2	2.804	2.805	-0.001	216395080	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.898	3.899	-0.001	577720836	50.0	48.7	
2	3.787	3.786	0.001	84988854	50.0	48.3	
						RPD = 0.94	
5 Hexachlorobenzene							
1	4.307	4.306	0.001	609586971	50.0	49.1	
2	4.265	4.265	0.000	90426402	50.0	48.7	
						RPD = 0.94	
8 alpha-BHC							
1	4.478	4.477	0.001	901268342	50.0	50.2	
2	4.410	4.410	0.000	117965343	50.0	49.2	
						RPD = 2.05	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	770846986	50.0	50.3	
2	4.723	4.724	-0.001	101157892	50.0	48.5	
						RPD = 3.67	
10 beta-BHC							
1	4.843	4.842	0.001	292637684	50.0	49.8	
2	4.800	4.801	-0.001	42406416	50.0	47.5	
						RPD = 4.55	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	4.991	4.991	0.000	783145800	50.0	50.3	
2	5.033	5.033	0.000	101863072	50.0	48.2	
						RPD = 4.14	
15 Heptachlor							
1	5.165	5.165	0.000	697323809	50.0	51.3	
2	5.074	5.075	-0.001	90815997	50.0	50.4	
						RPD = 1.83	
16 Aldrin							
1	5.433	5.433	0.000	752738899	50.0	51.9	
2	5.341	5.341	0.000	97171867	50.0	50.0	
						RPD = 3.68	
18 Isodrin							
1	5.757	5.756	0.001	612358036	50.0	52.9	
2	5.700	5.700	0.000	82020428	50.0	49.7	
						RPD = 6.21	
21 Heptachlor epoxide							
1	6.042	6.041	0.001	635945456	50.0	51.7	
2	5.878	5.877	0.001	87008428	50.0	49.3	
						RPD = 4.77	
22 trans-Chlordane							
1	6.173	6.172	0.001	685410089	50.0	51.8	
2	6.075	6.076	-0.001	89717315	50.0	48.4	
						RPD = 6.78	
23 cis-Chlordane							
1	6.314	6.314	0.000	655766879	50.0	51.8	
2	6.231	6.231	0.000	86898525	50.0	49.5	
						RPD = 4.50	
24 4,4'-DDE							
1	6.390	6.391	-0.001	667518116	50.0	50.3	
2	6.414	6.415	-0.001	88209664	50.0	48.4	
						RPD = 3.86	
25 Endosulfan I							
1	6.463	6.462	0.001	619188644	50.0	53.2	
2	6.290	6.290	0.000	82957147	50.0	49.8	
						RPD = 6.65	
27 Dieldrin							
1	6.715	6.716	-0.001	676842176	50.0	52.3	
2	6.580	6.580	0.000	91680529	50.0	49.9	
						RPD = 4.65	
30 Endrin							
1	6.963	6.963	0.000	646934837	50.0	57.5	
2	6.902	6.901	0.001	87549202	50.0	54.0	
						RPD = 6.25	
32 4,4'-DDD							
1	7.025	7.025	0.000	542050911	50.0	52.6	
2	7.029	7.029	0.000	73245240	50.0	49.4	
						RPD = 6.40	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.200	7.199	0.001	572679498	50.0	54.2	
2	7.128	7.127	0.001	78858383	50.0	50.2	
						RPD = 7.73	
35 4,4'-DDT							
1	7.319	7.319	0.000	541358488	50.0	58.6	
2	7.360	7.360	0.000	72764440	50.0	56.5	
						RPD = 3.64	
36 Endrin aldehyde							
1	7.645	7.645	0.000	453151933	50.0	56.1	
2	7.486	7.486	0.000	63364385	50.0	50.3	
						RPD = 10.81	
37 Methoxychlor							
1	7.823	7.823	0.000	262914238	50.0	62.5	
2	8.090	8.090	0.000	36685060	50.0	57.9	
						RPD = 7.77	
38 Mirex							
1	7.983	7.981	0.002	399747709	50.0	59.3	
2	8.281	8.280	0.001	53859888	50.0	50.6	
						RPD = 15.87	
39 Endosulfan sulfate							
1	8.103	8.102	0.001	563114767	50.0	60.2	
2	7.778	7.778	0.000	73957067	50.0	51.4	
						RPD = 15.71	
40 Endrin ketone							
1	8.394	8.394	0.000	593095281	50.0	60.3	
2	8.330	8.331	-0.001	81262783	50.0	51.4	
						RPD = 16.03	
$ 41 DCB Decachlorobiphenyl							
1	9.408	9.407	0.001	373083483	50.0	61.0	
2	9.600	9.600	0.000	51826251	50.0	49.8	
						RPD = 20.17	
S 3 Endosulfan, Total							
1						167.6	
2						151.4	
						RPD = 10.18	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

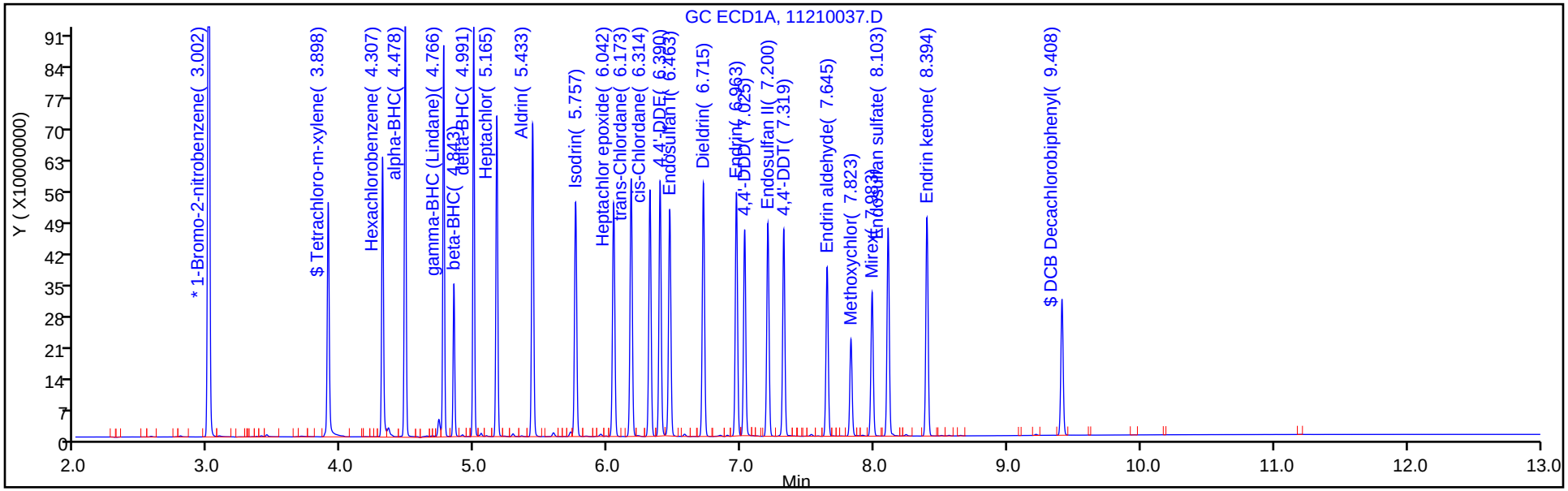
Report Date: 25-Nov-2018 21:26:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

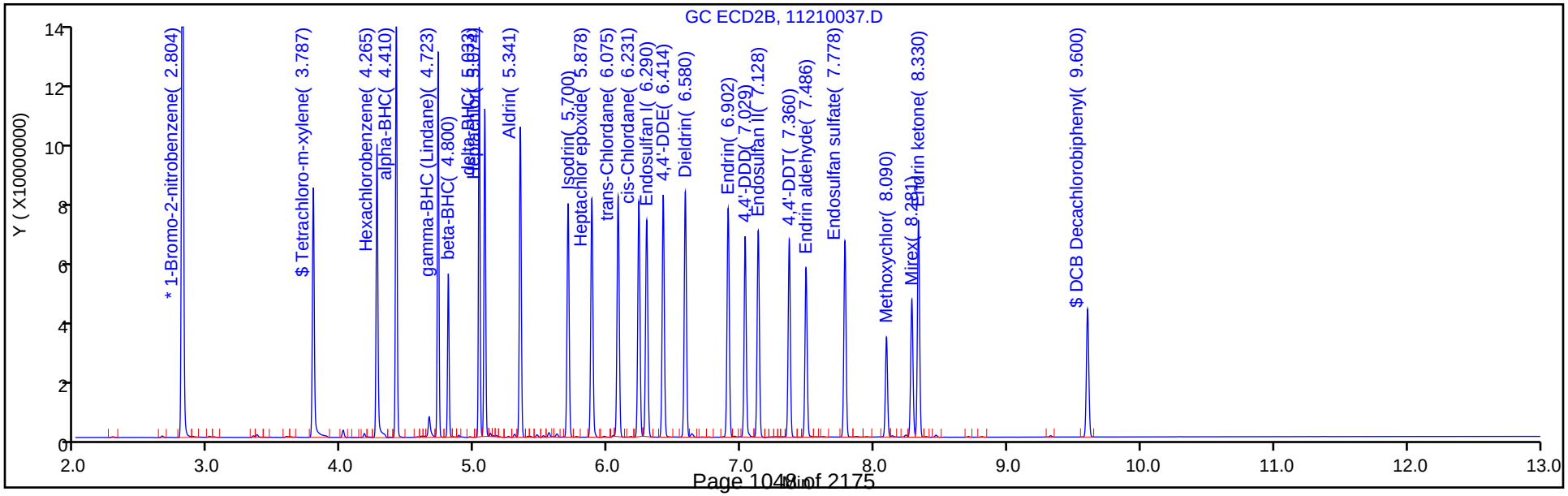
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210037.D

Injection Date:	21-Nov-2018 20:55:56	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV AB			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/37 Calibration Date: 11/21/2018 20:55

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210037.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Lin2		1.635		49.2	50.0	-1.6	20.0
gamma-BHC (Lindane)	Lin2		1.402		48.5	50.0	-3.0	20.0
beta-BHC	Lin2		0.5879		47.5	50.0	-4.9	20.0
delta-BHC	Lin2		1.412		48.2	50.0	-3.6	20.0
Heptachlor	Lin2		1.259		50.4	50.0	0.8	20.0
Aldrin	Lin2		1.347		50.0	50.0	0.0	20.0
Heptachlor epoxide	Lin2		1.206		49.3	50.0	-1.5	20.0
trans-Chlordane	Lin2		1.244		48.4	50.0	-3.3	20.0
cis-Chlordane	Lin2		1.205		49.5	50.0	-0.9	20.0
Endosulfan I	Lin2		1.150		49.8	50.0	-0.4	20.0
4,4'-DDE	Lin2		1.223		48.4	50.0	-3.3	20.0
Dieldrin	Lin2		1.271		49.9	50.0	-0.2	20.0
Endrin	Lin2		1.214		54.0	50.0	8.1	20.0
4,4'-DDD	Lin2		1.015		49.4	50.0	-1.3	20.0
Endosulfan II	Lin2		1.093		50.2	50.0	0.4	20.0
4,4'-DDT	Lin2		1.009		56.5	50.0	13.0	20.0
Endrin aldehyde	Lin2		0.8785		50.3	50.0	0.7	20.0
Endosulfan sulfate	Lin2		1.025		51.4	50.0	2.8	20.0
Methoxychlor	Lin2		0.5086		57.9	50.0	15.7	20.0
Endrin ketone	Lin2		1.127		51.4	50.0	2.7	20.0
Tetrachloro-m-xylene	Lin2		1.178		48.3	50.0	-3.4	20.0
DCB Decachlorobiphenyl	Lin2		0.7185		49.8	50.0	-0.4	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-438443/37 Calibration Date: 11/21/2018 20:55

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11210037.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	4.41	4.40	4.42
gamma-BHC (Lindane)	4.72	4.71	4.74
beta-BHC	4.80	4.79	4.81
delta-BHC	5.03	5.02	5.05
Heptachlor	5.07	5.06	5.09
Aldrin	5.34	5.33	5.35
Heptachlor epoxide	5.88	5.87	5.89
trans-Chlordane	6.08	6.06	6.09
cis-Chlordane	6.23	6.22	6.24
Endosulfan I	6.29	6.28	6.30
4,4'-DDE	6.41	6.40	6.43
Dieldrin	6.58	6.57	6.59
Endrin	6.90	6.89	6.91
4,4'-DDD	7.03	7.02	7.04
Endosulfan II	7.13	7.12	7.14
4,4'-DDT	7.36	7.35	7.37
Endrin aldehyde	7.49	7.47	7.50
Endosulfan sulfate	7.78	7.77	7.79
Methoxychlor	8.09	8.08	8.10
Endrin ketone	8.33	8.32	8.34
Tetrachloro-m-xylene	3.79	3.77	3.80
DCB Decachlorobiphenyl	9.60	9.59	9.61

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210037.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 21-Nov-2018 20:55:56 ALS Bottle#: 31 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076442-037
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:26:31 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:08:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						200.5	
2						193.5	
						RPD = 3.60	
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1613450730	150.0	150.0	
2	2.804	2.805	-0.001	216395080	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.898	3.899	-0.001	577720836	50.0	48.7	
2	3.787	3.786	0.001	84988854	50.0	48.3	
						RPD = 0.94	
5 Hexachlorobenzene							
1	4.307	4.306	0.001	609586971	50.0	49.1	
2	4.265	4.265	0.000	90426402	50.0	48.7	
						RPD = 0.94	
8 alpha-BHC							
1	4.478	4.477	0.001	901268342	50.0	50.2	
2	4.410	4.410	0.000	117965343	50.0	49.2	
						RPD = 2.05	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	770846986	50.0	50.3	
2	4.723	4.724	-0.001	101157892	50.0	48.5	
						RPD = 3.67	
10 beta-BHC							
1	4.843	4.842	0.001	292637684	50.0	49.8	
2	4.800	4.801	-0.001	42406416	50.0	47.5	
						RPD = 4.55	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	4.991	4.991	0.000	783145800	50.0	50.3	
2	5.033	5.033	0.000	101863072	50.0	48.2	
						RPD = 4.14	
15 Heptachlor							
1	5.165	5.165	0.000	697323809	50.0	51.3	
2	5.074	5.075	-0.001	90815997	50.0	50.4	
						RPD = 1.83	
16 Aldrin							
1	5.433	5.433	0.000	752738899	50.0	51.9	
2	5.341	5.341	0.000	97171867	50.0	50.0	
						RPD = 3.68	
18 Isodrin							
1	5.757	5.756	0.001	612358036	50.0	52.9	
2	5.700	5.700	0.000	82020428	50.0	49.7	
						RPD = 6.21	
21 Heptachlor epoxide							
1	6.042	6.041	0.001	635945456	50.0	51.7	
2	5.878	5.877	0.001	87008428	50.0	49.3	
						RPD = 4.77	
22 trans-Chlordane							
1	6.173	6.172	0.001	685410089	50.0	51.8	
2	6.075	6.076	-0.001	89717315	50.0	48.4	
						RPD = 6.78	
23 cis-Chlordane							
1	6.314	6.314	0.000	655766879	50.0	51.8	
2	6.231	6.231	0.000	86898525	50.0	49.5	
						RPD = 4.50	
24 4,4'-DDE							
1	6.390	6.391	-0.001	667518116	50.0	50.3	
2	6.414	6.415	-0.001	88209664	50.0	48.4	
						RPD = 3.86	
25 Endosulfan I							
1	6.463	6.462	0.001	619188644	50.0	53.2	
2	6.290	6.290	0.000	82957147	50.0	49.8	
						RPD = 6.65	
27 Dieldrin							
1	6.715	6.716	-0.001	676842176	50.0	52.3	
2	6.580	6.580	0.000	91680529	50.0	49.9	
						RPD = 4.65	
30 Endrin							
1	6.963	6.963	0.000	646934837	50.0	57.5	
2	6.902	6.901	0.001	87549202	50.0	54.0	
						RPD = 6.25	
32 4,4'-DDD							
1	7.025	7.025	0.000	542050911	50.0	52.6	
2	7.029	7.029	0.000	73245240	50.0	49.4	
						RPD = 6.40	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.200	7.199	0.001	572679498	50.0	54.2	
2	7.128	7.127	0.001	78858383	50.0	50.2	
						RPD = 7.73	
35 4,4'-DDT							
1	7.319	7.319	0.000	541358488	50.0	58.6	
2	7.360	7.360	0.000	72764440	50.0	56.5	
						RPD = 3.64	
36 Endrin aldehyde							
1	7.645	7.645	0.000	453151933	50.0	56.1	
2	7.486	7.486	0.000	63364385	50.0	50.3	
						RPD = 10.81	
37 Methoxychlor							
1	7.823	7.823	0.000	262914238	50.0	62.5	
2	8.090	8.090	0.000	36685060	50.0	57.9	
						RPD = 7.77	
38 Mirex							
1	7.983	7.981	0.002	399747709	50.0	59.3	
2	8.281	8.280	0.001	53859888	50.0	50.6	
						RPD = 15.87	
39 Endosulfan sulfate							
1	8.103	8.102	0.001	563114767	50.0	60.2	
2	7.778	7.778	0.000	73957067	50.0	51.4	
						RPD = 15.71	
40 Endrin ketone							
1	8.394	8.394	0.000	593095281	50.0	60.3	
2	8.330	8.331	-0.001	81262783	50.0	51.4	
						RPD = 16.03	
$ 41 DCB Decachlorobiphenyl							
1	9.408	9.407	0.001	373083483	50.0	61.0	
2	9.600	9.600	0.000	51826251	50.0	49.8	
						RPD = 20.17	
S 3 Endosulfan, Total							
1						167.6	
2						151.4	
						RPD = 10.18	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

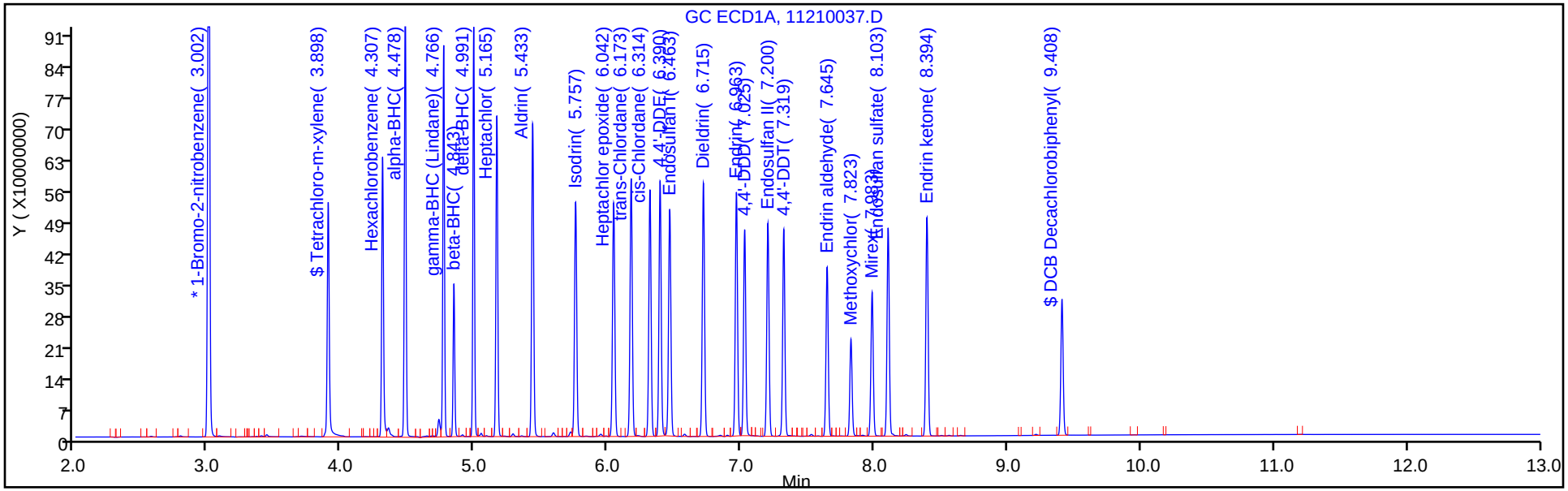
Report Date: 25-Nov-2018 21:26:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

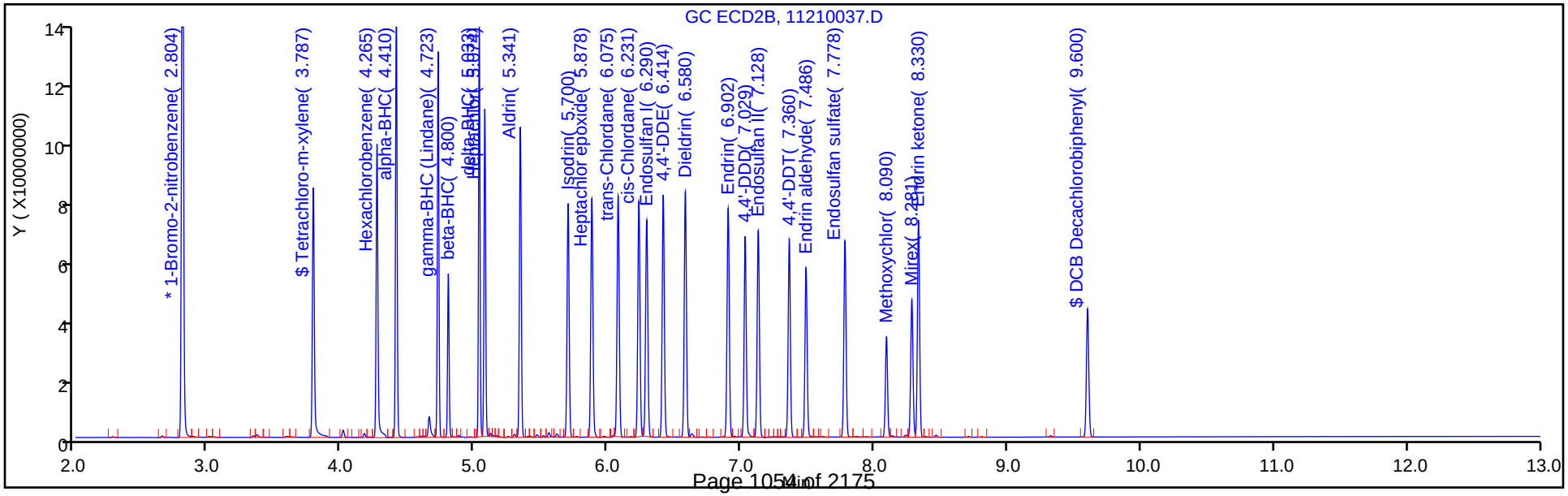
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210037.D

Injection Date:	21-Nov-2018 20:55:56	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV AB			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LB3 280-436732/1-I

Matrix: Water (TCLP) | Lab File ID: 11210015.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 15:57

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-20-8	Endrin	ND		0.00050	0.000079
76-44-8	Heptachlor	ND		0.00050	0.000077
1024-57-3	Heptachlor epoxide	ND		0.00050	0.000075
58-89-9	gamma-BHC (Lindane)	ND		0.00050	0.000069
72-43-5	Methoxychlor	ND		0.0010	0.00013
8001-35-2	Toxaphene	ND		0.020	0.0037
12789-03-6	Chlordane (technical)	ND		0.0050	0.0014

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	88		28-115
2051-24-3	DCB Decachlorobiphenyl	101		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210015.D
Lims ID: LB3 280-436732/1-I
Client ID:
Sample Type: LB3
Inject. Date: 21-Nov-2018 15:57:41 ALS Bottle#: 9 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LB3 280-436732/1
Misc. Info.: 280-0076442-015
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 21:05:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1		1.000				ND	
2		0.000					
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1647706577	150.0	150.0	
2	2.804	2.805	0.000	212901053	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.899	3.899	0.000	202842783	20.0	17.0	
2	3.787	3.786	0.001	31189339	20.0	17.6	
						RPD = 3.46	
5 Hexachlorobenzene							
1	4.307	4.306	0.001	7067317		0.8475	
2	4.264	4.265	-0.001	1281656		0.1347	
						RPD = 145.15	
6 Diallate							
1		4.331				ND	
2		4.217					
7 Propachlor							
1		4.472				ND	
2		4.096					
8 alpha-BHC							
1		4.477				ND	
2		4.410					
9 gamma-BHC (Lindane)							
1		4.766				ND	
2		4.724					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
10 beta-BHC							
1		4.842				ND	
2		4.801					
11 2,4,5-Trichlorophenol							
1		4.861				ND	
2		4.772					
12 delta-BHC							
1		4.991				ND	
2		5.033					
14 Chlordane (technical)							
1		5.097				ND	
1		5.562					
1		6.172					
1		6.311					
1		7.125					
2		4.960					
2		5.479					
2		6.074					
2		6.231					
2		7.174					
13 Technical Chlordane							
1		5.097				ND	
1		5.562					
1		6.172					
1		6.311					
1		7.125					
2		4.960					
2		5.479					
2		6.074					
2		6.231					
2		7.174					
15 Heptachlor							
1		5.165				ND	
2		5.075					
16 Aldrin							
1		5.433				ND	
2		5.341					
17 Chlorpyrifos							
1		5.664				ND	
2		5.561					
18 Isodrin							
1		5.756				ND	
2		5.700					
19 Dicofol							
1		5.796				ND	
2		5.659					
20 2,4'-DDE							
1		6.024				ND	
2		6.081					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
21 Heptachlor epoxide							
1		6.041				ND	
2		5.877					
22 trans-Chlordane							
1		6.172				ND	
2		6.076					
28 Toxaphene							
1		6.210				ND	
1		6.815					
1		7.488					
1		7.847					
1		8.164					
2		5.725					
2		7.077					
2		7.218					
2		7.732					
2		8.026					
23 cis-Chlordane							
1		6.314				ND	
2		6.231					
24 4,4'-DDE							
1		6.391				ND	
2		6.415					
25 Endosulfan I							
1		6.462				ND	
2		6.290					
26 2,4'-DDD							
1		6.574				ND	
2		6.626					
27 Dieldrin							
1		6.716				ND	
2		6.580					
29 2,4'-DDT							
1		6.842				ND	
2		6.948					
30 Endrin							
1		6.963				ND	
2		6.901					
31 Kepone							
1		7.005				ND	
2		7.016					
32 4,4'-DDD							
1	7.029	7.025	0.004	109995		0.4651	
2	7.018	7.029	-0.011	256281		-0.1002	
						RPD = 309.92	
33 Chlorobenzilate							
1		7.038				ND	
2		6.896					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1		7.199				ND	
2		7.127					
35 4,4'-DDT							
1		7.319				ND	
2		7.360					
36 Endrin aldehyde							
1		7.645				ND	
2		7.486					
37 Methoxychlor							
1		7.823				ND	
2		8.090					
38 Mirex							
1		7.981				ND	
2		8.280					
39 Endosulfan sulfate							
1		8.102				ND	
2		7.778					
40 Endrin ketone							
1		8.394				ND	
2		8.331					
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.407	0.000	139989411	20.0	22.3	
2	9.599	9.600	-0.001	21269904	20.0	20.2	
						RPD = 9.98	
42 Tris(2,3-dibromopropyl)phosphate							
1		11.197				ND	
2		11.371					
S 3 Endosulfan, Total							
1		0.000				ND	
2		0.000					

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

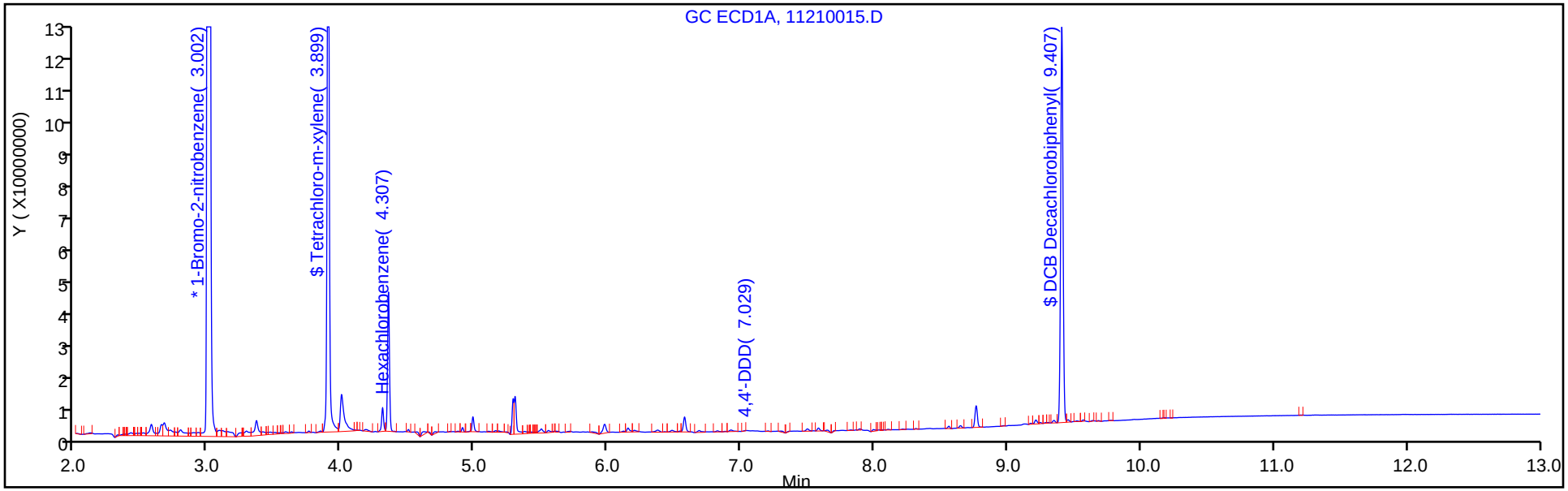
Report Date: 25-Nov-2018 21:25:47 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

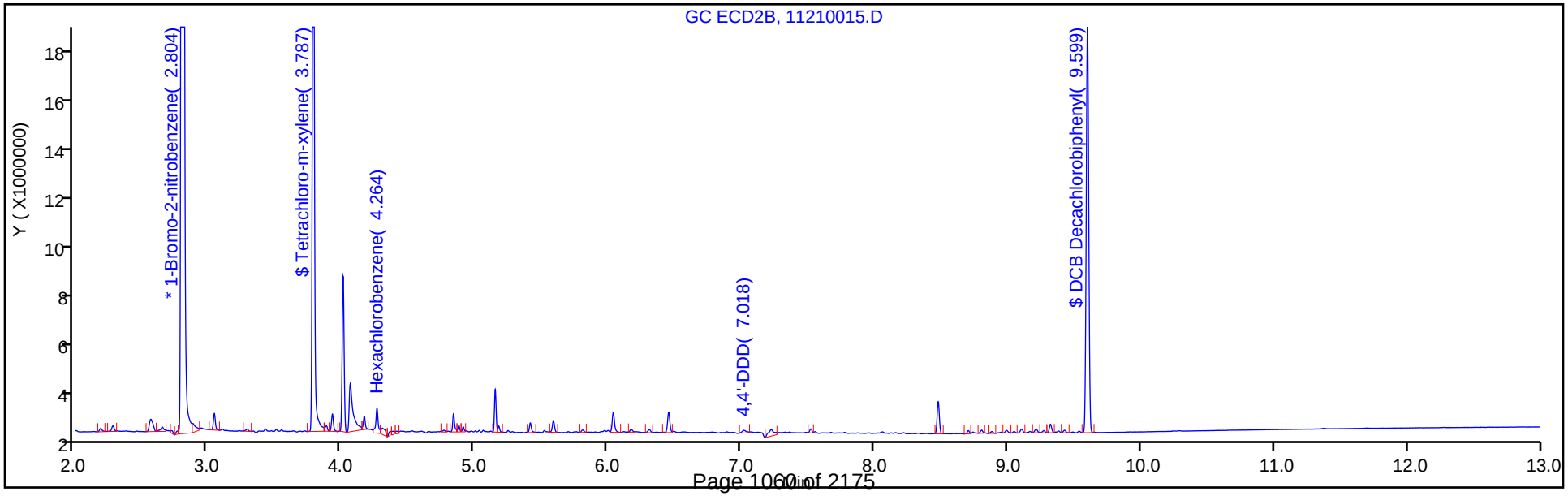
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210015.D

Injection Date:	21-Nov-2018 15:57:41	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LB3 280-436732/1-I			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210015.D				
Lims ID:	LB3 280-436732/1-I				
Client ID:					
Sample Type:	LB3				
Inject. Date:	21-Nov-2018 15:57:41	ALS Bottle#:	9	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LB3 280-436732/1				
Misc. Info.:	280-0076442-015				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 21:05:20		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.0	85.05
$ 41 DCB Decachlorobiphenyl	20.0	22.3	111.55

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.6	88.05
$ 41 DCB Decachlorobiphenyl	20.0	20.2	100.95

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436732/3-E

Matrix: Water (TCLP) | Lab File ID: 11210016.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 16:15

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-20-8	Endrin	0.00514		0.00050	0.000079
76-44-8	Heptachlor	0.00484		0.00050	0.000077
1024-57-3	Heptachlor epoxide	0.00481		0.00050	0.000075
58-89-9	gamma-BHC (Lindane)	0.00474		0.00050	0.000069
72-43-5	Methoxychlor	0.00560		0.0010	0.00013

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	90		28-115
2051-24-3	DCB Decachlorobiphenyl	103		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210016.D
Lims ID: LCS 280-436732/3-E
Client ID:
Sample Type: LCS
Inject. Date: 21-Nov-2018 16:15:14 ALS Bottle#: 10 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436732/3
Misc. Info.: 280-0076442-016
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.000	1651005801	150.0	150.0	
2	2.805	2.805	0.000	214808985	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.899	3.899	0.000	206097081	20.0	17.2	
2	3.787	3.786	0.001	31970366	20.0	17.9	
						RPD = 3.74	
5 Hexachlorobenzene							
1	4.307	4.306	0.001	585881154	50.0	46.2	
2	4.265	4.265	0.000	82546368	50.0	44.7	
						RPD = 3.20	
8 alpha-BHC							
1	4.477	4.477	0.000	878828912	50.0	47.9	
2	4.410	4.410	0.000	113518913	50.0	47.7	
						RPD = 0.42	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	755476628	50.0	48.2	
2	4.723	4.724	-0.001	98056858	50.0	47.4	
						RPD = 1.78	
10 beta-BHC							
1	4.842	4.842	0.000	291028900	50.0	48.3	
2	4.800	4.801	-0.001	41050417	50.0	46.3	
						RPD = 4.23	
12 delta-BHC							
1	4.991	4.991	0.000	787993854	50.0	49.4	
2	5.032	5.033	-0.001	98030273	50.0	46.7	
						RPD = 5.59	
15 Heptachlor							
1	5.165	5.165	0.000	676680484	50.0	48.7	
2	5.074	5.075	-0.001	86520353	50.0	48.4	
						RPD = 0.71	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
16 Aldrin							
1	5.433	5.433	0.000	718770924	50.0	48.5	
2	5.341	5.341	0.000	91573407	50.0	47.5	
						RPD = 2.05	
21 Heptachlor epoxide							
1	6.042	6.041	0.001	626793432	50.0	49.8	
2	5.877	5.877	0.000	84321168	50.0	48.1	
						RPD = 3.47	
22 trans-Chlordane							
1	6.173	6.172	0.001	668237381	50.0	49.3	
2	6.075	6.076	-0.001	87142256	50.0	47.3	
						RPD = 4.17	
23 cis-Chlordane							
1	6.314	6.314	0.000	638619952	50.0	49.3	
2	6.230	6.231	-0.001	83579950	50.0	48.0	
						RPD = 2.78	
24 4,4'-DDE							
1	6.390	6.391	-0.001	643462197	50.0	47.4	
2	6.414	6.415	-0.001	84376354	50.0	46.6	
						RPD = 1.67	
25 Endosulfan I							
1	6.462	6.462	0.000	569201368	50.0	47.8	
2	6.289	6.290	-0.001	75669232	50.0	45.7	
						RPD = 4.56	
27 Dieldrin							
1	6.716	6.716	0.000	666402804	50.0	50.3	
2	6.579	6.580	-0.001	88837520	50.0	48.7	
						RPD = 3.25	
30 Endrin							
1	6.962	6.963	-0.001	621642986	50.0	54.0	
2	6.901	6.901	0.000	82706608	50.0	51.4	
						RPD = 4.99	
32 4,4'-DDD							
1	7.024	7.025	-0.001	530851159	50.0	50.4	
2	7.028	7.029	-0.001	70959715	50.0	48.2	
						RPD = 4.50	
34 Endosulfan II							
1	7.199	7.199	0.000	507741369	50.0	47.0	
2	7.127	7.127	0.000	68866898	50.0	44.1	
						RPD = 6.49	
35 4,4'-DDT							
1	7.317	7.319	-0.002	501655966	50.0	53.1	
2	7.359	7.360	-0.001	69872977	50.0	54.7	
						RPD = 2.83	
36 Endrin aldehyde							
1	7.644	7.645	-0.001	280056058	50.0	33.9	
2	7.486	7.486	0.000	39814839	50.0	31.6	
						RPD = 7.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
37 Methoxychlor							
1	7.822	7.823	-0.001	254048296	50.0	59.1	
2	8.089	8.090	-0.001	35248140	50.0	56.0	
						RPD = 5.33	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	550032192	50.0	57.5	
2	7.777	7.778	-0.001	71267549	50.0	49.9	
						RPD = 14.10	
40 Endrin ketone							
1	8.393	8.394	-0.001	553779491	50.0	55.1	
2	8.329	8.331	-0.002	76006055	50.0	48.4	
						RPD = 12.95	
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.407	0.000	143022092	20.0	22.8	
2	9.598	9.600	-0.002	21918249	20.0	20.6	
						RPD = 9.72	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

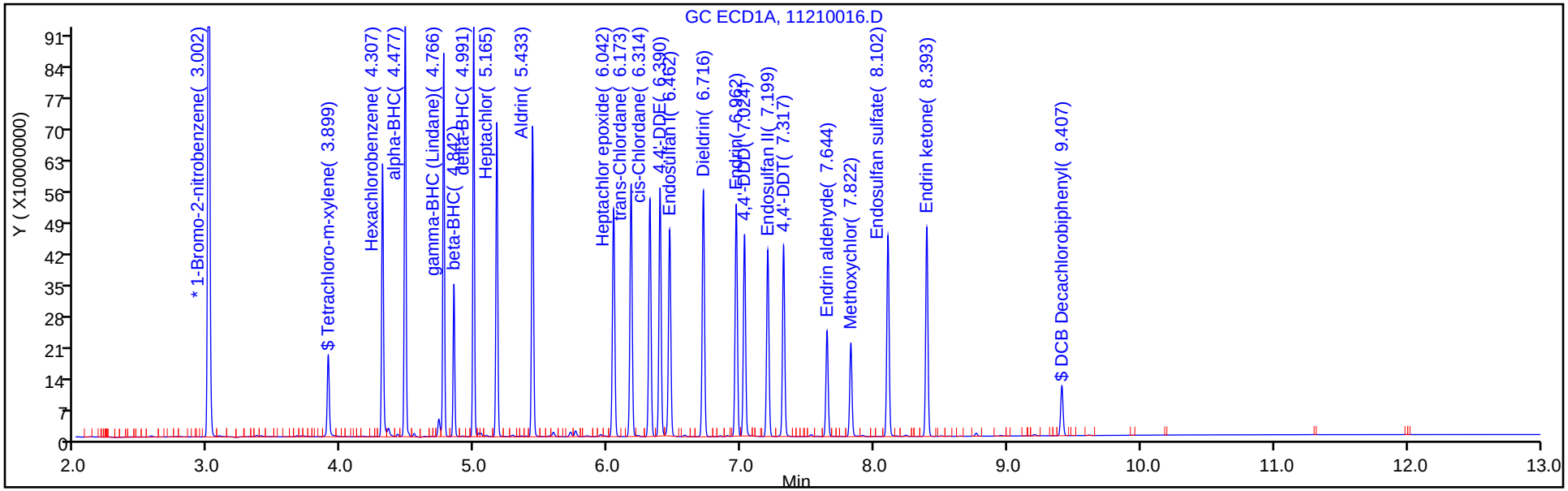
Report Date: 25-Nov-2018 21:25:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

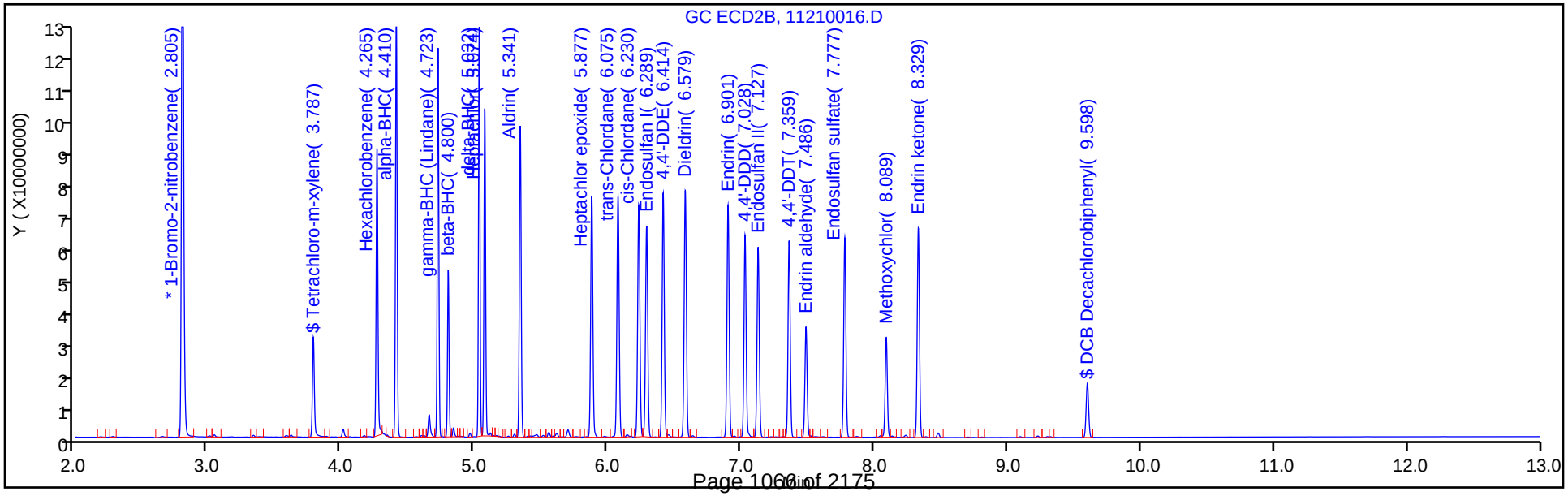
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210016.D

Injection Date:	21-Nov-2018 16:15:14	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCS 280-436732/3-E			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210016.D				
Lims ID:	LCS 280-436732/3-E				
Client ID:					
Sample Type:	LCS				
Inject. Date:	21-Nov-2018 16:15:14	ALS Bottle#:	10	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436732/3				
Misc. Info.:	280-0076442-016				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.2	86.22
$ 41 DCB Decachlorobiphenyl	20.0	22.8	113.75

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.9	89.50
$ 41 DCB Decachlorobiphenyl	20.0	20.6	103.21

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436732/3-F

Matrix: Water (TCLP) | Lab File ID: 11210017.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 16:32

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8001-35-2	Toxaphene	0.219		0.020	0.0037

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	89		28-115
2051-24-3	DCB Decachlorobiphenyl	115		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210017.D
Lims ID: LCS 280-436732/3-F
Client ID:
Sample Type: LCS
Inject. Date: 21-Nov-2018 16:32:54 ALS Bottle#: 11 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436732/3
Misc. Info.: 280-0076442-017
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:19:12

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.002	3.002	0.001	1626761580	150.0	150.0	
2	2.805	2.805	0.000	217042001	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.899	3.899	0.000	199778520	20.0	17.0	
2	3.787	3.786	0.001	32258520	20.0	17.9	
						RPD = 5.20	
28 Toxaphene							M
1	6.200	6.210	-0.010	83501475	2000.0	1140.9	M
1	6.815	6.815	0.000	333633978	2000.0	1763.6	M
1	7.484	7.488	-0.004	446926763	2000.0	2109.8	M
1	7.852	7.847	0.005	245513476	2000.0	2858.1	M
1	8.169	8.164	0.005	387217970	2000.0	4422.5	M
		Average of Peak Amounts =				2459.0	
2	5.725	5.725	0.000	11442025	2000.0	1705.2	M
2	7.075	7.077	-0.002	46583177	2000.0	1549.3	M
2	7.216	7.218	-0.002	124426348	2000.0	1501.2	M
2	7.722	7.732	-0.010	85357505	2000.0	3593.4	M
2	8.026	8.026	0.000	120369269	2000.0	2600.7	M
		Average of Peak Amounts =				2190.0	
						RPD = 11.57	
$ 41 DCB Decachlorobiphenyl							M
1	9.407	9.407	0.000	179725000	20.0	29.1	M
2	9.600	9.600	0.000	24496912	20.0	22.9	M
						RPD = 23.53	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

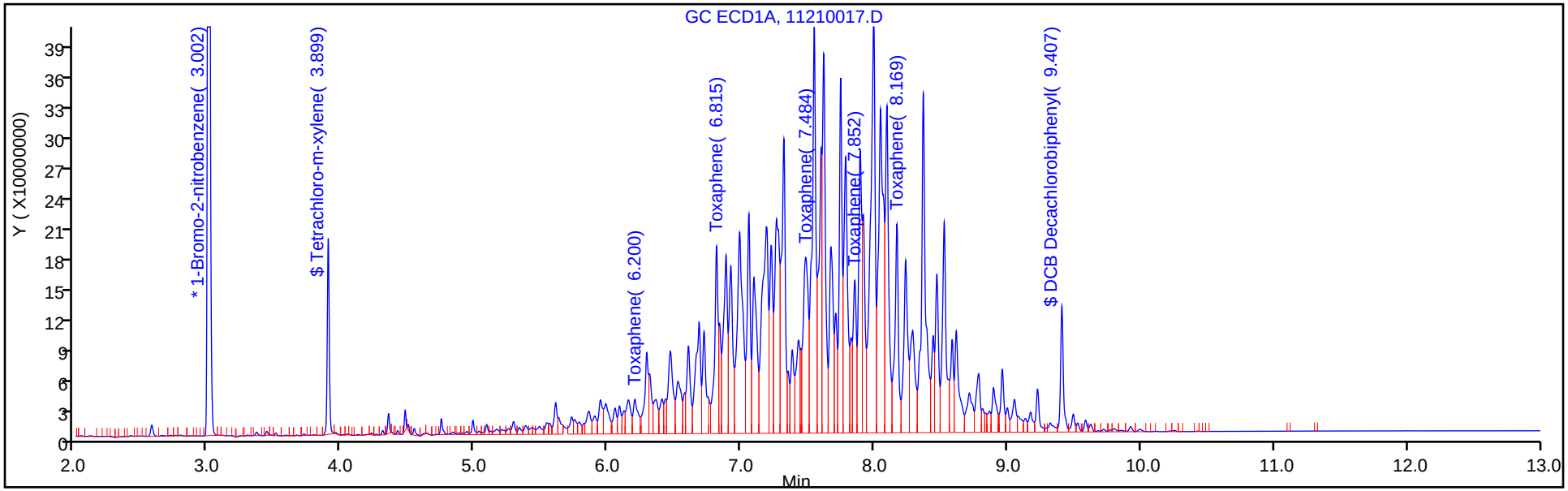
Report Date: 25-Nov-2018 21:25:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

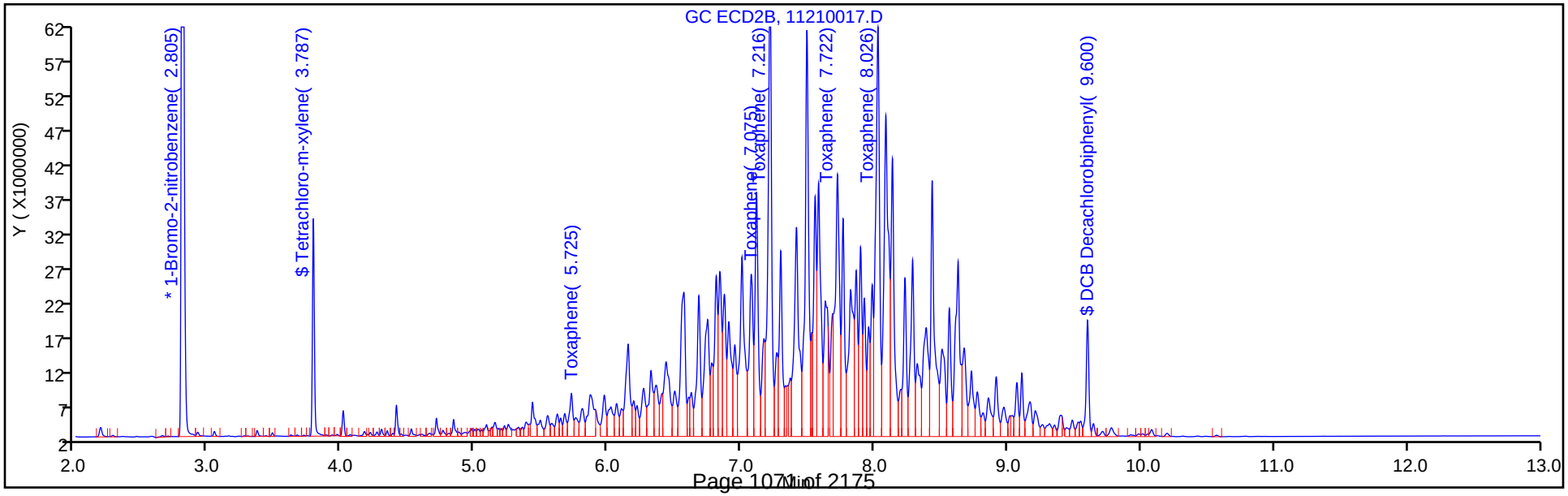
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210017.D

Injection Date:	21-Nov-2018 16:32:54	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCS 280-436732/3-F			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210017.D				
Lims ID:	LCS 280-436732/3-F				
Client ID:					
Sample Type:	LCS				
Inject. Date:	21-Nov-2018 16:32:54	ALS Bottle#:	11	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436732/3				
Misc. Info.:	280-0076442-017				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	23-Nov-2018 10:19:12		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.0	84.85
$ 41 DCB Decachlorobiphenyl	20.0	29.1	145.30

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.9	89.38
$ 41 DCB Decachlorobiphenyl	20.0	22.9	114.71

Report Date: 25-Nov-2018 21:25:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

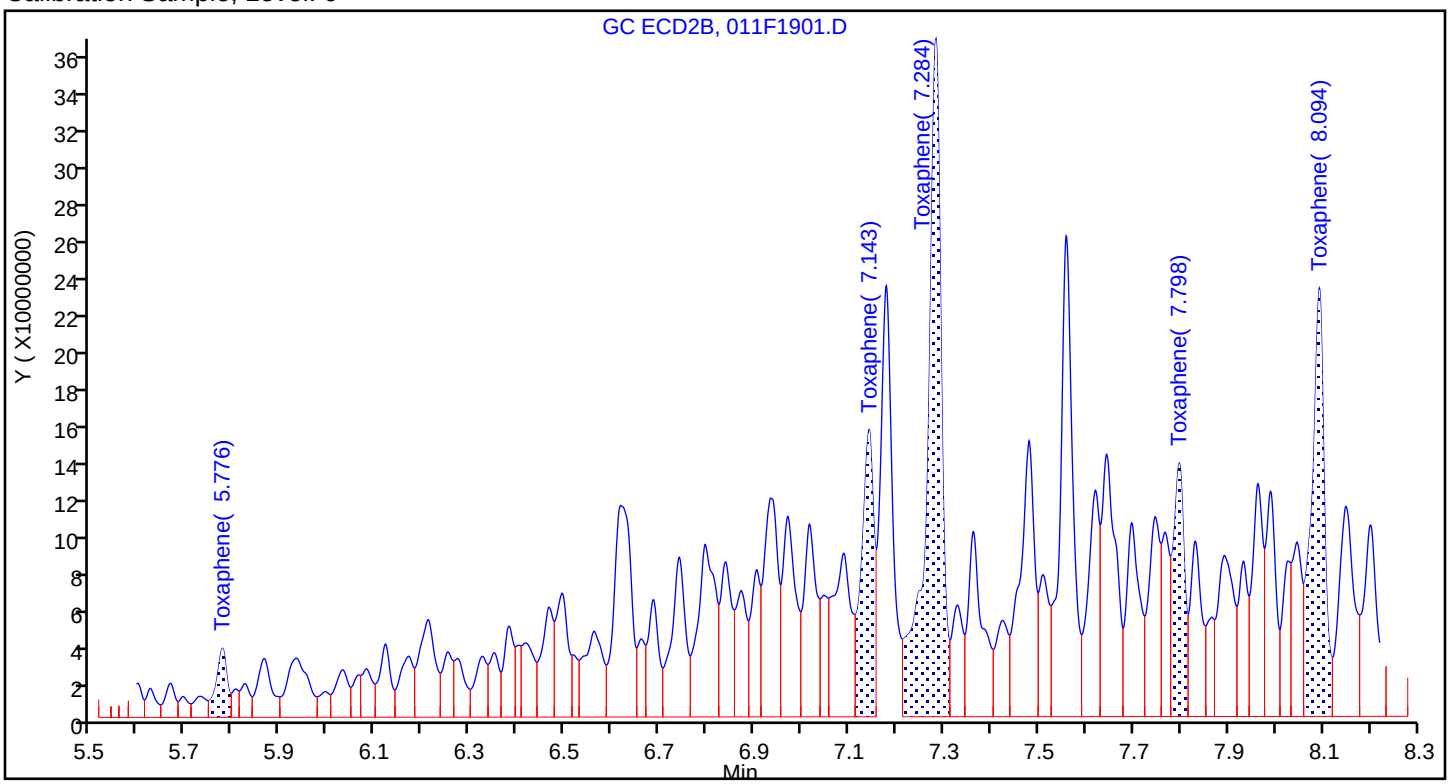
TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210017.D

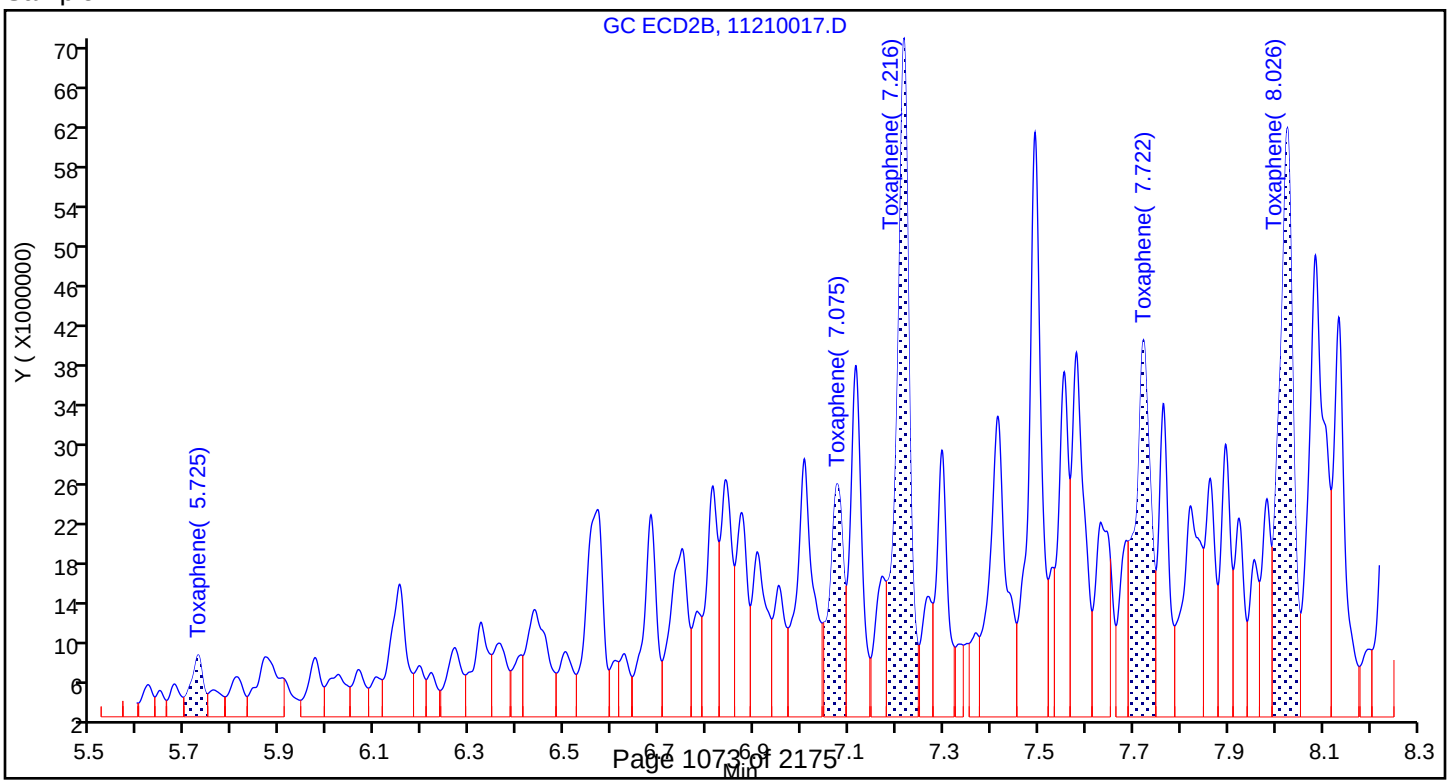
Injection Date:	21-Nov-2018 16:32:54	Instrument ID:	SGC_P2
Lims ID:	LCS 280-436732/3-F		
Client ID:			
Operator ID:	TEM	ALS Bottle#:	11 Worklist Smp#: 17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B

28 Toxaphene, CAS: 8001-35-2

Calibration Sample, Level: 6



Sample



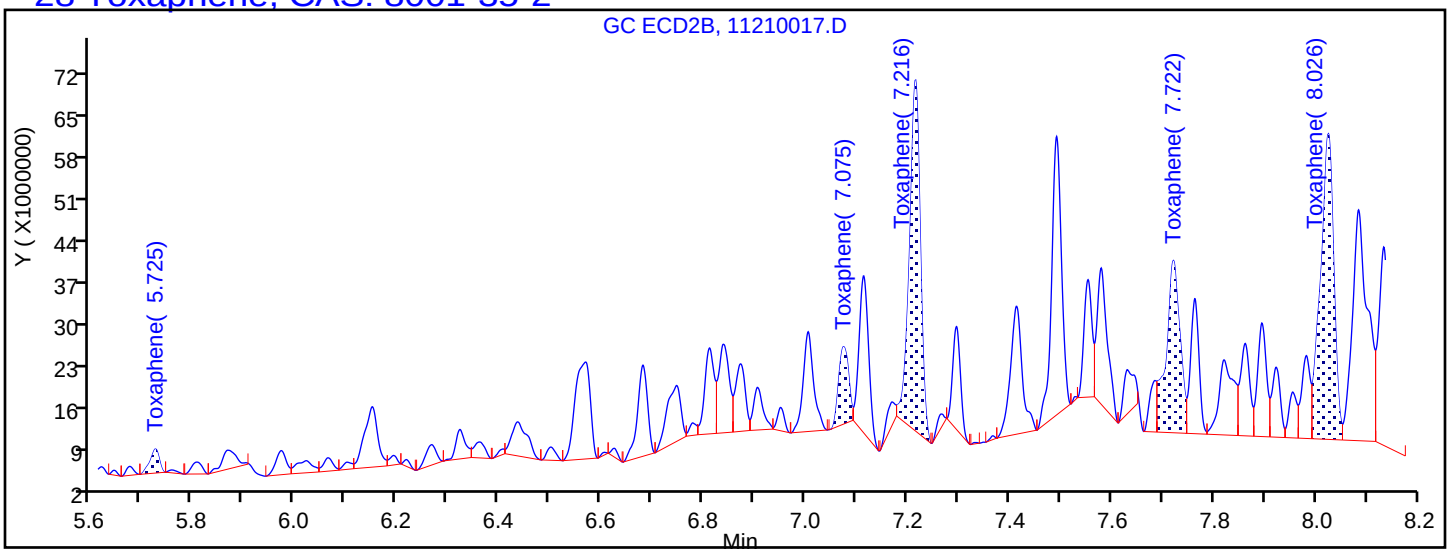
Report Date: 25-Nov-2018 21:25:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210017.D

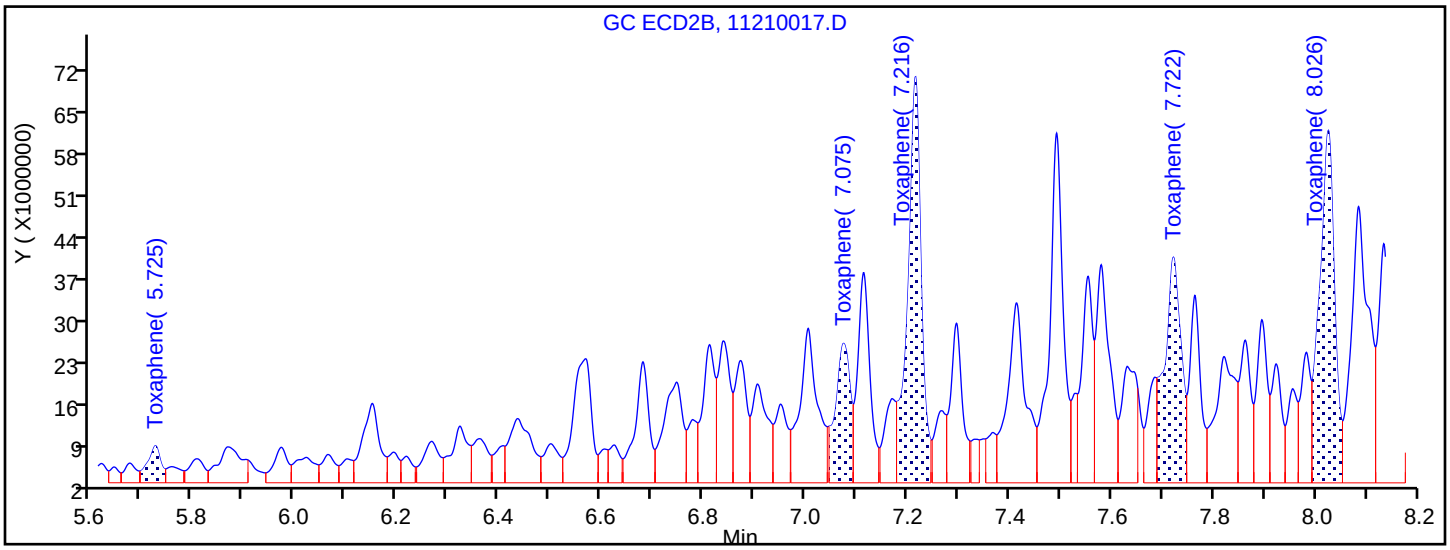
Injection Date:	21-Nov-2018 16:32:54	Instrument ID:	SGC_P2		
Lims ID:	LCS 280-436732/3-F				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	11	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.725	Response = 5049678
7.075	Response = 17595143
7.216	Response = 86280157
7.722	Response = 54176744
8.026	Response = 92288941



Manual Integration Results

5.725	Response = 11442025	M
7.075	Response = 46583177	M
7.216	Response = 124426348	M
7.722	Response = 85357505	M
8.026	Response = 120369269	M

Reviewer: mooret, 25-Nov-2018 21:05:45

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

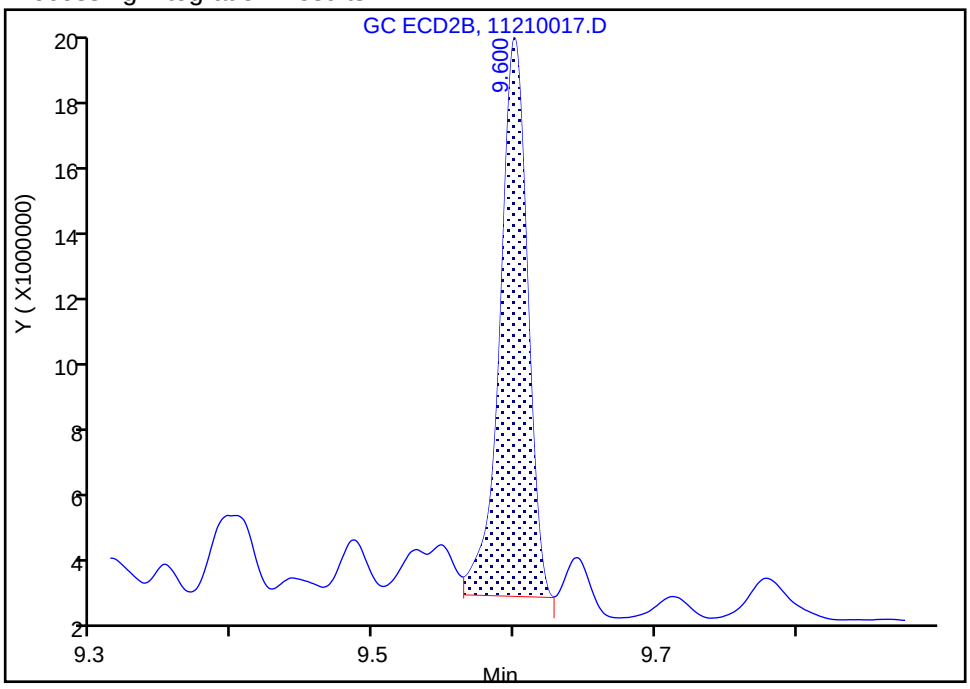
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210017.D
Injection Date: 21-Nov-2018 16:32:54 Instrument ID: SGC_P2
Lims ID: LCS 280-436732/3-F
Client ID:
Operator ID: TEM ALS Bottle#: 11 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: P2 8081 IS Limit Group: GCSV - 8081A - IS
Column: CLP2 (0.32 mm) Detector GC ECD2B

$ 41 DCB Decachlorobiphenyl, CAS: 2051-24-3

Signal: 2

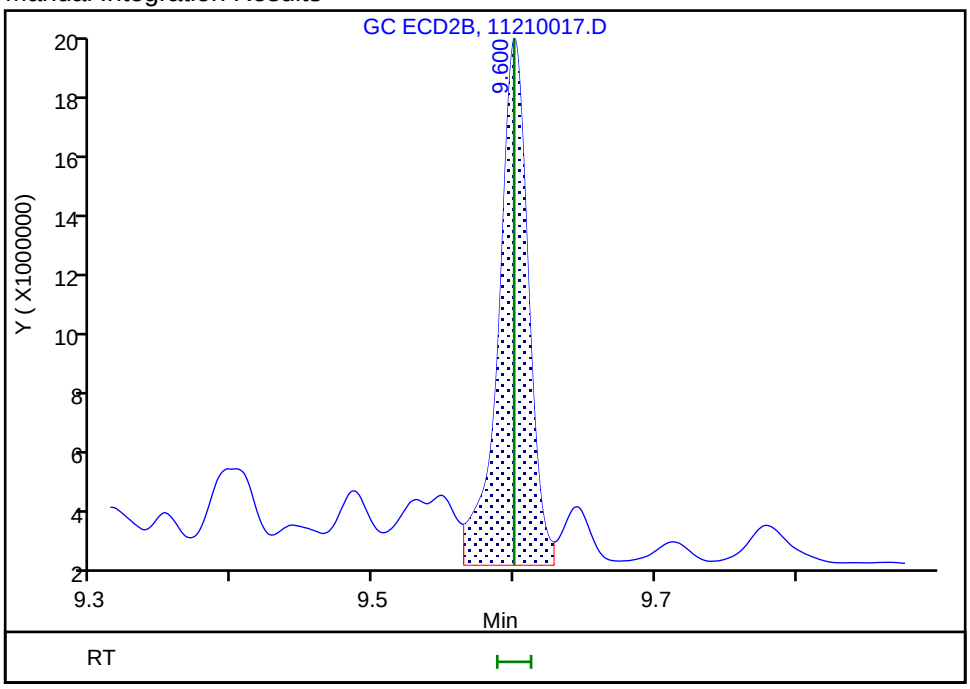
Processing Integration Results

RT: 9.60
Area: 21604490
Amount: 20.112514
Amount Units: ng/mL



Manual Integration Results

RT: 9.60
Area: 24496912
Amount: 22.941515
Amount Units: ng/mL



Reviewer: mooret, 25-Nov-2018 21:05:45
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MS | Lab Sample ID: 280-116538-4 MS

Matrix: Water (TCLP) | Lab File ID: 11210020.D

Analysis Method: 8081B | Date Collected: 11/02/2018 15:30

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 17:25

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-20-8	Endrin	0.00505		0.00050	0.000079
76-44-8	Heptachlor	0.00494		0.00050	0.000077
1024-57-3	Heptachlor epoxide	0.00481		0.00050	0.000075
58-89-9	gamma-BHC (Lindane)	0.00484		0.00050	0.000069
72-43-5	Methoxychlor	0.00532		0.0010	0.00013

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	89		28-115
2051-24-3	DCB Decachlorobiphenyl	92		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210020.D
Lims ID: 280-116538-A-4-L MS
Client ID:
Sample Type: MS
Inject. Date: 21-Nov-2018 17:25:24 ALS Bottle#: 14 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-L
Misc. Info.: 280-0076442-020
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.004	3.002	0.002	1682111455	150.0	150.0	
2	2.806	2.805	0.001	221650496	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.900	3.899	0.001	210770568	20.0	17.3	
2	3.789	3.786	0.003	32813576	20.0	17.8	
						RPD = 2.82	
5 Hexachlorobenzene							
1	4.308	4.306	0.002	597229102	50.0	46.2	
2	4.266	4.265	0.001	86722294	50.0	45.5	
						RPD = 1.43	
8 alpha-BHC							
1	4.478	4.477	0.001	911188515	50.0	48.7	
2	4.411	4.410	0.001	118589474	50.0	48.3	
						RPD = 0.90	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	793966401	50.0	49.7	
2	4.725	4.724	0.001	103420422	50.0	48.4	
						RPD = 2.66	
10 beta-BHC							
1	4.843	4.842	0.001	306455189	50.0	50.0	
2	4.801	4.801	0.000	43369648	50.0	47.5	
						RPD = 5.16	
12 delta-BHC							
1	4.991	4.991	0.000	805961822	50.0	49.6	
2	5.034	5.033	0.001	101484140	50.0	46.9	
						RPD = 5.64	
15 Heptachlor							
1	5.165	5.165	0.000	715525925	50.0	50.5	
2	5.075	5.075	0.000	91123463	50.0	49.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
16 Aldrin							
1	5.435	5.433	0.002	733229752	50.0	48.5	
2	5.342	5.341	0.001	93040314	50.0	46.8	
						RPD = 3.73	
21 Heptachlor epoxide							
1	6.043	6.041	0.002	652411684	50.0	50.8	
2	5.879	5.877	0.002	87145287	50.0	48.1	
						RPD = 5.44	
22 trans-Chlordane							
1	6.174	6.172	0.002	688604482	50.0	49.9	
2	6.076	6.076	0.000	89098515	50.0	46.9	
						RPD = 6.22	
23 cis-Chlordane							
1	6.315	6.314	0.001	658208342	50.0	49.9	
2	6.232	6.231	0.001	85182627	50.0	47.4	
						RPD = 5.17	
24 4,4'-DDE							
1	6.391	6.391	0.000	646865266	50.0	46.8	
2	6.415	6.415	0.000	84290133	50.0	45.1	
						RPD = 3.60	
25 Endosulfan I							
1	6.463	6.462	0.001	582887533	50.0	48.1	
2	6.291	6.290	0.001	77585348	50.0	45.4	
						RPD = 5.71	
27 Dieldrin							
1	6.717	6.716	0.001	693873274	50.0	51.4	
2	6.581	6.580	0.001	90779808	50.0	48.2	
						RPD = 6.38	
30 Endrin							
1	6.965	6.963	0.002	633627995	50.0	54.1	
2	6.903	6.901	0.002	83916817	50.0	50.5	
						RPD = 6.72	
32 4,4'-DDD							
1	7.025	7.025	0.000	537945945	50.0	50.1	
2	7.030	7.029	0.001	71451133	50.0	47.0	
						RPD = 6.43	
34 Endosulfan II							
1	7.200	7.199	0.001	514542698	50.0	46.8	
2	7.128	7.127	0.001	69451600	50.0	43.0	
						RPD = 8.29	
35 4,4'-DDT							
1	7.320	7.319	0.001	489894955	50.0	51.0	
2	7.361	7.360	0.001	68873537	50.0	52.2	
						RPD = 2.44	
36 Endrin aldehyde							
1	7.645	7.645	0.000	174400953	50.0	20.8	
2	7.487	7.486	0.001	25395777	50.0	19.3	
						RPD = 7.62	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
37 Methoxychlor							
1	7.825	7.823	0.002	250160885	50.0	57.1	
2	8.090	8.090	0.000	34570827	50.0	53.2	
						RPD = 7.04	
39 Endosulfan sulfate							
1	8.103	8.102	0.001	551247862	50.0	56.5	
2	7.779	7.778	0.001	71335802	50.0	48.4	
						RPD = 15.54	
40 Endrin ketone							
1	8.395	8.394	0.001	556271834	50.0	54.3	
2	8.331	8.331	0.000	75924590	50.0	46.8	
						RPD = 14.81	
$ 41 DCB Decachlorobiphenyl							
1	9.408	9.407	0.001	132773706	20.0	20.7	
2	9.600	9.600	0.000	20232763	20.0	18.4	
						RPD = 12.06	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

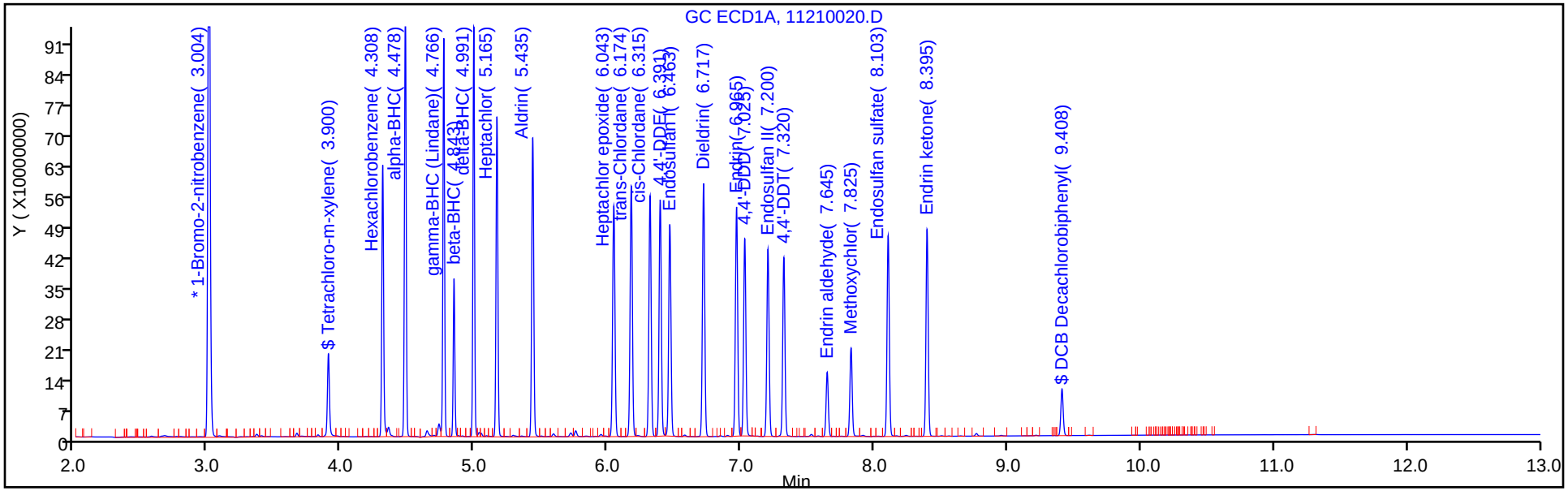
Report Date: 25-Nov-2018 21:25:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

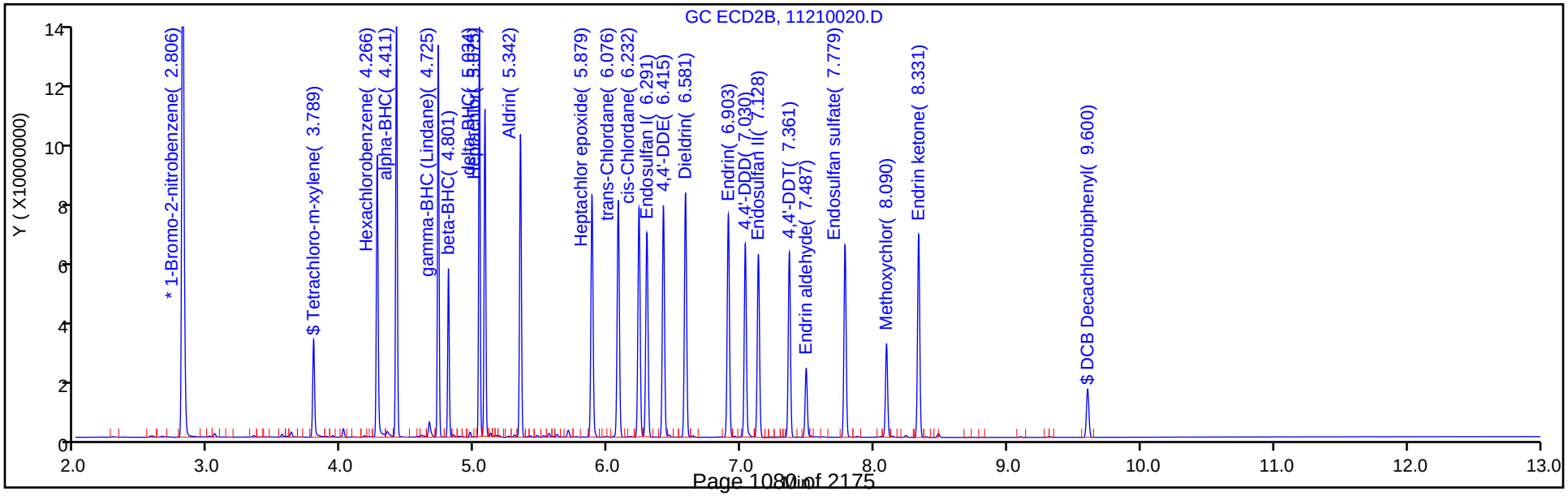
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210020.D

Injection Date:	21-Nov-2018 17:25:24	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-A-4-L MS			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210020.D				
Lims ID:	280-116538-A-4-L MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	21-Nov-2018 17:25:24	ALS Bottle#:	14	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-L				
Misc. Info.:	280-0076442-020				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.3	86.53
$ 41 DCB Decachlorobiphenyl	20.0	20.7	103.58

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.8	89.01
$ 41 DCB Decachlorobiphenyl	20.0	18.4	91.80

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MS | Lab Sample ID: 280-116538-4 MS

Matrix: Water (TCLP) | Lab File ID: 11210022.D

Analysis Method: 8081B | Date Collected: 11/02/2018 15:30

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 18:00

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8001-35-2	Toxaphene	0.205		0.020	0.0037

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	88		28-115
2051-24-3	DCB Decachlorobiphenyl	106		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210022.D
Lims ID: 280-116538-A-4-N MS
Client ID:
Sample Type: MS
Inject. Date: 21-Nov-2018 18:00:32 ALS Bottle#: 16 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-N
Misc. Info.: 280-0076442-022
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:19:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.004	3.002	0.002	1638626068	150.0	150.0	
2	2.807	2.805	0.002	216228957	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.899	0.002	204821060	20.0	17.3	
2	3.789	3.786	0.003	31756134	20.0	17.7	
						RPD = 2.23	
28 Toxaphene							M
1	6.202	6.210	-0.008	77897823	2000.0	1059.2	M
1	6.817	6.815	0.002	321077107	2000.0	1686.9	M
1	7.486	7.488	-0.002	464275335	2000.0	2173.8	M
1	7.852	7.847	0.005	234541673	2000.0	2714.4	M
1	8.170	8.164	0.006	375228506	2000.0	4258.4	M
		Average of Peak Amounts =				2378.5	
2	5.726	5.725	0.001	9708426	2000.0	1444.5	
2	7.077	7.077	0.000	44942735	2000.0	1500.0	
2	7.218	7.218	0.000	118110614	2000.0	1430.5	
2	7.723	7.732	-0.009	79568029	2000.0	3362.8	
2	8.028	8.026	0.002	115142173	2000.0	2497.2	
		Average of Peak Amounts =				2047.0	
						RPD = 14.98	
$ 41 DCB Decachlorobiphenyl							M
1	9.408	9.407	0.001	171863486	20.0	27.6	M
2	9.601	9.600	0.001	22549029	20.0	21.1	
						RPD = 26.53	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

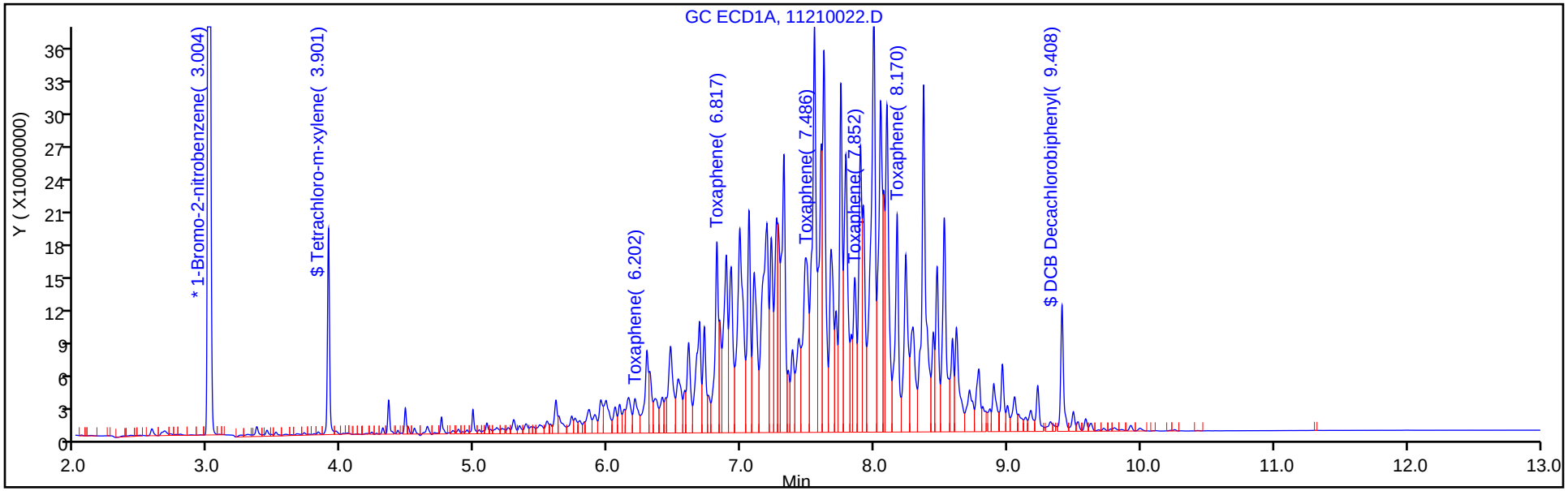
Report Date: 25-Nov-2018 21:25:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

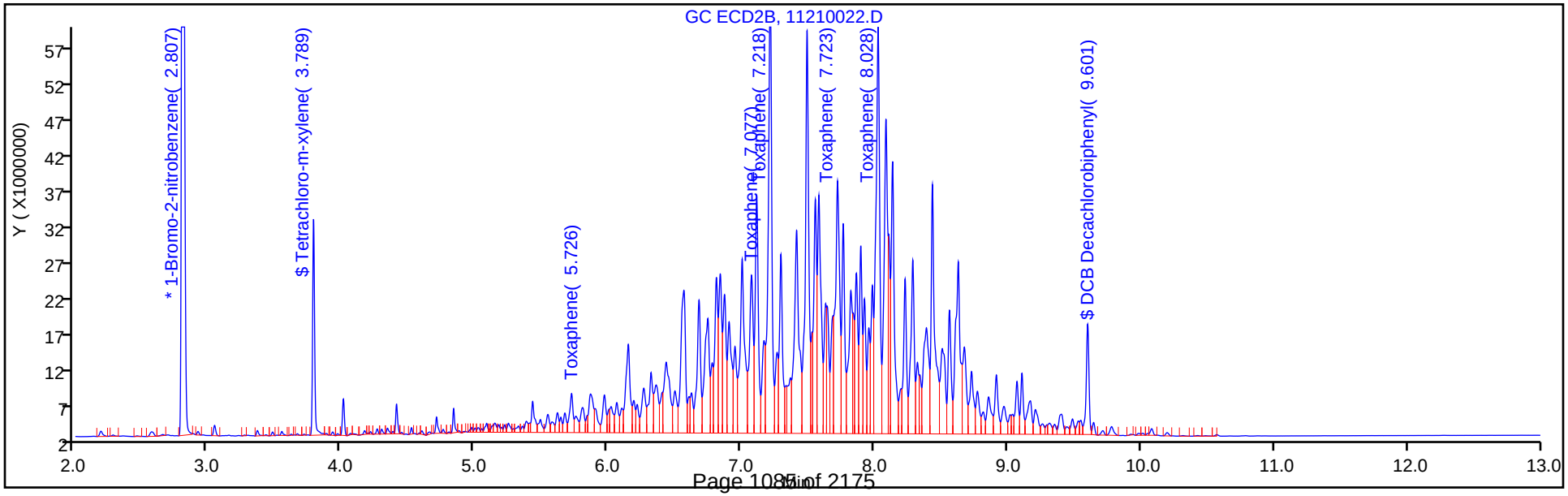
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210022.D

Injection Date:	21-Nov-2018 18:00:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-A-4-N MS			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210022.D				
Lims ID:	280-116538-A-4-N MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	21-Nov-2018 18:00:32	ALS Bottle#:	16	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-N				
Misc. Info.:	280-0076442-022				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	23-Nov-2018 10:19:33		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.3	86.33
$ 41 DCB Decachlorobiphenyl	20.0	27.6	137.90

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.7	88.28
$ 41 DCB Decachlorobiphenyl	20.0	21.1	105.60

Report Date: 25-Nov-2018 21:26:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

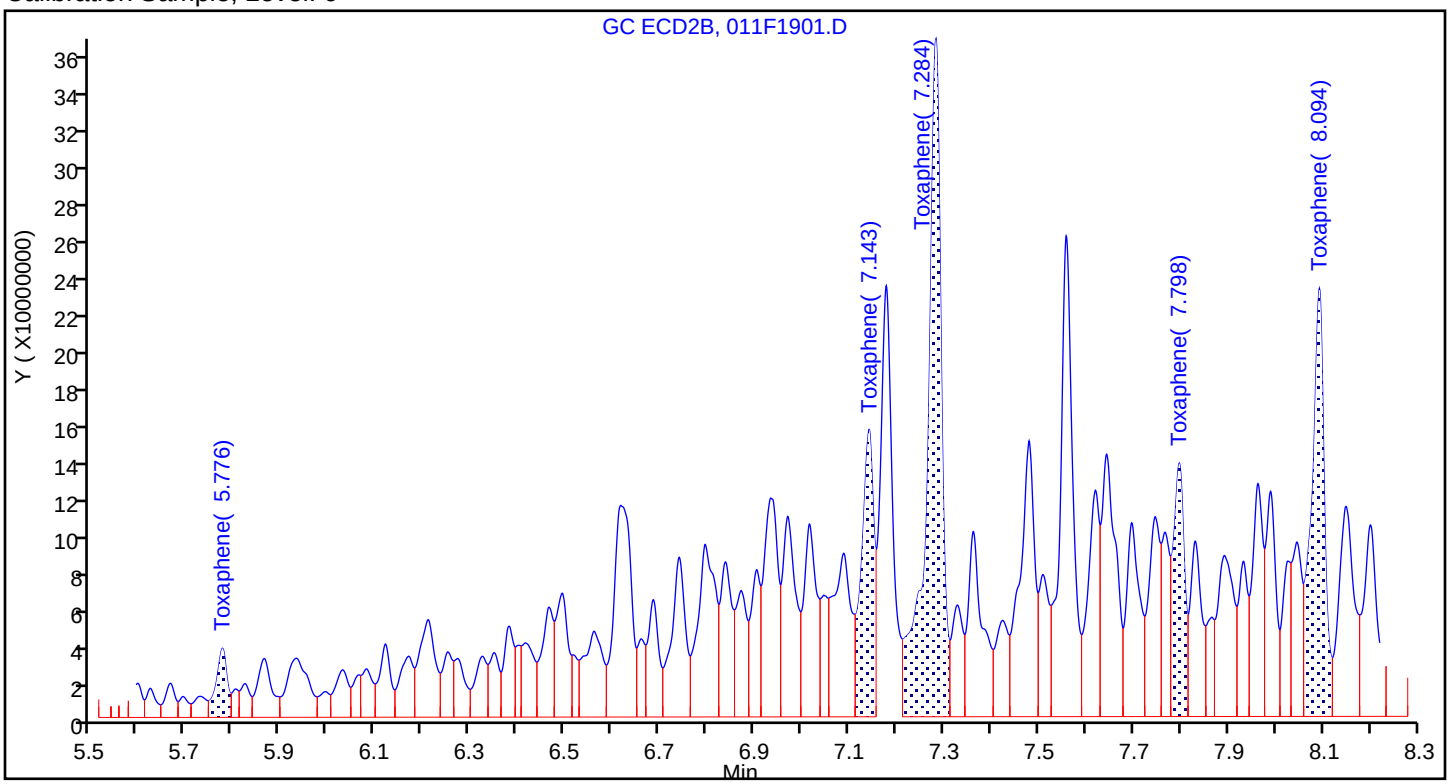
TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210022.D

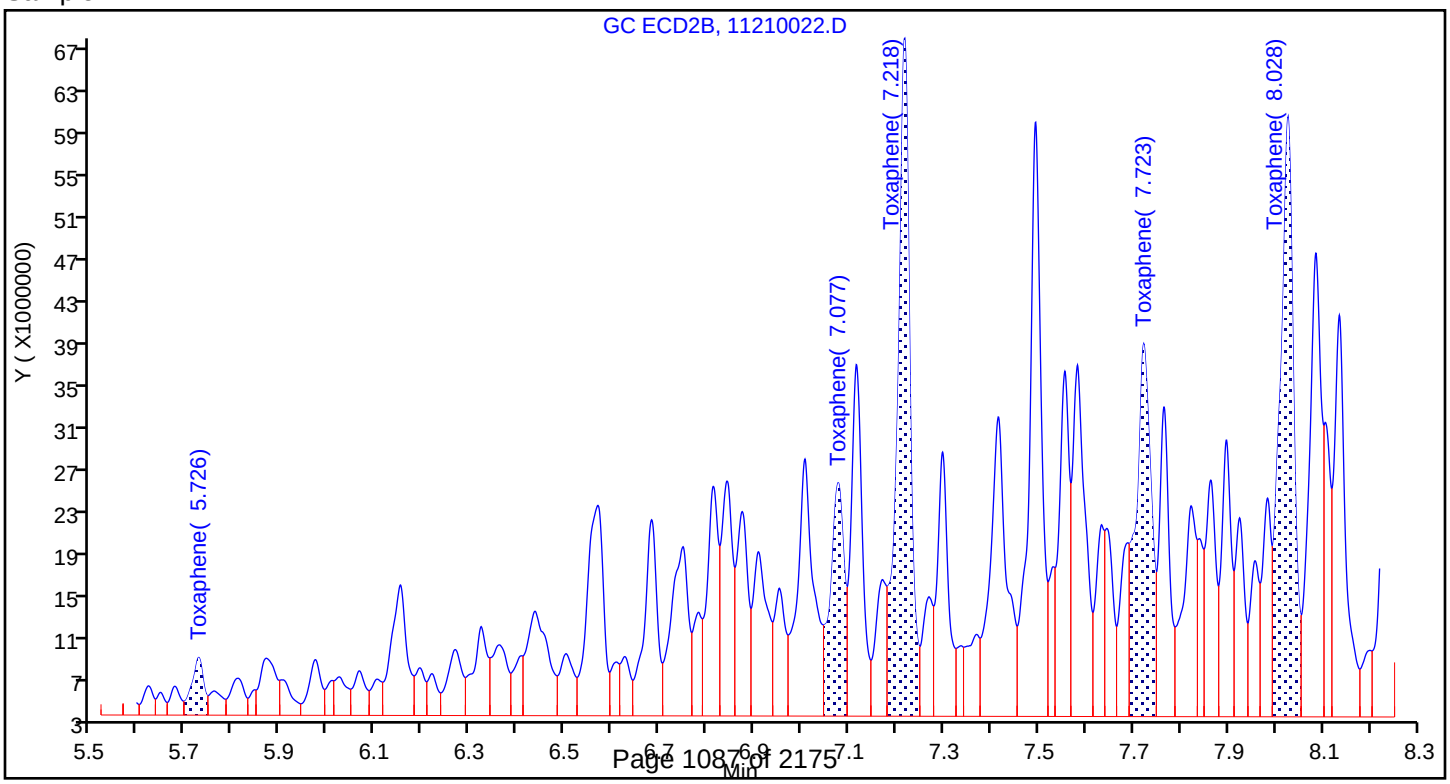
Injection Date:	21-Nov-2018 18:00:32	Instrument ID:	SGC_P2		
Lims ID:	280-116538-A-4-N MS				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	16	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2

Calibration Sample, Level: 6



Sample



FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MSD | Lab Sample ID: 280-116538-4 MSD

Matrix: Water (TCLP) | Lab File ID: 11210021.D

Analysis Method: 8081B | Date Collected: 11/02/2018 15:30

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 17:43

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-20-8	Endrin	0.00490		0.00050	0.000079
76-44-8	Heptachlor	0.00489		0.00050	0.000077
1024-57-3	Heptachlor epoxide	0.00468		0.00050	0.000075
58-89-9	gamma-BHC (Lindane)	0.00474		0.00050	0.000069
72-43-5	Methoxychlor	0.00535		0.0010	0.00013

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	88		28-115
2051-24-3	DCB Decachlorobiphenyl	94		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210021.D
Lims ID: 280-116538-A-4-M MSD
Client ID:
Sample Type: MSD
Inject. Date: 21-Nov-2018 17:43:02 ALS Bottle#: 15 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-M
Misc. Info.: 280-0076442-021
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.002	0.003	1694614309	150.0	150.0	
2	2.806	2.805	0.001	221964220	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.899	0.002	209768056	20.0	17.1	
2	3.789	3.786	0.003	32408723	20.0	17.5	
						RPD = 2.58	
5 Hexachlorobenzene							
1	4.309	4.306	0.003	590167070	50.0	45.3	
2	4.266	4.265	0.001	85901933	50.0	45.0	
						RPD = 0.62	
8 alpha-BHC							
1	4.479	4.477	0.002	897987828	50.0	47.7	
2	4.411	4.410	0.001	116141645	50.0	47.2	
						RPD = 0.98	
9 gamma-BHC (Lindane)							
1	4.767	4.766	0.001	780330274	50.0	48.5	
2	4.725	4.724	0.001	101306331	50.0	47.4	
						RPD = 2.42	
10 beta-BHC							
1	4.844	4.842	0.002	300961062	50.0	48.7	
2	4.802	4.801	0.001	42450552	50.0	46.4	
						RPD = 4.91	
12 delta-BHC							
1	4.992	4.991	0.001	809952550	50.0	49.5	
2	5.034	5.033	0.001	100173392	50.0	46.2	
						RPD = 6.84	
15 Heptachlor							
1	5.166	5.165	0.001	713994992	50.0	50.1	
2	5.075	5.075	0.000	90393124	50.0	48.9	
						RPD = 2.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
16 Aldrin							
1	5.435	5.433	0.002	736554462	50.0	48.4	
2	5.342	5.341	0.001	92868236	50.0	46.6	
						RPD = 3.78	
21 Heptachlor epoxide							
1	6.044	6.041	0.003	637220846	50.0	49.3	
2	5.880	5.877	0.003	84860281	50.0	46.8	
						RPD = 5.19	
22 trans-Chlordane							
1	6.174	6.172	0.002	674550851	50.0	48.5	
2	6.076	6.076	0.000	87215003	50.0	45.8	
						RPD = 5.74	
23 cis-Chlordane							
1	6.315	6.314	0.001	643951216	50.0	48.5	
2	6.232	6.231	0.001	83229232	50.0	46.2	
						RPD = 4.76	
24 4,4'-DDE							
1	6.392	6.391	0.001	640042251	50.0	45.9	
2	6.416	6.415	0.001	82871448	50.0	44.3	
						RPD = 3.67	
25 Endosulfan I							
1	6.464	6.462	0.002	570312261	50.0	46.7	
2	6.291	6.290	0.001	75600763	50.0	44.2	
						RPD = 5.57	
27 Dieldrin							
1	6.716	6.716	0.000	678043435	50.0	49.9	
2	6.581	6.580	0.001	88095008	50.0	46.7	
						RPD = 6.52	
30 Endrin							
1	6.964	6.963	0.001	615563586	50.0	52.1	
2	6.903	6.901	0.002	81547718	50.0	49.0	
						RPD = 6.13	
32 4,4'-DDD							
1	7.026	7.025	0.001	527727680	50.0	48.8	
2	7.030	7.029	0.001	70340342	50.0	46.2	
						RPD = 5.51	
34 Endosulfan II							
1	7.200	7.199	0.001	500017068	50.0	45.1	
2	7.129	7.127	0.002	67971690	50.0	42.0	
						RPD = 7.04	
35 4,4'-DDT							
1	7.320	7.319	0.001	477140739	50.0	49.3	
2	7.361	7.360	0.001	67853460	50.0	51.4	
						RPD = 4.14	
36 Endrin aldehyde							
1	7.646	7.645	0.001	290689819	50.0	34.3	
2	7.488	7.486	0.002	41189236	50.0	31.7	
						RPD = 8.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
37 Methoxychlor							
1	7.825	7.823	0.002	247585930	50.0	56.1	
2	8.091	8.090	0.001	34796550	50.0	53.5	
						RPD = 4.75	
39 Endosulfan sulfate							
1	8.103	8.102	0.001	540712509	50.0	55.1	
2	7.780	7.778	0.002	69871451	50.0	47.3	
						RPD = 15.13	
40 Endrin ketone							
1	8.395	8.394	0.001	544238638	50.0	52.7	
2	8.332	8.331	0.001	74497408	50.0	45.8	
						RPD = 13.96	
$ 41 DCB Decachlorobiphenyl							
1	9.409	9.407	0.002	136447666	20.0	21.1	
2	9.601	9.600	0.001	20649910	20.0	18.7	
						RPD = 12.06	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

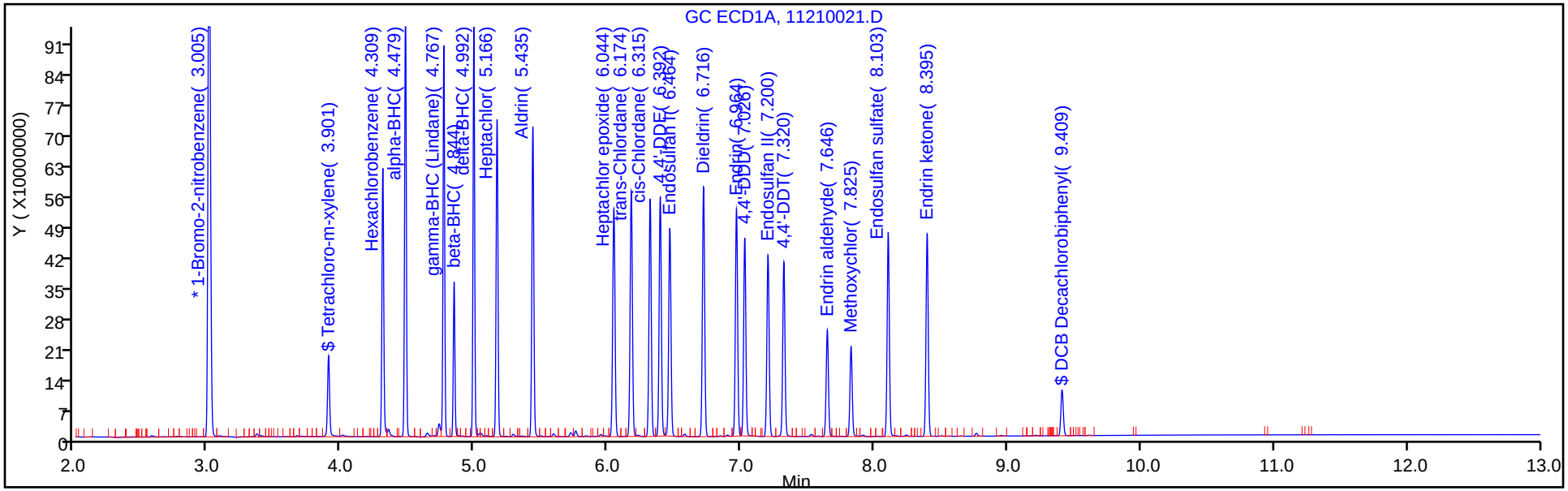
Report Date: 25-Nov-2018 21:25:57 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

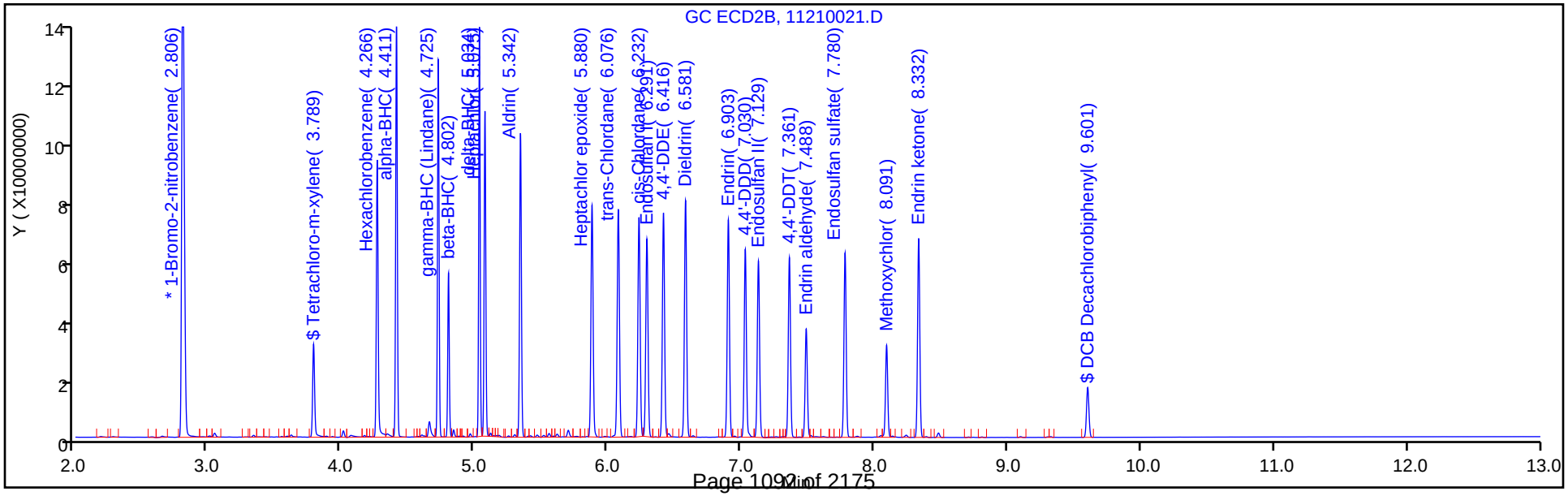
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210021.D

Injection Date:	21-Nov-2018 17:43:02	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-A-4-M MSD			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210021.D				
Lims ID:	280-116538-A-4-M MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	21-Nov-2018 17:43:02	ALS Bottle#:	15	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-M				
Misc. Info.:	280-0076442-021				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.1	85.51
$ 41 DCB Decachlorobiphenyl	20.0	21.1	105.68

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.5	87.74
$ 41 DCB Decachlorobiphenyl	20.0	18.7	93.65

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MSD | Lab Sample ID: 280-116538-4 MSD

Matrix: Water (TCLP) | Lab File ID: 11210023.D

Analysis Method: 8081B | Date Collected: 11/02/2018 15:30

Extraction Method: 3510C | Date Extracted: 11/12/2018 19:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/21/2018 18:18

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438443 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8001-35-2	Toxaphene	0.200		0.020	0.0037

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	82		28-115
2051-24-3	DCB Decachlorobiphenyl	100		34-122

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210023.D
Lims ID: 280-116538-A-4-O MSD
Client ID:
Sample Type: MSD
Inject. Date: 21-Nov-2018 18:18:04 ALS Bottle#: 17 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-O
Misc. Info.: 280-0076442-023
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 21:25:43 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 23-Nov-2018 10:19:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.002	0.002	1637987992	150.0	150.0	
2	2.807	2.805	0.002	218068003	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.900	3.899	0.001	180755210	20.0	15.3	
2	3.789	3.786	0.003	29884199	20.0	16.4	
						RPD = 7.21	
28 Toxaphene							M
1	6.201	6.210	-0.009	73851998	2000.0	1006.3	M
1	6.816	6.815	0.001	291869540	2000.0	1538.3	M
1	7.483	7.488	-0.005	409719376	2000.0	1926.7	M
1	7.853	7.847	0.006	223432522	2000.0	2590.3	M
1	8.170	8.164	0.006	345435206	2000.0	3929.9	M
		Average of Peak Amounts =				2198.3	
2	5.726	5.725	0.001	10345150	2000.0	1529.2	M
2	7.077	7.077	0.000	43481414	2000.0	1438.6	M
2	7.218	7.218	0.000	112485922	2000.0	1350.9	M
2	7.723	7.732	-0.009	79870358	2000.0	3347.2	M
2	8.027	8.026	0.001	108789349	2000.0	2339.7	M
		Average of Peak Amounts =				2001.1	
						RPD = 9.39	
$ 41 DCB Decachlorobiphenyl							M
1	9.408	9.407	0.001	156109205	20.0	25.0	M
2	9.601	9.600	0.001	21490516	20.0	19.9	M
						RPD = 22.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

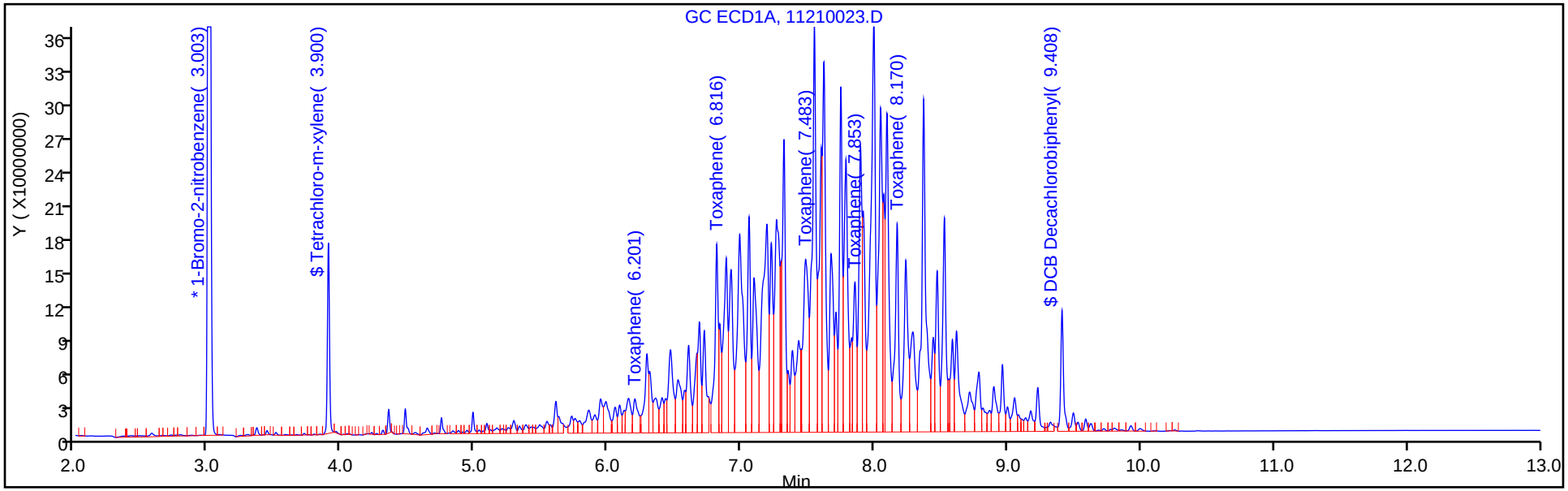
Report Date: 25-Nov-2018 21:26:02 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

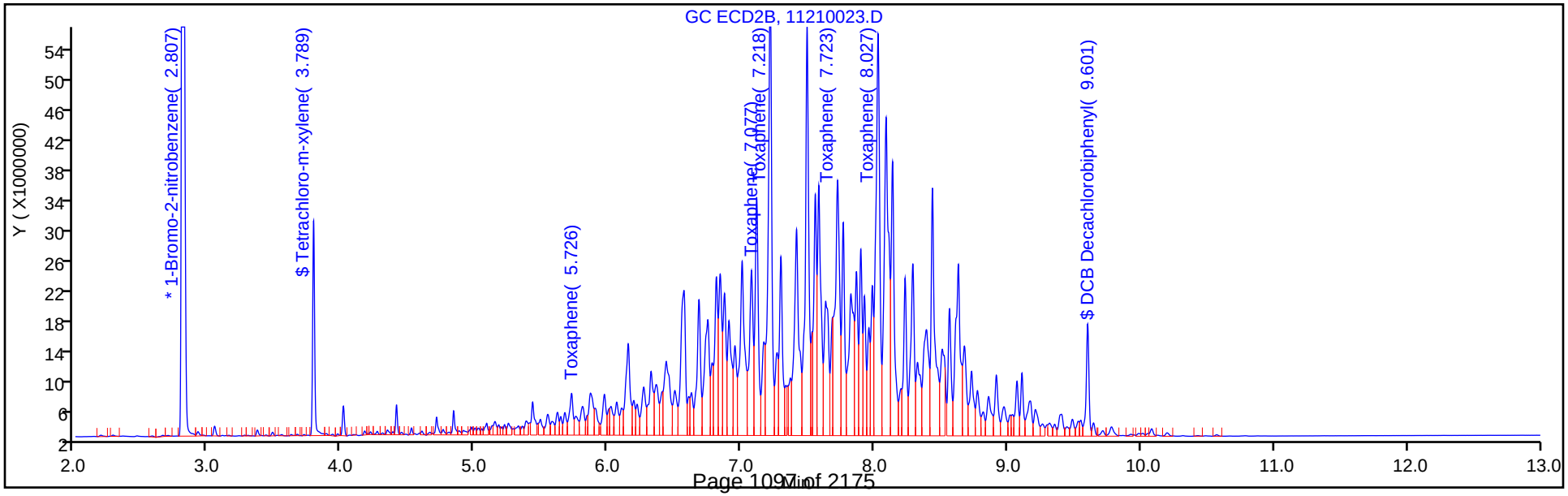
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210023.D

Injection Date:	21-Nov-2018 18:18:04	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-A-4-O MSD			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210023.D				
Lims ID:	280-116538-A-4-O MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	21-Nov-2018 18:18:04	ALS Bottle#:	17	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-O				
Misc. Info.:	280-0076442-023				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 21:25:43	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	23-Nov-2018 10:19:50		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	15.3	76.44
$ 41 DCB Decachlorobiphenyl	20.0	25.0	125.23

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	16.4	82.16
$ 41 DCB Decachlorobiphenyl	20.0	19.9	99.51

Report Date: 25-Nov-2018 21:26:02 Chrom Revision: 2.3 21-Nov-2018 13:56:44

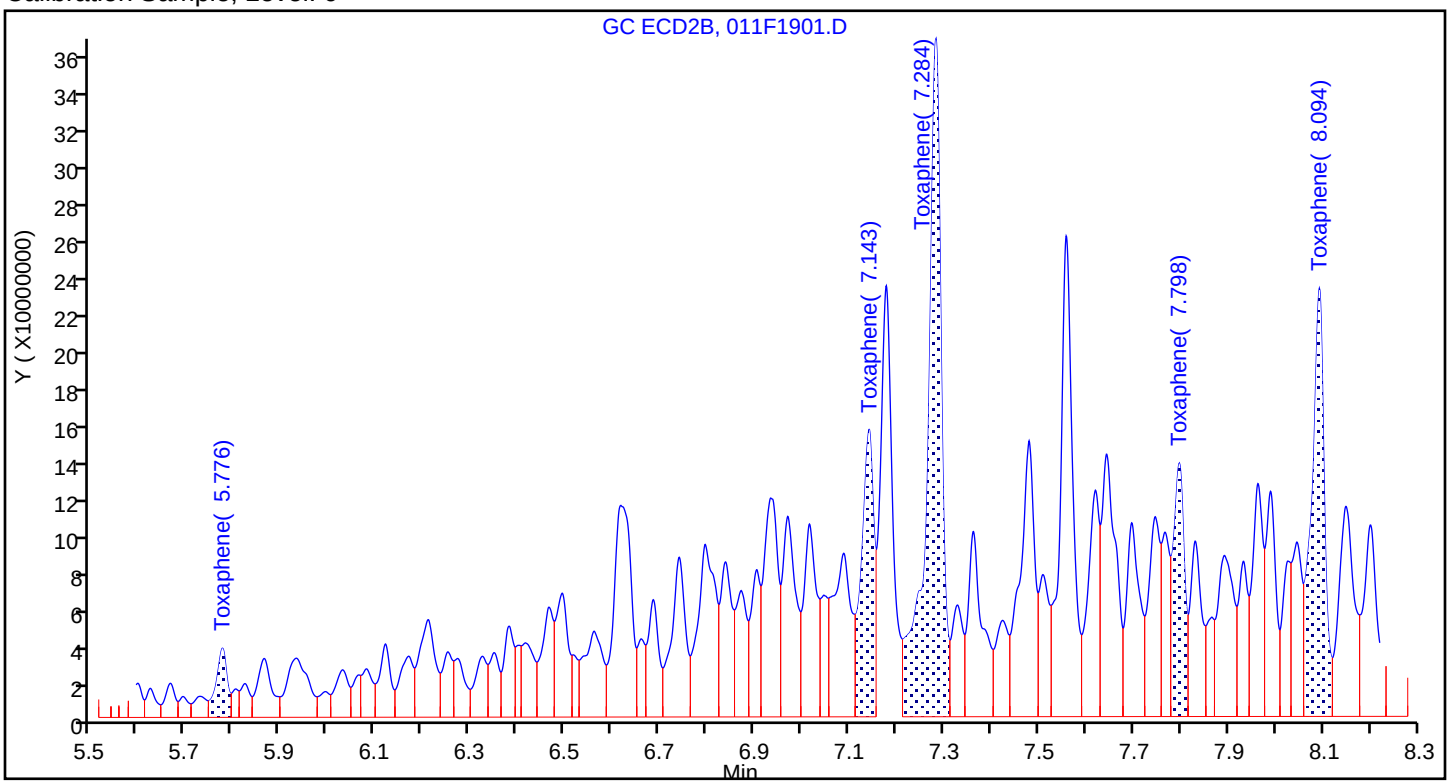
TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210023.D

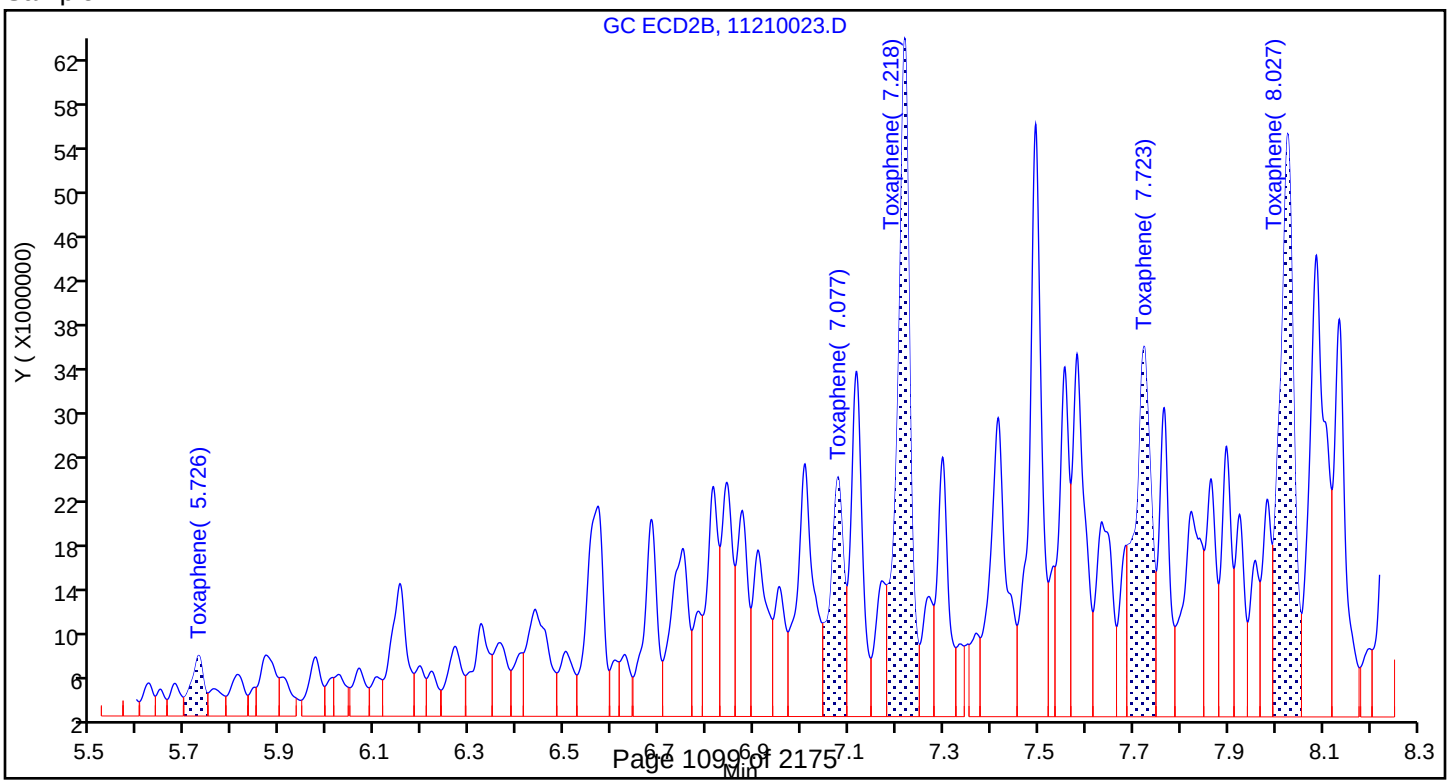
Injection Date:	21-Nov-2018 18:18:04	Instrument ID:	SGC_P2		
Lims ID:	280-116538-A-4-O MSD				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	17	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2

Calibration Sample, Level: 6



Sample



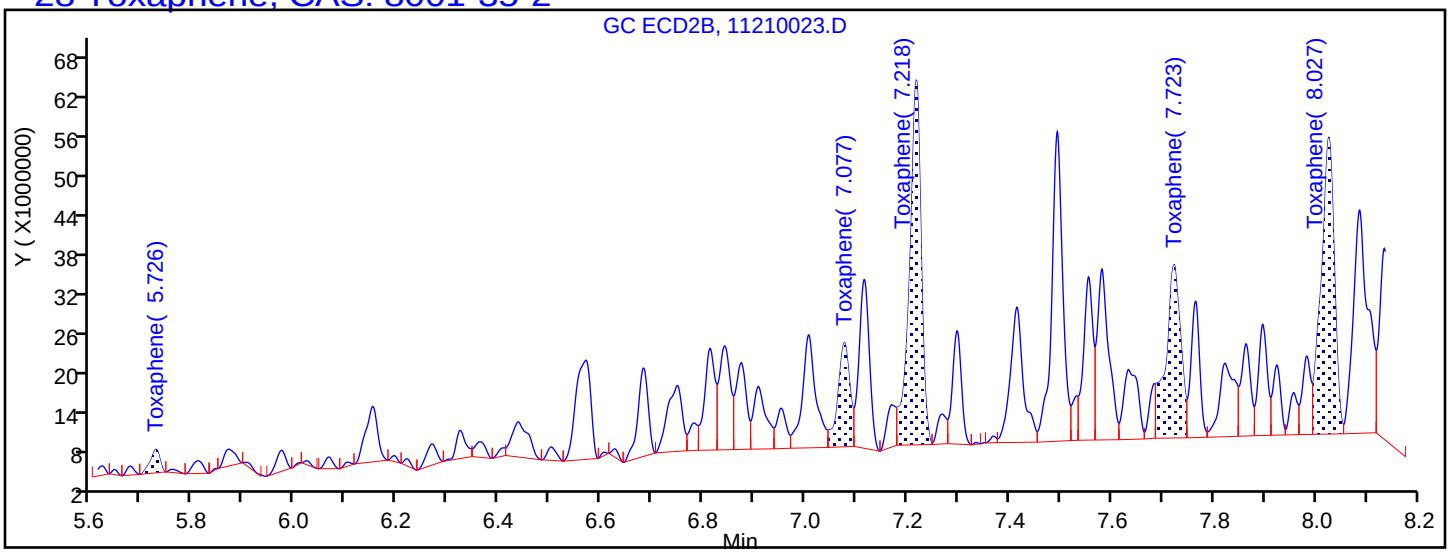
Report Date: 25-Nov-2018 21:26:02 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210023.D

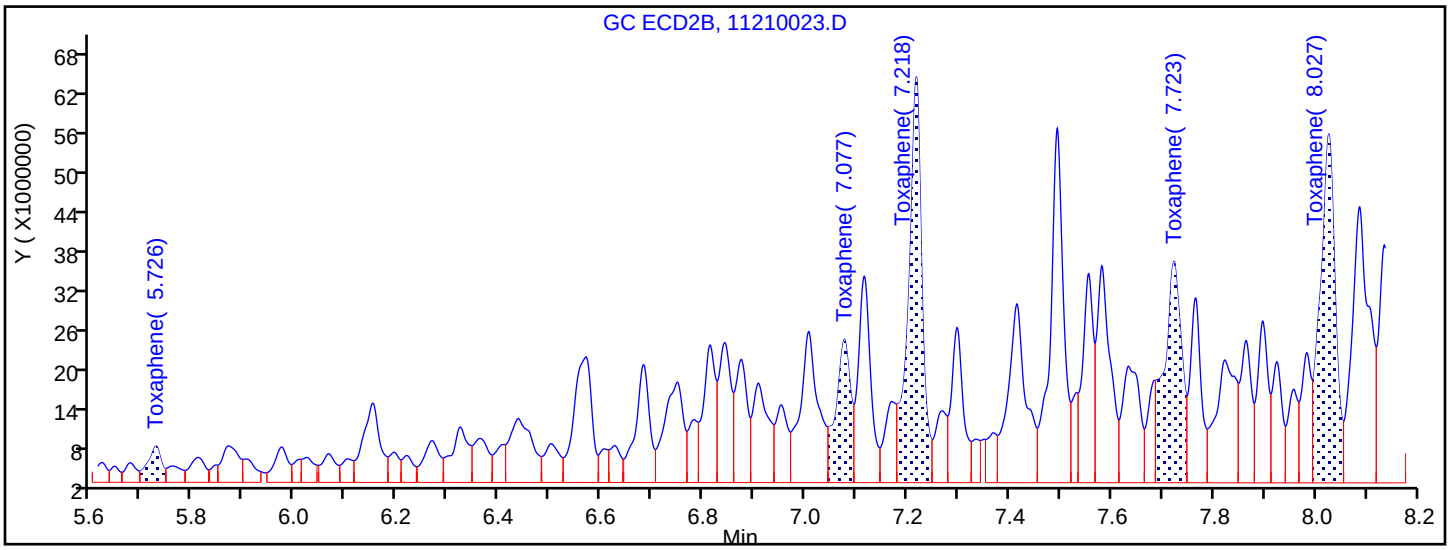
Injection Date:	21-Nov-2018 18:18:04	Instrument ID:	SGC_P2		
Lims ID:	280-116538-A-4-O MSD				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	17	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.726	Response = 4597893
7.077	Response = 25549020
7.218	Response = 86796380
7.723	Response = 53085307
8.027	Response = 80168451



Manual Integration Results

5.726	Response = 10345150	M
7.077	Response = 43481414	M
7.218	Response = 112485922	M
7.723	Response = 79870358	M
8.027	Response = 108789349	M

Reviewer: mooret, 25-Nov-2018 21:07:54

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

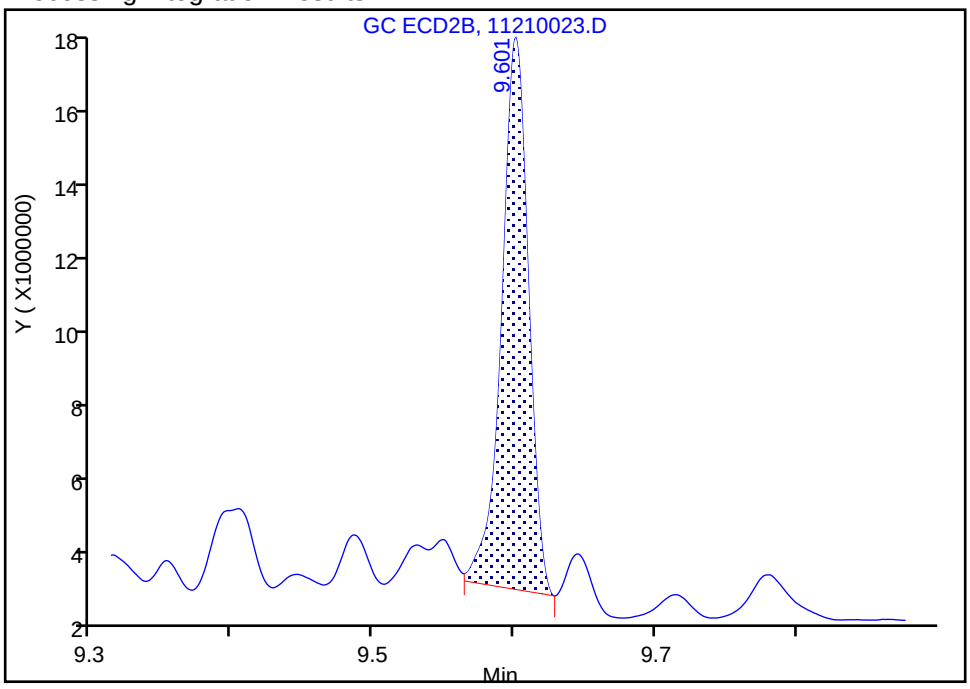
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181121-76442.b\11210023.D
Injection Date: 21-Nov-2018 18:18:04 Instrument ID: SGC_P2
Lims ID: 280-116538-A-4-O MSD
Client ID:
Operator ID: TEM ALS Bottle#: 17 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: P2 8081 IS Limit Group: GCSV - 8081A - IS
Column: CLP2 (0.32 mm) Detector GC ECD2B

$ 41 DCB Decachlorobiphenyl, CAS: 2051-24-3

Signal: 2

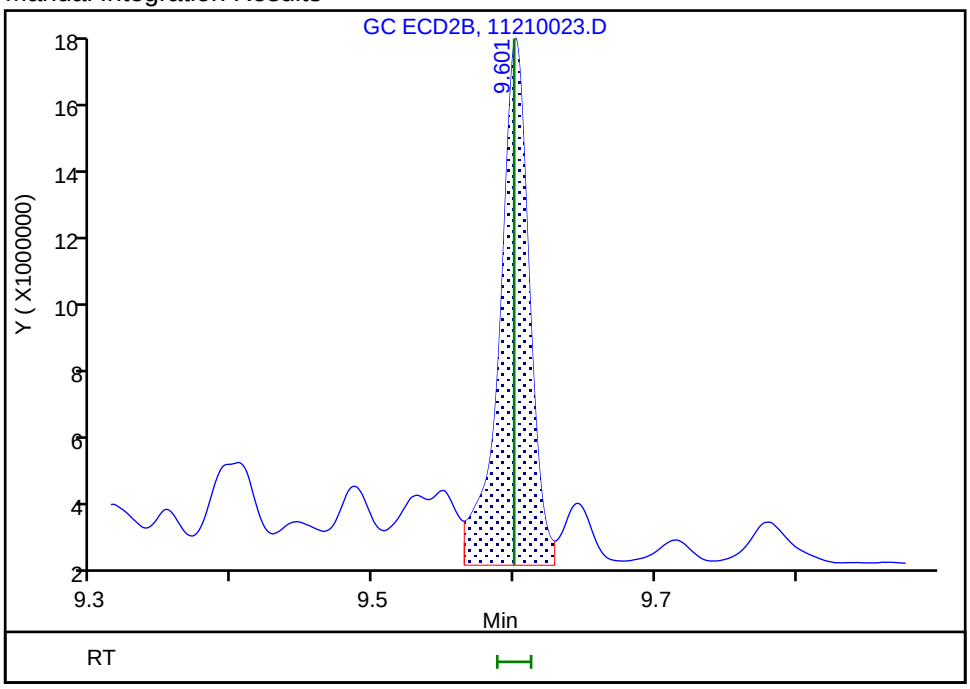
Processing Integration Results

RT: 9.60
Area: 18189370
Amount: 16.688573
Amount Units: ng/mL



Manual Integration Results

RT: 9.60
Area: 21490516
Amount: 19.902144
Amount Units: ng/mL



Reviewer: mooret, 25-Nov-2018 21:07:54
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 280-433303/6		10/13/2018 13:16	1		CLP1 0.32(mm)
PEM 280-433303/6		10/13/2018 13:16	1		CLP2 0.32(mm)
STD7 280-433303/9 IC		10/13/2018 14:08	1		CLP1 0.32(mm)
STD7 280-433303/9 IC		10/13/2018 14:08	1		CLP2 0.32(mm)
STD6 280-433303/10 IC		10/13/2018 14:26	1		CLP1 0.32(mm)
STD6 280-433303/10 IC		10/13/2018 14:26	1		CLP2 0.32(mm)
STD5 280-433303/11 IC		10/13/2018 14:43	1		CLP1 0.32(mm)
STD5 280-433303/11 IC		10/13/2018 14:43	1		CLP2 0.32(mm)
STD4 280-433303/12 IC		10/13/2018 15:01	1		CLP1 0.32(mm)
STD4 280-433303/12 IC		10/13/2018 15:01	1		CLP2 0.32(mm)
STD3 280-433303/13 IC		10/13/2018 15:18	1		CLP1 0.32(mm)
STD3 280-433303/13 IC		10/13/2018 15:18	1		CLP2 0.32(mm)
STD2 280-433303/14 IC		10/13/2018 15:35	1		CLP1 0.32(mm)
STD2 280-433303/14 IC		10/13/2018 15:35	1		CLP2 0.32(mm)
STD1 280-433303/15 IC		10/13/2018 15:53	1		CLP1 0.32(mm)
STD1 280-433303/15 IC		10/13/2018 15:53	1		CLP2 0.32(mm)
STD6 280-433303/16 IC		10/13/2018 16:10	1	011F1901.D	CLP1 0.32(mm)
STD6 280-433303/16 IC		10/13/2018 16:10	1	011F1901.D	CLP2 0.32(mm)
STD5 280-433303/17 IC		10/13/2018 16:28	1	012F2001.D	CLP1 0.32(mm)
STD5 280-433303/17 IC		10/13/2018 16:28	1	012F2001.D	CLP2 0.32(mm)
STD4 280-433303/18 IC		10/13/2018 16:45	1	013F2101.D	CLP1 0.32(mm)
STD4 280-433303/18 IC		10/13/2018 16:45	1	013F2101.D	CLP2 0.32(mm)
STD3 280-433303/19 IC		10/13/2018 17:03	1	014F2201.D	CLP1 0.32(mm)
STD3 280-433303/19 IC		10/13/2018 17:03	1	014F2201.D	CLP2 0.32(mm)
STD2 280-433303/20 IC		10/13/2018 17:20	1	015F2301.D	CLP1 0.32(mm)
STD2 280-433303/20 IC		10/13/2018 17:20	1	015F2301.D	CLP2 0.32(mm)
STD1 280-433303/21 IC		10/13/2018 17:37	1	016F2401.D	CLP1 0.32(mm)
STD1 280-433303/21 IC		10/13/2018 17:37	1	016F2401.D	CLP2 0.32(mm)
STD5 280-433303/22 IC		10/13/2018 17:55	1	017F2501.D	CLP1 0.32(mm)
STD5 280-433303/22 IC		10/13/2018 17:55	1	017F2501.D	CLP2 0.32(mm)
STD4 280-433303/23 IC		10/13/2018 18:12	1	018F2601.D	CLP1 0.32(mm)
STD4 280-433303/23 IC		10/13/2018 18:12	1	018F2601.D	CLP2 0.32(mm)
STD3 280-433303/24 IC		10/13/2018 18:30	1	019F2701.D	CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD3 280-433303/24 IC		10/13/2018 18:30	1	019F2701.D	CLP2 0.32(mm)
STD2 280-433303/25 IC		10/13/2018 18:47	1	020F2801.D	CLP1 0.32(mm)
STD2 280-433303/25 IC		10/13/2018 18:47	1	020F2801.D	CLP2 0.32(mm)
STD1 280-433303/26 IC		10/13/2018 19:05	1	021F2901.D	CLP1 0.32(mm)
STD1 280-433303/26 IC		10/13/2018 19:05	1	021F2901.D	CLP2 0.32(mm)
STD6 280-433303/27 IC		10/13/2018 19:22	1	022F3001.D	CLP1 0.32(mm)
STD6 280-433303/27 IC		10/13/2018 19:22	1	022F3001.D	CLP2 0.32(mm)
STD5 280-433303/28 IC		10/13/2018 19:39	1	023F3101.D	CLP1 0.32(mm)
STD5 280-433303/28 IC		10/13/2018 19:39	1	023F3101.D	CLP2 0.32(mm)
STD4 280-433303/29 ICIS		10/13/2018 19:57	1	024F3201.D	CLP1 0.32(mm)
STD4 280-433303/29 ICIS		10/13/2018 19:57	1	024F3201.D	CLP2 0.32(mm)
STD3 280-433303/30 IC		10/13/2018 20:14	1	025F3301.D	CLP1 0.32(mm)
STD3 280-433303/30 IC		10/13/2018 20:14	1	025F3301.D	CLP2 0.32(mm)
STD2 280-433303/31 IC		10/13/2018 20:32	1	026F3401.D	CLP1 0.32(mm)
STD2 280-433303/31 IC		10/13/2018 20:32	1	026F3401.D	CLP2 0.32(mm)
STD1 280-433303/32 IC		10/13/2018 20:49	1	027F3501.D	CLP1 0.32(mm)
STD1 280-433303/32 IC		10/13/2018 20:49	1	027F3501.D	CLP2 0.32(mm)
ICV 280-433303/33		10/13/2018 21:07	1	028F3601.D	CLP1 0.32(mm)
ICV 280-433303/33		10/13/2018 21:07	1	028F3601.D	CLP2 0.32(mm)
ICV 280-433303/34		10/13/2018 21:24	1	029F3701.D	CLP1 0.32(mm)
ICV 280-433303/34		10/13/2018 21:24	1	029F3701.D	CLP2 0.32(mm)
ICV 280-433303/35		10/13/2018 21:41	1	030F3801.D	CLP1 0.32(mm)
ICV 280-433303/35		10/13/2018 21:41	1	030F3801.D	CLP2 0.32(mm)
ICV 280-433303/36		10/13/2018 21:59	1	031F3901.D	CLP1 0.32(mm)
ICV 280-433303/36		10/13/2018 21:59	1	031F3901.D	CLP2 0.32(mm)
PEM 280-433303/37		10/13/2018 22:16	1		CLP1 0.32(mm)
PEM 280-433303/37		10/13/2018 22:16	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 22:34	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 22:34	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 22:51	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 22:51	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:08	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:08	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:26	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:26	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:43	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:43	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:00	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/14/2018 00:00	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:18	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:18	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:35	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:35	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:53	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:53	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:10	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:10	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:27	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:27	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:45	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:45	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:02	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:02	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:19	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:19	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:37	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:37	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:54	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:54	1		CLP2 0.32(mm)
CCV 280-433303/54		10/14/2018 03:11	1		CLP1 0.32(mm)
CCV 280-433303/54		10/14/2018 03:11	1		CLP2 0.32(mm)
CCV 280-433303/55		10/14/2018 03:29	1		CLP1 0.32(mm)
CCV 280-433303/55		10/14/2018 03:29	1		CLP2 0.32(mm)
CCV 280-433303/56		10/14/2018 03:46	1		CLP1 0.32(mm)
CCV 280-433303/56		10/14/2018 03:46	1		CLP2 0.32(mm)
CCV 280-433303/57		10/14/2018 04:03	1		CLP1 0.32(mm)
CCV 280-433303/57		10/14/2018 04:03	1		CLP2 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Start Date: 11/21/2018 13:36

Analysis Batch Number: 438443 End Date: 11/22/2018 02:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 280-438443/7		11/21/2018 13:36	1	11210007.D	CLP1 0.32(mm)
PEM 280-438443/7		11/21/2018 13:36	1	11210007.D	CLP2 0.32(mm)
CCV 280-438443/10		11/21/2018 14:29	1		CLP1 0.32(mm)
CCV 280-438443/10		11/21/2018 14:29	1		CLP2 0.32(mm)
CCV 280-438443/11		11/21/2018 14:47	1	11210011.D	CLP1 0.32(mm)
CCV 280-438443/11		11/21/2018 14:47	1	11210011.D	CLP2 0.32(mm)
CCV 280-438443/12		11/21/2018 15:04	1	11210012.D	CLP1 0.32(mm)
CCV 280-438443/12		11/21/2018 15:04	1	11210012.D	CLP2 0.32(mm)
CCVIS 280-438443/13		11/21/2018 15:22	1	11210013.D	CLP1 0.32(mm)
CCVIS 280-438443/13		11/21/2018 15:22	1	11210013.D	CLP2 0.32(mm)
ZZZZZ		11/21/2018 15:40	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 15:40	1		CLP2 0.32(mm)
LB3 280-436732/1-I		11/21/2018 15:57	1	11210015.D	CLP1 0.32(mm)
LB3 280-436732/1-I		11/21/2018 15:57	1	11210015.D	CLP2 0.32(mm)
LCS 280-436732/3-E		11/21/2018 16:15	1	11210016.D	CLP1 0.32(mm)
LCS 280-436732/3-E		11/21/2018 16:15	1	11210016.D	CLP2 0.32(mm)
LCS 280-436732/3-F		11/21/2018 16:32	1	11210017.D	CLP1 0.32(mm)
LCS 280-436732/3-F		11/21/2018 16:32	1	11210017.D	CLP2 0.32(mm)
ZZZZZ		11/21/2018 16:50	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 16:50	1		CLP2 0.32(mm)
280-116538-4		11/21/2018 17:07	1	11210019.D	CLP1 0.32(mm)
280-116538-4		11/21/2018 17:07	1	11210019.D	CLP2 0.32(mm)
280-116538-4 MS		11/21/2018 17:25	1	11210020.D	CLP1 0.32(mm)
280-116538-4 MS		11/21/2018 17:25	1	11210020.D	CLP2 0.32(mm)
280-116538-4 MSD		11/21/2018 17:43	1	11210021.D	CLP1 0.32(mm)
280-116538-4 MSD		11/21/2018 17:43	1	11210021.D	CLP2 0.32(mm)
280-116538-4 MS		11/21/2018 18:00	1	11210022.D	CLP1 0.32(mm)
280-116538-4 MS		11/21/2018 18:00	1	11210022.D	CLP2 0.32(mm)
280-116538-4 MSD		11/21/2018 18:18	1	11210023.D	CLP1 0.32(mm)
280-116538-4 MSD		11/21/2018 18:18	1	11210023.D	CLP2 0.32(mm)
ZZZZZ		11/21/2018 18:35	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 18:35	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 18:53	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 18:53	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 19:10	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 19:10	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 19:28	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 19:28	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 19:45	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 19:45	1		CLP2 0.32(mm)
CCV 280-438443/34		11/21/2018 20:03	1		CLP1 0.32(mm)
CCV 280-438443/34		11/21/2018 20:03	1		CLP2 0.32(mm)
CCV 280-438443/35		11/21/2018 20:20	1	11210035.D	CLP1 0.32(mm)
CCV 280-438443/35		11/21/2018 20:20	1	11210035.D	CLP2 0.32(mm)
CCV 280-438443/36		11/21/2018 20:38	1	11210036.D	CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_P2 Start Date: 11/21/2018 13:36

Analysis Batch Number: 438443 End Date: 11/22/2018 02:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-438443/36		11/21/2018 20:38	1	11210036.D	CLP2 0.32(mm)
CCV 280-438443/37		11/21/2018 20:55	1	11210037.D	CLP1 0.32(mm)
CCV 280-438443/37		11/21/2018 20:55	1	11210037.D	CLP2 0.32(mm)
ZZZZZ		11/21/2018 21:13	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 21:13	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 21:31	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 21:31	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 21:48	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 21:48	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 22:06	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 22:06	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 22:23	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 22:23	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 22:41	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 22:41	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 22:58	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 22:58	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 23:16	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 23:16	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 23:33	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 23:33	1		CLP2 0.32(mm)
ZZZZZ		11/21/2018 23:51	1		CLP1 0.32(mm)
ZZZZZ		11/21/2018 23:51	1		CLP2 0.32(mm)
ZZZZZ		11/22/2018 00:08	10		CLP1 0.32(mm)
ZZZZZ		11/22/2018 00:08	10		CLP2 0.32(mm)
ZZZZZ		11/22/2018 00:26	10		CLP1 0.32(mm)
ZZZZZ		11/22/2018 00:26	10		CLP2 0.32(mm)
ZZZZZ		11/22/2018 00:43	10		CLP1 0.32(mm)
ZZZZZ		11/22/2018 00:43	10		CLP2 0.32(mm)
ZZZZZ		11/22/2018 01:01	10		CLP1 0.32(mm)
ZZZZZ		11/22/2018 01:01	10		CLP2 0.32(mm)
ZZZZZ		11/22/2018 01:18	20		CLP1 0.32(mm)
ZZZZZ		11/22/2018 01:18	20		CLP2 0.32(mm)
ZZZZZ		11/22/2018 01:36	20		CLP1 0.32(mm)
ZZZZZ		11/22/2018 01:36	20		CLP2 0.32(mm)
ZZZZZ		11/22/2018 01:53	20		CLP1 0.32(mm)
ZZZZZ		11/22/2018 01:53	20		CLP2 0.32(mm)
ZZZZZ		11/22/2018 02:11	100		CLP1 0.32(mm)
ZZZZZ		11/22/2018 02:11	100		CLP2 0.32(mm)

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436732 Batch Start Date: 11/07/18 09:48 Batch Analyst: Bourgery, David F

Batch Method: 1311 Batch End Date: 11/10/18 10:17

Lab Sample ID	Client Sample ID	Method Chain	Basis	ExtractFluid	AnalysisComment				
LB3 280-436732/1		1311, 3510C, 8081B		milliq					
LCS 280-436732/3		1311, 3510C, 8081B		milliq	TOX				
280-116538-A-4	FWGIDW-181001-WW	1311, 3510C, 8081B	P	milliq	TOX used d too				

Batch Notes	
First End time	11/07/18 19:48
First Start time	11/07/18 9:48

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437290 Batch Start Date: 11/12/18 19:56 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 11/13/18 14:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	8081 LCS 00451	8081/82 Surr 00105	8081Toxaphene 00032
LB3 280-436732/1-A		3510C, 8081B		100 mL	10 mL	6 SU		1 mL	
LCS 280-436732/3-A		3510C, 8081B		100 mL	10 mL	6 SU	1 mL	1 mL	
LCS 280-436732/3-A		3510C, 8081B		100 mL	10 mL	6 SU		1 mL	1 mL
280-116538-A-4-A	FWGIDW-181001-WW	3510C, 8081B	P	100 mL	10 mL	9 SU		1 mL	
280-116538-A-4-A MS	FWGIDW-181001-WW	3510C, 8081B	P	100 mL	10 mL	9 SU	1 mL	1 mL	
280-116538-A-4-A MSD	FWGIDW-181001-WW	3510C, 8081B	P	100 mL	10 mL	9 SU	1 mL	1 mL	
280-116538-A-4-A MS	FWGIDW-181001-WW	3510C, 8081B	P	100 mL	10 mL	9 SU		1 mL	1 mL
280-116538-A-4-A MSD	FWGIDW-181001-WW	3510C, 8081B	P	100 mL	10 mL	9 SU		1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
LB3 280-436732/1-A		3510C, 8081B							
LCS 280-436732/3-A		3510C, 8081B		81					
LCS 280-436732/3-A		3510C, 8081B		Tox					
280-116538-A-4-A	FWGIDW-181001-WW	3510C, 8081B	P						
280-116538-A-4-A MS	FWGIDW-181001-WW	3510C, 8081B	P	81					
280-116538-A-4-A MSD	FWGIDW-181001-WW	3510C, 8081B	P	81					
280-116538-A-4-A MS	FWGIDW-181001-WW	3510C, 8081B	P	Tox					
280-116538-A-4-A MSD	FWGIDW-181001-WW	3510C, 8081B	P	Tox					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437290 Batch Start Date: 11/12/18 19:56 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 11/13/18 14:15

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007/BB8@10.00mL
Analyst ID - Concentration	MF
Concentration 1 Corrected Temperature	88/88 Degrees C
Equipment ID - Concentration 1	A/B
Exchange Solvent ID	Hexane_Cycl_00053
Analyst ID - Extraction	AE
Method/Fraction	3510C/8081_DOD5
Na2SO4 ID	0000205461_00010
NaCl ID	181957
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00412/413
Prep Solvent Volume Used	90 mL
Analyst ID - Spike Analyst	AE
Analyst ID - Spike Witness Analyst	Reviewer: RC
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	89/87 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8082A_DOD5

Polychlorinated Biphenyls (PCBs) by Gas Chromatography

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): CLP2 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCBP1 #
FWGIDW-181001-WW	280-116538-4	78	70
	MB 280-437451/1-A	85	94
	LCS 280-437451/4-A	86	93
	LCSD 280-437451/5-A	87	97

	QC LIMITS
TCX = Tetrachloro-m-xylene	25-120
DCBP = DCB Decachlorobiphenyl	30-136

Column to be used to flag recovery values

FORM II 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water Level: Low Lab File ID: 11281810.D

Lab ID: LCS 280-437451/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
PCB-1016	2.00	2.12	106	46-129	
PCB-1260	2.00	2.16	108	45-134	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water Level: Low Lab File ID: 11281811.D

Lab ID: LCSD 280-437451/5-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
PCB-1016	2.00	2.10	105	1	30	46-129	
PCB-1260	2.00	2.34	117	8	30	45-134	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: MB 280-437451/1-A

Matrix: Water Date Extracted: 11/13/2018 18:28

Lab File ID:(1) 11281809.D Lab File ID:(2) 11281809.D

Date Analyzed:(1) 11/28/2018 18:43 Date Analyzed:(2) 11/28/2018 18:43

Instrument ID:(1) SGC_J Instrument ID:(2) SGC_J

GC Column:(1) CLP2 ID: 0.32(mm) GC Column:(2) CLP1 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-437451/4-A	11/28/2018 19:04	11/28/2018 19:04
	LCSD 280-437451/5-A	11/28/2018 19:25	11/28/2018 19:25
FWGIDW-181001-WW	280-116538-4	11/28/2018 20:29	11/28/2018 20:29

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: STDL51660 280-438388/20 Date Analyzed: 11/21/2018 15:27

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11211820.D Heated Purge: (Y/N) N

Calibration ID: 34386

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		29769998	1.97				
UPPER LIMIT		59539996	2.47				
LOWER LIMIT		14884999	1.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-438388/39		27962663	1.97				
ICV 280-438388/40		29773128	1.97				
ICV 280-438388/41		26927485	1.97				
ICV 280-438388/42		26954302	1.97				
ICV 280-438388/43		30567576	1.97				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: STDL51660 280-438388/20 Date Analyzed: 11/21/2018 15:27

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11211820.D Heated Purge: (Y/N) N

Calibration ID: 34387

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		167274345	1.75				
UPPER LIMIT		334548690	2.25				
LOWER LIMIT		83637173	1.25				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-438388/39		158680424	1.75				
ICV 280-438388/40		167287659	1.75				
ICV 280-438388/41		153501296	1.75				
ICV 280-438388/42		152978208	1.75				
ICV 280-438388/43		172646811	1.75				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: CCVIS 280-439075/4 Date Analyzed: 11/28/2018 16:57

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11281804.D Heated Purge: (Y/N) N

Calibration ID: 34394

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		36287423	1.97				
UPPER LIMIT		72574846	2.47				
LOWER LIMIT		18143712	1.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-437451/1-A		35902958	1.97				
LCS 280-437451/4-A		34064083	1.97				
LCSD 280-437451/5-A		35579264	1.97				
280-116538-4	FWGIDW-181001-WW	37221821	1.97				
CCV 280-439075/25		40753455	1.97				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: CCVIS 280-439075/4 Date Analyzed: 11/28/2018 16:57

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11281804.D Heated Purge: (Y/N) N

Calibration ID: 34395

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		181510268	1.74				
UPPER LIMIT		363020536	2.24				
LOWER LIMIT		90755134	1.24				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-437451/1-A		180433079	1.74				
LCS 280-437451/4-A		174486762	1.74				
LCSD 280-437451/5-A		181571836	1.74				
280-116538-4	FWGIDW-181001-WW	189399457	1.74				
CCV 280-439075/25		190831119	1.74				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-437451/4-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 11/28/2018 19:04 Date Analyzed (2): 11/28/2018 19:04

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.27	3.02	3.52	2.34	2.12	17.0
		2	3.66	3.41	3.91	2.08		
		3	4.12	3.87	4.37	2.02		
		4	4.26	4.01	4.51	2.10		
		5	4.49	4.24	4.74	2.08		
	2	1	3.27	3.02	3.52	1.96	1.79	
		2	3.63	3.38	3.88	1.76		
		3	4.12	3.87	4.37	1.67		
		4	4.26	4.02	4.52	1.78		
		5	4.73	4.48	4.98	1.78		
PCB-1260	1	1	6.64	6.39	6.89	2.38	2.16	11.7
		2	7.11	6.86	7.36	2.58		
		3	7.64	7.39	7.89	1.93		
		4	8.01	7.76	8.26	1.94		
		5	8.51	8.26	8.76	1.97		
	2	1	6.25	6.00	6.50	2.07	1.92	
		2	6.99	6.75	7.25	2.25		
		3	7.49	7.24	7.74	1.72		
		4	7.93	7.68	8.18	1.66		
		5	8.32	8.07	8.57	1.91		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-437451/5-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 11/28/2018 19:25 Date Analyzed (2): 11/28/2018 19:25

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.27	3.02	3.52	2.20	2.10	12.6
		2	3.66	3.41	3.91	2.08		
		3	4.12	3.87	4.37	2.05		
		4	4.26	4.01	4.51	2.06		
		5	4.49	4.24	4.74	2.08		
	2	1	3.27	3.02	3.52	2.04	1.85	
		2	3.63	3.38	3.88	1.79		
		3	4.12	3.87	4.37	1.74		
		4	4.26	4.02	4.52	1.83		
		5	4.73	4.48	4.98	1.83		
PCB-1260	1	1	6.64	6.39	6.89	2.75	2.34	10.2
		2	7.11	6.86	7.36	2.76		
		3	7.64	7.39	7.89	2.14		
		4	8.01	7.76	8.26	2.00		
		5	8.51	8.26	8.76	2.03		
	2	1	6.25	6.00	6.50	2.11	2.11	
		2	7.00	6.75	7.25	2.48		
		3	7.49	7.24	7.74	2.18		
		4	7.93	7.68	8.18	1.82		
		5	8.32	8.07	8.57	1.96		

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW | Lab Sample ID: 280-116538-4

Matrix: Water | Lab File ID: 11281814.D

Analysis Method: 8082A | Date Collected: 11/02/2018 15:30

Extraction Method: 3510C | Date Extracted: 11/13/2018 18:28

Sample wt/vol: 897.7(mL) | Date Analyzed: 11/28/2018 20:29

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 439075 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		1.1	0.14
11104-28-2	PCB-1221	ND		1.1	0.24
11141-16-5	PCB-1232	ND		1.1	0.18
53469-21-9	PCB-1242	ND		1.1	0.12
12672-29-6	PCB-1248	ND		1.1	0.10
11097-69-1	PCB-1254	ND		1.1	0.13
11096-82-5	PCB-1260	ND		1.1	0.18
37324-23-5	PCB-1262	ND		1.1	0.094
11100-14-4	PCB-1268	ND		1.1	0.40

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	78		25-120
2051-24-3	DCB Decachlorobiphenyl	70		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281814.D
Lims ID: 280-116538-C-4-A
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 28-Nov-2018 20:29:19 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-C-4-A
Misc. Info.: 280-0076621-014
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:10:32 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 10:57:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.967	1.966	0.001	37221821	1000.0	
2	1.740	1.743	-0.003	189399457	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						
1	2.880	2.879	0.001	12148599	12.5	
2	2.774	2.773	0.001	38547470	15.6	
					RPD = 22.20	
3 PCB-1221						U
1		3.085			ND	
1		3.232				
1		3.269				
2		3.092				
2		3.222				
2		3.276				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7	PCB-1232					U
1		3.088			ND	
1		3.271				
1		4.118				
1		4.264				
1		4.731				
2		3.275				
2		3.665				
2		4.121				
2		4.265				
2		4.928				
1	PCB-1016					U
1		3.269			ND	
1		3.632				
1		4.119				
1		4.266				
1		4.732				
2		3.273				
2		3.659				
2		4.116				
2		4.259				
2		4.493				
4	PCB-1248					U
1		3.629			ND	
1		4.115				
1		4.729				
1		5.505				
1		6.005				
2		4.119				
2		4.499				
2		4.789				
2		4.929				
2		6.102				
10	PCB-1242					U
1		3.631			ND	
1		4.117				
1		4.264				
1		5.237				
1		5.261				
2		3.664				
2		4.121				
2		4.264				
2		4.788				
2		4.928				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.182			ND	
1		5.509				
1		5.849				
1		6.622				
1		6.995				
2		5.529				
2		5.952				
2		6.402				
2		6.649				
2		7.119				
5 PCB-1262						U
1		6.248			ND	
1		7.154				
1		7.488				
1		7.931				
1		8.321				
2		6.648				
2		7.248				
2		7.645				
2		8.011				
2		8.515				
12 PCB-1260						U
1		6.249			ND	
1		6.996				
1		7.492				
1		7.932				
1		8.322				
2		6.643				
2		7.109				
2		7.639				
2		8.006				
2		8.509				
13 PCB-1268						U
1		8.381			ND	
1		8.434				
1		8.707				
1		9.224				
1		9.637				
2		8.511				
2		8.574				
2		8.928				
2		9.358				
2		9.821				
$ 15 DCB Decachlorobiphenyl						
1	9.914	9.916	-0.002	9544091	12.4	
2	10.177	10.179	-0.002	39677881	13.9	
					RPD = 11.55	
S 8 Polychlorinated biphenyls, Total						
1		0.000			ND	
2		0.000				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 PCB-5460						
1		0.000			ND	
1		12.739				
1		0.000				
1		13.802				
1		14.259				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
6 PCB-5432						
1		7.063			ND	
1		7.693				
1		8.203				
1		9.029				
1		9.459				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
11 PCB-5442						
1		9.459			ND	
1		9.923				
1		10.079				
1		10.289				
1		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

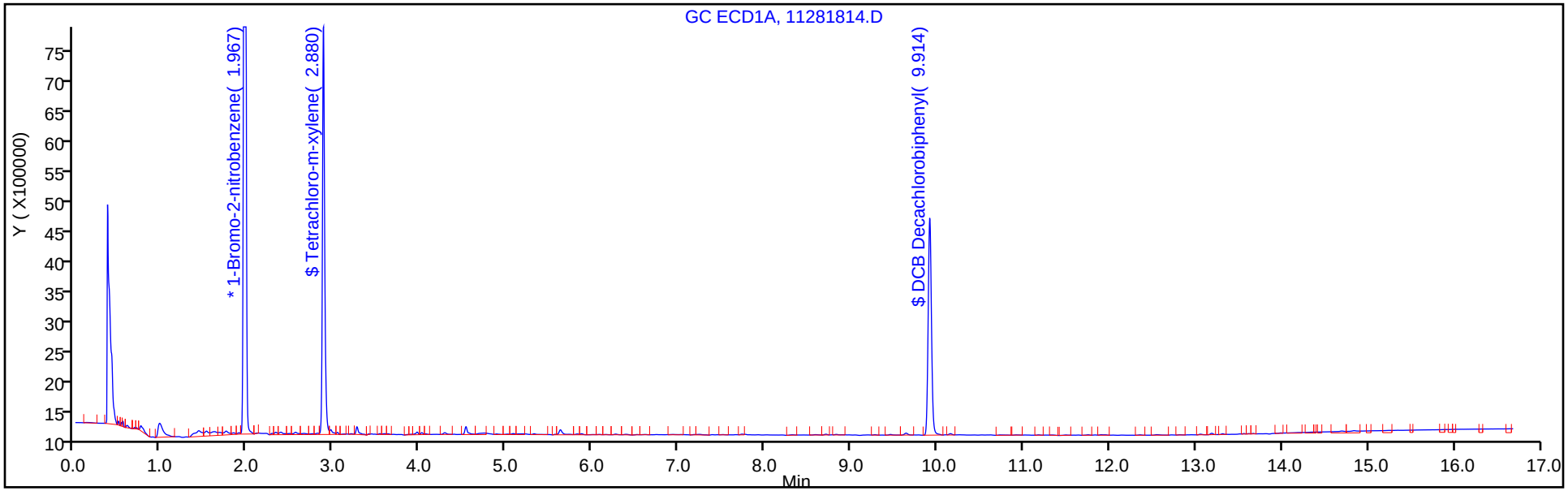
Report Date: 03-Dec-2018 11:10:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

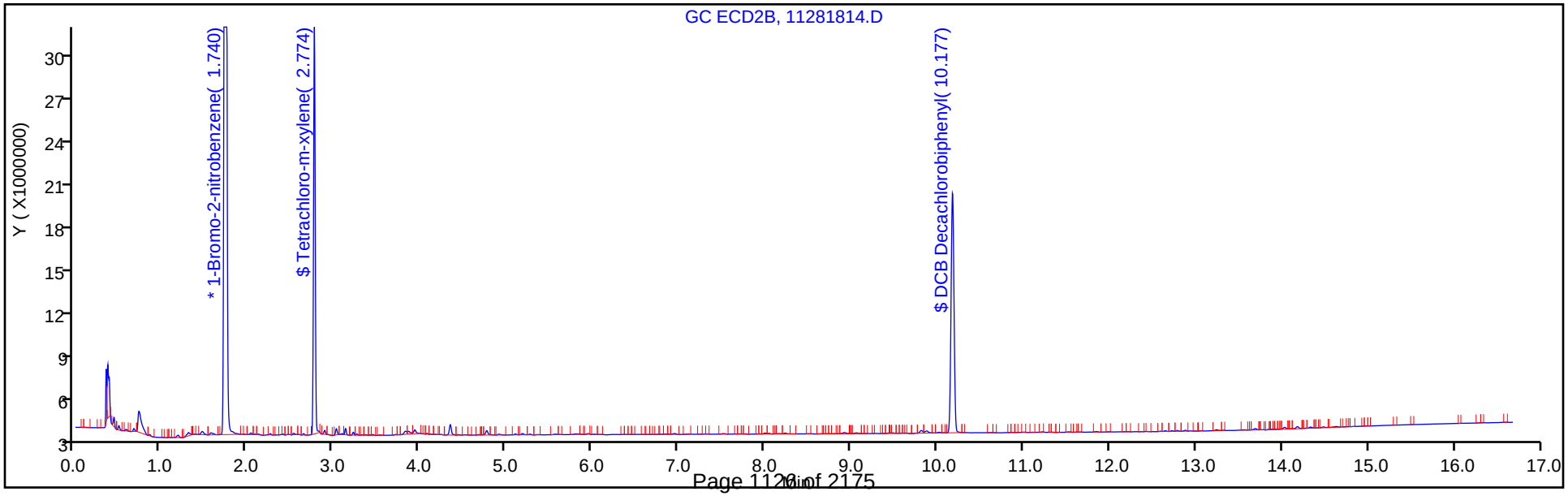
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281814.D

Injection Date:	28-Nov-2018 20:29:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	280-116538-C-4-A	Lab Sample ID:	280-116538-4	Worklist Smp#:	14
Client ID:	FWGIDW-181001-WW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281814.D				
Lims ID:	280-116538-C-4-A				
Client ID:	FWGIDW-181001-WW				
Sample Type:	Client				
Inject. Date:	28-Nov-2018 20:29:19	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-C-4-A				
Misc. Info.:	280-0076621-014				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	03-Dec-2018 11:10:32	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0309				
First Level Reviewer: patadiab		Date:	30-Nov-2018 10:57:10		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	12.5	62.46
$ 15 DCB Decachlorobiphenyl	20.0	12.4	61.96

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	15.6	78.06
$ 15 DCB Decachlorobiphenyl	20.0	13.9	69.55

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.7122 0.4127	0.6118 0.4011	0.5704	0.4630	0.4556	Lin1	9.8720	0.4076							0.9960		0.9900
PCB-1248 Peak 2	1.0403 0.8770	0.9550 0.9026	1.0280	0.8779	0.9242	Lin1	4.6019	0.8921							0.9990		0.9900
PCB-1248 Peak 3	1.2895 0.9992	1.1836 1.0099	1.2299	1.0238	1.0668	Lin1	9.5371	1.0079							0.9980		0.9900
PCB-1248 Peak 4	0.8968 0.6951	0.8199 0.7107	0.8337	0.7223	0.7530	Lin1	6.0934	0.7077							0.9990		0.9900
PCB-1248 Peak 5	0.5801 0.4479	0.5241 0.4719	0.5587	0.4626	0.4874	Lin1	3.7614	0.4626							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Lin1	499158 9442915	908243 11858019	1647978	3572971	6545537	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 2	BNB	Lin1	729109 20068466	1417622 26688023	2970012	6774612	13279339	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 3	BNB	Lin1	903744 22864792	1757060 29858711	3553415	7900982	15327875	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 4	BNB	Lin1	628528 15905035	1217158 21012955	2408573	5573784	10818763	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 5	BNB	Lin1	406565 10248925	778039 13952293	1614155	3570034	7003033	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D
Lims ID: STDL71248
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 09:48:04 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71248
Misc. Info.: 280-0076428-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	29567346	1000.0	1000.0	
2	1.748	1.744	0.004	169218357	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	11858019	1000.0	959.6	
1	4.114	4.115	-0.001	26688023	1000.0	1006.7	
1	4.731	4.729	0.002	29858711	1000.0	992.4	
1	5.504	5.505	-0.001	21012955	1000.0	995.6	
1	6.004	6.005	-0.001	13952293	1000.0	1012.0	
		Average of Peak Amounts =				993.3	
2	4.121	4.119	0.002	83375893	1000.0	957.5	
2	4.498	4.499	-0.001	49673627	1000.0	973.7	
2	4.791	4.789	0.002	68034804	1000.0	970.6	
2	4.927	4.929	-0.002	74524210	1000.0	959.9	
2	6.101	6.102	-0.001	51421671	1000.0	963.6	
		Average of Peak Amounts =				965.0	
						RPD = 2.88	
S 8 Polychlorinated biphenyls, Total							
1						993.3	
2						965.0	
						RPD = 2.88	

Reagents:

AR_1248_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

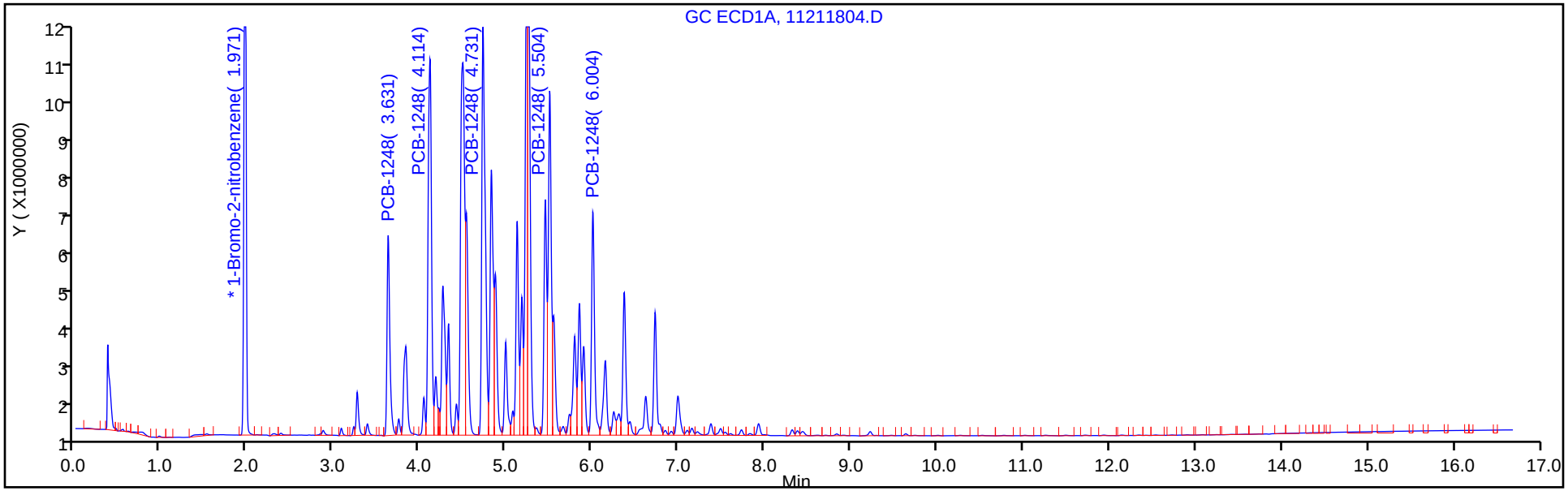
Report Date: 23-Nov-2018 11:01:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

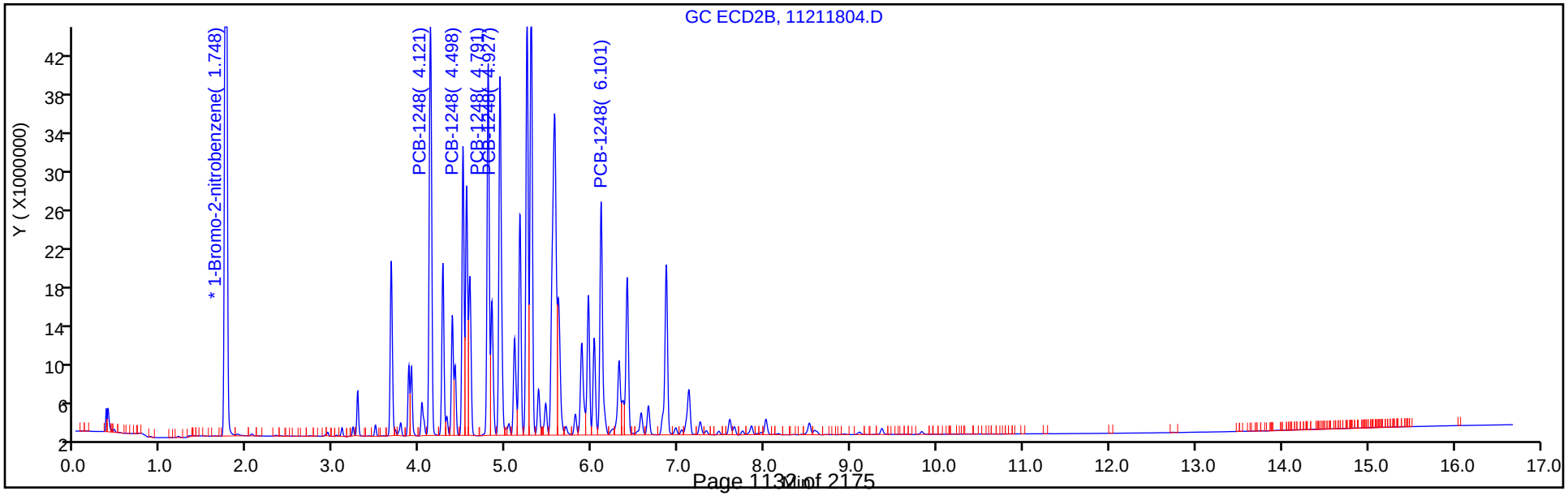
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D

Injection Date:	21-Nov-2018 09:48:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71248			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D
Lims ID: STDL61248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 10:09:17 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61248
Misc. Info.: 280-0076428-005
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:51 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	30510716	1000.0	1000.0	
2	1.748	1.744	0.004	173614890	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.631	3.629	0.002	9442915	750.0	735.0	
1	4.115	4.115	0.000	20068466	750.0	732.2	
1	4.731	4.729	0.002	22864792	750.0	734.0	
1	5.505	5.505	0.000	15905035	750.0	728.0	M
1	6.005	6.005	0.000	10248925	750.0	718.0	
		Average of Peak Amounts =				729.5	
2	4.118	4.119	-0.001	66929326	750.0	745.5	
2	4.498	4.499	-0.001	38624976	750.0	733.4	
2	4.791	4.789	0.002	53290956	750.0	736.2	
2	4.928	4.929	-0.001	59463126	750.0	742.7	
2	6.101	6.102	-0.001	40520608	750.0	736.4	
		Average of Peak Amounts =				738.8	
						RPD = 1.28	
S 8 Polychlorinated biphenyls, Total							
1						729.5	
2						738.8	
						RPD = 1.28	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1248_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

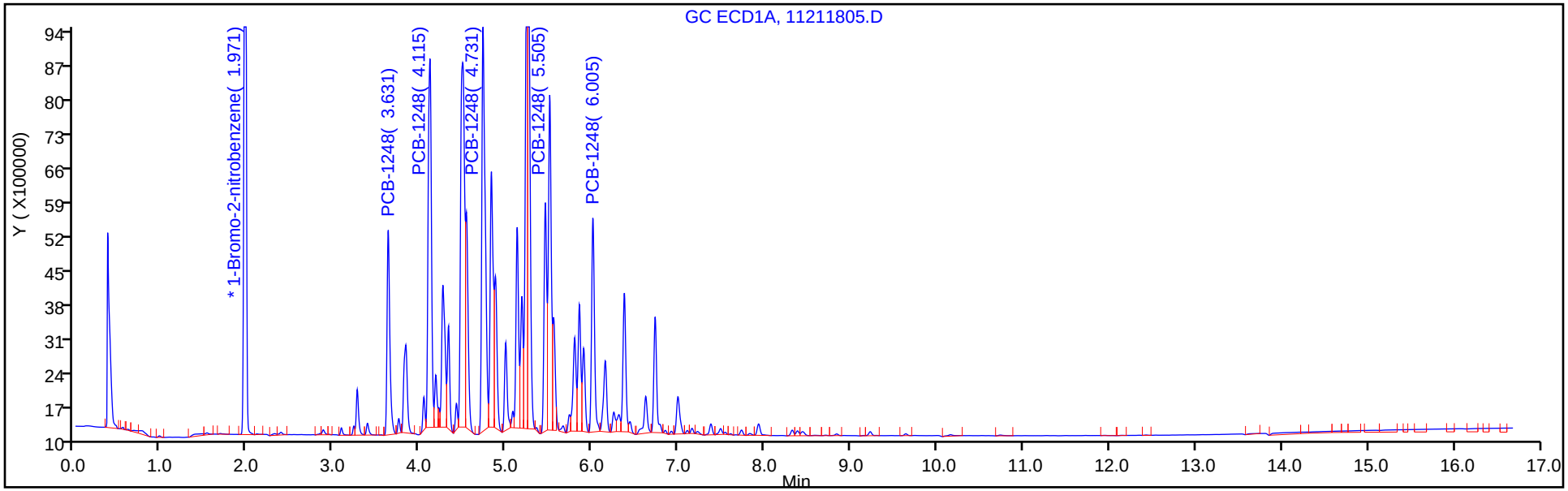
Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

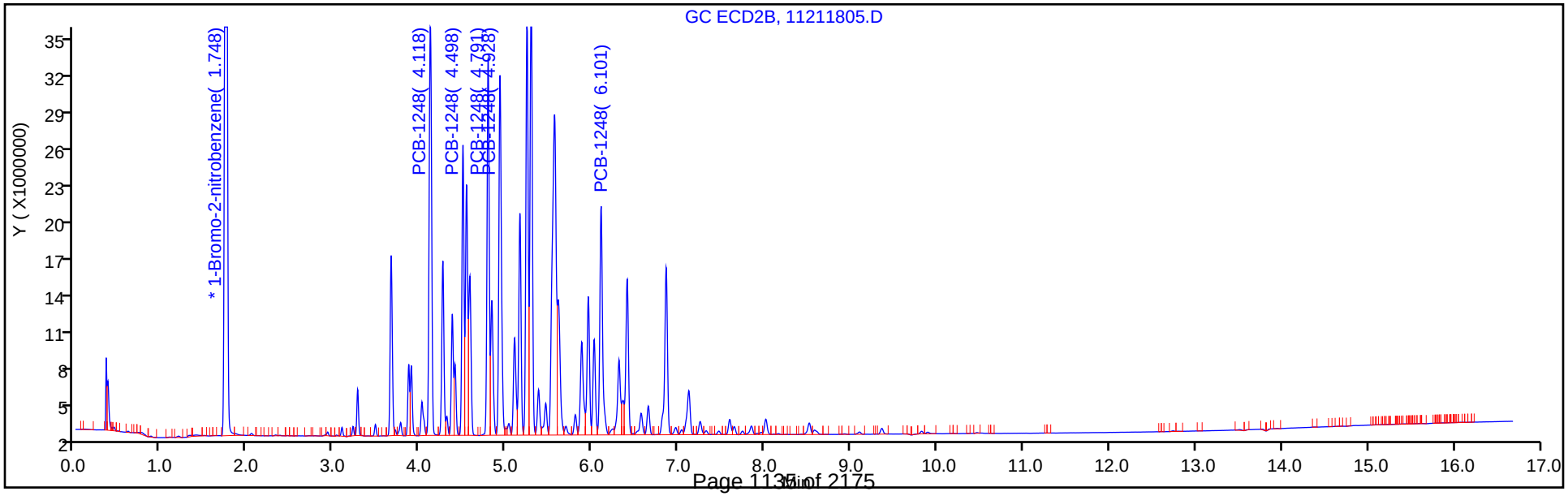
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date:	21-Nov-2018 10:09:17	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61248			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date: 21-Nov-2018 10:09:17 Instrument ID: SGC_J

Lims ID: STDL61248

Client ID:

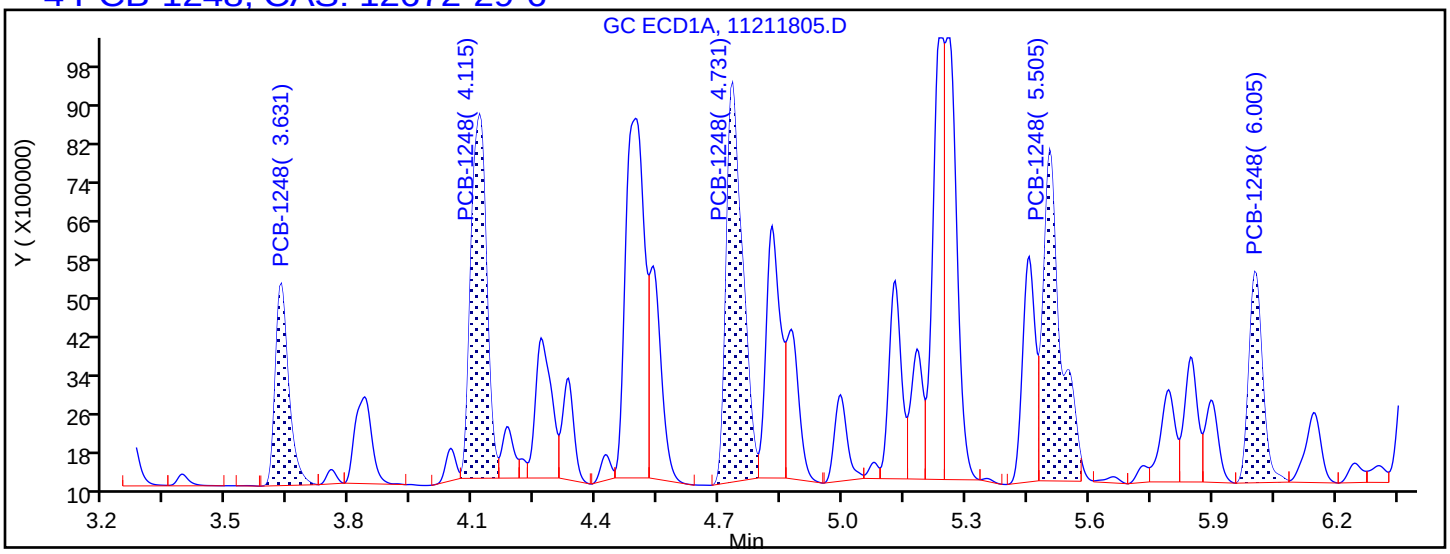
Operator ID: ALS ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

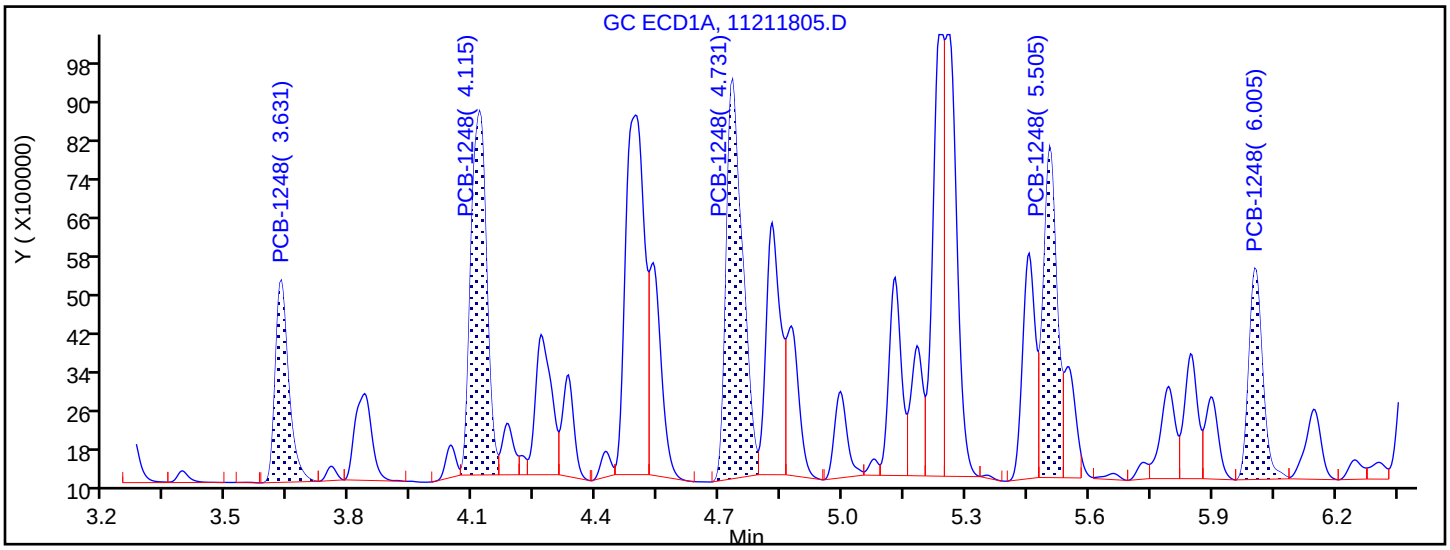
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

4 PCB-1248, CAS: 12672-29-6



Processing Integration Results

3.631	Response = 9442915
4.115	Response = 20068466
4.731	Response = 22864792
5.505	Response = 20328921
6.005	Response = 10248925



Manual Integration Results

3.631	Response = 9442915	
4.115	Response = 20068466	
4.731	Response = 22864792	
5.505	Response = 15905035	M
6.005	Response = 10248925	

Reviewer: patadiab, 21-Nov-2018 11:04:58

Audit Action: Split an Integrated Peak Audit Reason: Shouldering

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D
Lims ID: STDL51248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 10:30:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51248
Misc. Info.: 280-0076428-006
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28736785	1000.0	1000.0	
2	1.745	1.745	0.000	164020581	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.629	3.629	0.000	6545537	500.0	534.6	
1	4.115	4.115	0.000	13279339	500.0	512.9	
1	4.729	4.729	0.000	15327875	500.0	519.7	
1	5.505	5.505	0.000	10818763	500.0	523.3	M
1	6.005	6.005	0.000	7003033	500.0	518.7	
		Average of Peak Amounts =				521.8	
2	4.119	4.119	0.000	45483505	500.0	531.6	
2	4.499	4.499	0.000	26585884	500.0	529.3	
2	4.789	4.789	0.000	36645923	500.0	530.3	
2	4.929	4.929	0.000	40664465	500.0	532.9	
2	6.102	6.102	0.000	28205008	500.0	538.4	
		Average of Peak Amounts =				532.5	
						RPD = 2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

AR_1248_L5_00021 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

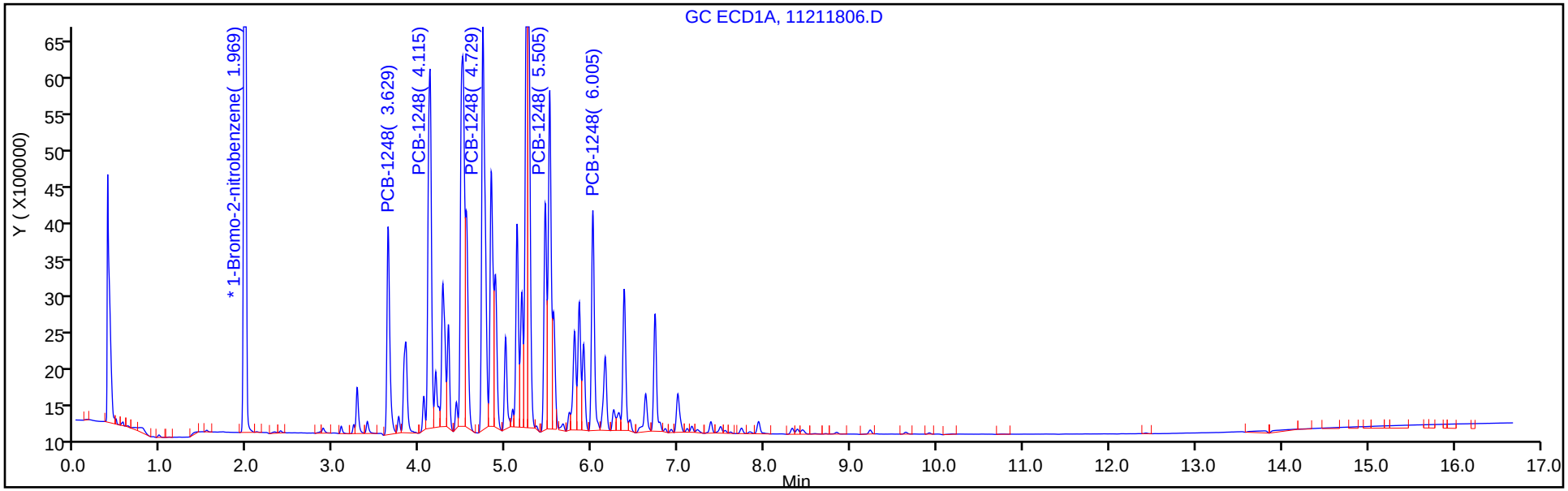
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

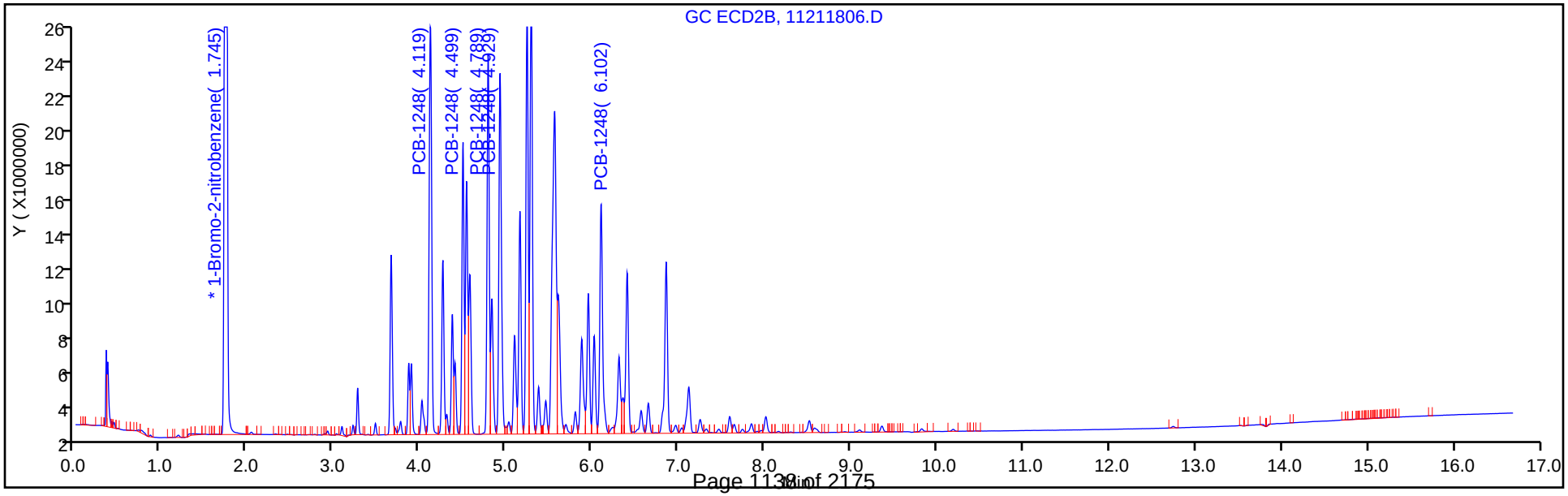
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date: 21-Nov-2018 10:30:25 Instrument ID: SGC_J

Lims ID: STDL51248

Client ID:

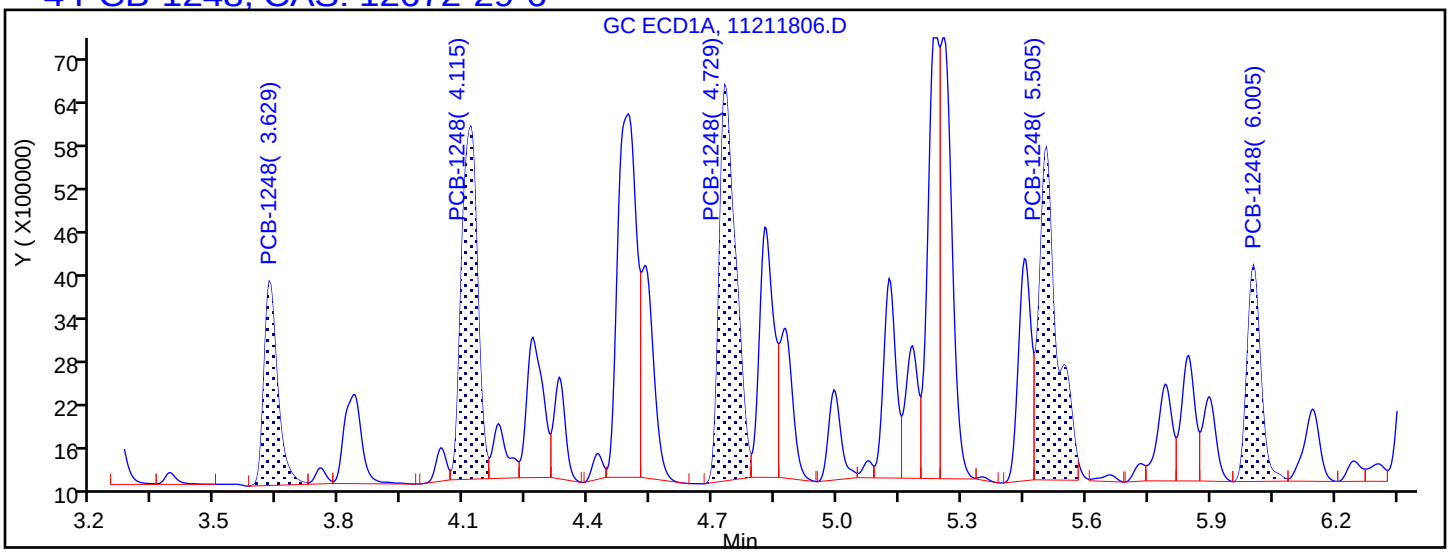
Operator ID: ALS ALS Bottle#: 6 Worklist Smp#: 6

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

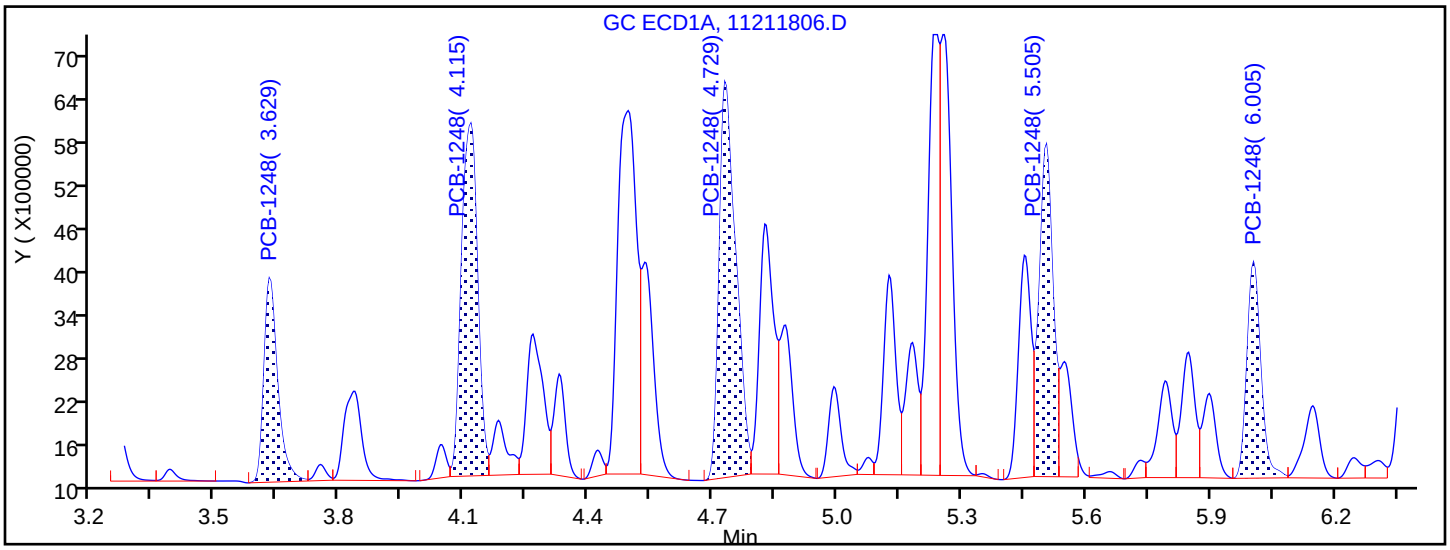
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

4 PCB-1248, CAS: 12672-29-6



Processing Integration Results

3.629	Response = 6545537
4.115	Response = 13279339
4.729	Response = 15327875
5.505	Response = 14072476
6.005	Response = 7003033



Manual Integration Results

3.629	Response = 6545537	
4.115	Response = 13279339	
4.729	Response = 15327875	
5.505	Response = 10818763	M
6.005	Response = 7003033	

Reviewer: mooret, 21-Nov-2018 15:16:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D
Lims ID: STDL41248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 10:51:35 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41248
Misc. Info.: 280-0076428-007
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:55 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:16:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	30868128	1000.0	1000.0	
2	1.748	1.745	0.003	175701150	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	3572971	250.0	259.7	
1	4.114	4.115	-0.001	6774612	250.0	240.9	
1	4.731	4.729	0.002	7900982	250.0	244.5	
1	5.504	5.505	-0.001	5573784	250.0	246.5	
1	6.004	6.005	-0.001	3570034	250.0	241.9	
		Average of Peak Amounts =				246.7	
2	4.121	4.119	0.002	24413334	250.0	258.1	
2	4.498	4.499	-0.001	14232505	250.0	255.2	
2	4.791	4.789	0.002	19636547	250.0	255.1	
2	4.928	4.929	-0.001	21701862	250.0	256.9	
2	6.101	6.102	-0.001	14716689	250.0	254.0	
		Average of Peak Amounts =				255.9	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						246.7	
2						255.9	
						RPD = 3.64	

Reagents:

AR_1248_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

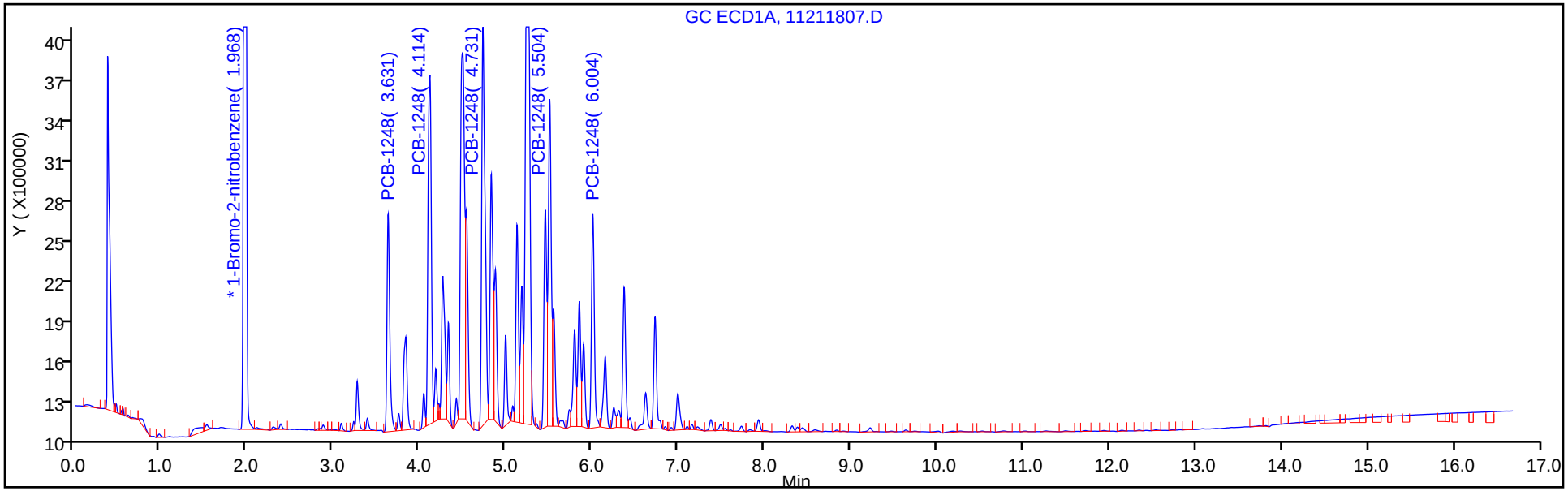
Report Date: 23-Nov-2018 11:01:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

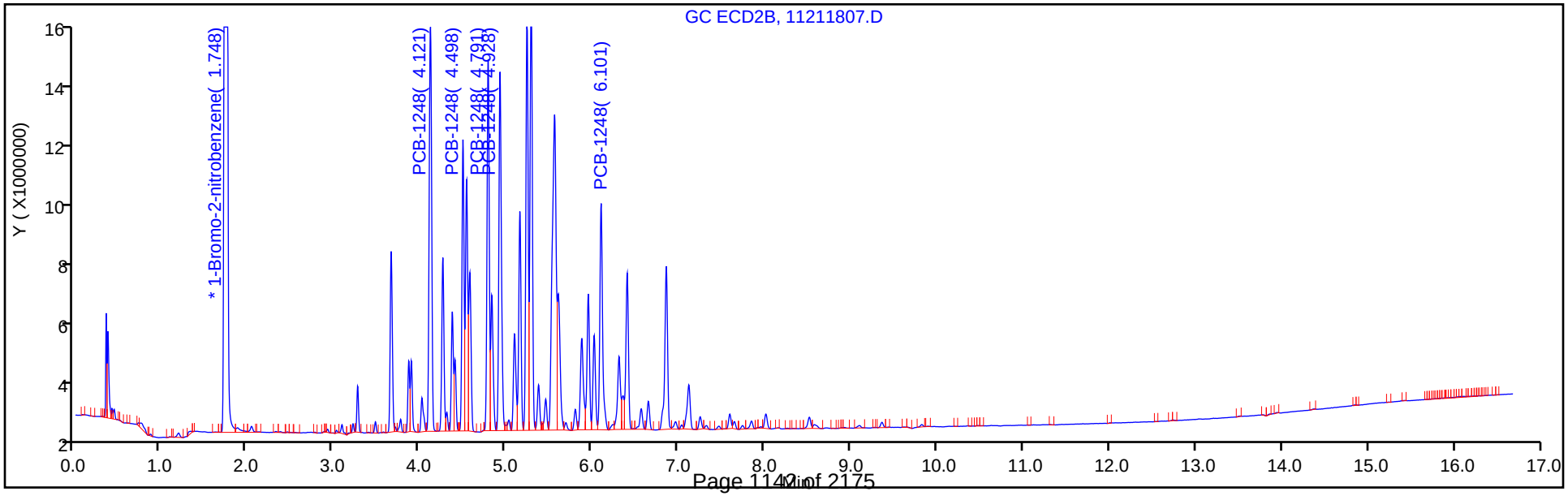
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D

Injection Date:	21-Nov-2018 10:51:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41248			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D
Lims ID: STDL31248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 11:12:45 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31248
Misc. Info.: 280-0076428-008
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:41:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	28891546	1000.0	1000.0	
2	1.746	1.745	0.001	164562398	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	1647978	100.0	115.7	
1	4.113	4.115	-0.002	2970012	100.0	110.1	
1	4.730	4.729	0.001	3553415	100.0	112.6	
1	5.506	5.505	0.001	2408573	100.0	109.2	
1	6.006	6.005	0.001	1614155	100.0	112.6	
		Average of Peak Amounts =				112.0	
2	4.120	4.119	0.001	10526463	100.0	109.8	
2	4.500	4.499	0.001	6322335	100.0	111.3	
2	4.790	4.789	0.001	8735777	100.0	110.4	
2	4.930	4.929	0.001	9459919	100.0	110.4	
2	6.103	6.102	0.001	6426439	100.0	109.9	
		Average of Peak Amounts =				110.4	
						RPD = 1.50	
S 8 Polychlorinated biphenyls, Total							
1						112.0	
2						110.4	
						RPD = 1.50	

Reagents:

AR_1248_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

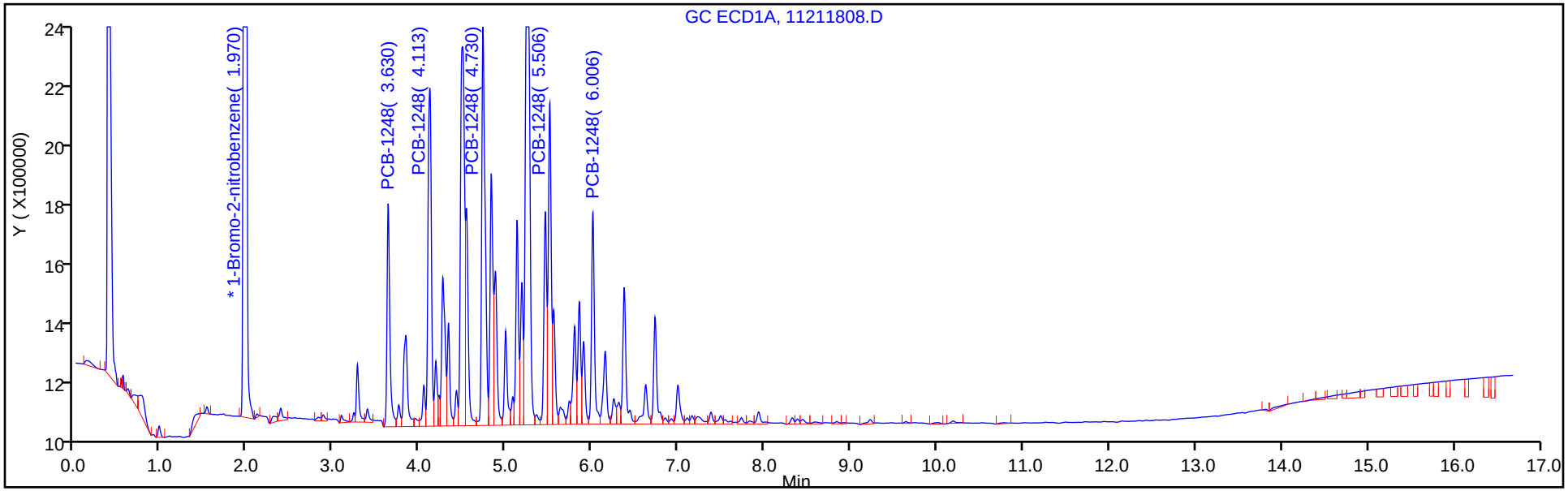
Report Date: 23-Nov-2018 11:01:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

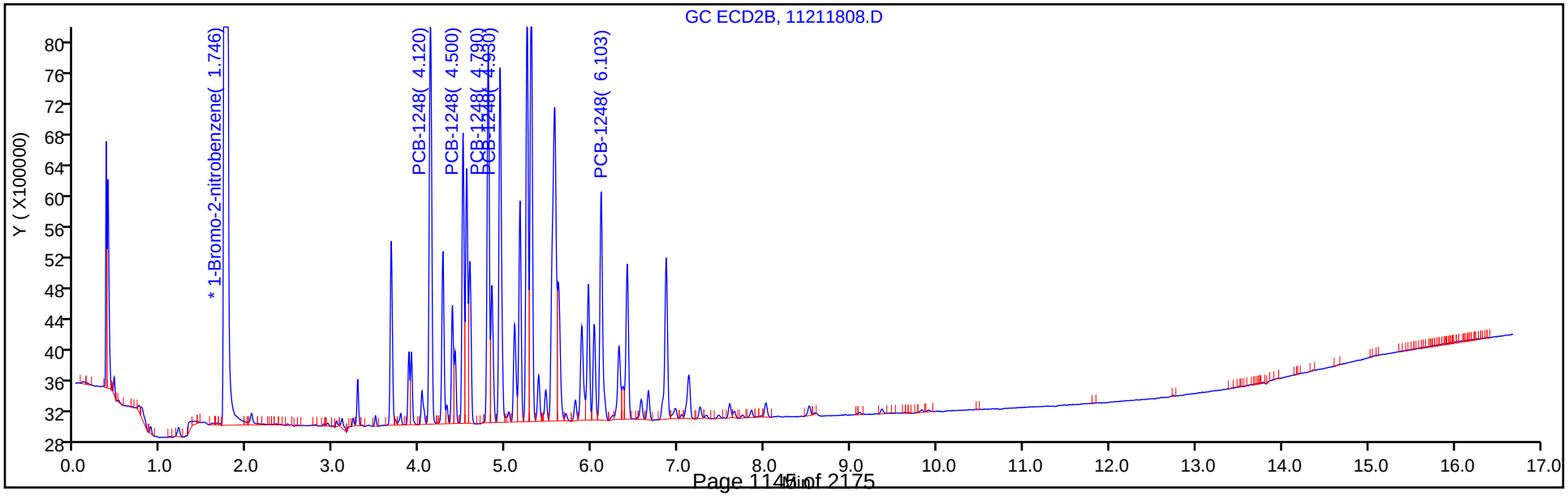
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D

Injection Date:	21-Nov-2018 11:12:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31248			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D
Lims ID: STDL21248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 11:33:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21248
Misc. Info.: 280-0076428-009
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:59 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:58:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	29689350	1000.0	1000.0	
2	1.748	1.745	0.003	167941963	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	908243	50.0	50.8	
1	4.111	4.115	-0.004	1417622	50.0	48.4	
1	4.728	4.729	-0.001	1757060	50.0	49.3	
1	5.505	5.505	0.000	1217158	50.0	49.3	
1	6.005	6.005	0.000	778039	50.0	48.5	
		Average of Peak Amounts =				49.3	
2	4.121	4.119	0.002	5857367	50.0	52.3	
2	4.498	4.499	-0.001	3480448	50.0	51.5	
2	4.791	4.789	0.002	4913700	50.0	51.7	
2	4.928	4.929	-0.001	5227558	50.0	51.9	
2	6.101	6.102	-0.001	3543306	50.0	52.0	
		Average of Peak Amounts =				51.9	
						RPD = 5.21	
S 8 Polychlorinated biphenyls, Total							
1						49.3	
2						51.9	
						RPD = 5.21	

Reagents:

AR_1248_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

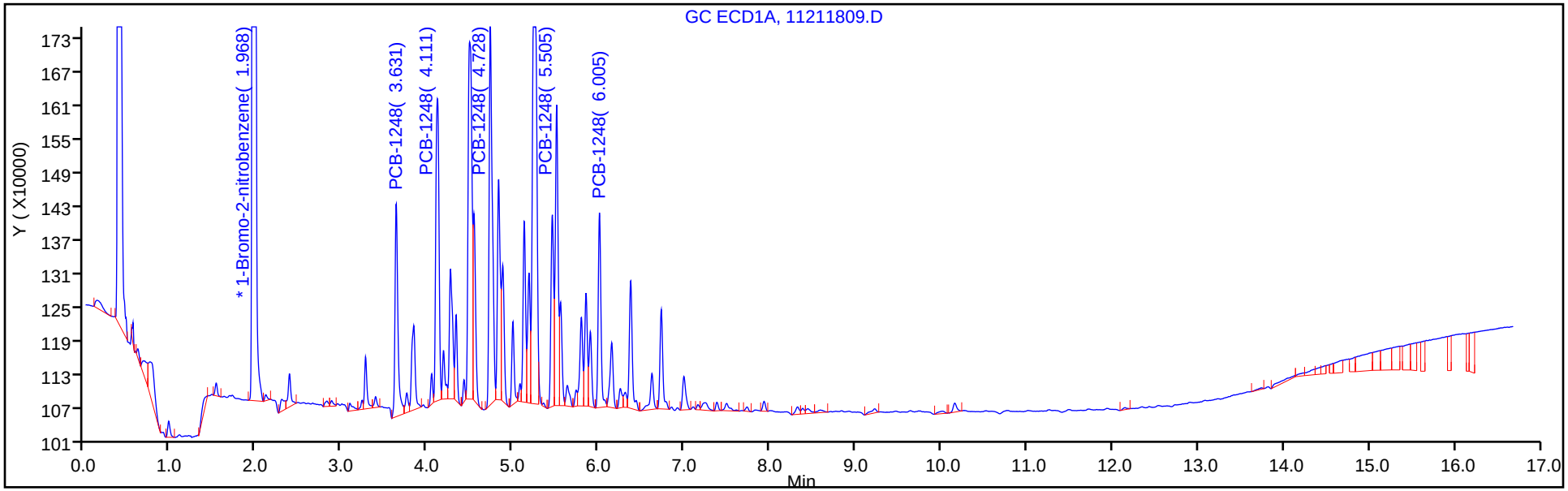
Report Date: 23-Nov-2018 11:02:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

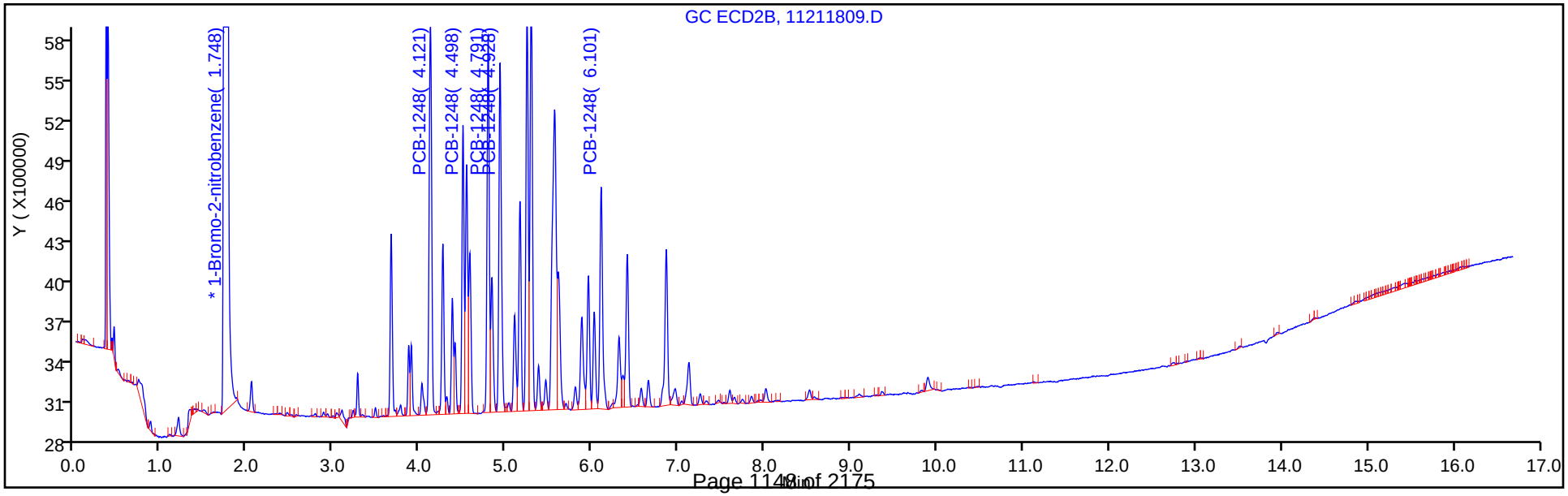
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D

Injection Date:	21-Nov-2018 11:33:58	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21248			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D
Lims ID: STDL11248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 11:55:11 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11248
Misc. Info.: 280-0076428-010
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 12:21:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.969	-0.002	28034459	1000.0	1000.0	
2	1.747	1.745	0.002	159672391	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	499158	25.0	19.5	
1	4.113	4.115	-0.002	729109	25.0	24.0	
1	4.730	4.729	0.001	903744	25.0	22.5	
1	5.503	5.505	-0.002	628528	25.0	23.1	
1	6.003	6.005	-0.002	406565	25.0	23.2	
		Average of Peak Amounts =				22.5	
2	4.120	4.119	0.001	2976466	25.0	20.2	
2	4.497	4.499	-0.002	1854776	25.0	20.7	
2	4.790	4.789	0.001	2664448	25.0	20.7	
2	4.927	4.929	-0.002	2696182	25.0	20.3	
2	6.100	6.102	-0.002	1808002	25.0	20.5	
		Average of Peak Amounts =				20.5	
						RPD = 9.11	
S 8 Polychlorinated biphenyls, Total							
1						22.5	
2						20.5	
						RPD = 9.11	

Reagents:

AR_1248_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

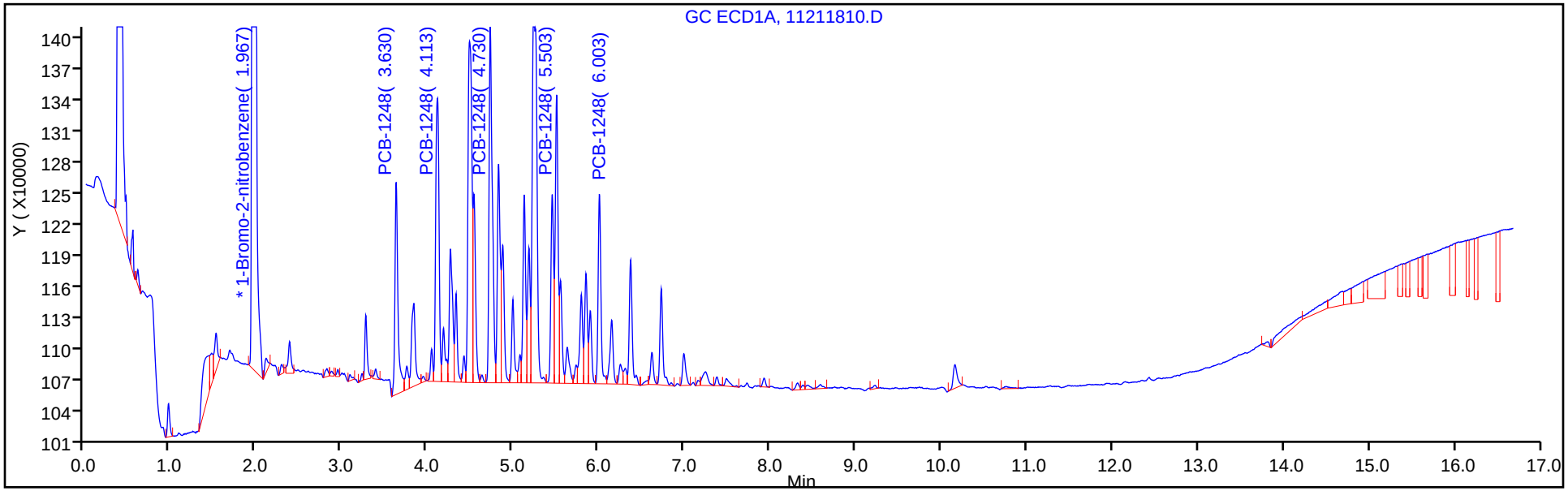
Report Date: 23-Nov-2018 11:02:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

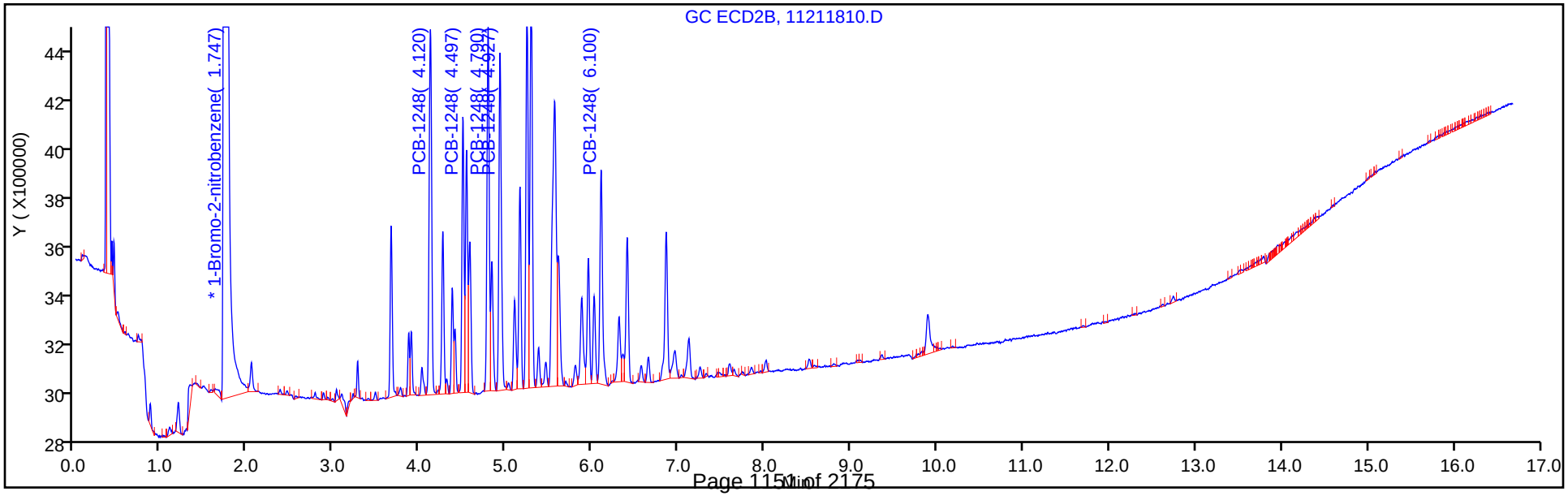
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D

Injection Date:	21-Nov-2018 11:55:11	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11248			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34379

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.7456 0.5140	0.6975 0.4927	0.6397	0.5558	0.5546	Lin1	8.4168	0.5058							0.9970		0.9900
PCB-1248 Peak 2	0.4646 0.2966	0.4145 0.2935	0.3842	0.3240	0.3242	Lin1	5.4995	0.2958							0.9980		0.9900
PCB-1248 Peak 3	0.6675 0.4093	0.5852 0.4021	0.5308	0.4470	0.4468	Lin1	8.2830	0.4057							0.9980		0.9900
PCB-1248 Peak 4	0.6754 0.4567	0.6225 0.4404	0.5749	0.4941	0.4958	Lin1	7.7151	0.4508							0.9970		0.9900
PCB-1248 Peak 5	0.4529 0.3112	0.4220 0.3039	0.3905	0.3350	0.3439	Lin1	4.9536	0.3102							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34379

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Lin1	2976466 66929326	5857367 83375893	10526463	24413334	45483505	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 2	BNB	Lin1	1854776 38624976	3480448 49673627	6322335	14232505	26585884	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 3	BNB	Lin1	2664448 53290956	4913700 68034804	8735777	19636547	36645923	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 4	BNB	Lin1	2696182 59463126	5227558 74524210	9459919	21701862	40664465	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 5	BNB	Lin1	1808002 40520608	3543306 51421671	6426439	14716689	28205008	25.0 750	50.0 1000	100	250	500

Curve Type Legend:

Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D
Lims ID: STDL71248
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 09:48:04 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71248
Misc. Info.: 280-0076428-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	29567346	1000.0	1000.0	
2	1.748	1.744	0.004	169218357	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	11858019	1000.0	959.6	
1	4.114	4.115	-0.001	26688023	1000.0	1006.7	
1	4.731	4.729	0.002	29858711	1000.0	992.4	
1	5.504	5.505	-0.001	21012955	1000.0	995.6	
1	6.004	6.005	-0.001	13952293	1000.0	1012.0	
		Average of Peak Amounts =				993.3	
2	4.121	4.119	0.002	83375893	1000.0	957.5	
2	4.498	4.499	-0.001	49673627	1000.0	973.7	
2	4.791	4.789	0.002	68034804	1000.0	970.6	
2	4.927	4.929	-0.002	74524210	1000.0	959.9	
2	6.101	6.102	-0.001	51421671	1000.0	963.6	
		Average of Peak Amounts =				965.0	
						RPD = 2.88	
S 8 Polychlorinated biphenyls, Total							
1						993.3	
2						965.0	
						RPD = 2.88	

Reagents:

AR_1248_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

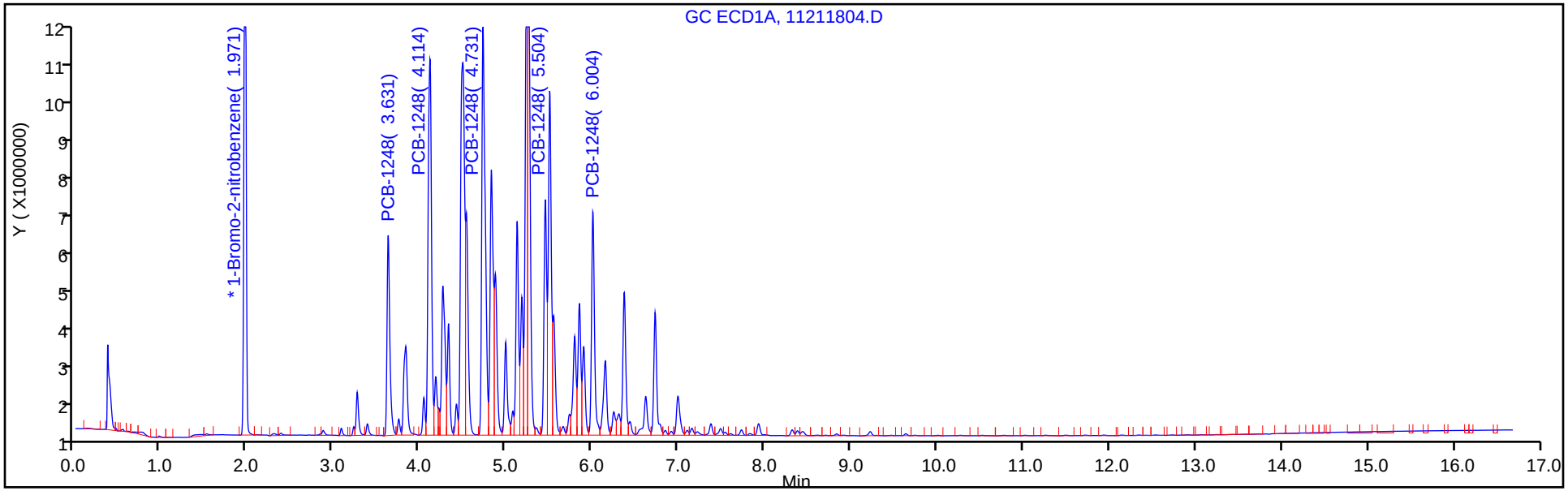
Report Date: 23-Nov-2018 11:01:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

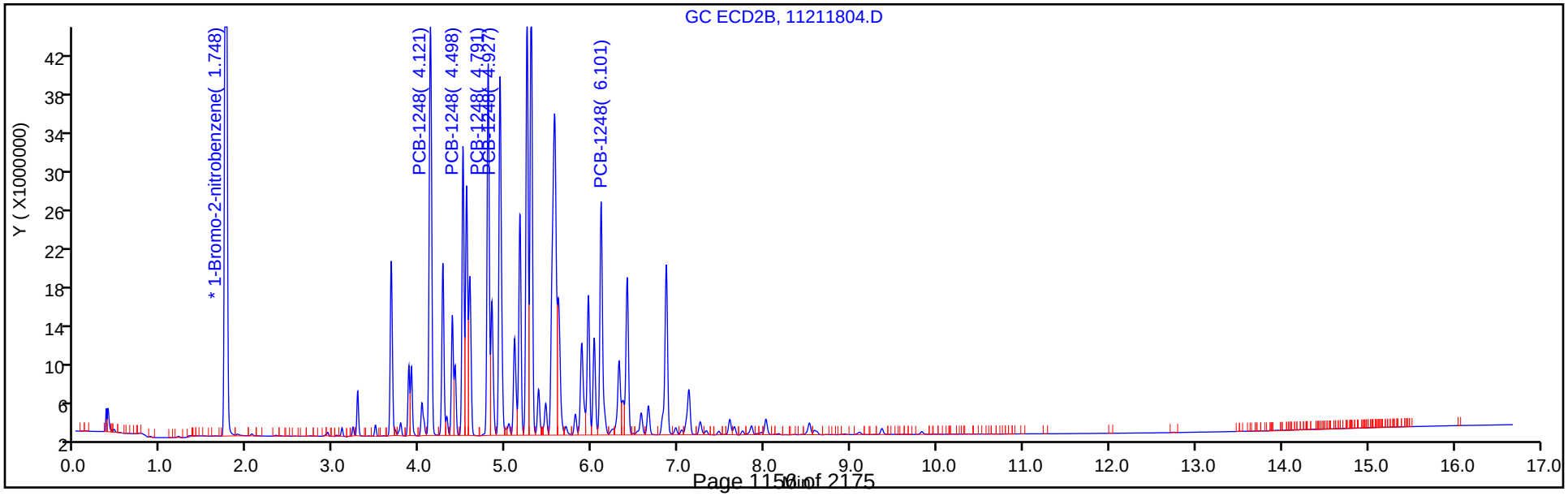
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D

Injection Date:	21-Nov-2018 09:48:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71248			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D
Lims ID: STDL61248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 10:09:17 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61248
Misc. Info.: 280-0076428-005
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:51 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	30510716	1000.0	1000.0	
2	1.748	1.744	0.004	173614890	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.631	3.629	0.002	9442915	750.0	735.0	
1	4.115	4.115	0.000	20068466	750.0	732.2	
1	4.731	4.729	0.002	22864792	750.0	734.0	
1	5.505	5.505	0.000	15905035	750.0	728.0	M
1	6.005	6.005	0.000	10248925	750.0	718.0	
		Average of Peak Amounts =				729.5	
2	4.118	4.119	-0.001	66929326	750.0	745.5	
2	4.498	4.499	-0.001	38624976	750.0	733.4	
2	4.791	4.789	0.002	53290956	750.0	736.2	
2	4.928	4.929	-0.001	59463126	750.0	742.7	
2	6.101	6.102	-0.001	40520608	750.0	736.4	
		Average of Peak Amounts =				738.8	
						RPD = 1.28	
S 8 Polychlorinated biphenyls, Total							
1						729.5	
2						738.8	
						RPD = 1.28	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1248_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

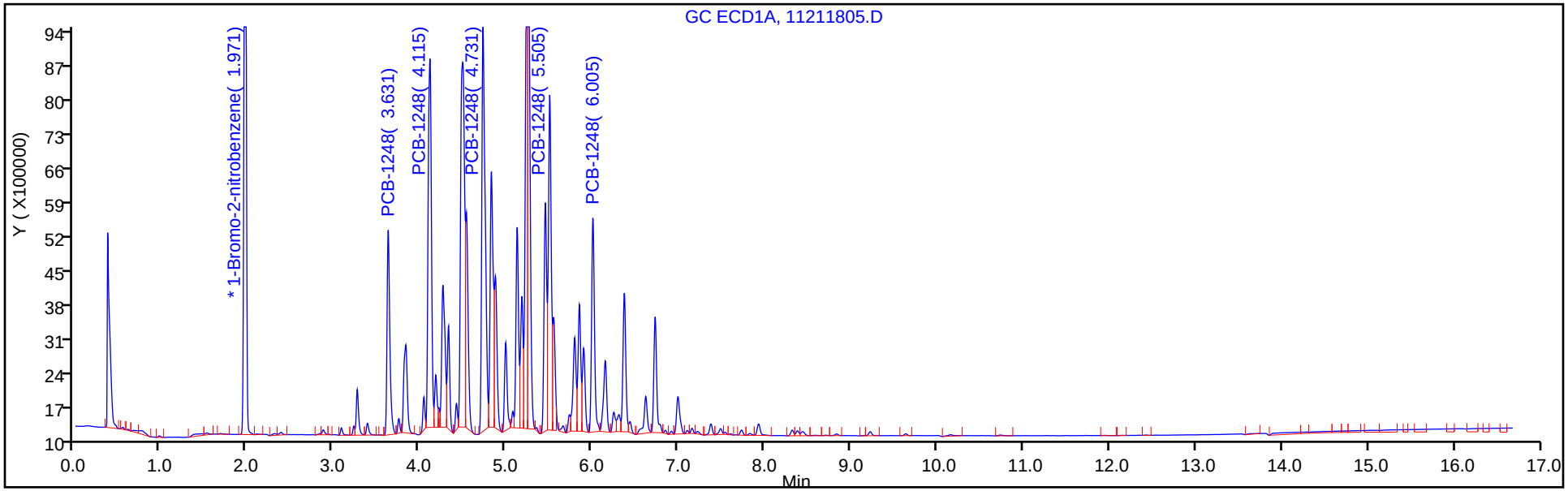
Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

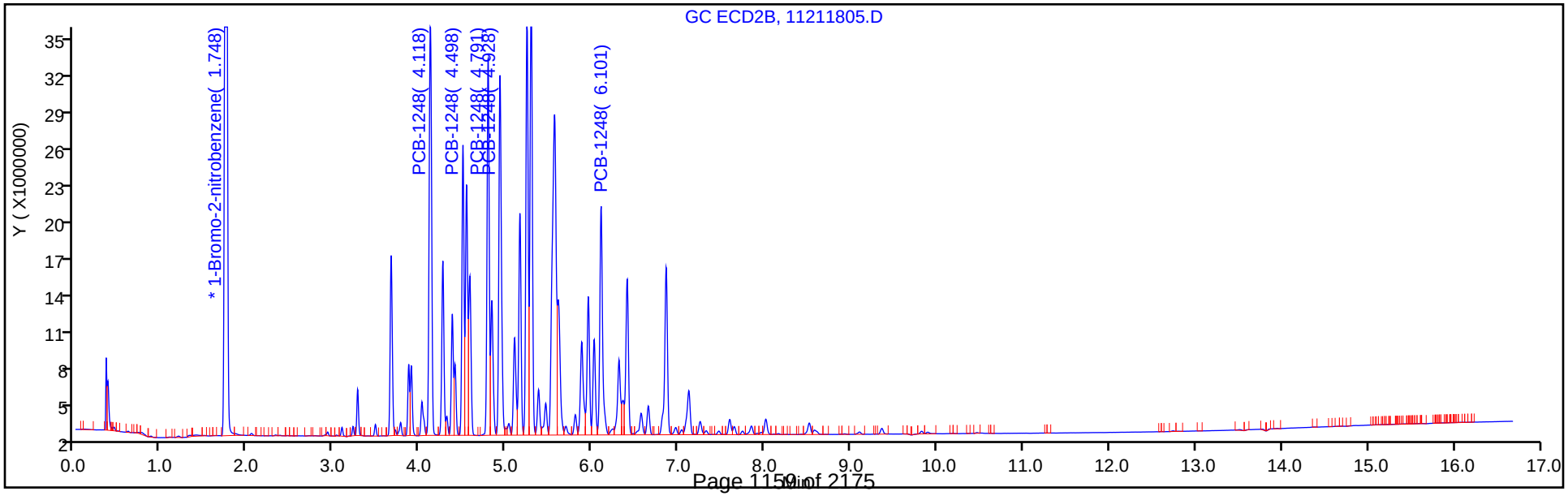
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date:	21-Nov-2018 10:09:17	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61248			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D
Lims ID: STDL51248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 10:30:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51248
Misc. Info.: 280-0076428-006
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28736785	1000.0	1000.0	
2	1.745	1.745	0.000	164020581	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.629	3.629	0.000	6545537	500.0	534.6	
1	4.115	4.115	0.000	13279339	500.0	512.9	
1	4.729	4.729	0.000	15327875	500.0	519.7	
1	5.505	5.505	0.000	10818763	500.0	523.3	M
1	6.005	6.005	0.000	7003033	500.0	518.7	
		Average of Peak Amounts =				521.8	
2	4.119	4.119	0.000	45483505	500.0	531.6	
2	4.499	4.499	0.000	26585884	500.0	529.3	
2	4.789	4.789	0.000	36645923	500.0	530.3	
2	4.929	4.929	0.000	40664465	500.0	532.9	
2	6.102	6.102	0.000	28205008	500.0	538.4	
		Average of Peak Amounts =				532.5	
						RPD = 2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

AR_1248_L5_00021 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

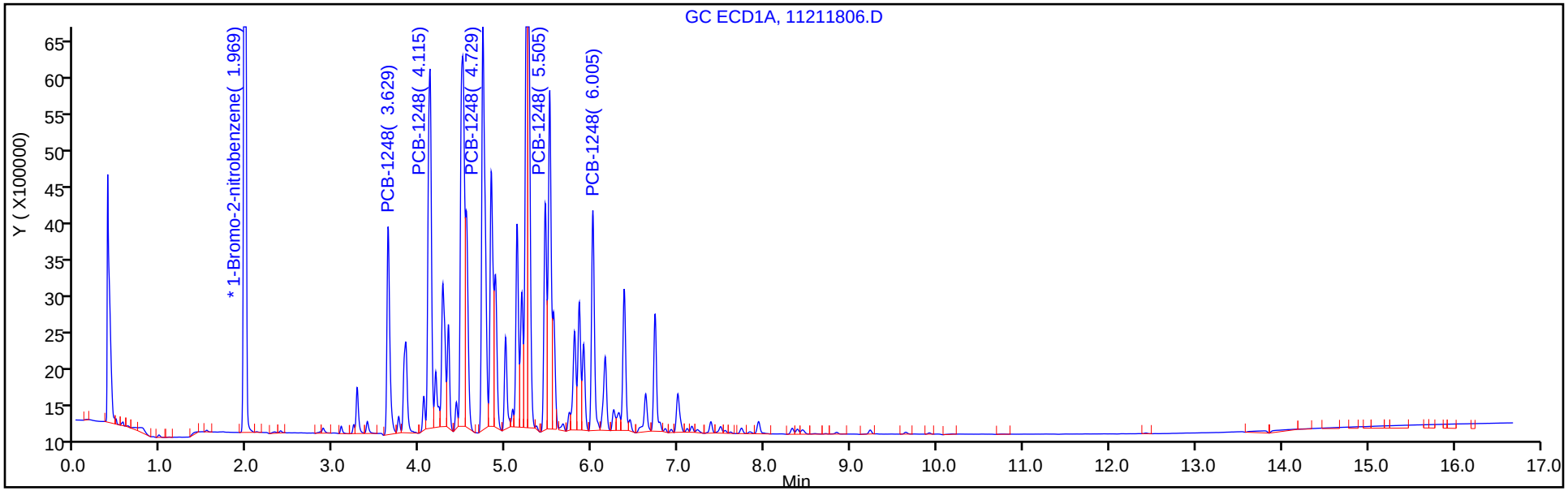
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

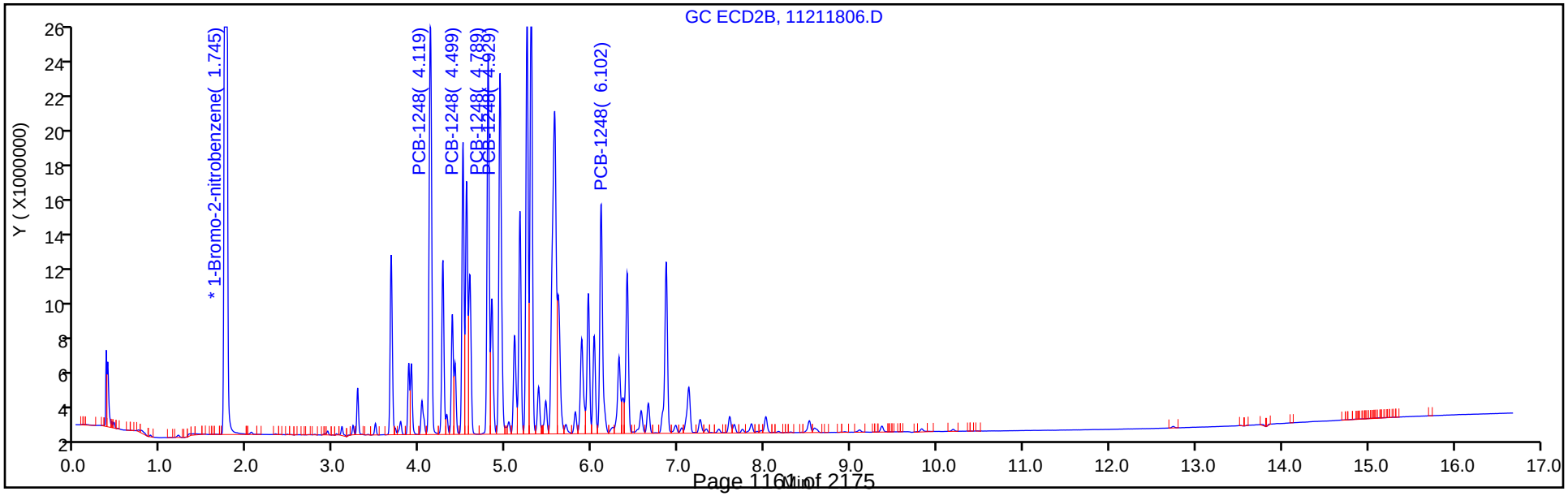
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D
Lims ID: STDL41248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 10:51:35 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41248
Misc. Info.: 280-0076428-007
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:55 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:16:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	30868128	1000.0	1000.0	
2	1.748	1.745	0.003	175701150	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	3572971	250.0	259.7	
1	4.114	4.115	-0.001	6774612	250.0	240.9	
1	4.731	4.729	0.002	7900982	250.0	244.5	
1	5.504	5.505	-0.001	5573784	250.0	246.5	
1	6.004	6.005	-0.001	3570034	250.0	241.9	
		Average of Peak Amounts =				246.7	
2	4.121	4.119	0.002	24413334	250.0	258.1	
2	4.498	4.499	-0.001	14232505	250.0	255.2	
2	4.791	4.789	0.002	19636547	250.0	255.1	
2	4.928	4.929	-0.001	21701862	250.0	256.9	
2	6.101	6.102	-0.001	14716689	250.0	254.0	
		Average of Peak Amounts =				255.9	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						246.7	
2						255.9	
						RPD = 3.64	

Reagents:

AR_1248_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

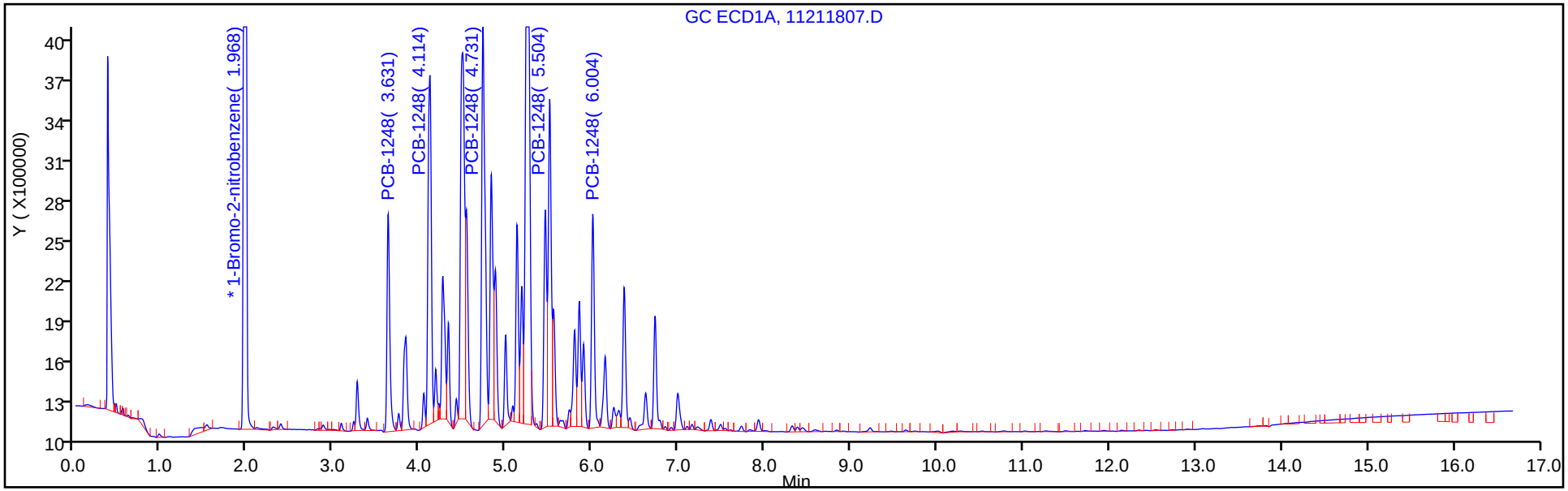
Report Date: 23-Nov-2018 11:01:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

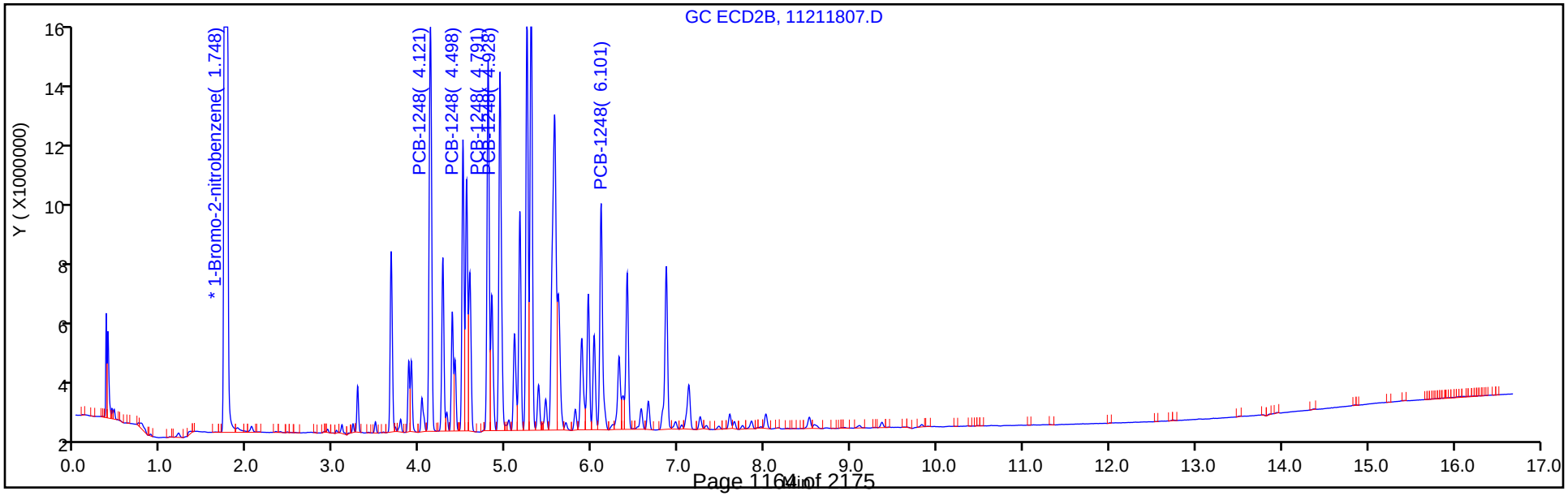
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D

Injection Date:	21-Nov-2018 10:51:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41248			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D
Lims ID: STDL31248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 11:12:45 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31248
Misc. Info.: 280-0076428-008
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:41:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	28891546	1000.0	1000.0	
2	1.746	1.745	0.001	164562398	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	1647978	100.0	115.7	
1	4.113	4.115	-0.002	2970012	100.0	110.1	
1	4.730	4.729	0.001	3553415	100.0	112.6	
1	5.506	5.505	0.001	2408573	100.0	109.2	
1	6.006	6.005	0.001	1614155	100.0	112.6	
		Average of Peak Amounts =				112.0	
2	4.120	4.119	0.001	10526463	100.0	109.8	
2	4.500	4.499	0.001	6322335	100.0	111.3	
2	4.790	4.789	0.001	8735777	100.0	110.4	
2	4.930	4.929	0.001	9459919	100.0	110.4	
2	6.103	6.102	0.001	6426439	100.0	109.9	
		Average of Peak Amounts =				110.4	
						RPD = 1.50	
S 8 Polychlorinated biphenyls, Total							
1						112.0	
2						110.4	
						RPD = 1.50	

Reagents:

AR_1248_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

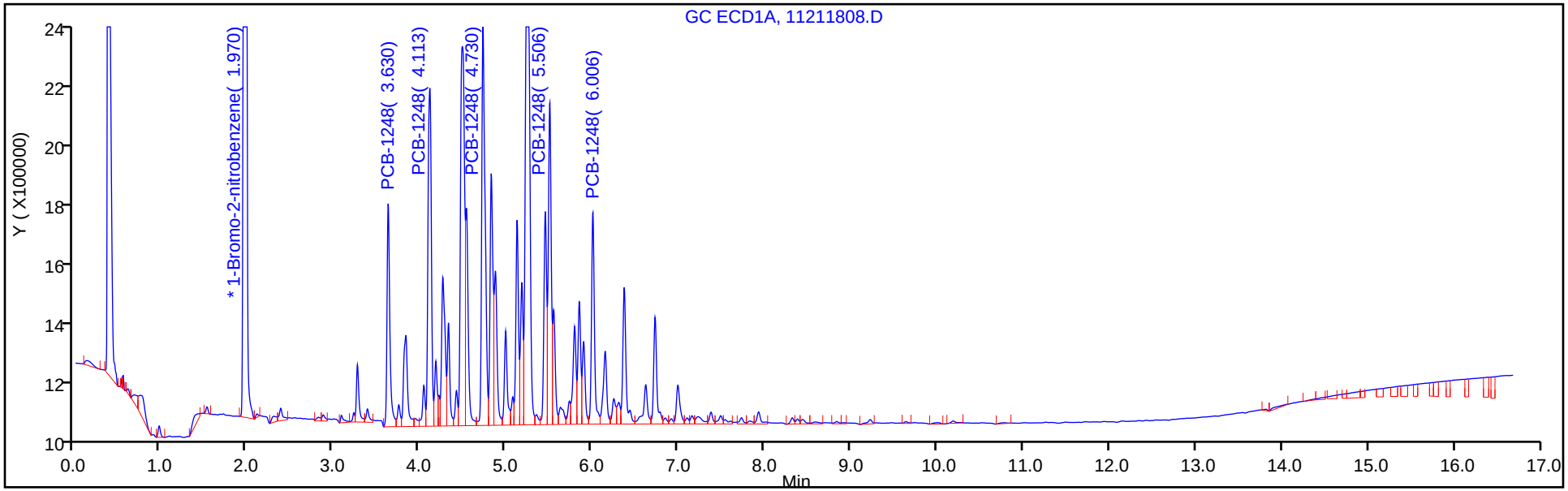
Report Date: 23-Nov-2018 11:01:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

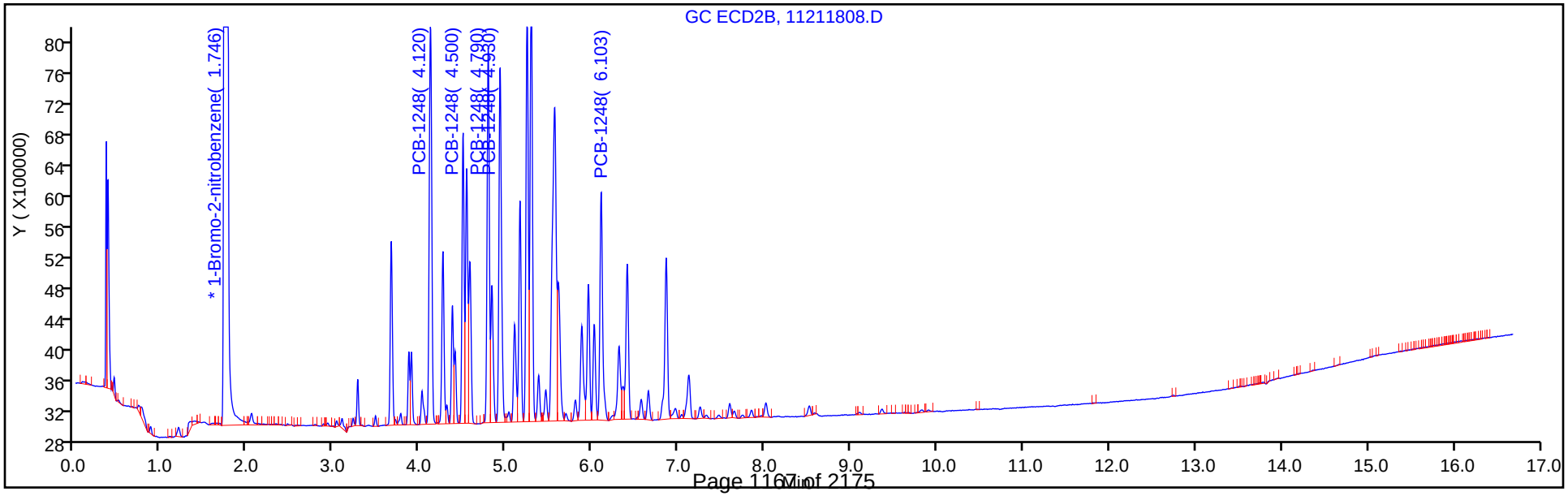
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D

Injection Date:	21-Nov-2018 11:12:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31248			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D
Lims ID: STDL21248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 11:33:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21248
Misc. Info.: 280-0076428-009
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:59 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:58:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	29689350	1000.0	1000.0	
2	1.748	1.745	0.003	167941963	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	908243	50.0	50.8	
1	4.111	4.115	-0.004	1417622	50.0	48.4	
1	4.728	4.729	-0.001	1757060	50.0	49.3	
1	5.505	5.505	0.000	1217158	50.0	49.3	
1	6.005	6.005	0.000	778039	50.0	48.5	
		Average of Peak Amounts =				49.3	
2	4.121	4.119	0.002	5857367	50.0	52.3	
2	4.498	4.499	-0.001	3480448	50.0	51.5	
2	4.791	4.789	0.002	4913700	50.0	51.7	
2	4.928	4.929	-0.001	5227558	50.0	51.9	
2	6.101	6.102	-0.001	3543306	50.0	52.0	
		Average of Peak Amounts =				51.9	
						RPD = 5.21	
S 8 Polychlorinated biphenyls, Total							
1						49.3	
2						51.9	
						RPD = 5.21	

Reagents:

AR_1248_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

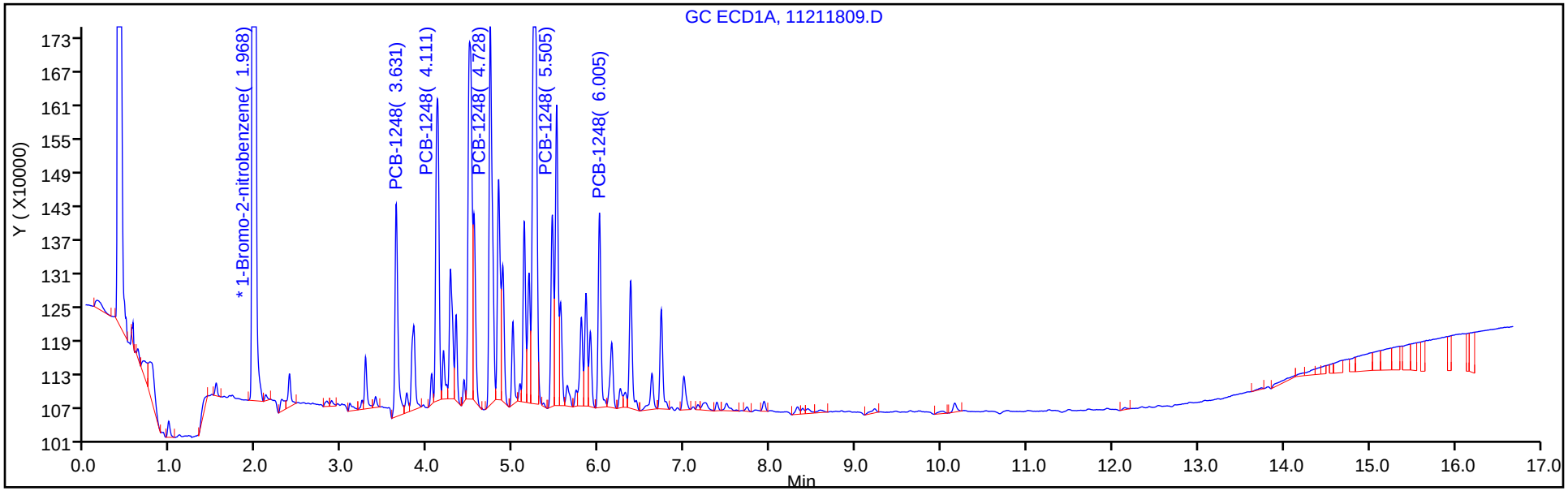
Report Date: 23-Nov-2018 11:02:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

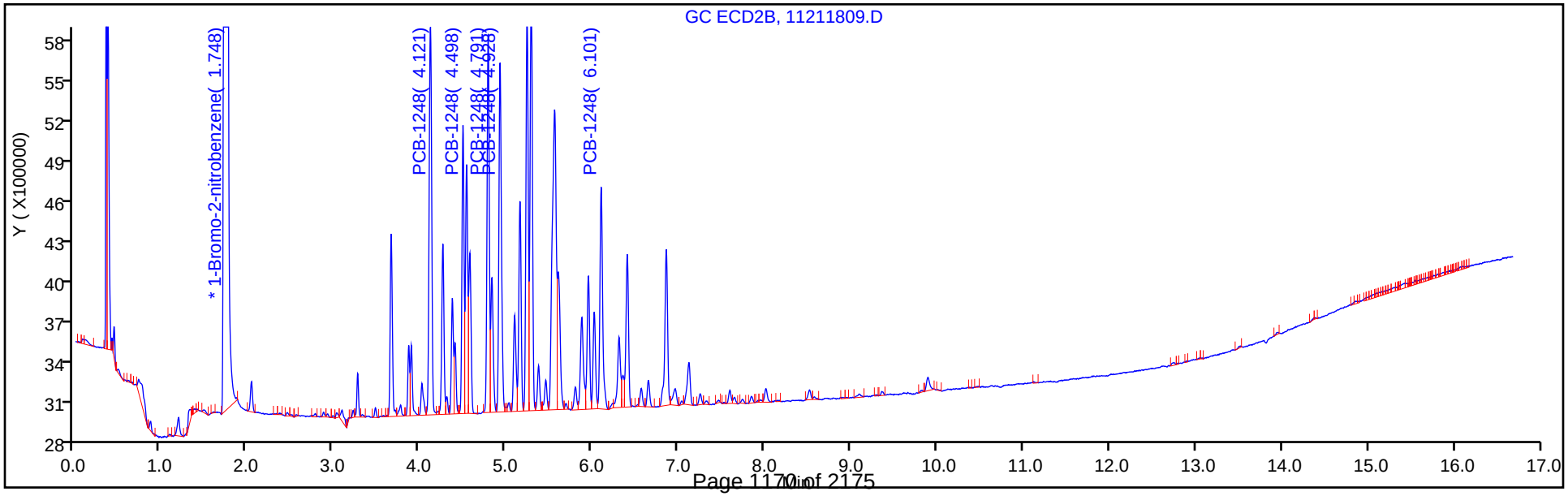
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D

Injection Date:	21-Nov-2018 11:33:58	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21248			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D
Lims ID: STDL11248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 11:55:11 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11248
Misc. Info.: 280-0076428-010
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 12:21:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.969	-0.002	28034459	1000.0	1000.0	
2	1.747	1.745	0.002	159672391	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	499158	25.0	19.5	
1	4.113	4.115	-0.002	729109	25.0	24.0	
1	4.730	4.729	0.001	903744	25.0	22.5	
1	5.503	5.505	-0.002	628528	25.0	23.1	
1	6.003	6.005	-0.002	406565	25.0	23.2	
		Average of Peak Amounts =				22.5	
2	4.120	4.119	0.001	2976466	25.0	20.2	
2	4.497	4.499	-0.002	1854776	25.0	20.7	
2	4.790	4.789	0.001	2664448	25.0	20.7	
2	4.927	4.929	-0.002	2696182	25.0	20.3	
2	6.100	6.102	-0.002	1808002	25.0	20.5	
		Average of Peak Amounts =				20.5	
						RPD = 9.11	
S 8 Polychlorinated biphenyls, Total							
1						22.5	
2						20.5	
						RPD = 9.11	

Reagents:

AR_1248_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

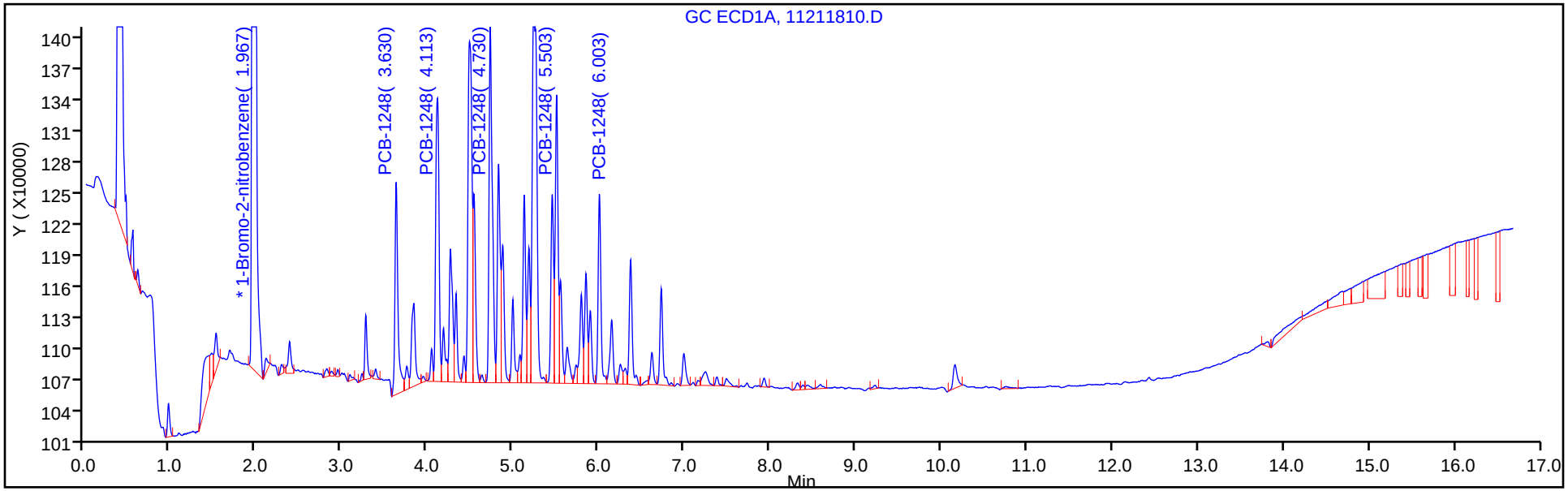
Report Date: 23-Nov-2018 11:02:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

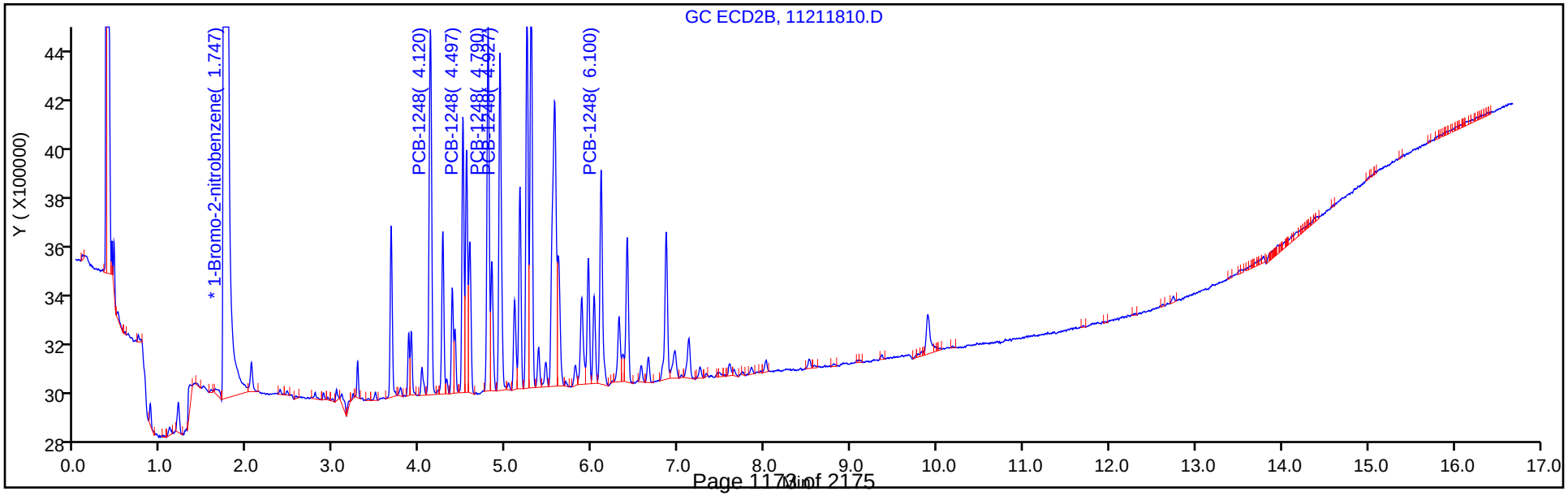
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D

Injection Date:	21-Nov-2018 11:55:11	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11248			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.3324 0.2543	0.3063 0.2408	0.2831	0.2742	0.2560	Lin1	2.7935	0.2469							0.9990		0.9900
PCB-1221 Peak 2	0.2001 0.1490	0.1916 0.1317	0.1804	0.1697	0.1512	Lin1	2.3729	0.1411							0.9920		0.9900
PCB-1221 Peak 3	0.7629 0.6346	0.7594 0.5938	0.7881	0.6927	0.6412	Lin1	7.0937	0.6167							0.9960		0.9900
PCB-1254 Peak 1	1.0411 0.7678	1.0771 0.7457	0.9481	0.8237	0.7656	Lin1	11.881	0.7483							0.9980		0.9900
PCB-1254 Peak 2	1.3591 1.1371	1.4854 1.0678	1.3447	1.2147	1.1311	Lin1	13.399	1.0986							0.9970		0.9900
PCB-1254 Peak 3	0.9424 0.8572	1.0002 0.8194	0.9434	0.8812	0.8159	Lin1	5.8262	0.8290							0.9990		0.9900
PCB-1254 Peak 4	1.2545 1.0368	1.3517 0.9872	1.2209	1.1047	1.0311	Lin1	11.971	1.0070							0.9980		0.9900
PCB-1254 Peak 5	1.5798 1.4286	1.7199 1.3750	1.5764	1.4700	1.4137	Lin1	10.152	1.3955							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Lin1	258968 5979075	422934 7654096	794996	2063928	3897553	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 2	BNB	Lin1	155902 3504422	264535 4185310	506503	1277667	2302370	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 3	BNB	Lin1	594265 14922887	1048520 18870386	2212927	5214449	9761452	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 1	BNB	Lin1	810954 18053312	1487053 23698129	2662071	6200718	11654391	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 2	BNB	Lin1	1058665 26738366	2050858 33934042	3775608	9144535	17219418	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 3	BNB	Lin1	734067 20156036	1380932 26040802	2648846	6634099	12420039	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 4	BNB	Lin1	977183 24380329	1866154 31371863	3428029	8316205	15696475	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 5	BNB	Lin1	1230625 33590891	2374593 43698000	4426432	11066699	21521176	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D
Lims ID: STDL72154
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 12:16:22 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL72154
Misc. Info.: 280-0076428-011
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31780064	1000.0	1000.0	
2	1.748	1.745	0.003	176632693	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.088	3.085	0.003	7654096	1000.0	964.1	
1	3.231	3.232	-0.001	4185310	1000.0	916.3	
1	3.271	3.269	0.002	18870386	1000.0	951.3	
		Average of Peak Amounts =				943.9	
2	3.094	3.092	0.002	23025045	1000.0	950.4	
2	3.221	3.222	-0.001	15205275	1000.0	956.1	
2	3.278	3.276	0.002	52969181	1000.0	950.9	
		Average of Peak Amounts =				952.5	
						RPD = 0.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.181	5.182	-0.001	23698129	1000.0	980.6	
1	5.508	5.509	-0.001	33934042	1000.0	959.7	
1	5.848	5.849	-0.001	26040802	1000.0	981.4	
1	6.621	6.622	-0.001	31371863	1000.0	968.4	
1	6.994	6.995	-0.001	43698000	1000.0	978.1	
		Average of Peak Amounts =				973.6	
2	5.531	5.529	0.002	96750392	1000.0	950.5	
2	5.951	5.952	-0.001	75935033	1000.0	949.3	
2	6.404	6.402	0.002	102458024	1000.0	940.6	
2	6.648	6.649	-0.001	61272987	1000.0	948.5	
2	7.118	7.119	-0.001	150030344	1000.0	953.5	
		Average of Peak Amounts =				948.5	
						RPD = 2.62	
S 8 Polychlorinated biphenyls, Total							
1						1917.5	
2						1901.0	
						RPD = 0.87	

Reagents:

AR_2154_L7_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

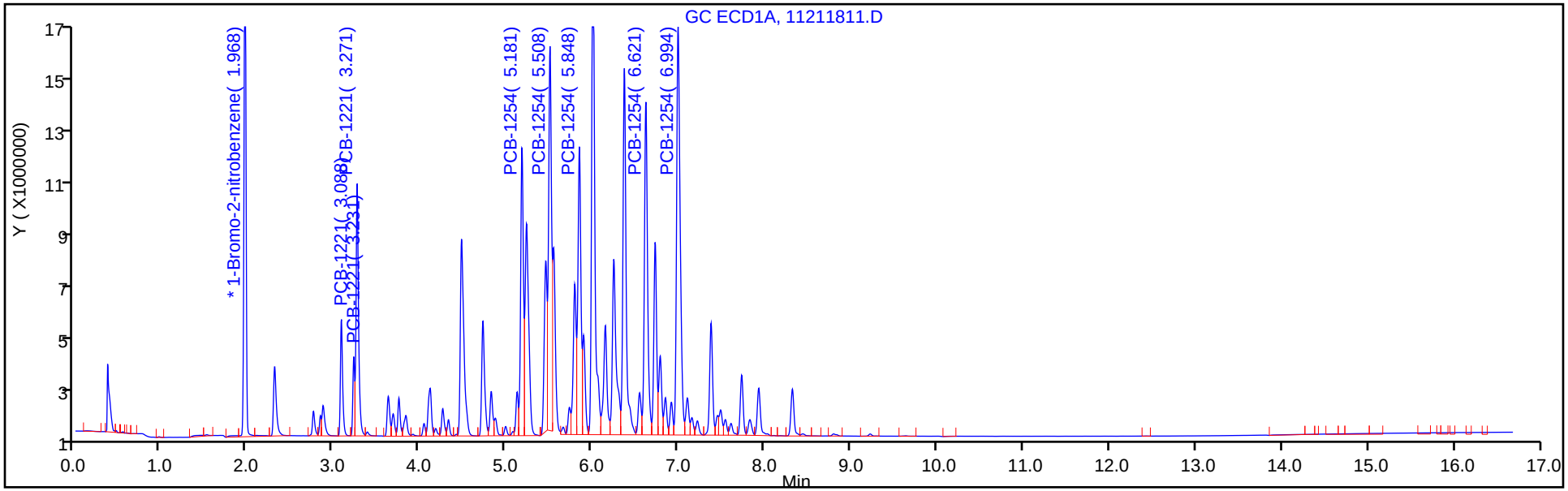
Report Date: 23-Nov-2018 11:02:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

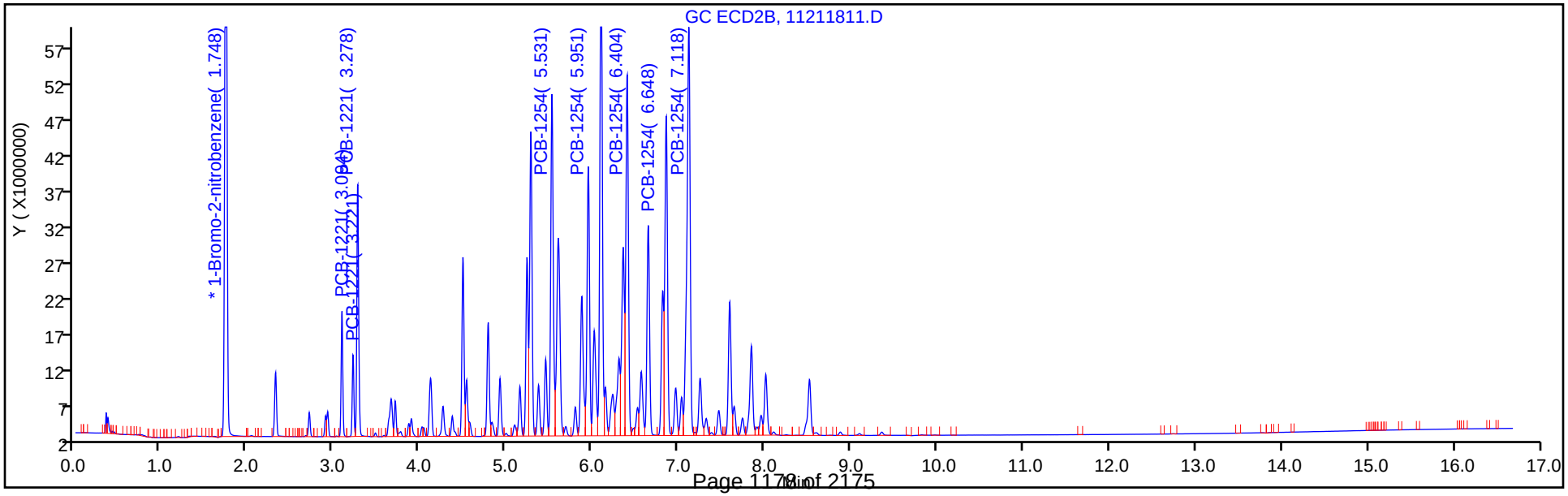
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D

Injection Date:	21-Nov-2018 12:16:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL72154			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D
Lims ID: STDL62154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 12:37:32 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL62154
Misc. Info.: 280-0076428-012
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:06 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31351854	1000.0	1000.0	
2	1.746	1.745	0.001	175195598	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	5979075	750.0	761.1	
1	3.230	3.232	-0.002	3504422	750.0	775.2	
1	3.270	3.269	0.001	14922887	750.0	760.3	
		Average of Peak Amounts =				765.5	
2	3.093	3.092	0.001	18439769	750.0	763.3	
2	3.223	3.222	0.001	12375313	750.0	782.0	
2	3.276	3.276	0.000	42701683	750.0	769.7	
		Average of Peak Amounts =				771.7	
						RPD = 0.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	18053312	750.0	753.6	
1	5.506	5.509	-0.003	26738366	750.0	764.1	
1	5.850	5.849	0.001	20156036	750.0	768.4	
1	6.620	6.622	-0.002	24380329	750.0	760.3	
1	6.993	6.995	-0.002	33590891	750.0	760.5	
		Average of Peak Amounts =				761.4	
2	5.530	5.529	0.001	76003812	750.0	748.9	
2	5.953	5.952	0.001	60170755	750.0	755.0	
2	6.403	6.402	0.001	82164284	750.0	757.0	
2	6.650	6.649	0.001	48574994	750.0	754.4	
2	7.120	7.119	0.001	117808494	750.0	751.3	
		Average of Peak Amounts =				753.3	
						RPD = 1.07	
S 8 Polychlorinated biphenyls, Total							
1						1526.9	
2						1525.0	
						RPD = 0.12	

Reagents:

AR_2154_L6_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

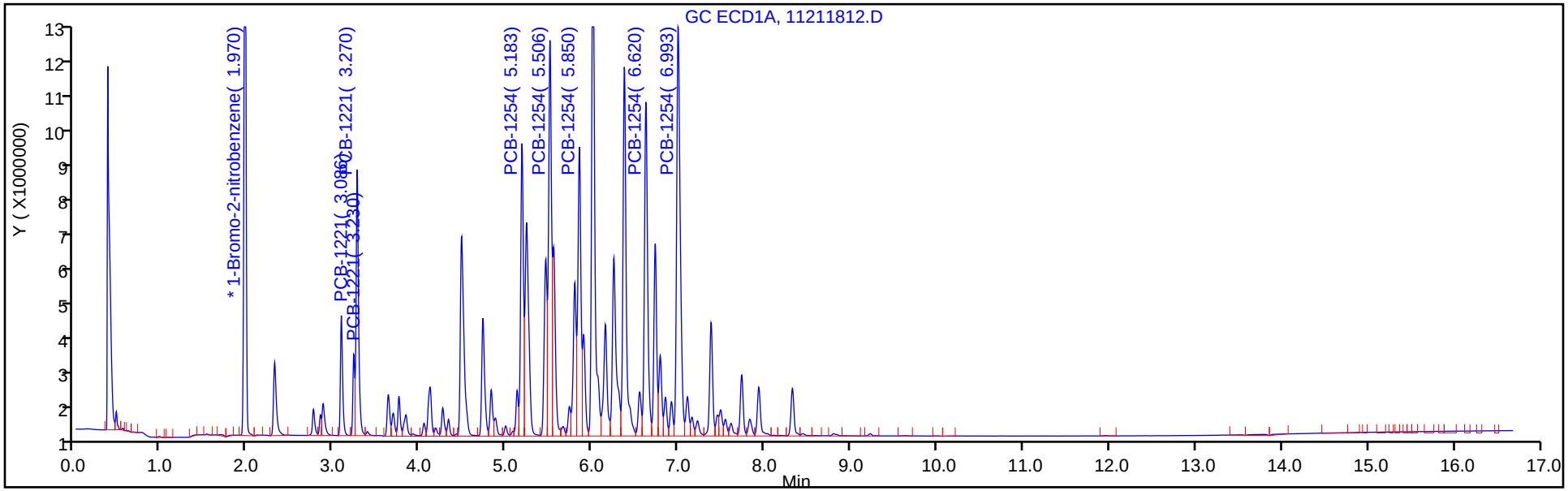
Report Date: 23-Nov-2018 11:02:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

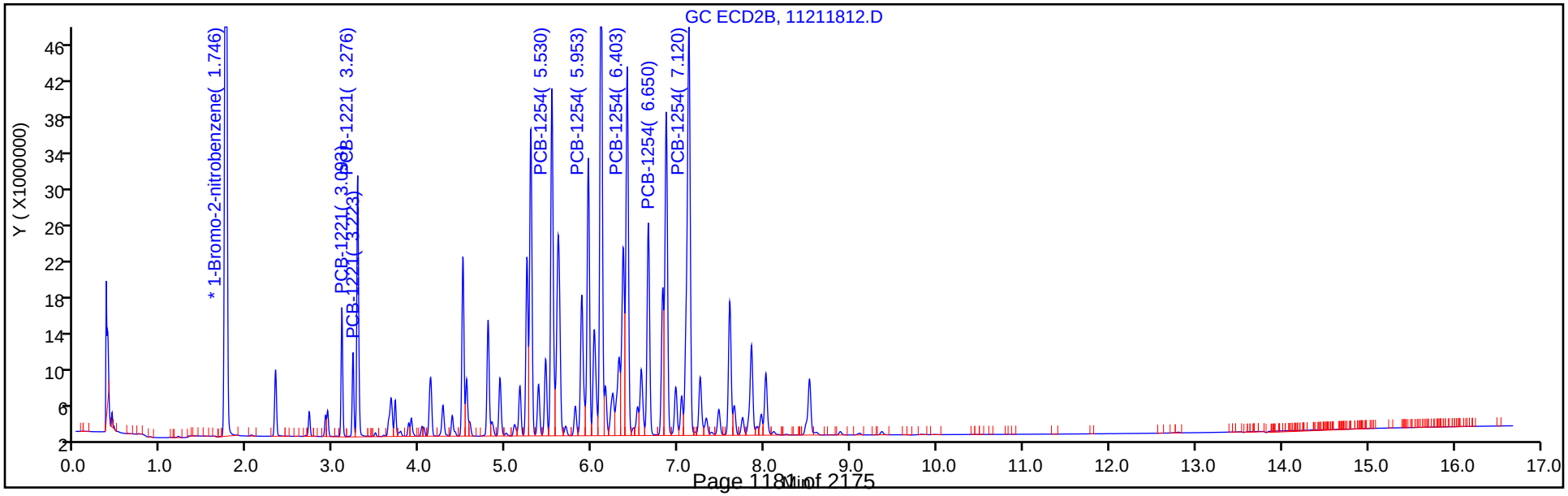
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D

Injection Date:	21-Nov-2018 12:37:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL62154			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D
Lims ID: STDL52154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 12:58:43 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL52154
Misc. Info.: 280-0076428-013
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:10 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	30445909	1000.0	1000.0	
2	1.749	1.749	0.000	171268741	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	3897553	500.0	507.1	
1	3.232	3.232	0.000	2302370	500.0	519.0	
1	3.269	3.269	0.000	9761452	500.0	508.4	
		Average of Peak Amounts =				511.5	
2	3.092	3.092	0.000	12215805	500.0	510.5	
2	3.222	3.222	0.000	7689765	500.0	492.0	
2	3.276	3.276	0.000	27611810	500.0	503.2	
		Average of Peak Amounts =				501.9	
						RPD = 1.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	11654391	500.0	495.7	
1	5.509	5.509	0.000	17219418	500.0	502.6	M
1	5.849	5.849	0.000	12420039	500.0	485.0	
1	6.622	6.622	0.000	15696475	500.0	500.1	
1	6.995	6.995	0.000	21521176	500.0	499.3	
		Average of Peak Amounts =				496.5	
2	5.529	5.529	0.000	51845638	500.0	516.9	
2	5.952	5.952	0.000	40591711	500.0	515.7	
2	6.402	6.402	0.000	55787230	500.0	520.3	
2	6.649	6.649	0.000	32678665	500.0	513.5	
2	7.119	7.119	0.000	79736218	500.0	514.8	
		Average of Peak Amounts =				516.3	
						RPD = 3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

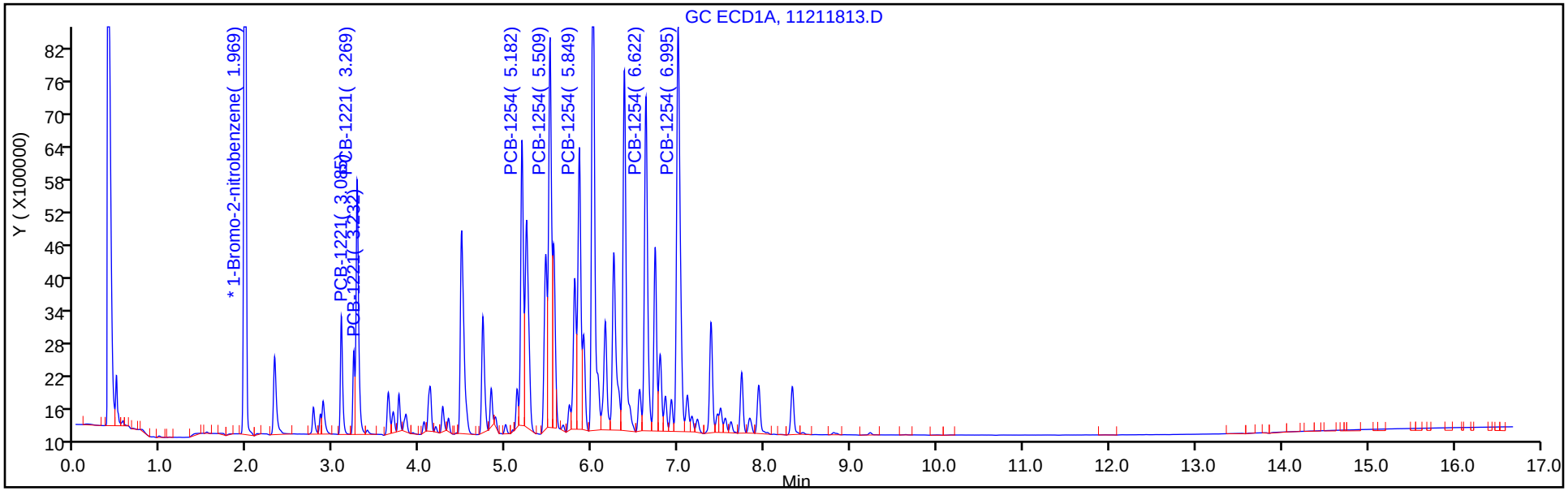
Report Date: 23-Nov-2018 11:02:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

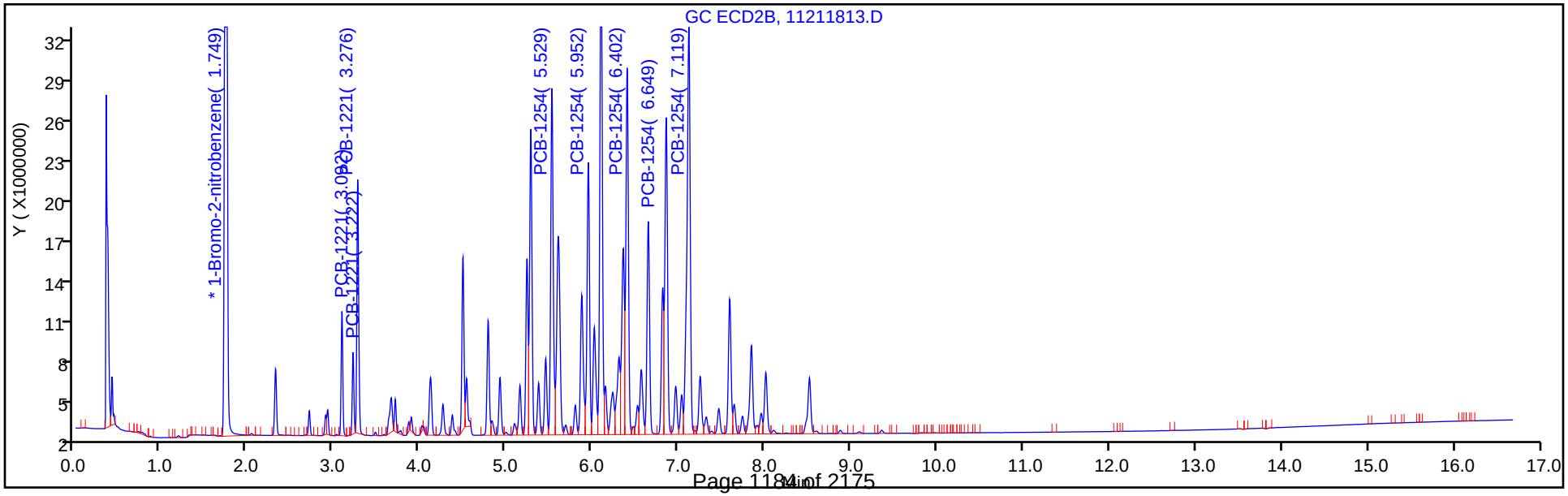
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date:	21-Nov-2018 12:58:43	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL52154			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date: 21-Nov-2018 12:58:43 Instrument ID: SGC_J

Lims ID: STDL52154

Client ID:

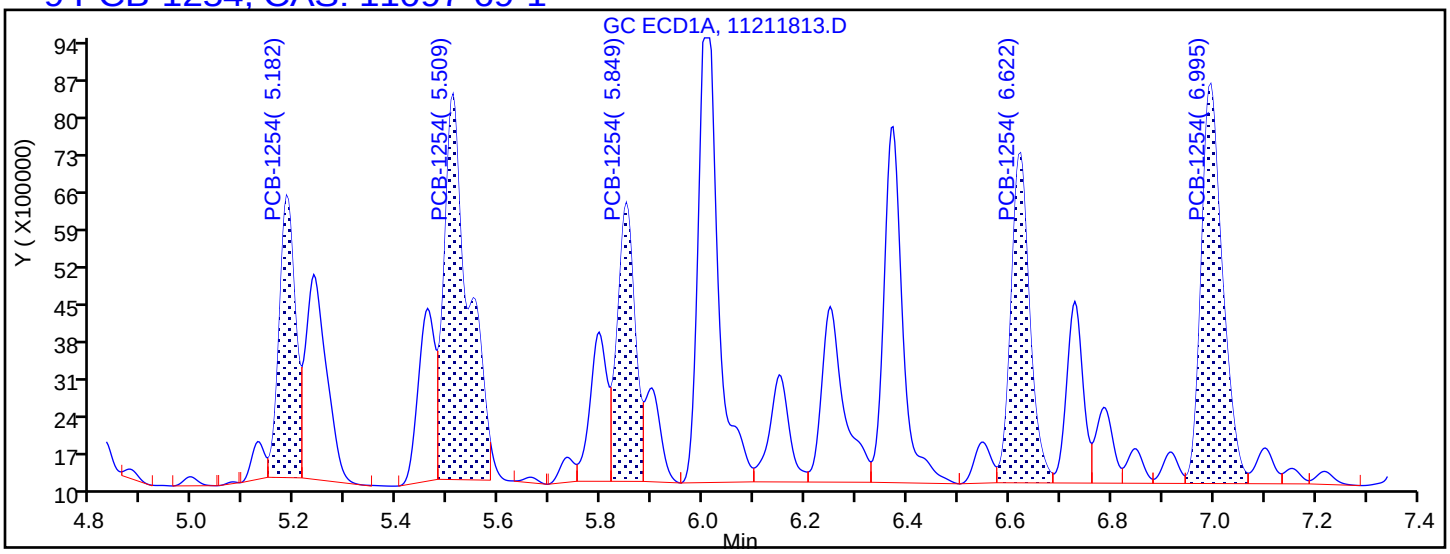
Operator ID: ALS ALS Bottle#: 13 Worklist Smp#: 13

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

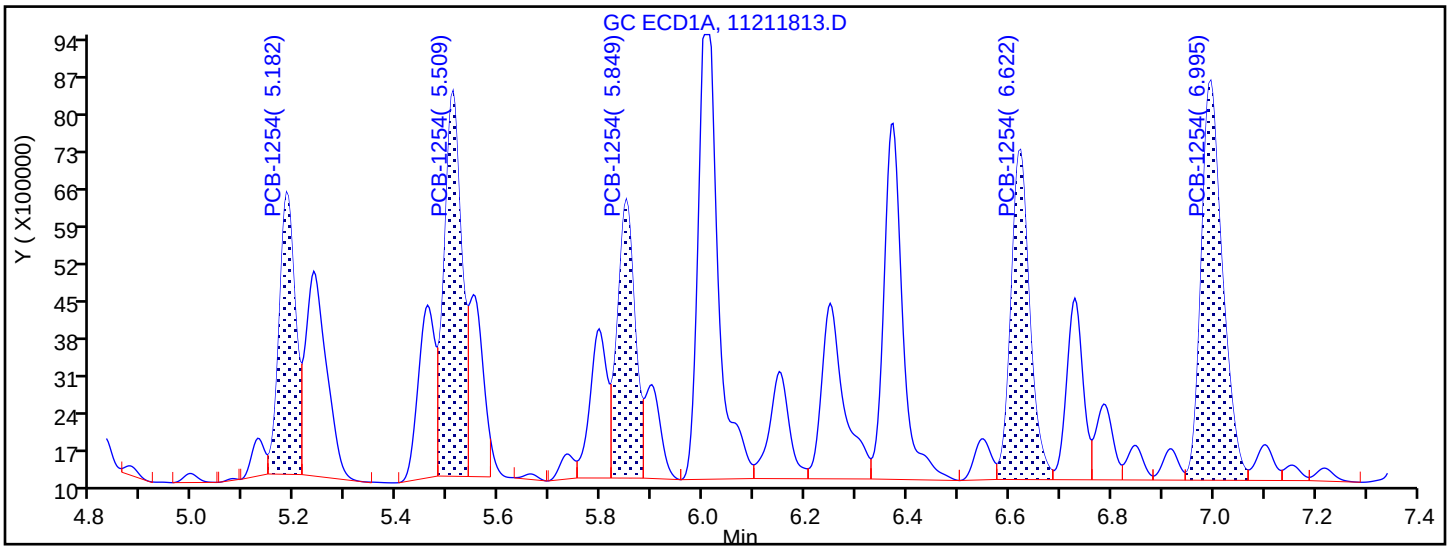
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.182	Response = 11654391
5.509	Response = 23607478
5.849	Response = 12420039
6.622	Response = 15696475
6.995	Response = 21521176



Manual Integration Results

5.182	Response = 11654391	
5.509	Response = 17219418	M
5.849	Response = 12420039	
6.622	Response = 15696475	
6.995	Response = 21521176	

Reviewer: mooret, 21-Nov-2018 15:10:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D
Lims ID: STDL42154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 13:19:55 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL42154
Misc. Info.: 280-0076428-014
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:12 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30112720	1000.0	1000.0	
2	1.747	1.749	-0.002	169613542	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2063928	250.0	266.3	
1	3.230	3.232	-0.002	1277667	250.0	283.8	
1	3.270	3.269	0.001	5214449	250.0	269.3	
		Average of Peak Amounts =				273.1	
2	3.093	3.092	0.001	6662383	250.0	271.7	
2	3.223	3.222	0.001	4151876	250.0	261.9	
2	3.277	3.276	0.001	14954730	250.0	267.4	
		Average of Peak Amounts =				267.0	
						RPD = 2.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6200718	250.0	259.3	
1	5.506	5.509	-0.003	9144535	250.0	264.2	M
1	5.846	5.849	-0.003	6634099	250.0	258.7	
1	6.620	6.622	-0.002	8316205	250.0	262.4	
1	6.993	6.995	-0.002	11066699	250.0	256.1	
		Average of Peak Amounts =				260.1	
2	5.530	5.529	0.001	27978613	250.0	273.1	
2	5.953	5.952	0.001	21681477	250.0	270.3	
2	6.403	6.402	0.001	29833754	250.0	272.7	
2	6.650	6.649	0.001	17685692	250.0	272.4	
2	7.120	7.119	0.001	42598206	250.0	269.8	
		Average of Peak Amounts =				271.7	
						RPD = 4.33	
S 8 Polychlorinated biphenyls, Total							
1						533.3	
2						538.7	
						RPD = 1.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

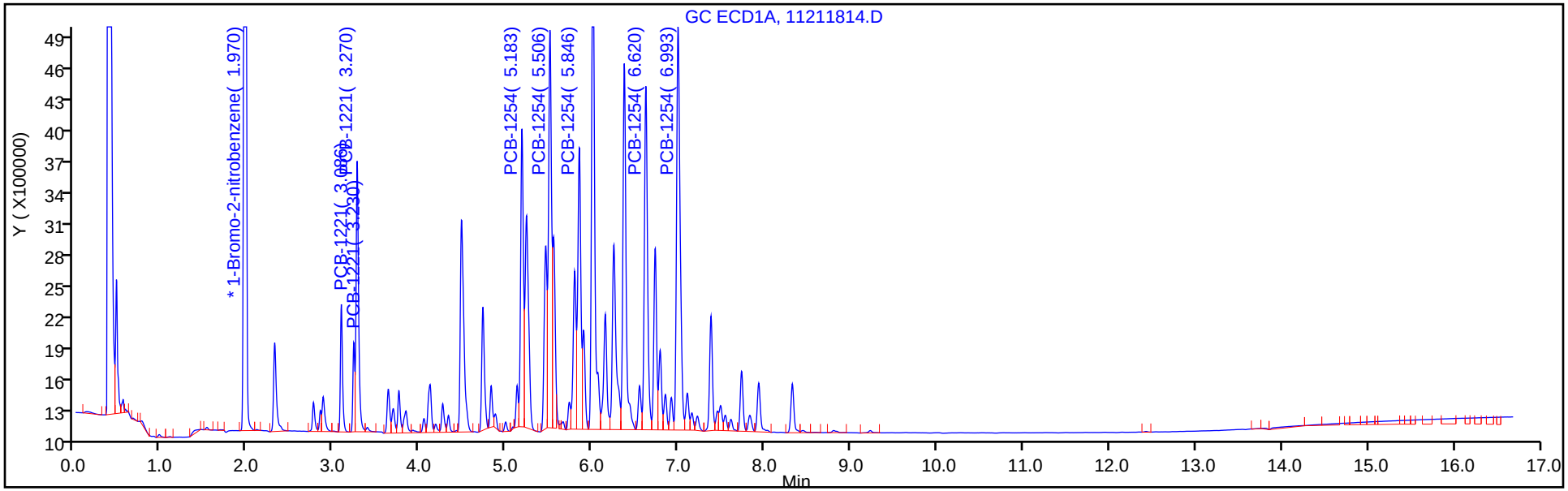
Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

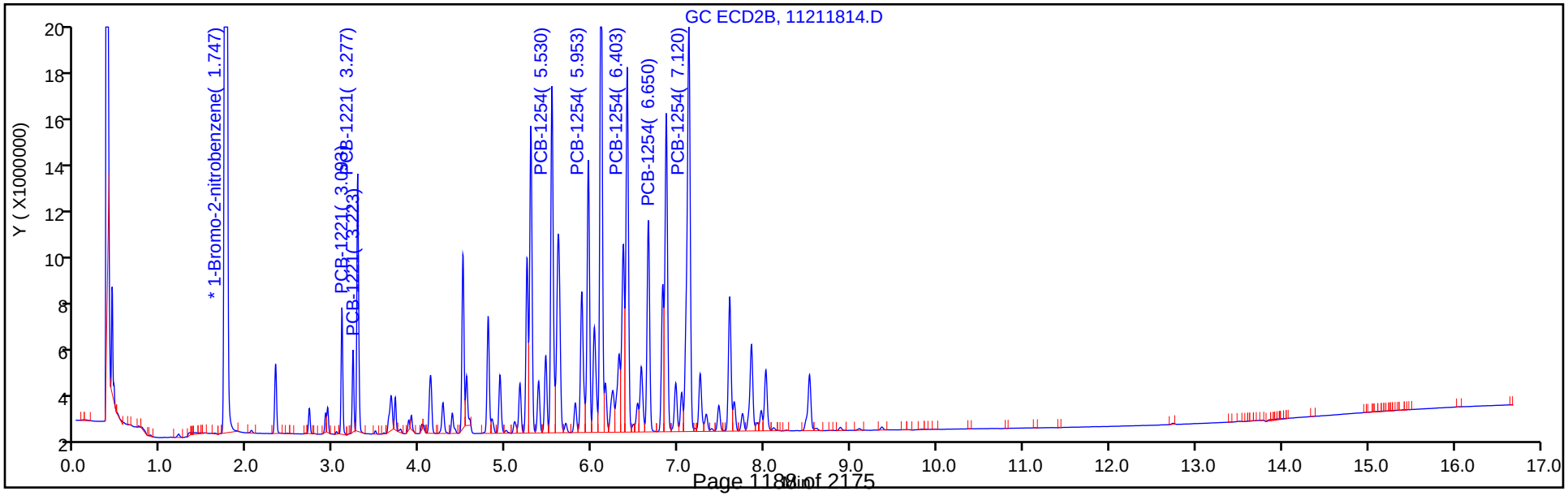
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date:	21-Nov-2018 13:19:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL42154			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date: 21-Nov-2018 13:19:55 Instrument ID: SGC_J

Lims ID: STDL42154

Client ID:

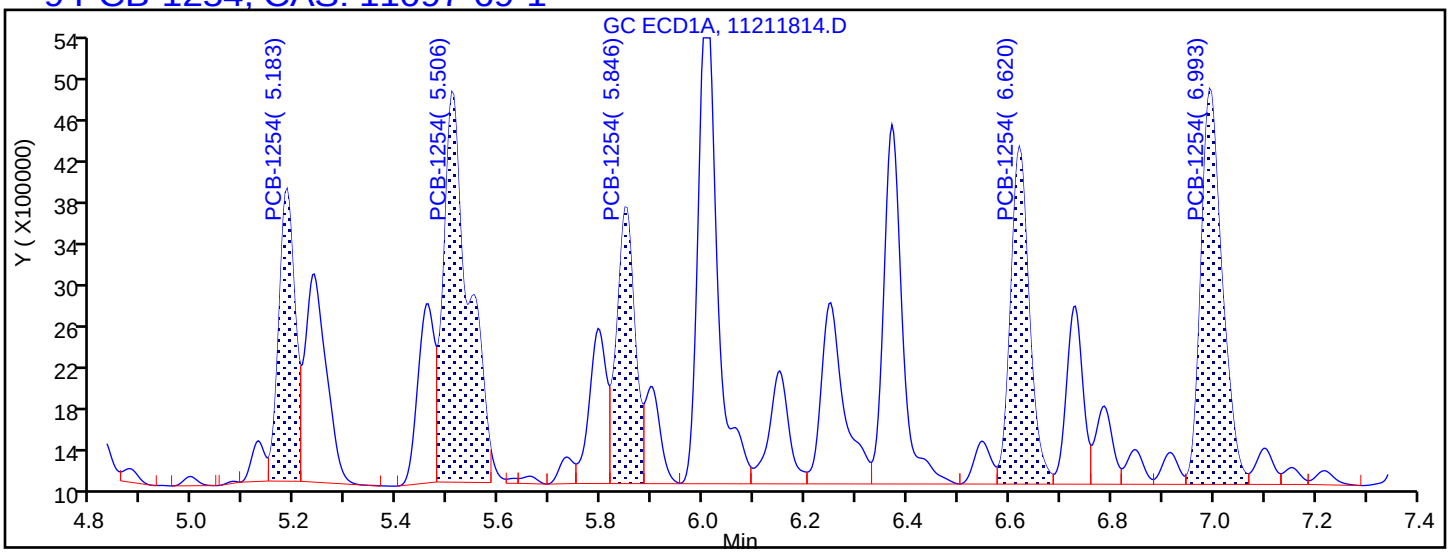
Operator ID: ALS ALS Bottle#: 14 Worklist Smp#: 14

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

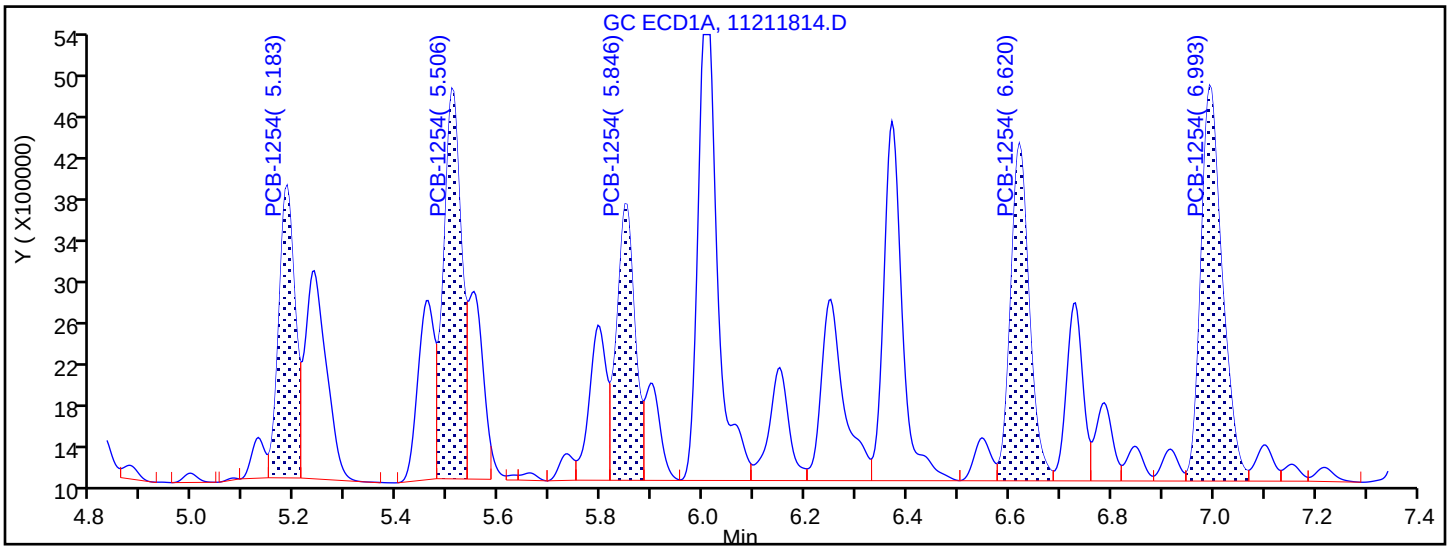
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 6200718
5.506	Response = 12802421
5.846	Response = 6634099
6.620	Response = 8316205
6.993	Response = 11066699



Manual Integration Results

5.183	Response = 6200718	
5.506	Response = 9144535	M
5.846	Response = 6634099	
6.620	Response = 8316205	
6.993	Response = 11066699	

Reviewer: mooret, 21-Nov-2018 15:11:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D
Lims ID: STDL32154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 13:41:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL32154
Misc. Info.: 280-0076428-015
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28078685	1000.0	1000.0	
2	1.746	1.749	-0.003	159417859	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	794996	100.0	103.4	
1	3.229	3.232	-0.003	506503	100.0	111.0	
1	3.269	3.269	0.000	2212927	100.0	116.3	
		Average of Peak Amounts =				110.2	
2	3.093	3.092	0.001	2763923	100.0	108.2	
2	3.223	3.222	0.001	1748923	100.0	109.7	
2	3.276	3.276	0.000	6335939	100.0	111.0	
		Average of Peak Amounts =				109.6	
						RPD = 0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	2662071	100.0	110.8	
1	5.506	5.509	-0.003	3775608	100.0	110.2	M
1	5.849	5.849	0.000	2648846	100.0	106.8	
1	6.619	6.622	-0.003	3428029	100.0	109.3	
1	6.993	6.995	-0.002	4426432	100.0	105.7	
		Average of Peak Amounts =				108.6	
2	5.529	5.529	0.000	11951653	100.0	113.9	
2	5.953	5.952	0.001	9184571	100.0	112.5	
2	6.403	6.402	0.001	12571284	100.0	112.4	
2	6.649	6.649	0.000	7560827	100.0	113.9	
2	7.119	7.119	0.000	18178594	100.0	113.0	
		Average of Peak Amounts =				113.1	
						RPD = 4.13	
S 8 Polychlorinated biphenyls, Total							
1						218.8	
2						222.8	
						RPD = 1.82	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

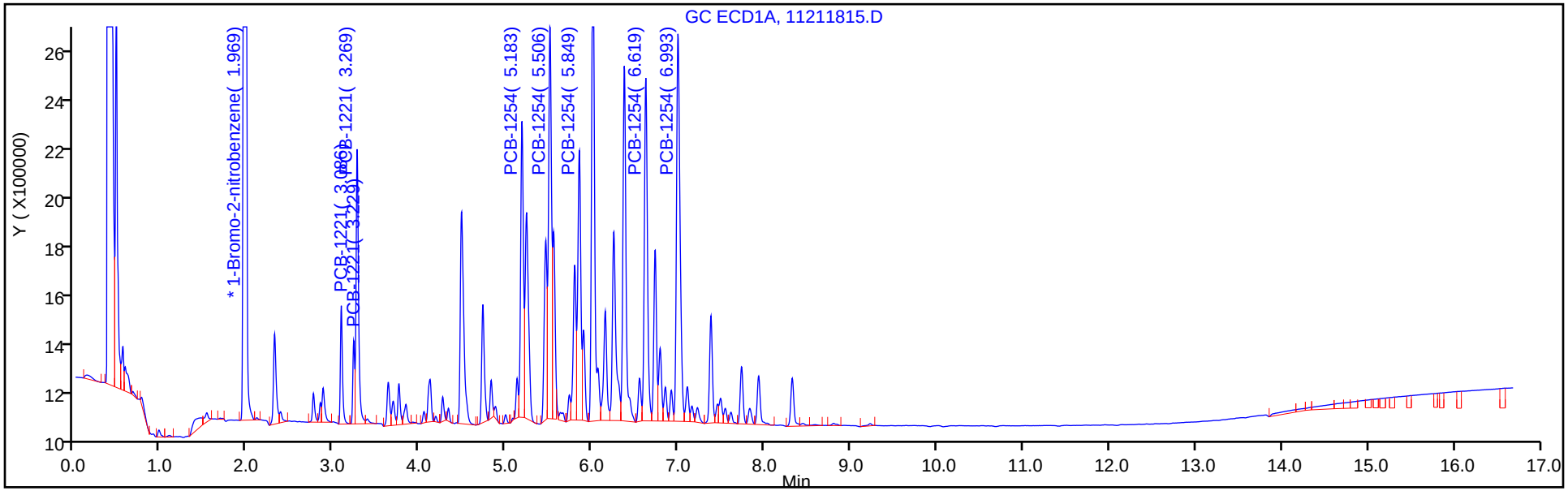
Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

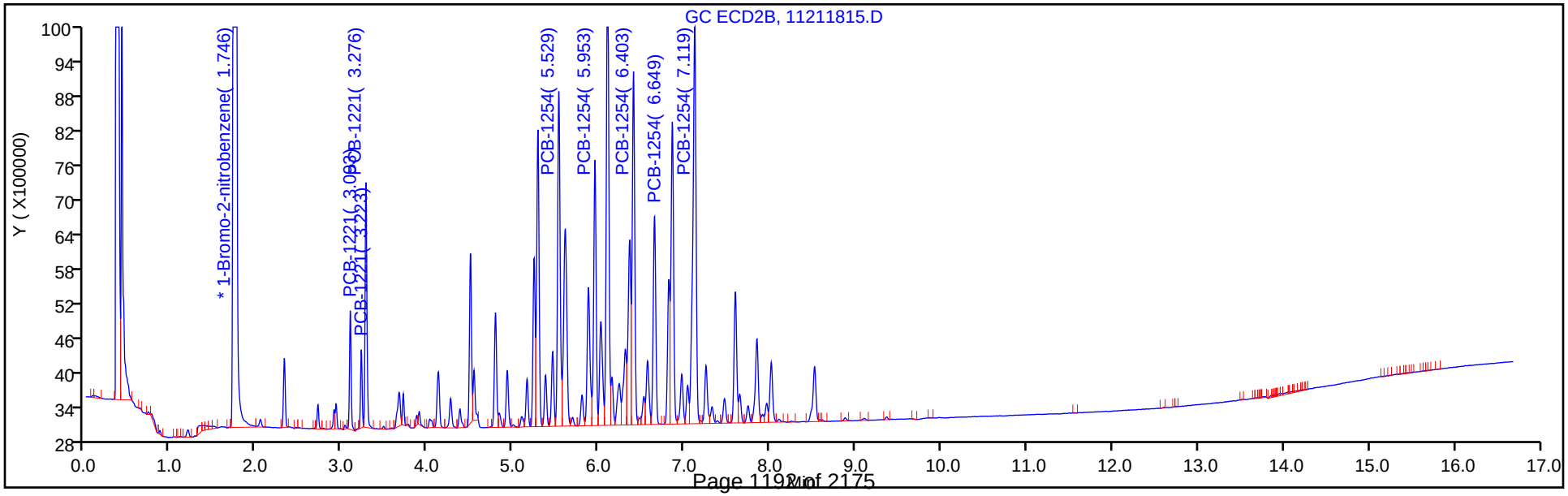
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date:	21-Nov-2018 13:41:08	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL32154			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date: 21-Nov-2018 13:41:08 Instrument ID: SGC_J

Lims ID: STDL32154

Client ID:

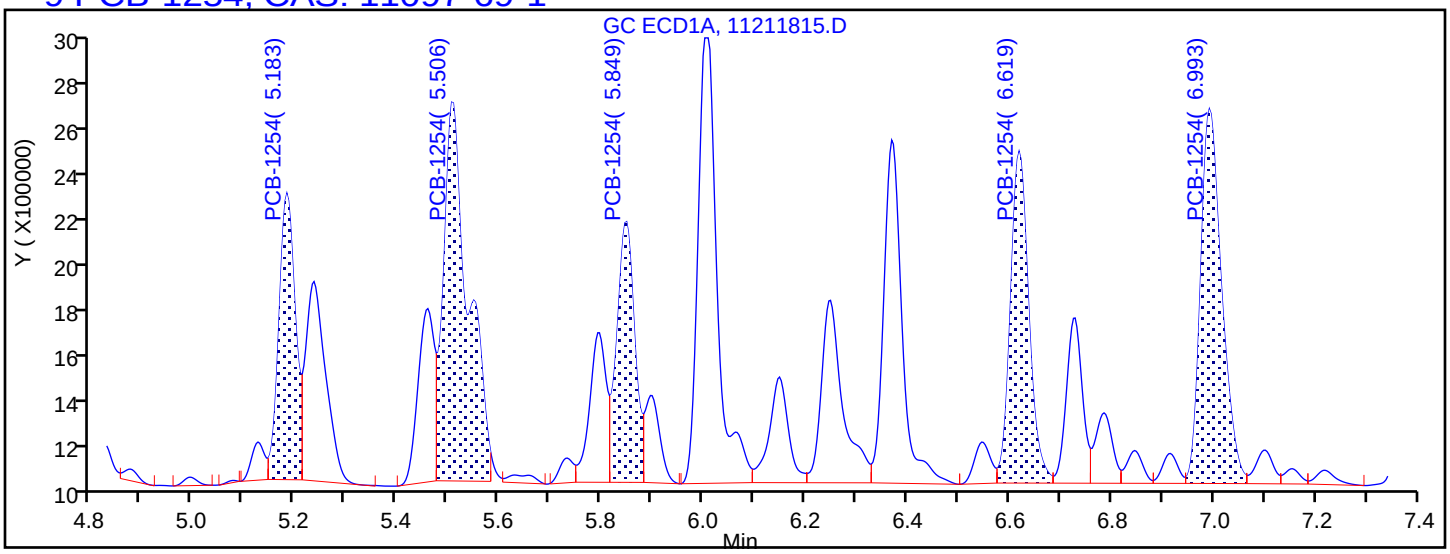
Operator ID: ALS ALS Bottle#: 15 Worklist Smp#: 15

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

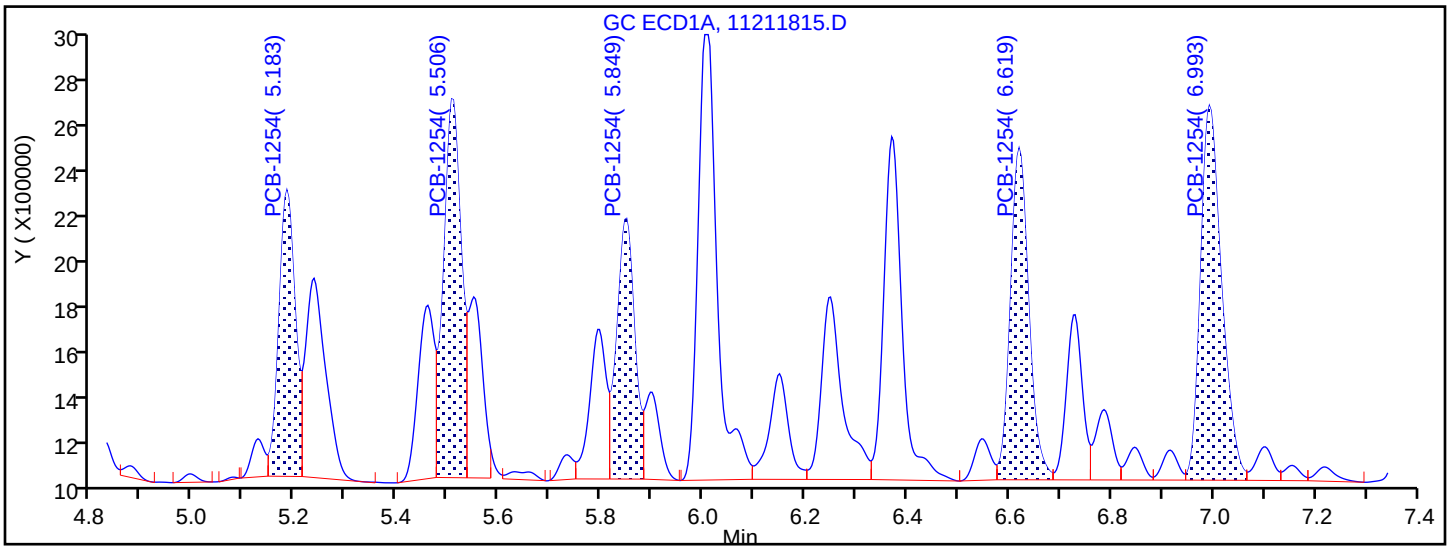
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 2662071
5.506	Response = 5259178
5.849	Response = 2648846
6.619	Response = 3428029
6.993	Response = 4426432



Manual Integration Results

5.183	Response = 2662071	
5.506	Response = 3775608	M
5.849	Response = 2648846	
6.619	Response = 3428029	
6.993	Response = 4426432	

Reviewer: mooret, 21-Nov-2018 15:11:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D
Lims ID: STDL22154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 14:02:19 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL22154
Misc. Info.: 280-0076428-016
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	27612767	1000.0	1000.0	
2	1.746	1.749	-0.003	155958976	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	422934	50.0	50.7	
1	3.229	3.232	-0.003	264535	50.0	51.1	
1	3.269	3.269	0.000	1048520	50.0	50.1	
		Average of Peak Amounts =				50.6	
2	3.093	3.092	0.001	1479927	50.0	49.7	
2	3.223	3.222	0.001	922521	50.0	52.8	
2	3.276	3.276	0.000	3428605	50.0	53.7	
		Average of Peak Amounts =				52.0	
						RPD = 2.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	1487053	50.0	56.1	
1	5.506	5.509	-0.003	2050858	50.0	55.4	
1	5.846	5.849	-0.003	1380932	50.0	53.3	
1	6.619	6.622	-0.003	1866154	50.0	55.2	
1	6.993	6.995	-0.002	2374593	50.0	54.4	
		Average of Peak Amounts =				54.9	
2	5.530	5.529	0.001	6401352	50.0	53.9	
2	5.953	5.952	0.001	4927585	50.0	54.0	
2	6.403	6.402	0.001	6824249	50.0	54.3	
2	6.646	6.649	-0.003	4105287	50.0	55.1	
2	7.120	7.119	0.001	9840352	50.0	54.8	
		Average of Peak Amounts =				54.4	
						RPD = 0.81	
S 8 Polychlorinated biphenyls, Total							
1						105.5	
2						106.5	
						RPD = 0.93	

Reagents:

AR_2154_L2_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

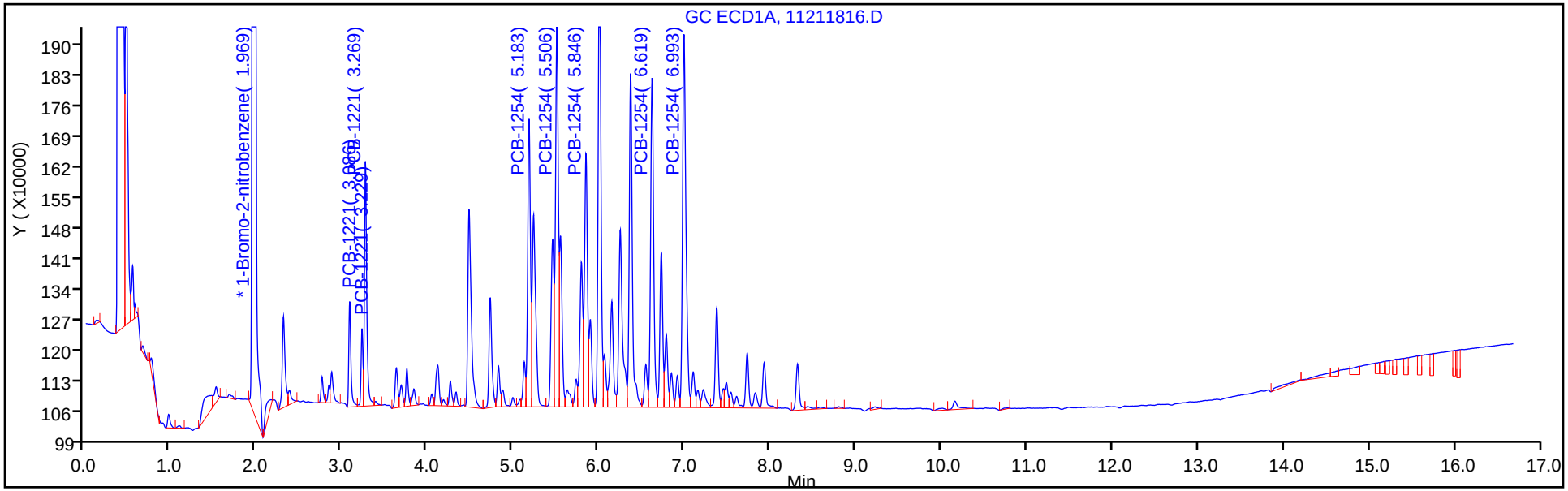
Report Date: 23-Nov-2018 11:02:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

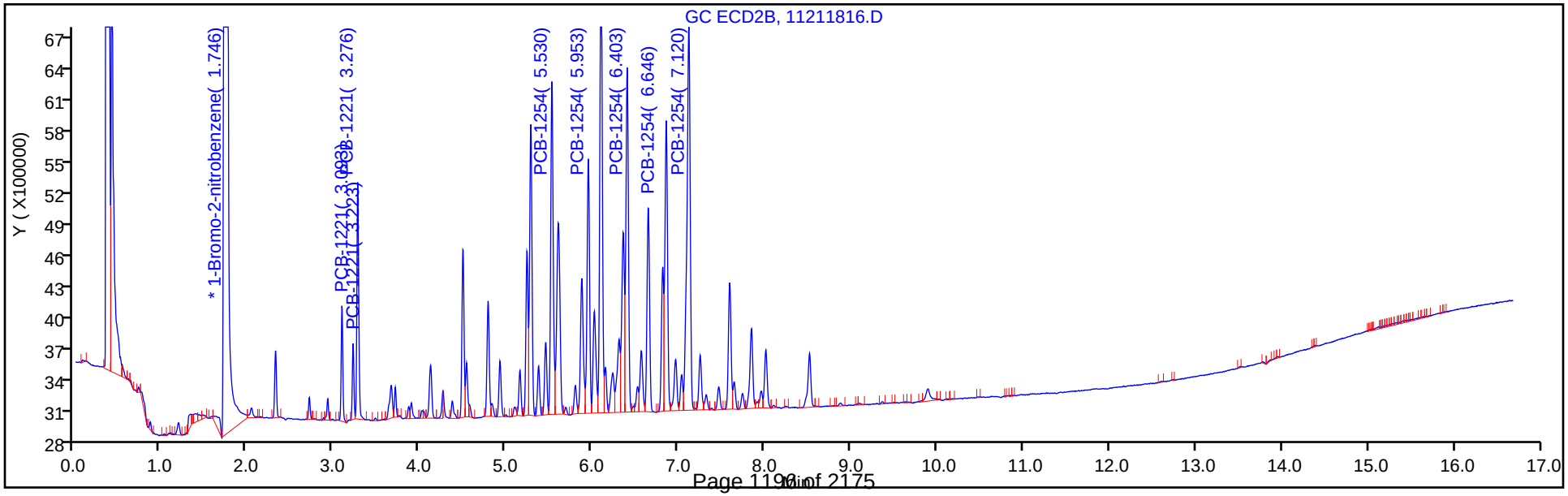
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D

Injection Date:	21-Nov-2018 14:02:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL22154			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D
Lims ID: STDL12154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 14:23:32 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL12154
Misc. Info.: 280-0076428-017
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:20 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:12:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31158892	1000.0	1000.0	
2	1.749	1.749	0.000	174644682	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	258968	25.0	22.3	
1	3.229	3.232	-0.003	155902	25.0	18.6	
1	3.272	3.269	0.003	594265	25.0	19.4	
		Average of Peak Amounts =				20.1	
2	3.092	3.092	0.000	990606	25.0	21.2	
2	3.222	3.222	0.000	531473	25.0	20.4	
2	3.276	3.276	0.000	1966030	25.0	19.1	
		Average of Peak Amounts =				20.2	
						RPD = 0.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	810954	25.0	18.9	
1	5.509	5.509	0.000	1058665	25.0	18.7	M
1	5.849	5.849	0.000	734067	25.0	21.4	
1	6.619	6.622	-0.003	977183	25.0	19.3	
1	6.992	6.995	-0.003	1230625	25.0	21.0	
		Average of Peak Amounts =				19.9	
2	5.529	5.529	0.000	3601131	25.0	17.7	
2	5.952	5.952	0.000	2735694	25.0	18.2	
2	6.402	6.402	0.000	3769252	25.0	17.7	
2	6.649	6.649	0.000	2218210	25.0	17.2	
2	7.119	7.119	0.000	5349050	25.0	17.7	
		Average of Peak Amounts =				17.7	
						RPD = 11.52	
S 8 Polychlorinated biphenyls, Total							
1						40.0	
2						37.9	
						RPD = 5.30	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

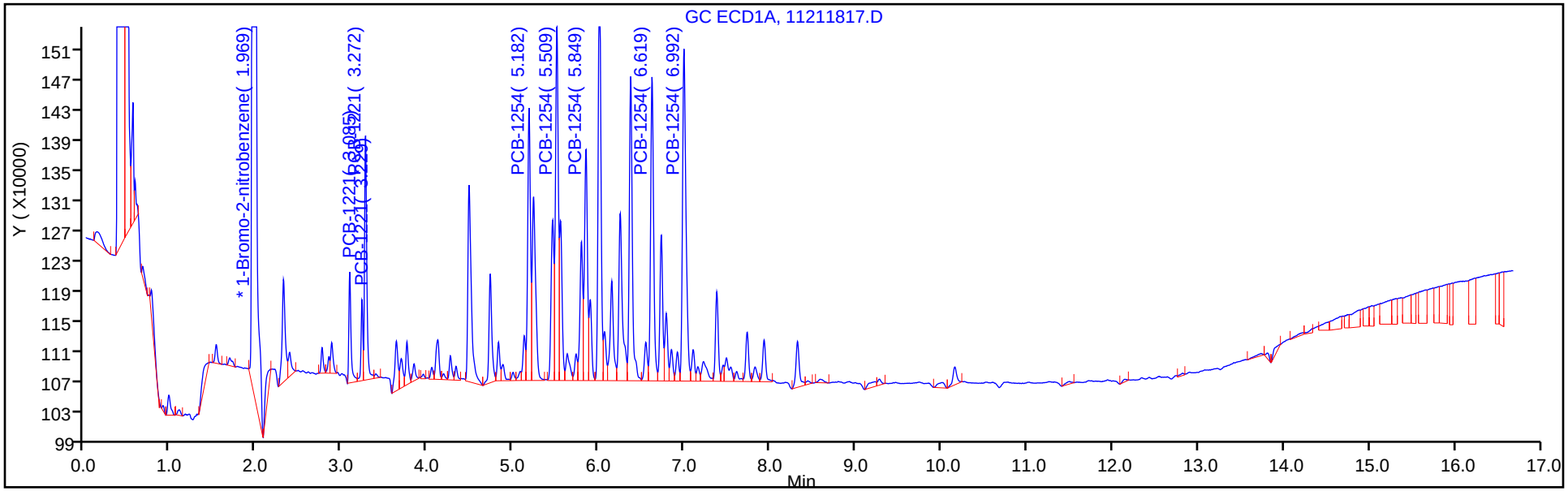
Report Date: 23-Nov-2018 11:02:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

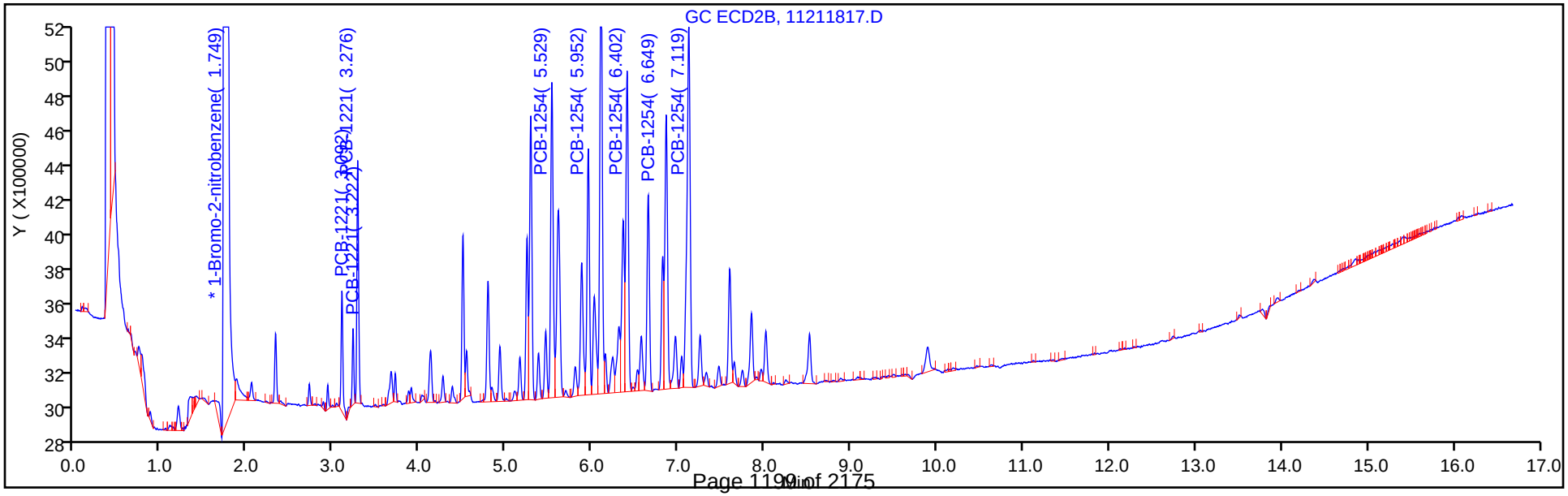
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL12154			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



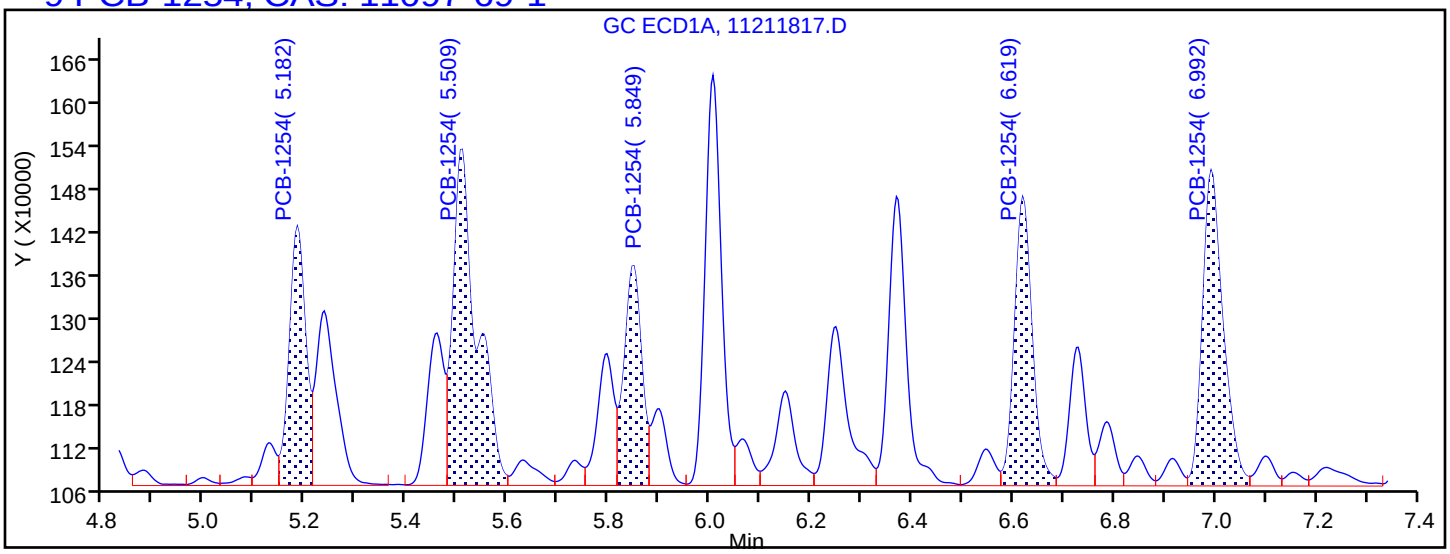
Report Date: 23-Nov-2018 11:02:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

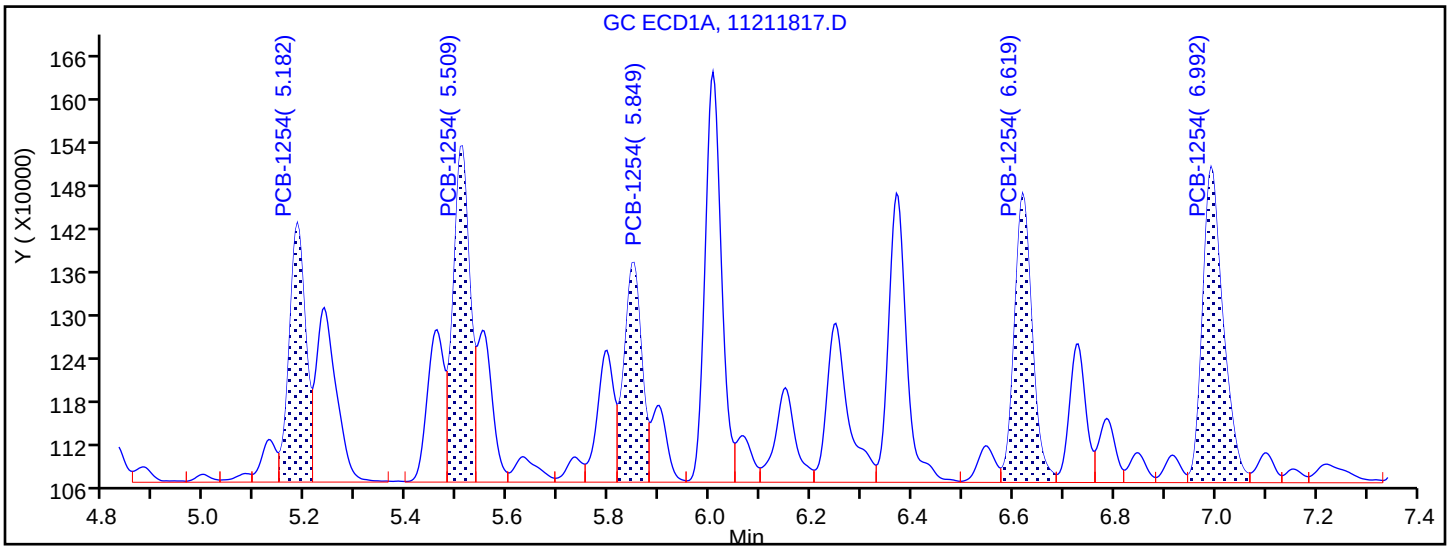
Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J		
Lims ID:	STDL12154				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP1 Pesticides Column 1 (0.32 mm)	Detector	GC ECD1A		

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.182	Response = 810954
5.509	Response = 1501336
5.849	Response = 734067
6.619	Response = 977183
6.992	Response = 1230625



Manual Integration Results

5.182	Response = 810954	
5.509	Response = 1058665	M
5.849	Response = 734067	
6.619	Response = 977183	
6.992	Response = 1230625	

Reviewer: mooret, 21-Nov-2018 15:12:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34383

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.2269 0.1403	0.1898 0.1304	0.1734	0.1571	0.1427	Lin1	2.8240	0.1342							0.9970		0.9900
PCB-1221 Peak 2	0.1217 0.0942	0.1183 0.0861	0.1097	0.0979	0.0898	Lin1	1.2314	0.0888							0.9970		0.9900
PCB-1221 Peak 3	0.4503 0.3250	0.4397 0.2999	0.3974	0.3527	0.3224	Lin1	5.3527	0.3097							0.9970		0.9900
PCB-1254 Peak 1	0.8248 0.5784	0.8209 0.5477	0.7497	0.6598	0.6054	Lin1	10.612	0.5651							0.9950		0.9900
PCB-1254 Peak 2	0.6266 0.4579	0.6319 0.4299	0.5761	0.5113	0.4740	Lin1	7.5798	0.4449							0.9960		0.9900
PCB-1254 Peak 3	0.8633 0.6253	0.8751 0.5801	0.7886	0.7036	0.6515	Lin1	10.868	0.6052							0.9950		0.9900
PCB-1254 Peak 4	0.5081 0.3697	0.5265 0.3469	0.4743	0.4171	0.3816	Lin1	6.5376	0.3588							0.9950		0.9900
PCB-1254 Peak 5	1.2251 0.8966	1.2619 0.8494	1.1403	1.0046	0.9311	Lin1	15.121	0.8749							0.9960		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34383

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Lin1	990606 18439769	1479927 23025045	2763923	6662383	12215805	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 2	BNB	Lin1	531473 12375313	922521 15205275	1748923	4151876	7689765	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 3	BNB	Lin1	1966030 42701683	3428605 52969181	6335939	14954730	27611810	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 1	BNB	Lin1	3601131 76003812	6401352 96750392	11951653	27978613	51845638	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 2	BNB	Lin1	2735694 60170755	4927585 75935033	9184571	21681477	40591711	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 3	BNB	Lin1	3769252 82164284	6824249 102458024	12571284	29833754	55787230	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 4	BNB	Lin1	2218210 48574994	4105287 61272987	7560827	17685692	32678665	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 5	BNB	Lin1	5349050 117808494	9840352 150030344	18178594	42598206	79736218	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D
Lims ID: STDL72154
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 12:16:22 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL72154
Misc. Info.: 280-0076428-011
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31780064	1000.0	1000.0	
2	1.748	1.745	0.003	176632693	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.088	3.085	0.003	7654096	1000.0	964.1	
1	3.231	3.232	-0.001	4185310	1000.0	916.3	
1	3.271	3.269	0.002	18870386	1000.0	951.3	
		Average of Peak Amounts =				943.9	
2	3.094	3.092	0.002	23025045	1000.0	950.4	
2	3.221	3.222	-0.001	15205275	1000.0	956.1	
2	3.278	3.276	0.002	52969181	1000.0	950.9	
		Average of Peak Amounts =				952.5	
						RPD = 0.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.181	5.182	-0.001	23698129	1000.0	980.6	
1	5.508	5.509	-0.001	33934042	1000.0	959.7	
1	5.848	5.849	-0.001	26040802	1000.0	981.4	
1	6.621	6.622	-0.001	31371863	1000.0	968.4	
1	6.994	6.995	-0.001	43698000	1000.0	978.1	
		Average of Peak Amounts =				973.6	
2	5.531	5.529	0.002	96750392	1000.0	950.5	
2	5.951	5.952	-0.001	75935033	1000.0	949.3	
2	6.404	6.402	0.002	102458024	1000.0	940.6	
2	6.648	6.649	-0.001	61272987	1000.0	948.5	
2	7.118	7.119	-0.001	150030344	1000.0	953.5	
		Average of Peak Amounts =				948.5	
						RPD = 2.62	
S 8 Polychlorinated biphenyls, Total							
1						1917.5	
2						1901.0	
						RPD = 0.87	

Reagents:

AR_2154_L7_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

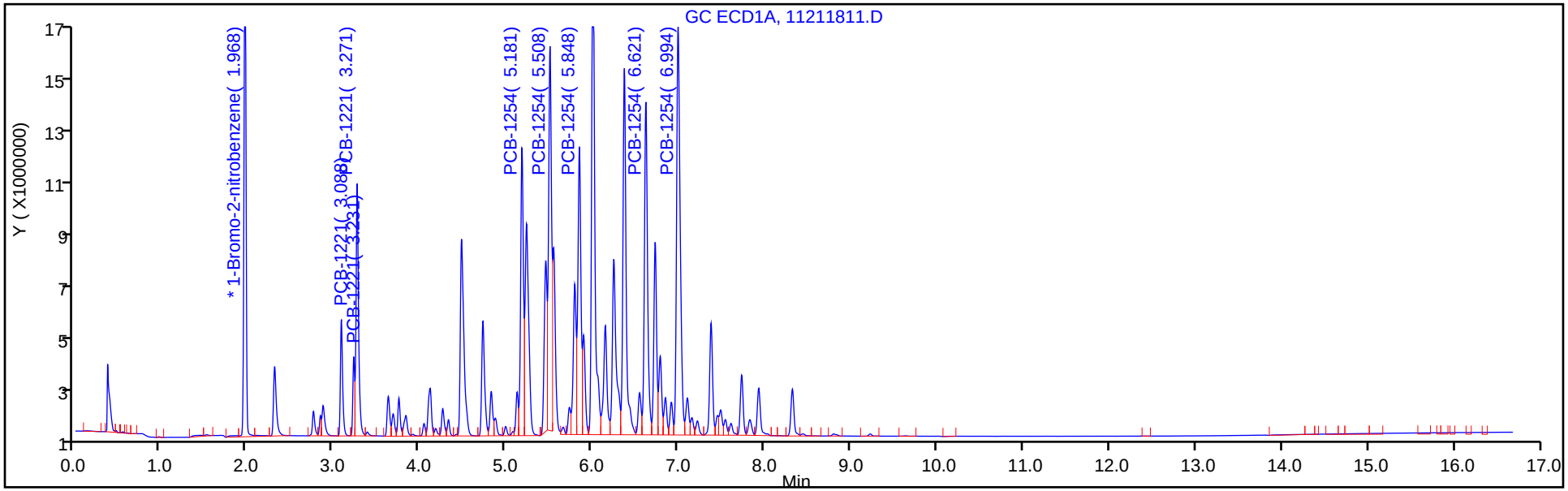
Report Date: 23-Nov-2018 11:02:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

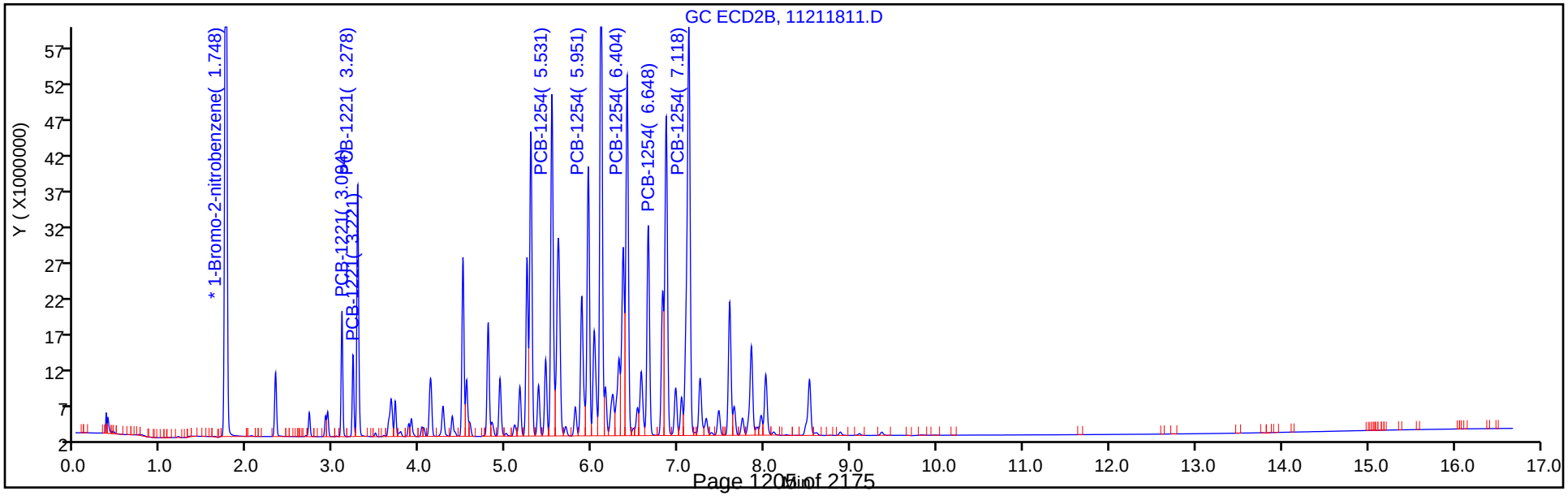
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D

Injection Date:	21-Nov-2018 12:16:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL72154			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D
Lims ID: STDL62154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 12:37:32 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL62154
Misc. Info.: 280-0076428-012
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:06 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31351854	1000.0	1000.0	
2	1.746	1.745	0.001	175195598	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	5979075	750.0	761.1	
1	3.230	3.232	-0.002	3504422	750.0	775.2	
1	3.270	3.269	0.001	14922887	750.0	760.3	
		Average of Peak Amounts =				765.5	
2	3.093	3.092	0.001	18439769	750.0	763.3	
2	3.223	3.222	0.001	12375313	750.0	782.0	
2	3.276	3.276	0.000	42701683	750.0	769.7	
		Average of Peak Amounts =				771.7	
						RPD = 0.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	18053312	750.0	753.6	
1	5.506	5.509	-0.003	26738366	750.0	764.1	
1	5.850	5.849	0.001	20156036	750.0	768.4	
1	6.620	6.622	-0.002	24380329	750.0	760.3	
1	6.993	6.995	-0.002	33590891	750.0	760.5	
		Average of Peak Amounts =				761.4	
2	5.530	5.529	0.001	76003812	750.0	748.9	
2	5.953	5.952	0.001	60170755	750.0	755.0	
2	6.403	6.402	0.001	82164284	750.0	757.0	
2	6.650	6.649	0.001	48574994	750.0	754.4	
2	7.120	7.119	0.001	117808494	750.0	751.3	
		Average of Peak Amounts =				753.3	
						RPD = 1.07	
S 8 Polychlorinated biphenyls, Total							
1						1526.9	
2						1525.0	
						RPD = 0.12	

Reagents:

AR_2154_L6_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

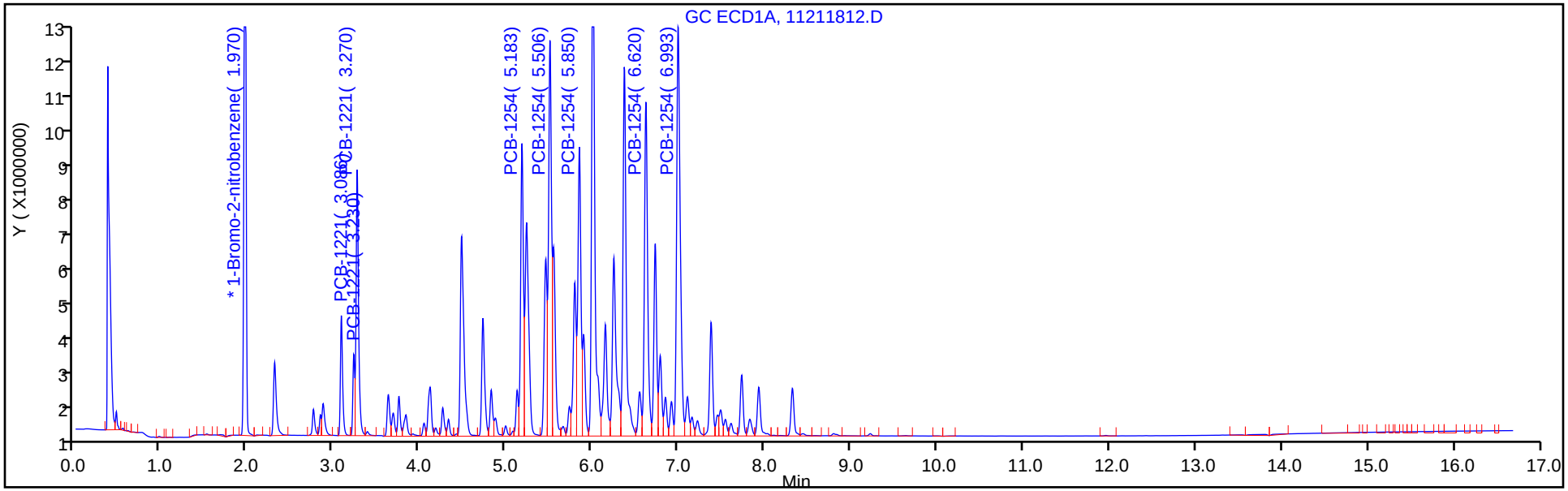
Report Date: 23-Nov-2018 11:02:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

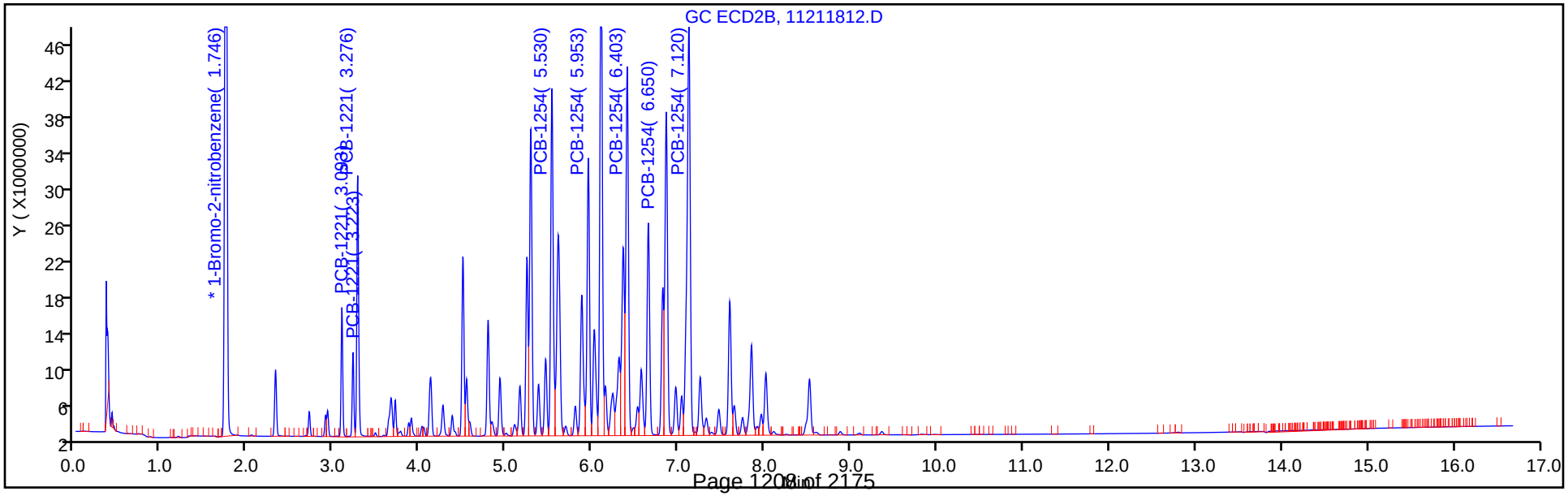
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D

Injection Date:	21-Nov-2018 12:37:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL62154			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D
Lims ID: STDL52154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 12:58:43 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL52154
Misc. Info.: 280-0076428-013
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:10 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	30445909	1000.0	1000.0	
2	1.749	1.749	0.000	171268741	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	3897553	500.0	507.1	
1	3.232	3.232	0.000	2302370	500.0	519.0	
1	3.269	3.269	0.000	9761452	500.0	508.4	
		Average of Peak Amounts =				511.5	
2	3.092	3.092	0.000	12215805	500.0	510.5	
2	3.222	3.222	0.000	7689765	500.0	492.0	
2	3.276	3.276	0.000	27611810	500.0	503.2	
		Average of Peak Amounts =				501.9	
						RPD = 1.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	11654391	500.0	495.7	
1	5.509	5.509	0.000	17219418	500.0	502.6	M
1	5.849	5.849	0.000	12420039	500.0	485.0	
1	6.622	6.622	0.000	15696475	500.0	500.1	
1	6.995	6.995	0.000	21521176	500.0	499.3	
		Average of Peak Amounts =				496.5	
2	5.529	5.529	0.000	51845638	500.0	516.9	
2	5.952	5.952	0.000	40591711	500.0	515.7	
2	6.402	6.402	0.000	55787230	500.0	520.3	
2	6.649	6.649	0.000	32678665	500.0	513.5	
2	7.119	7.119	0.000	79736218	500.0	514.8	
		Average of Peak Amounts =				516.3	
						RPD = 3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

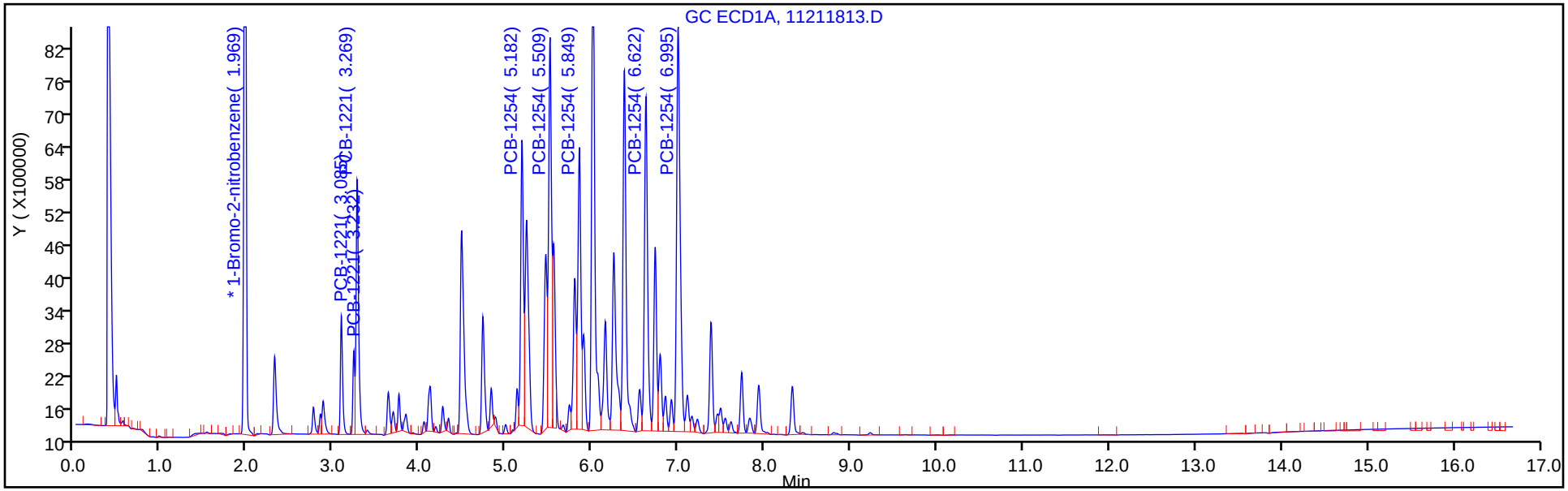
Report Date: 23-Nov-2018 11:02:11 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

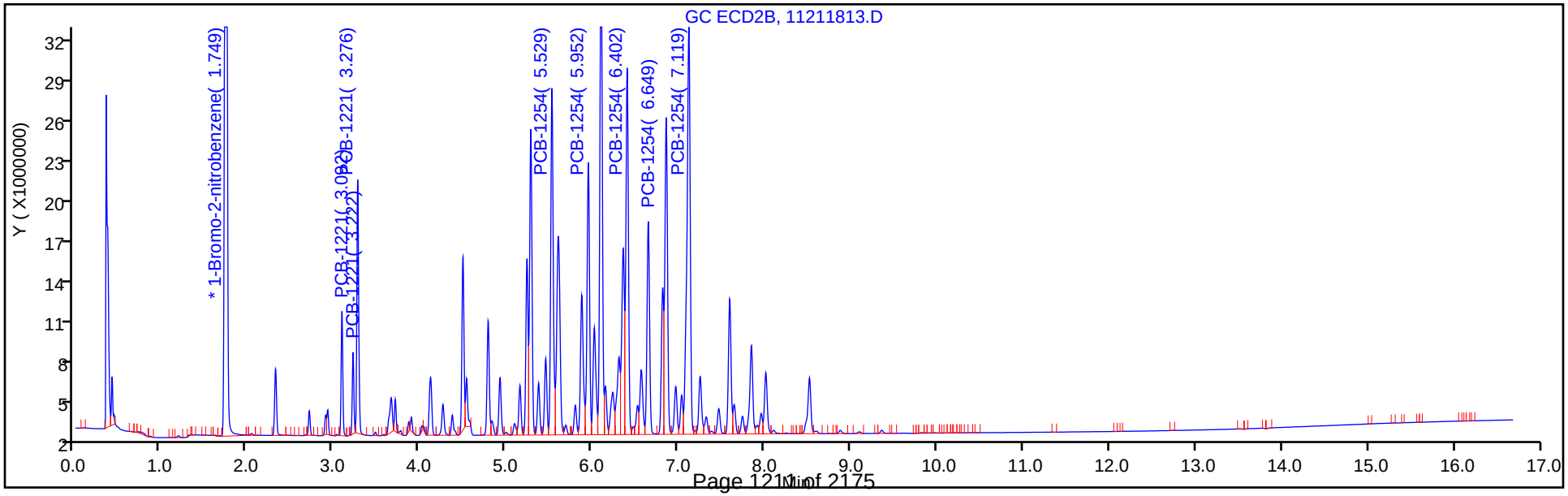
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date:	21-Nov-2018 12:58:43	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL52154			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D
Lims ID: STDL42154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 13:19:55 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL42154
Misc. Info.: 280-0076428-014
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:12 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30112720	1000.0	1000.0	
2	1.747	1.749	-0.002	169613542	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2063928	250.0	266.3	
1	3.230	3.232	-0.002	1277667	250.0	283.8	
1	3.270	3.269	0.001	5214449	250.0	269.3	
		Average of Peak Amounts =				273.1	
2	3.093	3.092	0.001	6662383	250.0	271.7	
2	3.223	3.222	0.001	4151876	250.0	261.9	
2	3.277	3.276	0.001	14954730	250.0	267.4	
		Average of Peak Amounts =				267.0	
						RPD = 2.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6200718	250.0	259.3	
1	5.506	5.509	-0.003	9144535	250.0	264.2	M
1	5.846	5.849	-0.003	6634099	250.0	258.7	
1	6.620	6.622	-0.002	8316205	250.0	262.4	
1	6.993	6.995	-0.002	11066699	250.0	256.1	
		Average of Peak Amounts =				260.1	
2	5.530	5.529	0.001	27978613	250.0	273.1	
2	5.953	5.952	0.001	21681477	250.0	270.3	
2	6.403	6.402	0.001	29833754	250.0	272.7	
2	6.650	6.649	0.001	17685692	250.0	272.4	
2	7.120	7.119	0.001	42598206	250.0	269.8	
		Average of Peak Amounts =				271.7	
						RPD = 4.33	
S 8 Polychlorinated biphenyls, Total							
1						533.3	
2						538.7	
						RPD = 1.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

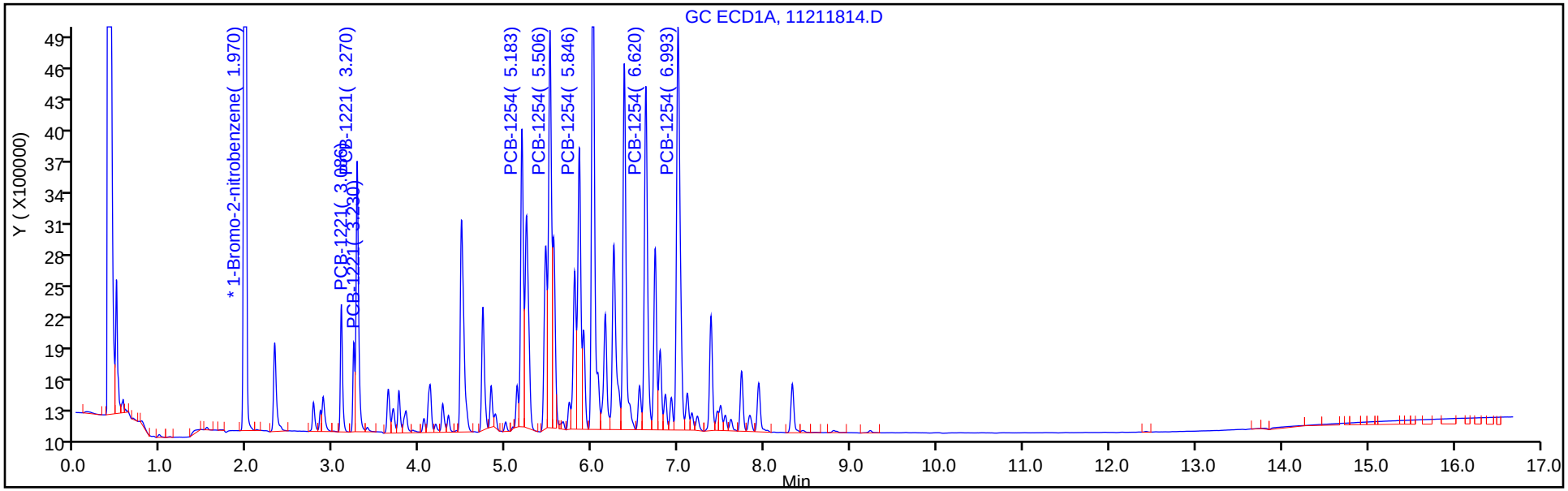
Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

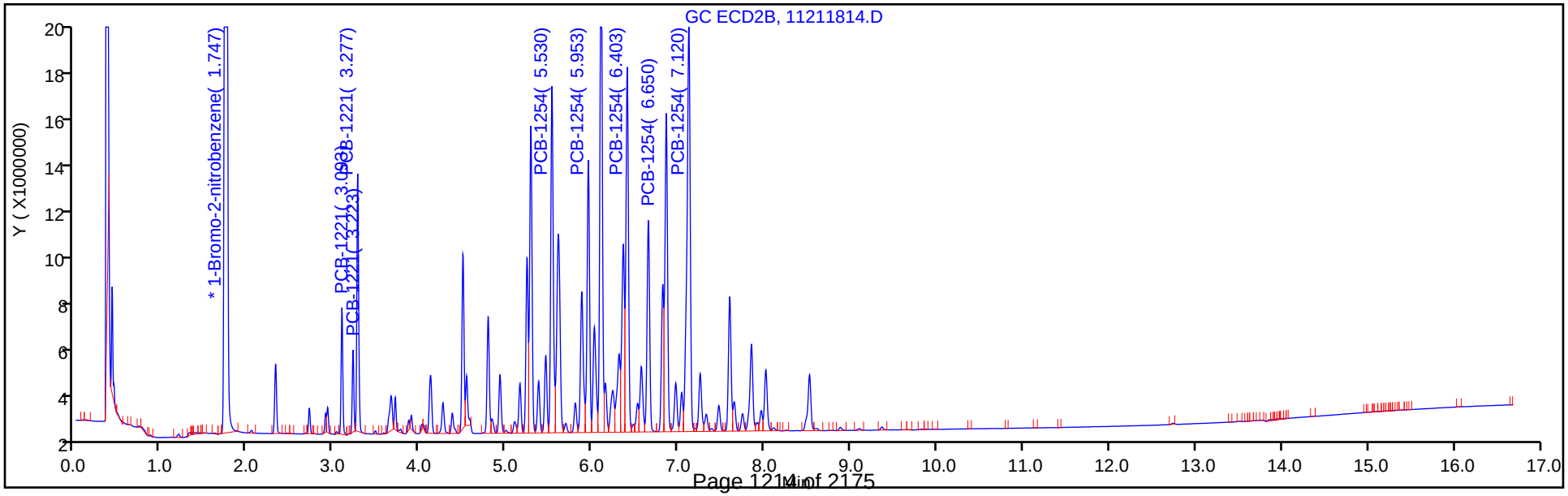
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date:	21-Nov-2018 13:19:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL42154			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D
Lims ID: STDL32154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 13:41:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL32154
Misc. Info.: 280-0076428-015
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28078685	1000.0	1000.0	
2	1.746	1.749	-0.003	159417859	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	794996	100.0	103.4	
1	3.229	3.232	-0.003	506503	100.0	111.0	
1	3.269	3.269	0.000	2212927	100.0	116.3	
		Average of Peak Amounts =				110.2	
2	3.093	3.092	0.001	2763923	100.0	108.2	
2	3.223	3.222	0.001	1748923	100.0	109.7	
2	3.276	3.276	0.000	6335939	100.0	111.0	
		Average of Peak Amounts =				109.6	
						RPD = 0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	2662071	100.0	110.8	
1	5.506	5.509	-0.003	3775608	100.0	110.2	M
1	5.849	5.849	0.000	2648846	100.0	106.8	
1	6.619	6.622	-0.003	3428029	100.0	109.3	
1	6.993	6.995	-0.002	4426432	100.0	105.7	
		Average of Peak Amounts =				108.6	
2	5.529	5.529	0.000	11951653	100.0	113.9	
2	5.953	5.952	0.001	9184571	100.0	112.5	
2	6.403	6.402	0.001	12571284	100.0	112.4	
2	6.649	6.649	0.000	7560827	100.0	113.9	
2	7.119	7.119	0.000	18178594	100.0	113.0	
		Average of Peak Amounts =				113.1	
						RPD = 4.13	
S 8 Polychlorinated biphenyls, Total							
1						218.8	
2						222.8	
						RPD = 1.82	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

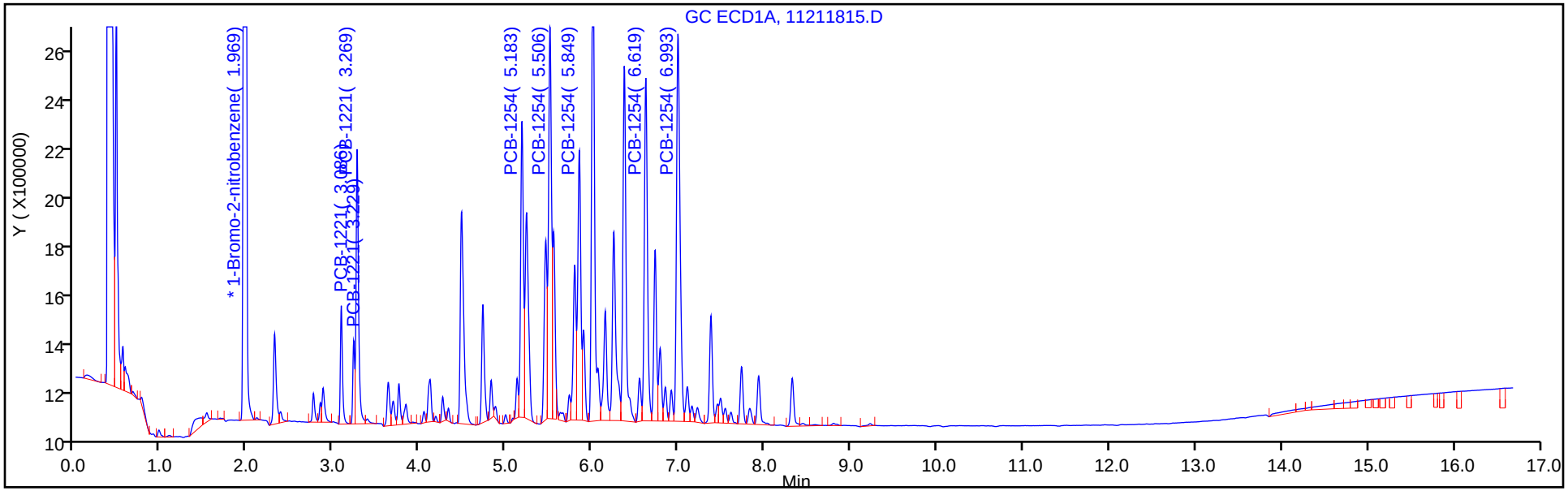
Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

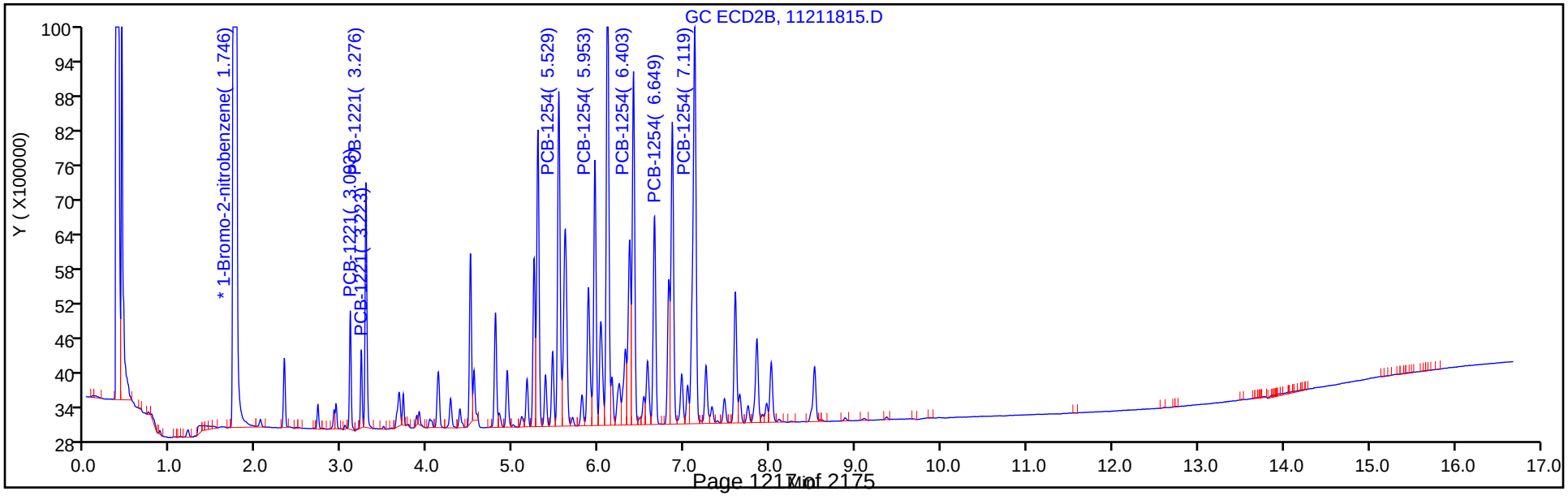
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date:	21-Nov-2018 13:41:08	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL32154			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D
Lims ID: STDL22154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 14:02:19 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL22154
Misc. Info.: 280-0076428-016
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	27612767	1000.0	1000.0	
2	1.746	1.749	-0.003	155958976	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	422934	50.0	50.7	
1	3.229	3.232	-0.003	264535	50.0	51.1	
1	3.269	3.269	0.000	1048520	50.0	50.1	
		Average of Peak Amounts =				50.6	
2	3.093	3.092	0.001	1479927	50.0	49.7	
2	3.223	3.222	0.001	922521	50.0	52.8	
2	3.276	3.276	0.000	3428605	50.0	53.7	
		Average of Peak Amounts =				52.0	
						RPD = 2.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	1487053	50.0	56.1	
1	5.506	5.509	-0.003	2050858	50.0	55.4	
1	5.846	5.849	-0.003	1380932	50.0	53.3	
1	6.619	6.622	-0.003	1866154	50.0	55.2	
1	6.993	6.995	-0.002	2374593	50.0	54.4	
		Average of Peak Amounts =				54.9	
2	5.530	5.529	0.001	6401352	50.0	53.9	
2	5.953	5.952	0.001	4927585	50.0	54.0	
2	6.403	6.402	0.001	6824249	50.0	54.3	
2	6.646	6.649	-0.003	4105287	50.0	55.1	
2	7.120	7.119	0.001	9840352	50.0	54.8	
		Average of Peak Amounts =				54.4	
						RPD = 0.81	
S 8 Polychlorinated biphenyls, Total							
1						105.5	
2						106.5	
						RPD = 0.93	

Reagents:

AR_2154_L2_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

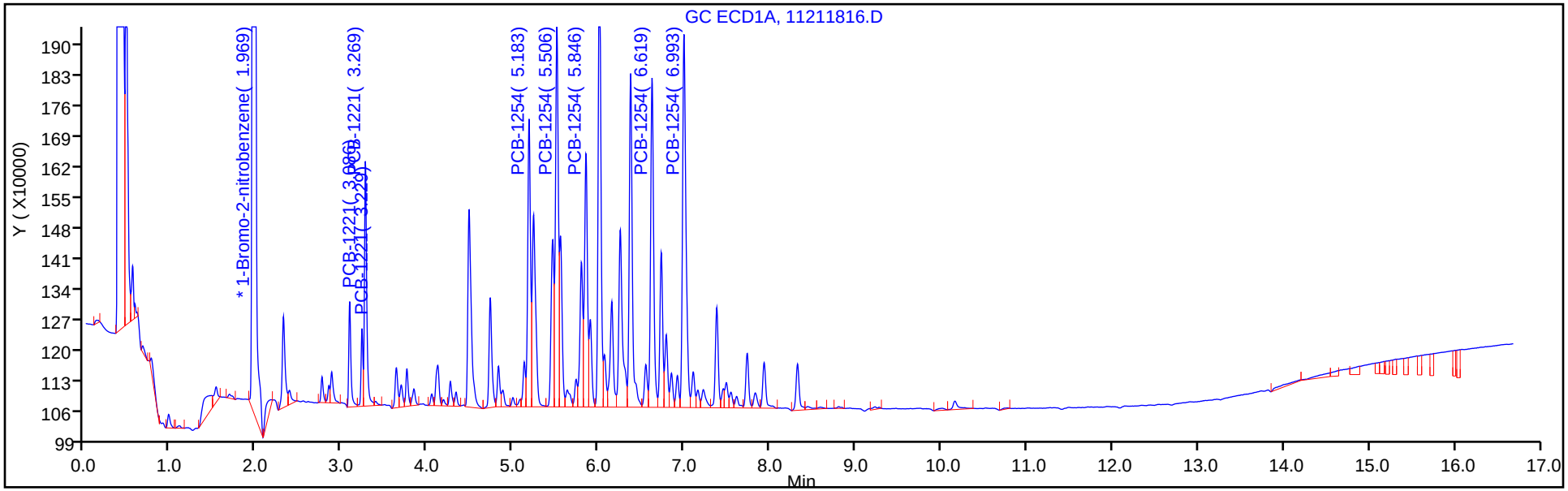
Report Date: 23-Nov-2018 11:02:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

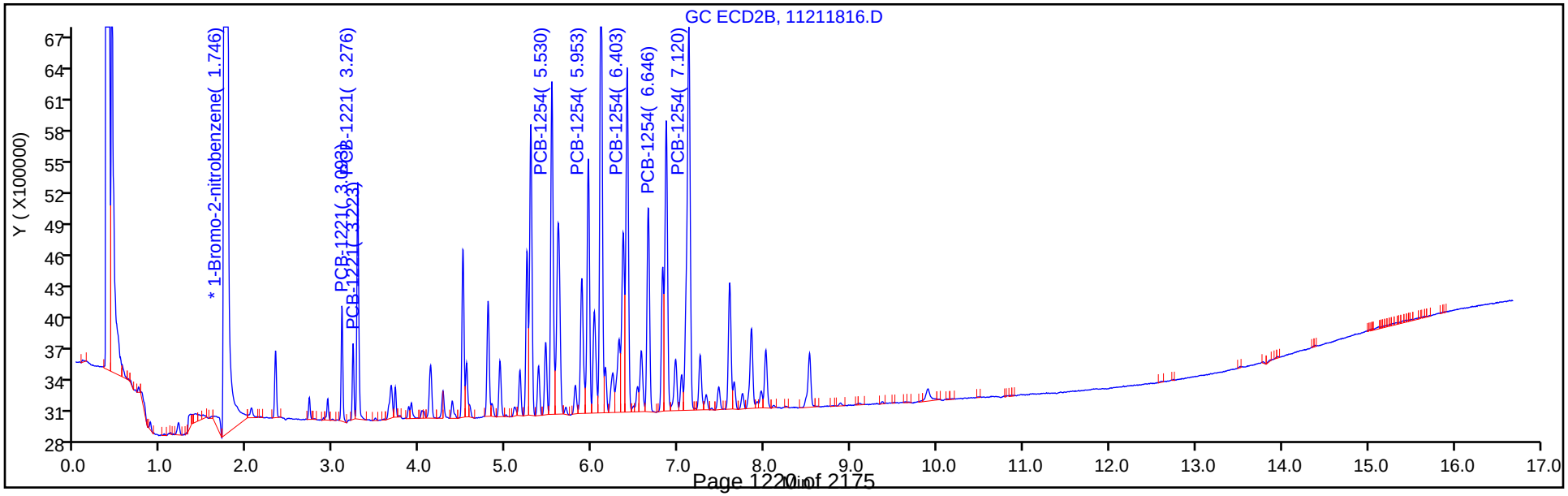
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D

Injection Date:	21-Nov-2018 14:02:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL22154			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D
Lims ID: STDL12154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 14:23:32 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL12154
Misc. Info.: 280-0076428-017
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:20 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:12:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31158892	1000.0	1000.0	
2	1.749	1.749	0.000	174644682	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	258968	25.0	22.3	
1	3.229	3.232	-0.003	155902	25.0	18.6	
1	3.272	3.269	0.003	594265	25.0	19.4	
		Average of Peak Amounts =				20.1	
2	3.092	3.092	0.000	990606	25.0	21.2	
2	3.222	3.222	0.000	531473	25.0	20.4	
2	3.276	3.276	0.000	1966030	25.0	19.1	
		Average of Peak Amounts =				20.2	
						RPD = 0.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	810954	25.0	18.9	
1	5.509	5.509	0.000	1058665	25.0	18.7	M
1	5.849	5.849	0.000	734067	25.0	21.4	
1	6.619	6.622	-0.003	977183	25.0	19.3	
1	6.992	6.995	-0.003	1230625	25.0	21.0	
		Average of Peak Amounts =				19.9	
2	5.529	5.529	0.000	3601131	25.0	17.7	
2	5.952	5.952	0.000	2735694	25.0	18.2	
2	6.402	6.402	0.000	3769252	25.0	17.7	
2	6.649	6.649	0.000	2218210	25.0	17.2	
2	7.119	7.119	0.000	5349050	25.0	17.7	
		Average of Peak Amounts =				17.7	
						RPD = 11.52	
S 8 Polychlorinated biphenyls, Total							
1						40.0	
2						37.9	
						RPD = 5.30	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

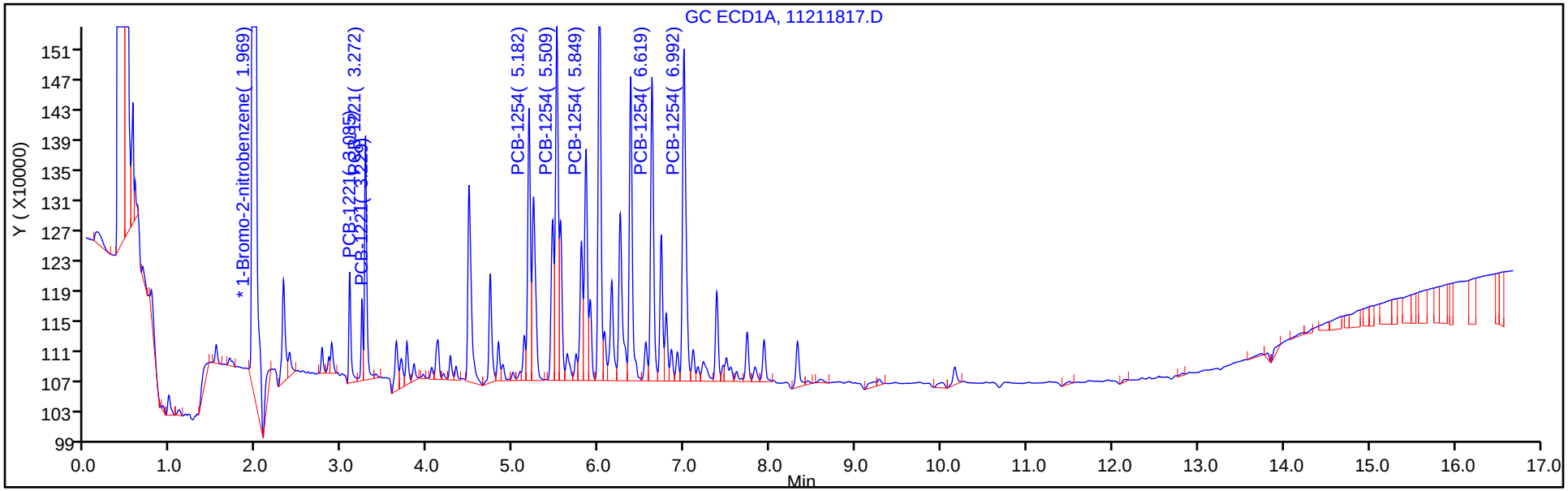
Report Date: 23-Nov-2018 11:02:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

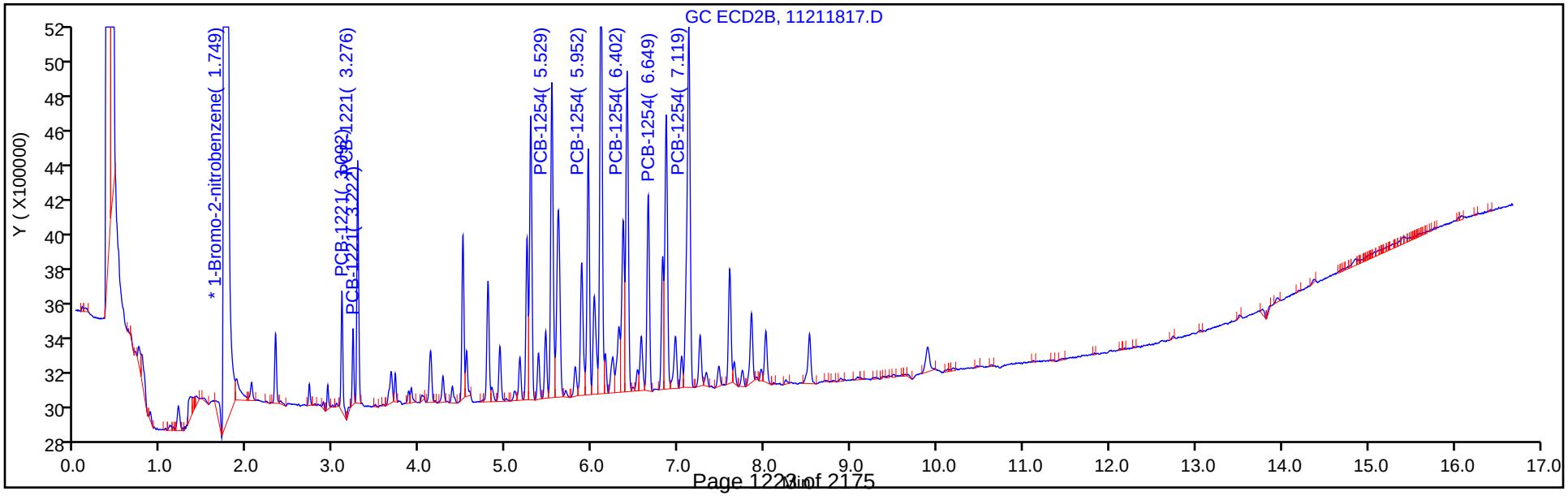
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL12154			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34386

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.5677 0.4346	0.5551 0.3962	0.5409	0.4852	0.4570	Lin1	6.3337	0.4201							0.9940		0.9900
PCB-1016 Peak 2	1.3072 0.9928	1.2929 0.9421	1.2319	1.1161	1.0742	Lin1	13.843	0.9818							0.9950		0.9900
PCB-1016 Peak 3	1.8906 1.8578	1.9617 1.8002	1.9602	1.8927	1.9482	Lin1	4.5623	1.8506							0.9990		0.9900
PCB-1016 Peak 4	0.8890 0.7766	0.9092 0.7383	0.9043	0.8365	0.8317	Lin1	6.3362	0.7699							0.9970		0.9900
PCB-1016 Peak 5	0.9487 0.8423	0.9583 0.8137	0.9580	0.8987	0.8701	Lin1	5.7144	0.8346							0.9980		0.9900
PCB-1260 Peak 1	1.3639 1.1412	1.3747 1.1236	1.3336	1.2270	1.2120	Lin1	9.8220	1.1438							0.9980		0.9900
PCB-1260 Peak 2	1.8759 1.7707	1.9174 1.7702	1.9079	1.8103	1.8575	Lin1	5.2462	1.7856							0.9990		0.9900
PCB-1260 Peak 3	1.1956 1.0408	1.1845 1.0428	1.2002	1.0955	1.1080	Lin1	6.3677	1.0526							0.9990		0.9900
PCB-1260 Peak 4	2.4858 2.3766	2.5292 2.3887	2.5314	2.4370	2.4961	Lin1	5.2228	2.4051							1.0000		0.9900
PCB-1260 Peak 5	1.1252 1.0822	1.1505 1.0911	1.1460	1.1027	1.1345	Lin1	2.0533	1.0959							1.0000		0.9900
Tetrachloro-m-xylene	24.166 26.317	25.085 26.191	25.541	25.685	26.715	Lin1	-3.160	26.379							1.0000		0.9900
DCB Decachlorobiphenyl	25.943 19.864	24.892 19.439	23.887	21.374	21.028	Lin1	11.557	19.760							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34386

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Lin1	469132 10292626	883638 12255500	1679350	3816191	6801886	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 2	BNB	Lin1	1080310 23509757	2058248 29138313	3824818	8778351	15989031	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 3	BNB	Lin1	1562445 43992946	3122897 55680903	6086050	14886212	28999155	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 4	BNB	Lin1	734649 18389026	1447486 22835416	2807752	6578902	12379838	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 5	BNB	Lin1	784034 19946184	1525625 25166398	2974460	7068443	12951678	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 1	BNB	Lin1	1127159 27023644	2188444 34751926	4140653	9650098	18040094	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 2	BNB	Lin1	1550296 41930903	3052493 54752979	5923763	14238155	27649105	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 3	BNB	Lin1	988085 24646608	1885624 32252970	3726238	8615850	16493165	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 4	BNB	Lin1	2054328 56278619	4026393 73881863	7859527	19166787	37154269	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 5	BNB	Lin1	929879 25627349	1831626 33747429	3558044	8672757	16886305	25.0 750	50.0 1000	100	250	500
Tetrachloro-m-xylene	BNB	Lin1	998558 31159991	1996738 40504428	3964953	10100542	19882681	1.25 37.5	2.50 50.0	5.00	12.5	25.0
DCB Decachlorobiphenyl	BNB	Lin1	1072007 23519401	1981347 30062336	3708204	8405396	15649907	1.25 37.5	2.50 50.0	5.00	12.5	25.0

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D
Lims ID: STDL71660
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 14:44:45 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71660
Misc. Info.: 280-0076428-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:22 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:26:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30929643	1000.0	1000.0	
2	1.746	1.749	-0.003	172682643	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	40504428	50.0	49.8	
2	2.776	2.780	-0.004	105788700	50.0	48.2	
						RPD = 3.20	
1 PCB-1016							
1	3.270	3.269	0.001	12255500	1000.0	928.2	
1	3.633	3.633	0.000	29138313	1000.0	945.4	
1	4.116	4.116	0.000	55680903	1000.0	970.3	
1	4.263	4.263	0.000	22835416	1000.0	950.7	
1	4.730	4.729	0.001	25166398	1000.0	968.1	
		Average of Peak Amounts =				952.5	
2	3.276	3.276	0.000	35638141	1000.0	956.5	
2	3.666	3.666	0.000	73285982	1000.0	952.1	
2	4.123	4.123	0.000	163781976	1000.0	957.7	
2	4.266	4.266	0.000	69518646	1000.0	946.1	
2	4.496	4.496	0.000	37279827	1000.0	943.6	
		Average of Peak Amounts =				951.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	34751926	1000.0	973.7	
1	6.993	6.993	0.000	54752979	1000.0	988.5	
1	7.490	7.489	0.001	32252970	1000.0	984.6	
1	7.930	7.929	0.001	73881863	1000.0	991.0	
1	8.320	8.319	0.001	33747429	1000.0	993.7	
		Average of Peak Amounts =				986.3	
2	6.650	6.646	0.004	121750112	1000.0	963.1	
2	7.116	7.116	0.000	181248886	1000.0	965.7	
2	7.646	7.646	0.000	109270203	1000.0	970.8	
2	8.013	8.013	0.000	244056914	1000.0	967.3	
2	8.516	8.516	0.000	187015797	1000.0	968.8	
		Average of Peak Amounts =				967.2	
						RPD = 1.96	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	30062336	50.0	48.6	
2	10.186	10.186	0.000	121182268	50.0	48.3	
						RPD = 0.69	
S 8 Polychlorinated biphenyls, Total							
1						1938.9	
2						1918.4	
						RPD = 1.06	

Reagents:

AR_1660_L7_00026	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

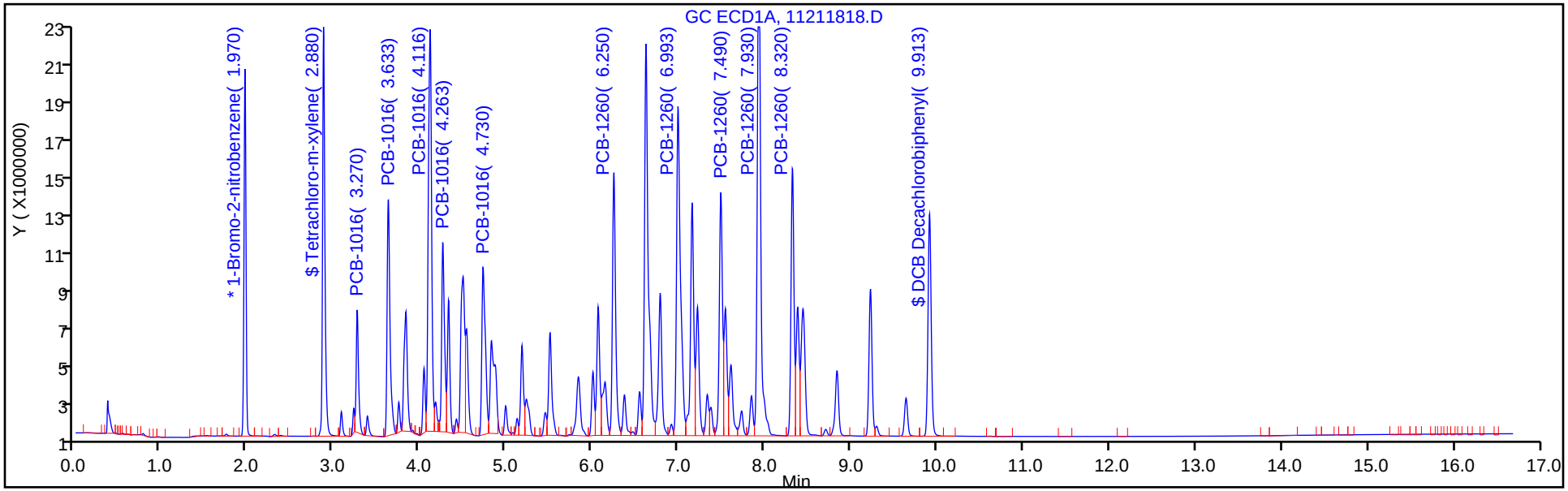
Report Date: 23-Nov-2018 11:02:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

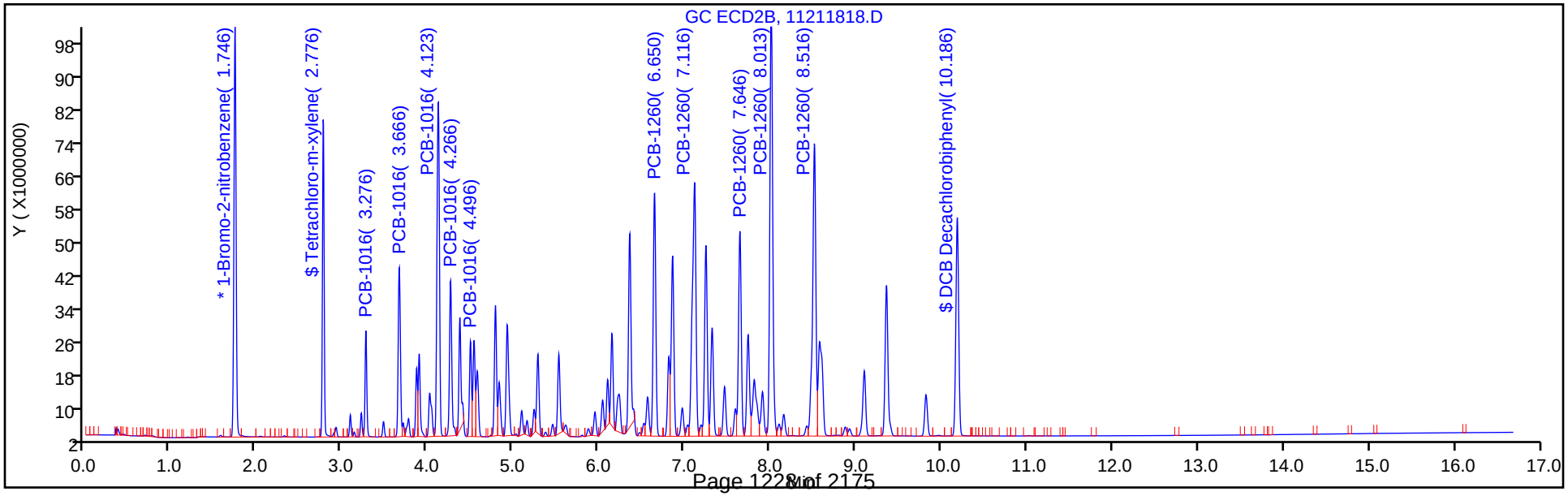
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D

Injection Date:	21-Nov-2018 14:44:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71660			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D
Lims ID: STDL61660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 15:05:56 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61660
Misc. Info.: 280-0076428-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:25 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:02:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31573792	1000.0	1000.0	
2	1.749	1.749	0.000	174603036	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	31159991	37.5	37.5	
2	2.779	2.780	-0.001	83308843	37.5	37.4	
						RPD = 0.34	
1 PCB-1016							
1	3.272	3.269	0.003	10292626	750.0	760.9	
1	3.632	3.633	-0.001	23509757	750.0	744.3	
1	4.118	4.116	0.002	43992946	750.0	750.5	
1	4.265	4.263	0.002	18389026	750.0	748.3	
1	4.732	4.729	0.003	19946184	750.0	750.1	
		Average of Peak Amounts =				750.8	
2	3.275	3.276	-0.001	28324629	750.0	748.3	
2	3.665	3.666	-0.001	58050459	750.0	742.3	
2	4.122	4.123	-0.001	128903407	750.0	742.4	
2	4.265	4.266	-0.001	55437372	750.0	742.9	
2	4.499	4.496	0.003	30262522	750.0	754.2	
		Average of Peak Amounts =				746.0	
						RPD = 0.64	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.249	-0.001	27023644	750.0	739.7	
1	6.992	6.993	-0.001	41930903	750.0	740.8	
1	7.488	7.489	-0.001	24646608	750.0	735.5	
1	7.932	7.929	0.003	56278619	750.0	738.9	
1	8.322	8.319	0.003	25627349	750.0	738.8	
		Average of Peak Amounts =				738.7	
2	6.649	6.646	0.003	95127310	750.0	741.1	
2	7.115	7.116	-0.001	141113456	750.0	740.7	
2	7.645	7.646	-0.001	84305248	750.0	737.8	
2	8.012	8.013	-0.001	189441684	750.0	739.9	
2	8.515	8.516	-0.001	144616476	750.0	738.0	
		Average of Peak Amounts =				739.5	
						RPD = 0.10	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	23519401	37.5	37.1	
2	10.185	10.186	-0.001	94115340	37.5	36.9	
						RPD = 0.55	
S 8 Polychlorinated biphenyls, Total							
1						1489.5	
2						1485.5	
						RPD = 0.27	

Reagents:

AR_1660_L6_00033	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

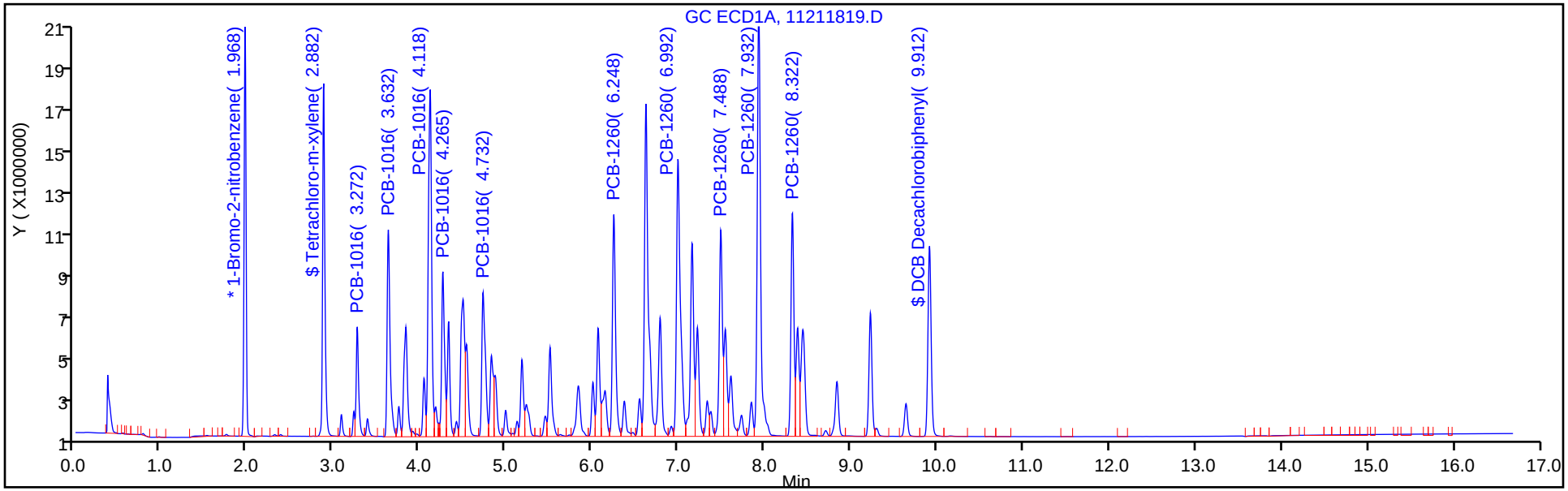
Report Date: 23-Nov-2018 11:02:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

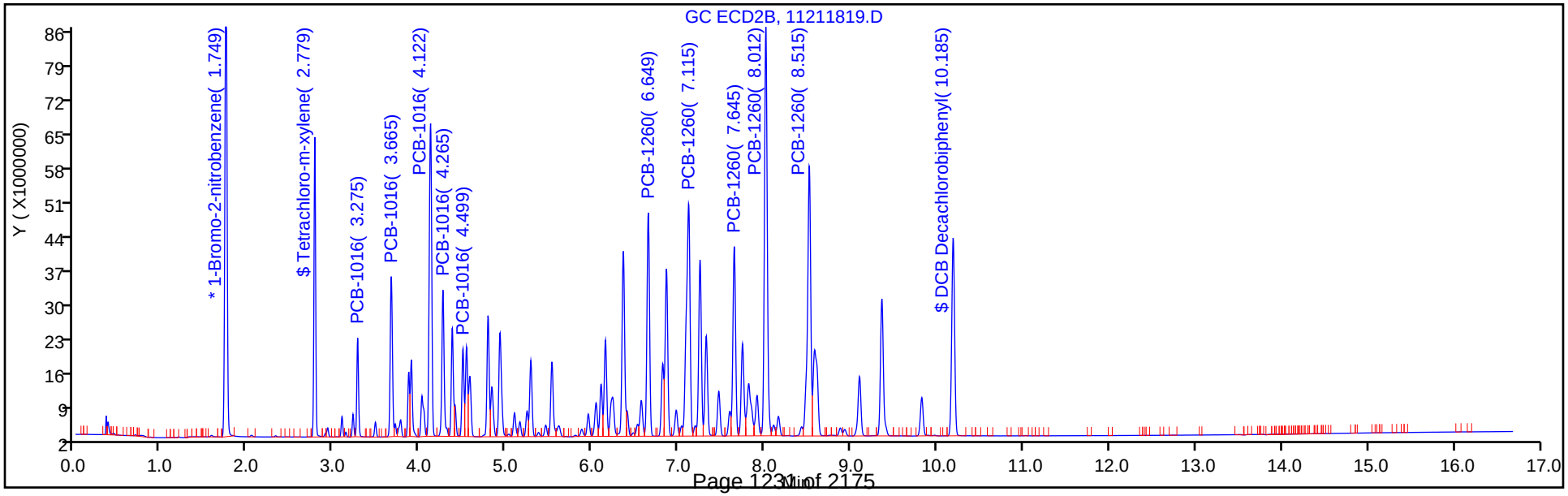
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D

Injection Date:	21-Nov-2018 15:05:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61660			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D
Lims ID: STDL51660
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 21-Nov-2018 15:27:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51660
Misc. Info.: 280-0076428-020
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:27 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29769998	1000.0	1000.0	
2	1.746	1.746	0.000	167274345	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	19882681	25.0	25.4	
2	2.780	2.780	0.000	55710908	25.0	25.9	
						RPD = 1.91	
1 PCB-1016							M
1	3.269	3.269	0.000	6801886	500.0	528.8	
1	3.633	3.633	0.000	15989031	500.0	532.9	
1	4.116	4.116	0.000	28999155	500.0	523.9	
1	4.263	4.263	0.000	12379838	500.0	531.9	
1	4.729	4.729	0.000	12951678	500.0	514.4	
		Average of Peak Amounts =				526.4	
2	3.276	3.276	0.000	18899868	500.0	516.1	
2	3.666	3.666	0.000	40057019	500.0	530.0	M
2	4.123	4.123	0.000	88563385	500.0	528.5	M
2	4.266	4.266	0.000	38741347	500.0	537.6	M
2	4.496	4.496	0.000	20361835	500.0	524.5	M
		Average of Peak Amounts =				527.3	
						RPD = 0.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	18040094	500.0	521.2	
1	6.993	6.993	0.000	27649105	500.0	517.2	
1	7.489	7.489	0.000	16493165	500.0	520.3	
1	7.929	7.929	0.000	37154269	500.0	516.7	
1	8.319	8.319	0.000	16886305	500.0	515.7	
		Average of Peak Amounts =				518.2	
2	6.646	6.646	0.000	64958906	500.0	524.4	
2	7.116	7.116	0.000	96225163	500.0	523.6	
2	7.646	7.646	0.000	57482127	500.0	521.5	
2	8.013	8.013	0.000	129198578	500.0	523.3	
2	8.516	8.516	0.000	99208427	500.0	525.0	
		Average of Peak Amounts =				523.6	
						RPD = 1.02	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	15649907	25.0	26.0	
2	10.186	10.186	0.000	64572494	25.0	26.2	
						RPD = 0.81	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

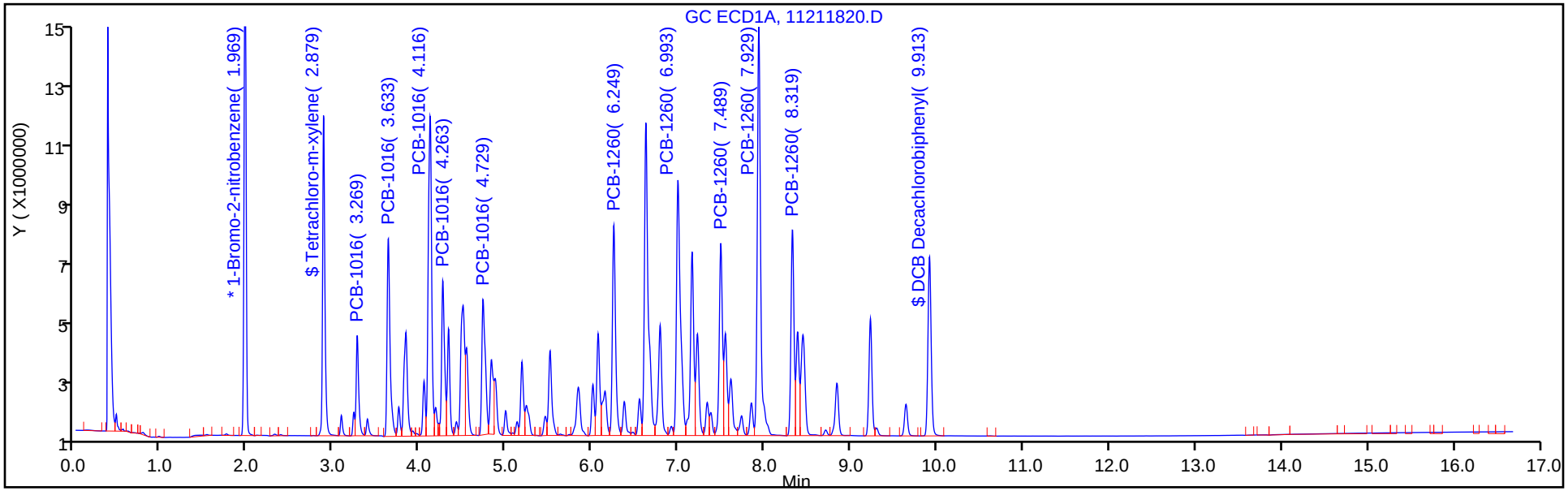
Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

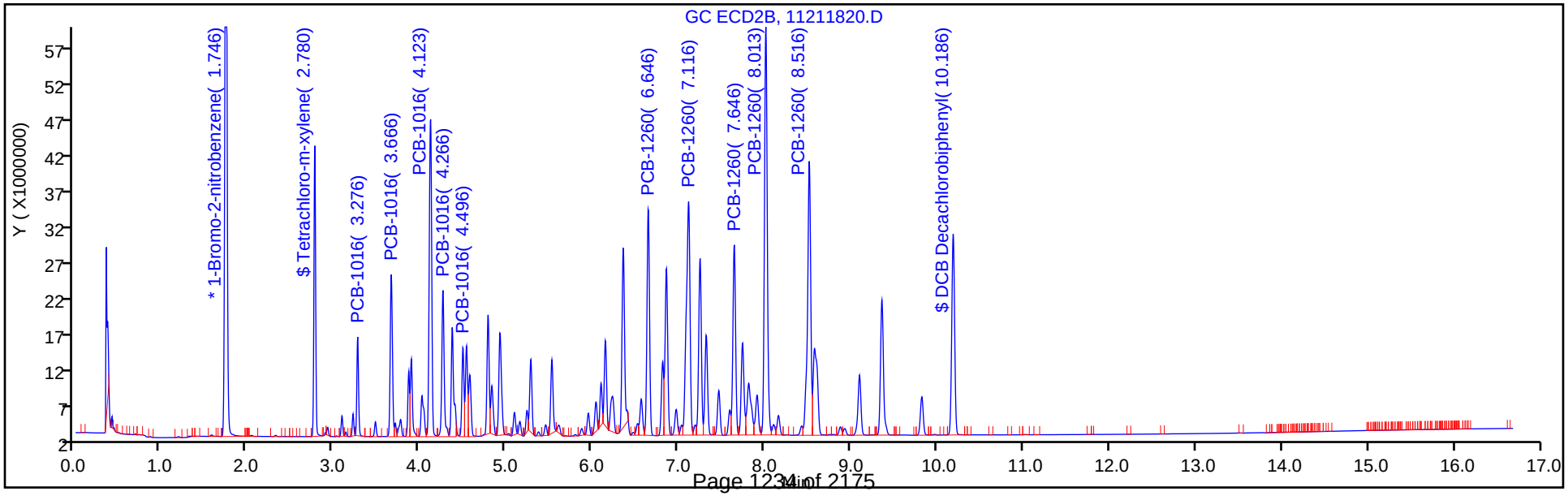
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date:	21-Nov-2018 15:27:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51660			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D
Lims ID: STDL41660
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 15:48:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41660
Misc. Info.: 280-0076428-021
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:30 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31460203	1000.0	1000.0	
2	1.749	1.746	0.003	176509413	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	10100542	12.5	12.3	
2	2.779	2.780	-0.001	30523746	12.5	13.2	
						RPD = 6.95	
1 PCB-1016							
1	3.272	3.269	0.003	3816191	250.0	273.7	
1	3.632	3.633	-0.001	8778351	250.0	270.1	
1	4.119	4.116	0.003	14886212	250.0	253.2	
1	4.265	4.263	0.002	6578902	250.0	263.4	
1	4.732	4.729	0.003	7068443	250.0	262.4	
		Average of Peak Amounts =				264.6	
2	3.275	3.276	-0.001	10752270	250.0	270.6	
2	3.665	3.666	-0.001	22260570	250.0	271.3	
2	4.122	4.123	-0.001	48351201	250.0	266.7	
2	4.265	4.266	-0.001	21045310	250.0	269.2	
2	4.499	4.496	0.003	11353500	250.0	269.0	
		Average of Peak Amounts =				269.4	
						RPD = 1.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9650098	250.0	259.6	
1	6.992	6.993	-0.001	14238155	250.0	250.5	
1	7.489	7.489	0.000	8615850	250.0	254.1	
1	7.932	7.929	0.003	19166787	250.0	251.1	
1	8.322	8.319	0.003	8672757	250.0	249.7	
		Average of Peak Amounts =				253.0	
2	6.649	6.646	0.003	35419484	250.0	264.3	
2	7.115	7.116	-0.001	52349958	250.0	263.8	
2	7.645	7.646	-0.001	31335455	250.0	263.4	
2	8.012	8.013	-0.001	70151512	250.0	263.6	
2	8.515	8.516	-0.001	53442743	250.0	262.1	
		Average of Peak Amounts =				263.4	
						RPD = 4.04	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8405396	12.5	12.9	
2	10.185	10.186	-0.001	35221995	12.5	13.2	
						RPD = 2.14	
S 8 Polychlorinated biphenyls, Total							
1						517.6	
2						532.8	
						RPD = 2.90	

Reagents:

AR_1660_L4_00068	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

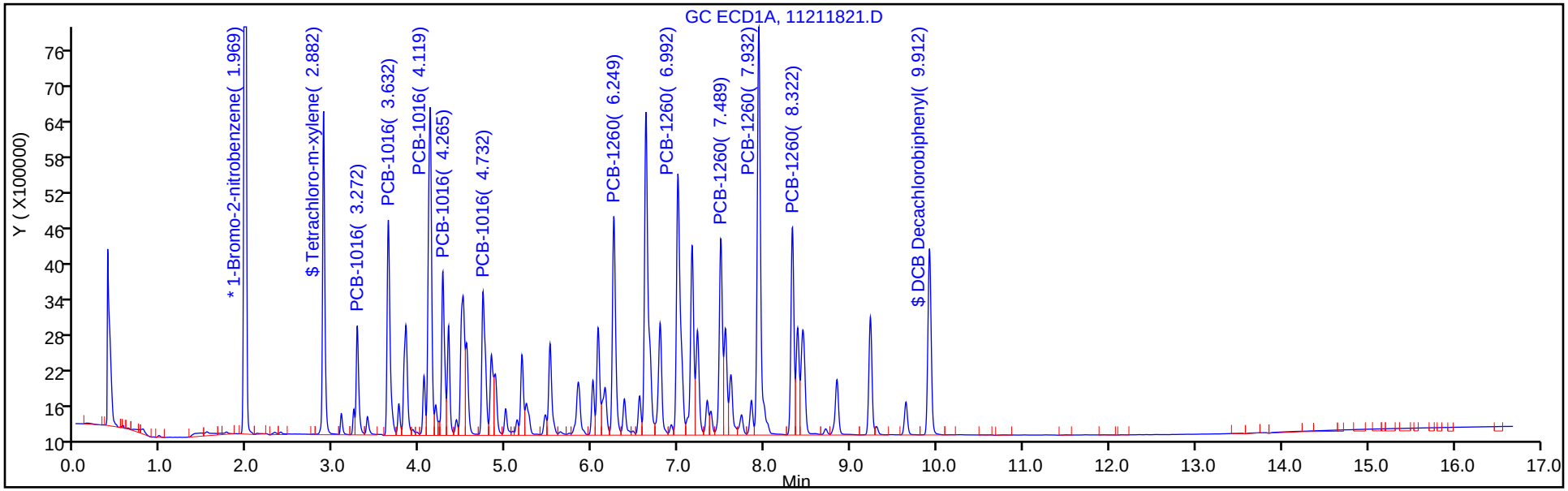
Report Date: 23-Nov-2018 11:02:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

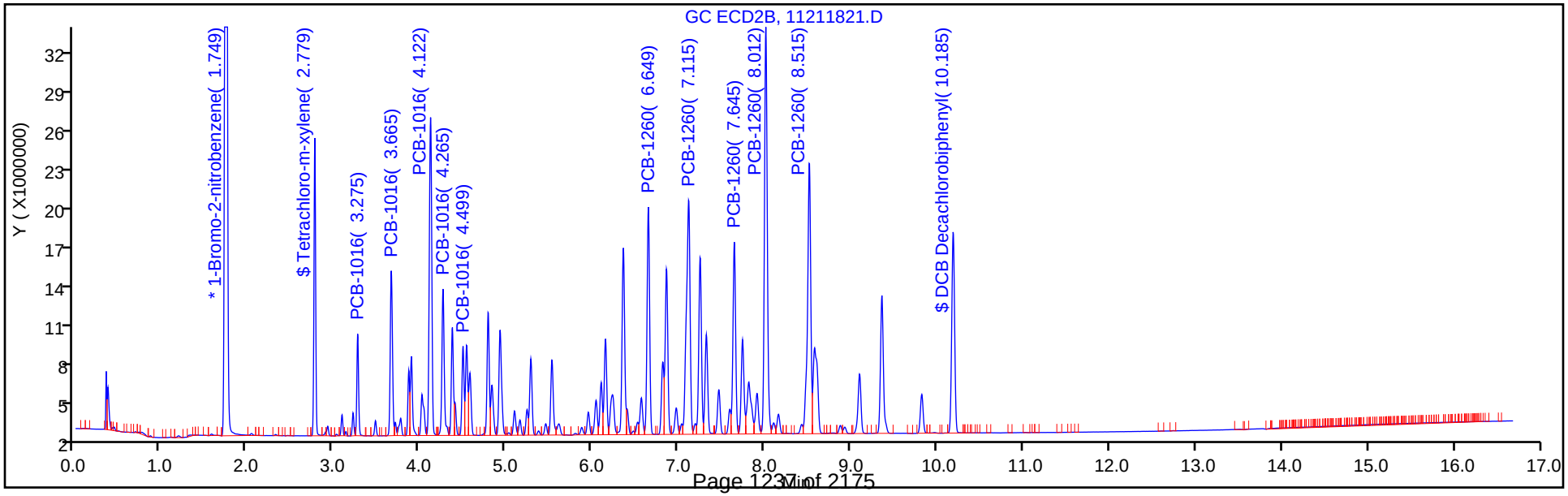
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D

Injection Date:	21-Nov-2018 15:48:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41660			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D
Lims ID: STDL31660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 16:09:34 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31660
Misc. Info.: 280-0076428-022
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:05:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31048095	1000.0	1000.0	
2	1.750	1.746	0.004	175133355	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	3964953	5.00	4.96	
2	2.780	2.780	0.000	13257502	5.00	5.43	
						RPD = 9.06	
1 PCB-1016							
1	3.269	3.269	0.000	1679350	100.0	113.7	
1	3.633	3.633	0.000	3824818	100.0	111.4	
1	4.116	4.116	0.000	6086050	100.0	103.5	
1	4.263	4.263	0.000	2807752	100.0	109.2	
1	4.729	4.729	0.000	2974460	100.0	107.9	
		Average of Peak Amounts =				109.1	
2	3.276	3.276	0.000	4799160	100.0	112.6	
2	3.666	3.666	0.000	9573999	100.0	108.2	
2	4.123	4.123	0.000	20834280	100.0	108.0	
2	4.266	4.266	0.000	9095859	100.0	108.4	
2	4.496	4.496	0.000	5107027	100.0	112.5	
		Average of Peak Amounts =				109.9	
						RPD = 0.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	4140653	100.0	108.0	
1	6.993	6.993	0.000	5923763	100.0	103.9	
1	7.489	7.489	0.000	3726238	100.0	108.0	
1	7.929	7.929	0.000	7859527	100.0	103.1	
1	8.319	8.319	0.000	3558044	100.0	102.7	
		Average of Peak Amounts =				105.1	
2	6.650	6.646	0.004	15611005	100.0	109.8	
2	7.116	7.116	0.000	22806129	100.0	108.8	
2	7.646	7.646	0.000	13672887	100.0	108.8	
2	8.013	8.013	0.000	30406302	100.0	108.5	
2	8.520	8.516	0.004	23327598	100.0	108.5	
		Average of Peak Amounts =				108.9	
						RPD = 3.50	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	3708204	5.00	5.46	
2	10.186	10.186	0.000	15646900	5.00	5.52	
						RPD = 1.19	
S 8 Polychlorinated biphenyls, Total							
1						214.3	
2						218.8	
						RPD = 2.10	

Reagents:

AR_1660_L3_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

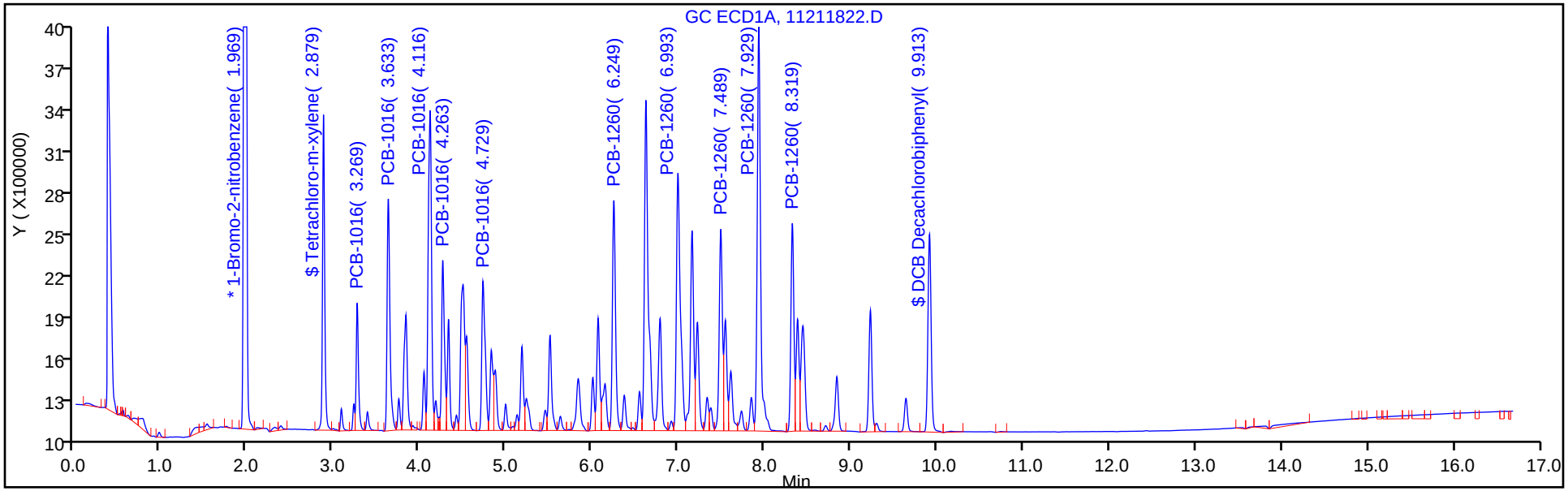
Report Date: 23-Nov-2018 11:02:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

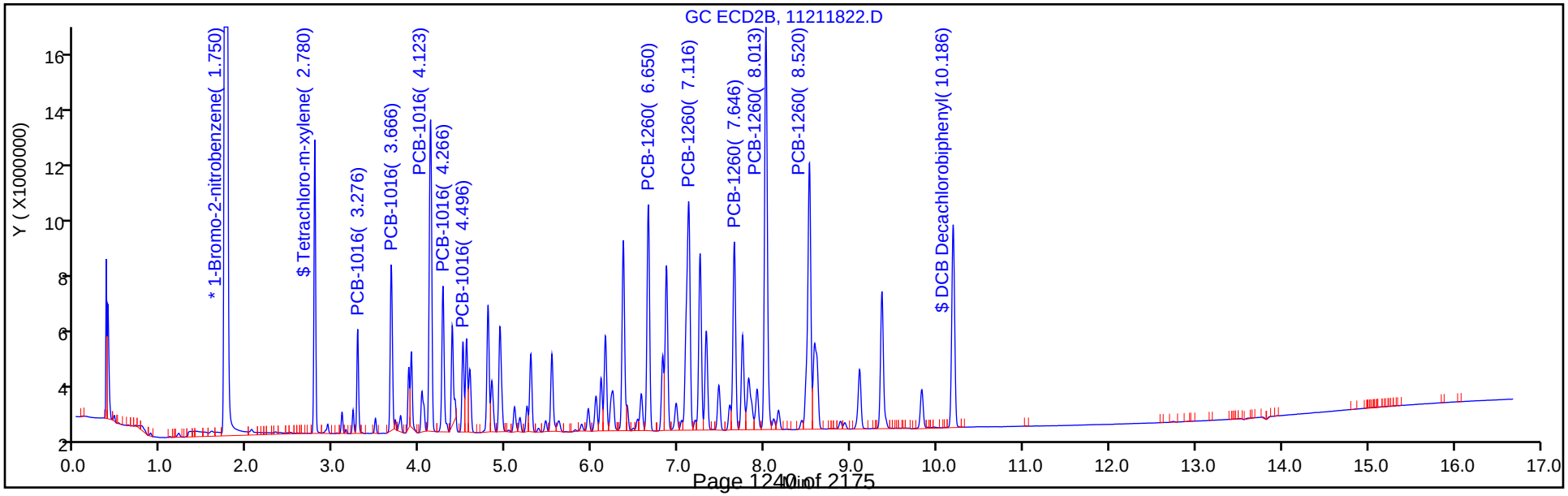
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D

Injection Date:	21-Nov-2018 16:09:34	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31660			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D
Lims ID: STDL21660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 16:30:45 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21660
Misc. Info.: 280-0076428-023
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:36 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31839217	1000.0	1000.0	
2	1.750	1.746	0.004	177179573	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	1996738	2.50	2.50	
2	2.780	2.780	0.000	7055763	2.50	2.57	
						RPD = 3.03	
1 PCB-1016							
1	3.269	3.269	0.000	883638	50.0	51.0	
1	3.629	3.633	-0.004	2058248	50.0	51.7	
1	4.116	4.116	0.000	3122897	50.0	50.5	
1	4.263	4.263	0.000	1447486	50.0	50.8	
1	4.729	4.729	0.000	1525625	50.0	50.6	
		Average of Peak Amounts =				50.9	
2	3.276	3.276	0.000	2565446	50.0	51.6	
2	3.666	3.666	0.000	5231349	50.0	50.8	
2	4.123	4.123	0.000	11249839	50.0	51.1	
2	4.266	4.266	0.000	4898205	50.0	50.4	
2	4.496	4.496	0.000	2765621	50.0	52.2	
		Average of Peak Amounts =				51.2	
						RPD = 0.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	2188444	50.0	51.5	
1	6.993	6.993	0.000	3052493	50.0	50.8	
1	7.489	7.489	0.000	1885624	50.0	50.2	
1	7.929	7.929	0.000	4026393	50.0	50.4	
1	8.319	8.319	0.000	1831626	50.0	50.6	
		Average of Peak Amounts =				50.7	
2	6.650	6.646	0.004	8418682	50.0	52.2	
2	7.116	7.116	0.000	12242650	50.0	51.8	
2	7.646	7.646	0.000	7400170	50.0	52.4	
2	8.013	8.013	0.000	16246619	50.0	51.8	
2	8.516	8.516	0.000	12553559	50.0	52.0	
		Average of Peak Amounts =				52.0	
						RPD = 2.58	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1981347	2.50	2.56	
2	10.183	10.186	-0.003	8427351	2.50	2.61	
						RPD = 1.72	
S 8 Polychlorinated biphenyls, Total							
1						101.6	
2						103.3	
						RPD = 1.59	

Reagents:

AR_1660_L2_00030	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

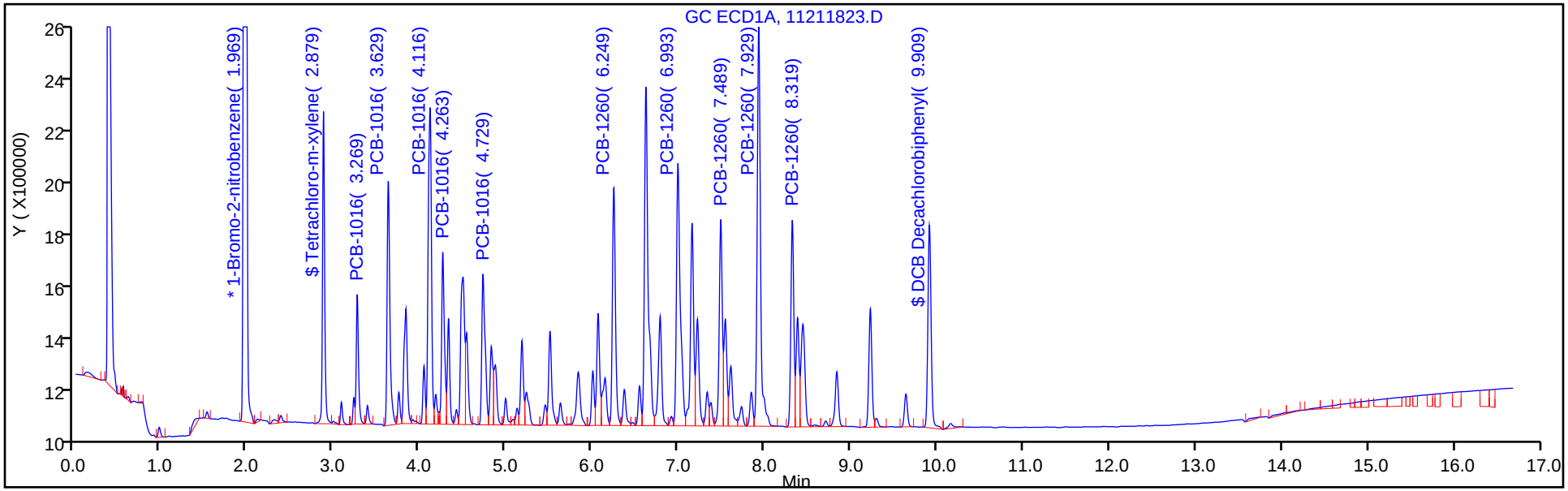
Report Date: 23-Nov-2018 11:02:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

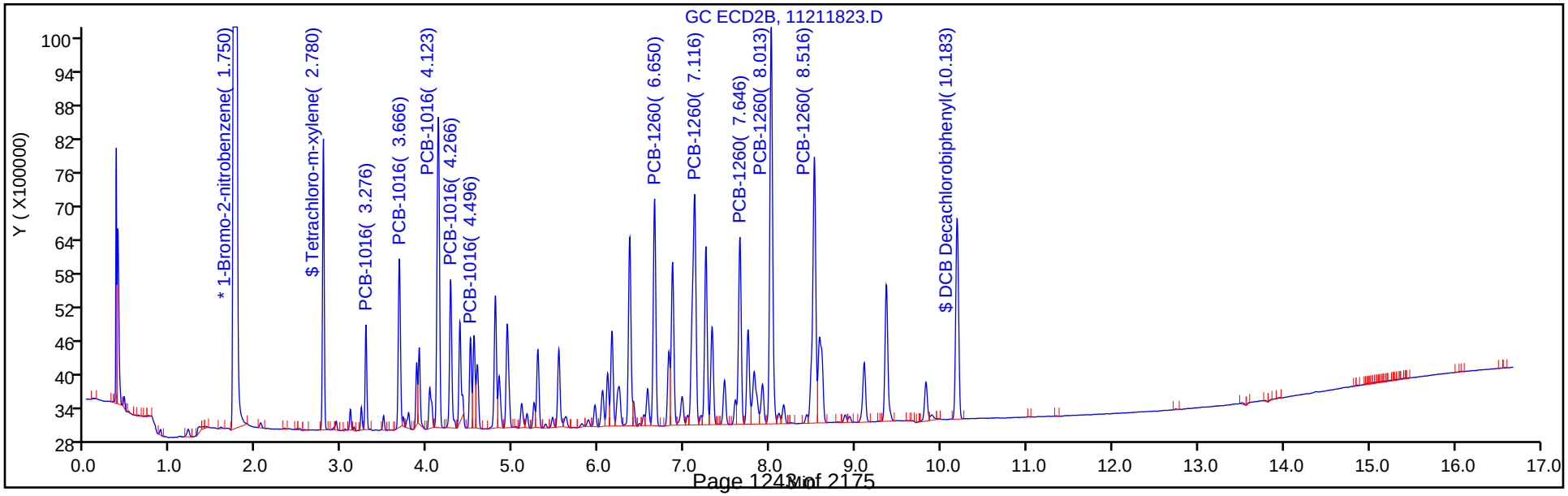
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D

Injection Date:	21-Nov-2018 16:30:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21660			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D
Lims ID: STDL11660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 16:51:56 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11660
Misc. Info.: 280-0076428-024
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:40 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	33056810	1000.0	1000.0	
2	1.749	1.746	0.003	183948370	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	998558	1.25	1.26	
2	2.779	2.780	-0.001	3780517	1.25	1.04	
						RPD = 19.58	
1 PCB-1016							
1	3.272	3.269	0.003	469132	25.0	18.7	
1	3.632	3.633	-0.001	1080310	25.0	19.2	
1	4.116	4.116	0.000	1562445	25.0	23.1	
1	4.262	4.263	-0.001	734649	25.0	20.6	
1	4.729	4.729	0.000	784034	25.0	21.6	
		Average of Peak Amounts =				20.6	
2	3.276	3.276	0.000	1402102	25.0	19.3	
2	3.666	3.666	0.000	2975533	25.0	20.4	
2	4.122	4.123	-0.001	6206319	25.0	20.7	
2	4.266	4.266	0.000	2787481	25.0	20.5	
2	4.499	4.496	0.003	1494252	25.0	18.9	
		Average of Peak Amounts =				19.9	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	1127159	25.0	21.2	
1	6.992	6.993	-0.001	1550296	25.0	23.3	
1	7.489	7.489	0.000	988085	25.0	22.3	
1	7.929	7.929	0.000	2054328	25.0	23.7	
1	8.319	8.319	0.000	929879	25.0	23.8	
		Average of Peak Amounts =				22.9	
2	6.649	6.646	0.003	4471690	25.0	20.0	
2	7.116	7.116	0.000	6532137	25.0	20.5	
2	7.646	7.646	0.000	3887676	25.0	20.3	
2	8.012	8.013	-0.001	8601587	25.0	20.6	
2	8.516	8.516	0.000	6657019	25.0	20.6	
		Average of Peak Amounts =				20.4	
						RPD = 11.35	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1072007	1.25	1.06	
2	10.186	10.186	0.000	4494073	1.25	0.99	
						RPD = 6.04	
S 8 Polychlorinated biphenyls, Total							
1						43.5	
2						40.4	
						RPD = 7.49	

Reagents:

AR_1660_L1_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

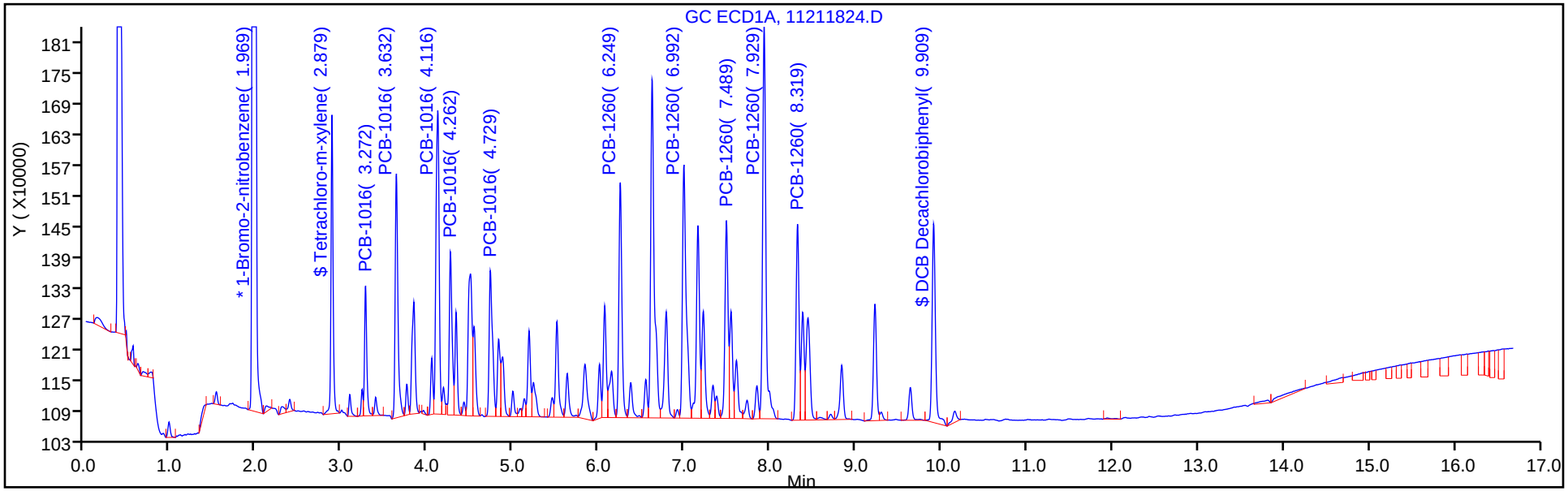
Report Date: 23-Nov-2018 11:02:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

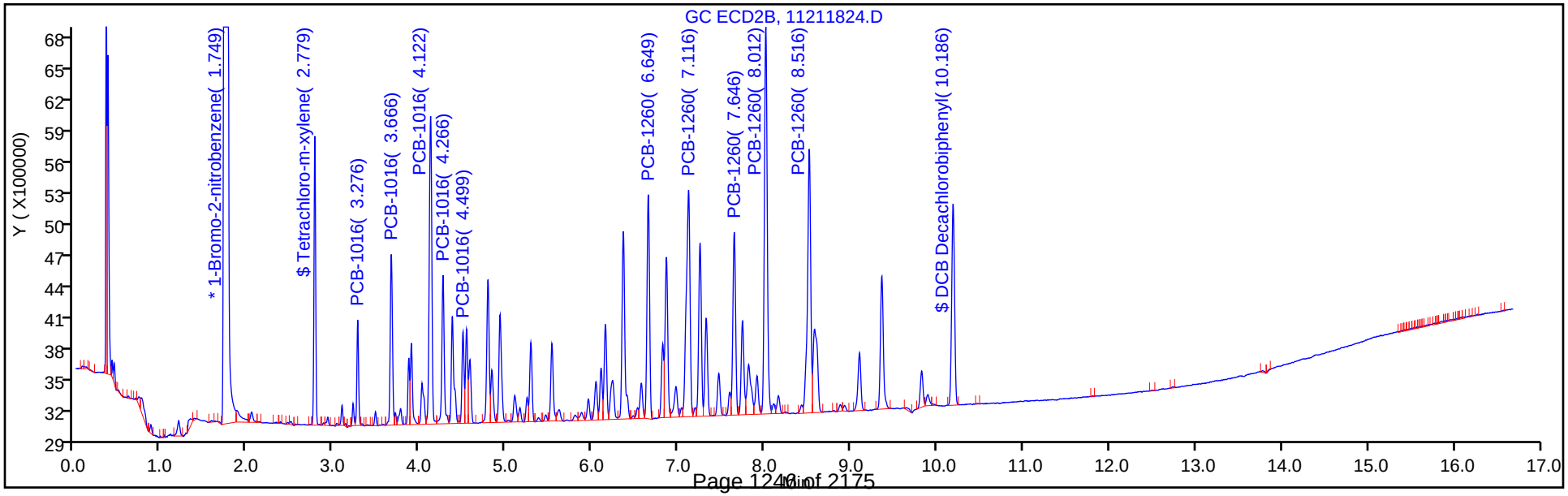
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D

Injection Date:	21-Nov-2018 16:51:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11660			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34387

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.3049 0.2163	0.2896 0.2064	0.2740	0.2437	0.2260	Lin1	3.5264	0.2121							0.9970		0.9900
PCB-1016 Peak 2	0.6470 0.4433	0.5905 0.4244	0.5467	0.5045	0.4789	Lin1	7.2549	0.4381							0.9960		0.9900
PCB-1016 Peak 3	1.3496 0.9844	1.2699 0.9485	1.1896	1.0957	1.0589	Lin1	13.573	0.9762							0.9970		0.9900
PCB-1016 Peak 4	0.6061 0.4233	0.5529 0.4026	0.5194	0.4769	0.4632	Lin1	6.5676	0.4186							0.9960		0.9900
PCB-1016 Peak 5	0.3249 0.2311	0.3122 0.2159	0.2916	0.2573	0.2435	Lin1	3.8771	0.2247							0.9960		0.9900
PCB-1260 Peak 1	0.9724 0.7264	0.9503 0.7051	0.8914	0.8027	0.7767	Lin1	9.8584	0.7218							0.9970		0.9900
PCB-1260 Peak 2	1.4204 1.0776	1.3819 1.0496	1.3022	1.1863	1.1505	Lin1	13.516	1.0728							0.9980		0.9900
PCB-1260 Peak 3	0.8454 0.6438	0.8353 0.6328	0.7807	0.7101	0.6873	Lin1	8.0530	0.6435							0.9980		0.9900
PCB-1260 Peak 4	1.8704 1.4466	1.8339 1.4133	1.7362	1.5898	1.5448	Lin1	16.988	1.4435							0.9980		0.9900
PCB-1260 Peak 5	1.4476 1.1043	1.4170 1.0830	1.3320	1.2111	1.1862	Lin1	13.444	1.1040							0.9980		0.9900
Tetrachloro-m-xylene	16.442 12.724	15.929 12.252	15.140	13.834	13.322	Lin1	7.5033	12.555							0.9980		0.9900
DCB Decachlorobiphenyl	19.545 14.374	19.026 14.035	17.869	15.964	15.441	Lin1	10.184	14.328							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34387

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Lin1	1402102 28324629	2565446 35638141	4799160	10752270	18899868	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 2	BNB	Lin1	2975533 58050459	5231349 73285982	9573999	22260570	40057019	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 3	BNB	Lin1	6206319 128903407	11249839 163781976	20834280	48351201	88563385	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 4	BNB	Lin1	2787481 55437372	4898205 69518646	9095859	21045310	38741347	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 5	BNB	Lin1	1494252 30262522	2765621 37279827	5107027	11353500	20361835	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 1	BNB	Lin1	4471690 95127310	8418682 121750112	15611005	35419484	64958906	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 2	BNB	Lin1	6532137 141113456	12242650 181248886	22806129	52349958	96225163	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 3	BNB	Lin1	3887676 84305248	7400170 109270203	13672887	31335455	57482127	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 4	BNB	Lin1	8601587 189441684	16246619 244056914	30406302	70151512	129198578	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 5	BNB	Lin1	6657019 144616476	12553559 187015797	23327598	53442743	99208427	25.0 750	50.0 1000	100	250	500
Tetrachloro-m-xylene	BNB	Lin1	3780517 83308843	7055763 105788700	13257502	30523746	55710908	1.25 37.5	2.50 50.0	5.00	12.5	25.0
DCB Decachlorobiphenyl	BNB	Lin1	4494073 94115340	8427351 121182268	15646900	35221995	64572494	1.25 37.5	2.50 50.0	5.00	12.5	25.0

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D
Lims ID: STDL71660
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 14:44:45 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71660
Misc. Info.: 280-0076428-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:22 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:26:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30929643	1000.0	1000.0	
2	1.746	1.749	-0.003	172682643	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	40504428	50.0	49.8	
2	2.776	2.780	-0.004	105788700	50.0	48.2	
						RPD = 3.20	
1 PCB-1016							
1	3.270	3.269	0.001	12255500	1000.0	928.2	
1	3.633	3.633	0.000	29138313	1000.0	945.4	
1	4.116	4.116	0.000	55680903	1000.0	970.3	
1	4.263	4.263	0.000	22835416	1000.0	950.7	
1	4.730	4.729	0.001	25166398	1000.0	968.1	
		Average of Peak Amounts =				952.5	
2	3.276	3.276	0.000	35638141	1000.0	956.5	
2	3.666	3.666	0.000	73285982	1000.0	952.1	
2	4.123	4.123	0.000	163781976	1000.0	957.7	
2	4.266	4.266	0.000	69518646	1000.0	946.1	
2	4.496	4.496	0.000	37279827	1000.0	943.6	
		Average of Peak Amounts =				951.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	34751926	1000.0	973.7	
1	6.993	6.993	0.000	54752979	1000.0	988.5	
1	7.490	7.489	0.001	32252970	1000.0	984.6	
1	7.930	7.929	0.001	73881863	1000.0	991.0	
1	8.320	8.319	0.001	33747429	1000.0	993.7	
		Average of Peak Amounts =				986.3	
2	6.650	6.646	0.004	121750112	1000.0	963.1	
2	7.116	7.116	0.000	181248886	1000.0	965.7	
2	7.646	7.646	0.000	109270203	1000.0	970.8	
2	8.013	8.013	0.000	244056914	1000.0	967.3	
2	8.516	8.516	0.000	187015797	1000.0	968.8	
		Average of Peak Amounts =				967.2	
						RPD = 1.96	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	30062336	50.0	48.6	
2	10.186	10.186	0.000	121182268	50.0	48.3	
						RPD = 0.69	
S 8 Polychlorinated biphenyls, Total							
1						1938.9	
2						1918.4	
						RPD = 1.06	

Reagents:

AR_1660_L7_00026	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

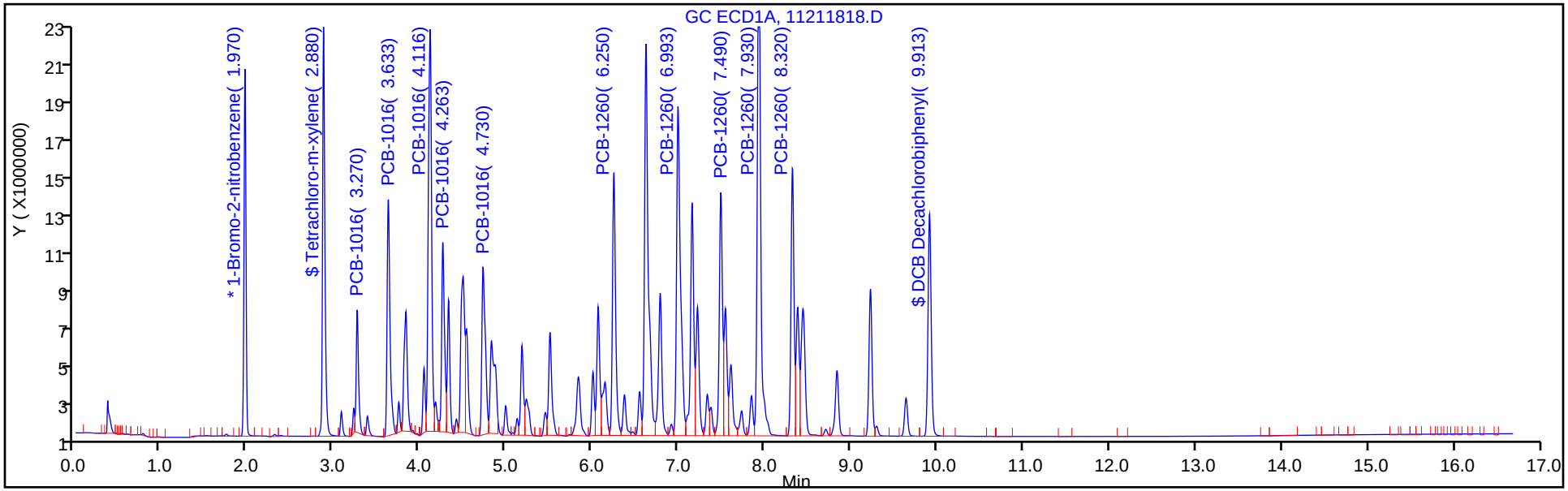
Report Date: 23-Nov-2018 11:02:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

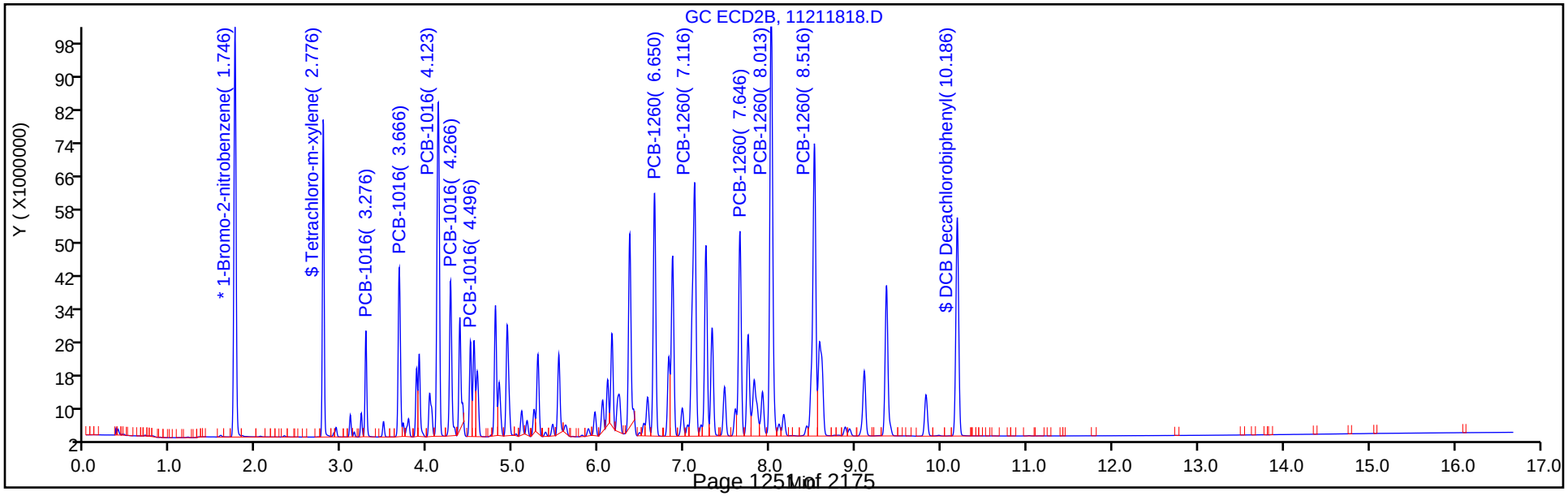
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D

Injection Date:	21-Nov-2018 14:44:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71660			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D
Lims ID: STDL61660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 15:05:56 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61660
Misc. Info.: 280-0076428-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:25 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:02:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31573792	1000.0	1000.0	
2	1.749	1.749	0.000	174603036	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	31159991	37.5	37.5	
2	2.779	2.780	-0.001	83308843	37.5	37.4	
						RPD = 0.34	
1 PCB-1016							
1	3.272	3.269	0.003	10292626	750.0	760.9	
1	3.632	3.633	-0.001	23509757	750.0	744.3	
1	4.118	4.116	0.002	43992946	750.0	750.5	
1	4.265	4.263	0.002	18389026	750.0	748.3	
1	4.732	4.729	0.003	19946184	750.0	750.1	
		Average of Peak Amounts =				750.8	
2	3.275	3.276	-0.001	28324629	750.0	748.3	
2	3.665	3.666	-0.001	58050459	750.0	742.3	
2	4.122	4.123	-0.001	128903407	750.0	742.4	
2	4.265	4.266	-0.001	55437372	750.0	742.9	
2	4.499	4.496	0.003	30262522	750.0	754.2	
		Average of Peak Amounts =				746.0	
						RPD = 0.64	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.249	-0.001	27023644	750.0	739.7	
1	6.992	6.993	-0.001	41930903	750.0	740.8	
1	7.488	7.489	-0.001	24646608	750.0	735.5	
1	7.932	7.929	0.003	56278619	750.0	738.9	
1	8.322	8.319	0.003	25627349	750.0	738.8	
		Average of Peak Amounts =				738.7	
2	6.649	6.646	0.003	95127310	750.0	741.1	
2	7.115	7.116	-0.001	141113456	750.0	740.7	
2	7.645	7.646	-0.001	84305248	750.0	737.8	
2	8.012	8.013	-0.001	189441684	750.0	739.9	
2	8.515	8.516	-0.001	144616476	750.0	738.0	
		Average of Peak Amounts =				739.5	
						RPD = 0.10	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	23519401	37.5	37.1	
2	10.185	10.186	-0.001	94115340	37.5	36.9	
						RPD = 0.55	
S 8 Polychlorinated biphenyls, Total							
1						1489.5	
2						1485.5	
						RPD = 0.27	

Reagents:

AR_1660_L6_00033	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

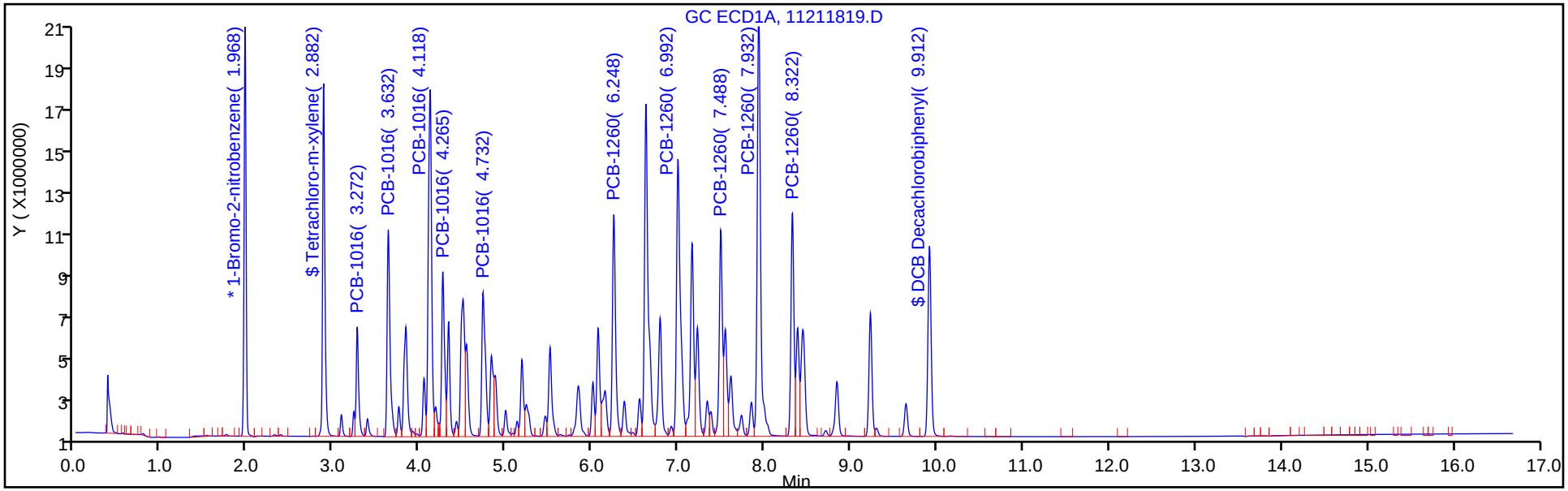
Report Date: 23-Nov-2018 11:02:26 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

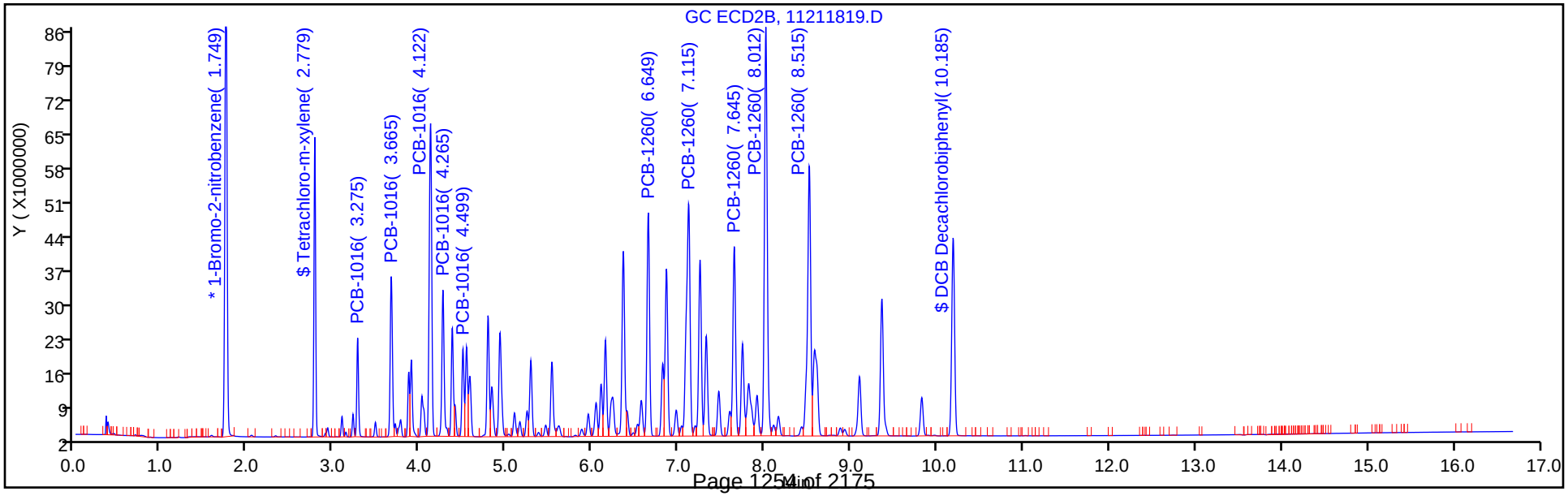
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D

Injection Date:	21-Nov-2018 15:05:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61660			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D
Lims ID: STDL51660
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 21-Nov-2018 15:27:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51660
Misc. Info.: 280-0076428-020
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:27 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29769998	1000.0	1000.0	
2	1.746	1.746	0.000	167274345	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	19882681	25.0	25.4	
2	2.780	2.780	0.000	55710908	25.0	25.9	
						RPD = 1.91	
1 PCB-1016							M
1	3.269	3.269	0.000	6801886	500.0	528.8	
1	3.633	3.633	0.000	15989031	500.0	532.9	
1	4.116	4.116	0.000	28999155	500.0	523.9	
1	4.263	4.263	0.000	12379838	500.0	531.9	
1	4.729	4.729	0.000	12951678	500.0	514.4	
		Average of Peak Amounts =				526.4	
2	3.276	3.276	0.000	18899868	500.0	516.1	
2	3.666	3.666	0.000	40057019	500.0	530.0	M
2	4.123	4.123	0.000	88563385	500.0	528.5	M
2	4.266	4.266	0.000	38741347	500.0	537.6	M
2	4.496	4.496	0.000	20361835	500.0	524.5	M
		Average of Peak Amounts =				527.3	
						RPD = 0.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	18040094	500.0	521.2	
1	6.993	6.993	0.000	27649105	500.0	517.2	
1	7.489	7.489	0.000	16493165	500.0	520.3	
1	7.929	7.929	0.000	37154269	500.0	516.7	
1	8.319	8.319	0.000	16886305	500.0	515.7	
		Average of Peak Amounts =				518.2	
2	6.646	6.646	0.000	64958906	500.0	524.4	
2	7.116	7.116	0.000	96225163	500.0	523.6	
2	7.646	7.646	0.000	57482127	500.0	521.5	
2	8.013	8.013	0.000	129198578	500.0	523.3	
2	8.516	8.516	0.000	99208427	500.0	525.0	
		Average of Peak Amounts =				523.6	
						RPD = 1.02	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	15649907	25.0	26.0	
2	10.186	10.186	0.000	64572494	25.0	26.2	
						RPD = 0.81	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

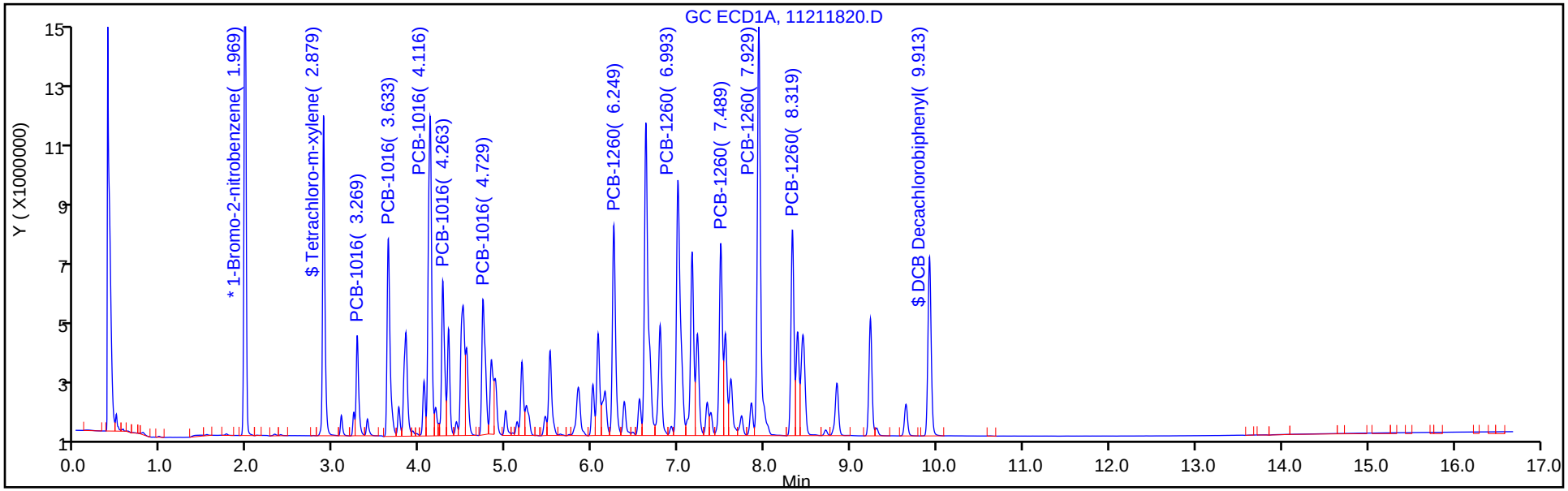
Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

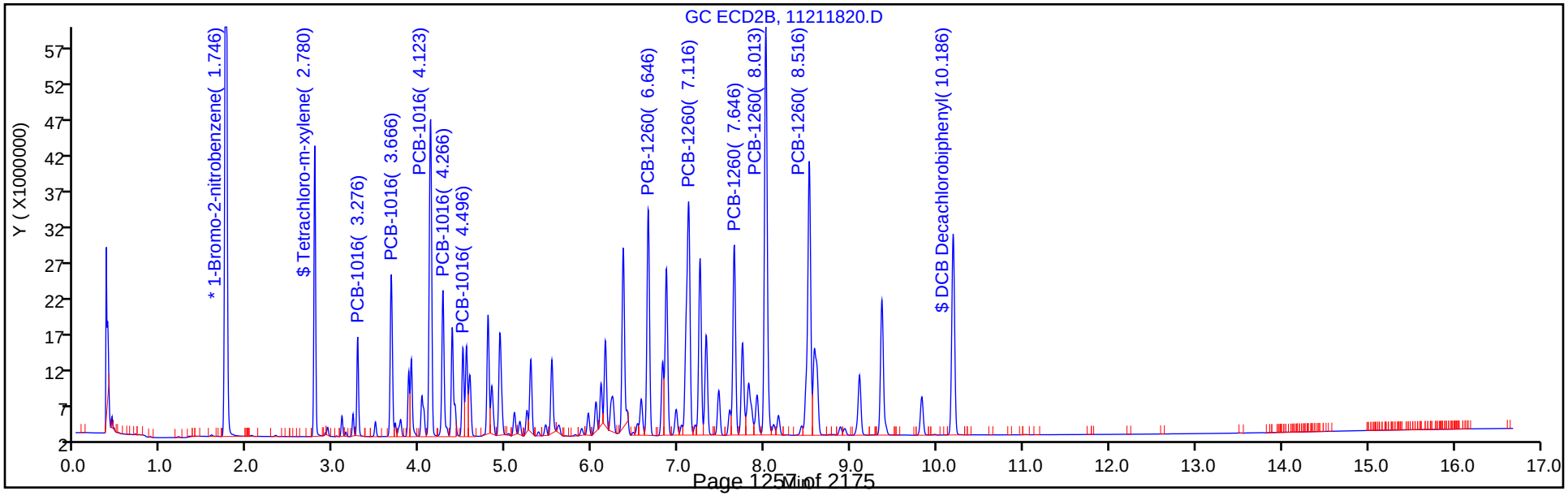
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date:	21-Nov-2018 15:27:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51660			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date: 21-Nov-2018 15:27:09 Instrument ID: SGC_J

Lims ID: STDL51660

Client ID:

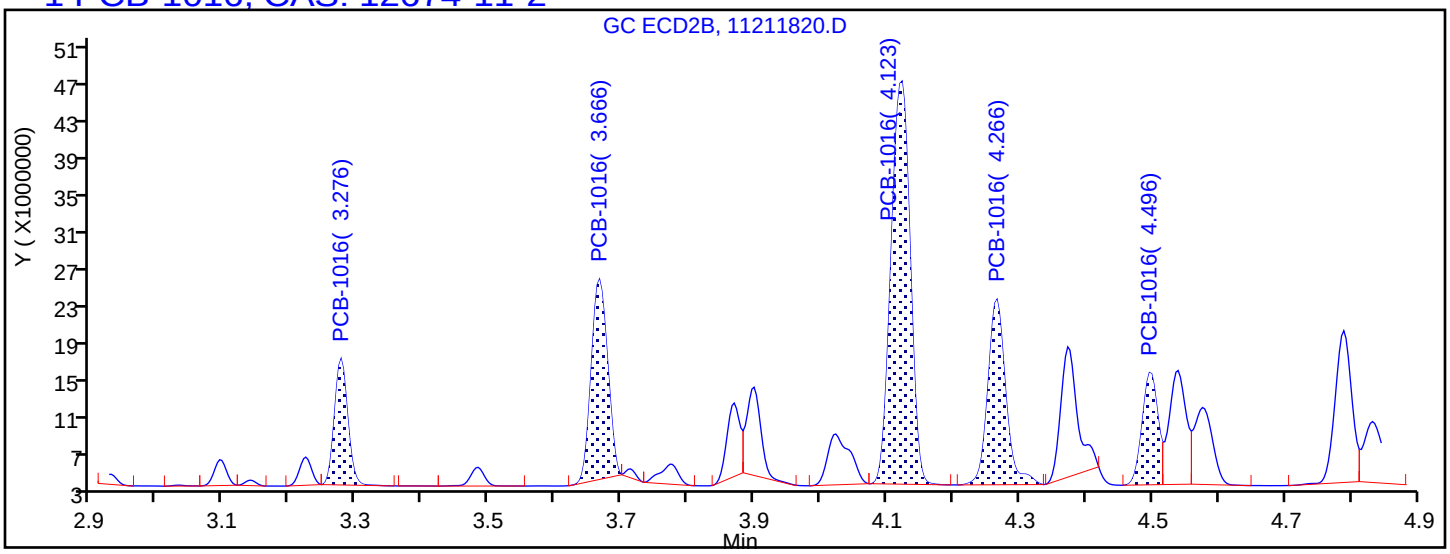
Operator ID: ALS ALS Bottle#: 20 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

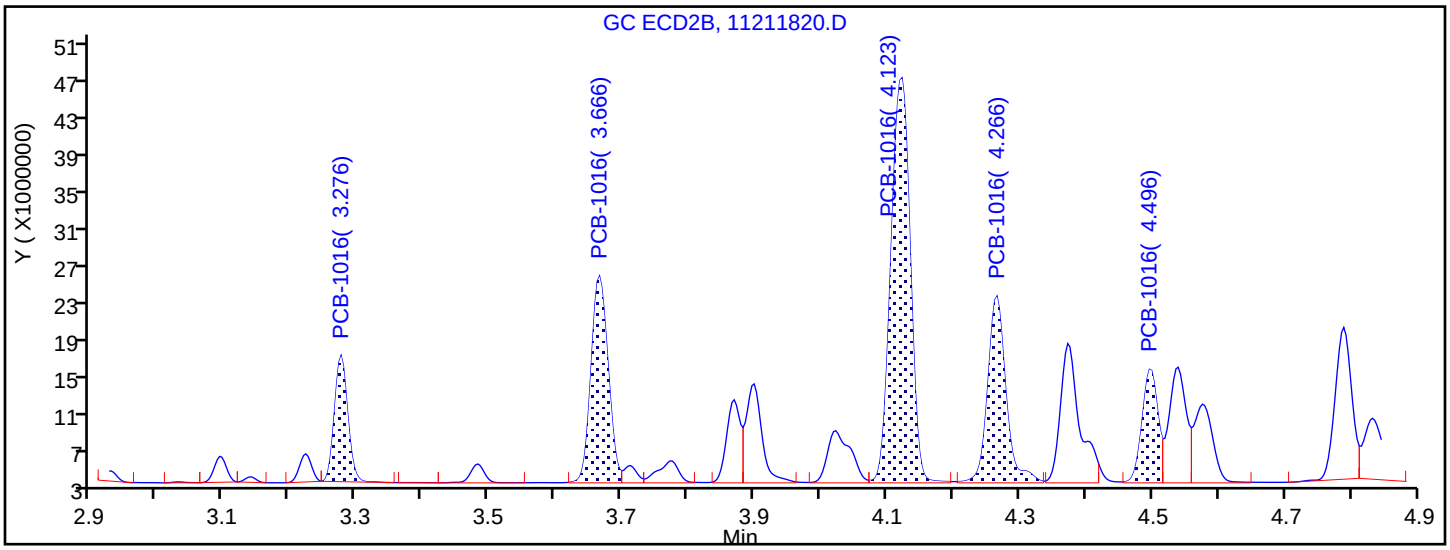
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.276	Response = 18899868	
3.666	Response = 37059133	
4.123	Response = 87084066	
4.266	Response = 37557635	
4.496	Response = 19881812	



Manual Integration Results

3.276	Response = 18899868	
3.666	Response = 40057019	M
4.123	Response = 88563385	M
4.266	Response = 38741347	M
4.496	Response = 20361835	M

Reviewer: patadiab, 23-Nov-2018 10:03:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D
Lims ID: STDL41660
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 15:48:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41660
Misc. Info.: 280-0076428-021
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:30 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31460203	1000.0	1000.0	
2	1.749	1.746	0.003	176509413	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	10100542	12.5	12.3	
2	2.779	2.780	-0.001	30523746	12.5	13.2	
						RPD = 6.95	
1 PCB-1016							
1	3.272	3.269	0.003	3816191	250.0	273.7	
1	3.632	3.633	-0.001	8778351	250.0	270.1	
1	4.119	4.116	0.003	14886212	250.0	253.2	
1	4.265	4.263	0.002	6578902	250.0	263.4	
1	4.732	4.729	0.003	7068443	250.0	262.4	
		Average of Peak Amounts =				264.6	
2	3.275	3.276	-0.001	10752270	250.0	270.6	
2	3.665	3.666	-0.001	22260570	250.0	271.3	
2	4.122	4.123	-0.001	48351201	250.0	266.7	
2	4.265	4.266	-0.001	21045310	250.0	269.2	
2	4.499	4.496	0.003	11353500	250.0	269.0	
		Average of Peak Amounts =				269.4	
						RPD = 1.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9650098	250.0	259.6	
1	6.992	6.993	-0.001	14238155	250.0	250.5	
1	7.489	7.489	0.000	8615850	250.0	254.1	
1	7.932	7.929	0.003	19166787	250.0	251.1	
1	8.322	8.319	0.003	8672757	250.0	249.7	
		Average of Peak Amounts =				253.0	
2	6.649	6.646	0.003	35419484	250.0	264.3	
2	7.115	7.116	-0.001	52349958	250.0	263.8	
2	7.645	7.646	-0.001	31335455	250.0	263.4	
2	8.012	8.013	-0.001	70151512	250.0	263.6	
2	8.515	8.516	-0.001	53442743	250.0	262.1	
		Average of Peak Amounts =				263.4	
						RPD = 4.04	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8405396	12.5	12.9	
2	10.185	10.186	-0.001	35221995	12.5	13.2	
						RPD = 2.14	
S 8 Polychlorinated biphenyls, Total							
1						517.6	
2						532.8	
						RPD = 2.90	

Reagents:

AR_1660_L4_00068	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

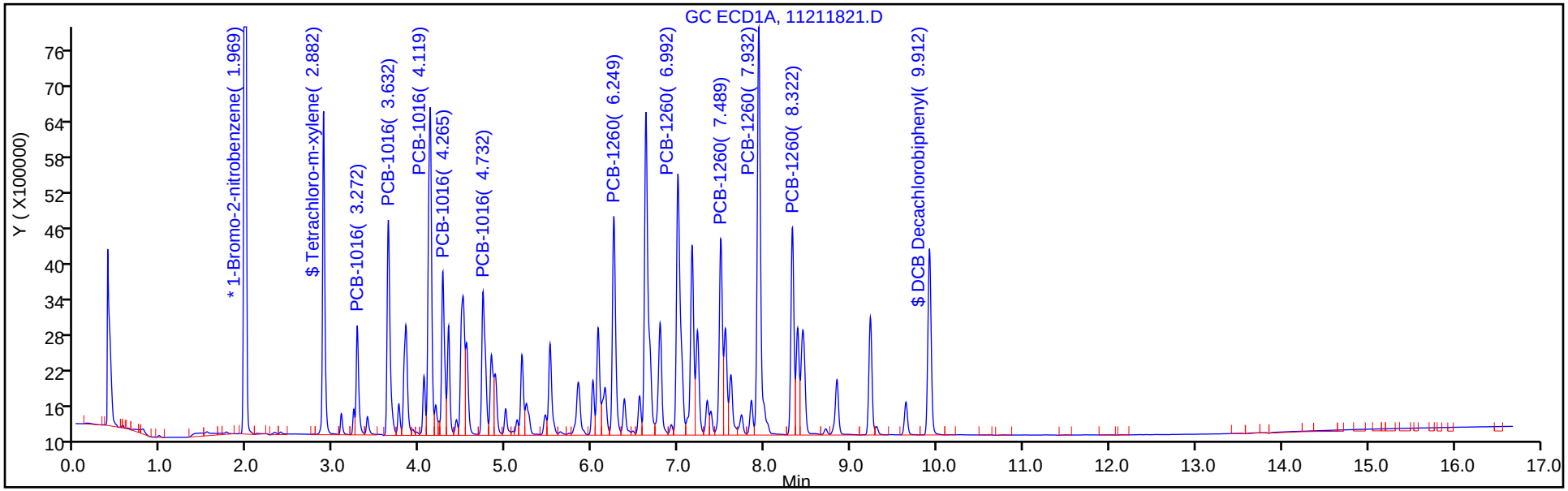
Report Date: 23-Nov-2018 11:02:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

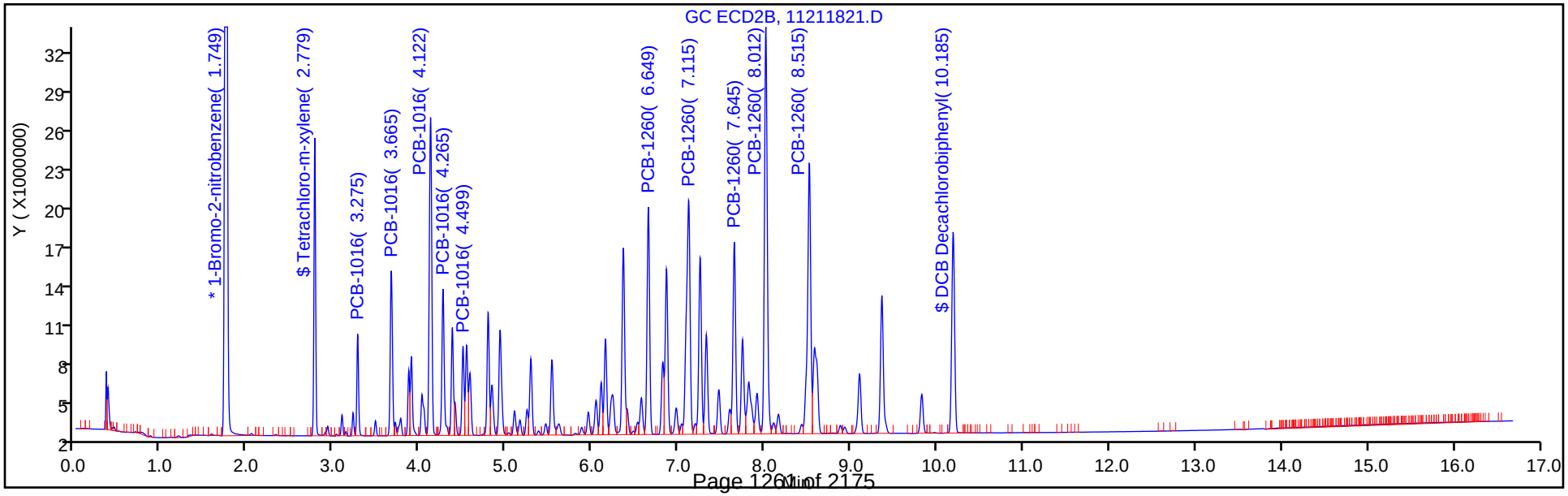
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D

Injection Date:	21-Nov-2018 15:48:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41660			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D
Lims ID: STDL31660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 16:09:34 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31660
Misc. Info.: 280-0076428-022
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:05:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31048095	1000.0	1000.0	
2	1.750	1.746	0.004	175133355	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	3964953	5.00	4.96	
2	2.780	2.780	0.000	13257502	5.00	5.43	
						RPD = 9.06	
1 PCB-1016							
1	3.269	3.269	0.000	1679350	100.0	113.7	
1	3.633	3.633	0.000	3824818	100.0	111.4	
1	4.116	4.116	0.000	6086050	100.0	103.5	
1	4.263	4.263	0.000	2807752	100.0	109.2	
1	4.729	4.729	0.000	2974460	100.0	107.9	
		Average of Peak Amounts =				109.1	
2	3.276	3.276	0.000	4799160	100.0	112.6	
2	3.666	3.666	0.000	9573999	100.0	108.2	
2	4.123	4.123	0.000	20834280	100.0	108.0	
2	4.266	4.266	0.000	9095859	100.0	108.4	
2	4.496	4.496	0.000	5107027	100.0	112.5	
		Average of Peak Amounts =				109.9	
						RPD = 0.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	4140653	100.0	108.0	
1	6.993	6.993	0.000	5923763	100.0	103.9	
1	7.489	7.489	0.000	3726238	100.0	108.0	
1	7.929	7.929	0.000	7859527	100.0	103.1	
1	8.319	8.319	0.000	3558044	100.0	102.7	
		Average of Peak Amounts =				105.1	
2	6.650	6.646	0.004	15611005	100.0	109.8	
2	7.116	7.116	0.000	22806129	100.0	108.8	
2	7.646	7.646	0.000	13672887	100.0	108.8	
2	8.013	8.013	0.000	30406302	100.0	108.5	
2	8.520	8.516	0.004	23327598	100.0	108.5	
		Average of Peak Amounts =				108.9	
						RPD = 3.50	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	3708204	5.00	5.46	
2	10.186	10.186	0.000	15646900	5.00	5.52	
						RPD = 1.19	
S 8 Polychlorinated biphenyls, Total							
1						214.3	
2						218.8	
						RPD = 2.10	

Reagents:

AR_1660_L3_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

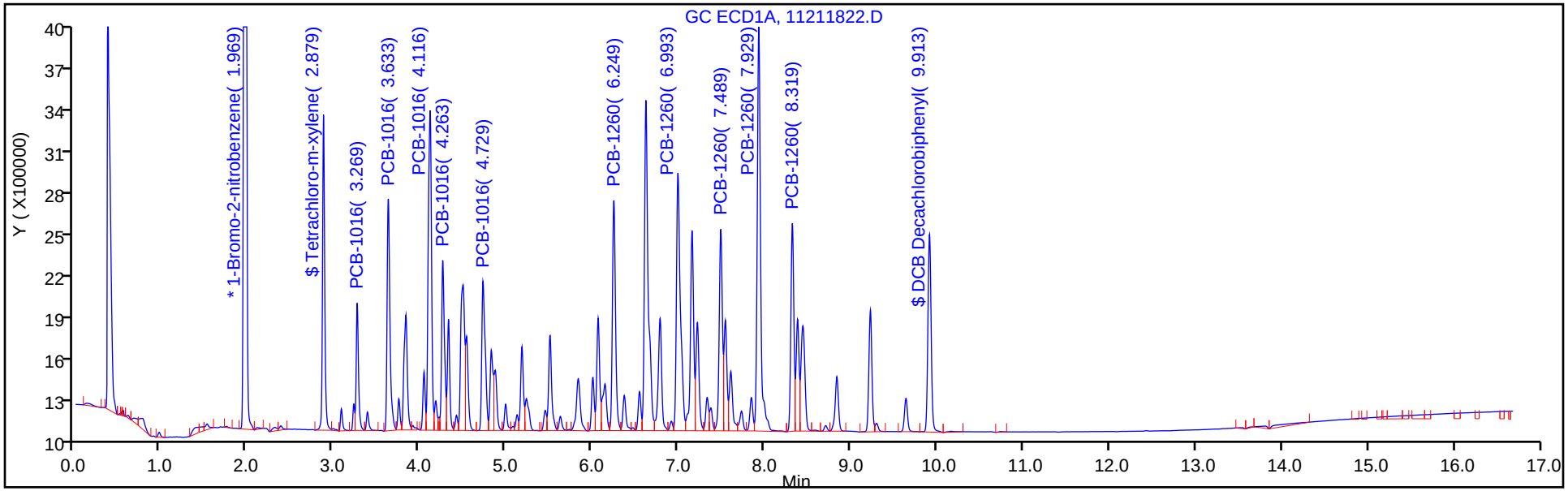
Report Date: 23-Nov-2018 11:02:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

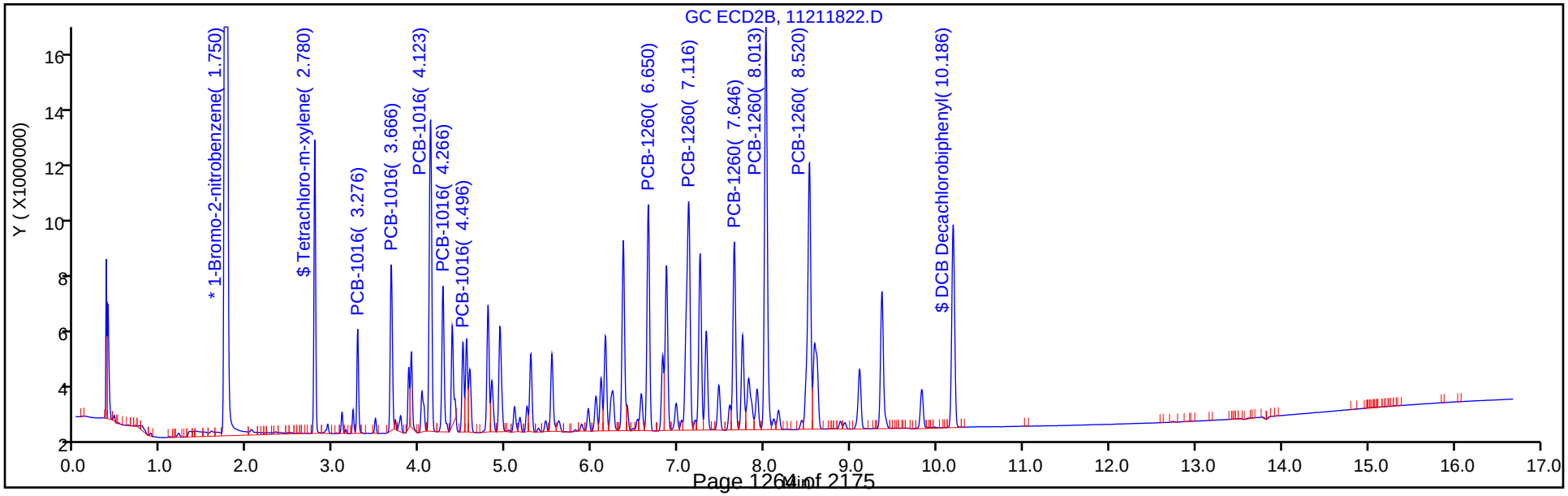
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D

Injection Date:	21-Nov-2018 16:09:34	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31660			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D
Lims ID: STDL21660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 16:30:45 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21660
Misc. Info.: 280-0076428-023
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:36 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31839217	1000.0	1000.0	
2	1.750	1.746	0.004	177179573	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	1996738	2.50	2.50	
2	2.780	2.780	0.000	7055763	2.50	2.57	
						RPD = 3.03	
1 PCB-1016							
1	3.269	3.269	0.000	883638	50.0	51.0	
1	3.629	3.633	-0.004	2058248	50.0	51.7	
1	4.116	4.116	0.000	3122897	50.0	50.5	
1	4.263	4.263	0.000	1447486	50.0	50.8	
1	4.729	4.729	0.000	1525625	50.0	50.6	
		Average of Peak Amounts =				50.9	
2	3.276	3.276	0.000	2565446	50.0	51.6	
2	3.666	3.666	0.000	5231349	50.0	50.8	
2	4.123	4.123	0.000	11249839	50.0	51.1	
2	4.266	4.266	0.000	4898205	50.0	50.4	
2	4.496	4.496	0.000	2765621	50.0	52.2	
		Average of Peak Amounts =				51.2	
						RPD = 0.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	2188444	50.0	51.5	
1	6.993	6.993	0.000	3052493	50.0	50.8	
1	7.489	7.489	0.000	1885624	50.0	50.2	
1	7.929	7.929	0.000	4026393	50.0	50.4	
1	8.319	8.319	0.000	1831626	50.0	50.6	
		Average of Peak Amounts =				50.7	
2	6.650	6.646	0.004	8418682	50.0	52.2	
2	7.116	7.116	0.000	12242650	50.0	51.8	
2	7.646	7.646	0.000	7400170	50.0	52.4	
2	8.013	8.013	0.000	16246619	50.0	51.8	
2	8.516	8.516	0.000	12553559	50.0	52.0	
		Average of Peak Amounts =				52.0	
						RPD = 2.58	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1981347	2.50	2.56	
2	10.183	10.186	-0.003	8427351	2.50	2.61	
						RPD = 1.72	
S 8 Polychlorinated biphenyls, Total							
1						101.6	
2						103.3	
						RPD = 1.59	

Reagents:

AR_1660_L2_00030	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

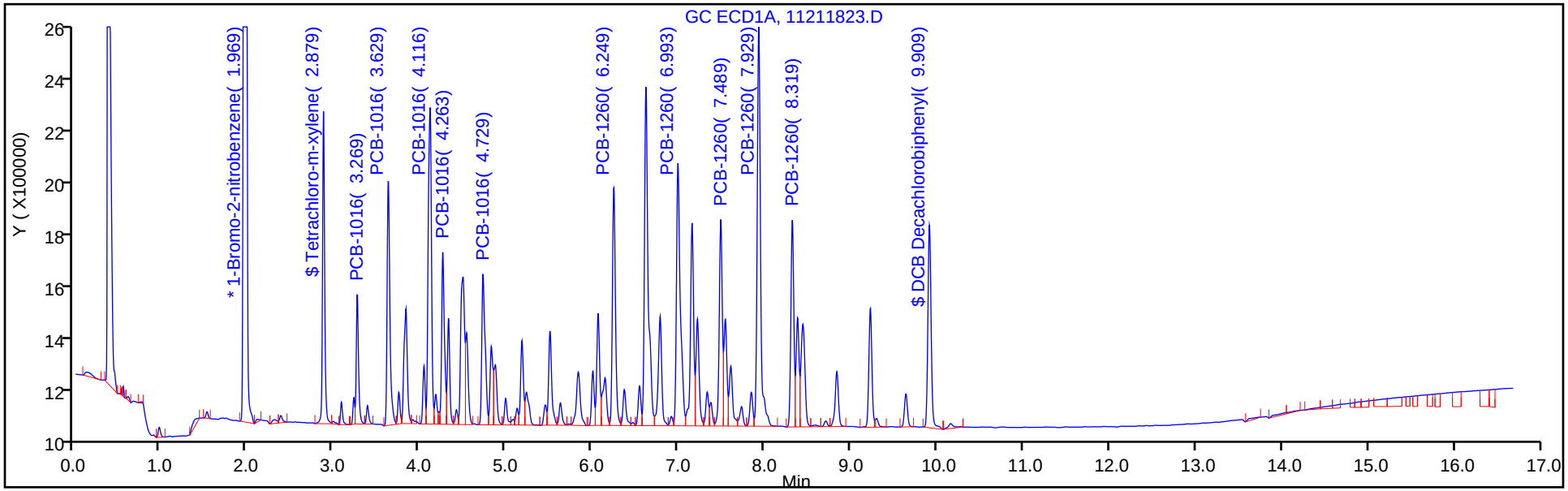
Report Date: 23-Nov-2018 11:02:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

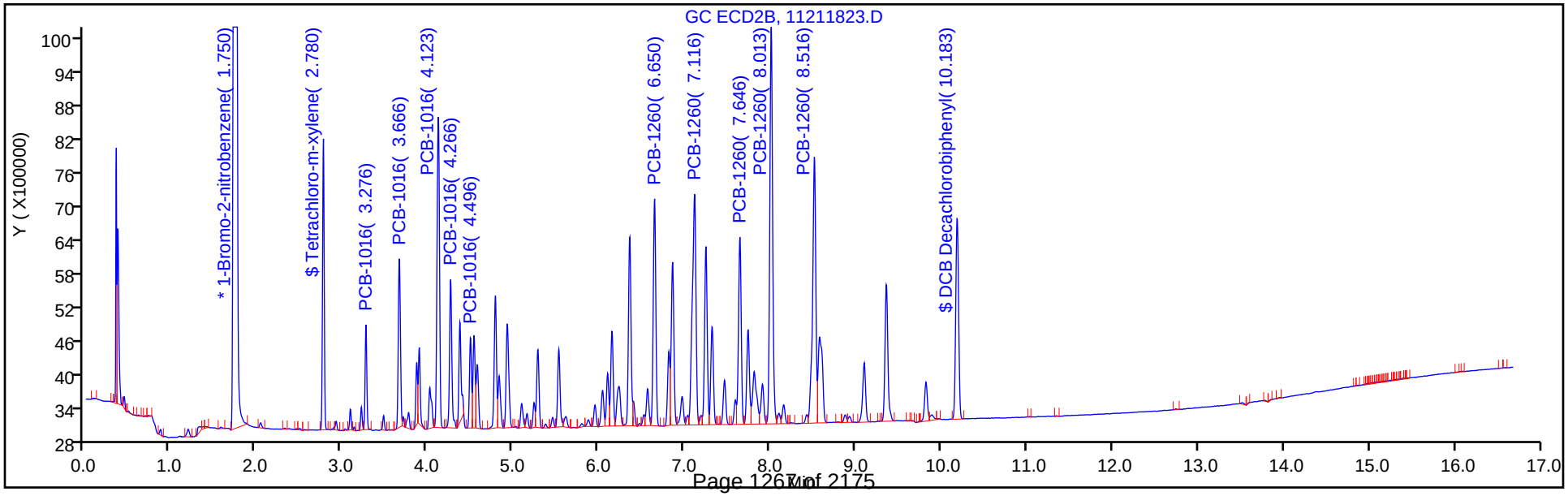
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D

Injection Date:	21-Nov-2018 16:30:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21660			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D
Lims ID: STDL11660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 16:51:56 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11660
Misc. Info.: 280-0076428-024
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:40 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	33056810	1000.0	1000.0	
2	1.749	1.746	0.003	183948370	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	998558	1.25	1.26	
2	2.779	2.780	-0.001	3780517	1.25	1.04	
						RPD = 19.58	
1 PCB-1016							
1	3.272	3.269	0.003	469132	25.0	18.7	
1	3.632	3.633	-0.001	1080310	25.0	19.2	
1	4.116	4.116	0.000	1562445	25.0	23.1	
1	4.262	4.263	-0.001	734649	25.0	20.6	
1	4.729	4.729	0.000	784034	25.0	21.6	
		Average of Peak Amounts =				20.6	
2	3.276	3.276	0.000	1402102	25.0	19.3	
2	3.666	3.666	0.000	2975533	25.0	20.4	
2	4.122	4.123	-0.001	6206319	25.0	20.7	
2	4.266	4.266	0.000	2787481	25.0	20.5	
2	4.499	4.496	0.003	1494252	25.0	18.9	
		Average of Peak Amounts =				19.9	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	1127159	25.0	21.2	
1	6.992	6.993	-0.001	1550296	25.0	23.3	
1	7.489	7.489	0.000	988085	25.0	22.3	
1	7.929	7.929	0.000	2054328	25.0	23.7	
1	8.319	8.319	0.000	929879	25.0	23.8	
		Average of Peak Amounts =				22.9	
2	6.649	6.646	0.003	4471690	25.0	20.0	
2	7.116	7.116	0.000	6532137	25.0	20.5	
2	7.646	7.646	0.000	3887676	25.0	20.3	
2	8.012	8.013	-0.001	8601587	25.0	20.6	
2	8.516	8.516	0.000	6657019	25.0	20.6	
		Average of Peak Amounts =				20.4	
						RPD = 11.35	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1072007	1.25	1.06	
2	10.186	10.186	0.000	4494073	1.25	0.99	
						RPD = 6.04	
S 8 Polychlorinated biphenyls, Total							
1						43.5	
2						40.4	
						RPD = 7.49	

Reagents:

AR_1660_L1_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

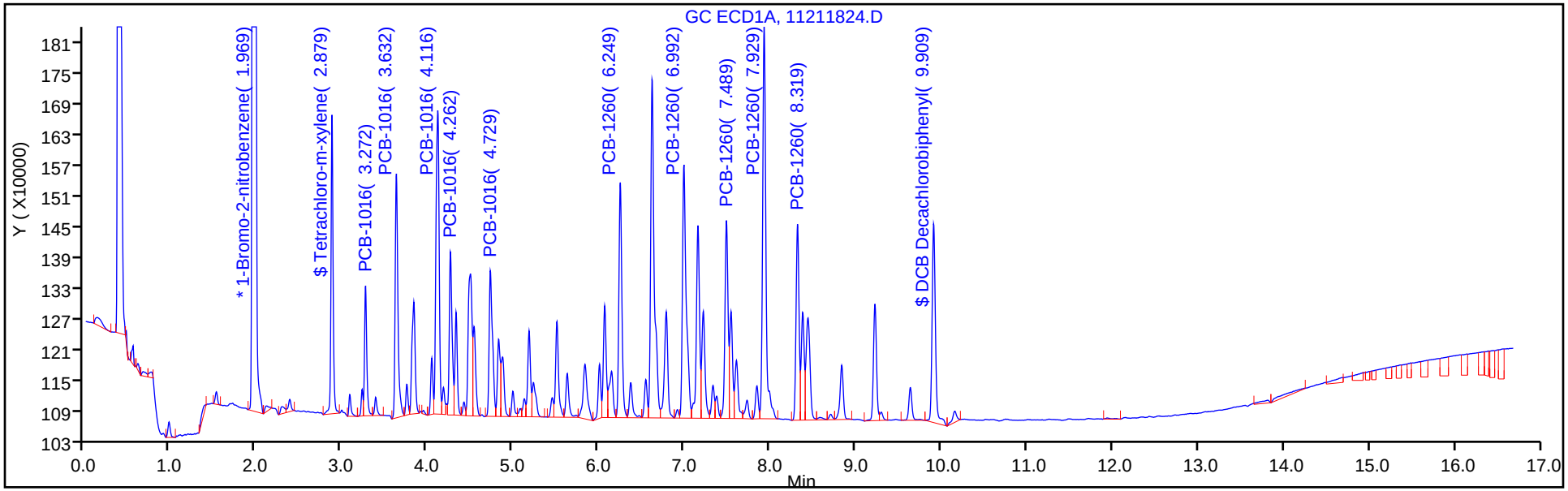
Report Date: 23-Nov-2018 11:02:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

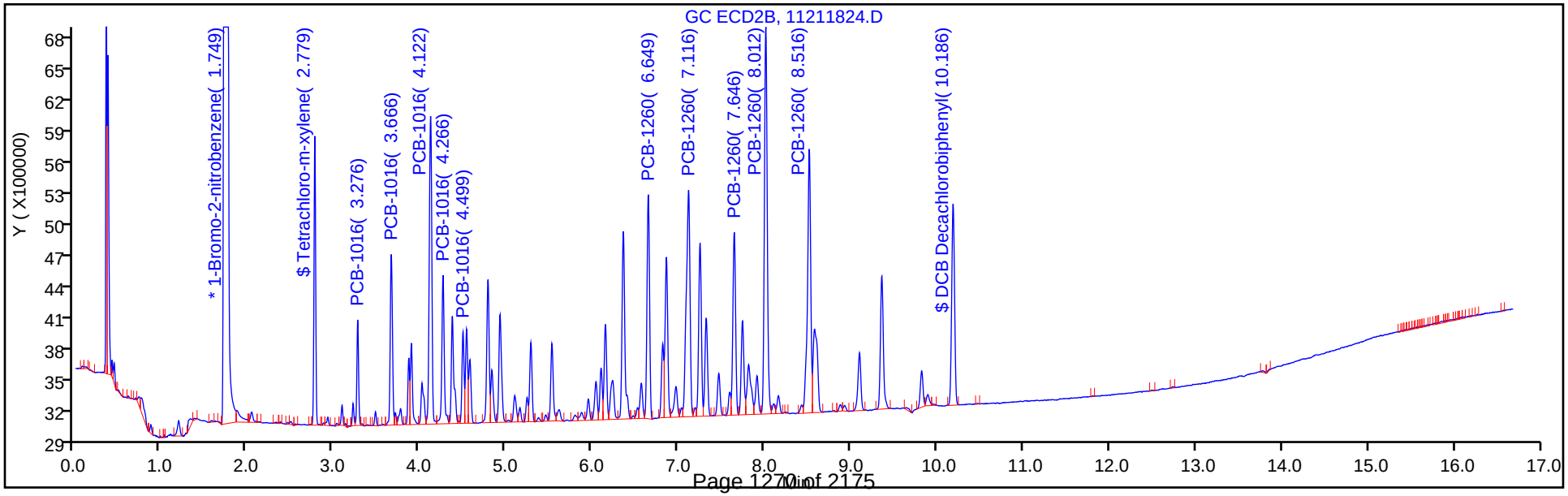
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D

Injection Date:	21-Nov-2018 16:51:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11660			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34390

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.2020 0.1716	0.2001 0.1576	0.1758	0.1799	0.1642	Lin1	1.4008	0.1631							0.9980		0.9900
PCB-1232 Peak 2	0.7316 0.5379	0.6621 0.4960	0.5963	0.5828	0.5382	Lin1	6.9182	0.5147							0.9970		0.9900
PCB-1232 Peak 3	0.8869 0.8293	0.8265 0.7752	0.7896	0.8158	0.7901	Lin1	1.9484	0.7944							0.9990		0.9900
PCB-1232 Peak 4	0.4237 0.3607	0.3807 0.3320	0.3740	0.3767	0.3499	Lin1	2.3547	0.3447							0.9980		0.9900
PCB-1232 Peak 5	0.4155 0.3609	0.3923 0.3303	0.3615	0.3738	0.3558	Lin1	2.2391	0.3450							0.9980		0.9900
PCB-1262 Peak 1	1.2460 0.9862	1.1306 0.9078	1.0330	1.0289	0.9612	Lin1	9.1979	0.9390							0.9980		0.9900
PCB-1262 Peak 2	1.9150 1.5416	1.7805 1.4315	1.5760	1.5898	1.5128	Lin1	13.088	1.4746							0.9990		0.9900
PCB-1262 Peak 3	1.6782 1.3722	1.5439 1.2785	1.3824	1.4086	1.3079	Lin1	10.443	1.3077							0.9990		0.9900
PCB-1262 Peak 4	3.2087 2.8651	2.9676 2.6722	2.6736	2.8308	2.7344	Lin1	10.149	2.7368							0.9990		0.9900
PCB-1262 Peak 5	1.0018 0.8715	0.9225 0.8216	0.8505	0.8771	0.8263	Lin1	4.1209	0.8355							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34390

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Lin1	145633 3825778	308483 4984840	547298	1392895	2583135	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 2	BNB	Lin1	527466 11992126	1020472 15689198	1856728	4511528	8464098	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 3	BNB	Lin1	639419 18488855	1273955 24520289	2458762	6315260	12426844	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 4	BNB	Lin1	305449 8040685	586726 10501101	1164474	2916425	5502198	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 5	BNB	Lin1	299569 8045853	604692 10446034	1125602	2893984	5595129	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 1	BNB	Lin1	898312 21984609	1742564 28715451	3216578	7964853	15117077	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 2	BNB	Lin1	1380613 34368147	2744291 45278660	4907514	12307287	23792647	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 3	BNB	Lin1	1209897 30590995	2379701 40438292	4304645	10904443	20569577	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 4	BNB	Lin1	2313295 63873370	4573994 84521517	8325389	21913797	43005230	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 5	BNB	Lin1	722269 19427531	1421934 25986514	2648440	6789639	12995186	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D
Lims ID: STDL73262
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 17:13:09 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL73262
Misc. Info.: 280-0076428-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:44 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:18:47

	Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
*	17 1-Bromo-2-nitrobenzene							
	1	1.970	1.969	0.001	31630227	1000.0	1000.0	
	2	1.747	1.746	0.001	177174681	1000.0	1000.0	
							RPD = 0.00	
	7 PCB-1232							M
	1	3.086	3.088	-0.002	4984840	1000.0	957.8	
	1	3.270	3.271	-0.001	15689198	1000.0	950.2	
	1	4.116	4.118	-0.002	24520289	1000.0	973.4	
	1	4.263	4.264	-0.001	10501101	1000.0	956.2	
	1	4.730	4.731	-0.001	10446034	1000.0	950.9	M
			Average of Peak Amounts =				957.7	
	2	3.277	3.275	0.002	43153197	1000.0	951.3	M
	2	3.667	3.665	0.002	37154008	1000.0	967.1	M
	2	4.120	4.121	-0.001	76218445	1000.0	956.2	M
	2	4.267	4.265	0.002	33438438	1000.0	958.6	M
	2	4.927	4.928	-0.001	28051936	1000.0	956.8	M
			Average of Peak Amounts =				958.0	
							RPD = 0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.250	6.248	0.002	28715451	1000.0	957.0	M
1	7.156	7.154	0.002	45278660	1000.0	961.9	M
1	7.490	7.488	0.002	40438292	1000.0	969.7	M
1	7.930	7.931	-0.001	84521517	1000.0	972.7	M
1	8.320	8.321	-0.001	25986514	1000.0	978.4	M
		Average of Peak Amounts =				967.9	
2	6.647	6.648	-0.001	98230933	1000.0	943.5	M
2	7.247	7.248	-0.001	138859883	1000.0	944.4	
2	7.647	7.645	0.002	137990458	1000.0	944.0	
2	8.010	8.011	-0.001	270071150	1000.0	945.2	
2	8.517	8.515	0.002	204325846	1000.0	947.3	
		Average of Peak Amounts =				944.9	
						RPD = 2.41	
S 8 Polychlorinated biphenyls, Total							
1						1925.6	
2						1902.8	
						RPD = 1.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

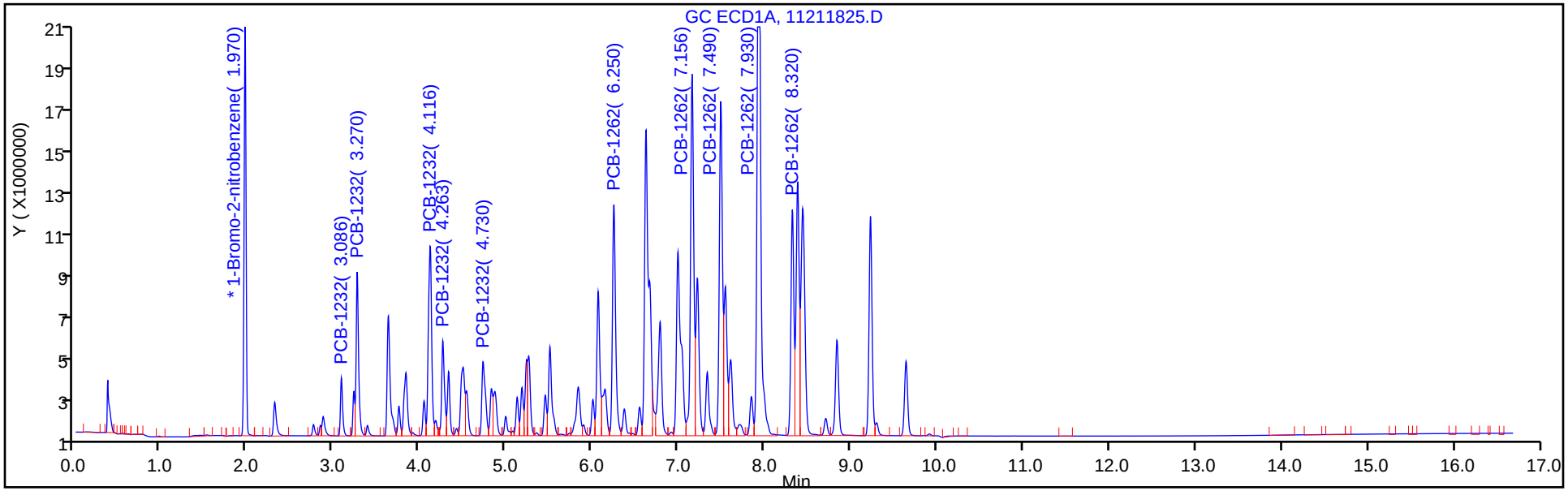
Report Date: 23-Nov-2018 11:02:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

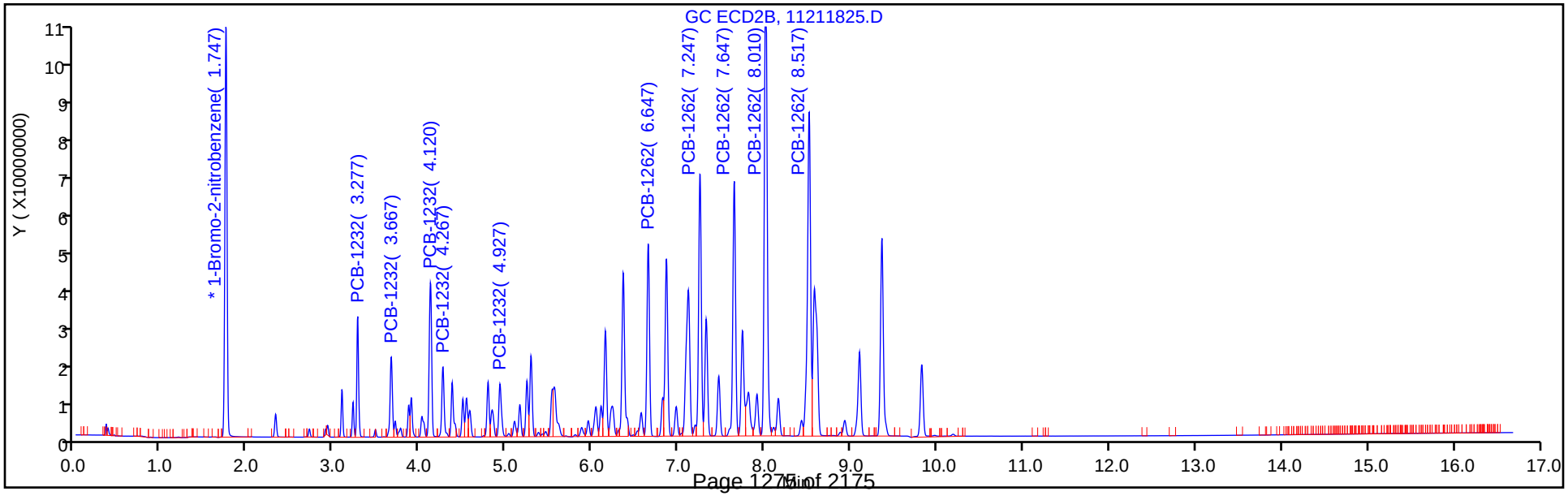
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date:	21-Nov-2018 17:13:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL73262			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

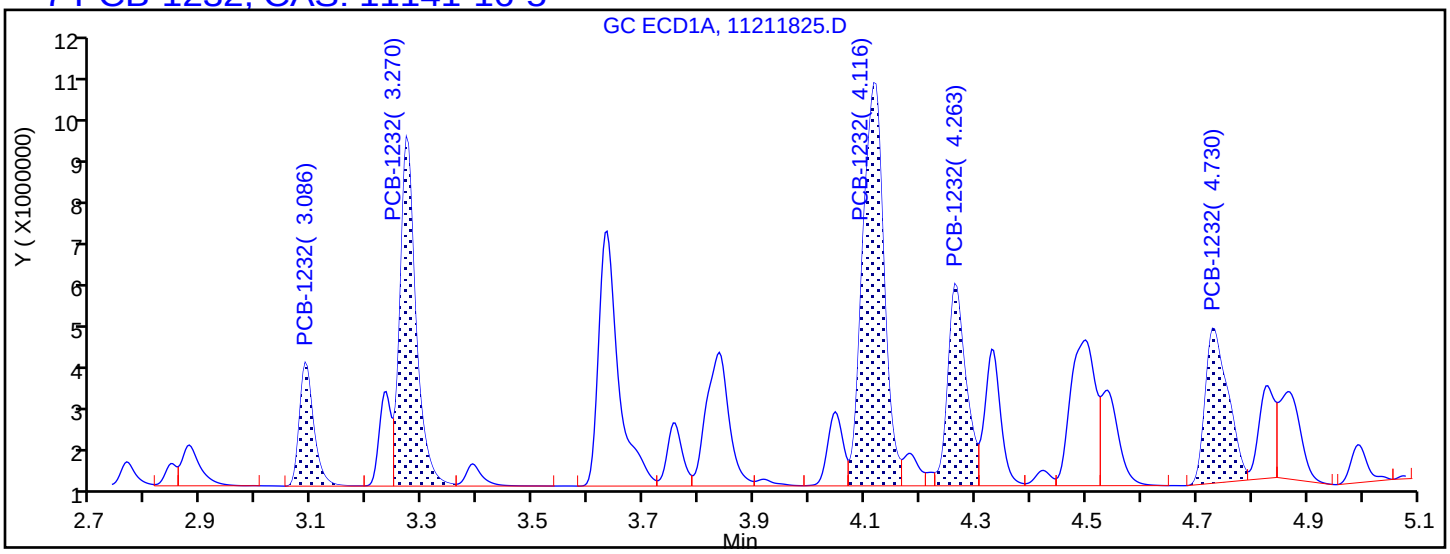
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

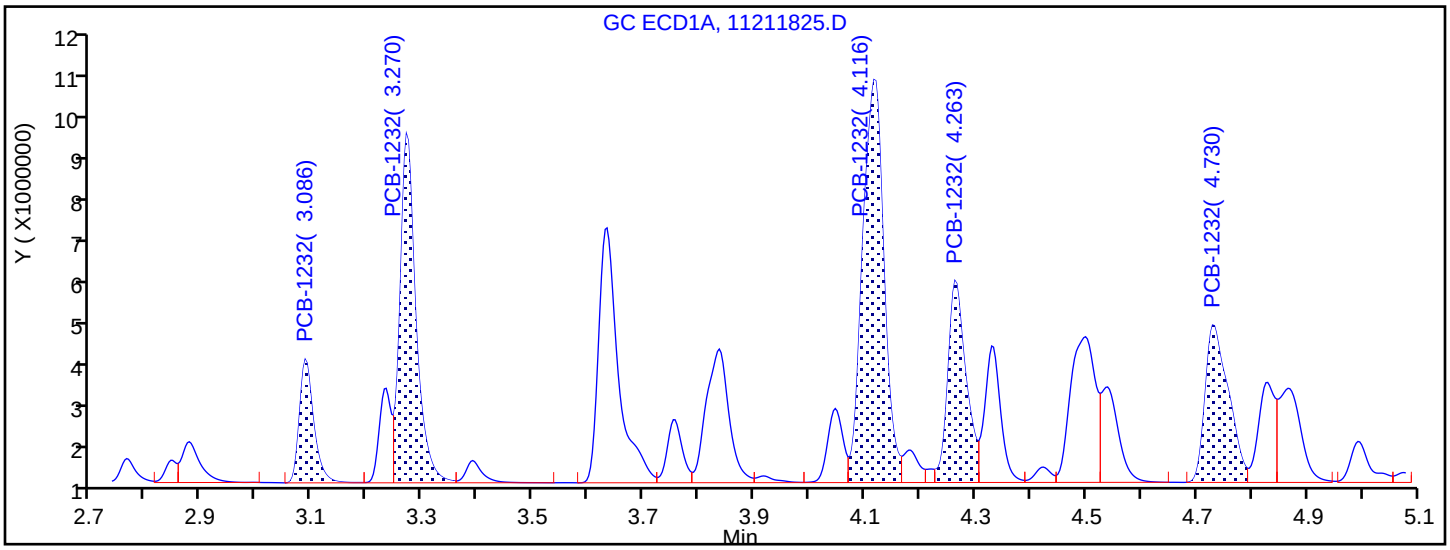
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.086	Response = 4984840
3.270	Response = 15689198
4.116	Response = 24520289
4.263	Response = 10501101
4.730	Response = 10017869



Manual Integration Results

3.086	Response = 4984840	
3.270	Response = 15689198	
4.116	Response = 24520289	
4.263	Response = 10501101	
4.730	Response = 10446034	M

Reviewer: patadiab, 23-Nov-2018 10:17:48

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

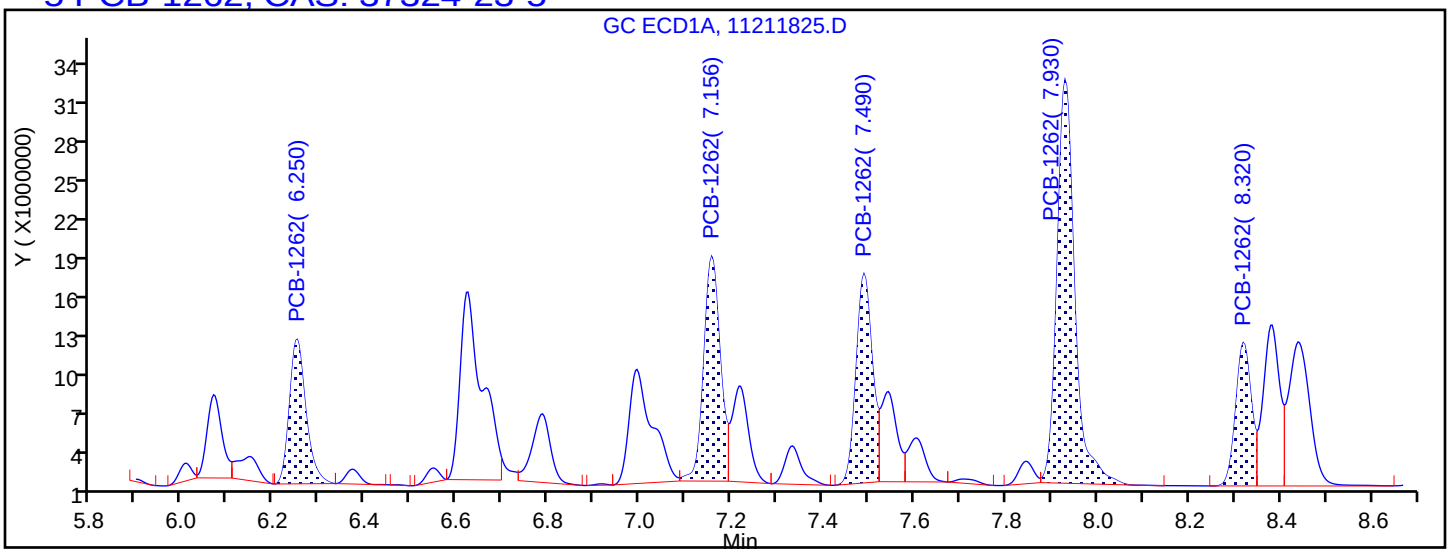
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

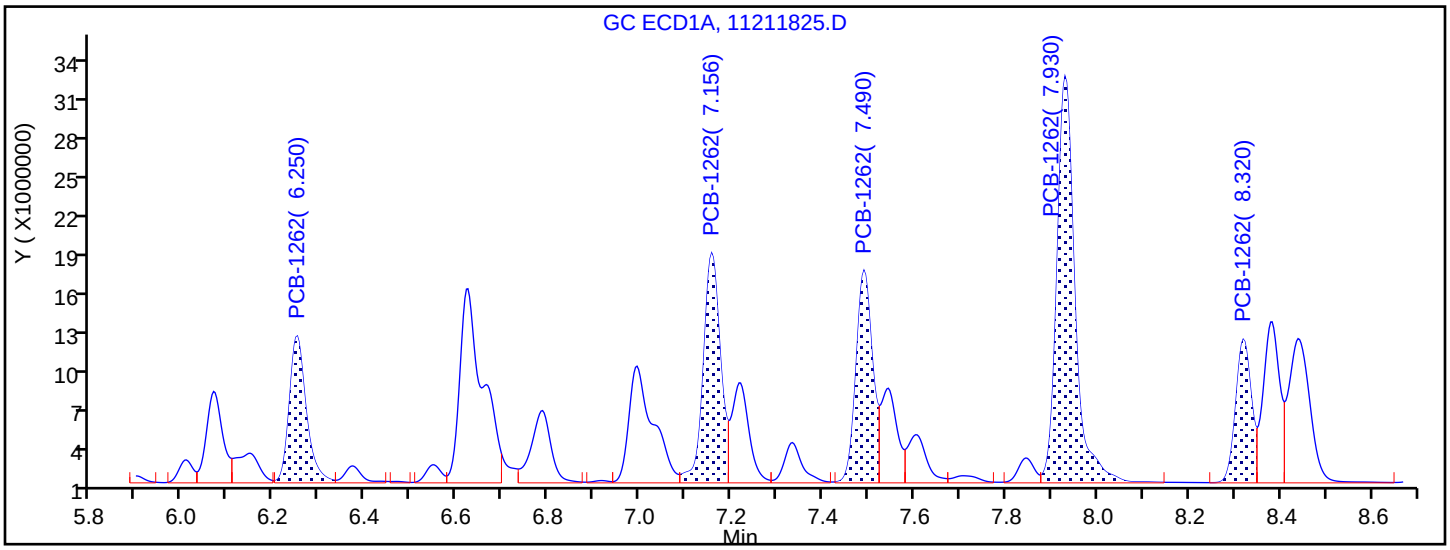
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.250	Response = 27284287
7.156	Response = 42823297
7.490	Response = 39275835
7.930	Response = 82203775
8.320	Response = 25885445



Manual Integration Results

6.250	Response = 28715451	M
7.156	Response = 45278660	M
7.490	Response = 40438292	M
7.930	Response = 84521517	M
8.320	Response = 25986514	M

Reviewer: patadiab, 23-Nov-2018 10:17:48

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D
Lims ID: STDL63262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 17:34:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL63262
Misc. Info.: 280-0076428-026
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:20:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29724345	1000.0	1000.0	
2	1.749	1.746	0.003	167597392	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	3825778	750.0	780.6	
1	3.269	3.271	-0.002	11992126	750.0	770.4	
1	4.116	4.118	-0.002	18488855	750.0	780.5	
1	4.263	4.264	-0.001	8040685	750.0	777.9	
1	4.729	4.731	-0.002	8045853	750.0	778.2	M
		Average of Peak Amounts =				777.5	
2	3.276	3.275	0.001	33236999	750.0	771.4	
2	3.666	3.665	0.001	27752244	750.0	759.9	
2	4.123	4.121	0.002	58138353	750.0	768.0	
2	4.266	4.265	0.001	25319272	750.0	764.2	
2	4.929	4.928	0.001	21128917	750.0	758.5	
		Average of Peak Amounts =				764.4	
						RPD = 1.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.249	6.248	0.001	21984609	750.0	777.9	M
1	7.156	7.154	0.002	34368147	750.0	775.2	M
1	7.489	7.488	0.001	30590995	750.0	779.0	M
1	7.929	7.931	-0.002	63873370	750.0	781.5	M
1	8.319	8.321	-0.002	19427531	750.0	777.3	M
		Average of Peak Amounts =				778.2	
2	6.649	6.648	0.001	76501019	750.0	773.9	
2	7.249	7.248	0.001	108005184	750.0	773.7	
2	7.646	7.645	0.001	107493024	750.0	774.8	
2	8.013	8.011	0.002	210407349	750.0	776.0	
2	8.516	8.515	0.001	158732369	750.0	775.3	
		Average of Peak Amounts =				774.7	
						RPD = 0.45	
S 8 Polychlorinated biphenyls, Total							
1						1555.7	
2						1539.1	
						RPD = 1.07	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

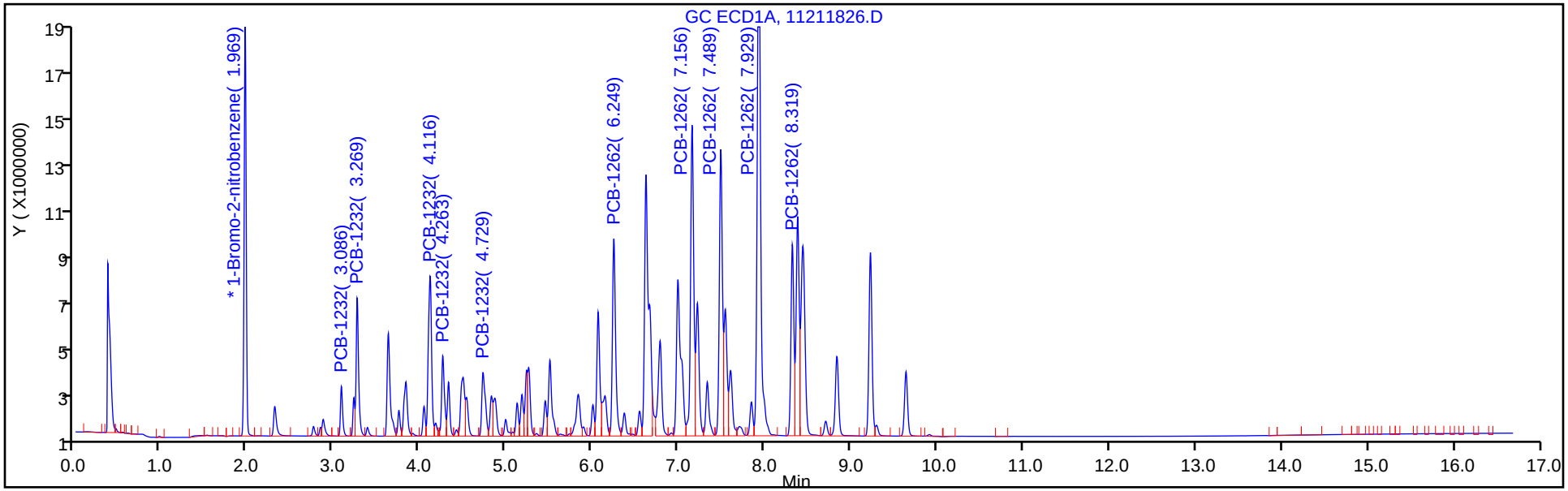
Report Date: 23-Nov-2018 11:02:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

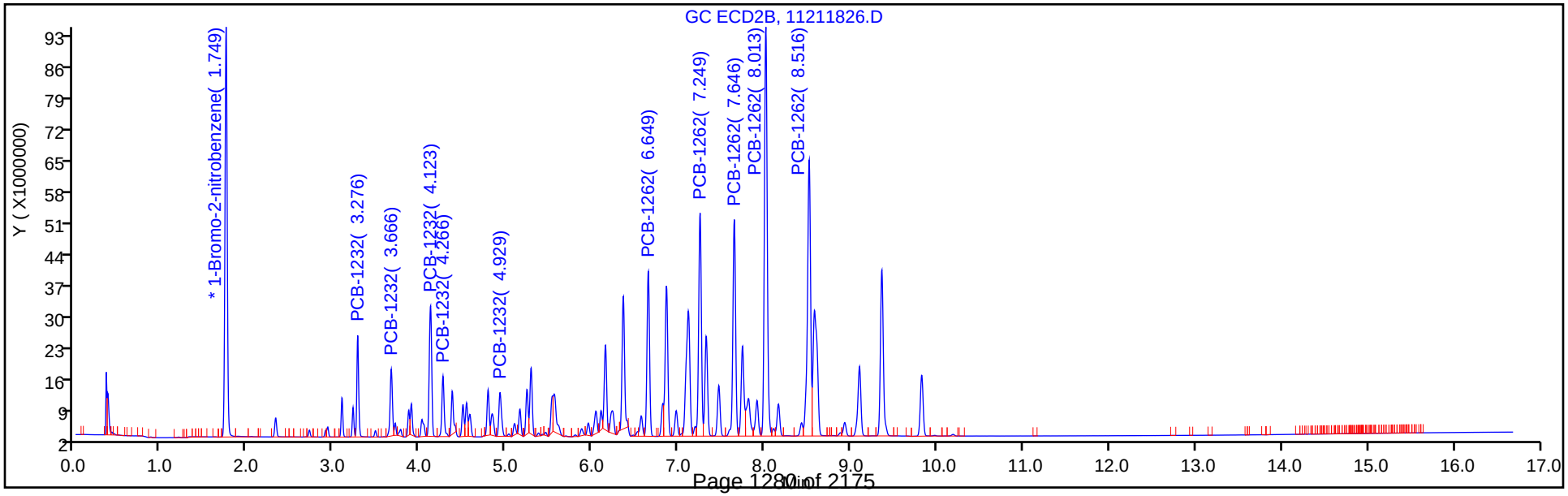
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date:	21-Nov-2018 17:34:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL63262			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date: 21-Nov-2018 17:34:18 Instrument ID: SGC_J

Lims ID: STDL63262

Client ID:

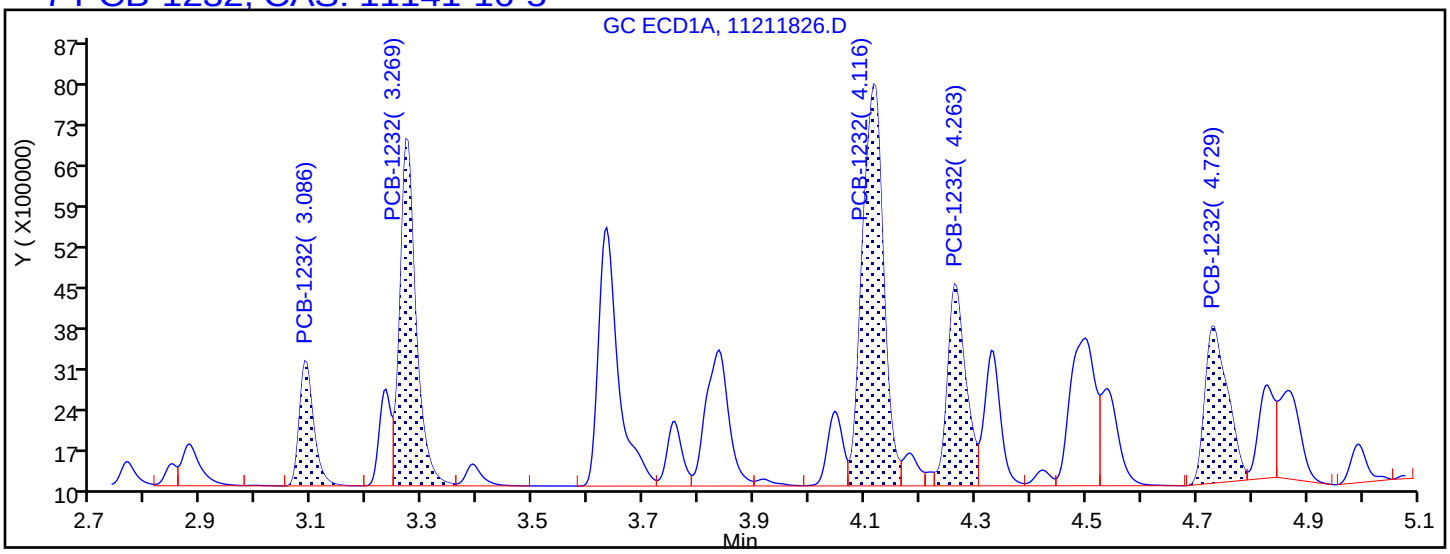
Operator ID: ALS ALS Bottle#: 26 Worklist Smp#: 26

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

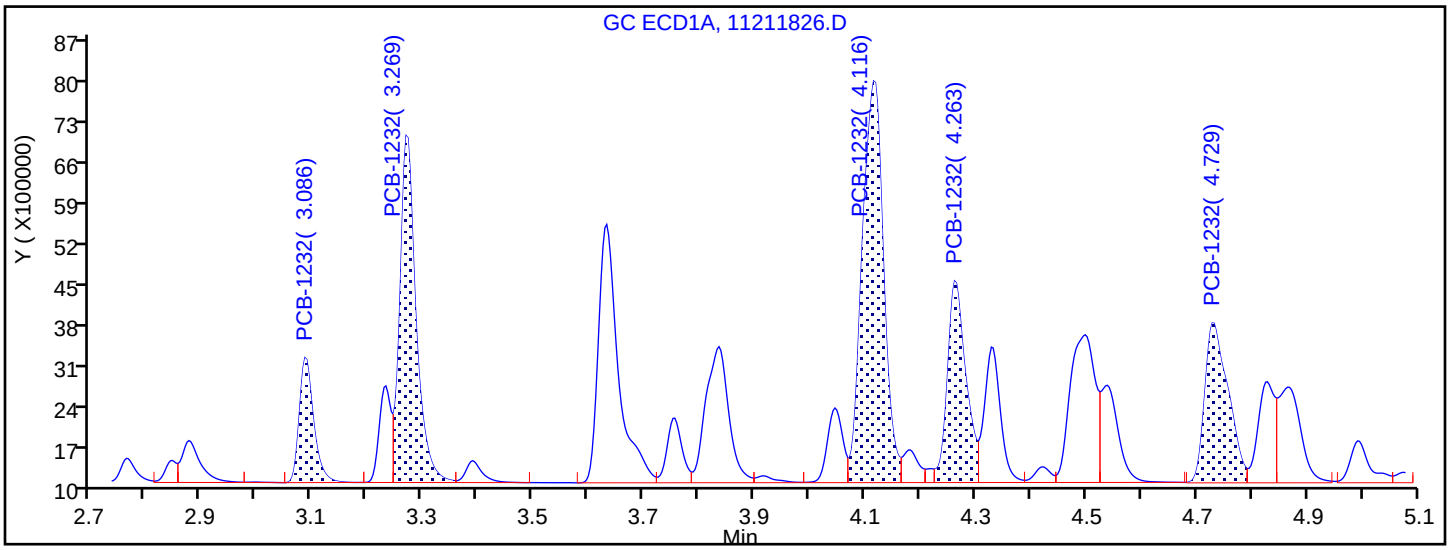
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.086	Response = 3825778
3.269	Response = 11992126
4.116	Response = 18488855
4.263	Response = 8040685
4.729	Response = 7671926



Manual Integration Results

3.086	Response = 3825778	
3.269	Response = 11992126	
4.116	Response = 18488855	
4.263	Response = 8040685	
4.729	Response = 8045853	M

Reviewer: patadiab, 23-Nov-2018 10:20:10

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date: 21-Nov-2018 17:34:18 Instrument ID: SGC_J

Lims ID: STDL63262

Client ID:

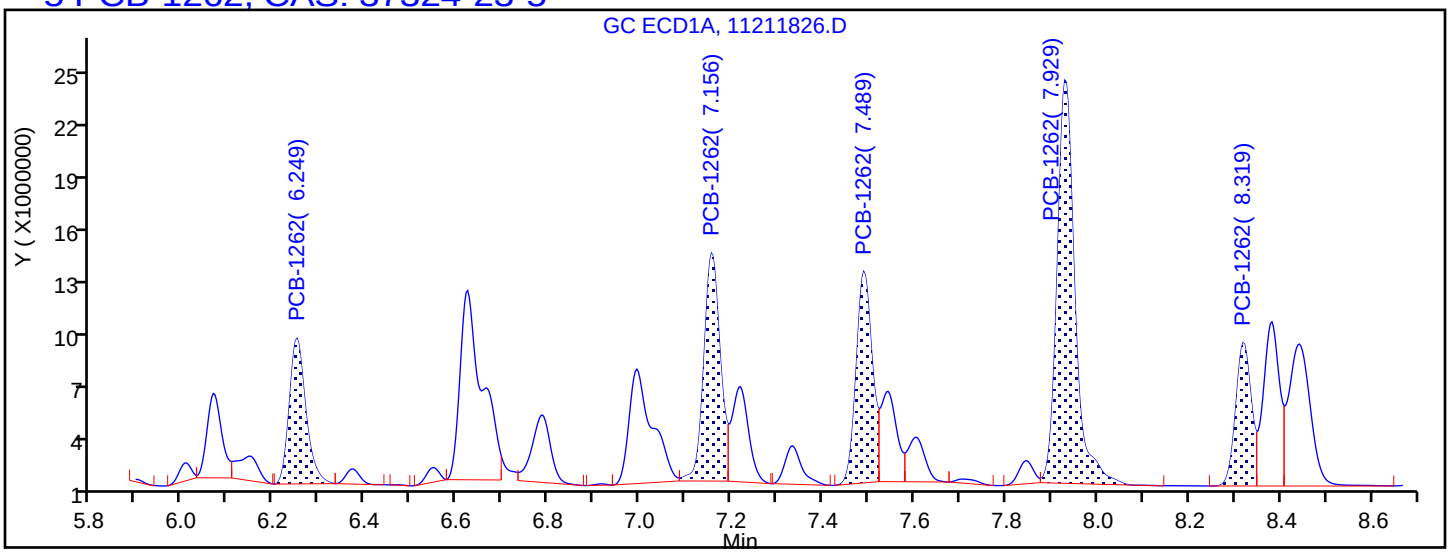
Operator ID: ALS ALS Bottle#: 26 Worklist Smp#: 26

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

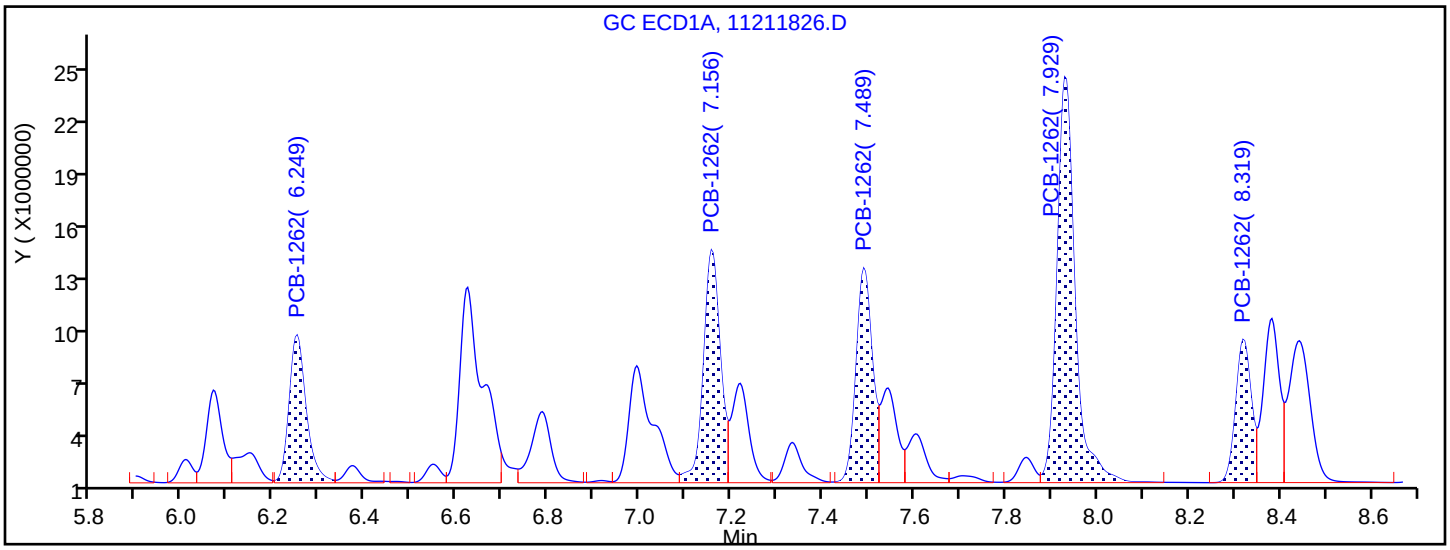
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.249	Response = 20927193
7.156	Response = 32519750
7.489	Response = 29752196
7.929	Response = 62336451
8.319	Response = 19446262



Manual Integration Results

6.249	Response = 21984609	M
7.156	Response = 34368147	M
7.489	Response = 30590995	M
7.929	Response = 63873370	M
8.319	Response = 19427531	M

Reviewer: patadiab, 23-Nov-2018 10:20:10

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D
Lims ID: STDL53262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 17:55:27 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL53262
Misc. Info.: 280-0076428-027
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:14:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	31454394	1000.0	1000.0	
2	1.748	1.748	0.000	177287409	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.088	3.088	0.000	2583135	500.0	495.0	
1	3.271	3.271	0.000	8464098	500.0	509.4	
1	4.118	4.118	0.000	12426844	500.0	494.9	M
1	4.264	4.264	0.000	5502198	500.0	500.6	M
1	4.731	4.731	0.000	5595129	500.0	509.2	M
		Average of Peak Amounts =				501.8	
2	3.275	3.275	0.000	23119208	500.0	501.5	
2	3.665	3.665	0.000	19468141	500.0	497.9	
2	4.121	4.121	0.000	40797414	500.0	504.3	
2	4.265	4.265	0.000	17838929	500.0	503.9	
2	4.928	4.928	0.000	15244324	500.0	512.0	
		Average of Peak Amounts =				503.9	
						RPD = 0.42	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.248	6.248	0.000	15117077	500.0	502.0	M
1	7.154	7.154	0.000	23792647	500.0	504.1	M
1	7.488	7.488	0.000	20569577	500.0	492.1	M
1	7.931	7.931	0.000	43005230	500.0	495.9	M
1	8.321	8.321	0.000	12995186	500.0	489.6	M
		Average of Peak Amounts =				496.7	
2	6.648	6.648	0.000	54027511	500.0	511.3	
2	7.248	7.248	0.000	76105584	500.0	510.0	
2	7.645	7.645	0.000	75571069	500.0	510.0	
2	8.011	8.011	0.000	147285972	500.0	508.7	
2	8.515	8.515	0.000	110696168	500.0	506.1	
		Average of Peak Amounts =				509.2	
						RPD = 2.49	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

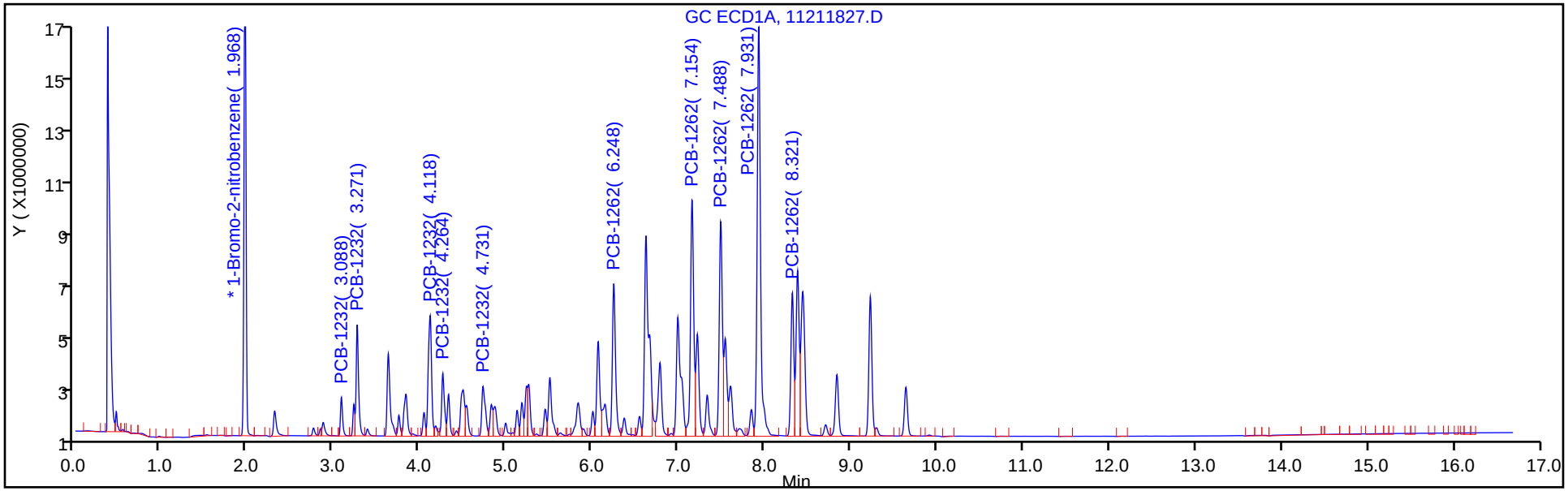
Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

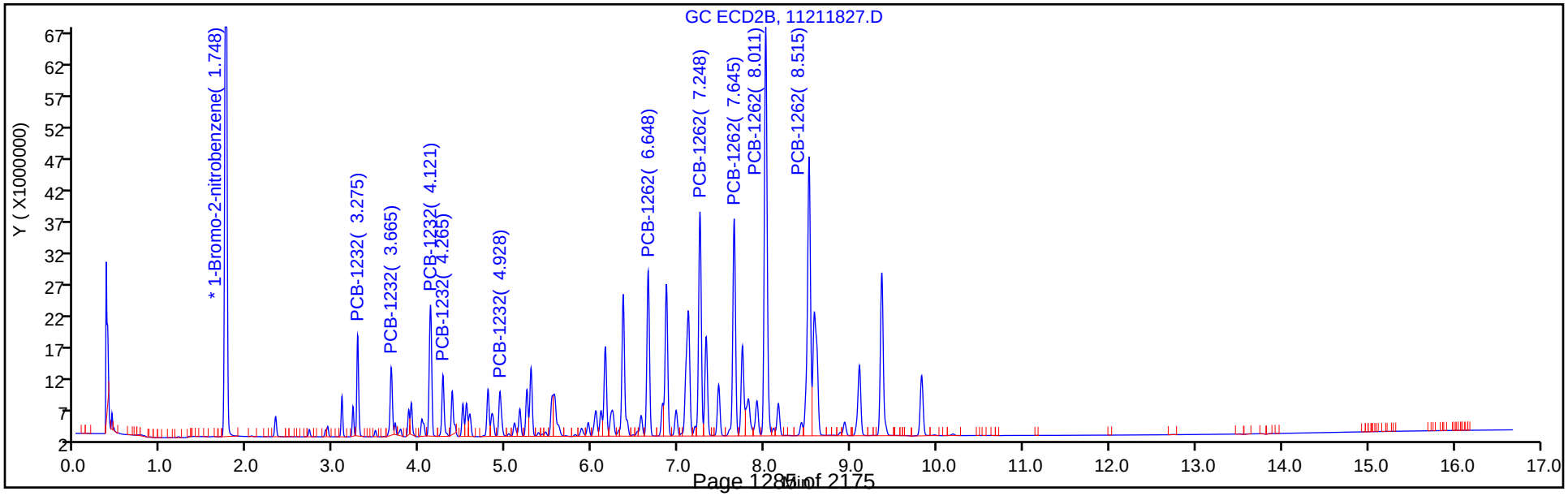
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date:	21-Nov-2018 17:55:27	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL53262			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date: 21-Nov-2018 17:55:27 Instrument ID: SGC_J

Lims ID: STDL53262

Client ID:

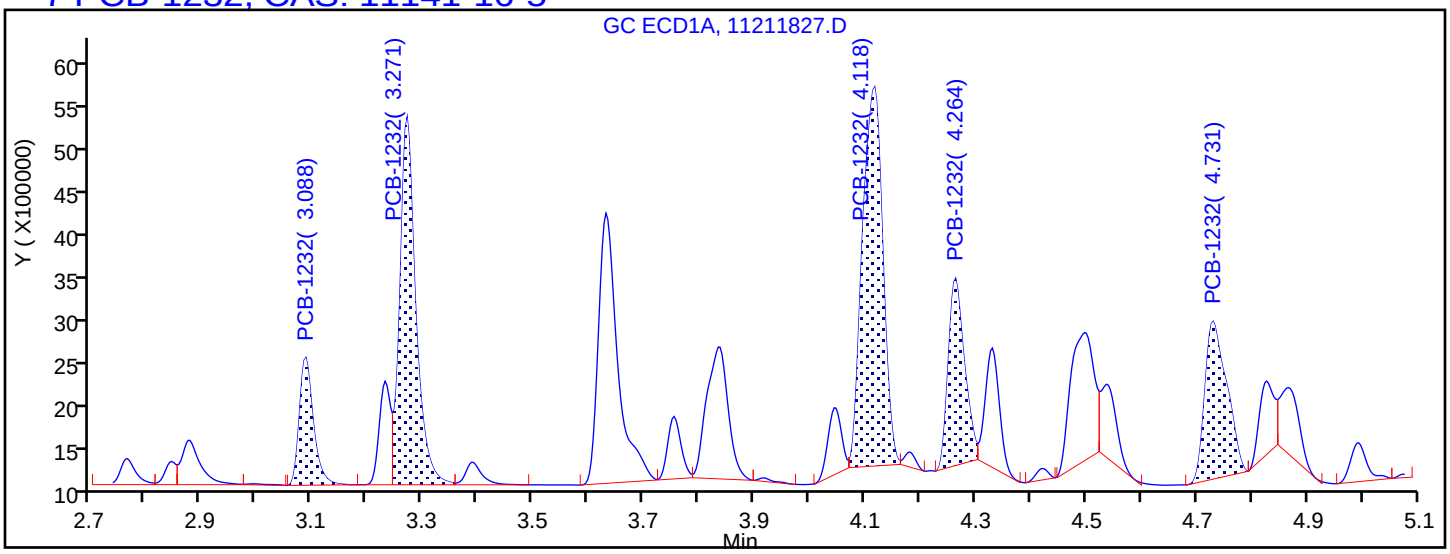
Operator ID: ALS ALS Bottle#: 27 Worklist Smp#: 27

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

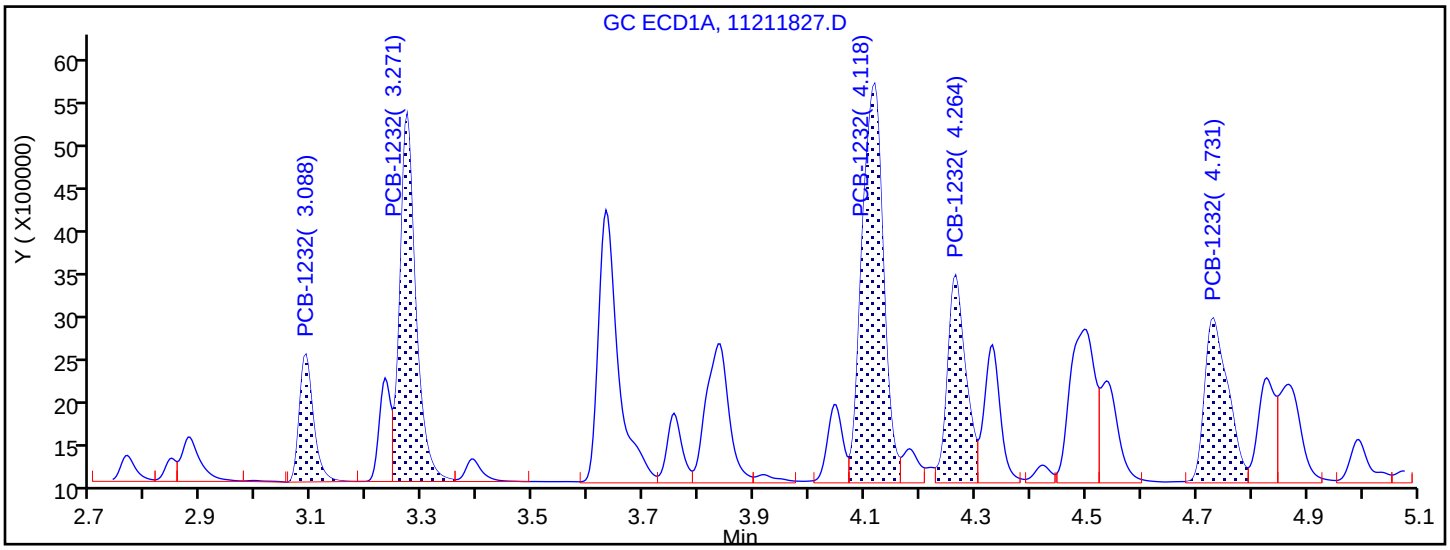
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.088	Response = 2583135
3.271	Response = 8464098
4.118	Response = 11130600
4.264	Response = 4396782
4.731	Response = 4977431



Manual Integration Results

3.088	Response = 2583135	
3.271	Response = 8464098	
4.118	Response = 12426844	M
4.264	Response = 5502198	M
4.731	Response = 5595129	M

Reviewer: patadiab, 23-Nov-2018 10:21:16

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date: 21-Nov-2018 17:55:27 Instrument ID: SGC_J

Lims ID: STDL53262

Client ID:

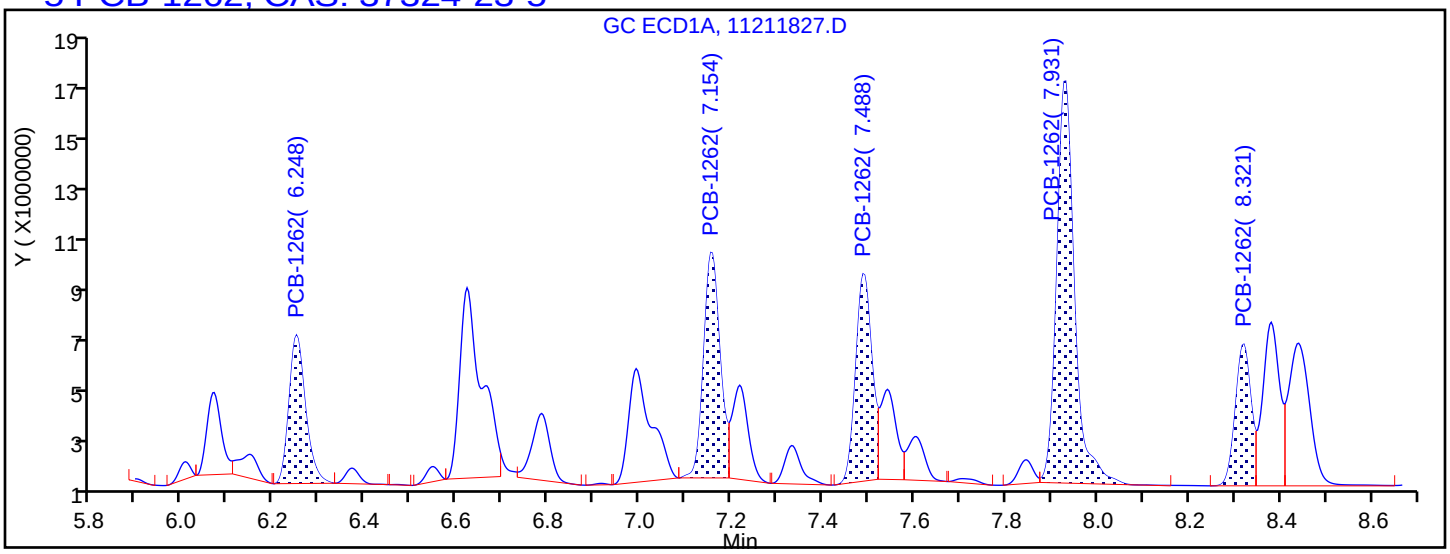
Operator ID: ALS ALS Bottle#: 27 Worklist Smp#: 27

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

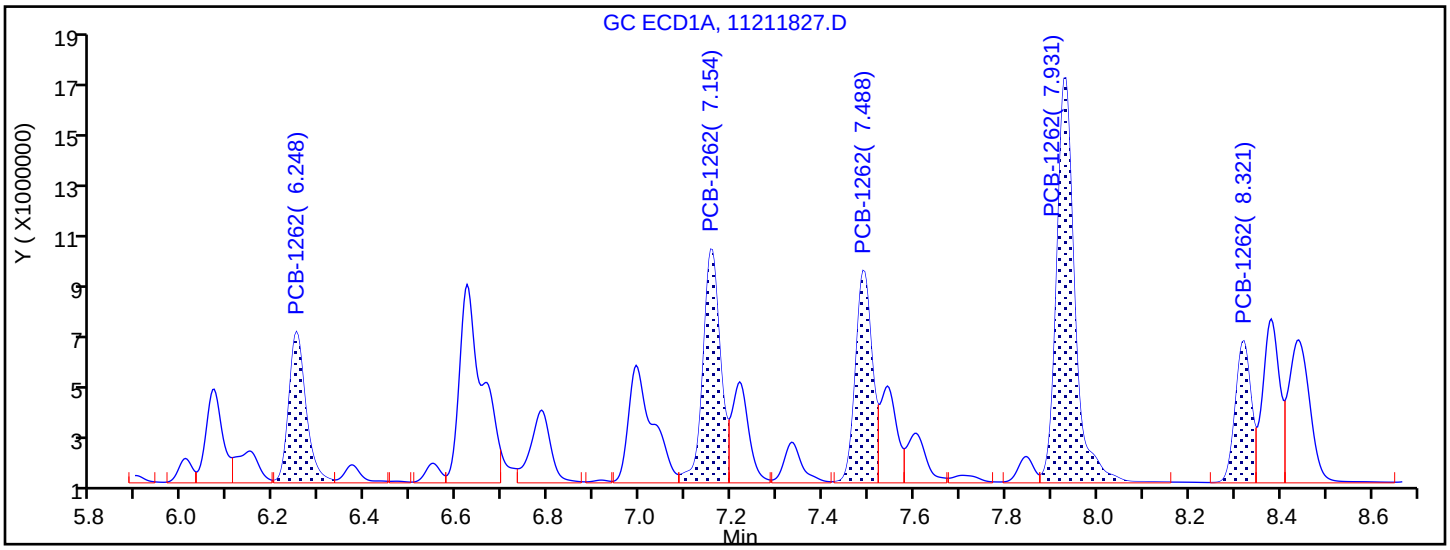
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.248	Response = 14296465
7.154	Response = 21705490
7.488	Response = 19673274
7.931	Response = 41669539
8.321	Response = 12921719



Manual Integration Results

6.248	Response = 15117077	M
7.154	Response = 23792647	M
7.488	Response = 20569577	M
7.931	Response = 43005230	M
8.321	Response = 12995186	M

Reviewer: patadiab, 23-Nov-2018 10:21:16

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D
Lims ID: STDL43262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 18:16:46 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL43262
Misc. Info.: 280-0076428-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:56 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:16:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	30965018	1000.0	1000.0	
2	1.747	1.748	-0.001	174717072	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	1392895	250.0	267.2	
1	3.270	3.271	-0.001	4511528	250.0	269.6	
1	4.117	4.118	-0.001	6315260	250.0	254.3	
1	4.263	4.264	-0.001	2916425	250.0	266.4	
1	4.730	4.731	-0.001	2893984	250.0	264.4	
		Average of Peak Amounts =				264.4	
2	3.277	3.275	0.002	12740193	250.0	272.9	
2	3.663	3.665	-0.002	10698875	250.0	269.7	
2	4.120	4.121	-0.001	21982243	250.0	268.7	
2	4.267	4.265	0.002	9641479	250.0	269.4	
2	4.927	4.928	-0.001	8096778	250.0	268.2	
		Average of Peak Amounts =				269.8	
						RPD = 2.02	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.250	6.248	0.002	7964853	250.0	264.1	
1	7.157	7.154	0.003	12307287	250.0	260.7	
1	7.490	7.488	0.002	10904443	250.0	261.3	
1	7.930	7.931	-0.001	21913797	250.0	254.9	
1	8.320	8.321	-0.001	6789639	250.0	257.5	
		Average of Peak Amounts =				259.7	
2	6.647	6.648	-0.001	28900783	250.0	270.2	
2	7.247	7.248	-0.001	40916207	250.0	271.0	
2	7.647	7.645	0.002	40467048	250.0	270.4	
2	8.010	8.011	-0.001	78867004	250.0	270.0	
2	8.513	8.515	-0.002	59822420	250.0	270.9	
		Average of Peak Amounts =				270.5	
						RPD = 4.07	
S 8 Polychlorinated biphenyls, Total							
1						524.1	
2						540.3	
						RPD = 3.04	

Reagents:

AR_3262_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

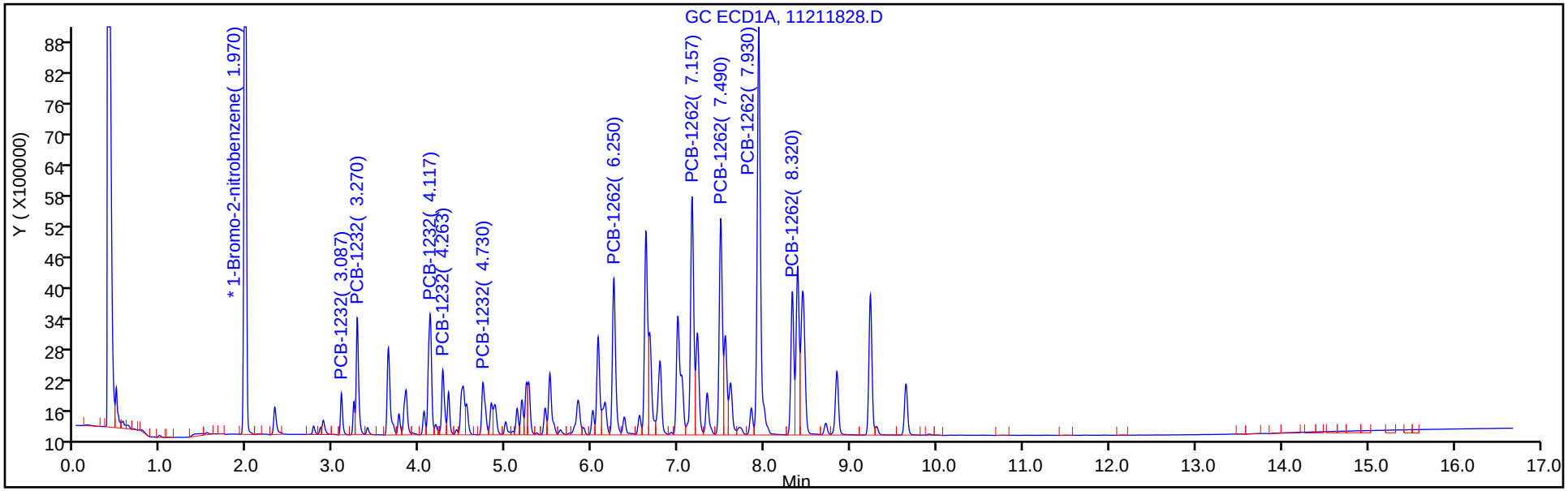
Report Date: 23-Nov-2018 11:02:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

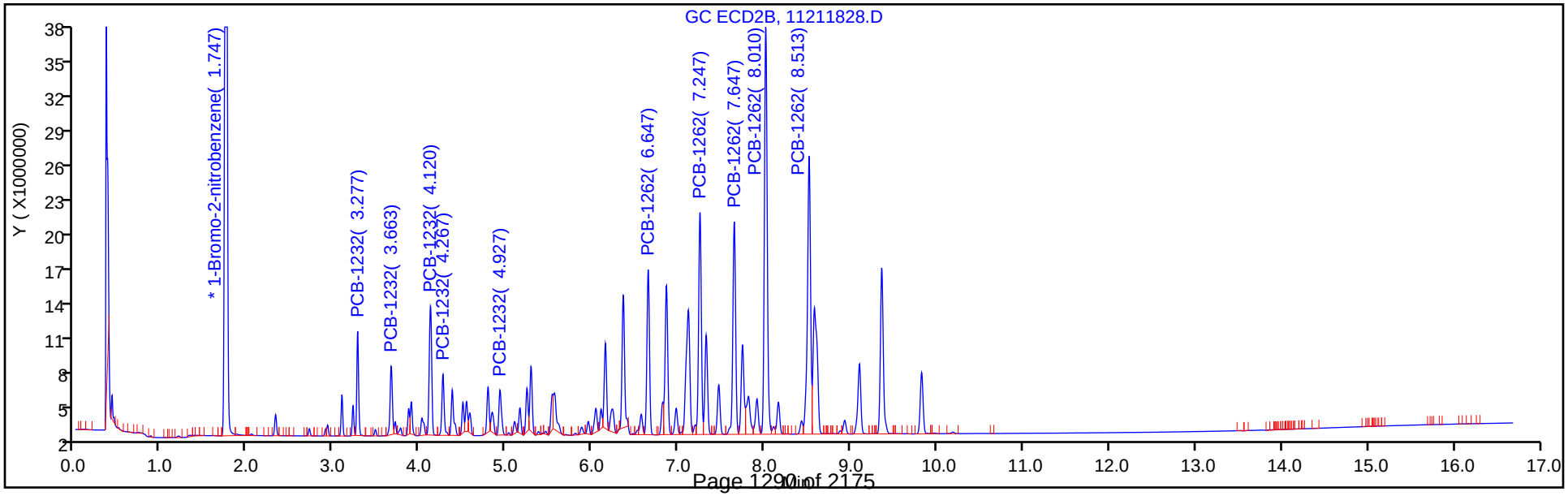
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D

Injection Date:	21-Nov-2018 18:16:46	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL43262			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D
Lims ID: STDL33262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 18:37:56 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL33262
Misc. Info.: 280-0076428-029
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.968	0.004	31139299	1000.0	1000.0	
2	1.749	1.748	0.001	176067915	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	547298	100.0	99.2	
1	3.272	3.271	0.001	1856728	100.0	102.4	
1	4.116	4.118	-0.002	2458762	100.0	96.9	
1	4.262	4.264	-0.002	1164474	100.0	101.6	
1	4.729	4.731	-0.002	1125602	100.0	98.3	
		Average of Peak Amounts =				99.7	
2	3.276	3.275	0.001	5377655	100.0	104.5	
2	3.666	3.665	0.001	4662843	100.0	106.4	
2	4.122	4.121	0.001	9281019	100.0	103.5	
2	4.266	4.265	0.001	4103159	100.0	104.9	
2	4.926	4.928	-0.002	3526090	100.0	106.4	
		Average of Peak Amounts =				105.2	
						RPD = 5.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	3216578	100.0	100.2	
1	7.156	7.154	0.002	4907514	100.0	98.0	
1	7.489	7.488	0.001	4304645	100.0	97.7	
1	7.929	7.931	-0.002	8325389	100.0	94.0	
1	8.319	8.321	-0.002	2648440	100.0	96.9	
		Average of Peak Amounts =				97.4	
2	6.646	6.648	-0.002	12068360	100.0	102.5	
2	7.249	7.248	0.001	17019760	100.0	102.5	
2	7.646	7.645	0.001	16739062	100.0	102.3	
2	8.012	8.011	0.001	32344111	100.0	101.5	
2	8.512	8.515	-0.003	24623782	100.0	101.9	
		Average of Peak Amounts =				102.2	
						RPD = 4.81	
S 8 Polychlorinated biphenyls, Total							
1						197.1	
2						207.3	
						RPD = 5.07	

Reagents:

AR_3262_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

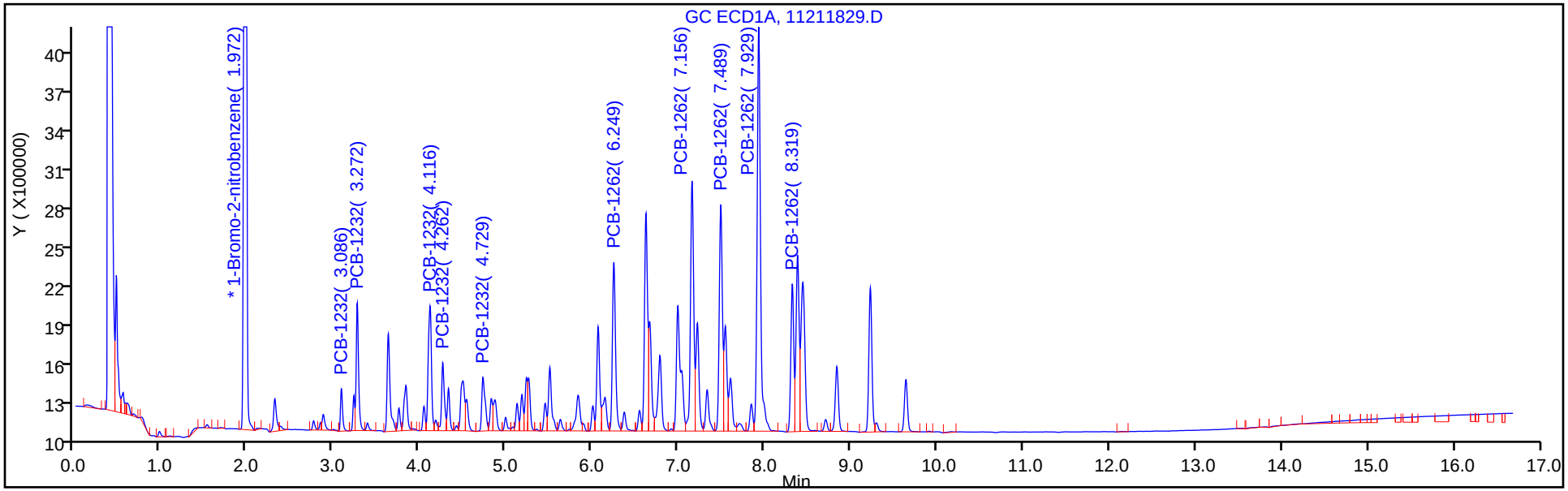
Report Date: 23-Nov-2018 11:02:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

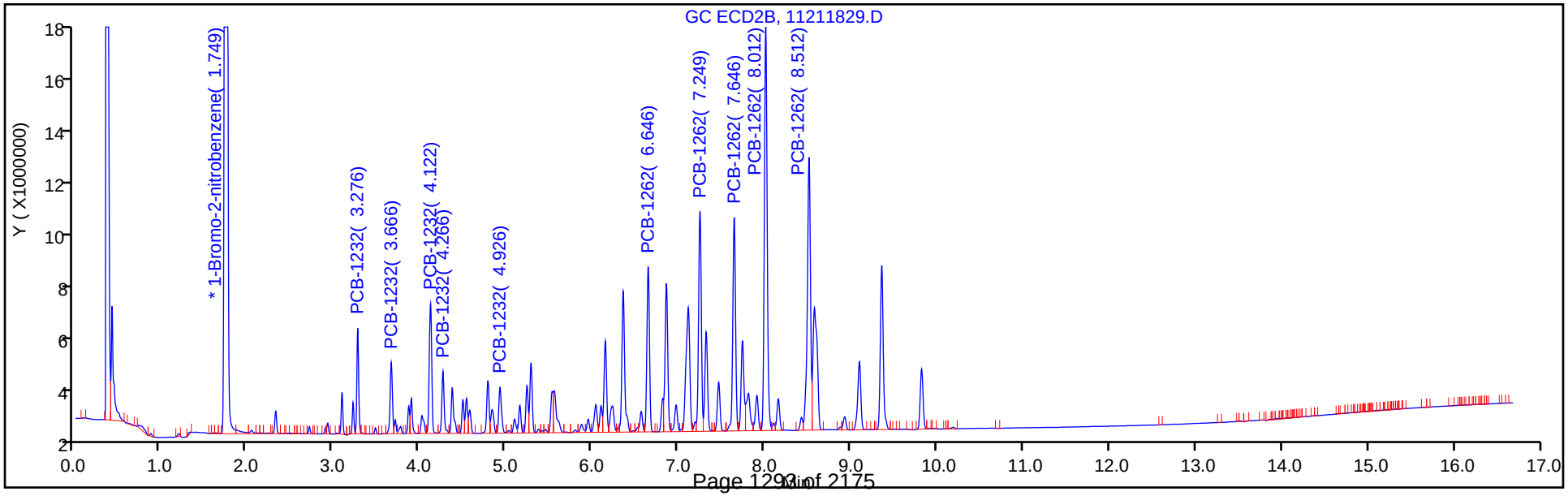
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D

Injection Date:	21-Nov-2018 18:37:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL33262			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D
Lims ID: STDL23262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 18:59:04 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL23262
Misc. Info.: 280-0076428-030
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	30826448	1000.0	1000.0	
2	1.748	1.748	0.000	173971839	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.088	3.088	0.000	308483	50.0	52.8	
1	3.271	3.271	0.000	1020472	50.0	50.9	
1	4.118	4.118	0.000	1273955	50.0	49.6	
1	4.264	4.264	0.000	586726	50.0	48.4	
1	4.731	4.731	0.000	604692	50.0	50.4	
		Average of Peak Amounts =				50.4	
2	3.274	3.275	-0.001	3052064	50.0	52.8	
2	3.664	3.665	-0.001	2666828	50.0	54.0	
2	4.121	4.121	0.000	5327006	50.0	53.6	
2	4.264	4.265	-0.001	2327446	50.0	53.7	
2	4.928	4.928	0.000	1962103	50.0	52.6	
		Average of Peak Amounts =				53.4	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.248	6.248	0.000	1742564	50.0	50.4	
1	7.154	7.154	0.000	2744291	50.0	51.5	
1	7.488	7.488	0.000	2379701	50.0	51.0	
1	7.928	7.931	-0.003	4573994	50.0	50.5	
1	8.318	8.321	-0.003	1421934	50.0	50.3	
		Average of Peak Amounts =				50.7	
2	6.648	6.648	0.000	6882439	50.0	52.4	
2	7.248	7.248	0.000	9662784	50.0	52.1	
2	7.644	7.645	-0.001	9459588	50.0	52.2	
2	8.011	8.011	0.000	18241846	50.0	51.9	
2	8.514	8.515	-0.001	13866078	50.0	51.7	
		Average of Peak Amounts =				52.1	
						RPD = 2.56	
S 8 Polychlorinated biphenyls, Total							
1						101.1	
2						105.4	
						RPD = 4.14	

Reagents:

AR_3262_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

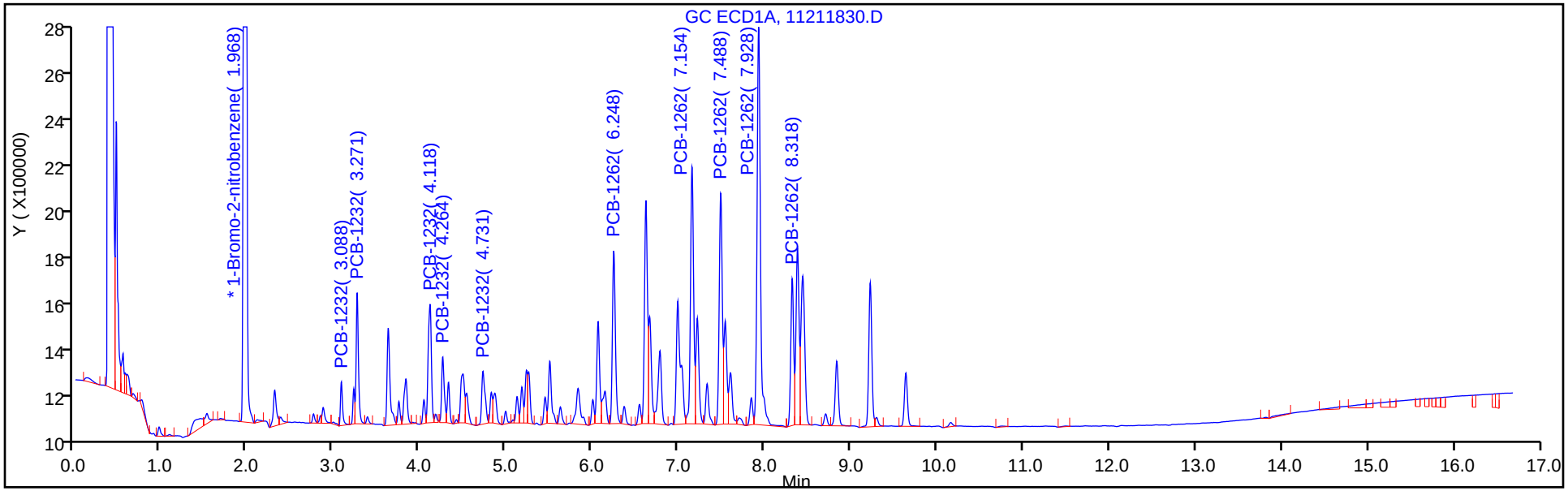
Report Date: 23-Nov-2018 11:03:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

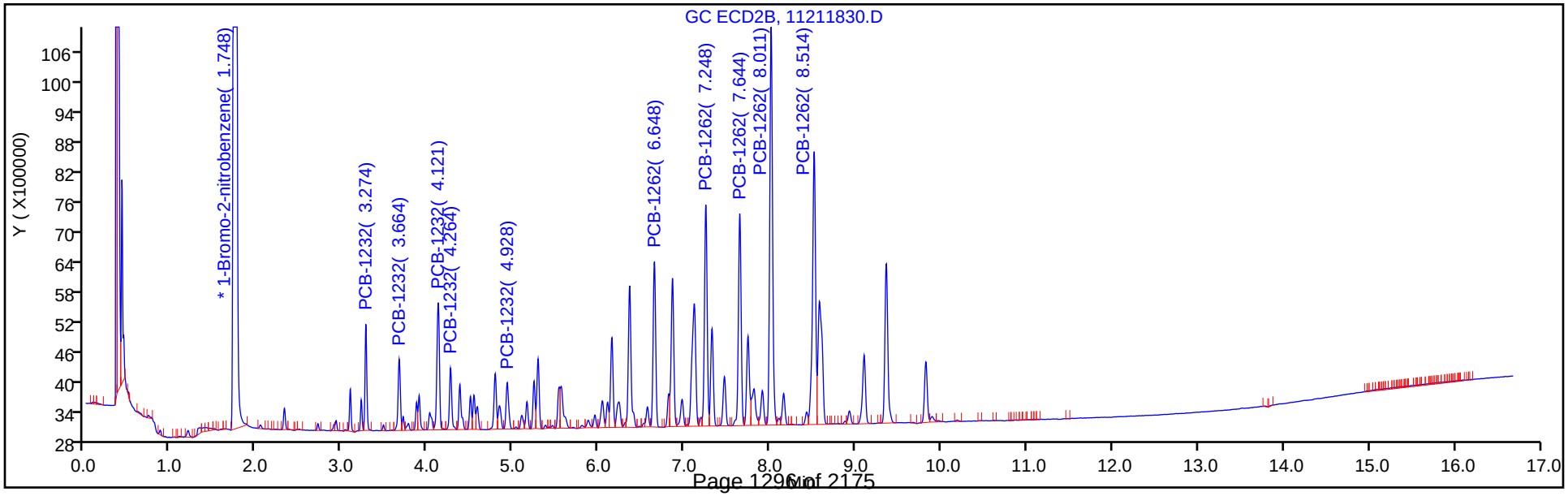
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D

Injection Date:	21-Nov-2018 18:59:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL23262			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D
Lims ID: STDL13262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 19:20:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL13262
Misc. Info.: 280-0076428-031
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:05 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:27:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	28837858	1000.0	1000.0	
2	1.747	1.748	-0.001	164029832	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	145633	25.0	22.4	
1	3.270	3.271	-0.001	527466	25.0	22.1	
1	4.117	4.118	-0.001	639419	25.0	25.5	
1	4.263	4.264	-0.001	305449	25.0	23.9	
1	4.730	4.731	-0.001	299569	25.0	23.6	
		Average of Peak Amounts =				23.5	
2	3.277	3.275	0.002	1549784	25.0	20.6	
2	3.667	3.665	0.002	1327362	25.0	20.0	
2	4.120	4.121	-0.001	2630983	25.0	20.7	
2	4.267	4.265	0.002	1136029	25.0	20.4	
2	4.927	4.928	-0.001	991404	25.0	20.5	
		Average of Peak Amounts =				20.4	
						RPD = 13.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.247	6.248	-0.001	898312	25.0	23.4	
1	7.157	7.154	0.003	1380613	25.0	23.6	
1	7.490	7.488	0.002	1209897	25.0	24.1	
1	7.930	7.931	-0.001	2313295	25.0	25.6	
1	8.320	8.321	-0.001	722269	25.0	25.0	
		Average of Peak Amounts =				24.3	
2	6.647	6.648	-0.001	3536624	25.0	21.2	
2	7.250	7.248	0.002	4988537	25.0	21.3	
2	7.647	7.645	0.002	4810570	25.0	21.4	
2	8.010	8.011	-0.001	9332035	25.0	21.7	
2	8.513	8.515	-0.002	7179707	25.0	21.7	
		Average of Peak Amounts =				21.5	
						RPD = 12.52	
S 8 Polychlorinated biphenyls, Total							
1						47.8	
2						41.9	
						RPD = 13.20	

Reagents:

AR_3262_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

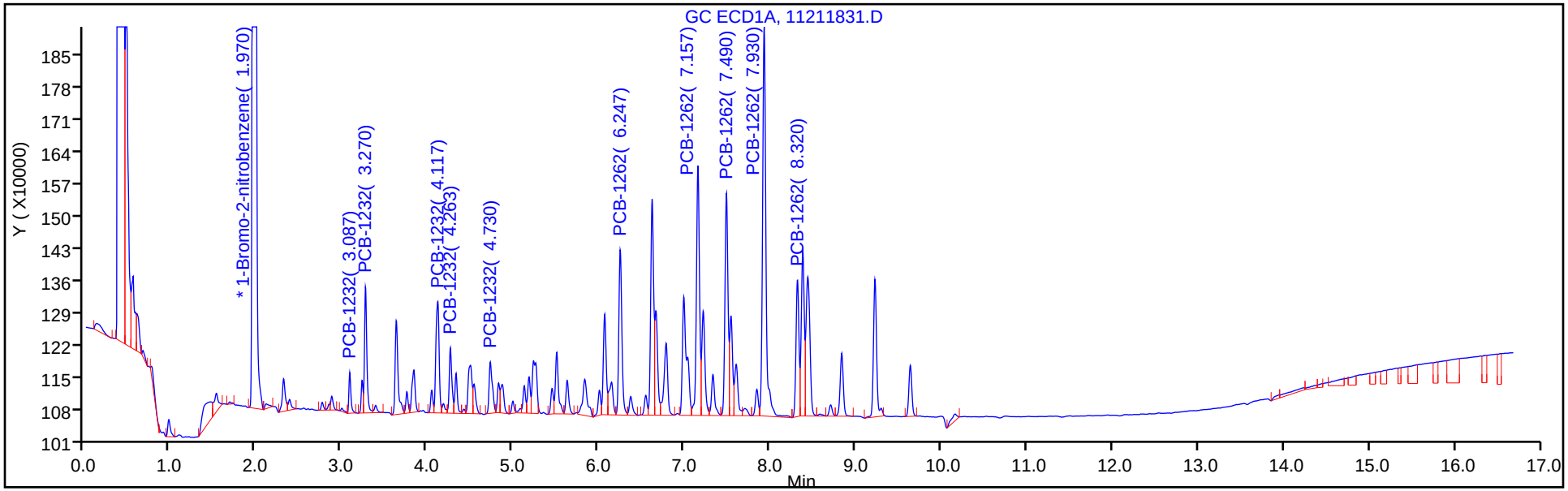
Report Date: 23-Nov-2018 11:03:06 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

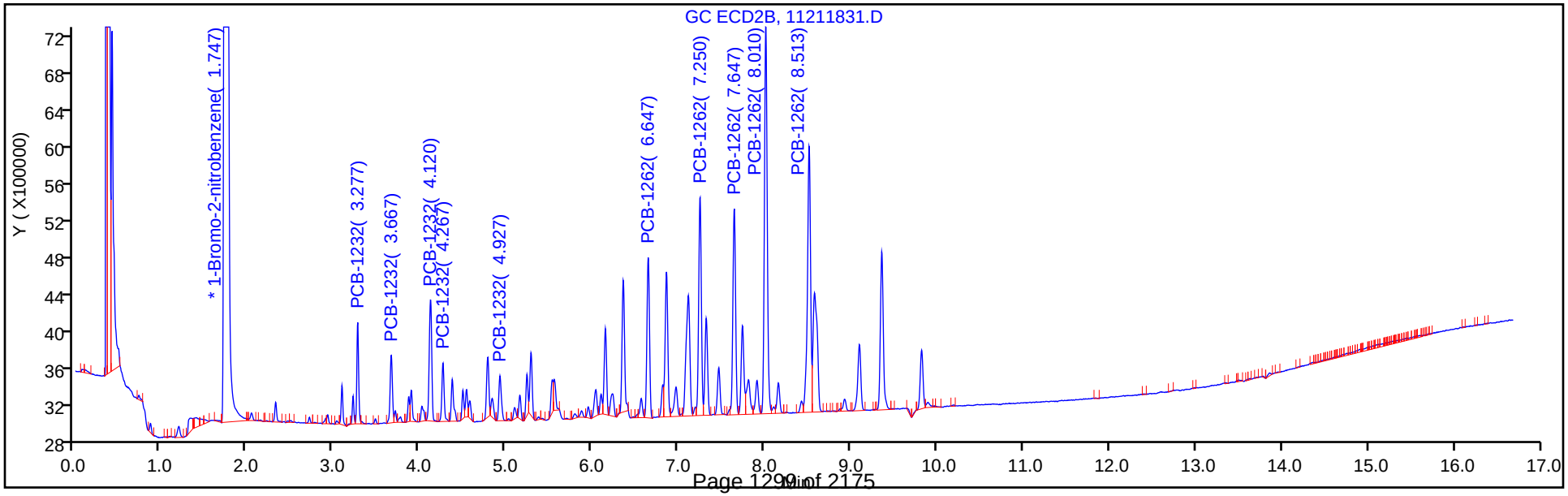
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D

Injection Date:	21-Nov-2018 19:20:15	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL13262			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34391

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.3779 0.2644	0.3509 0.2436	0.3054	0.2917	0.2608	Lin1	4.2615	0.2516							0.9970		0.9900
PCB-1232 Peak 2	0.3237 0.2208	0.3066 0.2097	0.2648	0.2449	0.2196	Lin1	3.8305	0.2129							0.9980		0.9900
PCB-1232 Peak 3	0.6416 0.4625	0.6124 0.4302	0.5271	0.5033	0.4602	Lin1	6.8713	0.4427							0.9980		0.9900
PCB-1232 Peak 4	0.2770 0.2014	0.2676 0.1887	0.2330	0.2207	0.2012	Lin1	2.9783	0.1938							0.9980		0.9900
PCB-1232 Peak 5	0.2418 0.1681	0.2256 0.1583	0.2003	0.1854	0.1720	Lin1	2.7180	0.1626							0.9980		0.9900
PCB-1262 Peak 1	0.8624 0.6086	0.7912 0.5544	0.6854	0.6617	0.6095	Lin1	9.3030	0.5778							0.9970		0.9900
PCB-1262 Peak 2	1.2165 0.8592	1.1108 0.7837	0.9667	0.9367	0.8586	Lin1	13.012	0.8161							0.9970		0.9900
PCB-1262 Peak 3	1.1731 0.8552	1.0875 0.7788	0.9507	0.9265	0.8525	Lin1	11.971	0.8124							0.9970		0.9900
PCB-1262 Peak 4	2.2757 1.6739	2.0971 1.5243	1.8370	1.8056	1.6616	Lin1	22.359	1.5891							0.9970		0.9900
PCB-1262 Peak 5	1.7508 1.2628	1.5941 1.1532	1.3985	1.3696	1.2488	Lin1	17.706	1.1987							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34391

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Lin1	1549784 33236999	3052064 43153197	5377655	12740193	23119208	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 2	BNB	Lin1	1327362 27752244	2666828 37154008	4662843	10698875	19468141	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 3	BNB	Lin1	2630983 58138353	5327006 76218445	9281019	21982243	40797414	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 4	BNB	Lin1	1136029 25319272	2327446 33438438	4103159	9641479	17838929	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 5	BNB	Lin1	991404 21128917	1962103 28051936	3526090	8096778	15244324	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 1	BNB	Lin1	3536624 76501019	6882439 98230933	12068360	28900783	54027511	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 2	BNB	Lin1	4988537 108005184	9662784 138859883	17019760	40916207	76105584	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 3	BNB	Lin1	4810570 107493024	9459588 137990458	16739062	40467048	75571069	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 4	BNB	Lin1	9332035 210407349	18241846 270071150	32344111	78867004	147285972	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 5	BNB	Lin1	7179707 158732369	13866078 204325846	24623782	59822420	110696168	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D
Lims ID: STDL73262
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 17:13:09 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL73262
Misc. Info.: 280-0076428-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:44 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:18:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31630227	1000.0	1000.0	
2	1.747	1.746	0.001	177174681	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	4984840	1000.0	957.8	
1	3.270	3.271	-0.001	15689198	1000.0	950.2	
1	4.116	4.118	-0.002	24520289	1000.0	973.4	
1	4.263	4.264	-0.001	10501101	1000.0	956.2	
1	4.730	4.731	-0.001	10446034	1000.0	950.9	M
		Average of Peak Amounts =				957.7	
2	3.277	3.275	0.002	43153197	1000.0	951.3	M
2	3.667	3.665	0.002	37154008	1000.0	967.1	M
2	4.120	4.121	-0.001	76218445	1000.0	956.2	M
2	4.267	4.265	0.002	33438438	1000.0	958.6	M
2	4.927	4.928	-0.001	28051936	1000.0	956.8	M
		Average of Peak Amounts =				958.0	
						RPD = 0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.250	6.248	0.002	28715451	1000.0	957.0	M
1	7.156	7.154	0.002	45278660	1000.0	961.9	M
1	7.490	7.488	0.002	40438292	1000.0	969.7	M
1	7.930	7.931	-0.001	84521517	1000.0	972.7	M
1	8.320	8.321	-0.001	25986514	1000.0	978.4	M
		Average of Peak Amounts =				967.9	
2	6.647	6.648	-0.001	98230933	1000.0	943.5	M
2	7.247	7.248	-0.001	138859883	1000.0	944.4	
2	7.647	7.645	0.002	137990458	1000.0	944.0	
2	8.010	8.011	-0.001	270071150	1000.0	945.2	
2	8.517	8.515	0.002	204325846	1000.0	947.3	
		Average of Peak Amounts =				944.9	
						RPD = 2.41	
S 8 Polychlorinated biphenyls, Total							
1						1925.6	
2						1902.8	
						RPD = 1.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

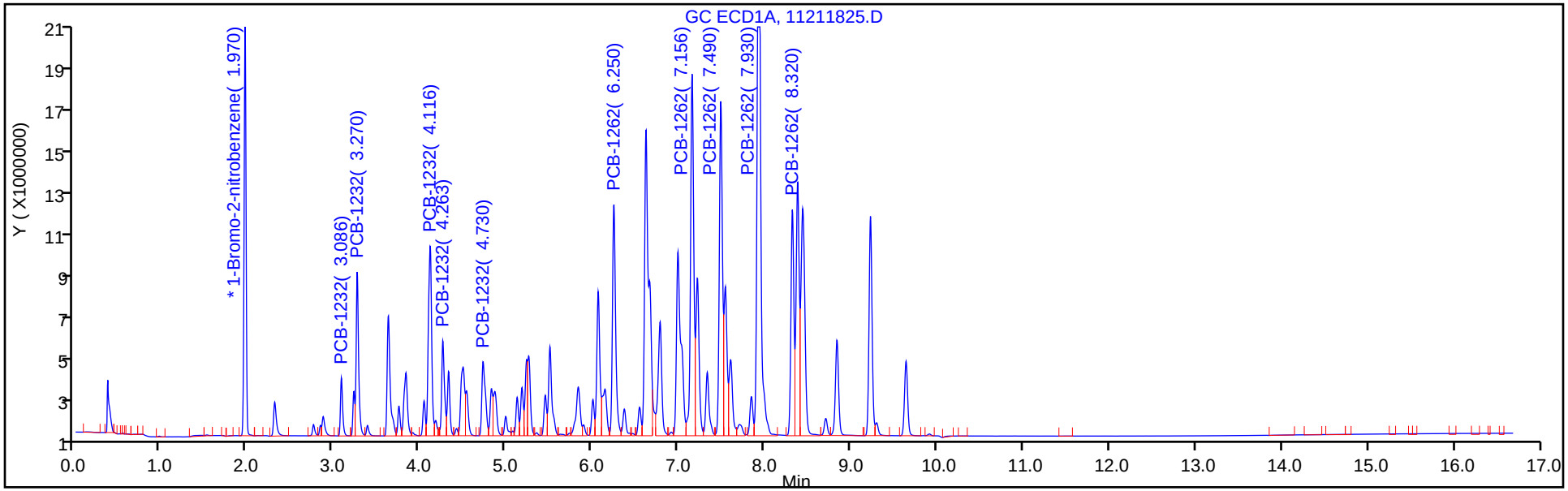
Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

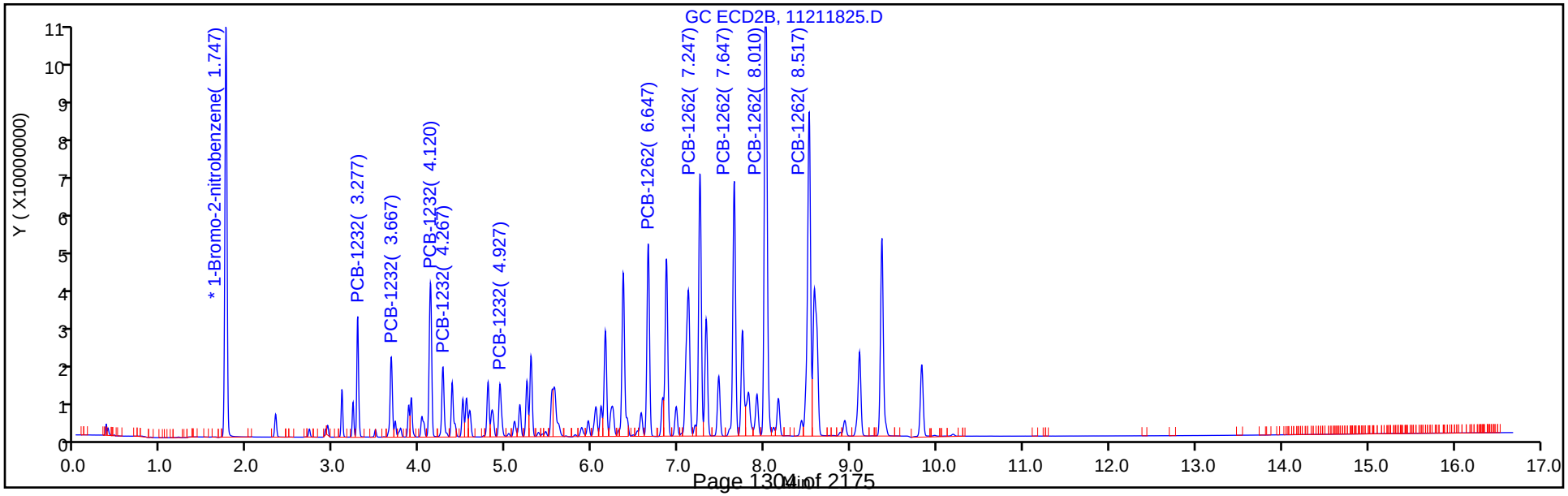
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date:	21-Nov-2018 17:13:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL73262			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

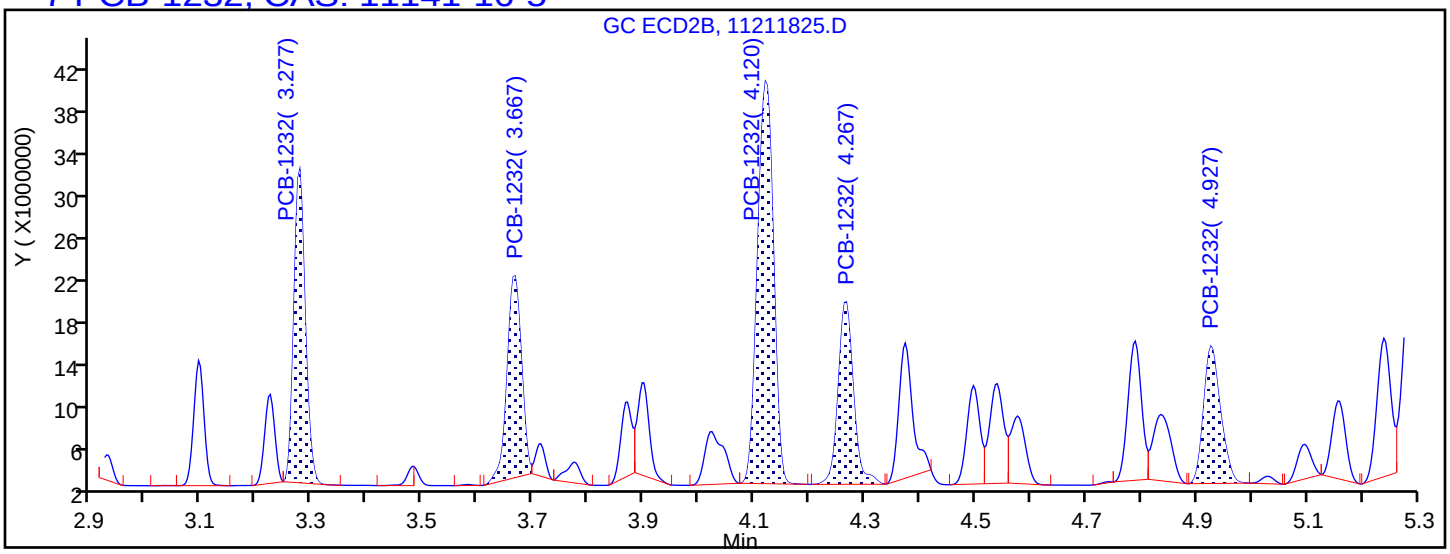
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

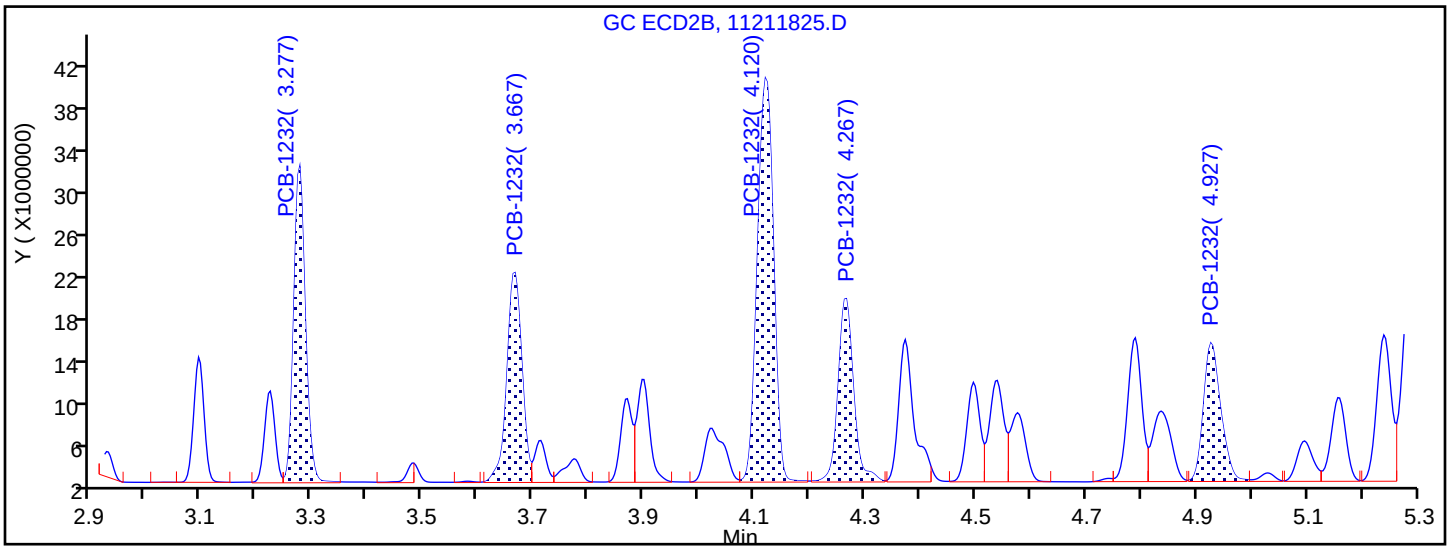
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.277	Response = 41723521
3.667	Response = 34071287
4.120	Response = 75089161
4.267	Response = 32655110
4.927	Response = 27191504



Manual Integration Results

3.277	Response = 43153197	M
3.667	Response = 37154008	M
4.120	Response = 76218445	M
4.267	Response = 33438438	M
4.927	Response = 28051936	M

Reviewer: patadiab, 23-Nov-2018 10:18:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

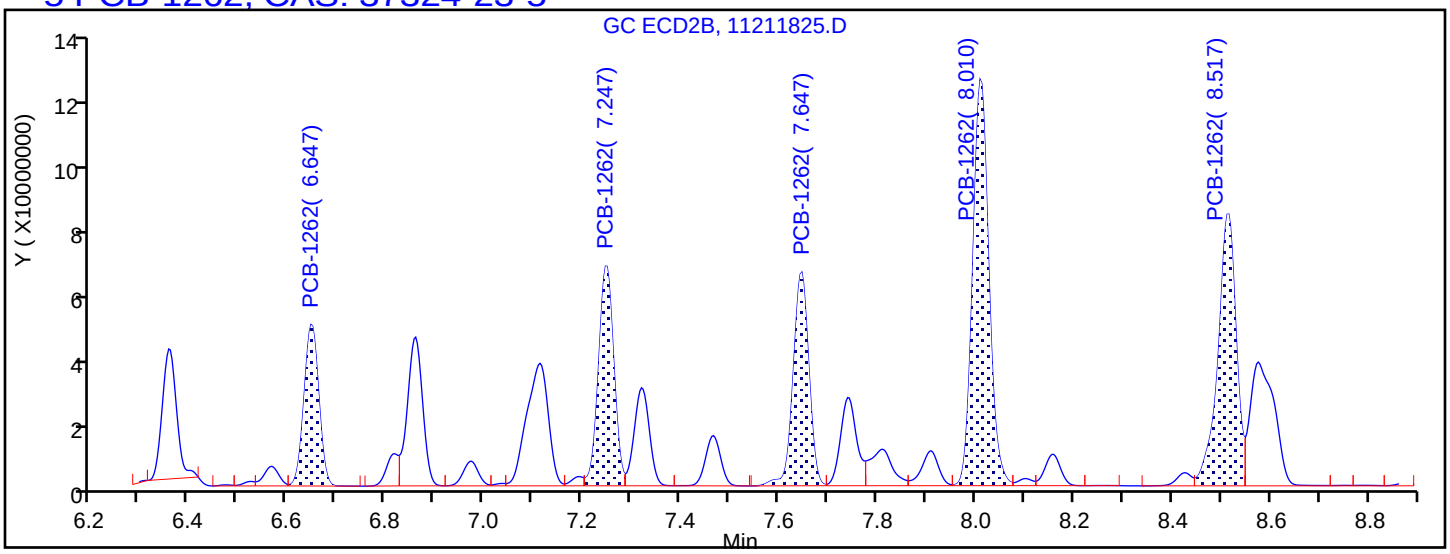
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

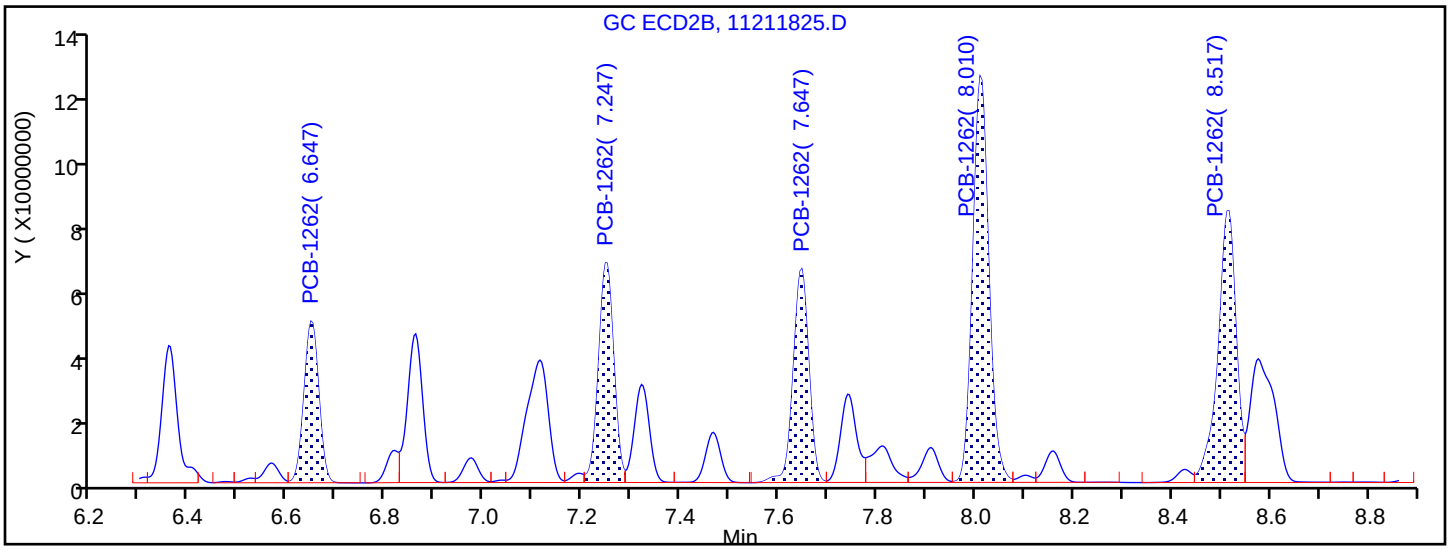
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.647	Response = 98275730
7.247	Response = 138859883
7.647	Response = 137990458
8.010	Response = 270071150
8.517	Response = 204325846



Manual Integration Results

6.647	Response = 98230933	M
7.247	Response = 138859883	
7.647	Response = 137990458	
8.010	Response = 270071150	
8.517	Response = 204325846	

Reviewer: patadiab, 23-Nov-2018 10:18:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D
Lims ID: STDL63262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 17:34:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL63262
Misc. Info.: 280-0076428-026
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:20:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29724345	1000.0	1000.0	
2	1.749	1.746	0.003	167597392	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	3825778	750.0	780.6	
1	3.269	3.271	-0.002	11992126	750.0	770.4	
1	4.116	4.118	-0.002	18488855	750.0	780.5	
1	4.263	4.264	-0.001	8040685	750.0	777.9	
1	4.729	4.731	-0.002	8045853	750.0	778.2	M
		Average of Peak Amounts =				777.5	
2	3.276	3.275	0.001	33236999	750.0	771.4	
2	3.666	3.665	0.001	27752244	750.0	759.9	
2	4.123	4.121	0.002	58138353	750.0	768.0	
2	4.266	4.265	0.001	25319272	750.0	764.2	
2	4.929	4.928	0.001	21128917	750.0	758.5	
		Average of Peak Amounts =				764.4	
						RPD = 1.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.249	6.248	0.001	21984609	750.0	777.9	M
1	7.156	7.154	0.002	34368147	750.0	775.2	M
1	7.489	7.488	0.001	30590995	750.0	779.0	M
1	7.929	7.931	-0.002	63873370	750.0	781.5	M
1	8.319	8.321	-0.002	19427531	750.0	777.3	M
		Average of Peak Amounts =				778.2	
2	6.649	6.648	0.001	76501019	750.0	773.9	
2	7.249	7.248	0.001	108005184	750.0	773.7	
2	7.646	7.645	0.001	107493024	750.0	774.8	
2	8.013	8.011	0.002	210407349	750.0	776.0	
2	8.516	8.515	0.001	158732369	750.0	775.3	
		Average of Peak Amounts =				774.7	
						RPD = 0.45	
S 8 Polychlorinated biphenyls, Total							
1						1555.7	
2						1539.1	
						RPD = 1.07	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

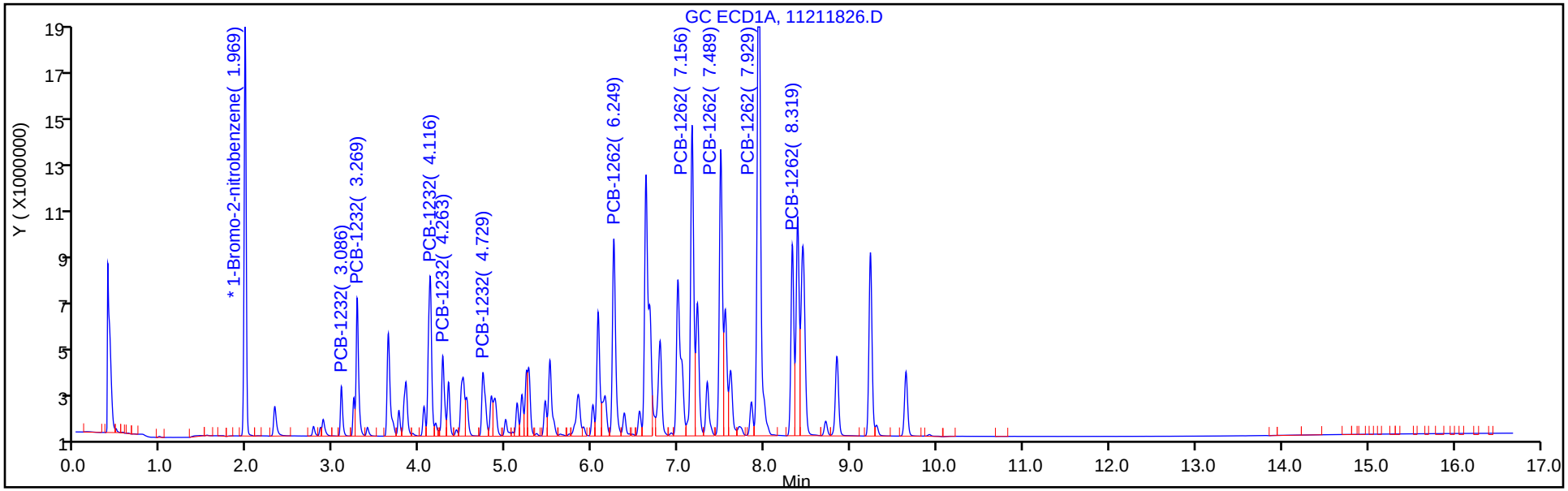
Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

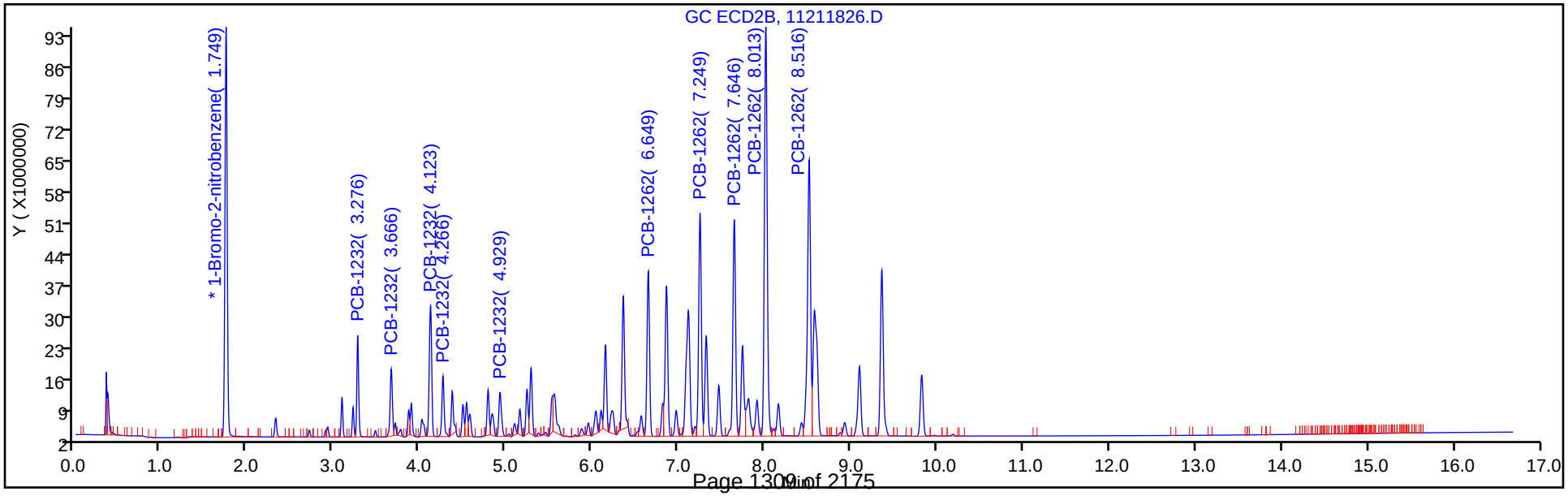
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date:	21-Nov-2018 17:34:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL63262			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D
Lims ID: STDL53262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 17:55:27 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL53262
Misc. Info.: 280-0076428-027
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:14:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	31454394	1000.0	1000.0	
2	1.748	1.748	0.000	177287409	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.088	3.088	0.000	2583135	500.0	495.0	
1	3.271	3.271	0.000	8464098	500.0	509.4	
1	4.118	4.118	0.000	12426844	500.0	494.9	M
1	4.264	4.264	0.000	5502198	500.0	500.6	M
1	4.731	4.731	0.000	5595129	500.0	509.2	M
		Average of Peak Amounts =				501.8	
2	3.275	3.275	0.000	23119208	500.0	501.5	
2	3.665	3.665	0.000	19468141	500.0	497.9	
2	4.121	4.121	0.000	40797414	500.0	504.3	
2	4.265	4.265	0.000	17838929	500.0	503.9	
2	4.928	4.928	0.000	15244324	500.0	512.0	
		Average of Peak Amounts =				503.9	
						RPD = 0.42	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.248	6.248	0.000	15117077	500.0	502.0	M
1	7.154	7.154	0.000	23792647	500.0	504.1	M
1	7.488	7.488	0.000	20569577	500.0	492.1	M
1	7.931	7.931	0.000	43005230	500.0	495.9	M
1	8.321	8.321	0.000	12995186	500.0	489.6	M
		Average of Peak Amounts =				496.7	
2	6.648	6.648	0.000	54027511	500.0	511.3	
2	7.248	7.248	0.000	76105584	500.0	510.0	
2	7.645	7.645	0.000	75571069	500.0	510.0	
2	8.011	8.011	0.000	147285972	500.0	508.7	
2	8.515	8.515	0.000	110696168	500.0	506.1	
		Average of Peak Amounts =				509.2	
						RPD = 2.49	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

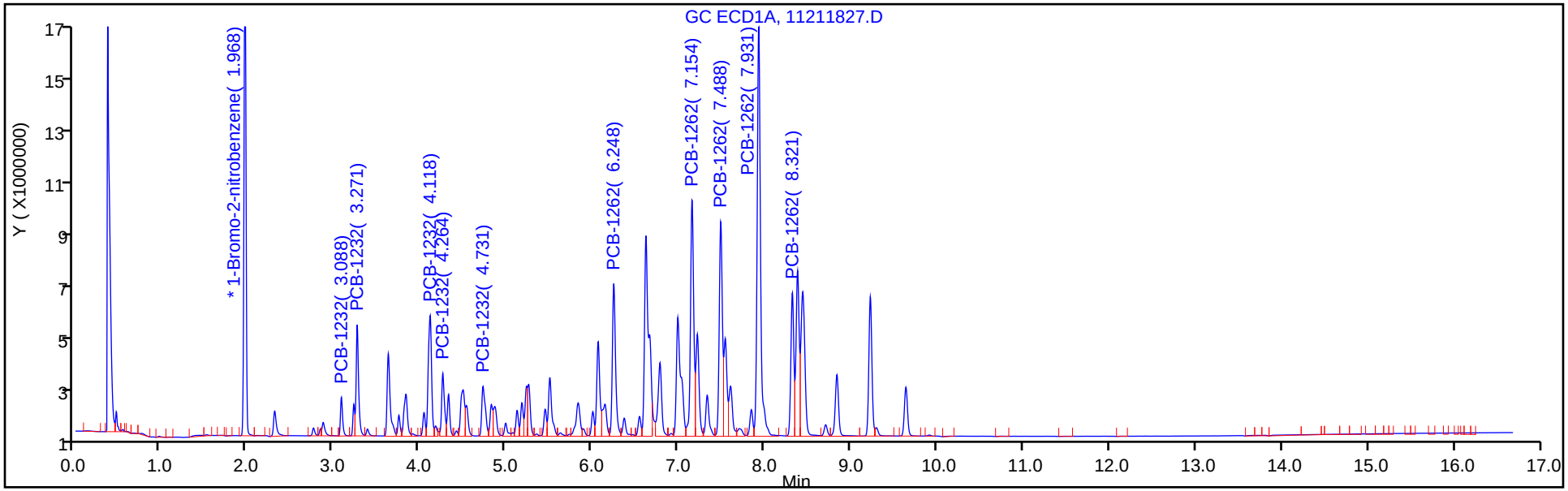
Report Date: 23-Nov-2018 11:02:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

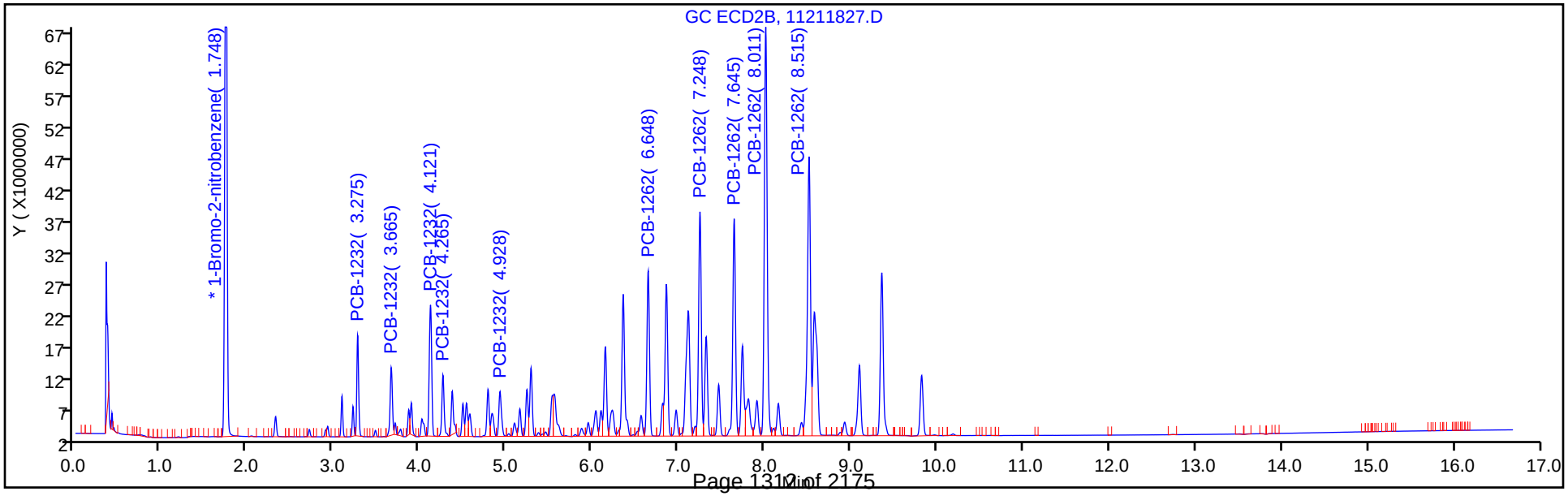
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date:	21-Nov-2018 17:55:27	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL53262			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D
Lims ID: STDL43262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 18:16:46 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL43262
Misc. Info.: 280-0076428-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:56 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:16:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	30965018	1000.0	1000.0	
2	1.747	1.748	-0.001	174717072	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	1392895	250.0	267.2	
1	3.270	3.271	-0.001	4511528	250.0	269.6	
1	4.117	4.118	-0.001	6315260	250.0	254.3	
1	4.263	4.264	-0.001	2916425	250.0	266.4	
1	4.730	4.731	-0.001	2893984	250.0	264.4	
		Average of Peak Amounts =				264.4	
2	3.277	3.275	0.002	12740193	250.0	272.9	
2	3.663	3.665	-0.002	10698875	250.0	269.7	
2	4.120	4.121	-0.001	21982243	250.0	268.7	
2	4.267	4.265	0.002	9641479	250.0	269.4	
2	4.927	4.928	-0.001	8096778	250.0	268.2	
		Average of Peak Amounts =				269.8	
						RPD = 2.02	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.250	6.248	0.002	7964853	250.0	264.1	
1	7.157	7.154	0.003	12307287	250.0	260.7	
1	7.490	7.488	0.002	10904443	250.0	261.3	
1	7.930	7.931	-0.001	21913797	250.0	254.9	
1	8.320	8.321	-0.001	6789639	250.0	257.5	
		Average of Peak Amounts =				259.7	
2	6.647	6.648	-0.001	28900783	250.0	270.2	
2	7.247	7.248	-0.001	40916207	250.0	271.0	
2	7.647	7.645	0.002	40467048	250.0	270.4	
2	8.010	8.011	-0.001	78867004	250.0	270.0	
2	8.513	8.515	-0.002	59822420	250.0	270.9	
		Average of Peak Amounts =				270.5	
						RPD = 4.07	
S 8 Polychlorinated biphenyls, Total							
1						524.1	
2						540.3	
						RPD = 3.04	

Reagents:

AR_3262_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

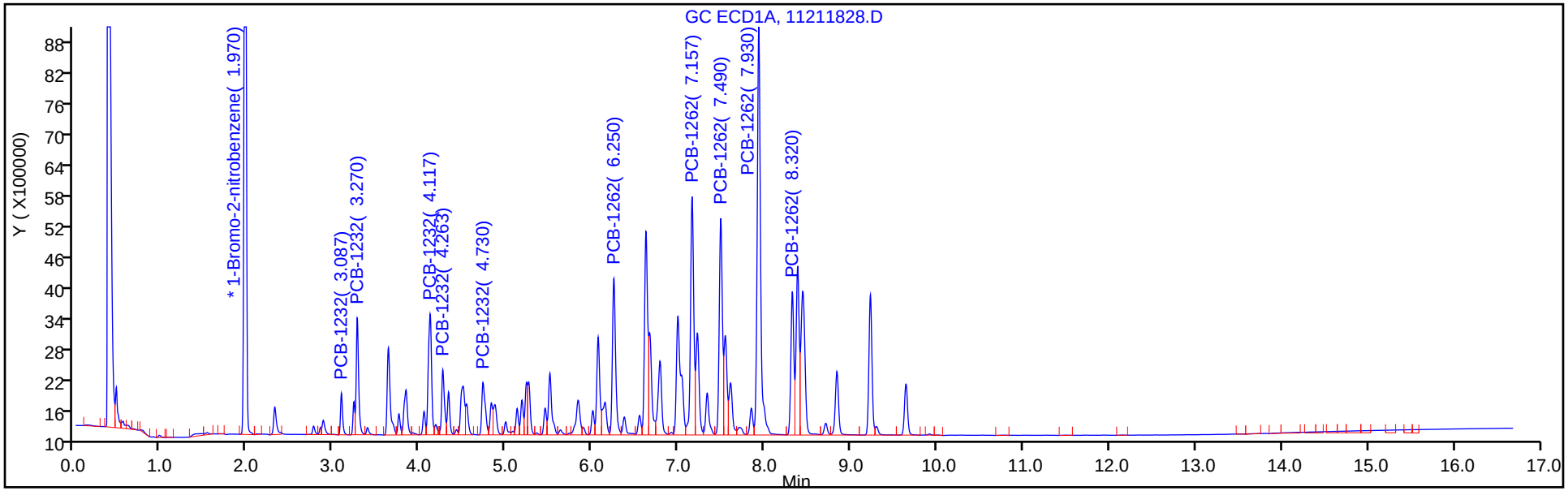
Report Date: 23-Nov-2018 11:02:57 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

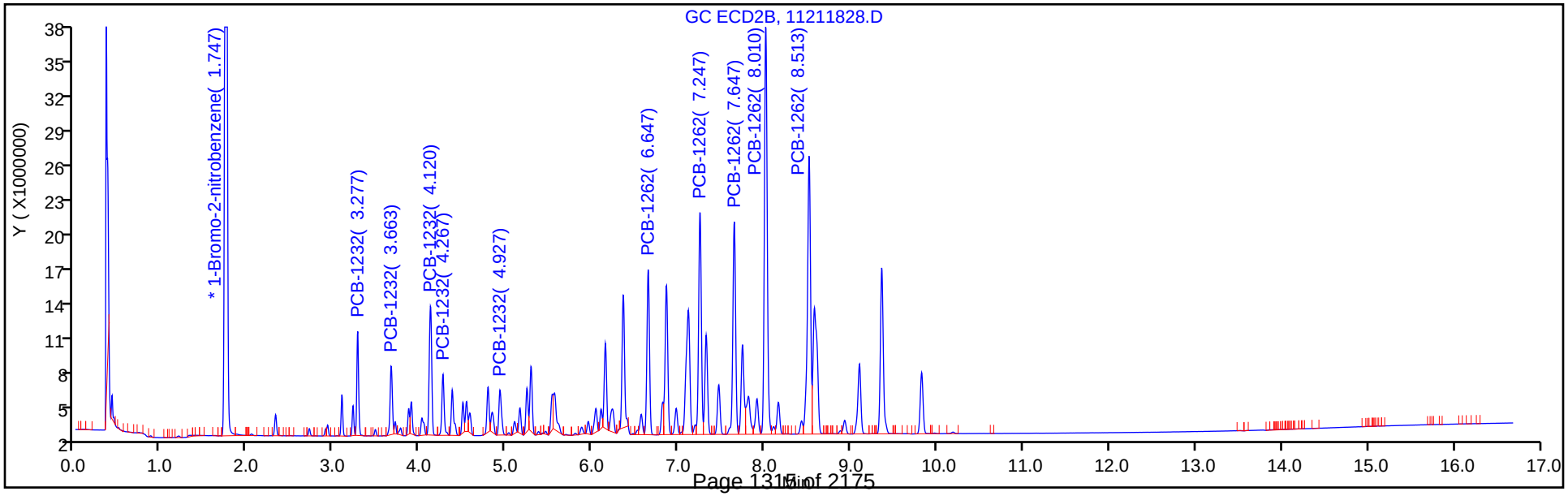
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D

Injection Date:	21-Nov-2018 18:16:46	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL43262			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D
Lims ID: STDL33262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 18:37:56 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL33262
Misc. Info.: 280-0076428-029
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.968	0.004	31139299	1000.0	1000.0	
2	1.749	1.748	0.001	176067915	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	547298	100.0	99.2	
1	3.272	3.271	0.001	1856728	100.0	102.4	
1	4.116	4.118	-0.002	2458762	100.0	96.9	
1	4.262	4.264	-0.002	1164474	100.0	101.6	
1	4.729	4.731	-0.002	1125602	100.0	98.3	
		Average of Peak Amounts =				99.7	
2	3.276	3.275	0.001	5377655	100.0	104.5	
2	3.666	3.665	0.001	4662843	100.0	106.4	
2	4.122	4.121	0.001	9281019	100.0	103.5	
2	4.266	4.265	0.001	4103159	100.0	104.9	
2	4.926	4.928	-0.002	3526090	100.0	106.4	
		Average of Peak Amounts =				105.2	
						RPD = 5.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	3216578	100.0	100.2	
1	7.156	7.154	0.002	4907514	100.0	98.0	
1	7.489	7.488	0.001	4304645	100.0	97.7	
1	7.929	7.931	-0.002	8325389	100.0	94.0	
1	8.319	8.321	-0.002	2648440	100.0	96.9	
		Average of Peak Amounts =				97.4	
2	6.646	6.648	-0.002	12068360	100.0	102.5	
2	7.249	7.248	0.001	17019760	100.0	102.5	
2	7.646	7.645	0.001	16739062	100.0	102.3	
2	8.012	8.011	0.001	32344111	100.0	101.5	
2	8.512	8.515	-0.003	24623782	100.0	101.9	
		Average of Peak Amounts =				102.2	
						RPD = 4.81	
S 8 Polychlorinated biphenyls, Total							
1						197.1	
2						207.3	
						RPD = 5.07	

Reagents:

AR_3262_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

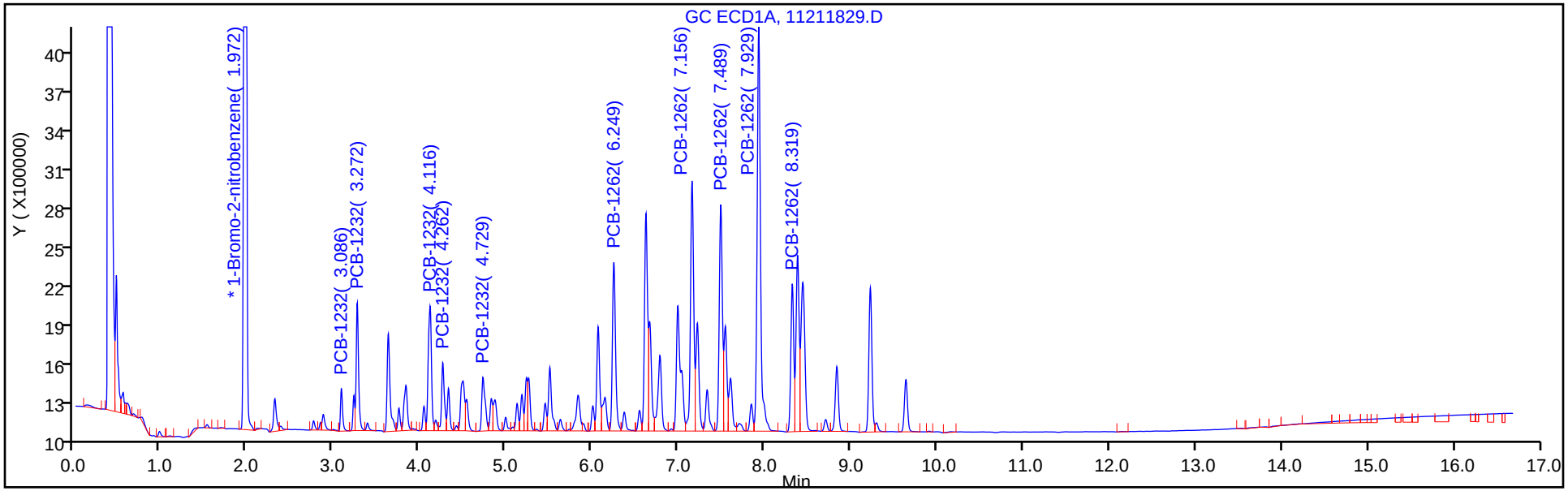
Report Date: 23-Nov-2018 11:03:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

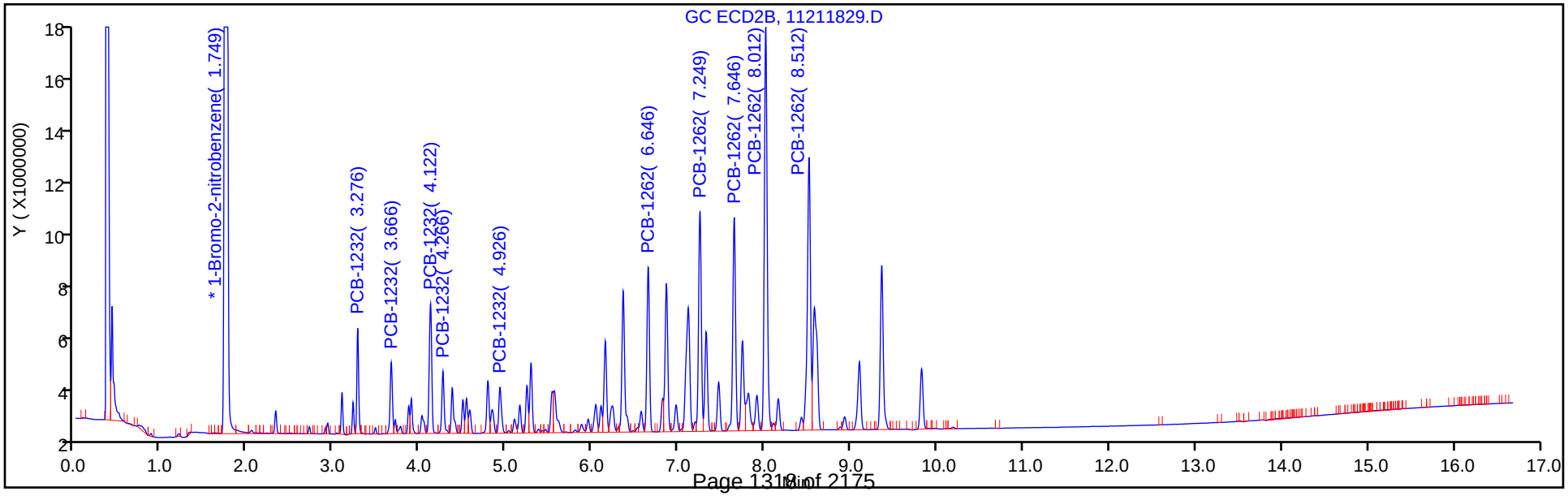
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D

Injection Date:	21-Nov-2018 18:37:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL33262			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D
Lims ID: STDL23262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 18:59:04 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL23262
Misc. Info.: 280-0076428-030
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	30826448	1000.0	1000.0	
2	1.748	1.748	0.000	173971839	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.088	3.088	0.000	308483	50.0	52.8	
1	3.271	3.271	0.000	1020472	50.0	50.9	
1	4.118	4.118	0.000	1273955	50.0	49.6	
1	4.264	4.264	0.000	586726	50.0	48.4	
1	4.731	4.731	0.000	604692	50.0	50.4	
		Average of Peak Amounts =				50.4	
2	3.274	3.275	-0.001	3052064	50.0	52.8	
2	3.664	3.665	-0.001	2666828	50.0	54.0	
2	4.121	4.121	0.000	5327006	50.0	53.6	
2	4.264	4.265	-0.001	2327446	50.0	53.7	
2	4.928	4.928	0.000	1962103	50.0	52.6	
		Average of Peak Amounts =				53.4	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.248	6.248	0.000	1742564	50.0	50.4	
1	7.154	7.154	0.000	2744291	50.0	51.5	
1	7.488	7.488	0.000	2379701	50.0	51.0	
1	7.928	7.931	-0.003	4573994	50.0	50.5	
1	8.318	8.321	-0.003	1421934	50.0	50.3	
		Average of Peak Amounts =				50.7	
2	6.648	6.648	0.000	6882439	50.0	52.4	
2	7.248	7.248	0.000	9662784	50.0	52.1	
2	7.644	7.645	-0.001	9459588	50.0	52.2	
2	8.011	8.011	0.000	18241846	50.0	51.9	
2	8.514	8.515	-0.001	13866078	50.0	51.7	
		Average of Peak Amounts =				52.1	
						RPD = 2.56	
S 8 Polychlorinated biphenyls, Total							
1						101.1	
2						105.4	
						RPD = 4.14	

Reagents:

AR_3262_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

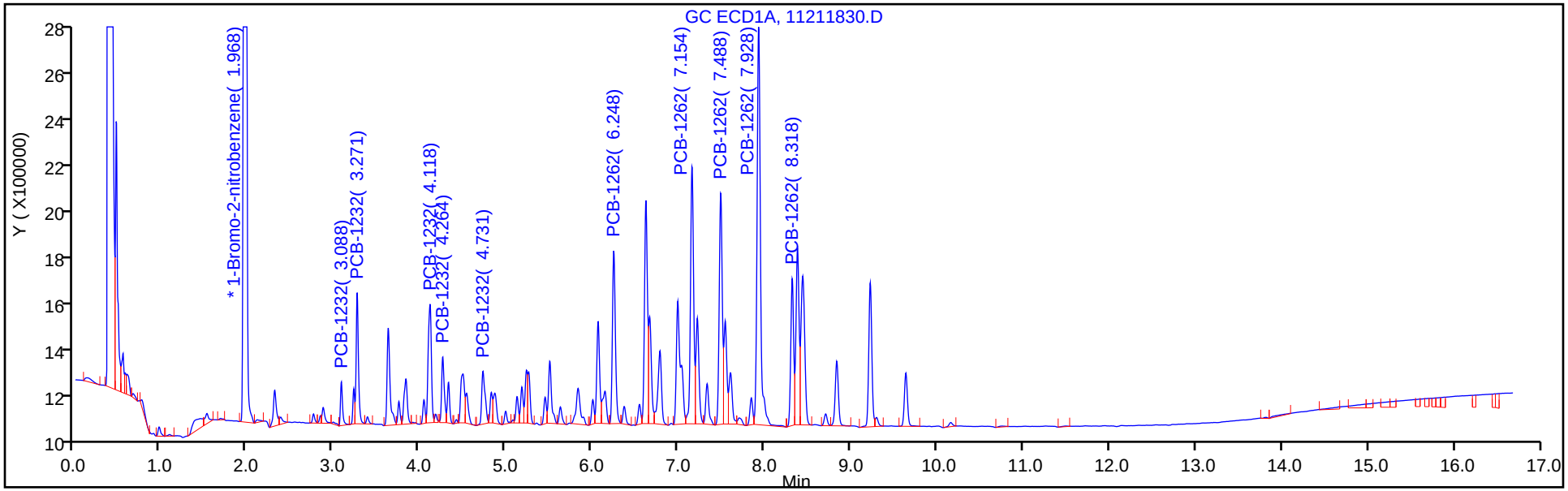
Report Date: 23-Nov-2018 11:03:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

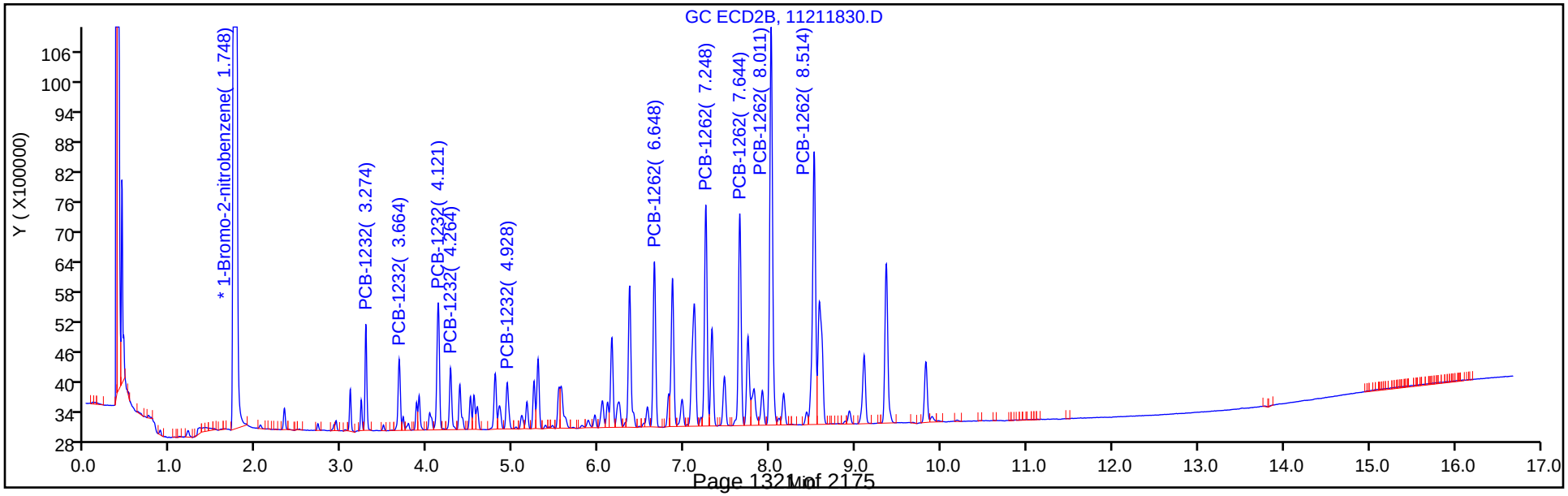
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D

Injection Date:	21-Nov-2018 18:59:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL23262			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D
Lims ID: STDL13262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 19:20:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL13262
Misc. Info.: 280-0076428-031
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:05 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:27:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	28837858	1000.0	1000.0	
2	1.747	1.748	-0.001	164029832	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	145633	25.0	22.4	
1	3.270	3.271	-0.001	527466	25.0	22.1	
1	4.117	4.118	-0.001	639419	25.0	25.5	
1	4.263	4.264	-0.001	305449	25.0	23.9	
1	4.730	4.731	-0.001	299569	25.0	23.6	
		Average of Peak Amounts =				23.5	
2	3.277	3.275	0.002	1549784	25.0	20.6	
2	3.667	3.665	0.002	1327362	25.0	20.0	
2	4.120	4.121	-0.001	2630983	25.0	20.7	
2	4.267	4.265	0.002	1136029	25.0	20.4	
2	4.927	4.928	-0.001	991404	25.0	20.5	
		Average of Peak Amounts =				20.4	
						RPD = 13.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.247	6.248	-0.001	898312	25.0	23.4	
1	7.157	7.154	0.003	1380613	25.0	23.6	
1	7.490	7.488	0.002	1209897	25.0	24.1	
1	7.930	7.931	-0.001	2313295	25.0	25.6	
1	8.320	8.321	-0.001	722269	25.0	25.0	
		Average of Peak Amounts =				24.3	
2	6.647	6.648	-0.001	3536624	25.0	21.2	
2	7.250	7.248	0.002	4988537	25.0	21.3	
2	7.647	7.645	0.002	4810570	25.0	21.4	
2	8.010	8.011	-0.001	9332035	25.0	21.7	
2	8.513	8.515	-0.002	7179707	25.0	21.7	
		Average of Peak Amounts =				21.5	
						RPD = 12.52	
S 8 Polychlorinated biphenyls, Total							
1						47.8	
2						41.9	
						RPD = 13.20	

Reagents:

AR_3262_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

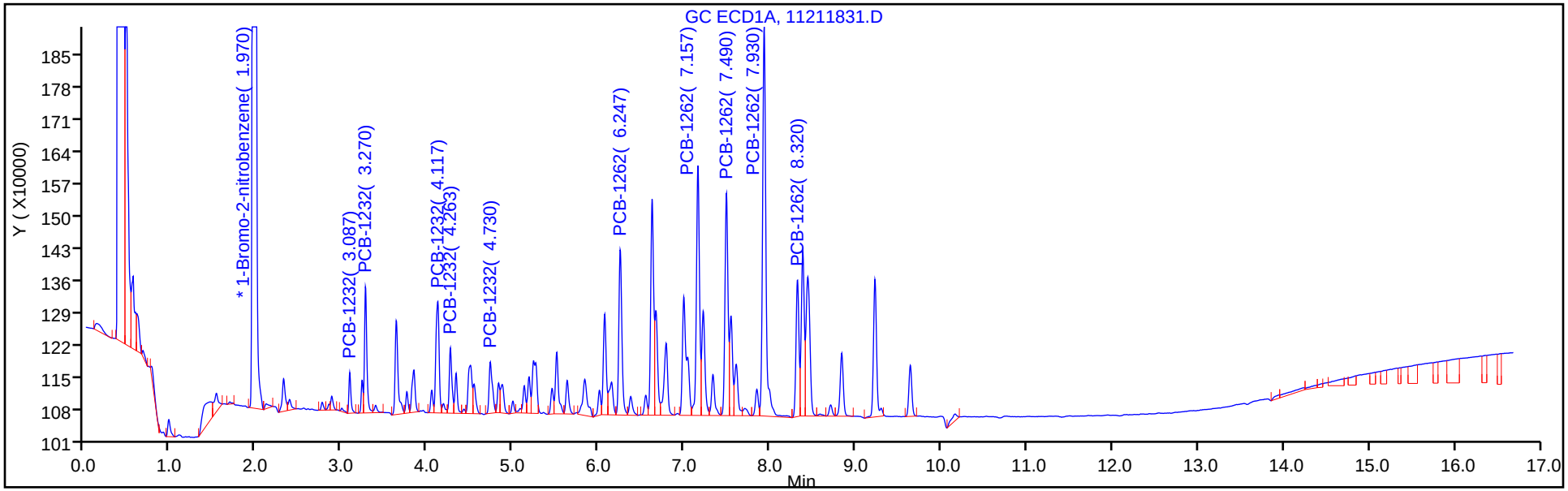
Report Date: 23-Nov-2018 11:03:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

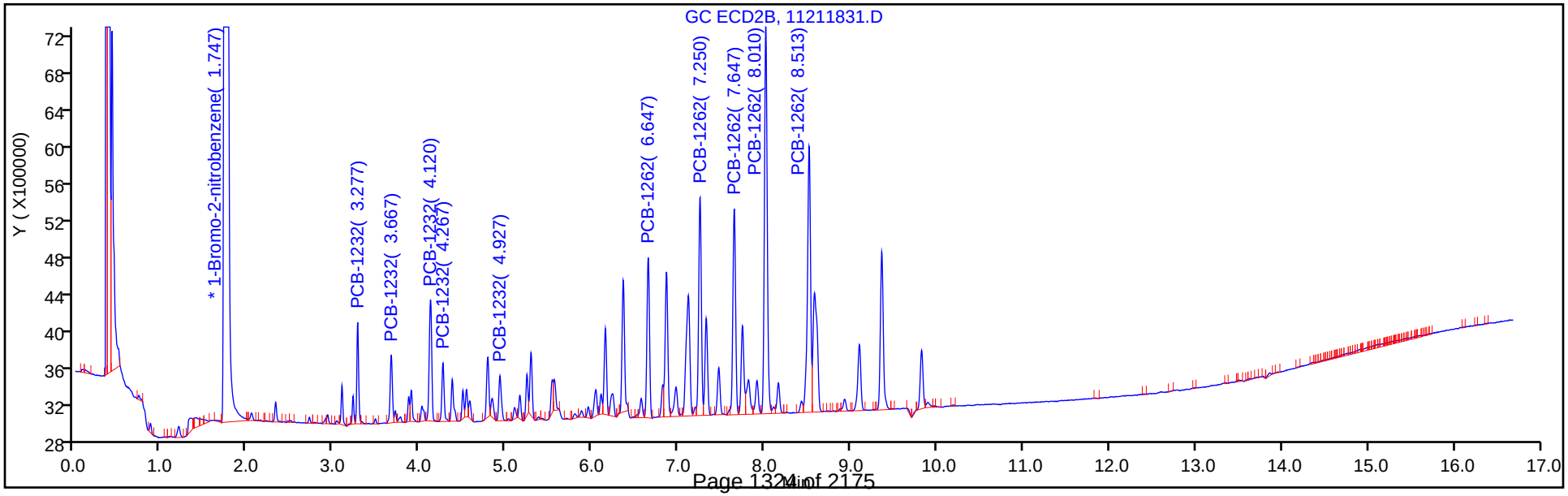
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D

Injection Date:	21-Nov-2018 19:20:15	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL13262			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	1.1005 0.7826	0.9842 0.7518	0.9316	0.8484	0.7941	Lin1	10.854	0.7633							0.9990		0.9900
PCB-1242 Peak 2	1.5351 1.4359	1.4435 1.3946	1.4192	1.3986	1.3859	Lin1	2.6035	1.4013							1.0000		0.9900
PCB-1242 Peak 3	0.7458 0.6049	0.6733 0.5795	0.6658	0.6259	0.5875	Lin1	4.8264	0.5864							0.9990		0.9900
PCB-1242 Peak 4	0.5373 0.4151	0.4846 0.3856	0.4813	0.4405	0.4151	Lin1	4.6644	0.3992							0.9980		0.9900
PCB-1242 Peak 5	0.6137 0.5483	0.5247 0.5411	0.5407	0.5157	0.5074	Lin1	0.7978	0.5327							0.9990		0.9900
PCB-1268 Peak 1	3.5642 2.9823	3.0682 2.7748	2.9905	2.8187	2.7519	Lin1	16.238	2.8112							0.9980		0.9900
PCB-1268 Peak 2	3.1918 2.9518	3.0270 2.8076	3.0783	2.8955	2.8596	Lin1	10.417	2.8565							0.9990		0.9900
PCB-1268 Peak 3	2.7905 2.3929	2.5131 2.2614	2.5155	2.3054	2.2736	Lin1	13.091	2.2896							0.9990		0.9900
PCB-1268 Peak 4	1.1823 0.9884	1.0224 0.9333	1.2421	0.9577	0.9386	Lin1	8.1973	0.9461							0.9960		0.9900
PCB-1268 Peak 5	8.0817 7.1359	7.2815 6.6759	7.5820	6.9414	6.8481	Lin1	35.077	6.8284							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Lin1	826846 18033958	1591803 23666995	2785673	6934698	12621153	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 2	BNB	Lin1	1153326 33088198	2334811 43906093	4243819	11431468	22028422	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 3	BNB	Lin1	560286 13939481	1089072 18245316	1990794	5115672	9337377	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 4	BNB	Lin1	403656 9565455	783867 12139444	1439135	3600286	6598400	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 5	BNB	Lin1	461108 12635374	848605 17036171	1616814	4215035	8065513	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 1	BNB	Lin1	2677797 68720772	4962556 87356816	8942275	23038908	43739892	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 2	BNB	Lin1	2398046 68019827	4896006 88389199	9204821	23666972	45452498	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 3	BNB	Lin1	2096540 55139677	4064693 71195019	7521874	18843418	36138239	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 4	BNB	Lin1	888286 22774873	1653587 29381338	3714053	7827884	14918235	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 5	BNB	Lin1	6071834 164433426	11777400 210173125	22672079	56736910	108847285	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D
Lims ID: STDL74268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 19:41:25 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL74268
Misc. Info.: 280-0076428-032
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:08 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.968	0.001	31482365	1000.0	1000.0	
2	1.749	1.748	0.001	176421211	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.632	3.631	0.001	23666995	1000.0	970.7	
1	4.116	4.117	-0.001	43906093	1000.0	993.4	
1	4.262	4.264	-0.002	18245316	1000.0	980.1	
1	5.239	5.237	0.002	12139444	1000.0	954.3	
1	5.259	5.261	-0.002	17036171	1000.0	1014.3	
		Average of Peak Amounts =				982.6	
2	3.666	3.664	0.002	58050740	1000.0	958.5	
2	4.122	4.121	0.001	129222617	1000.0	962.4	
2	4.266	4.264	0.002	55919168	1000.0	961.9	
2	4.789	4.788	0.001	44752744	1000.0	955.6	
2	4.926	4.928	-0.002	54422086	1000.0	963.6	
		Average of Peak Amounts =				960.4	
						RPD = 2.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.382	8.381	0.001	87356816	1000.0	981.3	
1	8.432	8.434	-0.002	88389199	1000.0	979.2	
1	8.709	8.707	0.002	71195019	1000.0	982.0	
1	9.226	9.224	0.002	29381338	1000.0	977.8	
1	9.639	9.637	0.002	210173125	1000.0	972.5	
		Average of Peak Amounts =				978.6	
2	8.512	8.511	0.001	304523679	1000.0	954.1	
2	8.576	8.574	0.002	292646780	1000.0	964.9	
2	8.929	8.928	0.001	252817304	1000.0	959.6	
2	9.359	9.358	0.001	119674966	1000.0	955.3	
2	9.819	9.821	-0.002	772165320	1000.0	960.8	
		Average of Peak Amounts =				959.0	
						RPD = 2.02	
S 8 Polychlorinated biphenyls, Total							
1						1961.1	
2						1919.4	
						RPD = 2.15	

Reagents:

AR_4268_L7_00016	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

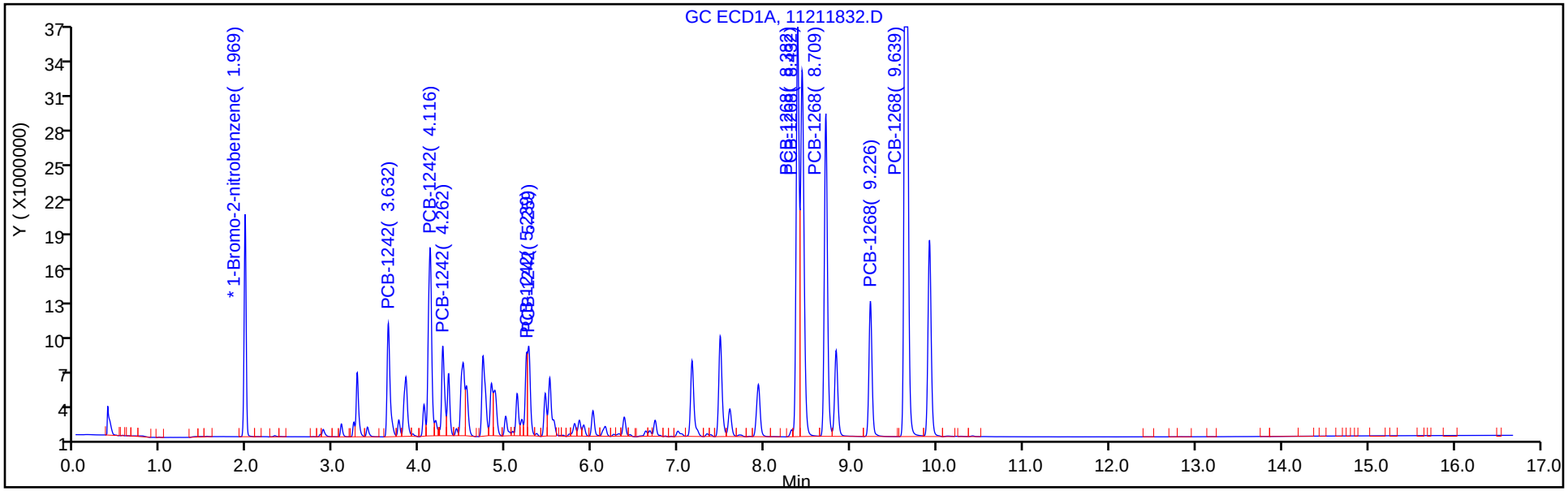
Report Date: 23-Nov-2018 11:03:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

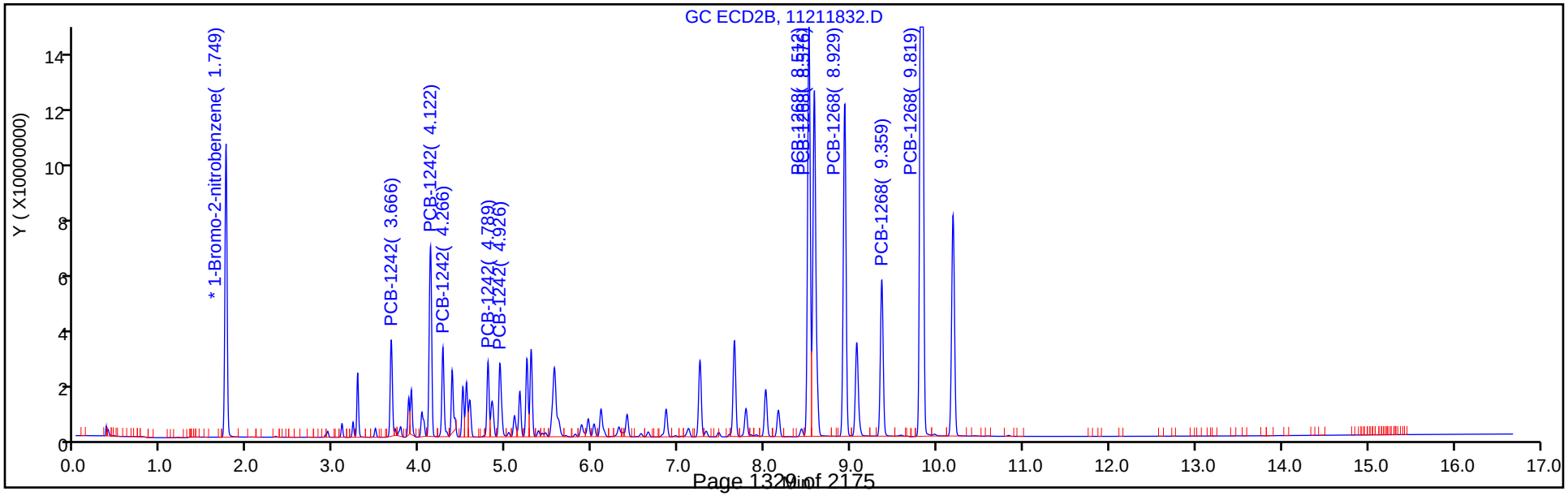
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D

Injection Date:	21-Nov-2018 19:41:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL74268			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D
Lims ID: STDL64268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 20:02:35 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL64268
Misc. Info.: 280-0076428-033
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:11 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:33:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.968	-0.002	30724311	1000.0	1000.0	
2	1.747	1.748	-0.001	172295175	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	18033958	750.0	754.8	
1	4.116	4.117	-0.001	33088198	750.0	766.7	
1	4.263	4.264	-0.001	13939481	750.0	765.5	
1	5.236	5.237	-0.001	9565455	750.0	768.3	
1	5.260	5.261	-0.001	12635374	750.0	770.5	
		Average of Peak Amounts =				765.1	
2	3.663	3.664	-0.001	44959096	750.0	756.3	
2	4.120	4.121	-0.001	100690473	750.0	764.9	
2	4.263	4.264	-0.001	43601831	750.0	764.9	
2	4.790	4.788	0.002	35305208	750.0	766.5	
2	4.927	4.928	-0.001	42582862	750.0	769.0	
		Average of Peak Amounts =				764.3	
						RPD = 0.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	68720772	750.0	789.9	
1	8.433	8.434	-0.001	68019827	750.0	771.4	
1	8.710	8.707	0.003	55139677	750.0	778.1	
1	9.226	9.224	0.002	22774873	750.0	774.9	
1	9.640	9.637	0.003	164433426	750.0	778.6	
		Average of Peak Amounts =				778.6	
2	8.513	8.511	0.002	242643975	750.0	775.8	
2	8.573	8.574	-0.001	229976284	750.0	773.9	
2	8.927	8.928	-0.001	200377742	750.0	776.3	
2	9.357	9.358	-0.001	95407700	750.0	777.4	
2	9.820	9.821	-0.001	610063306	750.0	774.7	
		Average of Peak Amounts =				775.6	
						RPD = 0.38	
S 8 Polychlorinated biphenyls, Total							
1						1543.7	
2						1540.0	
						RPD = 0.24	

Reagents:

AR_4268_L6_00018	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

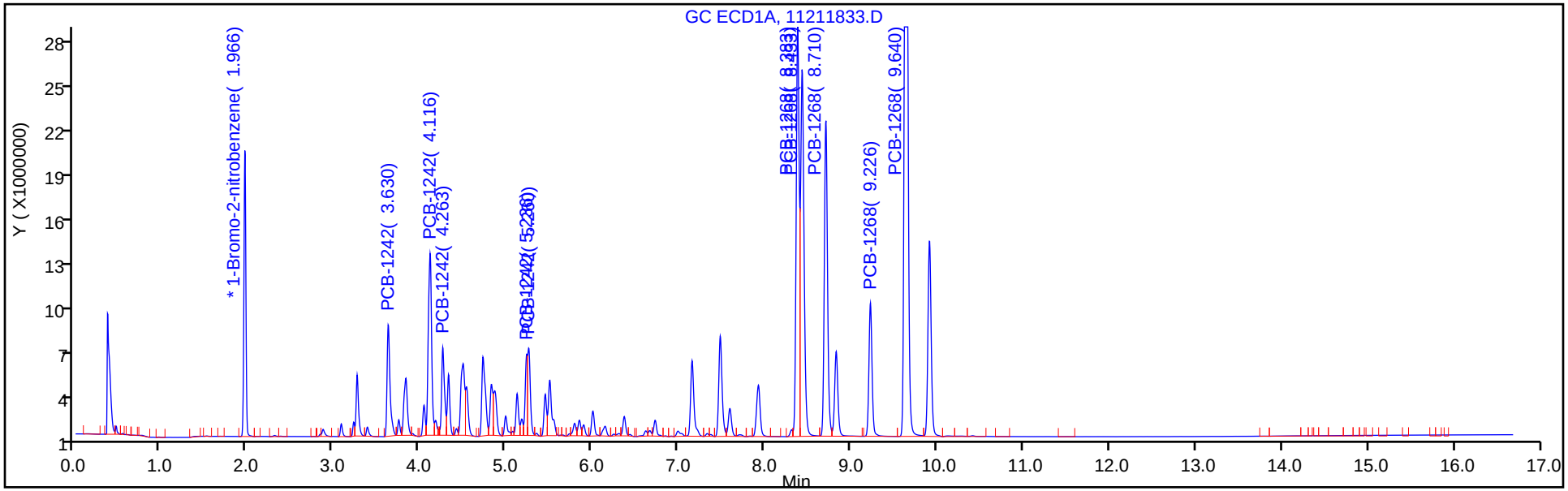
Report Date: 23-Nov-2018 11:03:12 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

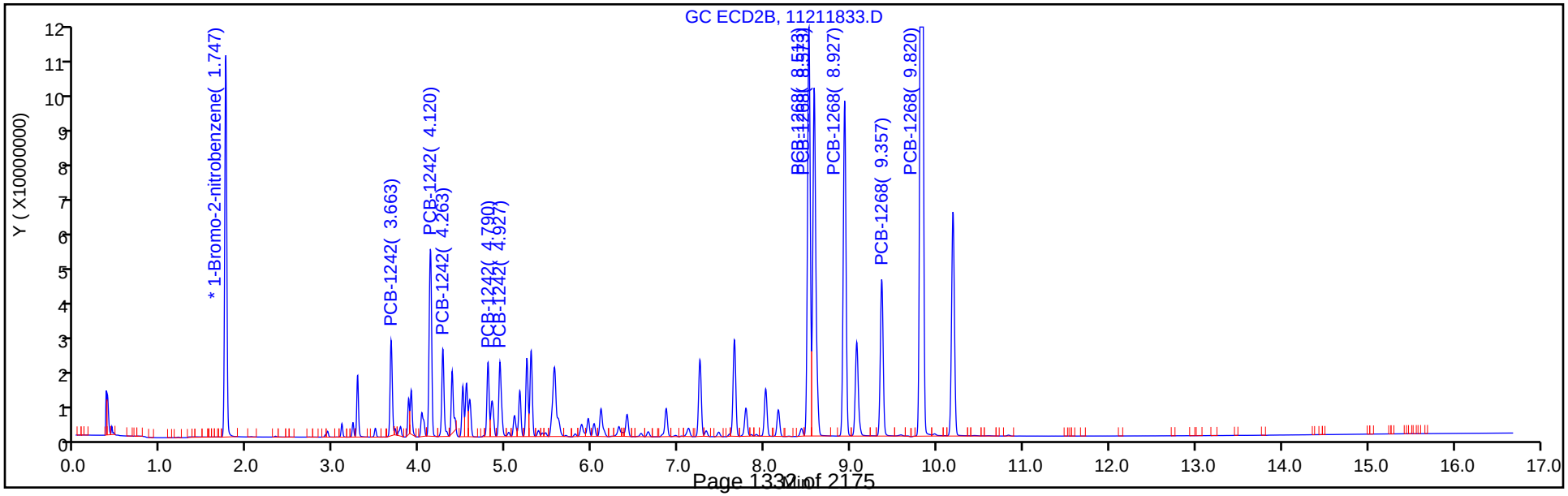
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D

Injection Date:	21-Nov-2018 20:02:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL64268			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D
Lims ID: STDL54268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 20:23:44 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL54268
Misc. Info.: 280-0076428-034
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:31:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	31789266	1000.0	1000.0	
2	1.744	1.744	0.000	178179597	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	12621153	500.0	505.9	
1	4.117	4.117	0.000	22028422	500.0	492.7	
1	4.264	4.264	0.000	9337377	500.0	492.7	
1	5.237	5.237	0.000	6598400	500.0	508.3	
1	5.261	5.261	0.000	8065513	500.0	474.8	
		Average of Peak Amounts =				494.9	
2	3.664	3.664	0.000	32047030	500.0	515.5	
2	4.121	4.121	0.000	69892795	500.0	508.6	
2	4.264	4.264	0.000	30223208	500.0	507.7	
2	4.788	4.788	0.000	24589768	500.0	507.1	
2	4.928	4.928	0.000	29090693	500.0	502.9	
		Average of Peak Amounts =				508.4	
						RPD = 2.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	43739892	500.0	483.7	
1	8.434	8.434	0.000	45452498	500.0	496.9	
1	8.707	8.707	0.000	36138239	500.0	490.8	
1	9.224	9.224	0.000	14918235	500.0	487.4	
1	9.637	9.637	0.000	108847285	500.0	496.3	
		Average of Peak Amounts =				491.0	
2	8.511	8.511	0.000	164790872	500.0	504.5	
2	8.574	8.574	0.000	154491173	500.0	498.2	
2	8.928	8.928	0.000	134857881	500.0	500.7	
2	9.358	9.358	0.000	64325885	500.0	502.2	
2	9.821	9.821	0.000	410787422	500.0	499.6	
		Average of Peak Amounts =				501.0	
						RPD = 2.02	

Reagents:

AR_4268_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

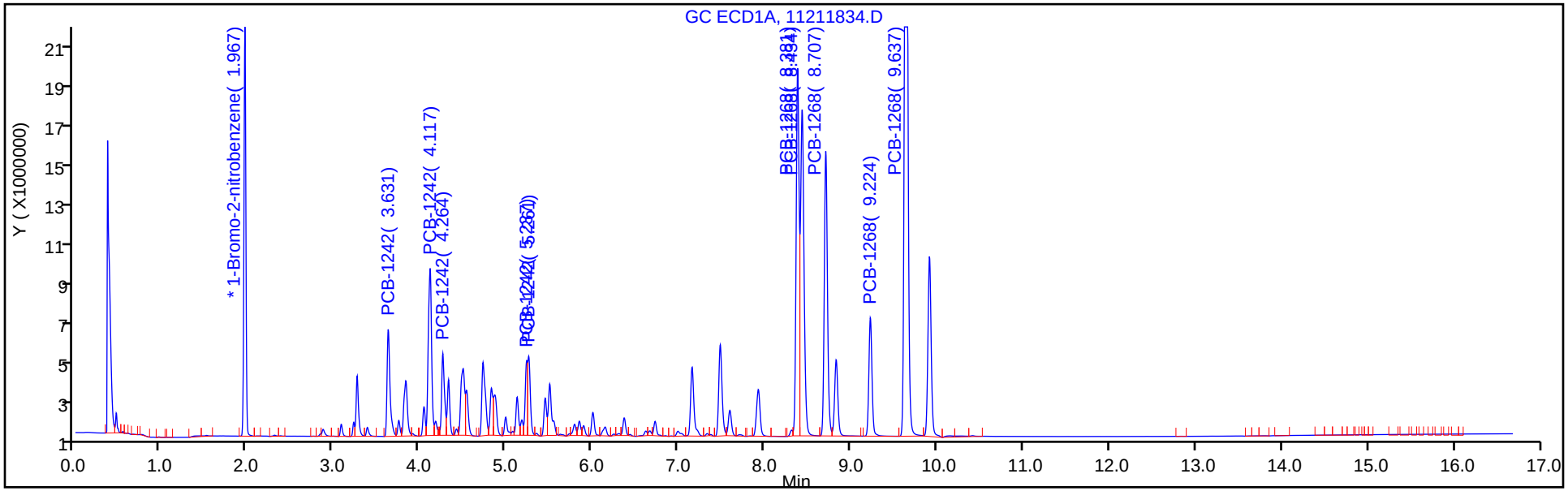
Report Date: 23-Nov-2018 11:03:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

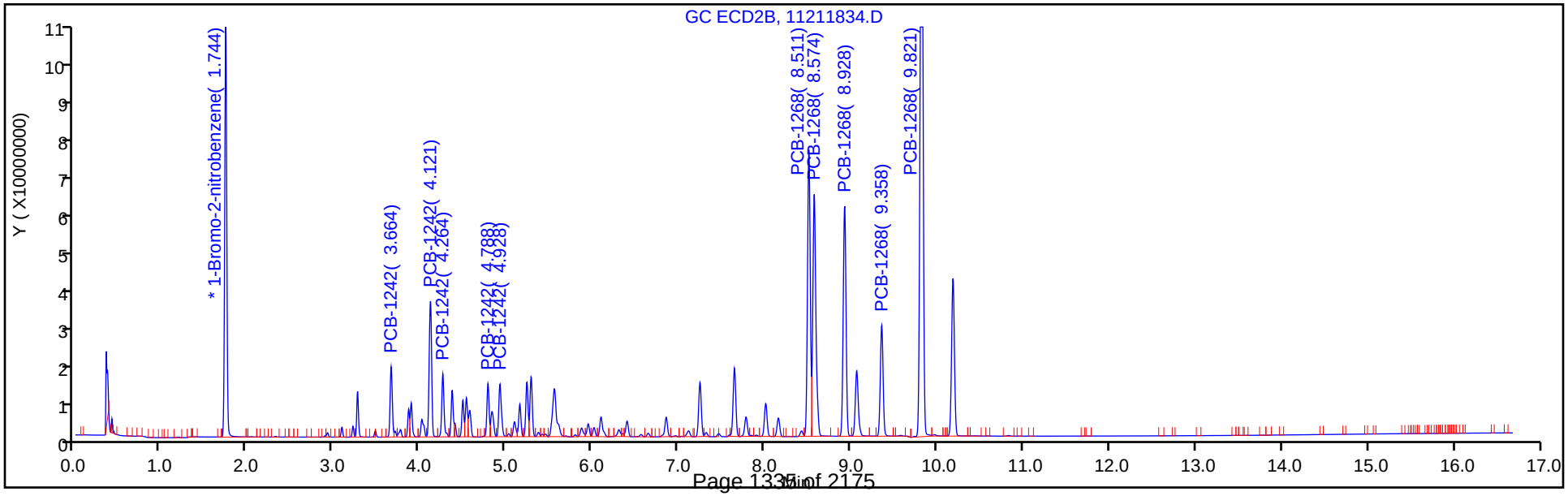
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D

Injection Date:	21-Nov-2018 20:23:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL54268			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D
Lims ID: STDL44268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 20:44:55 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL44268
Misc. Info.: 280-0076428-035
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32694800	1000.0	1000.0	
2	1.745	1.744	0.001	183441113	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	6934698	250.0	263.7	
1	4.118	4.117	0.001	11431468	250.0	247.7	
1	4.265	4.264	0.001	5115672	250.0	258.6	
1	5.238	5.237	0.001	3600286	250.0	264.2	
1	5.261	5.261	0.000	4215035	250.0	240.5	
		Average of Peak Amounts =				254.9	
2	3.665	3.664	0.001	17497734	250.0	264.7	
2	4.121	4.121	0.000	37814505	250.0	260.3	
2	4.265	4.264	0.001	16456921	250.0	261.4	
2	4.788	4.788	0.000	13877871	250.0	265.3	
2	4.928	4.928	0.000	15905764	250.0	260.0	
		Average of Peak Amounts =				262.4	
						RPD = 2.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	23038908	250.0	244.9	
1	8.434	8.434	0.000	23666972	250.0	249.8	
1	8.708	8.707	0.001	18843418	250.0	246.0	
1	9.224	9.224	0.000	7827884	250.0	244.4	
1	9.638	9.637	0.001	56736910	250.0	249.0	
		Average of Peak Amounts =				246.8	
2	8.511	8.511	0.000	89874672	250.0	260.4	
2	8.575	8.574	0.001	84348061	250.0	258.1	
2	8.928	8.928	0.000	73465781	250.0	258.8	
2	9.358	9.358	0.000	35091487	250.0	259.9	
2	9.821	9.821	0.000	224575190	250.0	258.9	
		Average of Peak Amounts =				259.2	
						RPD = 4.90	
S 8 Polychlorinated biphenyls, Total							
1						501.7	
2						521.6	
						RPD = 3.88	

Reagents:

AR_4268_L4_00023	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

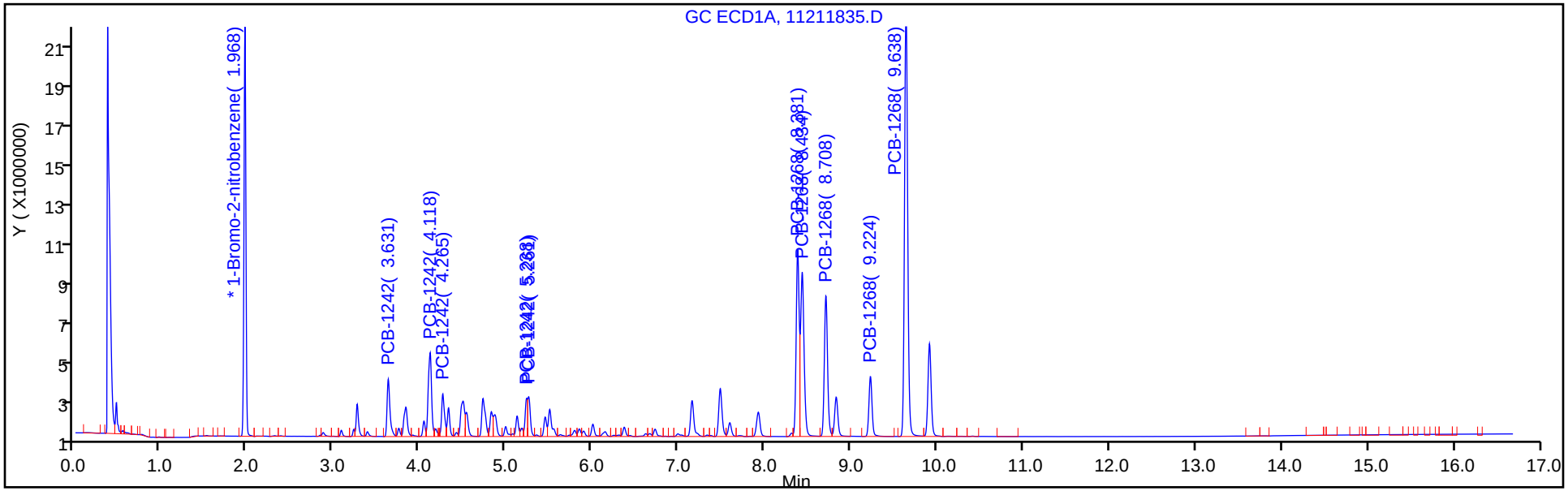
Report Date: 23-Nov-2018 11:03:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

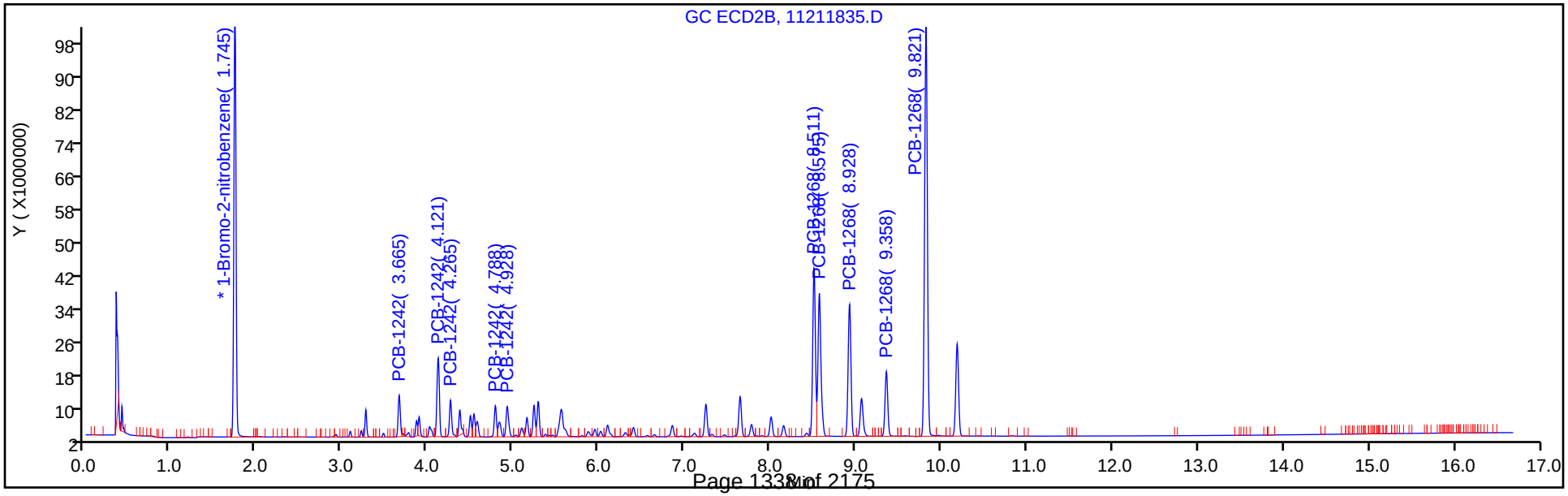
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D

Injection Date:	21-Nov-2018 20:44:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL44268			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D
Lims ID: STDL34268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 21:06:06 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL34268
Misc. Info.: 280-0076428-036
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:21 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	29902517	1000.0	1000.0	
2	1.744	1.744	0.000	169052125	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	2785673	100.0	107.8	
1	4.117	4.117	0.000	4243819	100.0	99.4	
1	4.264	4.264	0.000	1990794	100.0	105.3	
1	5.237	5.237	0.000	1439135	100.0	108.9	
1	5.261	5.261	0.000	1616814	100.0	100.0	
		Average of Peak Amounts =				104.3	
2	3.664	3.664	0.000	7236657	100.0	108.6	
2	4.121	4.121	0.000	15341647	100.0	106.4	
2	4.264	4.264	0.000	6684107	100.0	106.7	
2	4.788	4.788	0.000	5937221	100.0	108.2	
2	4.928	4.928	0.000	6462864	100.0	106.2	
		Average of Peak Amounts =				107.2	
						RPD = 2.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	8942275	100.0	100.6	
1	8.434	8.434	0.000	9204821	100.0	104.1	
1	8.707	8.707	0.000	7521874	100.0	104.1	
1	9.224	9.224	0.000	3714053	100.0	122.6	
1	9.641	9.637	0.004	22672079	100.0	105.9	
		Average of Peak Amounts =				107.5	
2	8.511	8.511	0.000	37039039	100.0	108.4	
2	8.574	8.574	0.000	34510186	100.0	107.4	
2	8.928	8.928	0.000	29936037	100.0	107.2	
2	9.358	9.358	0.000	14362338	100.0	108.0	
2	9.821	9.821	0.000	93152179	100.0	109.0	
		Average of Peak Amounts =				108.0	
						RPD = 0.49	
S 8 Polychlorinated biphenyls, Total							
1						211.8	
2						215.2	
						RPD = 1.62	

Reagents:

AR_4268_L3_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

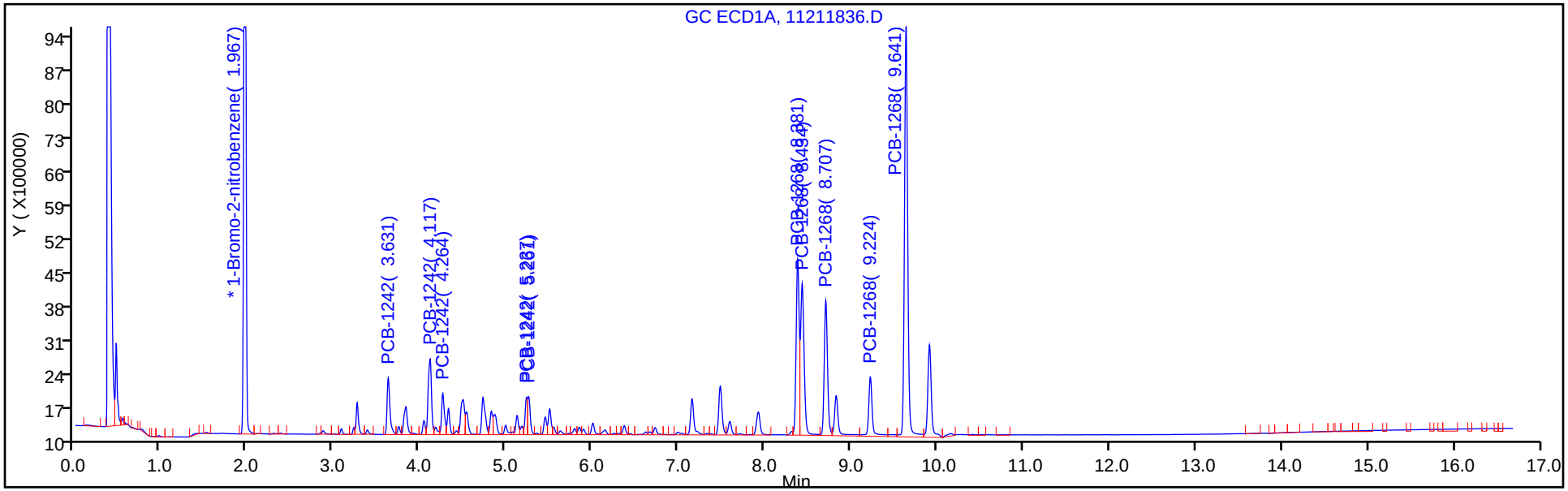
Report Date: 23-Nov-2018 11:03:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

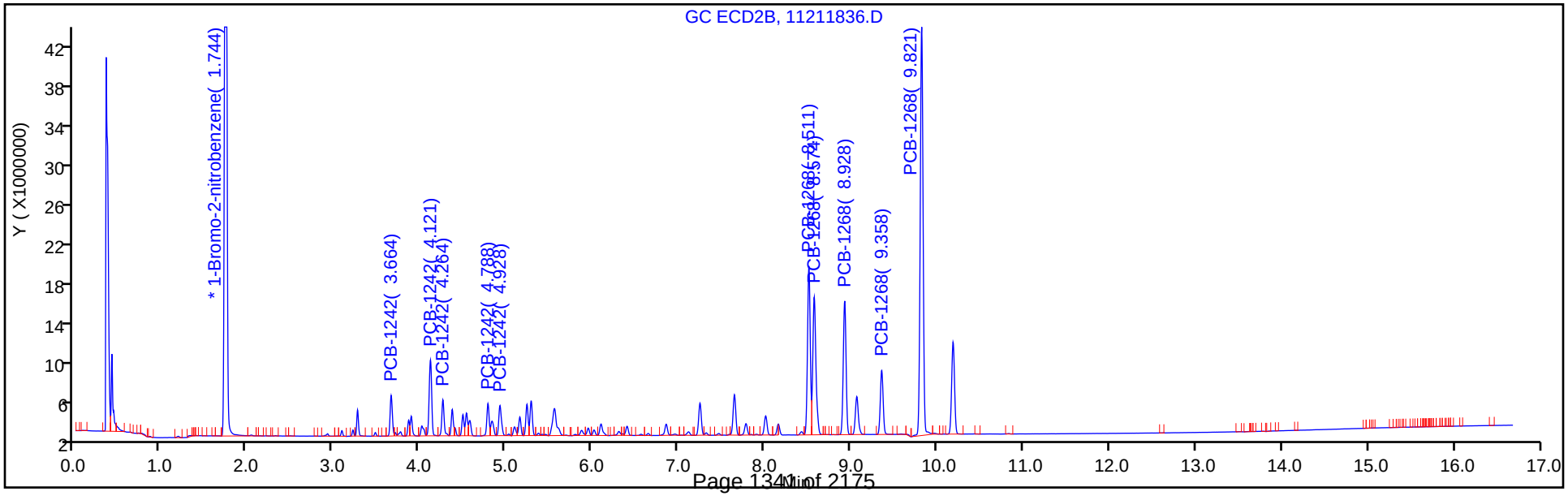
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D

Injection Date:	21-Nov-2018 21:06:06	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL34268			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D
Lims ID: STDL24268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 21:27:18 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL24268
Misc. Info.: 280-0076428-037
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:23 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32348608	1000.0	1000.0	
2	1.745	1.744	0.001	181848580	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	1591803	50.0	50.2	
1	4.118	4.117	0.001	2334811	50.0	49.6	
1	4.264	4.264	0.000	1089072	50.0	49.2	
1	5.234	5.237	-0.003	783867	50.0	49.0	
1	5.261	5.261	0.000	848605	50.0	47.7	
		Average of Peak Amounts =				49.2	
2	3.665	3.664	0.001	4196303	50.0	50.0	
2	4.121	4.121	0.000	8787056	50.0	49.8	
2	4.265	4.264	0.001	3857429	50.0	50.2	
2	4.788	4.788	0.000	3715663	50.0	51.2	
2	4.928	4.928	0.000	3803015	50.0	51.3	
		Average of Peak Amounts =				50.5	
						RPD = 2.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	4962556	50.0	48.8	
1	8.434	8.434	0.000	4896006	50.0	49.3	
1	8.708	8.707	0.001	4064693	50.0	49.2	
1	9.224	9.224	0.000	1653587	50.0	45.4	
1	9.638	9.637	0.001	11777400	50.0	48.2	
		Average of Peak Amounts =				48.2	
2	8.511	8.511	0.000	20840173	50.0	49.8	
2	8.575	8.574	0.001	19449827	50.0	50.1	
2	8.928	8.928	0.000	16824081	50.0	49.8	
2	9.358	9.358	0.000	8076058	50.0	50.1	
2	9.821	9.821	0.000	51994829	50.0	50.0	
		Average of Peak Amounts =				50.0	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						97.3	
2						100.5	
						RPD = 3.17	

Reagents:

AR_4268_L2_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

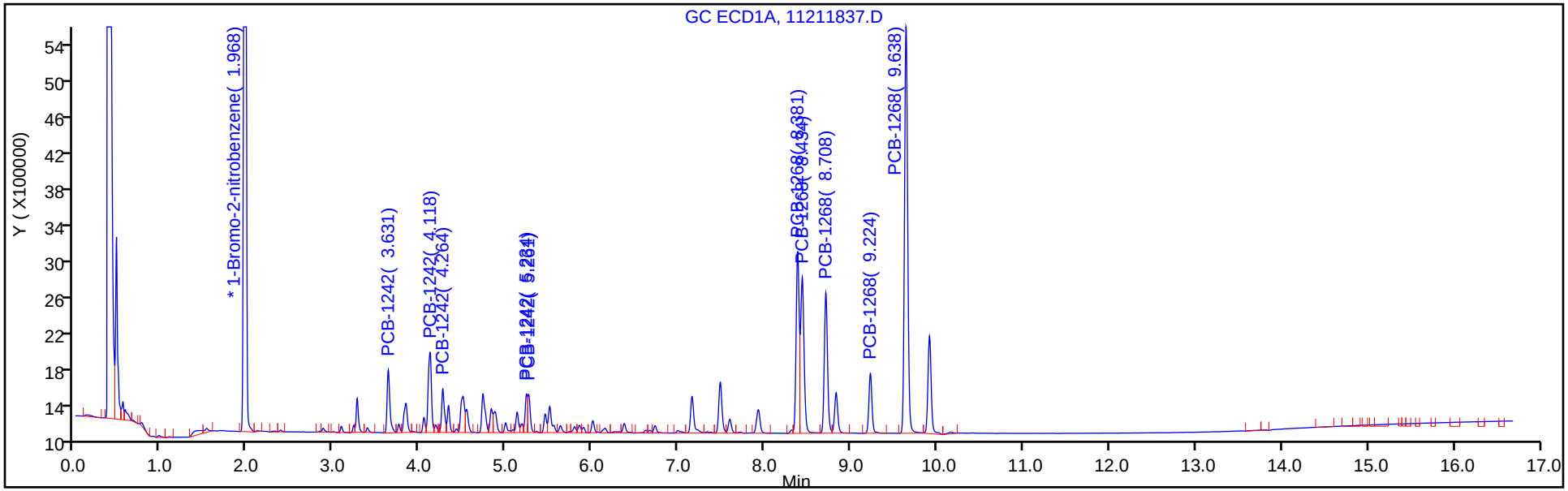
Report Date: 23-Nov-2018 11:03:24 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

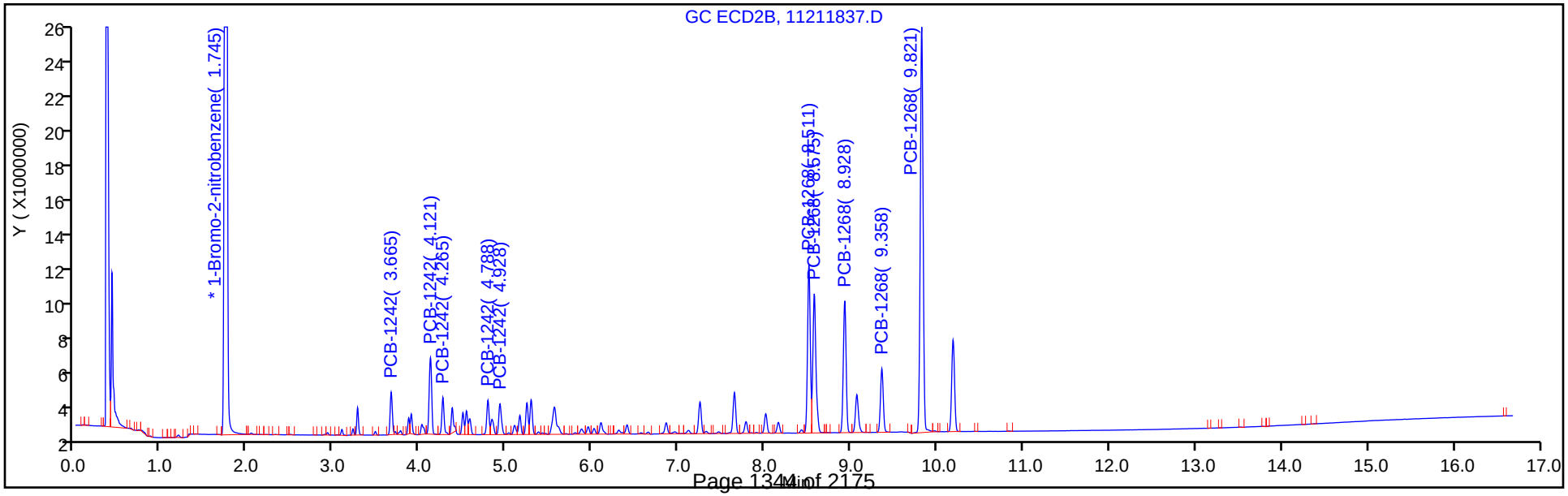
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D

Injection Date:	21-Nov-2018 21:27:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL24268			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D
Lims ID: STDL14268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 21:48:29 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL14268
Misc. Info.: 280-0076428-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:28 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:35:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30052215	1000.0	1000.0	
2	1.747	1.744	0.003	169482834	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	826846	25.0	21.8	
1	4.117	4.117	0.000	1153326	25.0	25.5	
1	4.263	4.264	-0.001	560286	25.0	23.6	
1	5.237	5.237	0.000	403656	25.0	22.0	
1	5.260	5.261	-0.001	461108	25.0	27.3	
		Average of Peak Amounts =				24.0	
2	3.663	3.664	-0.001	2277242	25.0	21.4	
2	4.120	4.121	-0.001	4714790	25.0	22.5	
2	4.267	4.264	0.003	2052043	25.0	22.1	
2	4.787	4.788	-0.001	2142202	25.0	21.0	
2	4.927	4.928	-0.001	1976394	25.0	21.9	
		Average of Peak Amounts =				21.8	
						RPD = 9.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.380	8.381	-0.001	2677797	25.0	25.9	
1	8.433	8.434	-0.001	2398046	25.0	24.3	
1	8.707	8.707	0.000	2096540	25.0	24.8	
1	9.223	9.224	-0.001	888286	25.0	22.6	
1	9.640	9.637	0.003	6071834	25.0	24.5	
		Average of Peak Amounts =				24.4	
2	8.510	8.511	-0.001	11047301	25.0	22.0	
2	8.573	8.574	-0.001	10180170	25.0	22.5	
2	8.927	8.928	-0.001	8862587	25.0	22.5	
2	9.357	9.358	-0.001	4193339	25.0	22.0	
2	9.820	9.821	-0.001	27200635	25.0	22.0	
		Average of Peak Amounts =				22.2	
						RPD = 9.35	
S 8 Polychlorinated biphenyls, Total							
1						48.4	
2						44.0	
						RPD = 9.57	

Reagents:

AR_4268_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

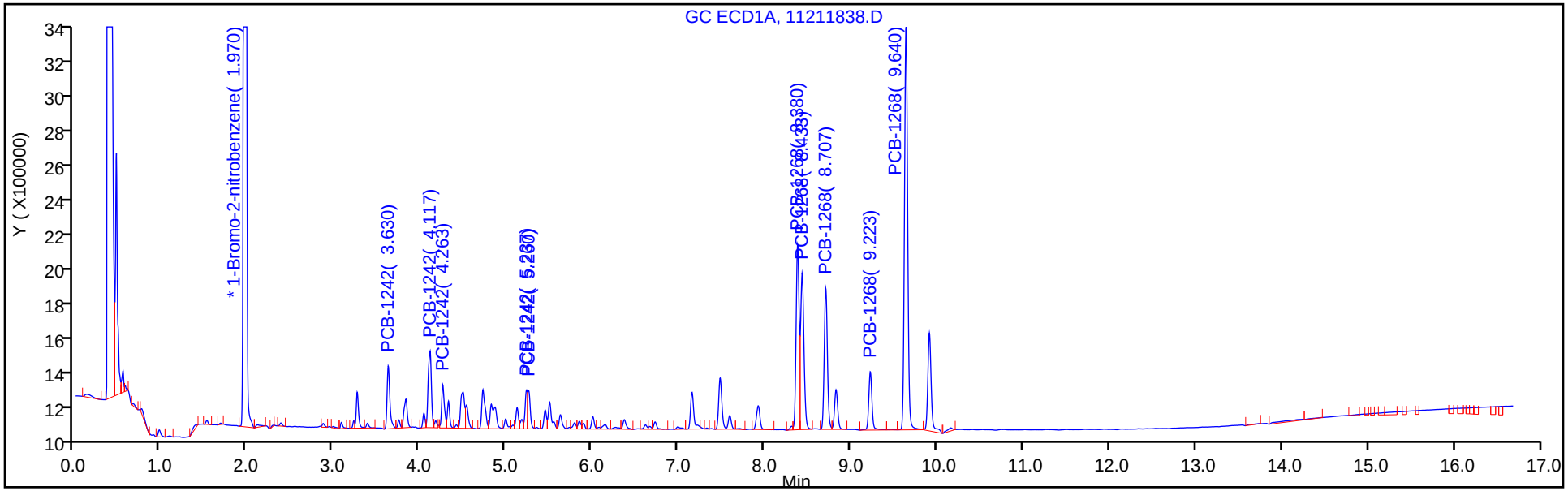
Report Date: 23-Nov-2018 11:03:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

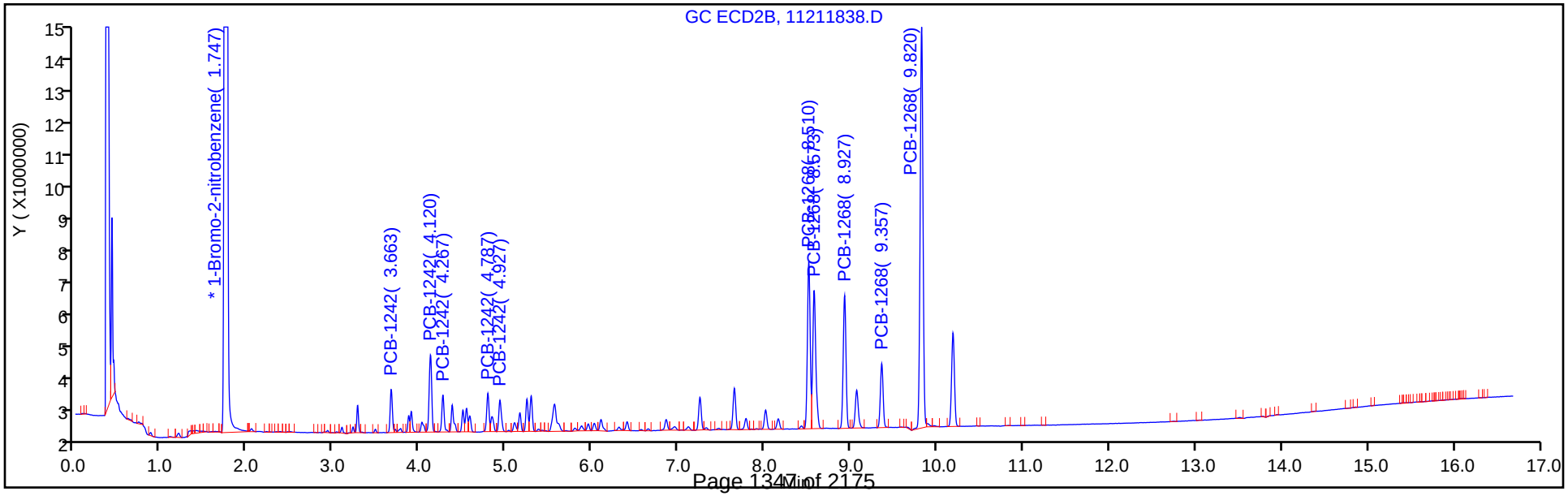
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Injection Date:	21-Nov-2018 21:48:29	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL14268			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34395

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.5375 0.3479	0.4615 0.3290	0.4281	0.3815	0.3597	Lin1	6.2242	0.3368							0.9980		0.9900
PCB-1242 Peak 2	1.1127 0.7792	0.9664 0.7325	0.9075	0.8246	0.7845	Lin1	10.977	0.7497							0.9990		0.9900
PCB-1242 Peak 3	0.4843 0.3374	0.4242 0.3170	0.3954	0.3588	0.3392	Lin1	4.9231	0.3244							0.9980		0.9900
PCB-1242 Peak 4	0.5056 0.2732	0.4087 0.2537	0.3512	0.3026	0.2760	Lin1	7.2210	0.2579							0.9980		0.9900
PCB-1242 Peak 5	0.4665 0.3295	0.4183 0.3085	0.3823	0.3468	0.3265	Lin1	4.7486	0.3152							0.9990		0.9900
PCB-1268 Peak 1	2.6073 1.8777	2.2920 1.7261	2.1910	1.9597	1.8497	Lin1	25.916	1.7819							0.9980		0.9900
PCB-1268 Peak 2	2.4026 1.7797	2.1391 1.6588	2.0414	1.8392	1.7341	Lin1	21.960	1.6964							0.9990		0.9900
PCB-1268 Peak 3	2.0917 1.5507	1.8503 1.4330	1.7708	1.6019	1.5137	Lin1	19.128	1.4734							0.9980		0.9900
PCB-1268 Peak 4	0.9897 0.7383	0.8882 0.6783	0.8496	0.7652	0.7220	Lin1	9.3078	0.7003							0.9980		0.9900
PCB-1268 Peak 5	6.4197 4.7211	5.7185 4.3768	5.5103	4.8969	4.6109	Lin1	61.458	4.4914							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34395

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Lin1	2277242 44959096	4196303 58050740	7236657	17497734	32047030	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 2	BNB	Lin1	4714790 100690473	8787056 129222617	15341647	37814505	69892795	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 3	BNB	Lin1	2052043 43601831	3857429 55919168	6684107	16456921	30223208	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 4	BNB	Lin1	2142202 35305208	3715663 44752744	5937221	13877871	24589768	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 5	BNB	Lin1	1976394 42582862	3803015 54422086	6462864	15905764	29090693	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 1	BNB	Lin1	11047301 242643975	20840173 304523679	37039039	89874672	164790872	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 2	BNB	Lin1	10180170 229976284	19449827 292646780	34510186	84348061	154491173	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 3	BNB	Lin1	8862587 200377742	16824081 252817304	29936037	73465781	134857881	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 4	BNB	Lin1	4193339 95407700	8076058 119674966	14362338	35091487	64325885	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 5	BNB	Lin1	27200635 610063306	51994829 772165320	93152179	224575190	410787422	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D
Lims ID: STDL74268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 19:41:25 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL74268
Misc. Info.: 280-0076428-032
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:08 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.968	0.001	31482365	1000.0	1000.0	
2	1.749	1.748	0.001	176421211	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.632	3.631	0.001	23666995	1000.0	970.7	
1	4.116	4.117	-0.001	43906093	1000.0	993.4	
1	4.262	4.264	-0.002	18245316	1000.0	980.1	
1	5.239	5.237	0.002	12139444	1000.0	954.3	
1	5.259	5.261	-0.002	17036171	1000.0	1014.3	
		Average of Peak Amounts =				982.6	
2	3.666	3.664	0.002	58050740	1000.0	958.5	
2	4.122	4.121	0.001	129222617	1000.0	962.4	
2	4.266	4.264	0.002	55919168	1000.0	961.9	
2	4.789	4.788	0.001	44752744	1000.0	955.6	
2	4.926	4.928	-0.002	54422086	1000.0	963.6	
		Average of Peak Amounts =				960.4	
						RPD = 2.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.382	8.381	0.001	87356816	1000.0	981.3	
1	8.432	8.434	-0.002	88389199	1000.0	979.2	
1	8.709	8.707	0.002	71195019	1000.0	982.0	
1	9.226	9.224	0.002	29381338	1000.0	977.8	
1	9.639	9.637	0.002	210173125	1000.0	972.5	
		Average of Peak Amounts =				978.6	
2	8.512	8.511	0.001	304523679	1000.0	954.1	
2	8.576	8.574	0.002	292646780	1000.0	964.9	
2	8.929	8.928	0.001	252817304	1000.0	959.6	
2	9.359	9.358	0.001	119674966	1000.0	955.3	
2	9.819	9.821	-0.002	772165320	1000.0	960.8	
		Average of Peak Amounts =				959.0	
						RPD = 2.02	
S 8 Polychlorinated biphenyls, Total							
1						1961.1	
2						1919.4	
						RPD = 2.15	

Reagents:

AR_4268_L7_00016	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

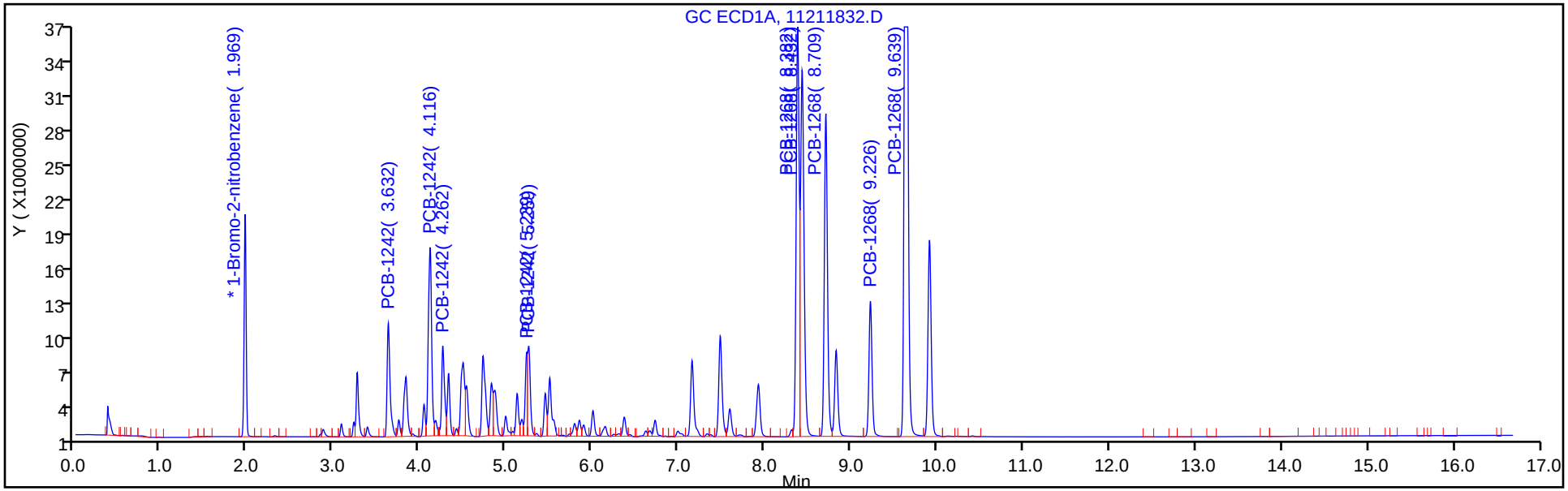
Report Date: 23-Nov-2018 11:03:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

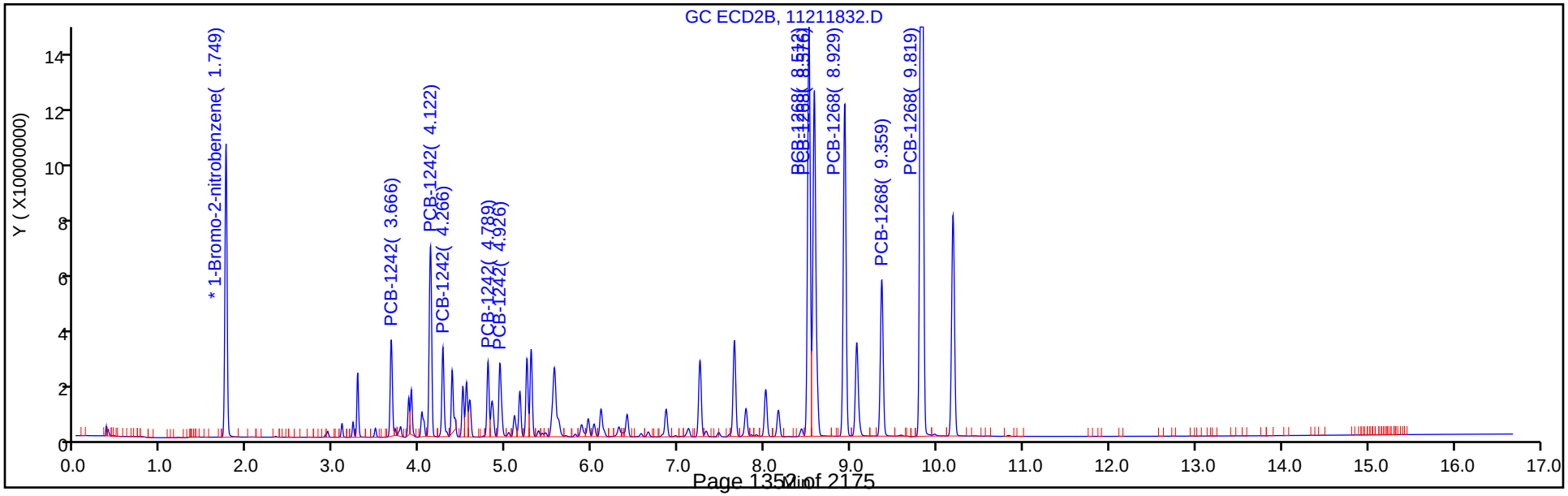
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D

Injection Date:	21-Nov-2018 19:41:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL74268			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D
Lims ID: STDL64268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 20:02:35 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL64268
Misc. Info.: 280-0076428-033
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:11 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:33:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.968	-0.002	30724311	1000.0	1000.0	
2	1.747	1.748	-0.001	172295175	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	18033958	750.0	754.8	
1	4.116	4.117	-0.001	33088198	750.0	766.7	
1	4.263	4.264	-0.001	13939481	750.0	765.5	
1	5.236	5.237	-0.001	9565455	750.0	768.3	
1	5.260	5.261	-0.001	12635374	750.0	770.5	
		Average of Peak Amounts =				765.1	
2	3.663	3.664	-0.001	44959096	750.0	756.3	
2	4.120	4.121	-0.001	100690473	750.0	764.9	
2	4.263	4.264	-0.001	43601831	750.0	764.9	
2	4.790	4.788	0.002	35305208	750.0	766.5	
2	4.927	4.928	-0.001	42582862	750.0	769.0	
		Average of Peak Amounts =				764.3	
						RPD = 0.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	68720772	750.0	789.9	
1	8.433	8.434	-0.001	68019827	750.0	771.4	
1	8.710	8.707	0.003	55139677	750.0	778.1	
1	9.226	9.224	0.002	22774873	750.0	774.9	
1	9.640	9.637	0.003	164433426	750.0	778.6	
		Average of Peak Amounts =				778.6	
2	8.513	8.511	0.002	242643975	750.0	775.8	
2	8.573	8.574	-0.001	229976284	750.0	773.9	
2	8.927	8.928	-0.001	200377742	750.0	776.3	
2	9.357	9.358	-0.001	95407700	750.0	777.4	
2	9.820	9.821	-0.001	610063306	750.0	774.7	
		Average of Peak Amounts =				775.6	
						RPD = 0.38	
S 8 Polychlorinated biphenyls, Total							
1						1543.7	
2						1540.0	
						RPD = 0.24	

Reagents:

AR_4268_L6_00018	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

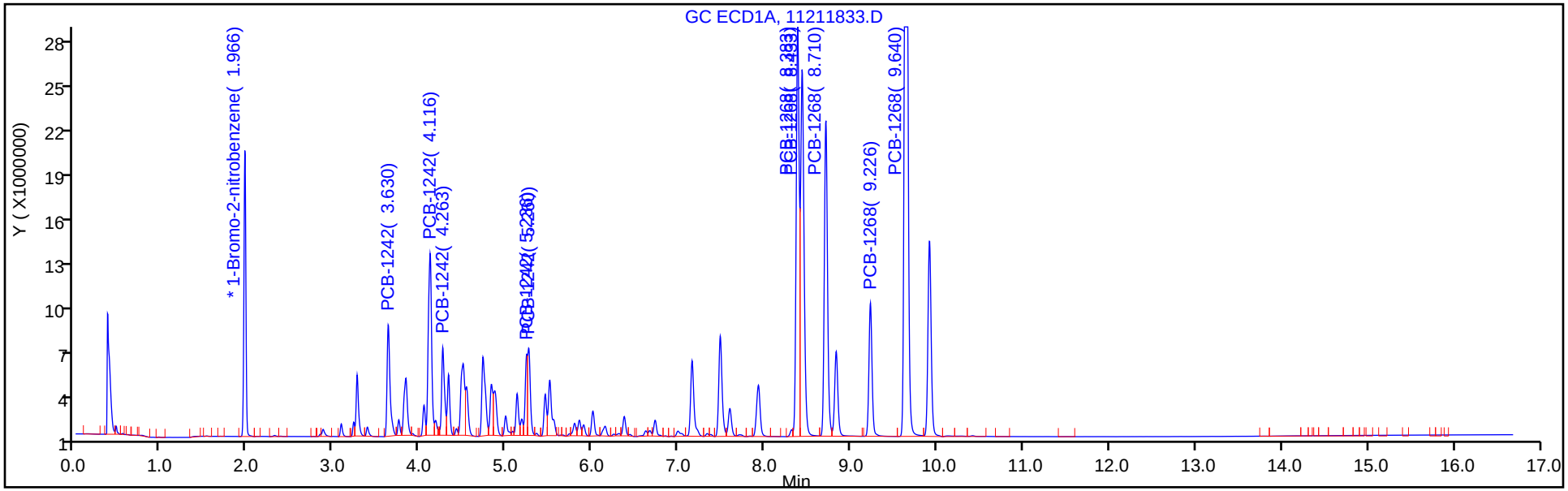
Report Date: 23-Nov-2018 11:03:12 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

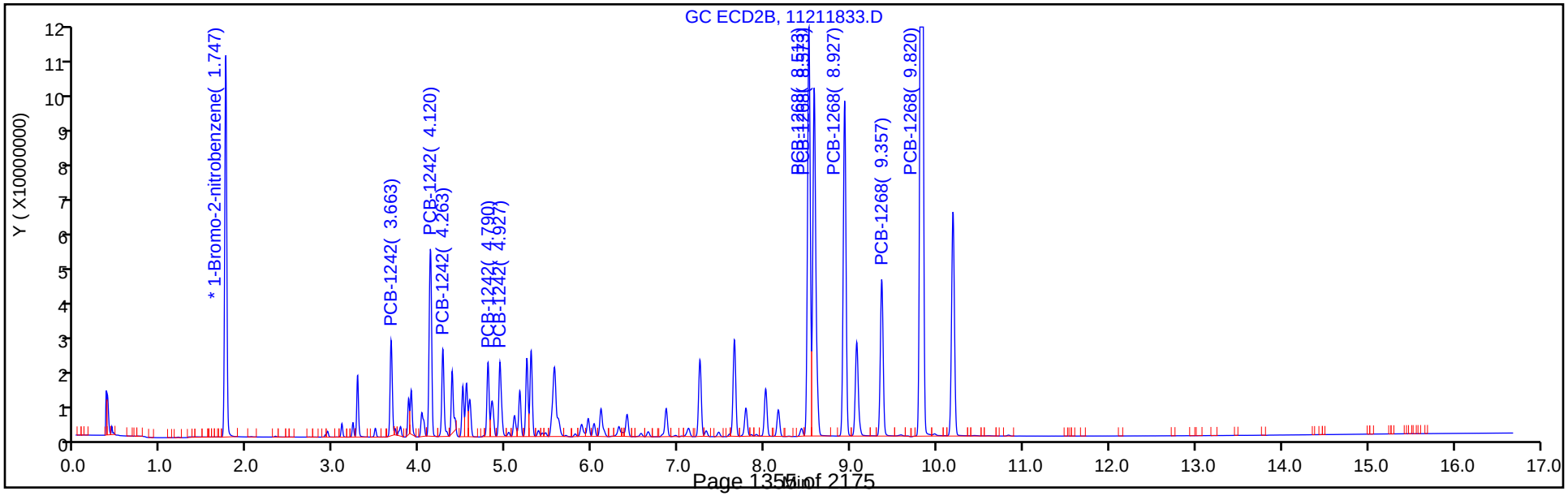
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D

Injection Date:	21-Nov-2018 20:02:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL64268			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D
Lims ID: STDL54268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 20:23:44 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL54268
Misc. Info.: 280-0076428-034
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:31:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	31789266	1000.0	1000.0	
2	1.744	1.744	0.000	178179597	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	12621153	500.0	505.9	
1	4.117	4.117	0.000	22028422	500.0	492.7	
1	4.264	4.264	0.000	9337377	500.0	492.7	
1	5.237	5.237	0.000	6598400	500.0	508.3	
1	5.261	5.261	0.000	8065513	500.0	474.8	
		Average of Peak Amounts =				494.9	
2	3.664	3.664	0.000	32047030	500.0	515.5	
2	4.121	4.121	0.000	69892795	500.0	508.6	
2	4.264	4.264	0.000	30223208	500.0	507.7	
2	4.788	4.788	0.000	24589768	500.0	507.1	
2	4.928	4.928	0.000	29090693	500.0	502.9	
		Average of Peak Amounts =				508.4	
						RPD = 2.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	43739892	500.0	483.7	
1	8.434	8.434	0.000	45452498	500.0	496.9	
1	8.707	8.707	0.000	36138239	500.0	490.8	
1	9.224	9.224	0.000	14918235	500.0	487.4	
1	9.637	9.637	0.000	108847285	500.0	496.3	
		Average of Peak Amounts =				491.0	
2	8.511	8.511	0.000	164790872	500.0	504.5	
2	8.574	8.574	0.000	154491173	500.0	498.2	
2	8.928	8.928	0.000	134857881	500.0	500.7	
2	9.358	9.358	0.000	64325885	500.0	502.2	
2	9.821	9.821	0.000	410787422	500.0	499.6	
		Average of Peak Amounts =				501.0	
						RPD = 2.02	

Reagents:

AR_4268_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

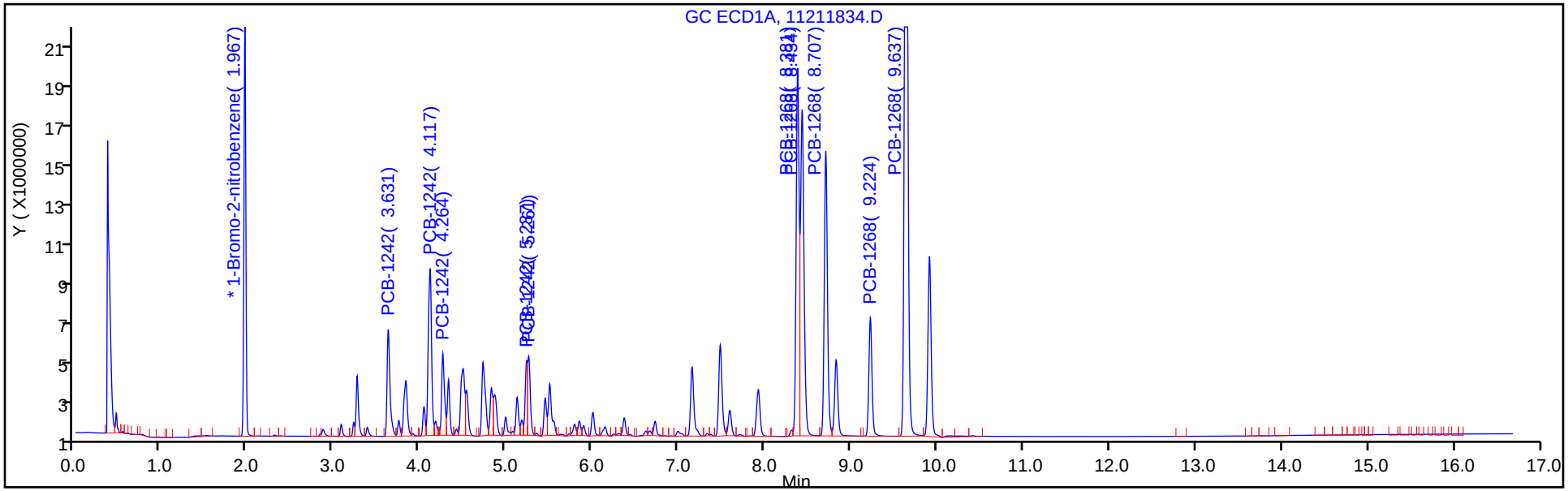
Report Date: 23-Nov-2018 11:03:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

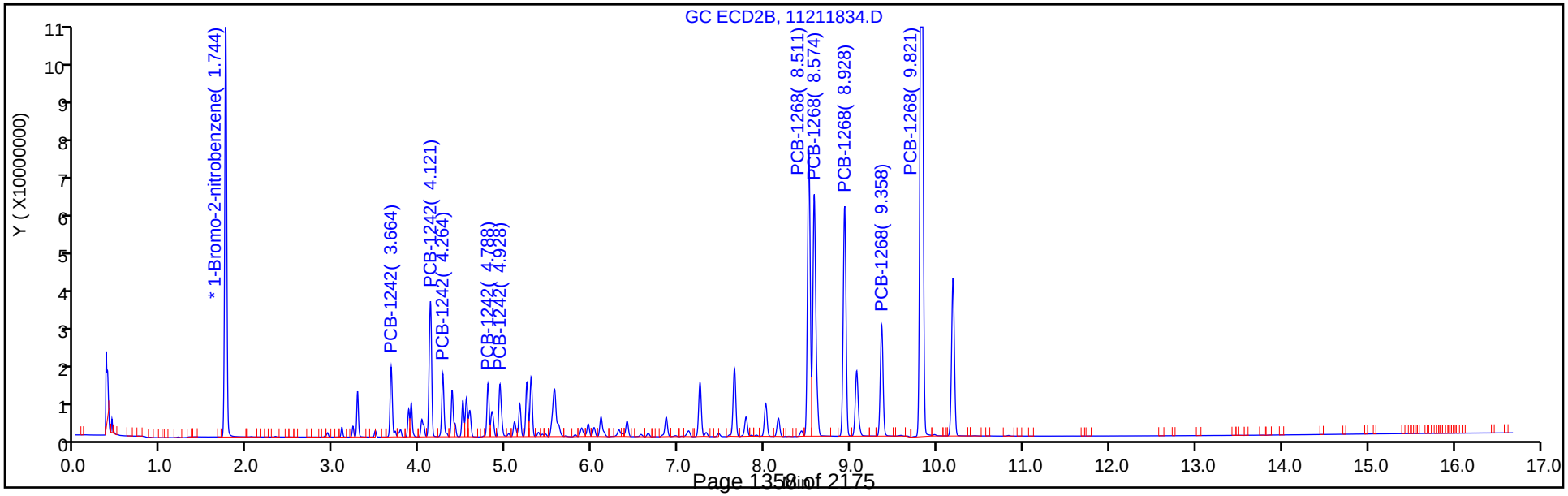
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D

Injection Date:	21-Nov-2018 20:23:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL54268			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D
Lims ID: STDL44268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 20:44:55 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL44268
Misc. Info.: 280-0076428-035
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32694800	1000.0	1000.0	
2	1.745	1.744	0.001	183441113	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	6934698	250.0	263.7	
1	4.118	4.117	0.001	11431468	250.0	247.7	
1	4.265	4.264	0.001	5115672	250.0	258.6	
1	5.238	5.237	0.001	3600286	250.0	264.2	
1	5.261	5.261	0.000	4215035	250.0	240.5	
		Average of Peak Amounts =				254.9	
2	3.665	3.664	0.001	17497734	250.0	264.7	
2	4.121	4.121	0.000	37814505	250.0	260.3	
2	4.265	4.264	0.001	16456921	250.0	261.4	
2	4.788	4.788	0.000	13877871	250.0	265.3	
2	4.928	4.928	0.000	15905764	250.0	260.0	
		Average of Peak Amounts =				262.4	
						RPD = 2.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	23038908	250.0	244.9	
1	8.434	8.434	0.000	23666972	250.0	249.8	
1	8.708	8.707	0.001	18843418	250.0	246.0	
1	9.224	9.224	0.000	7827884	250.0	244.4	
1	9.638	9.637	0.001	56736910	250.0	249.0	
		Average of Peak Amounts =				246.8	
2	8.511	8.511	0.000	89874672	250.0	260.4	
2	8.575	8.574	0.001	84348061	250.0	258.1	
2	8.928	8.928	0.000	73465781	250.0	258.8	
2	9.358	9.358	0.000	35091487	250.0	259.9	
2	9.821	9.821	0.000	224575190	250.0	258.9	
		Average of Peak Amounts =				259.2	
						RPD = 4.90	
S 8 Polychlorinated biphenyls, Total							
1						501.7	
2						521.6	
						RPD = 3.88	

Reagents:

AR_4268_L4_00023	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

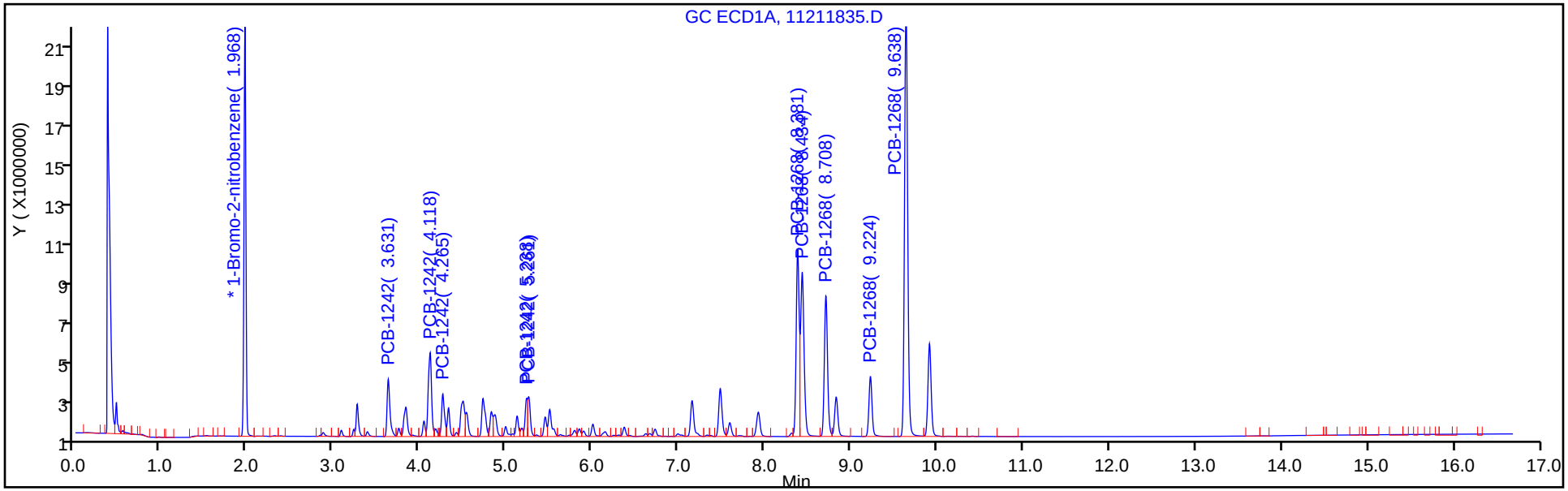
Report Date: 23-Nov-2018 11:03:19 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

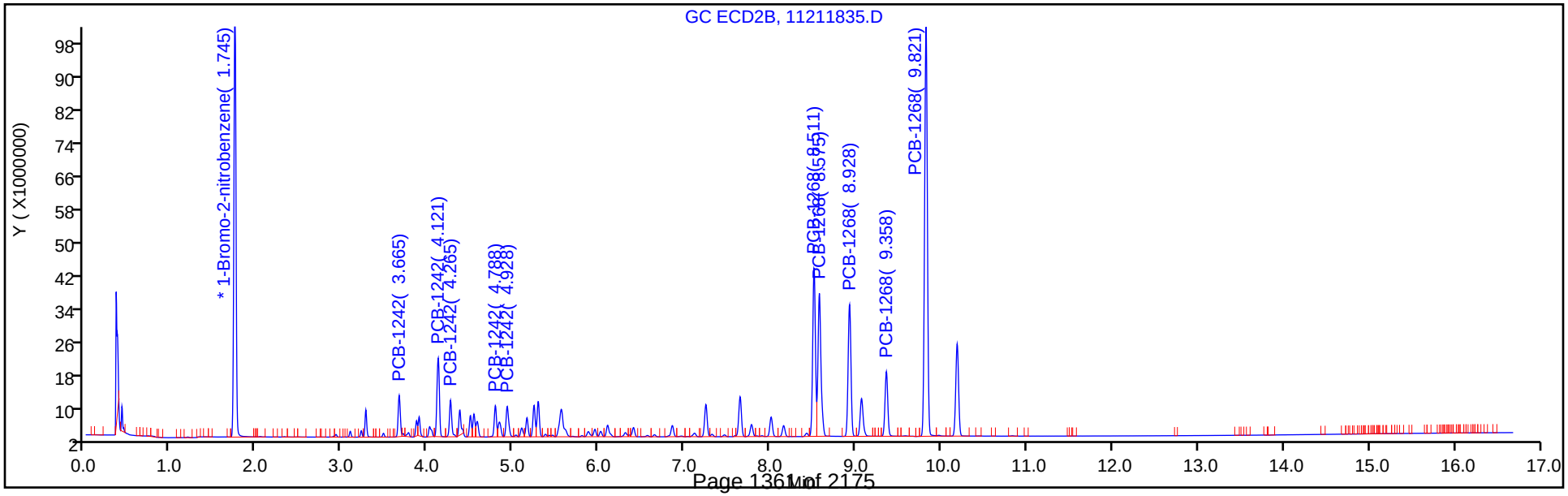
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D

Injection Date:	21-Nov-2018 20:44:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL44268			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D
Lims ID: STDL34268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 21:06:06 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL34268
Misc. Info.: 280-0076428-036
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:21 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	29902517	1000.0	1000.0	
2	1.744	1.744	0.000	169052125	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	2785673	100.0	107.8	
1	4.117	4.117	0.000	4243819	100.0	99.4	
1	4.264	4.264	0.000	1990794	100.0	105.3	
1	5.237	5.237	0.000	1439135	100.0	108.9	
1	5.261	5.261	0.000	1616814	100.0	100.0	
		Average of Peak Amounts =				104.3	
2	3.664	3.664	0.000	7236657	100.0	108.6	
2	4.121	4.121	0.000	15341647	100.0	106.4	
2	4.264	4.264	0.000	6684107	100.0	106.7	
2	4.788	4.788	0.000	5937221	100.0	108.2	
2	4.928	4.928	0.000	6462864	100.0	106.2	
		Average of Peak Amounts =				107.2	
						RPD = 2.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	8942275	100.0	100.6	
1	8.434	8.434	0.000	9204821	100.0	104.1	
1	8.707	8.707	0.000	7521874	100.0	104.1	
1	9.224	9.224	0.000	3714053	100.0	122.6	
1	9.641	9.637	0.004	22672079	100.0	105.9	
		Average of Peak Amounts =				107.5	
2	8.511	8.511	0.000	37039039	100.0	108.4	
2	8.574	8.574	0.000	34510186	100.0	107.4	
2	8.928	8.928	0.000	29936037	100.0	107.2	
2	9.358	9.358	0.000	14362338	100.0	108.0	
2	9.821	9.821	0.000	93152179	100.0	109.0	
		Average of Peak Amounts =				108.0	
						RPD = 0.49	
S 8 Polychlorinated biphenyls, Total							
1						211.8	
2						215.2	
						RPD = 1.62	

Reagents:

AR_4268_L3_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

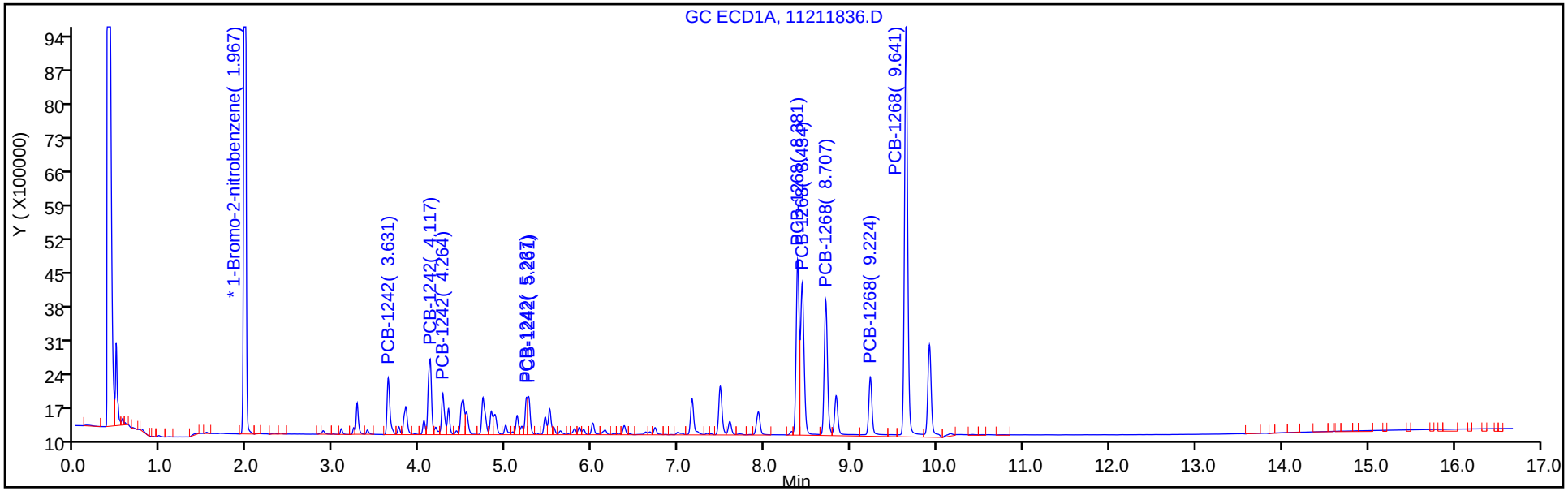
Report Date: 23-Nov-2018 11:03:22 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

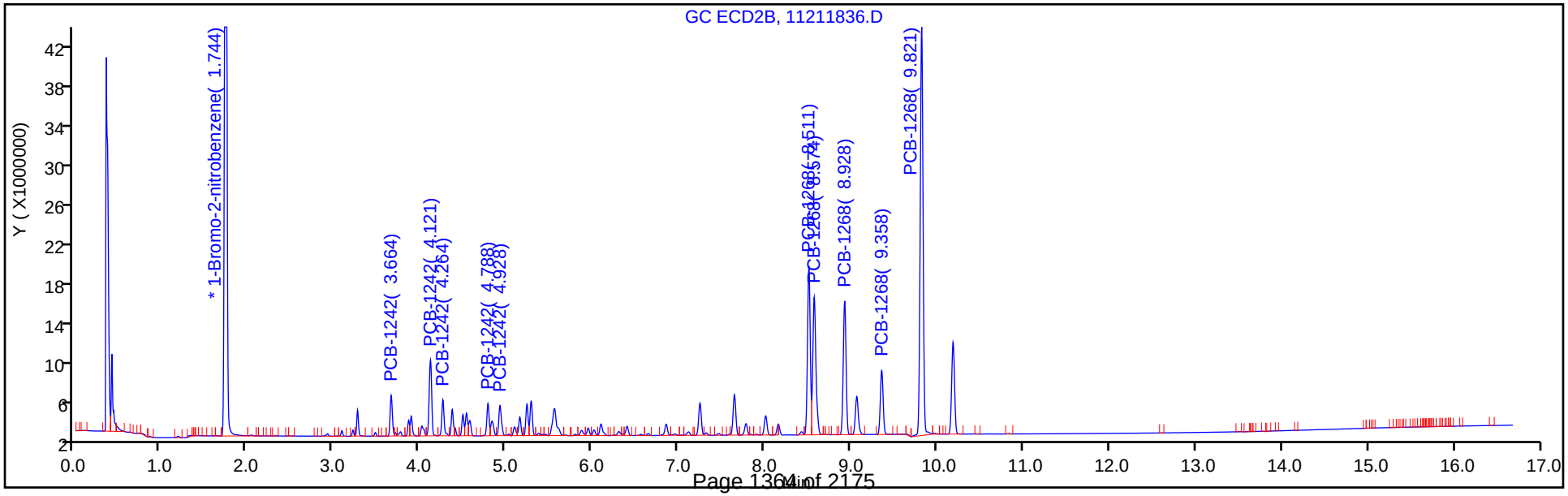
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D

Injection Date:	21-Nov-2018 21:06:06	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL34268			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D
Lims ID: STDL24268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 21:27:18 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL24268
Misc. Info.: 280-0076428-037
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:23 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32348608	1000.0	1000.0	
2	1.745	1.744	0.001	181848580	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	1591803	50.0	50.2	
1	4.118	4.117	0.001	2334811	50.0	49.6	
1	4.264	4.264	0.000	1089072	50.0	49.2	
1	5.234	5.237	-0.003	783867	50.0	49.0	
1	5.261	5.261	0.000	848605	50.0	47.7	
		Average of Peak Amounts =				49.2	
2	3.665	3.664	0.001	4196303	50.0	50.0	
2	4.121	4.121	0.000	8787056	50.0	49.8	
2	4.265	4.264	0.001	3857429	50.0	50.2	
2	4.788	4.788	0.000	3715663	50.0	51.2	
2	4.928	4.928	0.000	3803015	50.0	51.3	
		Average of Peak Amounts =				50.5	
						RPD = 2.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	4962556	50.0	48.8	
1	8.434	8.434	0.000	4896006	50.0	49.3	
1	8.708	8.707	0.001	4064693	50.0	49.2	
1	9.224	9.224	0.000	1653587	50.0	45.4	
1	9.638	9.637	0.001	11777400	50.0	48.2	
		Average of Peak Amounts =				48.2	
2	8.511	8.511	0.000	20840173	50.0	49.8	
2	8.575	8.574	0.001	19449827	50.0	50.1	
2	8.928	8.928	0.000	16824081	50.0	49.8	
2	9.358	9.358	0.000	8076058	50.0	50.1	
2	9.821	9.821	0.000	51994829	50.0	50.0	
		Average of Peak Amounts =				50.0	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						97.3	
2						100.5	
						RPD = 3.17	

Reagents:

AR_4268_L2_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

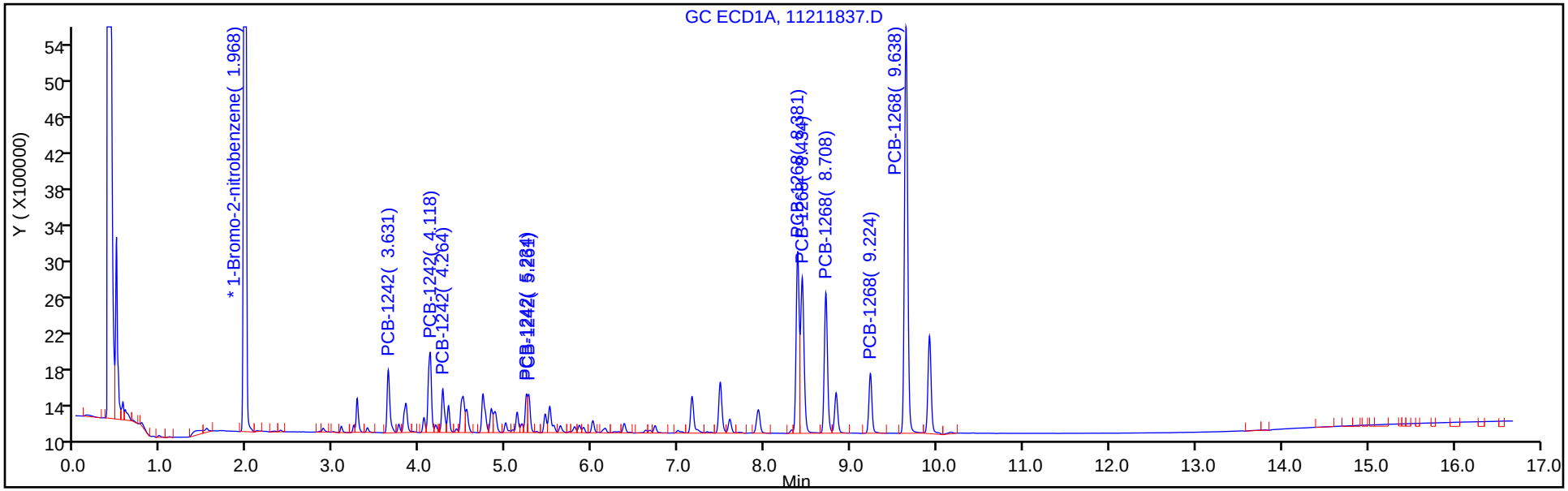
Report Date: 23-Nov-2018 11:03:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

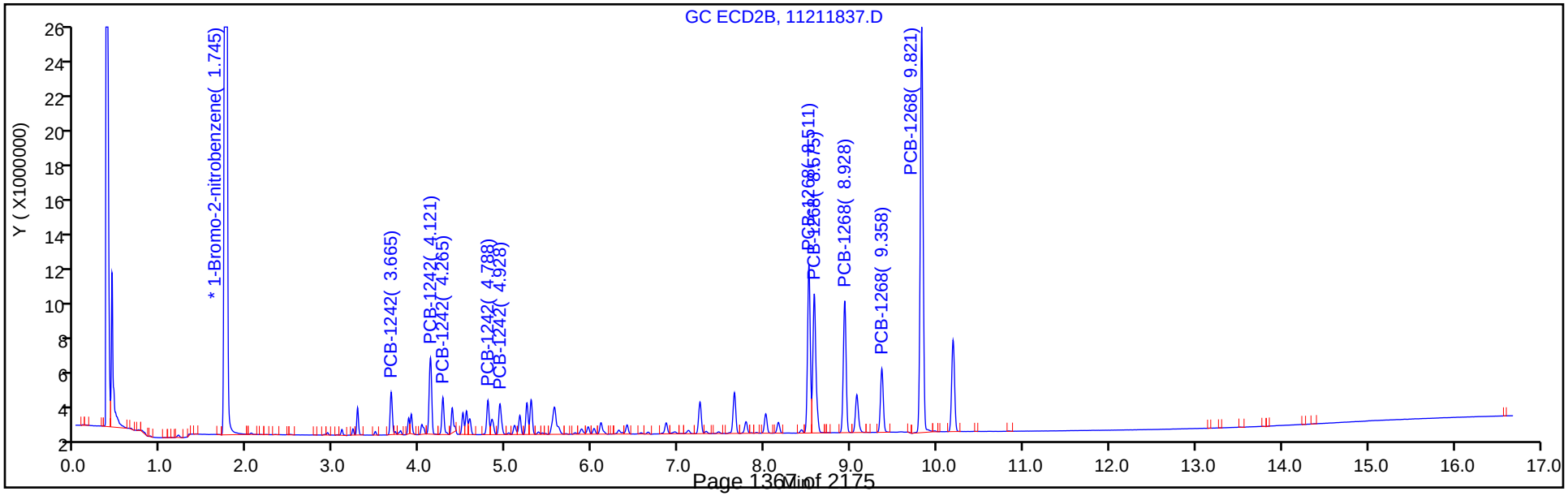
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D

Injection Date:	21-Nov-2018 21:27:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL24268			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D
Lims ID: STDL14268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 21:48:29 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL14268
Misc. Info.: 280-0076428-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:28 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:35:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30052215	1000.0	1000.0	
2	1.747	1.744	0.003	169482834	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	826846	25.0	21.8	
1	4.117	4.117	0.000	1153326	25.0	25.5	
1	4.263	4.264	-0.001	560286	25.0	23.6	
1	5.237	5.237	0.000	403656	25.0	22.0	
1	5.260	5.261	-0.001	461108	25.0	27.3	
		Average of Peak Amounts =				24.0	
2	3.663	3.664	-0.001	2277242	25.0	21.4	
2	4.120	4.121	-0.001	4714790	25.0	22.5	
2	4.267	4.264	0.003	2052043	25.0	22.1	
2	4.787	4.788	-0.001	2142202	25.0	21.0	
2	4.927	4.928	-0.001	1976394	25.0	21.9	
		Average of Peak Amounts =				21.8	
						RPD = 9.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.380	8.381	-0.001	2677797	25.0	25.9	
1	8.433	8.434	-0.001	2398046	25.0	24.3	
1	8.707	8.707	0.000	2096540	25.0	24.8	
1	9.223	9.224	-0.001	888286	25.0	22.6	
1	9.640	9.637	0.003	6071834	25.0	24.5	
		Average of Peak Amounts =				24.4	
2	8.510	8.511	-0.001	11047301	25.0	22.0	
2	8.573	8.574	-0.001	10180170	25.0	22.5	
2	8.927	8.928	-0.001	8862587	25.0	22.5	
2	9.357	9.358	-0.001	4193339	25.0	22.0	
2	9.820	9.821	-0.001	27200635	25.0	22.0	
		Average of Peak Amounts =				22.2	
						RPD = 9.35	
S 8 Polychlorinated biphenyls, Total							
1						48.4	
2						44.0	
						RPD = 9.57	

Reagents:

AR_4268_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

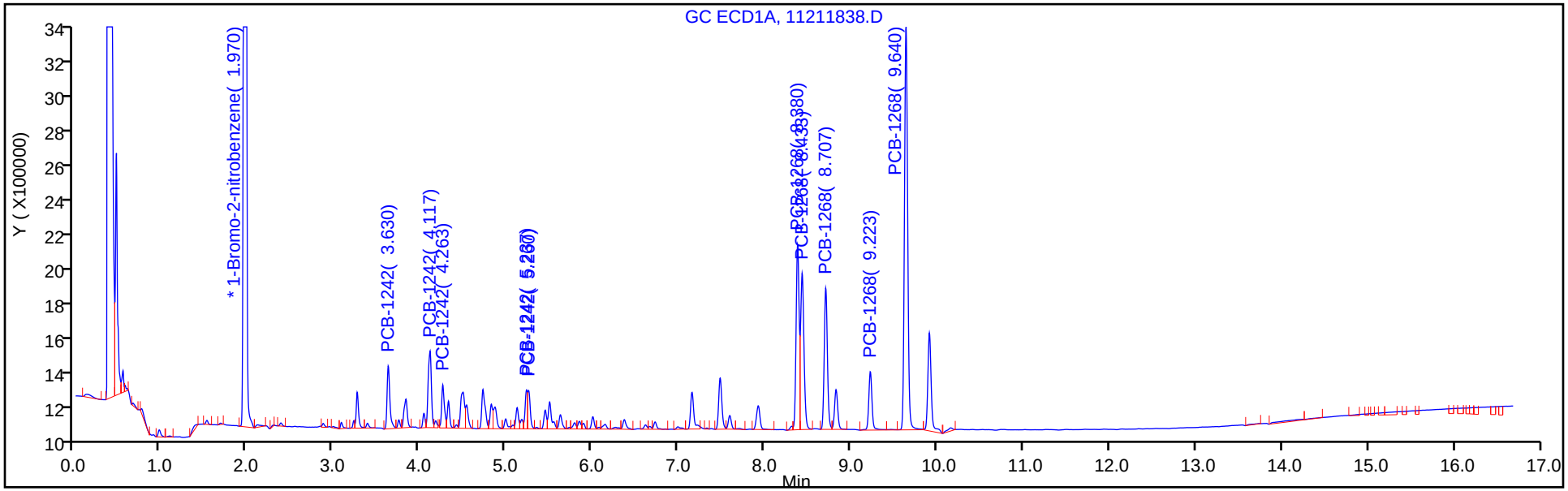
Report Date: 23-Nov-2018 11:03:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

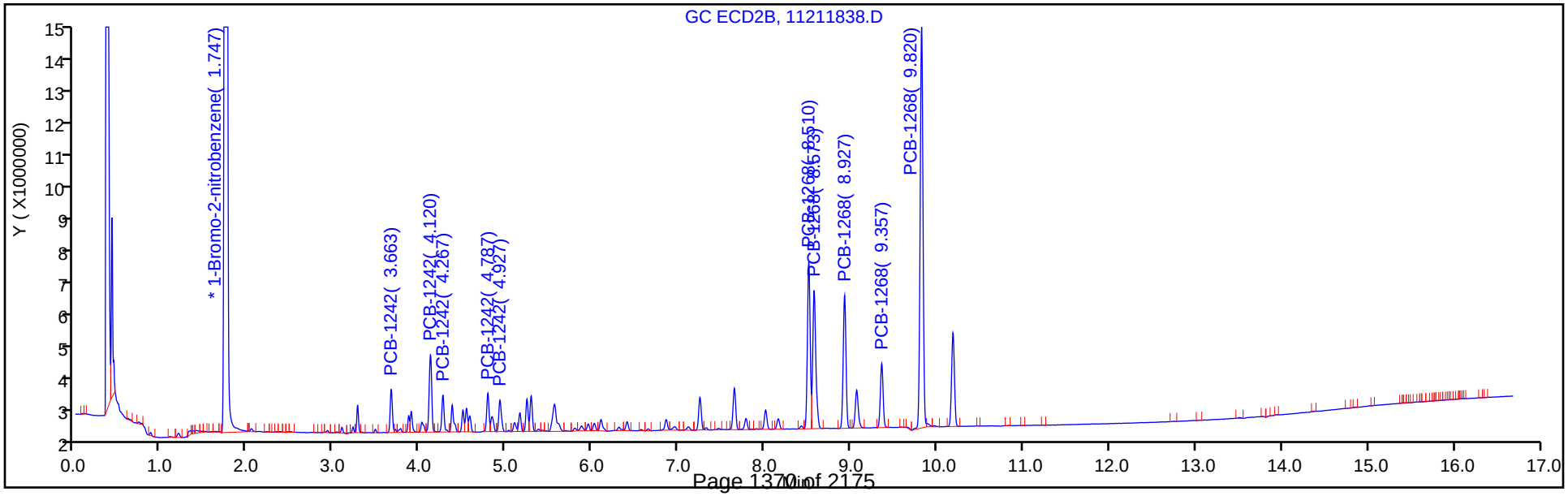
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Injection Date:	21-Nov-2018 21:48:29	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL14268			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Lin1		0.4808		271	250	8.3	20.0
PCB-1248 Peak 2	Lin1		1.136		313	250	25.2*	20.0
PCB-1248 Peak 3	Lin1		1.211		291	250	16.4	20.0
PCB-1248 Peak 4	Lin1		0.8706		299	250	19.6	20.0
PCB-1248 Peak 5	Lin1		0.5227		274	250	9.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	3.63	3.38	3.88
PCB-1248 Peak 2	4.12	3.87	4.37
PCB-1248 Peak 3	4.73	4.48	4.98
PCB-1248 Peak 4	5.51	5.26	5.76
PCB-1248 Peak 5	6.01	5.76	6.26

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:09:37 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-039
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 16:31:48 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

First Level Reviewer: patadiab Date: 23-Nov-2018 10:36:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.967	0.005	27962663	1000.0	1000.0	
2	1.749	1.744	0.005	158680424	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.629	3.629	0.000	3361129	250.0	270.7	
1	4.116	4.115	0.001	7939440	250.0	313.1	
1	4.729	4.729	0.000	8467096	250.0	291.0	
1	5.506	5.505	0.001	6086245	250.0	298.9	
1	6.006	6.005	0.001	3653650	250.0	274.3	
		Average of Peak Amounts =				289.6	
2	4.119	4.119	0.000	27239499	250.0	322.7	
2	4.499	4.499	0.000	14508774	250.0	290.5	
2	4.789	4.789	0.000	20289286	250.0	294.8	
2	4.926	4.929	-0.003	23450109	250.0	310.7	
2	6.099	6.102	-0.003	14715297	250.0	283.0	
		Average of Peak Amounts =				300.3	
						RPD = 3.64	

Reagents:

AR_1248_ICV_00013 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

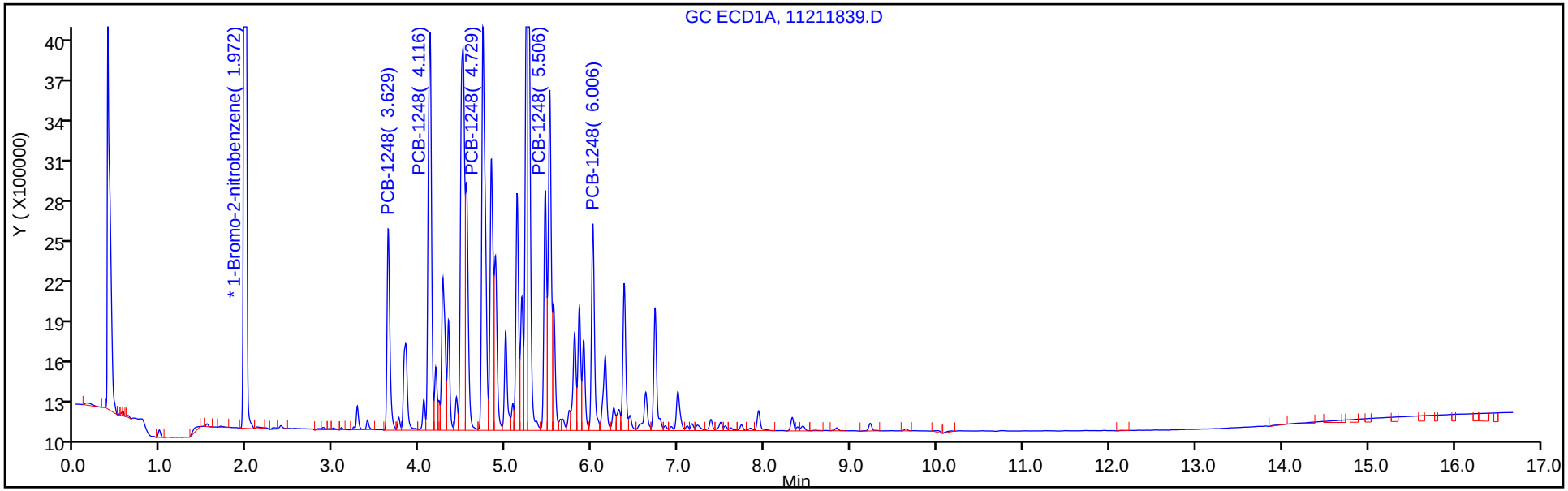
Report Date: 29-Nov-2018 16:31:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

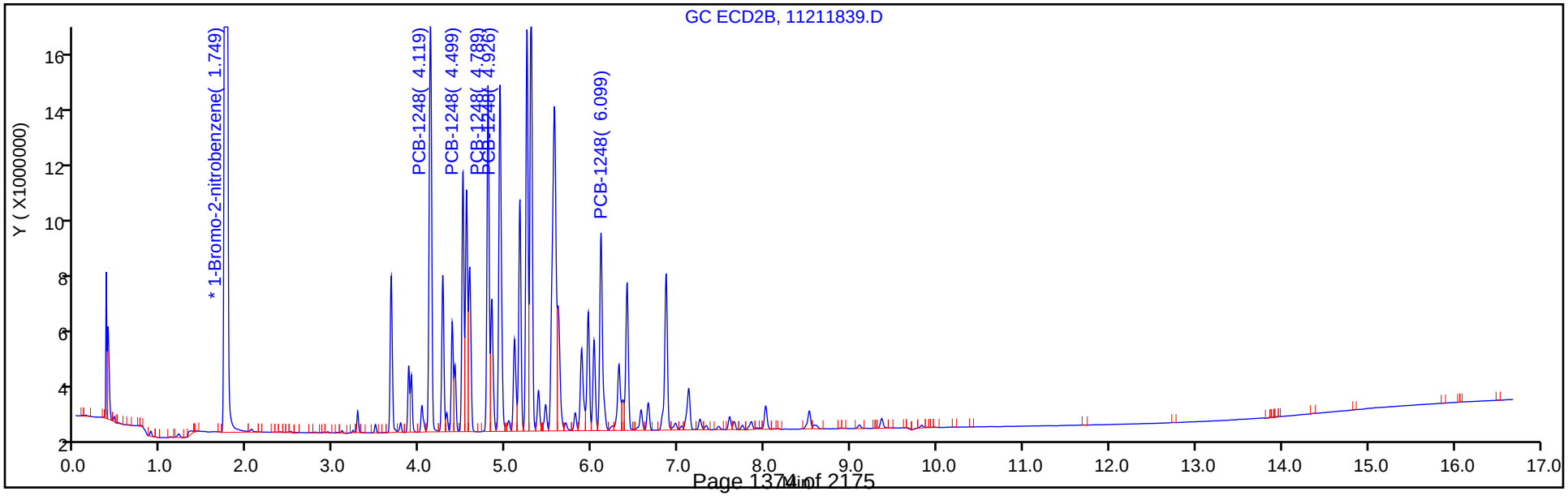
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D

Injection Date:	21-Nov-2018 22:09:37	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Lin1		0.6867		323	250	29.1*	20.0
PCB-1248 Peak 2	Lin1		0.3657		290	250	16.2	20.0
PCB-1248 Peak 3	Lin1		0.5115		295	250	17.9	20.0
PCB-1248 Peak 4	Lin1		0.5911		311	250	24.3*	20.0
PCB-1248 Peak 5	Lin1		0.3709		283	250	13.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.12	3.87	4.37
PCB-1248 Peak 2	4.50	4.25	4.75
PCB-1248 Peak 3	4.79	4.54	5.04
PCB-1248 Peak 4	4.93	4.68	5.18
PCB-1248 Peak 5	6.10	5.85	6.35

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:09:37 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-039
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 16:31:48 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

First Level Reviewer: patadiab Date: 23-Nov-2018 10:36:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.967	0.005	27962663	1000.0	1000.0	
2	1.749	1.744	0.005	158680424	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.629	3.629	0.000	3361129	250.0	270.7	
1	4.116	4.115	0.001	7939440	250.0	313.1	
1	4.729	4.729	0.000	8467096	250.0	291.0	
1	5.506	5.505	0.001	6086245	250.0	298.9	
1	6.006	6.005	0.001	3653650	250.0	274.3	
		Average of Peak Amounts =				289.6	
2	4.119	4.119	0.000	27239499	250.0	322.7	
2	4.499	4.499	0.000	14508774	250.0	290.5	
2	4.789	4.789	0.000	20289286	250.0	294.8	
2	4.926	4.929	-0.003	23450109	250.0	310.7	
2	6.099	6.102	-0.003	14715297	250.0	283.0	
		Average of Peak Amounts =				300.3	
						RPD = 3.64	

Reagents:

AR_1248_ICV_00013 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

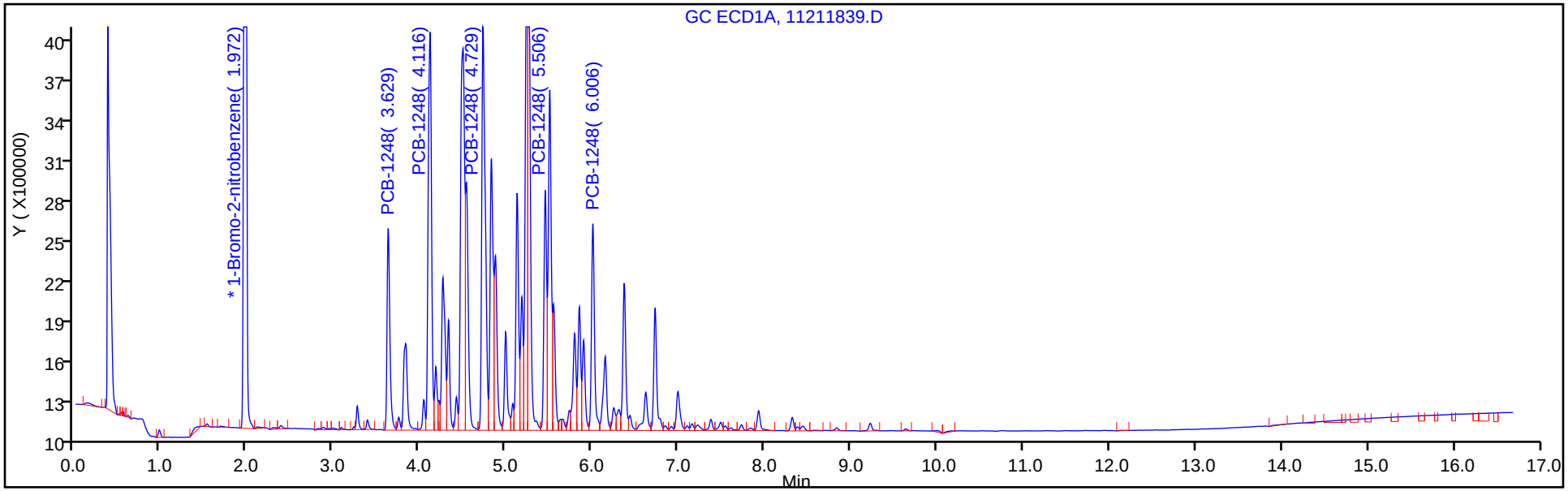
Report Date: 29-Nov-2018 16:31:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

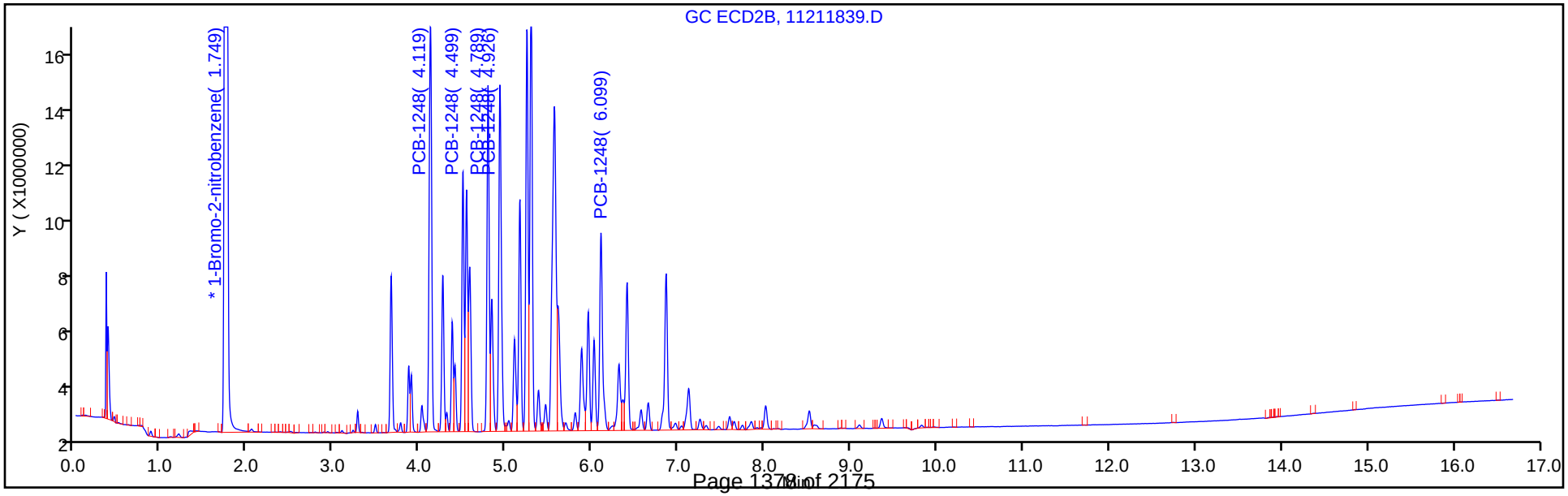
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D

Injection Date:	21-Nov-2018 22:09:37	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.2728		265	250	6.0	20.0
PCB-1221 Peak 2	Lin1		0.1654		276	250	10.5	20.0
PCB-1221 Peak 3	Lin1		0.7152		278	250	11.4	20.0
PCB-1254 Peak 1	Lin1		0.9104		288	250	15.3	20.0
PCB-1254 Peak 2	Lin1		1.319		288	250	15.2	20.0
PCB-1254 Peak 3	Lin1		0.9352		275	250	10.0	20.0
PCB-1254 Peak 4	Lin1		1.226		293	250	17.0	20.0
PCB-1254 Peak 5	Lin1		1.628		284	250	13.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.23	2.98	3.48
PCB-1221 Peak 3	3.27	3.02	3.52
PCB-1254 Peak 1	5.18	4.93	5.43
PCB-1254 Peak 2	5.51	5.26	5.76
PCB-1254 Peak 3	5.85	5.60	6.10
PCB-1254 Peak 4	6.62	6.37	6.87
PCB-1254 Peak 5	6.99	6.75	7.25

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:30:47 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-040
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:39:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	29773128	1000.0	1000.0	
2	1.750	1.744	0.006	167287659	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2030793	250.0	264.9	
1	3.233	3.232	0.001	1231106	250.0	276.2	
1	3.270	3.269	0.001	5323184	250.0	278.4	
		Average of Peak Amounts =				273.2	
2	3.093	3.092	0.001	6568563	250.0	271.6	
2	3.223	3.222	0.001	4336984	250.0	278.2	
2	3.276	3.276	0.000	15187978	250.0	275.8	
		Average of Peak Amounts =				275.2	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6776240	250.0	288.3	M
1	5.510	5.509	0.001	9816035	250.0	287.9	M
1	5.850	5.849	0.001	6960594	250.0	275.0	M
1	6.620	6.622	-0.002	9128323	250.0	292.6	M
1	6.993	6.995	-0.002	12116804	250.0	284.4	M
		Average of Peak Amounts =				285.6	
2	5.530	5.529	0.001	28299329	250.0	280.6	
2	5.950	5.952	-0.002	22018407	250.0	278.8	
2	6.403	6.402	0.001	29793523	250.0	276.3	
2	6.646	6.649	-0.003	18699912	250.0	293.3	
2	7.116	7.119	-0.003	45648192	250.0	294.6	
		Average of Peak Amounts =				284.7	
						RPD = 0.31	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

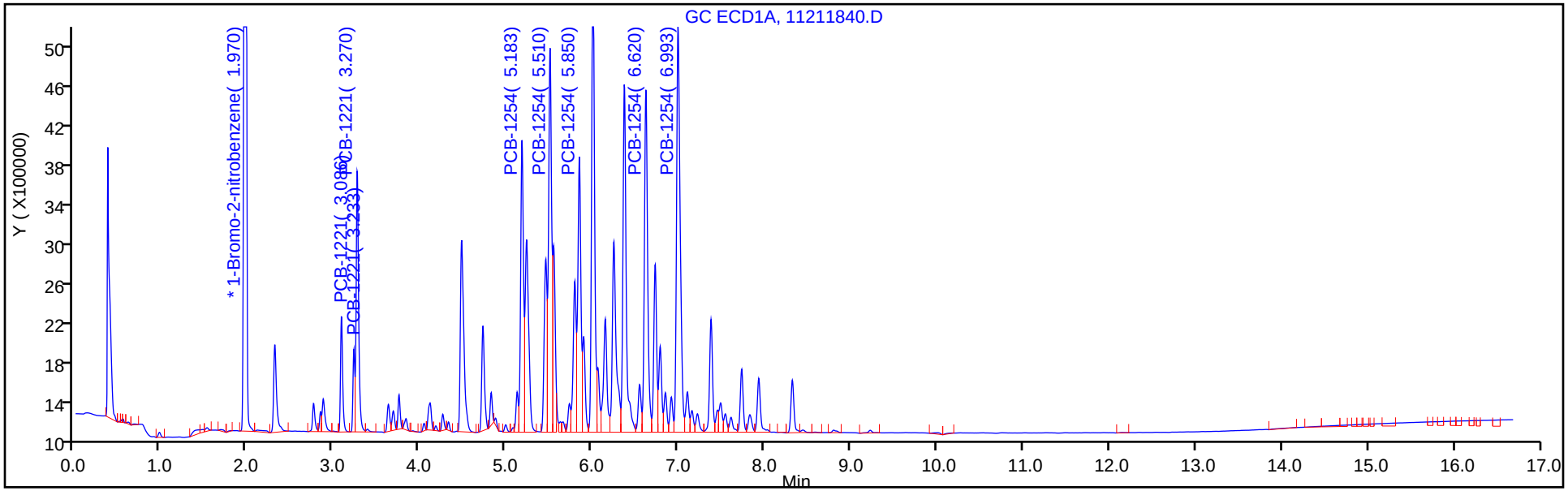
Report Date: 23-Nov-2018 10:58:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

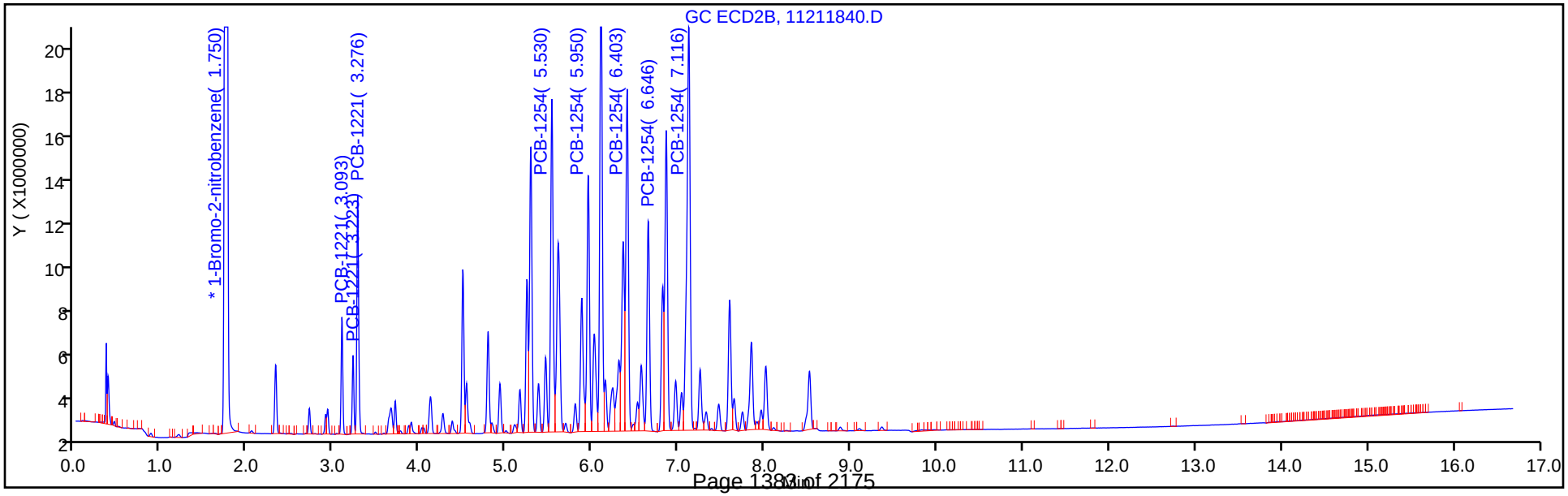
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date:	21-Nov-2018 22:30:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 10:58:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date: 21-Nov-2018 22:30:47 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

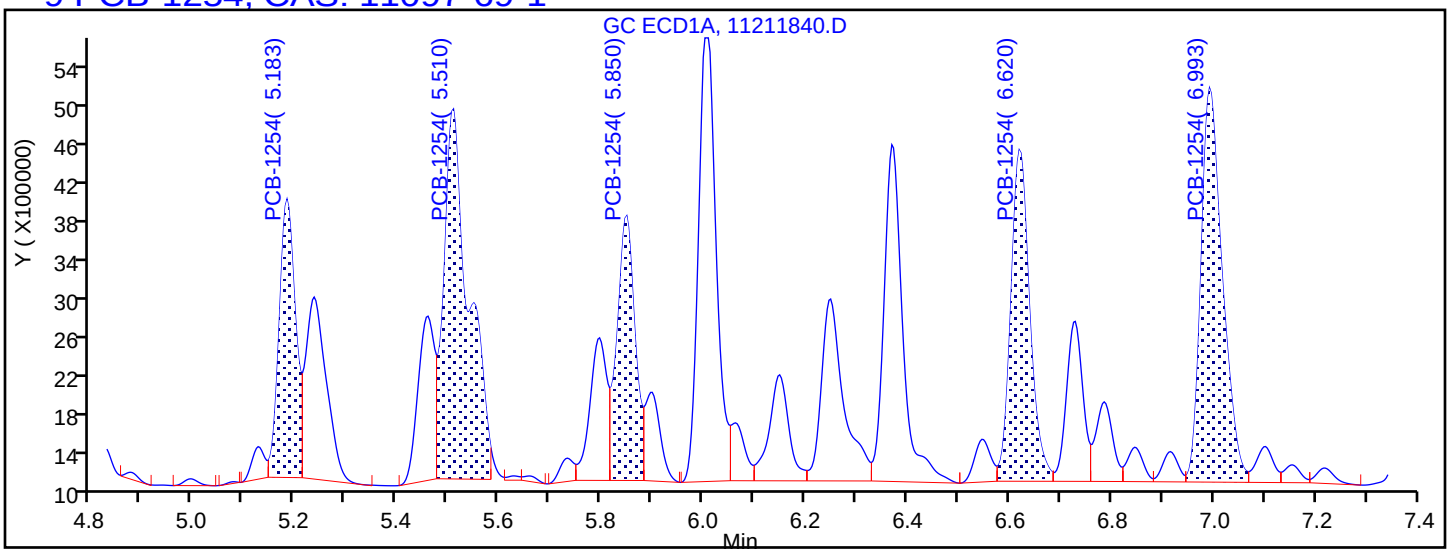
Operator ID: ALS ALS Bottle#: 40 Worklist Smp#: 40

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

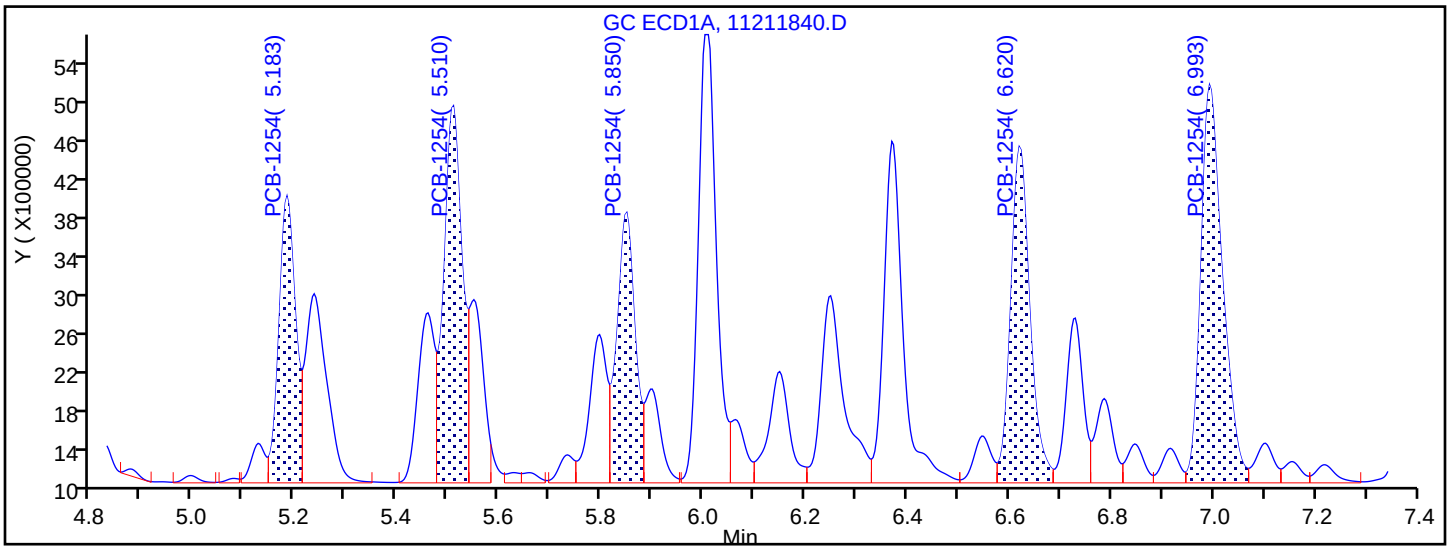
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 6417706
5.510	Response = 12898723
5.850	Response = 6726142
6.620	Response = 8795667
6.993	Response = 11812043



Manual Integration Results

5.183	Response = 6776240	M
5.510	Response = 9816035	M
5.850	Response = 6960594	M
6.620	Response = 9128323	M
6.993	Response = 12116804	M

Reviewer: patadiab, 23-Nov-2018 10:39:30

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.1571		272	250	8.6	20.0
PCB-1221 Peak 2	Lin1		0.1037		278	250	11.3	20.0
PCB-1221 Peak 3	Lin1		0.3632		276	250	10.3	20.0
PCB-1254 Peak 1	Lin1		0.6767		281	250	12.2	20.0
PCB-1254 Peak 2	Lin1		0.5265		279	250	11.5	20.0
PCB-1254 Peak 3	Lin1		0.7124		276	250	10.5	20.0
PCB-1254 Peak 4	Lin1		0.4471		293	250	17.3	20.0
PCB-1254 Peak 5	Lin1		1.091		295	250	17.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.22	2.97	3.47
PCB-1221 Peak 3	3.28	3.03	3.53
PCB-1254 Peak 1	5.53	5.28	5.78
PCB-1254 Peak 2	5.95	5.70	6.20
PCB-1254 Peak 3	6.40	6.15	6.65
PCB-1254 Peak 4	6.65	6.40	6.90
PCB-1254 Peak 5	7.12	6.87	7.37

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:30:47 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-040
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:39:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	29773128	1000.0	1000.0	
2	1.750	1.744	0.006	167287659	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2030793	250.0	264.9	
1	3.233	3.232	0.001	1231106	250.0	276.2	
1	3.270	3.269	0.001	5323184	250.0	278.4	
		Average of Peak Amounts =				273.2	
2	3.093	3.092	0.001	6568563	250.0	271.6	
2	3.223	3.222	0.001	4336984	250.0	278.2	
2	3.276	3.276	0.000	15187978	250.0	275.8	
		Average of Peak Amounts =				275.2	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6776240	250.0	288.3	M
1	5.510	5.509	0.001	9816035	250.0	287.9	M
1	5.850	5.849	0.001	6960594	250.0	275.0	M
1	6.620	6.622	-0.002	9128323	250.0	292.6	M
1	6.993	6.995	-0.002	12116804	250.0	284.4	M
		Average of Peak Amounts =				285.6	
2	5.530	5.529	0.001	28299329	250.0	280.6	
2	5.950	5.952	-0.002	22018407	250.0	278.8	
2	6.403	6.402	0.001	29793523	250.0	276.3	
2	6.646	6.649	-0.003	18699912	250.0	293.3	
2	7.116	7.119	-0.003	45648192	250.0	294.6	
		Average of Peak Amounts =				284.7	
						RPD = 0.31	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

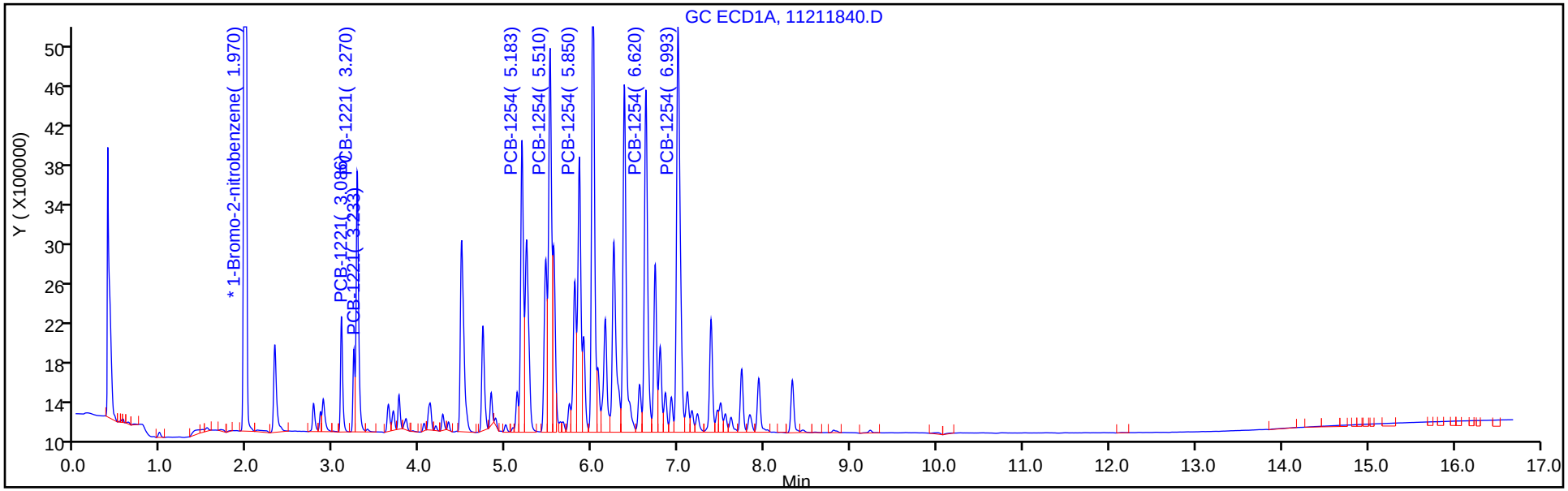
Report Date: 23-Nov-2018 10:58:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

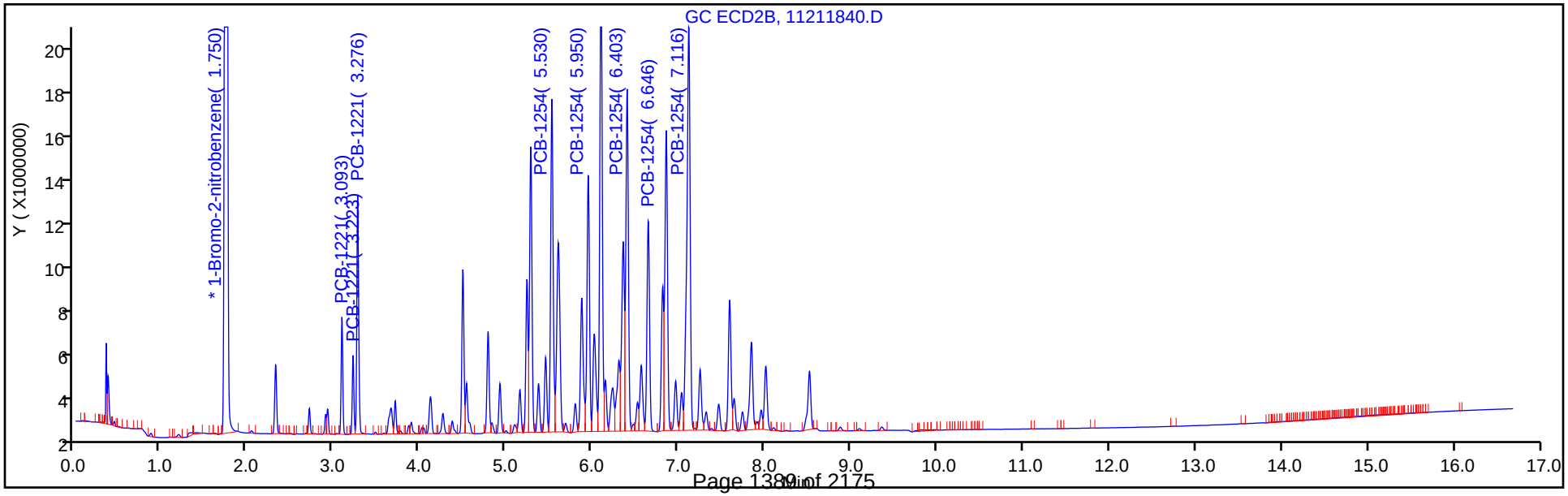
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date:	21-Nov-2018 22:30:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.5269		299	250	19.4	20.0
PCB-1016 Peak 2	Lin1		1.179		286	250	14.5	20.0
PCB-1016 Peak 3	Lin1		1.998		267	250	7.0	20.0
PCB-1016 Peak 4	Lin1		0.8836		279	250	11.5	20.0
PCB-1016 Peak 5	Lin1		0.9456		276	250	10.6	20.0
PCB-1260 Peak 1	Lin1		1.407		299	250	19.6	20.0
PCB-1260 Peak 2	Lin1		1.987		275	250	10.1	20.0
PCB-1260 Peak 3	Lin1		1.244		289	250	15.7	20.0
PCB-1260 Peak 4	Lin1		2.774		286	250	14.5	20.0
PCB-1260 Peak 5	Lin1		1.255		284	250	13.8	20.0
Tetrachloro-m-xylene	Lin1		26.07		12.5	12.5	-0.2	20.0
DCB Decachlorobiphenyl	Lin1		25.43		15.5	12.5	24.0*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.01	4.51
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.74	7.24
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.66	10.16

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:51:54 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-041
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:41:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26927485	1000.0	1000.0	
2	1.749	1.744	0.005	153501296	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	8774677	12.5	12.5	
2	2.779	2.780	-0.001	27009747	12.5	13.4	
						RPD = 7.29	
1 PCB-1016							M
1	3.272	3.269	0.003	3547242	250.0	298.5	
1	3.632	3.633	-0.001	7938090	250.0	286.1	
1	4.119	4.116	0.003	13448891	250.0	267.4	
1	4.265	4.263	0.002	5948063	250.0	278.7	
1	4.732	4.729	0.003	6365519	250.0	276.4	
		Average of Peak Amounts =				281.4	
2	3.275	3.276	-0.001	9601034	250.0	278.3	
2	3.665	3.666	-0.001	20402534	250.0	286.8	M
2	4.122	4.123	-0.001	44757622	250.0	284.8	M
2	4.265	4.266	-0.001	19470165	250.0	287.3	M
2	4.495	4.496	-0.001	9779283	250.0	266.3	M
		Average of Peak Amounts =				280.7	
						RPD = 0.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9472536	250.0	299.0	
1	6.992	6.993	-0.001	13373866	250.0	275.2	
1	7.492	7.489	0.003	8372131	250.0	289.3	
1	7.932	7.929	0.003	18676866	250.0	286.2	
1	8.322	8.319	0.003	8448030	250.0	284.4	
		Average of Peak Amounts =				286.8	
2	6.649	6.646	0.003	34912578	250.0	301.4	
2	7.115	7.116	-0.001	49684454	250.0	289.1	
2	7.645	7.646	-0.001	31194035	250.0	303.3	
2	8.012	8.013	-0.001	69380727	250.0	301.4	
2	8.515	8.516	-0.001	51465391	250.0	291.5	
		Average of Peak Amounts =				297.3	
						RPD = 3.60	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8559166	12.5	15.5	
2	10.185	10.186	-0.001	34784121	12.5	15.1	
						RPD = 2.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

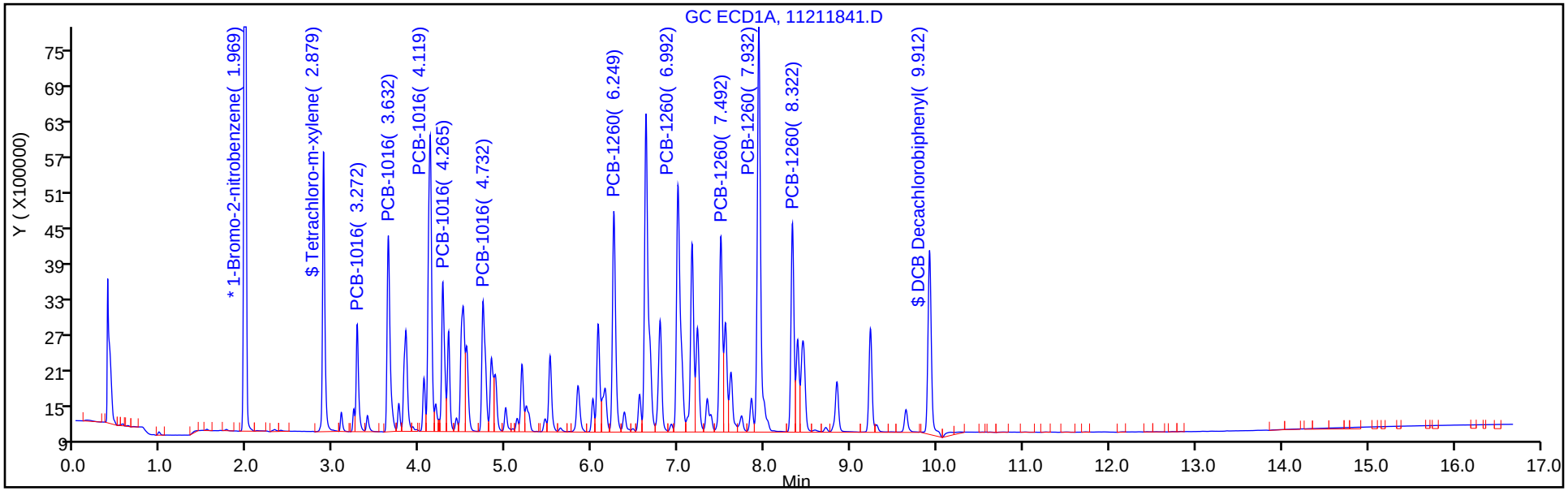
Report Date: 23-Nov-2018 10:58:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

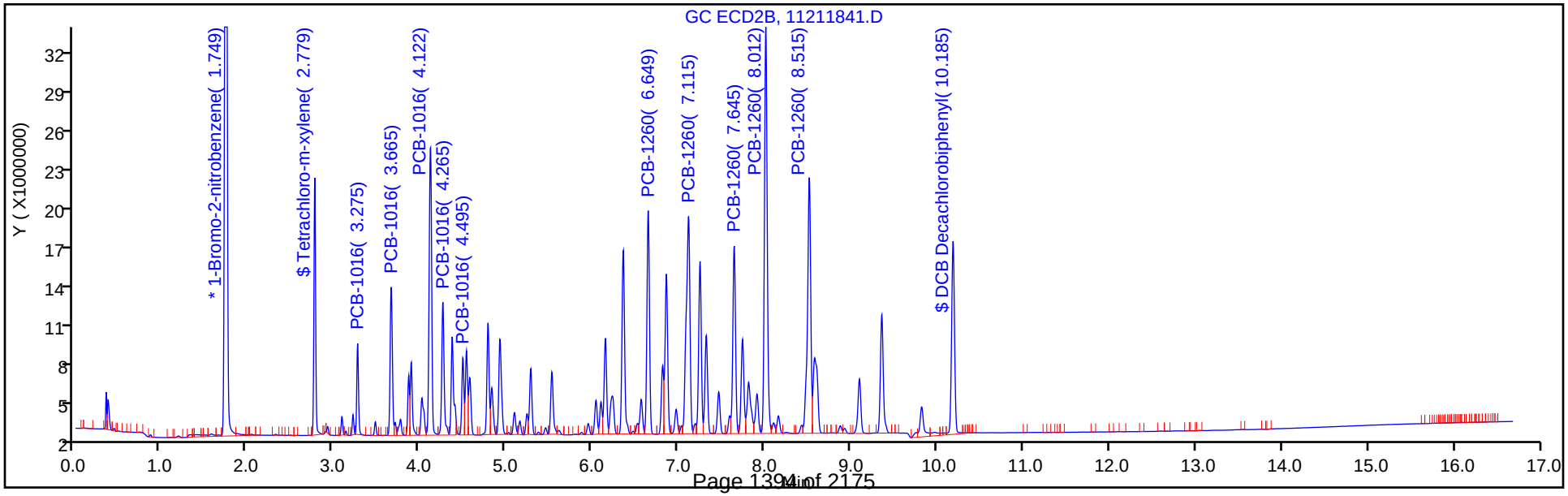
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date:	21-Nov-2018 22:51:54	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2502		278	250	11.3	20.0
PCB-1016 Peak 2	Lin1		0.5317		287	250	14.7	20.0
PCB-1016 Peak 3	Lin1		1.166		285	250	13.9	20.0
PCB-1016 Peak 4	Lin1		0.5074		287	250	14.9	20.0
PCB-1016 Peak 5	Lin1		0.2548		266	250	6.5	20.0
PCB-1260 Peak 1	Lin1		0.9098		301	250	20.6*	20.0
PCB-1260 Peak 2	Lin1		1.295		289	250	15.6	20.0
PCB-1260 Peak 3	Lin1		0.8129		303	250	21.3*	20.0
PCB-1260 Peak 4	Lin1		1.808		301	250	20.5*	20.0
PCB-1260 Peak 5	Lin1		1.341		292	250	16.6	20.0
Tetrachloro-m-xylene	Lin1		14.08		13.4	12.5	7.3	20.0
DCB Decachlorobiphenyl	Lin1		18.13		15.1	12.5	20.8*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.28	3.03	3.53
PCB-1016 Peak 2	3.67	3.42	3.92
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.02	4.52
PCB-1016 Peak 5	4.50	4.25	4.75
PCB-1260 Peak 1	6.65	6.40	6.90
PCB-1260 Peak 2	7.12	6.87	7.37
PCB-1260 Peak 3	7.65	7.40	7.90
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.52	8.27	8.77
Tetrachloro-m-xylene	2.78	2.53	3.03
DCB Decachlorobiphenyl	10.19	9.94	10.44

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:51:54 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-041
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:41:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26927485	1000.0	1000.0	
2	1.749	1.744	0.005	153501296	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	8774677	12.5	12.5	
2	2.779	2.780	-0.001	27009747	12.5	13.4	
						RPD = 7.29	
1 PCB-1016							M
1	3.272	3.269	0.003	3547242	250.0	298.5	
1	3.632	3.633	-0.001	7938090	250.0	286.1	
1	4.119	4.116	0.003	13448891	250.0	267.4	
1	4.265	4.263	0.002	5948063	250.0	278.7	
1	4.732	4.729	0.003	6365519	250.0	276.4	
		Average of Peak Amounts =				281.4	
2	3.275	3.276	-0.001	9601034	250.0	278.3	
2	3.665	3.666	-0.001	20402534	250.0	286.8	M
2	4.122	4.123	-0.001	44757622	250.0	284.8	M
2	4.265	4.266	-0.001	19470165	250.0	287.3	M
2	4.495	4.496	-0.001	9779283	250.0	266.3	M
		Average of Peak Amounts =				280.7	
						RPD = 0.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9472536	250.0	299.0	
1	6.992	6.993	-0.001	13373866	250.0	275.2	
1	7.492	7.489	0.003	8372131	250.0	289.3	
1	7.932	7.929	0.003	18676866	250.0	286.2	
1	8.322	8.319	0.003	8448030	250.0	284.4	
		Average of Peak Amounts =				286.8	
2	6.649	6.646	0.003	34912578	250.0	301.4	
2	7.115	7.116	-0.001	49684454	250.0	289.1	
2	7.645	7.646	-0.001	31194035	250.0	303.3	
2	8.012	8.013	-0.001	69380727	250.0	301.4	
2	8.515	8.516	-0.001	51465391	250.0	291.5	
		Average of Peak Amounts =				297.3	
						RPD = 3.60	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8559166	12.5	15.5	
2	10.185	10.186	-0.001	34784121	12.5	15.1	
						RPD = 2.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

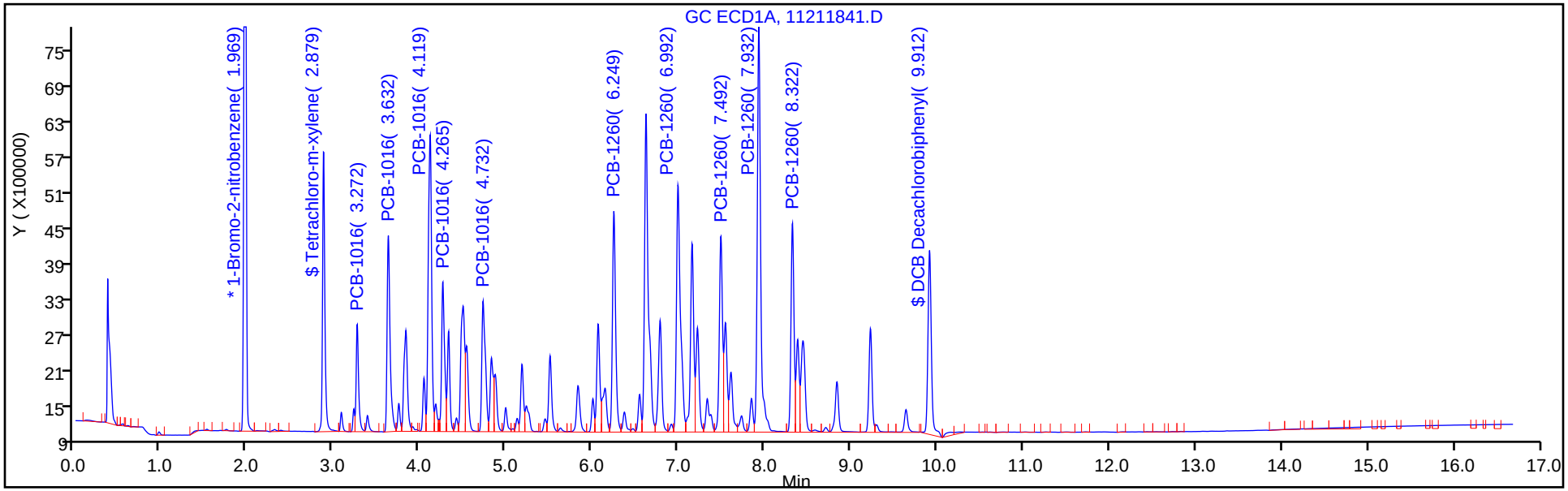
Report Date: 23-Nov-2018 10:58:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

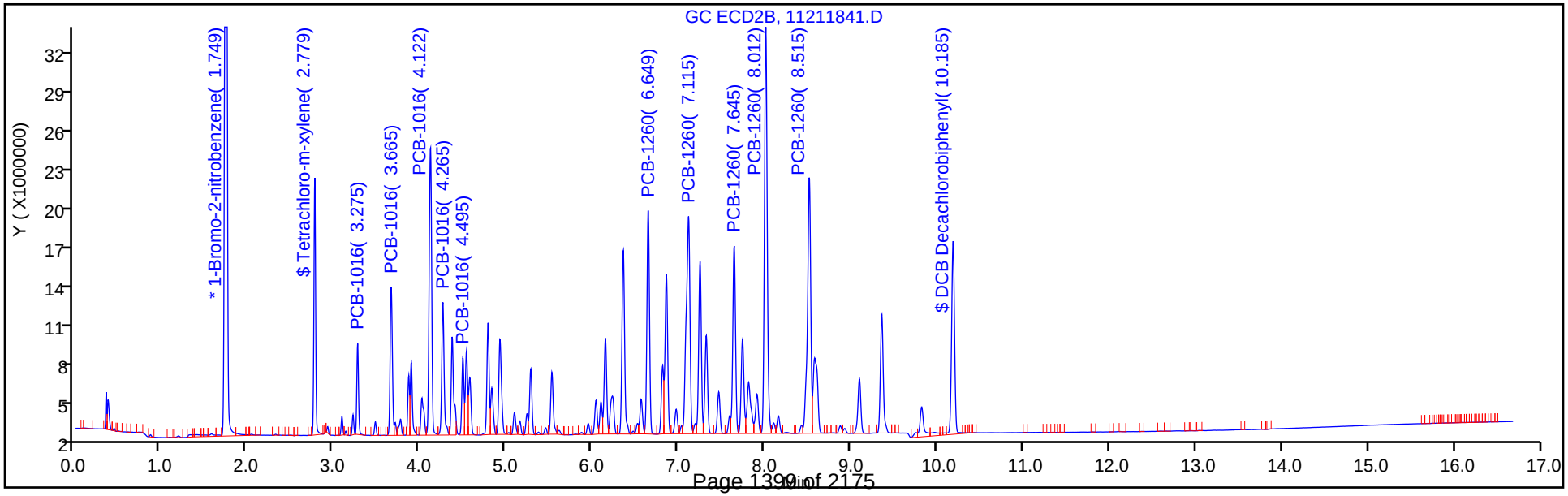
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date:	21-Nov-2018 22:51:54	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 10:58:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date: 21-Nov-2018 22:51:54 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

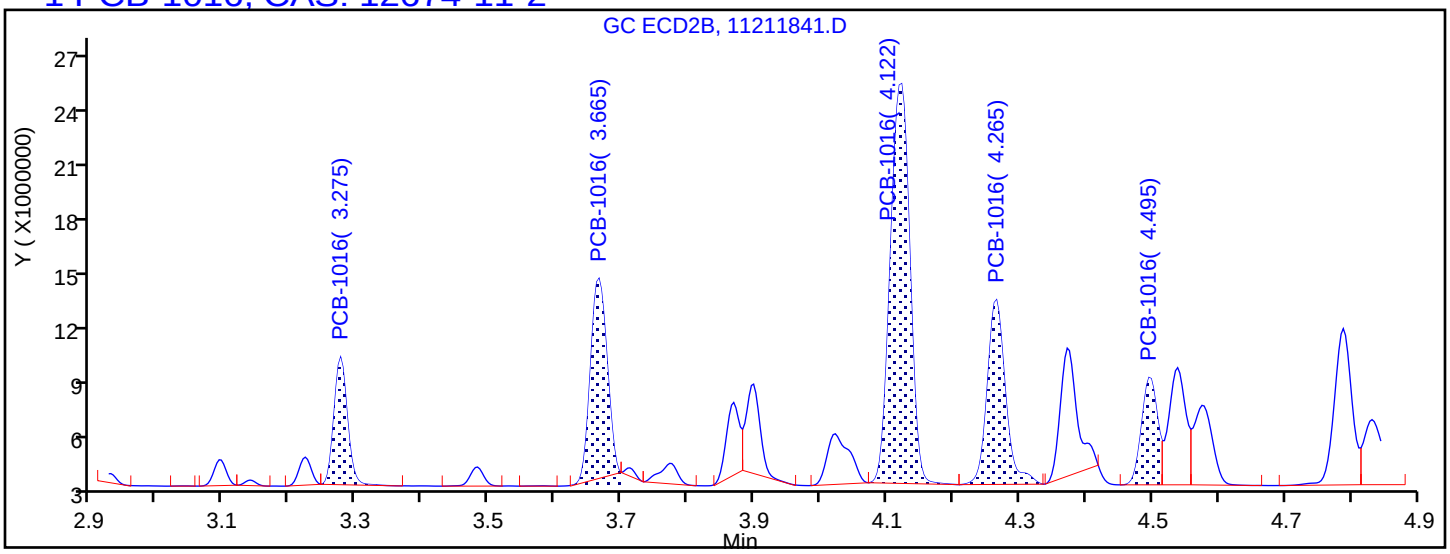
Operator ID: ALS ALS Bottle#: 41 Worklist Smp#: 41

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

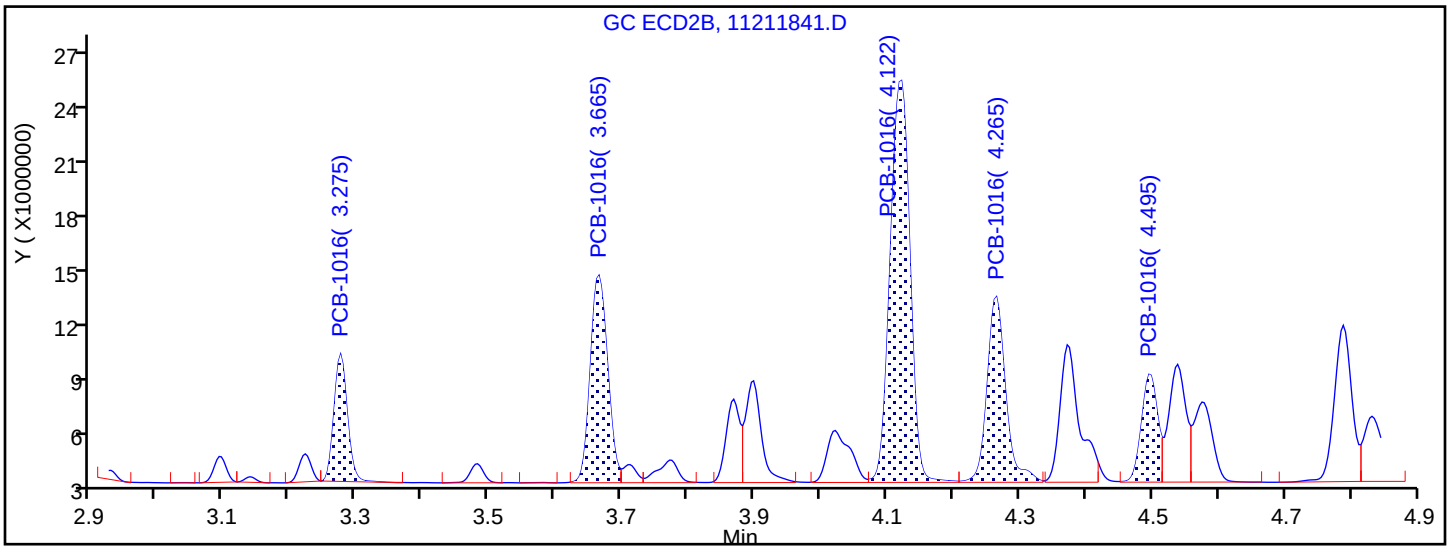
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.275	Response = 9601034	
3.665	Response = 18727987	
4.122	Response = 43874781	
4.265	Response = 18984635	
4.495	Response = 9655763	



Manual Integration Results

3.275	Response = 9601034	
3.665	Response = 20402534	M
4.122	Response = 44757622	M
4.265	Response = 19470165	M
4.495	Response = 9779283	M

Reviewer: patadiab, 23-Nov-2018 10:41:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Lin1		0.1706		253	250	1.2	20.0
PCB-1232 Peak 2	Lin1		0.5805		269	250	7.4	20.0
PCB-1232 Peak 3	Lin1		0.8455		264	250	5.4	20.0
PCB-1232 Peak 4	Lin1		0.3874		274	250	9.6	20.0
PCB-1232 Peak 5	Lin1		0.4202		298	250	19.2	20.0
PCB-1262 Peak 1	Lin1		1.153		297	250	18.8	20.0
PCB-1262 Peak 2	Lin1		1.659		272	250	9.0	20.0
PCB-1262 Peak 3	Lin1		1.483		276	250	10.2	20.0
PCB-1262 Peak 4	Lin1		3.241		292	250	17.0	20.0
PCB-1262 Peak 5	Lin1		1.059		312	250	24.8*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.09	2.84	3.34
PCB-1232 Peak 2	3.27	3.02	3.52
PCB-1232 Peak 3	4.12	3.87	4.37
PCB-1232 Peak 4	4.26	4.01	4.51
PCB-1232 Peak 5	4.73	4.48	4.98
PCB-1262 Peak 1	6.25	6.00	6.50
PCB-1262 Peak 2	7.16	6.90	7.40
PCB-1262 Peak 3	7.49	7.24	7.74
PCB-1262 Peak 4	7.93	7.68	8.18
PCB-1262 Peak 5	8.32	8.07	8.57

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:13:05 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-042
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:43:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26954302	1000.0	1000.0	
2	1.746	1.744	0.002	152978208	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	1149502	250.0	252.9	
1	3.269	3.271	-0.002	3911724	250.0	268.5	
1	4.116	4.118	-0.002	5697150	250.0	263.6	
1	4.262	4.264	-0.002	2610317	250.0	274.1	
1	4.729	4.731	-0.002	2831763	250.0	298.1	
		Average of Peak Amounts =				271.4	
2	3.276	3.275	0.001	11159015	250.0	273.0	
2	3.666	3.665	0.001	9939804	250.0	287.2	
2	4.123	4.121	0.002	20391815	250.0	285.6	
2	4.266	4.265	0.001	9058511	250.0	290.2	
2	4.926	4.928	-0.002	8279557	250.0	316.1	
		Average of Peak Amounts =				290.4	
						RPD = 6.76	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	7767201	250.0	297.1	
1	7.156	7.154	0.002	11179510	250.0	272.4	
1	7.489	7.488	0.001	9995072	250.0	275.6	
1	7.929	7.931	-0.002	21842740	250.0	292.4	
1	8.322	8.321	0.001	7135112	250.0	311.9	
		Average of Peak Amounts =				289.9	
2	6.646	6.648	-0.002	29328487	250.0	315.7	
2	7.249	7.248	0.001	37737006	250.0	286.3	
2	7.646	7.645	0.001	38058721	250.0	291.5	
2	8.009	8.011	-0.002	78979247	250.0	310.8	
2	8.516	8.515	0.001	60581655	250.0	315.6	
		Average of Peak Amounts =				304.0	
						RPD = 4.75	

Reagents:

AR_3262_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

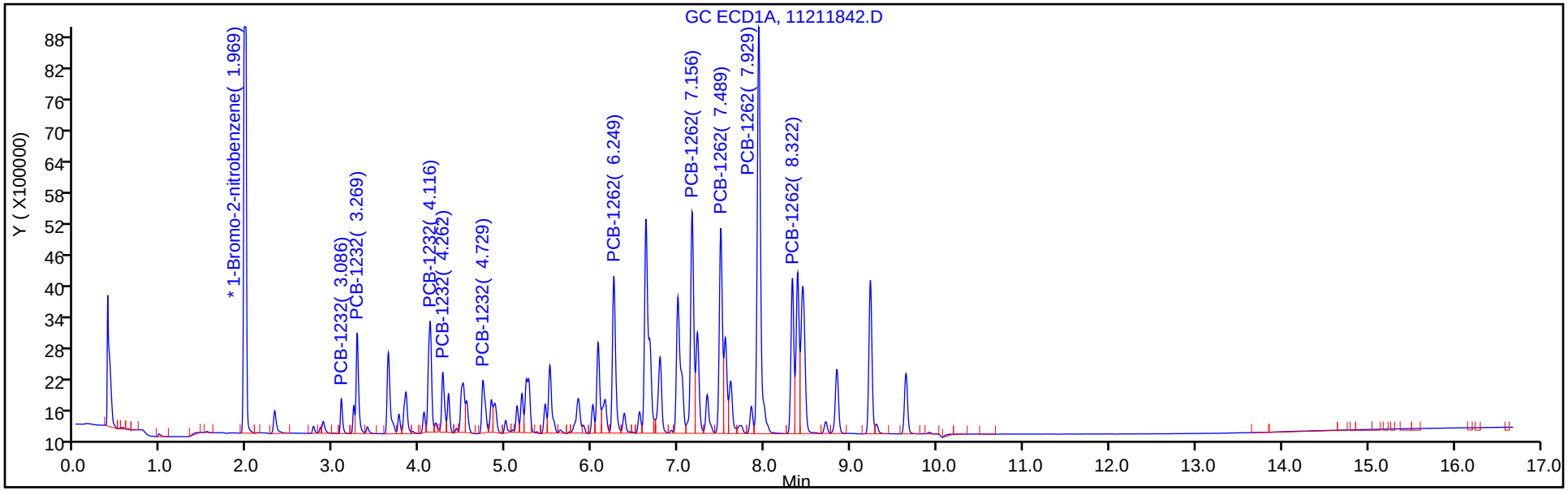
Report Date: 23-Nov-2018 10:58:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

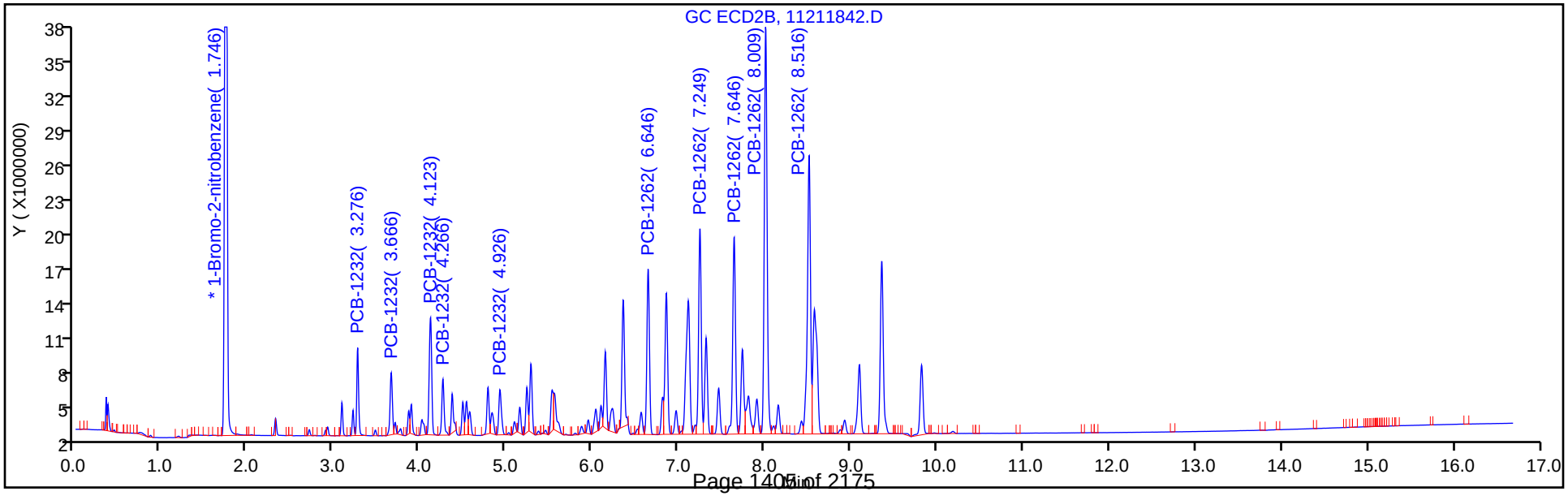
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D

Injection Date:	21-Nov-2018 23:13:05	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Lin1		0.2918		273	250	9.2	20.0
PCB-1232 Peak 2	Lin1		0.2599		287	250	14.9	20.0
PCB-1232 Peak 3	Lin1		0.5332		286	250	14.2	20.0
PCB-1232 Peak 4	Lin1		0.2369		290	250	16.1	20.0
PCB-1232 Peak 5	Lin1		0.2165		316	250	26.4*	20.0
PCB-1262 Peak 1	Lin1		0.7669		316	250	26.3*	20.0
PCB-1262 Peak 2	Lin1		0.9867		286	250	14.5	20.0
PCB-1262 Peak 3	Lin1		0.995		292	250	16.6	20.0
PCB-1262 Peak 4	Lin1		2.065		311	250	24.3*	20.0
PCB-1262 Peak 5	Lin1		1.584		316	250	26.2*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.28	3.03	3.53
PCB-1232 Peak 2	3.67	3.42	3.92
PCB-1232 Peak 3	4.12	3.87	4.37
PCB-1232 Peak 4	4.27	4.02	4.52
PCB-1232 Peak 5	4.93	4.68	5.18
PCB-1262 Peak 1	6.65	6.40	6.90
PCB-1262 Peak 2	7.25	7.00	7.50
PCB-1262 Peak 3	7.65	7.40	7.90
PCB-1262 Peak 4	8.01	7.76	8.26
PCB-1262 Peak 5	8.52	8.27	8.77

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:13:05 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-042
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:43:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26954302	1000.0	1000.0	
2	1.746	1.744	0.002	152978208	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	1149502	250.0	252.9	
1	3.269	3.271	-0.002	3911724	250.0	268.5	
1	4.116	4.118	-0.002	5697150	250.0	263.6	
1	4.262	4.264	-0.002	2610317	250.0	274.1	
1	4.729	4.731	-0.002	2831763	250.0	298.1	
		Average of Peak Amounts =				271.4	
2	3.276	3.275	0.001	11159015	250.0	273.0	
2	3.666	3.665	0.001	9939804	250.0	287.2	
2	4.123	4.121	0.002	20391815	250.0	285.6	
2	4.266	4.265	0.001	9058511	250.0	290.2	
2	4.926	4.928	-0.002	8279557	250.0	316.1	
		Average of Peak Amounts =				290.4	
						RPD = 6.76	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	7767201	250.0	297.1	
1	7.156	7.154	0.002	11179510	250.0	272.4	
1	7.489	7.488	0.001	9995072	250.0	275.6	
1	7.929	7.931	-0.002	21842740	250.0	292.4	
1	8.322	8.321	0.001	7135112	250.0	311.9	
		Average of Peak Amounts =				289.9	
2	6.646	6.648	-0.002	29328487	250.0	315.7	
2	7.249	7.248	0.001	37737006	250.0	286.3	
2	7.646	7.645	0.001	38058721	250.0	291.5	
2	8.009	8.011	-0.002	78979247	250.0	310.8	
2	8.516	8.515	0.001	60581655	250.0	315.6	
		Average of Peak Amounts =				304.0	
						RPD = 4.75	

Reagents:

AR_3262_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

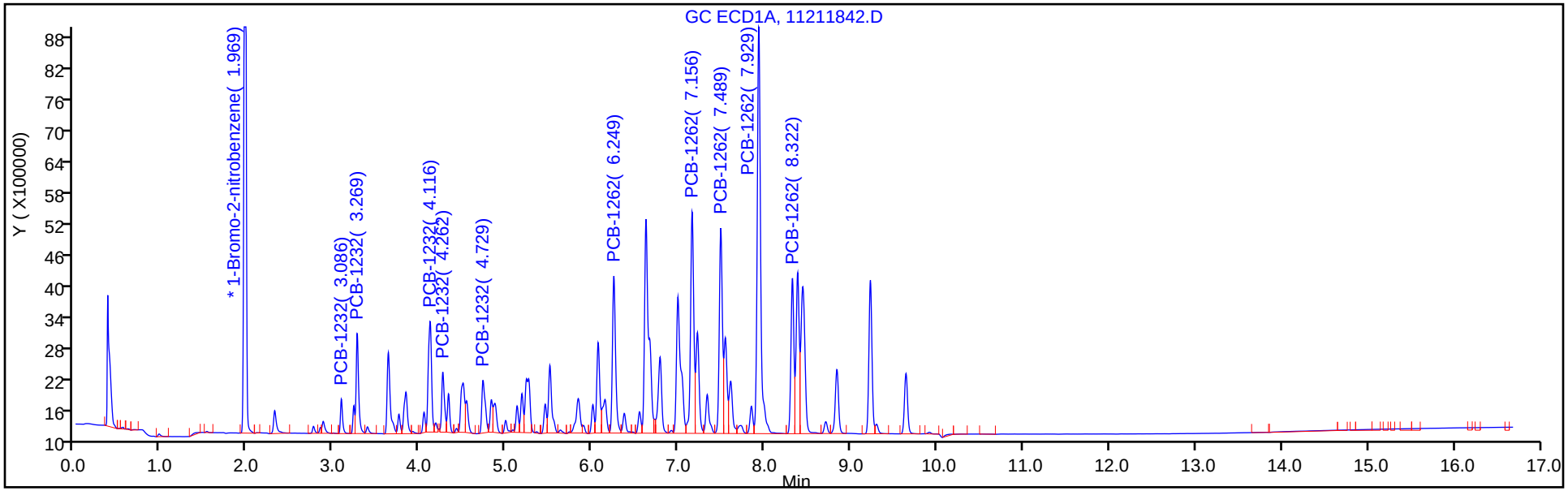
Report Date: 23-Nov-2018 10:58:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

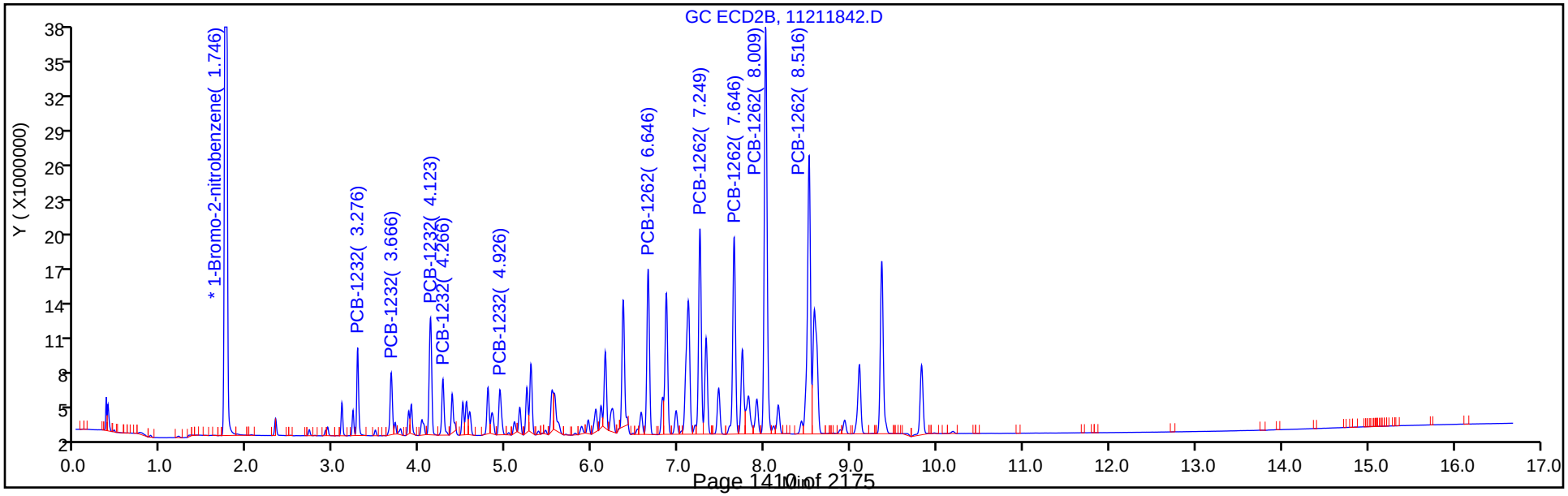
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D

Injection Date:	21-Nov-2018 23:13:05	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Lin1		0.8653		269	250	7.7	20.0
PCB-1242 Peak 2	Lin1		1.375		243	250	-2.6	20.0
PCB-1242 Peak 3	Lin1		0.6023		249	250	-0.6	20.0
PCB-1242 Peak 4	Lin1		0.4112		246	250	-1.7	20.0
PCB-1242 Peak 5	Lin1		0.4807		224	250	-10.4	20.0
PCB-1268 Peak 1	Lin1		3.171		276	250	10.5	20.0
PCB-1268 Peak 2	Lin1		3.065		265	250	5.8	20.0
PCB-1268 Peak 3	Lin1		2.752		295	250	17.9	20.0
PCB-1268 Peak 4	Lin1		0.7383		186	250	-25.4*	20.0
PCB-1268 Peak 5	Lin1		6.803		244	250	-2.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.63	3.38	3.88
PCB-1242 Peak 2	4.12	3.87	4.37
PCB-1242 Peak 3	4.26	4.01	4.51
PCB-1242 Peak 4	5.24	4.99	5.49
PCB-1242 Peak 5	5.26	5.01	5.51
PCB-1268 Peak 1	8.38	8.13	8.63
PCB-1268 Peak 2	8.43	8.18	8.68
PCB-1268 Peak 3	8.71	8.46	8.96
PCB-1268 Peak 4	9.23	8.97	9.47
PCB-1268 Peak 5	9.64	9.39	9.89

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:34:12 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-043
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:09:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:44:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30567576	1000.0	1000.0	
2	1.747	1.744	0.003	172646811	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							Ma
1	3.630	3.631	-0.001	6612174	250.0	269.2	
1	4.117	4.117	0.000	10505144	250.0	243.4	
1	4.263	4.264	-0.001	4602961	250.0	248.6	
1	5.237	5.237	0.000	3142547	250.0	245.9	M
1	5.260	5.261	-0.001	3673495	250.0	224.1	M
		Average of Peak Amounts =				246.2	
2	3.664	3.664	0.000	16978060	250.0	273.5	
2	4.120	4.121	-0.001	36272110	250.0	265.6	
2	4.264	4.264	0.000	15836385	250.0	267.6	
2	4.787	4.788	-0.001	13494422	250.0	275.1	
2	4.927	4.928	-0.001	15331263	250.0	266.7	
		Average of Peak Amounts =				269.7	
						RPD = 9.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	24235953	250.0	276.3	
1	8.433	8.434	-0.001	23424284	250.0	264.6	
1	8.710	8.707	0.003	21027004	250.0	294.7	
1	9.227	9.224	0.003	5641852	250.0	186.4	
1	9.640	9.637	0.003	51985946	250.0	243.9	
		Average of Peak Amounts =				253.2	
2	8.510	8.511	-0.001	92658099	250.0	286.6	
2	8.574	8.574	0.000	85134666	250.0	277.7	
2	8.927	8.928	-0.001	81954946	250.0	309.2	
2	9.357	9.358	-0.001	25443183	250.0	197.1	
2	9.820	9.821	-0.001	205859923	250.0	251.8	
		Average of Peak Amounts =				264.5	
						RPD = 4.37	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

AR_4268_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

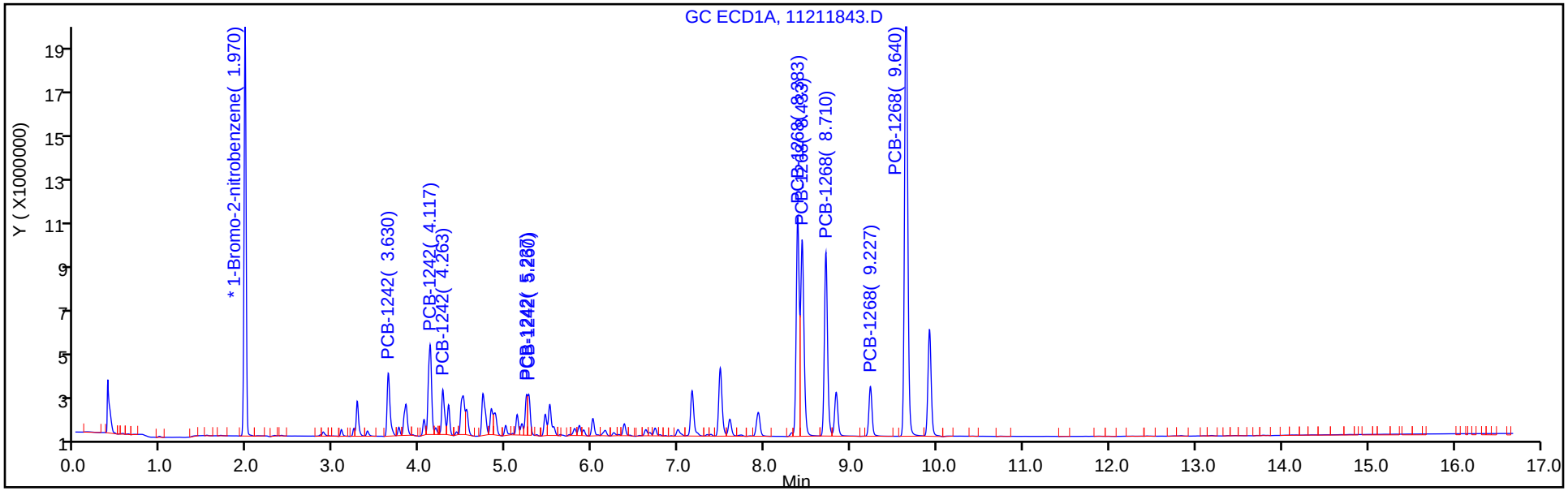
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

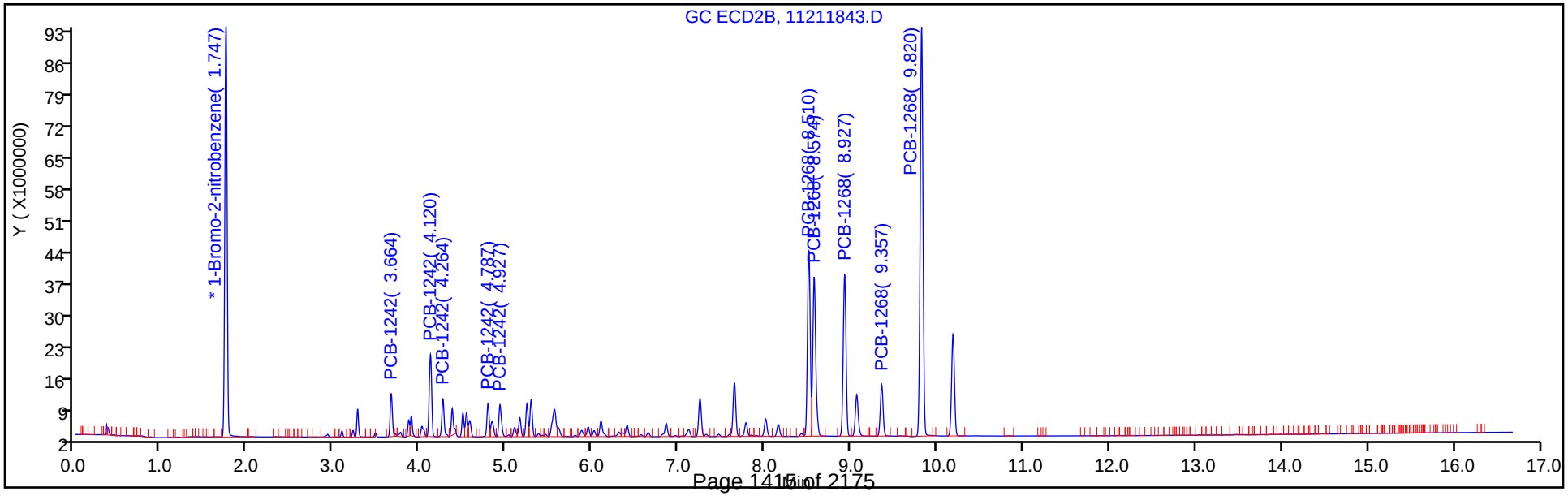
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date: 21-Nov-2018 23:34:12 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

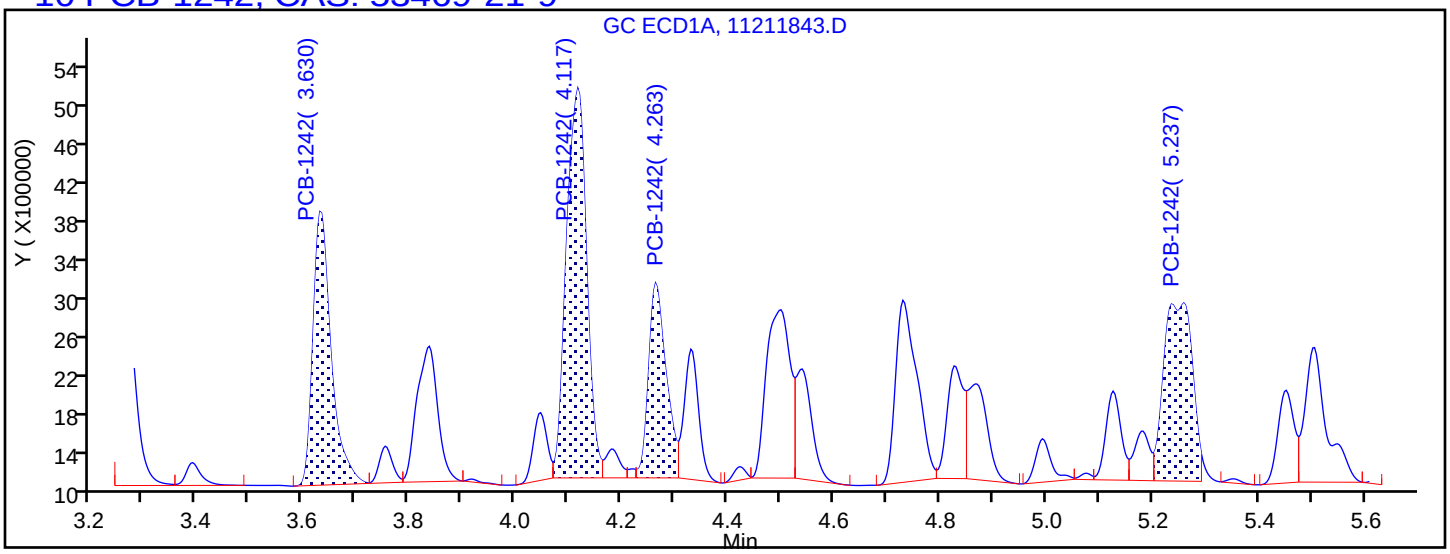
Operator ID: ALS ALS Bottle#: 43 Worklist Smp#: 43

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

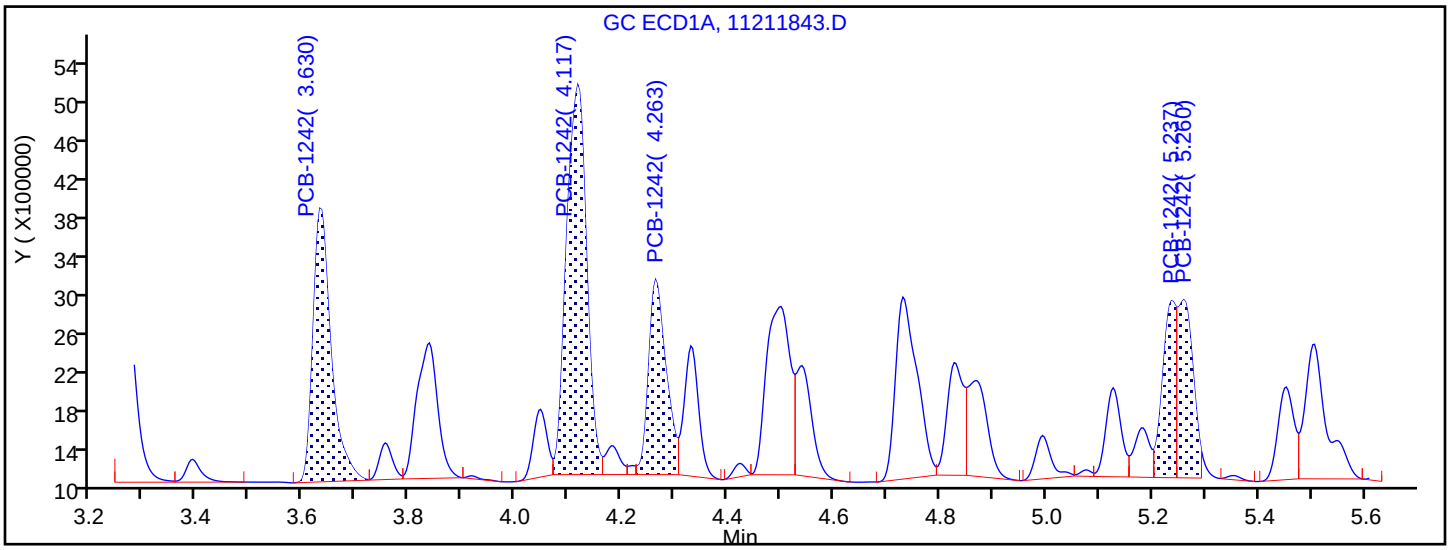
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

10 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.630	Response = 6612174
4.117	Response = 10505144
4.263	Response = 4602961
5.237	Response = 6815903
5.261	Response = 0



Manual Integration Results

3.630	Response = 6612174	
4.117	Response = 10505144	
4.263	Response = 4602961	
5.237	Response = 3142547	M
5.260	Response = 3673495	M

Reviewer: patadiab, 23-Nov-2018 11:08:36

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Lin1		0.3934		273	250	9.4	20.0
PCB-1242 Peak 2	Lin1		0.8404		266	250	6.2	20.0
PCB-1242 Peak 3	Lin1		0.3669		268	250	7.0	20.0
PCB-1242 Peak 4	Lin1		0.3127		275	250	10.0	20.0
PCB-1242 Peak 5	Lin1		0.3552		267	250	6.7	20.0
PCB-1268 Peak 1	Lin1		2.147		287	250	14.7	20.0
PCB-1268 Peak 2	Lin1		1.972		278	250	11.1	20.0
PCB-1268 Peak 3	Lin1		1.899		309	250	23.7*	20.0
PCB-1268 Peak 4	Lin1		0.5895		197	250	-21.1*	20.0
PCB-1268 Peak 5	Lin1		4.770		252	250	0.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.66	3.41	3.91
PCB-1242 Peak 2	4.12	3.87	4.37
PCB-1242 Peak 3	4.26	4.01	4.51
PCB-1242 Peak 4	4.79	4.54	5.04
PCB-1242 Peak 5	4.93	4.68	5.18
PCB-1268 Peak 1	8.51	8.26	8.76
PCB-1268 Peak 2	8.57	8.32	8.82
PCB-1268 Peak 3	8.93	8.68	9.18
PCB-1268 Peak 4	9.36	9.11	9.61
PCB-1268 Peak 5	9.82	9.57	10.07

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:34:12 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-043
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:09:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:44:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30567576	1000.0	1000.0	
2	1.747	1.744	0.003	172646811	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							Ma
1	3.630	3.631	-0.001	6612174	250.0	269.2	
1	4.117	4.117	0.000	10505144	250.0	243.4	
1	4.263	4.264	-0.001	4602961	250.0	248.6	
1	5.237	5.237	0.000	3142547	250.0	245.9	M
1	5.260	5.261	-0.001	3673495	250.0	224.1	M
		Average of Peak Amounts =				246.2	
2	3.664	3.664	0.000	16978060	250.0	273.5	
2	4.120	4.121	-0.001	36272110	250.0	265.6	
2	4.264	4.264	0.000	15836385	250.0	267.6	
2	4.787	4.788	-0.001	13494422	250.0	275.1	
2	4.927	4.928	-0.001	15331263	250.0	266.7	
		Average of Peak Amounts =				269.7	
						RPD = 9.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	24235953	250.0	276.3	
1	8.433	8.434	-0.001	23424284	250.0	264.6	
1	8.710	8.707	0.003	21027004	250.0	294.7	
1	9.227	9.224	0.003	5641852	250.0	186.4	
1	9.640	9.637	0.003	51985946	250.0	243.9	
		Average of Peak Amounts =				253.2	
2	8.510	8.511	-0.001	92658099	250.0	286.6	
2	8.574	8.574	0.000	85134666	250.0	277.7	
2	8.927	8.928	-0.001	81954946	250.0	309.2	
2	9.357	9.358	-0.001	25443183	250.0	197.1	
2	9.820	9.821	-0.001	205859923	250.0	251.8	
		Average of Peak Amounts =				264.5	
						RPD = 4.37	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

AR_4268_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

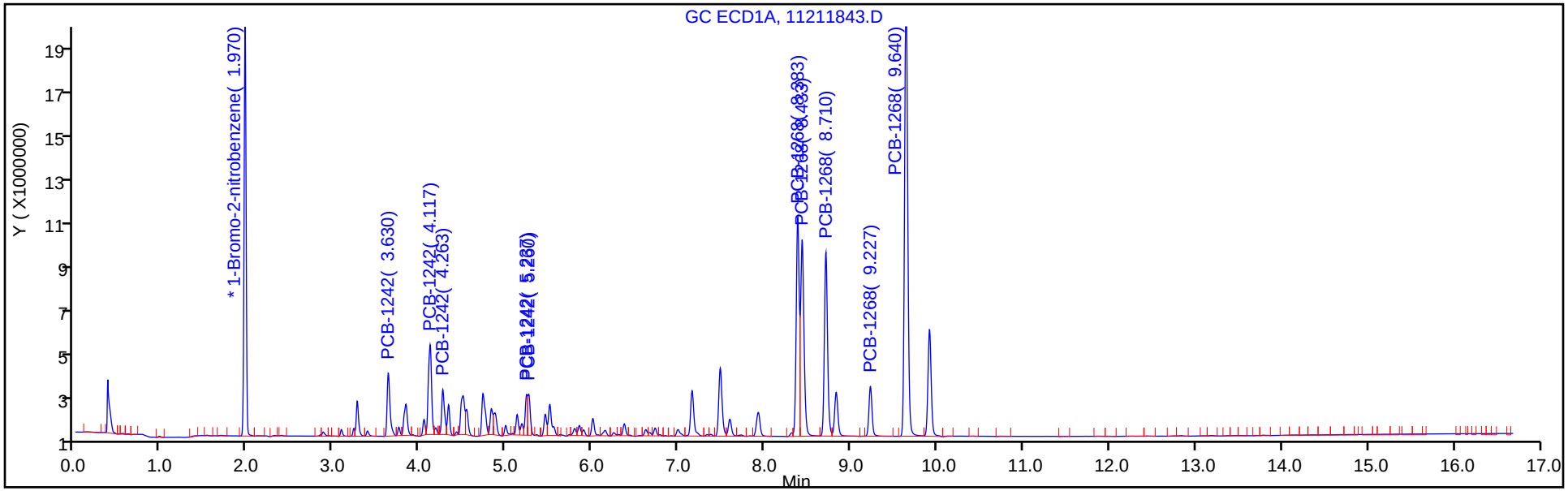
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

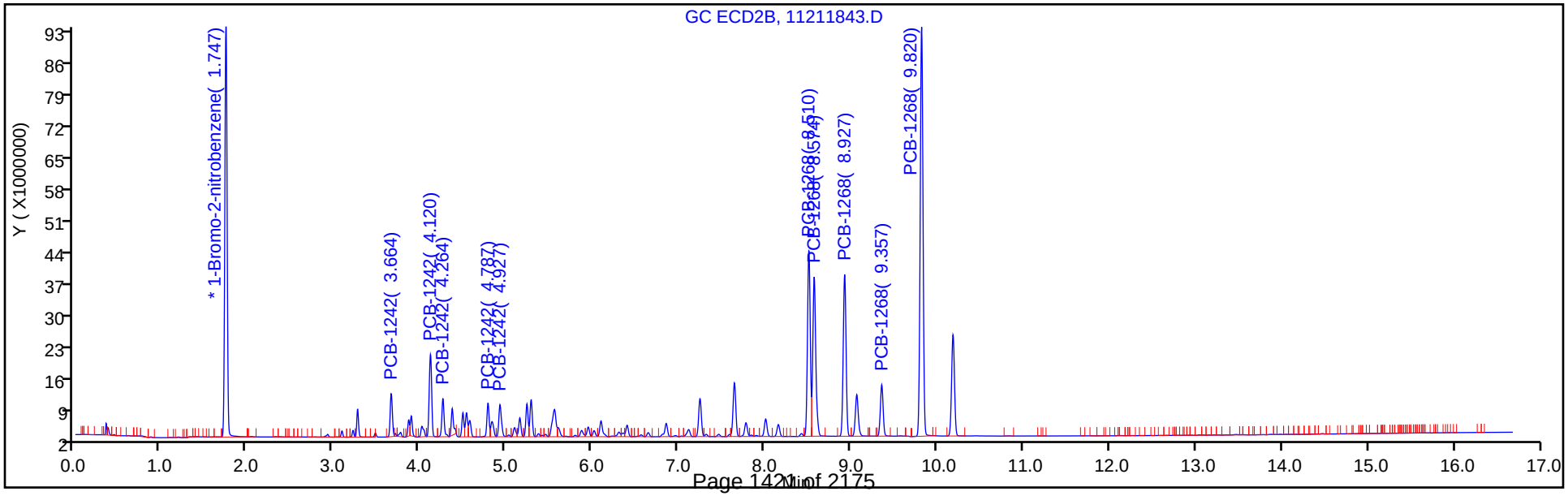
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-439075/4 Calibration Date: 11/28/2018 16:57

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281804.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.3751		431	500	-13.7	20.0
PCB-1016 Peak 2	Lin1		0.8327		410	500	-18.0	20.0
PCB-1016 Peak 3	Lin1		1.521		409	500	-18.3	20.0
PCB-1016 Peak 4	Lin1		0.6411		408	500	-18.4	20.0
PCB-1016 Peak 5	Lin1		0.6885		406	500	-18.9	20.0
PCB-1260 Peak 1	Lin1		0.9851		422	500	-15.6	20.0
PCB-1260 Peak 2	Lin1		1.561		434	500	-13.2	20.0
PCB-1260 Peak 3	Lin1		0.9451		443	500	-11.4	20.0
PCB-1260 Peak 4	Lin1		2.161		447	500	-10.6	20.0
PCB-1260 Peak 5	Lin1		0.9948		452	500	-9.6	20.0
Tetrachloro-m-xylene	Lin1		20.52		19.6	25.0	-21.7*	20.0
DCB Decachlorobiphenyl	Lin1		18.47		22.8	25.0	-8.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-439075/4 Calibration Date: 11/28/2018 16:57

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281804.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	7.00	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.92	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281804.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Nov-2018 16:57:19 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0076621-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:10:32 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 10:51:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.966	0.000	36287423	1000.0	1000.0	
2	1.743	1.743	0.000	181510268	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	18612906	25.0	19.6	
2	2.773	2.773	0.000	54372367	25.0	23.3	
						RPD = 17.26	
1 PCB-1016							
1	3.269	3.269	0.000	6806395	500.0	431.4	
1	3.632	3.632	0.000	15107916	500.0	409.9	
1	4.119	4.119	0.000	27599216	500.0	408.5	
1	4.266	4.266	0.000	11631765	500.0	408.1	
1	4.732	4.732	0.000	12491299	500.0	405.6	
		Average of Peak Amounts =				412.7	
2	3.273	3.273	0.000	18894983	500.0	474.2	
2	3.659	3.659	0.000	37934028	500.0	460.4	
2	4.116	4.116	0.000	83124983	500.0	455.2	
2	4.259	4.259	0.000	35997586	500.0	458.1	
2	4.493	4.493	0.000	19041306	500.0	449.7	
		Average of Peak Amounts =				459.5	
						RPD = 10.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	17872970	500.0	422.0	
1	6.996	6.996	0.000	28321029	500.0	434.2	
1	7.492	7.492	0.000	17147870	500.0	442.9	
1	7.932	7.932	0.000	39200177	500.0	447.0	
1	8.322	8.322	0.000	18049635	500.0	452.0	
		Average of Peak Amounts =				439.6	
2	6.643	6.643	0.000	63902517	500.0	474.1	
2	7.109	7.109	0.000	95484069	500.0	477.7	
2	7.639	7.639	0.000	57928186	500.0	483.4	
2	8.006	8.006	0.000	130586157	500.0	486.6	
2	8.509	8.509	0.000	100921586	500.0	491.4	
		Average of Peak Amounts =				482.7	
						RPD = 9.34	
$ 15 DCB Decachlorobiphenyl							
1	9.916	9.916	0.000	16758807	25.0	22.8	
2	10.179	10.179	0.000	67182598	25.0	25.1	
						RPD = 9.74	
19 1260 Res 1							
1	8.322	8.322	0.000	18049635	NR	NR	
16 1260 Res 2							
1	8.382	8.382	0.000	8838925	NR	NR	
18 1260 Res 3							
1	8.446	8.446	0.000	11498857	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

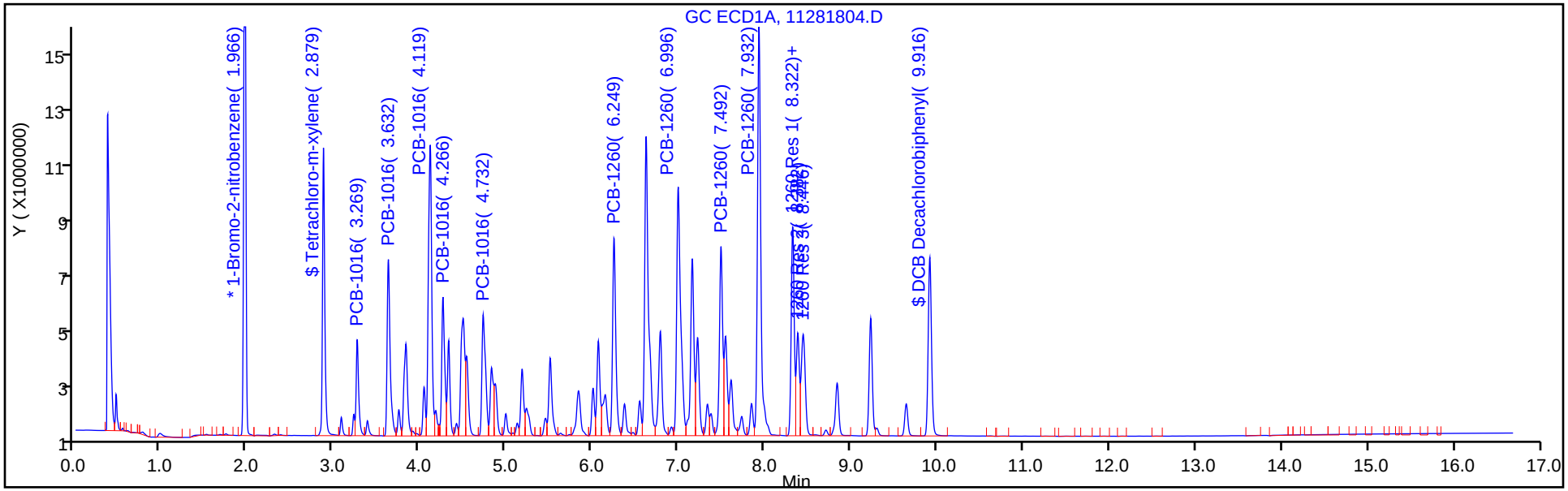
Report Date: 03-Dec-2018 11:10:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

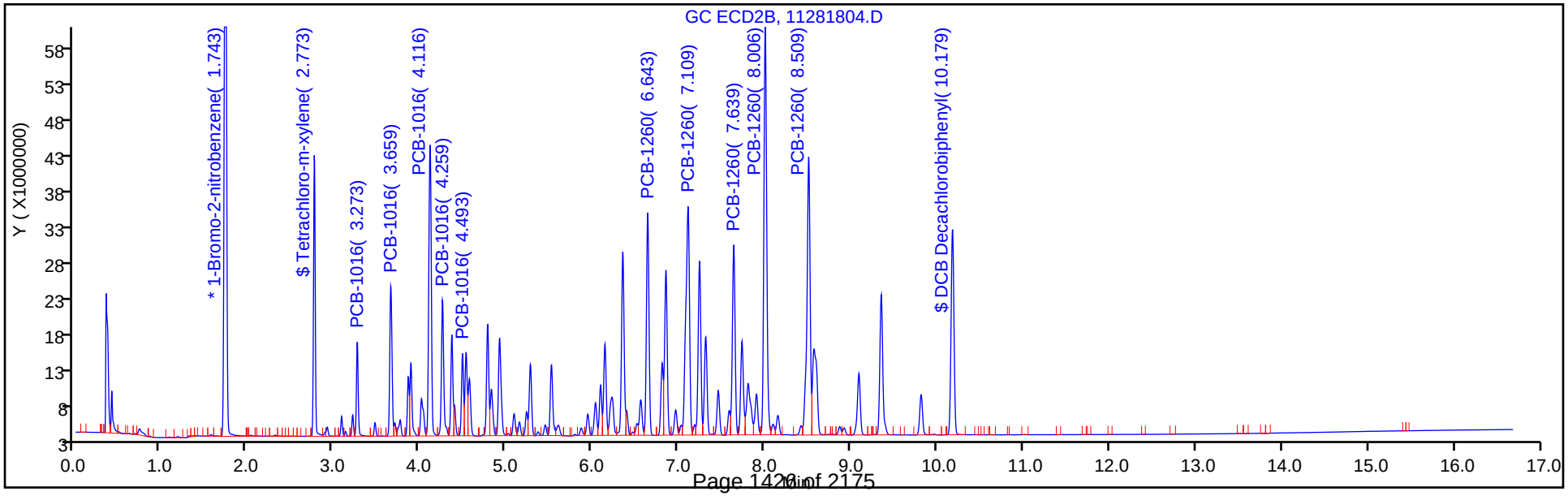
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281804.D

Injection Date:	28-Nov-2018 16:57:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-439075/4 Calibration Date: 11/28/2018 16:57

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281804.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2082		474	500	-5.2	20.0
PCB-1016 Peak 2	Lin1		0.4180		460	500	-7.9	20.0
PCB-1016 Peak 3	Lin1		0.9159		455	500	-9.0	20.0
PCB-1016 Peak 4	Lin1		0.3967		458	500	-8.4	20.0
PCB-1016 Peak 5	Lin1		0.2098		450	500	-10.1	20.0
PCB-1260 Peak 1	Lin1		0.7041		474	500	-5.2	20.0
PCB-1260 Peak 2	Lin1		1.052		478	500	-4.5	20.0
PCB-1260 Peak 3	Lin1		0.6383		483	500	-3.3	20.0
PCB-1260 Peak 4	Lin1		1.439		487	500	-2.7	20.0
PCB-1260 Peak 5	Lin1		1.112		491	500	-1.7	20.0
Tetrachloro-m-xylene	Lin1		11.98		23.3	25.0	-7.0	20.0
DCB Decachlorobiphenyl	Lin1		14.81		25.1	25.0	0.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVIS 280-439075/4 Calibration Date: 11/28/2018 16:57

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281804.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.24	4.74
PCB-1260 Peak 1	6.64	6.39	6.89
PCB-1260 Peak 2	7.11	6.86	7.36
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.26	8.76
Tetrachloro-m-xylene	2.77	2.52	3.02
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281804.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Nov-2018 16:57:19 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0076621-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:10:32 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 10:51:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.966	0.000	36287423	1000.0	1000.0	
2	1.743	1.743	0.000	181510268	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	18612906	25.0	19.6	
2	2.773	2.773	0.000	54372367	25.0	23.3	
						RPD = 17.26	
1 PCB-1016							
1	3.269	3.269	0.000	6806395	500.0	431.4	
1	3.632	3.632	0.000	15107916	500.0	409.9	
1	4.119	4.119	0.000	27599216	500.0	408.5	
1	4.266	4.266	0.000	11631765	500.0	408.1	
1	4.732	4.732	0.000	12491299	500.0	405.6	
		Average of Peak Amounts =				412.7	
2	3.273	3.273	0.000	18894983	500.0	474.2	
2	3.659	3.659	0.000	37934028	500.0	460.4	
2	4.116	4.116	0.000	83124983	500.0	455.2	
2	4.259	4.259	0.000	35997586	500.0	458.1	
2	4.493	4.493	0.000	19041306	500.0	449.7	
		Average of Peak Amounts =				459.5	
						RPD = 10.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	17872970	500.0	422.0	
1	6.996	6.996	0.000	28321029	500.0	434.2	
1	7.492	7.492	0.000	17147870	500.0	442.9	
1	7.932	7.932	0.000	39200177	500.0	447.0	
1	8.322	8.322	0.000	18049635	500.0	452.0	
		Average of Peak Amounts =				439.6	
2	6.643	6.643	0.000	63902517	500.0	474.1	
2	7.109	7.109	0.000	95484069	500.0	477.7	
2	7.639	7.639	0.000	57928186	500.0	483.4	
2	8.006	8.006	0.000	130586157	500.0	486.6	
2	8.509	8.509	0.000	100921586	500.0	491.4	
		Average of Peak Amounts =				482.7	
						RPD = 9.34	
$ 15 DCB Decachlorobiphenyl							
1	9.916	9.916	0.000	16758807	25.0	22.8	
2	10.179	10.179	0.000	67182598	25.0	25.1	
						RPD = 9.74	
19 1260 Res 1							
1	8.322	8.322	0.000	18049635	NR	NR	
16 1260 Res 2							
1	8.382	8.382	0.000	8838925	NR	NR	
18 1260 Res 3							
1	8.446	8.446	0.000	11498857	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

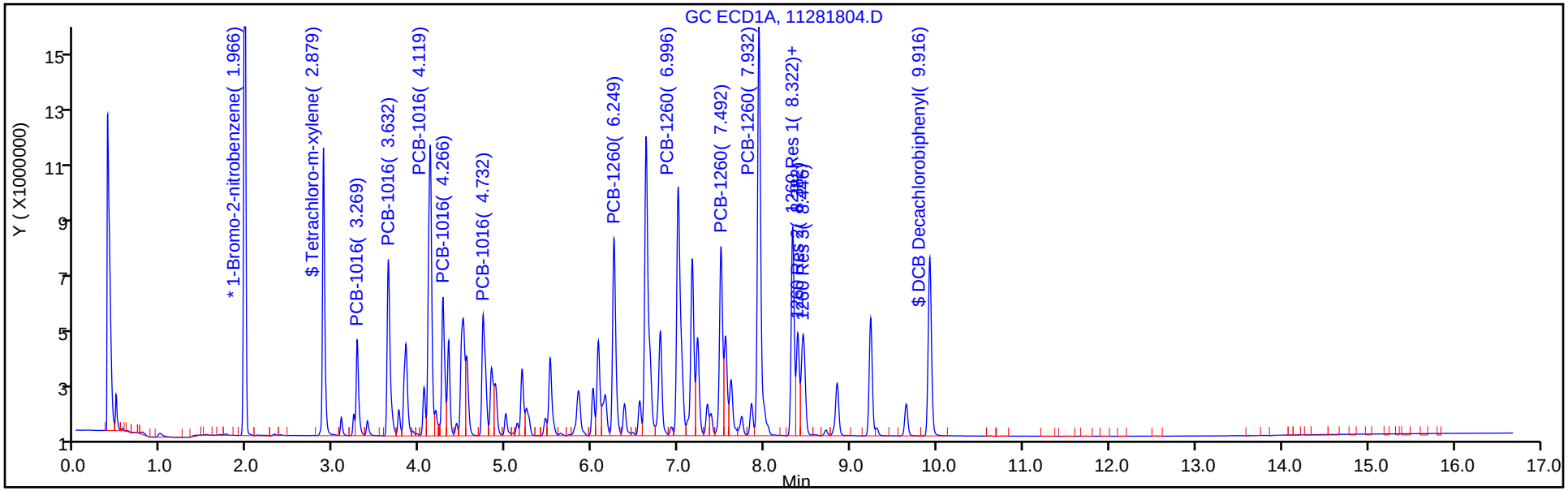
Report Date: 03-Dec-2018 11:10:33 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

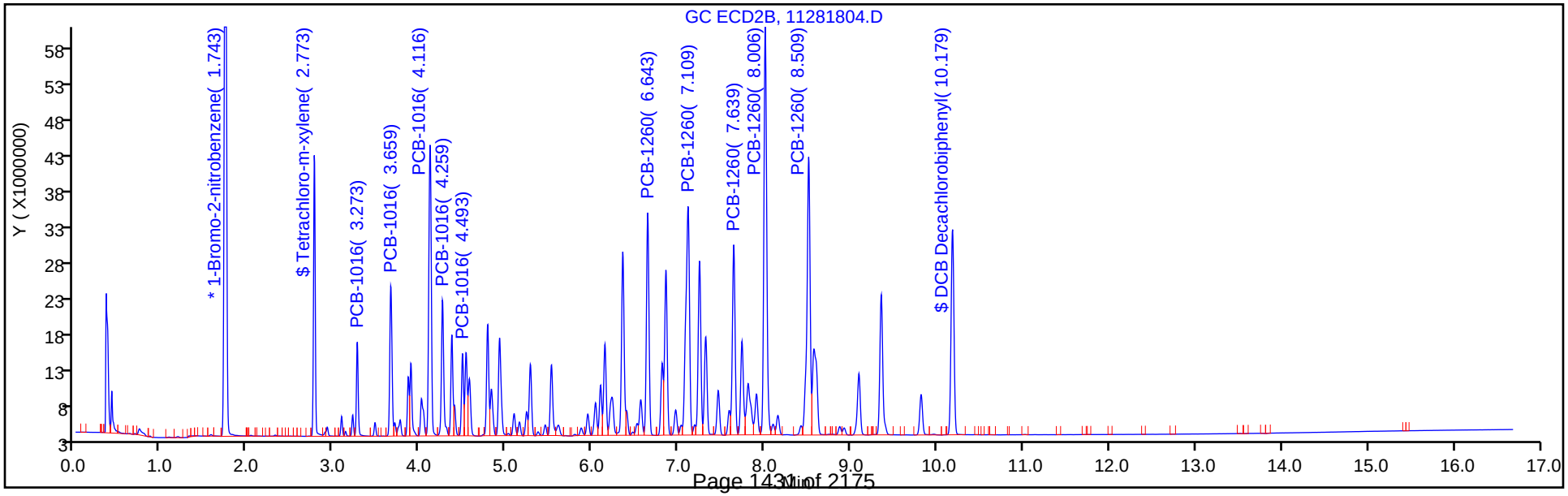
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281804.D

Injection Date:	28-Nov-2018 16:57:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-439075/25 Calibration Date: 11/29/2018 00:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281825.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.3809		438	500	-12.3	20.0
PCB-1016 Peak 2	Lin1		0.8602		424	500	-15.2	20.0
PCB-1016 Peak 3	Lin1		1.666		448	500	-10.5	20.0
PCB-1016 Peak 4	Lin1		0.6793		433	500	-13.4	20.0
PCB-1016 Peak 5	Lin1		0.7295		430	500	-14.0	20.0
PCB-1260 Peak 1	Lin1		1.025		439	500	-12.1	20.0
PCB-1260 Peak 2	Lin1		1.646		458	500	-8.4	20.0
PCB-1260 Peak 3	Lin1		0.9581		449	500	-10.2	20.0
PCB-1260 Peak 4	Lin1		2.318		480	500	-4.1	20.0
PCB-1260 Peak 5	Lin1		1.051		478	500	-4.5	20.0
Tetrachloro-m-xylene	Lin1		21.87		20.8	25.0	-16.6	20.0
DCB Decachlorobiphenyl	Lin1		21.77		27.0	25.0	7.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-439075/25 Calibration Date: 11/29/2018 00:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281825.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281825.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 29-Nov-2018 00:22:50 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076621-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:11:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 11:07:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	40753455	1000.0	1000.0	
2	1.741	1.743	-0.002	190831119	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.881	2.879	0.002	22284416	25.0	20.8	
2	2.774	2.773	0.001	61091955	25.0	24.9	
						RPD = 17.71	
1 PCB-1016							
1	3.271	3.269	0.002	7761716	500.0	438.3	
1	3.631	3.632	-0.001	17527243	500.0	423.9	
1	4.117	4.119	-0.002	33941588	500.0	447.6	
1	4.264	4.266	-0.002	13841312	500.0	432.9	
1	4.731	4.732	-0.001	14865584	500.0	430.2	
		Average of Peak Amounts =				434.6	
2	3.271	3.273	-0.002	20410951	500.0	487.7	
2	3.661	3.659	0.002	40625522	500.0	469.3	
2	4.118	4.116	0.002	94473340	500.0	493.2	
2	4.261	4.259	0.002	40330471	500.0	489.2	
2	4.491	4.493	-0.002	22241483	500.0	501.5	
		Average of Peak Amounts =				488.2	
						RPD = 11.62	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.251	6.249	0.002	20886290	500.0	439.5	
1	6.994	6.996	-0.002	33537145	500.0	457.9	
1	7.494	7.492	0.002	19522244	500.0	449.0	
1	7.934	7.932	0.002	47224387	500.0	479.6	
1	8.324	8.322	0.002	21420153	500.0	477.7	
		Average of Peak Amounts =				460.8	
2	6.641	6.643	-0.002	70632911	500.0	499.1	
2	7.111	7.109	0.002	104617777	500.0	498.4	
2	7.641	7.639	0.002	62706654	500.0	498.1	
2	8.004	8.006	-0.002	140959042	500.0	500.0	
2	8.511	8.509	0.002	106898902	500.0	495.2	
		Average of Peak Amounts =				498.2	
						RPD = 7.80	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.916	-0.002	22184673	25.0	27.0	
2	10.178	10.179	-0.001	72272102	25.0	25.7	
						RPD = 4.72	
S 8 Polychlorinated biphenyls, Total							
1						895.4	
2						986.4	
						RPD = 9.67	
19 1260 Res 1							
1	8.324	8.322	0.002	21420153	NR	NR	
16 1260 Res 2							
1	8.384	8.382	0.002	9807986	NR	NR	
18 1260 Res 3							
1	8.447	8.446	0.002	14447941	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

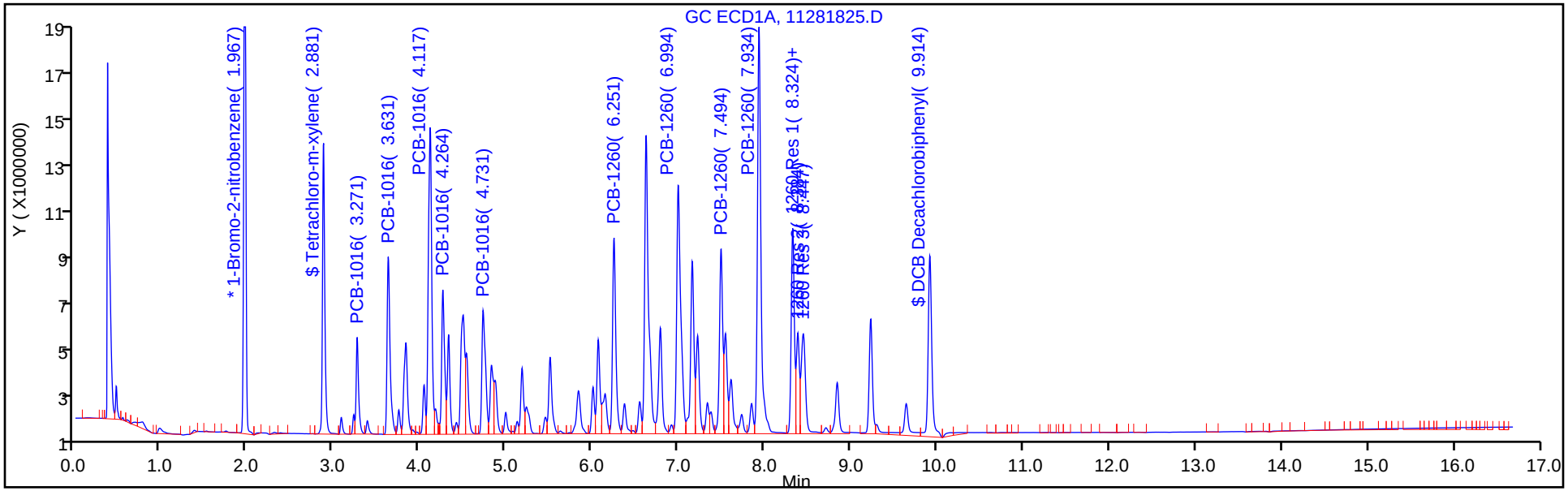
Report Date: 03-Dec-2018 11:11:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

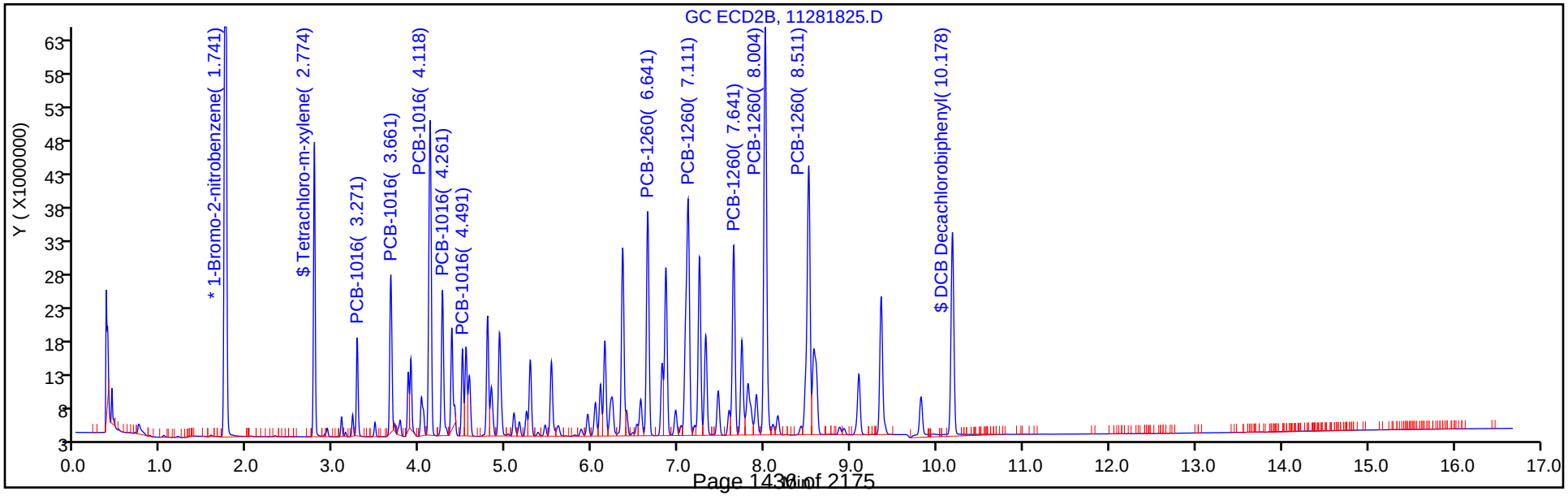
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281825.D

Injection Date:	29-Nov-2018 00:22:50	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-439075/25 Calibration Date: 11/29/2018 00:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281825.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2139		488	500	-2.5	20.0
PCB-1016 Peak 2	Lin1		0.4258		469	500	-6.1	20.0
PCB-1016 Peak 3	Lin1		0.9901		493	500	-1.4	20.0
PCB-1016 Peak 4	Lin1		0.4227		489	500	-2.2	20.0
PCB-1016 Peak 5	Lin1		0.2331		501	500	0.3	20.0
PCB-1260 Peak 1	Lin1		0.7403		499	500	-0.2	20.0
PCB-1260 Peak 2	Lin1		1.096		498	500	-0.3	20.0
PCB-1260 Peak 3	Lin1		0.6572		498	500	-0.4	20.0
PCB-1260 Peak 4	Lin1		1.477		500	500	-0.0	20.0
PCB-1260 Peak 5	Lin1		1.120		495	500	-1.0	20.0
Tetrachloro-m-xylene	Lin1		12.81		24.9	25.0	-0.4	20.0
DCB Decachlorobiphenyl	Lin1		15.15		25.7	25.0	2.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-439075/25 Calibration Date: 11/29/2018 00:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11281825.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.24	4.74
PCB-1260 Peak 1	6.64	6.39	6.89
PCB-1260 Peak 2	7.11	6.86	7.36
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.00	7.76	8.26
PCB-1260 Peak 5	8.51	8.26	8.76
Tetrachloro-m-xylene	2.77	2.52	3.02
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281825.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 29-Nov-2018 00:22:50 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076621-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:11:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 11:07:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	40753455	1000.0	1000.0	
2	1.741	1.743	-0.002	190831119	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.881	2.879	0.002	22284416	25.0	20.8	
2	2.774	2.773	0.001	61091955	25.0	24.9	
						RPD = 17.71	
1 PCB-1016							
1	3.271	3.269	0.002	7761716	500.0	438.3	
1	3.631	3.632	-0.001	17527243	500.0	423.9	
1	4.117	4.119	-0.002	33941588	500.0	447.6	
1	4.264	4.266	-0.002	13841312	500.0	432.9	
1	4.731	4.732	-0.001	14865584	500.0	430.2	
		Average of Peak Amounts =				434.6	
2	3.271	3.273	-0.002	20410951	500.0	487.7	
2	3.661	3.659	0.002	40625522	500.0	469.3	
2	4.118	4.116	0.002	94473340	500.0	493.2	
2	4.261	4.259	0.002	40330471	500.0	489.2	
2	4.491	4.493	-0.002	22241483	500.0	501.5	
		Average of Peak Amounts =				488.2	
						RPD = 11.62	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.251	6.249	0.002	20886290	500.0	439.5	
1	6.994	6.996	-0.002	33537145	500.0	457.9	
1	7.494	7.492	0.002	19522244	500.0	449.0	
1	7.934	7.932	0.002	47224387	500.0	479.6	
1	8.324	8.322	0.002	21420153	500.0	477.7	
		Average of Peak Amounts =				460.8	
2	6.641	6.643	-0.002	70632911	500.0	499.1	
2	7.111	7.109	0.002	104617777	500.0	498.4	
2	7.641	7.639	0.002	62706654	500.0	498.1	
2	8.004	8.006	-0.002	140959042	500.0	500.0	
2	8.511	8.509	0.002	106898902	500.0	495.2	
		Average of Peak Amounts =				498.2	
						RPD = 7.80	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.916	-0.002	22184673	25.0	27.0	
2	10.178	10.179	-0.001	72272102	25.0	25.7	
						RPD = 4.72	
S 8 Polychlorinated biphenyls, Total							
1						895.4	
2						986.4	
						RPD = 9.67	
19 1260 Res 1							
1	8.324	8.322	0.002	21420153	NR	NR	
16 1260 Res 2							
1	8.384	8.382	0.002	9807986	NR	NR	
18 1260 Res 3							
1	8.447	8.446	0.002	14447941	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

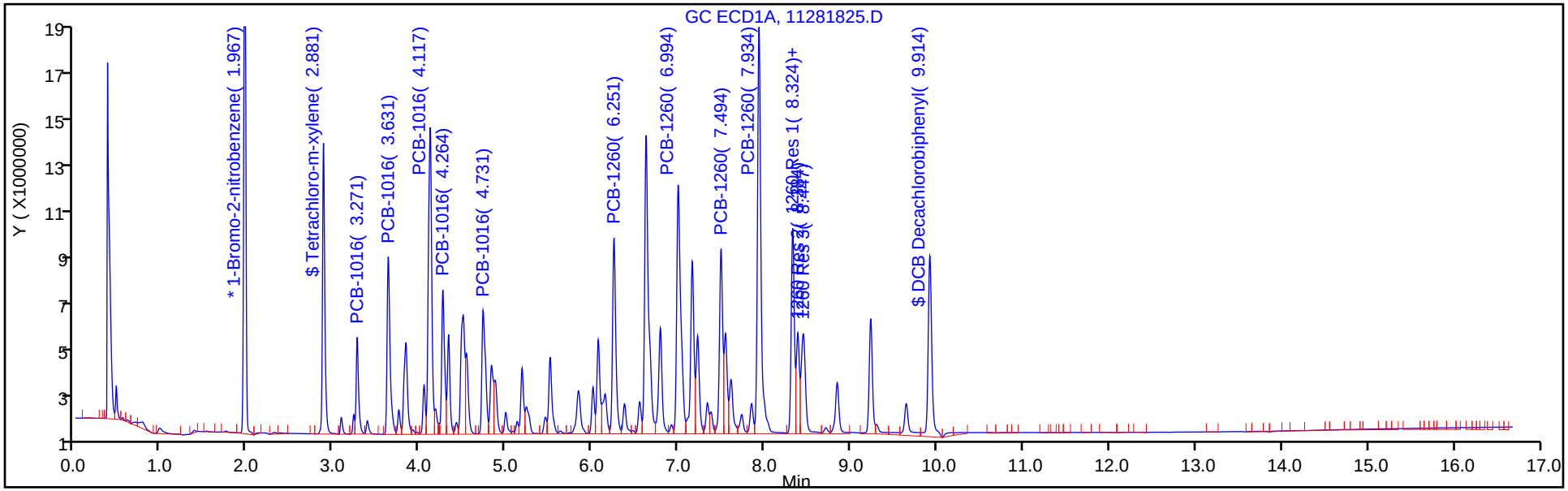
Report Date: 03-Dec-2018 11:11:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

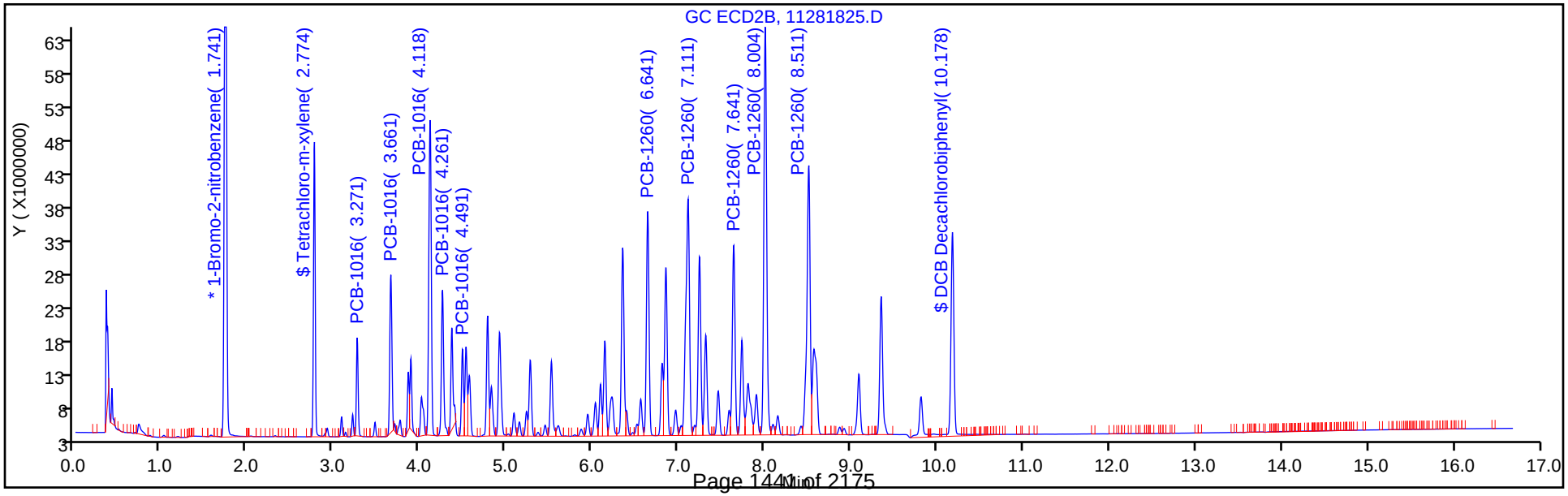
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281825.D

Injection Date:	29-Nov-2018 00:22:50	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-437451/1-A

Matrix: Water | Lab File ID: 11281809.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/13/2018 18:28

Sample wt/vol: 1000(mL) | Date Analyzed: 11/28/2018 18:43

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 439075 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	ND		1.0	0.12
11104-28-2	PCB-1221	ND		1.0	0.21
11141-16-5	PCB-1232	ND		1.0	0.17
53469-21-9	PCB-1242	ND		1.0	0.10
12672-29-6	PCB-1248	ND		1.0	0.092
11097-69-1	PCB-1254	ND		1.0	0.11
11096-82-5	PCB-1260	ND		1.0	0.16
37324-23-5	PCB-1262	ND		1.0	0.085
11100-14-4	PCB-1268	ND		1.0	0.36

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	85		25-120
2051-24-3	DCB Decachlorobiphenyl	94		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281809.D
Lims ID: MB 280-437451/1-A
Client ID:
Sample Type: MB
Inject. Date: 28-Nov-2018 18:43:18 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-437451/1-
Misc. Info.: 280-0076621-009
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:10:32 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 10:54:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.966	0.000	35902958	1000.0	1000.0	
2	1.743	1.743	0.000	180433079	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	12618149	20.0	13.4	
2	2.773	2.773	0.000	39837517	20.0	17.0	
						RPD = 23.29	
3 PCB-1221							U
1		3.085				ND	
1		3.232					
1		3.269					
2		3.092					
2		3.222					
2		3.276					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
7	PCB-1232						U
1		3.088				ND	
1		3.271					
1		4.118					
1		4.264					
1		4.731					
2		3.275					
2		3.665					
2		4.121					
2		4.265					
2		4.928					
1	PCB-1016						U
1		3.269				ND	
1		3.632					
1		4.119					
1		4.266					
1		4.732					
2		3.273					
2		3.659					
2		4.116					
2		4.259					
2		4.493					
4	PCB-1248						U
1		3.629				ND	
1		4.115					
1		4.729					
1		5.505					
1		6.005					
2		4.119					
2		4.499					
2		4.789					
2		4.929					
2		6.102					
10	PCB-1242						U
1		3.631				ND	
1		4.117					
1		4.264					
1		5.237					
1		5.261					
2		3.664					
2		4.121					
2		4.264					
2		4.788					
2		4.928					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							U
1		5.182				ND	
1		5.509					
1		5.849					
1		6.622					
1		6.995					
2		5.529					
2		5.952					
2		6.402					
2		6.649					
2		7.119					
5 PCB-1262							U
1		6.248				ND	
1		7.154					
1		7.488					
1		7.931					
1		8.321					
2		6.648					
2		7.248					
2		7.645					
2		8.011					
2		8.515					
12 PCB-1260							U
1		6.249				ND	
1		6.996					
1		7.492					
1		7.932					
1		8.322					
2		6.643					
2		7.109					
2		7.639					
2		8.006					
2		8.509					
13 PCB-1268							U
1		8.381				ND	
1		8.434					
1		8.707					
1		9.224					
1		9.637					
2		8.511					
2		8.574					
2		8.928					
2		9.358					
2		9.821					
$ 15 DCB Decachlorobiphenyl							
1	9.916	9.916	0.000	12280863	20.0	16.7	
2	10.176	10.179	-0.003	50366404	20.0	18.8	
						RPD = 11.53	
S 8 Polychlorinated biphenyls, Total							
1		0.000				ND	
2		0.000					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 PCB-5460							
1		0.000				ND	
1		12.739					
1		0.000					
1		13.802					
1		14.259					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
6 PCB-5432							
1		7.063				ND	
1		7.693					
1		8.203					
1		9.029					
1		9.459					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
11 PCB-5442							
1		9.459				ND	
1		9.923					
1		10.079					
1		10.289					
1		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

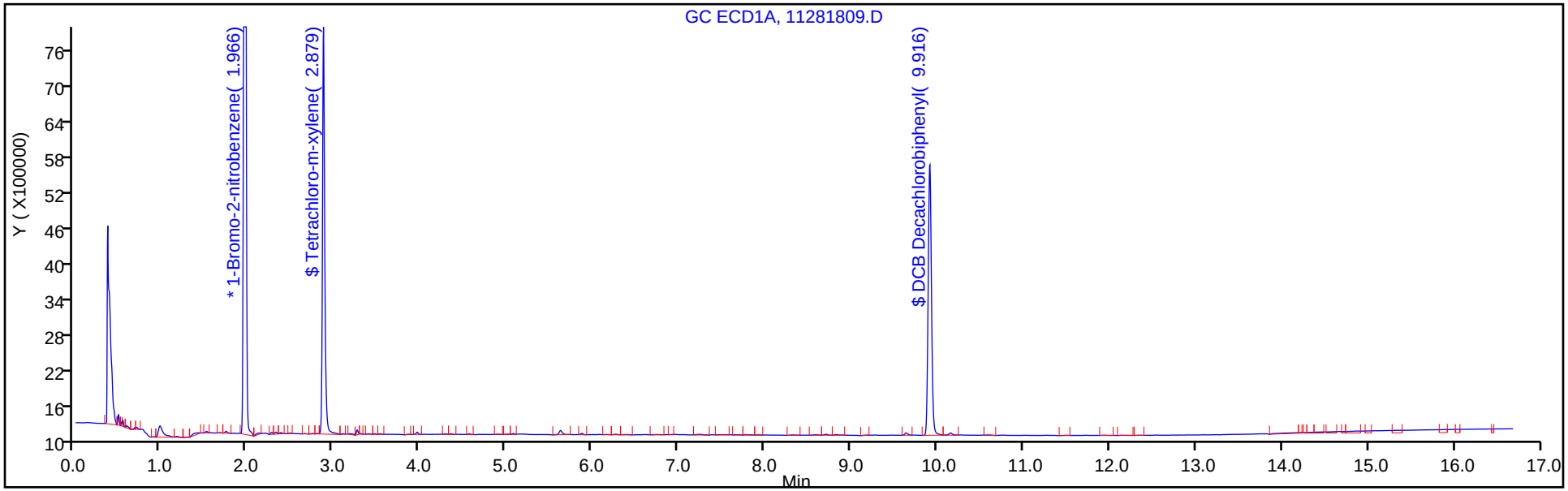
Report Date: 03-Dec-2018 11:10:40 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

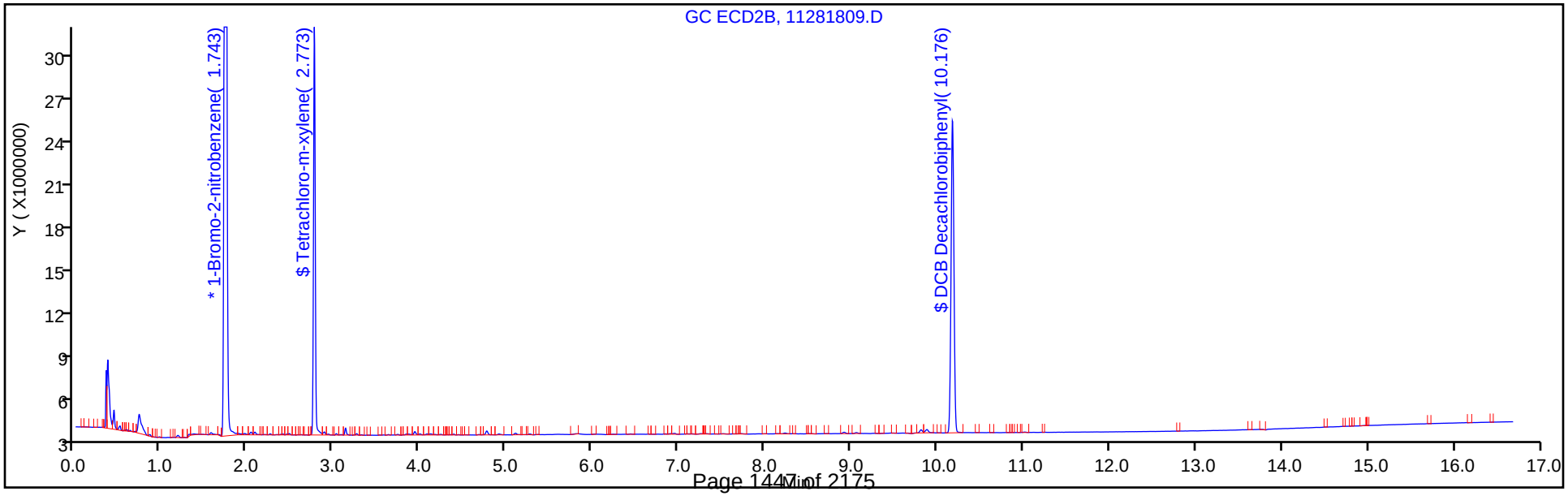
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281809.D

Injection Date:	28-Nov-2018 18:43:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	MB 280-437451/1-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281809.D				
Lims ID:	MB 280-437451/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	28-Nov-2018 18:43:18	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-437451/1-				
Misc. Info.:	280-0076621-009				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	03-Dec-2018 11:10:32	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0309				
First Level Reviewer: patadiab		Date:	30-Nov-2018 10:54:03		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.4	67.22
$ 15 DCB Decachlorobiphenyl	20.0	16.7	83.63

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.0	84.94
$ 15 DCB Decachlorobiphenyl	20.0	18.8	93.86

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437451/4-A

Matrix: Water | Lab File ID: 11281810.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/13/2018 18:28

Sample wt/vol: 1000(mL) | Date Analyzed: 11/28/2018 19:04

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 439075 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	2.12		1.0	0.12
11096-82-5	PCB-1260	2.16		1.0	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	86		25-120
2051-24-3	DCB Decachlorobiphenyl	93		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281810.D
Lims ID: LCS 280-437451/4-A
Client ID:
Sample Type: LCS
Inject. Date: 28-Nov-2018 19:04:31 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-437451/4
Misc. Info.: 280-0076621-010
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:10:32 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 10:54:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	34064083	1000.0	1000.0	
2	1.740	1.743	-0.003	174486762	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	12128640	20.0	13.6	
2	2.773	2.773	0.000	38953414	20.0	17.2	
						RPD = 23.15	
1 PCB-1016							
1	3.270	3.269	0.001	3017377	200.0	195.8	
1	3.630	3.632	-0.002	6352213	200.0	175.8	
1	4.117	4.119	-0.002	10679513	200.0	166.9	
1	4.263	4.266	-0.003	4876115	200.0	177.7	
1	4.730	4.732	-0.002	5244872	200.0	177.6	
		Average of Peak Amounts =				178.8	
2	3.270	3.273	-0.003	9266830	200.0	233.8	
2	3.660	3.659	0.001	17156267	200.0	207.9	
2	4.117	4.116	0.001	36692467	200.0	201.5	
2	4.260	4.259	0.001	16451381	200.0	209.6	
2	4.493	4.493	0.000	8815105	200.0	207.6	
		Average of Peak Amounts =				212.1	
						RPD = 17.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	8390400	200.0	206.8	
1	6.993	6.996	-0.003	13861861	200.0	225.0	
1	7.490	7.492	-0.002	6371855	200.0	171.7	
1	7.933	7.932	0.001	13805686	200.0	166.3	
1	8.323	8.322	0.001	7186212	200.0	190.6	
		Average of Peak Amounts =				192.1	
2	6.640	6.643	-0.003	31731156	200.0	238.3	
2	7.110	7.109	0.001	50623232	200.0	257.8	
2	7.640	7.639	0.001	23023881	200.0	192.5	
2	8.007	8.006	0.001	51837699	200.0	194.0	
2	8.510	8.509	0.001	40302821	200.0	197.0	
		Average of Peak Amounts =				215.9	
						RPD = 11.71	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.916	-0.003	11738897	20.0	16.9	
2	10.180	10.179	0.001	48362069	20.0	18.6	
						RPD = 10.02	

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

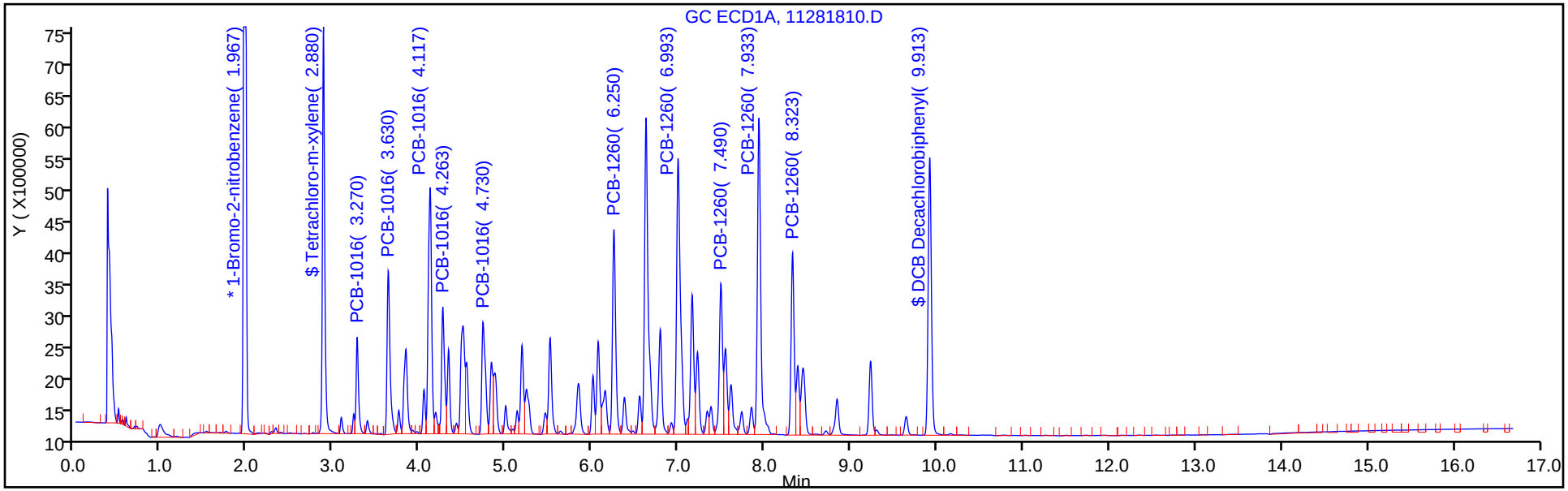
Report Date: 03-Dec-2018 11:10:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

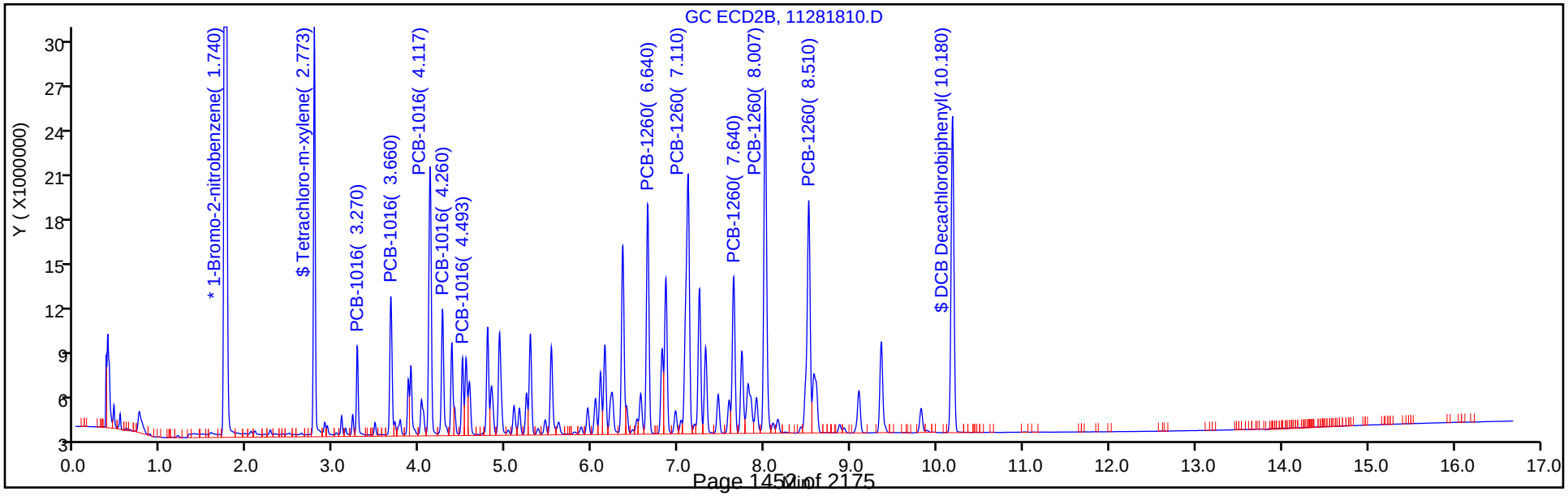
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281810.D

Injection Date:	28-Nov-2018 19:04:31	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	LCS 280-437451/4-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281810.D				
Lims ID:	LCS 280-437451/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	28-Nov-2018 19:04:31	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-437451/4				
Misc. Info.:	280-0076621-010				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	03-Dec-2018 11:10:32	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0309				
First Level Reviewer: patadiab		Date:	30-Nov-2018 10:54:37		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.6	68.09
$ 15 DCB Decachlorobiphenyl	20.0	16.9	84.27

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.2	85.92
$ 15 DCB Decachlorobiphenyl	20.0	18.6	93.17

Report Date: 03-Dec-2018 11:10:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

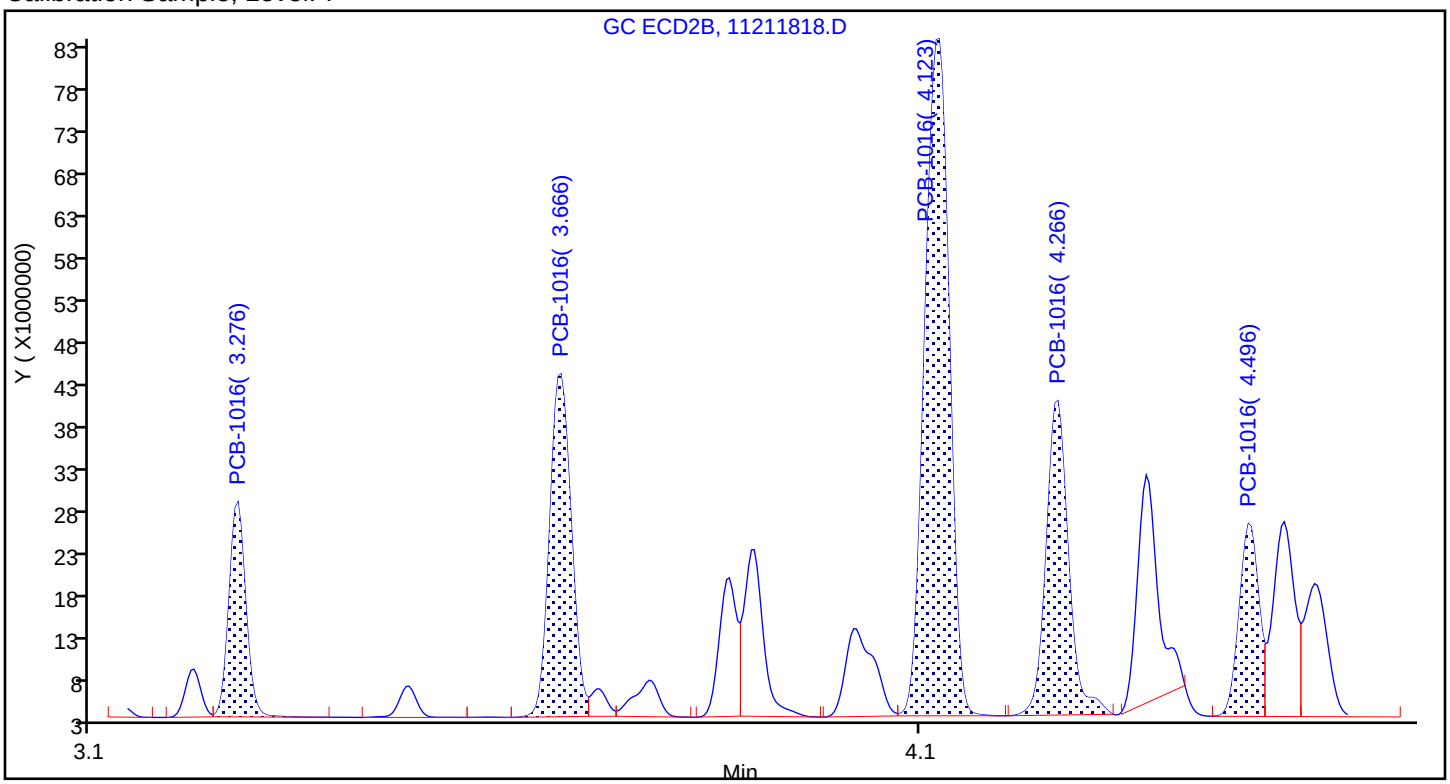
TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281810.D

Injection Date:	28-Nov-2018 19:04:31	Instrument ID:	SGC_J		
Lims ID:	LCS 280-437451/4-A				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP2 Pesticides Column 2 (0.32 mm)	Detector	GC ECD2B		

1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



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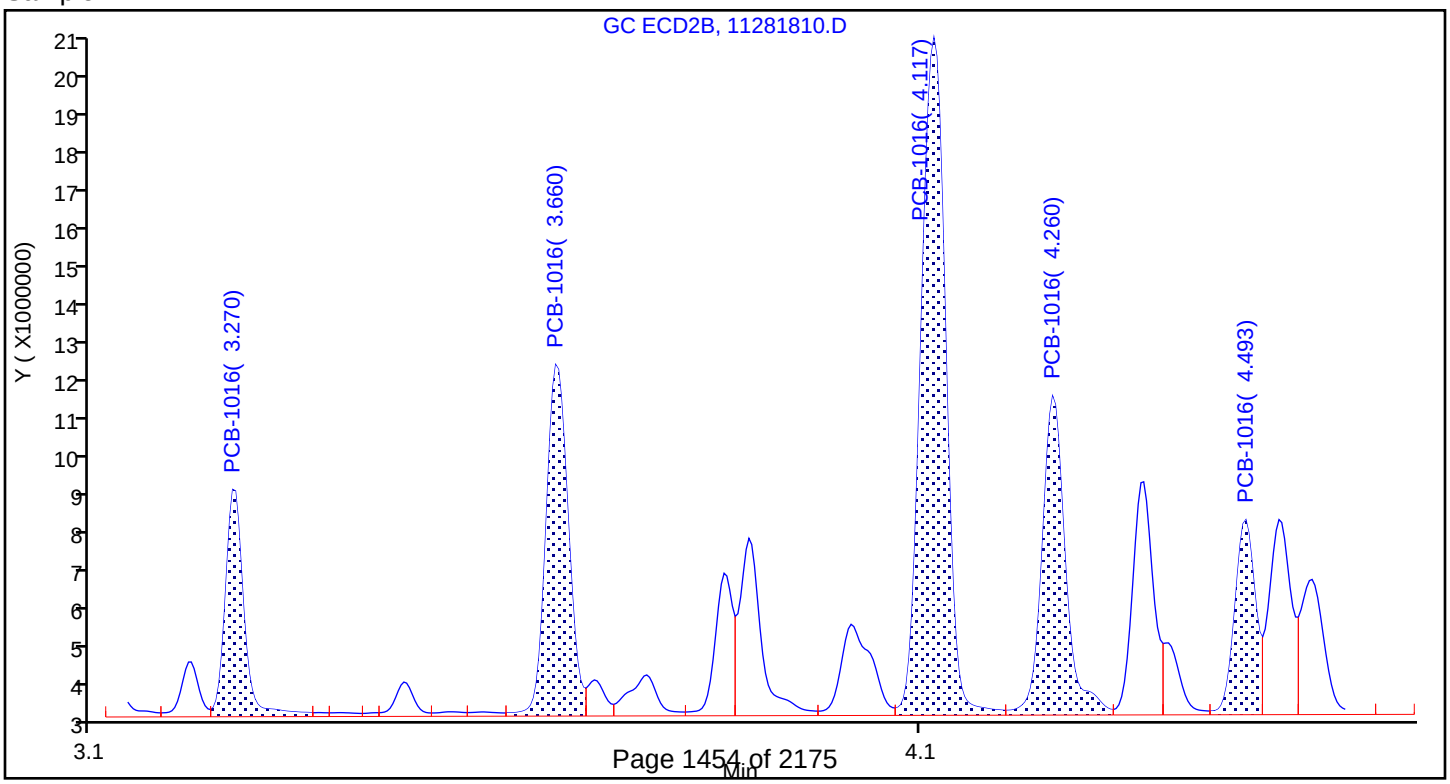


Report Date: 03-Dec-2018 11:10:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281810.D

Injection Date: 28-Nov-2018 19:04:31 Instrument ID: SGC_J

Lims ID: LCS 280-437451/4-A

Client ID:

Operator ID: ALS ALS Bottle#: 10 Worklist Smp#: 10

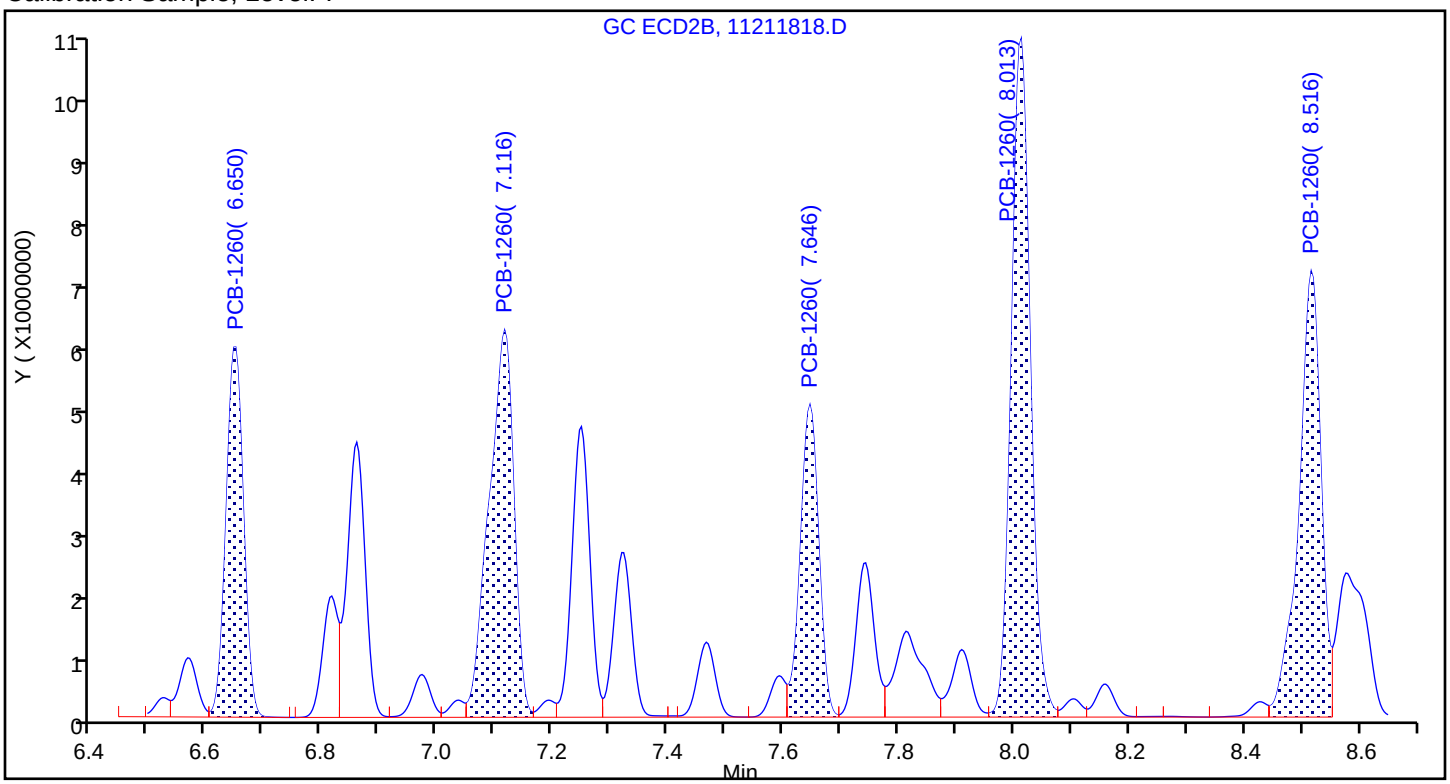
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



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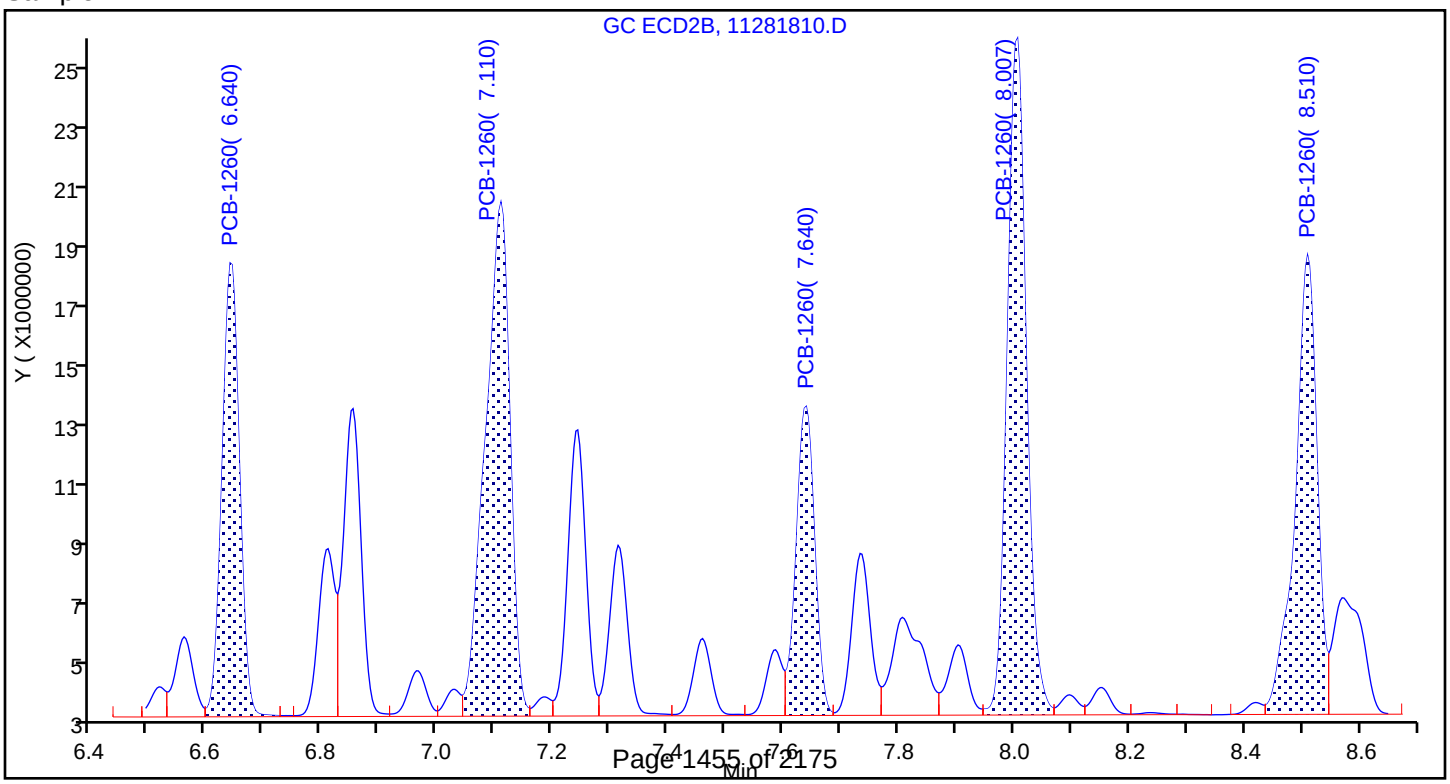


FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-437451/5-A

Matrix: Water | Lab File ID: 11281811.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/13/2018 18:28

Sample wt/vol: 1000(mL) | Date Analyzed: 11/28/2018 19:25

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 439075 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	PCB-1016	2.10		1.0	0.12
11096-82-5	PCB-1260	2.34		1.0	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	87		25-120
2051-24-3	DCB Decachlorobiphenyl	97		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281811.D
Lims ID: LCSD 280-437451/5-A
Client ID:
Sample Type: LCSD
Inject. Date: 28-Nov-2018 19:25:44 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-437451/
Misc. Info.: 280-0076621-011
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 03-Dec-2018 11:10:32 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0309

First Level Reviewer: patadiab Date: 30-Nov-2018 10:55:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.966	0.000	35579264	1000.0	1000.0	
2	1.743	1.743	0.000	181571836	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	12918704	20.0	13.9	
2	2.773	2.773	0.000	40865871	20.0	17.3	
						RPD = 22.07	
1 PCB-1016							
1	3.269	3.269	0.000	3278253	200.0	204.3	
1	3.633	3.632	0.001	6749290	200.0	179.1	
1	4.116	4.119	-0.003	11595311	200.0	173.6	
1	4.263	4.266	-0.003	5242650	200.0	183.2	
1	4.733	4.732	0.001	5636501	200.0	183.0	
		Average of Peak Amounts =				184.6	
2	3.269	3.273	-0.004	9131049	200.0	220.5	
2	3.659	3.659	0.000	17832279	200.0	207.6	
2	4.116	4.116	0.000	38798607	200.0	205.0	
2	4.259	4.259	0.000	16877970	200.0	206.4	
2	4.493	4.493	0.000	9192425	200.0	208.1	
		Average of Peak Amounts =				209.5	
						RPD = 12.62	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	8927287	200.0	210.8	
1	6.996	6.996	0.000	15962089	200.0	248.3	
1	7.489	7.492	-0.003	8380574	200.0	217.7	
1	7.933	7.932	0.001	15795144	200.0	182.4	
1	8.323	8.322	0.001	7704527	200.0	195.7	
		Average of Peak Amounts =				211.0	
2	6.643	6.643	0.000	37842677	200.0	275.1	
2	7.109	7.109	0.000	56261061	200.0	276.2	
2	7.639	7.639	0.000	26419830	200.0	213.6	
2	8.006	8.006	0.000	55608781	200.0	200.4	
2	8.509	8.509	0.000	43164926	200.0	203.2	
		Average of Peak Amounts =				233.7	
						RPD = 10.21	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.916	-0.003	12780359	20.0	17.6	
2	10.176	10.179	-0.003	52142484	20.0	19.3	
						RPD = 9.41	

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

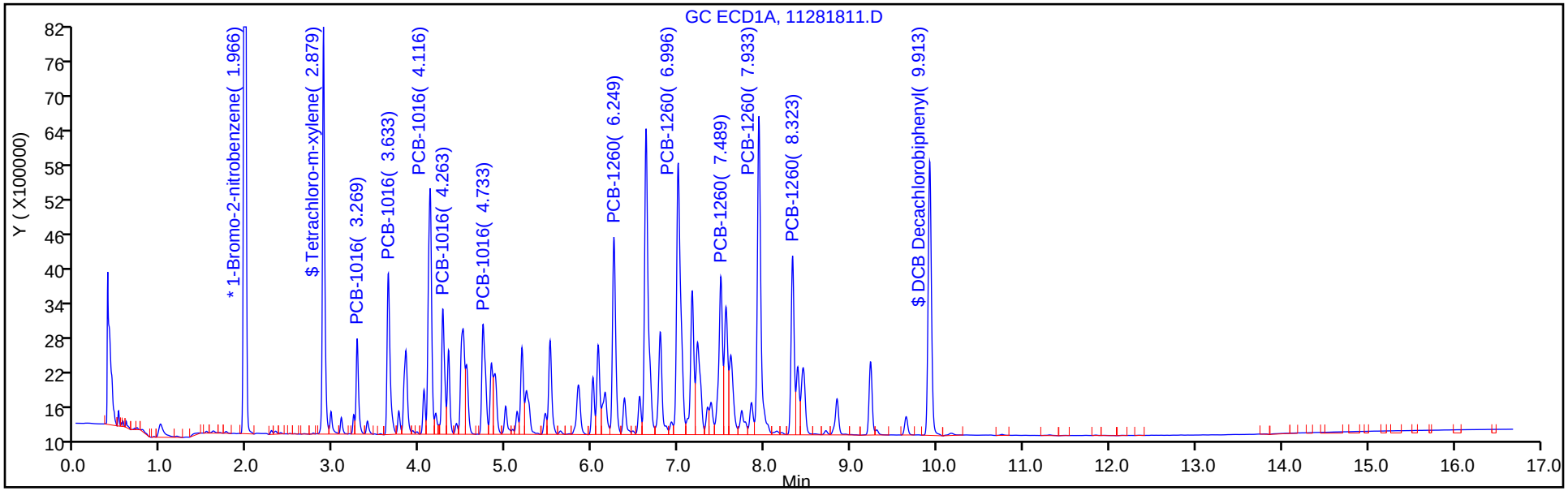
Report Date: 03-Dec-2018 11:10:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

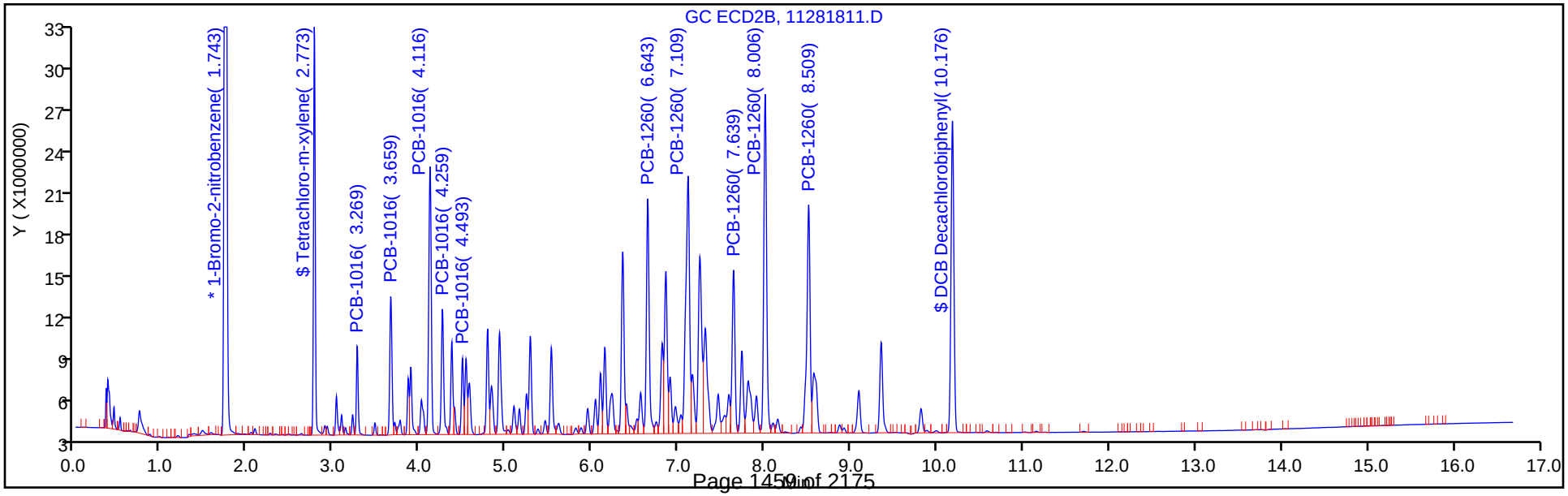
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281811.D

Injection Date:	28-Nov-2018 19:25:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	LCSD 280-437451/5-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281811.D				
Lims ID:	LCSD 280-437451/5-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	28-Nov-2018 19:25:44	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 280-437451/				
Misc. Info.:	280-0076621-011				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	03-Dec-2018 11:10:32	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0309				
First Level Reviewer: patadiab		Date:	30-Nov-2018 10:55:16		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.9	69.42
$ 15 DCB Decachlorobiphenyl	20.0	17.6	87.97

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.3	86.64
$ 15 DCB Decachlorobiphenyl	20.0	19.3	96.66

Report Date: 03-Dec-2018 11:10:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

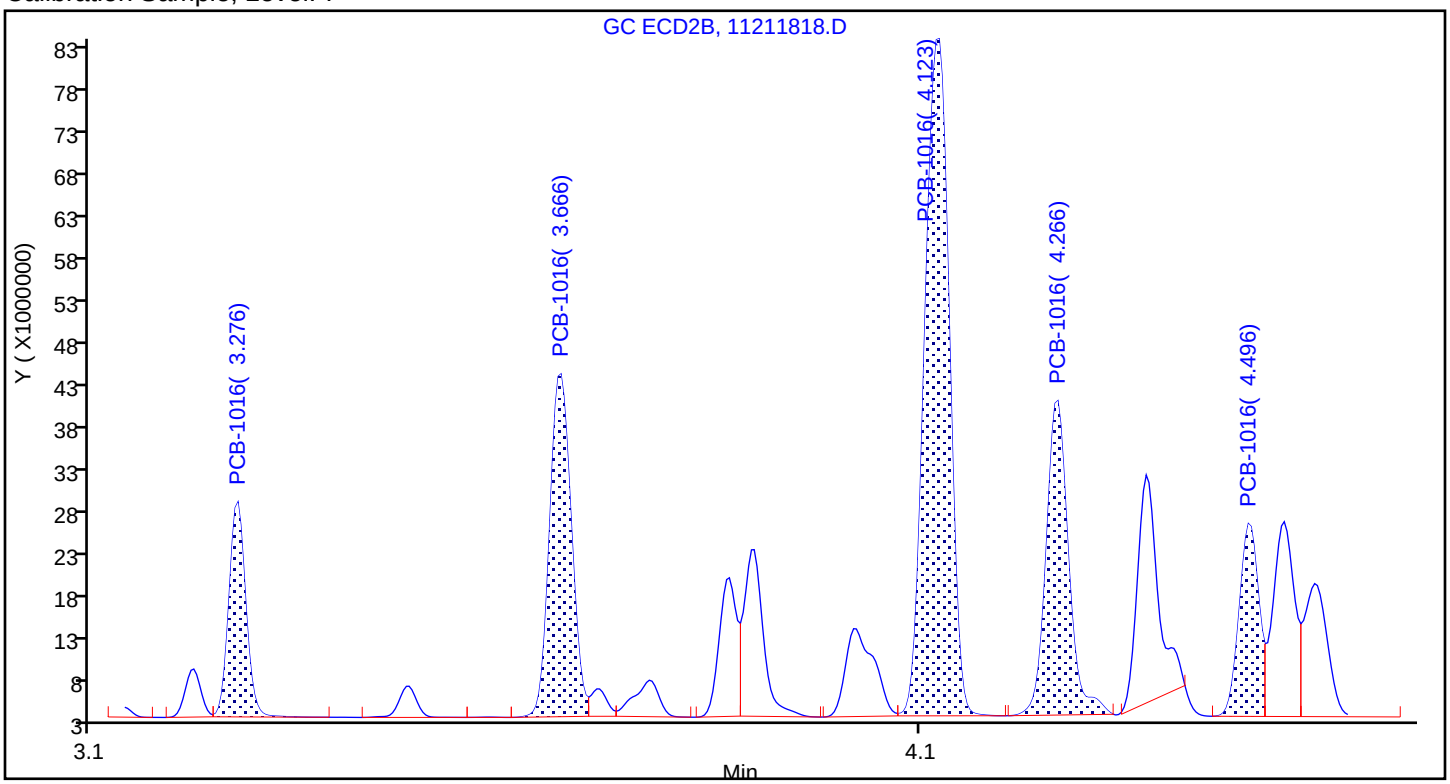
TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281811.D

Injection Date:	28-Nov-2018 19:25:44	Instrument ID:	SGC_J		
Lims ID:	LCSD 280-437451/5-A				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP2 Pesticides Column 2 (0.32 mm)	Detector	GC ECD2B		

1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



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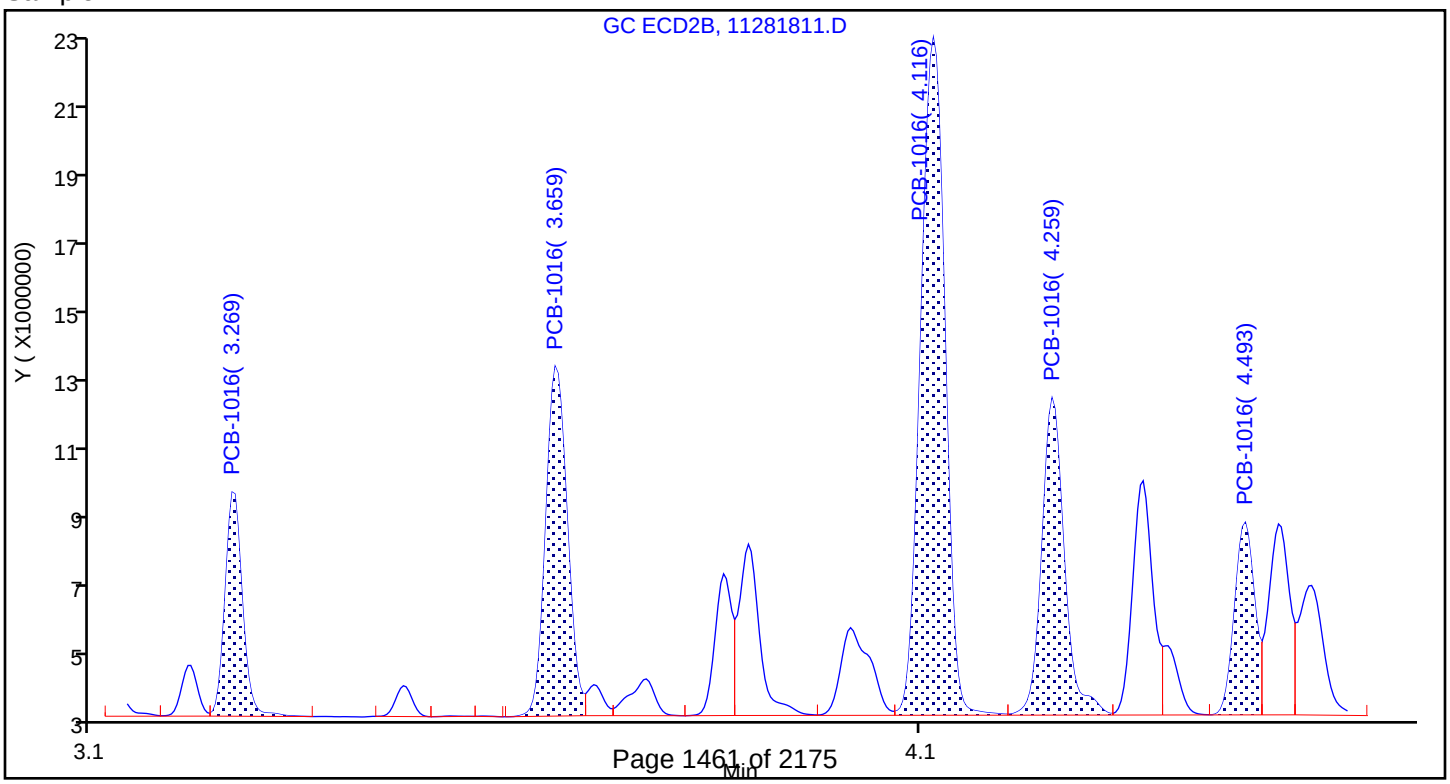


Report Date: 03-Dec-2018 11:10:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181128-76621.b\11281811.D

Injection Date: 28-Nov-2018 19:25:44 Instrument ID: SGC_J

Lims ID: LCSD 280-437451/5-A

Client ID:

Operator ID: ALS ALS Bottle#: 11 Worklist Smp#: 11

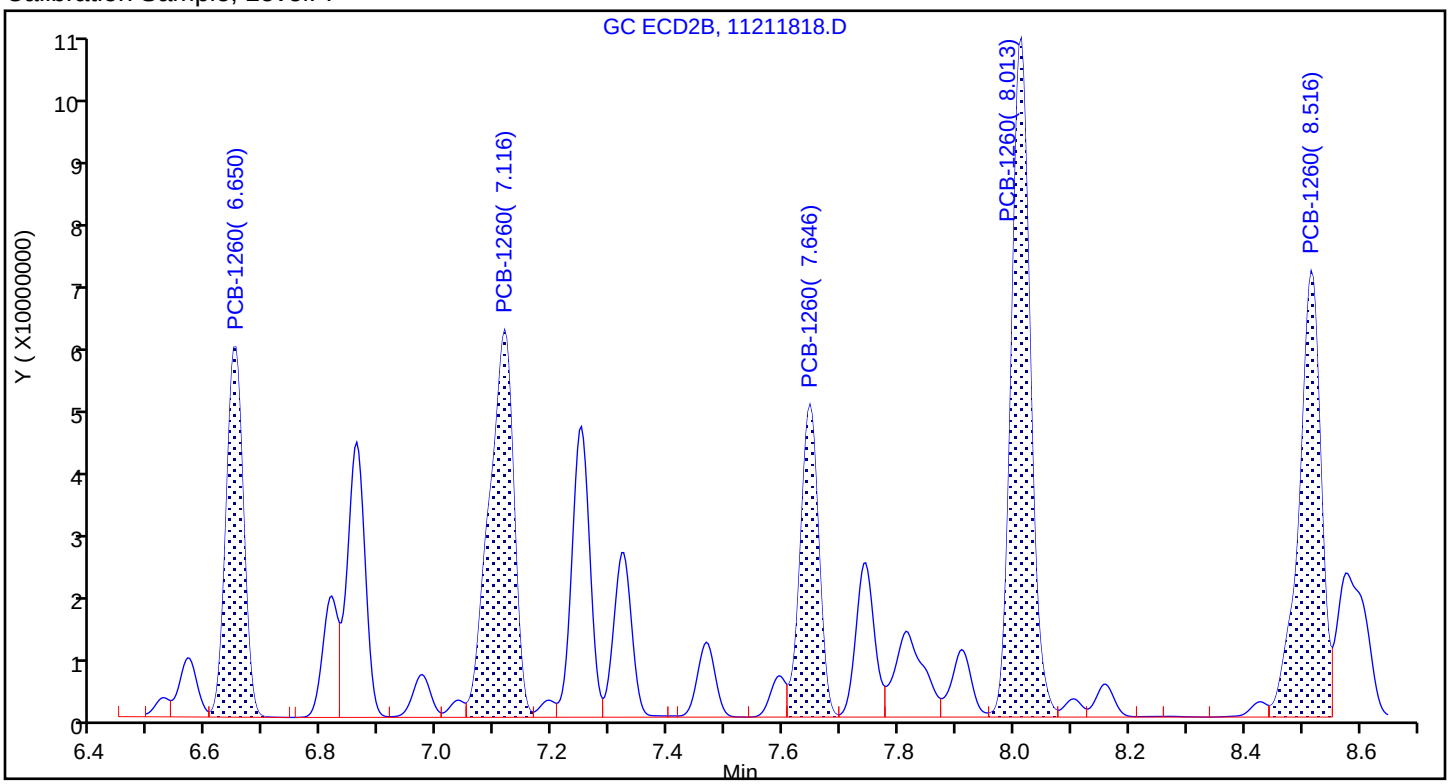
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



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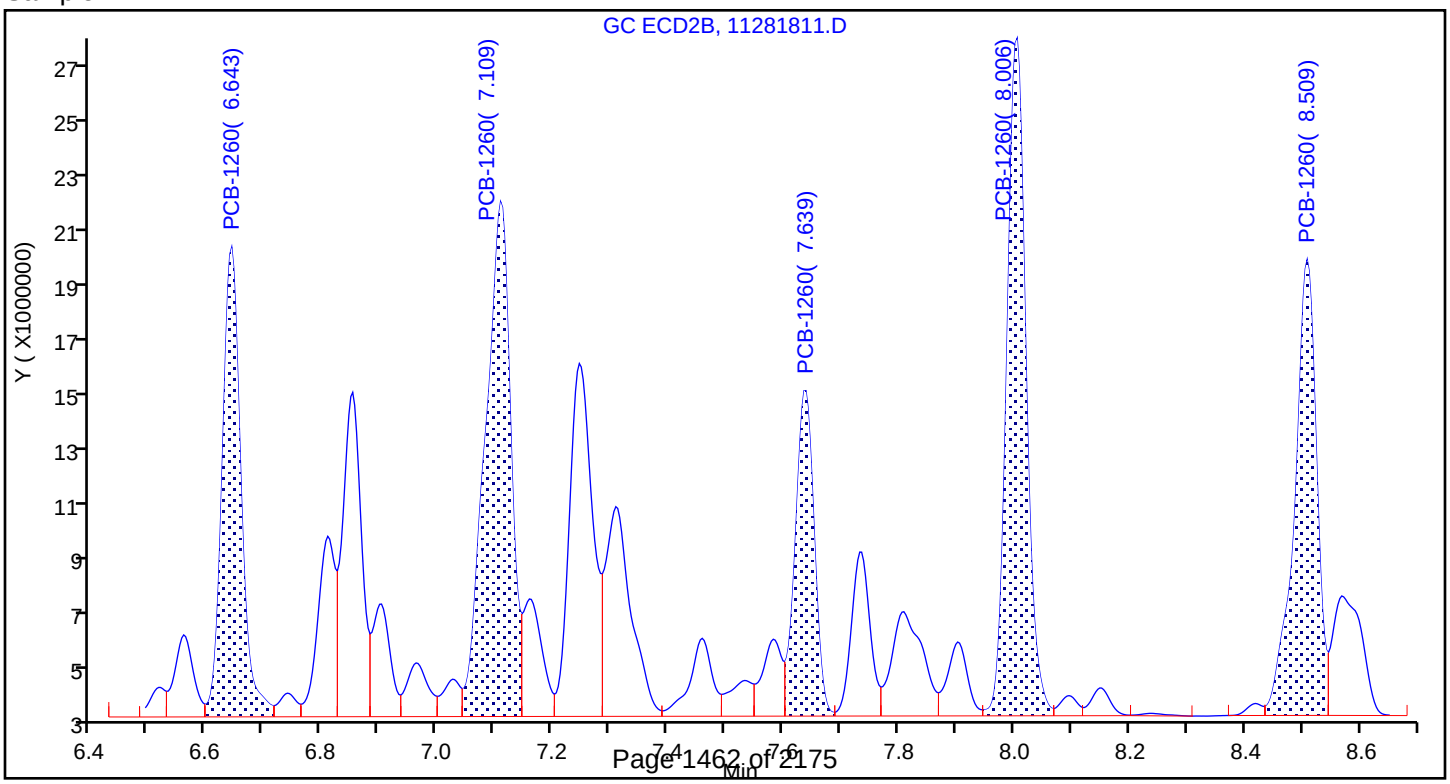


PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL71248 280-438388/4 IC		11/21/2018 09:48	1	11211804.D	CLP1 0.32(mm)
STDL71248 280-438388/4 IC		11/21/2018 09:48	1	11211804.D	CLP2 0.32(mm)
STDL61248 280-438388/5 IC		11/21/2018 10:09	1	11211805.D	CLP1 0.32(mm)
STDL61248 280-438388/5 IC		11/21/2018 10:09	1	11211805.D	CLP2 0.32(mm)
STDL51248 280-438388/6 IC		11/21/2018 10:30	1	11211806.D	CLP1 0.32(mm)
STDL51248 280-438388/6 IC		11/21/2018 10:30	1	11211806.D	CLP2 0.32(mm)
STDL41248 280-438388/7 IC		11/21/2018 10:51	1	11211807.D	CLP1 0.32(mm)
STDL41248 280-438388/7 IC		11/21/2018 10:51	1	11211807.D	CLP2 0.32(mm)
STDL31248 280-438388/8 IC		11/21/2018 11:12	1	11211808.D	CLP1 0.32(mm)
STDL31248 280-438388/8 IC		11/21/2018 11:12	1	11211808.D	CLP2 0.32(mm)
STDL21248 280-438388/9 IC		11/21/2018 11:33	1	11211809.D	CLP1 0.32(mm)
STDL21248 280-438388/9 IC		11/21/2018 11:33	1	11211809.D	CLP2 0.32(mm)
STDL11248 280-438388/10 IC		11/21/2018 11:55	1	11211810.D	CLP1 0.32(mm)
STDL11248 280-438388/10 IC		11/21/2018 11:55	1	11211810.D	CLP2 0.32(mm)
STDL72154 280-438388/11 IC		11/21/2018 12:16	1	11211811.D	CLP1 0.32(mm)
STDL72154 280-438388/11 IC		11/21/2018 12:16	1	11211811.D	CLP2 0.32(mm)
STDL62154 280-438388/12 IC		11/21/2018 12:37	1	11211812.D	CLP1 0.32(mm)
STDL62154 280-438388/12 IC		11/21/2018 12:37	1	11211812.D	CLP2 0.32(mm)
STDL52154 280-438388/13 IC		11/21/2018 12:58	1	11211813.D	CLP1 0.32(mm)
STDL52154 280-438388/13 IC		11/21/2018 12:58	1	11211813.D	CLP2 0.32(mm)
STDL42154 280-438388/14 IC		11/21/2018 13:19	1	11211814.D	CLP1 0.32(mm)
STDL42154 280-438388/14 IC		11/21/2018 13:19	1	11211814.D	CLP2 0.32(mm)
STDL32154 280-438388/15 IC		11/21/2018 13:41	1	11211815.D	CLP1 0.32(mm)
STDL32154 280-438388/15 IC		11/21/2018 13:41	1	11211815.D	CLP2 0.32(mm)
STDL22154 280-438388/16 IC		11/21/2018 14:02	1	11211816.D	CLP1 0.32(mm)
STDL22154 280-438388/16 IC		11/21/2018 14:02	1	11211816.D	CLP2 0.32(mm)
STDL12154 280-438388/17 IC		11/21/2018 14:23	1	11211817.D	CLP1 0.32(mm)
STDL12154 280-438388/17 IC		11/21/2018 14:23	1	11211817.D	CLP2 0.32(mm)
STDL71660 280-438388/18 IC		11/21/2018 14:44	1	11211818.D	CLP1 0.32(mm)
STDL71660 280-438388/18 IC		11/21/2018 14:44	1	11211818.D	CLP2 0.32(mm)
STDL61660 280-438388/19 IC		11/21/2018 15:05	1	11211819.D	CLP1 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL61660 280-438388/19 IC		11/21/2018 15:05	1	11211819.D	CLP2 0.32(mm)
STDL51660 280-438388/20 ICIS		11/21/2018 15:27	1	11211820.D	CLP1 0.32(mm)
STDL51660 280-438388/20 ICIS		11/21/2018 15:27	1	11211820.D	CLP2 0.32(mm)
STDL41660 280-438388/21 IC		11/21/2018 15:48	1	11211821.D	CLP1 0.32(mm)
STDL41660 280-438388/21 IC		11/21/2018 15:48	1	11211821.D	CLP2 0.32(mm)
STDL31660 280-438388/22 IC		11/21/2018 16:09	1	11211822.D	CLP1 0.32(mm)
STDL31660 280-438388/22 IC		11/21/2018 16:09	1	11211822.D	CLP2 0.32(mm)
STDL21660 280-438388/23 IC		11/21/2018 16:30	1	11211823.D	CLP1 0.32(mm)
STDL21660 280-438388/23 IC		11/21/2018 16:30	1	11211823.D	CLP2 0.32(mm)
STDL11660 280-438388/24 IC		11/21/2018 16:51	1	11211824.D	CLP1 0.32(mm)
STDL11660 280-438388/24 IC		11/21/2018 16:51	1	11211824.D	CLP2 0.32(mm)
STDL73262 280-438388/25 IC		11/21/2018 17:13	1	11211825.D	CLP1 0.32(mm)
STDL73262 280-438388/25 IC		11/21/2018 17:13	1	11211825.D	CLP2 0.32(mm)
STDL63262 280-438388/26 IC		11/21/2018 17:34	1	11211826.D	CLP1 0.32(mm)
STDL63262 280-438388/26 IC		11/21/2018 17:34	1	11211826.D	CLP2 0.32(mm)
STDL53262 280-438388/27 IC		11/21/2018 17:55	1	11211827.D	CLP1 0.32(mm)
STDL53262 280-438388/27 IC		11/21/2018 17:55	1	11211827.D	CLP2 0.32(mm)
STDL43262 280-438388/28 IC		11/21/2018 18:16	1	11211828.D	CLP1 0.32(mm)
STDL43262 280-438388/28 IC		11/21/2018 18:16	1	11211828.D	CLP2 0.32(mm)
STDL33262 280-438388/29 IC		11/21/2018 18:37	1	11211829.D	CLP1 0.32(mm)
STDL33262 280-438388/29 IC		11/21/2018 18:37	1	11211829.D	CLP2 0.32(mm)
STDL23262 280-438388/30 IC		11/21/2018 18:59	1	11211830.D	CLP1 0.32(mm)
STDL23262 280-438388/30 IC		11/21/2018 18:59	1	11211830.D	CLP2 0.32(mm)
STDL13262 280-438388/31 IC		11/21/2018 19:20	1	11211831.D	CLP1 0.32(mm)
STDL13262 280-438388/31 IC		11/21/2018 19:20	1	11211831.D	CLP2 0.32(mm)
STDL74268 280-438388/32 IC		11/21/2018 19:41	1	11211832.D	CLP1 0.32(mm)
STDL74268 280-438388/32 IC		11/21/2018 19:41	1	11211832.D	CLP2 0.32(mm)
STDL64268 280-438388/33 IC		11/21/2018 20:02	1	11211833.D	CLP1 0.32(mm)
STDL64268 280-438388/33 IC		11/21/2018 20:02	1	11211833.D	CLP2 0.32(mm)
STDL54268 280-438388/34 IC		11/21/2018 20:23	1	11211834.D	CLP1 0.32(mm)
STDL54268 280-438388/34 IC		11/21/2018 20:23	1	11211834.D	CLP2 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL44268 280-438388/35 IC		11/21/2018 20:44	1	11211835.D	CLP1 0.32(mm)
STDL44268 280-438388/35 IC		11/21/2018 20:44	1	11211835.D	CLP2 0.32(mm)
STDL34268 280-438388/36 IC		11/21/2018 21:06	1	11211836.D	CLP1 0.32(mm)
STDL34268 280-438388/36 IC		11/21/2018 21:06	1	11211836.D	CLP2 0.32(mm)
STDL24268 280-438388/37 IC		11/21/2018 21:27	1	11211837.D	CLP1 0.32(mm)
STDL24268 280-438388/37 IC		11/21/2018 21:27	1	11211837.D	CLP2 0.32(mm)
STDL14268 280-438388/38 IC		11/21/2018 21:48	1	11211838.D	CLP1 0.32(mm)
STDL14268 280-438388/38 IC		11/21/2018 21:48	1	11211838.D	CLP2 0.32(mm)
ICV 280-438388/39		11/21/2018 22:09	1	11211839.D	CLP1 0.32(mm)
ICV 280-438388/39		11/21/2018 22:09	1	11211839.D	CLP2 0.32(mm)
ICV 280-438388/40		11/21/2018 22:30	1	11211840.D	CLP1 0.32(mm)
ICV 280-438388/40		11/21/2018 22:30	1	11211840.D	CLP2 0.32(mm)
ICV 280-438388/41		11/21/2018 22:51	1	11211841.D	CLP1 0.32(mm)
ICV 280-438388/41		11/21/2018 22:51	1	11211841.D	CLP2 0.32(mm)
ICV 280-438388/42		11/21/2018 23:13	1	11211842.D	CLP1 0.32(mm)
ICV 280-438388/42		11/21/2018 23:13	1	11211842.D	CLP2 0.32(mm)
ICV 280-438388/43		11/21/2018 23:34	1	11211843.D	CLP1 0.32(mm)
ICV 280-438388/43		11/21/2018 23:34	1	11211843.D	CLP2 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Start Date: 11/28/2018 16:57

Analysis Batch Number: 439075 End Date: 11/29/2018 08:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 280-439075/4		11/28/2018 16:57	1	11281804.D	CLP1 0.32(mm)
CCVIS 280-439075/4		11/28/2018 16:57	1	11281804.D	CLP2 0.32(mm)
ZZZZZ		11/28/2018 17:18	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 17:18	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 17:39	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 17:39	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 18:00	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 18:00	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 18:22	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 18:22	1		CLP2 0.32(mm)
MB 280-437451/1-A		11/28/2018 18:43	1	11281809.D	CLP1 0.32(mm)
MB 280-437451/1-A		11/28/2018 18:43	1	11281809.D	CLP2 0.32(mm)
LCS 280-437451/4-A		11/28/2018 19:04	1	11281810.D	CLP1 0.32(mm)
LCS 280-437451/4-A		11/28/2018 19:04	1	11281810.D	CLP2 0.32(mm)
LCSD 280-437451/5-A		11/28/2018 19:25	1	11281811.D	CLP1 0.32(mm)
LCSD 280-437451/5-A		11/28/2018 19:25	1	11281811.D	CLP2 0.32(mm)
280-116538-4		11/28/2018 20:29	1	11281814.D	CLP1 0.32(mm)
280-116538-4		11/28/2018 20:29	1	11281814.D	CLP2 0.32(mm)
ZZZZZ		11/28/2018 20:50	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 20:50	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 21:11	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 21:11	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 21:32	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 21:32	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 21:54	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 21:54	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 22:15	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 22:15	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 22:36	500		CLP1 0.32(mm)
ZZZZZ		11/28/2018 22:36	500		CLP2 0.32(mm)
ZZZZZ		11/28/2018 22:58	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 22:58	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 23:19	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 23:19	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 23:40	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 23:40	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 00:01	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 00:01	1		CLP2 0.32(mm)
CCV 280-439075/25		11/29/2018 00:22	1	11281825.D	CLP1 0.32(mm)
CCV 280-439075/25		11/29/2018 00:22	1	11281825.D	CLP2 0.32(mm)
ZZZZZ		11/29/2018 00:44	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 00:44	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 01:05	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 01:05	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 01:26	1		CLP1 0.32(mm)

8082A

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_J Start Date: 11/28/2018 16:57

Analysis Batch Number: 439075 End Date: 11/29/2018 08:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/29/2018 01:26	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 01:47	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 01:47	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 02:08	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 02:08	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 02:29	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 02:29	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 02:51	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 02:51	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 03:12	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 03:12	1		CLP2 0.32(mm)
ZZZZZ		11/29/2018 06:44	2000		CLP1 0.32(mm)
ZZZZZ		11/29/2018 06:44	2000		CLP2 0.32(mm)
ZZZZZ		11/29/2018 07:05	5000		CLP1 0.32(mm)
ZZZZZ		11/29/2018 07:05	5000		CLP2 0.32(mm)
ZZZZZ		11/29/2018 07:26	1		CLP1 0.32(mm)
ZZZZZ		11/29/2018 07:26	1		CLP2 0.32(mm)
CCV 280-439075/46		11/29/2018 07:47	1		CLP1 0.32(mm)
CCV 280-439075/46		11/29/2018 07:47	1		CLP2 0.32(mm)
CCV 280-439075/47		11/29/2018 08:08	1		CLP1 0.32(mm)
CCV 280-439075/47		11/29/2018 08:08	1		CLP2 0.32(mm)
CCV 280-439075/48		11/29/2018 08:30	1		CLP1 0.32(mm)
CCV 280-439075/48		11/29/2018 08:30	1		CLP2 0.32(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437451 Batch Start Date: 11/13/18 18:28 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 11/14/18 14:31

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8081/82 Surr 00105
MB 280-437451/1		3510C, 8082A				1000 mL	10 mL	7 SU	1 mL
LCS 280-437451/4		3510C, 8082A				1000 mL	10 mL	7 SU	1 mL
LCSD 280-437451/5		3510C, 8082A				1000 mL	10 mL	7 SU	1 mL
280-116538-C-4	FWGIDW-181001-WW	3510C, 8082A	T	1379.3 g	481.6 g	897.7 mL	10 mL	6 SU	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	8082 LCS 00049	AnalysisComment				
MB 280-437451/1		3510C, 8082A							
LCS 280-437451/4		3510C, 8082A		1 mL	8082				
LCSD 280-437451/5		3510C, 8082A		1 mL	8082				
280-116538-C-4	FWGIDW-181001-WW	3510C, 8082A	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437451 Batch Start Date: 11/13/18 18:28 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 11/14/18 14:31

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007/BB8@10.00mL
Analyst ID - Concentration	MF
Concentration 1 Corrected Temperature	88/88 Degrees C
Equipment ID - Concentration 1	A/B
Exchange Solvent ID	Hexane_Cycl_00053
Analyst ID - Extraction	AE
Method/Fraction	3510C/608_DOD5/8082_DOD5
Na2SO4 ID	0000205461_00010
NaCl ID	181957
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00413
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	AE
Analyst ID - Spike Witness Analyst	Reviewer: AP
Sufficient Volume for Batch QC	No
Concentration 1 Uncorrected Temperature	89/87 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8151A_DOD5

Herbicides (GC)

FORM II
HERBICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low

GC Column (1): CLP1 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	DCPAA1 #
FWGIDW-181001-WW	280-116538-4	79
	LB3 280-436732/1-B	76
	LCS 280-436732/2-B	78
FWGIDW-181001-WW MS	280-116538-4 MS	83
FWGIDW-181001-WW MSD	280-116538-4 MSD	78

	QC LIMITS
DCPAA = 2,4-Dichlorophenylacetic acid	10-131

Column to be used to flag recovery values

FORM II 8151A DOD

FORM III
HERBICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11130011.D

Lab ID: LCS 280-436732/2-B Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2,4-D	0.0500	0.0376 J	75	13-115	
Silvex (2,4,5-TP)	0.0500	0.0403	81	10-158	

Column to be used to flag recovery and RPD values

FORM III 8151A DOD

FORM III
HERBICIDES MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11130013.D

Lab ID: 280-116538-4 MS Client ID: FWGIDW-181001-WW MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2,4-D	0.0500	ND	0.0389 J	78	13-115	
Silvex (2,4,5-TP)	0.0500	ND	0.0392	78	10-158	

Column to be used to flag recovery and RPD values

FORM III 8151A DOD

FORM III
HERBICIDES MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water (TCLP) Level: Low Lab File ID: 11130014.D

Lab ID: 280-116538-4 MSD Client ID: FWGIDW-181001-WW MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,4-D	0.0500	0.0372 J	74	5	30	13-115	
Silvex (2,4,5-TP)	0.0500	0.0374	75	5	30	10-158	

Column to be used to flag recovery and RPD values

FORM III 8151A DOD

FORM VIII
HERBICIDES ANALYTICAL SEQUENCE

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: STD4 280-436856/6 Date Analyzed: 11/08/2018 20:59

Instrument ID: SGC_M GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11080006.D Heated Purge: (Y/N) N

Calibration ID: 34237

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DCPAA RT #		
INITIAL CALIBRATION SURROGATE				5.29		
UPPER LIMIT						
LOWER LIMIT						
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
STD4 280-436856/6 ICRT		11/08/2018 20:59	11080006.D	5.29		
ICV 280-436856/10		11/08/2018 22:04	11080010.D	5.30		

Column used to flag values outside QC limits

FORM VIII
HERBICIDES ANALYTICAL SEQUENCE

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: STD4 280-436856/6 Date Analyzed: 11/08/2018 20:59

Instrument ID: SGC_M GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11080006.D Heated Purge: (Y/N) N

Calibration ID: 34238

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DCPAA RT #		
INITIAL CALIBRATION SURROGATE				5.02		
UPPER LIMIT						
LOWER LIMIT						
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
STD4 280-436856/6 ICRT		11/08/2018 20:59	11080006.D	5.02		
ICV 280-436856/10		11/08/2018 22:04	11080010.D	5.02		

Column used to flag values outside QC limits

FORM VIII 8151A DOD

FORM VIII
HERBICIDES ANALYTICAL SEQUENCE

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: CCVRT 280-437382/3 Date Analyzed: 11/13/2018 15:49

Instrument ID: SGC_M GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11130003.D Heated Purge: (Y/N) N

Calibration ID: 34237

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DCPAA RT #		
CONTINUING CALIBRATION SURROGATE				5.30		
UPPER LIMIT						
LOWER LIMIT						
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 280-437382/3		11/13/2018 15:49	11130003.D	5.30		
CCV 280-437382/9		11/13/2018 18:07	11130009.D	5.30		
LB3 280-436732/1-B		11/13/2018 18:24	11130010.D	5.30		
LCS 280-436732/2-B		11/13/2018 18:40	11130011.D	5.30		
280-116538-4	FWGIDW-181001-WW	11/13/2018 18:57	11130012.D	5.29		
280-116538-4 MS	FWGIDW-181001-WW MS	11/13/2018 19:13	11130013.D	5.29		
280-116538-4 MSD	FWGIDW-181001-WW MSD	11/13/2018 19:29	11130014.D	5.30		
CCV 280-437382/20		11/13/2018 21:06	11130020.D	5.30		

Column used to flag values outside QC limits

FORM VIII
HERBICIDES ANALYTICAL SEQUENCE

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Sample No.: CCVRT 280-437382/3 Date Analyzed: 11/13/2018 15:49

Instrument ID: SGC_M GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11130003.D Heated Purge: (Y/N) N

Calibration ID: 34238

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DCPAA RT #		
CONTINUING CALIBRATION SURROGATE				5.02		
UPPER LIMIT						
LOWER LIMIT						
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 280-437382/3		11/13/2018 15:49	11130003.D	5.02		
CCV 280-437382/9		11/13/2018 18:07	11130009.D	5.02		
CCV 280-437382/20		11/13/2018 21:06	11130020.D	5.02		

Column used to flag values outside QC limits

FORM VIII 8151A DOD

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW | Lab Sample ID: 280-116538-4

Matrix: Water (TCLP) | Lab File ID: 11130012.D

Analysis Method: 8151A DOD | Date Collected: 11/02/2018 15:30

Extraction Method: 8151A | Date Extracted: 11/08/2018 07:48

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2018 18:57

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437382 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
94-75-7	2,4-D	ND		0.040	0.0021
93-72-1	Silvex (2,4,5-TP)	ND		0.010	0.0017

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	79		10-131

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130012.D
Lims ID: 280-116538-A-4-B
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 13-Nov-2018 18:57:03 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-B
Misc. Info.: 280-0076146-012
Operator ID: AMB Instrument ID: SGC_M

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:56:45 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 14-Nov-2018 09:43:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 2,4-DBDinoseb						
1		-0.060			ND	
2		-0.060				
2 Dalapon						
1		1.601			ND	
2		1.365				
$ 3 2,4-Dichlorophenylacetic acid						
1	5.294	5.295	-0.001	73237183	0.3946	
2	5.021	5.022	-0.001	115400449	0.4042	
					RPD = 2.41	
4 Dicamba						
1	5.459	5.456	0.003	1495850	-0.0201	
2	5.178	5.180	-0.002	2066951	-0.0190	
					RPD = -5.65	
LOD = 0.001000						
5 MCPP						
1	5.624	5.627	-0.003	1462381	-3.93	
2	5.300	5.297	0.003	603460	-1.76	
					RPD = -76.31	
LOD = 0.001000						
6 MCPA						
1	5.734	5.749	-0.015	260876	-6.66	
2	5.462	5.489	-0.027	1589251	-3.32	
					RPD = -66.90	
LOD = 0.001000						
7 Dichlorprop						
1	6.026	6.027	-0.001	471785	-0.0234	
2	5.726	5.740	-0.014	450028	-0.0264	
					RPD = -11.82	
LOD = 0.001000						

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
8 2,4-D						
1	6.206	6.189	0.017	659641	-0.0165	
2	5.971	5.959	0.012	1009374	-0.0203	
					RPD = -20.93	
LOD = 0.001000						
14 Pentachlorophenol						
1	6.361	6.356	0.005	1014066	-0.0170	
2	6.195	6.207	-0.012	774457	-0.0194	
9 Silvex (2,4,5-TP)						
1		6.708			ND	
2		6.463				
10 2,4,5-T						
1	6.828	6.820	0.008	1703543	-0.0145	
2	6.677	6.677	0.000	1096400	-0.0165	
					RPD = -13.22	
LOD = 0.001000						
11 2,4-DB						
1	6.986	6.986	0.000	652252	-0.0209	
2	6.850	6.862	-0.012	1583936	-0.007816	
					RPD = -91.30	
LOD = 0.001000						
12 Picloram						
1	7.274	7.276	-0.002	3433365	0.002768	
2	7.240	7.239	0.001	4494353	-0.0134	
					RPD = -304.11	
13 Dinoseb						
1	7.321	7.330	-0.009	4889458	-0.0237	
2	6.960	6.954	0.006	5226476	-0.004520	
					RPD = -135.91	
LOD = 0.001000						

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

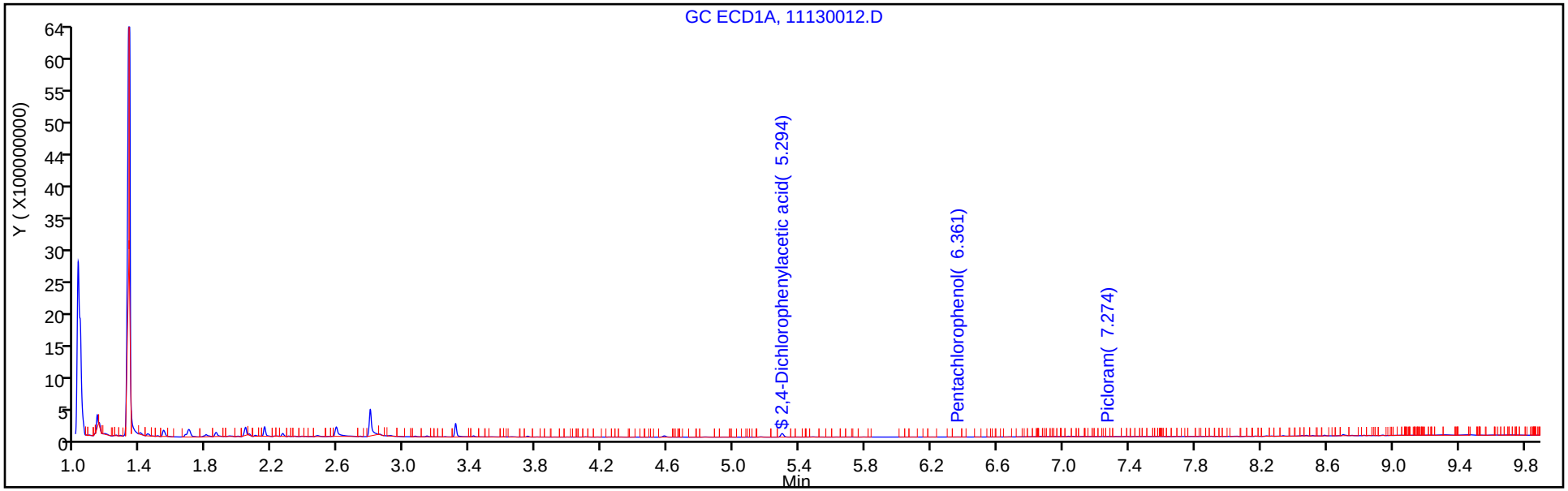
Report Date: 14-Nov-2018 09:57:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

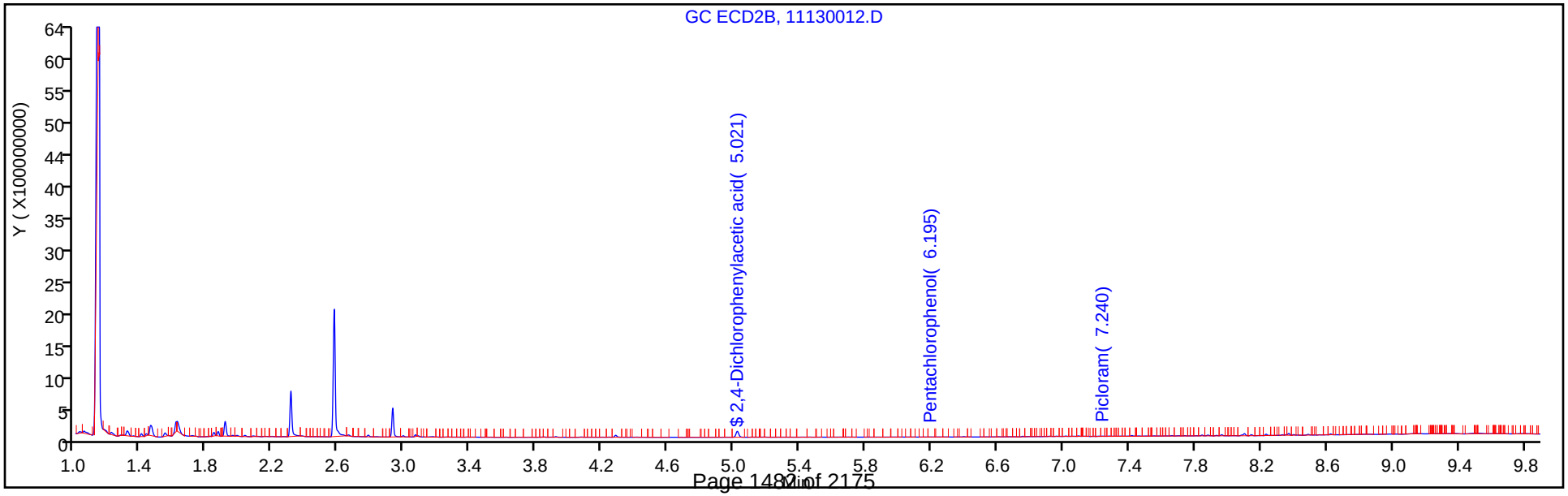
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130012.D

Injection Date:	13-Nov-2018 18:57:03	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	280-116538-A-4-B	Lab Sample ID:	280-116538-4	Worklist Smp#:	12
Client ID:	FWGIDW-181001-WW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130012.D				
Lims ID:	280-116538-A-4-B				
Client ID:	FWGIDW-181001-WW				
Sample Type:	Client				
Inject. Date:	13-Nov-2018 18:57:03	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-B				
Misc. Info.:	280-0076146-012				
Operator ID:	AMB	Instrument ID:	SGC_M		
Method:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m				
Limit Group:	GCSV - 8151				
Method Label:	8151A: Herbicides: DV-GC-0022				
Last Update:	14-Nov-2018 09:56:45	Calib Date:	08-Nov-2018 21:47:57		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: byla		Date:	14-Nov-2018 09:43:58		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.3946	78.91

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.4042	80.84

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 436856

SDG No.:

Instrument ID: SGC_M GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/08/2018 20:10 Calibration End Date: 11/08/2018 21:47 Calibration ID: 34237

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-436856/9	11080009.D
Level 2	STD2 280-436856/8	11080008.D
Level 3	STD3 280-436856/7	11080007.D
Level 4	STD4 280-436856/6	11080006.D
Level 5	STD5 280-436856/5	11080005.D
Level 6	STD6 280-436856/4	11080004.D
Level 7	STD7 280-436856/3	11080003.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Dalapon	1.599	1.600	1.601	1.602	1.601	1.600	1.601				1.571 - 1.631	1.601
Dicamba	5.457	5.457	5.456	5.456	5.456	5.455	5.457				5.427 - 5.487	5.456
MCPP	5.626	5.626	5.625	5.626	5.628	5.627	5.632				5.597 - 5.657	5.627
MCPA	5.748	5.748	5.748	5.747	5.749	5.749	5.755				5.719 - 5.779	5.749
Dichlorprop	6.029	6.029	6.027	6.027	6.027	6.025	6.027				5.999 - 6.059	6.027
2,4-D	6.193	6.192	6.189	6.188	6.189	6.187	6.188				6.161 - 6.221	6.189
Pentachlorophenol	6.356	6.356	6.354	6.354	6.355	6.354	6.356				6.256 - 6.456	6.355
Silvex (2,4,5-TP)	6.710	6.710	6.708	6.707	6.709	6.707	6.709				6.679 - 6.739	6.709
2,4,5-T	6.824	6.822	6.819	6.819	6.819	6.819	6.821				6.791 - 6.851	6.820
2,4-DB	6.992	6.989	6.986	6.986	6.985	6.985	6.986				6.956 - 7.016	6.987
Dinoseb	7.330	7.330	7.329	7.330	7.329	7.330	7.331				7.301 - 7.361	7.330
2,4-Dichlorophenylacetic acid	5.296	5.296	5.295	5.294	5.294	5.294	5.295				5.266 - 5.326	5.295

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 436856

SDG No.:

Instrument ID: SGC_M GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/08/2018 20:10 Calibration End Date: 11/08/2018 21:47 Calibration ID: 34237

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-436856/9	11080009.D
Level 2	STD2 280-436856/8	11080008.D
Level 3	STD3 280-436856/7	11080007.D
Level 4	STD4 280-436856/6	11080006.D
Level 5	STD5 280-436856/5	11080005.D
Level 6	STD6 280-436856/4	11080004.D
Level 7	STD7 280-436856/3	11080003.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Dalapon	338578119 266610811	311775667 261349526	289767396 254666703	275682605	Lin2	3700881.11	262812614							0.9990		0.9900
Dicamba	927917809 658924004	848435407 618468012	762717762 629678967	708181392	Lin2	14589527.2	651067605							0.9950		0.9900
MCPP	1345651 741717	1151903 680678	948488 671756	826292	Lin1	4091540.32	668677.741							0.9940		0.9900
MCPA	2013143 1011335	1636647 926594	1303951 920497	1131721	Lin1	6295275.65	906102.996							0.9950		0.9900
Dichlorprop	248873063 168806954	227620196 155685168	202664345 158723847	186054946	Lin2	4387736.50	167094702							0.9910		0.9900
2,4-D	275107689 201402161	259317026 186610674	238801880 192583010	222243722	Lin2	3983322.68	201651345							0.9910		0.9900
Pentachlorophenol	2885931500 2157319843	2657327761 2020609926	2439986644 2180811731	2334122543	Lin2	37851756.3	2162362040							0.9960		0.9900
Silvex (2,4,5-TP)	1125910229 802999946	1025832917 742462193	930891158 816981840	894034829	Lin2	16674806.2	809227720							0.9940		0.9900
2,4,5-T	1085900376 812527232	1006532233 752098571	978908168 822952329	916726894	Lin2	13725352.6	831275493							0.9920		0.9900
2,4-DB	199465573 132609232	178339946 122892466	151131897 133540789	152282561	Lin2	3435047.84	132859589							0.9930		0.9900
Dinoseb	946058538 587059151	827854954 537237905	678082192 579633327	687046854	Lin2	18703633.2	583118004							0.9910		0.9900
2,4-Dichlorophenylacetic acid	264851961 177017698	239586336 165203982	212110138 161812508	192793119	Lin2	4731162.73	173627751							0.9910		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 436856

SDG No.:

Instrument ID: SGC_M GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/08/2018 20:10 Calibration End Date: 11/08/2018 21:47 Calibration ID: 34237

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-436856/9	11080009.D
Level 2	STD2 280-436856/8	11080008.D
Level 3	STD3 280-436856/7	11080007.D
Level 4	STD4 280-436856/6	11080006.D
Level 5	STD5 280-436856/5	11080005.D
Level 6	STD6 280-436856/4	11080004.D
Level 7	STD7 280-436856/3	11080003.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dalapon	Lin2	15326585 236612793	28226610 461124999	65585228	124794623	181032073	0.0453 0.905	0.0905 1.81	0.226	0.453	0.679
Dicamba	Lin2	44041299 587080760	80537731 1195445518	181002459	336120593	469112708	0.0475 0.949	0.0949 1.90	0.237	0.475	0.712
MCPP	Lin1	6341663 64156715	10857169 126631738	22349753	38940739	52432443	4.71 94.3	9.43 189	23.6	47.1	70.7
MCPA	Lin1	9460101 87084448	15381766 173022797	30637436	53181506	71286553	4.70 94.0	9.40 188	23.5	47.0	70.5
Dichlorprop	Lin2	11860668 148391318	21695619 302575269	48292380	88669136	120673761	0.0477 0.953	0.0953 1.91	0.238	0.477	0.715
2,4-D	Lin2	12934188 175470017	24383580 362171608	56136352	104487886	142033839	0.0470 0.940	0.0940 1.88	0.235	0.470	0.705
Pentachlorophenol	Lin2	137767155 1929177327	253708368 4164260000	582394312	1114251749	1544775840	0.0477 0.955	0.0955 1.91	0.239	0.477	0.716
Silvex (2,4,5-TP)	Lin2	54043691 712763705	98479960 1568605132	223413878	429136718	578159961	0.0480 0.960	0.0960 1.92	0.240	0.480	0.720
2,4,5-T	Lin2	51982051 720059172	96365396 1575789119	234301670	438837164	583435179	0.0479 0.957	0.0957 1.91	0.239	0.479	0.718
2,4-DB	Lin2	9486084 116889169	16962804 254034643	35937276	72421779	94598453	0.0476 0.951	0.0951 1.90	0.238	0.476	0.713
Dinoseb	Lin2	45138818 512659271	78998059 1106230204	161764983	327807230	420150896	0.0477 0.954	0.0954 1.91	0.239	0.477	0.716
2,4-Dichlorophenylacetic acid	Lin2	12289131 153309295	22233612 300324014	49209552	89456007	123204318	0.0464 0.928	0.0928 1.86	0.232	0.464	0.696

Curve Type Legend:

Lin1 = Linear 1/conc
Lin2 = Linear 1/conc^2

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080003.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Nov-2018 20:10:50 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0075980-003
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:14 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	461124999	1.81	1.74	
2	1.366	1.364	0.002	812982004	1.81	1.75	
						RPD = 0.78	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.296	-0.001	300324014	1.86	1.70	
2	5.023	5.024	-0.001	472221393	1.86	1.75	
						RPD = 2.56	
4 Dicamba							
1	5.457	5.457	0.000	1195445518	1.90	1.81	
2	5.181	5.181	0.000	1874756098	1.90	1.81	
						RPD = 0.38	
5 MCPP							
1	5.632	5.627	0.005	126631738	188.5	183.3	
2	5.303	5.296	0.007	185097510	188.5	184.1	
						RPD = 0.43	
6 MCPA							
1	5.755	5.749	0.006	173022797	188.0	184.0	
2	5.496	5.489	0.007	258655000	188.0	181.9	
						RPD = 1.16	
7 Dichlorprop							
1	6.027	6.029	-0.002	302575269	1.91	1.78	
2	5.741	5.741	0.000	464059922	1.91	1.80	
						RPD = 0.88	
8 2,4-D							
1	6.188	6.191	-0.003	362171608	1.88	1.78	
2	5.959	5.960	-0.001	579122786	1.88	1.77	
						RPD = 0.22	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	4164260000	1.91	1.91	
2	6.208	6.207	0.001	5885858062	1.91	1.81	
9 Silvex (2,4,5-TP)							
1	6.709	6.709	0.000	1568605132	1.92	1.92	
2	6.464	6.464	0.000	2311626971	1.92	1.85	
						RPD = 3.45	
10 2,4,5-T							
1	6.821	6.821	0.000	1575789119	1.91	1.88	
2	6.676	6.677	-0.001	2405920646	1.91	1.86	
						RPD = 1.20	
11 2,4-DB							
1	6.986	6.986	0.000	254034643	1.90	1.89	
2	6.861	6.861	0.000	388339924	1.90	1.91	
						RPD = 1.24	
12 Picloram							
1	7.276	7.276	0.000	2353516468	1.89	1.90	
2	7.240	7.239	0.001	3575827736	1.89	1.84	
						RPD = 3.35	
13 Dinoseb							
1	7.331	7.331	0.000	1106230204	1.91	1.87	
2	6.955	6.954	0.001	1542084218	1.91	1.89	
						RPD = 1.54	

Reagents:

8151ICALL7_00062 Amount Added: 200.00 Units: uL

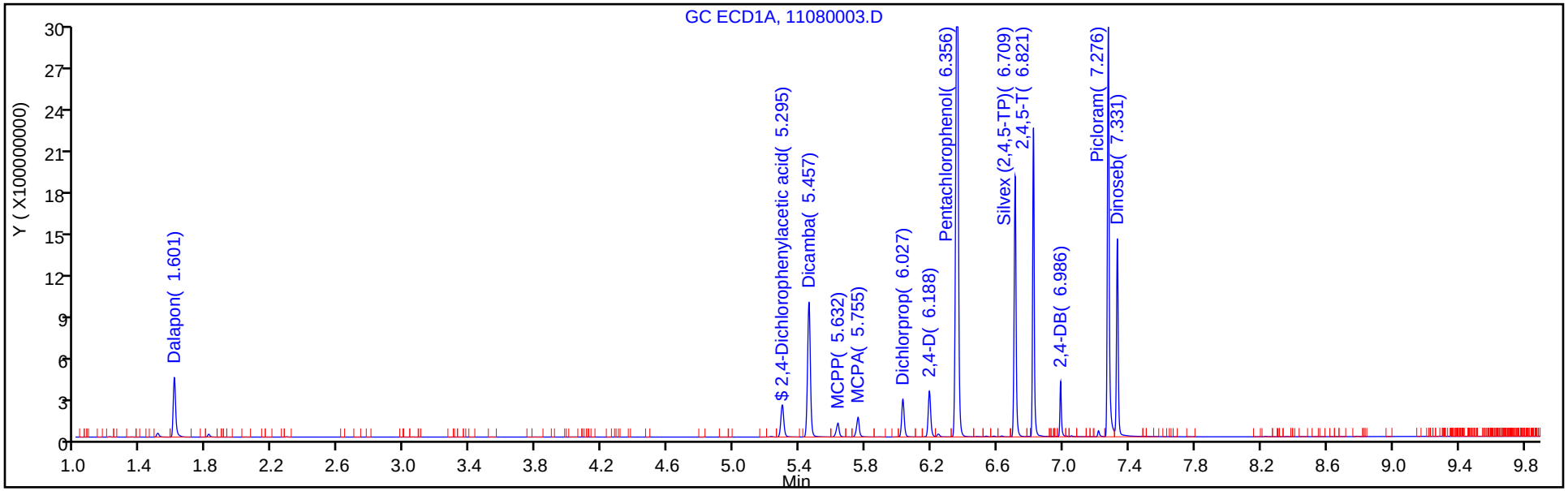
Report Date: 09-Nov-2018 10:25:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

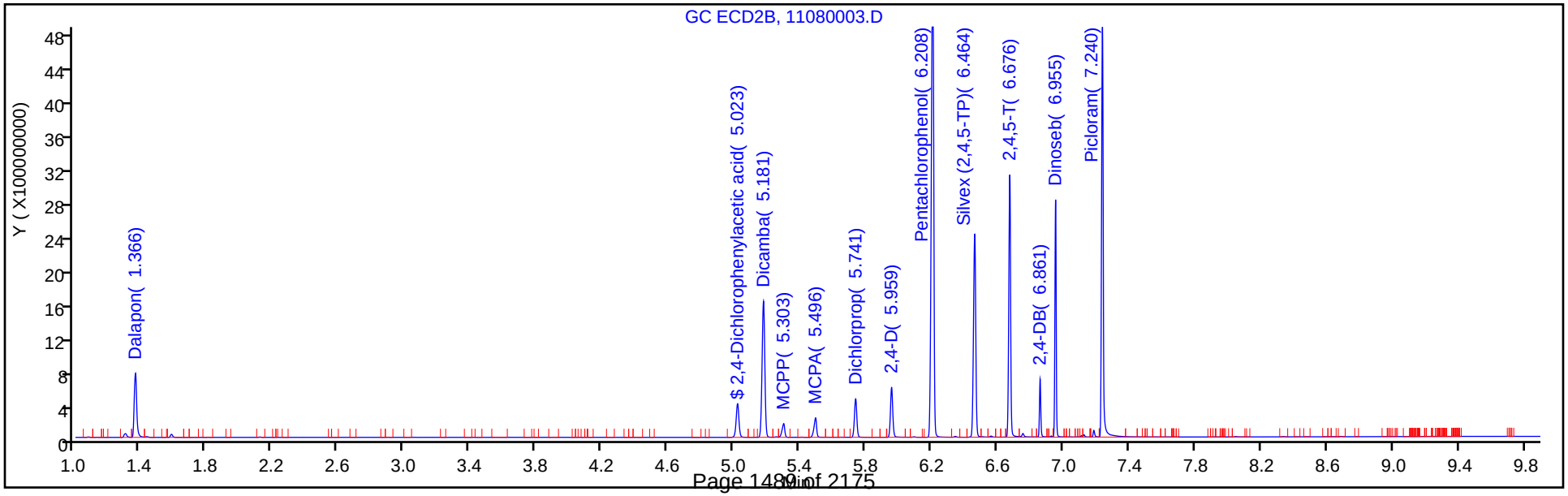
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080003.D

Injection Date:	08-Nov-2018 20:10:50	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD7			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080004.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Nov-2018 20:26:59 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0075980-004
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:16 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.600	1.601	-0.001	236612793	0.9054	0.8862	
2	1.363	1.364	-0.001	415303979	0.9054	0.8890	
						RPD = 0.32	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.296	-0.002	153309295	0.9280	0.8557	
2	5.021	5.024	-0.003	237705673	0.9280	0.8643	
						RPD = 1.00	
4 Dicamba							
1	5.455	5.457	-0.002	587080760	0.9493	0.8793	
2	5.179	5.181	-0.002	932004664	0.9493	0.8876	
						RPD = 0.94	
5 MCPP							
1	5.627	5.627	0.000	64156715	94.3	89.8	
2	5.296	5.296	0.000	88512812	94.3	86.8	
						RPD = 3.45	
6 MCPA							
1	5.749	5.749	0.000	87084448	94.0	89.2	
2	5.489	5.489	0.000	123615265	94.0	84.6	
						RPD = 5.26	
7 Dichlorprop							
1	6.025	6.029	-0.004	148391318	0.9532	0.8618	
2	5.737	5.741	-0.004	225397182	0.9532	0.8600	
						RPD = 0.21	
8 2,4-D							
1	6.187	6.191	-0.004	175470017	0.9403	0.8504	
2	5.956	5.960	-0.004	282015396	0.9403	0.8511	
						RPD = 0.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.354	6.356	-0.003	1929177327	0.9548	0.8747	
2	6.204	6.207	-0.003	2859861847	0.9548	0.8714	
9 Silvex (2,4,5-TP)							
1	6.707	6.709	-0.002	712763705	0.9600	0.8602	
2	6.460	6.464	-0.004	1082850198	0.9600	0.8564	
						RPD = 0.44	
10 2,4,5-T							
1	6.819	6.821	-0.002	720059172	0.9574	0.8497	
2	6.674	6.677	-0.003	1109867323	0.9574	0.8471	
						RPD = 0.30	
11 2,4-DB							
1	6.985	6.986	-0.001	116889169	0.9512	0.8539	
2	6.860	6.861	-0.001	176853417	0.9512	0.8612	
						RPD = 0.85	
12 Picloram							
1	7.275	7.276	-0.001	1054022797	0.9451	0.8499	
2	7.239	7.239	0.000	1727926386	0.9451	0.8787	
						RPD = 3.34	
13 Dinoseb							
1	7.330	7.331	-0.001	512659271	0.9543	0.8471	
2	6.954	6.954	0.000	708720744	0.9543	0.8645	
						RPD = 2.03	

Reagents:

8151ICALL7_00062 Amount Added: 100.00 Units: uL

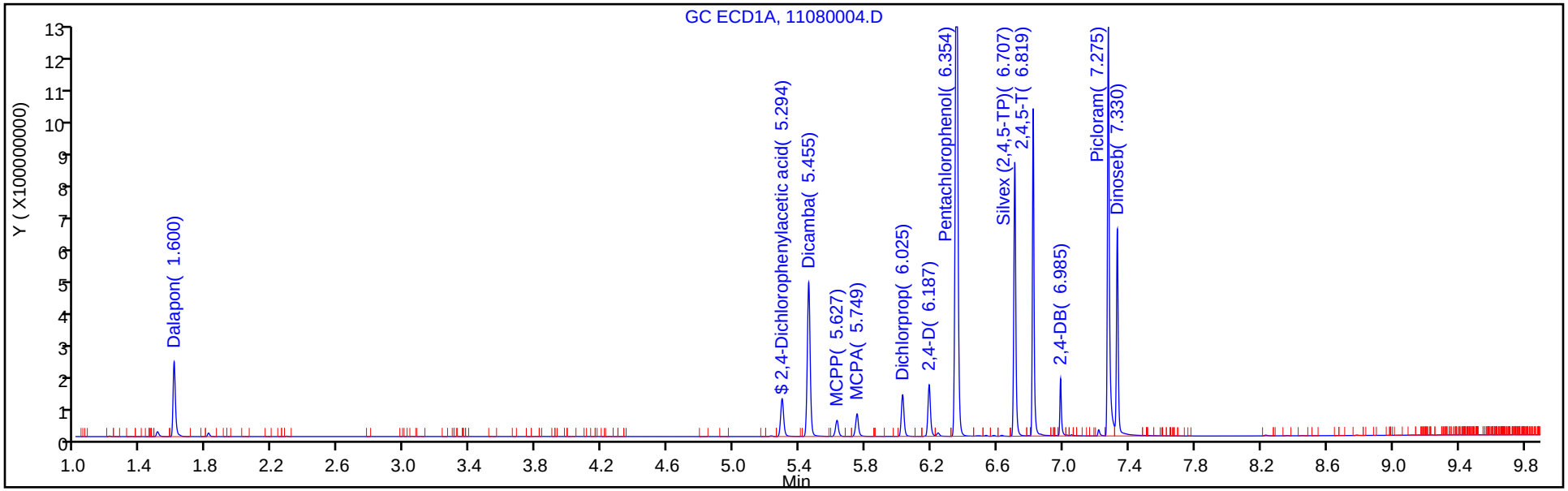
Report Date: 09-Nov-2018 10:25:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

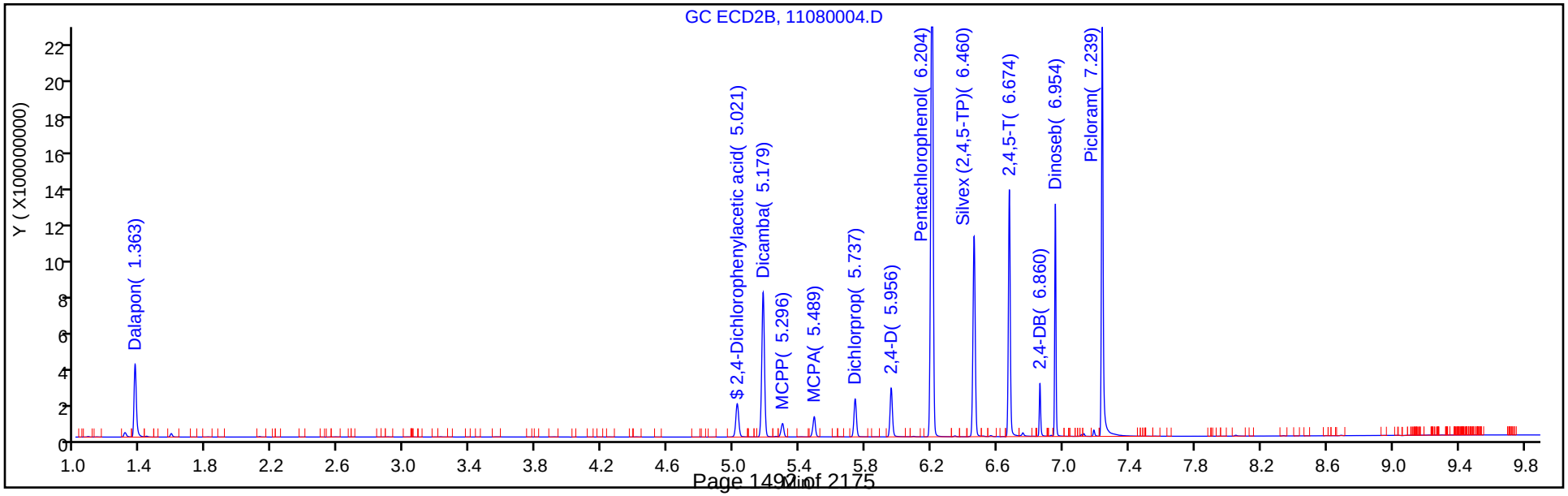
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080004.D

Injection Date:	08-Nov-2018 20:26:59	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD6			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080005.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Nov-2018 20:43:07 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0075980-005
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:17 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	181032073	0.6790	0.6747	
2	1.364	1.364	0.000	317869519	0.6790	0.6771	
						RPD = 0.34	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.296	-0.002	123204318	0.6960	0.6823	
2	5.024	5.024	0.000	188954555	0.6960	0.6809	
						RPD = 0.21	
4 Dicamba							
1	5.456	5.457	-0.001	469112708	0.7119	0.6981	
2	5.179	5.181	-0.002	738627091	0.7119	0.6991	
						RPD = 0.14	
5 MCPP							
1	5.628	5.627	0.001	52432443	70.7	72.3	
2	5.298	5.296	0.002	70447115	70.7	68.6	
						RPD = 5.27	
6 MCPA							
1	5.749	5.749	0.000	71286553	70.5	71.7	
2	5.490	5.489	0.001	100593063	70.5	68.0	
						RPD = 5.32	
7 Dichlorprop							
1	6.027	6.029	-0.002	120673761	0.7149	0.6959	
2	5.739	5.741	-0.002	183083163	0.7149	0.6932	
						RPD = 0.39	
8 2,4-D							
1	6.189	6.191	-0.002	142033839	0.7052	0.6846	
2	5.959	5.960	-0.001	226763752	0.7052	0.6797	
						RPD = 0.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.355	6.356	-0.001	1544775840	0.7161	0.6969	
2	6.206	6.207	-0.001	2310226950	0.7161	0.7002	
9 Silvex (2,4,5-TP)							
1	6.709	6.709	0.000	578159961	0.7200	0.6939	
2	6.463	6.464	-0.001	886922786	0.7200	0.6976	
						RPD = 0.53	
10 2,4,5-T							
1	6.819	6.821	-0.002	583435179	0.7181	0.6853	
2	6.676	6.677	-0.001	899175015	0.7181	0.6830	
						RPD = 0.34	
11 2,4-DB							
1	6.985	6.986	-0.001	94598453	0.7134	0.6862	
2	6.861	6.861	0.000	140890508	0.7134	0.6829	
						RPD = 0.48	
12 Picloram							
1	7.275	7.276	-0.001	811328012	0.7088	0.6542	
2	7.239	7.239	0.000	1348168713	0.7088	0.6821	
						RPD = 4.18	
13 Dinoseb							
1	7.329	7.331	-0.002	420150896	0.7157	0.6884	
2	6.954	6.954	0.000	568533829	0.7157	0.6913	
						RPD = 0.41	

Reagents:

8151ICALL7_00062 Amount Added: 75.00 Units: uL

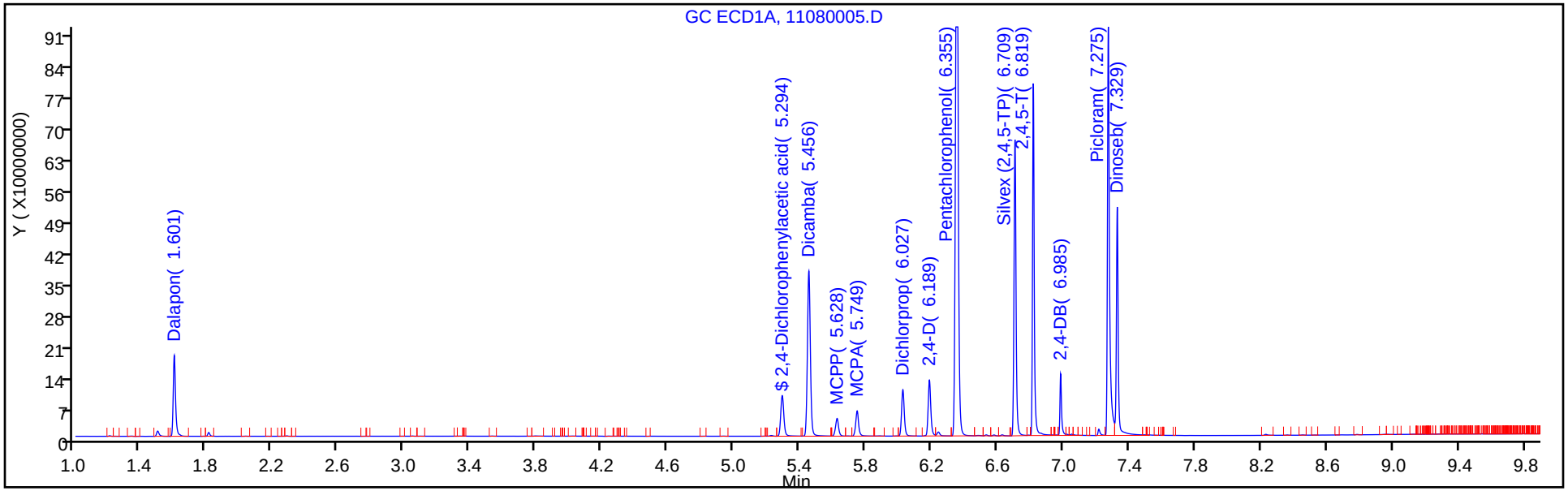
Report Date: 09-Nov-2018 10:25:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

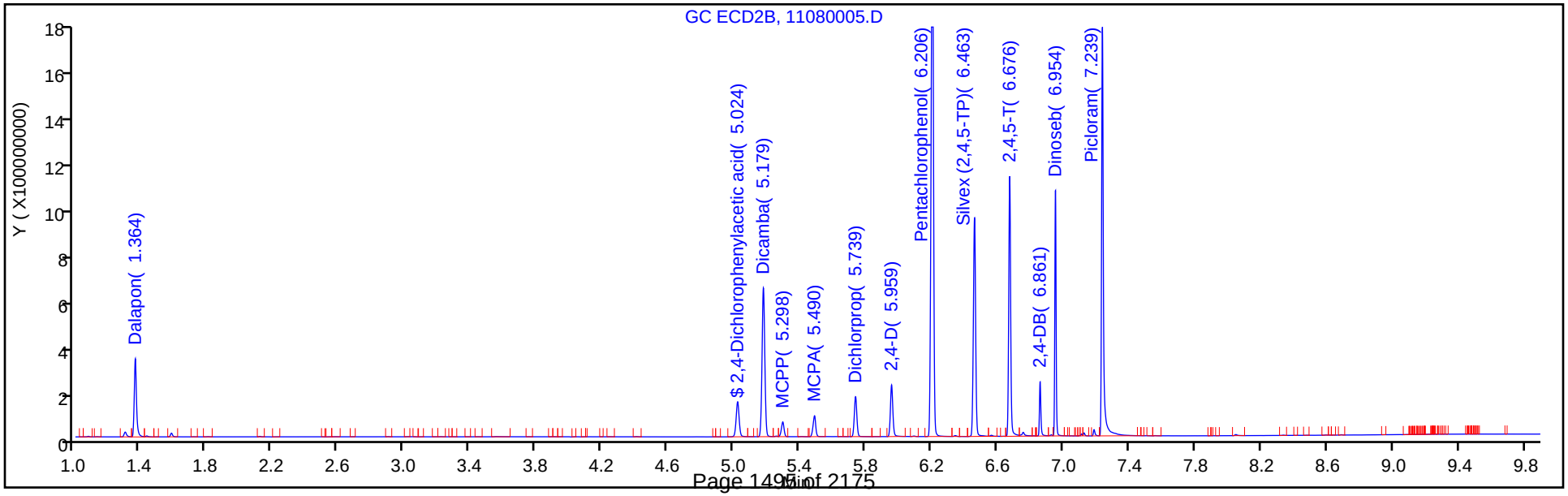
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080005.D

Injection Date:	08-Nov-2018 20:43:07	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD5			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080006.D
Lims ID: STD4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 08-Nov-2018 20:59:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0075980-006
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:19 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:05:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.602	1.602	0.000	124794623	0.4527	0.4608	
2	1.365	1.365	0.000	217730850	0.4527	0.4592	
						RPD = 0.34	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.294	0.000	89456007	0.4640	0.4880	
2	5.022	5.022	0.000	135972424	0.4640	0.4816	
						RPD = 1.32	
4 Dicamba							
1	5.456	5.456	0.000	336120593	0.4746	0.4939	
2	5.179	5.179	0.000	528749806	0.4746	0.4945	
						RPD = 0.13	
5 MCPP							
1	5.626	5.626	0.000	38940739	47.1	52.1	
2	5.295	5.295	0.000	50899046	47.1	48.9	
						RPD = 6.38	
6 MCPA							
1	5.747	5.747	0.000	53181506	47.0	51.7	
2	5.487	5.487	0.000	74028215	47.0	48.9	
						RPD = 5.72	
7 Dichlorprop							
1	6.027	6.027	0.000	88669136	0.4766	0.5044	
2	5.738	5.738	0.000	134581627	0.4766	0.5021	
						RPD = 0.45	
8 2,4-D							
1	6.188	6.188	0.000	104487886	0.4702	0.4984	
2	5.957	5.957	0.000	167917459	0.4702	0.4972	
						RPD = 0.23	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.354	6.354	0.000	1114251749	0.4774	0.4978	
2	6.204	6.204	0.000	1689061459	0.4774	0.5066	
9 Silvex (2,4,5-TP)							
1	6.707	6.707	0.000	429136718	0.4800	0.5097	
2	6.461	6.461	0.000	660795837	0.4800	0.5142	
						RPD = 0.88	
10 2,4,5-T							
1	6.819	6.819	0.000	438837164	0.4787	0.5114	
2	6.675	6.675	0.000	674699107	0.4787	0.5082	
						RPD = 0.63	
11 2,4-DB							
1	6.986	6.986	0.000	72421779	0.4756	0.5192	
2	6.861	6.861	0.000	107525868	0.4756	0.5175	
						RPD = 0.34	
12 Picloram							
1	7.276	7.276	0.000	616177704	0.4726	0.4968	
2	7.239	7.239	0.000	1042149923	0.4726	0.5237	
						RPD = 5.27	
13 Dinoseb							
1	7.330	7.330	0.000	327807230	0.4771	0.5301	
2	6.953	6.953	0.000	433525341	0.4771	0.5245	
						RPD = 1.05	

Reagents:

8151ICALL7_00062 Amount Added: 50.00 Units: uL

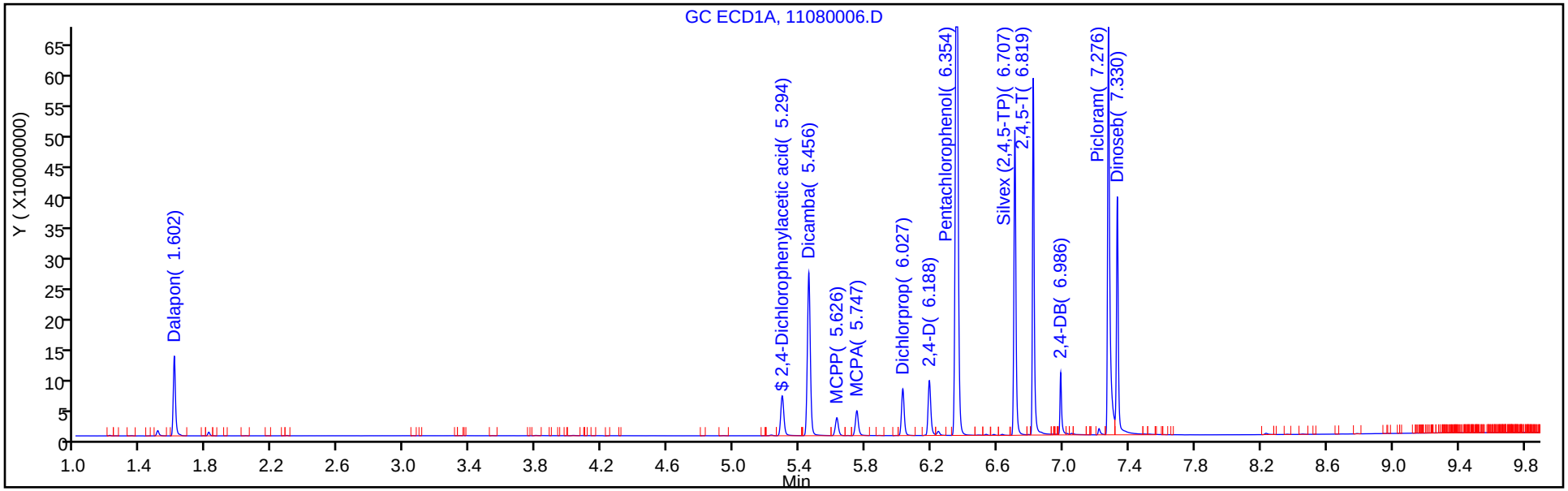
Report Date: 09-Nov-2018 10:25:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

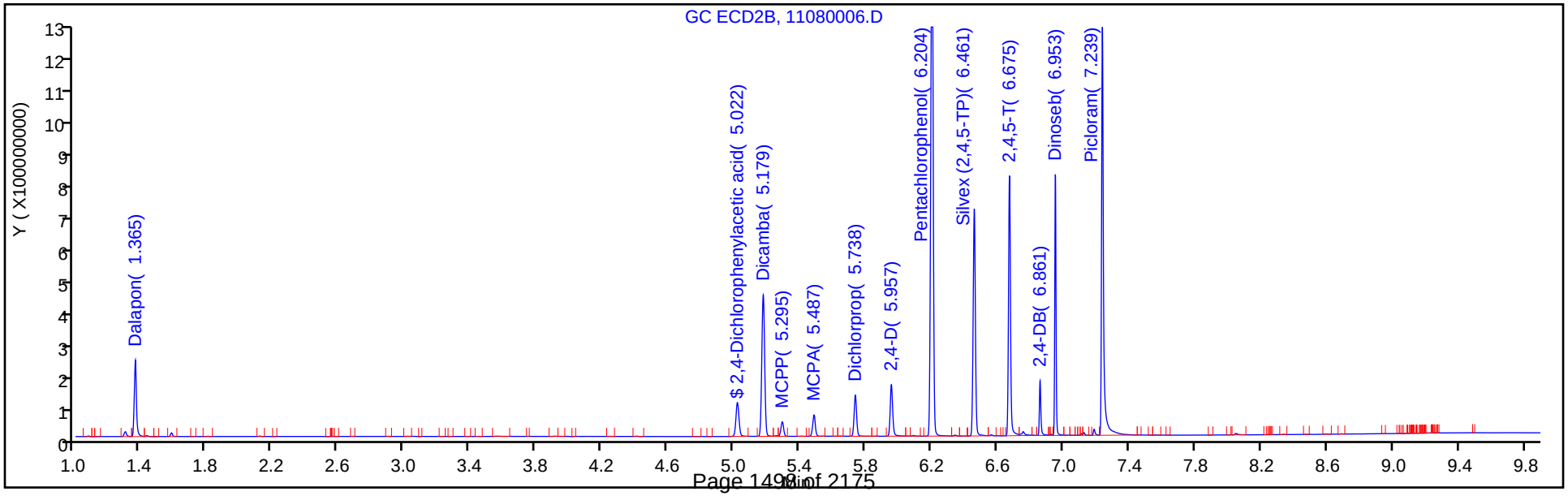
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080006.D

Injection Date:	08-Nov-2018 20:59:25	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD4			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080007.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Nov-2018 21:15:33 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0075980-007
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:21 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.602	-0.001	65585228	0.2263	0.2355	
2	1.364	1.365	-0.001	113541260	0.2263	0.2325	
						RPD = 1.25	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.294	0.001	49209552	0.2320	0.2562	
2	5.023	5.022	0.001	75321706	0.2320	0.2534	
						RPD = 1.08	
4 Dicamba							
1	5.456	5.456	0.000	181002459	0.2373	0.2556	
2	5.180	5.179	0.001	282838712	0.2373	0.2547	
						RPD = 0.34	
5 MCPP							
1	5.625	5.626	-0.001	22349753	23.6	27.3	
2	5.294	5.295	-0.001	27379667	23.6	25.2	
						RPD = 7.99	
6 MCPA							
1	5.748	5.747	0.001	30637436	23.5	26.9	
2	5.486	5.487	-0.001	41750796	23.5	25.6	
						RPD = 4.77	
7 Dichlorprop							
1	6.027	6.027	0.000	48292380	0.2383	0.2628	
2	5.739	5.738	0.001	73947923	0.2383	0.2632	
						RPD = 0.18	
8 2,4-D							
1	6.189	6.188	0.001	56136352	0.2351	0.2586	
2	5.958	5.957	0.001	91330132	0.2351	0.2597	
						RPD = 0.43	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.354	6.354	-0.001	582394312	0.2387	0.2518	
2	6.204	6.204	0.000	893703289	0.2387	0.2588	
9 Silvex (2,4,5-TP)							
1	6.708	6.707	0.001	223413878	0.2400	0.2555	
2	6.461	6.461	0.000	347858810	0.2400	0.2605	
						RPD = 1.94	
10 2,4,5-T							
1	6.819	6.819	0.000	234301670	0.2394	0.2653	
2	6.675	6.675	0.000	371593665	0.2394	0.2721	
						RPD = 2.50	
11 2,4-DB							
1	6.986	6.986	0.000	35937276	0.2378	0.2446	
2	6.861	6.861	0.000	54043486	0.2378	0.2523	
						RPD = 3.08	
12 Picloram							
1	7.277	7.276	0.001	286815470	0.2363	0.2313	
2	7.240	7.239	0.001	491135777	0.2363	0.2385	
						RPD = 3.08	
13 Dinoseb							
1	7.329	7.330	-0.001	161764983	0.2386	0.2453	
2	6.954	6.953	0.001	207764635	0.2386	0.2457	
						RPD = 0.13	

Reagents:

8151ICALL7_00062 Amount Added: 25.00 Units: uL

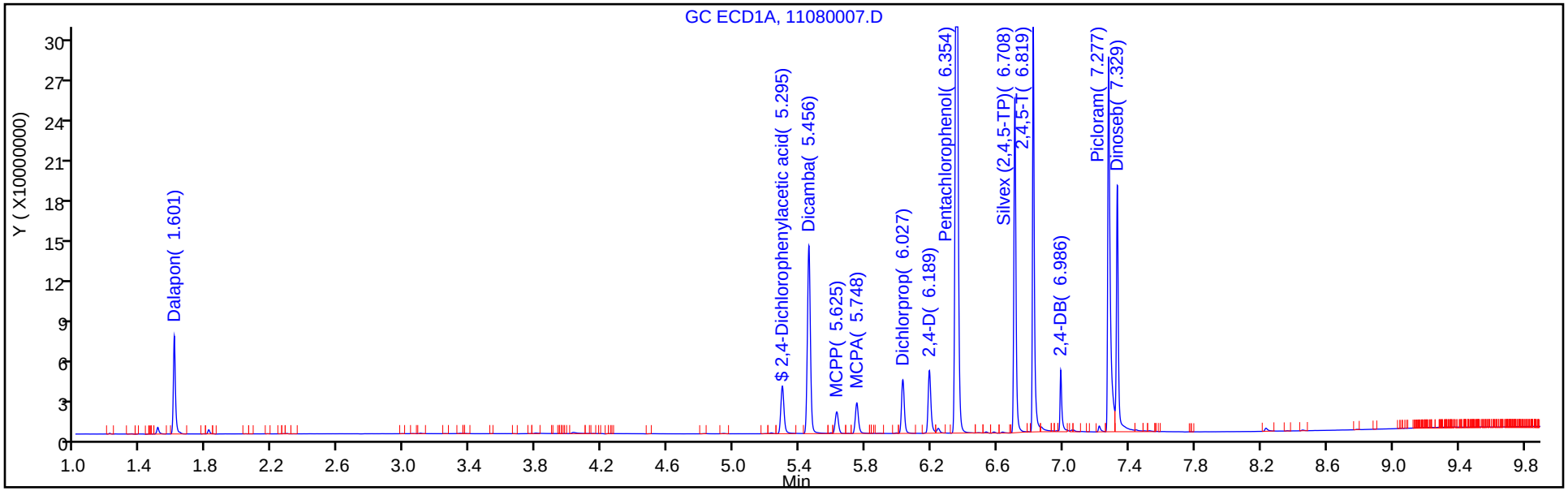
Report Date: 09-Nov-2018 10:25:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

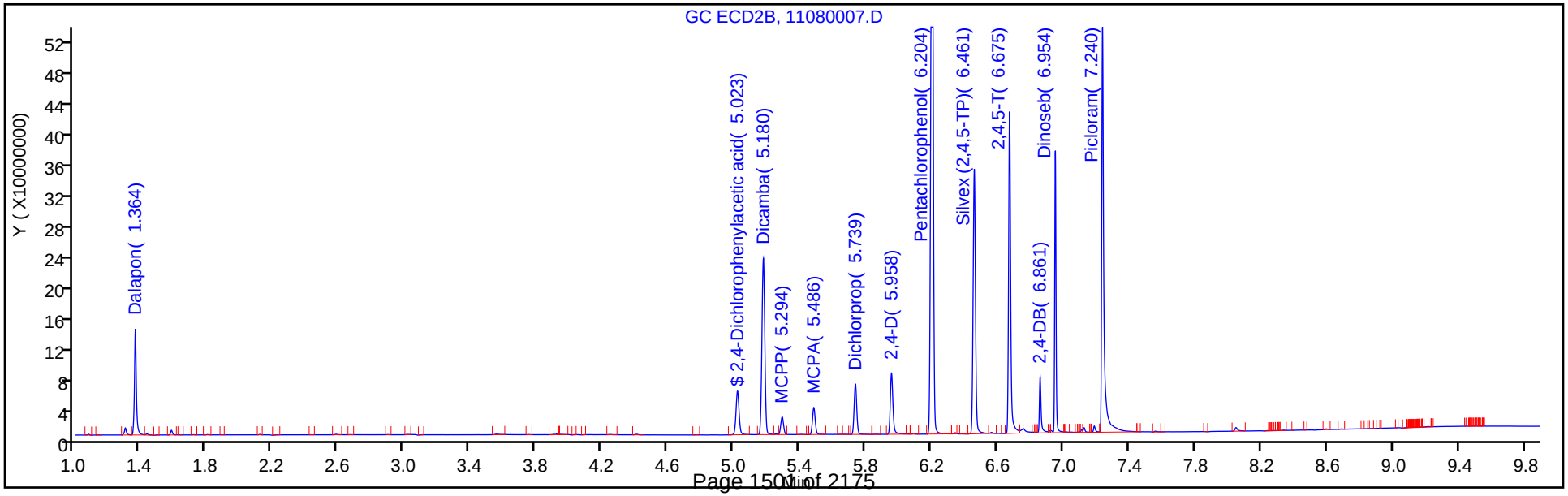
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080007.D

Injection Date:	08-Nov-2018 21:15:33	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD3			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080008.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Nov-2018 21:31:44 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0075980-008
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:23 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:07:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.600	1.602	-0.002	28226610	0.0905	0.0933	
2	1.363	1.365	-0.002	49542571	0.0905	0.0933	
						RPD = 0.01	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.294	0.002	22233612	0.0928	0.1008	
2	5.023	5.022	0.001	34348977	0.0928	0.0993	
						RPD = 1.52	
4 Dicamba							
1	5.457	5.456	0.001	80537731	0.0949	0.1013	
2	5.180	5.179	0.001	124615281	0.0949	0.1005	
						RPD = 0.81	
5 MCPP							
1	5.626	5.626	0.000	10857169	9.43	10.1	
2	5.294	5.295	-0.001	12395727	9.43	10.1	
						RPD = 0.01	
6 MCPA							
1	5.748	5.747	0.001	15381766	9.40	10.0	
2	5.487	5.487	0.000	20582458	9.40	10.4	
						RPD = 3.28	
7 Dichlorprop							
1	6.029	6.027	0.002	21695619	0.0953	0.1036	
2	5.740	5.738	0.002	33432281	0.0953	0.1036	
						RPD = 0.00	
8 2,4-D							
1	6.192	6.188	0.004	24383580	0.0940	0.1012	
2	5.961	5.957	0.004	40571878	0.0940	0.1023	
						RPD = 1.16	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.354	0.002	253708368	0.0955	0.0998	
2	6.205	6.204	0.001	387632244	0.0955	0.1011	
9 Silvex (2,4,5-TP)							
1	6.710	6.707	0.003	98479960	0.0960	0.1011	
2	6.464	6.461	0.003	152867481	0.0960	0.1024	
						RPD = 1.28	
10 2,4,5-T							
1	6.822	6.819	0.003	96365396	0.0957	0.0994	
2	6.678	6.675	0.003	150081398	0.0957	0.0995	
						RPD = 0.12	
11 2,4-DB							
1	6.989	6.986	0.003	16962804	0.0951	0.1018	
2	6.863	6.861	0.002	22258984	0.0951	0.0947	
						RPD = 7.25	
12 Picloram							
1	7.280	7.276	0.004	125213128	0.0945	0.1010	
2	7.242	7.239	0.003	222217993	0.0945	0.0993	
						RPD = 1.66	
13 Dinoseb							
1	7.330	7.330	0.000	78998059	0.0954	0.1034	
2	6.954	6.953	0.001	88508832	0.0954	0.0984	
						RPD = 5.00	

Reagents:

8151ICALL7_00062 Amount Added: 10.00 Units: uL

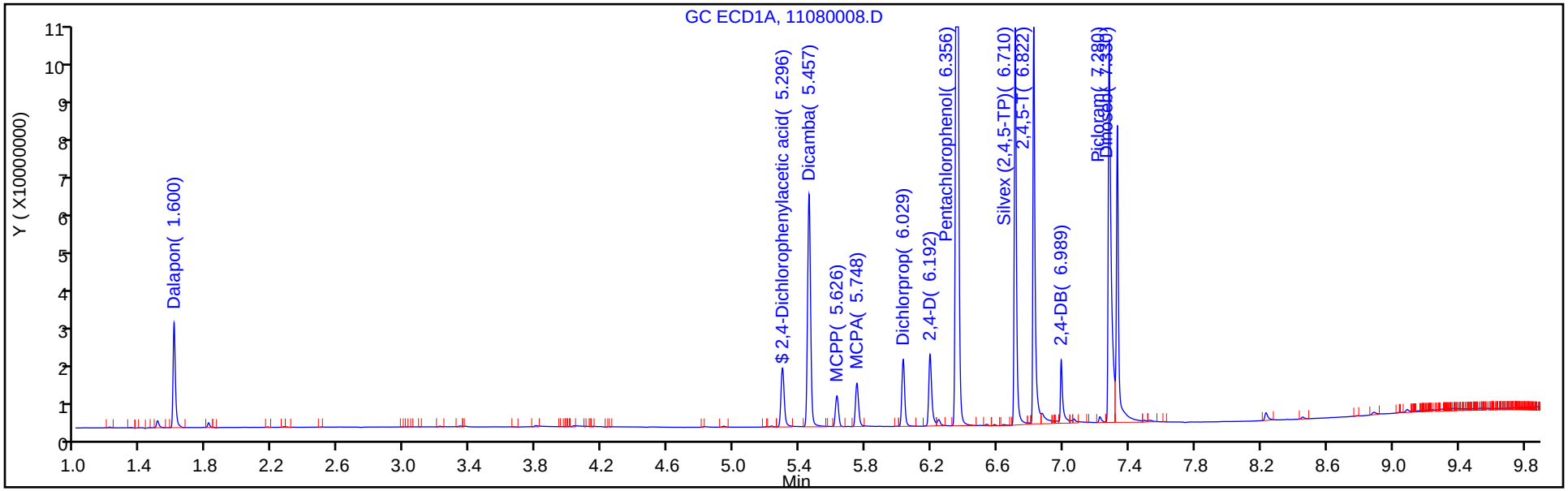
Report Date: 09-Nov-2018 10:25:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

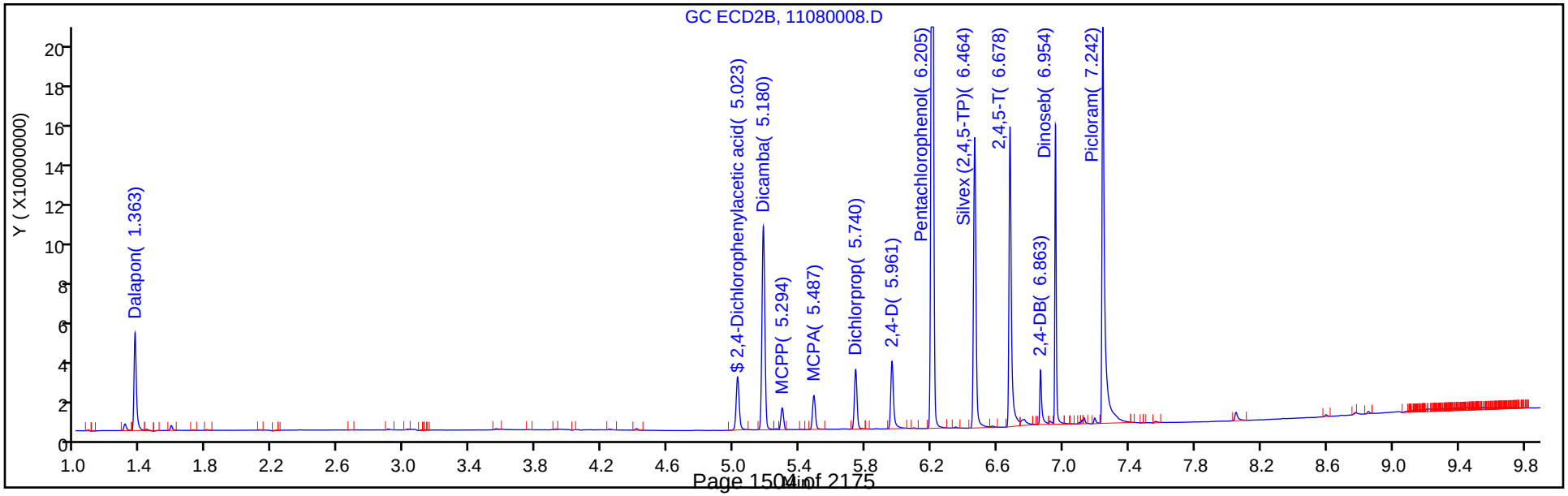
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080008.D

Injection Date:	08-Nov-2018 21:31:44	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD2			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Nov-2018 21:47:57 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 280-0075980-009
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:25 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:07:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.599	1.602	-0.003	15326585	0.0453	0.0442	
2	1.363	1.365	-0.002	27036832	0.0453	0.0443	
						RPD = 0.25	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.294	0.002	12289131	0.0464	0.0435	
2	5.024	5.022	0.002	19665589	0.0464	0.0440	
						RPD = 1.17	
4 Dicamba							
1	5.457	5.456	0.001	44041299	0.0475	0.0452	
2	5.181	5.179	0.002	68177875	0.0475	0.0454	
						RPD = 0.47	
5 MCPP							
1	5.626	5.626	0.000	6341663	4.71	3.37	
2	5.295	5.295	0.000	6806555	4.71	4.49	
						RPD = 28.59	
6 MCPA							
1	5.748	5.747	0.001	9460101	4.70	3.49	
2	5.488	5.487	0.001	12296687	4.70	4.39	
						RPD = 22.83	
7 Dichlorprop							
1	6.029	6.027	0.002	11860668	0.0477	0.0447	
2	5.741	5.738	0.003	18497957	0.0477	0.0447	
						RPD = 0.03	
8 2,4-D							
1	6.193	6.188	0.005	12934188	0.0470	0.0444	
2	5.963	5.957	0.006	21783020	0.0470	0.0441	
						RPD = 0.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.354	0.002	137767155	0.0477	0.0462	
2	6.206	6.204	0.002	209207722	0.0477	0.0456	
9 Silvex (2,4,5-TP)							
1	6.710	6.707	0.003	54043691	0.0480	0.0462	
2	6.464	6.461	0.003	82865563	0.0480	0.0456	
						RPD = 1.17	
10 2,4,5-T							
1	6.824	6.819	0.005	51982051	0.0479	0.0460	
2	6.680	6.675	0.005	81073356	0.0479	0.0458	
						RPD = 0.52	
11 2,4-DB							
1	6.992	6.986	0.006	9486084	0.0476	0.0455	
2	6.866	6.861	0.005	12643456	0.0476	0.0470	
						RPD = 3.19	
12 Picloram							
1	7.284	7.276	0.008	63031701	0.0473	0.0508	
2	7.245	7.239	0.006	118828190	0.0473	0.0458	
						RPD = 10.45	
13 Dinoseb							
1	7.330	7.330	0.000	45138818	0.0477	0.0453	
2	6.955	6.953	0.002	46580950	0.0477	0.0466	
						RPD = 2.68	

Reagents:

8151ICALL7_00062 Amount Added: 5.00 Units: uL

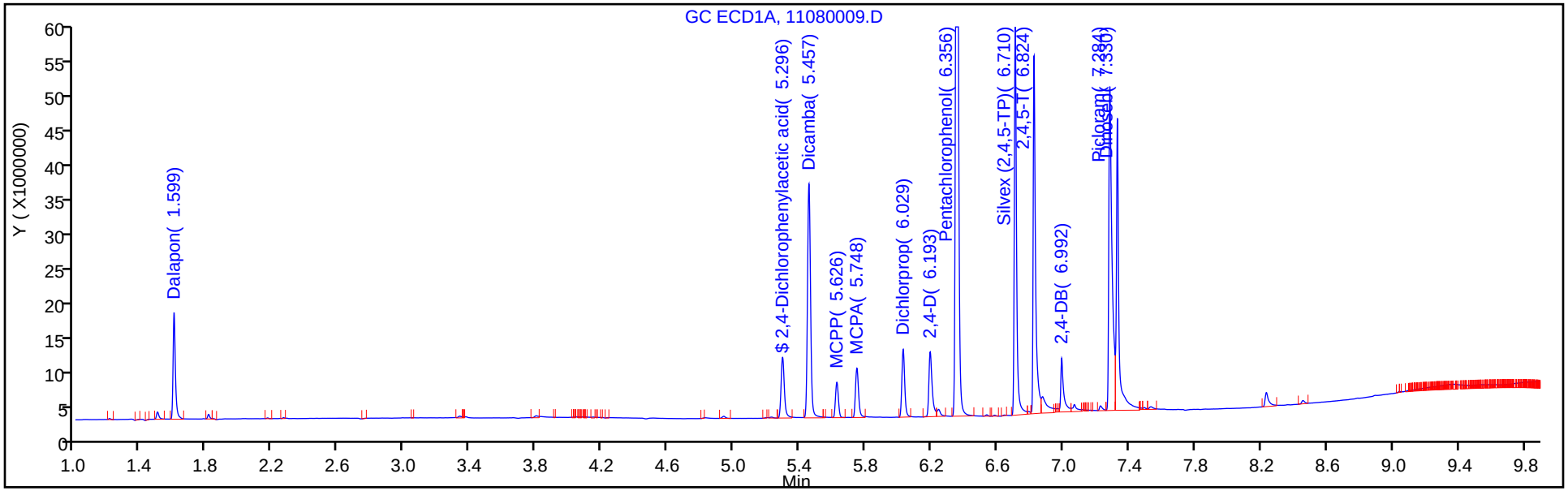
Report Date: 09-Nov-2018 10:25:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

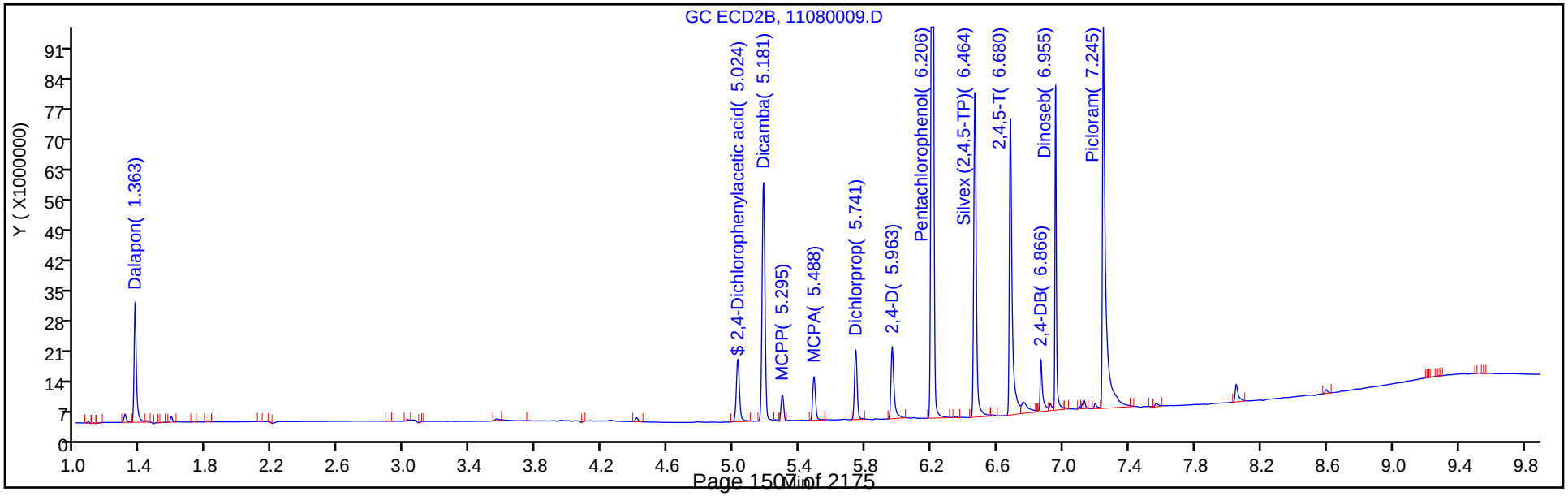
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Injection Date:	08-Nov-2018 21:47:57	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD1			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 436856

SDG No.:

Instrument ID: SGC_M GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/08/2018 20:10 Calibration End Date: 11/08/2018 21:47 Calibration ID: 34238

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-436856/9	11080009.D
Level 2	STD2 280-436856/8	11080008.D
Level 3	STD3 280-436856/7	11080007.D
Level 4	STD4 280-436856/6	11080006.D
Level 5	STD5 280-436856/5	11080005.D
Level 6	STD6 280-436856/4	11080004.D
Level 7	STD7 280-436856/3	11080003.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Dalapon	1.363	1.363	1.364	1.365	1.364	1.363	1.366				1.334 - 1.394	1.364
Dicamba	5.181	5.180	5.180	5.179	5.179	5.179	5.181				5.151 - 5.211	5.180
MCPP	5.295	5.294	5.294	5.295	5.298	5.296	5.303				5.266 - 5.326	5.296
MCPA	5.488	5.487	5.486	5.487	5.490	5.489	5.496				5.459 - 5.519	5.489
Dichlorprop	5.741	5.740	5.739	5.738	5.739	5.737	5.741				5.711 - 5.771	5.739
2,4-D	5.963	5.961	5.958	5.957	5.959	5.956	5.959				5.930 - 5.990	5.959
Pentachlorophenol	6.206	6.205	6.204	6.204	6.206	6.204	6.208				6.107 - 6.307	6.205
Silvex (2,4,5-TP)	6.464	6.464	6.461	6.461	6.463	6.460	6.464				6.434 - 6.494	6.462
2,4,5-T	6.680	6.678	6.675	6.675	6.676	6.674	6.676				6.647 - 6.707	6.676
2,4-DB	6.866	6.863	6.861	6.861	6.861	6.860	6.861				6.831 - 6.891	6.862
Dinoseb	6.955	6.954	6.954	6.953	6.954	6.954	6.955				6.924 - 6.984	6.954
2,4-Dichlorophenylacetic acid	5.024	5.023	5.023	5.022	5.024	5.021	5.023				4.994 - 5.054	5.023

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 436856

SDG No.:

Instrument ID: SGC_M GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/08/2018 20:10 Calibration End Date: 11/08/2018 21:47 Calibration ID: 34238

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-436856/9	11080009.D
Level 2	STD2 280-436856/8	11080008.D
Level 3	STD3 280-436856/7	11080007.D
Level 4	STD4 280-436856/6	11080006.D
Level 5	STD5 280-436856/5	11080005.D
Level 6	STD6 280-436856/4	11080004.D
Level 7	STD7 280-436856/3	11080003.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Dalapon	597268062 468135003	547220092 458722018	501645817 448987687	480987132	Lin2	6653058.94	459656430							0.9990		0.9900
Dicamba	1436457730 1037488671	1312776202 981832672	1191840767 987493336	1114036989	Lin2	21561377.8	1025694486							0.9950		0.9900
MCPP	1444297 996555	1315138 939086	1161950 981906	1080038	Lin2	2351045.42	992903.466							0.9950		0.9900
MCPA	2616778 1427104	2190010 1315288	1776943 1376067	1575347	Lin2	6199199.10	1388009.89							0.9910		0.9900
Dichlorprop	388143671 256109620	350755715 236476087	310330685 243434885	282393384	Lin2	7144743.30	253793171							0.9910		0.9900
2,4-D	463320642 321548090	431478018 299920659	388514865 307945755	357157203	Lin2	7567291.29	322480658							0.9900		0.9900
Pentachlorophenol	4382460791 3226292328	4060039214 2995403872	3744240017 3082407993	3538227722	Lin2	62977223.0	3209649637							0.9930		0.9900
Silvex (2,4,5-TP)	1726365896 1231837203	1592369594 1127968956	1449411708 1203972381	1376657994	Lin2	26574738.8	1233371234							0.9920		0.9900
2,4,5-T	1693615124 1252245686	1567593461 1159251434	1552511657 1256486654	1409440374	Lin2	22292013.2	1283850378							0.9900		0.9900
2,4-DB	265856195 197501983	234021805 185936411	227276396 204142314	226096553	Lin2	3160356.56	201685907							0.9950		0.9900
Dinoseb	976283993 794388373	927522473 742699234	870902321 808008498	908620049	Lin2	8885696.98	809545757							0.9950		0.9900
2,4-Dichlorophenylacetic acid	423827349 271486430	370139838 256148355	324662526 254429630	293044017	Lin2	7958734.06	265813551							0.9940		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-2 Analy Batch No.: 436856

SDG No.:

Instrument ID: SGC_M GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/08/2018 20:10 Calibration End Date: 11/08/2018 21:47 Calibration ID: 34238

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-436856/9	11080009.D
Level 2	STD2 280-436856/8	11080008.D
Level 3	STD3 280-436856/7	11080007.D
Level 4	STD4 280-436856/6	11080006.D
Level 5	STD5 280-436856/5	11080005.D
Level 6	STD6 280-436856/4	11080004.D
Level 7	STD7 280-436856/3	11080003.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dalapon	Lin2	27036832 415303979	49542571 812982004	113541260	217730850	317869519	0.0453 0.905	0.0905 1.81	0.226	0.453	0.679
Dicamba	Lin2	68177875 932004664	124615281 1874756098	282838712	528749806	738627091	0.0475 0.949	0.0949 1.90	0.237	0.475	0.712
MCPP	Lin2	6806555 88512812	12395727 185097510	27379667	50899046	70447115	4.71 94.3	9.43 189	23.6	47.1	70.7
MCPA	Lin2	12296687 123615265	20582458 258655000	41750796	74028215	100593063	4.70 94.0	9.40 188	23.5	47.0	70.5
Dichlorprop	Lin2	18497957 225397182	33432281 464059922	73947923	134581627	183083163	0.0477 0.953	0.0953 1.91	0.238	0.477	0.715
2,4-D	Lin2	21783020 282015396	40571878 579122786	91330132	167917459	226763752	0.0470 0.940	0.0940 1.88	0.235	0.470	0.705
Pentachlorophenol	Lin2	209207722 2859861847	387632244 5885858062	893703289	1689061459	2310226950	0.0477 0.955	0.0955 1.91	0.239	0.477	0.716
Silvex (2,4,5-TP)	Lin2	82865563 1082850198	152867481 2311626971	347858810	660795837	886922786	0.0480 0.960	0.0960 1.92	0.240	0.480	0.720
2,4,5-T	Lin2	81073356 1109867323	150081398 2405920646	371593665	674699107	899175015	0.0479 0.957	0.0957 1.91	0.239	0.479	0.718
2,4-DB	Lin2	12643456 176853417	22258984 388339924	54043486	107525868	140890508	0.0476 0.951	0.0951 1.90	0.238	0.476	0.713
Dinoseb	Lin2	46580950 708720744	88508832 1542084218	207764635	433525341	568533829	0.0477 0.954	0.0954 1.91	0.239	0.477	0.716
2,4-Dichlorophenylacetic acid	Lin2	19665589 237705673	34348977 472221393	75321706	135972424	188954555	0.0464 0.928	0.0928 1.86	0.232	0.464	0.696

Curve Type Legend:
Lin2 = Linear 1/conc^2

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080003.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Nov-2018 20:10:50 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD7
Misc. Info.: 280-0075980-003
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:14 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	461124999	1.81	1.74	
2	1.366	1.364	0.002	812982004	1.81	1.75	
						RPD = 0.78	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.296	-0.001	300324014	1.86	1.70	
2	5.023	5.024	-0.001	472221393	1.86	1.75	
						RPD = 2.56	
4 Dicamba							
1	5.457	5.457	0.000	1195445518	1.90	1.81	
2	5.181	5.181	0.000	1874756098	1.90	1.81	
						RPD = 0.38	
5 MCPP							
1	5.632	5.627	0.005	126631738	188.5	183.3	
2	5.303	5.296	0.007	185097510	188.5	184.1	
						RPD = 0.43	
6 MCPA							
1	5.755	5.749	0.006	173022797	188.0	184.0	
2	5.496	5.489	0.007	258655000	188.0	181.9	
						RPD = 1.16	
7 Dichlorprop							
1	6.027	6.029	-0.002	302575269	1.91	1.78	
2	5.741	5.741	0.000	464059922	1.91	1.80	
						RPD = 0.88	
8 2,4-D							
1	6.188	6.191	-0.003	362171608	1.88	1.78	
2	5.959	5.960	-0.001	579122786	1.88	1.77	
						RPD = 0.22	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	4164260000	1.91	1.91	
2	6.208	6.207	0.001	5885858062	1.91	1.81	
9 Silvex (2,4,5-TP)							
1	6.709	6.709	0.000	1568605132	1.92	1.92	
2	6.464	6.464	0.000	2311626971	1.92	1.85	
						RPD = 3.45	
10 2,4,5-T							
1	6.821	6.821	0.000	1575789119	1.91	1.88	
2	6.676	6.677	-0.001	2405920646	1.91	1.86	
						RPD = 1.20	
11 2,4-DB							
1	6.986	6.986	0.000	254034643	1.90	1.89	
2	6.861	6.861	0.000	388339924	1.90	1.91	
						RPD = 1.24	
12 Picloram							
1	7.276	7.276	0.000	2353516468	1.89	1.90	
2	7.240	7.239	0.001	3575827736	1.89	1.84	
						RPD = 3.35	
13 Dinoseb							
1	7.331	7.331	0.000	1106230204	1.91	1.87	
2	6.955	6.954	0.001	1542084218	1.91	1.89	
						RPD = 1.54	

Reagents:

8151ICALL7_00062 Amount Added: 200.00 Units: uL

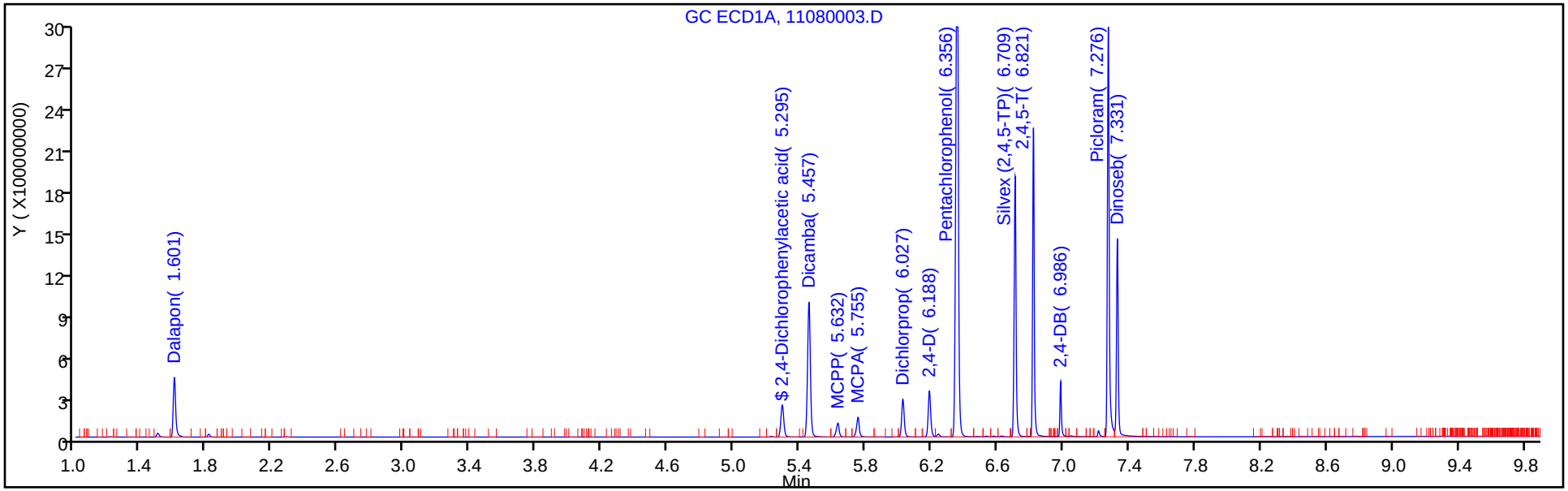
Report Date: 09-Nov-2018 10:25:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

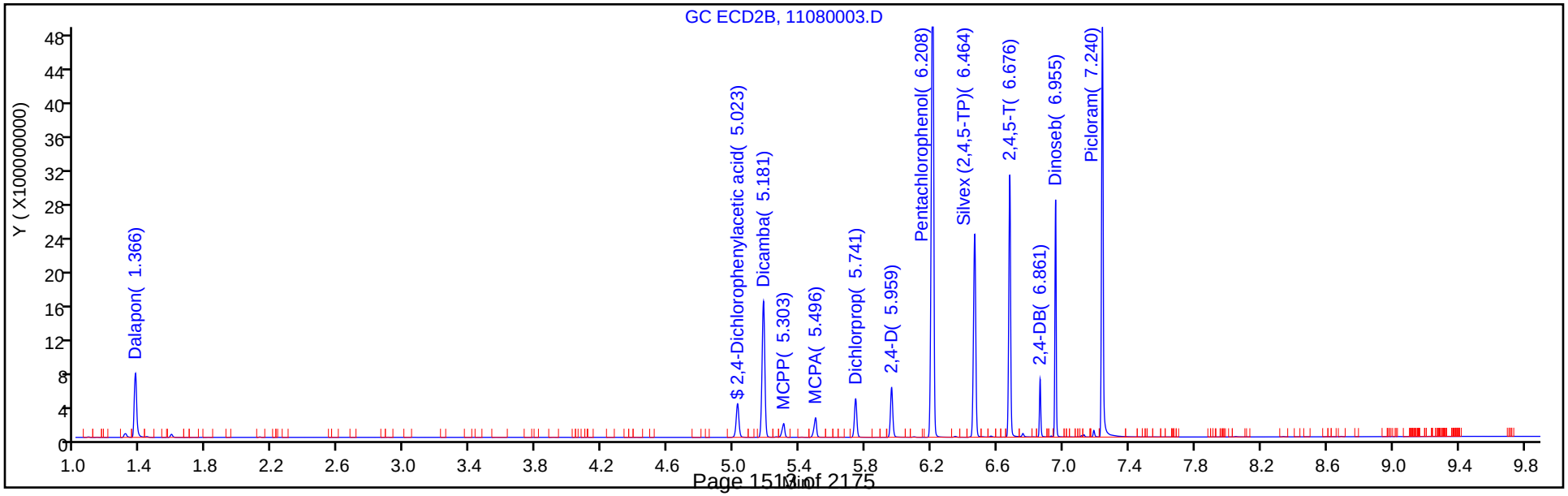
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080003.D

Injection Date:	08-Nov-2018 20:10:50	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD7			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080004.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Nov-2018 20:26:59 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6
Misc. Info.: 280-0075980-004
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:16 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.600	1.601	-0.001	236612793	0.9054	0.8862	
2	1.363	1.364	-0.001	415303979	0.9054	0.8890	
						RPD = 0.32	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.296	-0.002	153309295	0.9280	0.8557	
2	5.021	5.024	-0.003	237705673	0.9280	0.8643	
						RPD = 1.00	
4 Dicamba							
1	5.455	5.457	-0.002	587080760	0.9493	0.8793	
2	5.179	5.181	-0.002	932004664	0.9493	0.8876	
						RPD = 0.94	
5 MCPP							
1	5.627	5.627	0.000	64156715	94.3	89.8	
2	5.296	5.296	0.000	88512812	94.3	86.8	
						RPD = 3.45	
6 MCPA							
1	5.749	5.749	0.000	87084448	94.0	89.2	
2	5.489	5.489	0.000	123615265	94.0	84.6	
						RPD = 5.26	
7 Dichlorprop							
1	6.025	6.029	-0.004	148391318	0.9532	0.8618	
2	5.737	5.741	-0.004	225397182	0.9532	0.8600	
						RPD = 0.21	
8 2,4-D							
1	6.187	6.191	-0.004	175470017	0.9403	0.8504	
2	5.956	5.960	-0.004	282015396	0.9403	0.8511	
						RPD = 0.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.354	6.356	-0.003	1929177327	0.9548	0.8747	
2	6.204	6.207	-0.003	2859861847	0.9548	0.8714	
9 Silvex (2,4,5-TP)							
1	6.707	6.709	-0.002	712763705	0.9600	0.8602	
2	6.460	6.464	-0.004	1082850198	0.9600	0.8564	
						RPD = 0.44	
10 2,4,5-T							
1	6.819	6.821	-0.002	720059172	0.9574	0.8497	
2	6.674	6.677	-0.003	1109867323	0.9574	0.8471	
						RPD = 0.30	
11 2,4-DB							
1	6.985	6.986	-0.001	116889169	0.9512	0.8539	
2	6.860	6.861	-0.001	176853417	0.9512	0.8612	
						RPD = 0.85	
12 Picloram							
1	7.275	7.276	-0.001	1054022797	0.9451	0.8499	
2	7.239	7.239	0.000	1727926386	0.9451	0.8787	
						RPD = 3.34	
13 Dinoseb							
1	7.330	7.331	-0.001	512659271	0.9543	0.8471	
2	6.954	6.954	0.000	708720744	0.9543	0.8645	
						RPD = 2.03	

Reagents:

8151ICALL7_00062 Amount Added: 100.00 Units: uL

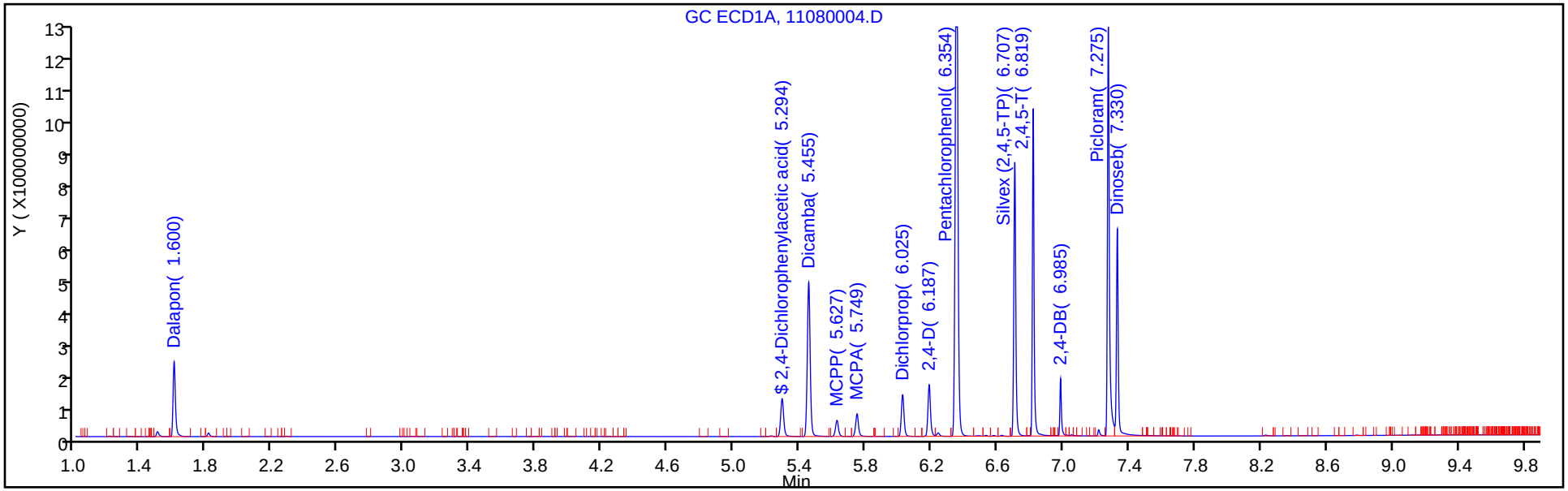
Report Date: 09-Nov-2018 10:25:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

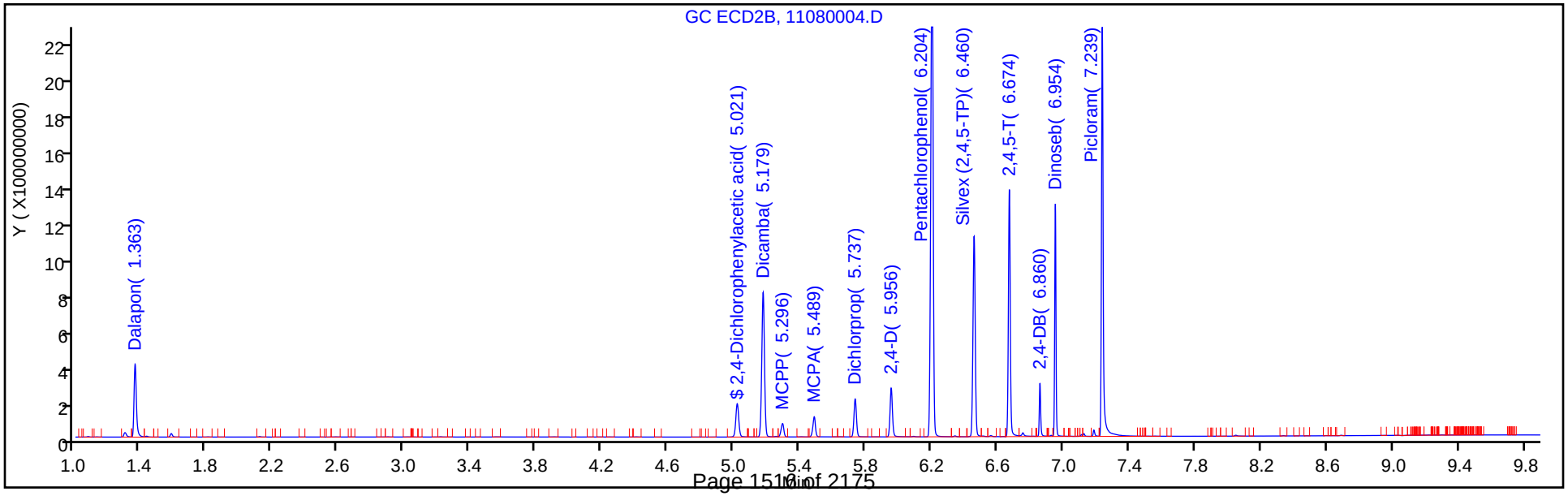
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080004.D

Injection Date:	08-Nov-2018 20:26:59	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD6			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080005.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Nov-2018 20:43:07 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 280-0075980-005
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:17 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	181032073	0.6790	0.6747	
2	1.364	1.364	0.000	317869519	0.6790	0.6771	
						RPD = 0.34	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.296	-0.002	123204318	0.6960	0.6823	
2	5.024	5.024	0.000	188954555	0.6960	0.6809	
						RPD = 0.21	
4 Dicamba							
1	5.456	5.457	-0.001	469112708	0.7119	0.6981	
2	5.179	5.181	-0.002	738627091	0.7119	0.6991	
						RPD = 0.14	
5 MCPP							
1	5.628	5.627	0.001	52432443	70.7	72.3	
2	5.298	5.296	0.002	70447115	70.7	68.6	
						RPD = 5.27	
6 MCPA							
1	5.749	5.749	0.000	71286553	70.5	71.7	
2	5.490	5.489	0.001	100593063	70.5	68.0	
						RPD = 5.32	
7 Dichlorprop							
1	6.027	6.029	-0.002	120673761	0.7149	0.6959	
2	5.739	5.741	-0.002	183083163	0.7149	0.6932	
						RPD = 0.39	
8 2,4-D							
1	6.189	6.191	-0.002	142033839	0.7052	0.6846	
2	5.959	5.960	-0.001	226763752	0.7052	0.6797	
						RPD = 0.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.355	6.356	-0.001	1544775840	0.7161	0.6969	
2	6.206	6.207	-0.001	2310226950	0.7161	0.7002	
9 Silvex (2,4,5-TP)							
1	6.709	6.709	0.000	578159961	0.7200	0.6939	
2	6.463	6.464	-0.001	886922786	0.7200	0.6976	
						RPD = 0.53	
10 2,4,5-T							
1	6.819	6.821	-0.002	583435179	0.7181	0.6853	
2	6.676	6.677	-0.001	899175015	0.7181	0.6830	
						RPD = 0.34	
11 2,4-DB							
1	6.985	6.986	-0.001	94598453	0.7134	0.6862	
2	6.861	6.861	0.000	140890508	0.7134	0.6829	
						RPD = 0.48	
12 Picloram							
1	7.275	7.276	-0.001	811328012	0.7088	0.6542	
2	7.239	7.239	0.000	1348168713	0.7088	0.6821	
						RPD = 4.18	
13 Dinoseb							
1	7.329	7.331	-0.002	420150896	0.7157	0.6884	
2	6.954	6.954	0.000	568533829	0.7157	0.6913	
						RPD = 0.41	

Reagents:

8151ICALL7_00062 Amount Added: 75.00 Units: uL

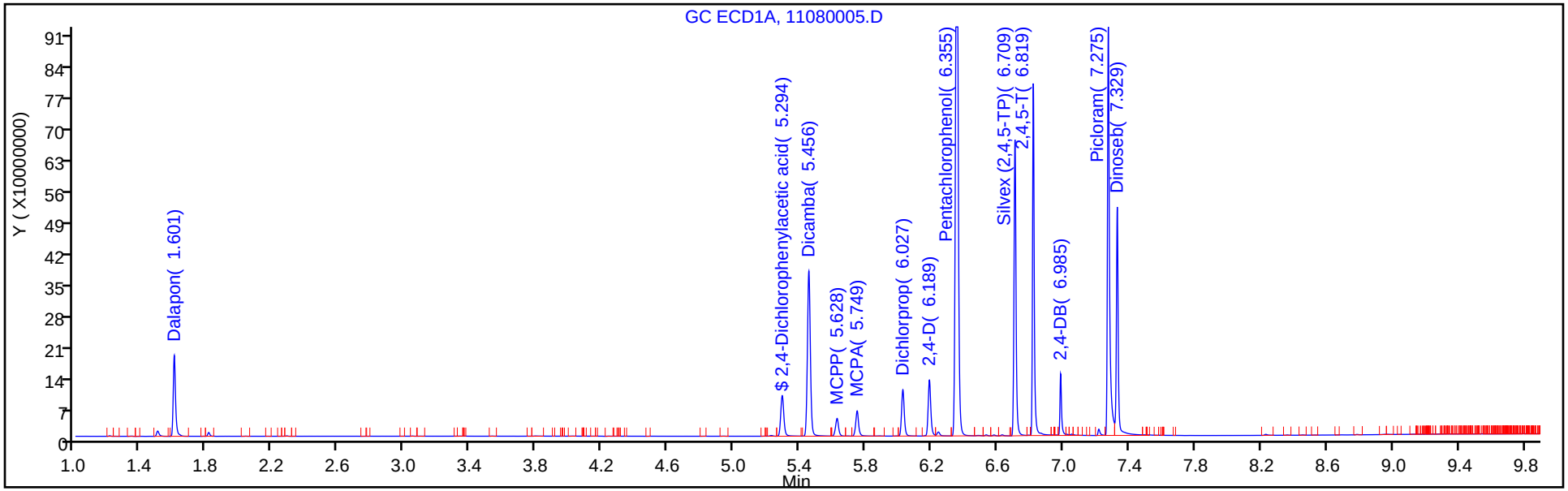
Report Date: 09-Nov-2018 10:25:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

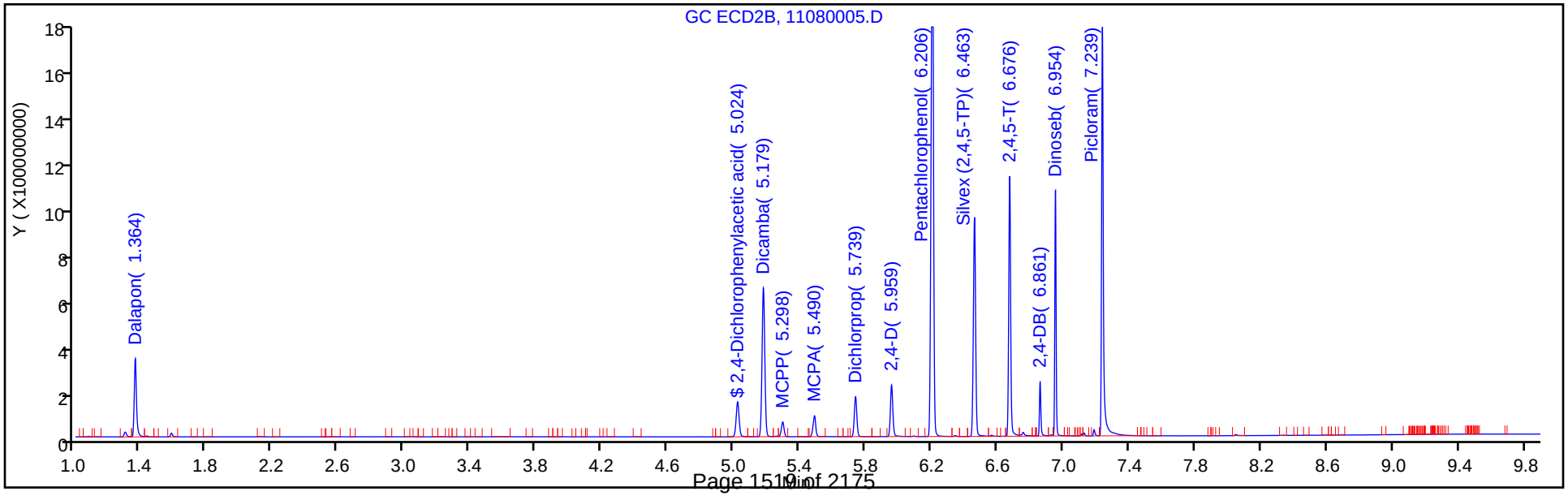
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080005.D

Injection Date:	08-Nov-2018 20:43:07	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD5			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080006.D
Lims ID: STD4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 08-Nov-2018 20:59:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Misc. Info.: 280-0075980-006
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:19 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:05:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.602	1.602	0.000	124794623	0.4527	0.4608	
2	1.365	1.365	0.000	217730850	0.4527	0.4592	
						RPD = 0.34	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.294	0.000	89456007	0.4640	0.4880	
2	5.022	5.022	0.000	135972424	0.4640	0.4816	
						RPD = 1.32	
4 Dicamba							
1	5.456	5.456	0.000	336120593	0.4746	0.4939	
2	5.179	5.179	0.000	528749806	0.4746	0.4945	
						RPD = 0.13	
5 MCPP							
1	5.626	5.626	0.000	38940739	47.1	52.1	
2	5.295	5.295	0.000	50899046	47.1	48.9	
						RPD = 6.38	
6 MCPA							
1	5.747	5.747	0.000	53181506	47.0	51.7	
2	5.487	5.487	0.000	74028215	47.0	48.9	
						RPD = 5.72	
7 Dichlorprop							
1	6.027	6.027	0.000	88669136	0.4766	0.5044	
2	5.738	5.738	0.000	134581627	0.4766	0.5021	
						RPD = 0.45	
8 2,4-D							
1	6.188	6.188	0.000	104487886	0.4702	0.4984	
2	5.957	5.957	0.000	167917459	0.4702	0.4972	
						RPD = 0.23	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.354	6.354	0.000	1114251749	0.4774	0.4978	
2	6.204	6.204	0.000	1689061459	0.4774	0.5066	
9 Silvex (2,4,5-TP)							
1	6.707	6.707	0.000	429136718	0.4800	0.5097	
2	6.461	6.461	0.000	660795837	0.4800	0.5142	
						RPD = 0.88	
10 2,4,5-T							
1	6.819	6.819	0.000	438837164	0.4787	0.5114	
2	6.675	6.675	0.000	674699107	0.4787	0.5082	
						RPD = 0.63	
11 2,4-DB							
1	6.986	6.986	0.000	72421779	0.4756	0.5192	
2	6.861	6.861	0.000	107525868	0.4756	0.5175	
						RPD = 0.34	
12 Picloram							
1	7.276	7.276	0.000	616177704	0.4726	0.4968	
2	7.239	7.239	0.000	1042149923	0.4726	0.5237	
						RPD = 5.27	
13 Dinoseb							
1	7.330	7.330	0.000	327807230	0.4771	0.5301	
2	6.953	6.953	0.000	433525341	0.4771	0.5245	
						RPD = 1.05	

Reagents:

8151ICALL7_00062 Amount Added: 50.00 Units: uL

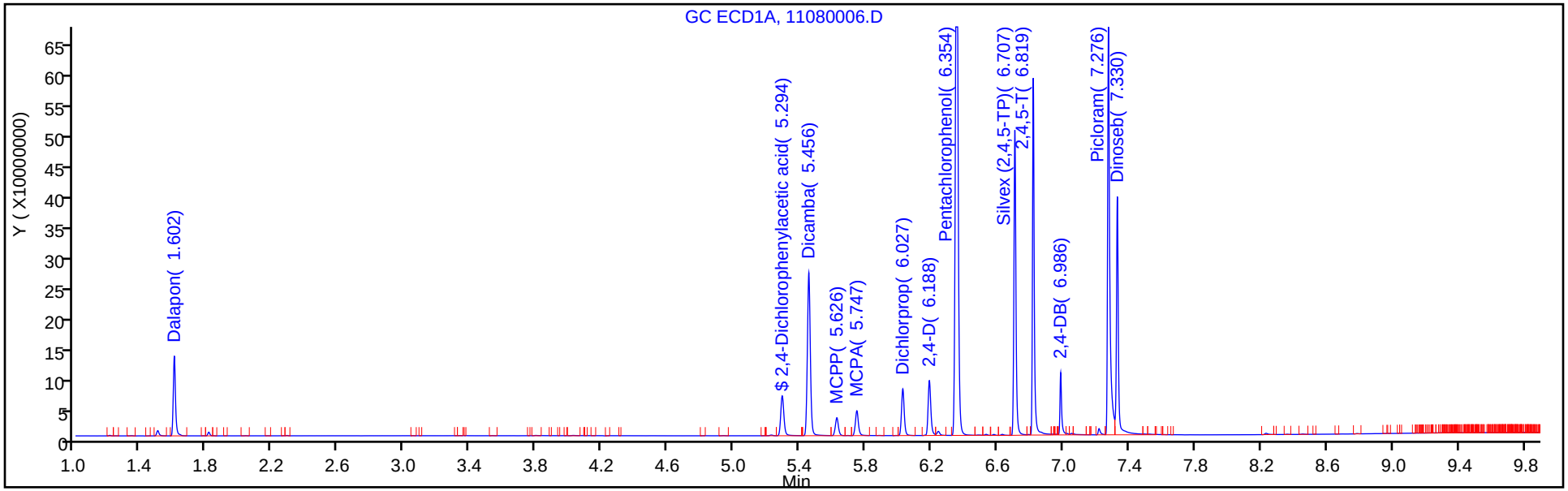
Report Date: 09-Nov-2018 10:25:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

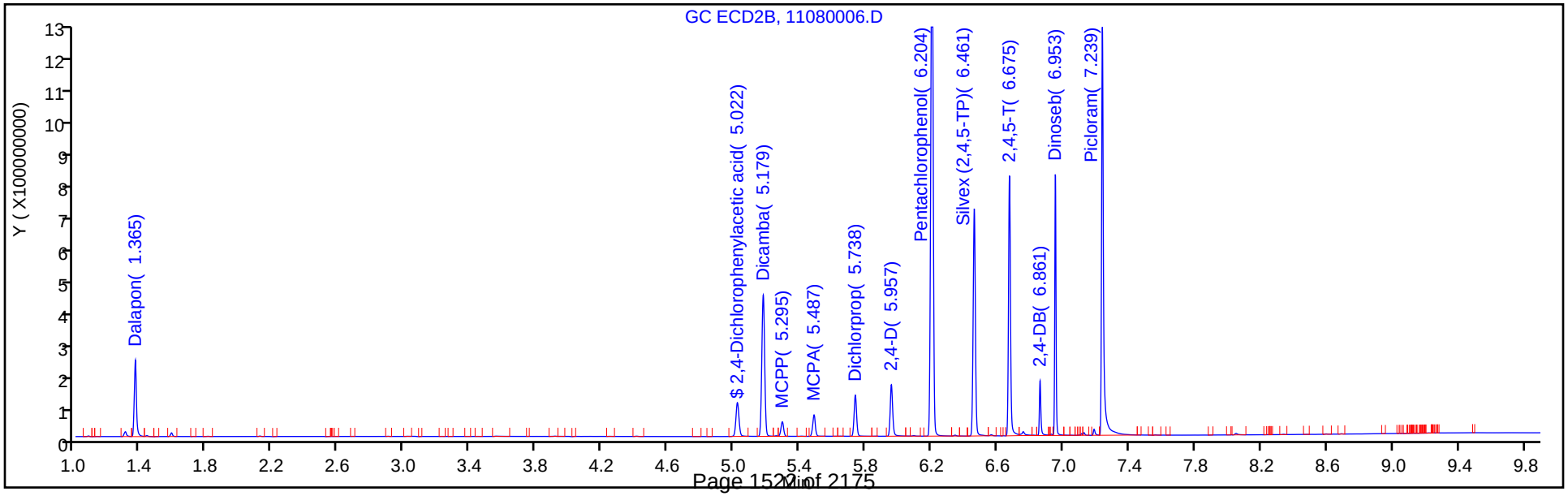
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080006.D

Injection Date:	08-Nov-2018 20:59:25	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD4			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080007.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Nov-2018 21:15:33 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Misc. Info.: 280-0075980-007
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:21 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:06:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.602	-0.001	65585228	0.2263	0.2355	
2	1.364	1.365	-0.001	113541260	0.2263	0.2325	
						RPD = 1.25	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.294	0.001	49209552	0.2320	0.2562	
2	5.023	5.022	0.001	75321706	0.2320	0.2534	
						RPD = 1.08	
4 Dicamba							
1	5.456	5.456	0.000	181002459	0.2373	0.2556	
2	5.180	5.179	0.001	282838712	0.2373	0.2547	
						RPD = 0.34	
5 MCPP							
1	5.625	5.626	-0.001	22349753	23.6	27.3	
2	5.294	5.295	-0.001	27379667	23.6	25.2	
						RPD = 7.99	
6 MCPA							
1	5.748	5.747	0.001	30637436	23.5	26.9	
2	5.486	5.487	-0.001	41750796	23.5	25.6	
						RPD = 4.77	
7 Dichlorprop							
1	6.027	6.027	0.000	48292380	0.2383	0.2628	
2	5.739	5.738	0.001	73947923	0.2383	0.2632	
						RPD = 0.18	
8 2,4-D							
1	6.189	6.188	0.001	56136352	0.2351	0.2586	
2	5.958	5.957	0.001	91330132	0.2351	0.2597	
						RPD = 0.43	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.354	6.354	-0.001	582394312	0.2387	0.2518	
2	6.204	6.204	0.000	893703289	0.2387	0.2588	
9 Silvex (2,4,5-TP)							
1	6.708	6.707	0.001	223413878	0.2400	0.2555	
2	6.461	6.461	0.000	347858810	0.2400	0.2605	
						RPD = 1.94	
10 2,4,5-T							
1	6.819	6.819	0.000	234301670	0.2394	0.2653	
2	6.675	6.675	0.000	371593665	0.2394	0.2721	
						RPD = 2.50	
11 2,4-DB							
1	6.986	6.986	0.000	35937276	0.2378	0.2446	
2	6.861	6.861	0.000	54043486	0.2378	0.2523	
						RPD = 3.08	
12 Picloram							
1	7.277	7.276	0.001	286815470	0.2363	0.2313	
2	7.240	7.239	0.001	491135777	0.2363	0.2385	
						RPD = 3.08	
13 Dinoseb							
1	7.329	7.330	-0.001	161764983	0.2386	0.2453	
2	6.954	6.953	0.001	207764635	0.2386	0.2457	
						RPD = 0.13	

Reagents:

8151ICALL7_00062 Amount Added: 25.00 Units: uL

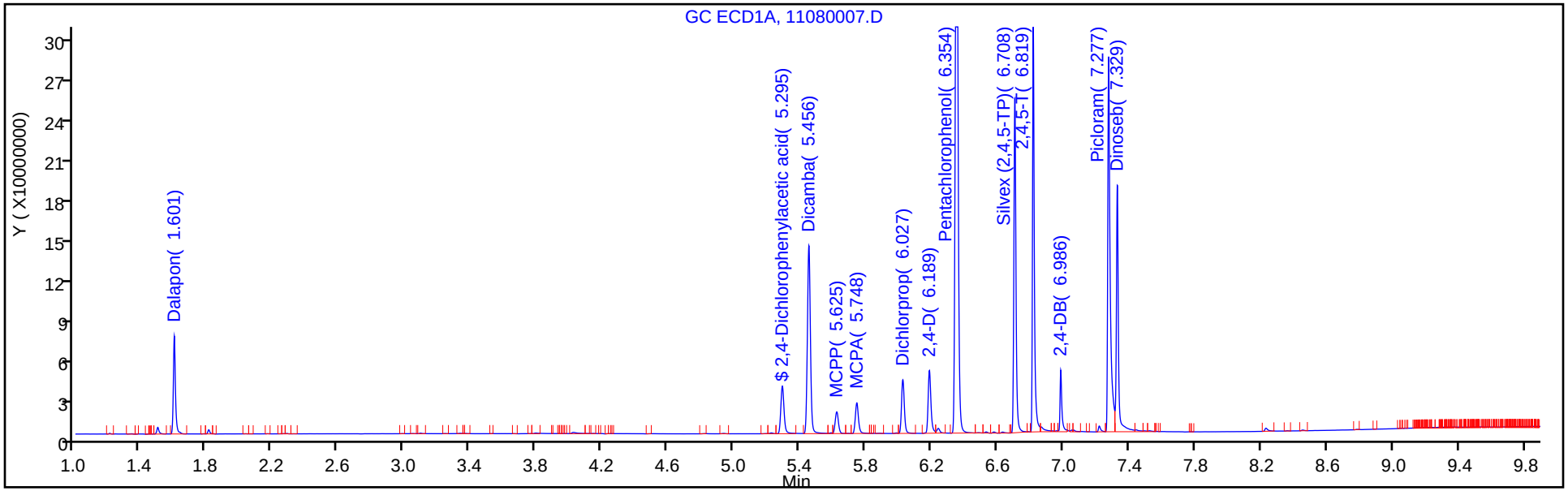
Report Date: 09-Nov-2018 10:25:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

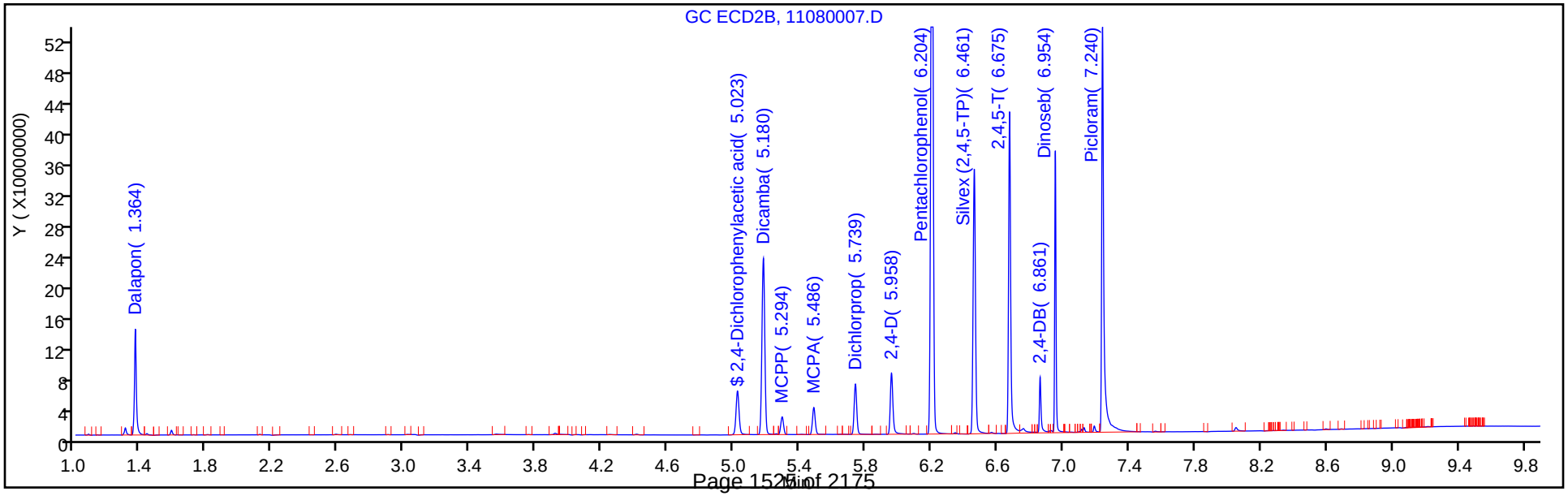
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080007.D

Injection Date:	08-Nov-2018 21:15:33	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD3			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080008.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Nov-2018 21:31:44 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 280-0075980-008
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:23 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:07:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.600	1.602	-0.002	28226610	0.0905	0.0933	
2	1.363	1.365	-0.002	49542571	0.0905	0.0933	
						RPD = 0.01	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.294	0.002	22233612	0.0928	0.1008	
2	5.023	5.022	0.001	34348977	0.0928	0.0993	
						RPD = 1.52	
4 Dicamba							
1	5.457	5.456	0.001	80537731	0.0949	0.1013	
2	5.180	5.179	0.001	124615281	0.0949	0.1005	
						RPD = 0.81	
5 MCPP							
1	5.626	5.626	0.000	10857169	9.43	10.1	
2	5.294	5.295	-0.001	12395727	9.43	10.1	
						RPD = 0.01	
6 MCPA							
1	5.748	5.747	0.001	15381766	9.40	10.0	
2	5.487	5.487	0.000	20582458	9.40	10.4	
						RPD = 3.28	
7 Dichlorprop							
1	6.029	6.027	0.002	21695619	0.0953	0.1036	
2	5.740	5.738	0.002	33432281	0.0953	0.1036	
						RPD = 0.00	
8 2,4-D							
1	6.192	6.188	0.004	24383580	0.0940	0.1012	
2	5.961	5.957	0.004	40571878	0.0940	0.1023	
						RPD = 1.16	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.354	0.002	253708368	0.0955	0.0998	
2	6.205	6.204	0.001	387632244	0.0955	0.1011	
9 Silvex (2,4,5-TP)							
1	6.710	6.707	0.003	98479960	0.0960	0.1011	
2	6.464	6.461	0.003	152867481	0.0960	0.1024	
						RPD = 1.28	
10 2,4,5-T							
1	6.822	6.819	0.003	96365396	0.0957	0.0994	
2	6.678	6.675	0.003	150081398	0.0957	0.0995	
						RPD = 0.12	
11 2,4-DB							
1	6.989	6.986	0.003	16962804	0.0951	0.1018	
2	6.863	6.861	0.002	22258984	0.0951	0.0947	
						RPD = 7.25	
12 Picloram							
1	7.280	7.276	0.004	125213128	0.0945	0.1010	
2	7.242	7.239	0.003	222217993	0.0945	0.0993	
						RPD = 1.66	
13 Dinoseb							
1	7.330	7.330	0.000	78998059	0.0954	0.1034	
2	6.954	6.953	0.001	88508832	0.0954	0.0984	
						RPD = 5.00	

Reagents:

8151ICALL7_00062 Amount Added: 10.00 Units: uL

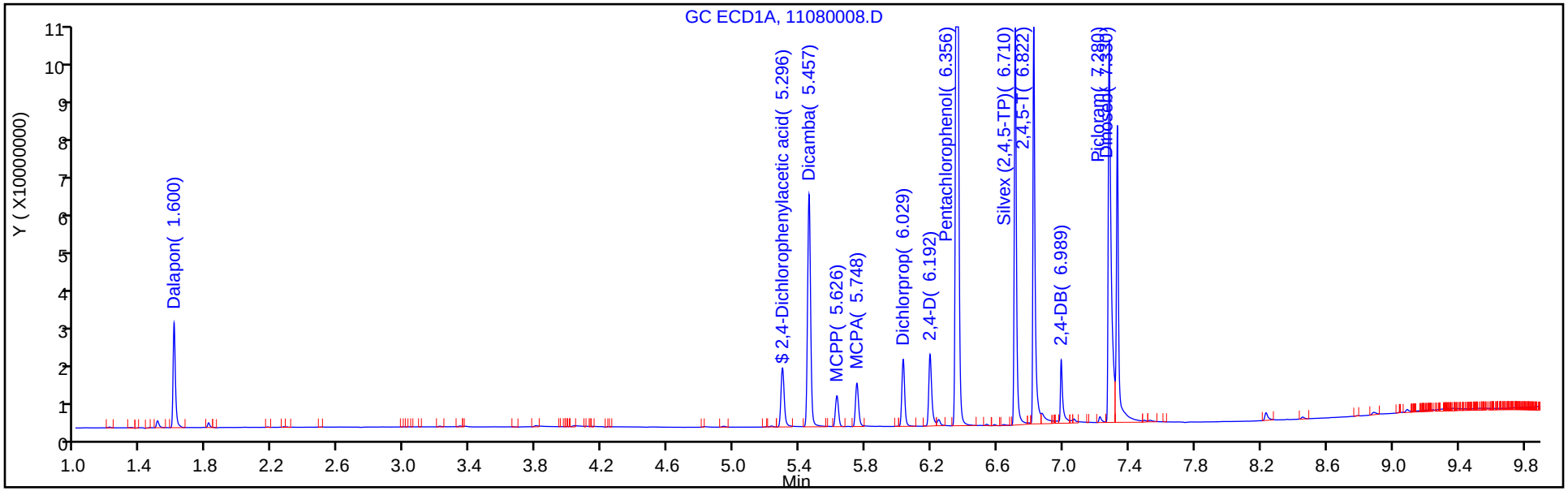
Report Date: 09-Nov-2018 10:25:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

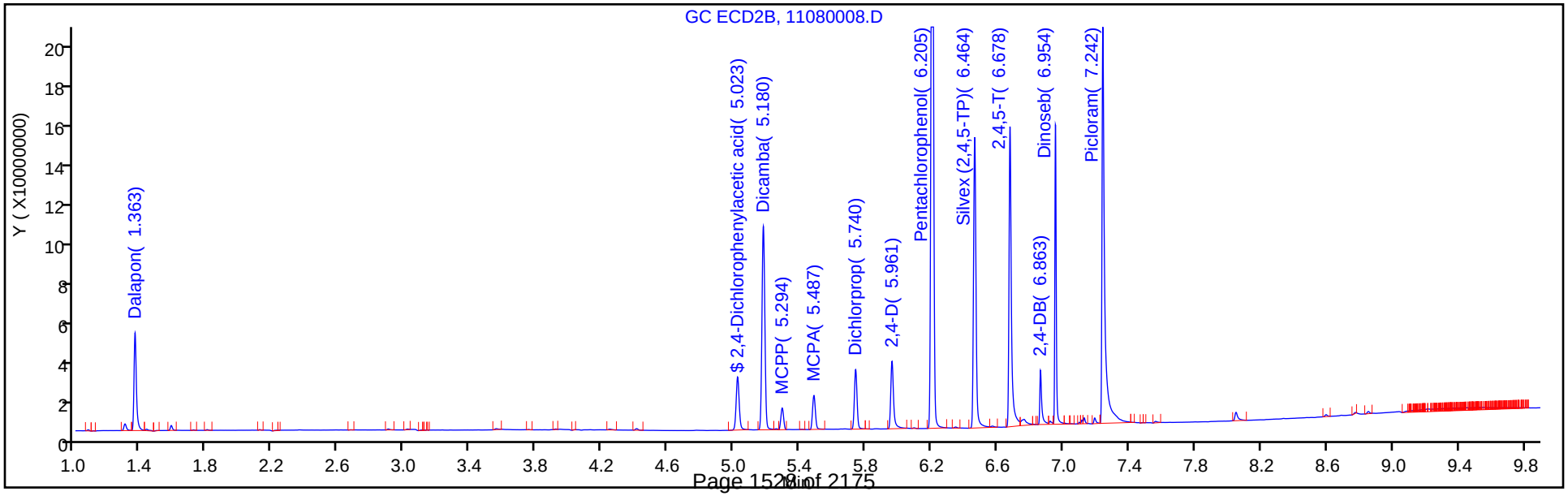
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080008.D

Injection Date:	08-Nov-2018 21:31:44	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD2			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Nov-2018 21:47:57 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 280-0075980-009
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:25:25 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:07:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.599	1.602	-0.003	15326585	0.0453	0.0442	
2	1.363	1.365	-0.002	27036832	0.0453	0.0443	
						RPD = 0.25	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.294	0.002	12289131	0.0464	0.0435	
2	5.024	5.022	0.002	19665589	0.0464	0.0440	
						RPD = 1.17	
4 Dicamba							
1	5.457	5.456	0.001	44041299	0.0475	0.0452	
2	5.181	5.179	0.002	68177875	0.0475	0.0454	
						RPD = 0.47	
5 MCPP							
1	5.626	5.626	0.000	6341663	4.71	3.37	
2	5.295	5.295	0.000	6806555	4.71	4.49	
						RPD = 28.59	
6 MCPA							
1	5.748	5.747	0.001	9460101	4.70	3.49	
2	5.488	5.487	0.001	12296687	4.70	4.39	
						RPD = 22.83	
7 Dichlorprop							
1	6.029	6.027	0.002	11860668	0.0477	0.0447	
2	5.741	5.738	0.003	18497957	0.0477	0.0447	
						RPD = 0.03	
8 2,4-D							
1	6.193	6.188	0.005	12934188	0.0470	0.0444	
2	5.963	5.957	0.006	21783020	0.0470	0.0441	
						RPD = 0.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.354	0.002	137767155	0.0477	0.0462	
2	6.206	6.204	0.002	209207722	0.0477	0.0456	
9 Silvex (2,4,5-TP)							
1	6.710	6.707	0.003	54043691	0.0480	0.0462	
2	6.464	6.461	0.003	82865563	0.0480	0.0456	
						RPD = 1.17	
10 2,4,5-T							
1	6.824	6.819	0.005	51982051	0.0479	0.0460	
2	6.680	6.675	0.005	81073356	0.0479	0.0458	
						RPD = 0.52	
11 2,4-DB							
1	6.992	6.986	0.006	9486084	0.0476	0.0455	
2	6.866	6.861	0.005	12643456	0.0476	0.0470	
						RPD = 3.19	
12 Picloram							
1	7.284	7.276	0.008	63031701	0.0473	0.0508	
2	7.245	7.239	0.006	118828190	0.0473	0.0458	
						RPD = 10.45	
13 Dinoseb							
1	7.330	7.330	0.000	45138818	0.0477	0.0453	
2	6.955	6.953	0.002	46580950	0.0477	0.0466	
						RPD = 2.68	

Reagents:

8151ICALL7_00062 Amount Added: 5.00 Units: uL

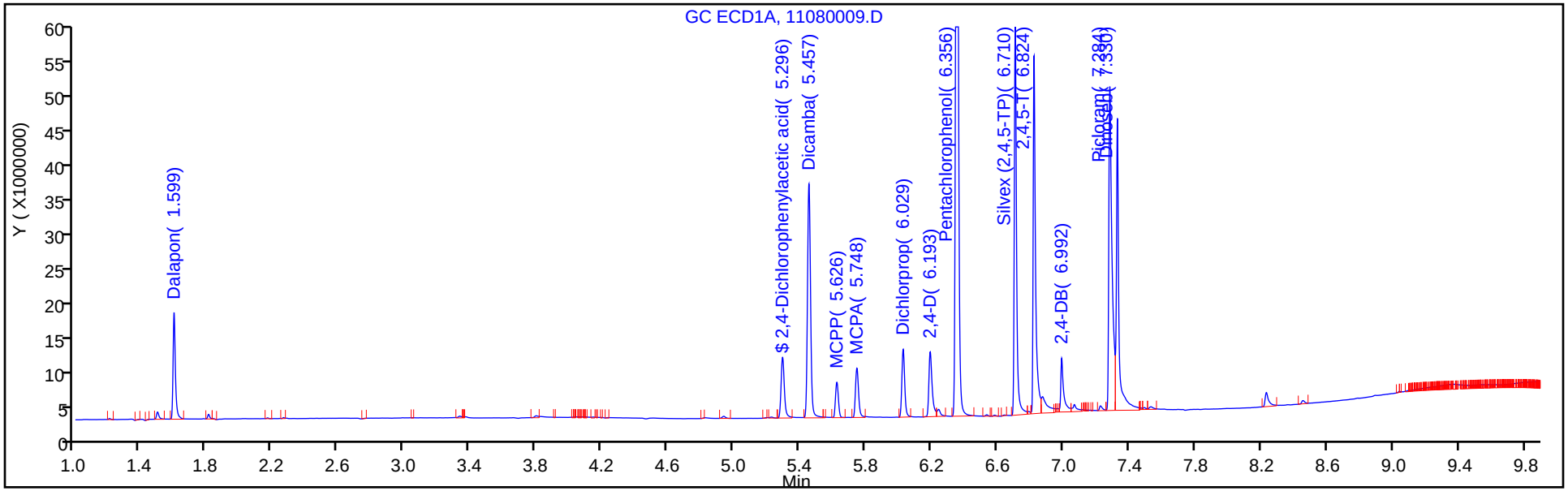
Report Date: 09-Nov-2018 10:25:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

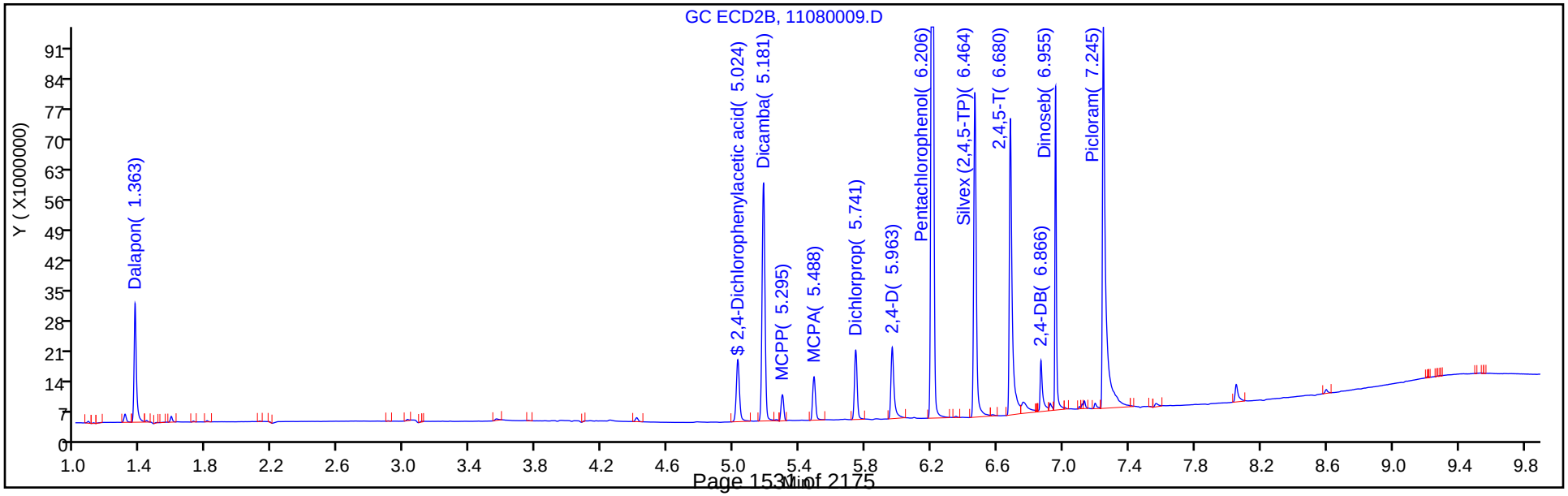
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Injection Date:	08-Nov-2018 21:47:57	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	STD1			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-436856/10 Calibration Date: 11/08/2018 22:04

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11080010.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		279450481		0.349	0.341	2.2	20.0
Dicamba	Lin2		655660568		0.333	0.353	-5.6	20.0
MCPP	Lin1		812399		36.6	35.2	4.1	20.0
MCPA	Lin1		1127865		36.7	35.0	4.7	20.0
Dichlorprop	Lin2		171274690		0.336	0.354	-4.9	20.0
2,4-D	Lin2		217548706		0.361	0.353	2.3	20.0
Pentachlorophenol	Lin2		2187562313		0.343	0.356	-3.7	20.0
Silvex (2,4,5-TP)	Lin2		839505307		0.349	0.356	-2.0	20.0
2,4,5-T	Lin2		873533734		0.357	0.355	0.4	20.0
2,4-DB	Lin2		132588374		0.328	0.355	-7.5	20.0
Dinoseb	Lin2		586482879		0.324	0.354	-8.5	20.0
2,4-Dichlorophenylacetic acid	Lin2		194063141		0.362	0.348	3.9	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-436856/10 Calibration Date: 11/08/2018 22:04

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11080010.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.60	1.57	1.63
Dicamba	5.46	5.43	5.49
MCPP	5.63	5.60	5.66
MCPA	5.75	5.72	5.78
Dichlorprop	6.03	6.00	6.06
2,4-D	6.19	6.16	6.22
Pentachlorophenol	6.36	6.26	6.46
Silvex (2,4,5-TP)	6.71	6.68	6.74
2,4,5-T	6.82	6.79	6.85
2,4-DB	6.99	6.96	7.02
Dinoseb	7.33	7.30	7.36
2,4-Dichlorophenylacetic acid	5.30	5.27	5.33

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080010.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Nov-2018 22:04:12 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0075980-010
Operator ID: AMB Instrument ID: SGC_M
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:26:09 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:21:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	95425353	0.3415	0.3490	
2	1.364	1.364	0.000	167674709	0.3415	0.3503	
						RPD = 0.37	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.296	0.000	67533973	0.3480	0.3617	
2	5.024	5.024	0.000	112554156	0.3480	0.3935	
						RPD = 8.42	
4 Dicamba							
1	5.457	5.457	0.000	231194112	0.3526	0.3327	
2	5.181	5.181	0.000	362428954	0.3526	0.3323	
						RPD = 0.11	
5 MCPP							
1	5.627	5.627	0.000	28594414	35.2	36.6	
2	5.296	5.296	0.000	38284026	35.2	36.2	
						RPD = 1.25	
6 MCPA							
1	5.749	5.749	0.000	39528835	35.0	36.7	
2	5.489	5.489	0.000	54796481	35.0	35.0	
						RPD = 4.65	
7 Dichlorprop							
1	6.029	6.029	0.000	60611972	0.3539	0.3365	
2	5.741	5.741	0.000	90890864	0.3539	0.3300	
						RPD = 1.95	
8 2,4-D							
1	6.191	6.191	0.000	76710393	0.3526	0.3607	
2	5.960	5.960	0.000	124909313	0.3526	0.3639	
						RPD = 0.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	779319074	0.3563	0.3429	
2	6.207	6.207	0.000	1191318105	0.3563	0.3515	
9 Silvex (2,4,5-TP)							
1	6.709	6.709	0.000	299231173	0.3564	0.3492	
2	6.464	6.464	0.000	470261681	0.3564	0.3597	
						RPD = 2.98	
10 2,4,5-T							
1	6.821	6.821	0.000	310508485	0.3555	0.3570	
2	6.677	6.677	0.000	428798424	0.3555	0.3166	
						RPD = 11.99	
11 2,4-DB							
1	6.986	6.986	0.000	47070530	0.3550	0.3284	
2	6.861	6.861	0.000	68747093	0.3550	0.3252	
						RPD = 0.99	
12 Picloram							
1	7.276	7.276	0.000	414386042	0.3582	0.3341	
2	7.239	7.239	0.000	676913477	0.3582	0.3347	
						RPD = 0.16	
13 Dinoseb							
1	7.331	7.331	0.000	207790884	0.3543	0.3243	
2	6.954	6.954	0.000	272815283	0.3543	0.3260	
						RPD = 0.54	

Reagents:

8151ICV_00019 Amount Added: 1.00 Units: mL

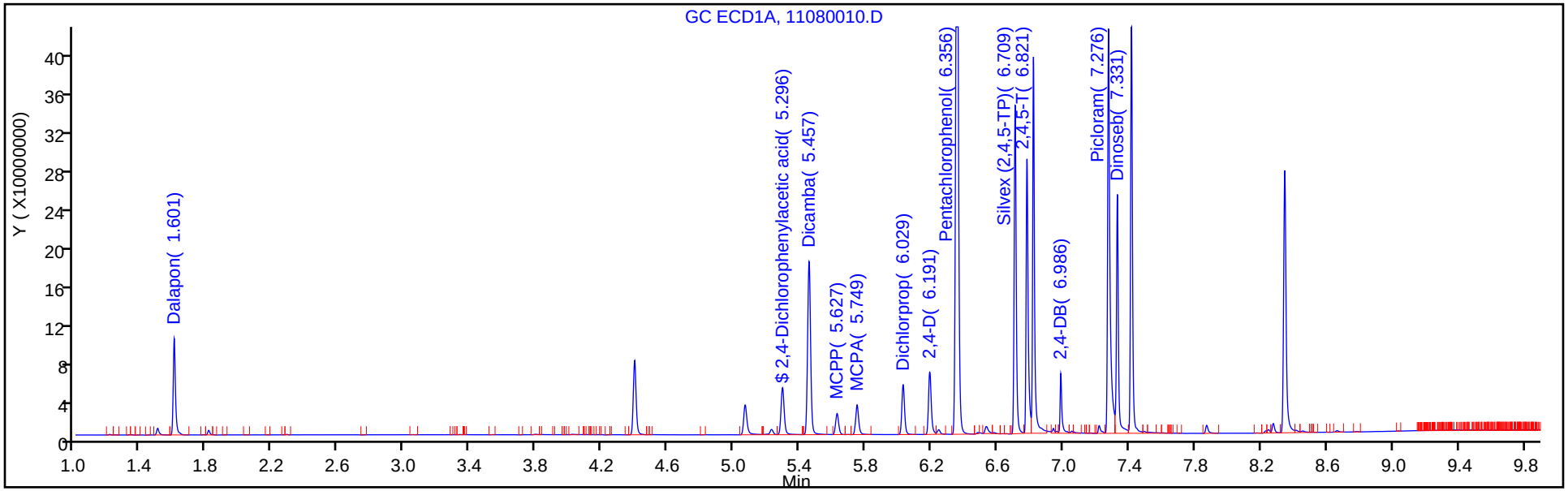
Report Date: 09-Nov-2018 10:26:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

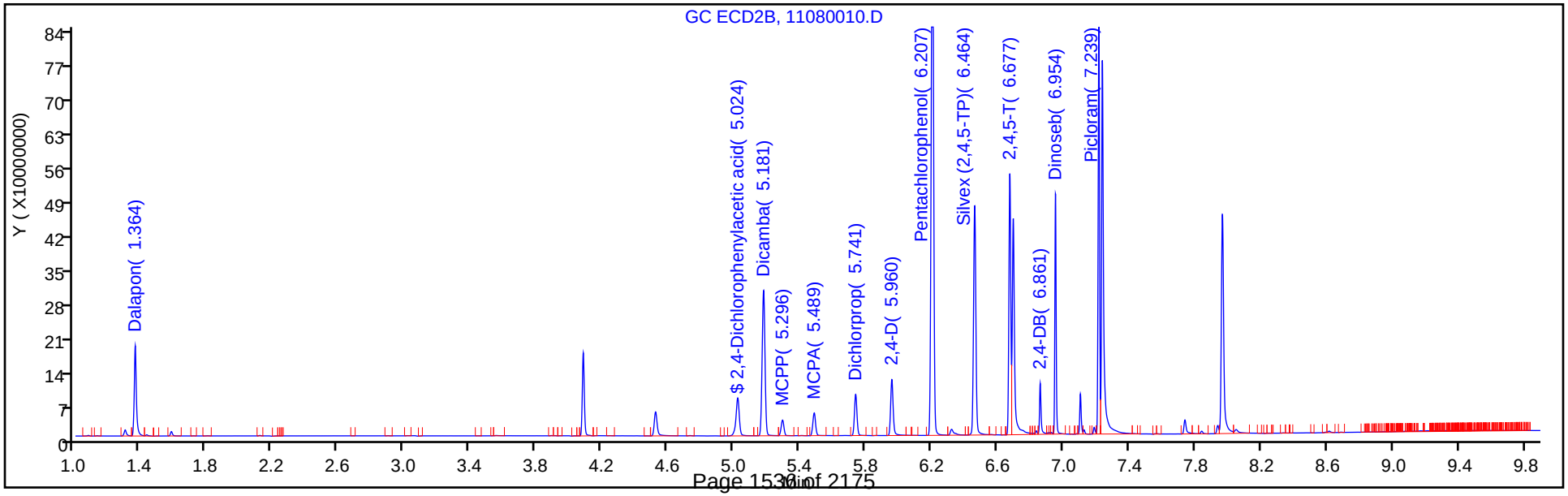
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080010.D

Injection Date:	08-Nov-2018 22:04:12	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	ICV			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-436856/10 Calibration Date: 11/08/2018 22:04

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11080010.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		491030702		0.350	0.341	2.6	20.0
Dicamba	Lin2		1027839212		0.332	0.353	-5.8	20.0
MCPP	Lin2		1087692		36.2	35.2	2.8	20.0
MCPA	Lin2		1563492		35.0	35.0	-0.1	20.0
Dichlorprop	Lin2		256835475		0.330	0.354	-6.8	20.0
2,4-D	Lin2		354239606		0.364	0.353	3.2	20.0
Pentachlorophenol	Lin2		3344050821		0.352	0.356	-1.3	20.0
Silvex (2,4,5-TP)	Lin2		1319338400		0.360	0.356	0.9	20.0
2,4,5-T	Lin2		1206311282		0.317	0.355	-10.9	20.0
2,4-DB	Lin2		193646965		0.325	0.355	-8.4	20.0
Dinoseb	Lin2		770012089		0.326	0.354	-8.0	20.0
2,4-Dichlorophenylacetic acid	Lin2		323431483		0.393	0.348	13.1	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICV 280-436856/10 Calibration Date: 11/08/2018 22:04

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11080010.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.36	1.33	1.39
Dicamba	5.18	5.15	5.21
MCPP	5.30	5.27	5.33
MCPA	5.49	5.46	5.52
Dichlorprop	5.74	5.71	5.77
2,4-D	5.96	5.93	5.99
Pentachlorophenol	6.21	6.11	6.31
Silvex (2,4,5-TP)	6.46	6.43	6.49
2,4,5-T	6.68	6.65	6.71
2,4-DB	6.86	6.83	6.89
Dinoseb	6.95	6.92	6.98
2,4-Dichlorophenylacetic acid	5.02	4.99	5.05

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080010.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Nov-2018 22:04:12 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0075980-010
Operator ID: AMB Instrument ID: SGC_M
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 09-Nov-2018 10:26:09 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0321

First Level Reviewer: byla Date: 09-Nov-2018 10:21:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	95425353	0.3415	0.3490	
2	1.364	1.364	0.000	167674709	0.3415	0.3503	
						RPD = 0.37	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.296	0.000	67533973	0.3480	0.3617	
2	5.024	5.024	0.000	112554156	0.3480	0.3935	
						RPD = 8.42	
4 Dicamba							
1	5.457	5.457	0.000	231194112	0.3526	0.3327	
2	5.181	5.181	0.000	362428954	0.3526	0.3323	
						RPD = 0.11	
5 MCPP							
1	5.627	5.627	0.000	28594414	35.2	36.6	
2	5.296	5.296	0.000	38284026	35.2	36.2	
						RPD = 1.25	
6 MCPA							
1	5.749	5.749	0.000	39528835	35.0	36.7	
2	5.489	5.489	0.000	54796481	35.0	35.0	
						RPD = 4.65	
7 Dichlorprop							
1	6.029	6.029	0.000	60611972	0.3539	0.3365	
2	5.741	5.741	0.000	90890864	0.3539	0.3300	
						RPD = 1.95	
8 2,4-D							
1	6.191	6.191	0.000	76710393	0.3526	0.3607	
2	5.960	5.960	0.000	124909313	0.3526	0.3639	
						RPD = 0.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	779319074	0.3563	0.3429	
2	6.207	6.207	0.000	1191318105	0.3563	0.3515	
9 Silvex (2,4,5-TP)							
1	6.709	6.709	0.000	299231173	0.3564	0.3492	
2	6.464	6.464	0.000	470261681	0.3564	0.3597	
						RPD = 2.98	
10 2,4,5-T							
1	6.821	6.821	0.000	310508485	0.3555	0.3570	
2	6.677	6.677	0.000	428798424	0.3555	0.3166	
						RPD = 11.99	
11 2,4-DB							
1	6.986	6.986	0.000	47070530	0.3550	0.3284	
2	6.861	6.861	0.000	68747093	0.3550	0.3252	
						RPD = 0.99	
12 Picloram							
1	7.276	7.276	0.000	414386042	0.3582	0.3341	
2	7.239	7.239	0.000	676913477	0.3582	0.3347	
						RPD = 0.16	
13 Dinoseb							
1	7.331	7.331	0.000	207790884	0.3543	0.3243	
2	6.954	6.954	0.000	272815283	0.3543	0.3260	
						RPD = 0.54	

Reagents:

8151ICV_00019 Amount Added: 1.00 Units: mL

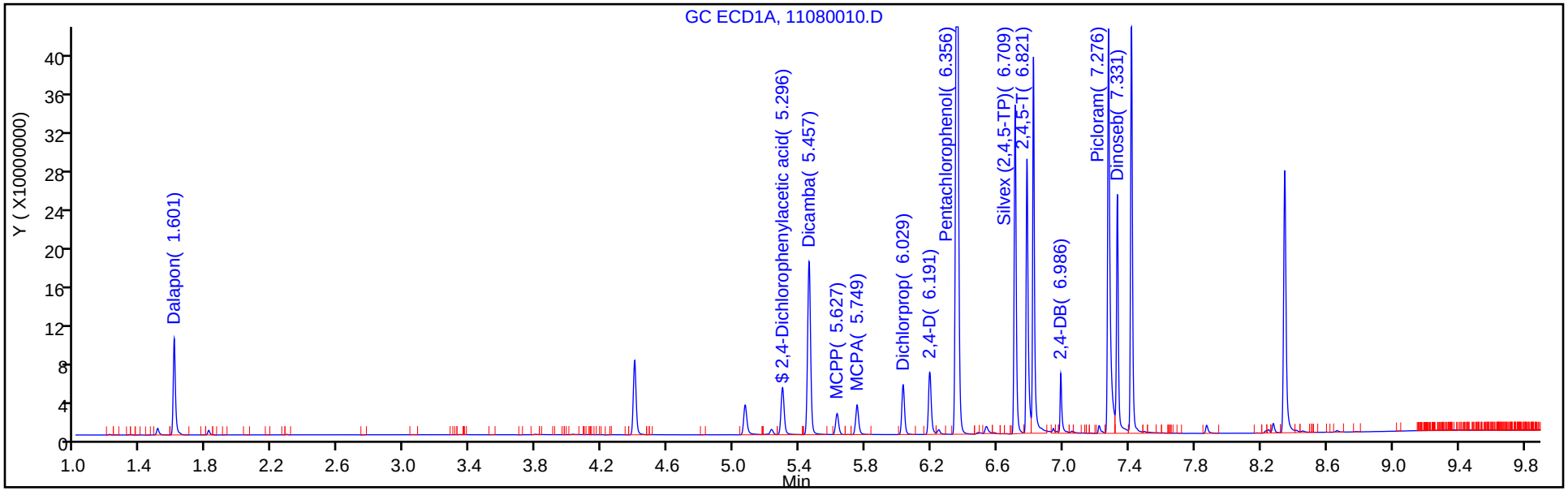
Report Date: 09-Nov-2018 10:26:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

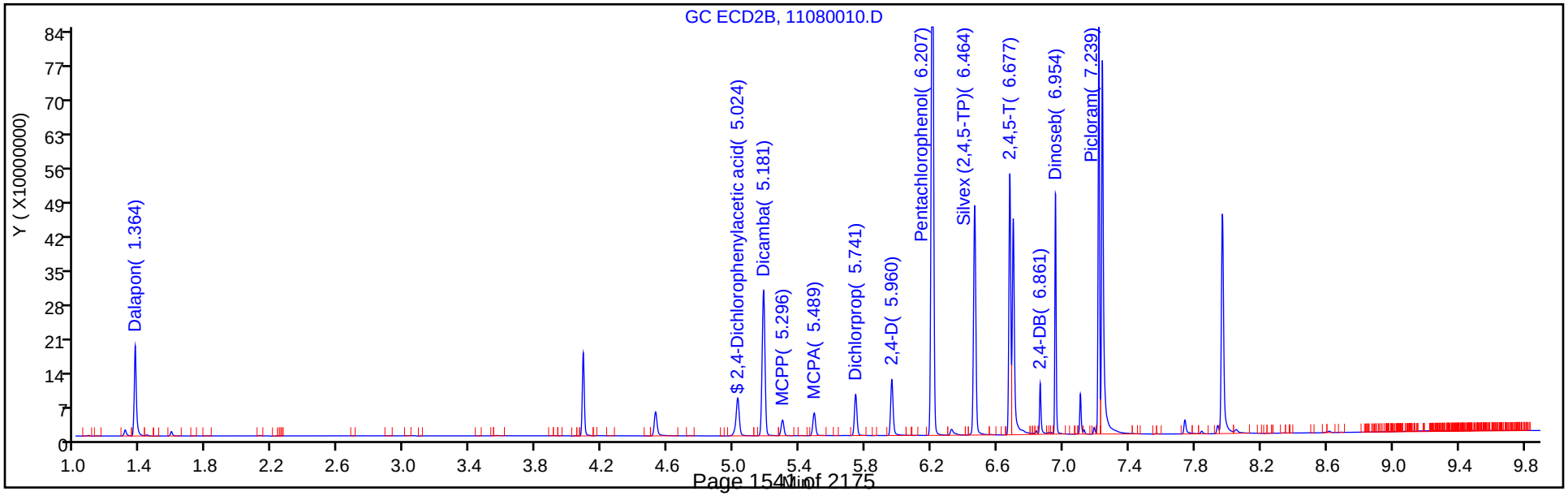
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080010.D

Injection Date:	08-Nov-2018 22:04:12	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	ICV			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVRT 280-437382/3 Calibration Date: 11/13/2018 15:49

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130003.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		283677166		0.475	0.453	4.8	20.0
Dicamba	Lin2		748946259		0.524	0.475	10.3	20.0
MCPP	Lin1		872795		55.4	47.1	17.5	20.0
MCPA	Lin1		1203982		55.5	47.0	18.1	20.0
Dichlorprop	Lin2		197843819		0.538	0.477	12.9	20.0
2,4-D	Lin2		236832794		0.532	0.470	13.2	20.0
Pentachlorophenol	Lin2		2523273535		0.540	0.477	13.0	20.0
Silvex (2,4,5-TP)	Lin2		965889867		0.552	0.480	15.1	20.0
2,4,5-T	Lin2		979731767		0.548	0.479	14.4	20.0
2,4-DB	Lin2		160207862		0.548	0.476	15.1	20.0
Dinoseb	Lin2		722585941		0.559	0.477	17.2	20.0
2,4-Dichlorophenylacetic acid	Lin2		201987356		0.513	0.464	10.5	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVRT 280-437382/3 Calibration Date: 11/13/2018 15:49

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.60	1.57	1.63
Dicamba	5.46	5.43	5.49
MCPP	5.63	5.60	5.66
MCPA	5.75	5.72	5.78
Dichlorprop	6.03	6.00	6.06
2,4-D	6.19	6.16	6.22
Pentachlorophenol	6.36	6.26	6.46
Silvex (2,4,5-TP)	6.71	6.68	6.74
2,4,5-T	6.82	6.79	6.85
2,4-DB	6.99	6.96	7.02
Dinoseb	7.33	7.30	7.36
2,4-Dichlorophenylacetic acid	5.30	5.27	5.33

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130003.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 13-Nov-2018 15:49:27 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVRT
Misc. Info.: 280-0076146-003
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 11:06:27 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 13-Nov-2018 16:55:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	128413561	0.4527	0.4745	
2	1.365	1.365	0.000	229012980	0.4527	0.4838	
						RPD = 1.92	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	93722133	0.4640	0.5125	
2	5.022	5.022	0.000	147705681	0.4640	0.5257	
						RPD = 2.54	
4 Dicamba							
1	5.456	5.456	0.000	355468618	0.4746	0.5236	
2	5.180	5.180	0.000	567082565	0.4746	0.5319	
						RPD = 1.57	
5 MCPP							
1	5.627	5.627	0.000	41132313	47.1	55.4	
2	5.297	5.297	0.000	53145221	47.1	51.2	
						RPD = 7.95	
6 MCPA							
1	5.749	5.749	0.000	56577160	47.0	55.5	
2	5.489	5.489	0.000	80792962	47.0	53.7	
						RPD = 3.21	
7 Dichlorprop							
1	6.027	6.027	0.000	94287418	0.4766	0.5380	
2	5.740	5.740	0.000	145319787	0.4766	0.5444	
						RPD = 1.19	
8 2,4-D							
1	6.189	6.189	0.000	111346938	0.4702	0.5324	
2	5.959	5.959	0.000	182368632	0.4702	0.5421	
						RPD = 1.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	1204547704	0.4774	0.5395	
2	6.207	6.207	0.000	1869398615	0.4774	0.5628	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	463627136	0.4800	0.5523	
2	6.463	6.463	0.000	729581233	0.4800	0.5700	
						RPD = 3.15	
10 2,4,5-T							
1	6.820	6.820	0.000	468997597	0.4787	0.5477	
2	6.677	6.677	0.000	738690136	0.4787	0.5580	
						RPD = 1.87	
11 2,4-DB							
1	6.986	6.986	0.000	76190854	0.4756	0.5476	
2	6.862	6.862	0.000	118111690	0.4756	0.5700	
						RPD = 4.00	
12 Picloram							
1	7.276	7.276	0.000	643548809	0.4726	0.5189	
2	7.239	7.239	0.000	1109735204	0.4726	0.5587	
						RPD = 7.39	
13 Dinoseb							
1	7.330	7.330	0.000	344763817	0.4771	0.5592	
2	6.954	6.954	0.000	461928964	0.4771	0.5596	
						RPD = 0.08	

Reagents:

8151ICALL4_00131 Amount Added: 1.00 Units: mL

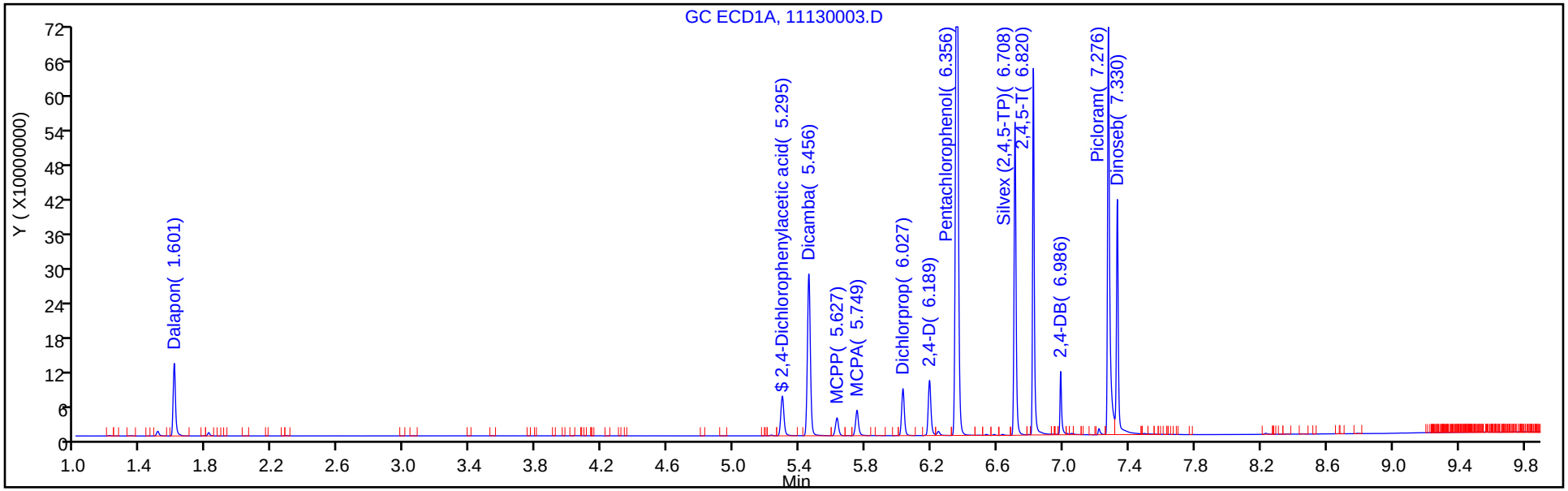
Report Date: 14-Nov-2018 11:06:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

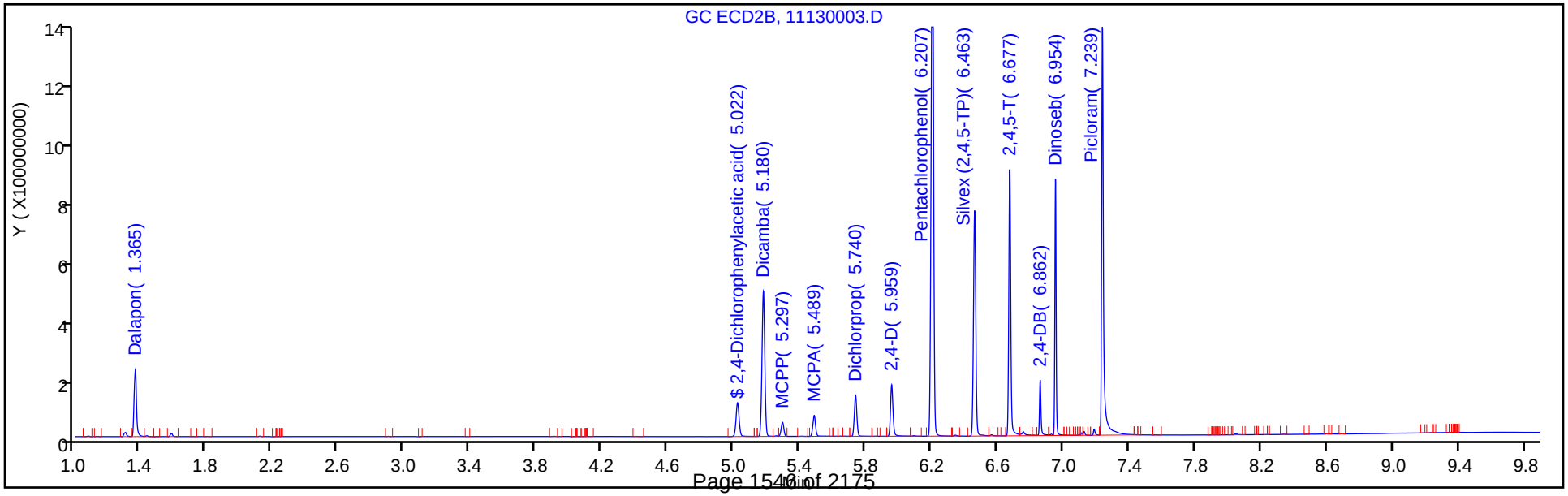
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130003.D

Injection Date:	13-Nov-2018 15:49:27	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	CCVRT			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVRT 280-437382/3 Calibration Date: 11/13/2018 15:49

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130003.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		505910377		0.484	0.453	6.9	20.0
Dicamba	Lin2		1194801296		0.532	0.475	12.1	20.0
MCPP	Lin2		1127700		51.2	47.1	8.6	20.0
MCPA	Lin2		1719303		53.7	47.0	14.4	20.0
Dichlorprop	Lin2		304925325		0.544	0.477	14.2	20.0
2,4-D	Lin2		387894570		0.542	0.470	15.3	20.0
Pentachlorophenol	Lin2		3915996051		0.563	0.477	17.9	20.0
Silvex (2,4,5-TP)	Lin2		1519960902		0.570	0.480	18.7	20.0
2,4,5-T	Lin2		1543117059		0.558	0.479	16.6	20.0
2,4-DB	Lin2		248355549		0.570	0.476	19.8	20.0
Dinoseb	Lin2		968150828		0.560	0.477	17.3	20.0
2,4-Dichlorophenylacetic acid	Lin2		318331209		0.526	0.464	13.3	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCVRT 280-437382/3 Calibration Date: 11/13/2018 15:49

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.37	1.34	1.40
Dicamba	5.18	5.15	5.21
MCPP	5.30	5.27	5.33
MCPA	5.49	5.46	5.52
Dichlorprop	5.74	5.71	5.77
2,4-D	5.96	5.93	5.99
Pentachlorophenol	6.21	6.11	6.31
Silvex (2,4,5-TP)	6.46	6.43	6.49
2,4,5-T	6.68	6.65	6.71
2,4-DB	6.86	6.83	6.89
Dinoseb	6.95	6.92	6.98
2,4-Dichlorophenylacetic acid	5.02	4.99	5.05

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130003.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 13-Nov-2018 15:49:27 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVRT
Misc. Info.: 280-0076146-003
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 11:06:27 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 13-Nov-2018 16:55:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	128413561	0.4527	0.4745	
2	1.365	1.365	0.000	229012980	0.4527	0.4838	
						RPD = 1.92	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	93722133	0.4640	0.5125	
2	5.022	5.022	0.000	147705681	0.4640	0.5257	
						RPD = 2.54	
4 Dicamba							
1	5.456	5.456	0.000	355468618	0.4746	0.5236	
2	5.180	5.180	0.000	567082565	0.4746	0.5319	
						RPD = 1.57	
5 MCPP							
1	5.627	5.627	0.000	41132313	47.1	55.4	
2	5.297	5.297	0.000	53145221	47.1	51.2	
						RPD = 7.95	
6 MCPA							
1	5.749	5.749	0.000	56577160	47.0	55.5	
2	5.489	5.489	0.000	80792962	47.0	53.7	
						RPD = 3.21	
7 Dichlorprop							
1	6.027	6.027	0.000	94287418	0.4766	0.5380	
2	5.740	5.740	0.000	145319787	0.4766	0.5444	
						RPD = 1.19	
8 2,4-D							
1	6.189	6.189	0.000	111346938	0.4702	0.5324	
2	5.959	5.959	0.000	182368632	0.4702	0.5421	
						RPD = 1.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	1204547704	0.4774	0.5395	
2	6.207	6.207	0.000	1869398615	0.4774	0.5628	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	463627136	0.4800	0.5523	
2	6.463	6.463	0.000	729581233	0.4800	0.5700	
						RPD = 3.15	
10 2,4,5-T							
1	6.820	6.820	0.000	468997597	0.4787	0.5477	
2	6.677	6.677	0.000	738690136	0.4787	0.5580	
						RPD = 1.87	
11 2,4-DB							
1	6.986	6.986	0.000	76190854	0.4756	0.5476	
2	6.862	6.862	0.000	118111690	0.4756	0.5700	
						RPD = 4.00	
12 Picloram							
1	7.276	7.276	0.000	643548809	0.4726	0.5189	
2	7.239	7.239	0.000	1109735204	0.4726	0.5587	
						RPD = 7.39	
13 Dinoseb							
1	7.330	7.330	0.000	344763817	0.4771	0.5592	
2	6.954	6.954	0.000	461928964	0.4771	0.5596	
						RPD = 0.08	

Reagents:

8151ICALL4_00131 Amount Added: 1.00 Units: mL

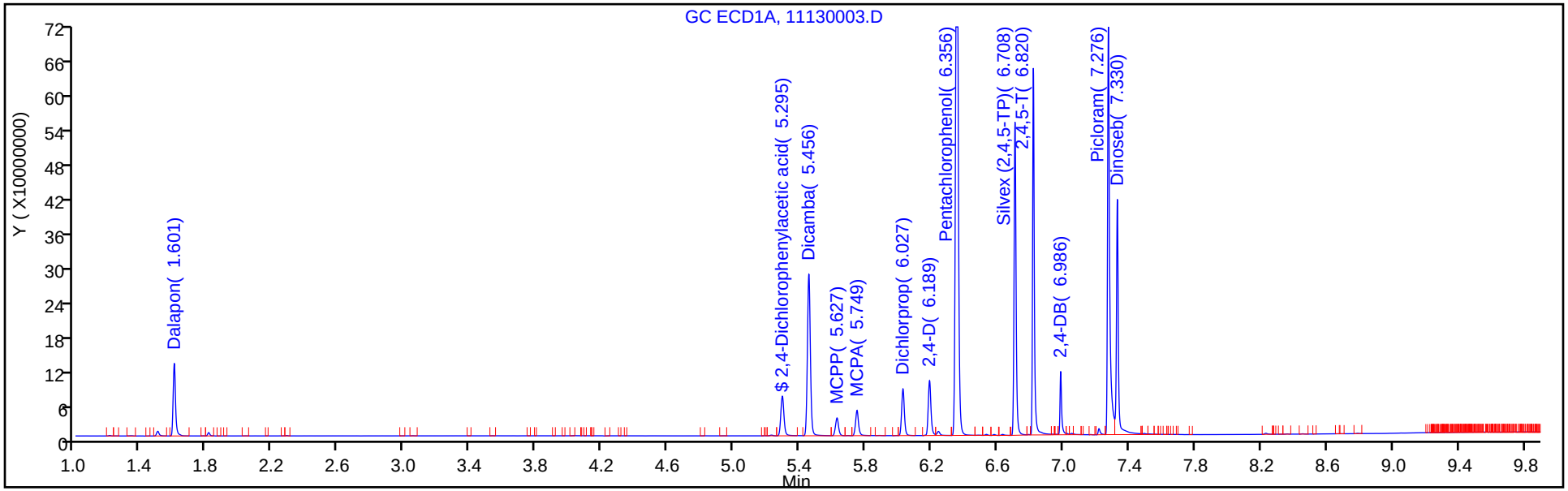
Report Date: 14-Nov-2018 11:06:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

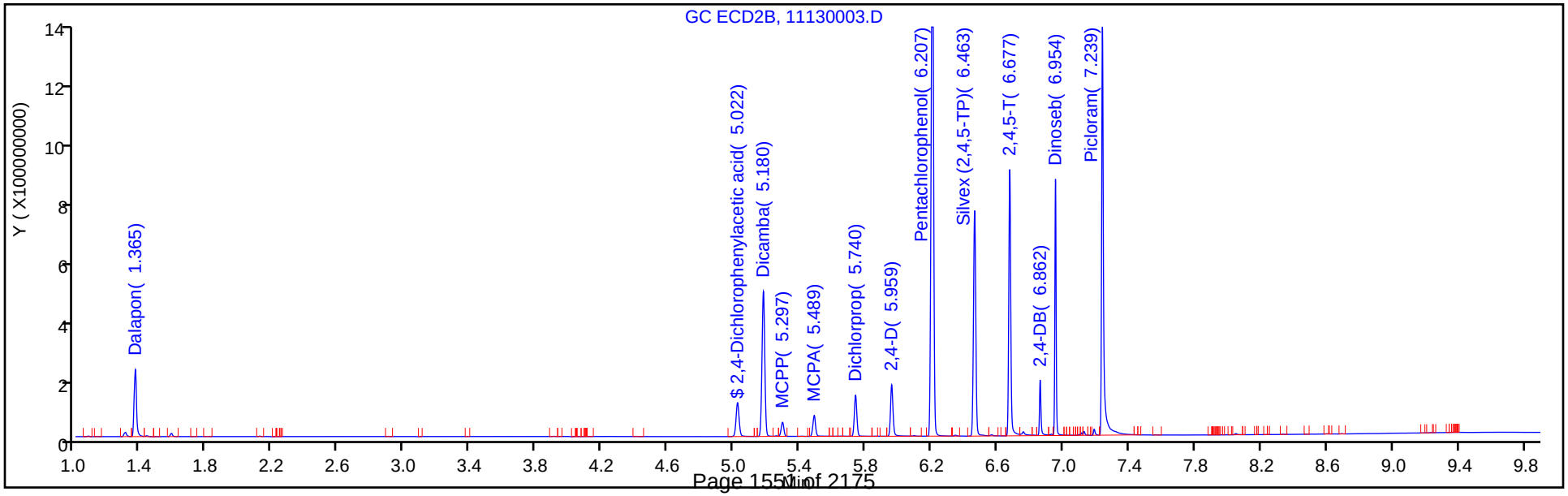
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130003.D

Injection Date:	13-Nov-2018 15:49:27	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	CCVRT			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/9 Calibration Date: 11/13/2018 18:07

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130009.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		270387015		0.452	0.453	-0.2	20.0
Dicamba	Lin2		643484159		0.447	0.475	-5.9	20.0
MCPP	Lin1		688561		42.4	47.1	-10.0	20.0
MCPA	Lin1		949534		42.3	47.0	-10.0	20.0
Dichlorprop	Lin2		158132030		0.425	0.477	-10.9	20.0
2,4-D	Lin2		186826049		0.416	0.470	-11.6	20.0
Pentachlorophenol	Lin2		2004799960		0.425	0.477	-11.0	20.0
Silvex (2,4,5-TP)	Lin2		749191433		0.424	0.480	-11.7	20.0
2,4,5-T	Lin2		714795028		0.395	0.479	-17.5	20.0
2,4-DB	Lin2		109559285		0.366	0.476	-23.0*	20.0
Dinoseb	Lin2		467749766		0.351	0.477	-26.5*	20.0
2,4-Dichlorophenylacetic acid	Lin2		169759289		0.426	0.464	-8.1	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/9 Calibration Date: 11/13/2018 18:07

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130009.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.60	1.57	1.63
Dicamba	5.46	5.43	5.49
MCPP	5.63	5.60	5.66
MCPA	5.75	5.72	5.78
Dichlorprop	6.03	6.00	6.06
2,4-D	6.19	6.16	6.22
Pentachlorophenol	6.36	6.26	6.46
Silvex (2,4,5-TP)	6.71	6.68	6.74
2,4,5-T	6.82	6.79	6.85
2,4-DB	6.99	6.96	7.02
Dinoseb	7.33	7.30	7.36
2,4-Dichlorophenylacetic acid	5.30	5.27	5.33

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130009.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 18:07:09 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076146-009
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 13-Nov-2018 19:37:25 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0325

First Level Reviewer: byla Date: 13-Nov-2018 19:35:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.600	1.601	-0.001	122397442	0.4527	0.4516	
2	1.363	1.365	-0.002	219711407	0.4527	0.4635	
						RPD = 2.60	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	78768310	0.4640	0.4264	
2	5.023	5.022	0.001	124642213	0.4640	0.4390	
						RPD = 2.90	
4 Dicamba							
1	5.457	5.456	0.001	305413669	0.4746	0.4467	
2	5.181	5.180	0.001	490219090	0.4746	0.4569	
						RPD = 2.26	
5 MCPP							
1	5.628	5.627	0.001	32449891	47.1	42.4	
2	5.296	5.297	-0.001	42848616	47.1	40.8	
						RPD = 3.90	
6 MCPA							
1	5.749	5.749	0.000	44620203	47.0	42.3	
2	5.489	5.489	0.000	61778952	47.0	40.0	
						RPD = 5.47	
7 Dichlorprop							
1	6.028	6.027	0.001	75361772	0.4766	0.4248	
2	5.739	5.740	-0.001	116150926	0.4766	0.4295	
						RPD = 1.11	
8 2,4-D							
1	6.189	6.189	0.000	87836267	0.4702	0.4158	
2	5.959	5.959	0.000	142960215	0.4702	0.4198	
						RPD = 0.96	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	957041381	0.4774	0.4251	
2	6.207	6.207	0.000	1489904192	0.4774	0.4446	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	359611888	0.4800	0.4238	
2	6.463	6.463	0.000	560958744	0.4800	0.4333	
						RPD = 2.21	
10 2,4,5-T							
1	6.820	6.820	0.000	342172380	0.4787	0.3951	
2	6.677	6.677	0.000	549425992	0.4787	0.4106	
						RPD = 3.84	
11 2,4-DB							
1	6.986	6.986	0.000	52103657	0.4756	0.3663	
2	6.861	6.862	-0.001	79907256	0.4756	0.3805	
						RPD = 3.81	
12 Picloram							
1	7.275	7.276	-0.001	509475025	0.4726	0.4108	
2	7.239	7.239	0.000	797955453	0.4726	0.3973	
						RPD = 3.34	
13 Dinoseb							
1	7.330	7.330	0.000	223175107	0.4771	0.3507	
2	6.954	6.954	0.000	340194564	0.4771	0.4093	
						RPD = 15.42	

Reagents:

8151ICALL4_00131 Amount Added: 1.00 Units: mL

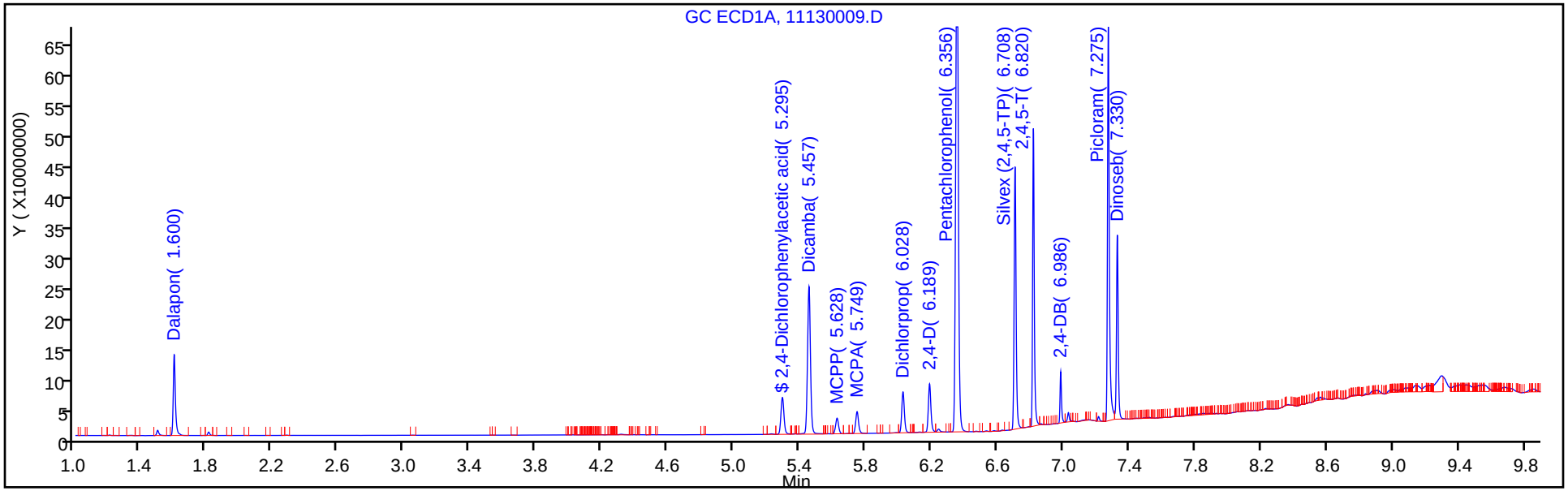
Report Date: 13-Nov-2018 19:37:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

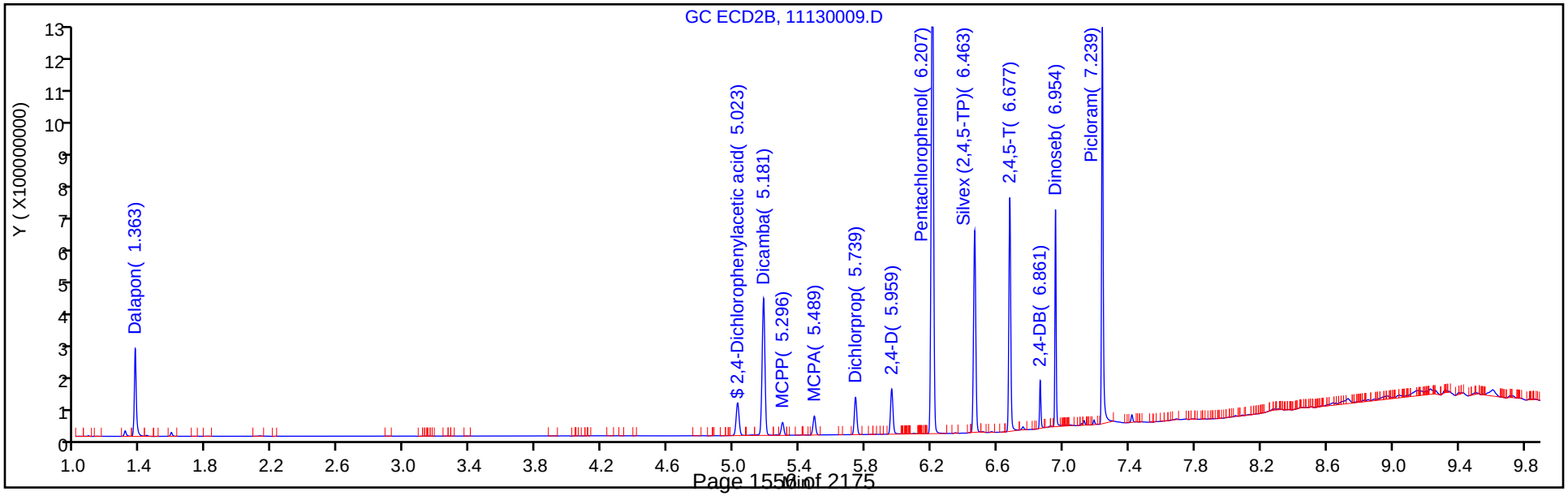
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130009.D

Injection Date:	13-Nov-2018 18:07:09	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	CCV			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/9 Calibration Date: 11/13/2018 18:07

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130009.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		485362362		0.464	0.453	2.4	20.0
Dicamba	Lin2		1032855602		0.457	0.475	-3.7	20.0
MCPP	Lin2		909214		40.8	47.1	-13.5	20.0
MCPA	Lin2		1314678		40.0	47.0	-14.8	20.0
Dichlorprop	Lin2		243720141		0.430	0.477	-9.9	20.0
2,4-D	Lin2		304073625		0.420	0.470	-10.7	20.0
Pentachlorophenol	Lin2		3121035228		0.445	0.477	-6.9	20.0
Silvex (2,4,5-TP)	Lin2		1168664050		0.433	0.480	-9.7	20.0
2,4,5-T	Lin2		1147745962		0.411	0.479	-14.2	20.0
2,4-DB	Lin2		168022407		0.381	0.476	-20.0	20.0
Dinoseb	Lin2		713009304		0.409	0.477	-14.2	20.0
2,4-Dichlorophenylacetic acid	Lin2		268625459		0.439	0.464	-5.4	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/9 Calibration Date: 11/13/2018 18:07

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130009.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.36	1.34	1.40
Dicamba	5.18	5.15	5.21
MCPP	5.30	5.27	5.33
MCPA	5.49	5.46	5.52
Dichlorprop	5.74	5.71	5.77
2,4-D	5.96	5.93	5.99
Pentachlorophenol	6.21	6.11	6.31
Silvex (2,4,5-TP)	6.46	6.43	6.49
2,4,5-T	6.68	6.65	6.71
2,4-DB	6.86	6.83	6.89
Dinoseb	6.95	6.92	6.98
2,4-Dichlorophenylacetic acid	5.02	4.99	5.05

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130009.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 18:07:09 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076146-009
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 13-Nov-2018 19:37:25 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0325

First Level Reviewer: byla Date: 13-Nov-2018 19:35:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.600	1.601	-0.001	122397442	0.4527	0.4516	
2	1.363	1.365	-0.002	219711407	0.4527	0.4635	
						RPD = 2.60	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	78768310	0.4640	0.4264	
2	5.023	5.022	0.001	124642213	0.4640	0.4390	
						RPD = 2.90	
4 Dicamba							
1	5.457	5.456	0.001	305413669	0.4746	0.4467	
2	5.181	5.180	0.001	490219090	0.4746	0.4569	
						RPD = 2.26	
5 MCPP							
1	5.628	5.627	0.001	32449891	47.1	42.4	
2	5.296	5.297	-0.001	42848616	47.1	40.8	
						RPD = 3.90	
6 MCPA							
1	5.749	5.749	0.000	44620203	47.0	42.3	
2	5.489	5.489	0.000	61778952	47.0	40.0	
						RPD = 5.47	
7 Dichlorprop							
1	6.028	6.027	0.001	75361772	0.4766	0.4248	
2	5.739	5.740	-0.001	116150926	0.4766	0.4295	
						RPD = 1.11	
8 2,4-D							
1	6.189	6.189	0.000	87836267	0.4702	0.4158	
2	5.959	5.959	0.000	142960215	0.4702	0.4198	
						RPD = 0.96	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	957041381	0.4774	0.4251	
2	6.207	6.207	0.000	1489904192	0.4774	0.4446	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	359611888	0.4800	0.4238	
2	6.463	6.463	0.000	560958744	0.4800	0.4333	
						RPD = 2.21	
10 2,4,5-T							
1	6.820	6.820	0.000	342172380	0.4787	0.3951	
2	6.677	6.677	0.000	549425992	0.4787	0.4106	
						RPD = 3.84	
11 2,4-DB							
1	6.986	6.986	0.000	52103657	0.4756	0.3663	
2	6.861	6.862	-0.001	79907256	0.4756	0.3805	
						RPD = 3.81	
12 Picloram							
1	7.275	7.276	-0.001	509475025	0.4726	0.4108	
2	7.239	7.239	0.000	797955453	0.4726	0.3973	
						RPD = 3.34	
13 Dinoseb							
1	7.330	7.330	0.000	223175107	0.4771	0.3507	
2	6.954	6.954	0.000	340194564	0.4771	0.4093	
						RPD = 15.42	

Reagents:

8151ICALL4_00131 Amount Added: 1.00 Units: mL

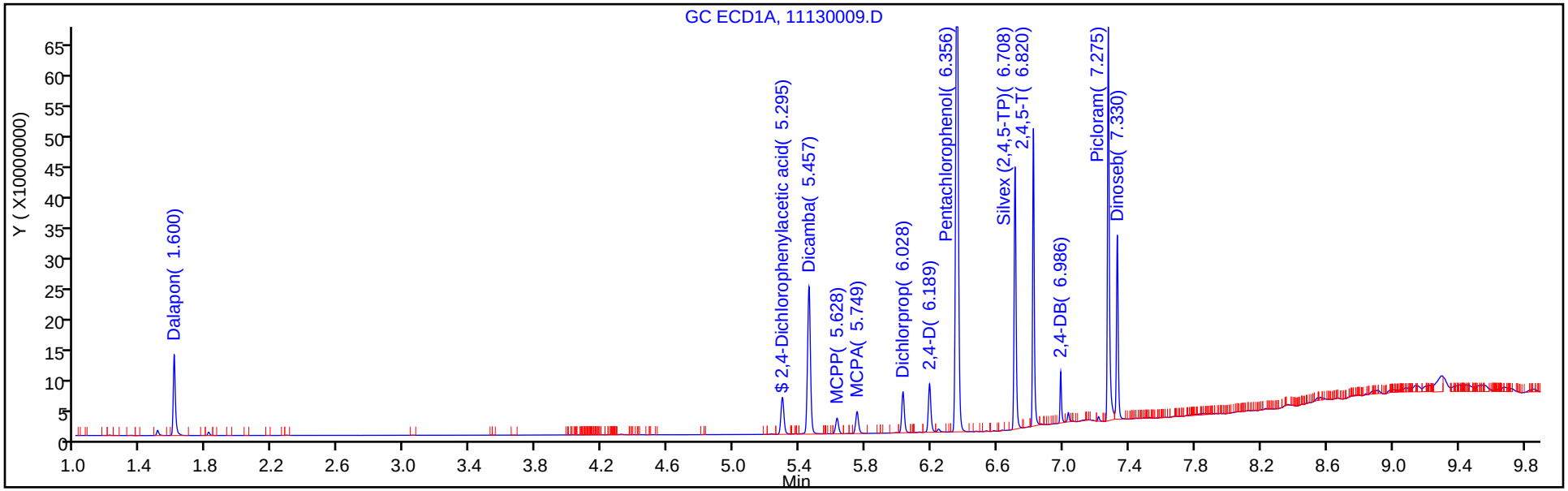
Report Date: 13-Nov-2018 19:37:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

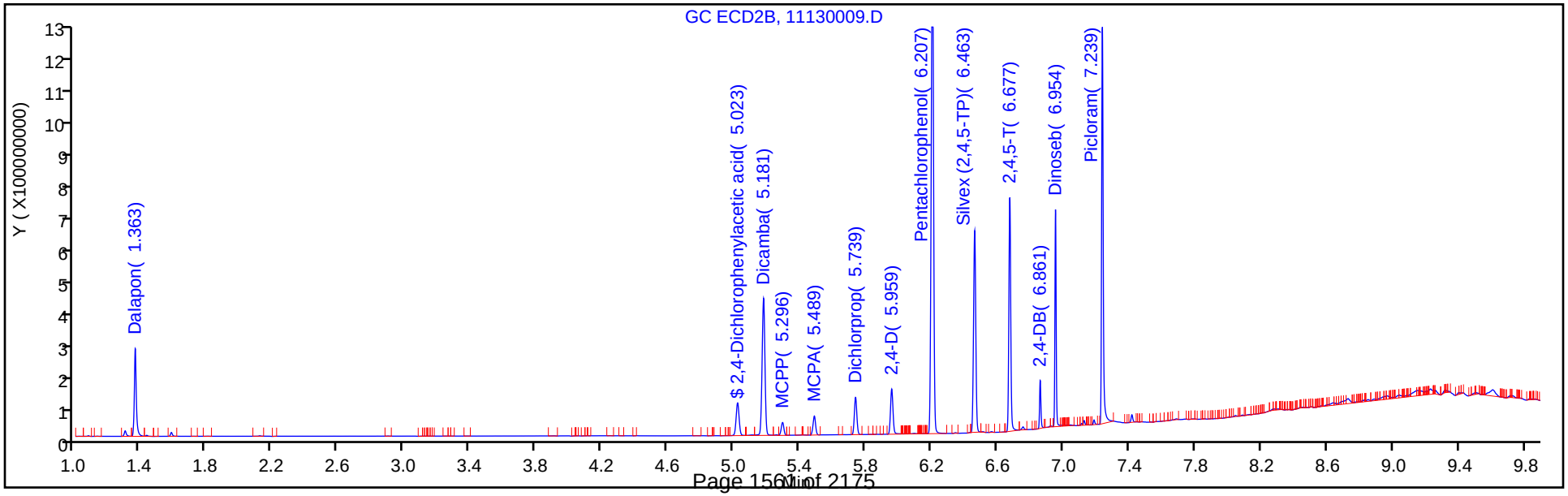
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130009.D

Injection Date:	13-Nov-2018 18:07:09	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	CCV			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/20 Calibration Date: 11/13/2018 21:06

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130020.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		268511698		0.448	0.453	-0.9	20.0
Dicamba	Lin2		630534961		0.437	0.475	-7.9	20.0
MCPP	Lin1		676658		41.6	47.1	-11.8	20.0
MCPA	Lin1		936514		41.6	47.0	-11.4	20.0
Dichlorprop	Lin2		156878607		0.421	0.477	-11.6	20.0
2,4-D	Lin2		180835969		0.402	0.470	-14.5	20.0
Pentachlorophenol	Lin2		2017280616		0.428	0.477	-10.4	20.0
Silvex (2,4,5-TP)	Lin2		747974000		0.423	0.480	-11.9	20.0
2,4,5-T	Lin2		715834458		0.396	0.479	-17.3	20.0
2,4-DB	Lin2		121101473		0.408	0.476	-14.3	20.0
Dinoseb	Lin2		486585375		0.366	0.477	-23.3*	20.0
2,4-Dichlorophenylacetic acid	Lin2		168118151		0.422	0.464	-9.0	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/20 Calibration Date: 11/13/2018 21:06

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130020.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.60	1.57	1.63
Dicamba	5.46	5.43	5.49
MCPP	5.63	5.60	5.66
MCPA	5.75	5.72	5.78
Dichlorprop	6.03	6.00	6.06
2,4-D	6.19	6.16	6.22
Pentachlorophenol	6.36	6.26	6.46
Silvex (2,4,5-TP)	6.71	6.68	6.74
2,4,5-T	6.82	6.79	6.85
2,4-DB	6.99	6.96	7.02
Dinoseb	7.33	7.30	7.36
2,4-Dichlorophenylacetic acid	5.30	5.27	5.33

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130020.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 21:06:35 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076146-020
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:57:34 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 14-Nov-2018 09:40:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	121548533	0.4527	0.4484	
2	1.363	1.365	-0.002	219438741	0.4527	0.4629	
						RPD = 3.19	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	78006822	0.4640	0.4220	
2	5.023	5.022	0.001	124539065	0.4640	0.4386	
						RPD = 3.85	
4 Dicamba							
1	5.456	5.456	0.000	299267656	0.4746	0.4372	
2	5.180	5.180	0.000	486839427	0.4746	0.4536	
						RPD = 3.68	
5 MCPP							
1	5.627	5.627	0.000	31888943	47.1	41.6	
2	5.297	5.297	0.000	42910098	47.1	40.8	
						RPD = 1.75	
6 MCPA							
1	5.749	5.749	0.000	44008379	47.0	41.6	
2	5.488	5.489	-0.001	61650372	47.0	40.0	
						RPD = 4.10	
7 Dichlorprop							
1	6.028	6.027	0.001	74764422	0.4766	0.4212	
2	5.740	5.740	0.000	115918504	0.4766	0.4286	
						RPD = 1.74	
8 2,4-D							
1	6.188	6.189	-0.001	85020031	0.4702	0.4019	
2	5.959	5.959	0.000	140498281	0.4702	0.4122	
						RPD = 2.54	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.355	6.356	-0.001	962999334	0.4774	0.4278	
2	6.206	6.207	-0.001	1493083457	0.4774	0.4456	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	359027520	0.4800	0.4231	
2	6.463	6.463	0.000	563800663	0.4800	0.4356	
						RPD = 2.91	
10 2,4,5-T							
1	6.820	6.820	0.000	342669955	0.4787	0.3957	
2	6.676	6.677	-0.001	547319797	0.4787	0.4089	
						RPD = 3.29	
11 2,4-DB							
1	6.986	6.986	0.000	57592833	0.4756	0.4076	
2	6.861	6.862	-0.001	79426716	0.4756	0.3781	
						RPD = 7.51	
12 Picloram							
1	7.276	7.276	0.000	516150459	0.4726	0.4162	
2	7.239	7.239	0.000	815135516	0.4726	0.4062	
						RPD = 2.42	
13 Dinoseb							
1	7.330	7.330	0.000	232162047	0.4771	0.3661	
2	6.954	6.954	0.000	329932235	0.4771	0.3966	
						RPD = 8.00	

Reagents:

8151ICALL4_00131 Amount Added: 1.00 Units: mL

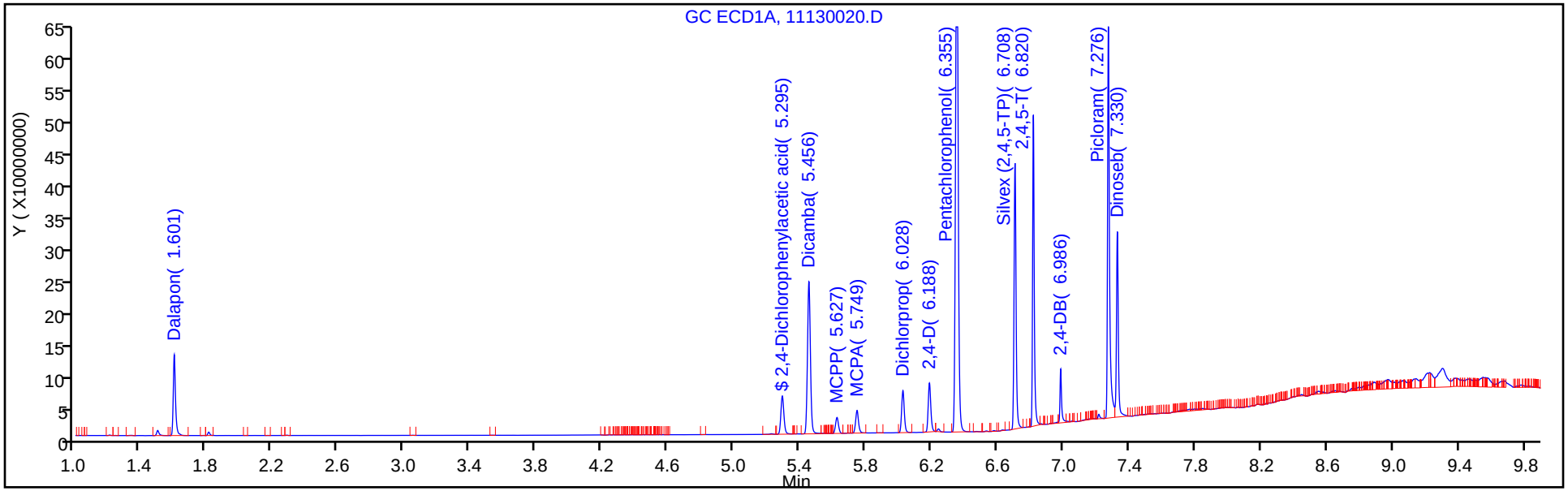
Report Date: 14-Nov-2018 09:57:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

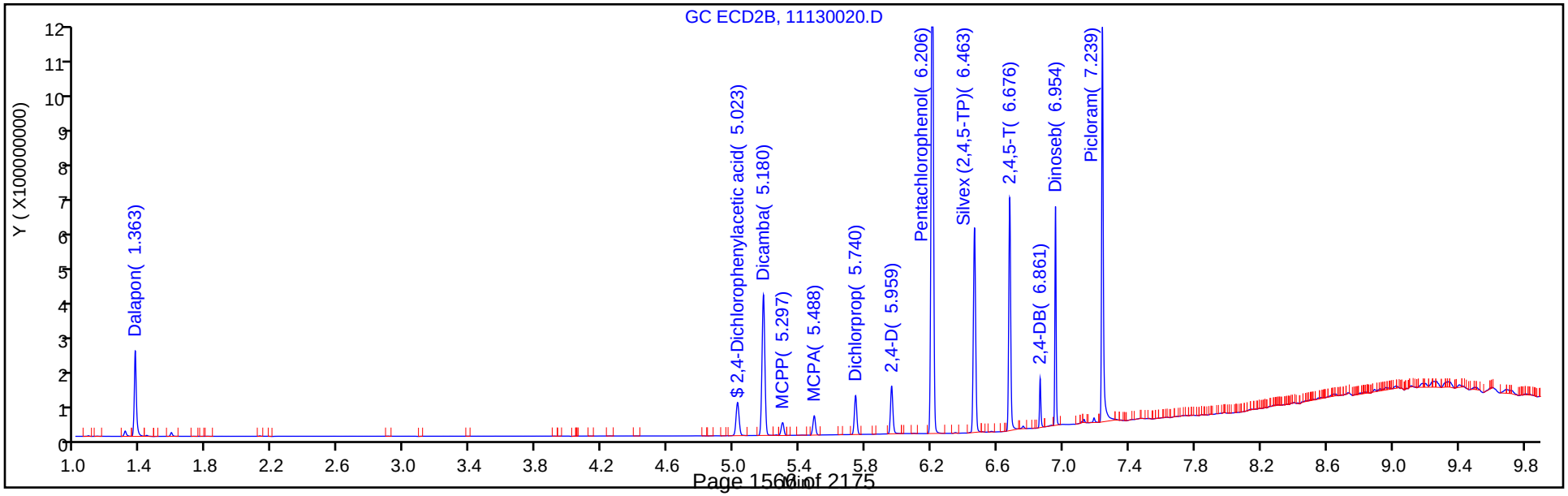
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130020.D

Injection Date:	13-Nov-2018 21:06:35	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	CCV			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/20 Calibration Date: 11/13/2018 21:06

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130020.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Lin2		484760018		0.463	0.453	2.3	20.0
Dicamba	Lin2		1025734900		0.454	0.475	-4.4	20.0
MCPP	Lin2		910519		40.8	47.1	-13.3	20.0
MCPA	Lin2		1311942		40.0	47.0	-15.0	20.0
Dichlorprop	Lin2		243232448		0.429	0.477	-10.1	20.0
2,4-D	Lin2		298837139		0.412	0.470	-12.3	20.0
Pentachlorophenol	Lin2		3127695118		0.446	0.477	-6.7	20.0
Silvex (2,4,5-TP)	Lin2		1174584715		0.436	0.480	-9.3	20.0
2,4,5-T	Lin2		1143346140		0.409	0.479	-14.6	20.0
2,4-DB	Lin2		167011967		0.378	0.476	-20.5*	20.0
Dinoseb	Lin2		691500624		0.397	0.477	-16.9	20.0
2,4-Dichlorophenylacetic acid	Lin2		268403157		0.439	0.464	-5.5	20.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: CCV 280-437382/20 Calibration Date: 11/13/2018 21:06

Instrument ID: SGC_M Calib Start Date: 11/08/2018 20:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/08/2018 21:47

Lab File ID: 11130020.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	1.36	1.34	1.40
Dicamba	5.18	5.15	5.21
MCPP	5.30	5.27	5.33
MCPA	5.49	5.46	5.52
Dichlorprop	5.74	5.71	5.77
2,4-D	5.96	5.93	5.99
Pentachlorophenol	6.21	6.11	6.31
Silvex (2,4,5-TP)	6.46	6.43	6.49
2,4,5-T	6.68	6.65	6.71
2,4-DB	6.86	6.83	6.89
Dinoseb	6.95	6.92	6.98
2,4-Dichlorophenylacetic acid	5.02	4.99	5.05

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130020.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 21:06:35 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076146-020
Operator ID: AMB Instrument ID: SGC_M
Sublist: chrom-8151_615*sub8

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:57:34 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 14-Nov-2018 09:40:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.601	1.601	0.000	121548533	0.4527	0.4484	
2	1.363	1.365	-0.002	219438741	0.4527	0.4629	
						RPD = 3.19	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	78006822	0.4640	0.4220	
2	5.023	5.022	0.001	124539065	0.4640	0.4386	
						RPD = 3.85	
4 Dicamba							
1	5.456	5.456	0.000	299267656	0.4746	0.4372	
2	5.180	5.180	0.000	486839427	0.4746	0.4536	
						RPD = 3.68	
5 MCPP							
1	5.627	5.627	0.000	31888943	47.1	41.6	
2	5.297	5.297	0.000	42910098	47.1	40.8	
						RPD = 1.75	
6 MCPA							
1	5.749	5.749	0.000	44008379	47.0	41.6	
2	5.488	5.489	-0.001	61650372	47.0	40.0	
						RPD = 4.10	
7 Dichlorprop							
1	6.028	6.027	0.001	74764422	0.4766	0.4212	
2	5.740	5.740	0.000	115918504	0.4766	0.4286	
						RPD = 1.74	
8 2,4-D							
1	6.188	6.189	-0.001	85020031	0.4702	0.4019	
2	5.959	5.959	0.000	140498281	0.4702	0.4122	
						RPD = 2.54	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.355	6.356	-0.001	962999334	0.4774	0.4278	
2	6.206	6.207	-0.001	1493083457	0.4774	0.4456	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	359027520	0.4800	0.4231	
2	6.463	6.463	0.000	563800663	0.4800	0.4356	
						RPD = 2.91	
10 2,4,5-T							
1	6.820	6.820	0.000	342669955	0.4787	0.3957	
2	6.676	6.677	-0.001	547319797	0.4787	0.4089	
						RPD = 3.29	
11 2,4-DB							
1	6.986	6.986	0.000	57592833	0.4756	0.4076	
2	6.861	6.862	-0.001	79426716	0.4756	0.3781	
						RPD = 7.51	
12 Picloram							
1	7.276	7.276	0.000	516150459	0.4726	0.4162	
2	7.239	7.239	0.000	815135516	0.4726	0.4062	
						RPD = 2.42	
13 Dinoseb							
1	7.330	7.330	0.000	232162047	0.4771	0.3661	
2	6.954	6.954	0.000	329932235	0.4771	0.3966	
						RPD = 8.00	

Reagents:

8151ICALL4_00131 Amount Added: 1.00 Units: mL

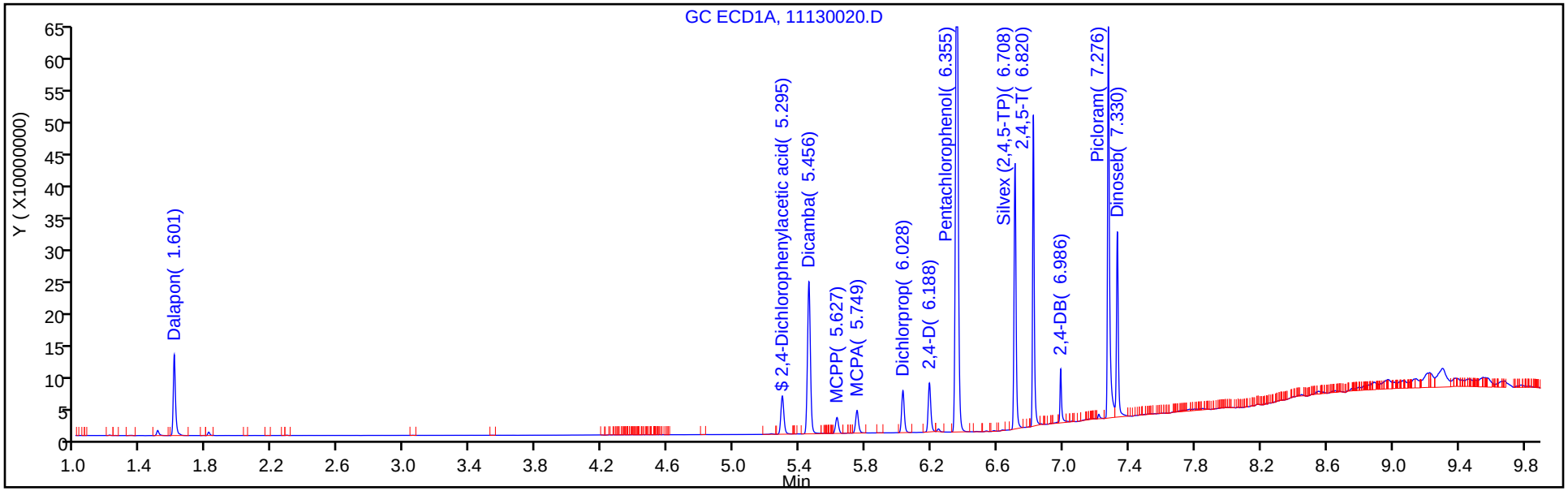
Report Date: 14-Nov-2018 09:57:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

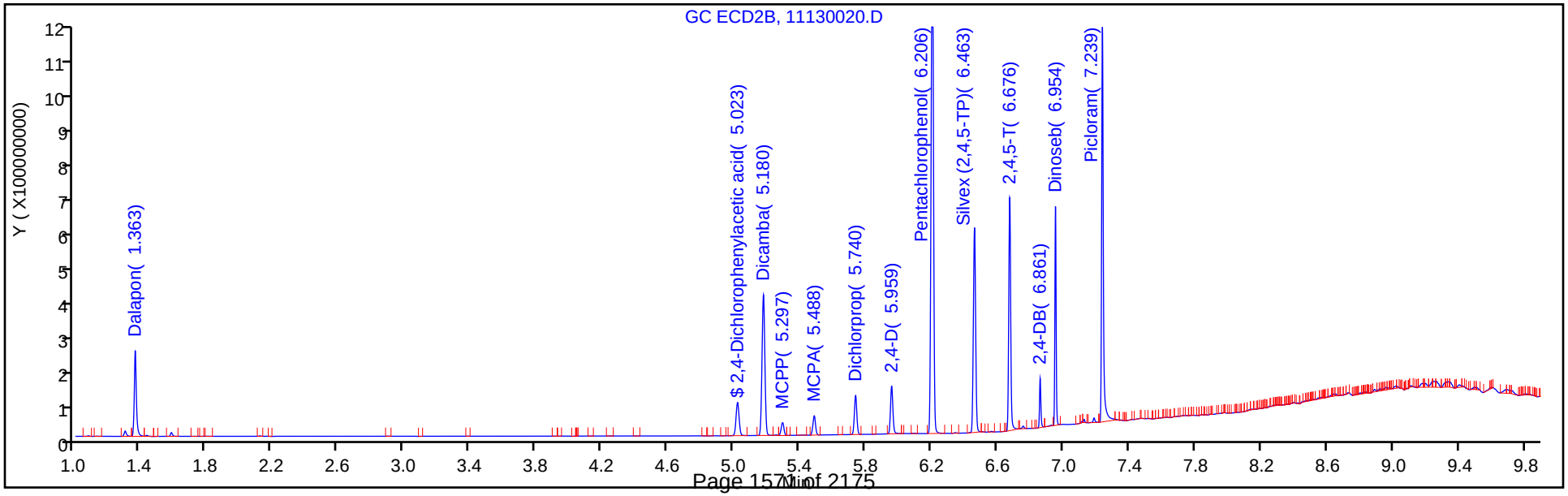
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130020.D

Injection Date:	13-Nov-2018 21:06:35	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	CCV			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LB3 280-436732/1-B

Matrix: Water (TCLP) | Lab File ID: 11130010.D

Analysis Method: 8151A DOD | Date Collected:

Extraction Method: 8151A | Date Extracted: 11/08/2018 07:48

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2018 18:24

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437382 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
94-75-7	2,4-D	ND		0.040	0.0021
93-72-1	Silvex (2,4,5-TP)	ND		0.010	0.0017

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	76		10-131

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130010.D
Lims ID: LB3 280-436732/1-B
Client ID:
Sample Type: LB3
Inject. Date: 13-Nov-2018 18:24:44 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LB3 280-436732/1
Misc. Info.: 280-0076146-010
Operator ID: AMB Instrument ID: SGC_M

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:56:45 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 13-Nov-2018 19:37:21

	Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1	2,4-DBDinoseb						
	1		-0.060				ND	
	2		-0.060					
	2	Dalapon						
	1		1.601				ND	
	2		1.365					
$	3	2,4-Dichlorophenylacetic acid						
	1	5.297	5.295	0.002	70854572	0.5000	0.3808	
	2	5.023	5.022	0.001	112287142	0.5000	0.3925	
							RPD = 3.01	
	4	Dicamba						
	1	5.458	5.456	0.002	5939459		-0.0133	
	2	5.176	5.180	-0.004	9590756		-0.0117	
							RPD = -12.94	
	LOD = 0.001000							
	5	MCPP						
	1	5.628	5.627	0.001	2854623		-1.85	
	2	5.298	5.297	0.001	139136		-2.23	
							RPD = -18.54	
	LOD = 0.001000							
	6	MCPA						
	1	5.740	5.749	-0.009	675807		-6.20	
	2	5.479	5.489	-0.010	898875		-3.82	
							RPD = -47.57	
	LOD = 0.001000							
	7	Dichlorprop						
	1	6.029	6.027	0.002	1759860		-0.0157	
	2	5.748	5.740	0.008	760518		-0.0252	
							RPD = 46.12	
	LOD = 0.001000							

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 2,4-D							
1	6.211	6.189	0.022	596264		-0.0168	
2	5.978	5.959	0.019	60506		-0.0233	
						RPD = -32.35	
LOD = 0.001000							
14 Pentachlorophenol							
1	6.356	6.356	0.000	196998		-0.0174	
2	6.212	6.207	0.005	420477		-0.0195	
9 Silvex (2,4,5-TP)							
1		6.708				ND	
2		6.463					
10 2,4,5-T							
1	6.828	6.820	0.008	2419507		-0.0136	
2	6.678	6.677	0.001	274584		-0.0171	
						RPD = -23.08	
LOD = 0.001000							
11 2,4-DB							
1	6.981	6.986	-0.005	3377181		-0.000436	
2	6.872	6.862	0.010	786181		-0.0118	
						RPD = -185.73	
LOD = 0.001000							
12 Picloram							
1	7.273	7.276	-0.003	2979866		0.002403	
2	7.240	7.239	0.001	4903780		-0.0132	
						RPD = -289.07	
13 Dinoseb							
1	7.333	7.330	0.003	1619967		-0.0293	
2	6.960	6.954	0.006	6168050		-0.003357	
						RPD = -158.88	
LOD = 0.001000							

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

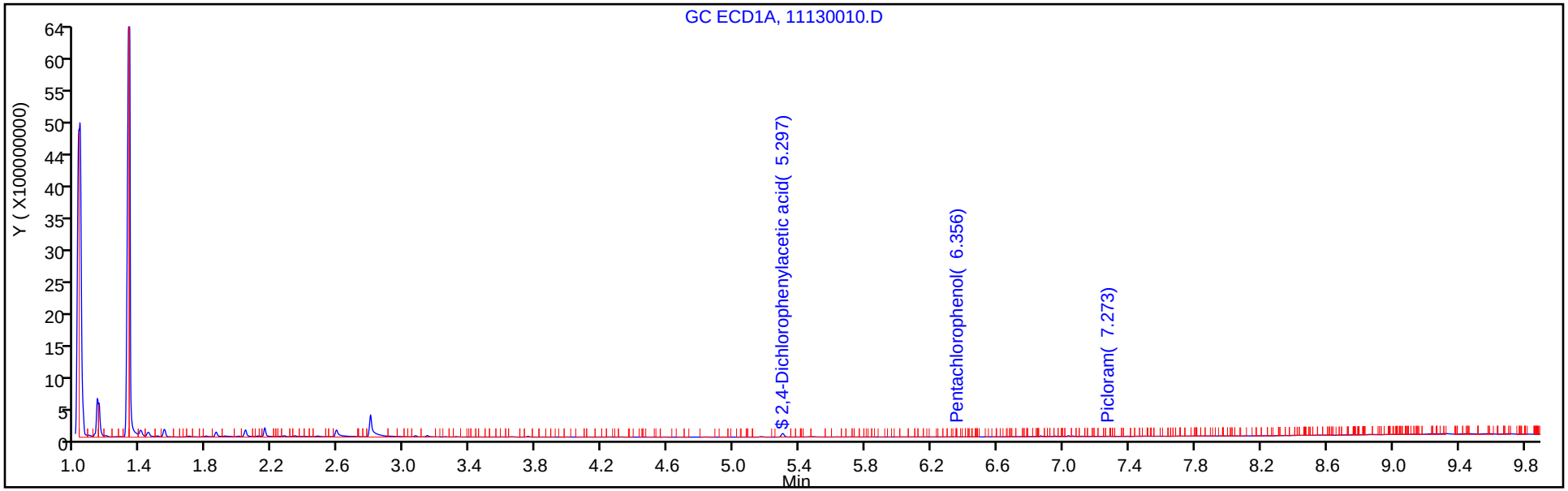
Report Date: 14-Nov-2018 09:57:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

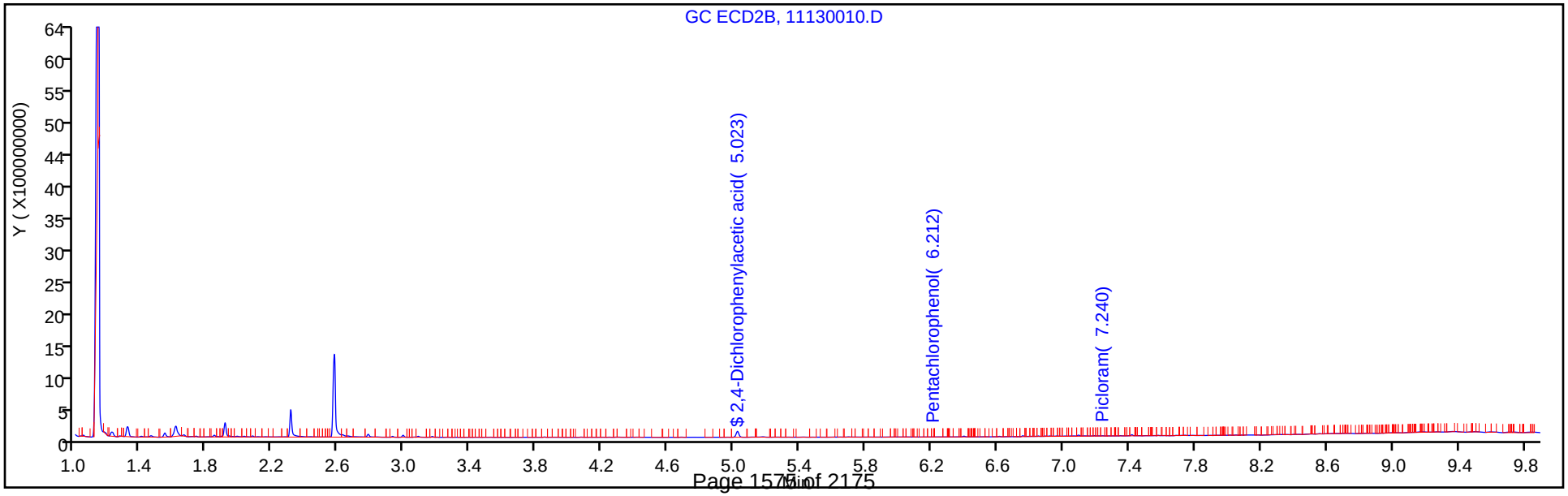
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130010.D

Injection Date:	13-Nov-2018 18:24:44	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	LB3 280-436732/1-B			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130010.D				
Lims ID:	LB3 280-436732/1-B				
Client ID:					
Sample Type:	LB3				
Inject. Date:	13-Nov-2018 18:24:44	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LB3 280-436732/1				
Misc. Info.:	280-0076146-010				
Operator ID:	AMB	Instrument ID:	SGC_M		
Method:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m				
Limit Group:	GCSV - 8151				
Method Label:	8151A: Herbicides: DV-GC-0022				
Last Update:	14-Nov-2018 09:56:45	Calib Date:	08-Nov-2018 21:47:57		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: byla		Date:	13-Nov-2018 19:37:21		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.3808	76.17

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.3925	78.50

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436732/2-B

Matrix: Water (TCLP) | Lab File ID: 11130011.D

Analysis Method: 8151A DOD | Date Collected:

Extraction Method: 8151A | Date Extracted: 11/08/2018 07:48

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2018 18:40

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437382 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
94-75-7	2,4-D	0.0376	J	0.040	0.0021
93-72-1	Silvex (2,4,5-TP)	0.0403		0.010	0.0017

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	78		10-131

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130011.D
Lims ID: LCS 280-436732/2-B
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 18:40:47 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436732/2
Misc. Info.: 280-0076146-011
Operator ID: AMB Instrument ID: SGC_M

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:56:45 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 14-Nov-2018 09:43:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Dalapon							
1	1.604	1.601	0.003	90451907	0.5000	0.3301	
2	1.365	1.365	0.000	118849755	0.5000	0.2441	
						RPD = 29.96	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.295	5.295	0.000	72420775	0.5000	0.3899	
2	5.022	5.022	0.000	129589834	0.5000	0.4576	
						RPD = 15.98	
4 Dicamba							
1	5.456	5.456	0.000	232810776	0.5000	0.3352	
2	5.180	5.180	0.000	354071824	0.5000	0.3242	
						RPD = 3.33	
5 MCPP							
1	5.626	5.627	-0.001	34014623	50.0	44.7	
2	5.296	5.297	-0.001	37355747	50.0	35.3	
						RPD = 23.74	
6 MCPA							
1	5.748	5.749	-0.001	39360445	50.0	36.5	
2	5.488	5.489	-0.001	50326685	50.0	31.8	
						RPD = 13.77	
7 Dichlorprop							
1	6.027	6.027	0.000	60398638	0.5000	0.3352	
2	5.740	5.740	0.000	94003642	0.5000	0.3422	
						RPD = 2.08	
8 2,4-D							
1	6.188	6.189	-0.001	79855252	0.5000	0.3763	
2	5.959	5.959	0.000	122534178	0.5000	0.3565	
						RPD = 5.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
14 Pentachlorophenol							
1	6.356	6.356	0.000	758037917	0.5000	0.3331	
2	6.206	6.207	0.000	1142504762	0.5000	0.3363	
9 Silvex (2,4,5-TP)							
1	6.708	6.708	0.000	343108195	0.5000	0.4034	
2	6.463	6.463	0.000	530223200	0.5000	0.4084	
						RPD = 1.22	
10 2,4,5-T							
1	6.820	6.820	0.000	478665912	0.5000	0.5593	
2	6.676	6.677	-0.001	749002616	0.5000	0.5660	
						RPD = 1.20	
11 2,4-DB							
1	6.986	6.986	0.000	47143084	0.5000	0.3290	
2	6.861	6.862	-0.001	50221638	0.5000	0.2333	
						RPD = 34.02	
12 Picloram							
1	7.274	7.276	-0.002	376083625	0.5000	0.3032	
2	7.238	7.239	-0.001	584023053	0.5000	0.2866	
						RPD = 5.65	
13 Dinoseb							
1	7.330	7.330	0.000	120707765	0.5000	0.1749	
2	6.954	6.954	0.000	184865712	0.5000	0.2174	
						RPD = 21.64	

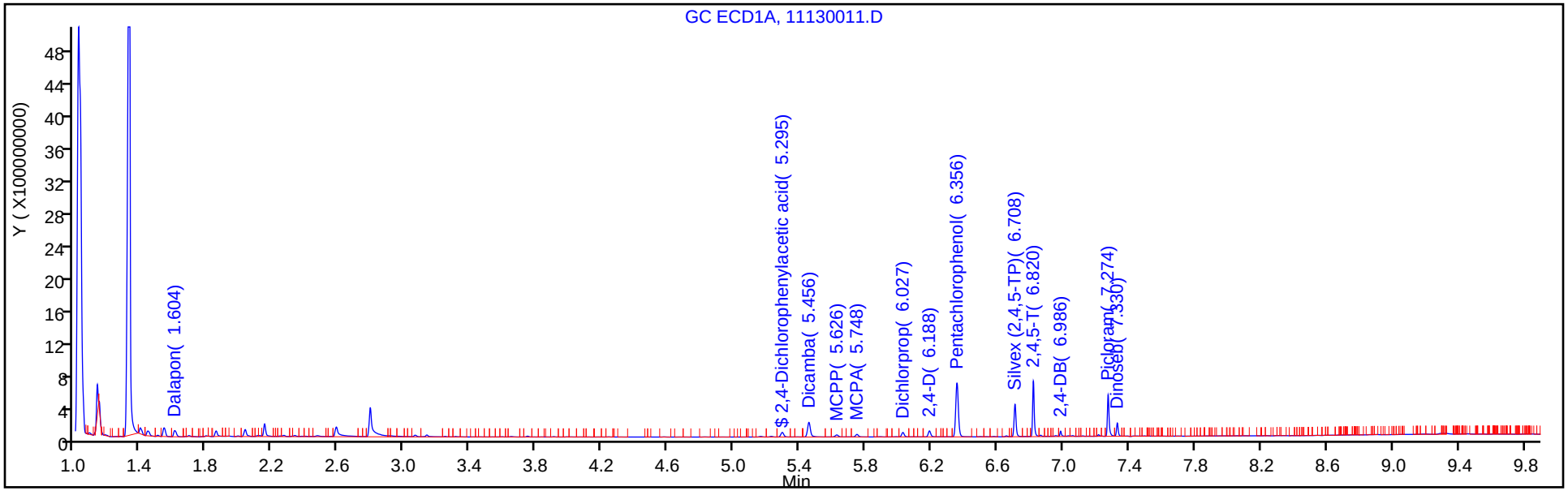
Report Date: 14-Nov-2018 09:57:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

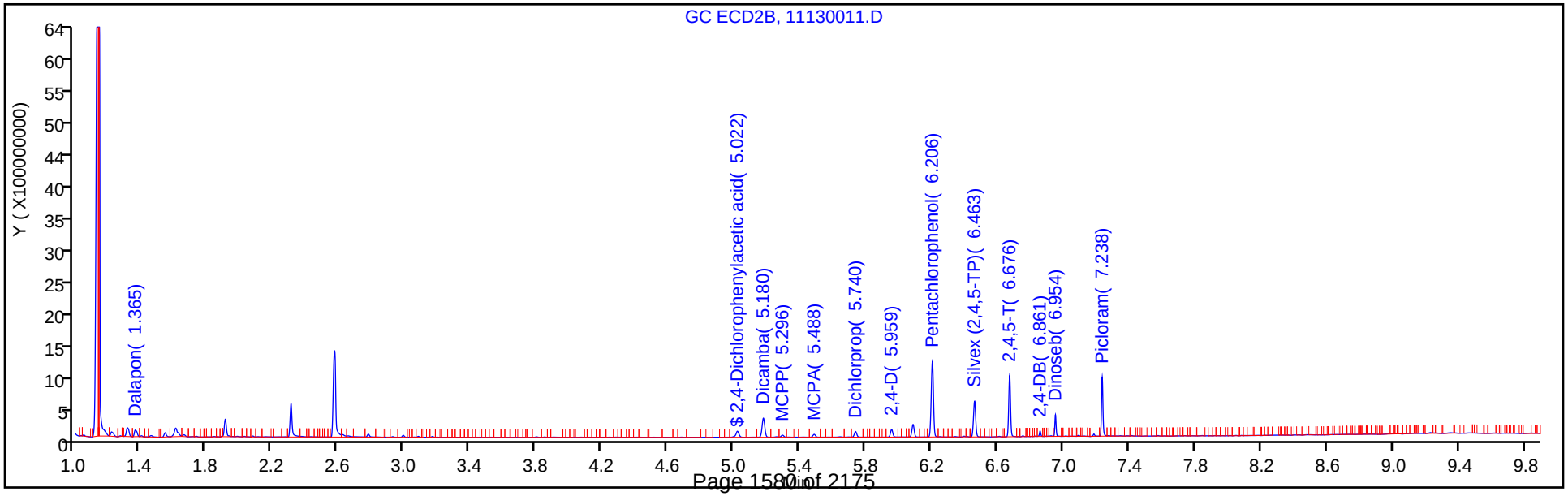
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130011.D

Injection Date:	13-Nov-2018 18:40:47	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	LCS 280-436732/2-B			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130011.D				
Lims ID:	LCS 280-436732/2-B				
Client ID:					
Sample Type:	LCS				
Inject. Date:	13-Nov-2018 18:40:47	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436732/2				
Misc. Info.:	280-0076146-011				
Operator ID:	AMB	Instrument ID:	SGC_M		
Method:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m				
Limit Group:	GCSV - 8151				
Method Label:	8151A: Herbicides: DV-GC-0022				
Last Update:	14-Nov-2018 09:56:45	Calib Date:	08-Nov-2018 21:47:57		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: byla		Date:	14-Nov-2018 09:43:45		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.3899	77.97

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.4576	91.52

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MS | Lab Sample ID: 280-116538-4 MS

Matrix: Water (TCLP) | Lab File ID: 11130013.D

Analysis Method: 8151A DOD | Date Collected: 11/02/2018 15:30

Extraction Method: 8151A | Date Extracted: 11/08/2018 07:48

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2018 19:13

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437382 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
94-75-7	2,4-D	0.0389	J	0.040	0.0021
93-72-1	Silvex (2,4,5-TP)	0.0392		0.010	0.0017

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	83		10-131

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130013.D
Lims ID: 280-116538-A-4-C MS
Client ID:
Sample Type: MS
Inject. Date: 13-Nov-2018 19:13:09 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-C
Misc. Info.: 280-0076146-013
Operator ID: AMB Instrument ID: SGC_M

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:56:45 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 14-Nov-2018 09:44:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 2,4-DBDinoseb							
1		-0.060				ND	
2		-0.060					
2 Dalapon							
1	1.603	1.601	0.002	99986738	0.5000	0.3664	
2	1.364	1.365	-0.001	192348716	0.5000	0.4040	
						RPD = 9.77	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.294	5.295	-0.001	76839820	0.5000	0.4153	
2	5.022	5.022	0.000	150525324	0.5000	0.5363	
						RPD = 25.44	
4 Dicamba							
1	5.456	5.456	0.000	242909092	0.5000	0.3507	
2	5.179	5.180	-0.001	392266792	0.5000	0.3614	
						RPD = 3.01	
5 MCPP							
1	5.627	5.627	0.000	33946103	50.0	44.6	
2	5.295	5.297	-0.002	38202058	50.0	36.1	
						RPD = 21.15	
6 MCPA							
1	5.748	5.749	-0.001	38492931	50.0	35.5	
2	5.488	5.489	-0.001	52719088	50.0	33.5	
						RPD = 5.85	
7 Dichlorprop							
1	6.027	6.027	0.000	66244034	0.5000	0.3702	
2	5.739	5.740	-0.001	99848977	0.5000	0.3653	
						RPD = 1.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 2,4-D							
1	6.187	6.189	-0.002	82490219	0.5000	0.3893	
2	5.958	5.959	-0.001	126775710	0.5000	0.3697	
						RPD = 5.18	
14 Pentachlorophenol							
1	6.355	6.356	-0.001	826454576	0.5000	0.3647	
2	6.206	6.207	-0.001	1168594061	0.5000	0.3445	
9 Silvex (2,4,5-TP)							
1	6.707	6.708	-0.001	333878908	0.5000	0.3920	
2	6.462	6.463	-0.001	519928680	0.5000	0.4000	
						RPD = 2.03	
10 2,4,5-T							
1	6.819	6.820	-0.001	320019020	0.5000	0.3685	
2	6.676	6.677	-0.001	506651006	0.5000	0.3773	
						RPD = 2.36	
11 2,4-DB							
1	6.985	6.986	-0.001	48330925	0.5000	0.3379	
2	6.860	6.862	-0.002	58193732	0.5000	0.2729	
						RPD = 21.30	
12 Picloram							
1	7.274	7.276	-0.002	408888855	0.5000	0.3297	
2	7.237	7.239	-0.002	640292974	0.5000	0.3157	
						RPD = 4.33	
13 Dinoseb							
1	7.329	7.330	-0.001	132904873	0.5000	0.1958	
2	6.953	6.954	-0.001	202287277	0.5000	0.2389	
						RPD = 19.81	

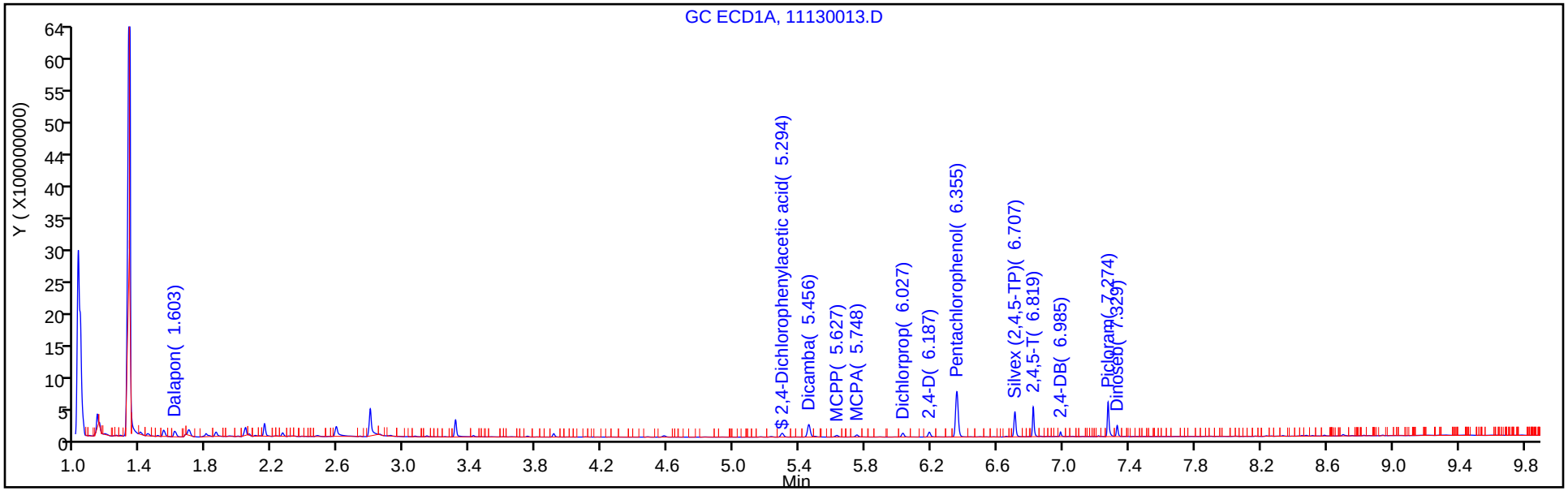
Report Date: 14-Nov-2018 09:57:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

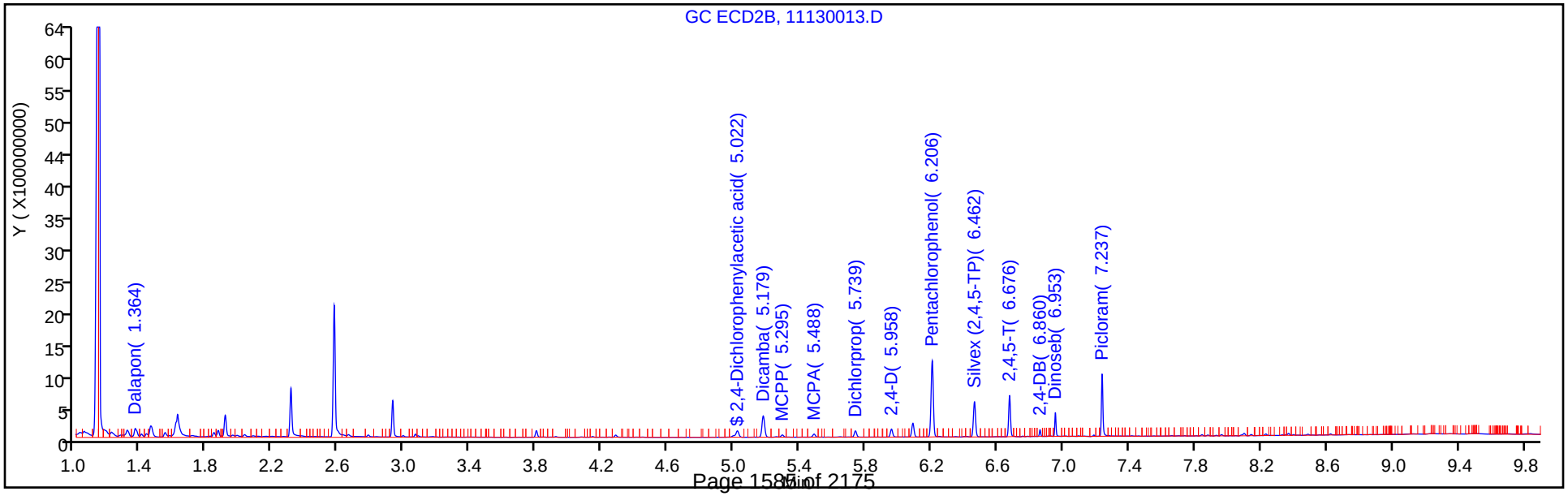
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130013.D

Injection Date:	13-Nov-2018 19:13:09	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	280-116538-A-4-C MS			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130013.D				
Lims ID:	280-116538-A-4-C MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	13-Nov-2018 19:13:09	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-C				
Misc. Info.:	280-0076146-013				
Operator ID:	AMB	Instrument ID:	SGC_M		
Method:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m				
Limit Group:	GCSV - 8151				
Method Label:	8151A: Herbicides: DV-GC-0022				
Last Update:	14-Nov-2018 09:56:45	Calib Date:	08-Nov-2018 21:47:57		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: byla		Date:	14-Nov-2018 09:44:19		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.4153	83.06

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.5363	107.27

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-2

SDG No.:

Client Sample ID: FWGIDW-181001-WW MSD | Lab Sample ID: 280-116538-4 MSD

Matrix: Water (TCLP) | Lab File ID: 11130014.D

Analysis Method: 8151A DOD | Date Collected: 11/02/2018 15:30

Extraction Method: 8151A | Date Extracted: 11/08/2018 07:48

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2018 19:29

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437382 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
94-75-7	2,4-D	0.0372	J	0.040	0.0021
93-72-1	Silvex (2,4,5-TP)	0.0374		0.010	0.0017

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	78		10-131

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130014.D
Lims ID: 280-116538-A-4-D MSD
Client ID:
Sample Type: MSD
Inject. Date: 13-Nov-2018 19:29:56 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-4-D
Misc. Info.: 280-0076146-014
Operator ID: AMB Instrument ID: SGC_M

Method: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m
Limit Group: GCSV - 8151
Method Label: 8151A: Herbicides: DV-GC-0022
Last Update: 14-Nov-2018 09:56:45 Calib Date: 08-Nov-2018 21:47:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: byla Date: 14-Nov-2018 09:44:27

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 2,4-DBDinoseb							
1		-0.060				ND	
2		-0.060					
2 Dalapon							
1	1.604	1.601	0.003	94372624	0.5000	0.3450	
2	1.364	1.365	-0.001	131389317	0.5000	0.2714	
						RPD = 23.89	
$ 3 2,4-Dichlorophenylacetic acid							
1	5.296	5.295	0.001	72615863	0.5000	0.3910	
2	5.022	5.022	0.000	139352929	0.5000	0.4943	
						RPD = 23.34	
4 Dicamba							
1	5.458	5.456	0.002	231974998	0.5000	0.3339	
2	5.180	5.180	0.000	368039528	0.5000	0.3378	
						RPD = 1.16	
5 MCPP							
1	5.628	5.627	0.001	33644355	50.0	44.2	
2	5.295	5.297	-0.002	35395050	50.0	33.3	
						RPD = 28.18	
6 MCPA							
1	5.750	5.749	0.001	40083253	50.0	37.3	
2	5.489	5.489	0.000	49904285	50.0	31.5	
						RPD = 16.87	
7 Dichlorprop							
1	6.029	6.027	0.002	63718555	0.5000	0.3551	
2	5.739	5.740	-0.001	94518552	0.5000	0.3443	
						RPD = 3.09	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 2,4-D							
1	6.189	6.189	0.000	78900027	0.5000	0.3715	
2	5.959	5.959	0.000	119656668	0.5000	0.3476	
						RPD = 6.66	
14 Pentachlorophenol							
1	6.357	6.356	0.001	691527803	0.5000	0.3023	
2	6.206	6.207	-0.001	983652274	0.5000	0.2868	
9 Silvex (2,4,5-TP)							
1	6.709	6.708	0.001	319098553	0.5000	0.3737	
2	6.463	6.463	0.000	497512478	0.5000	0.3818	
						RPD = 2.15	
10 2,4,5-T							
1	6.820	6.820	0.000	312829144	0.5000	0.3598	
2	6.676	6.677	-0.001	481299836	0.5000	0.3575	
						RPD = 0.64	
11 2,4-DB							
1	6.986	6.986	0.000	50647883	0.5000	0.3554	
2	6.860	6.862	-0.002	54368628	0.5000	0.2539	
						RPD = 33.31	
12 Picloram							
1	7.274	7.276	-0.002	408584774	0.5000	0.3294	
2	7.238	7.239	-0.001	632113765	0.5000	0.3115	
						RPD = 5.61	
13 Dinoseb							
1	7.330	7.330	0.000	126254809	0.5000	0.1844	
2	6.954	6.954	0.000	192145784	0.5000	0.2264	
						RPD = 20.41	

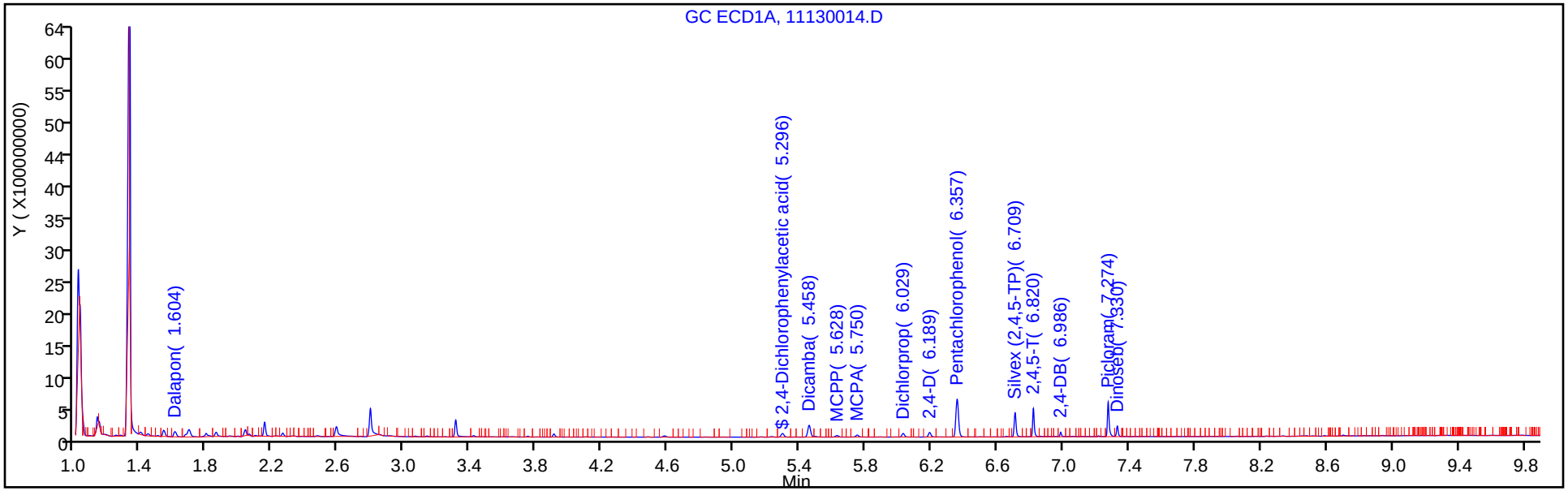
Report Date: 14-Nov-2018 09:57:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

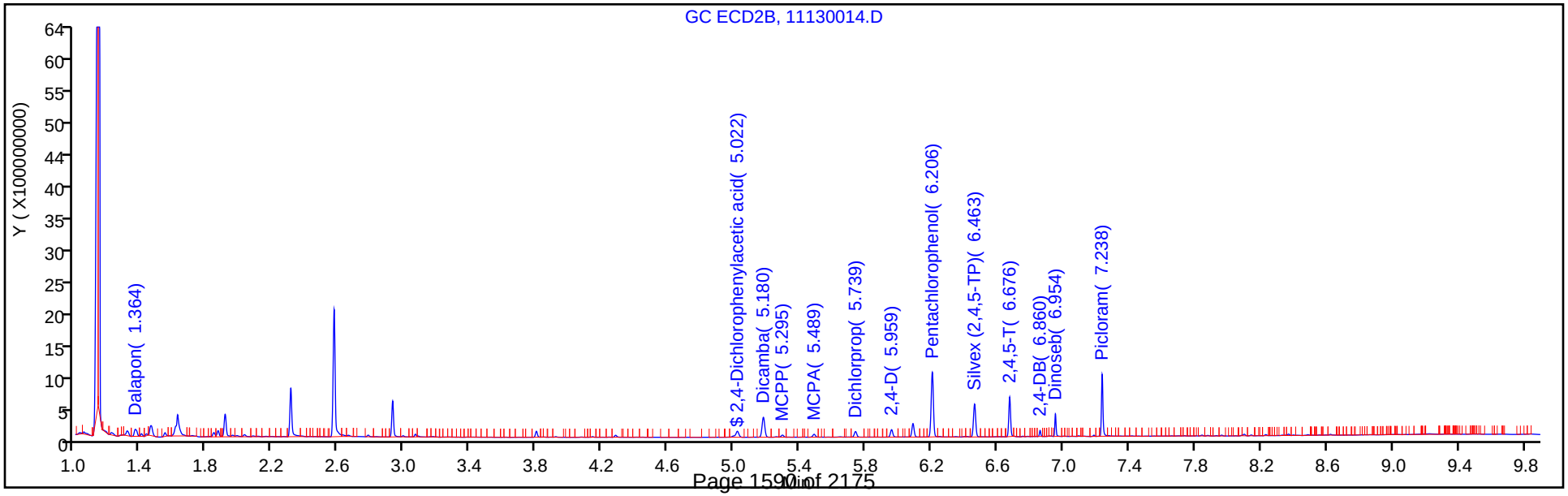
Data File: \\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130014.D

Injection Date:	13-Nov-2018 19:29:56	Instrument ID:	SGC_M	Operator ID:	AMB
Lims ID:	280-116538-A-4-D MSD			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8151_615	Limit Group:	GCSV - 8151		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 2



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\11130014.D				
Lims ID:	280-116538-A-4-D MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	13-Nov-2018 19:29:56	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-4-D				
Misc. Info.:	280-0076146-014				
Operator ID:	AMB	Instrument ID:	SGC_M		
Method:	\\ChromNA\Denver\ChromData\SGC_M\20181113-76146.b\8151_615.m				
Limit Group:	GCSV - 8151				
Method Label:	8151A: Herbicides: DV-GC-0022				
Last Update:	14-Nov-2018 09:56:45	Calib Date:	08-Nov-2018 21:47:57		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_M\20181108-75980.b\11080009.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: byla		Date:	14-Nov-2018 09:44:27		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.3910	78.20

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 2,4-Dichlorophenylacetic acid	0.5000	0.4943	98.86

HERBICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_M Start Date: 11/08/2018 20:10

Analysis Batch Number: 436856 End Date: 11/08/2018 23:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD7 280-436856/3 IC		11/08/2018 20:10	1	11080003.D	CLP1 0.32(mm)
STD7 280-436856/3 IC		11/08/2018 20:10	1	11080003.D	CLP2 0.32(mm)
STD6 280-436856/4 IC		11/08/2018 20:26	1	11080004.D	CLP1 0.32(mm)
STD6 280-436856/4 IC		11/08/2018 20:26	1	11080004.D	CLP2 0.32(mm)
STD5 280-436856/5 IC		11/08/2018 20:43	1	11080005.D	CLP1 0.32(mm)
STD5 280-436856/5 IC		11/08/2018 20:43	1	11080005.D	CLP2 0.32(mm)
STD4 280-436856/6 ICRT		11/08/2018 20:59	1	11080006.D	CLP1 0.32(mm)
STD4 280-436856/6 ICRT		11/08/2018 20:59	1	11080006.D	CLP2 0.32(mm)
STD3 280-436856/7 IC		11/08/2018 21:15	1	11080007.D	CLP1 0.32(mm)
STD3 280-436856/7 IC		11/08/2018 21:15	1	11080007.D	CLP2 0.32(mm)
STD2 280-436856/8 IC		11/08/2018 21:31	1	11080008.D	CLP1 0.32(mm)
STD2 280-436856/8 IC		11/08/2018 21:31	1	11080008.D	CLP2 0.32(mm)
STD1 280-436856/9 IC		11/08/2018 21:47	1	11080009.D	CLP1 0.32(mm)
STD1 280-436856/9 IC		11/08/2018 21:47	1	11080009.D	CLP2 0.32(mm)
ICV 280-436856/10		11/08/2018 22:04	1	11080010.D	CLP1 0.32(mm)
ICV 280-436856/10		11/08/2018 22:04	1	11080010.D	CLP2 0.32(mm)
ZZZZZ		11/08/2018 22:20	1		CLP1 0.32(mm)
ZZZZZ		11/08/2018 22:20	1		CLP2 0.32(mm)
ZZZZZ		11/08/2018 22:36	1		CLP1 0.32(mm)
ZZZZZ		11/08/2018 22:36	1		CLP2 0.32(mm)
ZZZZZ		11/08/2018 22:52	1		CLP1 0.32(mm)
ZZZZZ		11/08/2018 22:52	1		CLP2 0.32(mm)
ZZZZZ		11/08/2018 23:08	1		CLP1 0.32(mm)
ZZZZZ		11/08/2018 23:08	1		CLP2 0.32(mm)
ZZZZZ		11/08/2018 23:25	10		CLP1 0.32(mm)
ZZZZZ		11/08/2018 23:25	10		CLP2 0.32(mm)
CCV 280-436856/16		11/08/2018 23:41	1		CLP1 0.32(mm)
CCV 280-436856/16		11/08/2018 23:41	1		CLP2 0.32(mm)

HERBICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_M Start Date: 11/13/2018 15:49

Analysis Batch Number: 437382 End Date: 11/14/2018 00:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 280-437382/3		11/13/2018 15:49	1	11130003.D	CLP1 0.32(mm)
CCVRT 280-437382/3		11/13/2018 15:49	1	11130003.D	CLP2 0.32(mm)
ZZZZZ		11/13/2018 16:05	10000		CLP1 0.32(mm)
ZZZZZ		11/13/2018 16:05	10000		CLP2 0.32(mm)
ZZZZZ		11/13/2018 16:23	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 16:23	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 16:41	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 16:41	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 16:58	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 16:58	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 17:16	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 17:16	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 17:51	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 17:51	5		CLP2 0.32(mm)
CCV 280-437382/9		11/13/2018 18:07	1	11130009.D	CLP1 0.32(mm)
CCV 280-437382/9		11/13/2018 18:07	1	11130009.D	CLP2 0.32(mm)
LB3 280-436732/1-B		11/13/2018 18:24	1	11130010.D	CLP1 0.32(mm)
LB3 280-436732/1-B		11/13/2018 18:24	1	11130010.D	CLP2 0.32(mm)
LCS 280-436732/2-B		11/13/2018 18:40	1	11130011.D	CLP1 0.32(mm)
LCS 280-436732/2-B		11/13/2018 18:40	1	11130011.D	CLP2 0.32(mm)
280-116538-4		11/13/2018 18:57	1	11130012.D	CLP1 0.32(mm)
280-116538-4		11/13/2018 18:57	1	11130012.D	CLP2 0.32(mm)
280-116538-4 MS		11/13/2018 19:13	1	11130013.D	CLP1 0.32(mm)
280-116538-4 MS		11/13/2018 19:13	1	11130013.D	CLP2 0.32(mm)
280-116538-4 MSD		11/13/2018 19:29	1	11130014.D	CLP1 0.32(mm)
280-116538-4 MSD		11/13/2018 19:29	1	11130014.D	CLP2 0.32(mm)
ZZZZZ		11/13/2018 19:46	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 19:46	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 20:02	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 20:02	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 20:18	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 20:18	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 20:34	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 20:34	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 20:50	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 20:50	5		CLP2 0.32(mm)
CCV 280-437382/20		11/13/2018 21:06	1	11130020.D	CLP1 0.32(mm)
CCV 280-437382/20		11/13/2018 21:06	1	11130020.D	CLP2 0.32(mm)
ZZZZZ		11/13/2018 21:22	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 21:22	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 21:38	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 21:38	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 21:54	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 21:54	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 22:10	1		CLP1 0.32(mm)

HERBICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: SGC_M Start Date: 11/13/2018 15:49

Analysis Batch Number: 437382 End Date: 11/14/2018 00:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/13/2018 22:10	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 22:27	10		CLP1 0.32(mm)
ZZZZZ		11/13/2018 22:27	10		CLP2 0.32(mm)
ZZZZZ		11/13/2018 22:43	10		CLP1 0.32(mm)
ZZZZZ		11/13/2018 22:43	10		CLP2 0.32(mm)
ZZZZZ		11/13/2018 22:59	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 22:59	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 23:15	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 23:15	1		CLP2 0.32(mm)
ZZZZZ		11/13/2018 23:31	5		CLP1 0.32(mm)
ZZZZZ		11/13/2018 23:31	5		CLP2 0.32(mm)
ZZZZZ		11/13/2018 23:47	1		CLP1 0.32(mm)
ZZZZZ		11/13/2018 23:47	1		CLP2 0.32(mm)
CCV 280-437382/31		11/14/2018 00:03	1		CLP1 0.32(mm)
CCV 280-437382/31		11/14/2018 00:03	1		CLP2 0.32(mm)

HERBICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436732 Batch Start Date: 11/07/18 09:48 Batch Analyst: Bourgery, David F

Batch Method: 1311 Batch End Date: 11/10/18 10:17

Lab Sample ID	Client Sample ID	Method Chain	Basis	ExtractFluid	AnalysisComment				
LB3 280-436732/1		1311, 8151A, 8151A DOD		milliq					
LCS 280-436732/2		1311, 8151A, 8151A DOD		milliq					
280-116538-A-4	FWGIDW-181001-WW	1311, 8151A, 8151A DOD	P	milliq	TOX used d too				

Batch Notes	
First End time	11/07/18 19:48
First Start time	11/07/18 9:48

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HERBICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436773 Batch Start Date: 11/08/18 07:48 Batch Analyst: Zhang, Jian

Batch Method: 8151A Batch End Date: 11/12/18 18:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	SecondAdjustpH	8151 LCS 00100
LB3 280-436732/1-A		8151A, 8151A DOD		100 mL	10 mL	7 SU	>12 SU	<2	
LCS 280-436732/2-A		8151A, 8151A DOD		100 mL	10 mL	7 SU	>12 SU	<2	0.5 mL
280-116538-A-4-A	FWGIDW-181001-WW	8151A, 8151A DOD	P	100 mL	10 mL	7 SU	>12 SU	<2	
280-116538-A-4-A MS	FWGIDW-181001-WW	8151A, 8151A DOD	P	100 mL	10 mL	7 SU	>12 SU	<2	0.5 mL
280-116538-A-4-A MSD	FWGIDW-181001-WW	8151A, 8151A DOD	P	100 mL	10 mL	7 SU	>12 SU	<2	0.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	8151Surrogate 00170					
LB3 280-436732/1-A		8151A, 8151A DOD		1 mL					
LCS 280-436732/2-A		8151A, 8151A DOD		1 mL					
280-116538-A-4-A	FWGIDW-181001-WW	8151A, 8151A DOD	P	1 mL					
280-116538-A-4-A MS	FWGIDW-181001-WW	8151A, 8151A DOD	P	1 mL					
280-116538-A-4-A MSD	FWGIDW-181001-WW	8151A, 8151A DOD	P	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HERBICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436773 Batch Start Date: 11/08/18 07:48 Batch Analyst: Zhang, Jian

Batch Method: 8151A Batch End Date: 11/12/18 18:55

Batch Notes	
Acid Used for pH Adjustment ID	12N H2SO4
Balance ID	B442138757
Base Used to Adjust pH ID	37% KOH
Batch Comment	DV-OP-0011/ BB8 @10.00mL/SilicicAcid 00030/Methanol 00235
Concentration 1 Equipment ID	A
Analyst ID - Concentration	MM/CR
Concentration 1 Corrected Temperature	65 Degrees C
Diethyl Ether ID	EthylEther_01863/1864/1865
Analyst ID - Extraction	JZ
Sulfuric Acid Lot Number	12N H2SO4_00499
Potassium Hydroxide ID	37% KOH_00216
MeCL2 ID	MeCl2_Cycl_00412
Acidified Na2SO4 ID	Acid_NA2SO4_00613/615/616
NaCl ID	173831
Pipette/Syringe/Dispenser ID	K
Analyst ID - Spike Analyst	JZ
Analyst ID - Spike Witness Analyst	Reviewer:MF
Sufficient Volume for Batch QC	Yes
TMSDM ID	TMSD_00117
Concentration 1 Uncorrected Temperature	66 Degrees C
Reagent Water ID	N Elga

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
FWGIDW-181001-WW	280-116538-4

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TCLP

Client Sample ID: FWGIDW-181001-WW
Lab Sample ID: 280-116538-4
Lab Name: TestAmerica Denver
Job No.: 280-116538-2
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 15:30
Reporting Basis: WET
Date Received: 11/03/2018 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	0.50	0.022	mg/L			1	6010C
7440-39-3	Barium	0.015	1.0	0.0040	mg/L	J		1	6010C
7440-43-9	Cadmium	ND	0.10	0.0020	mg/L			1	6010C
7440-47-3	Chromium	ND	0.50	0.0030	mg/L			1	6010C
7439-92-1	Lead	ND	0.50	0.014	mg/L			1	6010C
7782-49-2	Selenium	ND	0.10	0.032	mg/L			1	6010C
7440-22-4	Silver	ND	0.50	0.0040	mg/L			1	6010C
7439-97-6	Mercury	ND	0.0020	0.000030	mg/L			1	7470A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

ICV Source: ICP ICV_00682 Concentration Units: mg/L

CCV Source: ICP CCV_00351

Analyte	ICV 280-437502/9 11/13/2018 10:58				ICV 280-437502/10 11/13/2018 11:02				CCV 280-437502/59 11/13/2018 14:36			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.246	J	0.250	98	0.249	J	0.250	100	0.970		1.00	97
Barium	0.258	J	0.250	103	0.256	J	0.250	102	0.494	J	0.500	99
Cadmium	0.250		0.250	100	0.251		0.250	100	0.486		0.500	97
Chromium	0.253	J	0.250	101	0.255	J	0.250	102	0.490	J	0.500	98
Lead	0.254	J	0.250	102	0.257	J	0.250	103	0.984		1.00	98
Selenium	0.479		0.500	96	0.487		0.500	97	0.968		1.00	97
Silver	0.249	J	0.250	100	0.251	J	0.250	100	0.489	J	0.500	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

ICV Source: ICP ICV_00682 Concentration Units: mg/L

CCV Source: ICP CCV_00351

Analyte	CCV 280-437502/73 11/13/2018 15:23											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.969		1.00	97								
Barium	0.492	J	0.500	98								
Cadmium	0.494		0.500	99								
Chromium	0.491	J	0.500	98								
Lead	0.991		1.00	99								
Selenium	0.962		1.00	96								
Silver	0.484	J	0.500	97								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

ICV Source: ICP LLCCV_02398 Concentration Units: mg/L

CCV Source: ICP LLCCV_02398

Analyte	ICVL 280-437502/11 11/13/2018 11:05				CCVL 280-437502/61 11/13/2018 14:42				CCVL 280-437502/75 11/13/2018 15:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	ND		0.0150	109	ND		0.0150	85	ND		0.0150	85
Barium	0.00977	J	0.0100	98	0.00965	J	0.0100	96	0.00951	J	0.0100	95
Cadmium	0.00493	J	0.00500	99	0.00469	J	0.00500	94	0.00478	J	0.00500	96
Chromium	0.00992	J	0.0100	99	0.00988	J	0.0100	99	0.00968	J	0.0100	97
Lead	ND		0.00900	106	ND		0.00900	107	ND		0.00900	98
Selenium	ND		0.0200	86	ND		0.0200	88	ND		0.0200	82
Silver	0.00927	J	0.0100	93	0.00905	J	0.0100	91	0.00911	J	0.0100	91

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

ICV Source: Hg Biwk ICV_00261 Concentration Units: mg/L

CCV Source: Hg Daily Spk_02290

Analyte	ICV 280-437490/9-A 11/15/2018 10:22				CCV 280-437490/12-A 11/15/2018 13:57				CCV 280-437490/12-A 11/15/2018 14:24			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00399		0.00400	100	0.00534		0.00500	107	0.00544		0.00500	109

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

ICV Source: Hg Biwk ICV_00261 Concentration Units: mg/L

CCV Source: Hg Daily Spk_02290

Analyte	CCV 280-437490/12-A 11/15/2018 15:02				CCV 280-437490/12-A 11/15/2018 15:48				CCV 280-437490/12-A 11/15/2018 16:04			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00512		0.00500	102	0.00525		0.00500	105	0.00515		0.00500	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Method: 6010C Instrument ID: MT_051

Lab Sample ID: CRI 280-437502/15 Concentration Units: mg/L

CRQL Check Standard Source: ICP LLCCV_02398

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	0.0150	ND		99	80-120
Barium	0.0100	0.00941	J	94	80-120
Cadmium	0.00500	0.00495	J	99	80-120
Chromium	0.0100	0.00958	J	96	80-120
Lead	0.00900	ND		113	80-120
Selenium	0.0200	ND		87	80-120
Silver	0.0100	0.00951	J	95	80-120

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

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 280-437502/14 11/13/2018 11:15		CCB 280-437502/60 11/13/2018 14:39		CCB 280-437502/74 11/13/2018 15:26			
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.50	ND		ND		ND			
Barium	1.0	ND		ND		ND			
Cadmium	0.10	ND		ND		ND			
Chromium	0.50	ND		ND		ND			
Lead	0.50	ND		ND		ND			
Selenium	0.10	ND		ND		ND			
Silver	0.50	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 280-437490/10-A 11/15/2018 10:24		CCB 280-437490/13-A 11/15/2018 13:59		CCB 280-437490/13-A 11/15/2018 14:27		CCB 280-437490/13-A 11/15/2018 15:04	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.0020	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Concentration Units: mg/L

Analyte	RL	CCB 280-437490/13-A 11/15/2018 15:51		CCB 280-437490/13-A 11/15/2018 16:06					
		Found	C	Found	C	Found	C	Found	C
Mercury	0.0020	ND		ND					

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TCLP

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Concentration Units: mg/L Lab Sample ID: LB3 280-436732/1-F

Instrument Code: MT_051 Batch No.: 437502

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	ND			6010C_DOD5
7440-39-3	Barium	ND			6010C_DOD5
7440-43-9	Cadmium	ND			6010C_DOD5
7440-47-3	Chromium	ND			6010C_DOD5
7439-92-1	Lead	ND			6010C_DOD5
7782-49-2	Selenium	ND			6010C_DOD5
7440-22-4	Silver	ND			6010C_DOD5

3-IN
METHOD BLANK
METALS - TCLP

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Concentration Units: mg/L Lab Sample ID: LB3 280-436732/1-J

Instrument Code: MT_033 Batch No.: 437814

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			7470A_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICSA 280-437502/16 Instrument ID: MT_051

Lab File ID: 51A111318A.csv ICS Source: ICP ICSA_00173

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**0.0026**	
Barium		**-0.0014**	
Cadmium		**-0.0009**	
Chromium		**-0.0002**	
Lead		**-0.0051**	
Selenium		**-0.0002**	
Silver		**0.0007**	
Aluminum	*500*	*522*	*104*
Antimony		*-0.0106*	
Beryllium		*-0.0013*	
Boron		*0.0027*	
Calcium	*500*	*496*	*99*
Cobalt		*-0.0026*	
Copper		*-0.0070*	
Iron	*200*	*194*	*97*
Lithium		*0.0071*	
Magnesium	*500*	*511*	*102*
Manganese		*0.0004*	
Molybdenum		*0.0001*	
Nickel		*-0.0002*	
Phosphorus		*0.0083*	
Potassium		*-0.0375*	
Silicon		*0.0280*	
Sodium		*0.0426*	
Strontium		*0.0049*	
Thallium		*0.0043*	
Tin		*0.0059*	
Titanium		*0.0000*	
Vanadium		*0.0013*	
Zinc		*-0.0064*	

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

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Lab Sample ID: ICSAB 280-437502/17 Instrument ID: MT_051

Lab File ID: 51A111318A.csv ICS Source: ICP ICSAB_00194

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**2.00**	**2.12**	**106**
Barium	**0.500**	**0.514**	**103**
Cadmium	**1.00**	**0.958**	**96**
Chromium	**0.500**	**0.493**	**99**
Lead	**1.00**	**0.986**	**99**
Selenium	**5.00**	**5.24**	**105**
Silver	**1.00**	**1.15**	**115**
Aluminum	*500*	*520*	*104*
Antimony	*1.00*	*1.05*	*105*
Beryllium	*0.500*	*0.501*	*100*
Boron	*2.00*	*2.20*	*110*
Calcium	*500*	*492*	*98*
Cobalt	*0.500*	*0.468*	*94*
Copper	*0.500*	*0.532*	*106*
Iron	*200*	*193*	*97*
Lithium	*1.00*	*1.10*	*110*
Magnesium	*500*	*511*	*102*
Manganese	*0.500*	*0.497*	*99*
Molybdenum	*1.00*	*0.999*	*100*
Nickel	*1.00*	*0.929*	*93*
Phosphorus	*2.00*	*2.12*	*106*
Potassium	*50.0*	*55.3*	*111*
Silicon	*10.0*	*10.7*	*107*
Sodium	*50.0*	*57.0*	*114*
Strontium	*1.00*	*1.04*	*104*
Thallium	*10.0*	*9.65*	*97*
Tin	*10.0*	*9.63*	*96*
Titanium	*1.00*	*1.04*	*104*
Vanadium	*0.500*	*0.516*	*103*
Zinc	*1.00*	*0.940*	*94*

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

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TCLP

Client ID: FWGIDW-181001-WW MS
Lab ID: 280-116538-4 MS
Lab Name: TestAmerica Denver
Job No.: 280-116538-2
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	3.98		ND		4.00	99	80-120		6010C
Barium	12.2		0.015	J	12.0	102	80-120		6010C
Cadmium	1.09		ND		1.10	99	80-120		6010C
Chromium	5.27		ND		5.20	101	80-120		6010C
Lead	5.61		ND		5.50	102	80-120		6010C
Selenium	2.88		ND		3.00	96	80-120		6010C
Silver	1.06		ND		1.05	101	80-120		6010C
Mercury	0.00497		ND		0.00500	99	90-116		7470A

SSR = Spiked Sample Result

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

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TCLP

Client ID: FWGIDW-181001-WW MSD
Lab ID: 280-116538-4 MSD
Lab Name: TestAmerica Denver
Job No.: 280-116538-2
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	3.99		4.00	100	80-120	0	20		6010C
Barium	12.1		12.0	101	80-120	1	20		6010C
Cadmium	1.11		1.10	100	80-120	1	20		6010C
Chromium	5.29		5.20	102	80-120	0	20		6010C
Lead	5.63		5.50	102	80-120	0	20		6010C
Selenium	2.90		3.00	97	80-120	1	20		6010C
Silver	1.04		1.05	99	80-120	1	20		6010C
Mercury	0.00514		0.00500	103	90-116	3	10		7470A

SDR = Sample Duplicate Result

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

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TCLP

Client ID: FWGIDW-181001-WW PDS
Lab ID: 280-116538-4 PDS
Lab Name: TestAmerica Denver
Job No.: 280-116538-2
SDG No.:
Matrix: Water
Concentration Units: mg/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	0.962		ND		1.00	96	80-120		6010C
Barium	0.496	J	0.015	J	0.500	96	80-120		6010C
Cadmium	0.240		ND		0.250	96	80-120		6010C
Chromium	0.245	J	ND		0.250	98	80-120		6010C
Lead	0.484	J	ND		0.500	97	80-120		6010C
Selenium	0.958		ND		1.00	96	80-120		6010C
Silver	0.219	J	ND		0.250	88	80-120		6010C
Mercury	0.00491		ND		0.00500	98	80-120		7470A

SSR = Spiked Sample Result

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

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TCLP

Lab ID: LCS 280-436732/2-F

Lab Name: TestAmerica Denver Job No.: 280-116538-2

Sample Matrix: Water LCS Source: TCLP Spike_00017

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	4.00	3.57		89	80	120		6010C
Barium	12.0	11.0		92	80	120		6010C
Cadmium	1.10	1.01		92	80	120		6010C
Chromium	5.20	4.80		92	80	120		6010C
Lead	5.50	5.12		93	80	120		6010C
Selenium	3.00	2.61		87	80	120		6010C
Silver	1.05	0.940		90	80	120		6010C

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

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TCLP

Lab ID: LCSD 280-436732/13-B

Lab Name: TestAmerica Denver Job No.: 280-116538-2

Sample Matrix: Water LCS Source: TCLP Spike_00017

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	3.86		4.00	97	80-120	8	20		6010C
Barium	11.9		12.0	99	80-120	8	20		6010C
Cadmium	1.09		1.10	99	80-120	7	20		6010C
Chromium	5.21		5.20	100	80-120	8	20		6010C
Lead	5.53		5.50	100	80-120	8	20		6010C
Selenium	2.82		3.00	94	80-120	8	20		6010C
Silver	1.01		1.05	96	80-120	7	20		6010C

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TCLP

Lab ID: LCS 280-436732/2-G

Lab Name: TestAmerica Denver Job No.: 280-116538-2

Sample Matrix: Water LCS Source: Hg Daily Spk_02290

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.00500	0.00495		99	90	116		7470A

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

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TCLP

Lab ID: LCSD 280-436732/13-D

Lab Name: TestAmerica Denver Job No.: 280-116538-2

Sample Matrix: Water LCS Source: Hg Daily Spk_02290

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.00482		0.00500	96	90-116	3	10		7470A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TCLP

Lab ID: 280-116538-4

SDG No:

Lab Name: TestAmerica Denver Job No: 280-116538-2

Matrix: Water Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	ND		ND		NC		6010C
Barium	0.015	J	0.0222	J	NC		6010C
Cadmium	ND		ND		NC		6010C
Chromium	ND		ND		NC		6010C
Lead	ND		ND		NC		6010C
Selenium	ND		ND		NC		6010C
Silver	ND		ND		NC		6010C

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

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TCLP

Lab ID: 280-116538-4

SDG No:

Lab Name: TestAmerica Denver Job No: 280-116538-2

Matrix: Water Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Mercury	ND		ND		NC		7470A

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

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: MT_051

Method: 6010C MDL Date: 08/01/2018 00:00

Prep Method: 3010A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Arsenic	189	0.5	0.022
Barium	455.4	1	0.004
Cadmium	228.8	0.1	0.002
Chromium	205.5	0.5	0.003
Lead	220.3	0.5	0.014
Selenium	196	0.1	0.032
Silver	328	0.5	0.004

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: MT_051

Method: 6010C XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Arsenic		0.5	0.022
Barium		1	0.004
Cadmium		0.1	0.002
Chromium		0.5	0.003
Lead		0.5	0.014
Selenium		0.1	0.032
Silver		0.5	0.004

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: MT_033

Method: 7470A MDL Date: 08/09/2015 00:00

Prep Method: 7470A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury	253.7	0.002	0.00003

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: MT_033

Method: 7470A XMDL Date: 02/26/2014 11:36

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.002	0.00003

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	167.019													0.0012	
Aluminum	396.152								0.000173						
Antimony	206.834		-0.000014									0.011394		-0.000086	
Arsenic	188.98													-0.000007	
Barium	493.408			-0.000045			0.000255		0.000002					0.000008	
Beryllium	234.861							0.000015						0.000104	
Bismuth	223.061													0.000065	
Boron	249.678		.0								0.001755			-0.00006	
Cadmium	214.439										0.000016			0.000016	
Calcium	315.887									0.000711					
Chromium	205.56						-0.00057							-0.000018	
Cobalt	237.863														
Copper	324.754		0.000007						-0.000011					0.000016	
Iron	238.204														
Iron	259.94														
Lead	220.353		-0.0001111											0.00003	
Lithium	670.783														
Magnesium	279.078													-0.00029	
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604													0.000006	
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026		0.000015											-0.0002	
Silicon	288.158														
Silver	328.066														
Sodium	589.592					0.451997									
Sodium	589.593					0.38916									
Strontium	407.771														
Sulfur	181.972														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.794								0		0.001808	0		-0.000012	
Thorium	288.505						-0.01079							-0.00002	
Tin	189.925														
Titanium	336.122								0.000022						
Uranium	409.013								-0.0000416					0.000203	
Vanadium	292.401											-0.00679		0	
Zinc	206.2														
Zirconium	343.823													0.000022	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Aluminum	396.152				0.031769										
Aluminum	167.019														
Antimony	206.834				-0.00208									0.000337	
Arsenic	188.98														
Barium	493.408														
Beryllium	234.861				-0.00022										
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.56				-0.00012										
Cobalt	237.863														
Copper	324.754				0.000505										
Iron	238.204														
Iron	259.94														
Lead	220.353				-0.00158										
Lithium	670.783														
Magnesium	279.078														
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604														
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026			000816.											
Silicon	288.158														
Silver	328.066														
Sodium	589.593														
Sodium	589.592														
Strontium	407.771														
Sulfur	181.972			0.00474											

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Thallium	190.794				-0.00112										
Thorium	288.505		0	-0.0025											
Tin	189.925														
Titanium	336.122														
Uranium	409.013														
Vanadium	292.401				-0.000580										
Zinc	206.2														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	167.019														
Aluminum	396.152														
Antimony	206.834		0.000287		-0.0011			-0.00142							
Arsenic	188.98														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.56														
Cobalt	237.863		0.001949												
Copper	324.754	0.00368	-0.00033		-0.00091										
Iron	238.204														
Iron	259.94														
Lead	220.353				0.0010										
Lithium	670.783														
Magnesium	279.078				-0.00469										
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604			0.000176											
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026														
Silicon	288.158														
Silver	328.066				-0.00053	-0.0046		0.0047							
Sodium	589.592														
Sodium	589.593														
Strontium	407.771														
Sulfur	181.972														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.794		-0.002												
Thorium	288.505				0.007837	0.01375									
Tin	189.925														
Titanium	336.122														
Uranium	409.013							-0.01707							
Vanadium	292.401	0.002372	0.000675		-0.00164										
Zinc	206.2														
Zirconium	343.823														

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-116538-2

SDG No.:

Instrument ID: MT_051 Date: 10/07/2018 00:00

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Arsenic		10	6010C
Barium		25	6010C
Cadmium		25	6010C
Chromium		10	6010C
Lead		50	6010C
Selenium		10	6010C
Silver		2.5	6010C

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Prep Method: 3010A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LB3 280-436732/1-F	11/13/2018 07:00	437152		10	50
LCS 280-436732/2-F	11/13/2018 07:00	437152		10	50
LCSD 280-436732/13-B	11/13/2018 07:00	437152		10	50
280-116538-4	11/13/2018 07:00	437152		10	50
280-116538-4 MS	11/13/2018 07:00	437152		10	50
280-116538-4 MSD	11/13/2018 07:00	437152		10	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LB3 280-436732/1-J	11/14/2018 12:30	437496		30	50
LCS 280-436732/2-G	11/14/2018 12:30	437496		30	50
LCSD 280-436732/13-D	11/14/2018 12:30	437496		30	50
280-116538-4	11/14/2018 12:30	437496		30	50
280-116538-4 MS	11/14/2018 12:30	437496		30	50
280-116538-4 MSD	11/14/2018 12:30	437496		30	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/13/2018 10:26 End Date: 11/14/2018 03:39

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Cd	Cr	Pb	Se																				
ICIS 280-437502/1	1		10:26	X	X	X	X	X	X	X																				
IC 280-437502/2			10:29	X	X	X	X	X	X	X																				
IC 280-437502/3			10:33	X	X	X	X	X	X	X																				
ZZZZZZ			10:36																											
ZZZZZZ			10:40																											
ICVH 280-437502/6	1		10:43	X	X	X	X	X	X	X																				
ICVH 280-437502/7	1		10:46	X	X	X	X	X	X	X																				
ZZZZZZ			10:50																											
ICV 280-437502/9	1		10:58	X	X	X	X	X	X	X																				
ICV 280-437502/10	1		11:02	X	X	X	X	X	X	X																				
ICVL 280-437502/11	1		11:05	X	X	X	X	X	X	X																				
CCVH 280-437502/12			11:08																											
CCV 280-437502/13			11:12																											
ICB 280-437502/14	1		11:15	X	X	X	X	X	X	X																				
CRI 280-437502/15	1		11:19	X	X	X	X	X	X	X																				
ICSA 280-437502/16	1		11:23	X	X	X	X	X	X	X																				
ICSAB 280-437502/17	1		11:27	X	X	X	X	X	X	X																				
LRA 280-437502/18			11:30																											
CCVH 280-437502/19			11:33																											
CCV 280-437502/20			11:37																											
CCB 280-437502/21			11:40																											
CCVL 280-437502/22			11:43																											
ZZZZZZ			11:47																											
ZZZZZZ			11:50																											
ZZZZZZ			11:53																											
ZZZZZZ			11:57																											
ZZZZZZ			12:00																											
ZZZZZZ			12:04																											
CCVH 280-437502/29			12:07																											
CCV 280-437502/30			12:10																											
CCB 280-437502/31			12:14																											
CCVL 280-437502/32			12:17																											
ZZZZZZ			12:20																											
ZZZZZZ			12:24																											
ZZZZZZ			12:27																											
ZZZZZZ			12:31																											
ZZZZZZ			12:34																											
ZZZZZZ			12:37																											
ZZZZZZ			12:51																											
ZZZZZZ			12:54																											
ZZZZZZ			12:58																											
ZZZZZZ			13:03																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/13/2018 10:26 End Date: 11/14/2018 03:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
CCVH 280-437502/43			13:06																									
ZZZZZZ			13:09																									
CCV 280-437502/45			13:23																									
CCV 280-437502/46			13:27																									
CCB 280-437502/47			13:30																									
CCVL 280-437502/48			13:33																									
ZZZZZZ			13:37																									
ZZZZZZ			14:05																									
ZZZZZZ			14:09																									
ZZZZZZ			14:12																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:22																									
ZZZZZZ			14:25																									
ZZZZZZ			14:29																									
CCVH 280-437502/58	1		14:32	X	X	X	X	X	X	X																		
CCV 280-437502/59	1		14:36	X	X	X	X	X	X	X																		
CCB 280-437502/60	1		14:39	X	X	X	X	X	X	X																		
CCVL 280-437502/61	1		14:42	X	X	X	X	X	X	X																		
LB3 280-436732/1-F	1	P	14:46	X	X	X	X	X	X	X																		
LCS 280-436732/2-F	1	P	14:49	X	X	X	X	X	X	X																		
LCSD 280-436732/13-B	1	P	14:52	X	X	X	X	X	X	X																		
280-116538-4	1	P	14:56	X	X	X	X	X	X	X																		
280-116538-4 SD	5	P	14:59	X	X	X	X	X	X	X																		
280-116538-4 MS	1	P	15:03	X	X	X	X	X	X	X																		
280-116538-4 MSD	1	P	15:06	X	X	X	X	X	X	X																		
280-116538-4 PDS	1	P	15:09	X	X	X	X	X	X	X																		
ZZZZZZ			15:13																									
ZZZZZZ			15:16																									
CCVH 280-437502/72	1		15:19	X	X	X	X	X	X	X																		
CCV 280-437502/73	1		15:23	X	X	X	X	X	X	X																		
CCB 280-437502/74	1		15:26	X	X	X	X	X	X	X																		
CCVL 280-437502/75	1		15:30	X	X	X	X	X	X	X																		
ZZZZZZ			15:33																									
ZZZZZZ			15:36																									
ZZZZZZ			15:40																									
ZZZZZZ			15:43																									
ZZZZZZ			15:46																									
ZZZZZZ			15:50																									
CCVH 280-437502/82			15:53																									
CCV 280-437502/83			15:56																									
CCB 280-437502/84			16:00																									

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/13/2018 10:26 End Date: 11/14/2018 03:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
CCVL 280-437502/85			16:03																									
ZZZZZZ			16:07																									
ZZZZZZ			16:10																									
ZZZZZZ			16:13																									
ZZZZZZ			16:17																									
ZZZZZZ			16:20																									
ZZZZZZ			16:23																									
ZZZZZZ			16:27																									
CCVH 280-437502/93			16:30																									
CCV 280-437502/94			16:34																									
CCB 280-437502/95			16:37																									
CCVL 280-437502/96			16:40																									
ZZZZZZ			16:44																									
ZZZZZZ			16:47																									
ZZZZZZ			16:50																									
ZZZZZZ			16:54																									
ZZZZZZ			16:57																									
ZZZZZZ			17:01																									
ZZZZZZ			17:04																									
ZZZZZZ			17:07																									
ZZZZZZ			17:11																									
ZZZZZZ			17:14																									
CCVH 280-437502/107			17:17																									
CCV 280-437502/108			17:21																									
CCB 280-437502/109			17:24																									
CCVL 280-437502/110			17:28																									
ZZZZZZ			17:31																									
ZZZZZZ			17:34																									
ZZZZZZ			17:38																									
ZZZZZZ			17:41																									
ZZZZZZ			17:44																									
ZZZZZZ			17:48																									
ZZZZZZ			17:51																									
CCVH 280-437502/118			17:55																									
CCV 280-437502/119			17:58																									
CCB 280-437502/120			18:01																									
CCVL 280-437502/121			18:05																									
ZZZZZZ			18:08																									
ZZZZZZ			18:11																									
ZZZZZZ			18:15																									
ZZZZZZ			18:18																									
ZZZZZZ			18:22																									

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/13/2018 10:26 End Date: 11/14/2018 03:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
CCVH 280-437502/127			18:25																									
CCV 280-437502/128			18:28																									
CCB 280-437502/129			18:32																									
CCVL 280-437502/130			18:35																									
CCVH 280-437502/131			01:04																									
CCV 280-437502/132			01:07																									
CCB 280-437502/133			01:11																									
CCVL 280-437502/134			01:14																									
ZZZZZZ			01:18																									
ZZZZZZ			01:21																									
ZZZZZZ			01:24																									
ZZZZZZ			01:28																									
ZZZZZZ			01:31																									
CCVH 280-437502/140			01:34																									
CCV 280-437502/141			01:38																									
CCB 280-437502/142			01:41																									
CCVL 280-437502/143			01:45																									
ZZZZZZ			01:48																									
ZZZZZZ			01:51																									
ZZZZZZ			01:55																									
ZZZZZZ			01:58																									
ZZZZZZ			02:01																									
ZZZZZZ			02:05																									
ZZZZZZ			02:08																									
ZZZZZZ			02:12																									
ZZZZZZ			02:15																									
CCVH 280-437502/153			02:18																									
CCV 280-437502/154			02:22																									
CCB 280-437502/155			02:25																									
CCVL 280-437502/156			02:28																									
ZZZZZZ			02:32																									
ZZZZZZ			02:35																									
ZZZZZZ			02:39																									
ZZZZZZ			02:42																									
ZZZZZZ			02:45																									
ZZZZZZ			02:49																									
ZZZZZZ			02:52																									
ZZZZZZ			02:55																									
ZZZZZZ			02:59																									
CCVH 280-437502/166			03:02																									
CCV 280-437502/167			03:05																									
CCB 280-437502/168			03:09																									

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/13/2018 10:26 End Date: 11/14/2018 03:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
CCVL 280-437502/169			03:12																									
ZZZZZZ			03:16																									
ZZZZZZ			03:19																									
ZZZZZZ			03:22																									
ZZZZZZ			03:26																									
CCVH 280-437502/174			03:29																									
CCV 280-437502/175			03:32																									
CCB 280-437502/176			03:36																									
CCVL 280-437502/177			03:39																									

Prep Types:
P = TCLP

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/15/2018 10:00 End Date: 11/15/2018 16:28

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 280-437490/1-A	1		10:00	X																								
IC 280-437490/2-A	1		10:03	X																								
IC 280-437490/3-A	1		10:05	X																								
IC 280-437490/4-A	1		10:07	X																								
IC 280-437490/5-A	1		10:09	X																								
IC 280-437490/6-A	1		10:11	X																								
IC 280-437490/7-A	1		10:14	X																								
IC 280-437490/8-A	1		10:16	X																								
ICV 280-437490/9-A	1		10:22	X																								
ICB 280-437490/10-A	1		10:24	X																								
CRA 280-437490/11-A			10:26																									
CCV 280-437490/12-A			10:29																									
CCB 280-437490/13-A			10:31																									
ZZZZZZ			10:33																									
ZZZZZZ			10:35																									
ZZZZZZ			10:38																									
ZZZZZZ			10:40																									
ZZZZZZ			10:42																									
ZZZZZZ			10:44																									
CCV 280-437490/12-A			10:47																									
CCB 280-437490/13-A			10:49																									
ZZZZZZ			10:51																									
ZZZZZZ			10:53																									
ZZZZZZ			10:55																									
ZZZZZZ			10:58																									
ZZZZZZ			11:00																									
ZZZZZZ			11:02																									
ZZZZZZ			11:04																									
ZZZZZZ			11:07																									
ZZZZZZ			11:09																									
ZZZZZZ			11:11																									
CCV 280-437490/12-A			11:13																									
CCB 280-437490/13-A			11:15																									
ZZZZZZ			11:18																									
ZZZZZZ			11:20																									
ZZZZZZ			11:22																									
ZZZZZZ			11:24																									
ZZZZZZ			11:27																									
ZZZZZZ			11:29																									
ZZZZZZ			11:31																									
ZZZZZZ			11:33																									
ZZZZZZ			11:35																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/15/2018 10:00 End Date: 11/15/2018 16:28

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			11:38																									
CCV 280-437490/12-A			11:40																									
CCB 280-437490/13-A			11:42																									
ZZZZZZ			11:44																									
ZZZZZZ			11:47																									
ZZZZZZ			11:49																									
ZZZZZZ			11:51																									
ZZZZZZ			11:53																									
ZZZZZZ			11:55																									
ZZZZZZ			11:58																									
ZZZZZZ			12:00																									
ZZZZZZ			12:02																									
ZZZZZZ			12:04																									
CCV 280-437490/12-A			12:07																									
CCB 280-437490/13-A			12:09																									
ZZZZZZ			12:11																									
ZZZZZZ			12:13																									
ZZZZZZ			12:15																									
ZZZZZZ			12:18																									
ZZZZZZ			12:20																									
ZZZZZZ			12:22																									
ZZZZZZ			12:24																									
ZZZZZZ			12:27																									
ZZZZZZ			12:29																									
ZZZZZZ			12:31																									
CCV 280-437490/12-A			12:33																									
CCB 280-437490/13-A			12:37																									
ZZZZZZ			12:39																									
ZZZZZZ			12:41																									
ZZZZZZ			12:43																									
ZZZZZZ			12:46																									
ZZZZZZ			12:48																									
ZZZZZZ			12:50																									
ZZZZZZ			12:52																									
ZZZZZZ			12:55																									
ZZZZZZ			12:58																									
ZZZZZZ			13:00																									
CCV 280-437490/12-A			13:02																									
CCB 280-437490/13-A			13:04																									
ZZZZZZ			13:06																									
ZZZZZZ			13:09																									
ZZZZZZ			13:11																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/15/2018 10:00 End Date: 11/15/2018 16:28

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			13:13																									
ZZZZZZ			13:17																									
ZZZZZZ			13:19																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:26																									
ZZZZZZ			13:28																									
CCV 280-437490/12-A			13:30																									
CCB 280-437490/13-A			13:32																									
ZZZZZZ			13:35																									
ZZZZZZ			13:37																									
ZZZZZZ			13:39																									
ZZZZZZ			13:42																									
ZZZZZZ			13:44																									
ZZZZZZ			13:46																									
ZZZZZZ			13:48																									
ZZZZZZ			13:50																									
ZZZZZZ			13:53																									
ZZZZZZ			13:55																									
CCV 280-437490/12-A	1		13:57	X																								
CCB 280-437490/13-A	1		13:59	X																								
ZZZZZZ			14:02																									
ZZZZZZ			14:04																									
ZZZZZZ			14:06																									
ZZZZZZ			14:08																									
ZZZZZZ			14:11																									
ZZZZZZ			14:13																									
LB3 280-436732/1-J	1	P	14:15	X																								
LCS 280-436732/2-G	1	P	14:17	X																								
LCSD 280-436732/13-D	1	P	14:19	X																								
ZZZZZZ			14:22																									
CCV 280-437490/12-A	1		14:24	X																								
CCB 280-437490/13-A	1		14:27	X																								
280-116538-4 SD	5	P	14:29	X																								
280-116538-4 MS	1	P	14:31	X																								
280-116538-4 MSD	1	P	14:33	X																								
280-116538-4 PDS	1	P	14:36	X																								
ZZZZZZ			14:38																									
ZZZZZZ			14:40																									
ZZZZZZ			14:43																									
ZZZZZZ			14:45																									
ZZZZZZ			14:47																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/15/2018 10:00 End Date: 11/15/2018 16:28

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			14:50																									
CCV 280-437490/12-A	1		15:02	X																								
CCB 280-437490/13-A	1		15:04	X																								
ZZZZZZ			15:07																									
ZZZZZZ			15:09																									
ZZZZZZ			15:12																									
ZZZZZZ			15:14																									
ZZZZZZ			15:16																									
ZZZZZZ			15:19																									
ZZZZZZ			15:21																									
CCV 280-437490/12-A			15:23																									
CCB 280-437490/13-A			15:25																									
ZZZZZZ			15:27																									
ZZZZZZ			15:30																									
ZZZZZZ			15:32																									
ZZZZZZ			15:34																									
ZZZZZZ			15:36																									
ZZZZZZ			15:39																									
ZZZZZZ			15:41																									
ZZZZZZ			15:43																									
ZZZZZZ			15:46																									
CCV 280-437490/12-A	1		15:48	X																								
CCB 280-437490/13-A	1		15:51	X																								
ZZZZZZ			15:53																									
280-116538-4	1	P	15:55	X																								
ZZZZZZ			15:57																									
ZZZZZZ			16:00																									
ZZZZZZ			16:02																									
CCV 280-437490/12-A	1		16:04	X																								
CCB 280-437490/13-A	1		16:06	X																								
ZZZZZZ			16:09																									
ZZZZZZ			16:12																									
ZZZZZZ			16:14																									
ZZZZZZ			16:16																									
ZZZZZZ			16:19																									
ZZZZZZ			16:21																									
ZZZZZZ			16:23																									
ZZZZZZ			16:25																									
CCV 280-437490/12-A			16:28																									

Prep Types:
P = TCLP

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

ICP Instrument ID: MT_051 Start Date: 11/13/2018 End Date: 11/13/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 242.219	Q	Element Y 377.433	Q	Element Y 488.368	Q	Element	Q	Element	Q
ICIS 280-437502/1	10:26										
ICVH 280-437502/6	10:43	102		101		102					
ICVH 280-437502/7	10:46	103		102		105					
ICV 280-437502/9	10:58	103		104		105					
ICV 280-437502/10	11:02	103		103		106					
ICVL 280-437502/11	11:05	103		103		105					
ICB 280-437502/14	11:15	101		102		103					
CRI 280-437502/15	11:19	103		104		106					
ICSA 280-437502/16	11:23	94		93		100					
ICSAB 280-437502/17	11:27	93		94		101					
CCVH 280-437502/58	14:32	97		97		100					
CCV 280-437502/59	14:36	98		99		101					
CCB 280-437502/60	14:39	98		99		100					
CCVL 280-437502/61	14:42	99		100		98					
LB3 280-436732/1-F	14:46	100		100		102					
LCS 280-436732/2-F	14:49	101		101		102					
LCSD 280-436732/13-B	14:52	102		102		102					
280-116538-4	14:56	102		102		104					
280-116538-4 SD	14:59	99		100		101					
280-116538-4 MS	15:03	99		100		102					
280-116538-4 MSD	15:06	102		102		102					
280-116538-4 PDS	15:09	101		101		103					
CCVH 280-437502/72	15:19	101		100		102					
CCV 280-437502/73	15:23	102		102		104					
CCB 280-437502/74	15:26	101		101		104					
CCVL 280-437502/75	15:30	103		103		105					

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436732 Batch Start Date: 11/07/18 09:48 Batch Analyst: Bourgery, David F

Batch Method: 1311 Batch End Date: 11/10/18 10:17

Lab Sample ID	Client Sample ID	Method Chain	Basis	ExtractFluid	AnalysisComment				
LB3 280-436732/1		1311, 3010A, 6010C		milliq					
LCS 280-436732/2		1311, 3010A, 6010C		milliq					
280-116538-A-4	FWGIDW-181001-WW	1311, 3010A, 6010C	P	milliq	TOX used d too				

Batch Notes	
First End time	11/07/18 19:48
First Start time	11/07/18 9:48

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437152 Batch Start Date: 11/13/18 07:00 Batch Analyst: Broander, Laura L

Batch Method: 3010A Batch End Date: 11/13/18 12:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ICP SPK 2B 00082	ICP SPK 3A 00155	TCLP Spike 00017
LB3 280-436732/1-A		3010A, 6010C			10 mL	50 mL			
LCS 280-436732/2-A		3010A, 6010C			10 mL	50 mL	0.1 mL	0.1 mL	0.1 mL
LCSD 280-436732/13-A		3010A, 6010C			10 mL	50 mL	0.1 mL	0.1 mL	0.1 mL
280-116538-A-4-A	FWGIDW-181001-WW	3010A, 6010C	P	<2 SU	10 mL	50 mL			
280-116538-A-4-A MS	FWGIDW-181001-WW	3010A, 6010C	P	<2 SU	10 mL	50 mL	0.1 mL	0.1 mL	0.1 mL
280-116538-A-4-A MSD	FWGIDW-181001-WW	3010A, 6010C	P	<2 SU	10 mL	50 mL	0.1 mL	0.1 mL	0.1 mL

Batch Notes	
Temperature - Corrected - End	94 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	11/13/2018 12:45
Digestion Start Time	11/13/2018 07:00
Digestion Unit ID	03
Hydrochloric Acid ID	0000198300-03/23
Nitric Acid ID	0000200458-05/23
Pipette/Syringe/Dispenser ID	MET-109
Analyst ID - Spike Analyst	LB
Sufficient Volume for Batch QC	Yes
Thermometer ID	QA-44
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	90 Degrees C

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436732 Batch Start Date: 11/07/18 09:48 Batch Analyst: Bourgery, David F

Batch Method: 1311 Batch End Date: 11/10/18 10:17

Lab Sample ID	Client Sample ID	Method Chain	Basis	ExtractFluid	AnalysisComment				
LB3 280-436732/1		1311, 7470A, 7470A		milliq					
LCS 280-436732/2		1311, 7470A, 7470A		milliq					
280-116538-A-4	FWGIDW-181001-WW	1311, 7470A, 7470A	P	milliq	TOX used d too				

Batch Notes	
First End time	11/07/18 19:48
First Start time	11/07/18 9:48

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437490 Batch Start Date: 11/14/18 12:30 Batch Analyst: Perry, Tara H

Batch Method: 245.1 Batch End Date: 11/14/18 14:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Biwk ICV 00261	Hg Daily Spk 02290	
STD0 280-437490/1 IC		245.1, 7470A		<2	30 mL	50 mL			
STD1 280-437490/2 IC		245.1, 7470A		<2	30 mL	50 mL		0.03 mL	
STD2 280-437490/3 IC		245.1, 7470A		<2	30 mL	50 mL		0.06 mL	
STD3 280-437490/4 IC		245.1, 7470A		<2	30 mL	50 mL		0.15 mL	
STD4 280-437490/5 IC		245.1, 7470A		<2	30 mL	50 mL		0.3 mL	
STD5 280-437490/6 IC		245.1, 7470A		<2	30 mL	50 mL		0.6 mL	
STD6 280-437490/7 IC		245.1, 7470A		<2	30 mL	50 mL		1.5 mL	
STD7 280-437490/8 IC		245.1, 7470A		<2	30 mL	50 mL		3 mL	
ICV 280-437490/9		245.1, 7470A		<2	30 mL	50 mL	0.3 mL		
ICB 280-437490/10		245.1, 7470A		<2	30 mL	50 mL			
CCV 280-437490/12		245.1, 7470A		<2	30 mL	50 mL		1.5 mL	
CCB 280-437490/13		245.1, 7470A		<2	30 mL	50 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437490 Batch Start Date: 11/14/18 12:30 Batch Analyst: Perry, Tara H

Batch Method: 245.1 Batch End Date: 11/14/18 14:30

Batch Notes	
Batch Comment	DV-MT-0015
Temperature - Corrected - End	93 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	11/14/2018 14:30
Digestion Start Time	11/14/2018 12:30
Digestion Unit ID	13
Sulfuric Acid Lot Number	184525-11/13/19
Nitric Acid ID	200458-10/22/19
Hydroxylamine ID	166725A-11/12/19
Potassium Persulfate ID	178262-11/03/19
Potassium Permanganate ID	207042-11/13/19
Pipette/Syringe/Dispenser ID	MET-114
Analyst ID - Spike Analyst	TP
Sufficient Volume for Batch QC	yes
Thermometer ID	QA-8
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	92 Degrees C
Temperature - Uncorrected - Start	89 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437496 Batch Start Date: 11/14/18 12:30 Batch Analyst: Perry, Tara H

Batch Method: 7470A Batch End Date: 11/14/18 14:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Daily Spk 02290		
LB3 280-436732/1-A		7470A, 7470A		<2	30 mL	50 mL			
LCS 280-436732/2-A		7470A, 7470A		<2	30 mL	50 mL	1.5 mL		
LCSD 280-436732/13-A		7470A, 7470A		<2	30 mL	50 mL	1.5 mL		
280-116538-A-4-A	FWGIDW-181001-WW	7470A, 7470A	P	<2	30 mL	50 mL			
280-116538-A-4-A MS	FWGIDW-181001-WW	7470A, 7470A	P	<2	30 mL	50 mL	1.5 mL		
280-116538-A-4-A MSD	FWGIDW-181001-WW	7470A, 7470A	P	<2	30 mL	50 mL	1.5 mL		

Batch Notes	
Batch Comment	DV-MT-0017
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	92 Degrees C
Digestion End Time	1430
Digestion Start Time	1230
Digestion Unit ID	15
Sulfuric Acid ID	184525-11/13/19
Nitric Acid ID	200458-10/22/19
Hydroxylamine ID	166725A-11/12/19
Potassium Persulfate ID	178262-11/03/19
Potassium Permanganate ID	207042-11/13/19
Pipette/Syringe/Dispenser ID	MET-114
Analyst ID - Spike Analyst	TP
Sufficient Volume for Batch QC	yes
Thermometer ID	QA-16
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	91 Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437496 Batch Start Date: 11/14/18 12:30 Batch Analyst: Perry, Tara H

Batch Method: 7470A Batch End Date: 11/14/18 14:30

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Path: D:\My Results\51A111318.esws

Date created: 11/13/2018 10:19:24 AM

Instrument used: MY14490005

Software Version : 7.3.1.9507

Firmware Version : 3442

Notes:

Sample Name: icis

Date: 11/13/2018 10:26:33 AM Rack:Tube: S1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000000	ppm	N/A	N/A	-436.577000	Y 377.433
Al (167.019 nm)	0.000000	ppm	N/A	N/A	1.782810	Y_R 377.433
Al H (396.152 nm)	0.000000	ppm	N/A	N/A	46.782427	Y_R 377.433
As (188.980 nm)	0.000000	ppm	N/A	N/A	-0.130475	Y 242.219
B (249.678 nm)	0.000000	ppm	N/A	N/A	58.402900	Y 242.219
Ba (493.408 nm)	0.000000	ppm	N/A	N/A	674.894000	Y_R 488.368
Be (234.861 nm)	0.000000	ppm	N/A	N/A	-84.480800	Y_R 488.368
Bi (223.061 nm)	0.000000	ppm	N/A	N/A	15.871000	Y 377.433
Ca (315.887 nm)	0.000000	ppm	N/A	N/A	-59.976335	Y_R 377.433
Cd (214.439 nm)	0.000000	ppm	N/A	N/A	19.561700	Y 377.433
Co (228.615 nm)	0.000000	ppm	N/A	N/A	-46.173800	Y 242.219
Cr (205.560 nm)	0.000000	ppm	N/A	N/A	6.173010	Y 377.433
Cu (324.754 nm)	0.000000	ppm	N/A	N/A	-366.614000	Y 377.433
Fe (238.204 nm)	0.000000	ppm	N/A	N/A	26.917308	Y_R 377.433
Fe H (259.940 nm)	0.000000	ppm	N/A	N/A	9.867860	Y_R 377.433
K (766.491 nm)	0.000000	ppm	N/A	N/A	-805.219000	Y_R2 488.368
Li (670.783 nm)	0.000000	ppm	N/A	N/A	-1574.170000	Y_R2 488.368
Mg (279.078 nm)	0.000000	ppm	N/A	N/A	66.100800	Y 377.433
Mn (257.610 nm)	0.000000	ppm	N/A	N/A	99.838000	Y 377.433
Mo (202.032 nm)	0.000000	ppm	N/A	N/A	2.596480	Y 377.433
Na (589.592 nm)	0.000000	ppm	N/A	N/A	338.309000	Y_R2 488.368
Na H (589.593 nm)	0.000000	ppm	N/A	N/A	2221.803019	Y_R 488.368
Ni (231.604 nm)	0.000000	ppm	N/A	N/A	-1.610570	Y 377.433
P (213.618 nm)	0.000000	ppm	N/A	N/A	35.143900	Y 242.219
Pb (220.353 nm)	0.000000	ppm	N/A	N/A	4.179140	Y 242.219
S (181.972 nm)	0.000000	ppm	N/A	N/A	16.641286	Y 377.433
Sb (206.834 nm)	0.000000	ppm	N/A	N/A	-30.777800	Y 377.433
Se (196.026 nm)	0.000000	ppm	N/A	N/A	16.504900	Y 242.219
Si (288.158 nm)	0.000000	ppm	N/A	N/A	969.734000	Y 377.433
Sn (189.925 nm)	0.000000	ppm	N/A	N/A	12.152100	Y 377.433
Sr (421.552 nm)	0.000000	ppm	N/A	N/A	130.238400	Y_R 488.368
Th (288.505 nm)	0.000000	ppm	N/A	N/A	73.328000	Y 377.433
Ti (336.122 nm)	0.000000	ppm	N/A	N/A	-351.262000	Y 377.433
Tl (190.794 nm)	0.000000	ppm	N/A	N/A	-6.237790	Y 377.433
U (409.013 nm)	0.000000	ppm	N/A	N/A	-230.477000	Y 377.433
V (292.401 nm)	0.000000	ppm	N/A	N/A	28.328100	Y 377.433
Zn (206.200 nm)	0.000000	ppm	N/A	N/A	41.397200	Y 377.433
Zr (343.823 nm)	0.000000	ppm	N/A	N/A	28.674800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000000	19532.256912	0.000000	0.00
Y 377.433	1.000000	990628.823342	0.000000	0.00
Y_R 377.433	1.000000	71165.200000	0.000000	0.00
Y_R 488.368	1.000000	40739.900000	0.000000	0.00
Y_R2 488.368	1.000000	80858.446500	0.000000	0.00

Sample Name: ic1

Date: 11/13/2018 10:29:57 AM Rack:Tube: 3:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.000000	ppm	N/A	N/A	45499.000000	Y 377.433
Al (167.019 nm)	1.000000	ppm	N/A	N/A	545.288000	Y_R 377.433
Al H (396.152 nm)	1.000000	ppm	N/A	N/A	2455.387109	Y_R 377.433
As (188.980 nm)	2.000000	ppm	N/A	N/A	2648.260000	Y 242.219
B (249.678 nm)	1.000000	ppm	N/A	N/A	25225.300000	Y 242.219
Ba (493.408 nm)	1.000000	ppm	N/A	N/A	106774.000000	Y_R 488.368
Be (234.861 nm)	1.000000	ppm	N/A	N/A	291229.000000	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	4.943100	Y 377.433
Ca (315.887 nm)	10.000000	ppm	N/A	N/A	7569.038273	Y_R 377.433
Cd (214.439 nm)	1.000000	ppm	N/A	N/A	63024.800000	Y 377.433
Co (228.615 nm)	1.000000	ppm	N/A	N/A	18671.400000	Y 242.219
Cr (205.560 nm)	1.000000	ppm	N/A	N/A	15459.500000	Y 377.433
Cu (324.754 nm)	1.000000	ppm	N/A	N/A	53456.900000	Y 377.433
Fe (238.204 nm)	5.000000	ppm	N/A	N/A	17665.161913	Y_R 377.433
Fe H (259.940 nm)	5.000000	ppm	N/A	N/A	9121.890000	Y_R 377.433
K (766.491 nm)	100.000000	ppm	N/A	N/A	108773.000000	Y_R2 488.368
Li (670.783 nm)	2.000000	ppm	N/A	N/A	60522.500000	Y_R2 488.368
Mg (279.078 nm)	40.000000	ppm	N/A	N/A	245159.000000	Y 377.433
Mn (257.610 nm)	1.000000	ppm	N/A	N/A	235772.000000	Y 377.433
Mo (202.032 nm)	1.000000	ppm	N/A	N/A	8950.680000	Y 377.433
Na (589.592 nm)	10.000000	ppm	N/A	N/A	64052.000000	Y_R2 488.368
Na H (589.593 nm)	10.000000	ppm	N/A	N/A	37240.875471	Y_R 488.368
Ni (231.604 nm)	1.000000	ppm	N/A	N/A	7087.310000	Y 377.433
P (213.618 nm)	2.000000	ppm	N/A	N/A	4311.240000	Y 242.219
Pb (220.353 nm)	2.000000	ppm	N/A	N/A	6028.510000	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	14.598700	Y 377.433
Sb (206.834 nm)	2.000000	ppm	N/A	N/A	5561.640000	Y 377.433
Se (196.026 nm)	2.000000	ppm	N/A	N/A	2107.450000	Y 242.219
Si (288.158 nm)	10.000000	ppm	N/A	N/A	87669.900000	Y 377.433
Sn (189.925 nm)	2.000000	ppm	N/A	N/A	4130.620000	Y 377.433
Sr (421.552 nm)	1.000000	ppm	N/A	N/A	194696.985805	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	112.510000	Y 377.433
Ti (336.122 nm)	1.000000	ppm	N/A	N/A	141119.000000	Y 377.433
Tl (190.794 nm)	2.000000	ppm	N/A	N/A	4544.410000	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	-343.990000	Y 377.433
V (292.401 nm)	1.000000	ppm	N/A	N/A	36976.500000	Y 377.433
Zn (206.200 nm)	1.000000	ppm	N/A	N/A	5624.720000	Y 377.433
Zr (343.823 nm)	1.000000	ppm	N/A	N/A	128992.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008623	19700.682210	0.001643	0.16
Y 377.433	1.007417	997976.497026	0.000463	0.05
Y_R 377.433	1.022490	72765.400000	0.004726	0.46
Y_R 488.368	1.023950	41715.700000	0.005599	0.55
Y_R2 488.368	1.020762	82537.202152	0.004890	0.48

Sample Name: ic2

Date: 11/13/2018 10:33:20 AM Rack:Tube: 3:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-1063.350000	Y 377.433
Al (167.019 nm)	100.000000	ppm	N/A	N/A	46044.900000	Y_R 377.433
Al H (396.152 nm)	100.000000	ppm	N/A	N/A	237186.870851	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	1.587580	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	-121.487000	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	804.893000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	2897.650000	Y_R 488.368
Bi (223.061 nm)	2.000000	ppm	N/A	N/A	5067.150000	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-84.041796	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	80.892900	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	66.830200	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-26.821000	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	-453.764000	Y 377.433
Fe (238.204 nm)	100.000000	ppm	N/A	N/A	351646.231403	Y_R 377.433
Fe H (259.940 nm)	100.000000	ppm	N/A	N/A	182627.000000	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	-776.731000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-1477.660000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	-850.479000	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	711.908000	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	-2.008630	Y 377.433
Na (589.592 nm)	500.000000	ppm	N/A	N/A	3088120.000000	Y_R2 488.368
Na H (589.593 nm)	500.000000	ppm	N/A	N/A	1712493.513697	Y_R 488.368
Ni (231.604 nm)		ppm	N/A	N/A	59.069200	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	16.864500	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	12.231400	Y 242.219
S (181.972 nm)	10.000000	ppm	N/A	N/A	5268.823884	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	-153.261000	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	-5.720610	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	1332.720000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	18.621100	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	278.116158	Y_R 488.368
Th (288.505 nm)	10.000000	ppm	N/A	N/A	25273.300000	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	40.500200	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-22.035000	Y 377.433
U (409.013 nm)	20.000000	ppm	N/A	N/A	88642.500000	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-87.781900	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	13.788900	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-808.179000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997291	19479.351155	0.000472	0.05
Y 377.433	0.983098	973884.831752	0.000279	0.03
Y_R 377.433	1.015970	72301.500000	0.005484	0.54
Y_R 488.368	1.024050	41719.800000	0.005081	0.50
Y_R2 488.368	1.018749	82374.434371	0.000938	0.09

Sample Name: S1-5416700

Date: 11/13/2018 10:36:43 AM Rack:Tube: 3:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.001990	ppm	0.000371	0.04	45643.200000	Y 377.433
Al (167.019 nm)	1.033810	ppm	0.007128	0.69	566.967000	Y_R 377.433
Al H (396.152 nm)	1.018392	ppm	0.001286	0.13	2578.655861	Y_R 377.433
As (188.980 nm)	2.002200	ppm	0.002250	0.11	2651.120000	Y 242.219
B (249.678 nm)	1.003270	ppm	0.000103	0.01	25344.300000	Y 242.219
Ba (493.408 nm)	1.001280	ppm	0.001131	0.11	106934.000000	Y_R 488.368
Be (234.861 nm)	0.994507	ppm	0.000660	0.07	289717.000000	Y_R 488.368
Bi (223.061 nm)	-0.002319 u	ppm	0.000655	28.25	10.845800	Y 377.433
Ca (315.887 nm)	10.040240	ppm	0.012783	0.13	7600.280222	Y_R 377.433
Cd (214.439 nm)	1.001200	ppm	0.002228	0.22	63106.400000	Y 377.433
Co (228.615 nm)	1.002210	ppm	0.000684	0.07	18749.500000	Y 242.219
Cr (205.560 nm)	1.001560	ppm	0.004620	0.46	15471.600000	Y 377.433
Cu (324.754 nm)	1.002220	ppm	0.000007	0.00	53581.100000	Y 377.433
Fe (238.204 nm)	5.054197	ppm	0.006471	0.13	17856.350813	Y_R 377.433
Fe H (259.940 nm)	5.057370	ppm	0.008787	0.17	9226.670000	Y_R 377.433
K (766.491 nm)	99.701600	ppm	0.570085	0.57	108446.000000	Y_R2 488.368
Li (670.783 nm)	2.003260	ppm	0.013359	0.67	60623.800000	Y_R2 488.368
Mg (279.078 nm)	40.197100	ppm	0.074929	0.19	246357.000000	Y 377.433
Mn (257.610 nm)	1.004430	ppm	0.000567	0.06	236816.000000	Y 377.433
Mo (202.032 nm)	1.002370	ppm	0.001932	0.19	8971.920000	Y 377.433
Na (589.592 nm)	10.132000	ppm	0.007802	0.08	66848.200000	Y_R2 488.368
Na H (589.593 nm)	10.154271	ppm	0.035380	0.35	38646.953600	Y_R 488.368
Ni (231.604 nm)	1.003100	ppm	0.001024	0.10	7112.030000	Y 377.433
P (213.618 nm)	2.002680	ppm	0.007813	0.39	4316.970000	Y 242.219
Pb (220.353 nm)	2.004040	ppm	0.004463	0.22	6036.020000	Y 242.219
S (181.972 nm)	0.002765	ppm	0.002904	> 100.00	20.593393	Y 377.433
Sb (206.834 nm)	2.003430	ppm	0.001993	0.10	5593.940000	Y 377.433
Se (196.026 nm)	2.004890	ppm	0.000021	0.00	2112.700000	Y 242.219
Si (288.158 nm)	9.999080	ppm	0.020728	0.21	87661.900000	Y 377.433
Sn (189.925 nm)	1.997090	ppm	0.000666	0.03	4124.630000	Y 377.433
Sr (421.552 nm)	1.005734	ppm	0.001889	0.19	195812.706647	Y_R 488.368
Th (288.505 nm)	0.009954	ppm	0.002334	23.45	129.870000	Y 377.433
Ti (336.122 nm)	1.004760	ppm	0.002441	0.24	141823.000000	Y 377.433
Tl (190.794 nm)	2.009280	ppm	0.004591	0.23	4562.370000	Y 377.433
U (409.013 nm)	0.001775 u	ppm	0.004932	> 100.00	-296.286000	Y 377.433
V (292.401 nm)	1.003500	ppm	0.000328	0.03	36856.200000	Y 377.433
Zn (206.200 nm)	1.001790	ppm	0.001159	0.12	5634.700000	Y 377.433
Zr (343.823 nm)	1.005950	ppm	0.001627	0.16	129774.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017400	19872.124392	0.001222	0.12
Y 377.433	1.014135	1004631.453007	0.001077	0.11
Y_R 377.433	1.035350	73681.100000	0.000170	0.02
Y_R 488.368	1.039830	42362.500000	0.001289	0.12
Y_R2 488.368	1.021065	82561.689846	0.008207	0.80

Sample Name: S2-5417908

Date: 11/13/2018 10:40:07 AM Rack:Tube: 3:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002859 u	ppm	0.000257	8.98	-1056.250000	Y 377.433
Al (167.019 nm)	85.235700 o	ppm	0.235015	0.28	46393.400000	Y_R 377.433
Al H (396.152 nm)	100.219144	ppm	0.042769	0.04	237706.423822	Y_R 377.433
As (188.980 nm)	0.002588	ppm	0.000153	5.90	2.365590	Y 242.219
B (249.678 nm)	-0.000451 u	ppm	0.000104	22.98	-104.428000	Y 242.219
Ba (493.408 nm)	0.000357	ppm	0.000112	31.29	798.046000	Y_R 488.368
Be (234.861 nm)	-0.000043 u	ppm	0.000030	69.66	2956.410000	Y_R 488.368
Bi (223.061 nm)	1.997720	ppm	0.003082	0.15	5077.900000	Y 377.433
Ca (315.887 nm)	-0.038234 u	ppm	0.001990	5.21	-89.144441	Y_R 377.433
Cd (214.439 nm)	-0.000401 u	ppm	0.000122	30.29	95.599000	Y 377.433
Co (228.615 nm)	0.006105	ppm	0.000415	6.80	68.146700	Y 242.219
Cr (205.560 nm)	-0.000089 u	ppm	0.000490	> 100.00	-23.154500	Y 377.433
Cu (324.754 nm)	-0.013725 u	ppm	0.000339	2.47	-463.781000	Y 377.433
Fe (238.204 nm)	100.151577 o	ppm	0.077634	0.08	353326.518159	Y_R 377.433
Fe H (259.940 nm)	100.251000	ppm	0.221138	0.22	183086.000000	Y_R 377.433
K (766.491 nm)	0.050165	ppm	0.029227	58.26	-750.249000	Y_R2 488.368
Li (670.783 nm)	0.005999	ppm	0.002412	40.20	-1387.900000	Y_R2 488.368
Mg (279.078 nm)	-0.019561 u	ppm	0.000098	0.50	-806.393000	Y 377.433
Mn (257.610 nm)	0.002817	ppm	0.000022	0.78	763.728000	Y 377.433
Mo (202.032 nm)	-0.000708 u	ppm	0.000692	97.73	-3.741480	Y 377.433
Na (589.592 nm)	483.484000 o	ppm	0.053933	0.01	3080800.000000	Y_R2 488.368
Na H (589.593 nm)	501.224818	ppm	3.054475	0.61	1716680.044528	Y_R 488.368
Ni (231.604 nm)	0.008845	ppm	0.000301	3.40	65.363300	Y 377.433
P (213.618 nm)	-0.006710 u	ppm	0.001846	27.51	20.797600	Y 242.219
Pb (220.353 nm)	-0.008414 u	ppm	0.001217	14.47	13.994100	Y 242.219
S (181.972 nm)	9.936478	ppm	0.028921	0.29	5235.469178	Y 377.433
Sb (206.834 nm)	-0.010531 u	ppm	0.002792	26.51	-153.487000	Y 377.433
Se (196.026 nm)	-0.002268 u	ppm	0.001997	88.05	-4.778890	Y 242.219
Si (288.158 nm)	0.044671	ppm	0.000016	0.04	1357.030000	Y 377.433
Sn (189.925 nm)	0.002026	ppm	0.000091	4.51	16.323500	Y 377.433
Sr (421.552 nm)	0.000978	ppm	0.000217	22.14	320.522283	Y_R 488.368
Th (288.505 nm)	10.007700	ppm	0.002163	0.02	25682.600000	Y 377.433
Ti (336.122 nm)	0.003089	ppm	0.000053	1.72	85.883000	Y 377.433
Tl (190.794 nm)	-0.005750 u	ppm	0.001419	24.67	-22.044300	Y 377.433
U (409.013 nm)	19.980700	ppm	0.017891	0.09	88647.400000	Y 377.433
V (292.401 nm)	0.005839	ppm	0.000396	6.78	-88.753000	Y 377.433
Zn (206.200 nm)	-0.006414 u	ppm	0.000267	4.16	5.585910	Y 377.433
Zr (343.823 nm)	-0.008541 u	ppm	0.000040	0.47	-787.665000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003576	19602.110797	0.003994	0.40
Y 377.433	0.989947	980670.037321	0.004421	0.45
Y_R 377.433	1.022190	72744.700000	0.002759	0.27
Y_R 488.368	1.027520	41861.300000	0.002920	0.28
Y_R2 488.368	1.018469	82351.828414	0.008910	0.87

Sample Name: ICVH-5425104

Date: 11/13/2018 10:43:30 AM Rack:Tube: 3:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001346 u	ppm	0.000089	6.60	-621.130000	Y 377.433
Al (167.019 nm)	38.116200 o	ppm	0.123496	0.32	20770.500000	Y_R 377.433
Al H (396.152 nm)	40.108879	ppm	0.059046	0.15	95183.495992	Y_R 377.433
As (188.980 nm)	0.001070	ppm	0.001218	> 100.00	0.543503	Y 242.219
B (249.678 nm)	0.001655	ppm	0.000313	18.94	-21.017200	Y 242.219
Ba (493.408 nm)	0.000308	ppm	0.000007	2.43	775.640000	Y_R 488.368
Be (234.861 nm)	-0.000056 u	ppm	0.000185	> 100.00	2330.490000	Y_R 488.368
Bi (223.061 nm)	0.470122	ppm	0.003408	0.72	1216.390000	Y 377.433
Ca (315.887 nm)	-0.017076 u	ppm	0.004207	24.63	-73.003253	Y_R 377.433
Cd (214.439 nm)	-0.000491 u	ppm	0.000031	6.33	69.435100	Y 377.433
Co (228.615 nm)	0.000024 u	ppm	0.000069	> 100.00	-45.742700	Y 242.219
Cr (205.560 nm)	-0.000789 u	ppm	0.000057	7.25	-28.327000	Y 377.433
Cu (324.754 nm)	-0.003495 u	ppm	0.000090	2.57	-254.169000	Y 377.433
Fe (238.204 nm)	79.866466 o	ppm	0.125867	0.16	281767.769205	Y_R 377.433
Fe H (259.940 nm)	80.010500	ppm	0.118317	0.15	146119.000000	Y_R 377.433
K (766.491 nm)	0.032275	ppm	0.028996	89.84	-769.852000	Y_R2 488.368
Li (670.783 nm)	0.004069	ppm	0.001761	43.27	-1447.830000	Y_R2 488.368
Mg (279.078 nm)	-0.004662 u	ppm	0.000426	9.13	-249.162000	Y 377.433
Mn (257.610 nm)	0.001234	ppm	0.000013	1.07	390.634000	Y 377.433
Mo (202.032 nm)	-0.000323 u	ppm	0.000326	> 100.00	-0.290665	Y 377.433
Na (589.592 nm)	40.969700 o	ppm	0.070251	0.17	261372.000000	Y_R2 488.368
Na H (589.593 nm)	41.732947	ppm	0.271039	0.65	145732.106206	Y_R 488.368
Ni (231.604 nm)	0.001355	ppm	0.000480	35.43	11.401600	Y 377.433
P (213.618 nm)	-0.008117 u	ppm	0.001251	15.41	17.790000	Y 242.219
Pb (220.353 nm)	-0.001428 u	ppm	0.000090	6.33	8.556310	Y 242.219
S (181.972 nm)	3.783998 Q	ppm	0.018844	0.50	2004.068988 Q	Y 377.433
Sb (206.834 nm)	-0.001336 u	ppm	0.000783	58.60	-72.249400	Y 377.433
Se (196.026 nm)	0.006428	ppm	0.002454	38.18	7.508100	Y 242.219
Si (288.158 nm)	0.007326	ppm	0.000098	1.33	1033.250000	Y 377.433
Sn (189.925 nm)	-0.000850 u	ppm	0.001065	> 100.00	10.400800	Y 377.433
Sr (421.552 nm)	0.000550	ppm	0.000016	2.92	237.166189	Y_R 488.368
Th (288.505 nm)	3.035090	ppm	0.001808	0.06	7816.750000	Y 377.433
Ti (336.122 nm)	0.000576	ppm	0.000021	3.57	-269.733000	Y 377.433
Tl (190.794 nm)	-0.004611 u	ppm	0.002105	45.66	-18.915400	Y 377.433
U (409.013 nm)	5.098200	ppm	0.007362	0.14	22496.500000	Y 377.433
V (292.401 nm)	0.001377	ppm	0.000005	0.38	34.337100	Y 377.433
Zn (206.200 nm)	-0.007087 u	ppm	0.000149	2.10	1.827500	Y 377.433
Zr (343.823 nm)	-0.002292 u	ppm	0.000068	2.96	-39.478100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018241	19888.538926	0.004446	0.44
Y 377.433	1.012879	1003387.436978	0.005076	0.50
Y_R 377.433	1.030460	73332.900000	0.007572	0.73
Y_R 488.368	1.024780	41749.500000	0.001866	0.18
Y_R2 488.368	1.014072	81996.291750	0.000739	0.07

Sample Name: ICVH-5425104

Date: 11/13/2018 10:46:54 AM Rack:Tube: 3:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001413 u	ppm	0.000583	41.25	-622.575000	Y 377.433
Al (167.019 nm)	37.658700 o	ppm	0.143055	0.38	20521.400000	Y_R 377.433
Al H (396.152 nm)	39.748195	ppm	0.069345	0.17	94328.279695	Y_R 377.433
As (188.980 nm)	-0.001700 u	ppm	0.002438	> 100.00	-3.119050	Y 242.219
B (249.678 nm)	0.001712	ppm	0.000238	13.88	-18.605100	Y 242.219
Ba (493.408 nm)	0.000000 u	ppm	0.000497	> 100.00	742.441000	Y_R 488.368
Be (234.861 nm)	-0.000237 u	ppm	0.000078	32.77	2258.580000	Y_R 488.368
Bi (223.061 nm)	0.462670	ppm	0.002270	0.49	1197.470000	Y 377.433
Ca (315.887 nm)	-0.004810 u	ppm	0.002701	56.14	-63.645743	Y_R 377.433
Cd (214.439 nm)	-0.000542 u	ppm	0.000051	9.44	65.581300	Y 377.433
Co (228.615 nm)	-0.000083 u	ppm	0.000398	> 100.00	-47.739300	Y 242.219
Cr (205.560 nm)	-0.000744 u	ppm	0.000119	16.06	-27.446600	Y 377.433
Cu (324.754 nm)	-0.003203 u	ppm	0.000360	11.23	-238.974000	Y 377.433
Fe (238.204 nm)	79.317819 o	ppm	0.013588	0.02	279832.334859	Y_R 377.433
Fe H (259.940 nm)	79.378400	ppm	0.033524	0.04	144965.000000	Y_R 377.433
K (766.491 nm)	0.025678	ppm	0.022390	87.20	-777.082000	Y_R2 488.368
Li (670.783 nm)	0.003712	ppm	0.000270	7.27	-1458.920000	Y_R2 488.368
Mg (279.078 nm)	-0.010432 u	ppm	0.000938	8.99	-281.436000	Y 377.433
Mn (257.610 nm)	0.001122	ppm	0.000018	1.59	364.354000	Y 377.433
Mo (202.032 nm)	-0.000718 u	ppm	0.000603	83.99	-3.826590	Y 377.433
Na (589.592 nm)	40.417400 o	ppm	0.033606	0.08	257851.000000	Y_R2 488.368
Na H (589.593 nm)	40.670154	ppm	0.342192	0.84	142097.766543	Y_R 488.368
Ni (231.604 nm)	0.001334	ppm	0.000168	12.56	11.229200	Y 377.433
P (213.618 nm)	-0.007837 u	ppm	0.001485	18.95	18.387400	Y 242.219
Pb (220.353 nm)	-0.001283 u	ppm	0.001360	> 100.00	8.861380	Y 242.219
S (181.972 nm)	3.735902 Q	ppm	0.023645	0.63	1978.807881 Q	Y 377.433
Sb (206.834 nm)	-0.003279 u	ppm	0.002501	76.28	-77.292000	Y 377.433
Se (196.026 nm)	0.004108	ppm	0.003216	78.30	5.207410	Y 242.219
Si (288.158 nm)	0.003980	ppm	0.000579	14.55	1004.240000	Y 377.433
Sn (189.925 nm)	0.000368	ppm	0.000272	73.98	12.909000	Y 377.433
Sr (421.552 nm)	0.000366	ppm	0.000109	29.71	201.420281	Y_R 488.368
Th (288.505 nm)	3.021880	ppm	0.014305	0.47	7782.150000	Y 377.433
Ti (336.122 nm)	0.000647	ppm	0.000034	5.20	-259.629000	Y 377.433
Tl (190.794 nm)	-0.001560 u	ppm	0.001647	> 100.00	-11.955200	Y 377.433
U (409.013 nm)	5.030700	ppm	0.002466	0.05	22196.000000	Y 377.433
V (292.401 nm)	0.001685	ppm	0.000252	14.98	47.729800	Y 377.433
Zn (206.200 nm)	-0.007085 u	ppm	0.000298	4.20	1.836690	Y 377.433
Zr (343.823 nm)	-0.002305 u	ppm	0.000039	1.68	-42.857800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029591	20110.242137	0.001100	0.11
Y 377.433	1.023482	1013890.741610	0.000674	0.07
Y_R 377.433	1.039880	74003.000000	0.003658	0.35
Y_R 488.368	1.047410	42671.300000	0.006991	0.67
Y_R2 488.368	1.030302	83308.654454	0.005244	0.51

Sample Name: ICV-5425105

Date: 11/13/2018 10:50:17 AM Rack:Tube: 3:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.242762	ppm	0.000208	0.09	10727.700000	Y 377.433
Al (167.019 nm)	0.268508 Q	ppm	0.004526	1.69	147.907000 Q	Y_R 377.433
Al H (396.152 nm)	0.265054 u	ppm	0.000891	0.34	732.103847	Y_R 377.433
As (188.980 nm)	0.239907	ppm	0.000340	0.14	317.550000	Y 242.219
B (249.678 nm)	0.241195	ppm	0.000723	0.30	6138.750000	Y 242.219
Ba (493.408 nm)	0.248885	ppm	0.000535	0.21	27087.400000	Y_R 488.368
Be (234.861 nm)	0.237277 Q	ppm	0.000277	0.12	69030.300000 Q	Y_R 488.368
Bi (223.061 nm)	-0.002800 u	ppm	0.001560	55.70	8.845760	Y 377.433
Ca (315.887 nm)	2.001157	ppm	0.014784	0.74	1466.841540	Y_R 377.433
Cd (214.439 nm)	0.244322	ppm	0.001198	0.49	15413.700000	Y 377.433
Co (228.615 nm)	0.243099	ppm	0.000116	0.05	4513.040000	Y 242.219
Cr (205.560 nm)	0.245591	ppm	0.000020	0.01	3798.730000	Y 377.433
Cu (324.754 nm)	0.239420	ppm	0.000664	0.28	12516.800000	Y 377.433
Fe (238.204 nm)	0.288101 Q	ppm	0.005116	1.78	1043.237900 Q	Y_R 377.433
Fe H (259.940 nm)	0.294117 u	ppm	0.004917	1.67	527.194000	Y_R 377.433
K (766.491 nm)	19.519200	ppm	0.003360	0.02	20583.700000	Y_R2 488.368
Li (670.783 nm)	0.246775	ppm	0.002489	1.01	6087.780000	Y_R2 488.368
Mg (279.078 nm)	9.729990	ppm	0.008371	0.09	59684.100000	Y 377.433
Mn (257.610 nm)	0.255546	ppm	0.000331	0.13	60325.100000	Y 377.433
Mo (202.032 nm)	0.245244	ppm	0.000076	0.03	2197.060000	Y 377.433
Na (589.592 nm)	2.062240	ppm	0.004049	0.20	13964.000000	Y_R2 488.368
Na H (589.593 nm)	1.720851 u	ppm	0.042281	2.46	9153.962882	Y_R 488.368
Ni (231.604 nm)	0.244403	ppm	0.001574	0.64	1731.580000	Y 377.433
P (213.618 nm)	1.991260	ppm	0.001465	0.07	4292.560000	Y 242.219
Pb (220.353 nm)	0.247922	ppm	0.000417	0.17	749.735000	Y 242.219
S (181.972 nm)	-0.008224 u	ppm	0.007584	92.22	12.957627	Y 377.433
Sb (206.834 nm)	0.240402	ppm	0.000900	0.37	647.204000	Y 377.433
Se (196.026 nm)	0.466513 Q	ppm	0.002593	0.56	504.468000 Q	Y 242.219
Si (288.158 nm)	1.973610	ppm	0.009832	0.50	18081.000000	Y 377.433
Sn (189.925 nm)	0.488765	ppm	0.001320	0.27	1018.630000	Y 377.433
Sr (421.552 nm)	0.250535	ppm	0.000902	0.36	48875.925643	Y_R 488.368
Th (288.505 nm)	0.002164	ppm	0.002202	> 100.00	86.914800	Y 377.433
Ti (336.122 nm)	0.247517	ppm	0.000302	0.12	34671.100000	Y 377.433
Tl (190.794 nm)	0.495917	ppm	0.000494	0.10	1121.370000	Y 377.433
U (409.013 nm)	0.003030 u	ppm	0.008603	> 100.00	-235.800000	Y 377.433
V (292.401 nm)	0.245063	ppm	0.000416	0.17	9020.190000	Y 377.433
Zn (206.200 nm)	0.235839 Q	ppm	0.000022	0.01	1358.160000 Q	Y 377.433
Zr (343.823 nm)	0.247402	ppm	0.000626	0.25	31935.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027407	20067.569670	0.000907	0.09
Y 377.433	1.029070	1019426.002024	0.000233	0.02
Y_R 377.433	1.045920	74432.800000	0.001005	0.10
Y_R 488.368	1.046710	42642.900000	0.000482	0.05
Y_R2 488.368	1.031099	83373.086590	0.003645	0.35

Sample Name: ICV-5425105

Date: 11/13/2018 10:58:34 AM Rack:Tube: 3:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.249212	ppm	0.000107	0.04	11024.300000	Y 377.433
Al (167.019 nm)	0.251263	ppm	0.004764	1.90	138.517000	Y_R 377.433
Al H (396.152 nm)	0.250971 u	ppm	0.001331	0.53	699.177591	Y_R 377.433
As (188.980 nm)	0.246086	ppm	0.001503	0.61	325.734000	Y 242.219
B (249.678 nm)	0.247862	ppm	0.000399	0.16	6306.850000	Y 242.219
Ba (493.408 nm)	0.257758	ppm	0.000674	0.26	28029.000000	Y_R 488.368
Be (234.861 nm)	0.244204	ppm	0.001377	0.56	71047.100000	Y_R 488.368
Bi (223.061 nm)	-0.006678 u	ppm	0.000270	4.04	-0.952434	Y 377.433
Ca (315.887 nm)	2.066480	ppm	0.008086	0.39	1516.679371	Y_R 377.433
Cd (214.439 nm)	0.249700	ppm	0.001540	0.62	15752.500000	Y 377.433
Co (228.615 nm)	0.248710	ppm	0.000519	0.21	4618.290000	Y 242.219
Cr (205.560 nm)	0.252659	ppm	0.000219	0.09	3907.890000	Y 377.433
Cu (324.754 nm)	0.246677	ppm	0.000621	0.25	12907.600000	Y 377.433
Fe (238.204 nm)	0.261349	ppm	0.000234	0.09	948.863762	Y_R 377.433
Fe H (259.940 nm)	0.264518 u	ppm	0.002045	0.77	473.137000	Y_R 377.433
K (766.491 nm)	20.159500	ppm	0.006012	0.03	21285.300000	Y_R2 488.368
Li (670.783 nm)	0.258557	ppm	0.002684	1.04	6453.570000	Y_R2 488.368
Mg (279.078 nm)	9.972460	ppm	0.013172	0.13	61169.900000	Y 377.433
Mn (257.610 nm)	0.262354	ppm	0.000032	0.01	61929.400000	Y 377.433
Mo (202.032 nm)	0.251090	ppm	0.000765	0.30	2249.370000	Y 377.433
Na (589.592 nm)	2.089160	ppm	0.006382	0.31	14152.600000	Y_R2 488.368
Na H (589.593 nm)	1.682462 u	ppm	0.012536	0.75	9030.411297	Y_R 488.368
Ni (231.604 nm)	0.252020	ppm	0.001591	0.63	1785.590000	Y 377.433
P (213.618 nm)	2.045830	ppm	0.003775	0.18	4409.220000	Y 242.219
Pb (220.353 nm)	0.253958	ppm	0.000002	0.00	767.888000	Y 242.219
S (181.972 nm)	-0.009649 u	ppm	0.004771	49.45	12.226465	Y 377.433
Sb (206.834 nm)	0.245077	ppm	0.001753	0.72	660.464000	Y 377.433
Se (196.026 nm)	0.479150	ppm	0.004877	1.02	517.693000	Y 242.219
Si (288.158 nm)	2.005660	ppm	0.008968	0.45	18358.800000	Y 377.433
Sn (189.925 nm)	0.500887	ppm	0.000540	0.11	1043.600000	Y 377.433
Sr (421.552 nm)	0.259665	ppm	0.000942	0.36	50652.363088	Y_R 488.368
Th (288.505 nm)	-0.002000 u	ppm	0.006669	> 100.00	76.626900	Y 377.433
Ti (336.122 nm)	0.253683	ppm	0.000052	0.02	35543.700000	Y 377.433
Tl (190.794 nm)	0.507390	ppm	0.001661	0.33	1147.460000	Y 377.433
U (409.013 nm)	0.000989 u	ppm	0.003687	> 100.00	-245.426000	Y 377.433
V (292.401 nm)	0.251883	ppm	0.000016	0.01	9270.510000	Y 377.433
Zn (206.200 nm)	0.243294	ppm	0.000658	0.27	1399.790000	Y 377.433
Zr (343.823 nm)	0.254172	ppm	0.000030	0.01	32808.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034939	20214.688615	0.000145	0.01
Y 377.433	1.036436	1026723.788651	0.000784	0.08
Y_R 377.433	1.056650	75197.000000	0.001085	0.10
Y_R 488.368	1.053670	42926.300000	0.005976	0.57
Y_R2 488.368	1.042658	84307.694515	0.011121	1.07

Sample Name: ICV-5425105

Date: 11/13/2018 11:02:01 AM Rack:Tube: 3:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.250962	ppm	0.000141	0.06	11104.900000	Y 377.433
Al (167.019 nm)	0.259803	ppm	0.010211	3.93	143.155000	Y_R 377.433
Al H (396.152 nm)	0.248390 u	ppm	0.004745	1.91	693.178313	Y_R 377.433
As (188.980 nm)	0.249447	ppm	0.003293	1.32	330.185000	Y 242.219
B (249.678 nm)	0.249947	ppm	0.000264	0.11	6359.380000	Y 242.219
Ba (493.408 nm)	0.256185	ppm	0.001484	0.58	27862.000000	Y_R 488.368
Be (234.861 nm)	0.243294	ppm	0.002590	1.06	70781.700000	Y_R 488.368
Bi (223.061 nm)	-0.004355 u	ppm	0.001764	40.51	4.915040	Y 377.433
Ca (315.887 nm)	2.069372	ppm	0.023812	1.15	1518.886502	Y_R 377.433
Cd (214.439 nm)	0.250556	ppm	0.000358	0.14	15806.400000	Y 377.433
Co (228.615 nm)	0.250025	ppm	0.000145	0.06	4642.970000	Y 242.219
Cr (205.560 nm)	0.254629	ppm	0.000033	0.01	3938.350000	Y 377.433
Cu (324.754 nm)	0.248139	ppm	0.000568	0.23	12987.600000	Y 377.433
Fe (238.204 nm)	0.256881	ppm	0.001705	0.66	933.102655	Y_R 377.433
Fe H (259.940 nm)	0.261912 u	ppm	0.001753	0.67	468.376000	Y_R 377.433
K (766.491 nm)	20.313200	ppm	0.070266	0.35	21453.700000	Y_R2 488.368
Li (670.783 nm)	0.259105	ppm	0.000073	0.03	6470.600000	Y_R2 488.368
Mg (279.078 nm)	10.028800	ppm	0.004744	0.05	61515.200000	Y 377.433
Mn (257.610 nm)	0.264001 Q	ppm	0.000033	0.01	62317.700000 Q	Y 377.433
Mo (202.032 nm)	0.252612	ppm	0.000753	0.30	2262.990000	Y 377.433
Na (589.592 nm)	2.085650	ppm	0.011422	0.55	14126.700000	Y_R2 488.368
Na H (589.593 nm)	1.645079 u	ppm	0.011166	0.68	8901.034194	Y_R 488.368
Ni (231.604 nm)	0.253776	ppm	0.000156	0.06	1798.040000	Y 377.433
P (213.618 nm)	2.052960	ppm	0.002778	0.14	4424.480000	Y 242.219
Pb (220.353 nm)	0.256510	ppm	0.001413	0.55	775.551000	Y 242.219
S (181.972 nm)	-0.018582 u	ppm	0.000370	1.99	7.538534	Y 377.433
Sb (206.834 nm)	0.247091	ppm	0.000693	0.28	666.172000	Y 377.433
Se (196.026 nm)	0.487356	ppm	0.005845	1.20	526.274000	Y 242.219
Si (288.158 nm)	2.014650	ppm	0.003490	0.17	18436.800000	Y 377.433
Sn (189.925 nm)	0.502100	ppm	0.001225	0.24	1046.090000	Y 377.433
Sr (421.552 nm)	0.257918	ppm	0.001093	0.42	50312.463151	Y_R 488.368
Th (288.505 nm)	0.001091 u	ppm	0.002238	> 100.00	84.400800	Y 377.433
Ti (336.122 nm)	0.255431	ppm	0.000210	0.08	35790.900000	Y 377.433
Tl (190.794 nm)	0.509386	ppm	0.000274	0.05	1151.990000	Y 377.433
U (409.013 nm)	-0.000491 u	ppm	0.000898	> 100.00	-252.139000	Y 377.433
V (292.401 nm)	0.253961	ppm	0.000198	0.08	9347.570000	Y 377.433
Zn (206.200 nm)	0.244671	ppm	0.001000	0.41	1407.480000	Y 377.433
Zr (343.823 nm)	0.255716	ppm	0.000067	0.03	33007.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030758	20133.033570	0.002789	0.27
Y 377.433	1.031371	1021705.788946	0.003146	0.30
Y_R 377.433	1.053860	74998.500000	0.005634	0.53
Y_R 488.368	1.058240	43112.400000	0.009561	0.90
Y_R2 488.368	1.040212	84109.907058	0.004934	0.47

Sample Name: ICVL-5425098

Date: 11/13/2018 11:05:29 AM Rack:Tube: 3:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009272	ppm	0.000013	0.14	-9.803090	Y 377.433
Al (167.019 nm)	0.104631	ppm	0.001323	1.26	58.716700	Y_R 377.433
Al H (396.152 nm)	0.086832 u	ppm	0.006166	7.10	291.673845	Y_R 377.433
As (188.980 nm)	0.016296	ppm	0.002454	15.06	21.447200	Y 242.219
B (249.678 nm)	0.097109	ppm	0.000193	0.20	2502.610000	Y 242.219
Ba (493.408 nm)	0.009769	ppm	0.000155	1.59	1711.410000	Y_R 488.368
Be (234.861 nm)	0.001086	ppm	0.000041	3.78	234.302000	Y_R 488.368
Bi (223.061 nm)	0.100139	ppm	0.002052	2.05	268.804000	Y 377.433
Ca (315.887 nm)	0.204964	ppm	0.003030	1.48	96.394056	Y_R 377.433
Cd (214.439 nm)	0.004930	ppm	0.000045	0.90	330.277000	Y 377.433
Co (228.615 nm)	0.010533	ppm	0.000462	4.38	151.314000	Y 242.219
Cr (205.560 nm)	0.009922	ppm	0.000128	1.29	159.430000	Y 377.433
Cu (324.754 nm)	0.014614	ppm	0.000195	1.34	417.528000	Y 377.433
Fe (238.204 nm)	0.100665	ppm	0.000865	0.86	382.027265	Y_R 377.433
Fe H (259.940 nm)	0.113045 u	ppm	0.002311	2.04	196.489000	Y_R 377.433
K (766.491 nm)	3.033460	ppm	0.024511	0.81	2518.790000	Y_R2 488.368
Li (670.783 nm)	0.024855	ppm	0.000235	0.94	-802.461000	Y_R2 488.368
Mg (279.078 nm)	0.199769	ppm	0.001888	0.95	1289.180000	Y 377.433
Mn (257.610 nm)	0.010233	ppm	0.000030	0.29	2511.500000	Y 377.433
Mo (202.032 nm)	0.017975	ppm	0.000277	1.54	163.442000	Y 377.433
Na (589.592 nm)	1.039270	ppm	0.001695	0.16	6978.460000	Y_R2 488.368
Na H (589.593 nm)	0.580501 u	ppm	0.011181	1.93	5045.071315	Y_R 488.368
Ni (231.604 nm)	0.039870	ppm	0.000229	0.57	281.047000	Y 377.433
P (213.618 nm)	2.780860 o	ppm	0.006532	0.23	5980.760000	Y 242.219
Pb (220.353 nm)	0.009541	ppm	0.000861	9.02	32.891000	Y 242.219
S (181.972 nm)	0.079058	ppm	0.003286	4.16	58.189320	Y 377.433
Sb (206.834 nm)	0.018339	ppm	0.001946	10.61	20.618200	Y 377.433
Se (196.026 nm)	0.017192	ppm	0.003287	19.12	34.470800	Y 242.219
Si (288.158 nm)	0.476248	ppm	0.001112	0.23	5098.810000	Y 377.433
Sn (189.925 nm)	0.094367	ppm	0.001213	1.29	206.475000	Y 377.433
Sr (421.552 nm)	0.010184	ppm	0.000031	0.30	2111.789255	Y_R 488.368
Th (288.505 nm)	0.013421	ppm	0.000118	0.88	108.225000	Y 377.433
Ti (336.122 nm)	0.009830	ppm	0.000021	0.21	1039.940000	Y 377.433
Tl (190.794 nm)	0.015863	ppm	0.000070	0.44	29.804400	Y 377.433
U (409.013 nm)	0.062183	ppm	0.006636	10.67	44.801500	Y 377.433
V (292.401 nm)	0.009945	ppm	0.000081	0.81	391.224000	Y 377.433
Zn (206.200 nm)	0.013853 Q	ppm	0.000760	5.49	118.741000 Q	Y 377.433
Zr (343.823 nm)	0.014811	ppm	0.000068	0.46	1938.970000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033040	20177.602001	0.001591	0.15
Y 377.433	1.034155	1024464.070957	0.000038	0.00
Y_R 377.433	1.049620	74696.800000	0.003904	0.37
Y_R 488.368	1.049760	42767.000000	0.008347	0.80
Y_R2 488.368	1.051381	85013.029687	0.002693	0.26

Sample Name: CCVH-5417909

Date: 11/13/2018 11:08:53 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001731 u	ppm	0.000014	0.79	-760.630000	Y 377.433
Al (167.019 nm)	45.730300 o	ppm	0.019626	0.04	24889.000000	Y_R 377.433
Al H (396.152 nm)	50.148534	ppm	0.025037	0.05	118987.765804	Y_R 377.433
As (188.980 nm)	0.001159 u	ppm	0.002880	> 100.00	0.942146	Y 242.219
B (249.678 nm)	0.000223	ppm	0.000221	98.95	-11.209300	Y 242.219
Ba (493.408 nm)	-0.000063 u	ppm	0.000129	> 100.00	710.575000	Y_R 488.368
Be (234.861 nm)	-0.000055 u	ppm	0.000054	98.07	1415.000000	Y_R 488.368
Bi (223.061 nm)	0.992075	ppm	0.006735	0.68	2529.680000	Y 377.433
Ca (315.887 nm)	-0.005630 u	ppm	0.006197	> 100.00	-64.271389	Y_R 377.433
Cd (214.439 nm)	-0.000521 u	ppm	0.000016	3.02	37.025800	Y 377.433
Co (228.615 nm)	0.003163	ppm	0.000053	1.67	13.030200	Y 242.219
Cr (205.560 nm)	-0.000143 u	ppm	0.000221	> 100.00	-9.915450	Y 377.433
Cu (324.754 nm)	-0.007114 u	ppm	0.000039	0.55	-418.197000	Y 377.433
Fe (238.204 nm)	49.760441 o	ppm	0.104089	0.21	175564.282574	Y_R 377.433
Fe H (259.940 nm)	50.087500	ppm	0.035320	0.07	91468.500000	Y_R 377.433
K (766.491 nm)	0.088843	ppm	0.003725	4.19	-707.867000	Y_R2 488.368
Li (670.783 nm)	0.004211	ppm	0.001316	31.24	-1443.420000	Y_R2 488.368
Mg (279.078 nm)	-0.014035 u	ppm	0.000989	7.05	-395.763000	Y 377.433
Mn (257.610 nm)	0.001295	ppm	0.000027	2.12	404.966000	Y 377.433
Mo (202.032 nm)	-0.000711 u	ppm	0.001160	> 100.00	-3.764410	Y 377.433
Na (589.592 nm)	247.565000 o	ppm	1.169050	0.47	1577660.000000	Y_R2 488.368
Na H (589.593 nm)	252.618038	ppm	1.000398	0.40	866722.085717	Y_R 488.368
Ni (231.604 nm)	0.004225	ppm	0.000022	0.51	30.456500	Y 377.433
P (213.618 nm)	-0.003139 u	ppm	0.000360	11.48	28.432500	Y 242.219
Pb (220.353 nm)	-0.006184 u	ppm	0.001062	17.17	3.108450	Y 242.219
S (181.972 nm)	4.918660	ppm	0.004334	0.09	2600.015168	Y 377.433
Sb (206.834 nm)	-0.004889 u	ppm	0.001890	38.65	-91.021100	Y 377.433
Se (196.026 nm)	-0.001701 u	ppm	0.002982	> 100.00	5.343950	Y 242.219
Si (288.158 nm)	0.015865	ppm	0.000163	1.03	1107.280000	Y 377.433
Sn (189.925 nm)	-0.000294 u	ppm	0.001294	> 100.00	11.545800	Y 377.433
Sr (421.552 nm)	0.000601	ppm	0.000152	25.29	247.227066	Y_R 488.368
Th (288.505 nm)	5.065420	ppm	0.007165	0.14	13033.300000	Y 377.433
Ti (336.122 nm)	0.001653	ppm	0.000115	6.98	-117.257000	Y 377.433
Tl (190.794 nm)	-0.003334 u	ppm	0.000551	16.52	-15.176600	Y 377.433
U (409.013 nm)	10.110400	ppm	0.026723	0.26	44741.800000	Y 377.433
V (292.401 nm)	0.002686	ppm	0.000262	9.74	-34.163400	Y 377.433
Zn (206.200 nm)	-0.005151 u	ppm	0.000198	3.85	12.639400	Y 377.433
Zr (343.823 nm)	-0.004536 u	ppm	0.000007	0.16	-414.727000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023684	19994.856373	0.000802	0.08
Y 377.433	1.017122	1007590.423964	0.000867	0.09
Y_R 377.433	1.051030	74796.600000	0.001159	0.11
Y_R 488.368	1.055360	42995.400000	0.004287	0.41
Y_R2 488.368	1.040409	84125.887720	0.007056	0.68

Sample Name: CCV-5416701

Date: 11/13/2018 11:12:16 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.492343	ppm	0.000000	0.00	22205.900000	Y 377.433
Al (167.019 nm)	0.508987	ppm	0.010881	2.14	280.069000	Y_R 377.433
Al H (396.152 nm)	0.515268 u	ppm	0.007807	1.52	1345.725522	Y_R 377.433
As (188.980 nm)	0.986770	ppm	0.001849	0.19	1306.520000	Y 242.219
B (249.678 nm)	0.495410	ppm	0.000986	0.20	12544.500000	Y 242.219
Ba (493.408 nm)	0.498034	ppm	0.000032	0.01	53527.700000	Y_R 488.368
Be (234.861 nm)	0.488186	ppm	0.000698	0.14	142175.000000	Y_R 488.368
Bi (223.061 nm)	-0.004093 u	ppm	0.000405	9.89	5.947800	Y 377.433
Ca (315.887 nm)	5.034822	ppm	0.001224	0.02	3781.366170	Y_R 377.433
Cd (214.439 nm)	0.496853	ppm	0.000382	0.08	31327.000000	Y 377.433
Co (228.615 nm)	0.499428	ppm	0.001225	0.25	9320.250000	Y 242.219
Cr (205.560 nm)	0.499058	ppm	0.000523	0.10	7712.330000	Y 377.433
Cu (324.754 nm)	0.494812	ppm	0.000325	0.07	26266.800000	Y 377.433
Fe (238.204 nm)	2.520915	ppm	0.006520	0.26	8919.819932	Y_R 377.433
Fe H (259.940 nm)	2.546060 u	ppm	0.000297	0.01	4640.090000	Y_R 377.433
K (766.491 nm)	49.293500	ppm	0.136658	0.28	53209.800000	Y_R2 488.368
Li (670.783 nm)	0.995857	ppm	0.001576	0.16	29345.500000	Y_R2 488.368
Mg (279.078 nm)	19.713000	ppm	0.035119	0.18	120849.000000	Y 377.433
Mn (257.610 nm)	0.500226	ppm	0.000765	0.15	117989.000000	Y 377.433
Mo (202.032 nm)	0.499032	ppm	0.000745	0.15	4467.980000	Y 377.433
Na (589.592 nm)	5.070660	ppm	0.021108	0.42	33618.100000	Y_R2 488.368
Na H (589.593 nm)	4.869590 u	ppm	0.017227	0.35	20137.667263	Y_R 488.368
Ni (231.604 nm)	0.504507	ppm	0.000213	0.04	3576.170000	Y 377.433
P (213.618 nm)	1.039260	ppm	0.001900	0.18	2257.130000	Y 242.219
Pb (220.353 nm)	0.998576	ppm	0.000273	0.03	3009.740000	Y 242.219
S (181.972 nm)	-0.008108 u	ppm	0.000738	9.10	13.627683	Y 377.433
Sb (206.834 nm)	0.993092	ppm	0.001039	0.10	2757.390000	Y 377.433
Se (196.026 nm)	0.983935	ppm	0.000256	0.03	1045.250000	Y 242.219
Si (288.158 nm)	4.962430	ppm	0.014165	0.29	43994.100000	Y 377.433
Sn (189.925 nm)	0.993030	ppm	0.000015	0.00	2057.030000	Y 377.433
Sr (421.552 nm)	0.499374	ppm	0.000589	0.12	97291.743976	Y_R 488.368
Th (288.505 nm)	0.001418	ppm	0.000839	59.19	92.761600	Y 377.433
Ti (336.122 nm)	0.503263	ppm	0.000059	0.01	70860.900000	Y 377.433
Tl (190.794 nm)	0.996437	ppm	0.000814	0.08	2259.400000	Y 377.433
U (409.013 nm)	0.001559 u	ppm	0.005372	> 100.00	-260.211000	Y 377.433
V (292.401 nm)	0.498433	ppm	0.000293	0.06	18319.600000	Y 377.433
Zn (206.200 nm)	0.494203	ppm	0.000609	0.12	2800.690000	Y 377.433
Zr (343.823 nm)	0.500966	ppm	0.001216	0.24	64642.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038582	20285.843024	0.000482	0.05
Y 377.433	1.039537	1029795.217334	0.000594	0.06
Y_R 377.433	1.059470	75397.600000	0.001063	0.10
Y_R 488.368	1.064360	43362.000000	0.001097	0.10
Y_R2 488.368	1.057563	85512.924313	0.001170	0.11

Sample Name: ICB

Date: 11/13/2018 11:15:38 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000311	ppm	0.000100	32.04	-422.215000	Y 377.433
Al (167.019 nm)	0.014913	ppm	0.008956	60.06	9.896910	Y_R 377.433
Al H (396.152 nm)	-0.004698 u	ppm	0.006389	> 100.00	73.182456	Y_R 377.433
As (188.980 nm)	-0.000361 u	ppm	0.001563	> 100.00	-0.609190	Y 242.219
B (249.678 nm)	0.002136	ppm	0.000065	3.04	112.131000	Y 242.219
Ba (493.408 nm)	-0.000128 u	ppm	0.000373	> 100.00	661.379000	Y_R 488.368
Be (234.861 nm)	0.000226	ppm	0.000038	16.57	-18.100200	Y_R 488.368
Bi (223.061 nm)	-0.001353 u	ppm	0.000439	32.42	12.457200	Y 377.433
Ca (315.887 nm)	-0.000018 u	ppm	0.012360	> 100.00	-59.990086	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000090	> 100.00	19.446900	Y 377.433
Co (228.615 nm)	0.000457	ppm	0.000435	95.07	-37.617100	Y 242.219
Cr (205.560 nm)	0.000123 u	ppm	0.000288	> 100.00	8.065970	Y 377.433
Cu (324.754 nm)	-0.000382 u	ppm	0.000004	1.17	-387.496000	Y 377.433
Fe (238.204 nm)	0.013353	ppm	0.009313	69.75	74.021189	Y_R 377.433
Fe H (259.940 nm)	0.027682 u	ppm	0.009801	35.41	40.585200	Y_R 377.433
K (766.491 nm)	0.031624	ppm	0.035074	> 100.00	-770.566000	Y_R2 488.368
Li (670.783 nm)	0.003234	ppm	0.001513	46.77	-1473.750000	Y_R2 488.368
Mg (279.078 nm)	0.008374	ppm	0.000997	11.90	117.446000	Y 377.433
Mn (257.610 nm)	0.000090	ppm	0.000043	48.14	121.083000	Y 377.433
Mo (202.032 nm)	-0.000317 u	ppm	0.000406	> 100.00	-0.238014	Y 377.433
Na (589.592 nm)	0.113405	ppm	0.033064	29.16	1059.640000	Y_R2 488.368
Na H (589.593 nm)	-0.390796 u	ppm	0.039495	10.11	1715.413506	Y_R 488.368
Ni (231.604 nm)	0.000447	ppm	0.000447	99.91	1.560830	Y 377.433
P (213.618 nm)	0.002721	ppm	0.003701	> 100.00	40.960500	Y 242.219
Pb (220.353 nm)	0.000602 u	ppm	0.002512	> 100.00	5.985060	Y 242.219
S (181.972 nm)	-0.008878 u	ppm	0.006523	73.48	11.978924	Y 377.433
Sb (206.834 nm)	0.001368	ppm	0.000727	53.15	-26.946900	Y 377.433
Se (196.026 nm)	-0.001411 u	ppm	0.003684	> 100.00	15.026900	Y 242.219
Si (288.158 nm)	0.001095 u	ppm	0.001887	> 100.00	979.229000	Y 377.433
Sn (189.925 nm)	-0.001105 u	ppm	0.000642	58.11	9.877130	Y 377.433
Sr (421.552 nm)	0.000434	ppm	0.000200	46.01	214.661166	Y_R 488.368
Th (288.505 nm)	0.001202 u	ppm	0.003819	> 100.00	76.316700	Y 377.433
Ti (336.122 nm)	0.000291	ppm	0.000012	4.06	-310.150000	Y 377.433
Tl (190.794 nm)	0.002582	ppm	0.000480	18.57	-0.361481	Y 377.433
U (409.013 nm)	0.003644	ppm	0.000095	2.60	-214.272000	Y 377.433
V (292.401 nm)	0.000069 u	ppm	0.000176	> 100.00	30.778100	Y 377.433
Zn (206.200 nm)	-0.006753 u	ppm	0.000149	2.21	3.691990	Y 377.433
Zr (343.823 nm)	0.000194	ppm	0.000163	84.01	53.694700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012739	19781.083278	0.000040	0.00
Y 377.433	1.015622	1006104.031916	0.001653	0.16
Y_R 377.433	1.029500	73264.500000	0.001106	0.11
Y_R 488.368	1.031820	42036.400000	0.002175	0.21
Y_R2 488.368	1.024824	82865.644233	0.011488	1.12

Sample Name: CRI-5425098

Date: 11/13/2018 11:19:00 AM Rack:Tube: 3:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009510	ppm	0.000034	0.35	1.051740	Y 377.433
Al (167.019 nm)	0.102160	ppm	0.000875	0.86	57.374300	Y_R 377.433
Al H (396.152 nm)	0.086651 u	ppm	0.002874	3.32	291.246712	Y_R 377.433
As (188.980 nm)	0.014908	ppm	0.000860	5.77	19.610100	Y 242.219
B (249.678 nm)	0.097118	ppm	0.000501	0.52	2502.820000	Y 242.219
Ba (493.408 nm)	0.009412	ppm	0.000139	1.48	1673.540000	Y_R 488.368
Be (234.861 nm)	0.001072	ppm	0.000022	2.08	230.202000	Y_R 488.368
Bi (223.061 nm)	0.097139	ppm	0.000273	0.28	261.225000	Y 377.433
Ca (315.887 nm)	0.199074	ppm	0.000786	0.39	91.900396	Y_R 377.433
Cd (214.439 nm)	0.004948	ppm	0.000097	1.97	331.395000	Y 377.433
Co (228.615 nm)	0.010693	ppm	0.000092	0.86	154.301000	Y 242.219
Cr (205.560 nm)	0.009578	ppm	0.000009	0.10	154.108000	Y 377.433
Cu (324.754 nm)	0.014999	ppm	0.000045	0.30	437.835000	Y 377.433
Fe (238.204 nm)	0.102572	ppm	0.002648	2.58	388.754681	Y_R 377.433
Fe H (259.940 nm)	0.114402 u	ppm	0.002204	1.93	198.968000	Y_R 377.433
K (766.491 nm)	3.040720	ppm	0.009013	0.30	2526.750000	Y_R2 488.368
Li (670.783 nm)	0.025170 Q	ppm	0.000793	3.15	-792.696000 Q	Y_R2 488.368
Mg (279.078 nm)	0.199741	ppm	0.001061	0.53	1288.850000	Y 377.433
Mn (257.610 nm)	0.010151	ppm	0.000049	0.48	2492.060000	Y 377.433
Mo (202.032 nm)	0.018021	ppm	0.000144	0.80	163.849000	Y 377.433
Na (589.592 nm)	1.056360	ppm	0.007940	0.75	7087.230000	Y_R2 488.368
Na H (589.593 nm)	0.590918 u	ppm	0.007547	1.28	5080.633024	Y_R 488.368
Ni (231.604 nm)	0.040791	ppm	0.000211	0.52	287.576000	Y 377.433
P (213.618 nm)	2.771550 o	ppm	0.008105	0.29	5960.860000	Y 242.219
Pb (220.353 nm)	0.010168	ppm	0.000294	2.89	34.793700	Y 242.219
S (181.972 nm)	0.081216	ppm	0.002741	3.37	59.322543	Y 377.433
Sb (206.834 nm)	0.017342	ppm	0.000706	4.07	17.799300	Y 377.433
Se (196.026 nm)	0.017442	ppm	0.001397	8.01	34.732000	Y 242.219
Si (288.158 nm)	0.476530	ppm	0.005441	1.14	5101.260000	Y 377.433
Sn (189.925 nm)	0.094015	ppm	0.000505	0.54	205.751000	Y 377.433
Sr (421.552 nm)	0.010213	ppm	0.000095	0.93	2117.418042	Y_R 488.368
Th (288.505 nm)	0.016372	ppm	0.003892	23.77	115.760000	Y 377.433
Ti (336.122 nm)	0.009794	ppm	0.000026	0.27	1034.860000	Y 377.433
Tl (190.794 nm)	0.016104	ppm	0.001324	8.22	30.351600	Y 377.433
U (409.013 nm)	0.060439	ppm	0.002080	3.44	37.046900	Y 377.433
V (292.401 nm)	0.009649	ppm	0.000029	0.30	380.035000	Y 377.433
Zn (206.200 nm)	0.013457 Q	ppm	0.000598	4.44	116.530000 Q	Y 377.433
Zr (343.823 nm)	0.014780	ppm	0.000064	0.44	1935.030000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033509	20186.772486	0.000500	0.05
Y 377.433	1.035115	1025414.768620	0.001094	0.11
Y_R 377.433	1.058330	75316.300000	0.000504	0.05
Y_R 488.368	1.064740	43377.300000	0.005742	0.54
Y_R2 488.368	1.049704	84877.426514	0.011244	1.07

Sample Name: ICSA-5374484

Date: 11/13/2018 11:23:38 AM Rack:Tube: 3:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000713	ppm	0.000230	32.22	-404.766000	Y 377.433
Al (167.019 nm)	210.498000 o	ppm	0.116222	0.06	114532.000000	Y_R 377.433
Al H (396.152 nm)	522.305538 o	ppm	0.191676	0.04	1238687.348228	Y_R 377.433
As (188.980 nm)	0.002572	ppm	0.000861	33.47	1.518760	Y 242.219
B (249.678 nm)	0.002748	ppm	0.000080	2.89	-158.560000	Y 242.219
Ba (493.408 nm)	-0.001449 u	ppm	0.000007	0.45	787.196000	Y_R 488.368
Be (234.861 nm)	-0.001289 Ku	ppm	0.000207	16.02	5280.940000 K	Y_R 488.368
Bi (223.061 nm)	-0.012210 u	ppm	0.000361	2.95	16.142400	Y 377.433
Ca (315.887 nm)	495.577069 o	ppm	0.031191	0.01	378016.494893	Y_R 377.433
Cd (214.439 nm)	-0.000850 u	ppm	0.000128	15.06	157.044000	Y 377.433
Co (228.615 nm)	-0.002571 u	ppm	0.000193	7.53	-94.305200	Y 242.219
Cr (205.560 nm)	-0.000238 u	ppm	0.000703	> 100.00	-50.226000	Y 377.433
Cu (324.754 nm)	-0.006996 u	ppm	0.000085	1.22	-673.387000	Y 377.433
Fe (238.204 nm)	188.935803 o	ppm	0.239946	0.13	666526.097297	Y_R 377.433
Fe H (259.940 nm)	194.262000	ppm	0.494393	0.25	354785.000000	Y_R 377.433
K (766.491 nm)	-0.037498 u	ppm	0.017633	47.02	-846.309000	Y_R2 488.368
Li (670.783 nm)	0.007080	ppm	0.001390	19.64	-1354.350000	Y_R2 488.368
Mg (279.078 nm)	511.362000 o	ppm	0.611331	0.12	3133000.000000	Y 377.433
Mn (257.610 nm)	0.000410	ppm	0.000003	0.67	196.580000	Y 377.433
Mo (202.032 nm)	0.000058 u	ppm	0.000344	> 100.00	3.118610	Y 377.433
Na (589.592 nm)	0.042644	ppm	0.010187	23.89	610.937000	Y_R2 488.368
Na H (589.593 nm)	0.173144 u	ppm	0.021944	12.67	3644.419966	Y_R 488.368
Ni (231.604 nm)	-0.000205 u	ppm	0.001021	> 100.00	5.004800	Y 377.433
P (213.618 nm)	0.008330	ppm	0.000089	1.07	52.952900	Y 242.219
Pb (220.353 nm)	-0.005062 Ku	ppm	0.002304	45.51	-171.786000 K	Y 242.219
S (181.972 nm)	0.025989	ppm	0.001130	4.35	30.292093	Y 377.433
Sb (206.834 nm)	-0.010646 Ku	ppm	0.000312	2.93	-145.049000 K	Y 377.433
Se (196.026 nm)	-0.000238 u	ppm	0.006776	> 100.00	-14.177600	Y 242.219
Si (288.158 nm)	0.027962	ppm	0.002091	7.48	1212.160000	Y 377.433
Sn (189.925 nm)	0.005856	ppm	0.002579	44.04	24.211700	Y 377.433
Sr (421.552 nm)	0.004885 K	ppm	0.000114	2.33	1080.780246 K	Y_R 488.368
Th (288.505 nm)	-0.000109 u	ppm	0.009526	> 100.00	64.173700	Y 377.433
Ti (336.122 nm)	0.000040	ppm	0.000037	91.38	1197.960000	Y 377.433
Tl (190.794 nm)	0.004261	ppm	0.001378	32.34	-1.715650	Y 377.433
U (409.013 nm)	0.007889	ppm	0.001442	18.28	-117.188000	Y 377.433
V (292.401 nm)	0.001289	ppm	0.000657	51.00	76.355600	Y 377.433
Zn (206.200 nm)	-0.006396 u	ppm	0.000474	7.41	5.688470	Y 377.433
Zr (343.823 nm)	-0.001213 u	ppm	0.000094	7.77	409.809000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.938672	18334.379571	0.000913	0.10
Y 377.433	0.934671	925912.522887	0.002323	0.25
Y_R 377.433	1.001220	71252.100000	0.002455	0.25
Y_R 488.368	1.000360	40754.500000	0.007949	0.79
Y_R2 488.368	0.995713	80511.794038	0.004129	0.41

Sample Name: ICSAB-5408059

Date: 11/13/2018 11:27:00 AM Rack:Tube: 3:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.145690 o	ppm	0.003331	0.29	52322.400000	Y 377.433
Al (167.019 nm)	209.445000 o	ppm	1.977940	0.94	113959.000000	Y_R 377.433
Al H (396.152 nm)	520.017069 o	ppm	0.862616	0.17	1233335.014013	Y_R 377.433
As (188.980 nm)	2.123100	ppm	0.004382	0.21	2809.530000	Y 242.219
B (249.678 nm)	2.201990 o	ppm	0.002373	0.11	55212.200000	Y 242.219
Ba (493.408 nm)	0.513954	ppm	0.000503	0.10	55471.700000	Y_R 488.368
Be (234.861 nm)	0.501434	ppm	0.004746	0.95	151631.000000	Y_R 488.368
Bi (223.061 nm)	0.994226	ppm	0.001276	0.13	2557.820000	Y 377.433
Ca (315.887 nm)	491.668784 o	ppm	0.454318	0.09	375035.380603	Y_R 377.433
Cd (214.439 nm)	0.957832	ppm	0.001358	0.14	60558.200000	Y 377.433
Co (228.615 nm)	0.468053	ppm	0.001014	0.22	8752.280000	Y 242.219
Cr (205.560 nm)	0.492959	ppm	0.000493	0.10	7565.660000	Y 377.433
Cu (324.754 nm)	0.531538	ppm	0.001089	0.20	28690.900000	Y 377.433
Fe (238.204 nm)	187.571717 o	ppm	0.079620	0.04	661714.082778	Y_R 377.433
Fe H (259.940 nm)	193.311000	ppm	0.196910	0.10	353047.000000	Y_R 377.433
K (766.491 nm)	55.315300	ppm	0.004491	0.01	59808.400000	Y_R2 488.368
Li (670.783 nm)	1.100440	ppm	0.002307	0.21	32592.600000	Y_R2 488.368
Mg (279.078 nm)	510.760000 o	ppm	3.019850	0.59	3129320.000000	Y 377.433
Mn (257.610 nm)	0.497113	ppm	0.001332	0.27	117256.000000	Y 377.433
Mo (202.032 nm)	0.999198	ppm	0.003218	0.32	8943.500000	Y 377.433
Na (589.592 nm)	54.094000 o	ppm	0.306597	0.57	345997.000000	Y_R2 488.368
Na H (589.593 nm)	57.012381	ppm	0.085627	0.15	198422.282726	Y_R 488.368
Ni (231.604 nm)	0.928568	ppm	0.000536	0.06	6601.270000	Y 377.433
P (213.618 nm)	2.122690	ppm	0.001609	0.08	4573.560000	Y 242.219
Pb (220.353 nm)	0.986114	ppm	0.001986	0.20	2809.710000	Y 242.219
S (181.972 nm)	1.067832	ppm	0.001917	0.18	578.712500	Y 377.433
Sb (206.834 nm)	1.048840	ppm	0.002817	0.27	2832.840000	Y 377.433
Se (196.026 nm)	5.241080 o	ppm	0.015001	0.29	5466.420000	Y 242.219
Si (288.158 nm)	10.709700	ppm	0.037102	0.35	93822.600000	Y 377.433
Sn (189.925 nm)	9.632420 o	ppm	0.061234	0.64	19847.600000	Y 377.433
Sr (421.552 nm)	1.044861	ppm	0.004631	0.44	203425.496286	Y_R 488.368
Th (288.505 nm)	2.036120	ppm	0.007203	0.35	5212.620000	Y 377.433
Ti (336.122 nm)	1.035280	ppm	0.002327	0.22	147641.000000	Y 377.433
Tl (190.794 nm)	9.650370 o	ppm	0.020929	0.22	21941.000000	Y 377.433
U (409.013 nm)	0.007921	ppm	0.000239	3.02	-193.647000	Y 377.433
V (292.401 nm)	0.515740	ppm	0.001584	0.31	19128.500000	Y 377.433
Zn (206.200 nm)	0.939916	ppm	0.001922	0.20	5289.250000	Y 377.433
Zr (343.823 nm)	0.998452	ppm	0.003034	0.30	129326.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.932050	18205.033136	0.000709	0.08
Y 377.433	0.936422	927646.525401	0.000707	0.08
Y_R 377.433	1.012280	72038.900000	0.006632	0.66
Y_R 488.368	1.010710	41176.200000	0.006674	0.66
Y_R2 488.368	1.004746	81242.227896	0.000601	0.06

Sample Name: LRA-5413489

Date: 11/13/2018 11:30:23 AM Rack:Tube: 3:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.003292 u	ppm	0.000626	19.03	-2249.400000	Y 377.433
Al (167.019 nm)	0.262201	ppm	0.035615	13.58	454.969000	Y_R 377.433
Al H (396.152 nm)	0.225257 u	ppm	0.047861	21.25	993.254310	Y_R 377.433
As (188.980 nm)	9.979680 o	ppm	0.118774	1.19	13210.500000	Y 242.219
B (249.678 nm)	10.222000 o	ppm	0.080180	0.78	256820.000000	Y 242.219
Ba (493.408 nm)	12.292300 o	ppm	0.030042	0.24	1305240.000000	Y_R 488.368
Be (234.861 nm)	-0.003629 u	ppm	0.000034	0.94	12966.900000	Y_R 488.368
Bi (223.061 nm)	-0.036406 u	ppm	0.003828	10.51	2.123630	Y 377.433
Ca (315.887 nm)	0.239119	ppm	0.054735	22.89	123.528021	Y_R 377.433
Cd (214.439 nm)	1.980170 o	ppm	0.029195	1.47	125266.000000	Y 377.433
Co (228.615 nm)	5.069340 o	ppm	0.055887	1.10	95206.500000	Y 242.219
Cr (205.560 nm)	10.017700 o	ppm	0.147771	1.48	154672.000000	Y 377.433
Cu (324.754 nm)	10.566400 o	ppm	0.202305	1.91	568718.000000	Y 377.433
Fe (238.204 nm)	474.801955 o	ppm	1.114406	0.23	1674961.520768	Y_R 377.433
Fe H (259.940 nm)	484.957000	ppm	0.106252	0.02	885702.000000	Y_R 377.433
K (766.491 nm)	-0.001643 u	ppm	0.038454	> 100.00	-807.020000	Y_R2 488.368
Li (670.783 nm)	0.007868	ppm	0.001051	13.36	-1329.870000	Y_R2 488.368
Mg (279.078 nm)	0.281927	ppm	0.005886	2.09	941.055000	Y 377.433
Mn (257.610 nm)	9.864010 o	ppm	0.121565	1.23	2324780.000000	Y 377.433
Mo (202.032 nm)	4.974280 o	ppm	0.064293	1.29	44512.900000	Y 377.433
Na (589.592 nm)	-0.385710 u	ppm	0.011203	2.90	21856.900000	Y_R2 488.368
Na H (589.593 nm)	-0.272709 u	ppm	0.030638	11.23	12892.809536	Y_R 488.368
Ni (231.604 nm)	10.172000 o	ppm	0.145916	1.43	72133.900000	Y 377.433
P (213.618 nm)	0.511942	ppm	0.001175	0.23	1129.700000	Y 242.219
Pb (220.353 nm)	10.282800 o	ppm	0.114568	1.11	30997.300000	Y 242.219
S (181.972 nm)	-0.005208 u	ppm	0.009948	> 100.00	38.437456	Y 377.433
Sb (206.834 nm)	-0.019605 u	ppm	0.001721	8.78	90.758800	Y 377.433
Se (196.026 nm)	5.032870 o	ppm	0.061748	1.23	5192.530000	Y 242.219
Si (288.158 nm)	48.718200 o	ppm	0.217670	0.45	423358.000000	Y 377.433
Sn (189.925 nm)	0.003027	ppm	0.001143	37.75	18.385100	Y 377.433
Sr (421.552 nm)	10.177913 o	ppm	0.043142	0.42	1980413.673493	Y_R 488.368
Th (288.505 nm)	0.007303	ppm	0.000829	11.35	636.034000	Y 377.433
Ti (336.122 nm)	10.005300 o	ppm	0.123006	1.23	1415100.000000	Y 377.433
Tl (190.794 nm)	5.084160 o	ppm	0.069603	1.37	11511.400000	Y 377.433
U (409.013 nm)	-0.026499 u	ppm	0.004221	15.93	80.889400	Y 377.433
V (292.401 nm)	10.097700 o	ppm	0.119752	1.19	370736.000000	Y 377.433
Zn (206.200 nm)	9.779600 o	ppm	0.147077	1.50	54644.000000	Y 377.433
Zr (343.823 nm)	-0.002867 u	ppm	0.000241	8.41	1010.480000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022900	19979.552398	0.010645	1.04
Y 377.433	1.027164	1017537.783556	0.013239	1.29
Y_R 377.433	1.076280	76593.400000	0.004478	0.42
Y_R 488.368	1.081880	44075.600000	0.009738	0.90
Y_R2 488.368	1.070091	86525.865536	0.004128	0.39

Sample Name: CCVH-5417909

Date: 11/13/2018 11:33:46 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001534 u	ppm	0.000105	6.82	-753.126000	Y 377.433
Al (167.019 nm)	45.527000 o	ppm	0.226289	0.50	24778.800000	Y_R 377.433
Al H (396.152 nm)	50.277104	ppm	0.092791	0.18	119292.777743	Y_R 377.433
As (188.980 nm)	0.006502	ppm	0.000268	4.13	8.012290	Y 242.219
B (249.678 nm)	0.014270	ppm	0.000155	1.09	341.610000	Y 242.219
Ba (493.408 nm)	0.004205	ppm	0.001561	37.11	1163.880000	Y_R 488.368
Be (234.861 nm)	-0.000117 u	ppm	0.000077	65.82	1413.190000	Y_R 488.368
Bi (223.061 nm)	0.996528	ppm	0.001179	0.12	2541.020000	Y 377.433
Ca (315.887 nm)	0.142730	ppm	0.036953	25.89	48.913050	Y_R 377.433
Cd (214.439 nm)	0.000636	ppm	0.000189	29.72	110.444000	Y 377.433
Co (228.615 nm)	0.005250	ppm	0.000339	6.46	52.266000	Y 242.219
Cr (205.560 nm)	0.004183	ppm	0.000738	17.64	56.788100	Y 377.433
Cu (324.754 nm)	-0.001821 u	ppm	0.000748	41.08	-130.418000	Y 377.433
Fe (238.204 nm)	50.294978 o	ppm	0.023796	0.05	177449.941532	Y_R 377.433
Fe H (259.940 nm)	50.585200	ppm	0.068048	0.13	92377.500000	Y_R 377.433
K (766.491 nm)	0.028031	ppm	0.025926	92.49	-774.503000	Y_R2 488.368
Li (670.783 nm)	0.004805	ppm	0.001230	25.61	-1424.990000	Y_R2 488.368
Mg (279.078 nm)	0.158007	ppm	0.031417	19.88	656.547000	Y 377.433
Mn (257.610 nm)	0.005881	ppm	0.000576	9.79	1485.740000	Y 377.433
Mo (202.032 nm)	0.000957	ppm	0.000073	7.62	11.157200	Y 377.433
Na (589.592 nm)	246.263000 o	ppm	0.234692	0.10	1569370.000000	Y_R2 488.368
Na H (589.593 nm)	252.778730	ppm	0.721990	0.29	867275.481405	Y_R 488.368
Ni (231.604 nm)	0.008455	ppm	0.001439	17.02	60.483200	Y 377.433
P (213.618 nm)	-0.006928 u	ppm	0.001147	16.56	20.331800	Y 242.219
Pb (220.353 nm)	0.003726	ppm	0.000778	20.89	33.053500	Y 242.219
S (181.972 nm)	4.929607	ppm	0.016080	0.33	2605.775937	Y 377.433
Sb (206.834 nm)	-0.007548 u	ppm	0.000570	7.55	-98.575300	Y 377.433
Se (196.026 nm)	0.003068	ppm	0.002572	83.83	10.228700	Y 242.219
Si (288.158 nm)	0.057508	ppm	0.001641	2.85	1468.330000	Y 377.433
Sn (189.925 nm)	0.002074	ppm	0.000843	40.66	16.423800	Y 377.433
Sr (421.552 nm)	0.004110	ppm	0.000725	17.63	929.976988	Y_R 488.368
Th (288.505 nm)	5.097730	ppm	0.006463	0.13	13115.500000	Y 377.433
Ti (336.122 nm)	0.006622	ppm	0.000491	7.41	586.144000	Y 377.433
Tl (190.794 nm)	0.008112	ppm	0.003149	38.82	10.838300	Y 377.433
U (409.013 nm)	10.132500	ppm	0.006628	0.07	44840.300000	Y 377.433
V (292.401 nm)	0.007338	ppm	0.000412	5.61	137.073000	Y 377.433
Zn (206.200 nm)	0.000743	ppm	0.000613	82.41	45.547200	Y 377.433
Zr (343.823 nm)	-0.004386 u	ppm	0.000095	2.16	-393.969000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023508	19991.429428	0.001982	0.19
Y 377.433	1.018946	1009397.019827	0.002081	0.20
Y_R 377.433	1.066690	75911.000000	0.005046	0.47
Y_R 488.368	1.070010	43592.000000	0.004878	0.46
Y_R2 488.368	1.059003	85629.376918	0.005834	0.55

Sample Name: CCV-5416701

Date: 11/13/2018 11:37:08 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498899	ppm	0.000987	0.20	22507.500000	Y 377.433
Al (167.019 nm)	0.560929 Q	ppm	0.015329	2.73	308.352000 Q	Y_R 377.433
Al H (396.152 nm)	0.558878 u	ppm	0.000937	0.17	1449.685022	Y_R 377.433
As (188.980 nm)	1.002800	ppm	0.002518	0.25	1327.750000	Y 242.219
B (249.678 nm)	0.508754	ppm	0.000982	0.19	12880.500000	Y 242.219
Ba (493.408 nm)	0.501708	ppm	0.001008	0.20	53917.400000	Y_R 488.368
Be (234.861 nm)	0.485281	ppm	0.000444	0.09	141330.000000	Y_R 488.368
Bi (223.061 nm)	-0.003906 u	ppm	0.002038	52.17	6.434810	Y 377.433
Ca (315.887 nm)	5.115471	ppm	0.029126	0.57	3842.895916	Y_R 377.433
Cd (214.439 nm)	0.501032	ppm	0.000246	0.05	31590.300000	Y 377.433
Co (228.615 nm)	0.504523	ppm	0.000533	0.11	9415.810000	Y 242.219
Cr (205.560 nm)	0.505228	ppm	0.000789	0.16	7807.660000	Y 377.433
Cu (324.754 nm)	0.503218	ppm	0.000636	0.13	26719.100000	Y 377.433
Fe (238.204 nm)	2.602061	ppm	0.013051	0.50	9206.075721	Y_R 377.433
Fe H (259.940 nm)	2.630870 u	ppm	0.017481	0.66	4794.980000	Y_R 377.433
K (766.491 nm)	49.556200	ppm	0.041027	0.08	53497.700000	Y_R2 488.368
Li (670.783 nm)	1.002450	ppm	0.000521	0.05	29550.100000	Y_R2 488.368
Mg (279.078 nm)	19.996000	ppm	0.054427	0.27	122583.000000	Y 377.433
Mn (257.610 nm)	0.508314	ppm	0.000859	0.17	119896.000000	Y 377.433
Mo (202.032 nm)	0.505781	ppm	0.000801	0.16	4528.370000	Y 377.433
Na (589.592 nm)	5.068790	ppm	0.021276	0.42	33613.600000	Y_R2 488.368
Na H (589.593 nm)	4.874498 u	ppm	0.040524	0.83	20157.794265	Y_R 488.368
Ni (231.604 nm)	0.512087	ppm	0.000972	0.19	3629.910000	Y 377.433
P (213.618 nm)	1.051710	ppm	0.000961	0.09	2283.750000	Y 242.219
Pb (220.353 nm)	1.012430	ppm	0.003254	0.32	3051.420000	Y 242.219
S (181.972 nm)	-0.001854 u	ppm	0.001804	97.29	16.932315	Y 377.433
Sb (206.834 nm)	1.003680	ppm	0.001894	0.19	2787.110000	Y 377.433
Se (196.026 nm)	0.996603	ppm	0.002512	0.25	1058.490000	Y 242.219
Si (288.158 nm)	5.052240	ppm	0.007522	0.15	44772.800000	Y 377.433
Sn (189.925 nm)	1.005010	ppm	0.003638	0.36	2081.690000	Y 377.433
Sr (421.552 nm)	0.502273	ppm	0.000562	0.11	97855.887421	Y_R 488.368
Th (288.505 nm)	0.004075	ppm	0.002403	58.96	99.928400	Y 377.433
Ti (336.122 nm)	0.508063	ppm	0.000379	0.07	71540.300000	Y 377.433
Tl (190.794 nm)	1.014120	ppm	0.000534	0.05	2299.620000	Y 377.433
U (409.013 nm)	0.003956	ppm	0.002420	61.18	-250.075000	Y 377.433
V (292.401 nm)	0.505870	ppm	0.001493	0.30	18592.700000	Y 377.433
Zn (206.200 nm)	0.499707	ppm	0.003050	0.61	2831.420000	Y 377.433
Zr (343.823 nm)	0.508422	ppm	0.001501	0.30	65603.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.026366	20047.247254	0.003696	0.36
Y 377.433	1.028409	1018771.682547	0.005042	0.49
Y_R 377.433	1.066930	75928.200000	0.004952	0.46
Y_R 488.368	1.072860	43708.400000	0.002742	0.26
Y_R2 488.368	1.051332	85009.088979	0.007436	0.71

Sample Name: CCB

Date: 11/13/2018 11:40:30 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000114	ppm	0.000150	> 100.00	-431.601000	Y 377.433
Al (167.019 nm)	0.026542	ppm	0.008845	33.33	16.233800	Y_R 377.433
Al H (396.152 nm)	0.007685 u	ppm	0.011745	> 100.00	102.551223	Y_R 377.433
As (188.980 nm)	-0.000504 u	ppm	0.000603	> 100.00	-0.798207	Y 242.219
B (249.678 nm)	0.007485	ppm	0.000161	2.15	246.730000	Y 242.219
Ba (493.408 nm)	0.000290	ppm	0.000087	30.06	705.742000	Y_R 488.368
Be (234.861 nm)	0.000230	ppm	0.000026	11.34	-16.273200	Y_R 488.368
Bi (223.061 nm)	-0.001773 u	ppm	0.000351	19.80	11.398400	Y 377.433
Ca (315.887 nm)	0.019435	ppm	0.009163	47.15	-45.149356	Y_R 377.433
Cd (214.439 nm)	0.000154	ppm	0.000112	72.67	29.282000	Y 377.433
Co (228.615 nm)	0.000716	ppm	0.000173	24.14	-32.753000	Y 242.219
Cr (205.560 nm)	0.001071	ppm	0.000022	2.05	22.720100	Y 377.433
Cu (324.754 nm)	0.000863	ppm	0.000365	42.37	-322.388000	Y 377.433
Fe (238.204 nm)	0.038167	ppm	0.011095	29.07	161.557413	Y_R 377.433
Fe H (259.940 nm)	0.049449 u	ppm	0.013660	27.63	80.339600	Y_R 377.433
K (766.491 nm)	0.059312	ppm	0.026345	44.42	-740.226000	Y_R2 488.368
Li (670.783 nm)	0.004400	ppm	0.000882	20.04	-1437.570000	Y_R2 488.368
Mg (279.078 nm)	0.042447 Z	ppm	0.006567	15.47	325.947000 Z	Y 377.433
Mn (257.610 nm)	0.000879	ppm	0.000181	20.63	307.013000	Y 377.433
Mo (202.032 nm)	-0.000319 u	ppm	0.000314	98.32	-0.257315	Y 377.433
Na (589.592 nm)	0.038482	ppm	0.006087	15.82	583.943000	Y_R2 488.368
Na H (589.593 nm)	-0.425416 u	ppm	0.007119	1.67	1597.801873	Y_R 488.368
Ni (231.604 nm)	0.000548	ppm	0.000124	22.61	2.275530	Y 377.433
P (213.618 nm)	-0.000466 u	ppm	0.001898	> 100.00	34.148400	Y 242.219
Pb (220.353 nm)	0.000536	ppm	0.000367	68.46	5.807320	Y 242.219
S (181.972 nm)	-0.014912 u	ppm	0.003586	24.04	8.811291	Y 377.433
Sb (206.834 nm)	0.000557 u	ppm	0.002034	> 100.00	-29.224300	Y 377.433
Se (196.026 nm)	0.000317 u	ppm	0.003077	> 100.00	16.829900	Y 242.219
Si (288.158 nm)	0.008569	ppm	0.001900	22.17	1044.030000	Y 377.433
Sn (189.925 nm)	-0.000673 u	ppm	0.001676	> 100.00	10.766900	Y 377.433
Sr (421.552 nm)	0.000788	ppm	0.000073	9.22	283.505127	Y_R 488.368
Th (288.505 nm)	0.005505	ppm	0.001434	26.04	87.359900	Y 377.433
Ti (336.122 nm)	0.001115	ppm	0.000140	12.55	-193.536000	Y 377.433
Tl (190.794 nm)	0.003055	ppm	0.001595	52.20	0.711129	Y 377.433
U (409.013 nm)	-0.003629 u	ppm	0.005023	> 100.00	-246.567000	Y 377.433
V (292.401 nm)	0.001210	ppm	0.000169	13.98	71.705900	Y 377.433
Zn (206.200 nm)	-0.006350 u	ppm	0.000206	3.24	5.944110	Y 377.433
Zr (343.823 nm)	0.000192	ppm	0.000001	0.30	53.531500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003290	19596.522357	0.002626	0.26
Y 377.433	1.007734	998290.103791	0.002687	0.27
Y_R 377.433	1.033560	73553.400000	0.001750	0.17
Y_R 488.368	1.046970	42653.500000	0.008047	0.77
Y_R2 488.368	1.033852	83595.672995	0.003007	0.29

Sample Name: CCVL-5425098

Date: 11/13/2018 11:43:53 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009703	ppm	0.000159	1.64	9.822620	Y 377.433
Al (167.019 nm)	0.114968	ppm	0.000878	0.76	64.347800	Y_R 377.433
Al H (396.152 nm)	0.104568 u	ppm	0.002992	2.86	333.748614	Y_R 377.433
As (188.980 nm)	0.014017	ppm	0.000823	5.87	18.429200	Y 242.219
B (249.678 nm)	0.102075	ppm	0.000866	0.85	2627.550000	Y 242.219
Ba (493.408 nm)	0.010235	ppm	0.000257	2.51	1760.940000	Y_R 488.368
Be (234.861 nm)	0.001056	ppm	0.000021	1.99	226.152000	Y_R 488.368
Bi (223.061 nm)	0.097944	ppm	0.000099	0.10	263.263000	Y 377.433
Ca (315.887 nm)	0.210057	ppm	0.000998	0.48	100.279198	Y_R 377.433
Cd (214.439 nm)	0.004995	ppm	0.000086	1.73	334.415000	Y 377.433
Co (228.615 nm)	0.010707	ppm	0.000296	2.76	154.586000	Y 242.219
Cr (205.560 nm)	0.010329	ppm	0.000137	1.32	165.710000	Y 377.433
Cu (324.754 nm)	0.015391	ppm	0.000148	0.96	458.681000	Y 377.433
Fe (238.204 nm)	0.120976	ppm	0.000785	0.65	453.679156	Y_R 377.433
Fe H (259.940 nm)	0.132124 u	ppm	0.001041	0.79	231.335000	Y_R 377.433
K (766.491 nm)	2.995670	ppm	0.062982	2.10	2477.390000	Y_R2 488.368
Li (670.783 nm)	0.025270	ppm	0.000768	3.04	-789.595000	Y_R2 488.368
Mg (279.078 nm)	0.220098	ppm	0.001563	0.71	1413.540000	Y 377.433
Mn (257.610 nm)	0.010678	ppm	0.000047	0.44	2616.340000	Y 377.433
Mo (202.032 nm)	0.018131	ppm	0.000351	1.94	164.835000	Y 377.433
Na (589.592 nm)	1.052860	ppm	0.003072	0.29	7066.180000	Y_R2 488.368
Na H (589.593 nm)	0.588992 u	ppm	0.019088	3.24	5074.595492	Y_R 488.368
Ni (231.604 nm)	0.040335	ppm	0.000452	1.12	284.345000	Y 377.433
P (213.618 nm)	2.803560 o	ppm	0.009171	0.33	6029.300000	Y 242.219
Pb (220.353 nm)	0.011233	ppm	0.002169	19.31	37.997600	Y 242.219
S (181.972 nm)	0.082293	ppm	0.000650	0.79	59.889386	Y 377.433
Sb (206.834 nm)	0.018508	ppm	0.001543	8.34	21.074400	Y 377.433
Se (196.026 nm)	0.015501	ppm	0.001683	10.86	32.699500	Y 242.219
Si (288.158 nm)	0.479575	ppm	0.002204	0.46	5127.660000	Y 377.433
Sn (189.925 nm)	0.094343	ppm	0.000015	0.02	206.426000	Y 377.433
Sr (421.552 nm)	0.010322	ppm	0.000291	2.82	2138.598717	Y_R 488.368
Th (288.505 nm)	0.017416	ppm	0.002872	16.49	118.427000	Y 377.433
Ti (336.122 nm)	0.010364	ppm	0.000083	0.81	1115.580000	Y 377.433
Tl (190.794 nm)	0.016927	ppm	0.001056	6.24	32.222800	Y 377.433
U (409.013 nm)	0.058769	ppm	0.002097	3.57	29.634100	Y 377.433
V (292.401 nm)	0.010195	ppm	0.000578	5.67	399.922000	Y 377.433
Zn (206.200 nm)	0.013775 Q	ppm	0.000069	0.50	118.309000 Q	Y 377.433
Zr (343.823 nm)	0.014917	ppm	0.000109	0.73	1952.820000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025251	20025.471669	0.000798	0.08
Y 377.433	1.030647	1020988.415874	0.001285	0.12
Y_R 377.433	1.049790	74708.300000	0.001060	0.10
Y_R 488.368	1.054230	42949.400000	0.017622	1.67
Y_R2 488.368	1.050490	84940.989764	0.004740	0.45

Sample Name: 280-116595-D-9-A

Date: 11/13/2018 11:47:16 AM Rack:Tube: 1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000899	ppm	0.000209	23.26	-395.423000	Y 377.433
Al (167.019 nm)	0.029337	ppm	0.001077	3.67	20.032400	Y_R 377.433
Al H (396.152 nm)	0.048842 u	ppm	0.008282	16.96	271.344537	Y_R 377.433
As (188.980 nm)	0.002560	ppm	0.000691	26.97	3.227360	Y 242.219
B (249.678 nm)	0.031282	ppm	0.000089	0.28	840.543000	Y 242.219
Ba (493.408 nm)	0.184915	ppm	0.001946	1.05	20334.100000	Y_R 488.368
Be (234.861 nm)	-0.000041 u	ppm	0.000010	23.88	10.759500	Y_R 488.368
Bi (223.061 nm)	-0.003607 u	ppm	0.000102	2.84	7.341120	Y 377.433
Ca (315.887 nm)	173.255137 o	ppm	0.290712	0.17	132116.620599	Y_R 377.433
Cd (214.439 nm)	0.000072	ppm	0.000051	71.83	27.644300	Y 377.433
Co (228.615 nm)	0.006276	ppm	0.000095	1.52	71.305500	Y 242.219
Cr (205.560 nm)	0.000131 u	ppm	0.000192	> 100.00	7.220110	Y 377.433
Cu (324.754 nm)	-0.000722 u	ppm	0.000003	0.37	-502.291000	Y 377.433
Fe (238.204 nm)	3.527935	ppm	0.001482	0.04	12472.232408	Y_R 377.433
Fe H (259.940 nm)	3.578260 u	ppm	0.005092	0.14	6525.260000	Y_R 377.433
K (766.491 nm)	1.622920	ppm	0.039222	2.42	973.150000	Y_R2 488.368
Li (670.783 nm)	0.012768	ppm	0.000192	1.50	-1177.730000	Y_R2 488.368
Mg (279.078 nm)	20.469800	ppm	0.026662	0.13	125485.000000	Y 377.433
Mn (257.610 nm)	4.558890 o	ppm	0.011516	0.25	1074500.000000	Y 377.433
Mo (202.032 nm)	0.000259	ppm	0.000161	62.12	4.914640	Y 377.433
Na (589.592 nm)	11.368100 o	ppm	0.017720	0.16	73130.400000	Y_R2 488.368
Na H (589.593 nm)	11.140621	ppm	0.081866	0.73	41303.032455	Y_R 488.368
Ni (231.604 nm)	0.007495	ppm	0.000709	9.46	51.685800	Y 377.433
P (213.618 nm)	0.559565	ppm	0.003103	0.55	1231.520000	Y 242.219
Pb (220.353 nm)	0.002004	ppm	0.000444	22.18	10.489900	Y 242.219
S (181.972 nm)	21.241981 o	ppm	0.021180	0.10	11184.655652	Y 377.433
Sb (206.834 nm)	-0.002844 u	ppm	0.001248	43.88	-39.571400	Y 377.433
Se (196.026 nm)	-0.003071 u	ppm	0.000477	15.53	16.461100	Y 242.219
Si (288.158 nm)	11.256600 o	ppm	0.040662	0.36	98564.600000	Y 377.433
Sn (189.925 nm)	-0.000877 u	ppm	0.000437	49.87	10.347100	Y 377.433
Sr (421.552 nm)	0.728679	ppm	0.007198	0.99	141906.947056	Y_R 488.368
Th (288.505 nm)	0.008066	ppm	0.001075	13.32	183.307000	Y 377.433
Ti (336.122 nm)	0.001114	ppm	0.000037	3.34	346.259000	Y 377.433
Tl (190.794 nm)	0.004626	ppm	0.000993	21.48	4.208940	Y 377.433
U (409.013 nm)	-0.000581 u	ppm	0.004617	> 100.00	-262.243000	Y 377.433
V (292.401 nm)	0.000493	ppm	0.000151	30.58	47.879700	Y 377.433
Zn (206.200 nm)	-0.004536 u	ppm	0.000123	2.72	16.071400	Y 377.433
Zr (343.823 nm)	-0.000054 u	ppm	0.000037	67.73	31.742900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014332	19812.184234	0.002792	0.28
Y 377.433	1.022684	1013100.538915	0.002829	0.28
Y_R 377.433	1.062520	75614.500000	0.003785	0.36
Y_R 488.368	1.067960	43508.700000	0.010806	1.01
Y_R2 488.368	1.052002	85063.260632	0.002005	0.19

Sample Name: 280-116659-D-1-A@5

Date: 11/13/2018 11:50:37 AM Rack:Tube: 1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000521	ppm	0.000173	33.17	-413.186000	Y 377.433
Al (167.019 nm)	4.605780 o	ppm	0.003488	0.08	2505.070000	Y_R 377.433
Al H (396.152 nm)	4.888144	ppm	0.021449	0.44	11729.000261	Y_R 377.433
As (188.980 nm)	0.003121	ppm	0.003408	> 100.00	4.002410	Y 242.219
B (249.678 nm)	0.046654	ppm	0.001352	2.90	1234.890000	Y 242.219
Ba (493.408 nm)	0.000640	ppm	0.000171	26.65	771.301000	Y_R 488.368
Be (234.861 nm)	0.006501	ppm	0.000006	0.10	1810.180000	Y_R 488.368
Bi (223.061 nm)	-0.002010 u	ppm	0.003319	> 100.00	10.797300	Y 377.433
Ca (315.887 nm)	133.257566 o	ppm	0.793108	0.60	101602.415345	Y_R 377.433
Cd (214.439 nm)	0.000209	ppm	0.000067	32.18	32.820300	Y 377.433
Co (228.615 nm)	0.055885	ppm	0.000741	1.33	999.837000	Y 242.219
Cr (205.560 nm)	0.000297	ppm	0.000005	1.67	10.706000	Y 377.433
Cu (324.754 nm)	0.001999	ppm	0.000044	2.19	-334.292000	Y 377.433
Fe (238.204 nm)	0.022875	ppm	0.003115	13.62	107.613402	Y_R 377.433
Fe H (259.940 nm)	0.031520 u	ppm	0.005927	18.80	47.594200	Y_R 377.433
K (766.491 nm)	4.481830	ppm	0.062328	1.39	4105.900000	Y_R2 488.368
Li (670.783 nm)	0.331910	ppm	0.000799	0.24	8731.070000	Y_R2 488.368
Mg (279.078 nm)	54.717400 o	ppm	0.715945	1.31	335336.000000	Y 377.433
Mn (257.610 nm)	0.324520	ppm	0.003881	1.20	76580.300000	Y 377.433
Mo (202.032 nm)	-0.000506 u	ppm	0.000080	15.87	-1.931120	Y 377.433
Na (589.592 nm)	132.233000 o	ppm	0.239227	0.18	842847.000000	Y_R2 488.368
Na H (589.593 nm)	131.929432	ppm	1.422898	1.08	454104.082261	Y_R 488.368
Ni (231.604 nm)	0.063125	ppm	0.001175	1.86	445.882000	Y 377.433
P (213.618 nm)	0.005375	ppm	0.001189	22.12	46.634900	Y 242.219
Pb (220.353 nm)	0.003061	ppm	0.000582	19.02	11.747200	Y 242.219
S (181.972 nm)	128.578725 bo	ppm	1.601926	1.25	67549.341383	Y 377.433
Sb (206.834 nm)	-0.000591 u	ppm	0.000698	> 100.00	-32.820000	Y 377.433
Se (196.026 nm)	-0.004356 u	ppm	0.000763	17.53	12.299800	Y 242.219
Si (288.158 nm)	9.230210	ppm	0.178764	1.94	80995.800000	Y 377.433
Sn (189.925 nm)	-0.001150 u	ppm	0.000466	40.53	9.783880	Y 377.433
Sr (421.552 nm)	0.311098	ppm	0.001179	0.38	60659.532848	Y_R 488.368
Th (288.505 nm)	0.001461 u	ppm	0.004553	> 100.00	83.460200	Y 377.433
Ti (336.122 nm)	-0.000168 u	ppm	0.000016	9.68	40.592700	Y 377.433
Tl (190.794 nm)	0.001519	ppm	0.001894	> 100.00	-2.557320	Y 377.433
U (409.013 nm)	-0.023105 u	ppm	0.006021	26.06	-358.006000	Y 377.433
V (292.401 nm)	-0.000113 u	ppm	0.000236	> 100.00	24.688500	Y 377.433
Zn (206.200 nm)	0.104774	ppm	0.001503	1.43	626.385000	Y 377.433
Zr (343.823 nm)	-0.000323 u	ppm	0.000014	4.36	-12.916600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053069	20568.815100	0.000619	0.06
Y 377.433	1.062579	1052621.022115	0.002528	0.24
Y_R 377.433	1.109210	78937.300000	0.004586	0.41
Y_R 488.368	1.110600	45245.600000	0.015765	1.42
Y_R2 488.368	1.102973	89184.705870	0.002932	0.27

Sample Name: 280-116659-D-3-A@5

Date: 11/13/2018 11:53:59 AM Rack:Tube: 1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000464	ppm	0.000161	34.72	-415.480000	Y 377.433
Al (167.019 nm)	4.692690 o	ppm	0.012530	0.27	2552.300000	Y_R 377.433
Al H (396.152 nm)	5.008113	ppm	0.030875	0.62	12014.644747	Y_R 377.433
As (188.980 nm)	0.000309 u	ppm	0.000614	> 100.00	0.278040	Y 242.219
B (249.678 nm)	0.047555	ppm	0.000603	1.27	1257.630000	Y 242.219
Ba (493.408 nm)	0.000654	ppm	0.000139	21.28	773.437000	Y_R 488.368
Be (234.861 nm)	0.006666	ppm	0.000070	1.05	1858.220000	Y_R 488.368
Bi (223.061 nm)	-0.003138 u	ppm	0.000238	7.57	7.948350	Y 377.433
Ca (315.887 nm)	136.226109 o	ppm	0.733839	0.54	103867.121120	Y_R 377.433
Cd (214.439 nm)	0.000168	ppm	0.000091	53.98	30.252100	Y 377.433
Co (228.615 nm)	0.057842	ppm	0.000531	0.92	1036.470000	Y 242.219
Cr (205.560 nm)	0.000203	ppm	0.000005	2.65	9.254620	Y 377.433
Cu (324.754 nm)	0.001825	ppm	0.000166	9.07	-345.009000	Y 377.433
Fe (238.204 nm)	0.023388	ppm	0.002151	9.20	109.421704	Y_R 377.433
Fe H (259.940 nm)	0.032115 u	ppm	0.000009	0.03	48.680600	Y_R 377.433
K (766.491 nm)	4.556660	ppm	0.052616	1.15	4187.900000	Y_R2 488.368
Li (670.783 nm)	0.338179	ppm	0.000222	0.07	8925.700000	Y_R2 488.368
Mg (279.078 nm)	56.385500 o	ppm	0.766694	1.36	345557.000000	Y 377.433
Mn (257.610 nm)	0.332933	ppm	0.004721	1.42	78562.900000	Y 377.433
Mo (202.032 nm)	-0.000145 u	ppm	0.000290	> 100.00	1.294620	Y 377.433
Na (589.592 nm)	134.995000 o	ppm	1.165530	0.86	860445.000000	Y_R2 488.368
Na H (589.593 nm)	135.252490	ppm	1.332464	0.99	465465.191106	Y_R 488.368
Ni (231.604 nm)	0.064537	ppm	0.000491	0.76	455.887000	Y 377.433
P (213.618 nm)	0.002290	ppm	0.001608	70.22	40.040400	Y 242.219
Pb (220.353 nm)	0.001895	ppm	0.001267	66.85	8.156900	Y 242.219
S (181.972 nm)	132.875487 bo	ppm	1.584961	1.19	69806.100494	Y 377.433
Sb (206.834 nm)	-0.002070 u	ppm	0.002150	> 100.00	-36.930500	Y 377.433
Se (196.026 nm)	-0.004568 u	ppm	0.000756	16.55	12.086600	Y 242.219
Si (288.158 nm)	9.436860	ppm	0.152075	1.61	82787.500000	Y 377.433
Sn (189.925 nm)	-0.001704 u	ppm	0.000498	29.21	8.642770	Y 377.433
Sr (421.552 nm)	0.318011	ppm	0.002690	0.85	62004.537436	Y_R 488.368
Th (288.505 nm)	0.004659	ppm	0.000853	18.30	91.459400	Y 377.433
Ti (336.122 nm)	-0.000068 u	ppm	0.000088	> 100.00	63.574600	Y 377.433
Tl (190.794 nm)	0.002323	ppm	0.000492	21.19	-0.719842	Y 377.433
U (409.013 nm)	-0.022143 u	ppm	0.002700	12.19	-354.272000	Y 377.433
V (292.401 nm)	0.000097 u	ppm	0.000225	> 100.00	32.883800	Y 377.433
Zn (206.200 nm)	0.108943	ppm	0.002167	1.99	649.658000	Y 377.433
Zr (343.823 nm)	-0.000196 u	ppm	0.000112	57.06	3.515520	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067202	20844.871365	0.000182	0.02
Y 377.433	1.077783	1067682.685020	0.000321	0.03
Y_R 377.433	1.126850	80192.800000	0.000408	0.04
Y_R 488.368	1.133550	46180.700000	0.003305	0.29
Y_R2 488.368	1.121183	90657.089951	0.004331	0.39

Sample Name: 280-116591-C-2-A

Date: 11/13/2018 11:57:21 AM Rack:Tube: 1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000058 u	ppm	0.000080	> 100.00	-439.338000	Y 377.433
Al (167.019 nm)	0.009401	ppm	0.001346	14.32	6.895580	Y_R 377.433
Al H (396.152 nm)	-0.011901 u	ppm	0.004701	39.50	56.130751	Y_R 377.433
As (188.980 nm)	-0.000186 u	ppm	0.001413	> 100.00	-0.376254	Y 242.219
B (249.678 nm)	0.002156	ppm	0.000135	6.28	112.670000	Y 242.219
Ba (493.408 nm)	-0.000527 u	ppm	0.000145	27.58	619.054000	Y_R 488.368
Be (234.861 nm)	0.000086	ppm	0.000017	19.70	-59.102000	Y_R 488.368
Bi (223.061 nm)	-0.000202 u	ppm	0.000847	> 100.00	15.362500	Y 377.433
Ca (315.887 nm)	0.083885	ppm	0.015883	18.93	4.019352	Y_R 377.433
Cd (214.439 nm)	-0.000170 u	ppm	0.000027	15.77	8.830840	Y 377.433
Co (228.615 nm)	0.000739	ppm	0.000083	11.29	-32.344900	Y 242.219
Cr (205.560 nm)	0.000177	ppm	0.000016	9.27	8.907350	Y 377.433
Cu (324.754 nm)	0.000439	ppm	0.000059	13.36	-344.493000	Y 377.433
Fe (238.204 nm)	0.004126	ppm	0.001106	26.82	41.472807	Y_R 377.433
Fe H (259.940 nm)	0.019832 u	ppm	0.003063	15.45	26.248000	Y_R 377.433
K (766.491 nm)	0.006017	ppm	0.007857	> 100.00	-798.625000	Y_R2 488.368
Li (670.783 nm)	0.006791	ppm	0.000721	10.62	-1363.310000	Y_R2 488.368
Mg (279.078 nm)	0.043525	ppm	0.001800	4.14	332.788000	Y 377.433
Mn (257.610 nm)	0.000656	ppm	0.000057	8.64	254.456000	Y 377.433
Mo (202.032 nm)	-0.000500 u	ppm	0.000069	13.71	-1.877950	Y 377.433
Na (589.592 nm)	0.121810	ppm	0.005604	4.60	1112.420000	Y_R2 488.368
Na H (589.593 nm)	-0.112880 u	ppm	0.004647	4.12	2665.231892	Y_R 488.368
Ni (231.604 nm)	0.000058	ppm	0.000070	> 100.00	-1.201230	Y 377.433
P (213.618 nm)	-0.000350 u	ppm	0.000009	2.46	34.394700	Y 242.219
Pb (220.353 nm)	0.001301	ppm	0.001330	> 100.00	8.100270	Y 242.219
S (181.972 nm)	0.103076	ppm	0.003734	3.62	70.780412	Y 377.433
Sb (206.834 nm)	0.000072 u	ppm	0.001063	> 100.00	-30.579200	Y 377.433
Se (196.026 nm)	-0.000871 u	ppm	0.001699	> 100.00	15.594000	Y 242.219
Si (288.158 nm)	0.006676	ppm	0.000533	7.99	1027.620000	Y 377.433
Sn (189.925 nm)	-0.002176 u	ppm	0.000728	33.46	7.670560	Y 377.433
Sr (421.552 nm)	0.000268	ppm	0.000134	50.00	182.427997	Y_R 488.368
Th (288.505 nm)	0.001350	ppm	0.000540	40.03	76.742300	Y 377.433
Ti (336.122 nm)	0.000668	ppm	0.000104	15.55	-256.480000	Y 377.433
Tl (190.794 nm)	0.000170 u	ppm	0.000630	> 100.00	-5.849310	Y 377.433
U (409.013 nm)	0.004225	ppm	0.000477	11.28	-211.686000	Y 377.433
V (292.401 nm)	0.000199	ppm	0.000096	48.12	35.105900	Y 377.433
Zn (206.200 nm)	-0.005222 u	ppm	0.000109	2.08	12.242800	Y 377.433
Zr (343.823 nm)	-0.000153 u	ppm	0.000059	38.67	8.914290	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045167	20414.479381	0.001472	0.14
Y 377.433	1.053948	1044070.857621	0.000196	0.02
Y_R 377.433	1.099860	78271.900000	0.000733	0.07
Y_R 488.368	1.103590	44960.200000	0.007198	0.65
Y_R2 488.368	1.096690	88676.669366	0.012534	1.14

Sample Name: Bottle 116595-D-9-A

Date: 11/13/2018 12:00:43 PM Rack:Tube: 1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001258	ppm	0.000030	2.39	-378.926000	Y 377.433
Al (167.019 nm)	0.006909	ppm	0.000369	5.34	7.789330	Y_R 377.433
Al H (396.152 nm)	0.021877 u	ppm	0.002063	9.43	206.410591	Y_R 377.433
As (188.980 nm)	0.005371	ppm	0.000092	1.71	6.949420	Y 242.219
B (249.678 nm)	0.028689	ppm	0.000276	0.96	775.432000	Y 242.219
Ba (493.408 nm)	0.181171	ppm	0.000901	0.50	19936.300000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000011	17.19	38.352100	Y_R 488.368
Bi (223.061 nm)	-0.001135 u	ppm	0.000288	25.33	13.570300	Y 377.433
Ca (315.887 nm)	170.857032 o	ppm	1.385101	0.81	130287.102716	Y_R 377.433
Cd (214.439 nm)	-0.000029 u	ppm	0.000003	11.95	21.250200	Y 377.433
Co (228.615 nm)	0.006402	ppm	0.000133	2.07	73.665000	Y 242.219
Cr (205.560 nm)	0.000032	ppm	0.000022	67.82	5.712060	Y 377.433
Cu (324.754 nm)	-0.001433 u	ppm	0.000091	6.36	-539.784000	Y 377.433
Fe (238.204 nm)	3.445539	ppm	0.025902	0.75	12181.569633	Y_R 377.433
Fe H (259.940 nm)	3.483380 u	ppm	0.027584	0.79	6351.980000	Y_R 377.433
K (766.491 nm)	1.759240	ppm	0.028903	1.64	1122.530000	Y_R2 488.368
Li (670.783 nm)	0.014586	ppm	0.000908	6.23	-1121.300000	Y_R2 488.368
Mg (279.078 nm)	20.525300	ppm	0.206481	1.01	125825.000000	Y 377.433
Mn (257.610 nm)	4.591280 o	ppm	0.040492	0.88	1082140.000000	Y 377.433
Mo (202.032 nm)	0.000122 u	ppm	0.000239	> 100.00	3.692180	Y 377.433
Na (589.592 nm)	11.379600 o	ppm	0.044156	0.39	73196.200000	Y_R2 488.368
Na H (589.593 nm)	11.250750	ppm	0.006030	0.05	41676.275211	Y_R 488.368
Ni (231.604 nm)	0.008068	ppm	0.000251	3.11	55.734800	Y 377.433
P (213.618 nm)	0.576774	ppm	0.003808	0.66	1268.320000	Y 242.219
Pb (220.353 nm)	0.001793	ppm	0.001410	78.68	9.857940	Y 242.219
S (181.972 nm)	28.304383 o	ppm	0.402927	1.42	14894.027476	Y 377.433
Sb (206.834 nm)	-0.004009 u	ppm	0.001434	35.77	-42.821100	Y 377.433
Se (196.026 nm)	0.005240	ppm	0.000625	11.92	25.189200	Y 242.219
Si (288.158 nm)	11.455500 o	ppm	0.085341	0.74	100290.000000	Y 377.433
Sn (189.925 nm)	0.001154	ppm	0.000927	80.32	14.528700	Y 377.433
Sr (421.552 nm)	0.716802	ppm	0.001954	0.27	139595.980873	Y_R 488.368
Th (288.505 nm)	0.003236	ppm	0.001420	43.89	171.693000	Y 377.433
Ti (336.122 nm)	0.001539	ppm	0.000045	2.93	398.892000	Y 377.433
Tl (190.794 nm)	0.000831 u	ppm	0.001280	> 100.00	-4.421110	Y 377.433
U (409.013 nm)	0.000599 u	ppm	0.004213	> 100.00	-256.604000	Y 377.433
V (292.401 nm)	0.000118	ppm	0.000165	> 100.00	33.822200	Y 377.433
Zn (206.200 nm)	-0.005304 u	ppm	0.000517	9.74	11.784100	Y 377.433
Zr (343.823 nm)	-0.000134 u	ppm	0.000035	26.14	21.131100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040130	20316.085360	0.001079	0.10
Y 377.433	1.057364	1047455.725904	0.000382	0.04
Y_R 377.433	1.108140	78861.000000	0.002510	0.23
Y_R 488.368	1.118680	45574.700000	0.001952	0.17
Y_R2 488.368	1.105512	89389.997659	0.002244	0.20

Sample Name: Bottle 116591-C-2-A

Date: 11/13/2018 12:04:05 PM Rack:Tube: 1:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000466	ppm	0.000144	30.95	-415.276000	Y 377.433
Al (167.019 nm)	0.001674	ppm	0.002157	> 100.00	2.692210	Y_R 377.433
Al H (396.152 nm)	-0.020715 u	ppm	0.000438	2.11	35.223487	Y_R 377.433
As (188.980 nm)	0.001809	ppm	0.000212	11.73	2.264600	Y 242.219
B (249.678 nm)	0.000444	ppm	0.000061	13.80	69.575900	Y 242.219
Ba (493.408 nm)	-0.000779 u	ppm	0.000168	21.62	592.257000	Y_R 488.368
Be (234.861 nm)	0.000208	ppm	0.000010	4.67	-23.724700	Y_R 488.368
Bi (223.061 nm)	0.000937	ppm	0.000941	> 100.00	18.237500	Y 377.433
Ca (315.887 nm)	0.097123	ppm	0.003979	4.10	14.118467	Y_R 377.433
Cd (214.439 nm)	-0.000053 u	ppm	0.000015	27.55	16.232700	Y 377.433
Co (228.615 nm)	0.000752	ppm	0.000275	36.54	-32.087700	Y 242.219
Cr (205.560 nm)	-0.000159 u	ppm	0.000141	88.83	3.715670	Y 377.433
Cu (324.754 nm)	0.000155 u	ppm	0.000239	> 100.00	-358.530000	Y 377.433
Fe (238.204 nm)	-0.000911 u	ppm	0.000730	80.14	23.702240	Y_R 377.433
Fe H (259.940 nm)	0.012895 u	ppm	0.002857	22.16	13.579100	Y_R 377.433
K (766.491 nm)	0.104151	ppm	0.020416	19.60	-691.092000	Y_R2 488.368
Li (670.783 nm)	0.008327	ppm	0.002462	29.56	-1315.620000	Y_R2 488.368
Mg (279.078 nm)	0.020439	ppm	0.004864	23.80	191.337000	Y 377.433
Mn (257.610 nm)	0.002258	ppm	0.000479	21.23	631.928000	Y 377.433
Mo (202.032 nm)	-0.000734 u	ppm	0.000014	1.95	-3.974300	Y 377.433
Na (589.592 nm)	0.073905	ppm	0.003386	4.58	807.659000	Y_R2 488.368
Na H (589.593 nm)	-0.336129 u	ppm	0.012026	3.58	1902.175724	Y_R 488.368
Ni (231.604 nm)	0.001108	ppm	0.000067	6.07	6.245750	Y 377.433
P (213.618 nm)	-0.002157 u	ppm	0.002819	> 100.00	30.532400	Y 242.219
Pb (220.353 nm)	0.001534	ppm	0.000361	23.53	8.804020	Y 242.219
S (181.972 nm)	0.220370	ppm	0.051156	23.21	132.389137	Y 377.433
Sb (206.834 nm)	-0.002294 u	ppm	0.001300	56.70	-37.201100	Y 377.433
Se (196.026 nm)	-0.004424 u	ppm	0.003364	76.04	11.882000	Y 242.219
Si (288.158 nm)	0.002010 u	ppm	0.004543	> 100.00	987.159000	Y 377.433
Sn (189.925 nm)	-0.002047 u	ppm	0.001116	54.53	7.937020	Y 377.433
Sr (421.552 nm)	0.000358	ppm	0.000095	26.69	199.839239	Y_R 488.368
Th (288.505 nm)	0.003497 u	ppm	0.005526	> 100.00	82.184000	Y 377.433
Ti (336.122 nm)	0.001551	ppm	0.000051	3.32	-131.677000	Y 377.433
Tl (190.794 nm)	0.003442	ppm	0.001475	42.85	1.596970	Y 377.433
U (409.013 nm)	0.003257	ppm	0.000318	9.78	-215.991000	Y 377.433
V (292.401 nm)	-0.000146 u	ppm	0.000093	63.56	22.977900	Y 377.433
Zn (206.200 nm)	-0.007228 u	ppm	0.000158	2.19	1.041010	Y 377.433
Zr (343.823 nm)	-0.000189 u	ppm	0.000044	23.32	4.234260	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041589	20344.591690	0.026068	2.50
Y 377.433	1.051128	1041277.362068	0.024221	2.30
Y_R 377.433	1.114860	79339.000000	0.009439	0.85
Y_R 488.368	1.116360	45480.500000	0.011952	1.07
Y_R2 488.368	1.119236	90499.649968	0.008354	0.75

Sample Name: CCVH-5417909

Date: 11/13/2018 12:07:27 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001560 u	ppm	0.000094	6.00	-757.123000	Y 377.433
Al (167.019 nm)	45.571000 o	ppm	0.017859	0.04	24803.100000	Y_R 377.433
Al H (396.152 nm)	50.829567	ppm	0.169031	0.33	120602.525828	Y_R 377.433
As (188.980 nm)	-0.000332 u	ppm	0.003606	> 100.00	-1.042360	Y 242.219
B (249.678 nm)	-0.000244 u	ppm	0.000567	> 100.00	-24.501900	Y 242.219
Ba (493.408 nm)	-0.000185 u	ppm	0.000090	48.60	698.453000	Y_R 488.368
Be (234.861 nm)	-0.000398 u	ppm	0.000117	29.46	1345.770000	Y_R 488.368
Bi (223.061 nm)	1.007360	ppm	0.006219	0.62	2568.450000	Y 377.433
Ca (315.887 nm)	0.017070	ppm	0.010362	60.70	-46.953828	Y_R 377.433
Cd (214.439 nm)	-0.000548 u	ppm	0.000043	7.77	36.365900	Y 377.433
Co (228.615 nm)	0.003173	ppm	0.000201	6.34	13.226600	Y 242.219
Cr (205.560 nm)	-0.000019 u	ppm	0.000018	93.48	-8.281880	Y 377.433
Cu (324.754 nm)	-0.006974 u	ppm	0.000468	6.71	-411.378000	Y 377.433
Fe (238.204 nm)	50.766256 o	ppm	0.071478	0.14	179112.444877	Y_R 377.433
Fe H (259.940 nm)	51.092300	ppm	0.012051	0.02	93303.600000	Y_R 377.433
K (766.491 nm)	0.028793 u	ppm	0.075953	> 100.00	-773.668000	Y_R2 488.368
Li (670.783 nm)	0.005051	ppm	0.000892	17.65	-1417.350000	Y_R2 488.368
Mg (279.078 nm)	-0.007565 u	ppm	0.002097	27.72	-363.069000	Y 377.433
Mn (257.610 nm)	0.002198	ppm	0.000036	1.63	617.821000	Y 377.433
Mo (202.032 nm)	-0.000555 u	ppm	0.000419	75.39	-2.373740	Y 377.433
Na (589.592 nm)	248.794000 o	ppm	1.906010	0.77	1585500.000000	Y_R2 488.368
Na H (589.593 nm)	251.764640	ppm	1.940299	0.77	863804.160877	Y_R 488.368
Ni (231.604 nm)	0.004282	ppm	0.001072	25.04	30.911500	Y 377.433
P (213.618 nm)	-0.007180 u	ppm	0.001108	15.44	19.793300	Y 242.219
Pb (220.353 nm)	-0.004283 u	ppm	0.000278	6.50	9.237540	Y 242.219
S (181.972 nm)	5.069023	ppm	0.042798	0.84	2678.990810	Y 377.433
Sb (206.834 nm)	-0.004698 u	ppm	0.000430	9.15	-91.341800	Y 377.433
Se (196.026 nm)	-0.002141 u	ppm	0.003067	> 100.00	4.689180	Y 242.219
Si (288.158 nm)	0.023130	ppm	0.000946	4.09	1170.270000	Y 377.433
Sn (189.925 nm)	-0.000464 u	ppm	0.000872	> 100.00	11.196000	Y 377.433
Sr (421.552 nm)	0.000650	ppm	0.000067	10.28	256.627875	Y_R 488.368
Th (288.505 nm)	5.123800	ppm	0.063352	1.24	13183.900000	Y 377.433
Ti (336.122 nm)	0.001735	ppm	0.000043	2.50	-105.611000	Y 377.433
Tl (190.794 nm)	-0.003806 u	ppm	0.000546	14.35	-16.277400	Y 377.433
U (409.013 nm)	10.279100	ppm	0.047516	0.46	45492.200000	Y 377.433
V (292.401 nm)	0.002651	ppm	0.000196	7.38	-41.256800	Y 377.433
Zn (206.200 nm)	-0.006577 u	ppm	0.000149	2.26	4.673350	Y 377.433
Zr (343.823 nm)	-0.004688 u	ppm	0.000046	0.99	-431.520000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010318	19733.786950	0.002465	0.24
Y 377.433	1.006652	997218.882879	0.001629	0.16
Y_R 377.433	1.065650	75837.400000	0.004573	0.43
Y_R 488.368	1.083710	44150.100000	0.007175	0.66
Y_R2 488.368	1.058078	85554.545969	0.007916	0.75

Sample Name: CCV-5416701

Date: 11/13/2018 12:10:49 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.502279	ppm	0.004712	0.94	22663.200000	Y 377.433
Al (167.019 nm)	0.515836	ppm	0.004260	0.83	283.822000	Y_R 377.433
Al H (396.152 nm)	0.525142 u	ppm	0.002297	0.44	1369.779046	Y_R 377.433
As (188.980 nm)	1.005600	ppm	0.015510	1.54	1331.460000	Y 242.219
B (249.678 nm)	0.506721	ppm	0.004800	0.95	12829.400000	Y 242.219
Ba (493.408 nm)	0.510915	ppm	0.000858	0.17	54894.300000	Y_R 488.368
Be (234.861 nm)	0.485626	ppm	0.005803	1.19	141430.000000	Y_R 488.368
Bi (223.061 nm)	-0.002204 u	ppm	0.003031	> 100.00	10.726100	Y 377.433
Ca (315.887 nm)	5.173688	ppm	0.007966	0.15	3887.309908	Y_R 377.433
Cd (214.439 nm)	0.501535	ppm	0.007318	1.46	31622.000000	Y 377.433
Co (228.615 nm)	0.506373	ppm	0.007285	1.44	9450.580000	Y 242.219
Cr (205.560 nm)	0.502854	ppm	0.003857	0.77	7770.970000	Y 377.433
Cu (324.754 nm)	0.505305	ppm	0.005605	1.11	26832.100000	Y 377.433
Fe (238.204 nm)	2.567785	ppm	0.004086	0.16	9085.162123	Y_R 377.433
Fe H (259.940 nm)	2.599730 u	ppm	0.017449	0.67	4738.100000	Y_R 377.433
K (766.491 nm)	50.569100	ppm	0.073978	0.15	54607.600000	Y_R2 488.368
Li (670.783 nm)	1.022890	ppm	0.004989	0.49	30184.900000	Y_R2 488.368
Mg (279.078 nm)	19.942600	ppm	0.214586	1.08	122256.000000	Y 377.433
Mn (257.610 nm)	0.508949	ppm	0.005841	1.15	120045.000000	Y 377.433
Mo (202.032 nm)	0.506711	ppm	0.007160	1.41	4536.690000	Y 377.433
Na (589.592 nm)	5.192940	ppm	0.038381	0.74	34421.700000	Y_R2 488.368
Na H (589.593 nm)	5.374111 u	ppm	0.050642	0.94	21873.597623	Y_R 488.368
Ni (231.604 nm)	0.510468	ppm	0.006402	1.25	3618.440000	Y 377.433
P (213.618 nm)	1.054520	ppm	0.011279	1.07	2289.770000	Y 242.219
Pb (220.353 nm)	1.013010	ppm	0.011629	1.15	3053.170000	Y 242.219
S (181.972 nm)	0.034324	ppm	0.000927	2.70	35.935022	Y 377.433
Sb (206.834 nm)	1.007910	ppm	0.013175	1.31	2798.850000	Y 377.433
Se (196.026 nm)	1.004580	ppm	0.013315	1.33	1066.830000	Y 242.219
Si (288.158 nm)	5.066040	ppm	0.080561	1.59	44892.400000	Y 377.433
Sn (189.925 nm)	1.005840	ppm	0.011094	1.10	2083.420000	Y 377.433
Sr (421.552 nm)	0.511280	ppm	0.000027	0.01	99608.241265	Y_R 488.368
Th (288.505 nm)	0.009388	ppm	0.000033	0.35	113.313000	Y 377.433
Ti (336.122 nm)	0.512573	ppm	0.005337	1.04	72178.500000	Y 377.433
Tl (190.794 nm)	1.010640	ppm	0.011089	1.10	2291.680000	Y 377.433
U (409.013 nm)	0.003083	ppm	0.001002	32.51	-254.123000	Y 377.433
V (292.401 nm)	0.505108	ppm	0.006474	1.28	18565.600000	Y 377.433
Zn (206.200 nm)	0.498272	ppm	0.005886	1.18	2823.410000	Y 377.433
Zr (343.823 nm)	0.510115	ppm	0.005869	1.15	65822.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025447	20029.285204	0.001181	0.12
Y 377.433	1.030098	1020444.458996	0.001171	0.11
Y_R 377.433	1.071630	76262.600000	0.001843	0.17
Y_R 488.368	1.078660	43944.500000	0.001623	0.15
Y_R2 488.368	1.058625	85598.799931	0.018542	1.75

Sample Name: CCB

Date: 11/13/2018 12:14:12 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000112 u	ppm	0.000283	> 100.00	-431.371000	Y 377.433
Al (167.019 nm)	0.005698	ppm	0.006483	> 100.00	4.883280	Y_R 377.433
Al H (396.152 nm)	-0.012364 u	ppm	0.005830	47.16	55.030740	Y_R 377.433
As (188.980 nm)	0.001730 u	ppm	0.005223	> 100.00	2.160740	Y 242.219
B (249.678 nm)	0.002389	ppm	0.000261	10.93	118.520000	Y 242.219
Ba (493.408 nm)	-0.000424 u	ppm	0.000095	22.29	629.860000	Y_R 488.368
Be (234.861 nm)	0.000194	ppm	0.000028	14.23	-27.814300	Y_R 488.368
Bi (223.061 nm)	0.002107 u	ppm	0.003286	> 100.00	21.192300	Y 377.433
Ca (315.887 nm)	0.006804	ppm	0.001171	17.21	-54.785327	Y_R 377.433
Cd (214.439 nm)	-0.000019 u	ppm	0.000011	56.54	18.396700	Y 377.433
Co (228.615 nm)	0.000576	ppm	0.000185	32.16	-35.396600	Y 242.219
Cr (205.560 nm)	0.000138 u	ppm	0.000268	> 100.00	8.307730	Y 377.433
Cu (324.754 nm)	-0.000166 u	ppm	0.000231	> 100.00	-376.341000	Y 377.433
Fe (238.204 nm)	0.004763	ppm	0.002451	51.46	43.719393	Y_R 377.433
Fe H (259.940 nm)	0.020925 u	ppm	0.000246	1.18	28.244200	Y_R 377.433
K (766.491 nm)	-0.000246 u	ppm	0.025457	> 100.00	-805.489000	Y_R2 488.368
Li (670.783 nm)	0.006636	ppm	0.001756	26.46	-1368.140000	Y_R2 488.368
Mg (279.078 nm)	0.010360	ppm	0.000867	8.37	129.651000	Y 377.433
Mn (257.610 nm)	0.000343	ppm	0.000014	3.95	180.569000	Y 377.433
Mo (202.032 nm)	-0.000148 u	ppm	0.000108	73.12	1.275040	Y 377.433
Na (589.592 nm)	0.073378	ppm	0.008499	11.58	804.705000	Y_R2 488.368
Na H (589.593 nm)	-0.145159 u	ppm	0.008365	5.76	2555.260690	Y_R 488.368
Ni (231.604 nm)	-0.000226 u	ppm	0.000324	> 100.00	-3.215490	Y 377.433
P (213.618 nm)	0.000434 u	ppm	0.001673	> 100.00	36.072700	Y 242.219
Pb (220.353 nm)	0.000230 u	ppm	0.001725	> 100.00	4.863060	Y 242.219
S (181.972 nm)	0.016205	ppm	0.001745	10.77	25.153155	Y 377.433
Sb (206.834 nm)	-0.000323 u	ppm	0.000067	20.74	-31.681100	Y 377.433
Se (196.026 nm)	0.000150 u	ppm	0.001656	> 100.00	16.660900	Y 242.219
Si (288.158 nm)	0.005721	ppm	0.000436	7.62	1019.340000	Y 377.433
Sn (189.925 nm)	-0.001808 u	ppm	0.000439	24.29	8.428820	Y 377.433
Sr (421.552 nm)	0.000370	ppm	0.000140	37.76	202.283657	Y_R 488.368
Th (288.505 nm)	0.003437	ppm	0.000244	7.10	81.949200	Y 377.433
Ti (336.122 nm)	0.000392	ppm	0.000004	0.94	-295.893000	Y 377.433
Tl (190.794 nm)	0.001387	ppm	0.001668	> 100.00	-3.080440	Y 377.433
U (409.013 nm)	0.002427	ppm	0.001159	47.75	-219.695000	Y 377.433
V (292.401 nm)	0.000196 u	ppm	0.000473	> 100.00	35.350200	Y 377.433
Zn (206.200 nm)	-0.007352 u	ppm	0.000053	0.72	0.350089	Y 377.433
Zr (343.823 nm)	0.000245	ppm	0.000019	7.85	60.272100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008100	19690.475282	0.000232	0.02
Y 377.433	1.015558	1006041.451457	0.000425	0.04
Y_R 377.433	1.048870	74643.000000	0.003148	0.30
Y_R 488.368	1.053770	42930.600000	0.012074	1.15
Y_R2 488.368	1.049069	84826.106033	0.006461	0.62

Sample Name: CCVL-5425098

Date: 11/13/2018 12:17:33 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009652	ppm	0.000174	1.80	7.634220	Y 377.433
Al (167.019 nm)	0.105340	ppm	0.002224	2.11	59.105700	Y_R 377.433
Al H (396.152 nm)	0.085862 u	ppm	0.001946	2.27	289.416792	Y_R 377.433
As (188.980 nm)	0.013927	ppm	0.000933	6.70	18.310400	Y 242.219
B (249.678 nm)	0.098797	ppm	0.001103	1.12	2545.080000	Y 242.219
Ba (493.408 nm)	0.009816	ppm	0.000269	2.74	1716.490000	Y_R 488.368
Be (234.861 nm)	0.001077	ppm	0.000020	1.87	231.819000	Y_R 488.368
Bi (223.061 nm)	0.098635	ppm	0.000955	0.97	265.006000	Y 377.433
Ca (315.887 nm)	0.220958	ppm	0.009436	4.27	108.595581	Y_R 377.433
Cd (214.439 nm)	0.005033	ppm	0.000078	1.55	336.756000	Y 377.433
Co (228.615 nm)	0.010781	ppm	0.000195	1.81	155.951000	Y 242.219
Cr (205.560 nm)	0.009986	ppm	0.000230	2.30	160.412000	Y 377.433
Cu (324.754 nm)	0.015085	ppm	0.000230	1.53	442.979000	Y 377.433
Fe (238.204 nm)	0.106092	ppm	0.002057	1.94	401.173871	Y_R 377.433
Fe H (259.940 nm)	0.115774 u	ppm	0.000112	0.10	201.475000	Y_R 377.433
K (766.491 nm)	3.148690	ppm	0.012661	0.40	2645.060000	Y_R2 488.368
Li (670.783 nm)	0.026546 Q	ppm	0.001128	4.25	-749.970000 Q	Y_R2 488.368
Mg (279.078 nm)	0.206050	ppm	0.001260	0.61	1327.590000	Y 377.433
Mn (257.610 nm)	0.010567	ppm	0.000078	0.74	2590.090000	Y 377.433
Mo (202.032 nm)	0.018527	ppm	0.000196	1.06	168.380000	Y 377.433
Na (589.592 nm)	1.094930	ppm	0.002079	0.19	7332.960000	Y_R2 488.368
Na H (589.593 nm)	0.822086 u	ppm	0.012906	1.57	5870.952460	Y_R 488.368
Ni (231.604 nm)	0.040911	ppm	0.000004	0.01	288.421000	Y 377.433
P (213.618 nm)	2.826680 o	ppm	0.040327	1.43	6078.720000	Y 242.219
Pb (220.353 nm)	0.009751	ppm	0.001126	11.55	33.524400	Y 242.219
S (181.972 nm)	0.105612	ppm	0.000259	0.25	72.136803	Y 377.433
Sb (206.834 nm)	0.020166	ppm	0.000778	3.86	25.715700	Y 377.433
Se (196.026 nm)	0.018213	ppm	0.003193	17.53	35.537900	Y 242.219
Si (288.158 nm)	0.482210	ppm	0.006454	1.34	5150.500000	Y 377.433
Sn (189.925 nm)	0.094698	ppm	0.001908	2.01	207.157000	Y 377.433
Sr (421.552 nm)	0.010150	ppm	0.000085	0.84	2104.997469	Y_R 488.368
Th (288.505 nm)	0.019782 Q	ppm	0.002965	14.99	124.296000 Q	Y 377.433
Ti (336.122 nm)	0.009958	ppm	0.000028	0.28	1058.040000	Y 377.433
Tl (190.794 nm)	0.014792	ppm	0.000876	5.92	27.367900	Y 377.433
U (409.013 nm)	0.060520	ppm	0.005169	8.54	37.412900	Y 377.433
V (292.401 nm)	0.010011	ppm	0.000216	2.16	393.600000	Y 377.433
Zn (206.200 nm)	0.013029 Q	ppm	0.000238	1.83	114.142000 Q	Y 377.433
Zr (343.823 nm)	0.014951	ppm	0.000035	0.23	1957.050000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027139	20062.336865	0.001838	0.18
Y 377.433	1.034410	1024716.245834	0.003093	0.30
Y_R 377.433	1.072540	76327.400000	0.001524	0.14
Y_R 488.368	1.079070	43961.200000	0.001203	0.11
Y_R2 488.368	1.065228	86132.668492	0.002795	0.26

Sample Name: MB 280-436572/1-A

Date: 11/13/2018 12:20:56 PM Rack:Tube: 1:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000183	ppm	0.000017	9.44	-428.229000	Y 377.433
Al (167.019 nm)	0.007159	ppm	0.003194	44.61	5.680400	Y_R 377.433
Al H (396.152 nm)	-0.018043 u	ppm	0.002692	14.92	41.554638	Y_R 377.433
As (188.980 nm)	0.003627	ppm	0.001097	30.23	4.672920	Y 242.219
B (249.678 nm)	0.003247	ppm	0.000122	3.74	140.123000	Y 242.219
Ba (493.408 nm)	-0.000313 u	ppm	0.000068	21.68	641.647000	Y_R 488.368
Be (234.861 nm)	0.000151	ppm	0.000023	15.05	-40.168500	Y_R 488.368
Bi (223.061 nm)	-0.002283 u	ppm	0.001256	55.03	10.107200	Y 377.433
Ca (315.887 nm)	0.037360	ppm	0.001919	5.14	-31.474545	Y_R 377.433
Cd (214.439 nm)	-0.000127 u	ppm	0.000029	22.58	11.558700	Y 377.433
Co (228.615 nm)	0.000680	ppm	0.000403	59.28	-33.440700	Y 242.219
Cr (205.560 nm)	0.000058	ppm	0.000026	44.89	7.072720	Y 377.433
Cu (324.754 nm)	0.000337	ppm	0.000029	8.52	-349.621000	Y 377.433
Fe (238.204 nm)	0.009215	ppm	0.000075	0.82	59.424935	Y_R 377.433
Fe H (259.940 nm)	0.022632 u	ppm	0.001724	7.62	31.362100	Y_R 377.433
K (766.491 nm)	0.217537	ppm	0.019041	8.75	-566.846000	Y_R2 488.368
Li (670.783 nm)	0.006551	ppm	0.001118	17.07	-1370.780000	Y_R2 488.368
Mg (279.078 nm)	0.021164	ppm	0.000264	1.25	195.793000	Y 377.433
Mn (257.610 nm)	0.000302	ppm	0.000001	0.23	171.077000	Y 377.433
Mo (202.032 nm)	-0.000390 u	ppm	0.000066	16.84	-0.895550	Y 377.433
Na (589.592 nm)	0.380579	ppm	0.000209	0.05	2761.930000	Y_R2 488.368
Na H (589.593 nm)	0.000376 u	ppm	0.032766	> 100.00	3052.797377	Y_R 488.368
Ni (231.604 nm)	0.000396	ppm	0.000277	69.89	1.198130	Y 377.433
P (213.618 nm)	-0.001299 u	ppm	0.001385	> 100.00	32.365700	Y 242.219
Pb (220.353 nm)	0.002236	ppm	0.002128	95.15	10.914400	Y 242.219
S (181.972 nm)	0.026127	ppm	0.003617	13.85	30.364475	Y 377.433
Sb (206.834 nm)	-0.000660 u	ppm	0.000470	71.28	-32.633900	Y 377.433
Se (196.026 nm)	-0.001613 u	ppm	0.000285	17.68	14.817000	Y 242.219
Si (288.158 nm)	0.004938	ppm	0.000227	4.59	1012.550000	Y 377.433
Sn (189.925 nm)	-0.001113 u	ppm	0.000324	29.07	9.859470	Y 377.433
Sr (421.552 nm)	0.000280	ppm	0.000134	48.03	184.706302	Y_R 488.368
Th (288.505 nm)	0.003507	ppm	0.002065	58.88	82.159200	Y 377.433
Ti (336.122 nm)	0.001316	ppm	0.000118	8.99	-165.057000	Y 377.433
Tl (190.794 nm)	0.002145	ppm	0.000610	28.43	-1.357220	Y 377.433
U (409.013 nm)	0.006789	ppm	0.001582	23.31	-200.286000	Y 377.433
V (292.401 nm)	0.000119	ppm	0.000005	4.06	32.389300	Y 377.433
Zn (206.200 nm)	-0.004375 u	ppm	0.000907	20.72	16.968000	Y 377.433
Zr (343.823 nm)	-0.000050 u	ppm	0.000021	42.56	22.302400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038406	20282.414501	0.003583	0.35
Y 377.433	1.045993	1036191.234521	0.001740	0.17
Y_R 377.433	1.100430	78312.200000	0.004594	0.42
Y_R 488.368	1.112260	45313.300000	0.011097	1.00
Y_R2 488.368	1.094599	88507.598791	0.005032	0.46

Sample Name: LCS 280-436572/2-A

Date: 11/13/2018 12:24:18 PM Rack:Tube: 1:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054838	ppm	0.001391	2.54	2059.840000	Y 377.433
Al (167.019 nm)	2.012820	ppm	0.000912	0.05	1096.450000	Y_R 377.433
Al H (396.152 nm)	2.104654	ppm	0.006186	0.29	5173.660700	Y_R 377.433
As (188.980 nm)	1.017840	ppm	0.025089	2.46	1347.680000	Y 242.219
B (249.678 nm)	1.061980	ppm	0.030840	2.90	26805.400000	Y 242.219
Ba (493.408 nm)	2.099600 o	ppm	0.000669	0.03	223449.000000	Y_R 488.368
Be (234.861 nm)	0.049759	ppm	0.001524	3.06	14384.300000	Y_R 488.368
Bi (223.061 nm)	1.982180	ppm	0.062774	3.17	5022.320000	Y 377.433
Ca (315.887 nm)	52.149137 o	ppm	0.043399	0.08	39724.730333	Y_R 377.433
Cd (214.439 nm)	0.099298	ppm	0.002672	2.69	6277.410000	Y 377.433
Co (228.615 nm)	0.492239	ppm	0.016113	3.27	9205.000000	Y 242.219
Cr (205.560 nm)	0.201101	ppm	0.007351	3.66	3111.170000	Y 377.433
Cu (324.754 nm)	0.249023	ppm	0.007169	2.88	13059.100000	Y 377.433
Fe (238.204 nm)	1.049692	ppm	0.002462	0.23	3729.863452	Y_R 377.433
Fe H (259.940 nm)	1.062800 u	ppm	0.003813	0.36	1931.100000	Y_R 377.433
K (766.491 nm)	52.344300	ppm	0.192845	0.37	56552.900000	Y_R2 488.368
Li (670.783 nm)	1.044150	ppm	0.002246	0.22	30845.000000	Y_R2 488.368
Mg (279.078 nm)	50.049500 o	ppm	1.398650	2.79	306676.000000	Y 377.433
Mn (257.610 nm)	0.505368	ppm	0.014407	2.85	119201.000000	Y 377.433
Mo (202.032 nm)	1.031450	ppm	0.030470	2.95	9232.140000	Y 377.433
Na (589.592 nm)	51.526400 o	ppm	0.009950	0.02	332726.000000	Y_R2 488.368
Na H (589.593 nm)	53.313777	ppm	0.011817	0.02	187165.251855	Y_R 488.368
Ni (231.604 nm)	0.487858	ppm	0.016760	3.44	3459.360000	Y 377.433
P (213.618 nm)	10.912300 o	ppm	0.385727	3.53	23366.200000	Y 242.219
Pb (220.353 nm)	0.509382	ppm	0.012770	2.51	1539.040000	Y 242.219
S (181.972 nm)	2.037582	ppm	0.054154	2.66	1088.072716	Y 377.433
Sb (206.834 nm)	0.520551	ppm	0.014171	2.72	1418.440000	Y 377.433
Se (196.026 nm)	2.136260	ppm	0.067206	3.15	2250.460000	Y 242.219
Si (288.158 nm)	10.248600	ppm	0.268771	2.62	89825.400000	Y 377.433
Sn (189.925 nm)	1.999640	ppm	0.069869	3.49	4129.870000	Y 377.433
Sr (421.552 nm)	1.050898	ppm	0.001503	0.14	204599.998842	Y_R 488.368
Th (288.505 nm)	1.031440	ppm	0.030146	2.92	2739.820000	Y 377.433
Ti (336.122 nm)	1.031390	ppm	0.028261	2.74	145722.000000	Y 377.433
Tl (190.794 nm)	2.000890	ppm	0.077065	3.85	4541.110000	Y 377.433
U (409.013 nm)	2.095300	ppm	0.063466	3.03	9032.620000	Y 377.433
V (292.401 nm)	0.514962	ppm	0.014133	2.74	18970.200000	Y 377.433
Zn (206.200 nm)	0.493941	ppm	0.012305	2.49	2799.230000	Y 377.433
Zr (343.823 nm)	0.512556	ppm	0.014343	2.80	66132.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019515	19913.434667	0.002901	0.28
Y 377.433	1.028115	1018480.130962	0.001822	0.18
Y_R 377.433	1.085710	77265.000000	0.001504	0.14
Y_R 488.368	1.091370	44462.500000	0.000268	0.02
Y_R2 488.368	1.089442	88090.590364	0.013239	1.22

Sample Name: 280-116478-E-1-A

Date: 11/13/2018 12:27:40 PM
Rack:Tube: 1:9

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000746	ppm	0.000296	39.65	-400.106000	Y 377.433
Al (167.019 nm)	0.184572	ppm	0.001206	0.65	102.485000	Y_R 377.433
Al H (396.152 nm)	0.177201 u	ppm	0.001404	0.79	505.647942	Y_R 377.433
As (188.980 nm)	0.225469	ppm	0.006858	3.04	298.429000	Y 242.219
B (249.678 nm)	6.788110 o	ppm	0.204400	3.01	170894.000000	Y 242.219
Ba (493.408 nm)	0.096290	ppm	0.002186	2.27	10890.800000	Y_R 488.368
Be (234.861 nm)	0.000157	ppm	0.000016	10.22	-21.369500	Y_R 488.368
Bi (223.061 nm)	-0.003406 u	ppm	0.003762	> 100.00	7.367110	Y 377.433
Ca (315.887 nm)	1.029536	ppm	0.011808	1.15	725.458148	Y_R 377.433
Cd (214.439 nm)	-0.000054 u	ppm	0.000061	> 100.00	16.771600	Y 377.433
Co (228.615 nm)	0.012968	ppm	0.000342	2.64	216.389000	Y 242.219
Cr (205.560 nm)	0.195742	ppm	0.005539	2.83	3030.870000	Y 377.433
Cu (324.754 nm)	0.002264	ppm	0.000252	11.12	-254.404000	Y 377.433
Fe (238.204 nm)	0.591549	ppm	0.005801	0.98	2113.693323	Y_R 377.433
Fe H (259.940 nm)	0.597241 u	ppm	0.004302	0.72	1080.810000	Y_R 377.433
K (766.491 nm)	499.373000 o	ppm	1.733940	0.35	546400.000000	Y_R2 488.368
Li (670.783 nm)	0.230645	ppm	0.000389	0.17	5586.960000	Y_R2 488.368
Mg (279.078 nm)	51.720700 o	ppm	1.762870	3.41	316974.000000	Y 377.433
Mn (257.610 nm)	0.029413	ppm	0.001094	3.72	7031.640000	Y 377.433
Mo (202.032 nm)	0.009794	ppm	0.000476	4.86	90.233300	Y 377.433
Na (589.592 nm)	976.368000 o	ppm	2.972640	0.30	6221330.000000	Y_R2 488.368
Na H (589.593 nm)	1028.978051	ppm	29.010874	2.82	3521091.845200	Y_R 488.368
Ni (231.604 nm)	0.048526	ppm	0.000859	1.77	342.410000	Y 377.433
P (213.618 nm)	2.862670 o	ppm	0.097411	3.40	6155.680000	Y 242.219
Pb (220.353 nm)	0.000686	ppm	0.000069	10.00	6.203970	Y 242.219
S (181.972 nm)	54.264058 o	ppm	1.482518	2.73	28517.188120	Y 377.433
Sb (206.834 nm)	0.019650	ppm	0.000448	2.28	29.584000	Y 377.433
Se (196.026 nm)	0.003475 u	ppm	0.005034	> 100.00	20.207900	Y 242.219
Si (288.158 nm)	9.347840	ppm	0.500453	5.35	82015.700000	Y 377.433
Sn (189.925 nm)	0.011851	ppm	0.001872	15.80	36.556800	Y 377.433
Sr (421.552 nm)	0.468127	ppm	0.010985	2.35	91212.235851	Y_R 488.368
Th (288.505 nm)	0.016263	ppm	0.002875	17.68	121.859000	Y 377.433
Ti (336.122 nm)	0.541346	ppm	0.015139	2.80	76236.100000	Y 377.433
Tl (190.794 nm)	0.001858	ppm	0.001298	69.87	-4.470540	Y 377.433
U (409.013 nm)	-0.014658 u	ppm	0.003939	26.88	-306.917000	Y 377.433
V (292.401 nm)	0.187180	ppm	0.005742	3.07	6908.150000	Y 377.433
Zn (206.200 nm)	0.006805	ppm	0.000372	5.46	79.389900	Y 377.433
Zr (343.823 nm)	0.154063	ppm	0.004141	2.69	19898.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.929289	18151.111220	0.018964	2.04
Y 377.433	0.934125	925370.799926	0.021123	2.26
Y_R 377.433	1.041010	74083.500000	0.006733	0.65
Y_R 488.368	1.045640	42599.100000	0.019337	1.85
Y_R2 488.368	1.025303	82904.408014	0.000172	0.02

Sample Name: 280-116478-E-1-Asd@5

Date: 11/13/2018 12:31:02 PM Rack:Tube: 1:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000156	ppm	0.000163	> 100.00	-429.123000	Y 377.433
Al (167.019 nm)	0.033718	ppm	0.002105	6.24	20.178300	Y_R 377.433
Al H (396.152 nm)	0.017881 u	ppm	0.002571	14.38	126.839488	Y_R 377.433
As (188.980 nm)	0.025051	ppm	0.018182	72.58	33.041100	Y 242.219
B (249.678 nm)	0.737777	ppm	0.502767	68.15	18625.900000	Y 242.219
Ba (493.408 nm)	0.016701	ppm	0.000051	0.30	2446.830000	Y_R 488.368
Be (234.861 nm)	0.000074	ppm	0.000017	22.38	-59.672600	Y_R 488.368
Bi (223.061 nm)	-0.004247 u	ppm	0.000041	0.96	5.162540	Y 377.433
Ca (315.887 nm)	0.194990	ppm	0.003089	1.58	88.781739	Y_R 377.433
Cd (214.439 nm)	-0.000151 u	ppm	0.000009	5.93	10.165500	Y 377.433
Co (228.615 nm)	0.002067	ppm	0.000482	23.32	-5.083470	Y 242.219
Cr (205.560 nm)	0.024593	ppm	0.012232	49.74	386.182000	Y 377.433
Cu (324.754 nm)	0.000658	ppm	0.000124	18.84	-335.825000	Y 377.433
Fe (238.204 nm)	0.106070	ppm	0.002104	1.98	401.095727	Y_R 377.433
Fe H (259.940 nm)	0.118549 u	ppm	0.002343	1.98	206.542000	Y_R 377.433
K (766.491 nm)	92.881200	ppm	0.339864	0.37	100972.000000	Y_R2 488.368
Li (670.783 nm)	0.045460	ppm	0.001429	3.14	-162.722000	Y_R2 488.368
Mg (279.078 nm)	5.865350	ppm	3.961440	67.54	36004.700000	Y 377.433
Mn (257.610 nm)	0.003802	ppm	0.001886	49.60	995.863000	Y 377.433
Mo (202.032 nm)	0.000182 u	ppm	0.000566	> 100.00	4.226190	Y 377.433
Na (589.592 nm)	203.522000 o	ppm	0.399201	0.20	1297080.000000	Y_R2 488.368
Na H (589.593 nm)	206.585825	ppm	0.543985	0.26	709359.436892	Y_R 488.368
Ni (231.604 nm)	0.005278	ppm	0.002869	54.36	35.811100	Y 377.433
P (213.618 nm)	0.337340	ppm	0.173191	51.34	756.393000	Y 242.219
Pb (220.353 nm)	-0.000573 u	ppm	0.001441	> 100.00	2.450980	Y 242.219
S (181.972 nm)	6.369043	ppm	3.318761	52.11	3361.788432	Y 377.433
Sb (206.834 nm)	0.003162	ppm	0.001326	41.95	-21.272800	Y 377.433
Se (196.026 nm)	-0.000567 u	ppm	0.000283	49.82	15.913600	Y 242.219
Si (288.158 nm)	0.935218	ppm	0.887966	94.95	9078.090000	Y 377.433
Sn (189.925 nm)	-0.000414 u	ppm	0.000059	14.30	11.298700	Y 377.433
Sr (421.552 nm)	0.084095	ppm	0.000481	0.57	16492.398625	Y_R 488.368
Th (288.505 nm)	0.001538 u	ppm	0.003182	> 100.00	78.132200	Y 377.433
Ti (336.122 nm)	0.067417	ppm	0.034500	51.17	9186.760000	Y 377.433
Tl (190.794 nm)	0.002036	ppm	0.000040	1.94	-1.902110	Y 377.433
U (409.013 nm)	0.001961 u	ppm	0.008925	> 100.00	-223.142000	Y 377.433
V (292.401 nm)	0.023175	ppm	0.012061	52.05	878.613000	Y 377.433
Zn (206.200 nm)	-0.005197 u	ppm	0.001016	19.56	12.379200	Y 377.433
Zr (343.823 nm)	0.019196	ppm	0.009530	49.64	2504.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032959	20176.012202	0.035333	3.42
Y 377.433	1.042711	1032939.362200	0.036015	3.45
Y_R 377.433	1.064040	75722.800000	0.011793	1.11
Y_R 488.368	1.064960	43386.500000	0.012192	1.14
Y_R2 488.368	1.078978	87244.499518	0.017805	1.65

Sample Name: 280-116478-E-1-B MS

Date: 11/13/2018 12:34:24 PM Rack:Tube: 1:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.028073	ppm	0.027424	97.69	842.621000	Y 377.433
Al (167.019 nm)	1.619160	ppm	0.057877	3.57	882.605000	Y_R 377.433
Al H (396.152 nm)	1.732760	ppm	0.067415	3.89	4247.979218	Y_R 377.433
As (188.980 nm)	0.645792	ppm	0.628220	97.28	855.014000	Y 242.219
B (249.678 nm)	3.603290 o	ppm	4.714310	> 100.00	90751.800000	Y 242.219
Ba (493.408 nm)	1.652770 o	ppm	0.064337	3.89	176039.000000	Y_R 488.368
Be (234.861 nm)	0.022065	ppm	0.020774	94.15	6351.430000	Y_R 488.368
Bi (223.061 nm)	1.022200	ppm	1.012690	99.07	2597.780000	Y 377.433
Ca (315.887 nm)	39.538980 o	ppm	1.389027	3.51	30104.394076	Y_R 377.433
Cd (214.439 nm)	0.045869	ppm	0.054089	> 100.00	2911.020000	Y 377.433
Co (228.615 nm)	0.263053	ppm	0.254682	96.82	4905.130000	Y 242.219
Cr (205.560 nm)	0.204617	ppm	0.198892	97.20	3166.670000	Y 377.433
Cu (324.754 nm)	0.137841	ppm	0.135087	98.00	7040.050000	Y 377.433
Fe (238.204 nm)	1.225795	ppm	0.042011	3.43	4351.091368	Y_R 377.433
Fe H (259.940 nm)	1.230450 u	ppm	0.046893	3.81	2237.290000	Y_R 377.433
K (766.491 nm)	328.257000 o	ppm	8.217910	2.50	358894.000000	Y_R2 488.368
Li (670.783 nm)	0.789816	ppm	0.017465	2.21	22948.300000	Y_R2 488.368
Mg (279.078 nm)	45.768000 o	ppm	59.625300	> 100.00	280470.000000	Y 377.433
Mn (257.610 nm)	0.245683	ppm	0.302277	> 100.00	58000.600000	Y 377.433
Mo (202.032 nm)	0.517776	ppm	0.505807	97.69	4635.710000	Y 377.433
Na (589.592 nm)	608.832000 o	ppm	15.460100	2.54	3882660.000000	Y_R2 488.368
Na H (589.593 nm)	843.030428	ppm	27.230269	3.23	2886722.470426	Y_R 488.368
Ni (231.604 nm)	0.273467	ppm	0.265636	97.14	1938.240000	Y 377.433
P (213.618 nm)	6.412090 o	ppm	7.828240	> 100.00	13744.500000	Y 242.219
Pb (220.353 nm)	0.256146	ppm	0.247209	96.51	775.757000	Y 242.219
S (181.972 nm)	28.373359 o	ppm	29.478526	> 100.00	14919.456580	Y 377.433
Sb (206.834 nm)	0.269337	ppm	0.262191	97.35	722.064000	Y 377.433
Se (196.026 nm)	0.801406	ppm	0.791341	98.74	854.565000	Y 242.219
Si (288.158 nm)	6.024210 o	ppm	8.378540	> 100.00	53199.800000	Y 377.433
Sn (189.925 nm)	0.997836	ppm	0.976515	97.86	2066.930000	Y 377.433
Sr (421.552 nm)	1.155872 o	ppm	0.044534	3.85	225024.525547	Y_R 488.368
Th (288.505 nm)	0.453353	ppm	0.544181	> 100.00	1251.870000	Y 377.433
Ti (336.122 nm)	0.753423 o	ppm	0.863047	> 100.00	106359.000000	Y 377.433
Tl (190.794 nm)	0.965400	ppm	0.948775	98.28	2186.640000	Y 377.433
U (409.013 nm)	1.051090	ppm	1.015610	96.62	4409.700000	Y 377.433
V (292.401 nm)	0.339154	ppm	0.387070	> 100.00	12491.800000	Y 377.433
Zn (206.200 nm)	0.258757	ppm	0.259859	> 100.00	1486.120000	Y 377.433
Zr (343.823 nm)	0.319081	ppm	0.363675	> 100.00	41182.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038462	20283.499207	0.030300	2.92
Y 377.433	1.057002	1047096.213399	0.043302	4.10
Y_R 377.433	1.250130	88966.100000	0.018339	1.47
Y_R 488.368	1.253600	51071.500000	0.019329	1.54
Y_R2 488.368	1.532128	123885.495801	0.025691	1.68

Sample Name: 280-116478-E-1-C MSD

Date: 11/13/2018 12:37:47 PM
Rack:Tube: 1:12

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.014672	ppm	0.003531	24.07	232.046000	Y 377.433
Al (167.019 nm)	-0.467588 u	ppm	3.537760	> 100.00	-250.924000	Y_R 377.433
Al H (396.152 nm)	12.241238	ppm	10.920330	89.21	29148.569728	Y_R 377.433
As (188.980 nm)	0.341907	ppm	0.080236	23.47	452.601000	Y 242.219
B (249.678 nm)	2.154790 o	ppm	0.543925	25.24	54290.800000	Y 242.219
Ba (493.408 nm)	1.314710 o	ppm	0.018331	1.39	140291.000000	Y_R 488.368
Be (234.861 nm)	4.401170 o	ppm	0.198464	4.51	1282080.000000	Y_R 488.368
Bi (223.061 nm)	0.552096	ppm	0.120824	21.88	1410.630000	Y 377.433
Ca (315.887 nm)	-23.284213 u	ppm	25.744613	> 100.00	-17823.520845	Y_R 377.433
Cd (214.439 nm)	0.029305	ppm	0.004690	16.00	1868.260000	Y 377.433
Co (228.615 nm)	0.147091	ppm	0.032933	22.39	2722.910000	Y 242.219
Cr (205.560 nm)	0.120439	ppm	0.020081	16.67	1828.060000	Y 377.433
Cu (324.754 nm)	0.077773	ppm	0.015962	20.52	3812.100000	Y 377.433
Fe (238.204 nm)	2.305429	ppm	2.429577	> 100.00	8159.659730	Y_R 377.433
Fe H (259.940 nm)	2.676760 u	ppm	2.035020	76.03	4878.800000	Y_R 377.433
K (766.491 nm)	-233.741000 u	ppm	98.048500	41.95	-256935.000000	Y_R2 488.368
Li (670.783 nm)	-25.786200 bu	ppm	4.470390	17.34	-802191.000000	Y_R2 488.368
Mg (279.078 nm)	29.403600	ppm	6.610080	22.48	180212.000000	Y 377.433
Mn (257.610 nm)	0.151306	ppm	0.032581	21.53	35758.500000	Y 377.433
Mo (202.032 nm)	0.291846	ppm	0.063310	21.69	2614.060000	Y 377.433
Na (589.592 nm)	446.267000 o	ppm	55.078500	12.34	2846710.000000	Y_R2 488.368
Na H (589.593 nm)	661.272775	ppm	44.492145	6.73	2265233.930793	Y_R 488.368
Ni (231.604 nm)	0.153784	ppm	0.033075	21.51	1089.360000	Y 377.433
P (213.618 nm)	3.986900 o	ppm	0.716917	17.98	8559.330000	Y 242.219
Pb (220.353 nm)	0.142963	ppm	0.031522	22.05	427.511000	Y 242.219
S (181.972 nm)	15.157546 o	ppm	3.451290	22.77	7978.036312	Y 377.433
Sb (206.834 nm)	0.150887	ppm	0.031449	20.84	389.148000	Y 377.433
Se (196.026 nm)	0.423945	ppm	0.103391	24.39	459.894000	Y 242.219
Si (288.158 nm)	4.051230	ppm	0.551995	13.63	36093.900000	Y 377.433
Sn (189.925 nm)	0.560427	ppm	0.123149	21.97	1166.200000	Y 377.433
Sr (421.552 nm)	0.213861	ppm	0.088818	41.53	41740.463471	Y_R 488.368
Th (288.505 nm)	0.302918	ppm	0.048448	15.99	748.669000	Y 377.433
Ti (336.122 nm)	0.436598	ppm	0.103718	23.76	61550.700000	Y 377.433
Tl (190.794 nm)	0.562927	ppm	0.116164	20.64	1272.410000	Y 377.433
U (409.013 nm)	0.581931	ppm	0.116222	19.97	2335.090000	Y 377.433
V (292.401 nm)	0.200616	ppm	0.043081	21.47	7404.680000	Y 377.433
Zn (206.200 nm)	0.151706	ppm	0.026381	17.39	888.422000	Y 377.433
Zr (343.823 nm)	0.186692	ppm	0.040567	21.73	24111.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.790583	34974.121446	0.101969	5.69
Y 377.433	1.759709	1743218.094012	0.078869	4.48
Y_R 377.433	0.003334	237.256000	0.002682	80.45
Y_R 488.368	0.005772	235.159000	0.000752	13.03
Y_R2 488.368	0.002278	184.192356	0.000376	16.52

Sample Name: 280-116478-E-1-B MS

Date: 11/13/2018 12:51:20 PM
Rack:Tube: 1:11

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.056636	ppm	0.000112	0.20	2145.220000	Y 377.433
Al (167.019 nm)	2.102660	ppm	0.020945	1.00	1145.630000	Y_R 377.433
Al H (396.152 nm)	2.272092	ppm	0.000672	0.03	5570.175563	Y_R 377.433
As (188.980 nm)	1.287680	ppm	0.000956	0.07	1704.990000	Y 242.219
B (249.678 nm)	8.301350 o	ppm	0.003068	0.04	208999.000000	Y 242.219
Ba (493.408 nm)	2.163490 o	ppm	0.010735	0.50	230227.000000	Y_R 488.368
Be (234.861 nm)	0.048485	ppm	0.000018	0.04	14030.500000	Y_R 488.368
Bi (223.061 nm)	2.057030	ppm	0.000437	0.02	5211.460000	Y 377.433
Ca (315.887 nm)	51.542846 o	ppm	0.083973	0.16	39262.189050	Y_R 377.433
Cd (214.439 nm)	0.097467	ppm	0.000186	0.19	6162.610000	Y 377.433
Co (228.615 nm)	0.528561	ppm	0.000745	0.14	9905.960000	Y 242.219
Cr (205.560 nm)	0.403289	ppm	0.000385	0.10	6235.510000	Y 377.433
Cu (324.754 nm)	0.276343	ppm	0.000318	0.12	14508.900000	Y 377.433
Fe (238.204 nm)	1.601627	ppm	0.001258	0.08	5676.895335	Y_R 377.433
Fe H (259.940 nm)	1.596970 u	ppm	0.004281	0.27	2906.700000	Y_R 377.433
K (766.491 nm)	564.469000 bo	ppm	1.022360	0.18	617731.000000	Y_R2 488.368
Li (670.783 nm)	1.341030	ppm	0.000994	0.07	40062.600000	Y_R2 488.368
Mg (279.078 nm)	101.614000 o	ppm	0.027675	0.03	622623.000000	Y 377.433
Mn (257.610 nm)	0.537098	ppm	0.000146	0.03	126679.000000	Y 377.433
Mo (202.032 nm)	1.029590	ppm	0.002426	0.24	9215.500000	Y 377.433
Na (589.592 nm)	1051.680000 o	ppm	7.972170	0.76	6705210.000000	Y_R2 488.368
Na H (589.593 nm)	1102.520129	ppm	4.373020	0.40	3774334.377158	Y_R 488.368
Ni (231.604 nm)	0.538277	ppm	0.001741	0.32	3816.700000	Y 377.433
P (213.618 nm)	14.157900 o	ppm	0.103570	0.73	30305.500000	Y 242.219
Pb (220.353 nm)	0.506242	ppm	0.000098	0.02	1529.610000	Y 242.219
S (181.972 nm)	57.152772 o	ppm	0.117119	0.20	30035.651447	Y 377.433
Sb (206.834 nm)	0.532906	ppm	0.003260	0.61	1458.590000	Y 377.433
Se (196.026 nm)	1.623030	ppm	0.002437	0.15	1713.980000	Y 242.219
Si (288.158 nm)	13.811800 o	ppm	0.071968	0.52	120718.000000	Y 377.433
Sn (189.925 nm)	1.959370	ppm	0.001846	0.09	4046.950000	Y 377.433
Sr (421.552 nm)	1.511367 o	ppm	0.005698	0.38	294192.049144	Y_R 488.368
Th (288.505 nm)	0.980288	ppm	0.001219	0.12	2619.110000	Y 377.433
Ti (336.122 nm)	1.603860 o	ppm	0.001468	0.09	226708.000000	Y 377.433
Tl (190.794 nm)	1.937700	ppm	0.000721	0.04	4394.830000	Y 377.433
U (409.013 nm)	2.112800	ppm	0.002174	0.10	9098.290000	Y 377.433
V (292.401 nm)	0.720661	ppm	0.000627	0.09	26528.800000	Y 377.433
Zn (206.200 nm)	0.511911	ppm	0.000803	0.16	2899.560000	Y 377.433
Zr (343.823 nm)	0.679078	ppm	0.000984	0.14	87609.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.871769	17027.609679	0.001675	0.19
Y 377.433	0.892607	884242.717400	0.001640	0.18
Y_R 377.433	0.979642	69716.500000	0.002164	0.22
Y_R 488.368	0.977657	39829.600000	0.000468	0.05
Y_R2 488.368	0.979229	79178.968943	0.003060	0.31

Sample Name: 280-116478-E-1-C MSD

Date: 11/13/2018 12:54:42 PM
Rack:Tube: 1:12

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.057864	ppm	0.000021	0.04	2200.880000	Y 377.433
Al (167.019 nm)	2.138080	ppm	0.004243	0.20	1164.910000	Y_R 377.433
Al H (396.152 nm)	2.311286	ppm	0.014760	0.64	5665.600600	Y_R 377.433
As (188.980 nm)	1.309760	ppm	0.001262	0.10	1734.240000	Y 242.219
B (249.678 nm)	8.297230 o	ppm	0.013094	0.16	208895.000000	Y 242.219
Ba (493.408 nm)	2.203700 o	ppm	0.010569	0.48	234494.000000	Y_R 488.368
Be (234.861 nm)	0.050455	ppm	0.000013	0.03	14603.700000	Y_R 488.368
Bi (223.061 nm)	2.094310	ppm	0.005029	0.24	5305.610000	Y 377.433
Ca (315.887 nm)	52.376631 o	ppm	0.235167	0.45	39898.286996	Y_R 377.433
Cd (214.439 nm)	0.101915	ppm	0.000202	0.20	6442.950000	Y 377.433
Co (228.615 nm)	0.537284	ppm	0.001261	0.23	10070.400000	Y 242.219
Cr (205.560 nm)	0.415006	ppm	0.002877	0.69	6416.500000	Y 377.433
Cu (324.754 nm)	0.279847	ppm	0.000268	0.10	14698.200000	Y 377.433
Fe (238.204 nm)	1.634703	ppm	0.008981	0.55	5793.575136	Y_R 377.433
Fe H (259.940 nm)	1.639800 u	ppm	0.012215	0.74	2984.910000	Y_R 377.433
K (766.491 nm)	566.507000 bo	ppm	2.650570	0.47	619964.000000	Y_R2 488.368
Li (670.783 nm)	1.363400	ppm	0.000858	0.06	40757.100000	Y_R2 488.368
Mg (279.078 nm)	105.658000 o	ppm	0.244162	0.23	647404.000000	Y 377.433
Mn (257.610 nm)	0.552614	ppm	0.002586	0.47	130336.000000	Y 377.433
Mo (202.032 nm)	1.058610	ppm	0.001364	0.13	9475.130000	Y 377.433
Na (589.592 nm)	1053.390000 o	ppm	16.003800	1.52	6716200.000000	Y_R2 488.368
Na H (589.593 nm)	1106.726406	ppm	10.343298	0.93	3788750.040411	Y_R 488.368
Ni (231.604 nm)	0.559388	ppm	0.000238	0.04	3966.450000	Y 377.433
P (213.618 nm)	14.474100 o	ppm	0.067194	0.46	30981.600000	Y 242.219
Pb (220.353 nm)	0.523970	ppm	0.000739	0.14	1582.950000	Y 242.219
S (181.972 nm)	57.929916 o	ppm	0.161320	0.28	30443.859816	Y 377.433
Sb (206.834 nm)	0.546568	ppm	0.001770	0.32	1496.920000	Y 377.433
Se (196.026 nm)	1.687630	ppm	0.002493	0.15	1781.540000	Y 242.219
Si (288.158 nm)	14.130000 o	ppm	0.045162	0.32	123477.000000	Y 377.433
Sn (189.925 nm)	2.030240	ppm	0.012506	0.62	4192.890000	Y 377.433
Sr (421.552 nm)	1.534883 o	ppm	0.013060	0.85	298767.348439	Y_R 488.368
Th (288.505 nm)	0.998578	ppm	0.003507	0.35	2666.690000	Y 377.433
Ti (336.122 nm)	1.635650 o	ppm	0.005114	0.31	231207.000000	Y 377.433
Tl (190.794 nm)	2.005830	ppm	0.004473	0.22	4549.660000	Y 377.433
U (409.013 nm)	2.145310	ppm	0.011310	0.53	9241.560000	Y 377.433
V (292.401 nm)	0.739580	ppm	0.001405	0.19	27224.600000	Y 377.433
Zn (206.200 nm)	0.538212	ppm	0.002333	0.43	3046.400000	Y 377.433
Zr (343.823 nm)	0.693177	ppm	0.001395	0.20	89427.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.895422	17489.614202	0.004617	0.52
Y 377.433	0.903033	894570.673654	0.006465	0.72
Y_R 377.433	0.979896	69734.500000	0.005471	0.56
Y_R 488.368	0.977407	39819.500000	0.006941	0.71
Y_R2 488.368	0.981530	79364.966772	0.019557	1.99

Sample Name: 280-116478-E-2-A

Date: 11/13/2018 12:58:05 PM Rack:Tube: 1:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002473	ppm	0.000886	35.81	-338.813000	Y 377.433
Al (167.019 nm)	1.289940	ppm	0.008089	0.63	1194.180000	Y_R 377.433
Al H (396.152 nm)	1.726197 b	ppm	0.010042	0.58	5793.397023	Y_R 377.433
As (188.980 nm)	0.293411	ppm	0.003338	1.14	381.421000	Y 242.219
B (249.678 nm)	45.262500 o	ppm	0.952032	2.10	1138040.000000	Y 242.219
Ba (493.408 nm)	0.766508 b	ppm	0.004447	0.58	83475.000000	Y_R 488.368
Be (234.861 nm)	-0.026309 u	ppm	0.000795	3.02	15073.500000	Y_R 488.368
Bi (223.061 nm)	-0.032723 u	ppm	0.001427	4.36	56.891300	Y 377.433
Ca (315.887 nm)	3950.018621 bo	ppm	4.958320	0.13	3013415.004312	Y_R 377.433
Cd (214.439 nm)	-0.001971 u	ppm	0.000263	13.33	654.784000	Y 377.433
Co (228.615 nm)	0.032627	ppm	0.000992	3.04	577.862000	Y 242.219
Cr (205.560 nm)	0.205715	ppm	0.005524	2.69	2975.610000	Y 377.433
Cu (324.754 nm)	0.010661 b	ppm	0.000192	1.80	-1475.520000	Y 377.433
Fe (238.204 nm)	753.696491 o	ppm	0.308920	0.04	2658803.532065	Y_R 377.433
Fe H (259.940 nm)	800.202000	ppm	0.802294	0.10	1461460.000000	Y_R 377.433
K (766.491 nm)	1891.910000 bo	ppm	10.225900	0.54	2072310.000000	Y_R2 488.368
Li (670.783 nm)	1.980440	ppm	0.001363	0.07	59915.100000	Y_R2 488.368
Mg (279.078 nm)	1106.250000 bo	ppm	27.127800	2.45	6777040.000000	Y 377.433
Mn (257.610 nm)	23.385600 bo	ppm	0.642595	2.75	5511440.000000	Y 377.433
Mo (202.032 nm)	0.000814	ppm	0.000592	72.64	9.883420	Y 377.433
Na (589.592 nm)	2545.270000 o	ppm	24.505400	0.96	16218700.000000	Y_R2 488.368
Na H (589.593 nm)	2398.280118	ppm	2.312677	0.10	8203173.974151	Y_R 488.368
Ni (231.604 nm)	0.037111	ppm	0.002938	7.92	293.517000	Y 377.433
P (213.618 nm)	16.184900 o	ppm	0.533585	3.30	34639.300000	Y 242.219
Pb (220.353 nm)	0.016581	ppm	0.002678	16.15	121.644000	Y 242.219
S (181.972 nm)	1009.926627 bo	ppm	18.581404	1.84	530506.282243	Y 377.433
Sb (206.834 nm)	-0.006644 u	ppm	0.003570	53.73	-224.726000	Y 377.433
Se (196.026 nm)	0.037760 b	ppm	0.002472	6.55	-77.651300	Y 242.219
Si (288.158 nm)	84.937100 o	ppm	2.534910	2.98	737376.000000	Y 377.433
Sn (189.925 nm)	0.065464	ppm	0.004125	6.30	146.958000	Y 377.433
Sr (421.552 nm)	37.470276 bo	ppm	0.240675	0.64	7290600.022092	Y_R 488.368
Th (288.505 nm)	-0.051636 bu	ppm	0.002977	5.77	370.361000	Y 377.433
Ti (336.122 nm)	0.401076 b	ppm	0.011311	2.82	68651.900000	Y 377.433
Tl (190.794 nm)	-0.041753 u	ppm	0.001517	3.63	-123.316000	Y 377.433
U (409.013 nm)	-0.046446 bu	ppm	0.004985	10.73	-496.011000	Y 377.433
V (292.401 nm)	0.110717	ppm	0.003230	2.92	4076.130000	Y 377.433
Zn (206.200 nm)	2.112910 o	ppm	0.048849	2.31	11838.400000	Y 377.433
Zr (343.823 nm)	0.027152	ppm	0.001389	5.11	5667.580000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.655538	12804.128052	0.003870	0.59
Y 377.433	0.772031	764795.687243	0.004199	0.54
Y_R 377.433	1.025760	72998.700000	0.004213	0.41
Y_R 488.368	1.026770	41830.300000	0.004226	0.41
Y_R2 488.368	1.018794	82378.119128	0.000722	0.07

Sample Name: 280-116490-A-1-A

Date: 11/13/2018 1:03:08 PM Rack:Tube: 1:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000826	ppm	0.000185	22.41	-399.248000	Y 377.433
Al (167.019 nm)	0.014827	ppm	0.003162	21.33	9.904740	Y_R 377.433
Al H (396.152 nm)	0.077279 u	ppm	0.006308	8.16	509.585650	Y_R 377.433
As (188.980 nm)	0.002819	ppm	0.001450	51.44	3.601860	Y 242.219
B (249.678 nm)	0.107254	ppm	0.006569	6.12	2757.510000	Y 242.219
Ba (493.408 nm)	0.006707	ppm	0.000132	1.97	1511.820000	Y_R 488.368
Be (234.861 nm)	0.000093	ppm	0.000001	1.12	-54.286900	Y_R 488.368
Bi (223.061 nm)	0.001594 u	ppm	0.002483	> 100.00	19.913600	Y 377.433
Ca (315.887 nm)	589.662177 o	ppm	4.409141	0.75	449794.160129	Y_R 377.433
Cd (214.439 nm)	-0.000077 u	ppm	0.000042	54.79	14.821200	Y 377.433
Co (228.615 nm)	-0.000247 u	ppm	0.000082	33.05	-50.798900	Y 242.219
Cr (205.560 nm)	0.000158 u	ppm	0.000352	> 100.00	8.585760	Y 377.433
Cu (324.754 nm)	-0.005458 u	ppm	0.000114	2.09	-1006.970000	Y 377.433
Fe (238.204 nm)	0.096635	ppm	0.000075	0.08	367.811147	Y_R 377.433
Fe H (259.940 nm)	0.103613 u	ppm	0.004756	4.59	179.263000	Y_R 377.433
K (766.491 nm)	17.340200	ppm	0.226354	1.31	18195.900000	Y_R2 488.368
Li (670.783 nm)	0.125022	ppm	0.000485	0.39	2307.540000	Y_R2 488.368
Mg (279.078 nm)	55.366600 o	ppm	1.582410	2.86	339314.000000	Y 377.433
Mn (257.610 nm)	0.005170	ppm	0.000090	1.74	1318.240000	Y 377.433
Mo (202.032 nm)	-0.000392 u	ppm	0.000052	13.22	-0.911605	Y 377.433
Na (589.592 nm)	337.939000 o	ppm	0.578335	0.17	2153490.000000	Y_R2 488.368
Na H (589.593 nm)	353.179816	ppm	3.014502	0.85	1210539.080701	Y_R 488.368
Ni (231.604 nm)	0.000033 u	ppm	0.000704	> 100.00	-1.367640	Y 377.433
P (213.618 nm)	0.013569	ppm	0.007981	58.82	64.155200	Y 242.219
Pb (220.353 nm)	0.001040	ppm	0.001274	> 100.00	7.280710	Y 242.219
S (181.972 nm)	512.325033 bo	ppm	11.782975	2.30	269099.116445	Y 377.433
Sb (206.834 nm)	-0.003393 u	ppm	0.001511	44.54	-40.329700	Y 377.433
Se (196.026 nm)	0.096300	ppm	0.004157	4.32	117.172000	Y 242.219
Si (288.158 nm)	11.131900 o	ppm	0.149060	1.34	97483.500000	Y 377.433
Sn (189.925 nm)	0.001228	ppm	0.000353	28.79	14.680400	Y 377.433
Sr (421.552 nm)	9.607586 o	ppm	0.026146	0.27	1869446.924667	Y_R 488.368
Th (288.505 nm)	0.000437	ppm	0.000578	> 100.00	74.812800	Y 377.433
Ti (336.122 nm)	0.000113 u	ppm	0.000765	> 100.00	1501.130000	Y 377.433
Tl (190.794 nm)	0.004865	ppm	0.000784	16.11	4.829920	Y 377.433
U (409.013 nm)	0.021717	ppm	0.003270	15.06	-243.993000	Y 377.433
V (292.401 nm)	0.000924	ppm	0.000556	60.13	63.245500	Y 377.433
Zn (206.200 nm)	-0.002227 u	ppm	0.000814	36.54	28.964900	Y 377.433
Zr (343.823 nm)	-0.000023 u	ppm	0.000238	> 100.00	26.019400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.915451	17880.828696	0.004916	0.54
Y 377.433	0.936944	928163.705610	0.005800	0.62
Y_R 377.433	0.992221	70611.600000	0.000054	0.01
Y_R 488.368	1.001990	40821.100000	0.000485	0.05
Y_R2 488.368	0.989491	80008.709491	0.007158	0.72

Sample Name: CCVH-5417909

Date: 11/13/2018 1:06:31 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001715 u	ppm	0.000048	2.81	-764.253000	Y 377.433
Al (167.019 nm)	46.504000 o	ppm	0.143610	0.31	25310.300000	Y_R 377.433
Al H (396.152 nm)	51.866828	ppm	0.214838	0.41	123061.911333	Y_R 377.433
As (188.980 nm)	0.001735	ppm	0.001431	82.48	1.692350	Y 242.219
B (249.678 nm)	0.042161	ppm	0.004249	10.08	1042.280000	Y 242.219
Ba (493.408 nm)	0.000301	ppm	0.000095	31.63	750.334000	Y_R 488.368
Be (234.861 nm)	-0.000338 u	ppm	0.000146	43.25	1371.910000	Y_R 488.368
Bi (223.061 nm)	0.996639	ppm	0.016723	1.68	2541.420000	Y 377.433
Ca (315.887 nm)	0.139282	ppm	0.000352	0.25	46.281982	Y_R 377.433
Cd (214.439 nm)	-0.000593 u	ppm	0.000039	6.50	33.804800	Y 377.433
Co (228.615 nm)	0.003112	ppm	0.000363	11.67	12.086200	Y 242.219
Cr (205.560 nm)	-0.000424 u	ppm	0.000123	29.01	-14.619500	Y 377.433
Cu (324.754 nm)	-0.007098 u	ppm	0.000174	2.45	-422.566000	Y 377.433
Fe (238.204 nm)	51.197658 o	ppm	0.095156	0.19	180634.279905	Y_R 377.433
Fe H (259.940 nm)	51.416900	ppm	0.171379	0.33	93896.500000	Y_R 377.433
K (766.491 nm)	0.361488	ppm	0.093152	25.77	-409.106000	Y_R2 488.368
Li (670.783 nm)	0.001091 u	ppm	0.002055	> 100.00	-1540.290000	Y_R2 488.368
Mg (279.078 nm)	0.077585	ppm	0.071906	92.68	158.123000	Y 377.433
Mn (257.610 nm)	0.002839	ppm	0.001177	41.45	768.852000	Y 377.433
Mo (202.032 nm)	-0.000596 u	ppm	0.000383	64.28	-2.737600	Y 377.433
Na (589.592 nm)	251.189000 o	ppm	0.133914	0.05	1600750.000000	Y_R2 488.368
Na H (589.593 nm)	263.308931	ppm	2.075944	0.79	903273.242660	Y_R 488.368
Ni (231.604 nm)	0.004049	ppm	0.000086	2.12	29.268400	Y 377.433
P (213.618 nm)	-0.007286 u	ppm	0.002153	29.55	19.565700	Y 242.219
Pb (220.353 nm)	-0.003713 u	ppm	0.000779	20.97	10.651700	Y 242.219
S (181.972 nm)	5.211900	ppm	0.024392	0.47	2754.033773	Y 377.433
Sb (206.834 nm)	-0.004779 u	ppm	0.001474	30.85	-91.717600	Y 377.433
Se (196.026 nm)	-0.002183 u	ppm	0.000417	19.10	4.604240	Y 242.219
Si (288.158 nm)	0.278654	ppm	0.043038	15.45	3385.670000	Y 377.433
Sn (189.925 nm)	-0.000435 u	ppm	0.000753	> 100.00	11.256600	Y 377.433
Sr (421.552 nm)	0.002031	ppm	0.000209	10.30	525.477145	Y_R 488.368
Th (288.505 nm)	5.116340	ppm	0.101191	1.98	13165.100000	Y 377.433
Ti (336.122 nm)	0.001674	ppm	0.000026	1.52	-113.947000	Y 377.433
Tl (190.794 nm)	-0.005360 u	ppm	0.001530	28.54	-19.820300	Y 377.433
U (409.013 nm)	10.327900	ppm	0.159460	1.54	45709.300000	Y 377.433
V (292.401 nm)	0.002672	ppm	0.000097	3.63	-42.705200	Y 377.433
Zn (206.200 nm)	-0.006275 u	ppm	0.000561	8.93	6.362170	Y 377.433
Zr (343.823 nm)	-0.004650 u	ppm	0.000085	1.83	-425.813000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975787	19059.322700	0.005712	0.59
Y 377.433	0.976716	967562.837410	0.007033	0.72
Y_R 377.433	1.023960	72870.500000	0.002805	0.27
Y_R 488.368	1.027490	41860.000000	0.000793	0.08
Y_R2 488.368	1.022029	82639.655768	0.000249	0.02

Sample Name: CCV-5416701

Date: 11/13/2018 1:09:54 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	8.126530 Qbo	ppm	0.646253	7.95	374148.000000 Q	Y 377.433
Al (167.019 nm)	6.253190 Qo	ppm	2.465890	39.43	3403.290000 Q	Y_R 377.433
Al H (396.152 nm)	23.310114	ppm	3.015787	12.94	55459.479846	Y_R 377.433
As (188.980 nm)	0.661904 Q	ppm	0.698041	> 100.00	876.320000 Q	Y 242.219
B (249.678 nm)	2.267910 Qo	ppm	0.654556	28.86	57130.900000 Q	Y 242.219
Ba (493.408 nm)	2.580830 Qo	ppm	1.110690	43.04	274521.000000 Q	Y_R 488.368
Be (234.861 nm)	-0.044622 Qu	ppm	0.023897	53.55	-12924.500000 Q	Y_R 488.368
Bi (223.061 nm)	16.974800 o	ppm	4.779250	28.16	42888.700000	Y 377.433
Ca (315.887 nm)	-55.072031 Qu	ppm	5.930961	10.77	-42073.163722 Q	Y_R 377.433
Cd (214.439 nm)	0.627459 Q	ppm	0.037850	6.03	39557.300000 Q	Y 377.433
Co (228.615 nm)	-0.761142 Qu	ppm	0.231336	30.39	-13939.700000 Q	Y 242.219
Cr (205.560 nm)	1.545070 Qo	ppm	0.517241	33.48	23880.400000 Q	Y 377.433
Cu (324.754 nm)	-20.157900 Qbu	ppm	0.915547	4.54	-1061400.000000 Q	Y 377.433
Fe (238.204 nm)	4.915701 Qo	ppm	1.021487	20.78	17367.785135 Q	Y_R 377.433
Fe H (259.940 nm)	10.988900	ppm	0.103432	0.94	20059.800000	Y_R 377.433
K (766.491 nm)	-203.833000 Qu	ppm	105.622000	51.82	-224162.000000 Q	Y_R2 488.368
Li (670.783 nm)	-17.294000 Qbu	ppm	6.000430	34.70	-538524.000000 Q	Y_R2 488.368
Mg (279.078 nm)	54.998500 Qo	ppm	1.537990	2.80	337293.000000 Q	Y 377.433
Mn (257.610 nm)	1.025580 Q	ppm	0.021940	2.14	241801.000000 Q	Y 377.433
Mo (202.032 nm)	0.076102 Qu	ppm	0.437131	> 100.00	683.566000 Q	Y 377.433
Na (589.592 nm)	115.639000 Qo	ppm	34.827900	30.12	743445.000000 Q	Y_R2 488.368
Na H (589.593 nm)	896.383353	ppm	443.801400	49.51	3070523.699330	Y_R 488.368
Ni (231.604 nm)	4.495950 Qo	ppm	0.531034	11.81	31886.100000 Q	Y 377.433
P (213.618 nm)	5.629520 Qo	ppm	0.345854	6.14	12071.300000 Q	Y 242.219
Pb (220.353 nm)	1.190470 Q	ppm	0.723792	60.80	3541.680000 Q	Y 242.219
S (181.972 nm)	194.987845 bo	ppm	27.080109	13.89	102430.519559	Y 377.433
Sb (206.834 nm)	-41.827900 Qu	ppm	4.649220	11.12	-116902.000000 Q	Y 377.433
Se (196.026 nm)	3.733730 Qo	ppm	0.841126	22.53	3923.890000 Q	Y 242.219
Si (288.158 nm)	766.071000 Qbo	ppm	44.136600	5.76	6642820.000000 Q	Y 377.433
Sn (189.925 nm)	10.352300 Qo	ppm	0.039467	0.38	21330.000000 Q	Y 377.433
Sr (421.552 nm)	0.183833 Q	ppm	0.098765	53.73	35898.054746 Q	Y_R 488.368
Th (288.505 nm)	-20.330100 bu	ppm	1.263360	6.21	-51237.300000	Y 377.433
Ti (336.122 nm)	-2.726760 Qu	ppm	0.046431	1.70	-385632.000000 Q	Y 377.433
Tl (190.794 nm)	4.954630 Qo	ppm	1.734520	35.01	11221.700000 Q	Y 377.433
U (409.013 nm)	-142.550000 u	ppm	0.690038	0.48	-634180.000000	Y 377.433
V (292.401 nm)	1.668790 Qbo	ppm	0.108705	6.51	72157.500000 Q	Y 377.433
Zn (206.200 nm)	-0.805034 Qu	ppm	0.280669	34.86	-4453.360000 Q	Y 377.433
Zr (343.823 nm)	1.787810 Qo	ppm	0.053422	2.99	230603.000000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.002382	46.532078	0.000359	15.08
Y 377.433	0.000316	313.491110	0.000020	6.37
Y_R 377.433	0.000626	44.578700	0.000013	2.01
Y_R 488.368	0.002369	96.529500	0.001071	45.21
Y_R2 488.368	0.002508	202.773703	0.000899	35.83

Sample Name: CCV-5416701

Date: 11/13/2018 1:23:44 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.500665	ppm	0.001092	0.22	22587.500000	Y 377.433
Al (167.019 nm)	0.500896	ppm	0.000364	0.07	275.666000	Y_R 377.433
Al H (396.152 nm)	0.506568 u	ppm	0.000917	0.18	1325.572314	Y_R 377.433
As (188.980 nm)	1.016030	ppm	0.000506	0.05	1345.280000	Y 242.219
B (249.678 nm)	0.525381	ppm	0.002914	0.55	13299.200000	Y 242.219
Ba (493.408 nm)	0.502155	ppm	0.001830	0.36	53965.200000	Y_R 488.368
Be (234.861 nm)	0.502110	ppm	0.001036	0.21	146230.000000	Y_R 488.368
Bi (223.061 nm)	-0.003554 u	ppm	0.000533	15.01	7.307950	Y 377.433
Ca (315.887 nm)	5.076940	ppm	0.007323	0.14	3813.502353	Y_R 377.433
Cd (214.439 nm)	0.505156	ppm	0.000065	0.01	31850.100000	Y 377.433
Co (228.615 nm)	0.505300	ppm	0.000688	0.14	9430.160000	Y 242.219
Cr (205.560 nm)	0.502962	ppm	0.000381	0.08	7772.530000	Y 377.433
Cu (324.754 nm)	0.502236	ppm	0.000379	0.08	26666.500000	Y 377.433
Fe (238.204 nm)	2.517932	ppm	0.012186	0.48	8909.298328	Y_R 377.433
Fe H (259.940 nm)	2.534950 u	ppm	0.008568	0.34	4619.780000	Y_R 377.433
K (766.491 nm)	50.049900	ppm	0.100444	0.20	54038.700000	Y_R2 488.368
Li (670.783 nm)	1.012640	ppm	0.002557	0.25	29866.500000	Y_R2 488.368
Mg (279.078 nm)	20.045200	ppm	0.048070	0.24	122885.000000	Y 377.433
Mn (257.610 nm)	0.505713	ppm	0.000069	0.01	119282.000000	Y 377.433
Mo (202.032 nm)	0.505785	ppm	0.000994	0.20	4528.400000	Y 377.433
Na (589.592 nm)	5.207760	ppm	0.009452	0.18	34499.900000	Y_R2 488.368
Na H (589.593 nm)	7.364780 u	ppm	0.136126	1.85	28672.158800	Y_R 488.368
Ni (231.604 nm)	0.506863	ppm	0.001077	0.21	3592.890000	Y 377.433
P (213.618 nm)	1.073780	ppm	0.004962	0.46	2330.940000	Y 242.219
Pb (220.353 nm)	1.011750	ppm	0.004226	0.42	3049.390000	Y 242.219
S (181.972 nm)	0.042625	ppm	0.007470	17.53	40.286809	Y 377.433
Sb (206.834 nm)	1.008820	ppm	0.000395	0.04	2801.470000	Y 377.433
Se (196.026 nm)	1.019400	ppm	0.002596	0.25	1082.340000	Y 242.219
Si (288.158 nm)	5.202420	ppm	0.001146	0.02	46074.800000	Y 377.433
Sn (189.925 nm)	1.006110	ppm	0.005536	0.55	2083.960000	Y 377.433
Sr (421.552 nm)	0.501695	ppm	0.002378	0.47	97743.313239	Y_R 488.368
Th (288.505 nm)	0.000781	ppm	0.000014	1.76	91.210300	Y 377.433
Ti (336.122 nm)	0.505205	ppm	0.000181	0.04	71135.900000	Y 377.433
Tl (190.794 nm)	1.010580	ppm	0.002940	0.29	2291.600000	Y 377.433
U (409.013 nm)	-0.002371 u	ppm	0.009803	> 100.00	-277.920000	Y 377.433
V (292.401 nm)	0.505363	ppm	0.000361	0.07	18574.600000	Y 377.433
Zn (206.200 nm)	0.505673	ppm	0.001031	0.20	2864.730000	Y 377.433
Zr (343.823 nm)	0.506621	ppm	0.000399	0.08	65371.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971297	18971.621680	0.003373	0.35
Y 377.433	0.973354	964232.284410	0.002844	0.29
Y_R 377.433	0.990126	70462.600000	0.002611	0.26
Y_R 488.368	0.991340	40387.100000	0.004505	0.45
Y_R2 488.368	0.988820	79954.443548	0.000230	0.02

Sample Name: CCV-5416701

Date: 11/13/2018 1:27:05 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498158	ppm	0.000423	0.08	22473.200000	Y 377.433
Al (167.019 nm)	0.514679	ppm	0.000538	0.10	283.154000	Y_R 377.433
Al H (396.152 nm)	0.506669 u	ppm	0.002598	0.51	1325.377629	Y_R 377.433
As (188.980 nm)	1.001590	ppm	0.006839	0.68	1326.150000	Y 242.219
B (249.678 nm)	0.513111	ppm	0.001662	0.32	12990.200000	Y 242.219
Ba (493.408 nm)	0.500802	ppm	0.000579	0.12	53821.400000	Y_R 488.368
Be (234.861 nm)	0.490449	ppm	0.002021	0.41	142834.000000	Y_R 488.368
Bi (223.061 nm)	-0.001029 u	ppm	0.000573	55.66	13.684600	Y 377.433
Ca (315.887 nm)	5.070801	ppm	0.022374	0.44	3808.812755	Y_R 377.433
Cd (214.439 nm)	0.494272	ppm	0.000649	0.13	31164.400000	Y 377.433
Co (228.615 nm)	0.504915	ppm	0.000824	0.16	9422.880000	Y 242.219
Cr (205.560 nm)	0.498213	ppm	0.000044	0.01	7699.250000	Y 377.433
Cu (324.754 nm)	0.501193	ppm	0.001413	0.28	26609.300000	Y 377.433
Fe (238.204 nm)	2.512945	ppm	0.015815	0.63	8891.704909	Y_R 377.433
Fe H (259.940 nm)	2.533320 u	ppm	0.014153	0.56	4616.820000	Y_R 377.433
K (766.491 nm)	50.217000	ppm	0.068587	0.14	54221.700000	Y_R2 488.368
Li (670.783 nm)	1.003130	ppm	0.002185	0.22	29571.400000	Y_R2 488.368
Mg (279.078 nm)	19.568500	ppm	0.001040	0.01	119964.000000	Y 377.433
Mn (257.610 nm)	0.499826	ppm	0.000994	0.20	117895.000000	Y 377.433
Mo (202.032 nm)	0.500151	ppm	0.000997	0.20	4477.990000	Y 377.433
Na (589.592 nm)	5.146740	ppm	0.026766	0.52	34108.400000	Y_R2 488.368
Na H (589.593 nm)	6.499964 u	ppm	0.057477	0.88	25714.231659	Y_R 488.368
Ni (231.604 nm)	0.499798	ppm	0.001594	0.32	3542.790000	Y 377.433
P (213.618 nm)	0.994994	ppm	0.002955	0.30	2162.490000	Y 242.219
Pb (220.353 nm)	1.004620	ppm	0.000505	0.05	3027.970000	Y 242.219
S (181.972 nm)	0.029195	ppm	0.004365	14.95	33.216835	Y 377.433
Sb (206.834 nm)	1.002530	ppm	0.003091	0.31	2783.730000	Y 377.433
Se (196.026 nm)	1.005270	ppm	0.001646	0.16	1067.560000	Y 242.219
Si (288.158 nm)	5.034580	ppm	0.025990	0.52	44619.600000	Y 377.433
Sn (189.925 nm)	0.990890	ppm	0.003597	0.36	2052.630000	Y 377.433
Sr (421.552 nm)	0.500472	ppm	0.000114	0.02	97505.479746	Y_R 488.368
Th (288.505 nm)	-0.000039 u	ppm	0.004626	> 100.00	89.078600	Y 377.433
Ti (336.122 nm)	0.502818	ppm	0.000972	0.19	70798.100000	Y 377.433
Tl (190.794 nm)	0.997536	ppm	0.000120	0.01	2261.930000	Y 377.433
U (409.013 nm)	-0.001479 u	ppm	0.005918	> 100.00	-273.873000	Y 377.433
V (292.401 nm)	0.499066	ppm	0.000526	0.11	18342.700000	Y 377.433
Zn (206.200 nm)	0.492343	ppm	0.001262	0.26	2790.300000	Y 377.433
Zr (343.823 nm)	0.504980	ppm	0.000655	0.13	65159.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959901	18749.037029	0.000740	0.08
Y 377.433	0.969884	960795.446658	0.001302	0.13
Y_R 377.433	0.992187	70609.200000	0.002027	0.20
Y_R 488.368	0.996613	40601.900000	0.001880	0.19
Y_R2 488.368	0.985621	79695.784423	0.003007	0.31

Sample Name: CCB

Date: 11/13/2018 1:30:27 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000128 u	ppm	0.000405	> 100.00	-442.527000	Y 377.433
Al (167.019 nm)	-0.001574 u	ppm	0.003766	> 100.00	0.925756	Y_R 377.433
Al H (396.152 nm)	-0.014366 u	ppm	0.000432	3.01	50.262503	Y_R 377.433
As (188.980 nm)	-0.000643 u	ppm	0.000161	25.10	-0.982230	Y 242.219
B (249.678 nm)	0.008175	ppm	0.000934	11.43	264.143000	Y 242.219
Ba (493.408 nm)	0.000266	ppm	0.000205	77.17	703.107000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000015	> 100.00	-86.163000	Y_R 488.368
Bi (223.061 nm)	-0.002376 u	ppm	0.001039	43.73	9.869200	Y 377.433
Ca (315.887 nm)	0.008854	ppm	0.001694	19.14	-53.221787	Y_R 377.433
Cd (214.439 nm)	-0.000194 u	ppm	0.000072	36.99	7.323870	Y 377.433
Co (228.615 nm)	0.000228	ppm	0.000200	88.03	-41.918000	Y 242.219
Cr (205.560 nm)	-0.000021 u	ppm	0.000012	59.68	5.850980	Y 377.433
Cu (324.754 nm)	-0.000434 u	ppm	0.000166	38.15	-390.608000	Y 377.433
Fe (238.204 nm)	-0.002632 u	ppm	0.000048	1.83	17.634241	Y_R 377.433
Fe H (259.940 nm)	0.013959 u	ppm	0.004619	33.09	15.521900	Y_R 377.433
K (766.491 nm)	0.039470 u	ppm	0.107920	> 100.00	-761.968000	Y_R2 488.368
Li (670.783 nm)	-0.002737 u	ppm	0.003362	> 100.00	-1659.130000	Y_R2 488.368
Mg (279.078 nm)	0.002579	ppm	0.001311	50.82	81.855100	Y 377.433
Mn (257.610 nm)	-0.000052 u	ppm	0.000035	66.59	87.551700	Y 377.433
Mo (202.032 nm)	-0.000400 u	ppm	0.000458	> 100.00	-0.980142	Y 377.433
Na (589.592 nm)	0.099440	ppm	0.014961	15.04	972.194000	Y_R2 488.368
Na H (589.593 nm)	0.489469 u	ppm	0.035713	7.30	4725.626348	Y_R 488.368
Ni (231.604 nm)	0.000127 u	ppm	0.000430	> 100.00	-0.712168	Y 377.433
P (213.618 nm)	-0.000804 u	ppm	0.001840	> 100.00	33.424300	Y 242.219
Pb (220.353 nm)	-0.000401 u	ppm	0.001596	> 100.00	2.979000	Y 242.219
S (181.972 nm)	0.027883	ppm	0.004588	16.45	31.285747	Y 377.433
Sb (206.834 nm)	-0.000583 u	ppm	0.000730	> 100.00	-32.424100	Y 377.433
Se (196.026 nm)	-0.002624 u	ppm	0.000564	21.51	13.761800	Y 242.219
Si (288.158 nm)	0.012173	ppm	0.001619	13.30	1075.280000	Y 377.433
Sn (189.925 nm)	0.000076 u	ppm	0.000621	> 100.00	12.308300	Y 377.433
Sr (421.552 nm)	0.000139	ppm	0.000068	48.94	157.188718	Y_R 488.368
Th (288.505 nm)	0.001803	ppm	0.000830	46.05	77.905300	Y 377.433
Ti (336.122 nm)	-0.000022 u	ppm	0.000007	30.73	-354.363000	Y 377.433
Tl (190.794 nm)	-0.000647 u	ppm	0.000908	> 100.00	-7.707070	Y 377.433
U (409.013 nm)	-0.004503 u	ppm	0.001545	34.31	-250.480000	Y 377.433
V (292.401 nm)	-0.000029 u	ppm	0.000005	17.62	27.045500	Y 377.433
Zn (206.200 nm)	-0.007256 u	ppm	0.000216	2.98	0.883393	Y 377.433
Zr (343.823 nm)	0.000137	ppm	0.000067	48.79	46.285000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957631	18704.701833	0.003385	0.35
Y 377.433	0.969228	960145.391884	0.003867	0.40
Y_R 377.433	0.961180	68402.600000	0.001349	0.14
Y_R 488.368	0.952006	38784.600000	0.002750	0.29
Y_R2 488.368	0.975356	78865.759429	0.003708	0.38

Sample Name: CCVL-5425098

Date: 11/13/2018 1:33:50 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009361	ppm	0.000370	3.95	-5.805670	Y 377.433
Al (167.019 nm)	0.094871	ppm	0.005151	5.43	53.408300	Y_R 377.433
Al H (396.152 nm)	0.084530 u	ppm	0.003120	3.69	286.213782	Y_R 377.433
As (188.980 nm)	0.014762	ppm	0.002871	19.45	19.416800	Y 242.219
B (249.678 nm)	0.099953	ppm	0.000154	0.15	2574.170000	Y 242.219
Ba (493.408 nm)	0.010291	ppm	0.000237	2.30	1766.830000	Y_R 488.368
Be (234.861 nm)	0.000967	ppm	0.000017	1.73	199.301000	Y_R 488.368
Bi (223.061 nm)	0.095986	ppm	0.004005	4.17	258.313000	Y 377.433
Ca (315.887 nm)	0.203799	ppm	0.002748	1.35	95.504572	Y_R 377.433
Cd (214.439 nm)	0.004671	ppm	0.000085	1.82	313.958000	Y 377.433
Co (228.615 nm)	0.010211	ppm	0.000126	1.23	145.282000	Y 242.219
Cr (205.560 nm)	0.009956	ppm	0.000104	1.05	159.955000	Y 377.433
Cu (324.754 nm)	0.014686	ppm	0.000213	1.45	421.385000	Y 377.433
Fe (238.204 nm)	0.095236	ppm	0.000213	0.22	362.877188	Y_R 377.433
Fe H (259.940 nm)	0.107217 u	ppm	0.001943	1.81	185.847000	Y_R 377.433
K (766.491 nm)	3.152450	ppm	0.045116	1.43	2649.180000	Y_R2 488.368
Li (670.783 nm)	0.019038	ppm	0.001293	6.79	-983.072000	Y_R2 488.368
Mg (279.078 nm)	0.192170	ppm	0.001498	0.78	1242.520000	Y 377.433
Mn (257.610 nm)	0.010003	ppm	0.000003	0.03	2457.320000	Y 377.433
Mo (202.032 nm)	0.017969	ppm	0.000275	1.53	163.386000	Y 377.433
Na (589.592 nm)	1.141150	ppm	0.010311	0.90	7629.300000	Y_R2 488.368
Na H (589.593 nm)	1.478062 u	ppm	0.000321	0.02	8114.480665	Y_R 488.368
Ni (231.604 nm)	0.039849	ppm	0.000025	0.06	280.893000	Y 377.433
P (213.618 nm)	2.805740 o	ppm	0.002656	0.09	6033.960000	Y 242.219
Pb (220.353 nm)	0.009999	ppm	0.001130	11.31	34.279600	Y 242.219
S (181.972 nm)	0.107475	ppm	0.002590	2.41	73.113541	Y 377.433
Sb (206.834 nm)	0.019552	ppm	0.000512	2.62	23.999600	Y 377.433
Se (196.026 nm)	0.017805	ppm	0.000554	3.11	35.112200	Y 242.219
Si (288.158 nm)	0.480217	ppm	0.000283	0.06	5133.230000	Y 377.433
Sn (189.925 nm)	0.093680	ppm	0.000500	0.53	205.061000	Y 377.433
Sr (421.552 nm)	0.010002	ppm	0.000042	0.42	2076.306089	Y_R 488.368
Th (288.505 nm)	0.016998	ppm	0.002065	12.15	117.287000	Y 377.433
Ti (336.122 nm)	0.009422	ppm	0.000042	0.44	982.311000	Y 377.433
Tl (190.794 nm)	0.014812	ppm	0.000970	6.55	27.413600	Y 377.433
U (409.013 nm)	0.059578	ppm	0.009071	15.23	33.244600	Y 377.433
V (292.401 nm)	0.009377	ppm	0.000111	1.18	370.106000	Y 377.433
Zn (206.200 nm)	0.012459 Q	ppm	0.000037	0.30	110.959000 Q	Y 377.433
Zr (343.823 nm)	0.014617	ppm	0.000145	0.99	1914.040000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969293	18932.480614	0.004635	0.48
Y 377.433	0.980057	970872.436309	0.005178	0.53
Y_R 377.433	0.975459	69418.800000	0.004707	0.48
Y_R 488.368	0.971366	39573.400000	0.002969	0.31
Y_R2 488.368	0.988003	79888.364282	0.002355	0.24

Sample Name: 280-116478-E-2-A@5

Date: 11/13/2018 1:37:12 PM Rack:Tube: 1:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000673	ppm	0.000337	50.15	-409.654000	Y 377.433
Al (167.019 nm)	0.368448	ppm	0.010859	2.95	332.852000	Y_R 377.433
Al H (396.152 nm)	0.481754 u	ppm	0.014637	3.04	1649.528899	Y_R 377.433
As (188.980 nm)	0.066823	ppm	0.011488	17.19	86.496500	Y 242.219
B (249.678 nm)	10.463300 o	ppm	0.592147	5.66	263084.000000	Y 242.219
Ba (493.408 nm)	0.160641	ppm	0.004154	2.59	18107.500000	Y_R 488.368
Be (234.861 nm)	0.000300 u	ppm	0.000896	> 100.00	6079.740000	Y_R 488.368
Bi (223.061 nm)	-0.007789 u	ppm	0.000646	8.30	29.127400	Y 377.433
Ca (315.887 nm)	1030.759118 o	ppm	27.438283	2.66	786307.661519	Y_R 377.433
Cd (214.439 nm)	-0.000692 u	ppm	0.000032	4.64	178.194000	Y 377.433
Co (228.615 nm)	0.007879	ppm	0.001109	14.07	104.846000	Y 242.219
Cr (205.560 nm)	0.058575	ppm	0.002661	4.54	855.548000	Y 377.433
Cu (324.754 nm)	-0.007415 u	ppm	0.000908	12.24	-1200.910000	Y 377.433
Fe (238.204 nm)	200.237650 o	ppm	5.530973	2.76	706395.045608	Y_R 377.433
Fe H (259.940 nm)	206.040000	ppm	4.734140	2.30	376296.000000	Y_R 377.433
K (766.491 nm)	484.440000 o	ppm	9.793530	2.02	530037.000000	Y_R2 488.368
Li (670.783 nm)	0.332739	ppm	0.000492	0.15	8756.820000	Y_R2 488.368
Mg (279.078 nm)	376.888000 o	ppm	17.995700	4.77	2309020.000000	Y 377.433
Mn (257.610 nm)	7.039180 o	ppm	0.328874	4.67	1659040.000000	Y 377.433
Mo (202.032 nm)	0.000048 u	ppm	0.000291	> 100.00	3.023570	Y 377.433
Na (589.592 nm)	921.305000 o	ppm	9.135690	0.99	5870640.000000	Y_R2 488.368
Na H (589.593 nm)	1075.342348	ppm	27.164719	2.53	3679664.970241	Y_R 488.368
Ni (231.604 nm)	0.010615	ppm	0.002661	25.06	82.178100	Y 377.433
P (213.618 nm)	3.861820 o	ppm	0.183545	4.75	8291.900000	Y 242.219
Pb (220.353 nm)	0.002061	ppm	0.001932	93.72	28.203800	Y 242.219
S (181.972 nm)	313.261987 bo	ppm	17.390792	5.55	164565.015832	Y 377.433
Sb (206.834 nm)	-0.014979 u	ppm	0.003042	20.31	-119.082000	Y 377.433
Se (196.026 nm)	0.017904	ppm	0.001833	10.24	0.358758	Y 242.219
Si (288.158 nm)	21.129200 o	ppm	1.238850	5.86	184160.000000	Y 377.433
Sn (189.925 nm)	0.020187	ppm	0.001798	8.91	53.722700	Y 377.433
Sr (421.552 nm)	8.197906 o	ppm	0.236027	2.88	1595170.055756	Y_R 488.368
Th (288.505 nm)	0.005950	ppm	0.001287	21.63	217.839000	Y 377.433
Ti (336.122 nm)	0.105987	ppm	0.006674	6.30	17852.000000	Y 377.433
Tl (190.794 nm)	-0.009227 u	ppm	0.000196	2.12	-33.110400	Y 377.433
U (409.013 nm)	-0.032358 u	ppm	0.010496	32.44	-386.452000	Y 377.433
V (292.401 nm)	0.029580	ppm	0.001648	5.57	1110.710000	Y 377.433
Zn (206.200 nm)	0.720444	ppm	0.037836	5.25	4063.870000	Y 377.433
Zr (343.823 nm)	0.006322	ppm	0.000395	6.24	1413.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.855732	16714.373566	0.004229	0.49
Y 377.433	0.888714	880386.156377	0.004215	0.47
Y_R 377.433	0.954861	67952.900000	0.005937	0.62
Y_R 488.368	0.950944	38741.400000	0.002370	0.25
Y_R2 488.368	0.944435	76365.545196	0.005570	0.59

Sample Name: LB3 280-437112/1-B

Date: 11/13/2018 2:05:43 PM Rack:Tube: 1:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000121 u	ppm	0.000099	81.47	-442.320000	Y 377.433
Al (167.019 nm)	0.004063	ppm	0.003435	84.56	3.997020	Y_R 377.433
Al H (396.152 nm)	-0.016324 u	ppm	0.003353	20.54	45.656272	Y_R 377.433
As (188.980 nm)	0.000221	ppm	0.000260	> 100.00	0.161894	Y 242.219
B (249.678 nm)	0.013943	ppm	0.000070	0.50	409.276000	Y 242.219
Ba (493.408 nm)	0.000391	ppm	0.000294	75.37	716.354000	Y_R 488.368
Be (234.861 nm)	0.000047	ppm	0.000001	2.48	-70.534800	Y_R 488.368
Bi (223.061 nm)	0.000858	ppm	0.001180	> 100.00	18.038600	Y 377.433
Ca (315.887 nm)	0.048352	ppm	0.000015	0.03	-23.088765	Y_R 377.433
Cd (214.439 nm)	-0.000116 u	ppm	0.000114	98.19	12.259400	Y 377.433
Co (228.615 nm)	0.000161	ppm	0.000195	> 100.00	-43.169400	Y 242.219
Cr (205.560 nm)	0.000061 u	ppm	0.000225	> 100.00	7.106950	Y 377.433
Cu (324.754 nm)	0.000310	ppm	0.000208	67.21	-351.324000	Y 377.433
Fe (238.204 nm)	0.008604	ppm	0.000696	8.09	57.269857	Y_R 377.433
Fe H (259.940 nm)	0.022206 u	ppm	0.001381	6.22	30.583600	Y_R 377.433
K (766.491 nm)	0.044667 u	ppm	0.086754	> 100.00	-756.273000	Y_R2 488.368
Li (670.783 nm)	-0.000063 u	ppm	0.001391	> 100.00	-1576.120000	Y_R2 488.368
Mg (279.078 nm)	0.003875	ppm	0.000632	16.32	89.700900	Y 377.433
Mn (257.610 nm)	0.000507	ppm	0.000040	7.85	219.226000	Y 377.433
Mo (202.032 nm)	-0.000293 u	ppm	0.000283	96.70	-0.021123	Y 377.433
Na (589.592 nm)	1.451190	ppm	0.001766	0.12	9584.420000	Y_R2 488.368
Na H (589.593 nm)	2.527096 u	ppm	0.094048	3.72	11691.915752	Y_R 488.368
Ni (231.604 nm)	0.000168	ppm	0.000088	52.13	-0.418688	Y 377.433
P (213.618 nm)	-0.000905 u	ppm	0.000514	56.78	33.208500	Y 242.219
Pb (220.353 nm)	0.001520	ppm	0.000655	43.12	8.770740	Y 242.219
S (181.972 nm)	0.019742	ppm	0.003494	17.70	27.011439	Y 377.433
Sb (206.834 nm)	0.000539 u	ppm	0.003369	> 100.00	-29.294900	Y 377.433
Se (196.026 nm)	-0.001301 u	ppm	0.003038	> 100.00	15.142900	Y 242.219
Si (288.158 nm)	0.016726	ppm	0.000696	4.16	1114.750000	Y 377.433
Sn (189.925 nm)	-0.000588 u	ppm	0.000178	30.31	10.940800	Y 377.433
Sr (421.552 nm)	0.000181	ppm	0.000031	17.09	165.510938	Y_R 488.368
Th (288.505 nm)	-0.000444 u	ppm	0.000763	> 100.00	72.306900	Y 377.433
Ti (336.122 nm)	0.000386	ppm	0.000020	5.29	-296.480000	Y 377.433
Tl (190.794 nm)	0.001262 u	ppm	0.001851	> 100.00	-3.365480	Y 377.433
U (409.013 nm)	0.007236	ppm	0.001595	22.04	-198.303000	Y 377.433
V (292.401 nm)	-0.000027 u	ppm	0.000201	> 100.00	26.705000	Y 377.433
Zn (206.200 nm)	-0.004396 u	ppm	0.000540	12.27	16.853500	Y 377.433
Zr (343.823 nm)	-0.000042 u	ppm	0.000060	> 100.00	23.285900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982770	19195.709209	0.007536	0.77
Y 377.433	0.992199	982901.216290	0.009044	0.91
Y_R 377.433	0.982936	69950.800000	0.004119	0.42
Y_R 488.368	0.979625	39909.800000	0.004123	0.42
Y_R2 488.368	1.013999	81990.411151	0.005477	0.54

Sample Name: LCS 280-437112/2-B

Date: 11/13/2018 2:09:06 PM Rack:Tube: 1:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.207181	ppm	0.000073	0.04	9077.090000	Y 377.433
Al (167.019 nm)	0.398025	ppm	0.001570	0.39	218.245000	Y_R 377.433
Al H (396.152 nm)	0.386565 u	ppm	0.000034	0.01	1019.894080	Y_R 377.433
As (188.980 nm)	0.792027	ppm	0.002644	0.33	1048.670000	Y 242.219
B (249.678 nm)	0.210902	ppm	0.000256	0.12	5370.090000	Y 242.219
Ba (493.408 nm)	2.426410 o	ppm	0.015761	0.65	258114.000000	Y_R 488.368
Be (234.861 nm)	0.009568	ppm	0.000092	0.96	2697.820000	Y_R 488.368
Bi (223.061 nm)	0.365903	ppm	0.001233	0.34	940.043000	Y 377.433
Ca (315.887 nm)	9.924836	ppm	0.058625	0.59	7511.812345	Y_R 377.433
Cd (214.439 nm)	0.216366	ppm	0.000278	0.13	13652.100000	Y 377.433
Co (228.615 nm)	0.098612	ppm	0.000005	0.00	1806.700000	Y 242.219
Cr (205.560 nm)	1.040120	ppm	0.002301	0.22	16079.000000	Y 377.433
Cu (324.754 nm)	0.438650	ppm	0.001852	0.42	23246.400000	Y 377.433
Fe (238.204 nm)	0.204922	ppm	0.004368	2.13	749.811374	Y_R 377.433
Fe H (259.940 nm)	0.212371 u	ppm	0.001944	0.92	377.897000	Y_R 377.433
K (766.491 nm)	10.194500	ppm	0.075078	0.74	10365.800000	Y_R2 488.368
Li (670.783 nm)	0.199802	ppm	0.001964	0.98	4629.350000	Y_R2 488.368
Mg (279.078 nm)	9.514850	ppm	0.006882	0.07	58356.100000	Y 377.433
Mn (257.610 nm)	0.099194	ppm	0.000169	0.17	23477.200000	Y 377.433
Mo (202.032 nm)	0.198426	ppm	0.000460	0.23	1778.130000	Y 377.433
Na (589.592 nm)	11.238100 o	ppm	0.022281	0.20	76669.900000	Y_R2 488.368
Na H (589.593 nm)	12.927320	ppm	0.017912	0.14	49374.137785	Y_R 488.368
Ni (231.604 nm)	0.095346	ppm	0.001288	1.35	674.782000	Y 377.433
P (213.618 nm)	2.040630	ppm	0.014407	0.71	4398.120000	Y 242.219
Pb (220.353 nm)	1.120840	ppm	0.004469	0.40	3380.340000	Y 242.219
S (181.972 nm)	0.384755	ppm	0.001682	0.44	218.967133	Y 377.433
Sb (206.834 nm)	0.098846	ppm	0.000031	0.03	276.408000	Y 377.433
Se (196.026 nm)	0.582133	ppm	0.001350	0.23	625.215000	Y 242.219
Si (288.158 nm)	1.997100	ppm	0.002531	0.13	18284.600000	Y 377.433
Sn (189.925 nm)	0.388255	ppm	0.002010	0.52	811.661000	Y 377.433
Sr (421.552 nm)	0.198534	ppm	0.000643	0.32	38758.318600	Y_R 488.368
Th (288.505 nm)	0.200646	ppm	0.000120	0.06	591.106000	Y 377.433
Ti (336.122 nm)	0.197121	ppm	0.000158	0.08	27566.400000	Y 377.433
Tl (190.794 nm)	0.392113	ppm	0.000009	0.00	884.948000	Y 377.433
U (409.013 nm)	0.396814	ppm	0.003989	1.01	1523.810000	Y 377.433
V (292.401 nm)	0.097264	ppm	0.000533	0.55	3355.050000	Y 377.433
Zn (206.200 nm)	0.488868	ppm	0.000049	0.01	2770.900000	Y 377.433
Zr (343.823 nm)	0.098524	ppm	0.000128	0.13	12735.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993766	19410.497492	0.002062	0.21
Y 377.433	1.004372	994959.931078	0.001930	0.19
Y_R 377.433	1.028250	73175.800000	0.009899	0.96
Y_R 488.368	1.033770	42115.700000	0.010279	0.99
Y_R2 488.368	1.023090	82725.433284	0.003181	0.31

Sample Name: 280-116707-D-2-B

Date: 11/13/2018 2:12:27 PM Rack:Tube: 1:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000621	ppm	0.000042	6.82	-408.758000	Y 377.433
Al (167.019 nm)	0.001688	ppm	0.000564	33.39	2.777430	Y_R 377.433
Al H (396.152 nm)	-0.001782 u	ppm	0.006023	> 100.00	95.915733	Y_R 377.433
As (188.980 nm)	0.002707	ppm	0.000565	20.88	3.452370	Y 242.219
B (249.678 nm)	1.788030 o	ppm	0.002008	0.11	45057.300000	Y 242.219
Ba (493.408 nm)	0.011754	ppm	0.000436	3.71	1930.220000	Y_R 488.368
Be (234.861 nm)	0.000070	ppm	0.000000	0.15	-60.526400	Y_R 488.368
Bi (223.061 nm)	0.000075 u	ppm	0.001930	> 100.00	16.079400	Y 377.433
Ca (315.887 nm)	38.481900 o	ppm	0.141634	0.37	29297.921052	Y_R 377.433
Cd (214.439 nm)	-0.000170 u	ppm	0.000045	26.32	8.942880	Y 377.433
Co (228.615 nm)	0.000558	ppm	0.000133	23.73	-35.703400	Y 242.219
Cr (205.560 nm)	0.001665	ppm	0.000770	46.24	31.869600	Y 377.433
Cu (324.754 nm)	0.000893	ppm	0.000318	35.58	-336.075000	Y 377.433
Fe (238.204 nm)	0.117852	ppm	0.001456	1.24	442.657769	Y_R 377.433
Fe H (259.940 nm)	0.119679 u	ppm	0.002338	1.95	208.606000	Y_R 377.433
K (766.491 nm)	7.865580	ppm	0.083479	1.06	7813.760000	Y_R2 488.368
Li (670.783 nm)	0.047137	ppm	0.003195	6.78	-110.636000	Y_R2 488.368
Mg (279.078 nm)	205.931000 o	ppm	0.021195	0.01	1261870.000000	Y 377.433
Mn (257.610 nm)	0.110173	ppm	0.000175	0.16	26064.600000	Y 377.433
Mo (202.032 nm)	-0.000145 u	ppm	0.000117	81.06	1.301490	Y 377.433
Na (589.592 nm)	678.900000 o	ppm	1.283140	0.19	4325890.000000	Y_R2 488.368
Na H (589.593 nm)	712.702318	ppm	8.701407	1.22	2439707.725604	Y_R 488.368
Ni (231.604 nm)	0.061244	ppm	0.000169	0.28	432.548000	Y 377.433
P (213.618 nm)	0.140731	ppm	0.000593	0.42	336.033000	Y 242.219
Pb (220.353 nm)	0.000382	ppm	0.000320	83.74	5.359650	Y 242.219
S (181.972 nm)	409.225056 bo	ppm	0.167709	0.04	214949.385682	Y 377.433
Sb (206.834 nm)	-0.002066 u	ppm	0.000046	2.22	-36.558400	Y 377.433
Se (196.026 nm)	0.001053 u	ppm	0.002682	> 100.00	17.675600	Y 242.219
Si (288.158 nm)	6.753930	ppm	0.020271	0.30	59526.400000	Y 377.433
Sn (189.925 nm)	-0.001447 u	ppm	0.002678	> 100.00	9.173090	Y 377.433
Sr (421.552 nm)	0.741769	ppm	0.007801	1.05	144453.725176	Y_R 488.368
Th (288.505 nm)	0.013630	ppm	0.002296	16.84	110.101000	Y 377.433
Ti (336.122 nm)	0.000680	ppm	0.000047	6.97	-135.183000	Y 377.433
Tl (190.794 nm)	0.002125	ppm	0.001132	53.26	-1.406190	Y 377.433
U (409.013 nm)	-0.011403 u	ppm	0.000570	5.00	-288.242000	Y 377.433
V (292.401 nm)	0.001721	ppm	0.000192	11.18	93.615800	Y 377.433
Zn (206.200 nm)	0.005214	ppm	0.000266	5.11	70.506300	Y 377.433
Zr (343.823 nm)	0.000406	ppm	0.000198	48.78	81.304300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.946947	18496.009034	0.000472	0.05
Y 377.433	0.945337	936477.968771	0.000664	0.07
Y_R 377.433	0.981571	69853.700000	0.004405	0.45
Y_R 488.368	0.982634	40032.400000	0.013388	1.36
Y_R2 488.368	0.969992	78432.052765	0.001810	0.19

Sample Name: 280-116636-A-1-D

Date: 11/13/2018 2:15:49 PM Rack:Tube: 1:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000204	ppm	0.000176	86.18	-427.434000	Y 377.433
Al (167.019 nm)	0.009549	ppm	0.004074	42.67	6.995660	Y_R 377.433
Al H (396.152 nm)	-0.005600 u	ppm	0.006836	> 100.00	71.714996	Y_R 377.433
As (188.980 nm)	0.002709	ppm	0.002774	> 100.00	3.456130	Y 242.219
B (249.678 nm)	0.012638	ppm	0.000610	4.83	376.393000	Y 242.219
Ba (493.408 nm)	0.002042	ppm	0.000127	6.23	891.781000	Y_R 488.368
Be (234.861 nm)	0.000066	ppm	0.000007	10.81	-64.452200	Y_R 488.368
Bi (223.061 nm)	0.001799	ppm	0.001545	85.87	20.420700	Y 377.433
Ca (315.887 nm)	1.132767	ppm	0.013728	1.21	804.213195	Y_R 377.433
Cd (214.439 nm)	-0.000092 u	ppm	0.000057	62.29	13.805900	Y 377.433
Co (228.615 nm)	0.000410	ppm	0.000274	66.67	-38.476400	Y 242.219
Cr (205.560 nm)	0.000729	ppm	0.000106	14.55	17.423100	Y 377.433
Cu (324.754 nm)	0.013023	ppm	0.000343	2.64	332.918000	Y 377.433
Fe (238.204 nm)	0.034854	ppm	0.000099	0.28	149.868919	Y_R 377.433
Fe H (259.940 nm)	0.045244 u	ppm	0.002109	4.66	72.659500	Y_R 377.433
K (766.491 nm)	4.060070	ppm	0.063626	1.57	3643.750000	Y_R2 488.368
Li (670.783 nm)	-0.002129 u	ppm	0.000837	39.31	-1640.280000	Y_R2 488.368
Mg (279.078 nm)	0.451782	ppm	0.000189	0.04	2834.060000	Y 377.433
Mn (257.610 nm)	0.002761	ppm	0.000004	0.14	750.448000	Y 377.433
Mo (202.032 nm)	0.002331	ppm	0.000056	2.40	23.451500	Y 377.433
Na (589.592 nm)	865.827000 o	ppm	2.916420	0.34	5516850.000000	Y_R2 488.368
Na H (589.593 nm)	904.031311	ppm	2.902299	0.32	3093830.853066	Y_R 488.368
Ni (231.604 nm)	0.004886	ppm	0.001004	20.54	33.032000	Y 377.433
P (213.618 nm)	1.872370	ppm	0.003212	0.17	4038.360000	Y 242.219
Pb (220.353 nm)	0.002819	ppm	0.002020	71.64	12.681300	Y 242.219
S (181.972 nm)	41.154675 o	ppm	0.048263	0.12	21631.835027	Y 377.433
Sb (206.834 nm)	-0.001234 u	ppm	0.000514	41.68	-34.253400	Y 377.433
Se (196.026 nm)	-0.001617 u	ppm	0.001862	> 100.00	14.809700	Y 242.219
Si (288.158 nm)	0.663935	ppm	0.001126	0.17	6726.060000	Y 377.433
Sn (189.925 nm)	-0.000753 u	ppm	0.000050	6.65	10.601200	Y 377.433
Sr (421.552 nm)	0.009241	ppm	0.000197	2.13	1928.245690	Y_R 488.368
Th (288.505 nm)	0.001226 u	ppm	0.002353	> 100.00	76.601700	Y 377.433
Ti (336.122 nm)	0.000736	ppm	0.000069	9.38	-243.546000	Y 377.433
Tl (190.794 nm)	0.002654	ppm	0.000080	3.01	-0.208036	Y 377.433
U (409.013 nm)	-0.016877 u	ppm	0.007561	44.80	-305.640000	Y 377.433
V (292.401 nm)	-0.000150 u	ppm	0.000116	77.46	22.064300	Y 377.433
Zn (206.200 nm)	0.000984	ppm	0.000066	6.68	46.892800	Y 377.433
Zr (343.823 nm)	-0.000058 u	ppm	0.000036	63.09	21.354600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.929270	18150.736672	0.000422	0.05
Y 377.433	0.930893	922169.698694	0.000766	0.08
Y_R 377.433	0.978866	69661.200000	0.003669	0.37
Y_R 488.368	0.978170	39850.600000	0.004253	0.43
Y_R2 488.368	0.964472	77985.711305	0.003093	0.32

Sample Name: 280-116636-A-1-Dsd@5

Date: 11/13/2018 2:19:11 PM Rack:Tube: 1:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000155 u	ppm	0.000258	> 100.00	-443.967000	Y 377.433
Al (167.019 nm)	0.001823 u	ppm	0.005276	> 100.00	2.777470	Y_R 377.433
Al H (396.152 nm)	-0.018481 u	ppm	0.006901	37.34	40.588504	Y_R 377.433
As (188.980 nm)	0.001332	ppm	0.000322	24.18	1.633560	Y 242.219
B (249.678 nm)	0.003742	ppm	0.000274	7.33	152.578000	Y 242.219
Ba (493.408 nm)	0.000181	ppm	0.000250	> 100.00	694.145000	Y_R 488.368
Be (234.861 nm)	-0.000013 u	ppm	0.000017	> 100.00	-88.034900	Y_R 488.368
Bi (223.061 nm)	0.002063	ppm	0.001031	49.95	21.083100	Y 377.433
Ca (315.887 nm)	0.224961	ppm	0.006144	2.73	111.646454	Y_R 377.433
Cd (214.439 nm)	-0.000151 u	ppm	0.000053	35.07	10.061700	Y 377.433
Co (228.615 nm)	0.000199	ppm	0.000138	69.50	-42.462000	Y 242.219
Cr (205.560 nm)	0.000245	ppm	0.000269	> 100.00	9.961480	Y 377.433
Cu (324.754 nm)	0.002070	ppm	0.000375	18.12	-256.055000	Y 377.433
Fe (238.204 nm)	0.005787	ppm	0.001153	19.93	47.332484	Y_R 377.433
Fe H (259.940 nm)	0.021034 u	ppm	0.001076	5.12	28.443100	Y_R 377.433
K (766.491 nm)	0.839781	ppm	0.127876	15.23	115.000000	Y_R2 488.368
Li (670.783 nm)	-0.001561 u	ppm	0.000908	58.19	-1622.640000	Y_R2 488.368
Mg (279.078 nm)	0.085112	ppm	0.000148	0.17	587.336000	Y 377.433
Mn (257.610 nm)	0.000463	ppm	0.000024	5.26	208.865000	Y 377.433
Mo (202.032 nm)	-0.000428 u	ppm	0.000137	32.10	-1.232960	Y 377.433
Na (589.592 nm)	186.400000 o	ppm	1.308200	0.70	1187960.000000	Y_R2 488.368
Na H (589.593 nm)	193.048436	ppm	1.776915	0.92	663062.364952	Y_R 488.368
Ni (231.604 nm)	0.001031	ppm	0.000822	79.75	5.698500	Y 377.433
P (213.618 nm)	0.335641	ppm	0.004494	1.34	752.762000	Y 242.219
Pb (220.353 nm)	0.000693	ppm	0.000380	54.88	6.297620	Y 242.219
S (181.972 nm)	7.351876	ppm	0.101568	1.38	3877.982242	Y 377.433
Sb (206.834 nm)	0.000242	ppm	0.000178	73.66	-30.134400	Y 377.433
Se (196.026 nm)	-0.001761 u	ppm	0.003613	> 100.00	14.662700	Y 242.219
Si (288.158 nm)	0.118259	ppm	0.001217	1.03	1995.050000	Y 377.433
Sn (189.925 nm)	-0.002242 u	ppm	0.001268	56.56	7.534600	Y 377.433
Sr (421.552 nm)	0.001813	ppm	0.000116	6.41	482.925475	Y_R 488.368
Th (288.505 nm)	0.000720	ppm	0.000309	42.87	75.334500	Y 377.433
Ti (336.122 nm)	0.000040	ppm	0.000007	17.22	-344.927000	Y 377.433
Tl (190.794 nm)	0.000079 u	ppm	0.000685	> 100.00	-6.054670	Y 377.433
U (409.013 nm)	-0.003520 u	ppm	0.002284	64.87	-246.139000	Y 377.433
V (292.401 nm)	-0.000136 u	ppm	0.000121	89.45	22.801500	Y 377.433
Zn (206.200 nm)	-0.005936 u	ppm	0.000033	0.56	8.252990	Y 377.433
Zr (343.823 nm)	-0.000107 u	ppm	0.000025	23.50	14.922300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.970131	18948.847291	0.000858	0.09
Y 377.433	0.974036	964908.001277	0.000871	0.09
Y_R 377.433	0.963039	68534.900000	0.000839	0.09
Y_R 488.368	0.964557	39296.000000	0.007338	0.76
Y_R2 488.368	0.984330	79591.404481	0.000334	0.03

Sample Name: 280-116636-A-1-E MS

Date: 11/13/2018 2:22:34 PM Rack:Tube: 1:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.149320	ppm	0.000488	0.33	6416.800000	Y 377.433
Al (167.019 nm)	0.257829	ppm	0.005078	1.97	142.005000	Y_R 377.433
Al H (396.152 nm)	0.254562 u	ppm	0.009717	3.82	706.731756	Y_R 377.433
As (188.980 nm)	0.762738	ppm	0.000206	0.03	1009.880000	Y 242.219
B (249.678 nm)	0.200217	ppm	0.000145	0.07	5100.900000	Y 242.219
Ba (493.408 nm)	2.062560 o	ppm	0.007427	0.36	219510.000000	Y_R 488.368
Be (234.861 nm)	0.005442	ppm	0.000009	0.17	1493.730000	Y_R 488.368
Bi (223.061 nm)	0.256676	ppm	0.003542	1.38	664.164000	Y 377.433
Ca (315.887 nm)	10.276960	ppm	0.008490	0.08	7780.440988	Y_R 377.433
Cd (214.439 nm)	0.203430	ppm	0.000114	0.06	12836.900000	Y 377.433
Co (228.615 nm)	0.090568	ppm	0.000550	0.61	1653.660000	Y 242.219
Cr (205.560 nm)	0.652963	ppm	0.002859	0.44	10096.200000	Y 377.433
Cu (324.754 nm)	0.461122	ppm	0.000009	0.00	24444.900000	Y 377.433
Fe (238.204 nm)	0.139496	ppm	0.001228	0.88	519.011867	Y_R 377.433
Fe H (259.940 nm)	0.146650 u	ppm	0.000733	0.50	257.865000	Y_R 377.433
K (766.491 nm)	14.182600	ppm	0.045253	0.32	14735.900000	Y_R2 488.368
Li (670.783 nm)	0.194233	ppm	0.003585	1.85	4456.440000	Y_R2 488.368
Mg (279.078 nm)	9.153450	ppm	0.011825	0.13	56144.100000	Y 377.433
Mn (257.610 nm)	0.068177	ppm	0.000118	0.17	16167.200000	Y 377.433
Mo (202.032 nm)	0.194299	ppm	0.000353	0.18	1741.200000	Y 377.433
Na (589.592 nm)	844.932000 o	ppm	0.716644	0.08	5387740.000000	Y_R2 488.368
Na H (589.593 nm)	891.684119	ppm	6.746589	0.76	3053422.234771	Y_R 488.368
Ni (231.604 nm)	0.086201	ppm	0.000840	0.97	609.919000	Y 377.433
P (213.618 nm)	3.560460 o	ppm	0.001178	0.03	7647.590000	Y 242.219
Pb (220.353 nm)	1.063010	ppm	0.002967	0.28	3205.960000	Y 242.219
S (181.972 nm)	40.237885 o	ppm	0.071408	0.18	21150.481332	Y 377.433
Sb (206.834 nm)	0.088815	ppm	0.001363	1.53	236.300000	Y 377.433
Se (196.026 nm)	0.537570	ppm	0.001186	0.22	578.590000	Y 242.219
Si (288.158 nm)	2.388900	ppm	0.006332	0.27	21681.500000	Y 377.433
Sn (189.925 nm)	0.211516	ppm	0.002691	1.27	447.714000	Y 377.433
Sr (421.552 nm)	0.187769	ppm	0.000816	0.43	36663.788617	Y_R 488.368
Th (288.505 nm)	0.102582	ppm	0.003820	3.72	341.446000	Y 377.433
Ti (336.122 nm)	0.128704	ppm	0.000111	0.09	17888.500000	Y 377.433
Tl (190.794 nm)	0.362247	ppm	0.000139	0.04	817.281000	Y 377.433
U (409.013 nm)	0.319992	ppm	0.000978	0.31	1184.520000	Y 377.433
V (292.401 nm)	0.085937	ppm	0.000660	0.77	3028.900000	Y 377.433
Zn (206.200 nm)	0.473792	ppm	0.000619	0.13	2686.730000	Y 377.433
Zr (343.823 nm)	0.068971	ppm	0.000018	0.03	8923.830000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.927524	18116.646342	0.000206	0.02
Y 377.433	0.929918	921203.900006	0.000527	0.06
Y_R 377.433	0.980244	69759.300000	0.001791	0.18
Y_R 488.368	0.979238	39894.100000	0.006450	0.66
Y_R2 488.368	0.965137	78039.463953	0.002222	0.23

Sample Name: 280-116636-A-1-F MSD

Date: 11/13/2018 2:25:56 PM Rack:Tube: 1:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.153033	ppm	0.000379	0.25	6587.070000	Y 377.433
Al (167.019 nm)	0.250780	ppm	0.005237	2.09	138.173000	Y_R 377.433
Al H (396.152 nm)	0.261420 u	ppm	0.009432	3.61	723.113895	Y_R 377.433
As (188.980 nm)	0.774087	ppm	0.000498	0.06	1024.910000	Y 242.219
B (249.678 nm)	0.204217	ppm	0.000008	0.00	5201.650000	Y 242.219
Ba (493.408 nm)	2.111550 o	ppm	0.022285	1.06	224708.000000	Y_R 488.368
Be (234.861 nm)	0.005652	ppm	0.000132	2.33	1554.640000	Y_R 488.368
Bi (223.061 nm)	0.261465	ppm	0.000293	0.11	676.260000	Y 377.433
Ca (315.887 nm)	10.192880	ppm	0.077548	0.76	7716.298136	Y_R 377.433
Cd (214.439 nm)	0.207199	ppm	0.000110	0.05	13074.400000	Y 377.433
Co (228.615 nm)	0.091832	ppm	0.000232	0.25	1677.370000	Y 242.219
Cr (205.560 nm)	0.663712	ppm	0.005649	0.85	10262.300000	Y 377.433
Cu (324.754 nm)	0.468314	ppm	0.000566	0.12	24832.800000	Y 377.433
Fe (238.204 nm)	0.138258	ppm	0.000144	0.10	514.644104	Y_R 377.433
Fe H (259.940 nm)	0.150255 u	ppm	0.005309	3.53	264.449000	Y_R 377.433
K (766.491 nm)	14.418000	ppm	0.024644	0.17	14993.800000	Y_R2 488.368
Li (670.783 nm)	0.195387	ppm	0.000368	0.19	4492.270000	Y_R2 488.368
Mg (279.078 nm)	9.321660	ppm	0.008809	0.09	57174.700000	Y 377.433
Mn (257.610 nm)	0.069403	ppm	0.000044	0.06	16456.200000	Y 377.433
Mo (202.032 nm)	0.196460	ppm	0.000162	0.08	1760.530000	Y 377.433
Na (589.592 nm)	860.852000 o	ppm	2.073110	0.24	5489260.000000	Y_R2 488.368
Na H (589.593 nm)	904.606548	ppm	2.877433	0.32	3097645.419245	Y_R 488.368
Ni (231.604 nm)	0.086962	ppm	0.000347	0.40	615.320000	Y 377.433
P (213.618 nm)	3.635240 o	ppm	0.001789	0.05	7807.460000	Y 242.219
Pb (220.353 nm)	1.079070	ppm	0.002244	0.21	3254.340000	Y 242.219
S (181.972 nm)	41.119491 o	ppm	0.168592	0.41	21613.519845	Y 377.433
Sb (206.834 nm)	0.088986	ppm	0.000179	0.20	237.061000	Y 377.433
Se (196.026 nm)	0.545178	ppm	0.000246	0.05	586.546000	Y 242.219
Si (288.158 nm)	2.434810	ppm	0.000530	0.02	22079.500000	Y 377.433
Sn (189.925 nm)	0.213192	ppm	0.000943	0.44	451.164000	Y 377.433
Sr (421.552 nm)	0.191611	ppm	0.001750	0.91	37411.403083	Y_R 488.368
Th (288.505 nm)	0.107972	ppm	0.006466	5.99	355.231000	Y 377.433
Ti (336.122 nm)	0.130439	ppm	0.000226	0.17	18133.800000	Y 377.433
Tl (190.794 nm)	0.370850	ppm	0.000111	0.03	836.848000	Y 377.433
U (409.013 nm)	0.324841	ppm	0.003994	1.23	1206.030000	Y 377.433
V (292.401 nm)	0.087546	ppm	0.000207	0.24	3086.050000	Y 377.433
Zn (206.200 nm)	0.481987	ppm	0.000605	0.13	2732.490000	Y 377.433
Zr (343.823 nm)	0.069766	ppm	0.000078	0.11	9026.280000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.925729	18081.578026	0.003542	0.38
Y 377.433	0.927046	918358.414360	0.001255	0.14
Y_R 377.433	0.956391	68061.800000	0.016142	1.69
Y_R 488.368	0.953910	38862.200000	0.015519	1.63
Y_R2 488.368	0.953882	77129.456058	0.008379	0.88

Sample Name: 280-116636-A-1-Dpds

Date: 11/13/2018 2:29:18 PM Rack:Tube: 1:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047198	ppm	0.000039	0.08	1723.280000	Y 377.433
Al (167.019 nm)	0.946646	ppm	0.005602	0.59	516.940000	Y_R 377.433
Al H (396.152 nm)	0.961209	ppm	0.016113	1.68	2375.514579	Y_R 377.433
As (188.980 nm)	0.200169	ppm	0.001495	0.75	264.924000	Y 242.219
B (249.678 nm)	0.110763	ppm	0.000303	0.27	2846.520000	Y 242.219
Ba (493.408 nm)	0.099672	ppm	0.000595	0.60	11255.400000	Y_R 488.368
Be (234.861 nm)	0.046858	ppm	0.000262	0.56	13592.700000	Y_R 488.368
Bi (223.061 nm)	-0.002284 u	ppm	0.001054	46.13	10.266200	Y 377.433
Ca (315.887 nm)	20.073479 o	ppm	0.005299	0.03	15254.135166	Y_R 377.433
Cd (214.439 nm)	0.047616	ppm	0.000060	0.13	3020.660000	Y 377.433
Co (228.615 nm)	0.048721	ppm	0.000260	0.53	867.487000	Y 242.219
Cr (205.560 nm)	0.048145	ppm	0.000189	0.39	749.398000	Y 377.433
Cu (324.754 nm)	0.063837	ppm	0.000067	0.11	3062.110000	Y 377.433
Fe (238.204 nm)	1.002551	ppm	0.001723	0.17	3563.564724	Y_R 377.433
Fe H (259.940 nm)	1.003690 u	ppm	0.007954	0.79	1823.140000	Y_R 377.433
K (766.491 nm)	25.228700	ppm	0.051791	0.21	26840.000000	Y_R2 488.368
Li (670.783 nm)	0.100864	ppm	0.001562	1.55	1557.490000	Y_R2 488.368
Mg (279.078 nm)	19.141900	ppm	0.009588	0.05	117341.000000	Y 377.433
Mn (257.610 nm)	0.051165	ppm	0.000067	0.13	12158.000000	Y 377.433
Mo (202.032 nm)	0.051476	ppm	0.000296	0.58	463.204000	Y 377.433
Na (589.592 nm)	855.453000 o	ppm	1.040660	0.12	5450940.000000	Y_R2 488.368
Na H (589.593 nm)	909.278169	ppm	2.443223	0.27	3111854.827390	Y_R 488.368
Ni (231.604 nm)	0.050637	ppm	0.000268	0.53	357.631000	Y 377.433
P (213.618 nm)	3.899690 o	ppm	0.008280	0.21	8372.880000	Y 242.219
Pb (220.353 nm)	0.098029	ppm	0.000982	1.00	300.250000	Y 242.219
S (181.972 nm)	39.995012 o	ppm	0.031581	0.08	21022.877546	Y 377.433
Sb (206.834 nm)	0.092667	ppm	0.001042	1.12	227.836000	Y 377.433
Se (196.026 nm)	0.186457	ppm	0.007403	3.97	211.309000	Y 242.219
Si (288.158 nm)	5.468110	ppm	0.019771	0.36	48378.300000	Y 377.433
Sn (189.925 nm)	0.095186	ppm	0.000776	0.82	208.162000	Y 377.433
Sr (421.552 nm)	0.057623	ppm	0.000310	0.54	11341.782128	Y_R 488.368
Th (288.505 nm)	0.199384	ppm	0.000459	0.23	585.770000	Y 377.433
Ti (336.122 nm)	0.049363	ppm	0.000027	0.05	6694.780000	Y 377.433
Tl (190.794 nm)	0.191391	ppm	0.000510	0.27	429.059000	Y 377.433
U (409.013 nm)	0.477331	ppm	0.002451	0.51	1884.150000	Y 377.433
V (292.401 nm)	0.049986	ppm	0.000065	0.13	1852.720000	Y 377.433
Zn (206.200 nm)	0.204169	ppm	0.001326	0.65	1181.340000	Y 377.433
Zr (343.823 nm)	0.048845	ppm	0.000127	0.26	6330.710000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.924873	18064.865708	0.001367	0.15
Y 377.433	0.928670	919967.028405	0.002205	0.24
Y_R 377.433	0.977462	69561.300000	0.012800	1.31
Y_R 488.368	0.971874	39594.100000	0.003787	0.39
Y_R2 488.368	0.970983	78512.194278	0.008330	0.86

Sample Name: CCVH-5417909

Date: 11/13/2018 2:32:41 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001730 u	ppm	0.000163	9.44	-757.365000	Y 377.433
Al (167.019 nm)	45.776200 o	ppm	0.021649	0.05	24913.600000	Y_R 377.433
Al H (396.152 nm)	49.732876	ppm	0.261086	0.52	118002.203656	Y_R 377.433
As (188.980 nm)	0.001073	ppm	0.000775	72.27	0.833421	Y 242.219
B (249.678 nm)	-0.000020 u	ppm	0.000403	> 100.00	-16.443100	Y 242.219
Ba (493.408 nm)	0.000397	ppm	0.000091	22.92	758.852000	Y_R 488.368
Be (234.861 nm)	-0.000168 u	ppm	0.000024	14.04	1364.220000	Y_R 488.368
Bi (223.061 nm)	0.971807	ppm	0.002693	0.28	2478.400000	Y 377.433
Ca (315.887 nm)	-0.002423 u	ppm	0.004699	> 100.00	-61.825083	Y_R 377.433
Cd (214.439 nm)	-0.000552 u	ppm	0.000014	2.57	34.504800	Y 377.433
Co (228.615 nm)	0.003044	ppm	0.000267	8.77	10.805600	Y 242.219
Cr (205.560 nm)	-0.000244 u	ppm	0.000138	56.54	-11.316700	Y 377.433
Cu (324.754 nm)	-0.007984 u	ppm	0.000135	1.69	-475.443000	Y 377.433
Fe (238.204 nm)	49.553913 o	ppm	0.238066	0.48	174835.725422	Y_R 377.433
Fe H (259.940 nm)	49.337600	ppm	0.171889	0.35	90098.800000	Y_R 377.433
K (766.491 nm)	0.033125	ppm	0.015934	48.10	-768.922000	Y_R2 488.368
Li (670.783 nm)	-0.000344 u	ppm	0.001967	> 100.00	-1584.870000	Y_R2 488.368
Mg (279.078 nm)	-0.016264 u	ppm	0.002931	18.02	-404.605000	Y 377.433
Mn (257.610 nm)	0.001187	ppm	0.000006	0.53	379.612000	Y 377.433
Mo (202.032 nm)	-0.000973 u	ppm	0.000785	80.68	-6.105730	Y 377.433
Na (589.592 nm)	242.981000 o	ppm	0.340434	0.14	1548460.000000	Y_R2 488.368
Na H (589.593 nm)	253.714630	ppm	3.854160	1.52	870471.605626	Y_R 488.368
Ni (231.604 nm)	0.004385	ppm	0.001038	23.66	31.568800	Y 377.433
P (213.618 nm)	-0.005833 u	ppm	0.000122	2.08	22.672400	Y 242.219
Pb (220.353 nm)	-0.003523 u	ppm	0.001813	51.46	10.878100	Y 242.219
S (181.972 nm)	4.836340	ppm	0.006388	0.13	2556.778690	Y 377.433
Sb (206.834 nm)	-0.006763 u	ppm	0.000741	10.96	-95.678100	Y 377.433
Se (196.026 nm)	-0.003626 u	ppm	0.002724	75.11	3.441990	Y 242.219
Si (288.158 nm)	0.018483	ppm	0.000760	4.11	1129.980000	Y 377.433
Sn (189.925 nm)	-0.001303 u	ppm	0.000159	12.22	9.469320	Y 377.433
Sr (421.552 nm)	0.000575	ppm	0.000075	13.04	242.080220	Y_R 488.368
Th (288.505 nm)	5.012830	ppm	0.009964	0.20	12898.200000	Y 377.433
Ti (336.122 nm)	0.001505	ppm	0.000127	8.45	-138.242000	Y 377.433
Tl (190.794 nm)	-0.003779 u	ppm	0.000710	18.79	-16.170900	Y 377.433
U (409.013 nm)	10.069600	ppm	0.021469	0.21	44559.800000	Y 377.433
V (292.401 nm)	0.002561	ppm	0.000134	5.23	-39.298700	Y 377.433
Zn (206.200 nm)	-0.006511 u	ppm	0.000212	3.26	5.042930	Y 377.433
Zr (343.823 nm)	-0.004604 u	ppm	0.000078	1.69	-425.178000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972927	19003.453187	0.001081	0.11
Y 377.433	0.969884	960794.814101	0.000417	0.04
Y_R 377.433	0.996215	70895.900000	0.001880	0.19
Y_R 488.368	1.002530	40842.800000	0.014230	1.42
Y_R2 488.368	0.989066	79974.351392	0.002300	0.23

Sample Name: CCV-5416701

Date: 11/13/2018 2:36:03 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.489085	ppm	0.000197	0.04	22056.500000	Y 377.433
Al (167.019 nm)	0.497231	ppm	0.005180	1.04	273.644000	Y_R 377.433
Al H (396.152 nm)	0.492001 u	ppm	0.000990	0.20	1289.902657	Y_R 377.433
As (188.980 nm)	0.969881	ppm	0.002997	0.31	1284.160000	Y 242.219
B (249.678 nm)	0.488198	ppm	0.001747	0.36	12362.700000	Y 242.219
Ba (493.408 nm)	0.493735	ppm	0.001431	0.29	53071.500000	Y_R 488.368
Be (234.861 nm)	0.479887	ppm	0.003138	0.65	139756.000000	Y_R 488.368
Bi (223.061 nm)	-0.002870 u	ppm	0.002597	90.48	9.029320	Y 377.433
Ca (315.887 nm)	4.960629	ppm	0.000682	0.01	3724.756602	Y_R 377.433
Cd (214.439 nm)	0.485989	ppm	0.000918	0.19	30642.400000	Y 377.433
Co (228.615 nm)	0.492815	ppm	0.000794	0.16	9196.140000	Y 242.219
Cr (205.560 nm)	0.490308	ppm	0.001900	0.39	7577.210000	Y 377.433
Cu (324.754 nm)	0.486141	ppm	0.001754	0.36	25798.800000	Y 377.433
Fe (238.204 nm)	2.489246	ppm	0.001205	0.05	8808.104093	Y_R 377.433
Fe H (259.940 nm)	2.487240 u	ppm	0.000266	0.01	4532.660000	Y_R 377.433
K (766.491 nm)	49.620800	ppm	0.098350	0.20	53568.500000	Y_R2 488.368
Li (670.783 nm)	0.997131	ppm	0.000550	0.06	29385.100000	Y_R2 488.368
Mg (279.078 nm)	19.316300	ppm	0.042744	0.22	118419.000000	Y 377.433
Mn (257.610 nm)	0.492655	ppm	0.000449	0.09	116205.000000	Y 377.433
Mo (202.032 nm)	0.493451	ppm	0.000007	0.00	4418.040000	Y 377.433
Na (589.592 nm)	5.170560	ppm	0.014966	0.29	34245.200000	Y_R2 488.368
Na H (589.593 nm)	7.623310 u	ppm	0.073703	0.97	29548.099563	Y_R 488.368
Ni (231.604 nm)	0.490721	ppm	0.001291	0.26	3478.420000	Y 377.433
P (213.618 nm)	0.951195	ppm	0.005652	0.59	2068.850000	Y 242.219
Pb (220.353 nm)	0.984071	ppm	0.000741	0.08	2966.080000	Y 242.219
S (181.972 nm)	0.023078	ppm	0.005272	22.84	29.981133	Y 377.433
Sb (206.834 nm)	0.981222	ppm	0.001905	0.19	2723.950000	Y 377.433
Se (196.026 nm)	0.968320	ppm	0.001148	0.12	1028.920000	Y 242.219
Si (288.158 nm)	4.891760	ppm	0.033304	0.68	43381.400000	Y 377.433
Sn (189.925 nm)	0.966442	ppm	0.003595	0.37	2002.280000	Y 377.433
Sr (421.552 nm)	0.493702	ppm	0.001021	0.21	96188.215731	Y_R 488.368
Th (288.505 nm)	0.002405	ppm	0.001796	74.68	94.937300	Y 377.433
Ti (336.122 nm)	0.497416	ppm	0.000081	0.02	70033.700000	Y 377.433
Tl (190.794 nm)	0.989330	ppm	0.003348	0.34	2243.250000	Y 377.433
U (409.013 nm)	0.005277	ppm	0.001878	35.59	-243.350000	Y 377.433
V (292.401 nm)	0.492756	ppm	0.000454	0.09	18111.800000	Y 377.433
Zn (206.200 nm)	0.484313	ppm	0.001171	0.24	2745.470000	Y 377.433
Zr (343.823 nm)	0.499456	ppm	0.000468	0.09	64447.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982442	19189.316192	0.005973	0.61
Y 377.433	0.988294	979032.842349	0.008207	0.83
Y_R 377.433	1.004320	71472.700000	0.003852	0.38
Y_R 488.368	1.008280	41077.000000	0.001959	0.19
Y_R2 488.368	1.008983	81584.817022	0.001124	0.11

Sample Name: CCB

Date: 11/13/2018 2:39:26 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000213 u	ppm	0.000105	49.25	-446.524000	Y 377.433
Al (167.019 nm)	-0.003854 u	ppm	0.000337	8.76	-0.313596	Y_R 377.433
Al H (396.152 nm)	-0.014032 u	ppm	0.009353	66.66	51.051079	Y_R 377.433
As (188.980 nm)	0.000641 u	ppm	0.002437	> 100.00	0.717771	Y 242.219
B (249.678 nm)	0.002391	ppm	0.000328	13.72	118.584000	Y 242.219
Ba (493.408 nm)	0.000233	ppm	0.000115	49.42	699.560000	Y_R 488.368
Be (234.861 nm)	0.000035	ppm	0.000034	98.81	-74.475200	Y_R 488.368
Bi (223.061 nm)	-0.000903 u	ppm	0.000037	4.09	13.590000	Y 377.433
Ca (315.887 nm)	-0.009174 u	ppm	0.006129	66.81	-66.975484	Y_R 377.433
Cd (214.439 nm)	-0.000188 u	ppm	0.000007	3.55	7.704250	Y 377.433
Co (228.615 nm)	0.000336	ppm	0.000312	92.90	-39.893300	Y 242.219
Cr (205.560 nm)	0.000244	ppm	0.000020	8.33	9.949570	Y 377.433
Cu (324.754 nm)	-0.000642 u	ppm	0.000079	12.24	-401.705000	Y 377.433
Fe (238.204 nm)	-0.002735 u	ppm	0.001795	65.64	17.269240	Y_R 377.433
Fe H (259.940 nm)	0.011553 u	ppm	0.001403	12.15	11.126600	Y_R 377.433
K (766.491 nm)	-0.027038 u	ppm	0.056681	> 100.00	-834.847000	Y_R2 488.368
Li (670.783 nm)	-0.002925 u	ppm	0.001274	43.56	-1664.980000	Y_R2 488.368
Mg (279.078 nm)	0.002328	ppm	0.000162	6.95	80.200900	Y 377.433
Mn (257.610 nm)	-0.000100 u	ppm	0.000021	20.66	76.342400	Y 377.433
Mo (202.032 nm)	-0.000318 u	ppm	0.000259	81.51	-0.248843	Y 377.433
Na (589.592 nm)	0.164321	ppm	0.021175	12.89	1384.710000	Y_R2 488.368
Na H (589.593 nm)	1.353420 u	ppm	0.303192	22.40	7678.980870	Y_R 488.368
Ni (231.604 nm)	-0.000124 u	ppm	0.000588	> 100.00	-2.486450	Y 377.433
P (213.618 nm)	-0.001884 u	ppm	0.001752	93.02	31.116300	Y 242.219
Pb (220.353 nm)	0.000133	ppm	0.000003	2.54	4.598740	Y 242.219
S (181.972 nm)	0.018414	ppm	0.002912	15.82	26.312657	Y 377.433
Sb (206.834 nm)	0.000744	ppm	0.000104	13.92	-28.721100	Y 377.433
Se (196.026 nm)	0.001346	ppm	0.001196	88.80	17.912800	Y 242.219
Si (288.158 nm)	-0.002503 u	ppm	0.000166	6.62	948.034000	Y 377.433
Sn (189.925 nm)	-0.000748 u	ppm	0.000605	80.78	10.611000	Y 377.433
Sr (421.552 nm)	0.000228	ppm	0.000056	24.40	174.696344	Y_R 488.368
Th (288.505 nm)	0.002171	ppm	0.003025	> 100.00	78.911900	Y 377.433
Ti (336.122 nm)	0.000081	ppm	0.000046	57.57	-339.937000	Y 377.433
Tl (190.794 nm)	0.000330	ppm	0.000399	> 100.00	-5.484460	Y 377.433
U (409.013 nm)	0.003154 u	ppm	0.006932	> 100.00	-216.450000	Y 377.433
V (292.401 nm)	-0.000181 u	ppm	0.000124	68.58	21.309400	Y 377.433
Zn (206.200 nm)	-0.007514 u	ppm	0.000233	3.10	-0.554638	Y 377.433
Zr (343.823 nm)	0.000084	ppm	0.000081	96.45	39.549100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978402	19110.399519	0.004650	0.48
Y 377.433	0.986489	977244.822543	0.005583	0.57
Y_R 377.433	0.997110	70959.600000	0.002641	0.26
Y_R 488.368	0.998932	40696.400000	0.000755	0.08
Y_R2 488.368	0.997937	80691.642764	0.008711	0.87

Sample Name: CCVL-5425098

Date: 11/13/2018 2:42:48 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009050	ppm	0.000098	1.09	-20.006400	Y 377.433
Al (167.019 nm)	0.088895	ppm	0.001281	1.44	50.158500	Y_R 377.433
Al H (396.152 nm)	0.081696 u	ppm	0.001864	2.28	279.478380	Y_R 377.433
As (188.980 nm)	0.012724	ppm	0.001067	8.39	16.718000	Y 242.219
B (249.678 nm)	0.094767	ppm	0.000481	0.51	2443.660000	Y 242.219
Ba (493.408 nm)	0.009647	ppm	0.000016	0.16	1698.520000	Y_R 488.368
Be (234.861 nm)	0.000924	ppm	0.000024	2.57	186.847000	Y_R 488.368
Bi (223.061 nm)	0.093914	ppm	0.001298	1.38	253.080000	Y 377.433
Ca (315.887 nm)	0.194411	ppm	0.002750	1.41	88.342695	Y_R 377.433
Cd (214.439 nm)	0.004691	ppm	0.000059	1.26	315.233000	Y 377.433
Co (228.615 nm)	0.010183	ppm	0.000111	1.09	144.753000	Y 242.219
Cr (205.560 nm)	0.009875	ppm	0.000083	0.84	158.710000	Y 377.433
Cu (324.754 nm)	0.013962	ppm	0.000099	0.71	382.787000	Y 377.433
Fe (238.204 nm)	0.093709	ppm	0.000392	0.42	357.489458	Y_R 377.433
Fe H (259.940 nm)	0.104411 u	ppm	0.004928	4.72	180.721000	Y_R 377.433
K (766.491 nm)	2.962950	ppm	0.070628	2.38	2441.540000	Y_R2 488.368
Li (670.783 nm)	0.019242	ppm	0.000730	3.79	-976.735000	Y_R2 488.368
Mg (279.078 nm)	0.190840	ppm	0.000634	0.33	1234.550000	Y 377.433
Mn (257.610 nm)	0.009834	ppm	0.000046	0.47	2417.360000	Y 377.433
Mo (202.032 nm)	0.017955	ppm	0.000622	3.46	163.258000	Y 377.433
Na (589.592 nm)	1.174110	ppm	0.005377	0.46	7837.470000	Y_R2 488.368
Na H (589.593 nm)	1.859556 u	ppm	0.084498	4.54	9417.960734	Y_R 488.368
Ni (231.604 nm)	0.039387	ppm	0.001126	2.86	277.623000	Y 377.433
P (213.618 nm)	2.717290 o	ppm	0.009910	0.36	5844.850000	Y 242.219
Pb (220.353 nm)	0.009632	ppm	0.000879	9.13	33.158800	Y 242.219
S (181.972 nm)	0.101182	ppm	0.005974	5.90	69.808106	Y 377.433
Sb (206.834 nm)	0.017494	ppm	0.001840	10.52	18.257500	Y 377.433
Se (196.026 nm)	0.017574	ppm	0.002078	11.82	34.871600	Y 242.219
Si (288.158 nm)	0.463811	ppm	0.008791	1.90	4990.980000	Y 377.433
Sn (189.925 nm)	0.089921	ppm	0.001477	1.64	197.321000	Y 377.433
Sr (421.552 nm)	0.009836	ppm	0.000354	3.60	2044.032028	Y_R 488.368
Th (288.505 nm)	0.015954	ppm	0.000907	5.69	114.535000	Y 377.433
Ti (336.122 nm)	0.009531	ppm	0.000013	0.14	997.633000	Y 377.433
Tl (190.794 nm)	0.012999	ppm	0.002204	16.96	23.287400	Y 377.433
U (409.013 nm)	0.061289	ppm	0.001875	3.06	40.877300	Y 377.433
V (292.401 nm)	0.009295	ppm	0.000212	2.28	367.507000	Y 377.433
Zn (206.200 nm)	0.012098 Q	ppm	0.000455	3.76	108.946000 Q	Y 377.433
Zr (343.823 nm)	0.014434	ppm	0.000084	0.58	1890.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991797	19372.035041	0.000813	0.08
Y 377.433	0.999425	990059.009229	0.000002	0.00
Y_R 377.433	0.989251	70400.300000	0.001749	0.18
Y_R 488.368	0.983244	40057.300000	0.012429	1.26
Y_R2 488.368	1.000906	80931.676635	0.007162	0.72

Sample Name: LB3 280-436732/1-F

Date: 11/13/2018 2:46:11 PM Rack:Tube: 1:23

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000366 u	ppm	0.000090	24.56	-453.599000	Y 377.433
Al (167.019 nm)	0.012452	ppm	0.000634	5.09	8.562170	Y_R 377.433
Al H (396.152 nm)	-0.005253 u	ppm	0.003657	69.62	71.878637	Y_R 377.433
As (188.980 nm)	-0.001187 u	ppm	0.003727	> 100.00	-1.702460	Y 242.219
B (249.678 nm)	0.015322	ppm	0.000004	0.03	443.984000	Y 242.219
Ba (493.408 nm)	0.000541	ppm	0.000016	2.89	732.332000	Y_R 488.368
Be (234.861 nm)	0.000056	ppm	0.000008	15.08	-67.693300	Y_R 488.368
Bi (223.061 nm)	0.002521	ppm	0.000334	13.26	22.240800	Y 377.433
Ca (315.887 nm)	0.054092	ppm	0.006284	11.62	-18.709299	Y_R 377.433
Cd (214.439 nm)	-0.000196 u	ppm	0.000022	11.20	7.225470	Y 377.433
Co (228.615 nm)	0.000167	ppm	0.000199	> 100.00	-43.036800	Y 242.219
Cr (205.560 nm)	0.000330	ppm	0.000015	4.40	11.273400	Y 377.433
Cu (324.754 nm)	-0.000322 u	ppm	0.000327	> 100.00	-386.177000	Y 377.433
Fe (238.204 nm)	0.017999	ppm	0.001061	5.89	90.412177	Y_R 377.433
Fe H (259.940 nm)	0.026431 u	ppm	0.001207	4.57	38.301000	Y_R 377.433
K (766.491 nm)	-0.074326 u	ppm	0.121728	> 100.00	-886.664000	Y_R2 488.368
Li (670.783 nm)	-0.002094 u	ppm	0.000920	43.93	-1639.180000	Y_R2 488.368
Mg (279.078 nm)	0.009312	ppm	0.000822	8.83	122.915000	Y 377.433
Mn (257.610 nm)	0.000374	ppm	0.000014	3.65	188.065000	Y 377.433
Mo (202.032 nm)	-0.000541 u	ppm	0.000078	14.43	-2.243290	Y 377.433
Na (589.592 nm)	1.362670	ppm	0.014630	1.07	9020.170000	Y_R2 488.368
Na H (589.593 nm)	2.390634 u	ppm	0.063410	2.65	11225.252857	Y_R 488.368
Ni (231.604 nm)	0.000290	ppm	0.000162	55.66	0.447834	Y 377.433
P (213.618 nm)	-0.003080 u	ppm	0.000330	10.71	28.559500	Y 242.219
Pb (220.353 nm)	0.000281 u	ppm	0.001135	> 100.00	5.049430	Y 242.219
S (181.972 nm)	0.021756	ppm	0.000317	1.46	28.068916	Y 377.433
Sb (206.834 nm)	0.001747	ppm	0.002184	> 100.00	-25.917000	Y 377.433
Se (196.026 nm)	-0.001390 u	ppm	0.000193	13.91	15.048100	Y 242.219
Si (288.158 nm)	0.030638	ppm	0.000387	1.26	1235.370000	Y 377.433
Sn (189.925 nm)	-0.001622 u	ppm	0.001514	93.36	8.812360	Y 377.433
Sr (421.552 nm)	0.000262	ppm	0.000138	52.67	181.141929	Y_R 488.368
Th (288.505 nm)	-0.000221 u	ppm	0.002360	> 100.00	72.923100	Y 377.433
Ti (336.122 nm)	0.000893	ppm	0.000039	4.40	-224.745000	Y 377.433
Tl (190.794 nm)	-0.000272 u	ppm	0.000403	> 100.00	-6.857230	Y 377.433
U (409.013 nm)	0.008921	ppm	0.002593	29.07	-190.807000	Y 377.433
V (292.401 nm)	-0.000383 u	ppm	0.000031	8.10	13.007300	Y 377.433
Zn (206.200 nm)	-0.006157 u	ppm	0.000105	1.70	7.021400	Y 377.433
Zr (343.823 nm)	-0.000061 u	ppm	0.000064	> 100.00	20.834200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.995691	19448.087866	0.000546	0.05
Y 377.433	1.003040	993639.973317	0.002734	0.27
Y_R 377.433	1.014890	72224.700000	0.003322	0.33
Y_R 488.368	1.024150	41723.700000	0.007536	0.74
Y_R2 488.368	1.002213	81037.361750	0.000073	0.01

Sample Name: LCS 280-436732/2-F

Date: 11/13/2018 2:49:32 PM Rack:Tube: 1:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.187993	ppm	0.000422	0.22	8196.090000	Y 377.433
Al (167.019 nm)	0.366170	ppm	0.004627	1.26	200.925000	Y_R 377.433
Al H (396.152 nm)	0.366383 u	ppm	0.007799	2.13	970.499021	Y_R 377.433
As (188.980 nm)	0.713656	ppm	0.001270	0.18	944.888000	Y 242.219
B (249.678 nm)	0.189475	ppm	0.000216	0.11	4830.450000	Y 242.219
Ba (493.408 nm)	2.209890 o	ppm	0.008240	0.37	235142.000000	Y_R 488.368
Be (234.861 nm)	0.008846	ppm	0.000043	0.49	2488.010000	Y_R 488.368
Bi (223.061 nm)	0.330871	ppm	0.004650	1.41	851.563000	Y 377.433
Ca (315.887 nm)	9.020057	ppm	0.043599	0.48	6821.547362	Y_R 377.433
Cd (214.439 nm)	0.202318	ppm	0.000349	0.17	12766.900000	Y 377.433
Co (228.615 nm)	0.089285	ppm	0.000043	0.05	1631.540000	Y 242.219
Cr (205.560 nm)	0.959653	ppm	0.002426	0.25	14835.600000	Y 377.433
Cu (324.754 nm)	0.398884	ppm	0.001148	0.29	21106.200000	Y 377.433
Fe (238.204 nm)	0.195836	ppm	0.001391	0.71	717.759108	Y_R 377.433
Fe H (259.940 nm)	0.202565 u	ppm	0.003363	1.66	359.986000	Y_R 377.433
K (766.491 nm)	9.103910	ppm	0.015592	0.17	9170.700000	Y_R2 488.368
Li (670.783 nm)	0.179638	ppm	0.000957	0.53	4003.270000	Y_R2 488.368
Mg (279.078 nm)	8.837920	ppm	0.009225	0.10	54209.500000	Y 377.433
Mn (257.610 nm)	0.090682	ppm	0.000120	0.13	21471.000000	Y 377.433
Mo (202.032 nm)	0.183368	ppm	0.000734	0.40	1643.390000	Y 377.433
Na (589.592 nm)	10.147100	ppm	0.006058	0.06	69294.600000	Y_R2 488.368
Na H (589.593 nm)	11.649116	ppm	0.122004	1.05	44813.598196	Y_R 488.368
Ni (231.604 nm)	0.088070	ppm	0.000336	0.38	623.167000	Y 377.433
P (213.618 nm)	1.832750	ppm	0.002740	0.15	3953.660000	Y 242.219
Pb (220.353 nm)	1.024270	ppm	0.001832	0.18	3089.410000	Y 242.219
S (181.972 nm)	0.365342	ppm	0.000131	0.04	208.749036	Y 377.433
Sb (206.834 nm)	0.087364	ppm	0.002075	2.38	241.908000	Y 377.433
Se (196.026 nm)	0.522341	ppm	0.001948	0.37	562.694000	Y 242.219
Si (288.158 nm)	1.823060	ppm	0.005522	0.30	16775.700000	Y 377.433
Sn (189.925 nm)	0.358017	ppm	0.000326	0.09	749.393000	Y 377.433
Sr (421.552 nm)	0.179858	ppm	0.000752	0.42	35124.615136	Y_R 488.368
Th (288.505 nm)	0.180621	ppm	0.001708	0.95	539.435000	Y 377.433
Ti (336.122 nm)	0.180997	ppm	0.000141	0.08	25282.500000	Y 377.433
Tl (190.794 nm)	0.361952	ppm	0.000522	0.14	816.398000	Y 377.433
U (409.013 nm)	0.361203	ppm	0.001193	0.33	1366.360000	Y 377.433
V (292.401 nm)	0.089874	ppm	0.000131	0.15	3103.510000	Y 377.433
Zn (206.200 nm)	0.457034	ppm	0.000224	0.05	2593.160000	Y 377.433
Zr (343.823 nm)	0.090350	ppm	0.000105	0.12	11681.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014341	19812.372043	0.003554	0.35
Y 377.433	1.009643	1000181.861840	0.004354	0.43
Y_R 377.433	1.011810	72005.600000	0.006196	0.61
Y_R 488.368	1.019430	41531.600000	0.009160	0.90
Y_R2 488.368	1.024104	82807.452610	0.002390	0.23

Sample Name: LCSD 280-436732/13-B

Date: 11/13/2018 2:52:54 PM Rack:Tube: 1:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.201851	ppm	0.000242	0.12	8832.430000	Y 377.433
Al (167.019 nm)	0.399452	ppm	0.002956	0.74	219.038000	Y_R 377.433
Al H (396.152 nm)	0.390140 u	ppm	0.013057	3.35	1028.204922	Y_R 377.433
As (188.980 nm)	0.772353	ppm	0.004153	0.54	1022.610000	Y 242.219
B (249.678 nm)	0.204712	ppm	0.000078	0.04	5214.170000	Y 242.219
Ba (493.408 nm)	2.384500 o	ppm	0.007069	0.30	253667.000000	Y_R 488.368
Be (234.861 nm)	0.009622	ppm	0.000060	0.62	2714.390000	Y_R 488.368
Bi (223.061 nm)	0.357752	ppm	0.000647	0.18	919.461000	Y 377.433
Ca (315.887 nm)	9.724324	ppm	0.014766	0.15	7358.841889	Y_R 377.433
Cd (214.439 nm)	0.217817	ppm	0.000848	0.39	13743.500000	Y 377.433
Co (228.615 nm)	0.095954	ppm	0.000563	0.59	1756.870000	Y 242.219
Cr (205.560 nm)	1.042690	ppm	0.000018	0.00	16118.700000	Y 377.433
Cu (324.754 nm)	0.429528	ppm	0.001446	0.34	22755.600000	Y 377.433
Fe (238.204 nm)	0.232933	ppm	0.002975	1.28	848.621586	Y_R 377.433
Fe H (259.940 nm)	0.238200 u	ppm	0.001262	0.53	425.070000	Y_R 377.433
K (766.491 nm)	9.877600	ppm	0.057576	0.58	10018.500000	Y_R2 488.368
Li (670.783 nm)	0.193322	ppm	0.001724	0.89	4428.160000	Y_R2 488.368
Mg (279.078 nm)	9.508320	ppm	0.000954	0.01	58316.400000	Y 377.433
Mn (257.610 nm)	0.098143	ppm	0.000127	0.13	23229.500000	Y 377.433
Mo (202.032 nm)	0.197969	ppm	0.000072	0.04	1774.040000	Y 377.433
Na (589.592 nm)	10.846400	ppm	0.023077	0.21	74090.600000	Y_R2 488.368
Na H (589.593 nm)	12.241124	ppm	0.025917	0.21	46990.608437	Y_R 488.368
Ni (231.604 nm)	0.095027	ppm	0.000055	0.06	672.527000	Y 377.433
P (213.618 nm)	1.981680	ppm	0.001110	0.06	4272.070000	Y 242.219
Pb (220.353 nm)	1.105210	ppm	0.001380	0.12	3333.220000	Y 242.219
S (181.972 nm)	0.375773	ppm	0.003631	0.97	214.246477	Y 377.433
Sb (206.834 nm)	0.095998	ppm	0.000954	0.99	268.503000	Y 377.433
Se (196.026 nm)	0.563533	ppm	0.000798	0.14	605.762000	Y 242.219
Si (288.158 nm)	1.978160	ppm	0.004887	0.25	18120.500000	Y 377.433
Sn (189.925 nm)	0.386822	ppm	0.003163	0.82	808.709000	Y 377.433
Sr (421.552 nm)	0.194158	ppm	0.000379	0.20	37906.966568	Y_R 488.368
Th (288.505 nm)	0.193710	ppm	0.001785	0.92	573.349000	Y 377.433
Ti (336.122 nm)	0.195514	ppm	0.000044	0.02	27338.400000	Y 377.433
Tl (190.794 nm)	0.391029	ppm	0.000620	0.16	882.482000	Y 377.433
U (409.013 nm)	0.392113	ppm	0.007921	2.02	1503.070000	Y 377.433
V (292.401 nm)	0.096766	ppm	0.000275	0.28	3336.760000	Y 377.433
Zn (206.200 nm)	0.492643	ppm	0.000351	0.07	2791.980000	Y 377.433
Zr (343.823 nm)	0.097556	ppm	0.000099	0.10	12610.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.020585	19934.326888	0.000354	0.03
Y 377.433	1.017654	1008116.923047	0.000270	0.03
Y_R 377.433	1.011700	71997.600000	0.004618	0.46
Y_R 488.368	1.018480	41492.800000	0.005924	0.58
Y_R2 488.368	1.012784	81892.128401	0.007217	0.71

Sample Name: 280-116538-A-4-E

Date: 11/13/2018 2:56:17 PM Rack:Tube: 1:26

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000004 u	ppm	0.000398	> 100.00	-436.921000	Y 377.433
Al (167.019 nm)	0.002406	ppm	0.001899	78.89	3.130760	Y_R 377.433
Al H (396.152 nm)	-0.007557 u	ppm	0.002970	39.31	73.092860	Y_R 377.433
As (188.980 nm)	0.000302 u	ppm	0.001005	> 100.00	0.268451	Y 242.219
B (249.678 nm)	0.028494	ppm	0.000329	1.15	775.431000	Y 242.219
Ba (493.408 nm)	0.003082	ppm	0.000373	12.11	1005.370000	Y_R 488.368
Be (234.861 nm)	0.000036	ppm	0.000005	15.03	-72.161300	Y_R 488.368
Bi (223.061 nm)	-0.000186 u	ppm	0.000600	> 100.00	15.411700	Y 377.433
Ca (315.887 nm)	16.243340 o	ppm	0.056822	0.35	12332.091356	Y_R 377.433
Cd (214.439 nm)	-0.000136 u	ppm	0.000021	15.79	11.068500	Y 377.433
Co (228.615 nm)	0.000352	ppm	0.000241	68.44	-39.591300	Y 242.219
Cr (205.560 nm)	0.000585	ppm	0.000170	29.08	15.193300	Y 377.433
Cu (324.754 nm)	-0.000221 u	ppm	0.000120	54.44	-387.935000	Y 377.433
Fe (238.204 nm)	0.061258	ppm	0.001550	2.53	243.014518	Y_R 377.433
Fe H (259.940 nm)	0.072031 u	ppm	0.000954	1.32	121.583000	Y_R 377.433
K (766.491 nm)	1.010710	ppm	0.022867	2.26	302.298000	Y_R2 488.368
Li (670.783 nm)	0.002378	ppm	0.000479	20.16	-1500.340000	Y_R2 488.368
Mg (279.078 nm)	4.996450	ppm	0.000991	0.02	30680.700000	Y 377.433
Mn (257.610 nm)	0.072453	ppm	0.000113	0.16	17175.000000	Y 377.433
Mo (202.032 nm)	-0.000246 u	ppm	0.000049	20.11	0.397661	Y 377.433
Na (589.592 nm)	5.790860	ppm	0.006445	0.11	37240.100000	Y_R2 488.368
Na H (589.593 nm)	6.798506 u	ppm	0.009286	0.14	26298.073542	Y_R 488.368
Ni (231.604 nm)	-0.000152 u	ppm	0.000291	> 100.00	-2.686050	Y 377.433
P (213.618 nm)	-0.002530 u	ppm	0.000208	8.21	29.734300	Y 242.219
Pb (220.353 nm)	0.000565 u	ppm	0.001316	> 100.00	5.895560	Y 242.219
S (181.972 nm)	4.376883	ppm	0.003792	0.09	2315.638766	Y 377.433
Sb (206.834 nm)	-0.000349 u	ppm	0.000214	61.26	-31.767700	Y 377.433
Se (196.026 nm)	-0.002852 u	ppm	0.001438	50.43	13.572400	Y 242.219
Si (288.158 nm)	0.962987	ppm	0.006113	0.63	9318.850000	Y 377.433
Sn (189.925 nm)	-0.002198 u	ppm	0.000319	14.49	7.625400	Y 377.433
Sr (421.552 nm)	0.049152	ppm	0.000293	0.60	9693.678158	Y_R 488.368
Th (288.505 nm)	0.000110 u	ppm	0.001923	> 100.00	75.098300	Y 377.433
Ti (336.122 nm)	0.000464	ppm	0.000084	18.02	-234.942000	Y 377.433
Tl (190.794 nm)	0.001214	ppm	0.001212	99.84	-3.475850	Y 377.433
U (409.013 nm)	-0.000567 u	ppm	0.007568	> 100.00	-235.971000	Y 377.433
V (292.401 nm)	-0.000026 u	ppm	0.000395	> 100.00	27.241100	Y 377.433
Zn (206.200 nm)	-0.005376 u	ppm	0.000427	7.94	11.383200	Y 377.433
Zr (343.823 nm)	0.000029	ppm	0.000004	14.99	32.541000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018072	19885.242538	0.001517	0.15
Y 377.433	1.015568	1006051.337185	0.001160	0.11
Y_R 377.433	1.025520	72981.200000	0.007068	0.69
Y_R 488.368	1.042690	42479.200000	0.006324	0.61
Y_R2 488.368	1.026264	82982.125696	0.002849	0.28

Sample Name: 280-116538-A-4-Esd@5

Date: 11/13/2018 2:59:39 PM Rack:Tube: 1:27

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000503 u	ppm	0.000342	68.08	-459.800000	Y 377.433
Al (167.019 nm)	-0.001043 u	ppm	0.003094	> 100.00	1.224500	Y_R 377.433
Al H (396.152 nm)	-0.019930 u	ppm	0.008595	43.13	38.447157	Y_R 377.433
As (188.980 nm)	-0.000242 u	ppm	0.001543	> 100.00	-0.451334	Y 242.219
B (249.678 nm)	0.006313	ppm	0.000620	9.82	217.271000	Y 242.219
Ba (493.408 nm)	0.000889	ppm	0.000050	5.64	769.963000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000011	64.82	-88.973600	Y_R 488.368
Bi (223.061 nm)	-0.001063 u	ppm	0.000289	27.19	13.188800	Y 377.433
Ca (315.887 nm)	3.322883	ppm	0.001861	0.06	2475.056286	Y_R 377.433
Cd (214.439 nm)	-0.000208 u	ppm	0.000030	14.58	6.472000	Y 377.433
Co (228.615 nm)	0.000346	ppm	0.000004	1.28	-39.703700	Y 242.219
Cr (205.560 nm)	0.000158	ppm	0.000004	2.74	8.605890	Y 377.433
Cu (324.754 nm)	-0.000515 u	ppm	0.000131	25.47	-397.304000	Y 377.433
Fe (238.204 nm)	0.013556	ppm	0.002795	20.62	74.736995	Y_R 377.433
Fe H (259.940 nm)	0.023348 u	ppm	0.001794	7.69	32.668800	Y_R 377.433
K (766.491 nm)	0.165492	ppm	0.065173	39.38	-623.875000	Y_R2 488.368
Li (670.783 nm)	-0.001848 u	ppm	0.002498	> 100.00	-1631.550000	Y_R2 488.368
Mg (279.078 nm)	0.942603	ppm	0.020506	2.18	5841.670000	Y 377.433
Mn (257.610 nm)	0.013900	ppm	0.000317	2.28	3375.600000	Y 377.433
Mo (202.032 nm)	-0.000225 u	ppm	0.000383	> 100.00	0.583092	Y 377.433
Na (589.592 nm)	1.318710	ppm	0.009384	0.71	8741.710000	Y_R2 488.368
Na H (589.593 nm)	1.958406 u	ppm	0.025700	1.31	9748.253119	Y_R 488.368
Ni (231.604 nm)	0.000115 u	ppm	0.000230	> 100.00	-0.793181	Y 377.433
P (213.618 nm)	-0.001974 u	ppm	0.001137	57.60	30.922500	Y 242.219
Pb (220.353 nm)	0.000342	ppm	0.000077	22.44	5.220100	Y 242.219
S (181.972 nm)	0.822967	ppm	0.019392	2.36	448.912442	Y 377.433
Sb (206.834 nm)	0.000221 u	ppm	0.001926	> 100.00	-30.166000	Y 377.433
Se (196.026 nm)	-0.003667 u	ppm	0.001438	39.22	12.679600	Y 242.219
Si (288.158 nm)	0.175428	ppm	0.003499	1.99	2490.700000	Y 377.433
Sn (189.925 nm)	-0.001704 u	ppm	0.000761	44.68	8.644040	Y 377.433
Sr (421.552 nm)	0.010354	ppm	0.000303	2.93	2144.815030	Y_R 488.368
Th (288.505 nm)	0.000657 u	ppm	0.002384	> 100.00	75.275400	Y 377.433
Ti (336.122 nm)	0.000047 u	ppm	0.000070	> 100.00	-334.339000	Y 377.433
Tl (190.794 nm)	0.000887 u	ppm	0.002163	> 100.00	-4.217360	Y 377.433
U (409.013 nm)	-0.001002 u	ppm	0.002091	> 100.00	-235.504000	Y 377.433
V (292.401 nm)	0.000244	ppm	0.000160	65.62	36.873900	Y 377.433
Zn (206.200 nm)	-0.007169 u	ppm	0.000279	3.89	1.369970	Y 377.433
Zr (343.823 nm)	-0.000090 u	ppm	0.000055	60.87	17.081800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988917	19315.775149	0.001212	0.12
Y 377.433	0.997695	988345.541489	0.002951	0.30
Y_R 377.433	0.995535	70847.500000	0.007592	0.76
Y_R 488.368	1.007310	41037.600000	0.019798	1.97
Y_R2 488.368	1.005078	81269.051427	0.005298	0.53

Sample Name: 280-116538-A-4-F MS

Date: 11/13/2018 3:03:01 PM Rack:Tube: 1:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.211146	ppm	0.000385	0.18	9259.190000	Y 377.433
Al (167.019 nm)	0.393698	ppm	0.000353	0.09	215.923000	Y_R 377.433
Al H (396.152 nm)	0.397020 u	ppm	0.007693	1.94	1051.157053	Y_R 377.433
As (188.980 nm)	0.795642	ppm	0.003345	0.42	1053.450000	Y 242.219
B (249.678 nm)	0.222942	ppm	0.000251	0.11	5672.980000	Y 242.219
Ba (493.408 nm)	2.443920 o	ppm	0.017060	0.70	259975.000000	Y_R 488.368
Be (234.861 nm)	0.009727	ppm	0.000001	0.01	2745.330000	Y_R 488.368
Bi (223.061 nm)	0.363119	ppm	0.000135	0.04	933.019000	Y 377.433
Ca (315.887 nm)	25.209554 o	ppm	0.145619	0.58	19172.546503	Y_R 377.433
Cd (214.439 nm)	0.217781	ppm	0.001077	0.49	13741.200000	Y 377.433
Co (228.615 nm)	0.097209	ppm	0.000018	0.02	1780.520000	Y 242.219
Cr (205.560 nm)	1.054400	ppm	0.000691	0.07	16299.600000	Y 377.433
Cu (324.754 nm)	0.438578	ppm	0.000779	0.18	23235.300000	Y 377.433
Fe (238.204 nm)	0.252580	ppm	0.003850	1.52	917.932268	Y_R 377.433
Fe H (259.940 nm)	0.256017 u	ppm	0.004391	1.72	457.611000	Y_R 377.433
K (766.491 nm)	11.076400	ppm	0.032676	0.30	11332.100000	Y_R2 488.368
Li (670.783 nm)	0.203650	ppm	0.001182	0.58	4748.820000	Y_R2 488.368
Mg (279.078 nm)	14.014900	ppm	0.033910	0.24	85929.400000	Y 377.433
Mn (257.610 nm)	0.164333	ppm	0.000321	0.20	38828.700000	Y 377.433
Mo (202.032 nm)	0.201799	ppm	0.000260	0.13	1808.310000	Y 377.433
Na (589.592 nm)	15.331500 o	ppm	0.003355	0.02	102782.000000	Y_R2 488.368
Na H (589.593 nm)	16.412657	ppm	0.003574	0.02	61304.304236	Y_R 488.368
Ni (231.604 nm)	0.094805	ppm	0.000260	0.27	670.958000	Y 377.433
P (213.618 nm)	2.032060	ppm	0.002753	0.14	4379.790000	Y 242.219
Pb (220.353 nm)	1.122310	ppm	0.003770	0.34	3384.740000	Y 242.219
S (181.972 nm)	4.467167	ppm	0.007975	0.18	2363.284563	Y 377.433
Sb (206.834 nm)	0.098361	ppm	0.003384	3.44	275.396000	Y 377.433
Se (196.026 nm)	0.575904	ppm	0.004169	0.72	618.749000	Y 242.219
Si (288.158 nm)	2.873150	ppm	0.015868	0.55	25880.000000	Y 377.433
Sn (189.925 nm)	0.388990	ppm	0.000837	0.22	813.174000	Y 377.433
Sr (421.552 nm)	0.245414	ppm	0.001607	0.65	47879.706013	Y_R 488.368
Th (288.505 nm)	0.200010	ppm	0.002194	1.10	590.840000	Y 377.433
Ti (336.122 nm)	0.199725	ppm	0.000179	0.09	27982.400000	Y 377.433
Tl (190.794 nm)	0.397693	ppm	0.001277	0.32	897.622000	Y 377.433
U (409.013 nm)	0.406405	ppm	0.000845	0.21	1563.540000	Y 377.433
V (292.401 nm)	0.099299	ppm	0.000263	0.26	3428.010000	Y 377.433
Zn (206.200 nm)	0.490596	ppm	0.002150	0.44	2780.550000	Y 377.433
Zr (343.823 nm)	0.099719	ppm	0.000035	0.03	12889.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991604	19368.271607	0.005081	0.51
Y 377.433	0.998677	989317.770644	0.007129	0.71
Y_R 377.433	1.007490	71698.100000	0.004714	0.47
Y_R 488.368	1.015620	41376.400000	0.006676	0.66
Y_R2 488.368	1.016020	82153.773849	0.000507	0.05

Sample Name: 280-116538-A-4-G MSD

Date: 11/13/2018 3:06:23 PM Rack:Tube: 1:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.208536	ppm	0.000289	0.14	9139.390000	Y 377.433
Al (167.019 nm)	0.394600	ppm	0.000768	0.19	216.421000	Y_R 377.433
Al H (396.152 nm)	0.392369 u	ppm	0.002941	0.75	1040.091463	Y_R 377.433
As (188.980 nm)	0.797574	ppm	0.000986	0.12	1056.010000	Y 242.219
B (249.678 nm)	0.221383	ppm	0.001292	0.58	5633.680000	Y 242.219
Ba (493.408 nm)	2.426770 o	ppm	0.015472	0.64	258156.000000	Y_R 488.368
Be (234.861 nm)	0.009885	ppm	0.000041	0.41	2791.750000	Y_R 488.368
Bi (223.061 nm)	0.362887	ppm	0.001555	0.43	932.436000	Y 377.433
Ca (315.887 nm)	24.985493 o	ppm	0.129080	0.52	19001.611824	Y_R 377.433
Cd (214.439 nm)	0.221002	ppm	0.000940	0.43	13944.200000	Y 377.433
Co (228.615 nm)	0.096377	ppm	0.000339	0.35	1764.930000	Y 242.219
Cr (205.560 nm)	1.058010	ppm	0.005262	0.50	16355.400000	Y 377.433
Cu (324.754 nm)	0.434205	ppm	0.000848	0.20	22999.600000	Y 377.433
Fe (238.204 nm)	0.264672	ppm	0.000400	0.15	960.588859	Y_R 377.433
Fe H (259.940 nm)	0.270038 u	ppm	0.000369	0.14	483.217000	Y_R 377.433
K (766.491 nm)	10.951900	ppm	0.070608	0.64	11195.700000	Y_R2 488.368
Li (670.783 nm)	0.200607	ppm	0.000338	0.17	4654.320000	Y_R2 488.368
Mg (279.078 nm)	14.208600	ppm	0.007644	0.05	87116.000000	Y 377.433
Mn (257.610 nm)	0.165284	ppm	0.000326	0.20	39052.700000	Y 377.433
Mo (202.032 nm)	0.202566	ppm	0.000382	0.19	1815.180000	Y 377.433
Na (589.592 nm)	15.210000 o	ppm	0.050180	0.33	101974.000000	Y_R2 488.368
Na H (589.593 nm)	16.404169	ppm	0.172362	1.05	61260.050954	Y_R 488.368
Ni (231.604 nm)	0.095401	ppm	0.001353	1.42	675.195000	Y 377.433
P (213.618 nm)	2.037760	ppm	0.000020	0.00	4391.970000	Y 242.219
Pb (220.353 nm)	1.125970	ppm	0.005906	0.52	3395.740000	Y 242.219
S (181.972 nm)	4.494937	ppm	0.004519	0.10	2377.871886	Y 377.433
Sb (206.834 nm)	0.098160	ppm	0.000388	0.39	274.966000	Y 377.433
Se (196.026 nm)	0.580907	ppm	0.000861	0.15	623.978000	Y 242.219
Si (288.158 nm)	2.892200	ppm	0.009257	0.32	26045.100000	Y 377.433
Sn (189.925 nm)	0.394112	ppm	0.001314	0.33	823.720000	Y 377.433
Sr (421.552 nm)	0.243927	ppm	0.001234	0.51	47590.330708	Y_R 488.368
Th (288.505 nm)	0.201529	ppm	0.004385	2.18	594.533000	Y 377.433
Ti (336.122 nm)	0.199358	ppm	0.000358	0.18	27929.900000	Y 377.433
Tl (190.794 nm)	0.403367	ppm	0.000447	0.11	910.528000	Y 377.433
U (409.013 nm)	0.397298	ppm	0.001682	0.42	1523.140000	Y 377.433
V (292.401 nm)	0.099260	ppm	0.000050	0.05	3425.690000	Y 377.433
Zn (206.200 nm)	0.499567	ppm	0.000287	0.06	2830.640000	Y 377.433
Zr (343.823 nm)	0.099453	ppm	0.000178	0.18	12855.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017727	19878.514749	0.003498	0.34
Y 377.433	1.015063	1005550.744972	0.002270	0.22
Y_R 377.433	1.015780	72288.200000	0.001125	0.11
Y_R 488.368	1.021960	41634.700000	0.001734	0.17
Y_R2 488.368	1.012690	81884.573286	0.004276	0.42

Sample Name: 280-116538-A-4-Epds

Date: 11/13/2018 3:09:46 PM Rack:Tube: 1:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.043777	ppm	0.000042	0.10	1565.860000	Y 377.433
Al (167.019 nm)	0.967396	ppm	0.007068	0.73	528.243000	Y_R 377.433
Al H (396.152 nm)	0.976679	ppm	0.010539	1.08	2418.253254	Y_R 377.433
As (188.980 nm)	0.192380	ppm	0.000557	0.29	254.609000	Y 242.219
B (249.678 nm)	0.125060	ppm	0.000100	0.08	3206.240000	Y 242.219
Ba (493.408 nm)	0.099177	ppm	0.001139	1.15	11206.200000	Y_R 488.368
Be (234.861 nm)	0.047904	ppm	0.000110	0.23	13898.900000	Y_R 488.368
Bi (223.061 nm)	-0.003005 u	ppm	0.000982	32.67	8.451060	Y 377.433
Ca (315.887 nm)	35.226233 o	ppm	0.112914	0.32	26814.193575	Y_R 377.433
Cd (214.439 nm)	0.048011	ppm	0.000110	0.23	3045.620000	Y 377.433
Co (228.615 nm)	0.047138	ppm	0.000046	0.10	837.844000	Y 242.219
Cr (205.560 nm)	0.049098	ppm	0.000015	0.03	764.098000	Y 377.433
Cu (324.754 nm)	0.046691	ppm	0.000003	0.01	2129.830000	Y 377.433
Fe (238.204 nm)	1.043321	ppm	0.007091	0.68	3707.388556	Y_R 377.433
Fe H (259.940 nm)	1.045500 u	ppm	0.006581	0.63	1899.500000	Y_R 377.433
K (766.491 nm)	20.467500	ppm	0.080557	0.39	21622.700000	Y_R2 488.368
Li (670.783 nm)	0.100848	ppm	0.002964	2.94	1557.000000	Y_R2 488.368
Mg (279.078 nm)	23.880700	ppm	0.030069	0.13	146376.000000	Y 377.433
Mn (257.610 nm)	0.118889	ppm	0.000292	0.25	28118.700000	Y 377.433
Mo (202.032 nm)	0.049129	ppm	0.000410	0.83	442.203000	Y 377.433
Na (589.592 nm)	25.176800 o	ppm	0.072595	0.29	160943.000000	Y_R2 488.368
Na H (589.593 nm)	26.257502	ppm	0.144382	0.55	92910.572959	Y_R 488.368
Ni (231.604 nm)	0.046753	ppm	0.000383	0.82	330.106000	Y 377.433
P (213.618 nm)	1.993550	ppm	0.011454	0.57	4297.460000	Y 242.219
Pb (220.353 nm)	0.096857	ppm	0.000152	0.16	296.759000	Y 242.219
S (181.972 nm)	4.357234	ppm	0.013360	0.31	2305.433217	Y 377.433
Sb (206.834 nm)	0.093330	ppm	0.003329	3.57	229.691000	Y 377.433
Se (196.026 nm)	0.191579	ppm	0.002468	1.29	216.714000	Y 242.219
Si (288.158 nm)	5.715510	ppm	0.002435	0.04	50523.300000	Y 377.433
Sn (189.925 nm)	0.095007	ppm	0.000387	0.41	207.793000	Y 377.433
Sr (421.552 nm)	0.097051	ppm	0.000293	0.30	19013.069167	Y_R 488.368
Th (288.505 nm)	0.193978	ppm	0.002136	1.10	573.644000	Y 377.433
Ti (336.122 nm)	0.049492	ppm	0.000119	0.24	6760.190000	Y 377.433
Tl (190.794 nm)	0.197127	ppm	0.000018	0.01	442.111000	Y 377.433
U (409.013 nm)	0.491415	ppm	0.005930	1.21	1943.930000	Y 377.433
V (292.401 nm)	0.049623	ppm	0.000129	0.26	1838.660000	Y 377.433
Zn (206.200 nm)	0.188686	ppm	0.000155	0.08	1094.890000	Y 377.433
Zr (343.823 nm)	0.049012	ppm	0.000132	0.27	6352.350000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014825	19821.816489	0.003891	0.38
Y 377.433	1.014038	1004535.540555	0.003039	0.30
Y_R 377.433	1.011630	71993.200000	0.007813	0.77
Y_R 488.368	1.026450	41817.400000	0.002298	0.22
Y_R2 488.368	1.018240	82333.318016	0.008585	0.84

Sample Name: 280-116610-A-1-F

Date: 11/13/2018 3:13:09 PM Rack:Tube: 1:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000120	ppm	0.000147	> 100.00	-431.613000	Y 377.433
Al (167.019 nm)	0.001289 u	ppm	0.002166	> 100.00	2.505850	Y_R 377.433
Al H (396.152 nm)	-0.006374 u	ppm	0.001041	16.33	85.083403	Y_R 377.433
As (188.980 nm)	0.003162	ppm	0.001316	41.62	4.056140	Y 242.219
B (249.678 nm)	0.116363	ppm	0.000193	0.17	2986.900000	Y 242.219
Ba (493.408 nm)	0.023297	ppm	0.000074	0.32	3154.900000	Y_R 488.368
Be (234.861 nm)	0.000043	ppm	0.000020	47.49	-71.039800	Y_R 488.368
Bi (223.061 nm)	-0.001573 u	ppm	0.000886	56.30	11.903200	Y 377.433
Ca (315.887 nm)	38.528428 o	ppm	0.163334	0.42	29333.417578	Y_R 377.433
Cd (214.439 nm)	-0.000056 u	ppm	0.000040	71.53	16.040600	Y 377.433
Co (228.615 nm)	0.002154	ppm	0.000047	2.17	-5.861530	Y 242.219
Cr (205.560 nm)	0.000484	ppm	0.000080	16.52	13.640600	Y 377.433
Cu (324.754 nm)	0.001009	ppm	0.000183	18.17	-334.993000	Y 377.433
Fe (238.204 nm)	0.034668	ppm	0.000214	0.62	149.214860	Y_R 377.433
Fe H (259.940 nm)	0.040801 u	ppm	0.000195	0.48	64.544800	Y_R 377.433
K (766.491 nm)	16.225900	ppm	0.224399	1.38	16974.900000	Y_R2 488.368
Li (670.783 nm)	0.028555	ppm	0.001496	5.24	-687.580000	Y_R2 488.368
Mg (279.078 nm)	20.384300	ppm	0.009844	0.05	124967.000000	Y 377.433
Mn (257.610 nm)	0.518633	ppm	0.000369	0.07	122327.000000	Y 377.433
Mo (202.032 nm)	0.000212 u	ppm	0.000621	> 100.00	4.491570	Y 377.433
Na (589.592 nm)	83.355300 o	ppm	0.057023	0.07	531471.000000	Y_R2 488.368
Na H (589.593 nm)	86.254283	ppm	0.167597	0.19	297965.846761	Y_R 488.368
Ni (231.604 nm)	0.027508	ppm	0.000113	0.41	193.396000	Y 377.433
P (213.618 nm)	0.129246	ppm	0.007219	5.59	311.478000	Y 242.219
Pb (220.353 nm)	0.001617	ppm	0.001252	77.46	9.074160	Y 242.219
S (181.972 nm)	10.243387	ppm	0.044755	0.44	5397.935601	Y 377.433
Sb (206.834 nm)	0.000536 u	ppm	0.000764	> 100.00	-29.300900	Y 377.433
Se (196.026 nm)	-0.002472 u	ppm	0.002783	> 100.00	14.352000	Y 242.219
Si (288.158 nm)	3.193530	ppm	0.001925	0.06	28657.700000	Y 377.433
Sn (189.925 nm)	-0.001612 u	ppm	0.000321	19.88	8.831970	Y 377.433
Sr (421.552 nm)	0.867720	ppm	0.002353	0.27	168959.714761	Y_R 488.368
Th (288.505 nm)	0.001072 u	ppm	0.002176	> 100.00	86.422100	Y 377.433
Ti (336.122 nm)	0.000481	ppm	0.000019	3.88	-163.087000	Y 377.433
Tl (190.794 nm)	0.000496 u	ppm	0.000904	> 100.00	-5.105470	Y 377.433
U (409.013 nm)	-0.007055 u	ppm	0.003443	48.80	-269.000000	Y 377.433
V (292.401 nm)	0.001376	ppm	0.000352	25.58	78.866100	Y 377.433
Zn (206.200 nm)	0.003820	ppm	0.000128	3.36	62.723500	Y 377.433
Zr (343.823 nm)	0.000278	ppm	0.000018	6.42	64.654500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014474	19814.960326	0.003590	0.35
Y 377.433	1.013154	1003659.484516	0.003935	0.39
Y_R 377.433	1.024520	72909.900000	0.002268	0.22
Y_R 488.368	1.046480	42633.300000	0.003246	0.31
Y_R2 488.368	1.017322	82259.077497	0.002074	0.20

Sample Name: 280-116610-A-3-F

Date: 11/13/2018 3:16:31 PM Rack:Tube: 1:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000342	ppm	0.000037	10.79	-421.190000	Y 377.433
Al (167.019 nm)	0.005640	ppm	0.003319	58.85	4.888410	Y_R 377.433
Al H (396.152 nm)	-0.013650 u	ppm	0.013483	98.78	56.718966	Y_R 377.433
As (188.980 nm)	0.001462	ppm	0.001239	84.75	1.804860	Y 242.219
B (249.678 nm)	0.058644	ppm	0.000140	0.24	1534.190000	Y 242.219
Ba (493.408 nm)	0.021117	ppm	0.000059	0.28	2917.810000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000004	6.55	-66.644800	Y_R 488.368
Bi (223.061 nm)	-0.002475 u	ppm	0.001819	73.46	9.628940	Y 377.433
Ca (315.887 nm)	11.220009 o	ppm	0.076846	0.68	8499.784815	Y_R 377.433
Cd (214.439 nm)	0.000041	ppm	0.000014	33.48	22.209700	Y 377.433
Co (228.615 nm)	0.000367	ppm	0.000258	70.39	-39.298400	Y 242.219
Cr (205.560 nm)	0.000925	ppm	0.000136	14.72	20.446700	Y 377.433
Cu (324.754 nm)	0.017891	ppm	0.000093	0.52	586.086000	Y 377.433
Fe (238.204 nm)	0.061741	ppm	0.000390	0.63	244.719141	Y_R 377.433
Fe H (259.940 nm)	0.072505 u	ppm	0.004127	5.69	122.449000	Y_R 377.433
K (766.491 nm)	5.080940	ppm	0.053083	1.04	4762.400000	Y_R2 488.368
Li (670.783 nm)	0.009156	ppm	0.001283	14.01	-1289.900000	Y_R2 488.368
Mg (279.078 nm)	8.259170	ppm	0.003952	0.05	50672.300000	Y 377.433
Mn (257.610 nm)	0.047507	ppm	0.000025	0.05	11295.900000	Y 377.433
Mo (202.032 nm)	0.001673	ppm	0.000278	16.62	17.564700	Y 377.433
Na (589.592 nm)	175.357000 o	ppm	1.375740	0.78	1117640.000000	Y_R2 488.368
Na H (589.593 nm)	180.020115	ppm	0.415588	0.23	618538.172124	Y_R 488.368
Ni (231.604 nm)	0.017014	ppm	0.000525	3.09	119.006000	Y 377.433
P (213.618 nm)	0.026044	ppm	0.000100	0.38	90.826700	Y 242.219
Pb (220.353 nm)	0.002025	ppm	0.000127	6.29	10.293400	Y 242.219
S (181.972 nm)	13.071012 o	ppm	0.015496	0.12	6881.892112	Y 377.433
Sb (206.834 nm)	-0.001856 u	ppm	0.000080	4.33	-35.987800	Y 377.433
Se (196.026 nm)	-0.001794 u	ppm	0.001916	> 100.00	14.657400	Y 242.219
Si (288.158 nm)	0.989009	ppm	0.003576	0.36	9544.460000	Y 377.433
Sn (189.925 nm)	-0.001072 u	ppm	0.000317	29.54	9.944290	Y 377.433
Sr (421.552 nm)	0.316306	ppm	0.001941	0.61	61672.916744	Y_R 488.368
Th (288.505 nm)	-0.002212 u	ppm	0.000090	4.05	68.832900	Y 377.433
Ti (336.122 nm)	0.000676	ppm	0.000101	14.90	-220.705000	Y 377.433
Tl (190.794 nm)	0.001109	ppm	0.000148	13.37	-3.719790	Y 377.433
U (409.013 nm)	-0.004981 u	ppm	0.000795	15.96	-254.636000	Y 377.433
V (292.401 nm)	0.000274	ppm	0.000252	92.04	36.389100	Y 377.433
Zn (206.200 nm)	0.009039	ppm	0.000394	4.35	91.865900	Y 377.433
Zr (343.823 nm)	-0.000026 u	ppm	0.000055	> 100.00	25.537600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008583	19699.899658	0.000588	0.06
Y 377.433	1.004042	994633.119470	0.000930	0.09
Y_R 377.433	1.031850	73432.100000	0.003398	0.33
Y_R 488.368	1.044710	42561.500000	0.000771	0.07
Y_R2 488.368	1.037130	83860.725028	0.003865	0.37

Sample Name: CCVH-5417909

Date: 11/13/2018 3:19:54 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002495 u	ppm	0.000192	7.69	-789.233000	Y 377.433
Al (167.019 nm)	44.727000 o	ppm	0.288883	0.65	24343.200000	Y_R 377.433
Al H (396.152 nm)	49.617232	ppm	0.151586	0.31	117728.051298	Y_R 377.433
As (188.980 nm)	-0.000252 u	ppm	0.001736	> 100.00	-0.918898	Y 242.219
B (249.678 nm)	-0.000162 u	ppm	0.000272	> 100.00	-19.671800	Y 242.219
Ba (493.408 nm)	0.000106 u	ppm	0.000192	> 100.00	727.759000	Y_R 488.368
Be (234.861 nm)	0.000005 u	ppm	0.000017	> 100.00	1407.920000	Y_R 488.368
Bi (223.061 nm)	0.973288	ppm	0.000669	0.07	2482.100000	Y 377.433
Ca (315.887 nm)	-0.011232 u	ppm	0.004290	38.20	-68.544863	Y_R 377.433
Cd (214.439 nm)	-0.000499 u	ppm	0.000027	5.40	37.575500	Y 377.433
Co (228.615 nm)	0.002955	ppm	0.000568	19.22	9.140870	Y 242.219
Cr (205.560 nm)	-0.000143 u	ppm	0.000188	> 100.00	-9.689580	Y 377.433
Cu (324.754 nm)	-0.007859 u	ppm	0.000455	5.79	-463.237000	Y 377.433
Fe (238.204 nm)	49.440545 o	ppm	0.196570	0.40	174435.803249	Y_R 377.433
Fe H (259.940 nm)	49.335900	ppm	0.397238	0.81	90095.800000	Y_R 377.433
K (766.491 nm)	0.037636	ppm	0.048701	> 100.00	-763.978000	Y_R2 488.368
Li (670.783 nm)	-0.001965 u	ppm	0.000598	30.43	-1635.180000	Y_R2 488.368
Mg (279.078 nm)	-0.017865 u	ppm	0.001664	9.31	-410.177000	Y 377.433
Mn (257.610 nm)	0.001211	ppm	0.000003	0.21	385.251000	Y 377.433
Mo (202.032 nm)	-0.000378 u	ppm	0.000174	45.96	-0.787558	Y 377.433
Na (589.592 nm)	243.069000 o	ppm	1.058150	0.44	1549020.000000	Y_R2 488.368
Na H (589.593 nm)	250.094137	ppm	0.896539	0.36	858093.267375	Y_R 488.368
Ni (231.604 nm)	0.003993	ppm	0.000503	12.59	28.781200	Y 377.433
P (213.618 nm)	-0.009903 u	ppm	0.002579	26.04	13.970000	Y 242.219
Pb (220.353 nm)	-0.003168 u	ppm	0.000284	8.96	11.582300	Y 242.219
S (181.972 nm)	4.849522	ppm	0.006138	0.13	2563.702466	Y 377.433
Sb (206.834 nm)	-0.005694 u	ppm	0.000389	6.84	-92.205900	Y 377.433
Se (196.026 nm)	-0.001880 u	ppm	0.002276	> 100.00	5.310270	Y 242.219
Si (288.158 nm)	0.014680	ppm	0.001026	6.99	1097.010000	Y 377.433
Sn (189.925 nm)	0.000324	ppm	0.000110	34.13	12.818400	Y 377.433
Sr (421.552 nm)	0.000499	ppm	0.000127	25.43	227.253910	Y_R 488.368
Th (288.505 nm)	4.999730	ppm	0.011343	0.23	12862.500000	Y 377.433
Ti (336.122 nm)	0.001552	ppm	0.000037	2.38	-131.518000	Y 377.433
Tl (190.794 nm)	-0.003961 u	ppm	0.001909	48.19	-16.581900	Y 377.433
U (409.013 nm)	9.960670	ppm	0.015181	0.15	44075.600000	Y 377.433
V (292.401 nm)	0.002312	ppm	0.000481	20.82	-42.271400	Y 377.433
Zn (206.200 nm)	-0.006764 u	ppm	0.000451	6.66	3.632780	Y 377.433
Zr (343.823 nm)	-0.004646 u	ppm	0.000059	1.27	-431.199000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012518	19776.757478	0.000052	0.01
Y 377.433	1.001170	991787.377461	0.000666	0.07
Y_R 377.433	1.017630	72420.100000	0.006900	0.68
Y_R 488.368	1.022870	41671.700000	0.001953	0.19
Y_R2 488.368	1.022334	82664.312231	0.004757	0.47

Sample Name: CCV-5416701

Date: 11/13/2018 3:23:17 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.483576	ppm	0.000021	0.00	21802.400000	Y 377.433
Al (167.019 nm)	0.491205	ppm	0.002696	0.55	270.365000	Y_R 377.433
Al H (396.152 nm)	0.492522 u	ppm	0.012537	2.55	1291.368690	Y_R 377.433
As (188.980 nm)	0.969238	ppm	0.000093	0.01	1283.310000	Y 242.219
B (249.678 nm)	0.484434	ppm	0.000715	0.15	12268.100000	Y 242.219
Ba (493.408 nm)	0.492462	ppm	0.001203	0.24	52936.400000	Y_R 488.368
Be (234.861 nm)	0.481533	ppm	0.002006	0.42	140235.000000	Y_R 488.368
Bi (223.061 nm)	-0.002319 u	ppm	0.001218	52.52	10.418500	Y 377.433
Ca (315.887 nm)	4.975352	ppm	0.009836	0.20	3735.993179	Y_R 377.433
Cd (214.439 nm)	0.494265	ppm	0.001931	0.39	31163.900000	Y 377.433
Co (228.615 nm)	0.496014	ppm	0.001521	0.31	9256.060000	Y 242.219
Cr (205.560 nm)	0.491031	ppm	0.001609	0.33	7588.380000	Y 377.433
Cu (324.754 nm)	0.483034	ppm	0.000086	0.02	25632.200000	Y 377.433
Fe (238.204 nm)	2.488670	ppm	0.020801	0.84	8806.071552	Y_R 377.433
Fe H (259.940 nm)	2.498010 u	ppm	0.007696	0.31	4552.320000	Y_R 377.433
K (766.491 nm)	49.323500	ppm	0.002612	0.01	53242.700000	Y_R2 488.368
Li (670.783 nm)	0.996230	ppm	0.002173	0.22	29357.100000	Y_R2 488.368
Mg (279.078 nm)	19.599500	ppm	0.021763	0.11	120154.000000	Y 377.433
Mn (257.610 nm)	0.495181	ppm	0.000417	0.08	116800.000000	Y 377.433
Mo (202.032 nm)	0.496910	ppm	0.000303	0.06	4448.990000	Y 377.433
Na (589.592 nm)	5.050830	ppm	0.021631	0.43	33479.700000	Y_R2 488.368
Na H (589.593 nm)	6.033523 u	ppm	0.057436	0.95	24111.593983	Y_R 488.368
Ni (231.604 nm)	0.496858	ppm	0.003357	0.68	3521.930000	Y 377.433
P (213.618 nm)	0.944327	ppm	0.001542	0.16	2054.160000	Y 242.219
Pb (220.353 nm)	0.991284	ppm	0.001352	0.14	2987.810000	Y 242.219
S (181.972 nm)	0.006112	ppm	0.000853	13.95	21.075153	Y 377.433
Sb (206.834 nm)	0.982043	ppm	0.001792	0.18	2726.250000	Y 377.433
Se (196.026 nm)	0.962178	ppm	0.003156	0.33	1022.510000	Y 242.219
Si (288.158 nm)	4.877940	ppm	0.004517	0.09	43261.600000	Y 377.433
Sn (189.925 nm)	0.979910	ppm	0.001548	0.16	2030.020000	Y 377.433
Sr (421.552 nm)	0.490510	ppm	0.000516	0.11	95567.262452	Y_R 488.368
Th (288.505 nm)	0.005295	ppm	0.004166	78.68	102.325000	Y 377.433
Ti (336.122 nm)	0.498657	ppm	0.000110	0.02	70209.300000	Y 377.433
Tl (190.794 nm)	0.993290	ppm	0.000707	0.07	2252.260000	Y 377.433
U (409.013 nm)	-0.005159 u	ppm	0.003373	65.38	-289.479000	Y 377.433
V (292.401 nm)	0.495250	ppm	0.000594	0.12	18204.100000	Y 377.433
Zn (206.200 nm)	0.493704	ppm	0.001163	0.24	2797.900000	Y 377.433
Zr (343.823 nm)	0.496496	ppm	0.000647	0.13	64065.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018331	19890.296787	0.001268	0.12
Y 377.433	1.015089	1005576.298700	0.001053	0.10
Y_R 377.433	1.027180	73099.700000	0.007468	0.73
Y_R 488.368	1.035730	42195.400000	0.004949	0.48
Y_R2 488.368	1.025533	82922.992861	0.004649	0.45

Sample Name: CCB

Date: 11/13/2018 3:26:39 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000440 u	ppm	0.000012	2.79	-456.970000	Y 377.433
Al (167.019 nm)	-0.000887 u	ppm	0.000071	7.98	1.300100	Y_R 377.433
Al H (396.152 nm)	-0.014360 u	ppm	0.005293	36.86	50.250830	Y_R 377.433
As (188.980 nm)	0.001524	ppm	0.000982	64.43	1.887140	Y 242.219
B (249.678 nm)	0.002359	ppm	0.000129	5.48	117.766000	Y 242.219
Ba (493.408 nm)	-0.000154 u	ppm	0.000090	58.33	658.504000	Y_R 488.368
Be (234.861 nm)	0.000050	ppm	0.000009	17.60	-69.761200	Y_R 488.368
Bi (223.061 nm)	-0.000031 u	ppm	0.001711	> 100.00	15.792200	Y 377.433
Ca (315.887 nm)	-0.003909 u	ppm	0.009706	> 100.00	-62.958811	Y_R 377.433
Cd (214.439 nm)	-0.000153 u	ppm	0.000007	4.37	9.909370	Y 377.433
Co (228.615 nm)	0.000281	ppm	0.000074	26.19	-40.916000	Y 242.219
Cr (205.560 nm)	-0.000073 u	ppm	0.000024	32.35	5.050560	Y 377.433
Cu (324.754 nm)	-0.000841 u	ppm	0.000119	14.10	-411.937000	Y 377.433
Fe (238.204 nm)	-0.001726 u	ppm	0.001773	> 100.00	20.828546	Y_R 377.433
Fe H (259.940 nm)	0.011677 u	ppm	0.001811	15.51	11.353400	Y_R 377.433
K (766.491 nm)	-0.005763 u	ppm	0.052085	> 100.00	-811.534000	Y_R2 488.368
Li (670.783 nm)	-0.000219 u	ppm	0.000731	> 100.00	-1580.970000	Y_R2 488.368
Mg (279.078 nm)	0.001538	ppm	0.000934	60.74	75.343300	Y 377.433
Mn (257.610 nm)	-0.000091 u	ppm	0.000052	57.47	78.391500	Y 377.433
Mo (202.032 nm)	-0.000607 u	ppm	0.000015	2.46	-2.839160	Y 377.433
Na (589.592 nm)	0.082218	ppm	0.007478	9.10	861.403000	Y_R2 488.368
Na H (589.593 nm)	0.577319 u	ppm	0.019937	3.45	5025.495089	Y_R 488.368
Ni (231.604 nm)	-0.000018 u	ppm	0.000060	> 100.00	-1.735680	Y 377.433
P (213.618 nm)	-0.003992 u	ppm	0.002152	53.92	26.609800	Y 242.219
Pb (220.353 nm)	0.000956 u	ppm	0.001358	> 100.00	7.079460	Y 242.219
S (181.972 nm)	0.004496	ppm	0.003030	67.39	19.002333	Y 377.433
Sb (206.834 nm)	0.001360 u	ppm	0.001946	> 100.00	-27.000900	Y 377.433
Se (196.026 nm)	-0.000550 u	ppm	0.003075	> 100.00	15.930300	Y 242.219
Si (288.158 nm)	-0.003040 u	ppm	0.000809	26.62	943.374000	Y 377.433
Sn (189.925 nm)	-0.001312 u	ppm	0.000785	59.81	9.450720	Y 377.433
Sr (421.552 nm)	0.000118	ppm	0.000002	1.41	153.234823	Y_R 488.368
Th (288.505 nm)	0.001352	ppm	0.001142	84.44	76.863000	Y 377.433
Ti (336.122 nm)	0.000239	ppm	0.000079	32.87	-317.451000	Y 377.433
Tl (190.794 nm)	0.002036	ppm	0.000212	10.39	-1.604180	Y 377.433
U (409.013 nm)	0.003256	ppm	0.000663	20.37	-216.002000	Y 377.433
V (292.401 nm)	-0.000282 u	ppm	0.000109	38.74	17.809900	Y 377.433
Zn (206.200 nm)	-0.006951 u	ppm	0.000161	2.32	2.589100	Y 377.433
Zr (343.823 nm)	0.000021	ppm	0.000006	28.59	31.340800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.013804	19801.871996	0.006741	0.66
Y 377.433	1.011332	1001855.099451	0.008790	0.87
Y_R 377.433	1.023790	72858.000000	0.002456	0.24
Y_R 488.368	1.038950	42326.600000	0.002233	0.21
Y_R2 488.368	1.023855	82787.291813	0.004082	0.40

Sample Name: CCVL-5425098

Date: 11/13/2018 3:30:01 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009112	ppm	0.000166	1.82	-17.067300	Y 377.433
Al (167.019 nm)	0.093239	ppm	0.005900	6.33	52.521300	Y_R 377.433
Al H (396.152 nm)	0.076259 u	ppm	0.001208	1.58	266.576825	Y_R 377.433
As (188.980 nm)	0.012727	ppm	0.001019	8.00	16.721100	Y 242.219
B (249.678 nm)	0.093769	ppm	0.000046	0.05	2418.510000	Y 242.219
Ba (493.408 nm)	0.009508	ppm	0.000120	1.26	1683.810000	Y_R 488.368
Be (234.861 nm)	0.000935	ppm	0.000020	2.10	190.014000	Y_R 488.368
Bi (223.061 nm)	0.093587	ppm	0.000159	0.17	252.253000	Y 377.433
Ca (315.887 nm)	0.188002	ppm	0.010576	5.63	83.453659	Y_R 377.433
Cd (214.439 nm)	0.004779	ppm	0.000020	0.42	320.750000	Y 377.433
Co (228.615 nm)	0.010126	ppm	0.000054	0.53	143.680000	Y 242.219
Cr (205.560 nm)	0.009682	ppm	0.000024	0.25	155.720000	Y 377.433
Cu (324.754 nm)	0.013893	ppm	0.000032	0.23	378.744000	Y 377.433
Fe (238.204 nm)	0.096740	ppm	0.001191	1.23	368.183458	Y_R 377.433
Fe H (259.940 nm)	0.107969 u	ppm	0.004021	3.72	187.218000	Y_R 377.433
K (766.491 nm)	3.014690	ppm	0.003988	0.13	2498.240000	Y_R2 488.368
Li (670.783 nm)	0.019950	ppm	0.001273	6.38	-954.756000	Y_R2 488.368
Mg (279.078 nm)	0.193028	ppm	0.001707	0.88	1248.050000	Y 377.433
Mn (257.610 nm)	0.009875	ppm	0.000025	0.25	2427.220000	Y 377.433
Mo (202.032 nm)	0.017837	ppm	0.000099	0.55	162.199000	Y 377.433
Na (589.592 nm)	1.107070	ppm	0.027678	2.50	7409.790000	Y_R2 488.368
Na H (589.593 nm)	1.495366 u	ppm	0.000680	0.05	8172.581047	Y_R 488.368
Ni (231.604 nm)	0.039737	ppm	0.000145	0.37	280.104000	Y 377.433
P (213.618 nm)	2.682480 o	ppm	0.010891	0.41	5770.430000	Y 242.219
Pb (220.353 nm)	0.008845	ppm	0.000246	2.78	30.778300	Y 242.219
S (181.972 nm)	0.086397	ppm	0.001870	2.16	62.042496	Y 377.433
Sb (206.834 nm)	0.021407	ppm	0.000216	1.01	29.208200	Y 377.433
Se (196.026 nm)	0.016443	ppm	0.001757	10.69	33.688300	Y 242.219
Si (288.158 nm)	0.461753	ppm	0.002394	0.52	4973.140000	Y 377.433
Sn (189.925 nm)	0.091963	ppm	0.001768	1.92	201.526000	Y 377.433
Sr (421.552 nm)	0.009802	ppm	0.000003	0.03	2037.454860	Y_R 488.368
Th (288.505 nm)	0.014274	ppm	0.002122	14.87	110.245000	Y 377.433
Ti (336.122 nm)	0.009594	ppm	0.000036	0.38	1006.530000	Y 377.433
Tl (190.794 nm)	0.014413	ppm	0.000206	1.43	26.504700	Y 377.433
U (409.013 nm)	0.057856	ppm	0.001533	2.65	25.607600	Y 377.433
V (292.401 nm)	0.009798	ppm	0.000112	1.15	386.049000	Y 377.433
Zn (206.200 nm)	0.012442 Q	ppm	0.000047	0.38	110.862000 Q	Y 377.433
Zr (343.823 nm)	0.014506	ppm	0.000089	0.61	1899.690000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028760	20094.010465	0.004894	0.48
Y 377.433	1.026716	1017094.004432	0.006618	0.64
Y_R 377.433	1.036980	73796.800000	0.001865	0.18
Y_R 488.368	1.048250	42705.700000	0.003586	0.34
Y_R2 488.368	1.031012	83366.053331	0.000444	0.04

Sample Name: 280-116610-D-5-F

Date: 11/13/2018 3:33:24 PM Rack:Tube: 1:33

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000488	ppm	0.000109	22.40	-438.458000	Y 377.433
Al (167.019 nm)	0.164836	ppm	0.001315	0.80	91.455400	Y_R 377.433
Al H (396.152 nm)	0.158945 u	ppm	0.002254	1.42	487.756757	Y_R 377.433
As (188.980 nm)	0.222604	ppm	0.002421	1.09	294.639000	Y 242.219
B (249.678 nm)	15.541800 o	ppm	0.054747	0.35	391198.000000	Y 242.219
Ba (493.408 nm)	0.011840	ppm	0.000004	0.03	1930.580000	Y_R 488.368
Be (234.861 nm)	0.000175	ppm	0.000004	2.24	-51.949300	Y_R 488.368
Bi (223.061 nm)	-0.003517 u	ppm	0.003753	> 100.00	7.009640	Y 377.433
Ca (315.887 nm)	1.955820	ppm	0.013640	0.70	1432.121519	Y_R 377.433
Cd (214.439 nm)	-0.000169 u	ppm	0.000057	33.41	9.023270	Y 377.433
Co (228.615 nm)	0.001981	ppm	0.000068	3.45	-0.973397	Y 242.219
Cr (205.560 nm)	0.019454	ppm	0.000070	0.36	306.105000	Y 377.433
Cu (324.754 nm)	0.004460	ppm	0.000080	1.79	-126.019000	Y 377.433
Fe (238.204 nm)	0.128632	ppm	0.001450	1.13	480.687530	Y_R 377.433
Fe H (259.940 nm)	0.139057 u	ppm	0.000978	0.70	243.998000	Y_R 377.433
K (766.491 nm)	234.509000 o	ppm	0.317020	0.14	256166.000000	Y_R2 488.368
Li (670.783 nm)	6.816620 o	ppm	0.032459	0.48	210070.000000	Y_R2 488.368
Mg (279.078 nm)	5.286790	ppm	0.007758	0.15	32459.500000	Y 377.433
Mn (257.610 nm)	0.135610	ppm	0.000371	0.27	32059.300000	Y 377.433
Mo (202.032 nm)	0.343501	ppm	0.000053	0.02	3076.280000	Y 377.433
Na (589.592 nm)	2586.290000 o	ppm	14.083400	0.54	16478600.000000	Y_R2 488.368
Na H (589.593 nm)	2430.486577	ppm	4.327250	0.18	8312611.192124	Y_R 488.368
Ni (231.604 nm)	0.222162	ppm	0.000219	0.10	1573.290000	Y 377.433
P (213.618 nm)	9.492690 o	ppm	0.002726	0.03	20331.000000	Y 242.219
Pb (220.353 nm)	-0.022629 u	ppm	0.001213	5.36	-65.636400	Y 242.219
S (181.972 nm)	1042.833866 bo	ppm	2.109485	0.20	547732.363273	Y 377.433
Sb (206.834 nm)	0.058969	ppm	0.002651	4.50	132.400000	Y 377.433
Se (196.026 nm)	0.105244	ppm	0.003906	3.71	126.692000	Y 242.219
Si (288.158 nm)	0.411818	ppm	0.003933	0.96	4540.200000	Y 377.433
Sn (189.925 nm)	0.196065	ppm	0.001689	0.86	415.896000	Y 377.433
Sr (421.552 nm)	0.235252	ppm	0.000594	0.25	45902.515082	Y_R 488.368
Th (288.505 nm)	0.011037	ppm	0.001162	10.53	115.033000	Y 377.433
Ti (336.122 nm)	0.223895	ppm	0.000358	0.16	31329.200000	Y 377.433
Tl (190.794 nm)	-0.009069 u	ppm	0.000669	7.38	-28.752400	Y 377.433
U (409.013 nm)	-0.045241 u	ppm	0.002323	5.14	-440.723000	Y 377.433
V (292.401 nm)	0.306038	ppm	0.000310	0.10	11327.200000	Y 377.433
Zn (206.200 nm)	0.003172	ppm	0.000129	4.07	59.105500	Y 377.433
Zr (343.823 nm)	0.119548	ppm	0.000282	0.24	15446.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.868292	16959.704975	0.001961	0.23
Y 377.433	0.865160	857052.565140	0.003250	0.38
Y_R 377.433	0.978096	69606.500000	0.001168	0.12
Y_R 488.368	0.979656	39911.100000	0.006689	0.68
Y_R2 488.368	0.968066	78276.301300	0.004735	0.49

Sample Name: 280-116610-A-6-H

Date: 11/13/2018 3:36:45 PM Rack:Tube: 1:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000015 u	ppm	0.000311	> 100.00	-437.736000	Y 377.433
Al (167.019 nm)	0.000239 u	ppm	0.002819	> 100.00	1.985340	Y_R 377.433
Al H (396.152 nm)	-0.013243 u	ppm	0.004265	32.21	60.378488	Y_R 377.433
As (188.980 nm)	0.000910 u	ppm	0.001654	> 100.00	1.073560	Y 242.219
B (249.678 nm)	0.600117	ppm	0.002983	0.50	15161.300000	Y 242.219
Ba (493.408 nm)	0.014172	ppm	0.000188	1.33	2182.410000	Y_R 488.368
Be (234.861 nm)	0.000069	ppm	0.000009	12.86	-61.215600	Y_R 488.368
Bi (223.061 nm)	-0.001488 u	ppm	0.000627	42.13	12.130300	Y 377.433
Ca (315.887 nm)	17.704720 o	ppm	0.105691	0.60	13446.980619	Y_R 377.433
Cd (214.439 nm)	-0.000160 u	ppm	0.000031	19.31	9.574820	Y 377.433
Co (228.615 nm)	0.000685	ppm	0.000157	22.99	-33.358700	Y 242.219
Cr (205.560 nm)	0.000290	ppm	0.000005	1.59	10.627000	Y 377.433
Cu (324.754 nm)	0.000278	ppm	0.000170	61.22	-362.224000	Y 377.433
Fe (238.204 nm)	0.112056	ppm	0.002000	1.78	422.210580	Y_R 377.433
Fe H (259.940 nm)	0.120840 u	ppm	0.000677	0.56	210.726000	Y_R 377.433
K (766.491 nm)	8.173020	ppm	0.046041	0.56	8150.650000	Y_R2 488.368
Li (670.783 nm)	0.177871	ppm	0.001920	1.08	3948.440000	Y_R2 488.368
Mg (279.078 nm)	4.542270	ppm	0.010534	0.23	27897.600000	Y 377.433
Mn (257.610 nm)	0.051490	ppm	0.000001	0.00	12234.600000	Y 377.433
Mo (202.032 nm)	0.001914	ppm	0.000273	14.28	19.720100	Y 377.433
Na (589.592 nm)	126.013000 o	ppm	0.999386	0.79	803243.000000	Y_R2 488.368
Na H (589.593 nm)	133.116635	ppm	0.853420	0.64	458174.632352	Y_R 488.368
Ni (231.604 nm)	0.003034	ppm	0.000597	19.68	19.899300	Y 377.433
P (213.618 nm)	0.062992	ppm	0.000314	0.50	169.824000	Y 242.219
Pb (220.353 nm)	0.000880 u	ppm	0.001287	> 100.00	6.852360	Y 242.219
S (181.972 nm)	32.796369 o	ppm	0.107506	0.33	17242.019962	Y 377.433
Sb (206.834 nm)	0.000402 u	ppm	0.001886	> 100.00	-29.717400	Y 377.433
Se (196.026 nm)	-0.003385 u	ppm	0.002524	74.56	12.987200	Y 242.219
Si (288.158 nm)	1.495710	ppm	0.009233	0.62	13937.500000	Y 377.433
Sn (189.925 nm)	-0.002318 u	ppm	0.000973	41.97	7.379630	Y 377.433
Sr (421.552 nm)	0.326687	ppm	0.002728	0.84	63692.671382	Y_R 488.368
Th (288.505 nm)	0.000158 u	ppm	0.000253	> 100.00	74.953100	Y 377.433
Ti (336.122 nm)	0.000641	ppm	0.000061	9.56	-205.360000	Y 377.433
Tl (190.794 nm)	0.001436	ppm	0.000488	33.99	-2.978200	Y 377.433
U (409.013 nm)	-0.004819 u	ppm	0.002511	52.11	-255.107000	Y 377.433
V (292.401 nm)	0.001404	ppm	0.000122	8.71	79.802100	Y 377.433
Zn (206.200 nm)	-0.004999 u	ppm	0.000104	2.08	13.488200	Y 377.433
Zr (343.823 nm)	0.000282	ppm	0.000069	24.43	65.298600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029911	20116.477865	0.001067	0.10
Y 377.433	1.026665	1017044.267591	0.000705	0.07
Y_R 377.433	1.041350	74107.800000	0.006149	0.59
Y_R 488.368	1.045370	42588.100000	0.007090	0.68
Y_R2 488.368	1.034511	83648.957084	0.010542	1.02

Sample Name: 280-116621-D-2-H

Date: 11/13/2018 3:40:08 PM Rack:Tube: 1:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000637	ppm	0.000506	79.38	-409.218000	Y 377.433
Al (167.019 nm)	0.011450	ppm	0.003121	27.26	8.048620	Y_R 377.433
Al H (396.152 nm)	0.023393 u	ppm	0.004526	19.35	192.507892	Y_R 377.433
As (188.980 nm)	0.023227	ppm	0.001676	7.21	30.625400	Y 242.219
B (249.678 nm)	2.799630 o	ppm	0.003316	0.12	70516.400000	Y 242.219
Ba (493.408 nm)	0.109490	ppm	0.000458	0.42	12318.200000	Y_R 488.368
Be (234.861 nm)	0.000040	ppm	0.000011	27.65	-72.015100	Y_R 488.368
Bi (223.061 nm)	-0.001309 u	ppm	0.002471	> 100.00	12.576100	Y 377.433
Ca (315.887 nm)	124.973390 o	ppm	0.550931	0.44	95282.405253	Y_R 377.433
Cd (214.439 nm)	-0.000165 u	ppm	0.000070	42.29	9.202040	Y 377.433
Co (228.615 nm)	0.000226	ppm	0.000051	22.66	-41.821800	Y 242.219
Cr (205.560 nm)	0.001865	ppm	0.000298	16.00	34.938400	Y 377.433
Cu (324.754 nm)	-0.000663 u	ppm	0.000140	21.16	-473.922000	Y 377.433
Fe (238.204 nm)	0.066180	ppm	0.000576	0.87	260.375925	Y_R 377.433
Fe H (259.940 nm)	0.066949 u	ppm	0.002537	3.79	112.301000	Y_R 377.433
K (766.491 nm)	15.014800	ppm	0.056349	0.38	15647.800000	Y_R2 488.368
Li (670.783 nm)	8.119540 o	ppm	0.024989	0.31	250524.000000	Y_R2 488.368
Mg (279.078 nm)	92.362600 o	ppm	0.083374	0.09	566000.000000	Y 377.433
Mn (257.610 nm)	0.512677	ppm	0.000565	0.11	120924.000000	Y 377.433
Mo (202.032 nm)	0.017758	ppm	0.000284	1.60	161.499000	Y 377.433
Na (589.592 nm)	569.077000 o	ppm	1.800910	0.32	3626350.000000	Y_R2 488.368
Na H (589.593 nm)	599.220295	ppm	5.579906	0.93	2051812.231433	Y_R 488.368
Ni (231.604 nm)	0.073313	ppm	0.000712	0.97	518.104000	Y 377.433
P (213.618 nm)	1.498180	ppm	0.006974	0.47	3238.330000	Y 242.219
Pb (220.353 nm)	0.001198	ppm	0.001066	88.91	7.721620	Y 242.219
S (181.972 nm)	36.945926 o	ppm	0.052905	0.14	19422.582184	Y 377.433
Sb (206.834 nm)	-0.002534 u	ppm	0.000549	21.65	-37.997200	Y 377.433
Se (196.026 nm)	0.002306	ppm	0.003237	> 100.00	19.337800	Y 242.219
Si (288.158 nm)	3.858220	ppm	0.014785	0.38	34420.600000	Y 377.433
Sn (189.925 nm)	-0.001417 u	ppm	0.002007	> 100.00	9.234180	Y 377.433
Sr (421.552 nm)	2.709295 o	ppm	0.015730	0.58	527268.918821	Y_R 488.368
Th (288.505 nm)	0.010543	ppm	0.003514	33.33	110.936000	Y 377.433
Ti (336.122 nm)	0.004077	ppm	0.000017	0.41	615.243000	Y 377.433
Tl (190.794 nm)	0.003041	ppm	0.002032	66.83	0.621065	Y 377.433
U (409.013 nm)	-0.025936 u	ppm	0.005259	20.28	-369.736000	Y 377.433
V (292.401 nm)	0.021483	ppm	0.000027	0.12	821.982000	Y 377.433
Zn (206.200 nm)	-0.004850 u	ppm	0.000302	6.23	14.320200	Y 377.433
Zr (343.823 nm)	0.009799	ppm	0.000078	0.79	1292.530000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971155	18968.854934	0.000124	0.01
Y 377.433	0.975715	966571.137256	0.001912	0.20
Y_R 377.433	1.008520	71771.700000	0.001594	0.16
Y_R 488.368	1.015140	41356.700000	0.002220	0.22
Y_R2 488.368	1.012106	81837.295713	0.005247	0.52

Sample Name: 280-116621-D-3-F

Date: 11/13/2018 3:43:30 PM Rack:Tube: 1:36

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000534	ppm	0.000111	20.79	-412.279000	Y 377.433
Al (167.019 nm)	0.004732	ppm	0.001479	31.25	4.380370	Y_R 377.433
Al H (396.152 nm)	0.026579 u	ppm	0.008719	32.80	201.546641	Y_R 377.433
As (188.980 nm)	0.004831	ppm	0.005436	> 100.00	6.266860	Y 242.219
B (249.678 nm)	2.979310 o	ppm	0.000568	0.02	75038.400000	Y 242.219
Ba (493.408 nm)	0.081215	ppm	0.000610	0.75	9319.710000	Y_R 488.368
Be (234.861 nm)	0.000039	ppm	0.000008	19.94	-72.248700	Y_R 488.368
Bi (223.061 nm)	-0.004058 u	ppm	0.000451	11.12	5.629170	Y 377.433
Ca (315.887 nm)	131.348140 o	ppm	0.499554	0.38	100145.711311	Y_R 377.433
Cd (214.439 nm)	-0.000060 u	ppm	0.000031	52.35	15.820100	Y 377.433
Co (228.615 nm)	0.000065 u	ppm	0.000556	> 100.00	-44.965800	Y 242.219
Cr (205.560 nm)	0.000414	ppm	0.000100	24.13	12.554900	Y 377.433
Cu (324.754 nm)	0.000097 u	ppm	0.000178	> 100.00	-435.469000	Y 377.433
Fe (238.204 nm)	0.039706	ppm	0.001869	4.71	166.987068	Y_R 377.433
Fe H (259.940 nm)	0.044250 u	ppm	0.000026	0.06	70.845000	Y_R 377.433
K (766.491 nm)	27.901800	ppm	0.036282	0.13	29769.100000	Y_R2 488.368
Li (670.783 nm)	0.800629	ppm	0.002238	0.28	23284.000000	Y_R2 488.368
Mg (279.078 nm)	126.251000 o	ppm	0.075129	0.06	773643.000000	Y 377.433
Mn (257.610 nm)	0.174518	ppm	0.000062	0.04	41228.900000	Y 377.433
Mo (202.032 nm)	0.002826	ppm	0.000355	12.58	27.883800	Y 377.433
Na (589.592 nm)	561.794000 o	ppm	0.724692	0.13	3579900.000000	Y_R2 488.368
Na H (589.593 nm)	593.666550	ppm	4.072702	0.69	2032800.226909	Y_R 488.368
Ni (231.604 nm)	0.101886	ppm	0.000259	0.25	720.659000	Y 377.433
P (213.618 nm)	0.683474	ppm	0.004025	0.59	1496.450000	Y 242.219
Pb (220.353 nm)	0.001565	ppm	0.000976	62.33	8.869820	Y 242.219
S (181.972 nm)	15.695105 o	ppm	0.006601	0.04	8260.427936	Y 377.433
Sb (206.834 nm)	-0.002195 u	ppm	0.001854	84.46	-36.943100	Y 377.433
Se (196.026 nm)	-0.000835 u	ppm	0.004031	> 100.00	15.772500	Y 242.219
Si (288.158 nm)	1.570500	ppm	0.008001	0.51	14586.000000	Y 377.433
Sn (189.925 nm)	-0.000447 u	ppm	0.000653	> 100.00	11.232400	Y 377.433
Sr (421.552 nm)	2.931621 o	ppm	0.022544	0.77	570526.216619	Y_R 488.368
Th (288.505 nm)	0.008682	ppm	0.003064	35.29	98.756100	Y 377.433
Ti (336.122 nm)	0.000556	ppm	0.000060	10.85	136.986000	Y 377.433
Tl (190.794 nm)	0.002324	ppm	0.000645	27.74	-0.957031	Y 377.433
U (409.013 nm)	-0.019236 u	ppm	0.004624	24.04	-340.565000	Y 377.433
V (292.401 nm)	0.001064	ppm	0.000006	0.58	69.061000	Y 377.433
Zn (206.200 nm)	0.000430	ppm	0.000005	1.27	43.797500	Y 377.433
Zr (343.823 nm)	0.001430	ppm	0.000017	1.21	213.162000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971477	18975.129582	0.000732	0.08
Y 377.433	0.973994	964866.972073	0.000006	0.00
Y_R 377.433	1.008110	71742.300000	0.001064	0.11
Y_R 488.368	1.015760	41382.100000	0.002611	0.26
Y_R2 488.368	1.014080	81996.932224	0.000693	0.07

Sample Name: 280-116621-C-4-F

Date: 11/13/2018 3:46:51 PM Rack:Tube: 1:37

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000467	ppm	0.000606	> 100.00	-414.729000	Y 377.433
Al (167.019 nm)	0.002496 u	ppm	0.004760	> 100.00	3.148120	Y_R 377.433
Al H (396.152 nm)	0.032410 u	ppm	0.002216	6.84	239.183262	Y_R 377.433
As (188.980 nm)	0.002549	ppm	0.002504	98.24	3.245020	Y 242.219
B (249.678 nm)	2.213900 o	ppm	0.006057	0.27	55775.400000	Y 242.219
Ba (493.408 nm)	0.078618	ppm	0.000027	0.03	9056.330000	Y_R 488.368
Be (234.861 nm)	-0.000007 u	ppm	0.000001	9.95	-86.354500	Y_R 488.368
Bi (223.061 nm)	0.000199 u	ppm	0.001345	> 100.00	16.376400	Y 377.433
Ca (315.887 nm)	188.628094 o	ppm	0.926348	0.49	143844.672325	Y_R 377.433
Cd (214.439 nm)	-0.000095 u	ppm	0.000084	88.18	13.587900	Y 377.433
Co (228.615 nm)	0.000104 u	ppm	0.000537	> 100.00	-44.208000	Y 242.219
Cr (205.560 nm)	0.001519	ppm	0.000088	5.79	29.634100	Y 377.433
Cu (324.754 nm)	-0.002072 u	ppm	0.000357	17.23	-588.998000	Y 377.433
Fe (238.204 nm)	0.013648	ppm	0.001025	7.51	75.062901	Y_R 377.433
Fe H (259.940 nm)	0.019804 u	ppm	0.002890	14.60	26.196100	Y_R 377.433
K (766.491 nm)	21.714600	ppm	0.092140	0.42	22989.300000	Y_R2 488.368
Li (670.783 nm)	1.684860	ppm	0.001800	0.11	50737.900000	Y_R2 488.368
Mg (279.078 nm)	83.917100 o	ppm	0.019286	0.02	514252.000000	Y 377.433
Mn (257.610 nm)	1.324940 o	ppm	0.001054	0.08	312352.000000	Y 377.433
Mo (202.032 nm)	0.005810	ppm	0.000177	3.04	54.586700	Y 377.433
Na (589.592 nm)	493.243000 o	ppm	4.332830	0.88	3143120.000000	Y_R2 488.368
Na H (589.593 nm)	513.303113	ppm	0.756218	0.15	1758044.584033	Y_R 488.368
Ni (231.604 nm)	0.152053	ppm	0.000526	0.35	1076.290000	Y 377.433
P (213.618 nm)	1.425320	ppm	0.001395	0.10	3082.560000	Y 242.219
Pb (220.353 nm)	0.002139	ppm	0.000012	0.58	10.589000	Y 242.219
S (181.972 nm)	17.231075 o	ppm	0.002401	0.01	9069.990133	Y 377.433
Sb (206.834 nm)	-0.000823 u	ppm	0.001233	> 100.00	-33.137500	Y 377.433
Se (196.026 nm)	-0.001230 u	ppm	0.003342	> 100.00	16.339200	Y 242.219
Si (288.158 nm)	4.148920	ppm	0.019757	0.48	36940.900000	Y 377.433
Sn (189.925 nm)	0.000909	ppm	0.001004	> 100.00	14.024100	Y 377.433
Sr (421.552 nm)	3.928968 o	ppm	0.004205	0.11	764576.740617	Y_R 488.368
Th (288.505 nm)	0.006443	ppm	0.001751	27.18	116.027000	Y 377.433
Ti (336.122 nm)	0.001392	ppm	0.000034	2.47	434.175000	Y 377.433
Tl (190.794 nm)	0.002639	ppm	0.001621	61.42	-0.251428	Y 377.433
U (409.013 nm)	-0.023030 u	ppm	0.002535	11.01	-368.844000	Y 377.433
V (292.401 nm)	0.008408	ppm	0.000282	3.36	338.626000	Y 377.433
Zn (206.200 nm)	-0.006683 u	ppm	0.000022	0.32	4.084700	Y 377.433
Zr (343.823 nm)	0.010302	ppm	0.000116	1.12	1357.260000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.974663	19037.377182	0.000623	0.06
Y 377.433	0.977862	968698.019609	0.001711	0.17
Y_R 377.433	1.009530	71843.600000	0.001233	0.12
Y_R 488.368	1.025540	41780.500000	0.003671	0.36
Y_R2 488.368	1.007179	81438.964144	0.000390	0.04

Sample Name: 490-162511-B-1-B

Date: 11/13/2018 3:50:12 PM Rack:Tube: 1:38

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000371 u	ppm	0.000233	62.68	-451.970000	Y 377.433
Al (167.019 nm)	0.084743	ppm	0.000536	0.63	47.905500	Y_R 377.433
Al H (396.152 nm)	0.062779 u	ppm	0.003007	4.79	233.956147	Y_R 377.433
As (188.980 nm)	0.001238 u	ppm	0.001766	> 100.00	1.507390	Y 242.219
B (249.678 nm)	0.064979	ppm	0.000169	0.26	1693.570000	Y 242.219
Ba (493.408 nm)	0.000369	ppm	0.000078	21.09	714.490000	Y_R 488.368
Be (234.861 nm)	0.000048	ppm	0.000011	23.37	-67.584500	Y_R 488.368
Bi (223.061 nm)	-0.000597 u	ppm	0.000081	13.49	14.379200	Y 377.433
Ca (315.887 nm)	1.708811	ppm	0.014071	0.82	1243.677963	Y_R 377.433
Cd (214.439 nm)	-0.000201 u	ppm	0.000016	8.11	6.978870	Y 377.433
Co (228.615 nm)	0.000228	ppm	0.000126	55.15	-41.493800	Y 242.219
Cr (205.560 nm)	0.000859	ppm	0.000281	32.75	19.415300	Y 377.433
Cu (324.754 nm)	0.000166 u	ppm	0.000325	> 100.00	-359.730000	Y 377.433
Fe (238.204 nm)	0.098182	ppm	0.000288	0.29	373.268575	Y_R 377.433
Fe H (259.940 nm)	0.109614 u	ppm	0.002853	2.60	190.224000	Y_R 377.433
K (766.491 nm)	0.279543	ppm	0.130560	46.70	-498.900000	Y_R2 488.368
Li (670.783 nm)	0.003235	ppm	0.000755	23.35	-1473.730000	Y_R2 488.368
Mg (279.078 nm)	0.634235	ppm	0.000899	0.14	3952.080000	Y 377.433
Mn (257.610 nm)	0.004252	ppm	0.000037	0.88	1101.970000	Y 377.433
Mo (202.032 nm)	0.000687	ppm	0.000088	12.80	8.747260	Y 377.433
Na (589.592 nm)	10.849800	ppm	0.045763	0.42	69466.600000	Y_R2 488.368
Na H (589.593 nm)	13.005145	ppm	0.205982	1.58	47515.261639	Y_R 488.368
Ni (231.604 nm)	0.000143 u	ppm	0.000205	> 100.00	-0.592301	Y 377.433
P (213.618 nm)	0.016667	ppm	0.001302	7.81	70.778500	Y 242.219
Pb (220.353 nm)	0.000605	ppm	0.000413	68.21	5.980410	Y 242.219
S (181.972 nm)	0.483425	ppm	0.005008	1.04	270.555110	Y 377.433
Sb (206.834 nm)	0.000933	ppm	0.000457	48.98	-28.226900	Y 377.433
Se (196.026 nm)	-0.003137 u	ppm	0.000587	18.72	13.213300	Y 242.219
Si (288.158 nm)	0.727918	ppm	0.004137	0.57	7280.800000	Y 377.433
Sn (189.925 nm)	-0.003313 u	ppm	0.000776	23.43	5.329710	Y 377.433
Sr (421.552 nm)	0.005516	ppm	0.000148	2.68	1203.470403	Y_R 488.368
Th (288.505 nm)	0.002044	ppm	0.001071	52.40	78.590600	Y 377.433
Ti (336.122 nm)	0.012209	ppm	0.000160	1.31	1381.280000	Y 377.433
Tl (190.794 nm)	0.000186	ppm	0.000080	43.03	-5.869100	Y 377.433
U (409.013 nm)	-0.001217 u	ppm	0.006619	> 100.00	-236.756000	Y 377.433
V (292.401 nm)	0.000860	ppm	0.000230	26.76	59.850800	Y 377.433
Zn (206.200 nm)	-0.005865 u	ppm	0.000674	11.49	8.648630	Y 377.433
Zr (343.823 nm)	0.008918	ppm	0.000110	1.24	1179.070000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041423	20341.350355	0.001784	0.17
Y 377.433	1.038310	1028579.724294	0.001917	0.18
Y_R 377.433	1.042700	74203.800000	0.002919	0.28
Y_R 488.368	1.048730	42725.000000	0.002019	0.19
Y_R2 488.368	1.040558	84137.905545	0.003536	0.34

Sample Name: CCVH-5417909

Date: 11/13/2018 3:53:35 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001785 u	ppm	0.000288	16.15	-756.742000	Y 377.433
Al (167.019 nm)	44.696500 o	ppm	0.174775	0.39	24326.600000	Y_R 377.433
Al H (396.152 nm)	49.689946	ppm	0.055279	0.11	117900.454507	Y_R 377.433
As (188.980 nm)	-0.000080 u	ppm	0.002030	> 100.00	-0.691279	Y 242.219
B (249.678 nm)	0.005044	ppm	0.000593	11.76	111.358000	Y 242.219
Ba (493.408 nm)	0.000158 u	ppm	0.000244	> 100.00	733.361000	Y_R 488.368
Be (234.861 nm)	-0.000034 u	ppm	0.000002	4.51	1396.310000	Y_R 488.368
Bi (223.061 nm)	0.967059	ppm	0.004861	0.50	2466.370000	Y 377.433
Ca (315.887 nm)	-0.009909 u	ppm	0.005045	50.91	-67.535981	Y_R 377.433
Cd (214.439 nm)	-0.000567 u	ppm	0.000070	12.32	33.312500	Y 377.433
Co (228.615 nm)	0.003249	ppm	0.000198	6.08	14.634400	Y 242.219
Cr (205.560 nm)	-0.000416 u	ppm	0.000277	66.49	-13.912500	Y 377.433
Cu (324.754 nm)	-0.007637 u	ppm	0.000097	1.26	-453.408000	Y 377.433
Fe (238.204 nm)	49.392787 o	ppm	0.127100	0.26	174267.328478	Y_R 377.433
Fe H (259.940 nm)	49.218400	ppm	0.104962	0.21	89881.300000	Y_R 377.433
K (766.491 nm)	0.086971	ppm	0.021123	24.29	-709.918000	Y_R2 488.368
Li (670.783 nm)	-0.000398 u	ppm	0.002805	> 100.00	-1586.530000	Y_R2 488.368
Mg (279.078 nm)	-0.017068 u	ppm	0.001126	6.60	-405.455000	Y 377.433
Mn (257.610 nm)	0.001190	ppm	0.000014	1.22	380.222000	Y 377.433
Mo (202.032 nm)	-0.000307 u	ppm	0.000055	17.83	-0.146409	Y 377.433
Na (589.592 nm)	240.833000 o	ppm	0.256463	0.11	1534770.000000	Y_R2 488.368
Na H (589.593 nm)	250.236113	ppm	1.377226	0.55	858578.714861	Y_R 488.368
Ni (231.604 nm)	0.004394	ppm	0.000695	15.83	31.620200	Y 377.433
P (213.618 nm)	-0.010371 u	ppm	0.002184	21.06	12.970400	Y 242.219
Pb (220.353 nm)	-0.003861 u	ppm	0.001649	42.70	9.472880	Y 242.219
S (181.972 nm)	4.831711	ppm	0.009613	0.20	2554.347281	Y 377.433
Sb (206.834 nm)	-0.006818 u	ppm	0.000084	1.24	-95.378900	Y 377.433
Se (196.026 nm)	-0.001199 u	ppm	0.002370	> 100.00	6.024950	Y 242.219
Si (288.158 nm)	0.013868	ppm	0.000126	0.91	1089.970000	Y 377.433
Sn (189.925 nm)	-0.001249 u	ppm	0.000524	41.99	9.580660	Y 377.433
Sr (421.552 nm)	0.000600	ppm	0.000020	3.40	247.008550	Y_R 488.368
Th (288.505 nm)	4.981160	ppm	0.002030	0.04	12815.800000	Y 377.433
Ti (336.122 nm)	0.001485	ppm	0.000107	7.20	-141.058000	Y 377.433
Tl (190.794 nm)	-0.002961 u	ppm	0.002102	70.99	-14.303700	Y 377.433
U (409.013 nm)	9.949200	ppm	0.002647	0.03	44024.700000	Y 377.433
V (292.401 nm)	0.002128	ppm	0.000067	3.15	-50.133300	Y 377.433
Zn (206.200 nm)	-0.006316 u	ppm	0.000425	6.73	6.133110	Y 377.433
Zr (343.823 nm)	-0.004527 u	ppm	0.000083	1.83	-415.881000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.024570	20012.162100	0.005299	0.52
Y 377.433	1.015057	1005544.862051	0.007535	0.74
Y_R 377.433	1.021130	72669.300000	0.003198	0.31
Y_R 488.368	1.032880	42079.300000	0.000259	0.03
Y_R2 488.368	1.028093	83130.000870	0.008654	0.84

Sample Name: CCV-5416701

Date: 11/13/2018 3:56:58 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.483949	ppm	0.000694	0.14	21819.800000	Y 377.433
Al (167.019 nm)	0.491577	ppm	0.011724	2.38	270.566000	Y_R 377.433
Al H (396.152 nm)	0.488072 u	ppm	0.000237	0.05	1280.746138	Y_R 377.433
As (188.980 nm)	0.968606	ppm	0.000055	0.01	1282.470000	Y 242.219
B (249.678 nm)	0.487124	ppm	0.001231	0.25	12335.600000	Y 242.219
Ba (493.408 nm)	0.492589	ppm	0.002055	0.42	52949.900000	Y_R 488.368
Be (234.861 nm)	0.485373	ppm	0.005338	1.10	141354.000000	Y_R 488.368
Bi (223.061 nm)	-0.004443 u	ppm	0.001010	22.73	5.054040	Y 377.433
Ca (315.887 nm)	4.981388	ppm	0.019116	0.38	3740.596770	Y_R 377.433
Cd (214.439 nm)	0.492037	ppm	0.000674	0.14	31023.500000	Y 377.433
Co (228.615 nm)	0.492858	ppm	0.000110	0.02	9196.970000	Y 242.219
Cr (205.560 nm)	0.490123	ppm	0.002063	0.42	7574.310000	Y 377.433
Cu (324.754 nm)	0.484266	ppm	0.000902	0.19	25697.300000	Y 377.433
Fe (238.204 nm)	2.480779	ppm	0.013850	0.56	8778.235873	Y_R 377.433
Fe H (259.940 nm)	2.487440 u	ppm	0.013271	0.53	4533.030000	Y_R 377.433
K (766.491 nm)	49.071500	ppm	0.244002	0.50	52966.600000	Y_R2 488.368
Li (670.783 nm)	0.989350	ppm	0.003000	0.30	29143.500000	Y_R2 488.368
Mg (279.078 nm)	19.567700	ppm	0.007190	0.04	119959.000000	Y 377.433
Mn (257.610 nm)	0.495139	ppm	0.000684	0.14	116791.000000	Y 377.433
Mo (202.032 nm)	0.495712	ppm	0.000010	0.00	4438.270000	Y 377.433
Na (589.592 nm)	5.061780	ppm	0.015432	0.30	33550.300000	Y_R2 488.368
Na H (589.593 nm)	6.609981 u	ppm	0.043931	0.66	26082.821893	Y_R 488.368
Ni (231.604 nm)	0.495658	ppm	0.001749	0.35	3513.420000	Y 377.433
P (213.618 nm)	0.944380	ppm	0.000921	0.10	2054.270000	Y 242.219
Pb (220.353 nm)	0.986483	ppm	0.000100	0.01	2973.340000	Y 242.219
S (181.972 nm)	0.026077	ppm	0.000655	2.51	31.561751	Y 377.433
Sb (206.834 nm)	0.977595	ppm	0.001832	0.19	2713.800000	Y 377.433
Se (196.026 nm)	0.968971	ppm	0.004560	0.47	1029.610000	Y 242.219
Si (288.158 nm)	4.874000	ppm	0.016661	0.34	43227.400000	Y 377.433
Sn (189.925 nm)	0.977055	ppm	0.002790	0.29	2024.140000	Y 377.433
Sr (421.552 nm)	0.490751	ppm	0.001521	0.31	95613.981955	Y_R 488.368
Th (288.505 nm)	0.000982	ppm	0.000840	85.57	91.273300	Y 377.433
Ti (336.122 nm)	0.498121	ppm	0.000482	0.10	70133.300000	Y 377.433
Tl (190.794 nm)	0.988708	ppm	0.001808	0.18	2241.830000	Y 377.433
U (409.013 nm)	-0.001900 u	ppm	0.002810	> 100.00	-275.025000	Y 377.433
V (292.401 nm)	0.494339	ppm	0.000634	0.13	18170.200000	Y 377.433
Zn (206.200 nm)	0.492740	ppm	0.000182	0.04	2792.520000	Y 377.433
Zr (343.823 nm)	0.496315	ppm	0.000993	0.20	64042.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037538	20265.467133	0.004130	0.40
Y 377.433	1.033669	1023982.588437	0.004285	0.41
Y_R 377.433	1.038300	73891.000000	0.004155	0.40
Y_R 488.368	1.046280	42625.500000	0.005104	0.49
Y_R2 488.368	1.043945	84411.779904	0.002703	0.26

Sample Name: CCB

Date: 11/13/2018 4:00:20 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000534 u	ppm	0.000043	8.04	-461.213000	Y 377.433
Al (167.019 nm)	0.001653	ppm	0.002279	> 100.00	2.679150	Y_R 377.433
Al H (396.152 nm)	-0.024381 u	ppm	0.003146	12.91	26.497961	Y_R 377.433
As (188.980 nm)	-0.000076 u	ppm	0.001892	> 100.00	-0.231301	Y 242.219
B (249.678 nm)	0.004860	ppm	0.000486	10.00	180.722000	Y 242.219
Ba (493.408 nm)	-0.000207 u	ppm	0.000197	95.26	652.929000	Y_R 488.368
Be (234.861 nm)	0.000060	ppm	0.000019	32.40	-67.031500	Y_R 488.368
Bi (223.061 nm)	0.001962	ppm	0.002471	> 100.00	20.825200	Y 377.433
Ca (315.887 nm)	-0.003927 u	ppm	0.014827	> 100.00	-62.971911	Y_R 377.433
Cd (214.439 nm)	-0.000104 u	ppm	0.000071	68.51	12.996600	Y 377.433
Co (228.615 nm)	0.000351	ppm	0.000192	54.70	-39.616200	Y 242.219
Cr (205.560 nm)	0.000176	ppm	0.000120	68.11	8.890890	Y 377.433
Cu (324.754 nm)	-0.000621 u	ppm	0.000006	0.94	-400.557000	Y 377.433
Fe (238.204 nm)	-0.002932 u	ppm	0.000669	22.81	16.574482	Y_R 377.433
Fe H (259.940 nm)	0.012077 u	ppm	0.000313	2.59	12.084300	Y_R 377.433
K (766.491 nm)	0.013684	ppm	0.001865	13.63	-790.224000	Y_R2 488.368
Li (670.783 nm)	-0.000001 u	ppm	0.001323	> 100.00	-1574.200000	Y_R2 488.368
Mg (279.078 nm)	0.000852	ppm	0.000227	26.68	71.281500	Y 377.433
Mn (257.610 nm)	-0.000115 u	ppm	0.000033	28.95	72.797200	Y 377.433
Mo (202.032 nm)	-0.000594 u	ppm	0.000104	17.54	-2.714400	Y 377.433
Na (589.592 nm)	0.134217	ppm	0.022562	16.81	1192.440000	Y_R2 488.368
Na H (589.593 nm)	1.134052 u	ppm	0.023094	2.04	6928.779214	Y_R 488.368
Ni (231.604 nm)	-0.000234 u	ppm	0.000398	> 100.00	-3.272300	Y 377.433
P (213.618 nm)	-0.007299 u	ppm	0.000809	11.08	19.537700	Y 242.219
Pb (220.353 nm)	0.000721	ppm	0.000069	9.55	6.362790	Y 242.219
S (181.972 nm)	0.018990	ppm	0.001544	8.13	26.614832	Y 377.433
Sb (206.834 nm)	0.000561 u	ppm	0.001309	> 100.00	-29.215900	Y 377.433
Se (196.026 nm)	-0.005099 u	ppm	0.001211	23.74	11.173900	Y 242.219
Si (288.158 nm)	-0.001488 u	ppm	0.000897	60.26	956.835000	Y 377.433
Sn (189.925 nm)	-0.001080 u	ppm	0.001025	94.87	9.928300	Y 377.433
Sr (421.552 nm)	0.000008 u	ppm	0.000094	> 100.00	131.863175	Y_R 488.368
Th (288.505 nm)	0.000032 u	ppm	0.002510	> 100.00	73.442800	Y 377.433
Ti (336.122 nm)	0.000252	ppm	0.000092	36.35	-315.646000	Y 377.433
Tl (190.794 nm)	0.000525	ppm	0.000535	> 100.00	-5.040310	Y 377.433
U (409.013 nm)	-0.005442 u	ppm	0.005992	> 100.00	-254.644000	Y 377.433
V (292.401 nm)	-0.000028 u	ppm	0.000098	> 100.00	27.110000	Y 377.433
Zn (206.200 nm)	-0.007405 u	ppm	0.000079	1.06	0.052585	Y 377.433
Zr (343.823 nm)	-0.000028 u	ppm	0.000119	> 100.00	25.018700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027787	20075.003645	0.004602	0.45
Y 377.433	1.026357	1016738.570831	0.006237	0.61
Y_R 377.433	1.023510	72838.400000	0.000299	0.03
Y_R 488.368	1.024460	41736.300000	0.013207	1.29
Y_R2 488.368	1.035638	83740.108880	0.000696	0.07

Sample Name: CCVL-5425098

Date: 11/13/2018 4:03:43 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008817	ppm	0.000287	3.26	-30.714900	Y 377.433
Al (167.019 nm)	0.094129	ppm	0.007204	7.65	53.004900	Y_R 377.433
Al H (396.152 nm)	0.077196 u	ppm	0.001091	1.41	268.817671	Y_R 377.433
As (188.980 nm)	0.013534	ppm	0.000771	5.69	17.790500	Y 242.219
B (249.678 nm)	0.096369	ppm	0.000676	0.70	2483.970000	Y 242.219
Ba (493.408 nm)	0.009755	ppm	0.000051	0.53	1709.910000	Y_R 488.368
Be (234.861 nm)	0.000949	ppm	0.000003	0.36	194.100000	Y_R 488.368
Bi (223.061 nm)	0.094788	ppm	0.003146	3.32	255.287000	Y 377.433
Ca (315.887 nm)	0.195027	ppm	0.002211	1.13	88.812658	Y_R 377.433
Cd (214.439 nm)	0.004726	ppm	0.000001	0.03	317.459000	Y 377.433
Co (228.615 nm)	0.010233	ppm	0.000092	0.90	145.686000	Y 242.219
Cr (205.560 nm)	0.009602	ppm	0.000038	0.39	154.488000	Y 377.433
Cu (324.754 nm)	0.013649	ppm	0.000498	3.65	365.316000	Y 377.433
Fe (238.204 nm)	0.096649	ppm	0.001191	1.23	367.862658	Y_R 377.433
Fe H (259.940 nm)	0.108500 u	ppm	0.000685	0.63	188.190000	Y_R 377.433
K (766.491 nm)	2.935850	ppm	0.083876	2.86	2411.840000	Y_R2 488.368
Li (670.783 nm)	0.021683	ppm	0.000920	4.24	-900.947000	Y_R2 488.368
Mg (279.078 nm)	0.193231	ppm	0.001589	0.82	1249.180000	Y 377.433
Mn (257.610 nm)	0.009898	ppm	0.000004	0.04	2432.550000	Y 377.433
Mo (202.032 nm)	0.017977	ppm	0.000042	0.23	163.454000	Y 377.433
Na (589.592 nm)	1.152500	ppm	0.009348	0.81	7700.520000	Y_R2 488.368
Na H (589.593 nm)	1.953825 u	ppm	0.002538	0.13	9740.570561	Y_R 488.368
Ni (231.604 nm)	0.040116	ppm	0.000466	1.16	282.790000	Y 377.433
P (213.618 nm)	2.729580 o	ppm	0.024078	0.88	5871.120000	Y 242.219
Pb (220.353 nm)	0.008762	ppm	0.001146	13.08	30.540100	Y 242.219
S (181.972 nm)	0.099753	ppm	0.012740	12.77	69.057590	Y 377.433
Sb (206.834 nm)	0.018988	ppm	0.000988	5.20	22.424100	Y 377.433
Se (196.026 nm)	0.016907	ppm	0.004115	24.34	34.173400	Y 242.219
Si (288.158 nm)	0.464235	ppm	0.002726	0.59	4994.660000	Y 377.433
Sn (189.925 nm)	0.091098	ppm	0.000419	0.46	199.745000	Y 377.433
Sr (421.552 nm)	0.009749	ppm	0.000061	0.62	2027.030877	Y_R 488.368
Th (288.505 nm)	0.013785	ppm	0.000976	7.08	109.091000	Y 377.433
Ti (336.122 nm)	0.009523	ppm	0.000050	0.52	996.601000	Y 377.433
Tl (190.794 nm)	0.014164	ppm	0.001258	8.88	25.939900	Y 377.433
U (409.013 nm)	0.056432	ppm	0.002239	3.97	19.283700	Y 377.433
V (292.401 nm)	0.009553	ppm	0.000206	2.15	376.772000	Y 377.433
Zn (206.200 nm)	0.013036 Q	ppm	0.000051	0.39	114.182000 Q	Y 377.433
Zr (343.823 nm)	0.014404	ppm	0.000011	0.08	1886.550000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033715	20190.783227	0.000843	0.08
Y 377.433	1.029989	1020336.363863	0.003497	0.34
Y_R 377.433	1.029930	73295.100000	0.008832	0.86
Y_R 488.368	1.036670	42233.700000	0.012565	1.21
Y_R2 488.368	1.040324	84118.957565	0.008853	0.85

Sample Name: LB 280-436906/1-B

Date: 11/13/2018 4:07:06 PM Rack:Tube: 1:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000137 u	ppm	0.000060	43.91	-443.166000	Y 377.433
Al (167.019 nm)	0.001394	ppm	0.000579	41.53	2.541670	Y_R 377.433
Al H (396.152 nm)	-0.012444 u	ppm	0.002735	21.98	54.874089	Y_R 377.433
As (188.980 nm)	0.000781 u	ppm	0.001195	> 100.00	0.903368	Y 242.219
B (249.678 nm)	0.010701	ppm	0.000324	3.03	327.706000	Y 242.219
Ba (493.408 nm)	0.001740	ppm	0.000101	5.78	859.562000	Y_R 488.368
Be (234.861 nm)	0.000066	ppm	0.000010	14.49	-65.026700	Y_R 488.368
Bi (223.061 nm)	0.000869	ppm	0.000098	11.26	18.066000	Y 377.433
Ca (315.887 nm)	0.131144	ppm	0.004490	3.42	40.073547	Y_R 377.433
Cd (214.439 nm)	-0.000149 u	ppm	0.000015	10.12	10.203500	Y 377.433
Co (228.615 nm)	0.000511	ppm	0.000474	92.80	-36.604900	Y 242.219
Cr (205.560 nm)	0.000040 u	ppm	0.000364	> 100.00	6.788400	Y 377.433
Cu (324.754 nm)	0.000254 u	ppm	0.000543	> 100.00	-354.216000	Y 377.433
Fe (238.204 nm)	0.002149	ppm	0.001293	60.18	34.499105	Y_R 377.433
Fe H (259.940 nm)	0.015092 u	ppm	0.002226	14.75	17.590600	Y_R 377.433
K (766.491 nm)	0.099096	ppm	0.047013	47.44	-696.631000	Y_R2 488.368
Li (670.783 nm)	-0.002084 u	ppm	0.002709	> 100.00	-1638.860000	Y_R2 488.368
Mg (279.078 nm)	0.012313	ppm	0.000468	3.80	141.265000	Y 377.433
Mn (257.610 nm)	0.000603	ppm	0.000017	2.85	242.061000	Y 377.433
Mo (202.032 nm)	-0.000340 u	ppm	0.000277	81.51	-0.444801	Y 377.433
Na (589.592 nm)	291.841000 o	ppm	0.457993	0.16	1859770.000000	Y_R2 488.368
Na H (589.593 nm)	301.150890	ppm	2.417832	0.80	1032653.006105	Y_R 488.368
Ni (231.604 nm)	0.000527	ppm	0.000653	> 100.00	2.125770	Y 377.433
P (213.618 nm)	-0.004085 u	ppm	0.000636	15.57	26.410300	Y 242.219
Pb (220.353 nm)	0.000786	ppm	0.000140	17.75	6.576050	Y 242.219
S (181.972 nm)	0.021222	ppm	0.008048	37.92	27.789102	Y 377.433
Sb (206.834 nm)	-0.000414 u	ppm	0.000209	50.42	-31.975200	Y 377.433
Se (196.026 nm)	0.000011 u	ppm	0.000605	> 100.00	16.516700	Y 242.219
Si (288.158 nm)	0.007478	ppm	0.000797	10.65	1034.570000	Y 377.433
Sn (189.925 nm)	0.000429 u	ppm	0.001414	> 100.00	13.034800	Y 377.433
Sr (421.552 nm)	0.000465	ppm	0.000059	12.76	220.705904	Y_R 488.368
Th (288.505 nm)	0.000434 u	ppm	0.003416	> 100.00	74.624700	Y 377.433
Ti (336.122 nm)	0.000542	ppm	0.000026	4.80	-274.142000	Y 377.433
Tl (190.794 nm)	-0.000795 u	ppm	0.001509	> 100.00	-8.046520	Y 377.433
U (409.013 nm)	-0.008437 u	ppm	0.004418	52.37	-267.972000	Y 377.433
V (292.401 nm)	-0.000013 u	ppm	0.000120	> 100.00	27.187200	Y 377.433
Zn (206.200 nm)	-0.006127 u	ppm	0.000142	2.32	7.188070	Y 377.433
Zr (343.823 nm)	-0.000139 u	ppm	0.000094	67.42	10.726200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009165	19711.267568	0.001659	0.16
Y 377.433	1.004806	995389.439400	0.002003	0.20
Y_R 377.433	1.020270	72607.700000	0.004104	0.40
Y_R 488.368	1.033080	42087.600000	0.005792	0.56
Y_R2 488.368	1.019734	82454.072395	0.010571	1.04

Sample Name: LCS 280-436906/2-B

Date: 11/13/2018 4:10:29 PM Rack:Tube: 1:40

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.198791	ppm	0.000125	0.06	8692.250000	Y 377.433
Al (167.019 nm)	0.357020	ppm	0.000582	0.16	195.946000	Y_R 377.433
Al H (396.152 nm)	0.354550 u	ppm	0.001088	0.31	942.796298	Y_R 377.433
As (188.980 nm)	0.737522	ppm	0.001422	0.19	976.492000	Y 242.219
B (249.678 nm)	0.188808	ppm	0.000335	0.18	4813.780000	Y 242.219
Ba (493.408 nm)	2.228790 o	ppm	0.002470	0.11	237147.000000	Y_R 488.368
Be (234.861 nm)	0.009092	ppm	0.000024	0.27	2559.130000	Y_R 488.368
Bi (223.061 nm)	0.353033	ppm	0.001032	0.29	907.536000	Y 377.433
Ca (315.887 nm)	9.200563	ppm	0.046760	0.51	6959.257547	Y_R 377.433
Cd (214.439 nm)	0.206304	ppm	0.000449	0.22	13018.100000	Y 377.433
Co (228.615 nm)	0.091881	ppm	0.000687	0.75	1680.270000	Y 242.219
Cr (205.560 nm)	0.969344	ppm	0.005727	0.59	14985.300000	Y 377.433
Cu (324.754 nm)	0.423559	ppm	0.002230	0.53	22435.100000	Y 377.433
Fe (238.204 nm)	0.185546	ppm	0.003096	1.67	681.458454	Y_R 377.433
Fe H (259.940 nm)	0.196426 u	ppm	0.000250	0.13	348.774000	Y_R 377.433
K (766.491 nm)	9.625490	ppm	0.055599	0.58	9742.240000	Y_R2 488.368
Li (670.783 nm)	0.184343	ppm	0.002362	1.28	4149.380000	Y_R2 488.368
Mg (279.078 nm)	8.926140	ppm	0.019406	0.22	54750.200000	Y 377.433
Mn (257.610 nm)	0.091102	ppm	0.000110	0.12	21570.000000	Y 377.433
Mo (202.032 nm)	0.186960	ppm	0.000184	0.10	1675.530000	Y 377.433
Na (589.592 nm)	269.418000 o	ppm	0.629542	0.23	1721240.000000	Y_R2 488.368
Na H (589.593 nm)	277.600693	ppm	1.381388	0.50	954087.421077	Y_R 488.368
Ni (231.604 nm)	0.090569	ppm	0.001077	1.19	640.888000	Y 377.433
P (213.618 nm)	1.911890	ppm	0.000045	0.00	4122.850000	Y 242.219
Pb (220.353 nm)	1.043640	ppm	0.000243	0.02	3147.720000	Y 242.219
S (181.972 nm)	0.368016	ppm	0.005829	1.58	210.154637	Y 377.433
Sb (206.834 nm)	0.089787	ppm	0.002656	2.96	249.017000	Y 377.433
Se (196.026 nm)	0.552646	ppm	0.005461	0.99	594.380000	Y 242.219
Si (288.158 nm)	1.829550	ppm	0.001779	0.10	16832.000000	Y 377.433
Sn (189.925 nm)	0.362002	ppm	0.001921	0.53	757.598000	Y 377.433
Sr (421.552 nm)	0.181434	ppm	0.000128	0.07	35431.341474	Y_R 488.368
Th (288.505 nm)	0.188056	ppm	0.001307	0.69	558.166000	Y 377.433
Ti (336.122 nm)	0.184905	ppm	0.000567	0.31	25835.900000	Y 377.433
Tl (190.794 nm)	0.362826	ppm	0.002526	0.70	818.368000	Y 377.433
U (409.013 nm)	0.358279	ppm	0.000499	0.14	1353.170000	Y 377.433
V (292.401 nm)	0.092533	ppm	0.000074	0.08	3199.580000	Y 377.433
Zn (206.200 nm)	0.476849	ppm	0.002929	0.61	2703.800000	Y 377.433
Zr (343.823 nm)	0.092131	ppm	0.000161	0.17	11910.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008105	19690.560452	0.004063	0.40
Y 377.433	1.003654	994248.964067	0.004558	0.45
Y_R 377.433	1.014200	72175.800000	0.002853	0.28
Y_R 488.368	1.023200	41684.900000	0.001089	0.11
Y_R2 488.368	1.018711	82371.388713	0.000551	0.05

Sample Name: 490-162509-B-1-B

Date: 11/13/2018 4:13:51 PM Rack:Tube: 1:41

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000114 u	ppm	0.000212	> 100.00	-441.837000	Y 377.433
Al (167.019 nm)	0.274863	ppm	0.003151	1.15	151.453000	Y_R 377.433
Al H (396.152 nm)	0.277622 u	ppm	0.005414	1.95	743.763722	Y_R 377.433
As (188.980 nm)	0.001390	ppm	0.000908	65.35	1.705790	Y 242.219
B (249.678 nm)	0.011980	ppm	0.000462	3.85	360.602000	Y 242.219
Ba (493.408 nm)	0.018386	ppm	0.000314	1.71	2626.610000	Y_R 488.368
Be (234.861 nm)	0.000099	ppm	0.000019	18.86	-42.423700	Y_R 488.368
Bi (223.061 nm)	-0.001126 u	ppm	0.000794	70.52	13.097400	Y 377.433
Ca (315.887 nm)	2.897749	ppm	0.002624	0.09	2150.720626	Y_R 377.433
Cd (214.439 nm)	-0.000096 u	ppm	0.000066	68.96	14.001400	Y 377.433
Co (228.615 nm)	0.032255	ppm	0.000113	0.35	557.563000	Y 242.219
Cr (205.560 nm)	0.000881	ppm	0.000014	1.64	19.667500	Y 377.433
Cu (324.754 nm)	0.120621	ppm	0.000366	0.30	6124.000000	Y 377.433
Fe (238.204 nm)	0.432073	ppm	0.001428	0.33	1551.119391	Y_R 377.433
Fe H (259.940 nm)	0.439100 u	ppm	0.004236	0.96	791.988000	Y_R 377.433
K (766.491 nm)	0.366389	ppm	0.039269	10.72	-403.735000	Y_R2 488.368
Li (670.783 nm)	0.000693 u	ppm	0.001935	> 100.00	-1552.640000	Y_R2 488.368
Mg (279.078 nm)	0.426598	ppm	0.001327	0.31	2679.310000	Y 377.433
Mn (257.610 nm)	0.099156	ppm	0.000098	0.10	23468.200000	Y 377.433
Mo (202.032 nm)	-0.000326 u	ppm	0.000021	6.59	-0.317907	Y 377.433
Na (589.592 nm)	268.026000 o	ppm	2.421030	0.90	1708070.000000	Y_R2 488.368
Na H (589.593 nm)	273.787192	ppm	1.903458	0.70	939114.412402	Y_R 488.368
Ni (231.604 nm)	0.004611	ppm	0.000096	2.08	31.092500	Y 377.433
P (213.618 nm)	0.016183	ppm	0.002560	15.82	69.744300	Y 242.219
Pb (220.353 nm)	0.001157	ppm	0.000986	85.21	7.601480	Y 242.219
S (181.972 nm)	0.043414	ppm	0.003394	7.82	39.687765	Y 377.433
Sb (206.834 nm)	-0.000763 u	ppm	0.000833	> 100.00	-33.007600	Y 377.433
Se (196.026 nm)	-0.002897 u	ppm	0.007620	> 100.00	13.476300	Y 242.219
Si (288.158 nm)	0.860278	ppm	0.004274	0.50	8428.360000	Y 377.433
Sn (189.925 nm)	-0.001085 u	ppm	0.001223	> 100.00	9.918100	Y 377.433
Sr (421.552 nm)	0.036291	ppm	0.000432	1.19	7191.236580	Y_R 488.368
Th (288.505 nm)	0.002470	ppm	0.000185	7.50	81.425900	Y 377.433
Ti (336.122 nm)	0.000622	ppm	0.000056	9.07	-254.271000	Y 377.433
Tl (190.794 nm)	0.001169	ppm	0.000114	9.75	-3.463970	Y 377.433
U (409.013 nm)	-0.010122 u	ppm	0.001786	17.64	-275.588000	Y 377.433
V (292.401 nm)	0.000028	ppm	0.000033	> 100.00	29.093400	Y 377.433
Zn (206.200 nm)	0.238956	ppm	0.000253	0.11	1375.570000	Y 377.433
Zr (343.823 nm)	-0.000059 u	ppm	0.000116	> 100.00	22.267100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015839	19841.636921	0.002319	0.23
Y 377.433	1.011109	1001634.001275	0.001091	0.11
Y_R 377.433	1.029610	73272.100000	0.007218	0.70
Y_R 488.368	1.044220	42541.600000	0.003850	0.37
Y_R2 488.368	1.021607	82605.525636	0.004411	0.43

Sample Name: 490-162509-B-1-Bsd@5

Date: 11/13/2018 4:17:13 PM Rack:Tube: 1:42

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000299 u	ppm	0.000139	46.48	-450.388000	Y 377.433
Al (167.019 nm)	0.053819	ppm	0.007260	13.49	31.090500	Y_R 377.433
Al H (396.152 nm)	0.041793 u	ppm	0.011108	26.58	183.636767	Y_R 377.433
As (188.980 nm)	-0.001091 u	ppm	0.000396	36.27	-1.576050	Y 242.219
B (249.678 nm)	0.003759	ppm	0.000028	0.74	153.100000	Y 242.219
Ba (493.408 nm)	0.003541	ppm	0.000109	3.09	1050.790000	Y_R 488.368
Be (234.861 nm)	0.000016	ppm	0.000015	90.21	-77.060300	Y_R 488.368
Bi (223.061 nm)	-0.001220 u	ppm	0.001586	> 100.00	12.804500	Y 377.433
Ca (315.887 nm)	0.592972	ppm	0.007406	1.25	392.403206	Y_R 377.433
Cd (214.439 nm)	-0.000144 u	ppm	0.000023	16.07	10.574900	Y 377.433
Co (228.615 nm)	0.006433	ppm	0.000177	2.76	74.230700	Y 242.219
Cr (205.560 nm)	0.000105 u	ppm	0.000245	> 100.00	7.780040	Y 377.433
Cu (324.754 nm)	0.023329	ppm	0.000120	0.52	888.801000	Y 377.433
Fe (238.204 nm)	0.087318	ppm	0.001893	2.17	334.945753	Y_R 377.433
Fe H (259.940 nm)	0.095393 u	ppm	0.000442	0.46	164.251000	Y_R 377.433
K (766.491 nm)	0.032507 u	ppm	0.075011	> 100.00	-769.598000	Y_R2 488.368
Li (670.783 nm)	-0.000578 u	ppm	0.000737	> 100.00	-1592.120000	Y_R2 488.368
Mg (279.078 nm)	0.084410	ppm	0.002563	3.04	583.232000	Y 377.433
Mn (257.610 nm)	0.019755	ppm	0.000318	1.61	4755.630000	Y 377.433
Mo (202.032 nm)	-0.000643 u	ppm	0.000047	7.32	-3.157960	Y 377.433
Na (589.592 nm)	56.003400 o	ppm	0.153329	0.27	357164.000000	Y_R2 488.368
Na H (589.593 nm)	59.304476	ppm	0.357179	0.60	205810.118089	Y_R 488.368
Ni (231.604 nm)	0.000655	ppm	0.000052	7.87	3.034490	Y 377.433
P (213.618 nm)	-0.004387 u	ppm	0.001031	23.49	25.764800	Y 242.219
Pb (220.353 nm)	-0.000236 u	ppm	0.000123	52.01	3.450400	Y 242.219
S (181.972 nm)	0.021458	ppm	0.000798	3.72	27.959997	Y 377.433
Sb (206.834 nm)	0.000123	ppm	0.000031	24.94	-30.453600	Y 377.433
Se (196.026 nm)	-0.002873 u	ppm	0.001282	44.64	13.501200	Y 242.219
Si (288.158 nm)	0.161940	ppm	0.001826	1.13	2373.750000	Y 377.433
Sn (189.925 nm)	-0.002567 u	ppm	0.002058	80.18	6.866310	Y 377.433
Sr (421.552 nm)	0.007488	ppm	0.000080	1.07	1587.148791	Y_R 488.368
Th (288.505 nm)	-0.000001 u	ppm	0.002505	> 100.00	73.657900	Y 377.433
Ti (336.122 nm)	0.000225	ppm	0.000180	79.96	-317.587000	Y 377.433
Tl (190.794 nm)	0.001020	ppm	0.000337	33.03	-3.894660	Y 377.433
U (409.013 nm)	-0.000876 u	ppm	0.005329	> 100.00	-234.371000	Y 377.433
V (292.401 nm)	0.000064	ppm	0.000014	22.10	30.874600	Y 377.433
Zn (206.200 nm)	0.040563	ppm	0.000533	1.32	267.872000	Y 377.433
Zr (343.823 nm)	-0.000107 u	ppm	0.000006	5.34	15.070100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030011	20118.437328	0.001883	0.18
Y 377.433	1.026418	1016799.459860	0.002883	0.28
Y_R 377.433	1.026050	73018.900000	0.001839	0.18
Y_R 488.368	1.036470	42225.700000	0.001696	0.16
Y_R2 488.368	1.020708	82532.892313	0.006673	0.65

Sample Name: 490-162509-B-1-C MS

Date: 11/13/2018 4:20:35 PM Rack:Tube: 1:43

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.204085	ppm	0.000388	0.19	8935.480000	Y 377.433
Al (167.019 nm)	0.625733	ppm	0.005639	0.90	342.276000	Y_R 377.433
Al H (396.152 nm)	0.634505 u	ppm	0.000828	0.13	1608.099122	Y_R 377.433
As (188.980 nm)	0.756818	ppm	0.000698	0.09	1002.040000	Y 242.219
B (249.678 nm)	0.196079	ppm	0.000348	0.18	4997.600000	Y 242.219
Ba (493.408 nm)	2.295080 o	ppm	0.003330	0.15	244181.000000	Y_R 488.368
Be (234.861 nm)	0.009328	ppm	0.000031	0.33	2640.860000	Y_R 488.368
Bi (223.061 nm)	0.362369	ppm	0.000017	0.00	931.187000	Y 377.433
Ca (315.887 nm)	12.152737 o	ppm	0.018889	0.16	9211.478645	Y_R 377.433
Cd (214.439 nm)	0.211354	ppm	0.000250	0.12	13336.700000	Y 377.433
Co (228.615 nm)	0.125559	ppm	0.000412	0.33	2310.810000	Y 242.219
Cr (205.560 nm)	0.991931	ppm	0.002785	0.28	15334.200000	Y 377.433
Cu (324.754 nm)	0.553321	ppm	0.001717	0.31	29419.600000	Y 377.433
Fe (238.204 nm)	0.620253	ppm	0.001630	0.26	2214.951386	Y_R 377.433
Fe H (259.940 nm)	0.624606 u	ppm	0.003486	0.56	1130.790000	Y_R 377.433
K (766.491 nm)	10.196900	ppm	0.000100	0.00	10368.400000	Y_R2 488.368
Li (670.783 nm)	0.192909	ppm	0.000353	0.18	4415.330000	Y_R2 488.368
Mg (279.078 nm)	9.543120	ppm	0.007294	0.08	58529.600000	Y 377.433
Mn (257.610 nm)	0.190863	ppm	0.000021	0.01	45080.900000	Y 377.433
Mo (202.032 nm)	0.191193	ppm	0.000195	0.10	1713.410000	Y 377.433
Na (589.592 nm)	271.083000 o	ppm	1.575140	0.58	1731980.000000	Y_R2 488.368
Na H (589.593 nm)	279.506074	ppm	0.567808	0.20	960660.433413	Y_R 488.368
Ni (231.604 nm)	0.096771	ppm	0.000444	0.46	684.883000	Y 377.433
P (213.618 nm)	1.897390	ppm	0.002808	0.15	4091.850000	Y 242.219
Pb (220.353 nm)	1.069420	ppm	0.000721	0.07	3225.340000	Y 242.219
S (181.972 nm)	0.399621	ppm	0.006046	1.51	227.000936	Y 377.433
Sb (206.834 nm)	0.091677	ppm	0.000145	0.16	254.851000	Y 377.433
Se (196.026 nm)	0.565163	ppm	0.004362	0.77	607.468000	Y 242.219
Si (288.158 nm)	2.718670	ppm	0.011981	0.44	24540.600000	Y 377.433
Sn (189.925 nm)	0.371580	ppm	0.001140	0.31	777.323000	Y 377.433
Sr (421.552 nm)	0.221724	ppm	0.000279	0.13	43270.400516	Y_R 488.368
Th (288.505 nm)	0.193222	ppm	0.000910	0.47	573.367000	Y 377.433
Ti (336.122 nm)	0.189448	ppm	0.000258	0.14	26487.800000	Y 377.433
Tl (190.794 nm)	0.372350	ppm	0.000239	0.06	840.134000	Y 377.433
U (409.013 nm)	0.366398	ppm	0.003543	0.97	1388.870000	Y 377.433
V (292.401 nm)	0.094444	ppm	0.000128	0.14	3264.900000	Y 377.433
Zn (206.200 nm)	0.722550	ppm	0.000387	0.05	4075.620000	Y 377.433
Zr (343.823 nm)	0.094754	ppm	0.000033	0.04	12250.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017034	19864.973455	0.002321	0.23
Y 377.433	1.012493	1003004.478543	0.002047	0.20
Y_R 377.433	1.021010	72660.700000	0.004214	0.41
Y_R 488.368	1.031800	42035.500000	0.001984	0.19
Y_R2 488.368	1.032917	83520.061401	0.000575	0.06

Sample Name: 490-162509-B-1-D MSD

Date: 11/13/2018 4:23:58 PM Rack:Tube: 1:44

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.226134	ppm	0.000217	0.10	9947.840000	Y 377.433
Al (167.019 nm)	0.688815	ppm	0.001142	0.17	376.601000	Y_R 377.433
Al H (396.152 nm)	0.710307 u	ppm	0.002256	0.32	1789.975715	Y_R 377.433
As (188.980 nm)	0.837203	ppm	0.001010	0.12	1108.480000	Y 242.219
B (249.678 nm)	0.217188	ppm	0.001122	0.52	5529.350000	Y 242.219
Ba (493.408 nm)	2.537220 o	ppm	0.006958	0.27	269873.000000	Y_R 488.368
Be (234.861 nm)	0.010320	ppm	0.000131	1.27	2930.300000	Y_R 488.368
Bi (223.061 nm)	0.399644	ppm	0.004534	1.13	1025.340000	Y 377.433
Ca (315.887 nm)	13.402437 o	ppm	0.016940	0.13	10164.888728	Y_R 377.433
Cd (214.439 nm)	0.233908	ppm	0.000257	0.11	14757.800000	Y 377.433
Co (228.615 nm)	0.138702	ppm	0.000976	0.70	2557.550000	Y 242.219
Cr (205.560 nm)	1.101710 o	ppm	0.001545	0.14	17030.600000	Y 377.433
Cu (324.754 nm)	0.612551	ppm	0.002393	0.39	32608.300000	Y 377.433
Fe (238.204 nm)	0.682864	ppm	0.002362	0.35	2435.821502	Y_R 377.433
Fe H (259.940 nm)	0.683017 u	ppm	0.004526	0.66	1237.470000	Y_R 377.433
K (766.491 nm)	11.223200	ppm	0.054808	0.49	11493.000000	Y_R2 488.368
Li (670.783 nm)	0.210982	ppm	0.003571	1.69	4976.460000	Y_R2 488.368
Mg (279.078 nm)	10.562800	ppm	0.011678	0.11	64776.200000	Y 377.433
Mn (257.610 nm)	0.211078	ppm	0.000390	0.18	49845.100000	Y 377.433
Mo (202.032 nm)	0.212792	ppm	0.000281	0.13	1906.670000	Y 377.433
Na (589.592 nm)	296.999000 o	ppm	0.314604	0.11	1897570.000000	Y_R2 488.368
Na H (589.593 nm)	308.641893	ppm	2.378500	0.77	1060484.238353	Y_R 488.368
Ni (231.604 nm)	0.107823	ppm	0.000317	0.29	763.283000	Y 377.433
P (213.618 nm)	2.096030	ppm	0.003571	0.17	4516.560000	Y 242.219
Pb (220.353 nm)	1.180910	ppm	0.004995	0.42	3561.170000	Y 242.219
S (181.972 nm)	0.446633	ppm	0.006091	1.36	251.742715	Y 377.433
Sb (206.834 nm)	0.103078	ppm	0.000165	0.16	289.990000	Y 377.433
Se (196.026 nm)	0.624591	ppm	0.002951	0.47	669.610000	Y 242.219
Si (288.158 nm)	3.029450	ppm	0.005414	0.18	27235.100000	Y 377.433
Sn (189.925 nm)	0.407995	ppm	0.001579	0.39	852.309000	Y 377.433
Sr (421.552 nm)	0.244639	ppm	0.001297	0.53	47728.804759	Y_R 488.368
Th (288.505 nm)	0.212728	ppm	0.001649	0.78	624.044000	Y 377.433
Ti (336.122 nm)	0.209624	ppm	0.000577	0.28	29346.100000	Y 377.433
Tl (190.794 nm)	0.413932	ppm	0.002070	0.50	934.651000	Y 377.433
U (409.013 nm)	0.408600	ppm	0.004478	1.10	1575.480000	Y 377.433
V (292.401 nm)	0.104406	ppm	0.000152	0.15	3604.610000	Y 377.433
Zn (206.200 nm)	0.802723	ppm	0.000361	0.04	4523.250000	Y 377.433
Zr (343.823 nm)	0.104698	ppm	0.000226	0.22	13532.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006555	19660.288600	0.003147	0.31
Y 377.433	1.002301	992907.804864	0.002256	0.23
Y_R 377.433	1.016680	72352.600000	0.009260	0.91
Y_R 488.368	1.025690	41786.600000	0.010661	1.04
Y_R2 488.368	1.024730	82858.046481	0.007519	0.73

Sample Name: 490-162509-B-1-Bpds

Date: 11/13/2018 4:27:20 PM Rack:Tube: 1:45

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.045062	ppm	0.000001	0.00	1625.120000	Y 377.433
Al (167.019 nm)	1.213670	ppm	0.013108	1.08	662.337000	Y_R 377.433
Al H (396.152 nm)	1.239142	ppm	0.019283	1.56	3035.184988	Y_R 377.433
As (188.980 nm)	0.194258	ppm	0.000897	0.46	257.093000	Y 242.219
B (249.678 nm)	0.109228	ppm	0.000496	0.45	2808.660000	Y 242.219
Ba (493.408 nm)	0.114734	ppm	0.000651	0.57	12854.400000	Y_R 488.368
Be (234.861 nm)	0.047727	ppm	0.000258	0.54	13858.600000	Y_R 488.368
Bi (223.061 nm)	-0.001227 u	ppm	0.000893	72.77	13.003200	Y 377.433
Ca (315.887 nm)	22.339183 o	ppm	0.102988	0.46	16982.644933	Y_R 377.433
Cd (214.439 nm)	0.048514	ppm	0.000065	0.13	3077.700000	Y 377.433
Co (228.615 nm)	0.080010	ppm	0.000592	0.74	1453.140000	Y 242.219
Cr (205.560 nm)	0.049390	ppm	0.000190	0.39	768.519000	Y 377.433
Cu (324.754 nm)	0.166670	ppm	0.000120	0.07	8596.240000	Y 377.433
Fe (238.204 nm)	1.412985	ppm	0.006154	0.44	5011.433312	Y_R 377.433
Fe H (259.940 nm)	1.417150 u	ppm	0.005473	0.39	2578.270000	Y_R 377.433
K (766.491 nm)	20.364000	ppm	0.086129	0.42	21509.400000	Y_R2 488.368
Li (670.783 nm)	0.100644	ppm	0.000922	0.92	1550.670000	Y_R2 488.368
Mg (279.078 nm)	19.451100	ppm	0.005805	0.03	119234.000000	Y 377.433
Mn (257.610 nm)	0.146433	ppm	0.000283	0.19	34610.100000	Y 377.433
Mo (202.032 nm)	0.048252	ppm	0.000388	0.81	434.361000	Y 377.433
Na (589.592 nm)	279.529000 o	ppm	0.498754	0.18	1781550.000000	Y_R2 488.368
Na H (589.593 nm)	289.437111	ppm	1.900650	0.66	992704.296013	Y_R 488.368
Ni (231.604 nm)	0.052035	ppm	0.000101	0.19	367.566000	Y 377.433
P (213.618 nm)	2.066260	ppm	0.006766	0.33	4452.900000	Y 242.219
Pb (220.353 nm)	0.096514	ppm	0.000259	0.27	295.658000	Y 242.219
S (181.972 nm)	0.037340	ppm	0.000738	1.98	36.614467	Y 377.433
Sb (206.834 nm)	0.093566	ppm	0.000255	0.27	230.273000	Y 377.433
Se (196.026 nm)	0.194178	ppm	0.000965	0.50	219.383000	Y 242.219
Si (288.158 nm)	5.717510	ppm	0.022534	0.39	50540.600000	Y 377.433
Sn (189.925 nm)	0.093535	ppm	0.001339	1.43	204.763000	Y 377.433
Sr (421.552 nm)	0.084525	ppm	0.000627	0.74	16576.033613	Y_R 488.368
Th (288.505 nm)	0.197690	ppm	0.000657	0.33	583.430000	Y 377.433
Ti (336.122 nm)	0.049726	ppm	0.000065	0.13	6753.120000	Y 377.433
Tl (190.794 nm)	0.194557	ppm	0.000840	0.43	436.387000	Y 377.433
U (409.013 nm)	0.481595	ppm	0.005361	1.11	1902.990000	Y 377.433
V (292.401 nm)	0.050151	ppm	0.000260	0.52	1858.530000	Y 377.433
Zn (206.200 nm)	0.429275	ppm	0.001189	0.28	2438.180000	Y 377.433
Zr (343.823 nm)	0.049480	ppm	0.000008	0.02	6413.740000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009128	19710.537637	0.000129	0.01
Y 377.433	1.006204	996774.263896	0.001037	0.10
Y_R 377.433	1.015790	72288.900000	0.005536	0.54
Y_R 488.368	1.032550	42065.900000	0.006669	0.65
Y_R2 488.368	1.023574	82764.585109	0.003933	0.38

Sample Name: CCVH-5417909

Date: 11/13/2018 4:30:44 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002184 u	ppm	0.000184	8.42	-775.068000	Y 377.433
Al (167.019 nm)	44.523700 o	ppm	0.058659	0.13	24232.700000	Y_R 377.433
Al H (396.152 nm)	49.571912	ppm	0.050921	0.10	117620.586432	Y_R 377.433
As (188.980 nm)	0.001258	ppm	0.001250	99.37	1.080440	Y 242.219
B (249.678 nm)	0.000167 u	ppm	0.000619	> 100.00	-11.436600	Y 242.219
Ba (493.408 nm)	0.000109 u	ppm	0.000244	> 100.00	728.181000	Y_R 488.368
Be (234.861 nm)	-0.000114 u	ppm	0.000023	20.06	1374.480000	Y_R 488.368
Bi (223.061 nm)	0.970267	ppm	0.000175	0.02	2474.480000	Y 377.433
Ca (315.887 nm)	-0.012076 u	ppm	0.012787	> 100.00	-69.189495	Y_R 377.433
Cd (214.439 nm)	-0.000559 u	ppm	0.000025	4.47	33.840700	Y 377.433
Co (228.615 nm)	0.003308	ppm	0.000045	1.35	15.744000	Y 242.219
Cr (205.560 nm)	-0.000019 u	ppm	0.000298	> 100.00	-7.780080	Y 377.433
Cu (324.754 nm)	-0.007954 u	ppm	0.000195	2.45	-470.667000	Y 377.433
Fe (238.204 nm)	49.447192 o	ppm	0.107075	0.22	174459.251813	Y_R 377.433
Fe H (259.940 nm)	49.287600	ppm	0.220845	0.45	90007.600000	Y_R 377.433
K (766.491 nm)	0.042066	ppm	0.003212	7.64	-759.124000	Y_R2 488.368
Li (670.783 nm)	0.001611	ppm	0.000869	53.94	-1524.170000	Y_R2 488.368
Mg (279.078 nm)	-0.018126 u	ppm	0.000099	0.54	-412.100000	Y 377.433
Mn (257.610 nm)	0.001190	ppm	0.000031	2.63	380.228000	Y 377.433
Mo (202.032 nm)	-0.000392 u	ppm	0.000063	16.12	-0.907483	Y 377.433
Na (589.592 nm)	241.675000 o	ppm	0.329230	0.14	1540140.000000	Y_R2 488.368
Na H (589.593 nm)	248.222880	ppm	3.432860	1.38	851695.733040	Y_R 488.368
Ni (231.604 nm)	0.004140	ppm	0.000317	7.66	29.823300	Y 377.433
P (213.618 nm)	-0.009491 u	ppm	0.001702	17.94	14.851600	Y 242.219
Pb (220.353 nm)	-0.004576 u	ppm	0.002726	59.58	7.376830	Y 242.219
S (181.972 nm)	4.812941	ppm	0.000443	0.01	2544.489054	Y 377.433
Sb (206.834 nm)	-0.005915 u	ppm	0.000098	1.65	-92.859400	Y 377.433
Se (196.026 nm)	-0.003795 u	ppm	0.000412	10.85	3.299750	Y 242.219
Si (288.158 nm)	0.014622	ppm	0.000453	3.10	1096.510000	Y 377.433
Sn (189.925 nm)	-0.001496 u	ppm	0.000780	52.16	9.072530	Y 377.433
Sr (421.552 nm)	0.000521	ppm	0.000117	22.50	231.616533	Y_R 488.368
Th (288.505 nm)	4.981200	ppm	0.002067	0.04	12816.000000	Y 377.433
Ti (336.122 nm)	0.001619	ppm	0.000077	4.76	-122.169000	Y 377.433
Tl (190.794 nm)	-0.003423 u	ppm	0.001365	39.87	-15.356000	Y 377.433
U (409.013 nm)	9.952770	ppm	0.025896	0.26	44040.600000	Y 377.433
V (292.401 nm)	0.002388	ppm	0.000248	10.39	-40.752700	Y 377.433
Zn (206.200 nm)	-0.007014 u	ppm	0.000077	1.09	2.233250	Y 377.433
Zr (343.823 nm)	-0.004725 u	ppm	0.000194	4.10	-441.320000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023170	19984.816086	0.000821	0.08
Y 377.433	1.011960	1002476.922118	0.000964	0.10
Y_R 377.433	1.028500	73193.400000	0.002571	0.25
Y_R 488.368	1.041180	42417.600000	0.011057	1.06
Y_R2 488.368	1.030186	83299.231532	0.003162	0.31

Sample Name: CCV-5416701

Date: 11/13/2018 4:34:07 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.483406	ppm	0.000401	0.08	21794.800000	Y 377.433
Al (167.019 nm)	0.488202	ppm	0.009679	1.98	268.734000	Y_R 377.433
Al H (396.152 nm)	0.487980 u	ppm	0.002588	0.53	1280.617898	Y_R 377.433
As (188.980 nm)	0.969964	ppm	0.004198	0.43	1284.270000	Y 242.219
B (249.678 nm)	0.483398	ppm	0.000599	0.12	12241.900000	Y 242.219
Ba (493.408 nm)	0.490899	ppm	0.002195	0.45	52770.600000	Y_R 488.368
Be (234.861 nm)	0.483554	ppm	0.002006	0.41	140824.000000	Y_R 488.368
Bi (223.061 nm)	-0.005236 u	ppm	0.000594	11.35	3.051400	Y 377.433
Ca (315.887 nm)	4.967546	ppm	0.023830	0.48	3730.037387	Y_R 377.433
Cd (214.439 nm)	0.493017	ppm	0.001041	0.21	31085.200000	Y 377.433
Co (228.615 nm)	0.494914	ppm	0.000049	0.01	9235.440000	Y 242.219
Cr (205.560 nm)	0.489749	ppm	0.001260	0.26	7568.550000	Y 377.433
Cu (324.754 nm)	0.483217	ppm	0.000895	0.19	25642.300000	Y 377.433
Fe (238.204 nm)	2.482278	ppm	0.014173	0.57	8783.522119	Y_R 377.433
Fe H (259.940 nm)	2.484640 u	ppm	0.020513	0.83	4527.900000	Y_R 377.433
K (766.491 nm)	48.845300	ppm	0.088121	0.18	52718.700000	Y_R2 488.368
Li (670.783 nm)	0.986929	ppm	0.004254	0.43	29068.300000	Y_R2 488.368
Mg (279.078 nm)	19.549500	ppm	0.027303	0.14	119848.000000	Y 377.433
Mn (257.610 nm)	0.493999	ppm	0.000597	0.12	116522.000000	Y 377.433
Mo (202.032 nm)	0.496907	ppm	0.000165	0.03	4448.970000	Y 377.433
Na (589.592 nm)	5.038220	ppm	0.019417	0.39	33396.800000	Y_R2 488.368
Na H (589.593 nm)	6.372715 u	ppm	0.061555	0.97	25270.087478	Y_R 488.368
Ni (231.604 nm)	0.496574	ppm	0.001234	0.25	3519.920000	Y 377.433
P (213.618 nm)	1.007190	ppm	0.002253	0.22	2188.560000	Y 242.219
Pb (220.353 nm)	0.985044	ppm	0.002024	0.21	2969.000000	Y 242.219
S (181.972 nm)	0.004759	ppm	0.000547	11.50	20.362836	Y 377.433
Sb (206.834 nm)	0.977420	ppm	0.002086	0.21	2713.320000	Y 377.433
Se (196.026 nm)	0.961966	ppm	0.002861	0.30	1022.280000	Y 242.219
Si (288.158 nm)	4.858190	ppm	0.009689	0.20	43090.400000	Y 377.433
Sn (189.925 nm)	0.980025	ppm	0.002633	0.27	2030.250000	Y 377.433
Sr (421.552 nm)	0.489450	ppm	0.003156	0.64	95360.839370	Y_R 488.368
Th (288.505 nm)	-0.002774 u	ppm	0.000811	29.22	81.834600	Y 377.433
Ti (336.122 nm)	0.497439	ppm	0.000307	0.06	70036.900000	Y 377.433
Tl (190.794 nm)	0.993080	ppm	0.003166	0.32	2251.780000	Y 377.433
U (409.013 nm)	-0.003346 u	ppm	0.004825	> 100.00	-281.418000	Y 377.433
V (292.401 nm)	0.493791	ppm	0.000205	0.04	18150.400000	Y 377.433
Zn (206.200 nm)	0.493377	ppm	0.000054	0.01	2796.080000	Y 377.433
Zr (343.823 nm)	0.495641	ppm	0.000850	0.17	63955.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.036493	20245.044993	0.003140	0.30
Y 377.433	1.032193	1022519.910326	0.003724	0.36
Y_R 377.433	1.039470	73974.300000	0.005804	0.56
Y_R 488.368	1.046660	42640.700000	0.006624	0.63
Y_R2 488.368	1.031478	83403.668544	0.001115	0.11

Sample Name: CCB

Date: 11/13/2018 4:37:29 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000191 u	ppm	0.000217	> 100.00	-445.420000	Y 377.433
Al (167.019 nm)	-0.000538 u	ppm	0.001906	> 100.00	1.489250	Y_R 377.433
Al H (396.152 nm)	-0.024281 u	ppm	0.007161	29.49	26.743235	Y_R 377.433
As (188.980 nm)	0.000406 u	ppm	0.001158	> 100.00	0.406609	Y 242.219
B (249.678 nm)	0.002346	ppm	0.000362	15.44	117.452000	Y 242.219
Ba (493.408 nm)	0.000049 u	ppm	0.000321	> 100.00	680.105000	Y_R 488.368
Be (234.861 nm)	0.000041	ppm	0.000030	73.44	-72.497600	Y_R 488.368
Bi (223.061 nm)	-0.000546 u	ppm	0.000795	> 100.00	14.492800	Y 377.433
Ca (315.887 nm)	-0.003957 u	ppm	0.001647	41.63	-62.995040	Y_R 377.433
Cd (214.439 nm)	-0.000103 u	ppm	0.000067	64.74	13.056100	Y 377.433
Co (228.615 nm)	0.000186	ppm	0.000119	64.08	-42.693700	Y 242.219
Cr (205.560 nm)	-0.000098 u	ppm	0.000096	97.27	4.654000	Y 377.433
Cu (324.754 nm)	-0.000696 u	ppm	0.000143	20.57	-404.413000	Y 377.433
Fe (238.204 nm)	-0.002005 u	ppm	0.001430	71.32	19.844452	Y_R 377.433
Fe H (259.940 nm)	0.011243 u	ppm	0.003944	35.08	10.561500	Y_R 377.433
K (766.491 nm)	0.028317	ppm	0.000485	1.71	-774.190000	Y_R2 488.368
Li (670.783 nm)	0.002592	ppm	0.002840	> 100.00	-1493.710000	Y_R2 488.368
Mg (279.078 nm)	0.002432	ppm	0.001998	82.16	80.962900	Y 377.433
Mn (257.610 nm)	-0.000109 u	ppm	0.000018	16.12	74.193400	Y 377.433
Mo (202.032 nm)	-0.000454 u	ppm	0.000037	8.11	-1.462130	Y 377.433
Na (589.592 nm)	0.132680	ppm	0.032801	24.72	1183.210000	Y_R2 488.368
Na H (589.593 nm)	0.867339 u	ppm	0.017258	1.99	6017.173493	Y_R 488.368
Ni (231.604 nm)	0.000596 u	ppm	0.000855	> 100.00	2.613580	Y 377.433
P (213.618 nm)	-0.004206 u	ppm	0.000645	15.33	26.152200	Y 242.219
Pb (220.353 nm)	-0.000037 u	ppm	0.000190	> 100.00	4.078340	Y 242.219
S (181.972 nm)	-0.003089 u	ppm	0.004790	> 100.00	15.018727	Y 377.433
Sb (206.834 nm)	0.001240	ppm	0.001383	> 100.00	-27.319500	Y 377.433
Se (196.026 nm)	0.000915	ppm	0.000251	27.45	17.462000	Y 242.219
Si (288.158 nm)	-0.004851 u	ppm	0.000528	10.89	927.678000	Y 377.433
Sn (189.925 nm)	-0.002371 u	ppm	0.000119	5.01	7.270600	Y 377.433
Sr (421.552 nm)	0.000007 u	ppm	0.000054	> 100.00	131.624511	Y_R 488.368
Th (288.505 nm)	-0.000574 u	ppm	0.003331	> 100.00	71.909200	Y 377.433
Ti (336.122 nm)	0.000220	ppm	0.000074	33.67	-320.142000	Y 377.433
Tl (190.794 nm)	0.001652	ppm	0.000385	23.29	-2.476220	Y 377.433
U (409.013 nm)	-0.005430 u	ppm	0.003343	61.57	-254.593000	Y 377.433
V (292.401 nm)	-0.000076 u	ppm	0.000340	> 100.00	25.404800	Y 377.433
Zn (206.200 nm)	-0.007535 u	ppm	0.000037	0.49	-0.673380	Y 377.433
Zr (343.823 nm)	0.000013 u	ppm	0.000202	> 100.00	30.294900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015253	19830.191477	0.000272	0.03
Y 377.433	1.014321	1004815.273088	0.000022	0.00
Y_R 377.433	1.024560	72912.900000	0.002034	0.20
Y_R 488.368	1.030660	41988.900000	0.007045	0.68
Y_R2 488.368	1.021104	82564.894395	0.010164	1.00

Sample Name: CCVL-5425098

Date: 11/13/2018 4:40:51 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008707	ppm	0.000135	1.55	-35.701600	Y 377.433
Al (167.019 nm)	0.092154	ppm	0.001432	1.55	51.930400	Y_R 377.433
Al H (396.152 nm)	0.077307 u	ppm	0.004170	5.39	269.060244	Y_R 377.433
As (188.980 nm)	0.012947	ppm	0.002017	15.58	17.012400	Y 242.219
B (249.678 nm)	0.093668	ppm	0.000092	0.10	2415.980000	Y 242.219
Ba (493.408 nm)	0.009641	ppm	0.000180	1.87	1697.860000	Y_R 488.368
Be (234.861 nm)	0.000942	ppm	0.000025	2.69	192.105000	Y_R 488.368
Bi (223.061 nm)	0.095287	ppm	0.000574	0.60	256.548000	Y 377.433
Ca (315.887 nm)	0.194599	ppm	0.008998	4.62	88.486521	Y_R 377.433
Cd (214.439 nm)	0.004728	ppm	0.000007	0.14	317.580000	Y 377.433
Co (228.615 nm)	0.010293	ppm	0.000083	0.81	146.811000	Y 242.219
Cr (205.560 nm)	0.009692	ppm	0.000294	3.03	155.887000	Y 377.433
Cu (324.754 nm)	0.014150	ppm	0.000084	0.59	392.288000	Y 377.433
Fe (238.204 nm)	0.094011	ppm	0.000030	0.03	358.555143	Y_R 377.433
Fe H (259.940 nm)	0.107699 u	ppm	0.000379	0.35	186.726000	Y_R 377.433
K (766.491 nm)	2.981790	ppm	0.054039	1.81	2462.180000	Y_R2 488.368
Li (670.783 nm)	0.020405	ppm	0.001069	5.24	-940.617000	Y_R2 488.368
Mg (279.078 nm)	0.191603	ppm	0.000172	0.09	1239.360000	Y 377.433
Mn (257.610 nm)	0.009844	ppm	0.000030	0.30	2419.850000	Y 377.433
Mo (202.032 nm)	0.017734	ppm	0.000069	0.39	161.280000	Y 377.433
Na (589.592 nm)	1.156920	ppm	0.015675	1.35	7727.240000	Y_R2 488.368
Na H (589.593 nm)	1.760612 u	ppm	0.043221	2.45	9079.351198	Y_R 488.368
Ni (231.604 nm)	0.039620	ppm	0.000581	1.47	279.274000	Y 377.433
P (213.618 nm)	2.710120 o	ppm	0.003313	0.12	5829.520000	Y 242.219
Pb (220.353 nm)	0.009699	ppm	0.000264	2.72	33.348800	Y 242.219
S (181.972 nm)	0.088864	ppm	0.003822	4.30	63.338570	Y 377.433
Sb (206.834 nm)	0.016384	ppm	0.000046	0.28	15.165200	Y 377.433
Se (196.026 nm)	0.015469	ppm	0.003145	20.33	32.670500	Y 242.219
Si (288.158 nm)	0.459336	ppm	0.000214	0.05	4952.180000	Y 377.433
Sn (189.925 nm)	0.090042	ppm	0.000645	0.72	197.570000	Y 377.433
Sr (421.552 nm)	0.009662	ppm	0.000128	1.32	2010.133521	Y_R 488.368
Th (288.505 nm)	0.010840	ppm	0.003938	36.33	101.567000	Y 377.433
Ti (336.122 nm)	0.009551	ppm	0.000020	0.21	1000.470000	Y 377.433
Tl (190.794 nm)	0.014960	ppm	0.000156	1.04	27.749300	Y 377.433
U (409.013 nm)	0.056177	ppm	0.002093	3.73	18.150600	Y 377.433
V (292.401 nm)	0.009530	ppm	0.000299	3.14	376.074000	Y 377.433
Zn (206.200 nm)	0.012241 Q	ppm	0.000050	0.41	109.741000 Q	Y 377.433
Zr (343.823 nm)	0.014517	ppm	0.000107	0.74	1901.080000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033565	20187.858900	0.000238	0.02
Y 377.433	1.033436	1023751.899224	0.001370	0.13
Y_R 377.433	1.029180	73242.100000	0.005801	0.56
Y_R 488.368	1.043120	42496.500000	0.012817	1.23
Y_R2 488.368	1.030178	83298.618158	0.001786	0.17

Sample Name: MB 280-436946/1-A

Date: 11/13/2018 4:44:14 PM Rack:Tube: 1:46

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000430 u	ppm	0.000009	2.00	-456.567000	Y 377.433
Al (167.019 nm)	0.000479 u	ppm	0.001069	> 100.00	2.046680	Y_R 377.433
Al H (396.152 nm)	-0.020499 u	ppm	0.000699	3.41	35.714076	Y_R 377.433
As (188.980 nm)	-0.000013 u	ppm	0.001739	> 100.00	-0.147532	Y 242.219
B (249.678 nm)	0.001493	ppm	0.000324	21.72	95.966700	Y 242.219
Ba (493.408 nm)	-0.000024 u	ppm	0.000164	> 100.00	672.404000	Y_R 488.368
Be (234.861 nm)	0.000031	ppm	0.000001	4.81	-75.204200	Y_R 488.368
Bi (223.061 nm)	0.000530 u	ppm	0.001255	> 100.00	17.210200	Y 377.433
Ca (315.887 nm)	0.024590	ppm	0.011413	46.41	-41.216376	Y_R 377.433
Cd (214.439 nm)	-0.000167 u	ppm	0.000004	2.51	9.016240	Y 377.433
Co (228.615 nm)	0.000540	ppm	0.000084	15.55	-36.073500	Y 242.219
Cr (205.560 nm)	0.000230	ppm	0.000205	89.31	9.727200	Y 377.433
Cu (324.754 nm)	-0.000307 u	ppm	0.000039	12.63	-384.047000	Y 377.433
Fe (238.204 nm)	0.004685	ppm	0.001142	24.38	43.444052	Y_R 377.433
Fe H (259.940 nm)	0.017934 u	ppm	0.002529	14.10	22.780900	Y_R 377.433
K (766.491 nm)	0.019778 u	ppm	0.033658	> 100.00	-783.547000	Y_R2 488.368
Li (670.783 nm)	-0.000319 u	ppm	0.000001	0.31	-1584.080000	Y_R2 488.368
Mg (279.078 nm)	0.002361	ppm	0.000927	39.25	80.366700	Y 377.433
Mn (257.610 nm)	0.001152	ppm	0.000019	1.68	371.280000	Y 377.433
Mo (202.032 nm)	-0.000492 u	ppm	0.000032	6.48	-1.807610	Y 377.433
Na (589.592 nm)	0.146925	ppm	0.010296	7.01	1274.300000	Y_R2 488.368
Na H (589.593 nm)	0.633335 u	ppm	0.004517	0.71	5217.291706	Y_R 488.368
Ni (231.604 nm)	0.000249 u	ppm	0.000787	> 100.00	0.159855	Y 377.433
P (213.618 nm)	-0.004048 u	ppm	0.002368	58.50	26.488800	Y 242.219
Pb (220.353 nm)	0.001968	ppm	0.001007	51.19	10.131600	Y 242.219
S (181.972 nm)	0.006552	ppm	0.000362	5.53	20.085312	Y 377.433
Sb (206.834 nm)	-0.000525 u	ppm	0.000226	42.98	-32.259600	Y 377.433
Se (196.026 nm)	0.001455 u	ppm	0.002891	> 100.00	18.026100	Y 242.219
Si (288.158 nm)	-0.004030 u	ppm	0.001685	41.81	934.794000	Y 377.433
Sn (189.925 nm)	-0.001795 u	ppm	0.000161	8.99	8.456660	Y 377.433
Sr (421.552 nm)	0.000114	ppm	0.000024	20.97	152.508801	Y_R 488.368
Th (288.505 nm)	-0.000438 u	ppm	0.000554	> 100.00	72.374500	Y 377.433
Ti (336.122 nm)	0.000455	ppm	0.000020	4.31	-286.943000	Y 377.433
Tl (190.794 nm)	0.002097	ppm	0.000924	44.05	-1.465020	Y 377.433
U (409.013 nm)	-0.000474 u	ppm	0.004034	> 100.00	-232.544000	Y 377.433
V (292.401 nm)	-0.000170 u	ppm	0.000193	> 100.00	21.448100	Y 377.433
Zn (206.200 nm)	-0.005376 u	ppm	0.000099	1.85	11.380400	Y 377.433
Zr (343.823 nm)	-0.000136 u	ppm	0.000078	57.09	11.126300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028152	20082.130505	0.000301	0.03
Y 377.433	1.026286	1016668.211604	0.000844	0.08
Y_R 377.433	1.040840	74071.800000	0.003481	0.33
Y_R 488.368	1.053070	42901.900000	0.008669	0.82
Y_R2 488.368	1.033577	83573.416049	0.000335	0.03

Sample Name: LCS 280-436946/2-A

Date: 11/13/2018 4:47:37 PM Rack:Tube: 1:47

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053991	ppm	0.000157	0.29	2020.850000	Y 377.433
Al (167.019 nm)	1.988420	ppm	0.012710	0.64	1083.180000	Y_R 377.433
Al H (396.152 nm)	2.083650	ppm	0.000603	0.03	5125.265412	Y_R 377.433
As (188.980 nm)	1.008850	ppm	0.000111	0.01	1335.780000	Y 242.219
B (249.678 nm)	1.053610	ppm	0.001412	0.13	26594.800000	Y 242.219
Ba (493.408 nm)	2.066680 o	ppm	0.002544	0.12	219957.000000	Y_R 488.368
Be (234.861 nm)	0.050981	ppm	0.000184	0.36	14738.700000	Y_R 488.368
Bi (223.061 nm)	1.977650	ppm	0.002381	0.12	5010.880000	Y 377.433
Ca (315.887 nm)	51.558864 o	ppm	0.083757	0.16	39274.410608	Y_R 377.433
Cd (214.439 nm)	0.101202	ppm	0.000215	0.21	6397.370000	Y 377.433
Co (228.615 nm)	0.499107	ppm	0.000222	0.04	9333.920000	Y 242.219
Cr (205.560 nm)	0.205917	ppm	0.001321	0.64	3185.540000	Y 377.433
Cu (324.754 nm)	0.247383	ppm	0.000197	0.08	12974.000000	Y 377.433
Fe (238.204 nm)	1.043203	ppm	0.003109	0.30	3706.971918	Y_R 377.433
Fe H (259.940 nm)	1.038360 u	ppm	0.004425	0.43	1886.470000	Y_R 377.433
K (766.491 nm)	52.393700	ppm	0.190203	0.36	56606.900000	Y_R2 488.368
Li (670.783 nm)	1.039170	ppm	0.003694	0.36	30690.200000	Y_R2 488.368
Mg (279.078 nm)	51.013700 o	ppm	0.106282	0.21	312584.000000	Y 377.433
Mn (257.610 nm)	0.512543	ppm	0.001233	0.24	120892.000000	Y 377.433
Mo (202.032 nm)	1.058950	ppm	0.002305	0.22	9478.200000	Y 377.433
Na (589.592 nm)	52.253200 o	ppm	0.078450	0.15	337289.000000	Y_R2 488.368
Na H (589.593 nm)	54.065138	ppm	0.019502	0.04	189703.761771	Y_R 488.368
Ni (231.604 nm)	0.495324	ppm	0.002376	0.48	3512.300000	Y 377.433
P (213.618 nm)	10.723800 o	ppm	0.017798	0.17	22963.200000	Y 242.219
Pb (220.353 nm)	0.516413	ppm	0.001563	0.30	1560.070000	Y 242.219
S (181.972 nm)	1.985041	ppm	0.001194	0.06	1060.488697	Y 377.433
Sb (206.834 nm)	0.523134	ppm	0.005252	1.00	1425.780000	Y 377.433
Se (196.026 nm)	2.042290	ppm	0.005020	0.25	2152.230000	Y 242.219
Si (288.158 nm)	10.243000	ppm	0.050428	0.49	89776.400000	Y 377.433
Sn (189.925 nm)	2.067510	ppm	0.003382	0.16	4269.640000	Y 377.433
Sr (421.552 nm)	1.030930	ppm	0.003297	0.32	200715.000797	Y_R 488.368
Th (288.505 nm)	1.048440	ppm	0.001095	0.10	2782.710000	Y 377.433
Ti (336.122 nm)	1.045920	ppm	0.002077	0.20	147775.000000	Y 377.433
Tl (190.794 nm)	2.060490	ppm	0.006860	0.33	4676.620000	Y 377.433
U (409.013 nm)	2.098980	ppm	0.007496	0.36	9048.740000	Y 377.433
V (292.401 nm)	0.526210	ppm	0.000675	0.13	19386.000000	Y 377.433
Zn (206.200 nm)	0.507139	ppm	0.002604	0.51	2872.920000	Y 377.433
Zr (343.823 nm)	0.519362	ppm	0.000721	0.14	67010.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016918	19862.694975	0.004044	0.40
Y 377.433	1.018971	1009422.051088	0.004025	0.40
Y_R 377.433	1.032590	73484.700000	0.000956	0.09
Y_R 488.368	1.040470	42388.600000	0.001048	0.10
Y_R2 488.368	1.018229	82332.434810	0.008008	0.79

Sample Name: 280-116746-A-1-D

Date: 11/13/2018 4:50:59 PM Rack:Tube: 1:48

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000205	ppm	0.000001	0.53	-427.595000	Y 377.433
Al (167.019 nm)	0.016586	ppm	0.005213	31.43	11.029800	Y_R 377.433
Al H (396.152 nm)	0.045176 u	ppm	0.003146	6.96	306.369353	Y_R 377.433
As (188.980 nm)	0.001146 u	ppm	0.003864	> 100.00	1.383420	Y 242.219
B (249.678 nm)	0.366999	ppm	0.000071	0.02	9294.100000	Y 242.219
Ba (493.408 nm)	0.038782	ppm	0.000423	1.09	4849.450000	Y_R 488.368
Be (234.861 nm)	0.000034	ppm	0.000028	81.04	-63.658200	Y_R 488.368
Bi (223.061 nm)	-0.002704 u	ppm	0.003156	> 100.00	9.099450	Y 377.433
Ca (315.887 nm)	279.774857 o	ppm	0.848892	0.30	213380.670524	Y_R 377.433
Cd (214.439 nm)	-0.000090 u	ppm	0.000032	35.73	14.259900	Y 377.433
Co (228.615 nm)	0.000065	ppm	0.000087	> 100.00	-44.957400	Y 242.219
Cr (205.560 nm)	0.000170	ppm	0.000225	> 100.00	8.694180	Y 377.433
Cu (324.754 nm)	-0.001588 u	ppm	0.000323	20.35	-615.712000	Y 377.433
Fe (238.204 nm)	0.358751	ppm	0.002075	0.58	1292.464788	Y_R 377.433
Fe H (259.940 nm)	0.356349 u	ppm	0.004608	1.29	640.854000	Y_R 377.433
K (766.491 nm)	0.499661	ppm	0.004318	0.86	-257.698000	Y_R2 488.368
Li (670.783 nm)	0.000242 u	ppm	0.002400	> 100.00	-1566.660000	Y_R2 488.368
Mg (279.078 nm)	43.165400	ppm	0.021310	0.05	264553.000000	Y 377.433
Mn (257.610 nm)	0.394787	ppm	0.000226	0.06	93140.200000	Y 377.433
Mo (202.032 nm)	-0.000483 u	ppm	0.000109	22.62	-1.723150	Y 377.433
Na (589.592 nm)	18.367300 o	ppm	0.035635	0.19	117440.000000	Y_R2 488.368
Na H (589.593 nm)	19.343934	ppm	0.047626	0.25	69221.159822	Y_R 488.368
Ni (231.604 nm)	0.001615	ppm	0.000591	36.62	9.853500	Y 377.433
P (213.618 nm)	0.263453	ppm	0.000530	0.20	598.420000	Y 242.219
Pb (220.353 nm)	0.001408	ppm	0.000787	55.89	8.435600	Y 242.219
S (181.972 nm)	233.535024 bo	ppm	0.119450	0.05	122674.476372	Y 377.433
Sb (206.834 nm)	-0.002037 u	ppm	0.000300	14.73	-36.580900	Y 377.433
Se (196.026 nm)	-0.002730 u	ppm	0.001459	53.43	13.914200	Y 242.219
Si (288.158 nm)	3.948690	ppm	0.009758	0.25	35205.000000	Y 377.433
Sn (189.925 nm)	0.000331	ppm	0.000093	28.16	12.833800	Y 377.433
Sr (421.552 nm)	1.100283 o	ppm	0.000348	0.03	214208.797823	Y_R 488.368
Th (288.505 nm)	-0.001010 u	ppm	0.000965	95.57	78.691000	Y 377.433
Ti (336.122 nm)	0.000043	ppm	0.000010	22.11	526.934000	Y 377.433
Tl (190.794 nm)	0.004014	ppm	0.000028	0.71	2.888480	Y 377.433
U (409.013 nm)	-0.008070 u	ppm	0.002540	31.47	-318.309000	Y 377.433
V (292.401 nm)	0.000676	ppm	0.000530	78.40	53.954400	Y 377.433
Zn (206.200 nm)	0.007664	ppm	0.000626	8.17	84.187200	Y 377.433
Zr (343.823 nm)	-0.000090 u	ppm	0.000151	> 100.00	18.102200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005786	19645.270351	0.001360	0.14
Y 377.433	1.014984	1005472.056359	0.001907	0.19
Y_R 377.433	1.029480	73262.800000	0.005180	0.50
Y_R 488.368	1.042280	42462.600000	0.001160	0.11
Y_R2 488.368	1.024295	82822.900846	0.005866	0.57

Sample Name: 280-116746-A-1-Dsd@5

Date: 11/13/2018 4:54:21 PM Rack:Tube: 1:49

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000266	ppm	0.000202	75.95	-424.525000	Y 377.433
Al (167.019 nm)	0.000932 u	ppm	0.001338	> 100.00	2.334410	Y_R 377.433
Al H (396.152 nm)	-0.000311 u	ppm	0.008191	> 100.00	106.719854	Y_R 377.433
As (188.980 nm)	-0.000643 u	ppm	0.000353	54.82	-0.983000	Y 242.219
B (249.678 nm)	0.072911	ppm	0.000224	0.31	1893.230000	Y 242.219
Ba (493.408 nm)	0.007229	ppm	0.000304	4.21	1453.910000	Y_R 488.368
Be (234.861 nm)	0.000019	ppm	0.000010	51.48	-76.936600	Y_R 488.368
Bi (223.061 nm)	-0.001847 u	ppm	0.001980	> 100.00	11.217900	Y 377.433
Ca (315.887 nm)	56.193617 o	ppm	0.241322	0.43	42810.216101	Y_R 377.433
Cd (214.439 nm)	-0.000198 u	ppm	0.000027	13.65	7.126930	Y 377.433
Co (228.615 nm)	-0.000096 u	ppm	0.000199	> 100.00	-47.987300	Y 242.219
Cr (205.560 nm)	0.000157	ppm	0.000082	52.47	8.579460	Y 377.433
Cu (324.754 nm)	-0.000555 u	ppm	0.000179	32.29	-431.718000	Y 377.433
Fe (238.204 nm)	0.068888	ppm	0.000328	0.48	269.931627	Y_R 377.433
Fe H (259.940 nm)	0.077744 u	ppm	0.000817	1.05	132.017000	Y_R 377.433
K (766.491 nm)	0.128772	ppm	0.009580	7.44	-664.113000	Y_R2 488.368
Li (670.783 nm)	0.002359	ppm	0.000777	32.93	-1500.920000	Y_R2 488.368
Mg (279.078 nm)	8.549870	ppm	0.010196	0.12	52453.700000	Y 377.433
Mn (257.610 nm)	0.079670	ppm	0.000008	0.01	18875.900000	Y 377.433
Mo (202.032 nm)	-0.000190 u	ppm	0.000139	72.86	0.894854	Y 377.433
Na (589.592 nm)	3.674090	ppm	0.001227	0.03	23761.400000	Y_R2 488.368
Na H (589.593 nm)	4.239937 u	ppm	0.071432	1.68	17554.208585	Y_R 488.368
Ni (231.604 nm)	-0.000197 u	ppm	0.000404	> 100.00	-3.004990	Y 377.433
P (213.618 nm)	0.046200	ppm	0.002258	4.89	133.921000	Y 242.219
Pb (220.353 nm)	0.000588	ppm	0.000405	68.81	5.956860	Y 242.219
S (181.972 nm)	45.698501 o	ppm	0.055693	0.12	24018.525129	Y 377.433
Sb (206.834 nm)	0.000512	ppm	0.000051	9.91	-29.376300	Y 377.433
Se (196.026 nm)	-0.003524 u	ppm	0.001601	45.42	12.874300	Y 242.219
Si (288.158 nm)	0.749647	ppm	0.000574	0.08	7469.190000	Y 377.433
Sn (189.925 nm)	-0.001792 u	ppm	0.001698	94.77	8.462400	Y 377.433
Sr (421.552 nm)	0.220237	ppm	0.000102	0.05	42981.130231	Y_R 488.368
Th (288.505 nm)	-0.001893 u	ppm	0.000435	22.99	70.160000	Y 377.433
Ti (336.122 nm)	0.000037	ppm	0.000043	> 100.00	-170.618000	Y 377.433
Tl (190.794 nm)	0.001955	ppm	0.000569	29.10	-1.788990	Y 377.433
U (409.013 nm)	-0.004966 u	ppm	0.000774	15.58	-262.973000	Y 377.433
V (292.401 nm)	-0.000197 u	ppm	0.000075	38.18	20.200000	Y 377.433
Zn (206.200 nm)	-0.005246 u	ppm	0.000133	2.54	12.106200	Y 377.433
Zr (343.823 nm)	-0.000090 u	ppm	0.000061	67.74	17.205800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052571	20559.080423	0.001873	0.18
Y 377.433	1.057755	1047842.722697	0.002205	0.21
Y_R 377.433	1.069140	76085.800000	0.004334	0.41
Y_R 488.368	1.074490	43774.500000	0.001144	0.11
Y_R2 488.368	1.072041	86683.604063	0.009299	0.87

Sample Name: 280-116746-A-1-E MS

Date: 11/13/2018 4:57:43 PM Rack:Tube: 1:50

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054593	ppm	0.000176	0.32	2047.840000	Y 377.433
Al (167.019 nm)	1.929520	ppm	0.003867	0.20	1051.380000	Y_R 377.433
Al H (396.152 nm)	2.161397	ppm	0.008336	0.39	5422.913925	Y_R 377.433
As (188.980 nm)	1.034060	ppm	0.005283	0.51	1369.150000	Y 242.219
B (249.678 nm)	1.466140 o	ppm	0.000881	0.06	36975.900000	Y 242.219
Ba (493.408 nm)	2.109470 o	ppm	0.001822	0.09	224556.000000	Y_R 488.368
Be (234.861 nm)	0.049973	ppm	0.000301	0.60	14455.300000	Y_R 488.368
Bi (223.061 nm)	1.986200	ppm	0.000565	0.03	5032.530000	Y 377.433
Ca (315.887 nm)	328.374765 o	ppm	1.867604	0.57	250457.663958	Y_R 377.433
Cd (214.439 nm)	0.097404	ppm	0.000136	0.14	6158.380000	Y 377.433
Co (228.615 nm)	0.486348	ppm	0.001719	0.35	9094.910000	Y 242.219
Cr (205.560 nm)	0.202347	ppm	0.000529	0.26	3130.290000	Y 377.433
Cu (324.754 nm)	0.249618	ppm	0.000088	0.04	12930.300000	Y 377.433
Fe (238.204 nm)	1.372545	ppm	0.013934	1.02	4868.774058	Y_R 377.433
Fe H (259.940 nm)	1.363980 u	ppm	0.010623	0.78	2481.170000	Y_R 377.433
K (766.491 nm)	53.671500	ppm	0.047651	0.09	58007.200000	Y_R2 488.368
Li (670.783 nm)	1.060150	ppm	0.000111	0.01	31341.800000	Y_R2 488.368
Mg (279.078 nm)	92.272100 o	ppm	0.217268	0.24	565386.000000	Y 377.433
Mn (257.610 nm)	0.895520	ppm	0.000907	0.10	211149.000000	Y 377.433
Mo (202.032 nm)	1.053940	ppm	0.001494	0.14	9433.380000	Y 377.433
Na (589.592 nm)	69.498100 o	ppm	0.004981	0.01	447248.000000	Y_R2 488.368
Na H (589.593 nm)	73.296865	ppm	0.234369	0.32	255492.699643	Y_R 488.368
Ni (231.604 nm)	0.480711	ppm	0.000156	0.03	3408.690000	Y 377.433
P (213.618 nm)	11.198800 o	ppm	0.019533	0.17	23978.800000	Y 242.219
Pb (220.353 nm)	0.508177	ppm	0.004700	0.92	1535.290000	Y 242.219
S (181.972 nm)	238.961080 bo	ppm	0.005299	0.00	125525.577738	Y 377.433
Sb (206.834 nm)	0.531023	ppm	0.000491	0.09	1447.600000	Y 377.433
Se (196.026 nm)	2.044060	ppm	0.009564	0.47	2154.330000	Y 242.219
Si (288.158 nm)	14.234300 o	ppm	0.000793	0.01	124381.000000	Y 377.433
Sn (189.925 nm)	2.043850	ppm	0.004392	0.21	4220.910000	Y 377.433
Sr (421.552 nm)	2.136088 o	ppm	0.005726	0.27	415741.950597	Y_R 488.368
Th (288.505 nm)	1.043830	ppm	0.000917	0.09	2778.890000	Y 377.433
Ti (336.122 nm)	1.043110	ppm	0.002195	0.21	148241.000000	Y 377.433
Tl (190.794 nm)	1.999020	ppm	0.004467	0.22	4536.740000	Y 377.433
U (409.013 nm)	2.124950	ppm	0.009023	0.42	9112.880000	Y 377.433
V (292.401 nm)	0.525662	ppm	0.000328	0.06	19366.000000	Y 377.433
Zn (206.200 nm)	0.491440	ppm	0.000015	0.00	2785.260000	Y 377.433
Zr (343.823 nm)	0.516917	ppm	0.000162	0.03	66696.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997863	19490.518993	0.003531	0.35
Y 377.433	1.009959	1000494.751347	0.003806	0.38
Y_R 377.433	1.048130	74590.700000	0.008878	0.85
Y_R 488.368	1.055510	43001.300000	0.009037	0.86
Y_R2 488.368	1.055309	85330.614239	0.000179	0.02

Sample Name: 280-116746-A-1-F MSD

Date: 11/13/2018 5:01:04 PM Rack:Tube: 1:51

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054399	ppm	0.000060	0.11	2039.130000	Y 377.433
Al (167.019 nm)	1.926070	ppm	0.017593	0.91	1049.510000	Y_R 377.433
Al H (396.152 nm)	2.152062	ppm	0.004626	0.21	5399.066389	Y_R 377.433
As (188.980 nm)	1.038560	ppm	0.000886	0.09	1375.110000	Y 242.219
B (249.678 nm)	1.459360 o	ppm	0.003433	0.24	36805.100000	Y 242.219
Ba (493.408 nm)	2.111540 o	ppm	0.004459	0.21	224775.000000	Y_R 488.368
Be (234.861 nm)	0.049669	ppm	0.000645	1.30	14367.200000	Y_R 488.368
Bi (223.061 nm)	1.986190	ppm	0.008348	0.42	5032.490000	Y 377.433
Ca (315.887 nm)	325.452664 o	ppm	0.661636	0.20	248228.388278	Y_R 377.433
Cd (214.439 nm)	0.096742	ppm	0.000119	0.12	6116.710000	Y 377.433
Co (228.615 nm)	0.483102	ppm	0.001079	0.22	9033.950000	Y 242.219
Cr (205.560 nm)	0.201188	ppm	0.000228	0.11	3112.390000	Y 377.433
Cu (324.754 nm)	0.249498	ppm	0.001142	0.46	12926.100000	Y 377.433
Fe (238.204 nm)	1.381776	ppm	0.001069	0.08	4901.337177	Y_R 377.433
Fe H (259.940 nm)	1.371280 u	ppm	0.005467	0.40	2494.490000	Y_R 377.433
K (766.491 nm)	54.107500	ppm	0.216893	0.40	58484.900000	Y_R2 488.368
Li (670.783 nm)	1.065410	ppm	0.007657	0.72	31505.100000	Y_R2 488.368
Mg (279.078 nm)	91.524800 o	ppm	0.167643	0.18	560808.000000	Y 377.433
Mn (257.610 nm)	0.888351	ppm	0.002743	0.31	209460.000000	Y 377.433
Mo (202.032 nm)	1.047250	ppm	0.000766	0.07	9373.510000	Y 377.433
Na (589.592 nm)	69.411500 o	ppm	0.047818	0.07	446701.000000	Y_R2 488.368
Na H (589.593 nm)	73.024186	ppm	0.113957	0.16	254562.496237	Y_R 488.368
Ni (231.604 nm)	0.479784	ppm	0.001157	0.24	3402.060000	Y 377.433
P (213.618 nm)	11.188300 o	ppm	0.011249	0.10	23956.200000	Y 242.219
Pb (220.353 nm)	0.507440	ppm	0.001225	0.24	1533.030000	Y 242.219
S (181.972 nm)	237.563947 bo	ppm	0.090179	0.04	124791.760775	Y 377.433
Sb (206.834 nm)	0.527987	ppm	0.000536	0.10	1439.180000	Y 377.433
Se (196.026 nm)	2.050870	ppm	0.004299	0.21	2161.450000	Y 242.219
Si (288.158 nm)	14.261600 o	ppm	0.009111	0.06	124618.000000	Y 377.433
Sn (189.925 nm)	2.032800	ppm	0.010280	0.51	4198.160000	Y 377.433
Sr (421.552 nm)	2.130337 o	ppm	0.004069	0.19	414622.931031	Y_R 488.368
Th (288.505 nm)	1.035710	ppm	0.005759	0.56	2757.750000	Y 377.433
Ti (336.122 nm)	1.037660	ppm	0.001093	0.11	147460.000000	Y 377.433
Tl (190.794 nm)	1.987680	ppm	0.001973	0.10	4510.950000	Y 377.433
U (409.013 nm)	2.103110	ppm	0.000650	0.03	9016.630000	Y 377.433
V (292.401 nm)	0.523649	ppm	0.001030	0.20	19292.900000	Y 377.433
Zn (206.200 nm)	0.488722	ppm	0.003282	0.67	2770.090000	Y 377.433
Zr (343.823 nm)	0.513759	ppm	0.000507	0.10	66288.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010323	19733.879820	0.001642	0.16
Y 377.433	1.024421	1014820.477193	0.000894	0.09
Y_R 377.433	1.067850	75994.100000	0.012875	1.21
Y_R 488.368	1.075620	43820.800000	0.013532	1.26
Y_R2 488.368	1.069034	86440.441711	0.012105	1.13

Sample Name: 280-116746-A-2-B

Date: 11/13/2018 5:04:26 PM Rack:Tube: 1:52

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000306	ppm	0.000281	91.93	-422.811000	Y 377.433
Al (167.019 nm)	0.006209	ppm	0.002377	38.28	5.295880	Y_R 377.433
Al H (396.152 nm)	0.019103 u	ppm	0.001888	9.88	195.672218	Y_R 377.433
As (188.980 nm)	0.000813 u	ppm	0.002238	> 100.00	0.943878	Y 242.219
B (249.678 nm)	0.047286	ppm	0.000053	0.11	1248.140000	Y 242.219
Ba (493.408 nm)	0.035838	ppm	0.000007	0.02	4511.620000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000002	10.47	-83.107500	Y_R 488.368
Bi (223.061 nm)	-0.000733 u	ppm	0.002155	> 100.00	14.053800	Y 377.433
Ca (315.887 nm)	160.810964 o	ppm	0.285365	0.18	122622.943030	Y_R 377.433
Cd (214.439 nm)	0.000080	ppm	0.000062	78.22	24.797300	Y 377.433
Co (228.615 nm)	0.000426	ppm	0.000192	44.98	-38.212200	Y 242.219
Cr (205.560 nm)	0.000270	ppm	0.000060	22.25	10.286300	Y 377.433
Cu (324.754 nm)	-0.001575 u	ppm	0.000191	12.12	-545.738000	Y 377.433
Fe (238.204 nm)	0.212746	ppm	0.000624	0.29	777.410473	Y_R 377.433
Fe H (259.940 nm)	0.217292 u	ppm	0.003784	1.74	386.884000	Y_R 377.433
K (766.491 nm)	2.039480	ppm	0.020360	1.00	1429.620000	Y_R2 488.368
Li (670.783 nm)	0.002899	ppm	0.000965	33.28	-1484.180000	Y_R2 488.368
Mg (279.078 nm)	18.851300	ppm	0.006788	0.04	115573.000000	Y 377.433
Mn (257.610 nm)	2.116130 o	ppm	0.000597	0.03	498814.000000	Y 377.433
Mo (202.032 nm)	-0.000552 u	ppm	0.000121	21.92	-2.344930	Y 377.433
Na (589.592 nm)	15.360800 o	ppm	0.059473	0.39	98278.600000	Y_R2 488.368
Na H (589.593 nm)	16.143974	ppm	0.093771	0.58	58278.216553	Y_R 488.368
Ni (231.604 nm)	0.004381	ppm	0.000495	11.30	29.462300	Y 377.433
P (213.618 nm)	0.082738	ppm	0.001187	1.43	212.043000	Y 242.219
Pb (220.353 nm)	0.001853	ppm	0.000598	32.29	9.772380	Y 242.219
S (181.972 nm)	103.412337 o	ppm	0.011755	0.01	54335.925199	Y 377.433
Sb (206.834 nm)	0.000409	ppm	0.000031	7.49	-29.691200	Y 377.433
Se (196.026 nm)	-0.001269 u	ppm	0.000921	72.54	16.929600	Y 242.219
Si (288.158 nm)	5.437520	ppm	0.000857	0.02	48113.100000	Y 377.433
Sn (189.925 nm)	-0.001440 u	ppm	0.000117	8.12	9.187500	Y 377.433
Sr (421.552 nm)	0.310470	ppm	0.001673	0.54	60537.301664	Y_R 488.368
Th (288.505 nm)	0.000057 u	ppm	0.002437	> 100.00	115.071000	Y 377.433
Ti (336.122 nm)	0.000307	ppm	0.000074	23.96	193.368000	Y 377.433
Tl (190.794 nm)	0.003775	ppm	0.002722	72.11	2.350140	Y 377.433
U (409.013 nm)	-0.005102 u	ppm	0.001499	29.38	-282.986000	Y 377.433
V (292.401 nm)	0.000044	ppm	0.000040	92.46	30.085900	Y 377.433
Zn (206.200 nm)	-0.002985 u	ppm	0.000055	1.83	24.728400	Y 377.433
Zr (343.823 nm)	-0.000119 u	ppm	0.000139	> 100.00	13.922400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054232	20591.534777	0.000979	0.09
Y 377.433	1.064324	1054349.710189	0.002074	0.19
Y_R 377.433	1.093080	77789.500000	0.000673	0.06
Y_R 488.368	1.099640	44799.200000	0.002101	0.19
Y_R2 488.368	1.079156	87258.917320	0.006488	0.60

Sample Name: 280-116746-A-3-B

Date: 11/13/2018 5:07:48 PM Rack:Tube: 1:53

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002068	ppm	0.000251	12.14	-342.142000	Y 377.433
Al (167.019 nm)	0.087146	ppm	0.004204	4.82	75.386500	Y_R 377.433
Al H (396.152 nm)	0.110654 u	ppm	0.005315	4.80	420.629701	Y_R 377.433
As (188.980 nm)	0.008090	ppm	0.001773	21.92	10.208800	Y 242.219
B (249.678 nm)	1.975120 o	ppm	0.000905	0.05	49710.000000	Y 242.219
Ba (493.408 nm)	0.177663	ppm	0.000403	0.23	19597.200000	Y_R 488.368
Be (234.861 nm)	-0.001074 u	ppm	0.000006	0.52	821.408000	Y_R 488.368
Bi (223.061 nm)	-0.002965 u	ppm	0.002704	91.20	14.987300	Y 377.433
Ca (315.887 nm)	179.908206 o	ppm	0.239809	0.13	137192.258410	Y_R 377.433
Cd (214.439 nm)	0.002917	ppm	0.000021	0.73	244.011000	Y 377.433
Co (228.615 nm)	0.108009	ppm	0.000051	0.05	1975.510000	Y 242.219
Cr (205.560 nm)	0.001706	ppm	0.000147	8.59	21.354700	Y 377.433
Cu (324.754 nm)	-0.000639 u	ppm	0.000253	39.65	-468.535000	Y 377.433
Fe (238.204 nm)	40.430424 o	ppm	0.020334	0.05	142651.259168	Y_R 377.433
Fe H (259.940 nm)	40.385400	ppm	0.083581	0.21	73748.900000	Y_R 377.433
K (766.491 nm)	1.134640	ppm	0.099964	8.81	438.100000	Y_R2 488.368
Li (670.783 nm)	0.007421	ppm	0.000289	3.89	-1343.780000	Y_R2 488.368
Mg (279.078 nm)	18.595000	ppm	0.035859	0.19	113932.000000	Y 377.433
Mn (257.610 nm)	24.862500 bo	ppm	0.049947	0.20	5859500.000000	Y 377.433
Mo (202.032 nm)	-0.000035 u	ppm	0.000163	> 100.00	2.285300	Y 377.433
Na (589.592 nm)	128.050000 o	ppm	0.171321	0.13	816541.000000	Y_R2 488.368
Na H (589.593 nm)	133.008847	ppm	0.569287	0.43	457949.907787	Y_R 488.368
Ni (231.604 nm)	0.081597	ppm	0.000839	1.03	578.593000	Y 377.433
P (213.618 nm)	1.561120	ppm	0.005110	0.33	3372.900000	Y 242.219
Pb (220.353 nm)	0.004530	ppm	0.000454	10.02	21.430400	Y 242.219
S (181.972 nm)	61.321934 bo	ppm	0.015849	0.03	32285.575707	Y 377.433
Sb (206.834 nm)	-0.004071 u	ppm	0.000876	21.52	-51.821400	Y 377.433
Se (196.026 nm)	-0.003231 bu	ppm	0.001962	60.72	26.014600	Y 242.219
Si (288.158 nm)	8.408480	ppm	0.012929	0.15	73871.400000	Y 377.433
Sn (189.925 nm)	-0.000561 u	ppm	0.001302	> 100.00	10.996800	Y 377.433
Sr (421.552 nm)	0.414108	ppm	0.001979	0.48	80701.835191	Y_R 488.368
Th (288.505 nm)	0.034533 b	ppm	0.006170	17.87	646.289000	Y 377.433
Ti (336.122 nm)	0.001675	ppm	0.000089	5.34	446.532000	Y 377.433
Tl (190.794 nm)	0.009295	ppm	0.000881	9.48	14.242400	Y 377.433
U (409.013 nm)	-0.006736 u	ppm	0.007792	> 100.00	-257.710000	Y 377.433
V (292.401 nm)	-0.001163 u	ppm	0.000017	1.46	-13.328900	Y 377.433
Zn (206.200 nm)	0.004932	ppm	0.000112	2.28	68.936400	Y 377.433
Zr (343.823 nm)	-0.000421 u	ppm	0.000120	28.40	88.471200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046814	20446.645992	0.004108	0.39
Y 377.433	1.056232	1046333.633858	0.006437	0.61
Y_R 377.433	1.089220	77514.500000	0.004085	0.38
Y_R 488.368	1.088310	44337.600000	0.004397	0.40
Y_R2 488.368	1.101810	89090.678375	0.002519	0.23

Sample Name: 280-116746-A-4-B

Date: 11/13/2018 5:11:11 PM Rack:Tube: 1:54

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000076 u	ppm	0.000235	> 100.00	-440.422000	Y 377.433
Al (167.019 nm)	0.019872	ppm	0.003443	17.33	12.642100	Y_R 377.433
Al H (396.152 nm)	0.020371 u	ppm	0.004672	22.93	146.728488	Y_R 377.433
As (188.980 nm)	0.001581	ppm	0.000070	4.40	1.961910	Y 242.219
B (249.678 nm)	0.014533	ppm	0.000203	1.40	424.009000	Y 242.219
Ba (493.408 nm)	0.061474	ppm	0.000680	1.11	7204.670000	Y_R 488.368
Be (234.861 nm)	0.000038	ppm	0.000002	4.23	-70.681700	Y_R 488.368
Bi (223.061 nm)	0.000643	ppm	0.000356	55.40	17.508900	Y 377.433
Ca (315.887 nm)	34.368442 o	ppm	0.109460	0.32	26159.758433	Y_R 377.433
Cd (214.439 nm)	-0.000068 u	ppm	0.000076	> 100.00	15.372700	Y 377.433
Co (228.615 nm)	0.000481	ppm	0.000307	63.85	-37.182200	Y 242.219
Cr (205.560 nm)	0.000320	ppm	0.000034	10.61	11.097900	Y 377.433
Cu (324.754 nm)	-0.000101 u	ppm	0.000138	> 100.00	-394.815000	Y 377.433
Fe (238.204 nm)	0.089633	ppm	0.000073	0.08	343.111572	Y_R 377.433
Fe H (259.940 nm)	0.094847 u	ppm	0.002590	2.73	163.253000	Y_R 377.433
K (766.491 nm)	0.437244	ppm	0.022589	5.17	-326.094000	Y_R2 488.368
Li (670.783 nm)	0.006076	ppm	0.000750	12.34	-1385.510000	Y_R2 488.368
Mg (279.078 nm)	2.974770	ppm	0.004349	0.15	18293.100000	Y 377.433
Mn (257.610 nm)	0.128523	ppm	0.000412	0.32	30389.100000	Y 377.433
Mo (202.032 nm)	-0.000483 u	ppm	0.000053	11.03	-1.728920	Y 377.433
Na (589.592 nm)	3.282840	ppm	0.006346	0.19	21374.300000	Y_R2 488.368
Na H (589.593 nm)	3.675511 u	ppm	0.035150	0.96	15672.030529	Y_R 488.368
Ni (231.604 nm)	0.003565	ppm	0.000290	8.13	23.662500	Y 377.433
P (213.618 nm)	0.207276	ppm	0.000027	0.01	478.311000	Y 242.219
Pb (220.353 nm)	0.000326	ppm	0.000440	> 100.00	5.181270	Y 242.219
S (181.972 nm)	18.368137 o	ppm	0.009040	0.05	9664.239843	Y 377.433
Sb (206.834 nm)	-0.000852 u	ppm	0.000993	> 100.00	-33.201300	Y 377.433
Se (196.026 nm)	-0.005789 u	ppm	0.000702	12.13	10.543600	Y 242.219
Si (288.158 nm)	6.335230	ppm	0.000481	0.01	55896.300000	Y 377.433
Sn (189.925 nm)	-0.002165 u	ppm	0.000997	46.03	7.693820	Y 377.433
Sr (421.552 nm)	0.093797	ppm	0.000682	0.73	18379.969904	Y_R 488.368
Th (288.505 nm)	-0.002905 u	ppm	0.001906	65.63	68.691500	Y 377.433
Ti (336.122 nm)	0.000680	ppm	0.000108	15.95	-148.027000	Y 377.433
Tl (190.794 nm)	-0.000304 u	ppm	0.000910	> 100.00	-6.930540	Y 377.433
U (409.013 nm)	-0.002687 u	ppm	0.002102	78.22	-248.735000	Y 377.433
V (292.401 nm)	0.000291	ppm	0.000057	19.50	37.766000	Y 377.433
Zn (206.200 nm)	0.001377	ppm	0.000166	12.08	49.086500	Y 377.433
Zr (343.823 nm)	-0.000113 u	ppm	0.000150	> 100.00	14.349500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.075778	21012.371041	0.002960	0.28
Y 377.433	1.081518	1071382.889734	0.001275	0.12
Y_R 377.433	1.099470	78244.400000	0.007068	0.64
Y_R 488.368	1.112070	45305.500000	0.012833	1.15
Y_R2 488.368	1.103232	89205.620949	0.001097	0.10

Sample Name: 280-116741-A-1-B

Date: 11/13/2018 5:14:33 PM Rack:Tube: 1:55

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000221	ppm	0.000130	58.99	-427.460000	Y 377.433
Al (167.019 nm)	1.033510	ppm	0.001630	0.16	566.649000	Y_R 377.433
Al H (396.152 nm)	1.147356	ppm	0.006439	0.56	2906.282060	Y_R 377.433
As (188.980 nm)	0.011819	ppm	0.000931	7.88	15.475400	Y 242.219
B (249.678 nm)	13.162100 o	ppm	0.003850	0.03	331300.000000	Y 242.219
Ba (493.408 nm)	0.415566	ppm	0.004590	1.10	44822.800000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000013	12.18	93.313000	Y_R 488.368
Bi (223.061 nm)	-0.002158 u	ppm	0.000511	23.69	11.213500	Y 377.433
Ca (315.887 nm)	247.177041 o	ppm	0.092962	0.04	188511.749502	Y_R 377.433
Cd (214.439 nm)	-0.000169 u	ppm	0.000043	25.36	13.747700	Y 377.433
Co (228.615 nm)	0.003807	ppm	0.000169	4.43	25.811600	Y 242.219
Cr (205.560 nm)	0.021288	ppm	0.000189	0.89	333.800000	Y 377.433
Cu (324.754 nm)	0.001158	ppm	0.000171	14.80	-449.560000	Y 377.433
Fe (238.204 nm)	4.847006	ppm	0.015215	0.31	17125.453588	Y_R 377.433
Fe H (259.940 nm)	4.837820	ppm	0.006679	0.14	8825.690000	Y_R 377.433
K (766.491 nm)	56.102200	ppm	0.227059	0.40	60670.700000	Y_R2 488.368
Li (670.783 nm)	0.032437	ppm	0.000653	2.01	-567.068000	Y_R2 488.368
Mg (279.078 nm)	85.813200 o	ppm	0.053455	0.06	525861.000000	Y 377.433
Mn (257.610 nm)	0.794680	ppm	0.000761	0.10	187384.000000	Y 377.433
Mo (202.032 nm)	0.000398	ppm	0.000216	54.31	6.153630	Y 377.433
Na (589.592 nm)	411.229000 o	ppm	1.673570	0.41	2621240.000000	Y_R2 488.368
Na H (589.593 nm)	432.707925	ppm	3.318681	0.77	1482794.122989	Y_R 488.368
Ni (231.604 nm)	0.004745	ppm	0.000105	2.22	32.232700	Y 377.433
P (213.618 nm)	0.896011	ppm	0.007343	0.82	1950.860000	Y 242.219
Pb (220.353 nm)	0.001327 u	ppm	0.001986	> 100.00	8.193730	Y 242.219
S (181.972 nm)	43.359390 o	ppm	0.084542	0.19	22791.749118	Y 377.433
Sb (206.834 nm)	-0.004684 u	ppm	0.000094	2.02	-44.492200	Y 377.433
Se (196.026 nm)	0.000053 u	ppm	0.002205	> 100.00	16.276000	Y 242.219
Si (288.158 nm)	21.466500 o	ppm	0.138439	0.64	187085.000000	Y 377.433
Sn (189.925 nm)	-0.000309 u	ppm	0.000622	> 100.00	11.515500	Y 377.433
Sr (421.552 nm)	5.040714 o	ppm	0.025673	0.51	980885.556880	Y_R 488.368
Th (288.505 nm)	0.004416	ppm	0.002120	48.02	100.237000	Y 377.433
Ti (336.122 nm)	0.022029	ppm	0.000009	0.04	3535.270000	Y 377.433
Tl (190.794 nm)	0.001101	ppm	0.001241	> 100.00	-3.944880	Y 377.433
U (409.013 nm)	-0.011678 u	ppm	0.002549	21.83	-324.400000	Y 377.433
V (292.401 nm)	0.007816	ppm	0.000196	2.50	310.775000	Y 377.433
Zn (206.200 nm)	0.137325	ppm	0.000248	0.18	808.126000	Y 377.433
Zr (343.823 nm)	0.002975	ppm	0.000095	3.18	425.989000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000503	19542.084227	0.001818	0.18
Y 377.433	1.014174	1004669.711882	0.002200	0.22
Y_R 377.433	1.047610	74553.600000	0.001992	0.19
Y_R 488.368	1.048190	42703.000000	0.010907	1.04
Y_R2 488.368	1.056273	85408.608946	0.002267	0.21

Sample Name: CCVH-5417909

Date: 11/13/2018 5:17:56 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002000 u	ppm	0.000376	18.80	-765.241000	Y 377.433
Al (167.019 nm)	44.051700 o	ppm	0.335503	0.76	23976.100000	Y_R 377.433
Al H (396.152 nm)	49.327948	ppm	0.215187	0.44	117042.150557	Y_R 377.433
As (188.980 nm)	0.000165 u	ppm	0.000620	> 100.00	-0.366105	Y 242.219
B (249.678 nm)	0.014824	ppm	0.001582	10.67	357.562000	Y 242.219
Ba (493.408 nm)	-0.000318 u	ppm	0.000134	42.16	682.762000	Y_R 488.368
Be (234.861 nm)	-0.000166 u	ppm	0.000130	78.62	1356.520000	Y_R 488.368
Bi (223.061 nm)	0.968812	ppm	0.000016	0.00	2470.790000	Y 377.433
Ca (315.887 nm)	-0.005839 u	ppm	0.005738	98.26	-64.431010	Y_R 377.433
Cd (214.439 nm)	-0.000490 u	ppm	0.000009	1.92	38.120200	Y 377.433
Co (228.615 nm)	0.003141	ppm	0.000370	11.77	12.616200	Y 242.219
Cr (205.560 nm)	-0.000124 u	ppm	0.000396	> 100.00	-9.382490	Y 377.433
Cu (324.754 nm)	-0.007472 u	ppm	0.000139	1.86	-442.768000	Y 377.433
Fe (238.204 nm)	49.229316 o	ppm	0.202049	0.41	173690.662011	Y_R 377.433
Fe H (259.940 nm)	49.163200	ppm	0.210755	0.43	89780.400000	Y_R 377.433
K (766.491 nm)	0.035656	ppm	0.037238	> 100.00	-766.148000	Y_R2 488.368
Li (670.783 nm)	0.002654	ppm	0.000289	10.88	-1491.770000	Y_R2 488.368
Mg (279.078 nm)	-0.016516 u	ppm	0.000056	0.34	-400.359000	Y 377.433
Mn (257.610 nm)	0.001301	ppm	0.000037	2.87	406.437000	Y 377.433
Mo (202.032 nm)	-0.000514 u	ppm	0.000098	19.12	-2.000130	Y 377.433
Na (589.592 nm)	239.471000 o	ppm	1.164810	0.49	1526090.000000	Y_R2 488.368
Na H (589.593 nm)	249.597041	ppm	5.281599	2.12	856393.500775	Y_R 488.368
Ni (231.604 nm)	0.003551	ppm	0.000341	9.60	25.644100	Y 377.433
P (213.618 nm)	-0.007243 u	ppm	0.000847	11.70	19.659100	Y 242.219
Pb (220.353 nm)	-0.002866 u	ppm	0.001489	51.96	12.407800	Y 242.219
S (181.972 nm)	4.867149	ppm	0.016535	0.34	2572.960737	Y 377.433
Sb (206.834 nm)	-0.005122 u	ppm	0.001872	36.55	-90.425400	Y 377.433
Se (196.026 nm)	-0.005510 u	ppm	0.000621	11.27	1.522840	Y 242.219
Si (288.158 nm)	0.025998	ppm	0.001390	5.35	1195.140000	Y 377.433
Sn (189.925 nm)	0.000703	ppm	0.000849	> 100.00	13.599600	Y 377.433
Sr (421.552 nm)	0.000485	ppm	0.000169	34.92	224.612898	Y_R 488.368
Th (288.505 nm)	4.964090	ppm	0.004649	0.09	12771.700000	Y 377.433
Ti (336.122 nm)	0.001700	ppm	0.000020	1.18	-110.564000	Y 377.433
Tl (190.794 nm)	-0.004447 u	ppm	0.000309	6.95	-17.684100	Y 377.433
U (409.013 nm)	9.862360	ppm	0.012805	0.13	43638.700000	Y 377.433
V (292.401 nm)	0.002257	ppm	0.000158	7.01	-42.921000	Y 377.433
Zn (206.200 nm)	-0.006649 u	ppm	0.000241	3.62	4.272340	Y 377.433
Zr (343.823 nm)	-0.004639 u	ppm	0.000010	0.21	-430.529000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.055189	20610.231290	0.002900	0.27
Y 377.433	1.050950	1041101.386296	0.002623	0.25
Y_R 377.433	1.067550	75972.300000	0.005227	0.49
Y_R 488.368	1.077600	43901.500000	0.017329	1.61
Y_R2 488.368	1.078199	87181.530980	0.006763	0.63

Sample Name: CCV-5416701

Date: 11/13/2018 5:21:19 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.482345	ppm	0.000143	0.03	21746.300000	Y 377.433
Al (167.019 nm)	0.483449	ppm	0.008520	1.76	266.147000	Y_R 377.433
Al H (396.152 nm)	0.484731 u	ppm	0.001324	0.27	1272.571378	Y_R 377.433
As (188.980 nm)	0.971362	ppm	0.003787	0.39	1286.120000	Y 242.219
B (249.678 nm)	0.492391	ppm	0.000909	0.18	12468.200000	Y 242.219
Ba (493.408 nm)	0.491250	ppm	0.002594	0.53	52807.700000	Y_R 488.368
Be (234.861 nm)	0.477596	ppm	0.000974	0.20	139089.000000	Y_R 488.368
Bi (223.061 nm)	-0.004919 u	ppm	0.000912	18.54	3.851300	Y 377.433
Ca (315.887 nm)	4.960867	ppm	0.042329	0.85	3724.940216	Y_R 377.433
Cd (214.439 nm)	0.488279	ppm	0.000461	0.09	30786.700000	Y 377.433
Co (228.615 nm)	0.491976	ppm	0.002237	0.45	9180.280000	Y 242.219
Cr (205.560 nm)	0.486072	ppm	0.003941	0.81	7511.780000	Y 377.433
Cu (324.754 nm)	0.483951	ppm	0.001030	0.21	25681.400000	Y 377.433
Fe (238.204 nm)	2.472992	ppm	0.019668	0.80	8750.764188	Y_R 377.433
Fe H (259.940 nm)	2.483770 u	ppm	0.014012	0.56	4526.330000	Y_R 377.433
K (766.491 nm)	48.788100	ppm	0.120856	0.25	52656.000000	Y_R2 488.368
Li (670.783 nm)	0.983976	ppm	0.001220	0.12	28976.600000	Y_R2 488.368
Mg (279.078 nm)	19.397700	ppm	0.042364	0.22	118918.000000	Y 377.433
Mn (257.610 nm)	0.491927	ppm	0.000074	0.01	116034.000000	Y 377.433
Mo (202.032 nm)	0.491827	ppm	0.000976	0.20	4403.510000	Y 377.433
Na (589.592 nm)	4.986750	ppm	0.005974	0.12	33069.500000	Y_R2 488.368
Na H (589.593 nm)	5.793245 u	ppm	0.100914	1.74	23289.244120	Y_R 488.368
Ni (231.604 nm)	0.493086	ppm	0.001812	0.37	3495.180000	Y 377.433
P (213.618 nm)	1.008710	ppm	0.000269	0.03	2191.820000	Y 242.219
Pb (220.353 nm)	0.987116	ppm	0.001039	0.11	2975.260000	Y 242.219
S (181.972 nm)	0.025078	ppm	0.007231	28.84	31.030933	Y 377.433
Sb (206.834 nm)	0.975518	ppm	0.000249	0.03	2707.900000	Y 377.433
Se (196.026 nm)	0.969891	ppm	0.001461	0.15	1030.570000	Y 242.219
Si (288.158 nm)	4.878330	ppm	0.016958	0.35	43264.900000	Y 377.433
Sn (189.925 nm)	0.975135	ppm	0.002448	0.25	2020.180000	Y 377.433
Sr (421.552 nm)	0.490181	ppm	0.002597	0.53	95503.114242	Y_R 488.368
Th (288.505 nm)	0.004483	ppm	0.001511	33.71	100.140000	Y 377.433
Ti (336.122 nm)	0.491782	ppm	0.000058	0.01	69236.600000	Y 377.433
Tl (190.794 nm)	0.983217	ppm	0.000030	0.00	2229.370000	Y 377.433
U (409.013 nm)	0.003030 u	ppm	0.005599	> 100.00	-253.012000	Y 377.433
V (292.401 nm)	0.491004	ppm	0.000186	0.04	18048.200000	Y 377.433
Zn (206.200 nm)	0.485339	ppm	0.000330	0.07	2751.200000	Y 377.433
Zr (343.823 nm)	0.493792	ppm	0.000190	0.04	63716.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067845	20857.424465	0.000720	0.07
Y 377.433	1.072396	1062346.307272	0.002693	0.25
Y_R 377.433	1.086550	77324.400000	0.007447	0.69
Y_R 488.368	1.094700	44597.800000	0.005805	0.53
Y_R2 488.368	1.083083	87576.398815	0.000435	0.04

Sample Name: CCB

Date: 11/13/2018 5:24:41 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000377 u	ppm	0.000162	42.90	-453.973000	Y 377.433
Al (167.019 nm)	-0.003426 u	ppm	0.001273	37.14	-0.080950	Y_R 377.433
Al H (396.152 nm)	-0.023038 u	ppm	0.003888	16.87	29.688874	Y_R 377.433
As (188.980 nm)	0.000346	ppm	0.000349	> 100.00	0.327891	Y 242.219
B (249.678 nm)	0.006683	ppm	0.000306	4.57	226.585000	Y 242.219
Ba (493.408 nm)	-0.000378 u	ppm	0.000055	14.51	634.819000	Y_R 488.368
Be (234.861 nm)	0.000045	ppm	0.000045	> 100.00	-71.558500	Y_R 488.368
Bi (223.061 nm)	-0.001337 u	ppm	0.001919	> 100.00	12.492700	Y 377.433
Ca (315.887 nm)	0.007219 u	ppm	0.012797	> 100.00	-54.469275	Y_R 377.433
Cd (214.439 nm)	-0.000207 u	ppm	0.000022	10.79	6.494600	Y 377.433
Co (228.615 nm)	0.000515	ppm	0.000144	27.96	-36.552500	Y 242.219
Cr (205.560 nm)	-0.000083 u	ppm	0.000208	> 100.00	4.898610	Y 377.433
Cu (324.754 nm)	0.000019 u	ppm	0.000216	> 100.00	-366.588000	Y 377.433
Fe (238.204 nm)	-0.003101 u	ppm	0.002340	75.46	15.978753	Y_R 377.433
Fe H (259.940 nm)	0.013081 u	ppm	0.000698	5.34	13.918000	Y_R 377.433
K (766.491 nm)	0.035472	ppm	0.047874	> 100.00	-766.349000	Y_R2 488.368
Li (670.783 nm)	0.003711	ppm	0.001824	49.17	-1458.960000	Y_R2 488.368
Mg (279.078 nm)	0.002183	ppm	0.000211	9.65	79.402200	Y 377.433
Mn (257.610 nm)	-0.000051 u	ppm	0.000011	21.42	87.922800	Y 377.433
Mo (202.032 nm)	-0.000355 u	ppm	0.000092	26.07	-0.578373	Y 377.433
Na (589.592 nm)	0.080304	ppm	0.016679	20.77	848.621000	Y_R2 488.368
Na H (589.593 nm)	0.368468 u	ppm	0.012633	3.43	4311.193887	Y_R 488.368
Ni (231.604 nm)	-0.000644 u	ppm	0.000704	> 100.00	-6.175010	Y 377.433
P (213.618 nm)	-0.003700 u	ppm	0.000499	13.48	27.233400	Y 242.219
Pb (220.353 nm)	0.000754	ppm	0.000424	56.28	6.462480	Y 242.219
S (181.972 nm)	0.016844	ppm	0.000696	4.13	25.488042	Y 377.433
Sb (206.834 nm)	0.001469	ppm	0.000435	29.60	-26.687300	Y 377.433
Se (196.026 nm)	-0.000413 u	ppm	0.000539	> 100.00	16.073200	Y 242.219
Si (288.158 nm)	-0.002077 u	ppm	0.000453	21.81	951.723000	Y 377.433
Sn (189.925 nm)	-0.001604 u	ppm	0.000601	37.45	8.849770	Y 377.433
Sr (421.552 nm)	0.000096	ppm	0.000012	12.21	148.962159	Y_R 488.368
Th (288.505 nm)	0.000122 u	ppm	0.000593	> 100.00	73.695500	Y 377.433
Ti (336.122 nm)	0.000218	ppm	0.000074	34.09	-320.467000	Y 377.433
Tl (190.794 nm)	0.000540 u	ppm	0.000809	> 100.00	-5.007190	Y 377.433
U (409.013 nm)	-0.002579 u	ppm	0.004203	> 100.00	-241.934000	Y 377.433
V (292.401 nm)	-0.000045 u	ppm	0.000082	> 100.00	26.257700	Y 377.433
Zn (206.200 nm)	-0.007521 u	ppm	0.000278	3.70	-0.593787	Y 377.433
Zr (343.823 nm)	0.000057	ppm	0.000036	63.25	35.984700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052185	20551.547603	0.001078	0.10
Y 377.433	1.057393	1047483.962838	0.000263	0.02
Y_R 377.433	1.061280	75525.900000	0.000384	0.04
Y_R 488.368	1.062360	43280.500000	0.003945	0.37
Y_R2 488.368	1.068518	86398.691107	0.013071	1.22

Sample Name: CCVL-5425098

Date: 11/13/2018 5:28:04 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008992	ppm	0.000026	0.29	-22.643700	Y 377.433
Al (167.019 nm)	0.092137	ppm	0.000635	0.69	51.923300	Y_R 377.433
Al H (396.152 nm)	0.073899 u	ppm	0.005690	7.70	260.987680	Y_R 377.433
As (188.980 nm)	0.011880	ppm	0.001827	15.37	15.600000	Y 242.219
B (249.678 nm)	0.097748	ppm	0.000040	0.04	2518.670000	Y 242.219
Ba (493.408 nm)	0.009261	ppm	0.000090	0.97	1657.610000	Y_R 488.368
Be (234.861 nm)	0.000953	ppm	0.000007	0.75	195.442000	Y_R 488.368
Bi (223.061 nm)	0.094170	ppm	0.000396	0.42	253.726000	Y 377.433
Ca (315.887 nm)	0.217701	ppm	0.024273	11.15	106.111158	Y_R 377.433
Cd (214.439 nm)	0.004756	ppm	0.000083	1.75	319.315000	Y 377.433
Co (228.615 nm)	0.010156	ppm	0.000310	3.06	144.226000	Y 242.219
Cr (205.560 nm)	0.009631	ppm	0.000107	1.11	154.943000	Y 377.433
Cu (324.754 nm)	0.014102	ppm	0.000238	1.69	389.212000	Y 377.433
Fe (238.204 nm)	0.097703	ppm	0.001692	1.73	371.580366	Y_R 377.433
Fe H (259.940 nm)	0.105701 u	ppm	0.001526	1.44	183.076000	Y_R 377.433
K (766.491 nm)	3.024230	ppm	0.022459	0.74	2508.680000	Y_R2 488.368
Li (670.783 nm)	0.024516	ppm	0.000661	2.70	-812.996000	Y_R2 488.368
Mg (279.078 nm)	0.191702	ppm	0.000461	0.24	1239.780000	Y 377.433
Mn (257.610 nm)	0.009844	ppm	0.000039	0.40	2419.820000	Y 377.433
Mo (202.032 nm)	0.017667	ppm	0.000015	0.08	160.680000	Y 377.433
Na (589.592 nm)	1.101200	ppm	0.017705	1.61	7372.610000	Y_R2 488.368
Na H (589.593 nm)	1.347603 u	ppm	0.067814	5.03	7667.492017	Y_R 488.368
Ni (231.604 nm)	0.038858	ppm	0.000217	0.56	273.870000	Y 377.433
P (213.618 nm)	2.705600 o	ppm	0.005093	0.19	5819.860000	Y 242.219
Pb (220.353 nm)	0.009869	ppm	0.000655	6.63	33.879000	Y 242.219
S (181.972 nm)	0.100615	ppm	0.003240	3.22	69.510467	Y 377.433
Sb (206.834 nm)	0.019689	ppm	0.000377	1.92	24.387000	Y 377.433
Se (196.026 nm)	0.014038	ppm	0.000945	6.73	31.173700	Y 242.219
Si (288.158 nm)	0.460336	ppm	0.003561	0.77	4960.850000	Y 377.433
Sn (189.925 nm)	0.092662	ppm	0.000675	0.73	202.965000	Y 377.433
Sr (421.552 nm)	0.009826	ppm	0.000183	1.86	2041.998621	Y_R 488.368
Th (288.505 nm)	0.013544	ppm	0.001945	14.36	108.491000	Y 377.433
Ti (336.122 nm)	0.009596	ppm	0.000026	0.28	1006.920000	Y 377.433
Tl (190.794 nm)	0.014223	ppm	0.000023	0.16	26.072600	Y 377.433
U (409.013 nm)	0.061839	ppm	0.003675	5.94	43.303800	Y 377.433
V (292.401 nm)	0.009320	ppm	0.000189	2.03	367.927000	Y 377.433
Zn (206.200 nm)	0.012312 Q	ppm	0.000234	1.90	110.140000 Q	Y 377.433
Zr (343.823 nm)	0.014438	ppm	0.000082	0.57	1890.910000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062518	20753.375577	0.000419	0.04
Y 377.433	1.067257	1057255.561688	0.000889	0.08
Y_R 377.433	1.066790	75918.500000	0.001365	0.13
Y_R 488.368	1.074180	43762.200000	0.007709	0.72
Y_R2 488.368	1.072541	86723.989320	0.012171	1.13

Sample Name: MB 280-437150/1-A

Date: 11/13/2018 5:31:27 PM Rack:Tube: 1:56

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000218 u	ppm	0.000206	94.48	-446.646000	Y 377.433
Al (167.019 nm)	0.005471	ppm	0.004970	90.85	4.764650	Y_R 377.433
Al H (396.152 nm)	-0.007919 u	ppm	0.001987	25.09	65.564216	Y_R 377.433
As (188.980 nm)	0.000606 u	ppm	0.001626	> 100.00	0.672339	Y 242.219
B (249.678 nm)	0.003495	ppm	0.000090	2.56	146.349000	Y 242.219
Ba (493.408 nm)	-0.000157 u	ppm	0.000363	> 100.00	658.235000	Y_R 488.368
Be (234.861 nm)	0.000050	ppm	0.000013	25.63	-69.402700	Y_R 488.368
Bi (223.061 nm)	-0.000735 u	ppm	0.000758	> 100.00	14.017000	Y 377.433
Ca (315.887 nm)	0.049490	ppm	0.013858	28.00	-22.220323	Y_R 377.433
Cd (214.439 nm)	-0.000178 u	ppm	0.000066	37.06	8.380170	Y 377.433
Co (228.615 nm)	0.000584	ppm	0.000015	2.58	-35.241800	Y 242.219
Cr (205.560 nm)	0.000050 u	ppm	0.000280	> 100.00	6.941490	Y 377.433
Cu (324.754 nm)	0.000078	ppm	0.000056	71.83	-363.054000	Y 377.433
Fe (238.204 nm)	0.013269	ppm	0.000109	0.82	73.726469	Y_R 377.433
Fe H (259.940 nm)	0.026540 u	ppm	0.000528	1.99	38.498800	Y_R 377.433
K (766.491 nm)	0.055937	ppm	0.007372	13.18	-743.924000	Y_R2 488.368
Li (670.783 nm)	0.003100	ppm	0.000459	14.82	-1477.920000	Y_R2 488.368
Mg (279.078 nm)	0.002000	ppm	0.000176	8.82	78.336400	Y 377.433
Mn (257.610 nm)	0.001201	ppm	0.000008	0.65	382.989000	Y 377.433
Mo (202.032 nm)	-0.000347 u	ppm	0.000075	21.60	-0.512949	Y 377.433
Na (589.592 nm)	0.102702	ppm	0.012203	11.88	992.220000	Y_R2 488.368
Na H (589.593 nm)	0.234275 u	ppm	0.002905	1.24	3852.806144	Y_R 488.368
Ni (231.604 nm)	0.000552	ppm	0.000181	32.88	2.302190	Y 377.433
P (213.618 nm)	-0.006362 u	ppm	0.000598	9.39	21.541800	Y 242.219
Pb (220.353 nm)	0.001051	ppm	0.001296	> 100.00	7.344640	Y 242.219
S (181.972 nm)	0.025303	ppm	0.002403	9.50	29.933784	Y 377.433
Sb (206.834 nm)	0.000205 u	ppm	0.002502	> 100.00	-30.215300	Y 377.433
Se (196.026 nm)	-0.001348 u	ppm	0.000333	24.75	15.094500	Y 242.219
Si (288.158 nm)	-0.000164 u	ppm	0.000280	> 100.00	968.310000	Y 377.433
Sn (189.925 nm)	-0.002612 u	ppm	0.000402	15.38	6.772950	Y 377.433
Sr (421.552 nm)	0.000157	ppm	0.000016	10.32	160.847241	Y_R 488.368
Th (288.505 nm)	0.001146 u	ppm	0.003115	> 100.00	76.235900	Y 377.433
Ti (336.122 nm)	0.000630	ppm	0.000031	4.91	-262.064000	Y 377.433
Tl (190.794 nm)	0.001568	ppm	0.000436	27.82	-2.666930	Y 377.433
U (409.013 nm)	-0.002088 u	ppm	0.000559	26.78	-239.725000	Y 377.433
V (292.401 nm)	0.000027 u	ppm	0.000164	> 100.00	29.135700	Y 377.433
Zn (206.200 nm)	-0.005430 u	ppm	0.000143	2.64	11.080700	Y 377.433
Zr (343.823 nm)	-0.000106 u	ppm	0.000042	39.88	15.072000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072307	20944.574055	0.002422	0.23
Y 377.433	1.078635	1068526.780584	0.002796	0.26
Y_R 377.433	1.083620	77116.000000	0.000969	0.09
Y_R 488.368	1.097760	44722.500000	0.007655	0.70
Y_R2 488.368	1.083877	87640.611121	0.000483	0.04

Sample Name: LCS 280-437150/2-A

Date: 11/13/2018 5:34:50 PM Rack:Tube: 1:57

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051997	ppm	0.000066	0.13	1929.570000	Y 377.433
Al (167.019 nm)	1.914970	ppm	0.011844	0.62	1043.240000	Y_R 377.433
Al H (396.152 nm)	2.011287	ppm	0.015951	0.79	4949.999694	Y_R 377.433
As (188.980 nm)	0.980055	ppm	0.000064	0.01	1297.650000	Y 242.219
B (249.678 nm)	1.028630	ppm	0.000199	0.02	25965.700000	Y 242.219
Ba (493.408 nm)	1.995250 o	ppm	0.008581	0.43	212377.000000	Y_R 488.368
Be (234.861 nm)	0.049338	ppm	0.000019	0.04	14261.300000	Y_R 488.368
Bi (223.061 nm)	1.915990	ppm	0.006638	0.35	4855.130000	Y 377.433
Ca (315.887 nm)	49.974657 o	ppm	0.263713	0.53	38065.814520	Y_R 377.433
Cd (214.439 nm)	0.097179	ppm	0.000405	0.42	6143.870000	Y 377.433
Co (228.615 nm)	0.483723	ppm	0.000312	0.06	9044.640000	Y 242.219
Cr (205.560 nm)	0.197057	ppm	0.000602	0.31	3048.720000	Y 377.433
Cu (324.754 nm)	0.240508	ppm	0.000041	0.02	12601.200000	Y 377.433
Fe (238.204 nm)	1.012152	ppm	0.000954	0.09	3597.434684	Y_R 377.433
Fe H (259.940 nm)	1.014760 u	ppm	0.006466	0.64	1843.350000	Y_R 377.433
K (766.491 nm)	50.429200	ppm	0.024650	0.05	54454.300000	Y_R2 488.368
Li (670.783 nm)	1.002280	ppm	0.010336	1.03	29544.900000	Y_R2 488.368
Mg (279.078 nm)	49.103700 o	ppm	0.079367	0.16	300882.000000	Y 377.433
Mn (257.610 nm)	0.494767	ppm	0.000474	0.10	116703.000000	Y 377.433
Mo (202.032 nm)	1.017080	ppm	0.001590	0.16	9103.540000	Y 377.433
Na (589.592 nm)	50.378200 o	ppm	0.150620	0.30	325205.000000	Y_R2 488.368
Na H (589.593 nm)	51.729526	ppm	0.146480	0.28	181656.557014	Y_R 488.368
Ni (231.604 nm)	0.476717	ppm	0.001073	0.23	3380.350000	Y 377.433
P (213.618 nm)	10.458900 o	ppm	0.013841	0.13	22396.700000	Y 242.219
Pb (220.353 nm)	0.500554	ppm	0.000987	0.20	1512.360000	Y 242.219
S (181.972 nm)	1.928229	ppm	0.001014	0.05	1030.607882	Y 377.433
Sb (206.834 nm)	0.504074	ppm	0.000671	0.13	1372.600000	Y 377.433
Se (196.026 nm)	1.993810	ppm	0.007329	0.37	2101.520000	Y 242.219
Si (288.158 nm)	9.983140	ppm	0.026082	0.26	87523.800000	Y 377.433
Sn (189.925 nm)	1.983640	ppm	0.006342	0.32	4096.940000	Y 377.433
Sr (421.552 nm)	0.995351	ppm	0.003628	0.36	193792.507292	Y_R 488.368
Th (288.505 nm)	1.011150	ppm	0.007358	0.73	2686.760000	Y 377.433
Ti (336.122 nm)	1.007670	ppm	0.001235	0.12	142360.000000	Y 377.433
Tl (190.794 nm)	1.983610	ppm	0.001097	0.06	4501.910000	Y 377.433
U (409.013 nm)	2.039930	ppm	0.003589	0.18	8787.980000	Y 377.433
V (292.401 nm)	0.507043	ppm	0.000135	0.03	18680.100000	Y 377.433
Zn (206.200 nm)	0.485385	ppm	0.002442	0.50	2751.460000	Y 377.433
Zr (343.823 nm)	0.500436	ppm	0.000656	0.13	64569.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.047703	20463.996539	0.000170	0.02
Y 377.433	1.056965	1047060.248137	0.000651	0.06
Y_R 377.433	1.067900	75997.400000	0.000835	0.08
Y_R 488.368	1.080190	44007.000000	0.000735	0.07
Y_R2 488.368	1.060652	85762.638741	0.002952	0.28

Sample Name: 280-116556-A-2-E

Date: 11/13/2018 5:38:12 PM Rack:Tube: 1:58

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000110	ppm	0.000154	> 100.00	-432.102000	Y 377.433
Al (167.019 nm)	0.005587	ppm	0.002149	38.47	4.838360	Y_R 377.433
Al H (396.152 nm)	-0.007225 u	ppm	0.005335	73.84	82.589438	Y_R 377.433
As (188.980 nm)	0.006012	ppm	0.000037	0.62	7.830290	Y 242.219
B (249.678 nm)	0.022910	ppm	0.000275	1.20	634.928000	Y 242.219
Ba (493.408 nm)	0.039710	ppm	0.000254	0.64	4895.750000	Y_R 488.368
Be (234.861 nm)	0.000049	ppm	0.000023	47.37	-69.835000	Y_R 488.368
Bi (223.061 nm)	-0.001613 u	ppm	0.001686	> 100.00	11.802700	Y 377.433
Ca (315.887 nm)	36.149358 o	ppm	0.045652	0.13	27518.421609	Y_R 377.433
Cd (214.439 nm)	-0.000135 u	ppm	0.000085	62.78	11.066900	Y 377.433
Co (228.615 nm)	0.000045 u	ppm	0.000274	> 100.00	-45.339800	Y 242.219
Cr (205.560 nm)	0.001128	ppm	0.000112	9.95	23.578500	Y 377.433
Cu (324.754 nm)	0.005075	ppm	0.000043	0.84	-115.074000	Y 377.433
Fe (238.204 nm)	0.029212	ppm	0.000791	2.71	129.968246	Y_R 377.433
Fe H (259.940 nm)	0.038141 u	ppm	0.000764	2.00	59.686700	Y_R 377.433
K (766.491 nm)	7.198250	ppm	0.038960	0.54	7082.510000	Y_R2 488.368
Li (670.783 nm)	0.017616	ppm	0.000204	1.16	-1027.220000	Y_R2 488.368
Mg (279.078 nm)	11.975400	ppm	0.006818	0.06	73443.100000	Y 377.433
Mn (257.610 nm)	0.004128	ppm	0.000018	0.44	1072.800000	Y 377.433
Mo (202.032 nm)	0.006651	ppm	0.000260	3.90	62.110400	Y 377.433
Na (589.592 nm)	22.747500 o	ppm	0.020182	0.09	145349.000000	Y_R2 488.368
Na H (589.593 nm)	23.589762	ppm	0.110778	0.47	83737.516461	Y_R 488.368
Ni (231.604 nm)	0.020778	ppm	0.000547	2.63	145.685000	Y 377.433
P (213.618 nm)	0.006582	ppm	0.000470	7.14	49.215600	Y 242.219
Pb (220.353 nm)	0.000681 u	ppm	0.002331	> 100.00	6.217330	Y 242.219
S (181.972 nm)	14.554670 o	ppm	0.014479	0.10	7661.029783	Y 377.433
Sb (206.834 nm)	-0.001012 u	ppm	0.000331	32.66	-33.646700	Y 377.433
Se (196.026 nm)	-0.001583 u	ppm	0.001375	86.87	14.847000	Y 242.219
Si (288.158 nm)	18.780700 o	ppm	0.041244	0.22	163799.000000	Y 377.433
Sn (189.925 nm)	-0.000486 u	ppm	0.000418	86.14	11.152300	Y 377.433
Sr (421.552 nm)	0.196356	ppm	0.000625	0.32	38334.544218	Y_R 488.368
Th (288.505 nm)	-0.003198 u	ppm	0.003742	> 100.00	65.554300	Y 377.433
Ti (336.122 nm)	0.000625	ppm	0.000049	7.83	-150.019000	Y 377.433
Tl (190.794 nm)	0.002763	ppm	0.000719	26.03	0.032594	Y 377.433
U (409.013 nm)	-0.002255 u	ppm	0.004264	> 100.00	-247.221000	Y 377.433
V (292.401 nm)	0.001617	ppm	0.000077	4.77	87.404500	Y 377.433
Zn (206.200 nm)	0.004209	ppm	0.000351	8.33	64.896800	Y 377.433
Zr (343.823 nm)	-0.000025 u	ppm	0.000121	> 100.00	25.574600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053163	20570.645515	0.001218	0.12
Y 377.433	1.057658	1047746.838671	0.001720	0.16
Y_R 377.433	1.077510	76681.100000	0.010373	0.96
Y_R 488.368	1.076690	43864.100000	0.009865	0.92
Y_R2 488.368	1.084347	87678.613297	0.001026	0.09

Sample Name: 280-116556-A-3-C

Date: 11/13/2018 5:41:36 PM Rack:Tube: 1:59

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000002 u	ppm	0.000207	> 100.00	-436.994000	Y 377.433
Al (167.019 nm)	0.001854	ppm	0.000180	9.73	2.797600	Y_R 377.433
Al H (396.152 nm)	-0.005551 u	ppm	0.002329	41.97	86.580375	Y_R 377.433
As (188.980 nm)	0.003099	ppm	0.002776	89.59	3.972970	Y 242.219
B (249.678 nm)	0.022843	ppm	0.000496	2.17	633.264000	Y 242.219
Ba (493.408 nm)	0.039052	ppm	0.000185	0.47	4826.030000	Y_R 488.368
Be (234.861 nm)	0.000000 u	ppm	0.000030	> 100.00	-84.540900	Y_R 488.368
Bi (223.061 nm)	-0.000945 u	ppm	0.000410	43.44	13.486800	Y 377.433
Ca (315.887 nm)	36.353552 o	ppm	0.155633	0.43	27674.201832	Y_R 377.433
Cd (214.439 nm)	-0.000120 u	ppm	0.000080	66.58	11.998600	Y 377.433
Co (228.615 nm)	-0.000091 u	ppm	0.000476	> 100.00	-47.881400	Y 242.219
Cr (205.560 nm)	0.000816	ppm	0.000033	4.01	18.768900	Y 377.433
Cu (324.754 nm)	0.000199	ppm	0.000031	15.54	-377.456000	Y 377.433
Fe (238.204 nm)	0.010570	ppm	0.000190	1.80	64.204374	Y_R 377.433
Fe H (259.940 nm)	0.022984 u	ppm	0.005343	23.25	32.004000	Y_R 377.433
K (766.491 nm)	7.336280	ppm	0.072247	0.98	7233.760000	Y_R2 488.368
Li (670.783 nm)	0.017037	ppm	0.000376	2.20	-1045.220000	Y_R2 488.368
Mg (279.078 nm)	12.123700	ppm	0.000190	0.00	74351.900000	Y 377.433
Mn (257.610 nm)	0.001611	ppm	0.000030	1.85	479.477000	Y 377.433
Mo (202.032 nm)	0.005833	ppm	0.000450	7.72	54.787400	Y 377.433
Na (589.592 nm)	23.726100 o	ppm	0.048036	0.20	151583.000000	Y_R2 488.368
Na H (589.593 nm)	24.278621	ppm	0.193383	0.80	86092.134826	Y_R 488.368
Ni (231.604 nm)	-0.000160 u	ppm	0.000733	> 100.00	-2.741200	Y 377.433
P (213.618 nm)	0.076324	ppm	0.001792	2.35	198.329000	Y 242.219
Pb (220.353 nm)	0.001198	ppm	0.000358	29.89	7.777130	Y 242.219
S (181.972 nm)	14.293095 o	ppm	0.023836	0.17	7523.639582	Y 377.433
Sb (206.834 nm)	0.000646 u	ppm	0.003060	> 100.00	-29.006900	Y 377.433
Se (196.026 nm)	-0.003359 u	ppm	0.002826	84.13	12.992000	Y 242.219
Si (288.158 nm)	18.908500 o	ppm	0.129620	0.69	164907.000000	Y 377.433
Sn (189.925 nm)	-0.001903 u	ppm	0.000412	21.68	8.233860	Y 377.433
Sr (421.552 nm)	0.194079	ppm	0.001017	0.52	37891.493374	Y_R 488.368
Th (288.505 nm)	-0.004374 u	ppm	0.000858	19.61	62.517200	Y 377.433
Ti (336.122 nm)	0.000392	ppm	0.000033	8.51	-182.430000	Y 377.433
Tl (190.794 nm)	0.000943	ppm	0.000656	69.54	-4.106510	Y 377.433
U (409.013 nm)	0.000537 u	ppm	0.006053	> 100.00	-234.852000	Y 377.433
V (292.401 nm)	0.001301	ppm	0.000350	26.91	75.891100	Y 377.433
Zn (206.200 nm)	0.006081	ppm	0.000539	8.87	75.349400	Y 377.433
Zr (343.823 nm)	-0.000139 u	ppm	0.000152	> 100.00	10.806700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057299	20651.427304	0.001497	0.14
Y 377.433	1.064268	1054294.661494	0.001644	0.15
Y_R 377.433	1.079430	76818.100000	0.004977	0.46
Y_R 488.368	1.093650	44555.300000	0.005590	0.51
Y_R2 488.368	1.087814	87958.971368	0.009753	0.90

Sample Name: 280-116556-A-8-C

Date: 11/13/2018 5:44:58 PM Rack:Tube: 1:60

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000151	ppm	0.000045	29.81	-432.855000	Y 377.433
Al (167.019 nm)	0.007035	ppm	0.005470	77.75	5.622790	Y_R 377.433
Al H (396.152 nm)	0.004946 u	ppm	0.001357	27.44	129.200800	Y_R 377.433
As (188.980 nm)	0.007815	ppm	0.002730	34.93	10.218100	Y 242.219
B (249.678 nm)	0.017763	ppm	0.000179	1.01	505.396000	Y 242.219
Ba (493.408 nm)	0.065275	ppm	0.000946	1.45	7617.400000	Y_R 488.368
Be (234.861 nm)	0.000052	ppm	0.000013	26.12	-69.041200	Y_R 488.368
Bi (223.061 nm)	-0.002762 u	ppm	0.000202	7.31	8.900490	Y 377.433
Ca (315.887 nm)	79.629311 o	ppm	0.442223	0.56	60689.341392	Y_R 377.433
Cd (214.439 nm)	-0.000172 u	ppm	0.000086	50.05	8.749040	Y 377.433
Co (228.615 nm)	0.000253	ppm	0.000115	45.36	-41.443500	Y 242.219
Cr (205.560 nm)	0.018092	ppm	0.000175	0.97	285.733000	Y 377.433
Cu (324.754 nm)	-0.000804 u	ppm	0.000007	0.91	-459.819000	Y 377.433
Fe (238.204 nm)	0.024607	ppm	0.000748	3.04	113.723505	Y_R 377.433
Fe H (259.940 nm)	0.036712 u	ppm	0.002917	7.94	57.077600	Y_R 377.433
K (766.491 nm)	9.407930	ppm	0.096759	1.03	9503.850000	Y_R2 488.368
Li (670.783 nm)	0.010477	ppm	0.000450	4.29	-1248.870000	Y_R2 488.368
Mg (279.078 nm)	20.379000	ppm	0.009893	0.05	124934.000000	Y 377.433
Mn (257.610 nm)	0.001831	ppm	0.000017	0.95	531.263000	Y 377.433
Mo (202.032 nm)	0.005574	ppm	0.000174	3.11	52.477300	Y 377.433
Na (589.592 nm)	29.823300 o	ppm	0.092760	0.31	190482.000000	Y_R2 488.368
Na H (589.593 nm)	30.615484	ppm	0.290289	0.95	107780.235324	Y_R 488.368
Ni (231.604 nm)	0.002155	ppm	0.000741	34.36	13.669000	Y 377.433
P (213.618 nm)	0.019495	ppm	0.002156	11.06	76.825100	Y 242.219
Pb (220.353 nm)	0.001235 u	ppm	0.002038	> 100.00	7.894980	Y 242.219
S (181.972 nm)	38.073086 o	ppm	0.081966	0.22	20013.325591	Y 377.433
Sb (206.834 nm)	-0.001399 u	ppm	0.000708	50.61	-34.189500	Y 377.433
Se (196.026 nm)	0.003392	ppm	0.000886	26.10	20.048200	Y 242.219
Si (288.158 nm)	19.068100 o	ppm	0.076896	0.40	166291.000000	Y 377.433
Sn (189.925 nm)	-0.002654 u	ppm	0.000268	10.09	6.687160	Y 377.433
Sr (421.552 nm)	0.404195	ppm	0.002679	0.66	78773.211728	Y_R 488.368
Th (288.505 nm)	-0.003748 u	ppm	0.003291	87.82	64.749600	Y 377.433
Ti (336.122 nm)	0.000485	ppm	0.000007	1.45	-34.575600	Y 377.433
Tl (190.794 nm)	0.001477	ppm	0.001754	> 100.00	-2.889710	Y 377.433
U (409.013 nm)	-0.003721 u	ppm	0.004036	> 100.00	-261.843000	Y 377.433
V (292.401 nm)	0.017296	ppm	0.000194	1.12	661.235000	Y 377.433
Zn (206.200 nm)	-0.005355 u	ppm	0.000118	2.20	11.498100	Y 377.433
Zr (343.823 nm)	-0.000044 u	ppm	0.000076	> 100.00	23.047200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.048346	20476.561264	0.000835	0.08
Y 377.433	1.056477	1046576.435033	0.002594	0.25
Y_R 377.433	1.066350	75887.100000	0.004816	0.45
Y_R 488.368	1.073500	43734.200000	0.006607	0.62
Y_R2 488.368	1.063163	85965.670348	0.003162	0.30

Sample Name: 280-116556-A-9-C

Date: 11/13/2018 5:48:21 PM Rack:Tube: 1:61

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000176	ppm	0.000124	70.40	-431.560000	Y 377.433
Al (167.019 nm)	0.008158	ppm	0.002928	35.89	6.309150	Y_R 377.433
Al H (396.152 nm)	0.009699 u	ppm	0.000584	6.03	139.493911	Y_R 377.433
As (188.980 nm)	0.008165	ppm	0.000982	12.03	10.679600	Y 242.219
B (249.678 nm)	0.016922	ppm	0.000019	0.11	484.074000	Y 242.219
Ba (493.408 nm)	0.062772	ppm	0.000201	0.32	7351.450000	Y_R 488.368
Be (234.861 nm)	0.000022	ppm	0.000011	51.96	-74.212500	Y_R 488.368
Bi (223.061 nm)	-0.003566 u	ppm	0.000564	15.80	6.887310	Y 377.433
Ca (315.887 nm)	77.214464 o	ppm	0.365902	0.47	58847.051216	Y_R 377.433
Cd (214.439 nm)	-0.000128 u	ppm	0.000046	35.72	11.642500	Y 377.433
Co (228.615 nm)	0.000128	ppm	0.000019	15.03	-43.770000	Y 242.219
Cr (205.560 nm)	0.045699	ppm	0.000610	1.34	712.332000	Y 377.433
Cu (324.754 nm)	0.001364	ppm	0.000052	3.80	-343.237000	Y 377.433
Fe (238.204 nm)	0.142095	ppm	0.006258	4.40	528.178721	Y_R 377.433
Fe H (259.940 nm)	0.151013 u	ppm	0.001223	0.81	265.834000	Y_R 377.433
K (766.491 nm)	9.000430	ppm	0.035453	0.39	9057.310000	Y_R2 488.368
Li (670.783 nm)	0.011259	ppm	0.002327	20.67	-1224.590000	Y_R2 488.368
Mg (279.078 nm)	19.674400	ppm	0.039214	0.20	120617.000000	Y 377.433
Mn (257.610 nm)	0.003793	ppm	0.000001	0.02	993.699000	Y 377.433
Mo (202.032 nm)	0.005701	ppm	0.000129	2.26	53.611500	Y 377.433
Na (589.592 nm)	28.606300 o	ppm	0.017309	0.06	182723.000000	Y_R2 488.368
Na H (589.593 nm)	29.447592	ppm	0.267719	0.91	103785.078630	Y_R 488.368
Ni (231.604 nm)	0.014339	ppm	0.000350	2.44	100.048000	Y 377.433
P (213.618 nm)	0.016968	ppm	0.001267	7.47	71.422100	Y 242.219
Pb (220.353 nm)	0.000547 u	ppm	0.001464	> 100.00	5.824890	Y 242.219
S (181.972 nm)	36.754341 o	ppm	0.105962	0.29	19320.701625	Y 377.433
Sb (206.834 nm)	0.000451 u	ppm	0.002276	> 100.00	-28.153000	Y 377.433
Se (196.026 nm)	0.004447	ppm	0.000432	9.72	21.129000	Y 242.219
Si (288.158 nm)	18.610000 o	ppm	0.087051	0.47	162319.000000	Y 377.433
Sn (189.925 nm)	-0.001682 u	ppm	0.000683	40.61	8.689470	Y 377.433
Sr (421.552 nm)	0.388368	ppm	0.002967	0.76	75693.793972	Y_R 488.368
Th (288.505 nm)	-0.004430 u	ppm	0.004178	94.30	63.009300	Y 377.433
Ti (336.122 nm)	0.000702	ppm	0.000070	10.02	-11.281200	Y 377.433
Tl (190.794 nm)	0.002131	ppm	0.000675	31.68	-1.407530	Y 377.433
U (409.013 nm)	-0.000687 u	ppm	0.004275	> 100.00	-247.817000	Y 377.433
V (292.401 nm)	0.016952	ppm	0.000059	0.35	640.921000	Y 377.433
Zn (206.200 nm)	-0.006174 u	ppm	0.000065	1.06	6.925330	Y 377.433
Zr (343.823 nm)	-0.000031 u	ppm	0.000040	> 100.00	25.113600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041201	20337.010479	0.001238	0.12
Y 377.433	1.047157	1037343.887584	0.000596	0.06
Y_R 377.433	1.058560	75332.800000	0.005984	0.57
Y_R 488.368	1.068490	43530.200000	0.007782	0.73
Y_R2 488.368	1.066055	86199.539199	0.000037	0.00

Sample Name: 280-116556-A-10-C

Date: 11/13/2018 5:51:42 PM Rack:Tube: 1:62

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000358	ppm	0.000021	5.84	-422.797000	Y 377.433
Al (167.019 nm)	0.020757	ppm	0.006509	31.36	13.176800	Y_R 377.433
Al H (396.152 nm)	0.044262 u	ppm	0.006331	14.30	258.484329	Y_R 377.433
As (188.980 nm)	0.006831	ppm	0.000279	4.08	8.913240	Y 242.219
B (249.678 nm)	0.019163	ppm	0.000237	1.24	540.418000	Y 242.219
Ba (493.408 nm)	0.151648	ppm	0.000215	0.14	16800.300000	Y_R 488.368
Be (234.861 nm)	0.000032	ppm	0.000032	> 100.00	-70.398200	Y_R 488.368
Bi (223.061 nm)	-0.002241 u	ppm	0.001634	72.92	10.240200	Y 377.433
Ca (315.887 nm)	167.492556 o	ppm	0.380854	0.23	127720.339045	Y_R 377.433
Cd (214.439 nm)	-0.000173 u	ppm	0.000053	30.65	8.808770	Y 377.433
Co (228.615 nm)	-0.000217 u	ppm	0.000421	> 100.00	-50.180100	Y 242.219
Cr (205.560 nm)	0.009523	ppm	0.000038	0.40	153.279000	Y 377.433
Cu (324.754 nm)	-0.001118 u	ppm	0.000068	6.07	-526.495000	Y 377.433
Fe (238.204 nm)	0.171892	ppm	0.000492	0.29	633.293512	Y_R 377.433
Fe H (259.940 nm)	0.177393 u	ppm	0.001380	0.78	314.014000	Y_R 377.433
K (766.491 nm)	13.993200	ppm	0.041634	0.30	14528.300000	Y_R2 488.368
Li (670.783 nm)	0.015800	ppm	0.001540	9.75	-1083.620000	Y_R2 488.368
Mg (279.078 nm)	44.918900 o	ppm	0.032042	0.07	275298.000000	Y 377.433
Mn (257.610 nm)	0.001264	ppm	0.000043	3.43	397.717000	Y 377.433
Mo (202.032 nm)	0.005073	ppm	0.000194	3.82	47.988100	Y 377.433
Na (589.592 nm)	56.623100 o	ppm	0.253675	0.45	361401.000000	Y_R2 488.368
Na H (589.593 nm)	58.747448	ppm	0.006350	0.01	204035.708780	Y_R 488.368
Ni (231.604 nm)	0.001868	ppm	0.000030	1.61	11.637500	Y 377.433
P (213.618 nm)	0.017297	ppm	0.001158	6.70	72.126500	Y 242.219
Pb (220.353 nm)	0.000786	ppm	0.000139	17.67	6.514360	Y 242.219
S (181.972 nm)	118.257877 bo	ppm	0.044074	0.04	62127.840690	Y 377.433
Sb (206.834 nm)	-0.002496 u	ppm	0.001558	62.43	-37.559500	Y 377.433
Se (196.026 nm)	0.021769	ppm	0.002789	12.81	39.231500	Y 242.219
Si (288.158 nm)	20.385600 o	ppm	0.023372	0.11	177713.000000	Y 377.433
Sn (189.925 nm)	-0.000923 u	ppm	0.000052	5.65	10.251000	Y 377.433
Sr (421.552 nm)	0.852772	ppm	0.000322	0.04	166051.280886	Y_R 488.368
Th (288.505 nm)	-0.001015 u	ppm	0.003116	> 100.00	71.455400	Y 377.433
Ti (336.122 nm)	0.002526	ppm	0.000011	0.42	528.049000	Y 377.433
Tl (190.794 nm)	0.000241 u	ppm	0.001748	> 100.00	-5.714040	Y 377.433
U (409.013 nm)	-0.005339 u	ppm	0.001226	22.97	-285.333000	Y 377.433
V (292.401 nm)	0.013989	ppm	0.000080	0.57	542.312000	Y 377.433
Zn (206.200 nm)	-0.006867 u	ppm	0.000126	1.83	3.054910	Y 377.433
Zr (343.823 nm)	-0.000010 u	ppm	0.000036	> 100.00	27.828100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040534	20323.978922	0.000088	0.01
Y 377.433	1.052379	1042516.677257	0.001874	0.18
Y_R 377.433	1.079530	76824.900000	0.008420	0.78
Y_R 488.368	1.083670	44148.600000	0.009764	0.90
Y_R2 488.368	1.055059	85310.411980	0.014048	1.33

Sample Name: CCVH-5417909

Date: 11/13/2018 5:55:04 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001675 u	ppm	0.000066	3.97	-751.528000	Y 377.433
Al (167.019 nm)	43.767400 o	ppm	0.028487	0.07	23821.400000	Y_R 377.433
Al H (396.152 nm)	49.035472	ppm	0.088375	0.18	116348.651294	Y_R 377.433
As (188.980 nm)	-0.000248 u	ppm	0.000044	17.77	-0.911194	Y 242.219
B (249.678 nm)	-0.000416 u	ppm	0.000397	95.47	-25.596000	Y 242.219
Ba (493.408 nm)	-0.000487 u	ppm	0.000397	81.57	664.628000	Y_R 488.368
Be (234.861 nm)	-0.000209 u	ppm	0.000118	56.72	1336.010000	Y_R 488.368
Bi (223.061 nm)	0.964714	ppm	0.000100	0.01	2460.390000	Y 377.433
Ca (315.887 nm)	0.002841	ppm	0.001066	37.51	-57.809099	Y_R 377.433
Cd (214.439 nm)	-0.000591 u	ppm	0.000046	7.78	31.489800	Y 377.433
Co (228.615 nm)	0.003059	ppm	0.000260	8.51	11.078100	Y 242.219
Cr (205.560 nm)	-0.000096 u	ppm	0.000125	> 100.00	-8.877900	Y 377.433
Cu (324.754 nm)	-0.006443 u	ppm	0.000164	2.54	-389.979000	Y 377.433
Fe (238.204 nm)	48.797894 o	ppm	0.080947	0.17	172168.756715	Y_R 377.433
Fe H (259.940 nm)	48.972000	ppm	0.217259	0.44	89431.200000	Y_R 377.433
K (766.491 nm)	0.129776	ppm	0.027892	21.49	-663.012000	Y_R2 488.368
Li (670.783 nm)	0.005873	ppm	0.000347	5.91	-1391.820000	Y_R2 488.368
Mg (279.078 nm)	-0.016218 u	ppm	0.002872	17.71	-399.461000	Y 377.433
Mn (257.610 nm)	0.001165	ppm	0.000002	0.18	374.305000	Y 377.433
Mo (202.032 nm)	-0.000734 u	ppm	0.000380	51.82	-3.969620	Y 377.433
Na (589.592 nm)	240.497000 o	ppm	0.513198	0.21	1532630.000000	Y_R2 488.368
Na H (589.593 nm)	250.534579	ppm	3.710761	1.48	859598.476620	Y_R 488.368
Ni (231.604 nm)	0.003612	ppm	0.000280	7.76	26.066300	Y 377.433
P (213.618 nm)	-0.008874 u	ppm	0.001543	17.39	16.171300	Y 242.219
Pb (220.353 nm)	-0.005847 u	ppm	0.001073	18.36	3.625410	Y 242.219
S (181.972 nm)	4.825819	ppm	0.022649	0.47	2551.252995	Y 377.433
Sb (206.834 nm)	-0.004602 u	ppm	0.002628	57.11	-89.040100	Y 377.433
Se (196.026 nm)	-0.004584 u	ppm	0.000856	18.66	2.542600	Y 242.219
Si (288.158 nm)	0.012396	ppm	0.000054	0.43	1077.210000	Y 377.433
Sn (189.925 nm)	0.000379	ppm	0.000402	> 100.00	12.933500	Y 377.433
Sr (421.552 nm)	0.000509	ppm	0.000126	24.74	229.334779	Y_R 488.368
Th (288.505 nm)	4.949660	ppm	0.009784	0.20	12736.300000	Y 377.433
Ti (336.122 nm)	0.001709	ppm	0.000043	2.54	-109.287000	Y 377.433
Tl (190.794 nm)	-0.000734 u	ppm	0.000773	> 100.00	-9.228870	Y 377.433
U (409.013 nm)	9.864950	ppm	0.000670	0.01	43650.000000	Y 377.433
V (292.401 nm)	0.002489	ppm	0.000326	13.12	-36.735400	Y 377.433
Zn (206.200 nm)	-0.006729 u	ppm	0.000007	0.11	3.825240	Y 377.433
Zr (343.823 nm)	-0.004595 u	ppm	0.000066	1.43	-425.630000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.071434	20927.529803	0.000542	0.05
Y 377.433	1.068501	1058488.263181	0.000221	0.02
Y_R 377.433	1.108730	78903.200000	0.002297	0.21
Y_R 488.368	1.105900	45054.100000	0.013756	1.24
Y_R2 488.368	1.119021	90482.288682	0.003868	0.35

Sample Name: CCV-5416701

Date: 11/13/2018 5:58:28 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.481873	ppm	0.000050	0.01	21724.700000	Y 377.433
Al (167.019 nm)	0.490100	ppm	0.004360	0.89	269.754000	Y_R 377.433
Al H (396.152 nm)	0.487826 u	ppm	0.003693	0.76	1279.944033	Y_R 377.433
As (188.980 nm)	0.962740	ppm	0.004472	0.46	1274.700000	Y 242.219
B (249.678 nm)	0.485360	ppm	0.000942	0.19	12291.300000	Y 242.219
Ba (493.408 nm)	0.488702	ppm	0.000401	0.08	52537.400000	Y_R 488.368
Be (234.861 nm)	0.479206	ppm	0.002676	0.56	139557.000000	Y_R 488.368
Bi (223.061 nm)	-0.001723 u	ppm	0.000088	5.10	11.921400	Y 377.433
Ca (315.887 nm)	4.937435	ppm	0.023509	0.48	3707.063041	Y_R 377.433
Cd (214.439 nm)	0.487119	ppm	0.001300	0.27	30713.600000	Y 377.433
Co (228.615 nm)	0.492213	ppm	0.000613	0.12	9184.710000	Y 242.219
Cr (205.560 nm)	0.486690	ppm	0.001345	0.28	7521.320000	Y 377.433
Cu (324.754 nm)	0.484627	ppm	0.000225	0.05	25716.700000	Y 377.433
Fe (238.204 nm)	2.453833	ppm	0.008702	0.35	8683.179977	Y_R 377.433
Fe H (259.940 nm)	2.474170 u	ppm	0.004941	0.20	4508.780000	Y_R 377.433
K (766.491 nm)	48.749800	ppm	0.033204	0.07	52614.000000	Y_R2 488.368
Li (670.783 nm)	0.982036	ppm	0.005571	0.57	28916.400000	Y_R2 488.368
Mg (279.078 nm)	19.349000	ppm	0.021802	0.11	118619.000000	Y 377.433
Mn (257.610 nm)	0.489591	ppm	0.000060	0.01	115483.000000	Y 377.433
Mo (202.032 nm)	0.491398	ppm	0.000052	0.01	4399.670000	Y 377.433
Na (589.592 nm)	4.988560	ppm	0.021426	0.43	33076.700000	Y_R2 488.368
Na H (589.593 nm)	5.485616 u	ppm	0.036399	0.66	22235.582119	Y_R 488.368
Ni (231.604 nm)	0.492442	ppm	0.003068	0.62	3490.620000	Y 377.433
P (213.618 nm)	1.005280	ppm	0.001833	0.18	2184.490000	Y 242.219
Pb (220.353 nm)	0.981867	ppm	0.005310	0.54	2959.450000	Y 242.219
S (181.972 nm)	0.009828	ppm	0.001096	11.15	23.019084	Y 377.433
Sb (206.834 nm)	0.967614	ppm	0.002950	0.30	2685.830000	Y 377.433
Se (196.026 nm)	0.959836	ppm	0.003208	0.33	1020.060000	Y 242.219
Si (288.158 nm)	4.854290	ppm	0.004095	0.08	43056.500000	Y 377.433
Sn (189.925 nm)	0.970106	ppm	0.001869	0.19	2009.830000	Y 377.433
Sr (421.552 nm)	0.489709	ppm	0.001175	0.24	95411.377411	Y_R 488.368
Th (288.505 nm)	0.003113	ppm	0.003204	> 100.00	96.618600	Y 377.433
Ti (336.122 nm)	0.490268	ppm	0.000522	0.11	69022.300000	Y 377.433
Tl (190.794 nm)	0.980981	ppm	0.000095	0.01	2224.280000	Y 377.433
U (409.013 nm)	-0.003238 u	ppm	0.002269	70.07	-280.861000	Y 377.433
V (292.401 nm)	0.488990	ppm	0.001103	0.23	17973.000000	Y 377.433
Zn (206.200 nm)	0.485280	ppm	0.000424	0.09	2750.870000	Y 377.433
Zr (343.823 nm)	0.492679	ppm	0.000648	0.13	63573.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069357	20886.954355	0.000193	0.02
Y 377.433	1.072137	1062089.356429	0.000077	0.01
Y_R 377.433	1.083560	77111.900000	0.007783	0.72
Y_R 488.368	1.089120	44370.700000	0.008140	0.75
Y_R2 488.368	1.072369	86710.128080	0.003761	0.35

Sample Name: CCB

Date: 11/13/2018 6:01:50 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000081 u	ppm	0.000491	> 100.00	-440.523000	Y 377.433
Al (167.019 nm)	-0.003148 u	ppm	0.004230	> 100.00	0.070809	Y_R 377.433
Al H (396.152 nm)	-0.020717 u	ppm	0.000762	3.68	35.206319	Y_R 377.433
As (188.980 nm)	0.000365 u	ppm	0.001941	> 100.00	0.352637	Y 242.219
B (249.678 nm)	0.002097	ppm	0.000258	12.31	111.172000	Y 242.219
Ba (493.408 nm)	-0.000680 u	ppm	0.000076	11.14	602.725000	Y_R 488.368
Be (234.861 nm)	0.000052	ppm	0.000018	33.85	-69.444800	Y_R 488.368
Bi (223.061 nm)	-0.002365 u	ppm	0.001129	47.71	9.896360	Y 377.433
Ca (315.887 nm)	-0.007049 u	ppm	0.004365	61.92	-65.353977	Y_R 377.433
Cd (214.439 nm)	-0.000158 u	ppm	0.000047	29.47	9.577050	Y 377.433
Co (228.615 nm)	0.000562	ppm	0.000128	22.79	-35.668500	Y 242.219
Cr (205.560 nm)	-0.000090 u	ppm	0.000126	> 100.00	4.781250	Y 377.433
Cu (324.754 nm)	-0.000018 u	ppm	0.000392	> 100.00	-368.912000	Y 377.433
Fe (238.204 nm)	-0.001841 u	ppm	0.000464	25.20	20.424217	Y_R 377.433
Fe H (259.940 nm)	0.012108 u	ppm	0.000418	3.45	12.141900	Y_R 377.433
K (766.491 nm)	-0.013664 u	ppm	0.008132	59.52	-820.192000	Y_R2 488.368
Li (670.783 nm)	0.003552	ppm	0.001180	33.23	-1463.900000	Y_R2 488.368
Mg (279.078 nm)	0.001129	ppm	0.000150	13.25	72.853800	Y 377.433
Mn (257.610 nm)	-0.000086 u	ppm	0.000025	29.37	79.673300	Y 377.433
Mo (202.032 nm)	-0.000235 u	ppm	0.000001	0.30	0.496142	Y 377.433
Na (589.592 nm)	0.057866	ppm	0.012527	21.65	705.809000	Y_R2 488.368
Na H (589.593 nm)	0.174793 u	ppm	0.006567	3.76	3649.108097	Y_R 488.368
Ni (231.604 nm)	-0.000115 u	ppm	0.000247	> 100.00	-2.427040	Y 377.433
P (213.618 nm)	-0.002771 u	ppm	0.000304	10.95	29.219200	Y 242.219
Pb (220.353 nm)	0.000979	ppm	0.000379	38.76	7.149190	Y 242.219
S (181.972 nm)	0.006032	ppm	0.005292	87.73	19.809107	Y 377.433
Sb (206.834 nm)	0.002876	ppm	0.000048	1.66	-22.759700	Y 377.433
Se (196.026 nm)	-0.001554 u	ppm	0.000758	48.74	14.880000	Y 242.219
Si (288.158 nm)	-0.006594 u	ppm	0.000594	9.01	912.563000	Y 377.433
Sn (189.925 nm)	-0.000719 u	ppm	0.001252	> 100.00	10.671200	Y 377.433
Sr (421.552 nm)	0.000024	ppm	0.000030	> 100.00	134.861588	Y_R 488.368
Th (288.505 nm)	0.000576 u	ppm	0.004807	> 100.00	74.903000	Y 377.433
Ti (336.122 nm)	0.000170	ppm	0.000059	34.35	-327.217000	Y 377.433
Tl (190.794 nm)	0.000548 u	ppm	0.002849	> 100.00	-4.988800	Y 377.433
U (409.013 nm)	0.001341 u	ppm	0.006124	> 100.00	-224.500000	Y 377.433
V (292.401 nm)	0.000148 u	ppm	0.000249	> 100.00	33.086800	Y 377.433
Zn (206.200 nm)	-0.007420 u	ppm	0.000102	1.38	-0.029284	Y 377.433
Zr (343.823 nm)	0.000094 u	ppm	0.000135	> 100.00	40.750800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054112	20589.195803	0.002075	0.20
Y 377.433	1.058799	1048876.552445	0.003423	0.32
Y_R 377.433	1.070890	76210.500000	0.007812	0.73
Y_R 488.368	1.076030	43837.400000	0.001903	0.18
Y_R2 488.368	1.063964	86030.486339	0.001833	0.17

Sample Name: CCVL-5425098

Date: 11/13/2018 6:05:12 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009241	ppm	0.000040	0.44	-11.215300	Y 377.433
Al (167.019 nm)	0.093756	ppm	0.003798	4.05	52.801600	Y_R 377.433
Al H (396.152 nm)	0.078685 u	ppm	0.007911	10.05	272.319387	Y_R 377.433
As (188.980 nm)	0.012317	ppm	0.000026	0.21	16.179200	Y 242.219
B (249.678 nm)	0.094558	ppm	0.000513	0.54	2438.390000	Y 242.219
Ba (493.408 nm)	0.009183	ppm	0.000154	1.68	1649.250000	Y_R 488.368
Be (234.861 nm)	0.000928	ppm	0.000005	0.57	188.015000	Y_R 488.368
Bi (223.061 nm)	0.094706	ppm	0.001853	1.96	255.079000	Y 377.433
Ca (315.887 nm)	0.192752	ppm	0.001269	0.66	87.077115	Y_R 377.433
Cd (214.439 nm)	0.004690	ppm	0.000023	0.49	315.157000	Y 377.433
Co (228.615 nm)	0.010045	ppm	0.000022	0.22	142.164000	Y 242.219
Cr (205.560 nm)	0.009653	ppm	0.000006	0.07	155.286000	Y 377.433
Cu (324.754 nm)	0.014535	ppm	0.000045	0.31	413.135000	Y 377.433
Fe (238.204 nm)	0.094491	ppm	0.000937	0.99	360.248466	Y_R 377.433
Fe H (259.940 nm)	0.107084 u	ppm	0.001528	1.43	185.602000	Y_R 377.433
K (766.491 nm)	2.999260	ppm	0.024010	0.80	2481.330000	Y_R2 488.368
Li (670.783 nm)	0.024014	ppm	0.000000	0.00	-828.592000	Y_R2 488.368
Mg (279.078 nm)	0.191136	ppm	0.000544	0.28	1236.410000	Y 377.433
Mn (257.610 nm)	0.009796	ppm	0.000016	0.17	2408.370000	Y 377.433
Mo (202.032 nm)	0.017660	ppm	0.000118	0.67	160.616000	Y 377.433
Na (589.592 nm)	1.082500	ppm	0.026643	2.46	7252.810000	Y_R2 488.368
Na H (589.593 nm)	1.166686 u	ppm	0.025428	2.18	7048.679664	Y_R 488.368
Ni (231.604 nm)	0.039330	ppm	0.000441	1.12	277.217000	Y 377.433
P (213.618 nm)	2.715600 o	ppm	0.005362	0.20	5841.230000	Y 242.219
Pb (220.353 nm)	0.008069	ppm	0.001884	23.35	28.447000	Y 242.219
S (181.972 nm)	0.091903	ppm	0.001031	1.12	64.934767	Y 377.433
Sb (206.834 nm)	0.018569	ppm	0.000033	0.18	21.268000	Y 377.433
Se (196.026 nm)	0.013280 Q	ppm	0.001453	10.94	30.381400 Q	Y 242.219
Si (288.158 nm)	0.454782	ppm	0.002661	0.59	4912.700000	Y 377.433
Sn (189.925 nm)	0.090384	ppm	0.000020	0.02	198.274000	Y 377.433
Sr (421.552 nm)	0.009798	ppm	0.000102	1.04	2036.648377	Y_R 488.368
Th (288.505 nm)	0.012447	ppm	0.002666	21.42	105.673000	Y 377.433
Ti (336.122 nm)	0.009404	ppm	0.000019	0.20	979.595000	Y 377.433
Tl (190.794 nm)	0.014970	ppm	0.001606	10.73	27.774600	Y 377.433
U (409.013 nm)	0.059755	ppm	0.000686	1.15	34.059700	Y 377.433
V (292.401 nm)	0.009491	ppm	0.000275	2.90	374.561000	Y 377.433
Zn (206.200 nm)	0.011886 Q	ppm	0.000192	1.61	107.759000 Q	Y 377.433
Zr (343.823 nm)	0.014306	ppm	0.000005	0.04	1873.930000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063091	20764.562918	0.003064	0.29
Y 377.433	1.067400	1057397.534124	0.001712	0.16
Y_R 377.433	1.075620	76546.600000	0.004174	0.39
Y_R 488.368	1.082920	44118.000000	0.005182	0.48
Y_R2 488.368	1.077167	87098.039812	0.003470	0.32

Sample Name: 280-116556-A-11-E

Date: 11/13/2018 6:08:34 PM Rack:Tube: 1:63

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000627	ppm	0.000108	17.31	-410.453000	Y 377.433
Al (167.019 nm)	0.001145	ppm	0.000267	23.30	2.477550	Y_R 377.433
Al H (396.152 nm)	0.026258 u	ppm	0.000637	2.43	214.707254	Y_R 377.433
As (188.980 nm)	0.004683	ppm	0.000100	2.14	6.069780	Y 242.219
B (249.678 nm)	0.018783	ppm	0.000026	0.14	530.951000	Y 242.219
Ba (493.408 nm)	0.149074	ppm	0.001216	0.82	16526.600000	Y_R 488.368
Be (234.861 nm)	0.000030	ppm	0.000011	37.94	-72.803400	Y_R 488.368
Bi (223.061 nm)	-0.002278 u	ppm	0.000012	0.53	10.135400	Y 377.433
Ca (315.887 nm)	164.848972 o	ppm	0.712825	0.43	125703.545600	Y_R 377.433
Cd (214.439 nm)	-0.000116 u	ppm	0.000007	5.78	12.389800	Y 377.433
Co (228.615 nm)	0.000081 u	ppm	0.000306	> 100.00	-44.670700	Y 242.219
Cr (205.560 nm)	0.005390	ppm	0.000068	1.26	89.430900	Y 377.433
Cu (324.754 nm)	-0.000827 u	ppm	0.000155	18.69	-508.793000	Y 377.433
Fe (238.204 nm)	0.110620	ppm	0.000795	0.72	417.144358	Y_R 377.433
Fe H (259.940 nm)	0.114800 u	ppm	0.001184	1.03	199.695000	Y_R 377.433
K (766.491 nm)	13.809400	ppm	0.065177	0.47	14326.900000	Y_R2 488.368
Li (670.783 nm)	0.017413	ppm	0.001334	7.66	-1033.530000	Y_R2 488.368
Mg (279.078 nm)	44.282600 o	ppm	0.076649	0.17	271399.000000	Y 377.433
Mn (257.610 nm)	0.001328	ppm	0.000064	4.84	412.768000	Y 377.433
Mo (202.032 nm)	0.005038	ppm	0.000111	2.20	47.675300	Y 377.433
Na (589.592 nm)	55.607900 o	ppm	0.060950	0.11	354930.000000	Y_R2 488.368
Na H (589.593 nm)	58.088512	ppm	0.552465	0.95	201781.318766	Y_R 488.368
Ni (231.604 nm)	0.000770	ppm	0.000366	47.53	3.853660	Y 377.433
P (213.618 nm)	0.016104	ppm	0.001355	8.42	69.575500	Y 242.219
Pb (220.353 nm)	0.001860	ppm	0.000915	49.20	9.758000	Y 242.219
S (181.972 nm)	115.814872 bo	ppm	0.119175	0.10	60844.730335	Y 377.433
Sb (206.834 nm)	-0.001124 u	ppm	0.004050	> 100.00	-33.838900	Y 377.433
Se (196.026 nm)	0.018352	ppm	0.002168	11.81	35.670800	Y 242.219
Si (288.158 nm)	20.243000 o	ppm	0.317232	1.57	176477.000000	Y 377.433
Sn (189.925 nm)	-0.001691 u	ppm	0.000683	40.40	8.669330	Y 377.433
Sr (421.552 nm)	0.841397	ppm	0.007737	0.92	163838.203071	Y_R 488.368
Th (288.505 nm)	-0.000411 u	ppm	0.001738	> 100.00	72.998400	Y 377.433
Ti (336.122 nm)	0.000046	ppm	0.000029	61.91	169.055000	Y 377.433
Tl (190.794 nm)	0.000559 u	ppm	0.000932	> 100.00	-4.978980	Y 377.433
U (409.013 nm)	-0.002544 u	ppm	0.003748	> 100.00	-272.467000	Y 377.433
V (292.401 nm)	0.013757	ppm	0.000261	1.90	534.889000	Y 377.433
Zn (206.200 nm)	-0.006787 u	ppm	0.000187	2.75	3.503760	Y 377.433
Zr (343.823 nm)	-0.000212 u	ppm	0.000060	28.58	1.708320	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037223	20259.305296	0.007239	0.70
Y 377.433	1.048150	1038327.576169	0.008551	0.82
Y_R 377.433	1.087370	77383.000000	0.009381	0.86
Y_R 488.368	1.092030	44489.100000	0.011484	1.05
Y_R2 488.368	1.082849	87557.465518	0.000821	0.08

Sample Name: 280-116556-A-11-Esd@5

Date: 11/13/2018 6:11:56 PM Rack:Tube: 1:64

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000266	ppm	0.000178	67.08	-425.016000	Y 377.433
Al (167.019 nm)	0.003417	ppm	0.001871	54.77	3.651890	Y_R 377.433
Al H (396.152 nm)	-0.010636 u	ppm	0.003898	36.65	72.659260	Y_R 377.433
As (188.980 nm)	-0.000160 u	ppm	0.000554	> 100.00	-0.342794	Y 242.219
B (249.678 nm)	0.004767	ppm	0.000337	7.07	178.338000	Y 242.219
Ba (493.408 nm)	0.029412	ppm	0.000269	0.92	3802.490000	Y_R 488.368
Be (234.861 nm)	0.000014	ppm	0.000019	> 100.00	-79.948200	Y_R 488.368
Bi (223.061 nm)	-0.001085 u	ppm	0.000711	65.56	13.133400	Y 377.433
Ca (315.887 nm)	32.899298 o	ppm	0.174897	0.53	25038.946073	Y_R 377.433
Cd (214.439 nm)	-0.000206 u	ppm	0.000008	3.81	6.592040	Y 377.433
Co (228.615 nm)	0.000314	ppm	0.000017	5.34	-40.312400	Y 242.219
Cr (205.560 nm)	0.001158	ppm	0.000077	6.67	24.064200	Y 377.433
Cu (324.754 nm)	0.000366	ppm	0.000152	41.71	-367.971000	Y 377.433
Fe (238.204 nm)	0.018079	ppm	0.002317	12.82	90.694330	Y_R 377.433
Fe H (259.940 nm)	0.032875 u	ppm	0.000805	2.45	50.070000	Y_R 377.433
K (766.491 nm)	2.756820	ppm	0.017904	0.65	2215.660000	Y_R2 488.368
Li (670.783 nm)	0.009973	ppm	0.000546	5.47	-1264.520000	Y_R2 488.368
Mg (279.078 nm)	8.734250	ppm	0.007670	0.09	53583.300000	Y 377.433
Mn (257.610 nm)	0.000154	ppm	0.000015	9.76	136.037000	Y 377.433
Mo (202.032 nm)	0.000185	ppm	0.000243	> 100.00	4.247450	Y 377.433
Na (589.592 nm)	11.184700 o	ppm	0.013477	0.12	71658.100000	Y_R2 488.368
Na H (589.593 nm)	11.677972	ppm	0.187583	1.61	43003.561202	Y_R 488.368
Ni (231.604 nm)	-0.000632 u	ppm	0.000525	83.02	-6.093370	Y 377.433
P (213.618 nm)	-0.002144 u	ppm	0.000215	10.02	30.560700	Y 242.219
Pb (220.353 nm)	-0.000698 u	ppm	0.000550	78.81	2.095390	Y 242.219
S (181.972 nm)	22.113287 o	ppm	0.020289	0.09	11630.943579	Y 377.433
Sb (206.834 nm)	-0.000896 u	ppm	0.001131	> 100.00	-33.281000	Y 377.433
Se (196.026 nm)	0.000517 u	ppm	0.003043	> 100.00	17.041400	Y 242.219
Si (288.158 nm)	3.852920	ppm	0.001335	0.03	34374.600000	Y 377.433
Sn (189.925 nm)	-0.001231 u	ppm	0.000330	26.83	9.617910	Y 377.433
Sr (421.552 nm)	0.168627	ppm	0.002269	1.35	32939.515698	Y_R 488.368
Th (288.505 nm)	-0.003545 u	ppm	0.000588	16.60	64.621400	Y 377.433
Ti (336.122 nm)	0.000021	ppm	0.000029	> 100.00	-246.050000	Y 377.433
Tl (190.794 nm)	0.000922 u	ppm	0.001402	> 100.00	-4.139340	Y 377.433
U (409.013 nm)	0.003844	ppm	0.002383	61.99	-219.495000	Y 377.433
V (292.401 nm)	0.002334	ppm	0.000225	9.65	113.449000	Y 377.433
Zn (206.200 nm)	-0.007141 u	ppm	0.000194	2.71	1.525540	Y 377.433
Zr (343.823 nm)	-0.000119 u	ppm	0.000115	96.58	13.363300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079227	21079.729999	0.004971	0.46
Y 377.433	1.086789	1076604.927136	0.003996	0.37
Y_R 377.433	1.106940	78775.500000	0.001848	0.17
Y_R 488.368	1.100360	44828.500000	0.010295	0.94
Y_R2 488.368	1.112670	89968.798915	0.002288	0.21

Sample Name: 280-116556-A-11-F MS

Date: 11/13/2018 6:15:18 PM Rack:Tube: 1:65

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052705	ppm	0.000084	0.16	1959.310000	Y 377.433
Al (167.019 nm)	1.831980	ppm	0.016177	0.88	998.186000	Y_R 377.433
Al H (396.152 nm)	2.026773	ppm	0.007818	0.39	5052.835926	Y_R 377.433
As (188.980 nm)	1.004200	ppm	0.002036	0.20	1329.610000	Y 242.219
B (249.678 nm)	1.060460	ppm	0.003273	0.31	26766.000000	Y 242.219
Ba (493.408 nm)	2.125740 o	ppm	0.001296	0.06	226257.000000	Y_R 488.368
Be (234.861 nm)	0.048631	ppm	0.000005	0.01	14058.600000	Y_R 488.368
Bi (223.061 nm)	1.919000	ppm	0.010167	0.53	4862.760000	Y 377.433
Ca (315.887 nm)	212.377770 o	ppm	0.363271	0.17	161963.385032	Y_R 377.433
Cd (214.439 nm)	0.093675	ppm	0.000408	0.44	5923.120000	Y 377.433
Co (228.615 nm)	0.470247	ppm	0.001171	0.25	8791.820000	Y 242.219
Cr (205.560 nm)	0.200276	ppm	0.001328	0.66	3098.460000	Y 377.433
Cu (324.754 nm)	0.242989	ppm	0.000516	0.21	12641.000000	Y 377.433
Fe (238.204 nm)	1.095234	ppm	0.003096	0.28	3890.519230	Y_R 377.433
Fe H (259.940 nm)	1.095330 u	ppm	0.001184	0.11	1990.510000	Y_R 377.433
K (766.491 nm)	64.762500	ppm	0.133102	0.21	70160.500000	Y_R2 488.368
Li (670.783 nm)	1.023960	ppm	0.002550	0.25	30218.100000	Y_R2 488.368
Mg (279.078 nm)	91.985700 o	ppm	0.274832	0.30	563634.000000	Y 377.433
Mn (257.610 nm)	0.483444	ppm	0.001508	0.31	114034.000000	Y 377.433
Mo (202.032 nm)	1.007230	ppm	0.003287	0.33	9015.370000	Y 377.433
Na (589.592 nm)	104.807000 o	ppm	0.433164	0.41	672248.000000	Y_R2 488.368
Na H (589.593 nm)	108.936600	ppm	0.166253	0.15	377356.518601	Y_R 488.368
Ni (231.604 nm)	0.464144	ppm	0.003342	0.72	3291.110000	Y 377.433
P (213.618 nm)	10.537100 o	ppm	0.004155	0.04	22563.900000	Y 242.219
Pb (220.353 nm)	0.489145	ppm	0.003165	0.65	1477.970000	Y 242.219
S (181.972 nm)	119.625042 bo	ppm	0.137457	0.11	62847.098932	Y 377.433
Sb (206.834 nm)	0.503546	ppm	0.000486	0.10	1371.280000	Y 377.433
Se (196.026 nm)	2.001580	ppm	0.005495	0.27	2109.620000	Y 242.219
Si (288.158 nm)	29.733100 o	ppm	0.127395	0.43	258757.000000	Y 377.433
Sn (189.925 nm)	1.971240	ppm	0.012340	0.63	4071.400000	Y 377.433
Sr (421.552 nm)	1.839741 o	ppm	0.001676	0.09	358082.661120	Y_R 488.368
Th (288.505 nm)	0.998660	ppm	0.006732	0.67	2655.270000	Y 377.433
Ti (336.122 nm)	0.989842	ppm	0.004030	0.41	140343.000000	Y 377.433
Tl (190.794 nm)	1.920360	ppm	0.009992	0.52	4358.040000	Y 377.433
U (409.013 nm)	2.026770	ppm	0.002287	0.11	8699.820000	Y 377.433
V (292.401 nm)	0.514331	ppm	0.001334	0.26	18949.400000	Y 377.433
Zn (206.200 nm)	0.466566	ppm	0.002538	0.54	2646.390000	Y 377.433
Zr (343.823 nm)	0.491513	ppm	0.001377	0.28	63419.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.031896	20155.260708	0.001174	0.11
Y 377.433	1.044536	1034747.685227	0.003806	0.36
Y_R 377.433	1.078010	76717.100000	0.003658	0.34
Y_R 488.368	1.079200	43966.600000	0.000136	0.01
Y_R2 488.368	1.066631	86246.088002	0.007032	0.66

Sample Name: 280-116556-A-11-G MSD

Date: 11/13/2018 6:18:41 PM Rack:Tube: 1:66

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052617	ppm	0.000185	0.35	1955.340000	Y 377.433
Al (167.019 nm)	1.853830	ppm	0.007293	0.39	1010.060000	Y_R 377.433
Al H (396.152 nm)	2.029453	ppm	0.010275	0.51	5057.772338	Y_R 377.433
As (188.980 nm)	0.997575	ppm	0.003020	0.30	1320.850000	Y 242.219
B (249.678 nm)	1.062090	ppm	0.001993	0.19	26807.000000	Y 242.219
Ba (493.408 nm)	2.115640 o	ppm	0.005200	0.25	225185.000000	Y_R 488.368
Be (234.861 nm)	0.048848	ppm	0.000061	0.13	14121.800000	Y_R 488.368
Bi (223.061 nm)	1.916540	ppm	0.001154	0.06	4856.550000	Y 377.433
Ca (315.887 nm)	209.387626 o	ppm	0.323018	0.15	159682.199524	Y_R 377.433
Cd (214.439 nm)	0.093580	ppm	0.000203	0.22	5917.160000	Y 377.433
Co (228.615 nm)	0.469074	ppm	0.000613	0.13	8769.740000	Y 242.219
Cr (205.560 nm)	0.198883	ppm	0.000319	0.16	3076.940000	Y 377.433
Cu (324.754 nm)	0.241078	ppm	0.000651	0.27	12538.600000	Y 377.433
Fe (238.204 nm)	1.090544	ppm	0.000078	0.01	3873.974962	Y_R 377.433
Fe H (259.940 nm)	1.092010 u	ppm	0.004984	0.46	1984.440000	Y_R 377.433
K (766.491 nm)	64.540000	ppm	0.227732	0.35	69916.700000	Y_R2 488.368
Li (670.783 nm)	1.021220	ppm	0.002109	0.21	30133.100000	Y_R2 488.368
Mg (279.078 nm)	91.133200 o	ppm	0.105299	0.12	558410.000000	Y 377.433
Mn (257.610 nm)	0.482957	ppm	0.000003	0.00	113920.000000	Y 377.433
Mo (202.032 nm)	1.004300	ppm	0.000976	0.10	8989.160000	Y 377.433
Na (589.592 nm)	103.895000 o	ppm	0.038144	0.04	666420.000000	Y_R2 488.368
Na H (589.593 nm)	107.540198	ppm	0.020352	0.02	372573.891803	Y_R 488.368
Ni (231.604 nm)	0.462276	ppm	0.002849	0.62	3277.860000	Y 377.433
P (213.618 nm)	10.549300 o	ppm	0.006587	0.06	22590.100000	Y 242.219
Pb (220.353 nm)	0.486221	ppm	0.000069	0.01	1469.150000	Y 242.219
S (181.972 nm)	117.520335 bo	ppm	0.292837	0.25	61741.667345	Y 377.433
Sb (206.834 nm)	0.501702	ppm	0.002274	0.45	1366.140000	Y 377.433
Se (196.026 nm)	1.998600	ppm	0.010657	0.53	2106.500000	Y 242.219
Si (288.158 nm)	29.442500 o	ppm	0.136781	0.46	256237.000000	Y 377.433
Sn (189.925 nm)	1.962990	ppm	0.000574	0.03	4054.400000	Y 377.433
Sr (421.552 nm)	1.822690 o	ppm	0.006719	0.37	354765.197103	Y_R 488.368
Th (288.505 nm)	0.991679	ppm	0.001967	0.20	2637.370000	Y 377.433
Ti (336.122 nm)	0.987014	ppm	0.000004	0.00	139934.000000	Y 377.433
Tl (190.794 nm)	1.916630	ppm	0.002523	0.13	4349.560000	Y 377.433
U (409.013 nm)	2.014850	ppm	0.007599	0.38	8647.550000	Y 377.433
V (292.401 nm)	0.513385	ppm	0.000094	0.02	18914.600000	Y 377.433
Zn (206.200 nm)	0.465938	ppm	0.002476	0.53	2642.880000	Y 377.433
Zr (343.823 nm)	0.489584	ppm	0.000121	0.02	63170.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023701	19995.185999	0.002211	0.22
Y 377.433	1.038116	1028387.554895	0.000096	0.01
Y_R 377.433	1.064230	75736.500000	0.004261	0.40
Y_R 488.368	1.067390	43485.300000	0.002208	0.21
Y_R2 488.368	1.052218	85080.733016	0.003817	0.36

Sample Name: 280-116556-A-11-Epds

Date: 11/13/2018 6:22:03 PM Rack:Tube: 1:67

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.045792	ppm	0.000027	0.06	1655.970000	Y 377.433
Al (167.019 nm)	0.926755	ppm	0.013890	1.50	506.186000	Y_R 377.433
Al H (396.152 nm)	1.010522	ppm	0.025020	2.48	2558.822018	Y_R 377.433
As (188.980 nm)	0.204292	ppm	0.003092	1.51	270.382000	Y 242.219
B (249.678 nm)	0.123277	ppm	0.000359	0.29	3161.250000	Y 242.219
Ba (493.408 nm)	0.248533	ppm	0.001457	0.59	27083.900000	Y_R 488.368
Be (234.861 nm)	0.048395	ppm	0.000369	0.76	14043.000000	Y_R 488.368
Bi (223.061 nm)	-0.002526 u	ppm	0.001658	65.61	9.668510	Y 377.433
Ca (315.887 nm)	181.195913 o	ppm	1.049191	0.58	138174.675913	Y_R 377.433
Cd (214.439 nm)	0.047009	ppm	0.000002	0.00	2982.530000	Y 377.433
Co (228.615 nm)	0.046619	ppm	0.000031	0.07	828.134000	Y 242.219
Cr (205.560 nm)	0.053588	ppm	0.000056	0.11	833.454000	Y 377.433
Cu (324.754 nm)	0.047446	ppm	0.000043	0.09	2086.530000	Y 377.433
Fe (238.204 nm)	1.082002	ppm	0.009792	0.90	3843.841988	Y_R 377.433
Fe H (259.940 nm)	1.087290 u	ppm	0.005155	0.47	1975.820000	Y_R 377.433
K (766.491 nm)	33.821200	ppm	0.066199	0.20	36255.500000	Y_R2 488.368
Li (670.783 nm)	0.118740	ppm	0.001242	1.05	2112.490000	Y_R2 488.368
Mg (279.078 nm)	62.897100 o	ppm	0.086677	0.14	385442.000000	Y 377.433
Mn (257.610 nm)	0.049561	ppm	0.000101	0.20	11780.100000	Y 377.433
Mo (202.032 nm)	0.054352	ppm	0.000043	0.08	488.943000	Y 377.433
Na (589.592 nm)	74.594100 o	ppm	0.238956	0.32	476091.000000	Y_R2 488.368
Na H (589.593 nm)	79.135914	ppm	0.282271	0.36	273826.927374	Y_R 488.368
Ni (231.604 nm)	0.046941	ppm	0.000606	1.29	331.432000	Y 377.433
P (213.618 nm)	2.107710	ppm	0.004093	0.19	4541.540000	Y 242.219
Pb (220.353 nm)	0.095358	ppm	0.000291	0.31	292.216000	Y 242.219
S (181.972 nm)	115.280968 bo	ppm	0.228565	0.20	60564.433914	Y 377.433
Sb (206.834 nm)	0.096868	ppm	0.000176	0.18	239.654000	Y 377.433
Se (196.026 nm)	0.214797	ppm	0.004811	2.24	240.921000	Y 242.219
Si (288.158 nm)	24.602900 o	ppm	0.243163	0.99	214277.000000	Y 377.433
Sn (189.925 nm)	0.096415	ppm	0.001022	1.06	210.693000	Y 377.433
Sr (421.552 nm)	0.890128	ppm	0.003577	0.40	173319.587769	Y_R 488.368
Th (288.505 nm)	0.202977	ppm	0.003688	1.82	595.680000	Y 377.433
Ti (336.122 nm)	0.049380	ppm	0.000069	0.14	7199.140000	Y 377.433
Tl (190.794 nm)	0.194350	ppm	0.000553	0.28	435.777000	Y 377.433
U (409.013 nm)	0.501705	ppm	0.002844	0.57	1962.390000	Y 377.433
V (292.401 nm)	0.063165	ppm	0.000135	0.21	2338.430000	Y 377.433
Zn (206.200 nm)	0.182387	ppm	0.000306	0.17	1059.720000	Y 377.433
Zr (343.823 nm)	0.049149	ppm	0.000069	0.14	6370.120000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046758	20445.540381	0.002757	0.26
Y 377.433	1.059801	1049869.806666	0.003798	0.36
Y_R 377.433	1.093610	77826.900000	0.013624	1.25
Y_R 488.368	1.082900	44117.300000	0.012034	1.11
Y_R2 488.368	1.084542	87694.412874	0.000734	0.07

Sample Name: CCVH-5417909

Date: 11/13/2018 6:25:26 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001923 u	ppm	0.000415	21.60	-762.604000	Y 377.433
Al (167.019 nm)	43.895600 o	ppm	0.211174	0.48	23890.900000	Y_R 377.433
Al H (396.152 nm)	48.745250	ppm	0.133621	0.27	115660.553539	Y_R 377.433
As (188.980 nm)	0.001206	ppm	0.001023	84.82	1.016940	Y 242.219
B (249.678 nm)	0.000337	ppm	0.000175	51.80	-6.348530	Y 242.219
Ba (493.408 nm)	-0.000387 u	ppm	0.000318	82.22	675.113000	Y_R 488.368
Be (234.861 nm)	-0.000170 u	ppm	0.000081	47.48	1341.590000	Y_R 488.368
Bi (223.061 nm)	0.963224	ppm	0.004938	0.51	2456.600000	Y 377.433
Ca (315.887 nm)	0.003106	ppm	0.003570	> 100.00	-57.606576	Y_R 377.433
Cd (214.439 nm)	-0.000443 u	ppm	0.000016	3.69	40.639500	Y 377.433
Co (228.615 nm)	0.003074	ppm	0.000226	7.35	11.370000	Y 242.219
Cr (205.560 nm)	0.000019 u	ppm	0.000147	> 100.00	-7.043730	Y 377.433
Cu (324.754 nm)	-0.005985 u	ppm	0.000072	1.20	-368.461000	Y 377.433
Fe (238.204 nm)	48.517579 o	ppm	0.133158	0.27	171179.901850	Y_R 377.433
Fe H (259.940 nm)	48.729900	ppm	0.075010	0.15	88989.100000	Y_R 377.433
K (766.491 nm)	0.112793	ppm	0.014800	13.12	-681.622000	Y_R2 488.368
Li (670.783 nm)	0.003284	ppm	0.001528	46.54	-1472.210000	Y_R2 488.368
Mg (279.078 nm)	-0.014236 u	ppm	0.003389	23.80	-386.679000	Y 377.433
Mn (257.610 nm)	0.001164	ppm	0.000023	1.99	374.144000	Y 377.433
Mo (202.032 nm)	-0.000367 u	ppm	0.000302	82.15	-0.689878	Y 377.433
Na (589.592 nm)	240.990000 o	ppm	1.407570	0.58	1535770.000000	Y_R2 488.368
Na H (589.593 nm)	245.846046	ppm	0.311298	0.13	843569.136351	Y_R 488.368
Ni (231.604 nm)	0.003463	ppm	0.000507	14.65	25.005200	Y 377.433
P (213.618 nm)	-0.011383 u	ppm	0.000007	0.06	10.806600	Y 242.219
Pb (220.353 nm)	-0.003963 u	ppm	0.000638	16.09	9.329120	Y 242.219
S (181.972 nm)	4.841106	ppm	0.047482	0.98	2559.282059	Y 377.433
Sb (206.834 nm)	-0.006342 u	ppm	0.001259	19.85	-93.812300	Y 377.433
Se (196.026 nm)	-0.001906 u	ppm	0.001131	59.34	5.376130	Y 242.219
Si (288.158 nm)	0.014963	ppm	0.000384	2.57	1099.460000	Y 377.433
Sn (189.925 nm)	-0.000833 u	ppm	0.000711	85.36	10.436200	Y 377.433
Sr (421.552 nm)	0.000557	ppm	0.000028	5.11	238.570179	Y_R 488.368
Th (288.505 nm)	4.925230	ppm	0.005721	0.12	12674.600000	Y 377.433
Ti (336.122 nm)	0.001703	ppm	0.000033	1.96	-110.212000	Y 377.433
Tl (190.794 nm)	-0.003315 u	ppm	0.000864	26.05	-15.096600	Y 377.433
U (409.013 nm)	9.832290	ppm	0.025400	0.26	43504.700000	Y 377.433
V (292.401 nm)	0.002373	ppm	0.000059	2.50	-42.002800	Y 377.433
Zn (206.200 nm)	-0.006790 u	ppm	0.000244	3.59	3.487430	Y 377.433
Zr (343.823 nm)	-0.004478 u	ppm	0.000028	0.63	-411.029000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.091398	21317.470129	0.001080	0.10
Y 377.433	1.089573	1079362.128642	0.002584	0.24
Y_R 377.433	1.111740	79117.100000	0.000900	0.08
Y_R 488.368	1.120320	45641.800000	0.005701	0.51
Y_R2 488.368	1.104909	89341.191330	0.005720	0.52

Sample Name: CCV-5416701

Date: 11/13/2018 6:28:49 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.481935	ppm	0.000502	0.10	21727.400000	Y 377.433
Al (167.019 nm)	0.490036	ppm	0.004616	0.94	269.720000	Y_R 377.433
Al H (396.152 nm)	0.486813 u	ppm	0.002081	0.43	1277.528496	Y_R 377.433
As (188.980 nm)	0.971233	ppm	0.002128	0.22	1285.950000	Y 242.219
B (249.678 nm)	0.486464	ppm	0.000592	0.12	12319.000000	Y 242.219
Ba (493.408 nm)	0.487678	ppm	0.001336	0.27	52428.600000	Y_R 488.368
Be (234.861 nm)	0.476623	ppm	0.002747	0.58	138805.000000	Y_R 488.368
Bi (223.061 nm)	-0.004654 u	ppm	0.000380	8.17	4.518860	Y 377.433
Ca (315.887 nm)	4.939319	ppm	0.041859	0.85	3708.498588	Y_R 377.433
Cd (214.439 nm)	0.483724	ppm	0.000664	0.14	30499.700000	Y 377.433
Co (228.615 nm)	0.487752	ppm	0.000684	0.14	9101.150000	Y 242.219
Cr (205.560 nm)	0.483003	ppm	0.000052	0.01	7464.370000	Y 377.433
Cu (324.754 nm)	0.485787	ppm	0.000034	0.01	25780.900000	Y 377.433
Fe (238.204 nm)	2.448875	ppm	0.004129	0.17	8665.688044	Y_R 377.433
Fe H (259.940 nm)	2.472630 u	ppm	0.019612	0.79	4505.970000	Y_R 377.433
K (766.491 nm)	49.029100	ppm	0.029548	0.06	52920.100000	Y_R2 488.368
Li (670.783 nm)	0.985079	ppm	0.003601	0.37	29010.900000	Y_R2 488.368
Mg (279.078 nm)	19.298600	ppm	0.037284	0.19	118310.000000	Y 377.433
Mn (257.610 nm)	0.488331	ppm	0.000348	0.07	115186.000000	Y 377.433
Mo (202.032 nm)	0.490804	ppm	0.000405	0.08	4394.360000	Y 377.433
Na (589.592 nm)	4.986820	ppm	0.008814	0.18	33063.700000	Y_R2 488.368
Na H (589.593 nm)	5.525458 u	ppm	0.023182	0.42	22370.943649	Y_R 488.368
Ni (231.604 nm)	0.490700	ppm	0.000055	0.01	3478.250000	Y 377.433
P (213.618 nm)	1.014160	ppm	0.002654	0.26	2203.470000	Y 242.219
Pb (220.353 nm)	0.977361	ppm	0.003553	0.36	2945.880000	Y 242.219
S (181.972 nm)	0.024890	ppm	0.000606	2.44	30.928363	Y 377.433
Sb (206.834 nm)	0.971787	ppm	0.002973	0.31	2697.420000	Y 377.433
Se (196.026 nm)	0.964605	ppm	0.002845	0.29	1025.040000	Y 242.219
Si (288.158 nm)	4.872910	ppm	0.010941	0.22	43217.900000	Y 377.433
Sn (189.925 nm)	0.970973	ppm	0.002420	0.25	2011.610000	Y 377.433
Sr (421.552 nm)	0.490787	ppm	0.003010	0.61	95620.987730	Y_R 488.368
Th (288.505 nm)	0.002033	ppm	0.001538	75.66	93.904200	Y 377.433
Ti (336.122 nm)	0.488466	ppm	0.001292	0.26	68767.300000	Y 377.433
Tl (190.794 nm)	0.975605	ppm	0.001007	0.10	2212.050000	Y 377.433
U (409.013 nm)	0.006177	ppm	0.006018	97.43	-238.904000	Y 377.433
V (292.401 nm)	0.486913	ppm	0.000985	0.20	17897.600000	Y 377.433
Zn (206.200 nm)	0.479284	ppm	0.000901	0.19	2717.390000	Y 377.433
Zr (343.823 nm)	0.490325	ppm	0.000792	0.16	63269.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102672	21537.669028	0.000819	0.07
Y 377.433	1.106894	1096521.431536	0.000787	0.07
Y_R 377.433	1.128640	80319.900000	0.007823	0.69
Y_R 488.368	1.130700	46064.700000	0.006734	0.60
Y_R2 488.368	1.116309	90263.005713	0.001926	0.17

Sample Name: CCB

Date: 11/13/2018 6:32:11 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000182 u	ppm	0.000206	> 100.00	-445.073000	Y 377.433
Al (167.019 nm)	-0.003143 u	ppm	0.002671	84.99	0.072448	Y_R 377.433
Al H (396.152 nm)	-0.026997 u	ppm	0.005596	20.73	20.293246	Y_R 377.433
As (188.980 nm)	-0.000499 u	ppm	0.001488	> 100.00	-0.791719	Y 242.219
B (249.678 nm)	0.001744	ppm	0.000008	0.44	102.294000	Y 242.219
Ba (493.408 nm)	-0.000640 u	ppm	0.000352	55.01	607.002000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000002	3.30	-66.121900	Y_R 488.368
Bi (223.061 nm)	-0.000757 u	ppm	0.003397	> 100.00	13.957800	Y 377.433
Ca (315.887 nm)	0.004639 u	ppm	0.007400	> 100.00	-56.436952	Y_R 377.433
Cd (214.439 nm)	-0.000160 u	ppm	0.000021	12.94	9.450060	Y 377.433
Co (228.615 nm)	0.000489	ppm	0.000044	8.90	-37.034100	Y 242.219
Cr (205.560 nm)	0.000122 u	ppm	0.000226	> 100.00	8.057780	Y 377.433
Cu (324.754 nm)	0.000431	ppm	0.000222	51.54	-347.260000	Y 377.433
Fe (238.204 nm)	-0.003680 u	ppm	0.001608	43.69	13.935500	Y_R 377.433
Fe H (259.940 nm)	0.011002 u	ppm	0.001498	13.62	10.120700	Y_R 377.433
K (766.491 nm)	0.100023	ppm	0.031117	31.11	-695.615000	Y_R2 488.368
Li (670.783 nm)	0.003555	ppm	0.000446	12.55	-1463.800000	Y_R2 488.368
Mg (279.078 nm)	0.001521	ppm	0.000659	43.30	75.367000	Y 377.433
Mn (257.610 nm)	-0.000115 u	ppm	0.000061	53.45	72.788400	Y 377.433
Mo (202.032 nm)	-0.000527 u	ppm	0.000120	22.71	-2.122910	Y 377.433
Na (589.592 nm)	0.041811	ppm	0.010827	25.90	603.453000	Y_R2 488.368
Na H (589.593 nm)	0.107165 u	ppm	0.004461	4.16	3417.868836	Y_R 488.368
Ni (231.604 nm)	-0.000005 u	ppm	0.000554	> 100.00	-1.643230	Y 377.433
P (213.618 nm)	-0.005633 u	ppm	0.000439	7.80	23.100100	Y 242.219
Pb (220.353 nm)	-0.000501 u	ppm	0.000189	37.72	2.680470	Y 242.219
S (181.972 nm)	0.013756	ppm	0.002731	19.85	23.866119	Y 377.433
Sb (206.834 nm)	0.001255	ppm	0.000275	21.91	-27.277500	Y 377.433
Se (196.026 nm)	-0.001239 u	ppm	0.000298	24.05	15.210300	Y 242.219
Si (288.158 nm)	-0.007367 u	ppm	0.000379	5.14	905.865000	Y 377.433
Sn (189.925 nm)	-0.002000 u	ppm	0.000871	43.55	8.032730	Y 377.433
Sr (421.552 nm)	0.000110	ppm	0.000077	70.04	151.563234	Y_R 488.368
Th (288.505 nm)	0.000232 u	ppm	0.002716	> 100.00	73.958000	Y 377.433
Ti (336.122 nm)	0.000173	ppm	0.000030	17.24	-326.830000	Y 377.433
Tl (190.794 nm)	0.000652 u	ppm	0.001016	> 100.00	-4.750370	Y 377.433
U (409.013 nm)	0.001689 u	ppm	0.003593	> 100.00	-222.945000	Y 377.433
V (292.401 nm)	0.000164 u	ppm	0.000297	> 100.00	32.668800	Y 377.433
Zn (206.200 nm)	-0.007387 u	ppm	0.000040	0.54	0.154319	Y 377.433
Zr (343.823 nm)	-0.000054 u	ppm	0.000088	> 100.00	21.754100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.082441	21142.515277	0.000048	0.00
Y 377.433	1.087599	1077407.204573	0.000912	0.08
Y_R 377.433	1.110700	79042.900000	0.005463	0.49
Y_R 488.368	1.116660	45492.600000	0.011450	1.03
Y_R2 488.368	1.090308	88160.637727	0.002217	0.20

Sample Name: CCVL-5425098

Date: 11/13/2018 6:35:34 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008879	ppm	0.000062	0.70	-28.020800	Y 377.433
Al (167.019 nm)	0.093741	ppm	0.001497	1.60	52.793200	Y_R 377.433
Al H (396.152 nm)	0.070961 u	ppm	0.006871	9.68	253.972824	Y_R 377.433
As (188.980 nm)	0.013011	ppm	0.000830	6.38	17.097300	Y 242.219
B (249.678 nm)	0.093816	ppm	0.000446	0.47	2419.730000	Y 242.219
Ba (493.408 nm)	0.008684	ppm	0.000145	1.67	1596.370000	Y_R 488.368
Be (234.861 nm)	0.000928	ppm	0.000031	3.29	187.953000	Y_R 488.368
Bi (223.061 nm)	0.093920	ppm	0.001697	1.81	253.095000	Y 377.433
Ca (315.887 nm)	0.202768	ppm	0.003202	1.58	94.718371	Y_R 377.433
Cd (214.439 nm)	0.004647	ppm	0.000066	1.41	312.435000	Y 377.433
Co (228.615 nm)	0.010453	ppm	0.000263	2.52	149.795000	Y 242.219
Cr (205.560 nm)	0.009727	ppm	0.000159	1.64	156.425000	Y 377.433
Cu (324.754 nm)	0.014916	ppm	0.000057	0.38	433.178000	Y 377.433
Fe (238.204 nm)	0.094168	ppm	0.000682	0.72	359.109489	Y_R 377.433
Fe H (259.940 nm)	0.107940 u	ppm	0.000132	0.12	187.166000	Y_R 377.433
K (766.491 nm)	3.075580	ppm	0.038060	1.24	2564.950000	Y_R2 488.368
Li (670.783 nm)	0.023762	ppm	0.000939	3.95	-836.415000	Y_R2 488.368
Mg (279.078 nm)	0.190248	ppm	0.002285	1.20	1230.770000	Y 377.433
Mn (257.610 nm)	0.009747	ppm	0.000034	0.35	2396.990000	Y 377.433
Mo (202.032 nm)	0.017170	ppm	0.000262	1.52	156.238000	Y 377.433
Na (589.592 nm)	1.063820	ppm	0.002144	0.20	7133.340000	Y_R2 488.368
Na H (589.593 nm)	1.068490 u	ppm	0.029612	2.77	6712.739053	Y_R 488.368
Ni (231.604 nm)	0.039770	ppm	0.000465	1.17	280.337000	Y 377.433
P (213.618 nm)	2.721840 o	ppm	0.005226	0.19	5854.580000	Y 242.219
Pb (220.353 nm)	0.008724	ppm	0.001343	15.39	30.444000	Y 242.219
S (181.972 nm)	0.092788	ppm	0.000833	0.90	65.399454	Y 377.433
Sb (206.834 nm)	0.016824	ppm	0.002868	17.04	16.373600	Y 377.433
Se (196.026 nm)	0.017898	ppm	0.000273	1.52	35.209600	Y 242.219
Si (288.158 nm)	0.452818	ppm	0.009703	2.14	4895.670000	Y 377.433
Sn (189.925 nm)	0.090599	ppm	0.000527	0.58	198.717000	Y 377.433
Sr (421.552 nm)	0.009621	ppm	0.000141	1.47	2002.092645	Y_R 488.368
Th (288.505 nm)	0.015558	ppm	0.001303	8.37	113.641000	Y 377.433
Ti (336.122 nm)	0.009530	ppm	0.000058	0.61	997.432000	Y 377.433
Tl (190.794 nm)	0.014222	ppm	0.000530	3.73	26.074500	Y 377.433
U (409.013 nm)	0.063094	ppm	0.000043	0.07	48.901900	Y 377.433
V (292.401 nm)	0.009307	ppm	0.000140	1.51	367.361000	Y 377.433
Zn (206.200 nm)	0.012122 Q	ppm	0.000114	0.94	109.078000 Q	Y 377.433
Zr (343.823 nm)	0.014228	ppm	0.000099	0.70	1863.860000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093537	21359.248406	0.003029	0.28
Y 377.433	1.098791	1088494.448938	0.001670	0.15
Y_R 377.433	1.105820	78695.600000	0.000879	0.08
Y_R 488.368	1.122950	45749.000000	0.002953	0.26
Y_R2 488.368	1.099826	88930.227161	0.010597	0.96

Sample Name: CCVH-5417909

Date: 11/14/2018 1:04:31 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001951 u	ppm	0.000000	0.01	-758.813000	Y 377.433
Al (167.019 nm)	44.737300 o	ppm	0.380095	0.85	24348.300000	Y_R 377.433
Al H (396.152 nm)	48.581744	ppm	0.080016	0.16	115272.868961	Y_R 377.433
As (188.980 nm)	-0.000382 u	ppm	0.000880	> 100.00	-1.085090	Y 242.219
B (249.678 nm)	-0.001895 u	ppm	0.000144	7.59	-62.268300	Y 242.219
Ba (493.408 nm)	0.000057 u	ppm	0.000127	> 100.00	721.989000	Y_R 488.368
Be (234.861 nm)	0.000075	ppm	0.000037	49.41	1407.560000	Y_R 488.368
Bi (223.061 nm)	0.953546	ppm	0.000240	0.03	2432.130000	Y 377.433
Ca (315.887 nm)	-0.003944 u	ppm	0.004611	> 100.00	-62.984994	Y_R 377.433
Cd (214.439 nm)	-0.000599 u	ppm	0.000016	2.65	30.612300	Y 377.433
Co (228.615 nm)	0.002801	ppm	0.000160	5.71	6.251650	Y 242.219
Cr (205.560 nm)	0.000124	ppm	0.000070	56.54	-5.369560	Y 377.433
Cu (324.754 nm)	-0.006684 u	ppm	0.000126	1.89	-407.828000	Y 377.433
Fe (238.204 nm)	48.508386 o	ppm	0.208261	0.43	171147.471165	Y_R 377.433
Fe H (259.940 nm)	48.289600	ppm	0.150189	0.31	88184.900000	Y_R 377.433
K (766.491 nm)	0.070874	ppm	0.045598	64.34	-727.556000	Y_R2 488.368
Li (670.783 nm)	0.000067	ppm	0.000066	98.27	-1572.080000	Y_R2 488.368
Mg (279.078 nm)	-0.018828 u	ppm	0.001205	6.40	-408.475000	Y 377.433
Mn (257.610 nm)	0.001192	ppm	0.000034	2.86	380.863000	Y 377.433
Mo (202.032 nm)	-0.000447 u	ppm	0.000171	38.32	-1.401800	Y 377.433
Na (589.592 nm)	239.097000 o	ppm	0.078284	0.03	1523710.000000	Y_R2 488.368
Na H (589.593 nm)	248.032586	ppm	1.640431	0.66	851044.943511	Y_R 488.368
Ni (231.604 nm)	0.004111	ppm	0.000574	13.97	29.591800	Y 377.433
P (213.618 nm)	-0.011733 u	ppm	0.002336	19.91	10.058900	Y 242.219
Pb (220.353 nm)	-0.002630 u	ppm	0.001005	38.20	12.778200	Y 242.219
S (181.972 nm)	4.829482	ppm	0.001337	0.03	2553.176720	Y 377.433
Sb (206.834 nm)	-0.007112 u	ppm	0.003389	47.65	-95.245200	Y 377.433
Se (196.026 nm)	-0.004494 u	ppm	0.003196	71.12	2.702250	Y 242.219
Si (288.158 nm)	0.010781	ppm	0.000266	2.47	1063.210000	Y 377.433
Sn (189.925 nm)	-0.000530 u	ppm	0.000389	73.43	11.060200	Y 377.433
Sr (421.552 nm)	0.000397	ppm	0.000176	44.41	207.410012	Y_R 488.368
Th (288.505 nm)	4.854230	ppm	0.018762	0.39	12491.500000	Y 377.433
Ti (336.122 nm)	0.001487	ppm	0.000011	0.71	-140.845000	Y 377.433
Tl (190.794 nm)	-0.003806 u	ppm	0.000520	13.65	-16.208200	Y 377.433
U (409.013 nm)	9.688830	ppm	0.012660	0.13	42867.100000	Y 377.433
V (292.401 nm)	0.002696	ppm	0.000109	4.04	-24.940500	Y 377.433
Zn (206.200 nm)	-0.006678 u	ppm	0.000239	3.58	4.111910	Y 377.433
Zr (343.823 nm)	-0.004602 u	ppm	0.000069	1.51	-427.512000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.048773	20484.902902	0.000029	0.00
Y 377.433	1.047873	1038053.289015	0.001017	0.10
Y_R 377.433	1.075390	76530.400000	0.001412	0.13
Y_R 488.368	1.079360	43973.000000	0.010114	0.94
Y_R2 488.368	1.072264	86701.579388	0.006078	0.57

Sample Name: CCV-5416701

Date: 11/14/2018 1:07:54 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.475858	ppm	0.000981	0.21	21446.700000	Y 377.433
Al (167.019 nm)	0.494930	ppm	0.003956	0.80	272.371000	Y_R 377.433
Al H (396.152 nm)	0.488559 u	ppm	0.006287	1.29	1281.054626	Y_R 377.433
As (188.980 nm)	0.974959	ppm	0.002844	0.29	1290.890000	Y 242.219
B (249.678 nm)	0.483149	ppm	0.001336	0.28	12235.500000	Y 242.219
Ba (493.408 nm)	0.484184	ppm	0.001667	0.34	52058.200000	Y_R 488.368
Be (234.861 nm)	0.487985	ppm	0.005876	1.20	142115.000000	Y_R 488.368
Bi (223.061 nm)	-0.002495 u	ppm	0.000991	39.72	9.970840	Y 377.433
Ca (315.887 nm)	4.898979	ppm	0.012488	0.25	3677.721547	Y_R 377.433
Cd (214.439 nm)	0.481908	ppm	0.001151	0.24	30385.300000	Y 377.433
Co (228.615 nm)	0.487356	ppm	0.001032	0.21	9093.540000	Y 242.219
Cr (205.560 nm)	0.480081	ppm	0.001028	0.21	7419.130000	Y 377.433
Cu (324.754 nm)	0.478751	ppm	0.001158	0.24	25401.000000	Y 377.433
Fe (238.204 nm)	2.450305	ppm	0.011980	0.49	8670.731545	Y_R 377.433
Fe H (259.940 nm)	2.455930 u	ppm	0.005818	0.24	4475.470000	Y_R 377.433
K (766.491 nm)	48.982800	ppm	0.055165	0.11	52869.400000	Y_R2 488.368
Li (670.783 nm)	0.979259	ppm	0.003549	0.36	28830.200000	Y_R2 488.368
Mg (279.078 nm)	19.189100	ppm	0.026862	0.14	117639.000000	Y 377.433
Mn (257.610 nm)	0.483574	ppm	0.001188	0.25	114065.000000	Y 377.433
Mo (202.032 nm)	0.484118	ppm	0.001005	0.21	4334.520000	Y 377.433
Na (589.592 nm)	4.939020	ppm	0.012363	0.25	32751.100000	Y_R2 488.368
Na H (589.593 nm)	5.234034 u	ppm	0.005520	0.11	21370.974365	Y_R 488.368
Ni (231.604 nm)	0.484384	ppm	0.001177	0.24	3433.470000	Y 377.433
P (213.618 nm)	1.014350	ppm	0.000128	0.01	2203.870000	Y 242.219
Pb (220.353 nm)	0.975757	ppm	0.002765	0.28	2941.080000	Y 242.219
S (181.972 nm)	-0.002016 u	ppm	0.001166	57.84	16.782196	Y 377.433
Sb (206.834 nm)	0.969665	ppm	0.000270	0.03	2691.420000	Y 377.433
Se (196.026 nm)	0.975719	ppm	0.000789	0.08	1036.660000	Y 242.219
Si (288.158 nm)	4.840850	ppm	0.009469	0.20	42940.000000	Y 377.433
Sn (189.925 nm)	0.955934	ppm	0.000080	0.01	1980.640000	Y 377.433
Sr (421.552 nm)	0.485882	ppm	0.002095	0.43	94666.654518	Y_R 488.368
Th (288.505 nm)	0.001456 u	ppm	0.002214	> 100.00	91.869300	Y 377.433
Ti (336.122 nm)	0.486141	ppm	0.000996	0.20	68438.300000	Y 377.433
Tl (190.794 nm)	0.965321	ppm	0.000024	0.00	2188.690000	Y 377.433
U (409.013 nm)	0.000352 u	ppm	0.003399	> 100.00	-263.959000	Y 377.433
V (292.401 nm)	0.482286	ppm	0.001448	0.30	17727.500000	Y 377.433
Zn (206.200 nm)	0.482916	ppm	0.000255	0.05	2737.670000	Y 377.433
Zr (343.823 nm)	0.482481	ppm	0.001842	0.38	62258.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062548	20753.958591	0.005978	0.56
Y 377.433	1.070562	1060529.791562	0.005613	0.52
Y_R 377.433	1.092460	77745.400000	0.001262	0.12
Y_R 488.368	1.097150	44697.800000	0.003806	0.35
Y_R2 488.368	1.082095	87496.534877	0.001476	0.14

Sample Name: CCB

Date: 11/14/2018 1:11:15 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000733 u	ppm	0.000027	3.64	-470.440000	Y 377.433
Al (167.019 nm)	-0.003046 u	ppm	0.002175	71.42	0.125654	Y_R 377.433
Al H (396.152 nm)	-0.026022 u	ppm	0.004786	18.39	22.650267	Y_R 377.433
As (188.980 nm)	-0.001286 u	ppm	0.000243	18.94	-1.832970	Y 242.219
B (249.678 nm)	0.000922	ppm	0.000053	5.69	81.624000	Y 242.219
Ba (493.408 nm)	-0.000145 u	ppm	0.000078	53.66	659.561000	Y_R 488.368
Be (234.861 nm)	0.000129	ppm	0.000022	16.74	-47.069700	Y_R 488.368
Bi (223.061 nm)	0.000160 u	ppm	0.001548	> 100.00	16.273400	Y 377.433
Ca (315.887 nm)	0.000518 u	ppm	0.007821	> 100.00	-59.581145	Y_R 377.433
Cd (214.439 nm)	-0.000184 u	ppm	0.000016	8.68	7.954090	Y 377.433
Co (228.615 nm)	0.000241	ppm	0.000031	12.96	-41.668300	Y 242.219
Cr (205.560 nm)	0.000255	ppm	0.000009	3.46	10.108700	Y 377.433
Cu (324.754 nm)	-0.000334 u	ppm	0.000210	62.81	-385.329000	Y 377.433
Fe (238.204 nm)	-0.003112 u	ppm	0.001377	44.25	15.939679	Y_R 377.433
Fe H (259.940 nm)	0.008612 u	ppm	0.001440	16.72	5.756500	Y_R 377.433
K (766.491 nm)	-0.006208 u	ppm	0.049124	> 100.00	-812.022000	Y_R2 488.368
Li (670.783 nm)	0.000611	ppm	0.000185	30.26	-1555.210000	Y_R2 488.368
Mg (279.078 nm)	0.001611	ppm	0.000971	60.25	75.794000	Y 377.433
Mn (257.610 nm)	-0.000076 u	ppm	0.000004	5.23	82.011100	Y 377.433
Mo (202.032 nm)	0.000024	ppm	0.000009	37.01	2.808430	Y 377.433
Na (589.592 nm)	0.034925	ppm	0.014856	42.54	560.949000	Y_R2 488.368
Na H (589.593 nm)	-0.103016 u	ppm	0.009282	9.01	2699.901404	Y_R 488.368
Ni (231.604 nm)	0.000199 u	ppm	0.000651	> 100.00	-0.200957	Y 377.433
P (213.618 nm)	-0.001784 u	ppm	0.002180	> 100.00	31.330000	Y 242.219
Pb (220.353 nm)	0.001287	ppm	0.000429	33.37	8.079120	Y 242.219
S (181.972 nm)	-0.008449 u	ppm	0.006053	71.64	12.203504	Y 377.433
Sb (206.834 nm)	0.001677	ppm	0.000729	43.43	-26.114200	Y 377.433
Se (196.026 nm)	0.002938	ppm	0.000920	31.30	19.576400	Y 242.219
Si (288.158 nm)	-0.004624 u	ppm	0.000922	19.95	929.645000	Y 377.433
Sn (189.925 nm)	-0.001360 u	ppm	0.000319	23.44	9.351030	Y 377.433
Sr (421.552 nm)	-0.000047 u	ppm	0.000015	31.53	121.171006	Y_R 488.368
Th (288.505 nm)	0.001304 u	ppm	0.001943	> 100.00	76.740800	Y 377.433
Ti (336.122 nm)	0.000130	ppm	0.000070	53.78	-332.986000	Y 377.433
Tl (190.794 nm)	0.000060 u	ppm	0.000608	> 100.00	-6.099210	Y 377.433
U (409.013 nm)	-0.001688 u	ppm	0.006025	> 100.00	-237.959000	Y 377.433
V (292.401 nm)	-0.000055 u	ppm	0.000026	46.98	25.830500	Y 377.433
Zn (206.200 nm)	-0.007439 u	ppm	0.000001	0.01	-0.137343	Y 377.433
Zr (343.823 nm)	0.000062 u	ppm	0.000105	> 100.00	36.709800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.048716	20483.784306	0.003449	0.33
Y 377.433	1.055811	1045917.029582	0.001109	0.11
Y_R 377.433	1.063620	75692.700000	0.003546	0.33
Y_R 488.368	1.069430	43568.400000	0.005541	0.52
Y_R2 488.368	1.051714	85039.967777	0.000509	0.05

Sample Name: CCVL-5425098

Date: 11/14/2018 1:14:38 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008669	ppm	0.000112	1.30	-37.478200	Y 377.433
Al (167.019 nm)	0.097236	ppm	0.002126	2.19	54.693800	Y_R 377.433
Al H (396.152 nm)	0.079555 u	ppm	0.000554	0.70	274.369632	Y_R 377.433
As (188.980 nm)	0.012595	ppm	0.002121	16.84	16.546400	Y 242.219
B (249.678 nm)	0.092813	ppm	0.000051	0.05	2394.460000	Y 242.219
Ba (493.408 nm)	0.009423	ppm	0.000109	1.16	1674.790000	Y_R 488.368
Be (234.861 nm)	0.001033	ppm	0.000001	0.13	218.730000	Y_R 488.368
Bi (223.061 nm)	0.095293	ppm	0.000113	0.12	256.563000	Y 377.433
Ca (315.887 nm)	0.186752	ppm	0.002825	1.51	82.499385	Y_R 377.433
Cd (214.439 nm)	0.004647	ppm	0.000066	1.41	312.467000	Y 377.433
Co (228.615 nm)	0.010127	ppm	0.000221	2.18	143.698000	Y 242.219
Cr (205.560 nm)	0.010002	ppm	0.000003	0.03	160.667000	Y 377.433
Cu (324.754 nm)	0.014169	ppm	0.000065	0.46	394.415000	Y 377.433
Fe (238.204 nm)	0.096616	ppm	0.001410	1.46	367.745080	Y_R 377.433
Fe H (259.940 nm)	0.103884 u	ppm	0.000942	0.91	179.759000	Y_R 377.433
K (766.491 nm)	3.038020	ppm	0.000638	0.02	2523.790000	Y_R2 488.368
Li (670.783 nm)	0.023140	ppm	0.000781	3.38	-855.729000	Y_R2 488.368
Mg (279.078 nm)	0.189879	ppm	0.000256	0.13	1228.710000	Y 377.433
Mn (257.610 nm)	0.009689	ppm	0.000039	0.40	2383.260000	Y 377.433
Mo (202.032 nm)	0.017535	ppm	0.000056	0.32	159.498000	Y 377.433
Na (589.592 nm)	1.042770	ppm	0.009125	0.88	6999.960000	Y_R2 488.368
Na H (589.593 nm)	0.897590 u	ppm	0.024656	2.75	6128.796571	Y_R 488.368
Ni (231.604 nm)	0.038482	ppm	0.000997	2.59	271.206000	Y 377.433
P (213.618 nm)	2.728710 o	ppm	0.022952	0.84	5869.260000	Y 242.219
Pb (220.353 nm)	0.008955	ppm	0.000867	9.68	31.115700	Y 242.219
S (181.972 nm)	0.078632	ppm	0.002789	3.55	57.964174	Y 377.433
Sb (206.834 nm)	0.018738	ppm	0.000765	4.08	21.754700	Y 377.433
Se (196.026 nm)	0.016685	ppm	0.004536	27.18	33.941500	Y 242.219
Si (288.158 nm)	0.455417	ppm	0.005237	1.15	4918.210000	Y 377.433
Sn (189.925 nm)	0.090156	ppm	0.000390	0.43	197.805000	Y 377.433
Sr (421.552 nm)	0.009890	ppm	0.000267	2.70	2054.444407	Y_R 488.368
Th (288.505 nm)	0.015861	ppm	0.002659	16.77	114.247000	Y 377.433
Ti (336.122 nm)	0.009209	ppm	0.000002	0.02	952.019000	Y 377.433
Tl (190.794 nm)	0.013374	ppm	0.000284	2.12	24.143100	Y 377.433
U (409.013 nm)	0.059464	ppm	0.002680	4.51	32.788300	Y 377.433
V (292.401 nm)	0.009093	ppm	0.000241	2.65	360.239000	Y 377.433
Zn (206.200 nm)	0.012223 Q	ppm	0.000093	0.76	109.644000 Q	Y 377.433
Zr (343.823 nm)	0.014063	ppm	0.000047	0.34	1842.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061872	20740.749338	0.003750	0.35
Y 377.433	1.070833	1060798.168970	0.004890	0.46
Y_R 377.433	1.086930	77351.700000	0.004023	0.37
Y_R 488.368	1.080160	44005.700000	0.010087	0.93
Y_R2 488.368	1.080318	87352.845761	0.004775	0.44

Sample Name: MB 280-436877/1-A

Date: 11/14/2018 1:18:02 AM Rack:Tube: 1:73

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000473 u	ppm	0.000204	43.19	-458.571000	Y 377.433
Al (167.019 nm)	0.010080	ppm	0.003657	36.28	7.264010	Y_R 377.433
Al H (396.152 nm)	-0.008133 u	ppm	0.007096	87.24	65.051677	Y_R 377.433
As (188.980 nm)	0.000148 u	ppm	0.002163	> 100.00	0.065903	Y 242.219
B (249.678 nm)	0.000407	ppm	0.000152	37.29	68.653000	Y 242.219
Ba (493.408 nm)	-0.000514 u	ppm	0.000017	3.24	620.400000	Y_R 488.368
Be (234.861 nm)	0.000128	ppm	0.000013	10.20	-46.995900	Y_R 488.368
Bi (223.061 nm)	0.000835	ppm	0.000550	65.90	17.980900	Y 377.433
Ca (315.887 nm)	0.007702 u	ppm	0.012981	> 100.00	-54.100831	Y_R 377.433
Cd (214.439 nm)	-0.000225 u	ppm	0.000064	28.59	5.394750	Y 377.433
Co (228.615 nm)	0.000400	ppm	0.000083	20.75	-38.688800	Y 242.219
Cr (205.560 nm)	0.000195	ppm	0.000198	> 100.00	9.178890	Y 377.433
Cu (324.754 nm)	0.000178	ppm	0.000227	> 100.00	-358.603000	Y 377.433
Fe (238.204 nm)	0.003974	ppm	0.001032	25.97	40.937854	Y_R 377.433
Fe H (259.940 nm)	0.016899 u	ppm	0.001786	10.57	20.892000	Y_R 377.433
K (766.491 nm)	-0.001567 u	ppm	0.046232	> 100.00	-806.936000	Y_R2 488.368
Li (670.783 nm)	0.002966	ppm	0.000921	31.04	-1482.090000	Y_R2 488.368
Mg (279.078 nm)	0.000276 u	ppm	0.000669	> 100.00	67.594400	Y 377.433
Mn (257.610 nm)	-0.000022 u	ppm	0.000016	73.70	94.603800	Y 377.433
Mo (202.032 nm)	-0.000261 u	ppm	0.000178	68.17	0.256697	Y 377.433
Na (589.592 nm)	0.036045	ppm	0.001012	2.81	566.315000	Y_R2 488.368
Na H (589.593 nm)	-0.217119 u	ppm	0.030016	13.82	2308.997400	Y_R 488.368
Ni (231.604 nm)	0.000299	ppm	0.000198	66.20	0.512714	Y 377.433
P (213.618 nm)	-0.004454 u	ppm	0.000208	4.67	25.620700	Y 242.219
Pb (220.353 nm)	0.001084	ppm	0.000064	5.93	7.462660	Y 242.219
S (181.972 nm)	-0.017906 u	ppm	0.003833	21.41	7.236749	Y 377.433
Sb (206.834 nm)	0.000439 u	ppm	0.002558	> 100.00	-29.574500	Y 377.433
Se (196.026 nm)	0.000094 u	ppm	0.001421	> 100.00	16.602400	Y 242.219
Si (288.158 nm)	-0.006102 u	ppm	0.001415	23.19	916.829000	Y 377.433
Sn (189.925 nm)	-0.002490 u	ppm	0.000158	6.33	7.023720	Y 377.433
Sr (421.552 nm)	0.000027 u	ppm	0.000085	> 100.00	135.559736	Y_R 488.368
Th (288.505 nm)	0.001305 u	ppm	0.002685	> 100.00	76.747700	Y 377.433
Ti (336.122 nm)	0.000447	ppm	0.000158	35.23	-288.017000	Y 377.433
Tl (190.794 nm)	0.000494	ppm	0.000290	58.67	-5.112010	Y 377.433
U (409.013 nm)	0.005423	ppm	0.001325	24.44	-206.344000	Y 377.433
V (292.401 nm)	0.000071	ppm	0.000035	48.96	30.078400	Y 377.433
Zn (206.200 nm)	-0.004503 u	ppm	0.000059	1.31	16.253000	Y 377.433
Zr (343.823 nm)	-0.000204 u	ppm	0.000112	54.81	2.393730	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072303	20944.499465	0.011523	1.07
Y 377.433	1.078081	1067978.455300	0.012282	1.14
Y_R 377.433	1.097900	78132.400000	0.006679	0.61
Y_R 488.368	1.100000	44813.900000	0.005696	0.52
Y_R2 488.368	1.089602	88103.506507	0.003526	0.32

Sample Name: LCS 280-436877/2-A

Date: 11/14/2018 1:21:26 AM Rack:Tube: 1:74

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052124	ppm	0.000495	0.95	1934.830000	Y 377.433
Al (167.019 nm)	1.952220	ppm	0.016867	0.86	1063.470000	Y_R 377.433
Al H (396.152 nm)	1.983073	ppm	0.009309	0.47	4881.843639	Y_R 377.433
As (188.980 nm)	0.985806	ppm	0.002330	0.24	1305.260000	Y 242.219
B (249.678 nm)	1.013480	ppm	0.000995	0.10	25584.100000	Y 242.219
Ba (493.408 nm)	1.979050 o	ppm	0.001176	0.06	210659.000000	Y_R 488.368
Be (234.861 nm)	0.050231	ppm	0.000006	0.01	14521.600000	Y_R 488.368
Bi (223.061 nm)	1.896470	ppm	0.002219	0.12	4805.830000	Y 377.433
Ca (315.887 nm)	49.317855 o	ppm	0.046480	0.09	37564.739233	Y_R 377.433
Cd (214.439 nm)	0.096648	ppm	0.000033	0.03	6110.350000	Y 377.433
Co (228.615 nm)	0.479516	ppm	0.001924	0.40	8965.220000	Y 242.219
Cr (205.560 nm)	0.196561	ppm	0.000623	0.32	3041.070000	Y 377.433
Cu (324.754 nm)	0.239370	ppm	0.000030	0.01	12540.600000	Y 377.433
Fe (238.204 nm)	0.992976	ppm	0.001382	0.14	3529.789215	Y_R 377.433
Fe H (259.940 nm)	0.994928 u	ppm	0.003357	0.34	1807.140000	Y_R 377.433
K (766.491 nm)	50.175400	ppm	0.042426	0.08	54176.200000	Y_R2 488.368
Li (670.783 nm)	0.994286	ppm	0.001292	0.13	29296.700000	Y_R2 488.368
Mg (279.078 nm)	48.747200 o	ppm	0.030154	0.06	298698.000000	Y 377.433
Mn (257.610 nm)	0.488613	ppm	0.000447	0.09	115253.000000	Y 377.433
Mo (202.032 nm)	1.004430	ppm	0.001328	0.13	8990.330000	Y 377.433
Na (589.592 nm)	49.448600 o	ppm	0.439226	0.89	319250.000000	Y_R2 488.368
Na H (589.593 nm)	51.439560	ppm	0.017734	0.03	180650.797791	Y_R 488.368
Ni (231.604 nm)	0.471616	ppm	0.000962	0.20	3344.160000	Y 377.433
P (213.618 nm)	10.489600 o	ppm	0.014426	0.14	22462.300000	Y 242.219
Pb (220.353 nm)	0.497193	ppm	0.004966	1.00	1502.210000	Y 242.219
S (181.972 nm)	1.901735	ppm	0.017085	0.90	1016.678000	Y 377.433
Sb (206.834 nm)	0.498373	ppm	0.000780	0.16	1356.840000	Y 377.433
Se (196.026 nm)	2.004730	ppm	0.001478	0.07	2112.930000	Y 242.219
Si (288.158 nm)	9.450220	ppm	0.029840	0.32	82903.300000	Y 377.433
Sn (189.925 nm)	1.961070	ppm	0.007142	0.36	4050.460000	Y 377.433
Sr (421.552 nm)	0.994446	ppm	0.000088	0.01	193616.437504	Y_R 488.368
Th (288.505 nm)	0.994457	ppm	0.009595	0.96	2643.780000	Y 377.433
Ti (336.122 nm)	0.992505	ppm	0.002271	0.23	140212.000000	Y 377.433
Tl (190.794 nm)	1.963140	ppm	0.001503	0.08	4455.430000	Y 377.433
U (409.013 nm)	2.013800	ppm	0.002789	0.14	8672.740000	Y 377.433
V (292.401 nm)	0.501466	ppm	0.000230	0.05	18475.000000	Y 377.433
Zn (206.200 nm)	0.488350	ppm	0.000764	0.16	2768.010000	Y 377.433
Zr (343.823 nm)	0.492187	ppm	0.000851	0.17	63505.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045885	20428.493612	0.000736	0.07
Y 377.433	1.053642	1043768.459182	0.001756	0.17
Y_R 377.433	1.084810	77200.700000	0.003877	0.36
Y_R 488.368	1.086480	44263.000000	0.002589	0.24
Y_R2 488.368	1.076718	87061.771519	0.004176	0.39

Sample Name: 280-116330-B-2-C

Date: 11/14/2018 1:24:48 AM Rack:Tube: 1:75

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000482	ppm	0.000187	38.79	-416.128000	Y 377.433
Al (167.019 nm)	4.347190 o	ppm	0.020294	0.47	2367.870000	Y_R 377.433
Al H (396.152 nm)	4.918944	ppm	0.019760	0.40	11951.908864	Y_R 377.433
As (188.980 nm)	0.004873	ppm	0.002101	43.12	6.274110	Y 242.219
B (249.678 nm)	5.159390 o	ppm	0.005388	0.10	129897.000000	Y 242.219
Ba (493.408 nm)	0.031376	ppm	0.000163	0.52	4114.050000	Y_R 488.368
Be (234.861 nm)	0.000426	ppm	0.000006	1.41	196.070000	Y_R 488.368
Bi (223.061 nm)	-0.002001 u	ppm	0.000345	17.22	11.664000	Y 377.433
Ca (315.887 nm)	498.346394 o	ppm	2.277444	0.46	380129.215369	Y_R 377.433
Cd (214.439 nm)	-0.000117 u	ppm	0.000025	21.84	17.419000	Y 377.433
Co (228.615 nm)	0.000923	ppm	0.000065	7.06	-26.726800	Y 242.219
Cr (205.560 nm)	0.017225	ppm	0.000341	1.98	270.918000	Y 377.433
Cu (324.754 nm)	-0.000493 u	ppm	0.000116	23.58	-679.063000	Y 377.433
Fe (238.204 nm)	5.179544	ppm	0.018254	0.35	18298.529165	Y_R 377.433
Fe H (259.940 nm)	5.167410	ppm	0.011762	0.23	9427.640000	Y_R 377.433
K (766.491 nm)	14.516900	ppm	0.100950	0.70	15102.200000	Y_R2 488.368
Li (670.783 nm)	0.675371	ppm	0.000838	0.12	19395.000000	Y_R2 488.368
Mg (279.078 nm)	185.789000 o	ppm	0.133732	0.07	1138440.000000	Y 377.433
Mn (257.610 nm)	0.142248	ppm	0.000013	0.01	33623.800000	Y 377.433
Mo (202.032 nm)	0.000347	ppm	0.000098	28.19	5.703980	Y 377.433
Na (589.592 nm)	858.083000 o	ppm	2.129750	0.25	5467570.000000	Y_R2 488.368
Na H (589.593 nm)	913.368690	ppm	7.652061	0.84	3125780.992966	Y_R 488.368
Ni (231.604 nm)	0.008604	ppm	0.000437	5.08	59.608900	Y 377.433
P (213.618 nm)	0.133485	ppm	0.001757	1.32	320.542000	Y 242.219
Pb (220.353 nm)	0.005228	ppm	0.002608	49.89	18.658800	Y 242.219
S (181.972 nm)	749.973502 bo	ppm	1.615533	0.22	393916.770486	Y 377.433
Sb (206.834 nm)	-0.002789 u	ppm	0.000273	9.80	-39.684200	Y 377.433
Se (196.026 nm)	0.003763	ppm	0.000896	23.82	19.606200	Y 242.219
Si (288.158 nm)	18.984400 o	ppm	0.170095	0.90	165565.000000	Y 377.433
Sn (189.925 nm)	0.001195	ppm	0.000242	20.26	14.612200	Y 377.433
Sr (421.552 nm)	14.954260 bo	ppm	0.024593	0.16	2909731.887547	Y_R 488.368
Th (288.505 nm)	0.011688	ppm	0.001192	10.20	105.923000	Y 377.433
Ti (336.122 nm)	0.063524	ppm	0.000140	0.22	10187.900000	Y 377.433
Tl (190.794 nm)	0.004945	ppm	0.003916	79.19	4.603630	Y 377.433
U (409.013 nm)	-0.017120 u	ppm	0.002490	14.54	-395.242000	Y 377.433
V (292.401 nm)	0.012979	ppm	0.000092	0.71	506.710000	Y 377.433
Zn (206.200 nm)	0.011251	ppm	0.000060	0.54	104.213000	Y 377.433
Zr (343.823 nm)	0.003669	ppm	0.000099	2.69	516.537000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972998	19004.839500	0.004351	0.45
Y 377.433	0.995632	986301.867285	0.004596	0.46
Y_R 377.433	1.110650	79039.600000	0.010007	0.90
Y_R 488.368	1.103680	44963.700000	0.012417	1.13
Y_R2 488.368	1.127956	91204.789908	0.003999	0.35

Sample Name: 280-116330-B-12-C

Date: 11/14/2018 1:28:11 AM Rack:Tube: 1:76

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000100	ppm	0.000127	> 100.00	-434.495000	Y 377.433
Al (167.019 nm)	6.339320 o	ppm	0.051669	0.82	3451.490000	Y_R 377.433
Al H (396.152 nm)	7.163292	ppm	0.003162	0.04	17299.931864	Y_R 377.433
As (188.980 nm)	0.004352	ppm	0.000958	22.00	5.572050	Y 242.219
B (249.678 nm)	2.501560 o	ppm	0.005615	0.22	63005.100000	Y 242.219
Ba (493.408 nm)	0.065707	ppm	0.000149	0.23	7771.510000	Y_R 488.368
Be (234.861 nm)	0.000349	ppm	0.000009	2.69	214.637000	Y_R 488.368
Bi (223.061 nm)	-0.003276 u	ppm	0.001136	34.67	8.667300	Y 377.433
Ca (315.887 nm)	563.169282 o	ppm	1.445173	0.26	429582.691779	Y_R 377.433
Cd (214.439 nm)	-0.000119 u	ppm	0.000090	75.60	18.639800	Y 377.433
Co (228.615 nm)	0.003675	ppm	0.000073	1.99	25.401800	Y 242.219
Cr (205.560 nm)	0.010793	ppm	0.000016	0.15	171.143000	Y 377.433
Cu (324.754 nm)	0.000756	ppm	0.000133	17.56	-650.836000	Y 377.433
Fe (238.204 nm)	6.553246 o	ppm	0.013480	0.21	23144.468123	Y_R 377.433
Fe H (259.940 nm)	6.538590	ppm	0.004246	0.06	11931.900000	Y_R 377.433
K (766.491 nm)	11.948200	ppm	0.095899	0.80	12287.400000	Y_R2 488.368
Li (670.783 nm)	0.589494	ppm	0.003456	0.59	16728.600000	Y_R2 488.368
Mg (279.078 nm)	204.008000 o	ppm	0.069014	0.03	1250070.000000	Y 377.433
Mn (257.610 nm)	0.684959	ppm	0.000224	0.03	161526.000000	Y 377.433
Mo (202.032 nm)	-0.000113 u	ppm	0.000665	> 100.00	1.586090	Y 377.433
Na (589.592 nm)	478.285000 o	ppm	4.015990	0.84	3047800.000000	Y_R2 488.368
Na H (589.593 nm)	503.177961	ppm	1.755894	0.35	1723416.852382	Y_R 488.368
Ni (231.604 nm)	0.018130	ppm	0.000363	2.00	127.190000	Y 377.433
P (213.618 nm)	0.136043	ppm	0.000264	0.19	326.011000	Y 242.219
Pb (220.353 nm)	0.004211	ppm	0.000970	23.04	14.950200	Y 242.219
S (181.972 nm)	705.829892 bo	ppm	1.211652	0.17	370733.083265	Y 377.433
Sb (206.834 nm)	-0.000851 u	ppm	0.002231	> 100.00	-34.978300	Y 377.433
Se (196.026 nm)	-0.003560 u	ppm	0.003323	93.33	12.173600	Y 242.219
Si (288.158 nm)	15.311700 o	ppm	0.472855	3.09	133722.000000	Y 377.433
Sn (189.925 nm)	-0.000743 u	ppm	0.000497	66.96	10.622200	Y 377.433
Sr (421.552 nm)	17.060846 bo	ppm	0.171348	1.00	3319603.537832	Y_R 488.368
Th (288.505 nm)	0.008400	ppm	0.000739	8.80	108.434000	Y 377.433
Ti (336.122 nm)	0.081311	ppm	0.000278	0.34	12906.400000	Y 377.433
Tl (190.794 nm)	0.003965	ppm	0.001129	28.48	2.269380	Y 377.433
U (409.013 nm)	-0.020048 u	ppm	0.002929	14.61	-419.135000	Y 377.433
V (292.401 nm)	0.017635	ppm	0.000234	1.32	679.741000	Y 377.433
Zn (206.200 nm)	0.018208	ppm	0.000287	1.58	143.058000	Y 377.433
Zr (343.823 nm)	0.003751	ppm	0.000039	1.05	530.854000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.080229	21099.310394	0.003319	0.31
Y 377.433	1.119212	1108723.299259	0.000219	0.02
Y_R 377.433	1.135940	80839.500000	0.037454	3.30
Y_R 488.368	1.131630	46102.600000	0.032554	2.88
Y_R2 488.368	1.133598	91660.988275	0.005403	0.48

Sample Name: 280-115834-B-2-A

Date: 11/14/2018 1:31:33 AM Rack:Tube: 1:77

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000423 u	ppm	0.000277	65.58	-456.343000	Y 377.433
Al (167.019 nm)	0.194713	ppm	0.006024	3.09	107.730000	Y_R 377.433
Al H (396.152 nm)	0.186409 u	ppm	0.006053	3.25	542.612355	Y_R 377.433
As (188.980 nm)	0.001610	ppm	0.000848	52.65	1.999760	Y 242.219
B (249.678 nm)	0.025293	ppm	0.000276	1.09	694.657000	Y 242.219
Ba (493.408 nm)	0.024765	ppm	0.000193	0.78	3310.080000	Y_R 488.368
Be (234.861 nm)	0.000144	ppm	0.000025	17.18	-38.576600	Y_R 488.368
Bi (223.061 nm)	-0.000599 u	ppm	0.001741	> 100.00	14.389300	Y 377.433
Ca (315.887 nm)	35.311238 o	ppm	0.093115	0.26	26879.018927	Y_R 377.433
Cd (214.439 nm)	-0.000191 u	ppm	0.000010	5.19	7.722300	Y 377.433
Co (228.615 nm)	0.000249	ppm	0.000129	51.86	-41.386600	Y 242.219
Cr (205.560 nm)	0.000509	ppm	0.000181	35.49	13.943000	Y 377.433
Cu (324.754 nm)	0.002302	ppm	0.000103	4.48	-263.866000	Y 377.433
Fe (238.204 nm)	0.183426	ppm	0.000533	0.29	673.981199	Y_R 377.433
Fe H (259.940 nm)	0.194026 u	ppm	0.002489	1.28	344.392000	Y_R 377.433
K (766.491 nm)	3.327900	ppm	0.022987	0.69	2841.440000	Y_R2 488.368
Li (670.783 nm)	0.016689	ppm	0.000870	5.22	-1056.010000	Y_R2 488.368
Mg (279.078 nm)	6.938910	ppm	0.005338	0.08	42582.500000	Y 377.433
Mn (257.610 nm)	0.006914	ppm	0.000066	0.95	1729.370000	Y 377.433
Mo (202.032 nm)	0.023616	ppm	0.000048	0.20	213.918000	Y 377.433
Na (589.592 nm)	21.372000 o	ppm	0.040680	0.19	136556.000000	Y_R2 488.368
Na H (589.593 nm)	22.422650	ppm	0.098575	0.44	79734.237868	Y_R 488.368
Ni (231.604 nm)	-0.000516 u	ppm	0.000128	24.69	-5.262160	Y 377.433
P (213.618 nm)	0.024916	ppm	0.000406	1.63	88.414600	Y 242.219
Pb (220.353 nm)	0.000042 u	ppm	0.002232	> 100.00	4.155830	Y 242.219
S (181.972 nm)	22.611039 o	ppm	0.007363	0.03	11892.388812	Y 377.433
Sb (206.834 nm)	0.000375	ppm	0.000391	> 100.00	-29.932500	Y 377.433
Se (196.026 nm)	-0.000625 u	ppm	0.001986	> 100.00	15.824500	Y 242.219
Si (288.158 nm)	2.514360	ppm	0.008395	0.33	22769.300000	Y 377.433
Sn (189.925 nm)	-0.000929 u	ppm	0.001511	> 100.00	10.238500	Y 377.433
Sr (421.552 nm)	0.222379	ppm	0.000403	0.18	43397.885399	Y_R 488.368
Th (288.505 nm)	-0.003386 u	ppm	0.002463	72.75	65.065300	Y 377.433
Ti (336.122 nm)	0.004533	ppm	0.000009	0.19	400.080000	Y 377.433
Tl (190.794 nm)	0.000908	ppm	0.000000	0.02	-4.251850	Y 377.433
U (409.013 nm)	0.002843	ppm	0.001484	52.19	-224.272000	Y 377.433
V (292.401 nm)	0.000765	ppm	0.000187	24.52	55.495300	Y 377.433
Zn (206.200 nm)	0.001454	ppm	0.000189	13.01	49.514900	Y 377.433
Zr (343.823 nm)	0.000100	ppm	0.000036	35.60	42.072000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.144087	22346.609239	0.005416	0.47
Y 377.433	1.159036	1148174.877006	0.007574	0.65
Y_R 377.433	1.200590	85440.300000	0.000076	0.01
Y_R 488.368	1.196220	48734.100000	0.000309	0.03
Y_R2 488.368	1.200573	97076.442334	0.000059	0.00

Sample Name: CCVH-5417909

Date: 11/14/2018 1:34:56 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002196 u	ppm	0.000262	11.95	-772.490000	Y 377.433
Al (167.019 nm)	44.261600 o	ppm	0.028690	0.06	24089.800000	Y_R 377.433
Al H (396.152 nm)	48.359222	ppm	0.047525	0.10	114745.262518	Y_R 377.433
As (188.980 nm)	0.000950 u	ppm	0.001988	> 100.00	0.678449	Y 242.219
B (249.678 nm)	0.001391	ppm	0.000345	24.81	20.405300	Y 242.219
Ba (493.408 nm)	-0.000690 u	ppm	0.000043	6.16	642.790000	Y_R 488.368
Be (234.861 nm)	-0.000021 u	ppm	0.000002	11.93	1380.420000	Y_R 488.368
Bi (223.061 nm)	0.962010	ppm	0.001448	0.15	2453.510000	Y 377.433
Ca (315.887 nm)	0.003262	ppm	0.001697	52.02	-57.487588	Y_R 377.433
Cd (214.439 nm)	-0.000564 u	ppm	0.000029	5.10	32.862300	Y 377.433
Co (228.615 nm)	0.003175	ppm	0.000327	10.29	13.255000	Y 242.219
Cr (205.560 nm)	0.000229	ppm	0.000232	> 100.00	-3.755900	Y 377.433
Cu (324.754 nm)	-0.006330 u	ppm	0.000097	1.53	-392.059000	Y 377.433
Fe (238.204 nm)	48.620290 o	ppm	0.053537	0.11	171542.232210	Y_R 377.433
Fe H (259.940 nm)	48.406500	ppm	0.039116	0.08	88398.400000	Y_R 377.433
K (766.491 nm)	0.147929	ppm	0.069205	46.78	-643.120000	Y_R2 488.368
Li (670.783 nm)	0.005942	ppm	0.000264	4.45	-1389.690000	Y_R2 488.368
Mg (279.078 nm)	-0.016847 u	ppm	0.001206	7.16	-399.306000	Y 377.433
Mn (257.610 nm)	0.001132	ppm	0.000023	2.01	366.709000	Y 377.433
Mo (202.032 nm)	-0.000470 u	ppm	0.000078	16.67	-1.605960	Y 377.433
Na (589.592 nm)	237.569000 o	ppm	1.376270	0.58	1513970.000000	Y_R2 488.368
Na H (589.593 nm)	246.042846	ppm	1.450912	0.59	844241.593807	Y_R 488.368
Ni (231.604 nm)	0.003998	ppm	0.000254	6.35	28.789500	Y 377.433
P (213.618 nm)	-0.010153 u	ppm	0.001910	18.82	13.436600	Y 242.219
Pb (220.353 nm)	-0.005022 u	ppm	0.002127	42.36	5.963800	Y 242.219
S (181.972 nm)	4.975753	ppm	0.007111	0.14	2630.000883	Y 377.433
Sb (206.834 nm)	-0.004515 u	ppm	0.000728	16.11	-88.289600	Y 377.433
Se (196.026 nm)	-0.003168 u	ppm	0.001646	51.95	4.080240	Y 242.219
Si (288.158 nm)	0.018640	ppm	0.000580	3.11	1131.340000	Y 377.433
Sn (189.925 nm)	-0.000329 u	ppm	0.001191	> 100.00	11.473700	Y 377.433
Sr (421.552 nm)	0.000613	ppm	0.000057	9.33	249.518644	Y_R 488.368
Th (288.505 nm)	4.884000	ppm	0.001870	0.04	12568.500000	Y 377.433
Ti (336.122 nm)	0.001660	ppm	0.000004	0.23	-116.277000	Y 377.433
Tl (190.794 nm)	-0.002830 u	ppm	0.001330	46.97	-13.988600	Y 377.433
U (409.013 nm)	9.779670	ppm	0.007144	0.07	43270.800000	Y 377.433
V (292.401 nm)	0.002098	ppm	0.000013	0.63	-51.280900	Y 377.433
Zn (206.200 nm)	-0.006693 u	ppm	0.000416	6.21	4.025990	Y 377.433
Zr (343.823 nm)	-0.004553 u	ppm	0.000107	2.34	-421.101000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119506	21866.475068	0.002172	0.19
Y 377.433	1.119714	1109220.636696	0.001580	0.14
Y_R 377.433	1.168410	83149.900000	0.005952	0.51
Y_R 488.368	1.173750	47818.700000	0.000922	0.08
Y_R2 488.368	1.149434	92941.422200	0.002129	0.19

Sample Name: CCV-5416701

Date: 11/14/2018 1:38:20 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.480323	ppm	0.000426	0.09	21652.400000	Y 377.433
Al (167.019 nm)	0.496516	ppm	0.003894	0.78	273.239000	Y_R 377.433
Al H (396.152 nm)	0.488148 u	ppm	0.000840	0.17	1280.275698	Y_R 377.433
As (188.980 nm)	0.971997	ppm	0.000418	0.04	1286.960000	Y 242.219
B (249.678 nm)	0.488676	ppm	0.000469	0.10	12374.600000	Y 242.219
Ba (493.408 nm)	0.487149	ppm	0.001076	0.22	52372.800000	Y_R 488.368
Be (234.861 nm)	0.488816	ppm	0.002917	0.60	142357.000000	Y_R 488.368
Bi (223.061 nm)	-0.003365 u	ppm	0.001556	46.23	7.774430	Y 377.433
Ca (315.887 nm)	4.920347	ppm	0.002394	0.05	3694.024190	Y_R 377.433
Cd (214.439 nm)	0.482631	ppm	0.001123	0.23	30430.800000	Y 377.433
Co (228.615 nm)	0.487847	ppm	0.000735	0.15	9102.730000	Y 242.219
Cr (205.560 nm)	0.480089	ppm	0.001322	0.28	7419.250000	Y 377.433
Cu (324.754 nm)	0.483993	ppm	0.000542	0.11	25683.600000	Y 377.433
Fe (238.204 nm)	2.459359	ppm	0.006867	0.28	8702.671406	Y_R 377.433
Fe H (259.940 nm)	2.455650 u	ppm	0.004233	0.17	4474.960000	Y_R 377.433
K (766.491 nm)	48.825700	ppm	0.024604	0.05	52697.200000	Y_R2 488.368
Li (670.783 nm)	0.982710	ppm	0.002575	0.26	28937.300000	Y_R2 488.368
Mg (279.078 nm)	19.283800	ppm	0.009584	0.05	118220.000000	Y 377.433
Mn (257.610 nm)	0.485304	ppm	0.000428	0.09	114473.000000	Y 377.433
Mo (202.032 nm)	0.486887	ppm	0.000843	0.17	4359.310000	Y 377.433
Na (589.592 nm)	4.972210	ppm	0.011956	0.24	32968.300000	Y_R2 488.368
Na H (589.593 nm)	5.483944 u	ppm	0.001373	0.03	22227.963139	Y_R 488.368
Ni (231.604 nm)	0.486945	ppm	0.000417	0.09	3451.630000	Y 377.433
P (213.618 nm)	1.009430	ppm	0.006555	0.65	2193.350000	Y 242.219
Pb (220.353 nm)	0.980885	ppm	0.000575	0.06	2956.510000	Y 242.219
S (181.972 nm)	0.080556	ppm	0.005478	6.80	60.153551	Y 377.433
Sb (206.834 nm)	0.973173	ppm	0.000343	0.04	2701.180000	Y 377.433
Se (196.026 nm)	0.975682	ppm	0.000196	0.02	1036.620000	Y 242.219
Si (288.158 nm)	4.858120	ppm	0.011605	0.24	43089.700000	Y 377.433
Sn (189.925 nm)	0.958395	ppm	0.002266	0.24	1985.710000	Y 377.433
Sr (421.552 nm)	0.489713	ppm	0.001341	0.27	95412.014588	Y_R 488.368
Th (288.505 nm)	0.000522 u	ppm	0.000767	> 100.00	89.587400	Y 377.433
Ti (336.122 nm)	0.485975	ppm	0.000524	0.11	68414.900000	Y 377.433
Tl (190.794 nm)	0.974246	ppm	0.001207	0.12	2208.990000	Y 377.433
U (409.013 nm)	0.008810	ppm	0.002122	24.08	-226.727000	Y 377.433
V (292.401 nm)	0.484986	ppm	0.000189	0.04	17827.500000	Y 377.433
Zn (206.200 nm)	0.482846	ppm	0.000553	0.11	2737.280000	Y 377.433
Zr (343.823 nm)	0.486895	ppm	0.000547	0.11	62827.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120005	21876.223400	0.001905	0.17
Y 377.433	1.127553	1116986.304736	0.003789	0.34
Y_R 377.433	1.153980	82123.300000	0.000433	0.04
Y_R 488.368	1.155290	47066.300000	0.003602	0.31
Y_R2 488.368	1.150316	93012.786984	0.003869	0.34

Sample Name: CCB

Date: 11/14/2018 1:41:41 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000543 u	ppm	0.000036	6.62	-461.552000	Y 377.433
Al (167.019 nm)	-0.000882 u	ppm	0.001150	> 100.00	1.301160	Y_R 377.433
Al H (396.152 nm)	-0.022143 u	ppm	0.007044	31.81	31.857852	Y_R 377.433
As (188.980 nm)	-0.000963 u	ppm	0.000051	5.33	-1.405180	Y 242.219
B (249.678 nm)	0.002220	ppm	0.000212	9.55	114.279000	Y 242.219
Ba (493.408 nm)	-0.000656 u	ppm	0.000044	6.64	605.310000	Y_R 488.368
Be (234.861 nm)	0.000140	ppm	0.000024	16.98	-43.696700	Y_R 488.368
Bi (223.061 nm)	-0.001204 u	ppm	0.001087	90.35	12.830700	Y 377.433
Ca (315.887 nm)	0.014579	ppm	0.002961	20.31	-48.854359	Y_R 377.433
Cd (214.439 nm)	-0.000149 u	ppm	0.000014	9.51	10.193800	Y 377.433
Co (228.615 nm)	0.000477	ppm	0.000357	74.80	-37.258700	Y 242.219
Cr (205.560 nm)	0.000071	ppm	0.000007	9.53	7.267340	Y 377.433
Cu (324.754 nm)	-0.000115 u	ppm	0.000100	86.33	-373.484000	Y 377.433
Fe (238.204 nm)	-0.003633 u	ppm	0.000224	6.15	14.102838	Y_R 377.433
Fe H (259.940 nm)	0.012027 u	ppm	0.001247	10.37	11.992700	Y_R 377.433
K (766.491 nm)	0.088023	ppm	0.038937	44.23	-708.764000	Y_R2 488.368
Li (670.783 nm)	0.003871	ppm	0.001187	30.66	-1454.000000	Y_R2 488.368
Mg (279.078 nm)	0.001619	ppm	0.000197	12.16	76.015700	Y 377.433
Mn (257.610 nm)	-0.000096 u	ppm	0.000014	14.28	77.169800	Y 377.433
Mo (202.032 nm)	-0.000240 u	ppm	0.000044	18.55	0.452474	Y 377.433
Na (589.592 nm)	0.042393	ppm	0.011477	27.07	606.791000	Y_R2 488.368
Na H (589.593 nm)	0.094863 u	ppm	0.082947	87.44	3375.646082	Y_R 488.368
Ni (231.604 nm)	-0.000800 u	ppm	0.000392	48.96	-7.285060	Y 377.433
P (213.618 nm)	-0.004567 u	ppm	0.001473	32.26	25.380200	Y 242.219
Pb (220.353 nm)	0.001922	ppm	0.001038	54.01	9.973130	Y 242.219
S (181.972 nm)	0.053889 Z	ppm	0.004661	8.65	44.944543 Z	Y 377.433
Sb (206.834 nm)	0.001975	ppm	0.001553	78.62	-25.261900	Y 377.433
Se (196.026 nm)	-0.003321 u	ppm	0.001100	33.13	13.033200	Y 242.219
Si (288.158 nm)	-0.004572 u	ppm	0.000540	11.82	930.099000	Y 377.433
Sn (189.925 nm)	-0.002295 u	ppm	0.000348	15.18	7.426360	Y 377.433
Sr (421.552 nm)	0.000202	ppm	0.000095	47.27	169.527521	Y_R 488.368
Th (288.505 nm)	0.000017 u	ppm	0.000941	> 100.00	73.375100	Y 377.433
Ti (336.122 nm)	0.000218	ppm	0.000121	55.51	-320.469000	Y 377.433
Tl (190.794 nm)	0.000208	ppm	0.000188	90.20	-5.760910	Y 377.433
U (409.013 nm)	-0.001529 u	ppm	0.001002	65.51	-237.265000	Y 377.433
V (292.401 nm)	-0.000123 u	ppm	0.000284	> 100.00	23.501700	Y 377.433
Zn (206.200 nm)	-0.007365 u	ppm	0.000108	1.47	0.274559	Y 377.433
Zr (343.823 nm)	0.000107	ppm	0.000063	59.11	42.484500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.110601	21692.537721	0.004887	0.44
Y 377.433	1.120211	1109713.233183	0.003290	0.29
Y_R 377.433	1.136090	80850.100000	0.001931	0.17
Y_R 488.368	1.136450	46299.000000	0.004651	0.41
Y_R2 488.368	1.128978	91287.427432	0.001836	0.16

Sample Name: CCVL-5425098

Date: 11/14/2018 1:45:04 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008690	ppm	0.000051	0.58	-36.612300	Y 377.433
Al (167.019 nm)	0.097755	ppm	0.002123	2.17	54.975500	Y_R 377.433
Al H (396.152 nm)	0.063901 u	ppm	0.004844	7.58	237.249600	Y_R 377.433
As (188.980 nm)	0.011489	ppm	0.002460	21.41	15.081900	Y 242.219
B (249.678 nm)	0.094660	ppm	0.000059	0.06	2440.940000	Y 242.219
Ba (493.408 nm)	0.008826	ppm	0.000310	3.51	1611.370000	Y_R 488.368
Be (234.861 nm)	0.001021	ppm	0.000007	0.68	215.198000	Y_R 488.368
Bi (223.061 nm)	0.091118	ppm	0.003556	3.90	246.017000	Y 377.433
Ca (315.887 nm)	0.199335	ppm	0.005158	2.59	92.099102	Y_R 377.433
Cd (214.439 nm)	0.004634	ppm	0.000027	0.58	311.660000	Y 377.433
Co (228.615 nm)	0.010313	ppm	0.000154	1.50	147.162000	Y 242.219
Cr (205.560 nm)	0.009839	ppm	0.000061	0.62	158.151000	Y 377.433
Cu (324.754 nm)	0.014620	ppm	0.000433	2.96	417.631000	Y 377.433
Fe (238.204 nm)	0.095868	ppm	0.001125	1.17	365.107603	Y_R 377.433
Fe H (259.940 nm)	0.104435 u	ppm	0.004255	4.07	180.765000	Y_R 377.433
K (766.491 nm)	3.103610	ppm	0.084084	2.71	2595.660000	Y_R2 488.368
Li (670.783 nm)	0.025069	ppm	0.000117	0.47	-795.820000	Y_R2 488.368
Mg (279.078 nm)	0.189239	ppm	0.000051	0.03	1224.710000	Y 377.433
Mn (257.610 nm)	0.009697	ppm	0.000009	0.10	2385.100000	Y 377.433
Mo (202.032 nm)	0.017482	ppm	0.000170	0.97	159.025000	Y 377.433
Na (589.592 nm)	1.047420	ppm	0.019398	1.85	7028.050000	Y_R2 488.368
Na H (589.593 nm)	1.038109 u	ppm	0.011049	1.06	6608.525709	Y_R 488.368
Ni (231.604 nm)	0.039084	ppm	0.000181	0.46	275.475000	Y 377.433
P (213.618 nm)	2.715130 o	ppm	0.007266	0.27	5840.220000	Y 242.219
Pb (220.353 nm)	0.009359	ppm	0.001474	15.75	32.343900	Y 242.219
S (181.972 nm)	0.129131	ppm	0.005459	4.23	84.487179	Y 377.433
Sb (206.834 nm)	0.021276	ppm	0.000679	3.19	28.834500	Y 377.433
Se (196.026 nm)	0.017399	ppm	0.001536	8.83	34.687100	Y 242.219
Si (288.158 nm)	0.458059	ppm	0.004262	0.93	4941.120000	Y 377.433
Sn (189.925 nm)	0.089863	ppm	0.000681	0.76	197.201000	Y 377.433
Sr (421.552 nm)	0.009877	ppm	0.000044	0.45	2051.888913	Y_R 488.368
Th (288.505 nm)	0.015532	ppm	0.006098	39.26	113.481000	Y 377.433
Ti (336.122 nm)	0.009474	ppm	0.000010	0.11	989.626000	Y 377.433
Tl (190.794 nm)	0.013997	ppm	0.000286	2.04	25.560700	Y 377.433
U (409.013 nm)	0.060560	ppm	0.000620	1.02	37.650400	Y 377.433
V (292.401 nm)	0.009210	ppm	0.000069	0.75	364.059000	Y 377.433
Zn (206.200 nm)	0.011989 Q	ppm	0.000171	1.42	108.334000 Q	Y 377.433
Zr (343.823 nm)	0.014134	ppm	0.000004	0.02	1851.650000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114989	21778.257938	0.000343	0.03
Y 377.433	1.123640	1113110.286910	0.001713	0.15
Y_R 377.433	1.136250	80861.800000	0.002939	0.26
Y_R 488.368	1.141030	46485.400000	0.007029	0.62
Y_R2 488.368	1.140188	92193.868779	0.003807	0.33

Sample Name: MB 280-437334/1-A

Date: 11/14/2018 1:48:27 AM Rack:Tube: 1:78

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000346 u	ppm	0.000405	> 100.00	-452.629000	Y 377.433
Al (167.019 nm)	0.006161	ppm	0.001172	19.03	5.142670	Y_R 377.433
Al H (396.152 nm)	-0.020567 u	ppm	0.003426	16.66	35.697876	Y_R 377.433
As (188.980 nm)	-0.000576 u	ppm	0.001239	> 100.00	-0.894019	Y 242.219
B (249.678 nm)	0.012202	ppm	0.000005	0.04	365.464000	Y 242.219
Ba (493.408 nm)	0.001063	ppm	0.000337	31.69	787.797000	Y_R 488.368
Be (234.861 nm)	0.000138	ppm	0.000030	21.48	-43.686500	Y_R 488.368
Bi (223.061 nm)	0.000228 u	ppm	0.002702	> 100.00	16.448500	Y 377.433
Ca (315.887 nm)	0.340800	ppm	0.004036	1.18	200.020606	Y_R 377.433
Cd (214.439 nm)	-0.000206 u	ppm	0.000098	47.39	6.589180	Y 377.433
Co (228.615 nm)	0.000787	ppm	0.000198	25.21	-31.447600	Y 242.219
Cr (205.560 nm)	0.000658	ppm	0.000108	16.39	16.329700	Y 377.433
Cu (324.754 nm)	0.000667	ppm	0.000143	21.50	-333.135000	Y 377.433
Fe (238.204 nm)	0.017851	ppm	0.000376	2.11	89.890431	Y_R 377.433
Fe H (259.940 nm)	0.030337 u	ppm	0.000392	1.29	45.433200	Y_R 377.433
K (766.491 nm)	0.098762	ppm	0.075325	76.27	-696.997000	Y_R2 488.368
Li (670.783 nm)	0.006511	ppm	0.001742	26.76	-1372.020000	Y_R2 488.368
Mg (279.078 nm)	0.087479	ppm	0.000591	0.68	601.957000	Y 377.433
Mn (257.610 nm)	0.000626	ppm	0.000003	0.53	247.452000	Y 377.433
Mo (202.032 nm)	-0.000450 u	ppm	0.000150	33.35	-1.432550	Y 377.433
Na (589.592 nm)	0.150711	ppm	0.010987	7.29	1299.800000	Y_R2 488.368
Na H (589.593 nm)	0.026922 u	ppm	0.000655	2.43	3144.654427	Y_R 488.368
Ni (231.604 nm)	0.000423 u	ppm	0.000970	> 100.00	1.388420	Y 377.433
P (213.618 nm)	0.008282	ppm	0.004667	56.35	52.850400	Y 242.219
Pb (220.353 nm)	0.000042 u	ppm	0.000482	> 100.00	4.325540	Y 242.219
S (181.972 nm)	0.031793	ppm	0.001799	5.66	33.341289	Y 377.433
Sb (206.834 nm)	0.001226	ppm	0.000124	10.14	-27.343300	Y 377.433
Se (196.026 nm)	-0.003768 u	ppm	0.003253	86.33	12.562600	Y 242.219
Si (288.158 nm)	0.053935	ppm	0.000548	1.02	1437.360000	Y 377.433
Sn (189.925 nm)	0.008700	ppm	0.001201	13.80	30.067400	Y 377.433
Sr (421.552 nm)	0.001076	ppm	0.000109	10.15	339.679609	Y_R 488.368
Th (288.505 nm)	-0.002471 u	ppm	0.001222	49.47	67.190000	Y 377.433
Ti (336.122 nm)	0.000680	ppm	0.000016	2.31	-254.101000	Y 377.433
Tl (190.794 nm)	0.000619 u	ppm	0.001056	> 100.00	-4.828650	Y 377.433
U (409.013 nm)	0.004608	ppm	0.001893	41.08	-210.008000	Y 377.433
V (292.401 nm)	-0.000319 u	ppm	0.000136	42.81	15.362200	Y 377.433
Zn (206.200 nm)	-0.005271 u	ppm	0.000156	2.96	11.970300	Y 377.433
Zr (343.823 nm)	-0.000137 u	ppm	0.000062	45.57	11.036700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127867	22029.788977	0.002944	0.26
Y 377.433	1.139135	1128459.672450	0.001803	0.16
Y_R 377.433	1.163730	82817.300000	0.000823	0.07
Y_R 488.368	1.168520	47605.500000	0.006683	0.57
Y_R2 488.368	1.169045	94527.124875	0.001229	0.11

Sample Name: LCS 280-437334/2-A

Date: 11/14/2018 1:51:49 AM Rack:Tube: 1:79

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052941	ppm	0.000183	0.35	1972.160000	Y 377.433
Al (167.019 nm)	2.001800	ppm	0.007961	0.40	1090.440000	Y_R 377.433
Al H (396.152 nm)	2.035649	ppm	0.008527	0.42	5007.874879	Y_R 377.433
As (188.980 nm)	0.986771	ppm	0.004098	0.42	1306.540000	Y 242.219
B (249.678 nm)	1.104640 o	ppm	0.001326	0.12	27878.700000	Y 242.219
Ba (493.408 nm)	1.998140 o	ppm	0.007059	0.35	212684.000000	Y_R 488.368
Be (234.861 nm)	0.050694	ppm	0.000107	0.21	14656.700000	Y_R 488.368
Bi (223.061 nm)	1.894610	ppm	0.001213	0.06	4801.130000	Y 377.433
Ca (315.887 nm)	50.184007 o	ppm	0.328479	0.65	38225.528195	Y_R 377.433
Cd (214.439 nm)	0.096936	ppm	0.000037	0.04	6128.560000	Y 377.433
Co (228.615 nm)	0.486634	ppm	0.003064	0.63	9099.070000	Y 242.219
Cr (205.560 nm)	0.197718	ppm	0.000403	0.20	3058.920000	Y 377.433
Cu (324.754 nm)	0.245700	ppm	0.000666	0.27	12878.600000	Y 377.433
Fe (238.204 nm)	1.021208	ppm	0.004997	0.49	3629.380855	Y_R 377.433
Fe H (259.940 nm)	1.018040 u	ppm	0.007272	0.71	1849.350000	Y_R 377.433
K (766.491 nm)	51.353100	ppm	0.198513	0.39	55466.700000	Y_R2 488.368
Li (670.783 nm)	1.016240	ppm	0.006403	0.63	29978.400000	Y_R2 488.368
Mg (279.078 nm)	49.179000 o	ppm	0.000539	0.00	301343.000000	Y 377.433
Mn (257.610 nm)	0.494210	ppm	0.000318	0.06	116571.000000	Y 377.433
Mo (202.032 nm)	1.017950	ppm	0.000810	0.08	9111.310000	Y 377.433
Na (589.592 nm)	50.156600 o	ppm	0.324644	0.65	323798.000000	Y_R2 488.368
Na H (589.593 nm)	52.283193	ppm	0.199345	0.38	183551.909145	Y_R 488.368
Ni (231.604 nm)	0.479264	ppm	0.001841	0.38	3398.360000	Y 377.433
P (213.618 nm)	10.565500 o	ppm	0.003171	0.03	22624.600000	Y 242.219
Pb (220.353 nm)	0.503723	ppm	0.001349	0.27	1521.940000	Y 242.219
S (181.972 nm)	1.958096	ppm	0.003467	0.18	1046.294172	Y 377.433
Sb (206.834 nm)	0.494589	ppm	0.003738	0.76	1346.050000	Y 377.433
Se (196.026 nm)	1.984890	ppm	0.002531	0.13	2092.200000	Y 242.219
Si (288.158 nm)	2.301710	ppm	0.002536	0.11	20925.600000	Y 377.433
Sn (189.925 nm)	1.973790	ppm	0.007654	0.39	4076.660000	Y 377.433
Sr (421.552 nm)	1.006835	ppm	0.003163	0.31	196026.757463	Y_R 488.368
Th (288.505 nm)	1.005860	ppm	0.000810	0.08	2673.680000	Y 377.433
Ti (336.122 nm)	1.009330	ppm	0.001042	0.10	142595.000000	Y 377.433
Tl (190.794 nm)	1.983870	ppm	0.005130	0.26	4502.520000	Y 377.433
U (409.013 nm)	2.055110	ppm	0.003574	0.17	8855.550000	Y 377.433
V (292.401 nm)	0.506428	ppm	0.000193	0.04	18655.900000	Y 377.433
Zn (206.200 nm)	0.483932	ppm	0.000736	0.15	2743.340000	Y 377.433
Zr (343.823 nm)	0.499796	ppm	0.000340	0.07	64486.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089380	21278.053431	0.002984	0.27
Y 377.433	1.100464	1090151.377175	0.002845	0.26
Y_R 377.433	1.127220	80218.800000	0.003621	0.32
Y_R 488.368	1.130550	46058.600000	0.001247	0.11
Y_R2 488.368	1.116741	90297.937477	0.002339	0.21

Sample Name: 280-116800-A-1-B

Date: 11/14/2018 1:55:10 AM Rack:Tube: 1:80

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000676 u	ppm	0.000301	44.53	-510.603000	Y 377.433
Al (167.019 nm)	131.530000 o	ppm	0.697652	0.53	71646.900000	Y_R 377.433
Al H (396.152 nm)	201.894631 o	ppm	2.443181	1.21	478807.253575	Y_R 377.433
As (188.980 nm)	0.130004	ppm	0.002585	1.99	169.779000	Y 242.219
B (249.678 nm)	0.114233	ppm	0.000083	0.07	2573.400000	Y 242.219
Ba (493.408 nm)	2.446310 o	ppm	0.017892	0.73	260444.000000	Y_R 488.368
Be (234.861 nm)	0.009814	ppm	0.000067	0.68	10098.100000	Y_R 488.368
Bi (223.061 nm)	-0.018258 u	ppm	0.000339	1.85	9.441330	Y 377.433
Ca (315.887 nm)	62.136929 o	ppm	0.268530	0.43	47344.379595	Y_R 377.433
Cd (214.439 nm)	-0.000227 u	ppm	0.000009	3.87	249.065000	Y 377.433
Co (228.615 nm)	0.115406	ppm	0.000012	0.01	2180.050000	Y 242.219
Cr (205.560 nm)	0.243668	ppm	0.000178	0.07	3704.420000	Y 377.433
Cu (324.754 nm)	0.184908	ppm	0.000444	0.24	9814.520000	Y 377.433
Fe (238.204 nm)	242.548437 o	ppm	1.996341	0.82	855652.648897	Y_R 377.433
Fe H (259.940 nm)	243.257000	ppm	0.840082	0.35	444267.000000	Y_R 377.433
K (766.491 nm)	29.112000	ppm	0.112482	0.39	31095.300000	Y_R2 488.368
Li (670.783 nm)	0.377407	ppm	0.001757	0.47	10143.700000	Y_R2 488.368
Mg (279.078 nm)	120.175000 o	ppm	0.131663	0.11	735985.000000	Y 377.433
Mn (257.610 nm)	4.749540 o	ppm	0.002472	0.05	1119440.000000	Y 377.433
Mo (202.032 nm)	0.002034	ppm	0.000706	34.71	20.795000	Y 377.433
Na (589.592 nm)	21.175400 o	ppm	0.116334	0.55	140025.000000	Y_R2 488.368
Na H (589.593 nm)	21.775439	ppm	0.225589	1.04	79642.895259	Y_R 488.368
Ni (231.604 nm)	0.314613	ppm	0.000987	0.31	2238.940000	Y 377.433
P (213.618 nm)	5.896380 o	ppm	0.005993	0.10	12641.900000	Y 242.219
Pb (220.353 nm)	0.159383	ppm	0.002691	1.69	437.654000	Y 242.219
S (181.972 nm)	1.472356	ppm	0.001514	0.10	801.709680	Y 377.433
Sb (206.834 nm)	-0.004796 u	ppm	0.000393	8.20	-110.156000	Y 377.433
Se (196.026 nm)	-0.002096 u	ppm	0.000734	35.03	-27.236200	Y 242.219
Si (288.158 nm)	2.358250	ppm	0.004775	0.20	21415.800000	Y 377.433
Sn (189.925 nm)	0.016311	ppm	0.001902	11.66	45.740200	Y 377.433
Sr (421.552 nm)	0.897414	ppm	0.009064	1.01	174737.069917	Y_R 488.368
Th (288.505 nm)	0.082167	ppm	0.000827	1.01	377.032000	Y 377.433
Ti (336.122 nm)	1.818080 o	ppm	0.001912	0.11	257046.000000	Y 377.433
Tl (190.794 nm)	0.004465	ppm	0.000624	13.98	-10.452400	Y 377.433
U (409.013 nm)	-0.075549 u	ppm	0.004059	5.37	-368.482000	Y 377.433
V (292.401 nm)	0.398328	ppm	0.000050	0.01	14735.500000	Y 377.433
Zn (206.200 nm)	0.584769	ppm	0.001074	0.18	3306.350000	Y 377.433
Zr (343.823 nm)	0.110745	ppm	0.000193	0.17	14996.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.136577	22199.909816	0.008563	0.75
Y 377.433	1.140477	1129789.065561	0.009044	0.79
Y_R 377.433	1.190880	84749.000000	0.008523	0.72
Y_R 488.368	1.184580	48259.800000	0.011043	0.93
Y_R2 488.368	1.180262	95434.190759	0.000578	0.05

Sample Name: 280-116800-A-2-D

Date: 11/14/2018 1:58:32 AM Rack:Tube: 1:81

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001115 u	ppm	0.000230	20.65	-518.875000	Y 377.433
Al (167.019 nm)	108.032000 o	ppm	0.282930	0.26	58835.000000	Y_R 377.433
Al H (396.152 nm)	149.414972 o	ppm	0.263945	0.18	354367.358596	Y_R 377.433
As (188.980 nm)	0.099311	ppm	0.000943	0.95	129.709000	Y 242.219
B (249.678 nm)	0.090137	ppm	0.000229	0.25	2057.980000	Y 242.219
Ba (493.408 nm)	3.301730 o	ppm	0.015228	0.46	351147.000000	Y_R 488.368
Be (234.861 nm)	0.007163	ppm	0.000002	0.03	7454.400000	Y_R 488.368
Bi (223.061 nm)	-0.017478 u	ppm	0.001437	8.22	1.273610	Y 377.433
Ca (315.887 nm)	39.182316 o	ppm	0.192368	0.49	29832.271222	Y_R 377.433
Cd (214.439 nm)	-0.000411 u	ppm	0.000045	10.93	175.159000	Y 377.433
Co (228.615 nm)	0.063354	ppm	0.000049	0.08	1216.640000	Y 242.219
Cr (205.560 nm)	0.162619	ppm	0.000473	0.29	2469.110000	Y 377.433
Cu (324.754 nm)	0.120475	ppm	0.000060	0.05	6281.360000	Y 377.433
Fe (238.204 nm)	180.653445 o	ppm	0.999939	0.55	637308.846421	Y_R 377.433
Fe H (259.940 nm)	182.456000	ppm	0.644002	0.35	333224.000000	Y_R 377.433
K (766.491 nm)	21.514700	ppm	0.059902	0.28	22770.300000	Y_R2 488.368
Li (670.783 nm)	0.266118	ppm	0.000139	0.05	6688.340000	Y_R2 488.368
Mg (279.078 nm)	71.263900 o	ppm	0.577379	0.81	436401.000000	Y 377.433
Mn (257.610 nm)	3.058200 o	ppm	0.000131	0.00	720834.000000	Y 377.433
Mo (202.032 nm)	0.003305	ppm	0.000790	23.90	32.168200	Y 377.433
Na (589.592 nm)	21.394100 o	ppm	0.076665	0.36	143084.000000	Y_R2 488.368
Na H (589.593 nm)	21.909261	ppm	0.153967	0.70	80849.132746	Y_R 488.368
Ni (231.604 nm)	0.142035	ppm	0.000846	0.60	1012.920000	Y 377.433
P (213.618 nm)	4.364130 o	ppm	0.004006	0.09	9365.880000	Y 242.219
Pb (220.353 nm)	0.123356	ppm	0.003246	2.63	341.349000	Y 242.219
S (181.972 nm)	1.047192	ppm	0.004456	0.43	574.220025	Y 377.433
Sb (206.834 nm)	-0.005232 u	ppm	0.000489	9.35	-95.160100	Y 377.433
Se (196.026 nm)	-0.001295 u	ppm	0.000633	48.88	-15.974000	Y 242.219
Si (288.158 nm)	2.923570	ppm	0.007487	0.26	26317.200000	Y 377.433
Sn (189.925 nm)	0.016250	ppm	0.000308	1.89	45.614200	Y 377.433
Sr (421.552 nm)	0.694700	ppm	0.003177	0.46	135295.827909	Y_R 488.368
Th (288.505 nm)	0.089800	ppm	0.001455	1.62	363.445000	Y 377.433
Ti (336.122 nm)	2.116370 o	ppm	0.002333	0.11	299174.000000	Y 377.433
Tl (190.794 nm)	0.001653	ppm	0.001209	73.13	-16.733600	Y 377.433
U (409.013 nm)	-0.080763 u	ppm	0.003904	4.83	-443.189000	Y 377.433
V (292.401 nm)	0.331111	ppm	0.000123	0.04	12279.600000	Y 377.433
Zn (206.200 nm)	0.424713	ppm	0.000295	0.07	2412.700000	Y 377.433
Zr (343.823 nm)	0.113572	ppm	0.000150	0.13	15185.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.145456	22373.334077	0.003801	0.33
Y 377.433	1.149233	1138463.424846	0.001301	0.11
Y_R 377.433	1.199160	85338.600000	0.003330	0.28
Y_R 488.368	1.196440	48742.700000	0.005712	0.48
Y_R2 488.368	1.188603	96108.619122	0.007529	0.63

Sample Name: 280-116800-A-2-D SD@5

Date: 11/14/2018 2:01:54 AM Rack:Tube: 1:82

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000363 u	ppm	0.000341	93.94	-460.008000	Y 377.433
Al (167.019 nm)	29.709300 o	ppm	0.147326	0.50	16174.100000	Y_R 377.433
Al H (396.152 nm)	31.270095	ppm	0.139208	0.45	74229.963987	Y_R 377.433
As (188.980 nm)	0.020663	ppm	0.003269	15.82	26.873400	Y 242.219
B (249.678 nm)	0.019462	ppm	0.000326	1.68	490.418000	Y 242.219
Ba (493.408 nm)	0.685961	ppm	0.002458	0.36	73489.400000	Y_R 488.368
Be (234.861 nm)	0.001884	ppm	0.000050	2.66	1634.970000	Y_R 488.368
Bi (223.061 nm)	-0.009318 u	ppm	0.000219	2.35	-1.319300	Y 377.433
Ca (315.887 nm)	8.320099	ppm	0.054186	0.65	6287.439246	Y_R 377.433
Cd (214.439 nm)	-0.000214 u	ppm	0.000039	18.02	45.054000	Y 377.433
Co (228.615 nm)	0.013952	ppm	0.000028	0.20	231.153000	Y 242.219
Cr (205.560 nm)	0.034591	ppm	0.000347	1.00	529.971000	Y 377.433
Cu (324.754 nm)	0.025069	ppm	0.000096	0.38	1013.040000	Y 377.433
Fe (238.204 nm)	38.800939 o	ppm	0.164439	0.42	136903.009253	Y_R 377.433
Fe H (259.940 nm)	38.656200	ppm	0.220604	0.57	70590.600000	Y_R 377.433
K (766.491 nm)	4.545670	ppm	0.024474	0.54	4175.860000	Y_R2 488.368
Li (670.783 nm)	0.059114	ppm	0.001717	2.90	261.231000	Y_R2 488.368
Mg (279.078 nm)	14.932800	ppm	0.043871	0.29	91494.900000	Y 377.433
Mn (257.610 nm)	0.662072	ppm	0.001158	0.17	156132.000000	Y 377.433
Mo (202.032 nm)	0.000234	ppm	0.000321	> 100.00	4.688100	Y 377.433
Na (589.592 nm)	4.420500	ppm	0.012789	0.29	29841.300000	Y_R2 488.368
Na H (589.593 nm)	4.344030 u	ppm	0.036263	0.83	18505.133258	Y_R 488.368
Ni (231.604 nm)	0.030399	ppm	0.000105	0.35	215.534000	Y 377.433
P (213.618 nm)	0.928547	ppm	0.000099	0.01	2020.420000	Y 242.219
Pb (220.353 nm)	0.026588	ppm	0.000247	0.93	77.165200	Y 242.219
S (181.972 nm)	0.238273	ppm	0.002629	1.10	143.426363	Y 377.433
Sb (206.834 nm)	-0.001405 u	ppm	0.001536	> 100.00	-45.351100	Y 377.433
Se (196.026 nm)	-0.002444 u	ppm	0.004740	> 100.00	7.256290	Y 242.219
Si (288.158 nm)	0.606928	ppm	0.000430	0.07	6231.810000	Y 377.433
Sn (189.925 nm)	0.001294	ppm	0.000741	57.29	14.816500	Y 377.433
Sr (421.552 nm)	0.146690	ppm	0.000624	0.43	28671.243582	Y_R 488.368
Th (288.505 nm)	0.015885	ppm	0.000663	4.17	127.125000	Y 377.433
Ti (336.122 nm)	0.447158	ppm	0.001235	0.28	62934.100000	Y 377.433
Tl (190.794 nm)	0.000670	ppm	0.000454	67.84	-7.733730	Y 377.433
U (409.013 nm)	-0.011355 u	ppm	0.001203	10.59	-249.394000	Y 377.433
V (292.401 nm)	0.069382	ppm	0.000342	0.49	2593.470000	Y 377.433
Zn (206.200 nm)	0.085488	ppm	0.000011	0.01	518.701000	Y 377.433
Zr (343.823 nm)	0.023577	ppm	0.000016	0.07	3178.930000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129238	22056.567224	0.005273	0.47
Y 377.433	1.135162	1124523.901415	0.003461	0.30
Y_R 377.433	1.154620	82168.800000	0.000613	0.05
Y_R 488.368	1.154510	47034.800000	0.001913	0.17
Y_R2 488.368	1.141697	92315.847660	0.002658	0.23

Sample Name: 280-116800-A-2-E MS

Date: 11/14/2018 2:05:16 AM Rack:Tube: 1:83

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051148	ppm	0.000369	0.72	1863.450000	Y 377.433
Al (167.019 nm)	124.490000 o	ppm	0.157303	0.13	67764.600000	Y_R 377.433
Al H (396.152 nm)	186.016362 o	ppm	0.482709	0.26	441237.231915	Y_R 377.433
As (188.980 nm)	1.018640	ppm	0.006306	0.62	1347.300000	Y 242.219
B (249.678 nm)	1.052340	ppm	0.000277	0.03	26329.900000	Y 242.219
Ba (493.408 nm)	4.299250 o	ppm	0.009893	0.23	456970.000000	Y_R 488.368
Be (234.861 nm)	0.054527	ppm	0.000276	0.51	20476.700000	Y_R 488.368
Bi (223.061 nm)	1.832920	ppm	0.008141	0.44	4670.790000	Y 377.433
Ca (315.887 nm)	84.582743 o	ppm	0.145989	0.17	64468.372562	Y_R 377.433
Cd (214.439 nm)	0.090817	ppm	0.000107	0.12	5899.350000	Y 377.433
Co (228.615 nm)	0.517640	ppm	0.002677	0.52	9776.800000	Y 242.219
Cr (205.560 nm)	0.358316	ppm	0.000968	0.27	5497.870000	Y 377.433
Cu (324.754 nm)	0.357133	ppm	0.000131	0.04	19025.500000	Y 377.433
Fe (238.204 nm)	156.592398 o	ppm	0.057820	0.04	552429.920149	Y_R 377.433
Fe H (259.940 nm)	158.428000	ppm	0.227917	0.14	289339.000000	Y_R 377.433
K (766.491 nm)	76.520600	ppm	0.587803	0.77	83044.800000	Y_R2 488.368
Li (670.783 nm)	1.237230	ppm	0.008347	0.67	36839.600000	Y_R2 488.368
Mg (279.078 nm)	116.800000 o	ppm	0.243193	0.21	715406.000000	Y 377.433
Mn (257.610 nm)	3.551860 o	ppm	0.002196	0.06	837175.000000	Y 377.433
Mo (202.032 nm)	0.915842	ppm	0.000344	0.04	8197.630000	Y 377.433
Na (589.592 nm)	67.724100 o	ppm	0.510946	0.75	440215.000000	Y_R2 488.368
Na H (589.593 nm)	71.000829	ppm	0.123431	0.17	249561.259521	Y_R 488.368
Ni (231.604 nm)	0.592653	ppm	0.000055	0.01	4208.580000	Y 377.433
P (213.618 nm)	13.223100 o	ppm	0.009181	0.07	28306.800000	Y 242.219
Pb (220.353 nm)	0.579824	ppm	0.001424	0.25	1702.890000	Y 242.219
S (181.972 nm)	2.536292	ppm	0.015663	0.62	1357.542429	Y 377.433
Sb (206.834 nm)	0.239226	ppm	0.000892	0.37	586.521000	Y 377.433
Se (196.026 nm)	1.870370	ppm	0.000141	0.01	1947.130000	Y 242.219
Si (288.158 nm)	5.609620	ppm	0.002527	0.05	49605.300000	Y 377.433
Sn (189.925 nm)	1.814570	ppm	0.006739	0.37	3748.770000	Y 377.433
Sr (421.552 nm)	1.716343 o	ppm	0.001949	0.11	334073.589697	Y_R 488.368
Th (288.505 nm)	1.048510	ppm	0.001393	0.13	2842.510000	Y 377.433
Ti (336.122 nm)	3.678820 o	ppm	0.002734	0.07	520355.000000	Y 377.433
Tl (190.794 nm)	1.824070	ppm	0.001928	0.11	4122.940000	Y 377.433
U (409.013 nm)	1.866600	ppm	0.001617	0.09	8144.160000	Y 377.433
V (292.401 nm)	0.801902	ppm	0.000379	0.05	29612.500000	Y 377.433
Zn (206.200 nm)	0.857078	ppm	0.000794	0.09	4826.730000	Y 377.433
Zr (343.823 nm)	0.590385	ppm	0.000014	0.00	76609.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109469	21670.425132	0.001037	0.09
Y 377.433	1.111349	1100934.006940	0.000179	0.02
Y_R 377.433	1.167460	83082.700000	0.001210	0.10
Y_R 488.368	1.165390	47477.900000	0.000620	0.05
Y_R2 488.368	1.158819	93700.304909	0.005977	0.52

Sample Name: 280-116800-A-2-F MSD

Date: 11/14/2018 2:08:39 AM Rack:Tube: 1:84

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050690	ppm	0.000059	0.12	1842.180000	Y 377.433
Al (167.019 nm)	117.070000 o	ppm	0.356534	0.30	63731.000000	Y_R 377.433
Al H (396.152 nm)	170.379741 o	ppm	0.417936	0.25	404162.455128	Y_R 377.433
As (188.980 nm)	1.007750	ppm	0.000323	0.03	1332.890000	Y 242.219
B (249.678 nm)	1.030860	ppm	0.000687	0.07	25791.300000	Y 242.219
Ba (493.408 nm)	4.139900 o	ppm	0.011985	0.29	440062.000000	Y_R 488.368
Be (234.861 nm)	0.053852	ppm	0.000073	0.14	20248.500000	Y_R 488.368
Bi (223.061 nm)	1.813470	ppm	0.000539	0.03	4621.480000	Y 377.433
Ca (315.887 nm)	85.505086 o	ppm	0.214252	0.25	65172.028529	Y_R 377.433
Cd (214.439 nm)	0.089123	ppm	0.000412	0.46	5791.570000	Y 377.433
Co (228.615 nm)	0.525678	ppm	0.001699	0.32	9938.710000	Y 242.219
Cr (205.560 nm)	0.411696	ppm	0.000181	0.04	6323.060000	Y 377.433
Cu (324.754 nm)	0.346417	ppm	0.001917	0.55	18432.600000	Y 377.433
Fe (238.204 nm)	155.427202 o	ppm	0.376557	0.24	548319.517498	Y_R 377.433
Fe H (259.940 nm)	157.293000	ppm	0.401788	0.26	287267.000000	Y_R 377.433
K (766.491 nm)	71.819300	ppm	0.249869	0.35	77893.200000	Y_R2 488.368
Li (670.783 nm)	1.254290	ppm	0.005190	0.41	37369.300000	Y_R2 488.368
Mg (279.078 nm)	129.881000 o	ppm	1.003720	0.77	795556.000000	Y 377.433
Mn (257.610 nm)	3.493790 o	ppm	0.007113	0.20	823490.000000	Y 377.433
Mo (202.032 nm)	0.910972	ppm	0.001852	0.20	8154.060000	Y 377.433
Na (589.592 nm)	65.167400 o	ppm	0.339112	0.52	423615.000000	Y_R2 488.368
Na H (589.593 nm)	68.752335	ppm	0.056066	0.08	241734.942665	Y_R 488.368
Ni (231.604 nm)	0.627987	ppm	0.000836	0.13	4458.990000	Y 377.433
P (213.618 nm)	15.184700 o	ppm	0.037041	0.24	32500.900000	Y 242.219
Pb (220.353 nm)	0.600666	ppm	0.001371	0.23	1770.810000	Y 242.219
S (181.972 nm)	2.534011	ppm	0.000588	0.02	1356.203252	Y 377.433
Sb (206.834 nm)	0.259238	ppm	0.001223	0.47	645.709000	Y 377.433
Se (196.026 nm)	1.837050	ppm	0.003510	0.19	1912.310000	Y 242.219
Si (288.158 nm)	5.627760	ppm	0.000452	0.01	49762.500000	Y 377.433
Sn (189.925 nm)	1.786660	ppm	0.002478	0.14	3691.310000	Y 377.433
Sr (421.552 nm)	1.593018 o	ppm	0.005572	0.35	310078.541793	Y_R 488.368
Th (288.505 nm)	1.019480	ppm	0.000614	0.06	2767.400000	Y 377.433
Ti (336.122 nm)	3.991550 o	ppm	0.020725	0.52	564599.000000	Y 377.433
Tl (190.794 nm)	1.805610	ppm	0.005530	0.31	4079.600000	Y 377.433
U (409.013 nm)	1.848600	ppm	0.014508	0.78	8063.970000	Y 377.433
V (292.401 nm)	0.790496	ppm	0.002594	0.33	29185.000000	Y 377.433
Zn (206.200 nm)	0.844713	ppm	0.001354	0.16	4757.700000	Y 377.433
Zr (343.823 nm)	0.578165	ppm	0.001516	0.26	75030.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115055	21779.549119	0.003495	0.31
Y 377.433	1.119518	1109026.836900	0.004418	0.39
Y_R 377.433	1.180050	83978.800000	0.001669	0.14
Y_R 488.368	1.175120	47874.300000	0.001422	0.12
Y_R2 488.368	1.161233	93895.493131	0.001912	0.16

Sample Name: 280-116800-A-2-D PDS

Date: 11/14/2018 2:12:01 AM Rack:Tube: 1:85

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.045616	ppm	0.000128	0.28	1620.810000	Y 377.433
Al (167.019 nm)	107.062000 o	ppm	1.147240	1.07	58306.700000	Y_R 377.433
Al H (396.152 nm)	148.293652 o	ppm	0.638087	0.43	351719.012783	Y_R 377.433
As (188.980 nm)	0.273859	ppm	0.001906	0.70	360.863000	Y 242.219
B (249.678 nm)	0.182433	ppm	0.000714	0.39	4385.640000	Y 242.219
Ba (493.408 nm)	3.326850 o	ppm	0.017989	0.54	353815.000000	Y_R 488.368
Be (234.861 nm)	0.051703	ppm	0.000110	0.21	20366.000000	Y_R 488.368
Bi (223.061 nm)	-0.014924 u	ppm	0.001439	9.64	7.393010	Y 377.433
Ca (315.887 nm)	56.628261 o	ppm	0.201983	0.36	43141.831973	Y_R 377.433
Cd (214.439 nm)	0.043146	ppm	0.000034	0.08	2917.500000	Y 377.433
Co (228.615 nm)	0.105090	ppm	0.000839	0.80	1998.350000	Y 242.219
Cr (205.560 nm)	0.204948	ppm	0.000354	0.17	3123.410000	Y 377.433
Cu (324.754 nm)	0.163960	ppm	0.000236	0.14	8616.400000	Y 377.433
Fe (238.204 nm)	178.592345 o	ppm	0.142054	0.08	630038.008807	Y_R 377.433
Fe H (259.940 nm)	180.680000	ppm	1.137990	0.63	329980.000000	Y_R 377.433
K (766.491 nm)	39.631200	ppm	0.015441	0.04	42622.000000	Y_R2 488.368
Li (670.783 nm)	0.351500	ppm	0.001108	0.32	9339.320000	Y_R2 488.368
Mg (279.078 nm)	87.604800 o	ppm	0.067040	0.08	536518.000000	Y 377.433
Mn (257.610 nm)	3.054620 o	ppm	0.001622	0.05	719990.000000	Y 377.433
Mo (202.032 nm)	0.045943	ppm	0.000155	0.34	413.702000	Y 377.433
Na (589.592 nm)	39.241200 o	ppm	0.110912	0.28	256843.000000	Y_R2 488.368
Na H (589.593 nm)	40.504179	ppm	0.312260	0.77	144445.043996	Y_R 488.368
Ni (231.604 nm)	0.182015	ppm	0.001539	0.85	1296.460000	Y 377.433
P (213.618 nm)	6.132960 o	ppm	0.025304	0.41	13147.700000	Y 242.219
Pb (220.353 nm)	0.209081	ppm	0.000681	0.33	600.762000	Y 242.219
S (181.972 nm)	1.040894	ppm	0.002109	0.20	570.903031	Y 377.433
Sb (206.834 nm)	0.081642	ppm	0.000938	1.15	148.091000	Y 377.433
Se (196.026 nm)	0.180448	ppm	0.000820	0.45	174.425000	Y 242.219
Si (288.158 nm)	7.494430	ppm	0.014675	0.20	65946.600000	Y 377.433
Sn (189.925 nm)	0.103799	ppm	0.001904	1.83	225.899000	Y 377.433
Sr (421.552 nm)	0.728742	ppm	0.003788	0.52	141919.137443	Y_R 488.368
Th (288.505 nm)	0.271767	ppm	0.003524	1.30	830.486000	Y 377.433
Ti (336.122 nm)	2.130510 o	ppm	0.000914	0.04	301228.000000	Y 377.433
Tl (190.794 nm)	0.176967	ppm	0.001260	0.71	382.217000	Y 377.433
U (409.013 nm)	0.377263	ppm	0.000090	0.02	1583.760000	Y 377.433
V (292.401 nm)	0.371642	ppm	0.000017	0.00	13757.600000	Y 377.433
Zn (206.200 nm)	0.593021	ppm	0.001066	0.18	3352.420000	Y 377.433
Zr (343.823 nm)	0.157136	ppm	0.000047	0.03	20798.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.135134	22171.728200	0.002785	0.25
Y 377.433	1.137175	1126518.750712	0.001961	0.17
Y_R 377.433	1.181430	84076.700000	0.005470	0.46
Y_R 488.368	1.181510	48134.500000	0.007906	0.67
Y_R2 488.368	1.180938	95488.813683	0.003394	0.29

Sample Name: 280-116800-A-3-B

Date: 11/14/2018 2:15:23 AM Rack:Tube: 1:86

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000841 u	ppm	0.000126	14.93	-513.357000	Y 377.433
Al (167.019 nm)	112.391000 o	ppm	0.285289	0.25	61220.100000	Y_R 377.433
Al H (396.152 nm)	160.128765 o	ppm	0.322070	0.20	379782.706842	Y_R 377.433
As (188.980 nm)	0.185434	ppm	0.002285	1.23	243.524000	Y 242.219
B (249.678 nm)	0.093129	ppm	0.000521	0.56	2096.820000	Y 242.219
Ba (493.408 nm)	1.201600 o	ppm	0.004914	0.41	128352.000000	Y_R 488.368
Be (234.861 nm)	0.007795	ppm	0.000010	0.13	8385.560000	Y_R 488.368
Bi (223.061 nm)	-0.016096 u	ppm	0.001800	11.18	8.812570	Y 377.433
Ca (315.887 nm)	69.601167 o	ppm	0.399991	0.57	53038.857057	Y_R 377.433
Cd (214.439 nm)	-0.000355 u	ppm	0.000059	16.68	203.563000	Y 377.433
Co (228.615 nm)	0.081598	ppm	0.000408	0.50	1536.450000	Y 242.219
Cr (205.560 nm)	0.231416	ppm	0.000133	0.06	3525.400000	Y 377.433
Cu (324.754 nm)	0.168705	ppm	0.000123	0.07	8895.650000	Y 377.433
Fe (238.204 nm)	205.406127 o	ppm	0.939328	0.46	724627.620719	Y_R 377.433
Fe H (259.940 nm)	208.448000	ppm	0.696656	0.33	380695.000000	Y_R 377.433
K (766.491 nm)	23.214500	ppm	0.107369	0.46	24632.900000	Y_R2 488.368
Li (670.783 nm)	0.327492	ppm	0.002108	0.64	8593.890000	Y_R2 488.368
Mg (279.078 nm)	91.099400 o	ppm	0.143922	0.16	557895.000000	Y 377.433
Mn (257.610 nm)	4.487220 o	ppm	0.010242	0.23	1057610.000000	Y 377.433
Mo (202.032 nm)	0.006061	ppm	0.000125	2.07	56.826600	Y 377.433
Na (589.592 nm)	8.661150	ppm	0.031742	0.37	57864.800000	Y_R2 488.368
Na H (589.593 nm)	8.881647 u	ppm	0.063517	0.72	34470.195737	Y_R 488.368
Ni (231.604 nm)	0.206580	ppm	0.001670	0.81	1471.530000	Y 377.433
P (213.618 nm)	5.584910 o	ppm	0.008738	0.16	11976.000000	Y 242.219
Pb (220.353 nm)	0.176914	ppm	0.000023	0.01	501.255000	Y 242.219
S (181.972 nm)	1.188510	ppm	0.000979	0.08	651.984920	Y 377.433
Sb (206.834 nm)	-0.003300 u	ppm	0.000108	3.26	-94.233900	Y 377.433
Se (196.026 nm)	-0.002483 u	ppm	0.004311	> 100.00	-21.039400	Y 242.219
Si (288.158 nm)	2.110380	ppm	0.005404	0.26	19266.700000	Y 377.433
Sn (189.925 nm)	0.015570	ppm	0.001703	10.94	44.213500	Y 377.433
Sr (421.552 nm)	0.541067	ppm	0.002379	0.44	105403.882956	Y_R 488.368
Th (288.505 nm)	0.085717	ppm	0.003101	3.62	380.341000	Y 377.433
Ti (336.122 nm)	1.522210 o	ppm	0.001009	0.07	215212.000000	Y 377.433
Tl (190.794 nm)	0.001655	ppm	0.000411	24.81	-14.633800	Y 377.433
U (409.013 nm)	-0.080982 u	ppm	0.000413	0.51	-425.590000	Y 377.433
V (292.401 nm)	0.338887	ppm	0.000287	0.08	12535.100000	Y 377.433
Zn (206.200 nm)	0.531286	ppm	0.001206	0.23	3007.730000	Y 377.433
Zr (343.823 nm)	0.086357	ppm	0.000118	0.14	11746.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.146960	22402.714818	0.001755	0.15
Y 377.433	1.153653	1142842.332120	0.001642	0.14
Y_R 377.433	1.195830	85101.300000	0.007237	0.61
Y_R 488.368	1.199520	48868.400000	0.005493	0.46
Y_R2 488.368	1.182252	95595.096633	0.001653	0.14

Sample Name: CCVH-5417909

Date: 11/14/2018 2:18:46 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002256 u	ppm	0.000363	16.10	-775.058000	Y 377.433
Al (167.019 nm)	44.453700 o	ppm	0.035975	0.08	24194.200000	Y_R 377.433
Al H (396.152 nm)	48.508549	ppm	0.191681	0.40	115099.316350	Y_R 377.433
As (188.980 nm)	0.000083 u	ppm	0.001950	> 100.00	-0.468903	Y 242.219
B (249.678 nm)	-0.000097 u	ppm	0.000453	> 100.00	-17.057200	Y 242.219
Ba (493.408 nm)	-0.000467 u	ppm	0.000034	7.37	666.419000	Y_R 488.368
Be (234.861 nm)	0.000044	ppm	0.000026	57.60	1399.800000	Y_R 488.368
Bi (223.061 nm)	0.957264	ppm	0.004528	0.47	2441.520000	Y 377.433
Ca (315.887 nm)	0.002198	ppm	0.002524	> 100.00	-58.299048	Y_R 377.433
Cd (214.439 nm)	-0.000510 u	ppm	0.000011	2.09	36.251400	Y 377.433
Co (228.615 nm)	0.003231	ppm	0.000352	10.91	14.312400	Y 242.219
Cr (205.560 nm)	0.000168	ppm	0.000177	> 100.00	-4.696020	Y 377.433
Cu (324.754 nm)	-0.006513 u	ppm	0.000268	4.12	-401.871000	Y 377.433
Fe (238.204 nm)	48.627531 o	ppm	0.169413	0.35	171567.773654	Y_R 377.433
Fe H (259.940 nm)	48.453600	ppm	0.176734	0.36	88484.400000	Y_R 377.433
K (766.491 nm)	0.109823	ppm	0.010888	9.91	-684.877000	Y_R2 488.368
Li (670.783 nm)	0.007078	ppm	0.001927	27.23	-1354.410000	Y_R2 488.368
Mg (279.078 nm)	-0.010659 u	ppm	0.000019	0.18	-361.126000	Y 377.433
Mn (257.610 nm)	0.001478	ppm	0.000103	6.99	448.189000	Y 377.433
Mo (202.032 nm)	-0.000491 u	ppm	0.000242	49.26	-1.794000	Y 377.433
Na (589.592 nm)	238.581000 o	ppm	1.804940	0.76	1520420.000000	Y_R2 488.368
Na H (589.593 nm)	246.234653	ppm	0.164005	0.07	844897.630154	Y_R 488.368
Ni (231.604 nm)	0.003502	ppm	0.000890	25.43	25.274900	Y 377.433
P (213.618 nm)	-0.009365 u	ppm	0.000238	2.54	15.121200	Y 242.219
Pb (220.353 nm)	-0.002182 u	ppm	0.000986	45.17	14.437600	Y 242.219
S (181.972 nm)	4.873630	ppm	0.006505	0.13	2576.364651	Y 377.433
Sb (206.834 nm)	-0.006455 u	ppm	0.001176	18.22	-93.699700	Y 377.433
Se (196.026 nm)	-0.003353 u	ppm	0.001397	41.67	3.887050	Y 242.219
Si (288.158 nm)	0.012568	ppm	0.000819	6.52	1078.700000	Y 377.433
Sn (189.925 nm)	-0.000889 u	ppm	0.000816	91.86	10.322300	Y 377.433
Sr (421.552 nm)	0.000564	ppm	0.000176	31.22	240.013873	Y_R 488.368
Th (288.505 nm)	4.880370	ppm	0.001166	0.02	12559.200000	Y 377.433
Ti (336.122 nm)	0.001874	ppm	0.000021	1.13	-85.991500	Y 377.433
Tl (190.794 nm)	-0.002735 u	ppm	0.001544	56.45	-13.773800	Y 377.433
U (409.013 nm)	9.784250	ppm	0.001040	0.01	43291.100000	Y 377.433
V (292.401 nm)	0.002459	ppm	0.000086	3.50	-37.671500	Y 377.433
Zn (206.200 nm)	-0.006668 u	ppm	0.000164	2.46	4.166220	Y 377.433
Zr (343.823 nm)	-0.004528 u	ppm	0.000144	3.17	-417.881000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086936	21230.321312	0.001721	0.16
Y 377.433	1.088116	1077919.378125	0.000404	0.04
Y_R 377.433	1.132540	80597.200000	0.000970	0.09
Y_R 488.368	1.135750	46270.200000	0.002091	0.18
Y_R2 488.368	1.112665	89968.336628	0.004402	0.40

Sample Name: CCV-5416701

Date: 11/14/2018 2:22:09 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.480229	ppm	0.000523	0.11	21648.300000	Y 377.433
Al (167.019 nm)	0.499906	ppm	0.000287	0.06	275.084000	Y_R 377.433
Al H (396.152 nm)	0.486888 u	ppm	0.003009	0.62	1277.240893	Y_R 377.433
As (188.980 nm)	0.970917	ppm	0.001356	0.14	1285.530000	Y 242.219
B (249.678 nm)	0.488116	ppm	0.000913	0.19	12360.600000	Y 242.219
Ba (493.408 nm)	0.486097	ppm	0.001139	0.23	52261.100000	Y_R 488.368
Be (234.861 nm)	0.487174	ppm	0.000624	0.13	141879.000000	Y_R 488.368
Bi (223.061 nm)	-0.004671 u	ppm	0.001806	38.67	4.475170	Y 377.433
Ca (315.887 nm)	4.920729	ppm	0.018131	0.37	3694.315643	Y_R 377.433
Cd (214.439 nm)	0.483430	ppm	0.000816	0.17	30481.200000	Y 377.433
Co (228.615 nm)	0.490520	ppm	0.001308	0.27	9152.830000	Y 242.219
Cr (205.560 nm)	0.483578	ppm	0.000110	0.02	7473.180000	Y 377.433
Cu (324.754 nm)	0.485258	ppm	0.000825	0.17	25751.200000	Y 377.433
Fe (238.204 nm)	2.463043	ppm	0.014113	0.57	8715.667620	Y_R 377.433
Fe H (259.940 nm)	2.474610 u	ppm	0.007237	0.29	4509.580000	Y_R 377.433
K (766.491 nm)	48.797400	ppm	0.099106	0.20	52666.200000	Y_R2 488.368
Li (670.783 nm)	0.975377	ppm	0.000225	0.02	28709.600000	Y_R2 488.368
Mg (279.078 nm)	19.296100	ppm	0.016428	0.09	118295.000000	Y 377.433
Mn (257.610 nm)	0.486628	ppm	0.000651	0.13	114785.000000	Y 377.433
Mo (202.032 nm)	0.486274	ppm	0.000184	0.04	4353.820000	Y 377.433
Na (589.592 nm)	4.933890	ppm	0.023015	0.47	32721.500000	Y_R2 488.368
Na H (589.593 nm)	5.084592 u	ppm	0.003019	0.06	20861.432371	Y_R 488.368
Ni (231.604 nm)	0.487141	ppm	0.002977	0.61	3453.030000	Y 377.433
P (213.618 nm)	0.953696	ppm	0.007280	0.76	2074.190000	Y 242.219
Pb (220.353 nm)	0.980732	ppm	0.003067	0.31	2956.070000	Y 242.219
S (181.972 nm)	0.012534	ppm	0.004686	37.39	24.430700	Y 377.433
Sb (206.834 nm)	0.970173	ppm	0.001480	0.15	2692.900000	Y 377.433
Se (196.026 nm)	0.973585	ppm	0.004338	0.45	1034.430000	Y 242.219
Si (288.158 nm)	4.873470	ppm	0.003143	0.06	43222.800000	Y 377.433
Sn (189.925 nm)	0.960741	ppm	0.003010	0.31	1990.540000	Y 377.433
Sr (421.552 nm)	0.489161	ppm	0.001260	0.26	95304.779207	Y_R 488.368
Th (288.505 nm)	0.000446	ppm	0.000196	44.04	89.543400	Y 377.433
Ti (336.122 nm)	0.487115	ppm	0.000600	0.12	68576.100000	Y 377.433
Tl (190.794 nm)	0.974113	ppm	0.001844	0.19	2208.690000	Y 377.433
U (409.013 nm)	0.008797	ppm	0.002279	25.90	-226.893000	Y 377.433
V (292.401 nm)	0.484824	ppm	0.000610	0.13	17820.300000	Y 377.433
Zn (206.200 nm)	0.481091	ppm	0.003800	0.79	2727.480000	Y 377.433
Zr (343.823 nm)	0.488603	ppm	0.000005	0.00	63047.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.107643	21634.760583	0.000227	0.02
Y 377.433	1.117017	1106549.730524	0.001050	0.09
Y_R 377.433	1.148560	81737.400000	0.001393	0.12
Y_R 488.368	1.149530	46831.700000	0.001351	0.12
Y_R2 488.368	1.131518	91492.760433	0.000451	0.04

Sample Name: CCB

Date: 11/14/2018 2:25:31 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000584 u	ppm	0.000210	35.95	-463.481000	Y 377.433
Al (167.019 nm)	0.000038 u	ppm	0.001239	> 100.00	1.802160	Y_R 377.433
Al H (396.152 nm)	-0.023999 u	ppm	0.003688	15.37	27.421395	Y_R 377.433
As (188.980 nm)	0.000142 u	ppm	0.001376	> 100.00	0.057086	Y 242.219
B (249.678 nm)	0.001387	ppm	0.000098	7.03	93.310300	Y 242.219
Ba (493.408 nm)	-0.000483 u	ppm	0.000330	68.32	623.691000	Y_R 488.368
Be (234.861 nm)	0.000152	ppm	0.000023	15.17	-40.325400	Y_R 488.368
Bi (223.061 nm)	0.003062	ppm	0.001561	50.98	23.604700	Y 377.433
Ca (315.887 nm)	0.002521 u	ppm	0.003779	> 100.00	-58.053040	Y_R 377.433
Cd (214.439 nm)	-0.000106 u	ppm	0.000015	13.94	12.889000	Y 377.433
Co (228.615 nm)	0.000401	ppm	0.000060	14.91	-38.689400	Y 242.219
Cr (205.560 nm)	0.000033 u	ppm	0.000090	> 100.00	6.691860	Y 377.433
Cu (324.754 nm)	-0.000153 u	ppm	0.000106	69.35	-376.041000	Y 377.433
Fe (238.204 nm)	-0.002487 u	ppm	0.001477	59.36	18.142814	Y_R 377.433
Fe H (259.940 nm)	0.010067 u	ppm	0.000186	1.85	8.412750	Y_R 377.433
K (766.491 nm)	0.024993	ppm	0.012040	48.17	-777.832000	Y_R2 488.368
Li (670.783 nm)	0.003982	ppm	0.001024	25.71	-1450.550000	Y_R2 488.368
Mg (279.078 nm)	0.002472	ppm	0.000757	30.61	81.152700	Y 377.433
Mn (257.610 nm)	-0.000068 u	ppm	0.000006	8.87	83.772900	Y 377.433
Mo (202.032 nm)	-0.000337 u	ppm	0.000148	44.06	-0.415774	Y 377.433
Na (589.592 nm)	0.006414	ppm	0.008565	> 100.00	377.501000	Y_R2 488.368
Na H (589.593 nm)	-0.213960 u	ppm	0.025996	12.15	2319.789422	Y_R 488.368
Ni (231.604 nm)	-0.000225 u	ppm	0.000208	92.52	-3.204300	Y 377.433
P (213.618 nm)	-0.003300 u	ppm	0.000224	6.78	28.087900	Y 242.219
Pb (220.353 nm)	0.001196	ppm	0.001421	> 100.00	7.794070	Y 242.219
S (181.972 nm)	0.007060	ppm	0.005075	71.89	20.349351	Y 377.433
Sb (206.834 nm)	0.001424	ppm	0.000118	8.28	-26.810000	Y 377.433
Se (196.026 nm)	-0.002070 u	ppm	0.000499	24.10	14.341000	Y 242.219
Si (288.158 nm)	-0.006953 u	ppm	0.000031	0.45	909.449000	Y 377.433
Sn (189.925 nm)	-0.002174 u	ppm	0.000392	18.03	7.675850	Y 377.433
Sr (421.552 nm)	0.000045 u	ppm	0.000089	> 100.00	138.990741	Y_R 488.368
Th (288.505 nm)	0.000077 u	ppm	0.003219	> 100.00	73.583000	Y 377.433
Ti (336.122 nm)	0.000192	ppm	0.000060	31.01	-324.129000	Y 377.433
Tl (190.794 nm)	-0.000472 u	ppm	0.000732	> 100.00	-7.309330	Y 377.433
U (409.013 nm)	0.006267	ppm	0.000324	5.17	-202.615000	Y 377.433
V (292.401 nm)	0.000040 u	ppm	0.000147	> 100.00	29.242600	Y 377.433
Zn (206.200 nm)	-0.007770 u	ppm	0.000043	0.55	-1.984020	Y 377.433
Zr (343.823 nm)	-0.000021 u	ppm	0.000038	> 100.00	25.993500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099196	21469.773331	0.003128	0.28
Y 377.433	1.108888	1098496.421670	0.000805	0.07
Y_R 377.433	1.131280	80508.100000	0.003809	0.34
Y_R 488.368	1.129690	46023.300000	0.004307	0.38
Y_R2 488.368	1.115703	90213.978242	0.008388	0.75

Sample Name: CCVL-5425098

Date: 11/14/2018 2:28:53 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008993	ppm	0.000037	0.41	-22.785300	Y 377.433
Al (167.019 nm)	0.092291	ppm	0.000818	0.89	52.006400	Y_R 377.433
Al H (396.152 nm)	0.076846 u	ppm	0.003204	4.17	267.952804	Y_R 377.433
As (188.980 nm)	0.013445	ppm	0.000325	2.42	17.672500	Y 242.219
B (249.678 nm)	0.093603	ppm	0.000095	0.10	2414.360000	Y 242.219
Ba (493.408 nm)	0.009394	ppm	0.000298	3.17	1671.660000	Y_R 488.368
Be (234.861 nm)	0.001028	ppm	0.000002	0.23	217.252000	Y_R 488.368
Bi (223.061 nm)	0.093408	ppm	0.000659	0.71	251.802000	Y 377.433
Ca (315.887 nm)	0.202407	ppm	0.001004	0.50	94.442589	Y_R 377.433
Cd (214.439 nm)	0.004640	ppm	0.000021	0.45	312.014000	Y 377.433
Co (228.615 nm)	0.010137	ppm	0.000102	1.00	143.876000	Y 242.219
Cr (205.560 nm)	0.009693	ppm	0.000020	0.21	155.900000	Y 377.433
Cu (324.754 nm)	0.014682	ppm	0.000393	2.68	420.913000	Y 377.433
Fe (238.204 nm)	0.096598	ppm	0.000909	0.94	367.679672	Y_R 377.433
Fe H (259.940 nm)	0.107482 u	ppm	0.002314	2.15	186.329000	Y_R 377.433
K (766.491 nm)	3.061090	ppm	0.052756	1.72	2549.080000	Y_R2 488.368
Li (670.783 nm)	0.025311	ppm	0.002420	9.56	-788.303000	Y_R2 488.368
Mg (279.078 nm)	0.189975	ppm	0.001296	0.68	1229.090000	Y 377.433
Mn (257.610 nm)	0.009722	ppm	0.000016	0.17	2391.100000	Y 377.433
Mo (202.032 nm)	0.017526	ppm	0.000361	2.06	159.418000	Y 377.433
Na (589.592 nm)	1.026730	ppm	0.004374	0.43	6897.490000	Y_R2 488.368
Na H (589.593 nm)	0.759461 u	ppm	0.013961	1.84	5656.419311	Y_R 488.368
Ni (231.604 nm)	0.038717	ppm	0.000080	0.21	272.872000	Y 377.433
P (213.618 nm)	2.731270 o	ppm	0.001683	0.06	5874.740000	Y 242.219
Pb (220.353 nm)	0.009412	ppm	0.000314	3.34	32.516300	Y 242.219
S (181.972 nm)	0.086616	ppm	0.003998	4.62	62.157643	Y 377.433
Sb (206.834 nm)	0.019151	ppm	0.000915	4.78	22.869400	Y 377.433
Se (196.026 nm)	0.015946	ppm	0.003257	20.42	33.168100	Y 242.219
Si (288.158 nm)	0.452244	ppm	0.006830	1.51	4890.690000	Y 377.433
Sn (189.925 nm)	0.089331	ppm	0.001062	1.19	196.106000	Y 377.433
Sr (421.552 nm)	0.009792	ppm	0.000321	3.28	2035.469303	Y_R 488.368
Th (288.505 nm)	0.013217	ppm	0.003944	29.84	107.733000	Y 377.433
Ti (336.122 nm)	0.009477	ppm	0.000133	1.40	989.992000	Y 377.433
Tl (190.794 nm)	0.015002	ppm	0.001430	9.53	27.846700	Y 377.433
U (409.013 nm)	0.065043	ppm	0.001607	2.47	57.572200	Y 377.433
V (292.401 nm)	0.009119	ppm	0.000209	2.29	360.596000	Y 377.433
Zn (206.200 nm)	0.012299 Q	ppm	0.000370	3.01	110.065000 Q	Y 377.433
Zr (343.823 nm)	0.014135	ppm	0.000089	0.63	1851.790000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113680	21752.681052	0.000064	0.01
Y 377.433	1.123574	1113044.723579	0.001454	0.13
Y_R 377.433	1.135740	80825.300000	0.000856	0.08
Y_R 488.368	1.129450	46013.800000	0.003545	0.31
Y_R2 488.368	1.134760	91754.909748	0.005410	0.48

Sample Name: MB 280-436764/1-D

Date: 11/14/2018 2:32:16 AM Rack:Tube: 1:87

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000410 u	ppm	0.000175	42.54	-455.505000	Y 377.433
Al (167.019 nm)	0.002812	ppm	0.001473	52.37	3.312210	Y_R 377.433
Al H (396.152 nm)	-0.027028 u	ppm	0.007401	27.38	20.237448	Y_R 377.433
As (188.980 nm)	-0.000345 u	ppm	0.001695	> 100.00	-0.587925	Y 242.219
B (249.678 nm)	0.000606	ppm	0.000075	12.40	73.644600	Y 242.219
Ba (493.408 nm)	-0.001201 u	ppm	0.000056	4.68	547.493000	Y_R 488.368
Be (234.861 nm)	0.000159	ppm	0.000014	8.65	-38.007200	Y_R 488.368
Bi (223.061 nm)	-0.000076 u	ppm	0.000684	> 100.00	15.678700	Y 377.433
Ca (315.887 nm)	0.019472	ppm	0.000587	3.02	-45.121305	Y_R 377.433
Cd (214.439 nm)	-0.000234 u	ppm	0.000085	36.28	4.838020	Y 377.433
Co (228.615 nm)	0.000609	ppm	0.000117	19.17	-34.775400	Y 242.219
Cr (205.560 nm)	0.000160	ppm	0.000061	38.31	8.642410	Y 377.433
Cu (324.754 nm)	0.000083	ppm	0.000068	81.73	-363.393000	Y 377.433
Fe (238.204 nm)	0.001152	ppm	0.001130	98.06	30.982541	Y_R 377.433
Fe H (259.940 nm)	0.014183 u	ppm	0.000585	4.12	15.930700	Y_R 377.433
K (766.491 nm)	0.146274	ppm	0.059796	40.88	-644.934000	Y_R2 488.368
Li (670.783 nm)	0.005978	ppm	0.000783	13.10	-1388.560000	Y_R2 488.368
Mg (279.078 nm)	-0.000001 u	ppm	0.000308	> 100.00	66.114200	Y 377.433
Mn (257.610 nm)	0.000538	ppm	0.000000	0.02	226.523000	Y 377.433
Mo (202.032 nm)	-0.000365 u	ppm	0.000242	66.22	-0.670040	Y 377.433
Na (589.592 nm)	0.019804	ppm	0.000968	4.89	461.284000	Y_R2 488.368
Na H (589.593 nm)	-0.350987 u	ppm	0.019459	5.54	1850.621612	Y_R 488.368
Ni (231.604 nm)	0.000616 u	ppm	0.000923	> 100.00	2.758010	Y 377.433
P (213.618 nm)	-0.005307 u	ppm	0.000205	3.87	23.796600	Y 242.219
Pb (220.353 nm)	0.001267	ppm	0.000955	75.40	8.000960	Y 242.219
S (181.972 nm)	0.013042	ppm	0.003584	27.48	23.492357	Y 377.433
Sb (206.834 nm)	0.002592	ppm	0.001727	66.61	-23.533000	Y 377.433
Se (196.026 nm)	-0.003697 u	ppm	0.001690	45.71	12.640000	Y 242.219
Si (288.158 nm)	-0.009333 u	ppm	0.000285	3.06	888.817000	Y 377.433
Sn (189.925 nm)	-0.001543 u	ppm	0.000273	17.70	8.974180	Y 377.433
Sr (421.552 nm)	0.000110	ppm	0.000049	45.02	151.628013	Y_R 488.368
Th (288.505 nm)	-0.000149 u	ppm	0.000712	> 100.00	72.945900	Y 377.433
Ti (336.122 nm)	0.000769	ppm	0.000148	19.24	-242.574000	Y 377.433
Tl (190.794 nm)	0.000549	ppm	0.000285	51.86	-4.985770	Y 377.433
U (409.013 nm)	0.009581	ppm	0.000994	10.38	-187.868000	Y 377.433
V (292.401 nm)	-0.000210 u	ppm	0.000142	67.74	20.147100	Y 377.433
Zn (206.200 nm)	-0.005624 u	ppm	0.000288	5.11	9.995510	Y 377.433
Zr (343.823 nm)	-0.000117 u	ppm	0.000136	> 100.00	13.584100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.123859	21951.499917	0.001994	0.18
Y 377.433	1.134557	1123924.490389	0.001379	0.12
Y_R 377.433	1.165870	82969.600000	0.005219	0.45
Y_R 488.368	1.170030	47667.100000	0.005948	0.51
Y_R2 488.368	1.147079	92750.990014	0.002496	0.22

Sample Name: LCS 280-436764/2-D

Date: 11/14/2018 2:35:38 AM Rack:Tube: 1:88

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052032	ppm	0.000154	0.30	1931.100000	Y 377.433
Al (167.019 nm)	1.921350	ppm	0.026614	1.39	1046.690000	Y_R 377.433
Al H (396.152 nm)	1.966462	ppm	0.010168	0.52	4841.662708	Y_R 377.433
As (188.980 nm)	0.985174	ppm	0.003511	0.36	1304.430000	Y 242.219
B (249.678 nm)	1.023680	ppm	0.001674	0.16	25840.700000	Y 242.219
Ba (493.408 nm)	1.964520 o	ppm	0.006546	0.33	209117.000000	Y_R 488.368
Be (234.861 nm)	0.049796	ppm	0.000145	0.29	14395.200000	Y_R 488.368
Bi (223.061 nm)	1.875730	ppm	0.003038	0.16	4753.450000	Y 377.433
Ca (315.887 nm)	48.792007 o	ppm	0.184893	0.38	37163.567917	Y_R 377.433
Cd (214.439 nm)	0.095203	ppm	0.000054	0.06	6019.340000	Y 377.433
Co (228.615 nm)	0.477040	ppm	0.001327	0.28	8918.760000	Y 242.219
Cr (205.560 nm)	0.194262	ppm	0.000137	0.07	3005.570000	Y 377.433
Cu (324.754 nm)	0.239858	ppm	0.000261	0.11	12565.200000	Y 377.433
Fe (238.204 nm)	0.984123	ppm	0.000157	0.02	3498.556066	Y_R 377.433
Fe H (259.940 nm)	0.984453 u	ppm	0.000600	0.06	1788.010000	Y_R 377.433
K (766.491 nm)	49.779300	ppm	0.031739	0.06	53742.100000	Y_R2 488.368
Li (670.783 nm)	0.983675	ppm	0.002980	0.30	28967.300000	Y_R2 488.368
Mg (279.078 nm)	48.314800 o	ppm	0.032848	0.07	296049.000000	Y 377.433
Mn (257.610 nm)	0.485584	ppm	0.000161	0.03	114539.000000	Y 377.433
Mo (202.032 nm)	0.996221	ppm	0.000428	0.04	8916.870000	Y 377.433
Na (589.592 nm)	48.779600 o	ppm	0.047022	0.10	314960.000000	Y_R2 488.368
Na H (589.593 nm)	50.659057	ppm	0.097889	0.19	177969.818979	Y_R 488.368
Ni (231.604 nm)	0.467664	ppm	0.001908	0.41	3316.100000	Y 377.433
P (213.618 nm)	10.459600 o	ppm	0.008412	0.08	22398.400000	Y 242.219
Pb (220.353 nm)	0.490940	ppm	0.002473	0.50	1483.440000	Y 242.219
S (181.972 nm)	1.942721	ppm	0.001456	0.07	1038.198192	Y 377.433
Sb (206.834 nm)	0.499707	ppm	0.002024	0.41	1360.500000	Y 377.433
Se (196.026 nm)	2.010210	ppm	0.004112	0.20	2118.650000	Y 242.219
Si (288.158 nm)	9.935150	ppm	0.023391	0.24	87107.700000	Y 377.433
Sn (189.925 nm)	1.935050	ppm	0.001215	0.06	3996.870000	Y 377.433
Sr (421.552 nm)	0.989246	ppm	0.003232	0.33	192604.657648	Y_R 488.368
Th (288.505 nm)	0.991191	ppm	0.002005	0.20	2635.420000	Y 377.433
Ti (336.122 nm)	0.988871	ppm	0.000459	0.05	139697.000000	Y 377.433
Tl (190.794 nm)	1.945580	ppm	0.002168	0.11	4415.500000	Y 377.433
U (409.013 nm)	2.016500	ppm	0.004240	0.21	8684.910000	Y 377.433
V (292.401 nm)	0.495789	ppm	0.000599	0.12	18265.000000	Y 377.433
Zn (206.200 nm)	0.476592	ppm	0.001338	0.28	2702.360000	Y 377.433
Zr (343.823 nm)	0.490563	ppm	0.000108	0.02	63296.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093286	21354.337494	0.004138	0.38
Y 377.433	1.105929	1095565.051106	0.003639	0.33
Y_R 377.433	1.147200	81640.700000	0.001895	0.17
Y_R 488.368	1.145330	46660.800000	0.000063	0.01
Y_R2 488.368	1.132657	91584.884310	0.009123	0.81

Sample Name: 280-116575-D-1-D

Date: 11/14/2018 2:39:01 AM Rack:Tube: 1:89

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000116 u	ppm	0.000302	> 100.00	-432.304000	Y 377.433
Al (167.019 nm)	0.003812	ppm	0.000132	3.46	3.855420	Y_R 377.433
Al H (396.152 nm)	0.016130 u	ppm	0.005744	35.61	183.631540	Y_R 377.433
As (188.980 nm)	0.003441	ppm	0.001786	51.89	4.426480	Y 242.219
B (249.678 nm)	0.245765	ppm	0.000476	0.19	6243.560000	Y 242.219
Ba (493.408 nm)	0.225909	ppm	0.001213	0.54	24675.200000	Y_R 488.368
Be (234.861 nm)	0.000164	ppm	0.000009	5.53	-36.746700	Y_R 488.368
Bi (223.061 nm)	-0.000362 u	ppm	0.002211	> 100.00	14.956700	Y 377.433
Ca (315.887 nm)	148.024383 o	ppm	0.675852	0.46	112868.041917	Y_R 377.433
Cd (214.439 nm)	-0.000210 u	ppm	0.000050	23.92	6.345670	Y 377.433
Co (228.615 nm)	0.000657	ppm	0.000339	51.64	-33.891800	Y 242.219
Cr (205.560 nm)	0.000332	ppm	0.000012	3.51	11.296400	Y 377.433
Cu (324.754 nm)	0.012595	ppm	0.000362	2.88	222.309000	Y 377.433
Fe (238.204 nm)	0.000762	ppm	0.000200	26.21	29.604454	Y_R 377.433
Fe H (259.940 nm)	0.012148 u	ppm	0.000546	4.50	12.214000	Y_R 377.433
K (766.491 nm)	9.665920	ppm	0.045293	0.47	9786.540000	Y_R2 488.368
Li (670.783 nm)	0.047380	ppm	0.001556	3.28	-103.110000	Y_R2 488.368
Mg (279.078 nm)	22.114200	ppm	0.021676	0.10	135566.000000	Y 377.433
Mn (257.610 nm)	0.001204	ppm	0.000015	1.26	383.497000	Y 377.433
Mo (202.032 nm)	0.002798	ppm	0.000709	25.34	27.629100	Y 377.433
Na (589.592 nm)	132.097000 o	ppm	0.212330	0.16	842420.000000	Y_R2 488.368
Na H (589.593 nm)	136.581743	ppm	0.448568	0.33	470207.254042	Y_R 488.368
Ni (231.604 nm)	0.000768	ppm	0.000318	41.47	3.833830	Y 377.433
P (213.618 nm)	0.167399	ppm	0.002156	1.29	393.052000	Y 242.219
Pb (220.353 nm)	0.000372	ppm	0.000141	37.86	5.297100	Y 242.219
S (181.972 nm)	77.991727 o	ppm	0.055812	0.07	40979.323572	Y 377.433
Sb (206.834 nm)	0.000539 u	ppm	0.001141	> 100.00	-29.306800	Y 377.433
Se (196.026 nm)	0.003314	ppm	0.000698	21.06	19.971000	Y 242.219
Si (288.158 nm)	12.438300 o	ppm	0.018291	0.15	108810.000000	Y 377.433
Sn (189.925 nm)	-0.001464 u	ppm	0.001218	83.23	9.137370	Y 377.433
Sr (421.552 nm)	1.182742 o	ppm	0.008357	0.71	230252.549523	Y_R 488.368
Th (288.505 nm)	-0.001962 u	ppm	0.000405	20.65	68.768200	Y 377.433
Ti (336.122 nm)	0.000437	ppm	0.000097	22.24	172.041000	Y 377.433
Tl (190.794 nm)	0.003762	ppm	0.000691	18.37	2.318130	Y 377.433
U (409.013 nm)	0.016695	ppm	0.000188	1.13	-183.948000	Y 377.433
V (292.401 nm)	0.003913	ppm	0.000222	5.67	171.877000	Y 377.433
Zn (206.200 nm)	0.009732	ppm	0.000613	6.30	95.734800	Y 377.433
Zr (343.823 nm)	-0.000058 u	ppm	0.000075	> 100.00	21.158100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087453	21240.416946	0.000277	0.03
Y 377.433	1.102116	1091788.150502	0.001683	0.15
Y_R 377.433	1.146900	81619.500000	0.002170	0.19
Y_R 488.368	1.141960	46523.200000	0.002458	0.22
Y_R2 488.368	1.121127	90652.556662	0.001746	0.16

Sample Name: 280-116663-F-1-B

Date: 11/14/2018 2:42:24 AM
Rack:Tube: 1:90

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000215	ppm	0.000047	21.73	-427.433000	Y 377.433
Al (167.019 nm)	0.004946	ppm	0.003206	64.83	4.495240	Y_R 377.433
Al H (396.152 nm)	0.017224 u	ppm	0.003884	22.55	192.630731	Y_R 377.433
As (188.980 nm)	0.000942	ppm	0.000621	65.95	1.116950	Y 242.219
B (249.678 nm)	0.291793	ppm	0.000164	0.06	7401.870000	Y 242.219
Ba (493.408 nm)	0.072272	ppm	0.000585	0.81	8377.550000	Y_R 488.368
Be (234.861 nm)	0.000150	ppm	0.000013	8.97	-40.210100	Y_R 488.368
Bi (223.061 nm)	-0.002486 u	ppm	0.001504	60.52	9.599470	Y 377.433
Ca (315.887 nm)	162.907218 o	ppm	0.923351	0.57	124222.178413	Y_R 377.433
Cd (214.439 nm)	-0.000180 u	ppm	0.000014	7.77	8.233870	Y 377.433
Co (228.615 nm)	0.000651	ppm	0.000092	14.17	-34.008000	Y 242.219
Cr (205.560 nm)	0.000438	ppm	0.000067	15.26	12.910700	Y 377.433
Cu (324.754 nm)	0.000478	ppm	0.000124	25.81	-436.709000	Y 377.433
Fe (238.204 nm)	0.036889	ppm	0.001335	3.62	157.049196	Y_R 377.433
Fe H (259.940 nm)	0.047649 u	ppm	0.000689	1.45	77.053200	Y_R 377.433
K (766.491 nm)	7.914340	ppm	0.075465	0.95	7867.190000	Y_R2 488.368
Li (670.783 nm)	0.052998	ppm	0.001848	3.49	71.334900	Y_R2 488.368
Mg (279.078 nm)	32.259400	ppm	0.012902	0.04	197729.000000	Y 377.433
Mn (257.610 nm)	0.118817	ppm	0.000106	0.09	28101.700000	Y 377.433
Mo (202.032 nm)	0.007241	ppm	0.000306	4.23	67.385400	Y 377.433
Na (589.592 nm)	210.703000 o	ppm	0.798123	0.38	1342940.000000	Y_R2 488.368
Na H (589.593 nm)	221.316289	ppm	1.441287	0.65	759770.016592	Y_R 488.368
Ni (231.604 nm)	0.000926	ppm	0.000772	83.37	4.952840	Y 377.433
P (213.618 nm)	0.242128	ppm	0.004434	1.83	552.827000	Y 242.219
Pb (220.353 nm)	0.000053 u	ppm	0.001322	> 100.00	4.318150	Y 242.219
S (181.972 nm)	147.918539 bo	ppm	0.055965	0.04	77706.453438	Y 377.433
Sb (206.834 nm)	-0.001093 u	ppm	0.000414	37.83	-33.911600	Y 377.433
Se (196.026 nm)	0.004331	ppm	0.000287	6.62	21.127400	Y 242.219
Si (288.158 nm)	5.729460	ppm	0.005677	0.10	50644.200000	Y 377.433
Sn (189.925 nm)	-0.002043 u	ppm	0.001359	66.54	7.945250	Y 377.433
Sr (421.552 nm)	2.209521 o	ppm	0.011063	0.50	430029.484757	Y_R 488.368
Th (288.505 nm)	-0.001128 u	ppm	0.000862	76.38	73.106000	Y 377.433
Ti (336.122 nm)	0.000384	ppm	0.000005	1.40	210.634000	Y 377.433
Tl (190.794 nm)	0.001431	ppm	0.001391	97.21	-2.998290	Y 377.433
U (409.013 nm)	0.014709	ppm	0.003421	23.26	-195.497000	Y 377.433
V (292.401 nm)	0.001360	ppm	0.000311	22.90	78.248200	Y 377.433
Zn (206.200 nm)	0.001712	ppm	0.000152	8.90	50.955500	Y 377.433
Zr (343.823 nm)	-0.000140 u	ppm	0.000032	23.11	10.672500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068482	20869.872216	0.000571	0.05
Y 377.433	1.081880	1071741.923214	0.000987	0.09
Y_R 377.433	1.132380	80586.300000	0.008846	0.78
Y_R 488.368	1.121690	45697.500000	0.012799	1.14
Y_R2 488.368	1.118803	90464.632813	0.003122	0.28

Sample Name: 280-116663-F-2-B

Date: 11/14/2018 2:45:46 AM Rack:Tube: 2:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000274	ppm	0.000023	8.42	-424.692000	Y 377.433
Al (167.019 nm)	0.001106	ppm	0.000092	8.35	2.398020	Y_R 377.433
Al H (396.152 nm)	0.020168 u	ppm	0.007520	37.29	200.328639	Y_R 377.433
As (188.980 nm)	0.002223	ppm	0.001102	49.59	2.813130	Y 242.219
B (249.678 nm)	0.258962	ppm	0.000587	0.23	6575.670000	Y 242.219
Ba (493.408 nm)	0.056742	ppm	0.000429	0.76	6730.280000	Y_R 488.368
Be (234.861 nm)	0.000167	ppm	0.000011	6.29	-35.367100	Y_R 488.368
Bi (223.061 nm)	-0.002786 u	ppm	0.001822	65.40	8.838000	Y 377.433
Ca (315.887 nm)	165.261765 o	ppm	0.993345	0.60	126018.465471	Y_R 377.433
Cd (214.439 nm)	-0.000156 u	ppm	0.000047	29.82	9.747730	Y 377.433
Co (228.615 nm)	0.000904	ppm	0.000232	25.65	-29.271200	Y 242.219
Cr (205.560 nm)	0.000277	ppm	0.000208	75.20	10.442500	Y 377.433
Cu (324.754 nm)	0.000514	ppm	0.000289	56.34	-436.561000	Y 377.433
Fe (238.204 nm)	0.021503	ppm	0.000125	0.58	102.772131	Y_R 377.433
Fe H (259.940 nm)	0.033322 u	ppm	0.001655	4.97	50.886700	Y_R 377.433
K (766.491 nm)	7.595530	ppm	0.022534	0.30	7517.840000	Y_R2 488.368
Li (670.783 nm)	0.052213	ppm	0.001798	3.44	46.960400	Y_R2 488.368
Mg (279.078 nm)	32.357800	ppm	0.027435	0.08	198332.000000	Y 377.433
Mn (257.610 nm)	0.073130	ppm	0.000078	0.11	17334.500000	Y 377.433
Mo (202.032 nm)	0.004057	ppm	0.000192	4.72	38.896000	Y 377.433
Na (589.592 nm)	197.796000 o	ppm	0.667239	0.34	1260680.000000	Y_R2 488.368
Na H (589.593 nm)	206.262047	ppm	0.529806	0.26	708287.702920	Y_R 488.368
Ni (231.604 nm)	0.001371	ppm	0.001336	97.42	8.111210	Y 377.433
P (213.618 nm)	0.113360	ppm	0.000601	0.53	277.514000	Y 242.219
Pb (220.353 nm)	-0.000280 u	ppm	0.002265	> 100.00	3.334680	Y 242.219
S (181.972 nm)	152.513481 bo	ppm	0.323004	0.21	80119.687651	Y 377.433
Sb (206.834 nm)	-0.001286 u	ppm	0.001897	> 100.00	-34.436600	Y 377.433
Se (196.026 nm)	0.000524 u	ppm	0.006087	> 100.00	17.111400	Y 242.219
Si (288.158 nm)	5.312380	ppm	0.010652	0.20	47028.200000	Y 377.433
Sn (189.925 nm)	-0.001157 u	ppm	0.000914	78.98	9.768890	Y 377.433
Sr (421.552 nm)	2.256251 o	ppm	0.013591	0.60	439121.737706	Y_R 488.368
Th (288.505 nm)	-0.000020 u	ppm	0.005932	> 100.00	75.023000	Y 377.433
Ti (336.122 nm)	0.000475	ppm	0.000103	21.75	230.716000	Y 377.433
Tl (190.794 nm)	0.002372	ppm	0.000747	31.48	-0.849053	Y 377.433
U (409.013 nm)	0.018891	ppm	0.004408	23.33	-177.352000	Y 377.433
V (292.401 nm)	0.001197	ppm	0.000263	21.94	72.127000	Y 377.433
Zn (206.200 nm)	0.003306	ppm	0.000047	1.42	59.853900	Y 377.433
Zr (343.823 nm)	-0.000220 u	ppm	0.000037	16.63	0.365879	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.082987	21153.174089	0.002688	0.25
Y 377.433	1.099233	1088931.817079	0.003352	0.30
Y_R 377.433	1.169660	83239.300000	0.005799	0.50
Y_R 488.368	1.165360	47476.500000	0.003346	0.29
Y_R2 488.368	1.152642	93200.833893	0.004140	0.36

Sample Name: 280-116666-C-1-D

Date: 11/14/2018 2:49:08 AM Rack:Tube: 2:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000082	ppm	0.000026	31.08	-433.398000	Y 377.433
Al (167.019 nm)	0.003669	ppm	0.002145	58.45	3.793540	Y_R 377.433
Al H (396.152 nm)	-0.000335 u	ppm	0.000239	71.39	121.597301	Y_R 377.433
As (188.980 nm)	0.001001	ppm	0.000803	80.23	1.195030	Y 242.219
B (249.678 nm)	0.189129	ppm	0.000006	0.00	4818.160000	Y 242.219
Ba (493.408 nm)	0.069089	ppm	0.000042	0.06	8024.620000	Y_R 488.368
Be (234.861 nm)	0.000130	ppm	0.000002	1.35	-46.250800	Y_R 488.368
Bi (223.061 nm)	-0.003189 u	ppm	0.003247	> 100.00	7.821530	Y 377.433
Ca (315.887 nm)	91.305140 o	ppm	0.048901	0.05	69596.848051	Y_R 377.433
Cd (214.439 nm)	-0.000149 u	ppm	0.000027	17.83	10.201000	Y 377.433
Co (228.615 nm)	0.000457	ppm	0.000095	20.69	-37.643200	Y 242.219
Cr (205.560 nm)	0.000492	ppm	0.000214	43.63	13.748700	Y 377.433
Cu (324.754 nm)	0.001443	ppm	0.000079	5.51	-343.858000	Y 377.433
Fe (238.204 nm)	0.024984	ppm	0.002275	9.11	115.050769	Y_R 377.433
Fe H (259.940 nm)	0.036296 u	ppm	0.000109	0.30	56.318400	Y_R 377.433
K (766.491 nm)	8.857910	ppm	0.080085	0.90	8901.140000	Y_R2 488.368
Li (670.783 nm)	0.039297	ppm	0.001172	2.98	-354.064000	Y_R2 488.368
Mg (279.078 nm)	19.701100	ppm	0.009352	0.05	120780.000000	Y 377.433
Mn (257.610 nm)	0.029811	ppm	0.000041	0.14	7125.350000	Y 377.433
Mo (202.032 nm)	0.007353	ppm	0.000108	1.47	68.395300	Y 377.433
Na (589.592 nm)	102.593000 o	ppm	0.218494	0.21	654131.000000	Y_R2 488.368
Na H (589.593 nm)	105.977665	ppm	0.566974	0.53	365437.880584	Y_R 488.368
Ni (231.604 nm)	0.001097	ppm	0.000464	42.26	6.171250	Y 377.433
P (213.618 nm)	0.604278	ppm	0.003701	0.61	1327.120000	Y 242.219
Pb (220.353 nm)	0.001238	ppm	0.001041	84.08	7.885010	Y 242.219
S (181.972 nm)	54.677001 o	ppm	0.058976	0.11	28734.074002	Y 377.433
Sb (206.834 nm)	0.000240	ppm	0.000097	40.48	-30.172200	Y 377.433
Se (196.026 nm)	-0.001600 u	ppm	0.000096	6.01	14.852400	Y 242.219
Si (288.158 nm)	5.175580	ppm	0.003293	0.06	45842.100000	Y 377.433
Sn (189.925 nm)	-0.001882 u	ppm	0.000085	4.54	8.275880	Y 377.433
Sr (421.552 nm)	0.764601	ppm	0.001163	0.15	148896.185338	Y_R 488.368
Th (288.505 nm)	-0.002540 u	ppm	0.001908	75.15	67.734800	Y 377.433
Ti (336.122 nm)	0.000450	ppm	0.000054	11.93	-3.150690	Y 377.433
Tl (190.794 nm)	0.001304	ppm	0.000374	28.71	-3.286200	Y 377.433
U (409.013 nm)	0.014448	ppm	0.000334	2.31	-183.282000	Y 377.433
V (292.401 nm)	0.001598	ppm	0.000052	3.28	86.477600	Y 377.433
Zn (206.200 nm)	0.005366	ppm	0.000263	4.90	71.357400	Y 377.433
Zr (343.823 nm)	-0.000185 u	ppm	0.000104	56.50	4.920900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119021	21857.001496	0.001821	0.16
Y 377.433	1.134779	1124144.689883	0.001701	0.15
Y_R 377.433	1.180140	83985.100000	0.000803	0.07
Y_R 488.368	1.179590	48056.400000	0.002586	0.22
Y_R2 488.368	1.167482	94400.764257	0.002798	0.24

Sample Name: 280-116666-C-1-D SD@5

Date: 11/14/2018 2:52:30 AM Rack:Tube: 2:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000296 u	ppm	0.000169	57.10	-450.499000	Y 377.433
Al (167.019 nm)	-0.002319 u	ppm	0.002141	92.35	0.524717	Y_R 377.433
Al H (396.152 nm)	-0.014798 u	ppm	0.006808	46.01	56.855565	Y_R 377.433
As (188.980 nm)	0.002742	ppm	0.001041	37.97	3.500430	Y 242.219
B (249.678 nm)	0.037728	ppm	0.000193	0.51	1007.900000	Y 242.219
Ba (493.408 nm)	0.012808	ppm	0.000363	2.84	2037.660000	Y_R 488.368
Be (234.861 nm)	0.000171	ppm	0.000023	13.17	-34.525600	Y_R 488.368
Bi (223.061 nm)	-0.002217 u	ppm	0.001358	61.25	10.272700	Y 377.433
Ca (315.887 nm)	18.342443 o	ppm	0.127340	0.69	13933.499928	Y_R 377.433
Cd (214.439 nm)	-0.000222 u	ppm	0.000039	17.40	5.587110	Y 377.433
Co (228.615 nm)	0.000481	ppm	0.000018	3.82	-37.180700	Y 242.219
Cr (205.560 nm)	-0.000084 u	ppm	0.000121	> 100.00	4.866270	Y 377.433
Cu (324.754 nm)	0.000633	ppm	0.000675	> 100.00	-344.743000	Y 377.433
Fe (238.204 nm)	0.002891	ppm	0.000017	0.59	37.114634	Y_R 377.433
Fe H (259.940 nm)	0.017735 u	ppm	0.000028	0.16	22.418900	Y_R 377.433
K (766.491 nm)	1.869180	ppm	0.047524	2.54	1243.000000	Y_R2 488.368
Li (670.783 nm)	0.014668	ppm	0.000792	5.40	-1118.770000	Y_R2 488.368
Mg (279.078 nm)	3.993290	ppm	0.003426	0.09	24534.000000	Y 377.433
Mn (257.610 nm)	0.005951	ppm	0.000006	0.10	1502.240000	Y 377.433
Mo (202.032 nm)	0.001124	ppm	0.000102	9.08	12.656200	Y 377.433
Na (589.592 nm)	20.888600 o	ppm	0.026754	0.13	133452.000000	Y_R2 488.368
Na H (589.593 nm)	21.164629	ppm	0.241659	1.14	75422.272216	Y_R 488.368
Ni (231.604 nm)	-0.000114 u	ppm	0.000671	> 100.00	-2.421600	Y 377.433
P (213.618 nm)	0.113913	ppm	0.002692	2.36	278.696000	Y 242.219
Pb (220.353 nm)	-0.000082 u	ppm	0.000283	> 100.00	3.950810	Y 242.219
S (181.972 nm)	10.909641	ppm	0.024634	0.23	5746.598379	Y 377.433
Sb (206.834 nm)	0.001329 u	ppm	0.003604	> 100.00	-27.102100	Y 377.433
Se (196.026 nm)	-0.003426 u	ppm	0.000352	10.27	12.927600	Y 242.219
Si (288.158 nm)	1.007130	ppm	0.010501	1.04	9701.570000	Y 377.433
Sn (189.925 nm)	-0.002515 u	ppm	0.000198	7.86	6.972210	Y 377.433
Sr (421.552 nm)	0.152218	ppm	0.001247	0.82	29746.807399	Y_R 488.368
Th (288.505 nm)	-0.003440 u	ppm	0.001549	45.02	64.913400	Y 377.433
Ti (336.122 nm)	0.000806	ppm	0.000004	0.46	-180.148000	Y 377.433
Tl (190.794 nm)	0.001034	ppm	0.000727	70.30	-3.884720	Y 377.433
U (409.013 nm)	0.010584	ppm	0.001549	14.63	-186.837000	Y 377.433
V (292.401 nm)	0.000209	ppm	0.000074	35.27	35.366900	Y 377.433
Zn (206.200 nm)	-0.005153 u	ppm	0.000157	3.05	12.626300	Y 377.433
Zr (343.823 nm)	-0.000227 u	ppm	0.000048	21.27	-0.636991	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.138142	22230.482190	0.008507	0.75
Y 377.433	1.150708	1139924.934121	0.010314	0.90
Y_R 377.433	1.206320	85847.700000	0.006545	0.54
Y_R 488.368	1.214510	49479.100000	0.010129	0.83
Y_R2 488.368	1.186489	95937.650984	0.008068	0.68

Sample Name: 280-116666-C-1-E MS

Date: 11/14/2018 2:55:51 AM Rack:Tube: 2:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053744	ppm	0.000249	0.46	2008.300000	Y 377.433
Al (167.019 nm)	1.887700	ppm	0.000679	0.04	1028.420000	Y_R 377.433
Al H (396.152 nm)	1.984871	ppm	0.012228	0.62	4923.484846	Y_R 377.433
As (188.980 nm)	1.006510	ppm	0.008429	0.84	1332.670000	Y 242.219
B (249.678 nm)	1.238170 o	ppm	0.001878	0.15	31238.800000	Y 242.219
Ba (493.408 nm)	2.044940 o	ppm	0.004729	0.23	217668.000000	Y_R 488.368
Be (234.861 nm)	0.050120	ppm	0.000075	0.15	14489.600000	Y_R 488.368
Bi (223.061 nm)	1.908950	ppm	0.003032	0.16	4837.370000	Y 377.433
Ca (315.887 nm)	138.990464 o	ppm	0.800235	0.58	105976.102319	Y_R 377.433
Cd (214.439 nm)	0.094542	ppm	0.000063	0.07	5977.680000	Y 377.433
Co (228.615 nm)	0.479930	ppm	0.000471	0.10	8973.100000	Y 242.219
Cr (205.560 nm)	0.195266	ppm	0.000044	0.02	3021.040000	Y 377.433
Cu (324.754 nm)	0.247704	ppm	0.000235	0.09	12933.200000	Y 377.433
Fe (238.204 nm)	1.013572	ppm	0.003577	0.35	3602.444628	Y_R 377.433
Fe H (259.940 nm)	1.012030 u	ppm	0.002794	0.28	1838.380000	Y_R 377.433
K (766.491 nm)	60.145800	ppm	0.221186	0.37	65101.600000	Y_R2 488.368
Li (670.783 nm)	1.040550	ppm	0.003819	0.37	30733.200000	Y_R2 488.368
Mg (279.078 nm)	68.641300 o	ppm	0.052594	0.08	420595.000000	Y 377.433
Mn (257.610 nm)	0.516131	ppm	0.000605	0.12	121738.000000	Y 377.433
Mo (202.032 nm)	1.011490	ppm	0.002348	0.23	9053.480000	Y 377.433
Na (589.592 nm)	150.469000 o	ppm	0.622430	0.41	963018.000000	Y_R2 488.368
Na H (589.593 nm)	156.850269	ppm	0.775243	0.49	541095.336545	Y_R 488.368
Ni (231.604 nm)	0.470853	ppm	0.000741	0.16	3338.720000	Y 377.433
P (213.618 nm)	11.276200 o	ppm	0.010164	0.09	24144.200000	Y 242.219
Pb (220.353 nm)	0.492846	ppm	0.001241	0.25	1489.190000	Y 242.219
S (181.972 nm)	57.363786 o	ppm	0.000219	0.00	30146.428035	Y 377.433
Sb (206.834 nm)	0.510735	ppm	0.001337	0.26	1391.180000	Y 377.433
Se (196.026 nm)	2.029830	ppm	0.004414	0.22	2139.190000	Y 242.219
Si (288.158 nm)	15.138700 o	ppm	0.033153	0.22	132223.000000	Y 377.433
Sn (189.925 nm)	1.962990	ppm	0.000816	0.04	4054.400000	Y 377.433
Sr (421.552 nm)	1.765258 o	ppm	0.007396	0.42	343590.732290	Y_R 488.368
Th (288.505 nm)	0.997132	ppm	0.003004	0.30	2651.900000	Y 377.433
Ti (336.122 nm)	0.995214	ppm	0.001294	0.13	140875.000000	Y 377.433
Tl (190.794 nm)	1.933740	ppm	0.003825	0.20	4388.500000	Y 377.433
U (409.013 nm)	2.053380	ppm	0.001889	0.09	8831.790000	Y 377.433
V (292.401 nm)	0.502673	ppm	0.000856	0.17	18517.400000	Y 377.433
Zn (206.200 nm)	0.482341	ppm	0.000674	0.14	2734.460000	Y 377.433
Zr (343.823 nm)	0.492448	ppm	0.000137	0.03	63539.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.085434	21200.973179	0.001065	0.10
Y 377.433	1.101033	1090714.861263	0.000097	0.01
Y_R 377.433	1.155140	82205.900000	0.003137	0.27
Y_R 488.368	1.152590	46956.300000	0.003641	0.32
Y_R2 488.368	1.137479	91974.791239	0.000245	0.02

Sample Name: 280-116666-C-1-F MSD

Date: 11/14/2018 2:59:13 AM Rack:Tube: 2:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053791	ppm	0.000111	0.21	2010.710000	Y 377.433
Al (167.019 nm)	1.910540	ppm	0.013197	0.69	1040.830000	Y_R 377.433
Al H (396.152 nm)	2.006396	ppm	0.002218	0.11	4974.692394	Y_R 377.433
As (188.980 nm)	1.003950	ppm	0.001621	0.16	1329.290000	Y 242.219
B (249.678 nm)	1.239680 o	ppm	0.000613	0.05	31276.900000	Y 242.219
Ba (493.408 nm)	2.047300 o	ppm	0.005163	0.25	217919.000000	Y_R 488.368
Be (234.861 nm)	0.050470	ppm	0.000565	1.12	14591.500000	Y_R 488.368
Bi (223.061 nm)	1.911000	ppm	0.000582	0.03	4842.530000	Y 377.433
Ca (315.887 nm)	139.043715 o	ppm	0.001023	0.00	106016.727271	Y_R 377.433
Cd (214.439 nm)	0.094453	ppm	0.000108	0.11	5972.120000	Y 377.433
Co (228.615 nm)	0.480504	ppm	0.004738	0.99	8983.870000	Y 242.219
Cr (205.560 nm)	0.195060	ppm	0.000838	0.43	3017.850000	Y 377.433
Cu (324.754 nm)	0.247374	ppm	0.000190	0.08	12915.300000	Y 377.433
Fe (238.204 nm)	1.018317	ppm	0.003134	0.31	3619.182421	Y_R 377.433
Fe H (259.940 nm)	1.013820 u	ppm	0.003335	0.33	1841.640000	Y_R 377.433
K (766.491 nm)	60.013400	ppm	0.151183	0.25	64956.500000	Y_R2 488.368
Li (670.783 nm)	1.042640	ppm	0.000045	0.00	30798.100000	Y_R2 488.368
Mg (279.078 nm)	68.579400 o	ppm	0.041118	0.06	420216.000000	Y 377.433
Mn (257.610 nm)	0.517140	ppm	0.000081	0.02	121976.000000	Y 377.433
Mo (202.032 nm)	1.014190	ppm	0.002199	0.22	9077.630000	Y 377.433
Na (589.592 nm)	150.424000 o	ppm	0.466764	0.31	962732.000000	Y_R2 488.368
Na H (589.593 nm)	156.659866	ppm	0.074815	0.05	540446.384083	Y_R 488.368
Ni (231.604 nm)	0.468683	ppm	0.000579	0.12	3323.330000	Y 377.433
P (213.618 nm)	11.288200 o	ppm	0.023798	0.21	24169.800000	Y 242.219
Pb (220.353 nm)	0.491938	ppm	0.001513	0.31	1486.430000	Y 242.219
S (181.972 nm)	57.158756 o	ppm	0.057364	0.10	30038.743992	Y 377.433
Sb (206.834 nm)	0.510455	ppm	0.004711	0.92	1390.390000	Y 377.433
Se (196.026 nm)	2.029990	ppm	0.001627	0.08	2139.360000	Y 242.219
Si (288.158 nm)	15.202200 o	ppm	0.102953	0.68	132773.000000	Y 377.433
Sn (189.925 nm)	1.969350	ppm	0.006050	0.31	4067.500000	Y 377.433
Sr (421.552 nm)	1.762687 o	ppm	0.005025	0.29	343090.522338	Y_R 488.368
Th (288.505 nm)	0.994348	ppm	0.001674	0.17	2644.840000	Y 377.433
Ti (336.122 nm)	0.996778	ppm	0.001305	0.13	141096.000000	Y 377.433
Tl (190.794 nm)	1.934320	ppm	0.001707	0.09	4389.830000	Y 377.433
U (409.013 nm)	2.054270	ppm	0.002871	0.14	8835.660000	Y 377.433
V (292.401 nm)	0.502847	ppm	0.000417	0.08	18523.800000	Y 377.433
Zn (206.200 nm)	0.483066	ppm	0.001319	0.27	2738.510000	Y 377.433
Zr (343.823 nm)	0.493678	ppm	0.000851	0.17	63698.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087890	21248.947671	0.006643	0.61
Y 377.433	1.105059	1094702.955977	0.006542	0.59
Y_R 377.433	1.148030	81699.700000	0.006378	0.56
Y_R 488.368	1.148780	46801.200000	0.008114	0.71
Y_R2 488.368	1.142229	92358.873657	0.002669	0.23

Sample Name: CCVH-5417909

Date: 11/14/2018 3:02:36 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002468 u	ppm	0.000484	19.60	-785.536000	Y 377.433
Al (167.019 nm)	44.467100 o	ppm	0.030876	0.07	24201.500000	Y_R 377.433
Al H (396.152 nm)	48.631969	ppm	0.073141	0.15	115391.974797	Y_R 377.433
As (188.980 nm)	-0.000436 u	ppm	0.000183	41.92	-1.157600	Y 242.219
B (249.678 nm)	0.001183	ppm	0.000425	35.90	15.082800	Y 242.219
Ba (493.408 nm)	-0.000533 u	ppm	0.000082	15.46	659.498000	Y_R 488.368
Be (234.861 nm)	-0.000008 u	ppm	0.000008	> 100.00	1386.110000	Y_R 488.368
Bi (223.061 nm)	0.958973	ppm	0.002397	0.25	2445.850000	Y 377.433
Ca (315.887 nm)	0.009213	ppm	0.006327	68.67	-52.947284	Y_R 377.433
Cd (214.439 nm)	-0.000532 u	ppm	0.000027	5.14	34.941800	Y 377.433
Co (228.615 nm)	0.003247	ppm	0.000200	6.15	14.606300	Y 242.219
Cr (205.560 nm)	-0.000050 u	ppm	0.000046	92.23	-8.089350	Y 377.433
Cu (324.754 nm)	-0.006544 u	ppm	0.000227	3.46	-405.691000	Y 377.433
Fe (238.204 nm)	48.681575 o	ppm	0.079906	0.16	171758.421611	Y_R 377.433
Fe H (259.940 nm)	48.453700	ppm	0.032793	0.07	88484.500000	Y_R 377.433
K (766.491 nm)	0.119492	ppm	0.006680	5.59	-674.281000	Y_R2 488.368
Li (670.783 nm)	0.006230	ppm	0.003728	59.84	-1380.750000	Y_R2 488.368
Mg (279.078 nm)	-0.014371 u	ppm	0.001769	12.31	-384.821000	Y 377.433
Mn (257.610 nm)	0.001164	ppm	0.000053	4.52	374.212000	Y 377.433
Mo (202.032 nm)	-0.000211 u	ppm	0.000059	27.90	0.708986	Y 377.433
Na (589.592 nm)	237.830000 o	ppm	0.516567	0.22	1515640.000000	Y_R2 488.368
Na H (589.593 nm)	246.578326	ppm	0.408096	0.17	846072.478073	Y_R 488.368
Ni (231.604 nm)	0.003172	ppm	0.000348	10.97	22.936300	Y 377.433
P (213.618 nm)	-0.008911 u	ppm	0.001032	11.58	16.091100	Y 242.219
Pb (220.353 nm)	-0.002778 u	ppm	0.000609	21.91	12.701900	Y 242.219
S (181.972 nm)	4.894433	ppm	0.019662	0.40	2587.290212	Y 377.433
Sb (206.834 nm)	-0.005116 u	ppm	0.001370	26.78	-90.071000	Y 377.433
Se (196.026 nm)	-0.003564 u	ppm	0.000111	3.10	3.657290	Y 242.219
Si (288.158 nm)	0.010979	ppm	0.001130	10.29	1064.920000	Y 377.433
Sn (189.925 nm)	-0.000769 u	ppm	0.000888	> 100.00	10.568700	Y 377.433
Sr (421.552 nm)	0.000630	ppm	0.000040	6.38	252.835113	Y_R 488.368
Th (288.505 nm)	4.882460	ppm	0.008274	0.17	12565.000000	Y 377.433
Ti (336.122 nm)	0.001779	ppm	0.000056	3.15	-99.527500	Y 377.433
Tl (190.794 nm)	-0.002536 u	ppm	0.000644	25.39	-13.321400	Y 377.433
U (409.013 nm)	9.798760	ppm	0.011606	0.12	43355.700000	Y 377.433
V (292.401 nm)	0.002648	ppm	0.000211	7.96	-32.496400	Y 377.433
Zn (206.200 nm)	-0.006715 u	ppm	0.000443	6.59	3.904650	Y 377.433
Zr (343.823 nm)	-0.004552 u	ppm	0.000058	1.28	-420.857000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113087	21741.100636	0.000073	0.01
Y 377.433	1.115978	1105520.025828	0.000945	0.08
Y_R 377.433	1.158190	82422.600000	0.000574	0.05
Y_R 488.368	1.166120	47507.600000	0.002682	0.23
Y_R2 488.368	1.137080	91942.516717	0.001288	0.11

Sample Name: CCV-5416701

Date: 11/14/2018 3:05:58 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.480758	ppm	0.001128	0.23	21672.600000	Y 377.433
Al (167.019 nm)	0.498035	ppm	0.003027	0.61	274.061000	Y_R 377.433
Al H (396.152 nm)	0.495706 u	ppm	0.006004	1.21	1298.221301	Y_R 377.433
As (188.980 nm)	0.973620	ppm	0.000702	0.07	1289.110000	Y 242.219
B (249.678 nm)	0.488490	ppm	0.000132	0.03	12370.000000	Y 242.219
Ba (493.408 nm)	0.485717	ppm	0.003270	0.67	52220.900000	Y_R 488.368
Be (234.861 nm)	0.487794	ppm	0.000622	0.13	142059.000000	Y_R 488.368
Bi (223.061 nm)	-0.005627 u	ppm	0.000575	10.22	2.059860	Y 377.433
Ca (315.887 nm)	4.900636	ppm	0.042301	0.86	3678.987092	Y_R 377.433
Cd (214.439 nm)	0.483587	ppm	0.000088	0.02	30491.000000	Y 377.433
Co (228.615 nm)	0.488469	ppm	0.000674	0.14	9114.420000	Y 242.219
Cr (205.560 nm)	0.482753	ppm	0.000097	0.02	7460.430000	Y 377.433
Cu (324.754 nm)	0.484827	ppm	0.000439	0.09	25728.900000	Y 377.433
Fe (238.204 nm)	2.451928	ppm	0.015508	0.63	8676.457492	Y_R 377.433
Fe H (259.940 nm)	2.455140 u	ppm	0.013980	0.57	4474.030000	Y_R 377.433
K (766.491 nm)	48.981900	ppm	0.155110	0.32	52868.400000	Y_R2 488.368
Li (670.783 nm)	0.983326	ppm	0.002240	0.23	28956.400000	Y_R2 488.368
Mg (279.078 nm)	19.291500	ppm	0.018048	0.09	118267.000000	Y 377.433
Mn (257.610 nm)	0.485725	ppm	0.000548	0.11	114572.000000	Y 377.433
Mo (202.032 nm)	0.487255	ppm	0.000896	0.18	4362.600000	Y 377.433
Na (589.592 nm)	4.968730	ppm	0.032410	0.65	32943.500000	Y_R2 488.368
Na H (589.593 nm)	5.316332 u	ppm	0.018253	0.34	21653.719713	Y_R 488.368
Ni (231.604 nm)	0.488000	ppm	0.000749	0.15	3459.120000	Y 377.433
P (213.618 nm)	1.010950	ppm	0.001296	0.13	2196.610000	Y 242.219
Pb (220.353 nm)	0.979470	ppm	0.001061	0.11	2952.250000	Y 242.219
S (181.972 nm)	0.013917	ppm	0.004813	34.58	25.154870	Y 377.433
Sb (206.834 nm)	0.973278	ppm	0.003691	0.38	2701.570000	Y 377.433
Se (196.026 nm)	0.976634	ppm	0.003978	0.41	1037.610000	Y 242.219
Si (288.158 nm)	4.876580	ppm	0.009236	0.19	43249.800000	Y 377.433
Sn (189.925 nm)	0.963001	ppm	0.001815	0.19	1995.200000	Y 377.433
Sr (421.552 nm)	0.487479	ppm	0.003157	0.65	94977.370294	Y_R 488.368
Th (288.505 nm)	0.001849	ppm	0.000003	0.15	93.001200	Y 377.433
Ti (336.122 nm)	0.487095	ppm	0.000530	0.11	68573.200000	Y 377.433
Tl (190.794 nm)	0.973307	ppm	0.002847	0.29	2206.850000	Y 377.433
U (409.013 nm)	-0.001531 u	ppm	0.000177	11.55	-272.760000	Y 377.433
V (292.401 nm)	0.484880	ppm	0.000016	0.00	17823.000000	Y 377.433
Zn (206.200 nm)	0.481805	ppm	0.000013	0.00	2731.470000	Y 377.433
Zr (343.823 nm)	0.488067	ppm	0.000741	0.15	62978.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111301	21706.220690	0.001744	0.16
Y 377.433	1.118753	1108269.383279	0.002266	0.20
Y_R 377.433	1.145970	81552.900000	0.003807	0.33
Y_R 488.368	1.149380	46825.800000	0.003545	0.31
Y_R2 488.368	1.130694	91426.169206	0.007395	0.65

Sample Name: CCB

Date: 11/14/2018 3:09:20 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000464 u	ppm	0.000227	49.03	-458.104000	Y 377.433
Al (167.019 nm)	0.000181 u	ppm	0.000459	> 100.00	1.879060	Y_R 377.433
Al H (396.152 nm)	-0.019060 u	ppm	0.003346	17.55	39.112195	Y_R 377.433
As (188.980 nm)	-0.003157 u	ppm	0.000131	4.16	-4.310850	Y 242.219
B (249.678 nm)	0.002321	ppm	0.000119	5.11	116.833000	Y 242.219
Ba (493.408 nm)	-0.000597 u	ppm	0.000201	33.63	611.527000	Y_R 488.368
Be (234.861 nm)	0.000166	ppm	0.000037	21.98	-36.070800	Y_R 488.368
Bi (223.061 nm)	0.000549 u	ppm	0.001499	> 100.00	17.257600	Y 377.433
Ca (315.887 nm)	0.008871	ppm	0.008684	97.89	-53.208443	Y_R 377.433
Cd (214.439 nm)	-0.000143 u	ppm	0.000060	42.18	10.549000	Y 377.433
Co (228.615 nm)	0.000594	ppm	0.000284	47.76	-35.068300	Y 242.219
Cr (205.560 nm)	0.000298	ppm	0.000152	51.13	10.779800	Y 377.433
Cu (324.754 nm)	0.000057 u	ppm	0.000214	> 100.00	-368.604000	Y 377.433
Fe (238.204 nm)	-0.002955 u	ppm	0.000371	12.56	16.493633	Y_R 377.433
Fe H (259.940 nm)	0.011654 u	ppm	0.000868	7.45	11.311400	Y_R 377.433
K (766.491 nm)	0.073197	ppm	0.069018	94.29	-725.011000	Y_R2 488.368
Li (670.783 nm)	0.004374	ppm	0.000633	14.48	-1438.370000	Y_R2 488.368
Mg (279.078 nm)	0.002322	ppm	0.001317	56.74	80.169800	Y 377.433
Mn (257.610 nm)	-0.000080 u	ppm	0.000011	14.17	80.877100	Y 377.433
Mo (202.032 nm)	-0.000595 u	ppm	0.000196	33.01	-2.725760	Y 377.433
Na (589.592 nm)	0.024354	ppm	0.015100	62.00	491.140000	Y_R2 488.368
Na H (589.593 nm)	-0.067573 u	ppm	0.011101	16.43	2819.969817	Y_R 488.368
Ni (231.604 nm)	-0.000130 u	ppm	0.000070	54.03	-2.535010	Y 377.433
P (213.618 nm)	-0.004541 u	ppm	0.003505	77.19	25.435800	Y 242.219
Pb (220.353 nm)	0.001971	ppm	0.000047	2.37	10.139400	Y 242.219
S (181.972 nm)	0.007816	ppm	0.007396	94.63	20.746291	Y 377.433
Sb (206.834 nm)	0.000214	ppm	0.000125	58.07	-30.189000	Y 377.433
Se (196.026 nm)	-0.001401 u	ppm	0.000816	58.21	15.040300	Y 242.219
Si (288.158 nm)	-0.007506 u	ppm	0.000256	3.40	904.656000	Y 377.433
Sn (189.925 nm)	-0.001832 u	ppm	0.000893	48.75	8.378860	Y 377.433
Sr (421.552 nm)	0.000043	ppm	0.000004	8.10	138.648744	Y_R 488.368
Th (288.505 nm)	-0.002508 u	ppm	0.003142	> 100.00	67.126100	Y 377.433
Ti (336.122 nm)	0.000233	ppm	0.000093	39.67	-318.296000	Y 377.433
Tl (190.794 nm)	0.000097 u	ppm	0.002113	> 100.00	-6.012220	Y 377.433
U (409.013 nm)	0.009234	ppm	0.000040	0.44	-189.432000	Y 377.433
V (292.401 nm)	0.000107	ppm	0.000047	43.70	29.878500	Y 377.433
Zn (206.200 nm)	-0.007236 u	ppm	0.000119	1.64	0.995447	Y 377.433
Zr (343.823 nm)	-0.000003 u	ppm	0.000049	> 100.00	28.273600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103937	21562.389396	0.004768	0.43
Y 377.433	1.112983	1102553.230912	0.005464	0.49
Y_R 377.433	1.117790	79547.900000	0.002047	0.18
Y_R 488.368	1.123220	45760.000000	0.005888	0.52
Y_R2 488.368	1.111467	89871.463027	0.003143	0.28

Sample Name: CCVL-5425098

Date: 11/14/2018 3:12:44 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008663	ppm	0.000007	0.08	-38.081200	Y 377.433
Al (167.019 nm)	0.097733	ppm	0.004359	4.46	54.964200	Y_R 377.433
Al H (396.152 nm)	0.079863 u	ppm	0.002854	3.57	275.095481	Y_R 377.433
As (188.980 nm)	0.014872	ppm	0.000849	5.71	19.562200	Y 242.219
B (249.678 nm)	0.094135	ppm	0.000045	0.05	2427.720000	Y 242.219
Ba (493.408 nm)	0.008801	ppm	0.000051	0.58	1608.720000	Y_R 488.368
Be (234.861 nm)	0.001030	ppm	0.000031	2.96	217.719000	Y_R 488.368
Bi (223.061 nm)	0.093348	ppm	0.000206	0.22	251.651000	Y 377.433
Ca (315.887 nm)	0.199538	ppm	0.008343	4.18	92.254152	Y_R 377.433
Cd (214.439 nm)	0.004649	ppm	0.000014	0.29	312.593000	Y 377.433
Co (228.615 nm)	0.010040	ppm	0.000245	2.44	142.061000	Y 242.219
Cr (205.560 nm)	0.009696	ppm	0.000014	0.14	155.942000	Y 377.433
Cu (324.754 nm)	0.014556	ppm	0.000320	2.20	412.922000	Y 377.433
Fe (238.204 nm)	0.095871	ppm	0.000152	0.16	365.114948	Y_R 377.433
Fe H (259.940 nm)	0.105235 u	ppm	0.005069	4.82	182.227000	Y_R 377.433
K (766.491 nm)	3.081400	ppm	0.041623	1.35	2571.330000	Y_R2 488.368
Li (670.783 nm)	0.025491	ppm	0.000336	1.32	-782.723000	Y_R2 488.368
Mg (279.078 nm)	0.189666	ppm	0.000699	0.37	1227.090000	Y 377.433
Mn (257.610 nm)	0.009716	ppm	0.000020	0.21	2389.720000	Y 377.433
Mo (202.032 nm)	0.017540	ppm	0.000164	0.93	159.543000	Y 377.433
Na (589.592 nm)	1.045390	ppm	0.010645	1.02	7015.060000	Y_R2 488.368
Na H (589.593 nm)	0.852984 u	ppm	0.006644	0.78	5975.580354	Y_R 488.368
Ni (231.604 nm)	0.039278	ppm	0.000508	1.29	276.845000	Y 377.433
P (213.618 nm)	2.738860 o	ppm	0.009786	0.36	5890.960000	Y 242.219
Pb (220.353 nm)	0.010495	ppm	0.000046	0.44	35.790400	Y 242.219
S (181.972 nm)	0.095820	ppm	0.003832	4.00	66.991607	Y 377.433
Sb (206.834 nm)	0.020853	ppm	0.000090	0.43	27.621900	Y 377.433
Se (196.026 nm)	0.015371	ppm	0.001932	12.57	32.567300	Y 242.219
Si (288.158 nm)	0.452740	ppm	0.003864	0.85	4895.000000	Y 377.433
Sn (189.925 nm)	0.089778	ppm	0.001699	1.89	197.026000	Y 377.433
Sr (421.552 nm)	0.009807	ppm	0.000232	2.36	2038.416891	Y_R 488.368
Th (288.505 nm)	0.011212	ppm	0.005377	47.96	102.766000	Y 377.433
Ti (336.122 nm)	0.009460	ppm	0.000121	1.28	987.622000	Y 377.433
Tl (190.794 nm)	0.014449	ppm	0.001259	8.71	26.589900	Y 377.433
U (409.013 nm)	0.068036	ppm	0.000748	1.10	70.873100	Y 377.433
V (292.401 nm)	0.009436	ppm	0.000002	0.03	371.645000	Y 377.433
Zn (206.200 nm)	0.012100 Q	ppm	0.000254	2.10	108.954000 Q	Y 377.433
Zr (343.823 nm)	0.014106	ppm	0.000031	0.22	1848.120000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.106690	21616.159182	0.004979	0.45
Y 377.433	1.115649	1105193.626899	0.005792	0.52
Y_R 377.433	1.135050	80776.100000	0.004569	0.40
Y_R 488.368	1.136300	46292.800000	0.006796	0.60
Y_R2 488.368	1.129795	91353.468262	0.005756	0.51

Sample Name: 280-116666-C-2-B

Date: 11/14/2018 3:16:07 AM Rack:Tube: 2:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000168 u	ppm	0.000249	> 100.00	-429.430000	Y 377.433
Al (167.019 nm)	0.001073	ppm	0.001317	> 100.00	2.383910	Y_R 377.433
Al H (396.152 nm)	0.007109 u	ppm	0.005834	82.06	138.754052	Y_R 377.433
As (188.980 nm)	-0.000129 u	ppm	0.003017	> 100.00	-0.301732	Y 242.219
B (249.678 nm)	0.186971	ppm	0.000092	0.05	4763.860000	Y 242.219
Ba (493.408 nm)	0.070138	ppm	0.000070	0.10	8135.600000	Y_R 488.368
Be (234.861 nm)	0.000138	ppm	0.000004	3.20	-43.833800	Y_R 488.368
Bi (223.061 nm)	-0.003125 u	ppm	0.001381	44.21	7.983800	Y 377.433
Ca (315.887 nm)	90.024938 o	ppm	0.134396	0.15	68620.179974	Y_R 377.433
Cd (214.439 nm)	-0.000145 u	ppm	0.000028	19.36	10.450200	Y 377.433
Co (228.615 nm)	0.000470 u	ppm	0.000684	> 100.00	-37.381100	Y 242.219
Cr (205.560 nm)	0.000295	ppm	0.000097	32.93	10.703200	Y 377.433
Cu (324.754 nm)	0.001457	ppm	0.000063	4.34	-342.411000	Y 377.433
Fe (238.204 nm)	0.027459	ppm	0.000281	1.02	123.781803	Y_R 377.433
Fe H (259.940 nm)	0.035361 u	ppm	0.001881	5.32	54.609600	Y_R 377.433
K (766.491 nm)	8.747880	ppm	0.048507	0.55	8780.570000	Y_R2 488.368
Li (670.783 nm)	0.037296	ppm	0.001081	2.90	-416.205000	Y_R2 488.368
Mg (279.078 nm)	19.430600	ppm	0.023207	0.12	119123.000000	Y 377.433
Mn (257.610 nm)	0.035946	ppm	0.000050	0.14	8571.240000	Y 377.433
Mo (202.032 nm)	0.007576	ppm	0.000819	10.81	70.388200	Y 377.433
Na (589.592 nm)	100.900000 o	ppm	0.167506	0.17	643344.000000	Y_R2 488.368
Na H (589.593 nm)	104.446920	ppm	0.242719	0.23	360205.297382	Y_R 488.368
Ni (231.604 nm)	0.001086	ppm	0.000354	32.57	6.088490	Y 377.433
P (213.618 nm)	0.605120	ppm	0.001335	0.22	1328.920000	Y 242.219
Pb (220.353 nm)	0.001629	ppm	0.000209	12.80	9.063810	Y 242.219
S (181.972 nm)	53.164498 o	ppm	0.134172	0.25	27939.695459	Y 377.433
Sb (206.834 nm)	-0.000252 u	ppm	0.000648	> 100.00	-31.554500	Y 377.433
Se (196.026 nm)	0.001735	ppm	0.001554	89.58	18.343700	Y 242.219
Si (288.158 nm)	5.232610	ppm	0.009846	0.19	46336.500000	Y 377.433
Sn (189.925 nm)	-0.001209 u	ppm	0.001187	98.24	9.663290	Y 377.433
Sr (421.552 nm)	0.759518	ppm	0.000014	0.00	147907.198860	Y_R 488.368
Th (288.505 nm)	-0.001872 u	ppm	0.003695	> 100.00	69.511400	Y 377.433
Ti (336.122 nm)	0.000440	ppm	0.000099	22.58	-8.513380	Y 377.433
Tl (190.794 nm)	0.002365	ppm	0.001954	82.61	-0.874472	Y 377.433
U (409.013 nm)	0.013836	ppm	0.002767	20.00	-185.766000	Y 377.433
V (292.401 nm)	0.001292	ppm	0.000084	6.49	75.259500	Y 377.433
Zn (206.200 nm)	0.006189	ppm	0.000083	1.35	75.952200	Y 377.433
Zr (343.823 nm)	-0.000102 u	ppm	0.000202	> 100.00	15.622600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.097734	21441.225340	0.006339	0.58
Y 377.433	1.110332	1099926.499440	0.008119	0.73
Y_R 377.433	1.157210	82352.800000	0.002839	0.25
Y_R 488.368	1.150520	46872.000000	0.006777	0.59
Y_R2 488.368	1.141746	92319.769434	0.006840	0.60

Sample Name: 280-116666-C-3-B

Date: 11/14/2018 3:19:30 AM Rack:Tube: 2:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000062 u	ppm	0.000164	> 100.00	-434.308000	Y 377.433
Al (167.019 nm)	0.006182	ppm	0.002326	37.62	5.173160	Y_R 377.433
Al H (396.152 nm)	0.001973 u	ppm	0.002094	> 100.00	123.328906	Y_R 377.433
As (188.980 nm)	0.000774 u	ppm	0.001703	> 100.00	0.893415	Y 242.219
B (249.678 nm)	0.176790	ppm	0.000058	0.03	4507.600000	Y 242.219
Ba (493.408 nm)	0.050968	ppm	0.000036	0.07	6099.880000	Y_R 488.368
Be (234.861 nm)	0.000154	ppm	0.000012	7.53	-38.994800	Y_R 488.368
Bi (223.061 nm)	-0.001064 u	ppm	0.000394	37.02	13.191300	Y 377.433
Ca (315.887 nm)	81.538742 o	ppm	0.346136	0.42	62146.049129	Y_R 377.433
Cd (214.439 nm)	-0.000178 u	ppm	0.000043	24.21	8.410090	Y 377.433
Co (228.615 nm)	0.000607	ppm	0.000111	18.33	-34.818400	Y 242.219
Cr (205.560 nm)	0.000186	ppm	0.000193	> 100.00	9.007140	Y 377.433
Cu (324.754 nm)	0.001912	ppm	0.000085	4.47	-311.752000	Y 377.433
Fe (238.204 nm)	0.046321	ppm	0.000369	0.80	190.321524	Y_R 377.433
Fe H (259.940 nm)	0.054316 u	ppm	0.004705	8.66	89.228500	Y_R 377.433
K (766.491 nm)	9.535680	ppm	0.073117	0.77	9643.820000	Y_R2 488.368
Li (670.783 nm)	0.033888	ppm	0.000546	1.61	-522.016000	Y_R2 488.368
Mg (279.078 nm)	18.942600	ppm	0.031770	0.17	116133.000000	Y 377.433
Mn (257.610 nm)	0.047645	ppm	0.000034	0.07	11328.400000	Y 377.433
Mo (202.032 nm)	0.010807	ppm	0.000301	2.79	99.302200	Y 377.433
Na (589.592 nm)	92.679500 o	ppm	0.212107	0.23	590933.000000	Y_R2 488.368
Na H (589.593 nm)	95.493721	ppm	0.557627	0.58	329578.517395	Y_R 488.368
Ni (231.604 nm)	0.000984	ppm	0.001047	> 100.00	5.366530	Y 377.433
P (213.618 nm)	0.908833	ppm	0.004730	0.52	1978.270000	Y 242.219
Pb (220.353 nm)	0.000507 u	ppm	0.003435	> 100.00	5.684080	Y 242.219
S (181.972 nm)	50.437001 o	ppm	0.083903	0.17	26507.193189	Y 377.433
Sb (206.834 nm)	0.000860	ppm	0.000537	62.45	-28.474000	Y 377.433
Se (196.026 nm)	-0.003326 u	ppm	0.001908	57.38	13.059200	Y 242.219
Si (288.158 nm)	3.692560	ppm	0.024195	0.66	32984.300000	Y 377.433
Sn (189.925 nm)	-0.001240 u	ppm	0.000858	69.20	9.599010	Y 377.433
Sr (421.552 nm)	0.646853	ppm	0.003028	0.47	125986.369796	Y_R 488.368
Th (288.505 nm)	-0.000998 u	ppm	0.000734	73.51	72.000800	Y 377.433
Ti (336.122 nm)	0.000521	ppm	0.000061	11.74	-23.558500	Y 377.433
Tl (190.794 nm)	0.002257	ppm	0.001889	83.70	-1.128890	Y 377.433
U (409.013 nm)	0.014091	ppm	0.000176	1.25	-183.037000	Y 377.433
V (292.401 nm)	0.000920	ppm	0.000039	4.25	61.756200	Y 377.433
Zn (206.200 nm)	0.011215	ppm	0.000175	1.56	104.012000	Y 377.433
Zr (343.823 nm)	-0.000123 u	ppm	0.000086	69.52	12.915900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099125	21468.384522	0.004491	0.41
Y 377.433	1.110227	1099822.496615	0.004352	0.39
Y_R 377.433	1.146840	81615.200000	0.004794	0.42
Y_R 488.368	1.145540	46669.200000	0.003452	0.30
Y_R2 488.368	1.134463	91730.911022	0.015152	1.34

Sample Name: 280-116666-C-4-B

Date: 11/14/2018 3:22:51 AM Rack:Tube: 2:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000285 u	ppm	0.000229	80.31	-450.189000	Y 377.433
Al (167.019 nm)	0.003851	ppm	0.001189	30.89	3.904620	Y_R 377.433
Al H (396.152 nm)	-0.003106 u	ppm	0.002517	81.02	110.781378	Y_R 377.433
As (188.980 nm)	0.000189 u	ppm	0.003304	> 100.00	0.118932	Y 242.219
B (249.678 nm)	0.146494	ppm	0.000268	0.18	3745.150000	Y 242.219
Ba (493.408 nm)	0.052612	ppm	0.000476	0.90	6274.180000	Y_R 488.368
Be (234.861 nm)	0.000114	ppm	0.000006	5.00	-50.416600	Y_R 488.368
Bi (223.061 nm)	-0.000179 u	ppm	0.000787	> 100.00	15.426700	Y 377.433
Ca (315.887 nm)	80.596482 o	ppm	0.274440	0.34	61427.197614	Y_R 377.433
Cd (214.439 nm)	-0.000222 u	ppm	0.000067	30.02	5.598980	Y 377.433
Co (228.615 nm)	0.000384	ppm	0.000370	96.21	-38.998800	Y 242.219
Cr (205.560 nm)	0.000174 u	ppm	0.000330	> 100.00	8.827050	Y 377.433
Cu (324.754 nm)	0.001608	ppm	0.000030	1.84	-328.307000	Y 377.433
Fe (238.204 nm)	0.043918	ppm	0.001465	3.34	181.843039	Y_R 377.433
Fe H (259.940 nm)	0.052448 u	ppm	0.001025	1.95	85.817800	Y_R 377.433
K (766.491 nm)	8.544750	ppm	0.028374	0.33	8557.980000	Y_R2 488.368
Li (670.783 nm)	0.032084	ppm	0.001703	5.31	-578.010000	Y_R2 488.368
Mg (279.078 nm)	18.988100	ppm	0.008761	0.05	116412.000000	Y 377.433
Mn (257.610 nm)	0.053531	ppm	0.000019	0.04	12715.600000	Y 377.433
Mo (202.032 nm)	0.009199	ppm	0.000264	2.87	84.912800	Y 377.433
Na (589.592 nm)	84.649600 o	ppm	0.354404	0.42	539775.000000	Y_R2 488.368
Na H (589.593 nm)	88.097915	ppm	0.277576	0.32	304294.764542	Y_R 488.368
Ni (231.604 nm)	0.001053	ppm	0.000703	66.74	5.854150	Y 377.433
P (213.618 nm)	0.674852	ppm	0.001791	0.27	1478.010000	Y 242.219
Pb (220.353 nm)	0.000626	ppm	0.000784	> 100.00	6.043860	Y 242.219
S (181.972 nm)	47.867355 o	ppm	0.076016	0.16	25157.582764	Y 377.433
Sb (206.834 nm)	-0.000171 u	ppm	0.000440	> 100.00	-31.346200	Y 377.433
Se (196.026 nm)	-0.004511 u	ppm	0.001683	37.31	11.824900	Y 242.219
Si (288.158 nm)	3.595170	ppm	0.012888	0.36	32139.900000	Y 377.433
Sn (189.925 nm)	-0.001753 u	ppm	0.000418	23.83	8.542900	Y 377.433
Sr (421.552 nm)	0.661357	ppm	0.002082	0.31	128808.232482	Y_R 488.368
Th (288.505 nm)	0.000155 u	ppm	0.001440	> 100.00	74.972100	Y 377.433
Ti (336.122 nm)	0.000271	ppm	0.000028	10.42	-61.728400	Y 377.433
Tl (190.794 nm)	0.001920	ppm	0.000806	42.00	-1.890970	Y 377.433
U (409.013 nm)	0.012906	ppm	0.005021	38.91	-188.113000	Y 377.433
V (292.401 nm)	0.000860	ppm	0.000096	11.19	59.342300	Y 377.433
Zn (206.200 nm)	0.002929	ppm	0.000364	12.44	57.749800	Y 377.433
Zr (343.823 nm)	-0.000190 u	ppm	0.000024	12.65	4.360330	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103596	21555.720756	0.004494	0.41
Y 377.433	1.117212	1106742.892834	0.003525	0.32
Y_R 377.433	1.148610	81741.400000	0.003119	0.27
Y_R 488.368	1.148370	46784.600000	0.003969	0.35
Y_R2 488.368	1.133346	91640.626744	0.004012	0.35

Sample Name: 280-116666-C-5-B

Date: 11/14/2018 3:26:13 AM Rack:Tube: 2:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000028 u	ppm	0.000242	> 100.00	-438.382000	Y 377.433
Al (167.019 nm)	0.001166 u	ppm	0.001768	> 100.00	2.428340	Y_R 377.433
Al H (396.152 nm)	0.002120 u	ppm	0.002136	> 100.00	126.816825	Y_R 377.433
As (188.980 nm)	0.001728	ppm	0.001856	> 100.00	2.156920	Y 242.219
B (249.678 nm)	0.129631	ppm	0.000263	0.20	3320.800000	Y 242.219
Ba (493.408 nm)	0.073965	ppm	0.000223	0.30	8541.720000	Y_R 488.368
Be (234.861 nm)	0.000143	ppm	0.000021	14.51	-42.681900	Y_R 488.368
Bi (223.061 nm)	-0.004096 u	ppm	0.000905	22.09	5.528530	Y 377.433
Ca (315.887 nm)	90.209364 o	ppm	0.279109	0.31	68760.879066	Y_R 377.433
Cd (214.439 nm)	-0.000206 u	ppm	0.000018	8.82	6.608010	Y 377.433
Co (228.615 nm)	0.000371	ppm	0.000111	29.84	-39.245100	Y 242.219
Cr (205.560 nm)	0.000355	ppm	0.000067	19.02	11.641400	Y 377.433
Cu (324.754 nm)	0.000857	ppm	0.000089	10.38	-373.935000	Y 377.433
Fe (238.204 nm)	0.018023	ppm	0.001350	7.49	90.497618	Y_R 377.433
Fe H (259.940 nm)	0.025616 u	ppm	0.002561	10.00	36.811600	Y_R 377.433
K (766.491 nm)	5.830120	ppm	0.036115	0.62	5583.340000	Y_R2 488.368
Li (670.783 nm)	0.039675	ppm	0.002799	7.05	-342.342000	Y_R2 488.368
Mg (279.078 nm)	21.136200	ppm	0.038378	0.18	129574.000000	Y 377.433
Mn (257.610 nm)	0.087358	ppm	0.000018	0.02	20687.800000	Y 377.433
Mo (202.032 nm)	0.005271	ppm	0.000388	7.35	49.762700	Y 377.433
Na (589.592 nm)	83.852800 o	ppm	0.407319	0.49	534740.000000	Y_R2 488.368
Na H (589.593 nm)	87.874047	ppm	0.157917	0.18	303548.063383	Y_R 488.368
Ni (231.604 nm)	0.000589	ppm	0.000427	72.48	2.569920	Y 377.433
P (213.618 nm)	0.009563	ppm	0.005203	54.41	55.589200	Y 242.219
Pb (220.353 nm)	0.001100 u	ppm	0.002017	> 100.00	7.497180	Y 242.219
S (181.972 nm)	49.952838 o	ppm	0.122005	0.24	26253.000212	Y 377.433
Sb (206.834 nm)	-0.000546 u	ppm	0.001321	> 100.00	-32.371800	Y 377.433
Se (196.026 nm)	-0.002513 u	ppm	0.003082	> 100.00	13.948000	Y 242.219
Si (288.158 nm)	4.094100	ppm	0.015739	0.38	36465.700000	Y 377.433
Sn (189.925 nm)	-0.002782 u	ppm	0.000691	24.85	6.423280	Y 377.433
Sr (421.552 nm)	0.768914	ppm	0.000449	0.06	149735.393197	Y_R 488.368
Th (288.505 nm)	-0.001225 u	ppm	0.001981	> 100.00	72.219800	Y 377.433
Ti (336.122 nm)	0.000393	ppm	0.000042	10.81	-14.700600	Y 377.433
Tl (190.794 nm)	0.001209	ppm	0.000551	45.56	-3.497860	Y 377.433
U (409.013 nm)	0.019288	ppm	0.004034	20.92	-161.582000	Y 377.433
V (292.401 nm)	0.000286	ppm	0.000170	59.52	38.337300	Y 377.433
Zn (206.200 nm)	-0.001860 u	ppm	0.000165	8.87	31.010700	Y 377.433
Zr (343.823 nm)	-0.000109 u	ppm	0.000053	48.94	14.633500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.107727	21636.400806	0.004286	0.39
Y 377.433	1.123188	1112662.781370	0.005869	0.52
Y_R 377.433	1.170380	83290.600000	0.000700	0.06
Y_R 488.368	1.173470	47807.200000	0.003626	0.31
Y_R2 488.368	1.166926	94355.801554	0.000861	0.07

Sample Name: CCVH-5417909

Date: 11/14/2018 3:29:35 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002247 u	ppm	0.000280	12.44	-775.363000	Y 377.433
Al (167.019 nm)	44.485400 o	ppm	0.180601	0.41	24211.300000	Y_R 377.433
Al H (396.152 nm)	48.377146	ppm	0.045501	0.09	114787.766874	Y_R 377.433
As (188.980 nm)	-0.002103 u	ppm	0.000891	42.37	-3.363470	Y 242.219
B (249.678 nm)	-0.000727 u	ppm	0.000019	2.60	-32.799400	Y 242.219
Ba (493.408 nm)	-0.000536 u	ppm	0.000437	81.50	659.113000	Y_R 488.368
Be (234.861 nm)	0.000068	ppm	0.000045	66.11	1404.120000	Y_R 488.368
Bi (223.061 nm)	0.961331	ppm	0.000694	0.07	2451.780000	Y 377.433
Ca (315.887 nm)	0.011469	ppm	0.003162	27.57	-51.226560	Y_R 377.433
Cd (214.439 nm)	-0.000667 u	ppm	0.000022	3.27	26.262300	Y 377.433
Co (228.615 nm)	0.003019	ppm	0.000369	12.24	10.330200	Y 242.219
Cr (205.560 nm)	-0.000119 u	ppm	0.000108	91.09	-9.106710	Y 377.433
Cu (324.754 nm)	-0.005995 u	ppm	0.000015	0.25	-373.837000	Y 377.433
Fe (238.204 nm)	48.526302 o	ppm	0.116542	0.24	171210.672876	Y_R 377.433
Fe H (259.940 nm)	48.320400	ppm	0.067511	0.14	88241.200000	Y_R 377.433
K (766.491 nm)	0.166183	ppm	0.019475	11.72	-623.118000	Y_R2 488.368
Li (670.783 nm)	0.006247	ppm	0.000787	12.59	-1380.220000	Y_R2 488.368
Mg (279.078 nm)	-0.018177 u	ppm	0.000861	4.74	-407.861000	Y 377.433
Mn (257.610 nm)	0.001152	ppm	0.000008	0.69	371.408000	Y 377.433
Mo (202.032 nm)	-0.000718 u	ppm	0.000369	51.40	-3.828710	Y 377.433
Na (589.592 nm)	237.905000 o	ppm	0.189159	0.08	1516110.000000	Y_R2 488.368
Na H (589.593 nm)	246.863668	ppm	0.717104	0.29	847048.136788	Y_R 488.368
Ni (231.604 nm)	0.003593	ppm	0.000082	2.29	25.915900	Y 377.433
P (213.618 nm)	-0.008939 u	ppm	0.002388	26.71	16.031600	Y 242.219
Pb (220.353 nm)	-0.003745 u	ppm	0.001689	45.11	9.860330	Y 242.219
S (181.972 nm)	4.904404	ppm	0.002301	0.05	2592.526945	Y 377.433
Sb (206.834 nm)	-0.003645 u	ppm	0.000453	12.43	-85.912700	Y 377.433
Se (196.026 nm)	-0.004885 u	ppm	0.002035	41.65	2.300910	Y 242.219
Si (288.158 nm)	0.008484	ppm	0.000574	6.76	1043.290000	Y 377.433
Sn (189.925 nm)	-0.001098 u	ppm	0.000591	53.82	9.890740	Y 377.433
Sr (421.552 nm)	0.000519	ppm	0.000042	8.08	231.177117	Y_R 488.368
Th (288.505 nm)	4.886540	ppm	0.018424	0.38	12575.300000	Y 377.433
Ti (336.122 nm)	0.001612	ppm	0.000015	0.93	-123.099000	Y 377.433
Tl (190.794 nm)	-0.002244 u	ppm	0.000551	24.54	-12.653300	Y 377.433
U (409.013 nm)	9.784700	ppm	0.009729	0.10	43293.000000	Y 377.433
V (292.401 nm)	0.002466	ppm	0.000179	7.27	-37.992600	Y 377.433
Zn (206.200 nm)	-0.006784 u	ppm	0.000269	3.96	3.520150	Y 377.433
Zr (343.823 nm)	-0.004679 u	ppm	0.000083	1.77	-437.638000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111798	21715.920105	0.001523	0.14
Y 377.433	1.112653	1102225.877808	0.001454	0.13
Y_R 377.433	1.152840	82042.000000	0.001848	0.16
Y_R 488.368	1.152440	46950.300000	0.011925	1.03
Y_R2 488.368	1.130197	91385.949905	0.006146	0.54

Sample Name: CCV-5416701

Date: 11/14/2018 3:32:58 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.480102	ppm	0.000006	0.00	21642.300000	Y 377.433
Al (167.019 nm)	0.499627	ppm	0.003915	0.78	274.919000	Y_R 377.433
Al H (396.152 nm)	0.480350 u	ppm	0.002407	0.50	1261.740912	Y_R 377.433
As (188.980 nm)	0.974213	ppm	0.000430	0.04	1289.900000	Y 242.219
B (249.678 nm)	0.487601	ppm	0.000631	0.13	12347.600000	Y 242.219
Ba (493.408 nm)	0.486086	ppm	0.001738	0.36	52260.000000	Y_R 488.368
Be (234.861 nm)	0.488246	ppm	0.001910	0.39	142190.000000	Y_R 488.368
Bi (223.061 nm)	-0.003014 u	ppm	0.000517	17.15	8.658340	Y 377.433
Ca (315.887 nm)	4.900539	ppm	0.009538	0.19	3678.912076	Y_R 377.433
Cd (214.439 nm)	0.482116	ppm	0.000813	0.17	30398.300000	Y 377.433
Co (228.615 nm)	0.488810	ppm	0.000495	0.10	9120.760000	Y 242.219
Cr (205.560 nm)	0.482018	ppm	0.002417	0.50	7449.060000	Y 377.433
Cu (324.754 nm)	0.483600	ppm	0.001373	0.28	25662.600000	Y 377.433
Fe (238.204 nm)	2.445759	ppm	0.000888	0.04	8654.695451	Y_R 377.433
Fe H (259.940 nm)	2.446710 u	ppm	0.009565	0.39	4458.640000	Y_R 377.433
K (766.491 nm)	48.729300	ppm	0.055429	0.11	52591.500000	Y_R2 488.368
Li (670.783 nm)	0.976810	ppm	0.001089	0.11	28754.100000	Y_R2 488.368
Mg (279.078 nm)	19.245700	ppm	0.004131	0.02	117986.000000	Y 377.433
Mn (257.610 nm)	0.484878	ppm	0.000033	0.01	114372.000000	Y 377.433
Mo (202.032 nm)	0.486760	ppm	0.000798	0.16	4358.170000	Y 377.433
Na (589.592 nm)	4.940360	ppm	0.008488	0.17	32763.500000	Y_R2 488.368
Na H (589.593 nm)	5.257928 u	ppm	0.026466	0.50	21454.383257	Y_R 488.368
Ni (231.604 nm)	0.486473	ppm	0.000171	0.04	3448.270000	Y 377.433
P (213.618 nm)	1.013430	ppm	0.003273	0.32	2201.900000	Y 242.219
Pb (220.353 nm)	0.980318	ppm	0.002770	0.28	2954.820000	Y 242.219
S (181.972 nm)	0.007285	ppm	0.004826	66.25	21.669132	Y 377.433
Sb (206.834 nm)	0.973868	ppm	0.001101	0.11	2703.190000	Y 377.433
Se (196.026 nm)	0.969126	ppm	0.002622	0.27	1029.770000	Y 242.219
Si (288.158 nm)	4.863680	ppm	0.018204	0.37	43138.000000	Y 377.433
Sn (189.925 nm)	0.958684	ppm	0.000029	0.00	1986.310000	Y 377.433
Sr (421.552 nm)	0.488449	ppm	0.001997	0.41	95166.222859	Y_R 488.368
Th (288.505 nm)	0.002311 u	ppm	0.005444	> 100.00	94.125800	Y 377.433
Ti (336.122 nm)	0.486263	ppm	0.000925	0.19	68455.500000	Y 377.433
Tl (190.794 nm)	0.972111	ppm	0.004083	0.42	2204.130000	Y 377.433
U (409.013 nm)	0.009020	ppm	0.003121	34.60	-225.796000	Y 377.433
V (292.401 nm)	0.484434	ppm	0.000191	0.04	17806.600000	Y 377.433
Zn (206.200 nm)	0.478716	ppm	0.000050	0.01	2714.220000	Y 377.433
Zr (343.823 nm)	0.487139	ppm	0.000814	0.17	62858.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113771	21754.468452	0.000174	0.02
Y 377.433	1.123843	1113311.560486	0.000298	0.03
Y_R 377.433	1.152340	82006.700000	0.001592	0.14
Y_R 488.368	1.151270	46902.700000	0.005088	0.44
Y_R2 488.368	1.147461	92781.878106	0.004694	0.41

Sample Name: CCB

Date: 11/14/2018 3:36:21 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000506 u	ppm	0.000198	39.11	-459.951000	Y 377.433
Al (167.019 nm)	0.000793 u	ppm	0.002874	> 100.00	2.212830	Y_R 377.433
Al H (396.152 nm)	-0.025521 u	ppm	0.000432	1.69	23.800454	Y_R 377.433
As (188.980 nm)	-0.000535 u	ppm	0.000610	> 100.00	-0.839131	Y 242.219
B (249.678 nm)	0.001155	ppm	0.000382	33.05	87.477800	Y 242.219
Ba (493.408 nm)	-0.000548 u	ppm	0.000117	21.38	616.788000	Y_R 488.368
Be (234.861 nm)	0.000164	ppm	0.000022	13.41	-36.578600	Y_R 488.368
Bi (223.061 nm)	0.001646	ppm	0.002156	> 100.00	20.027700	Y 377.433
Ca (315.887 nm)	0.001699 u	ppm	0.012789	> 100.00	-58.680261	Y_R 377.433
Cd (214.439 nm)	-0.000175 u	ppm	0.000099	56.80	8.540700	Y 377.433
Co (228.615 nm)	0.000427	ppm	0.000278	65.01	-38.192100	Y 242.219
Cr (205.560 nm)	0.000006 u	ppm	0.000333	> 100.00	6.265150	Y 377.433
Cu (324.754 nm)	-0.000161 u	ppm	0.000006	3.77	-376.663000	Y 377.433
Fe (238.204 nm)	-0.002320 u	ppm	0.001058	45.60	18.732287	Y_R 377.433
Fe H (259.940 nm)	0.013838 u	ppm	0.001400	10.12	15.300700	Y_R 377.433
K (766.491 nm)	0.111927	ppm	0.048499	43.33	-682.571000	Y_R2 488.368
Li (670.783 nm)	0.005382	ppm	0.001666	30.95	-1407.060000	Y_R2 488.368
Mg (279.078 nm)	0.001104 u	ppm	0.001666	> 100.00	72.802600	Y 377.433
Mn (257.610 nm)	-0.000101 u	ppm	0.000004	3.66	76.127600	Y 377.433
Mo (202.032 nm)	-0.000473 u	ppm	0.000341	72.09	-1.636840	Y 377.433
Na (589.592 nm)	0.036159	ppm	0.003827	10.59	566.792000	Y_R2 488.368
Na H (589.593 nm)	-0.103986 u	ppm	0.002404	2.31	2695.679638	Y_R 488.368
Ni (231.604 nm)	-0.000535 u	ppm	0.000368	68.73	-5.405140	Y 377.433
P (213.618 nm)	-0.005218 u	ppm	0.002631	50.42	23.988500	Y 242.219
Pb (220.353 nm)	0.001208	ppm	0.000066	5.50	7.831350	Y 242.219
S (181.972 nm)	0.002576 u	ppm	0.005417	> 100.00	17.994067	Y 377.433
Sb (206.834 nm)	0.002668	ppm	0.001238	46.39	-23.331200	Y 377.433
Se (196.026 nm)	-0.000771 u	ppm	0.001979	> 100.00	15.698900	Y 242.219
Si (288.158 nm)	-0.008713 u	ppm	0.000273	3.13	894.191000	Y 377.433
Sn (189.925 nm)	-0.001660 u	ppm	0.000726	43.73	8.734360	Y 377.433
Sr (421.552 nm)	0.000199	ppm	0.000070	35.26	168.875196	Y_R 488.368
Th (288.505 nm)	-0.002107 u	ppm	0.005430	> 100.00	68.066100	Y 377.433
Ti (336.122 nm)	0.000278	ppm	0.000045	16.34	-312.035000	Y 377.433
Tl (190.794 nm)	-0.000532 u	ppm	0.001196	> 100.00	-7.445610	Y 377.433
U (409.013 nm)	0.002953	ppm	0.002646	89.60	-217.333000	Y 377.433
V (292.401 nm)	-0.000107 u	ppm	0.000008	7.02	23.775300	Y 377.433
Zn (206.200 nm)	-0.007256 u	ppm	0.000038	0.53	0.885475	Y 377.433
Zr (343.823 nm)	0.000038 u	ppm	0.000067	> 100.00	33.557200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102068	21525.868080	0.002577	0.23
Y 377.433	1.111011	1100599.853269	0.002007	0.18
Y_R 377.433	1.126720	80183.600000	0.002633	0.23
Y_R 488.368	1.132540	46139.500000	0.000623	0.05
Y_R2 488.368	1.119092	90488.036283	0.001221	0.11

Sample Name: CCVL-5425098

Date: 11/14/2018 3:39:44 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008521	ppm	0.000104	1.22	-44.427700	Y 377.433
Al (167.019 nm)	0.094207	ppm	0.001217	1.29	53.046600	Y_R 377.433
Al H (396.152 nm)	0.076984 u	ppm	0.003708	4.82	268.267889	Y_R 377.433
As (188.980 nm)	0.012480	ppm	0.000243	1.95	16.394600	Y 242.219
B (249.678 nm)	0.093411	ppm	0.000380	0.41	2409.510000	Y 242.219
Ba (493.408 nm)	0.008750	ppm	0.000466	5.33	1603.380000	Y_R 488.368
Be (234.861 nm)	0.000997	ppm	0.000013	1.34	207.983000	Y_R 488.368
Bi (223.061 nm)	0.090552	ppm	0.000078	0.09	244.588000	Y 377.433
Ca (315.887 nm)	0.196596	ppm	0.003438	1.75	90.009831	Y_R 377.433
Cd (214.439 nm)	0.004594	ppm	0.000026	0.57	309.116000	Y 377.433
Co (228.615 nm)	0.010176	ppm	0.000062	0.61	144.598000	Y 242.219
Cr (205.560 nm)	0.009637	ppm	0.000033	0.34	155.032000	Y 377.433
Cu (324.754 nm)	0.014923	ppm	0.000078	0.52	433.148000	Y 377.433
Fe (238.204 nm)	0.094621	ppm	0.000311	0.33	360.706375	Y_R 377.433
Fe H (259.940 nm)	0.104997 u	ppm	0.001569	1.49	181.791000	Y_R 377.433
K (766.491 nm)	3.111880	ppm	0.038580	1.24	2604.730000	Y_R2 488.368
Li (670.783 nm)	0.025047	ppm	0.000207	0.83	-796.493000	Y_R2 488.368
Mg (279.078 nm)	0.189730	ppm	0.001532	0.81	1227.610000	Y 377.433
Mn (257.610 nm)	0.009659	ppm	0.000019	0.20	2376.270000	Y 377.433
Mo (202.032 nm)	0.017441	ppm	0.000245	1.41	158.657000	Y 377.433
Na (589.592 nm)	1.045410	ppm	0.008506	0.81	7015.350000	Y_R2 488.368
Na H (589.593 nm)	0.845159 u	ppm	0.027735	3.28	5948.879821	Y_R 488.368
Ni (231.604 nm)	0.039480	ppm	0.000434	1.10	278.282000	Y 377.433
P (213.618 nm)	2.721720 o	ppm	0.007680	0.28	5854.330000	Y 242.219
Pb (220.353 nm)	0.009112	ppm	0.000877	9.63	31.613000	Y 242.219
S (181.972 nm)	0.089193	ppm	0.002882	3.23	63.510994	Y 377.433
Sb (206.834 nm)	0.019549	ppm	0.001738	8.89	23.982600	Y 377.433
Se (196.026 nm)	0.013674 Q	ppm	0.001762	12.88	30.793700 Q	Y 242.219
Si (288.158 nm)	0.451811	ppm	0.000677	0.15	4886.940000	Y 377.433
Sn (189.925 nm)	0.090454	ppm	0.000465	0.51	198.418000	Y 377.433
Sr (421.552 nm)	0.009753	ppm	0.000100	1.02	2027.927016	Y_R 488.368
Th (288.505 nm)	0.014727	ppm	0.001381	9.37	111.535000	Y 377.433
Ti (336.122 nm)	0.009389	ppm	0.000019	0.20	977.625000	Y 377.433
Tl (190.794 nm)	0.014465	ppm	0.000441	3.05	26.625100	Y 377.433
U (409.013 nm)	0.063803	ppm	0.002203	3.45	52.052700	Y 377.433
V (292.401 nm)	0.009358	ppm	0.000039	0.42	369.160000	Y 377.433
Zn (206.200 nm)	0.011865 Q	ppm	0.000026	0.22	107.644000 Q	Y 377.433
Zr (343.823 nm)	0.014220	ppm	0.000203	1.43	1862.740000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.104146	21566.468774	0.004460	0.40
Y 377.433	1.112760	1102332.009552	0.002124	0.19
Y_R 377.433	1.130090	80422.800000	0.006818	0.60
Y_R 488.368	1.139660	46429.500000	0.007614	0.67
Y_R2 488.368	1.129615	91338.897131	0.002628	0.23

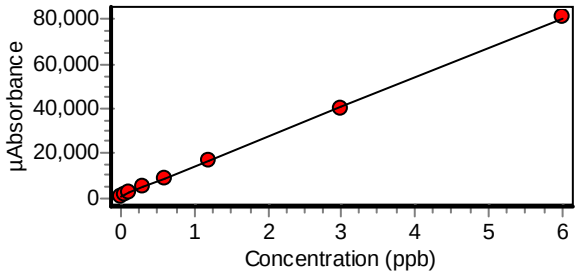
Report Generated By CETAC QuickTrace
Analyst: diazl
Worksheet file: C:\Program Files\QuickTrace\Worksheets\2018\11-Nov\181114ag.wsz
Date Started: 11/15/2018 9:50:47 AM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
IC 280-437490/1-A	STD	11/15/18 10:00:50 am	0.000	785	2.11		1.00	1.00	1.00
IC 280-437490/2-A	STD	11/15/18 10:03:03 am	0.060	2061	1.95		1.00	1.00	1.00
IC 280-437490/3-A	STD	11/15/18 10:05:16 am	0.120	2781	1.98		1.00	1.00	1.00
IC 280-437490/4-A	STD	11/15/18 10:07:30 am	0.300	5076	1.22		1.00	1.00	1.00
IC 280-437490/5-A	STD	11/15/18 10:09:44 am	0.600	8951	1.92		1.00	1.00	1.00
IC 280-437490/6-A	STD	11/15/18 10:11:59 am	1.200	16948	2.06		1.00	1.00	1.00
IC 280-437490/7-A	STD	11/15/18 10:14:15 am	3.000	39609	2.00		1.00	1.00	1.00
IC 280-437490/8-A	STD	11/15/18 10:16:31 am	6.000	80937	1.77		1.00	1.00	1.00

Calibration

Equation: A = 971.758 + 13242.460C
R2: 0.99970
SEE: 523.6146
Flags:



ICV 280-437490/9-A	ICV	11/15/18 10:22:10 am	2.391	32640	2.17		1.00	1.00	1.00
% Recovery 99.64									
ICB 280-437490/10-A	ICB	11/15/18 10:24:22 am	-0.017	749	1.27		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CRA 280-437490/11-A	CRDL	11/15/18 10:26:35 am	0.133	2727	2.41		1.00	1.00
% Recovery 110.45							1.00	
CCV 280-437490/12-A	CCV	11/15/18 10:29:16 am	3.035	41168	1.65		1.00	1.00
% Recovery 101.18							1.00	
CCB 280-437490/13-A	CCB	11/15/18 10:31:28 am	-0.020	711	0.64		1.00	1.00
							1.00	
MB 280-437492/1-A	UNK	11/15/18 10:33:41 am	-0.048	330	1.45		1.00	1.00
							1.00	
LCS 280-437492/2-A	UNK	11/15/18 10:35:53 am	2.860	38844	2.21		1.00	1.00
							1.00	
LCSD 280-437492/3-A	UNK	11/15/18 10:38:06 am	2.749	37379	4.00		1.00	1.00
							1.00	
280-116874-A-34-A	UNK	11/15/18 10:40:19 am	-0.040	443	0.56		1.00	1.00
							1.00	
280-116874-A-34-A SD@5	UNK	11/15/18 10:42:33 am	-0.055	237	1.62		1.00	1.00
							1.00	
280-116874-A-34-B MS	UNK	11/15/18 10:44:46 am	2.905	39437	1.66		1.00	1.00
							1.00	
CCV 280-437490/12-A	CCV	11/15/18 10:47:02 am	3.025	41027	2.06		1.00	1.00
% Recovery 100.83							1.00	
CCB 280-437490/13-A	CCB	11/15/18 10:49:14 am	-0.018	739	0.35		1.00	1.00
							1.00	
280-116874-A-34-C MSD	UNK	11/15/18 10:51:28 am	2.898	39352	2.03		1.00	1.00
							1.00	
280-116874-A-34-A PDS	UNK	11/15/18 10:53:42 am	2.717	36947	1.31		1.00	1.00
							1.00	
280-116874-A-35-A	UNK	11/15/18 10:55:57 am	-0.045	380	3.36		1.00	1.00
							1.00	
280-116289-E-3-C	UNK	11/15/18 10:58:12 am	-0.039	450	2.88		1.00	1.00
							1.00	
280-116289-E-4-G	UNK	11/15/18 11:00:24 am	-0.052	284	0.97		1.00	1.00
							1.00	
280-116289-G-4-E MS	UNK	11/15/18 11:02:36 am	2.848	38687	3.02		1.00	1.00
							1.00	

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116289-G-4-F MSD	UNK	11/15/18 11:04:48 am	2.884	39167	2.47		1.00	1.00	1.00
280-116289-G-5-C	UNK	11/15/18 11:07:01 am	-0.034	527	5.48	s	1.00	1.00	1.00
280-116323-C-3-D	UNK	11/15/18 11:09:13 am	-0.031	558	2.13		1.00	1.00	1.00
280-116323-E-4-A	UNK	11/15/18 11:11:27 am	-0.029	590	0.62		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 11:13:42 am	3.162	42841	2.69		1.00	1.00	1.00
% Recovery 105.39									
CCB 280-437490/13-A	CCB	11/15/18 11:15:54 am	-0.015	772	1.58		1.00	1.00	1.00
280-116323-E-5-A	UNK	11/15/18 11:18:08 am	-0.044	395	1.95		1.00	1.00	1.00
280-116323-E-6-A	UNK	11/15/18 11:20:21 am	-0.026	629	0.82		1.00	1.00	1.00
280-116387-D-3-B	UNK	11/15/18 11:22:35 am	-0.030	575	1.35		1.00	1.00	1.00
280-116387-D-4-B	UNK	11/15/18 11:24:50 am	-0.060	179	143.24	s	1.00	1.00	1.00
280-116387-D-5-B	UNK	11/15/18 11:27:04 am	-0.049	327	1.46		1.00	1.00	1.00
280-116387-D-6-B	UNK	11/15/18 11:29:19 am	-0.057	218	75.40	s	1.00	1.00	1.00
280-116462-D-4-G	UNK	11/15/18 11:31:32 am	-0.041	434	0.69		1.00	1.00	1.00
280-116462-D-5-C	UNK	11/15/18 11:33:44 am	-0.046	363	1.30		1.00	1.00	1.00
280-116462-D-6-C	UNK	11/15/18 11:35:56 am	0.042	1526	10.76	s	1.00	1.00	1.00
280-116462-D-7-C	UNK	11/15/18 11:38:09 am	-0.018	739	10.85	s	1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 11:40:24 am	3.026	41049	3.92		1.00	1.00	1.00
% Recovery 100.88									

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CCB 280-437490/13-A	CCB	11/15/18 11:42:37 am	0.024	1296	0.95		1.00	1.00	1.00
280-116517-M-9-B	UNK	11/15/18 11:44:49 am	0.171	3233	0.20		1.00	1.00	1.00
280-116517-M-10-D	UNK	11/15/18 11:47:03 am	-0.050	309	8.10	s	1.00	1.00	1.00
280-116517-Y-10-C MS	UNK	11/15/18 11:49:16 am	1.951	26804	2.93		1.00	1.00	1.00
280-116517-Y-10-D MSD	UNK	11/15/18 11:51:30 am	2.011	27608	3.21		1.00	1.00	1.00
280-116517-M-11-B	UNK	11/15/18 11:53:44 am	-0.085	-153	13.86		1.00	1.00	1.00
MB 280-437493/1-A	UNK	11/15/18 11:55:58 am	-0.056	228	3.58		1.00	1.00	1.00
LCS 280-437493/2-A	UNK	11/15/18 11:58:13 am	3.004	40750	2.80		1.00	1.00	1.00
LCSD 280-437493/3-A	UNK	11/15/18 12:00:28 pm	3.015	40894	3.07		1.00	1.00	1.00
280-116336-F-6-C	UNK	11/15/18 12:02:40 pm	-0.035	514	5.01	s	1.00	1.00	1.00
280-116336-F-6-C SD@5	UNK	11/15/18 12:04:53 pm	-0.055	246	7.62	s	1.00	1.00	1.00
CCV 280-437490/12-A % Recovery 105.46	CCV	11/15/18 12:07:08 pm	3.164	42869	3.17		1.00	1.00	1.00
CCB 280-437490/13-A	CCB	11/15/18 12:09:21 pm	-0.013	803	0.48		1.00	1.00	1.00
280-116336-F-6-D MS	UNK	11/15/18 12:11:33 pm	2.923	39676	3.06		1.00	1.00	1.00
280-116336-F-6-E MSD	UNK	11/15/18 12:13:46 pm	2.679	36451	2.96		1.00	1.00	1.00
280-116336-F-6-C PDS	UNK	11/15/18 12:15:59 pm	2.870	38983	3.63		1.00	1.00	1.00
280-116407-F-5-C	UNK	11/15/18 12:18:12 pm	-0.048	335	15.12	s	1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116349-G-4-B	UNK	11/15/18 12:20:25 pm	-0.046	366	6.70	s	1.00	1.00	1.00
280-116415-B-2-C	UNK	11/15/18 12:22:39 pm	-0.050	311	6.13	s	1.00	1.00	1.00
280-116415-B-3-C	UNK	11/15/18 12:24:53 pm	-0.051	291	1.92		1.00	1.00	1.00
280-116415-B-4-C	UNK	11/15/18 12:27:07 pm	-0.049	326	3.74		1.00	1.00	1.00
280-116415-B-5-C	UNK	11/15/18 12:29:22 pm	-0.050	316	2.61		1.00	1.00	1.00
280-116415-B-6-C	UNK	11/15/18 12:31:37 pm	-0.050	315	3.34		1.00	1.00	1.00
CCV 280-437490/12-A % Recovery 106.80	CCV	11/15/18 12:33:52 pm	3.204	43401	2.91		1.00	1.00	1.00
CCB 280-437490/13-A	CCB	11/15/18 12:37:10 pm	-0.010	844	0.98		1.00	1.00	1.00
280-11650	UNK	11/15/18 12:39:23 pm	-0.049	327	5.01	s	1.00	1.00	1.00
280-116547-A-2-E	UNK	11/15/18 12:41:36 pm	-0.046	358	1.81		1.00	1.00	1.00
280-116547-A-3-C	UNK	11/15/18 12:43:49 pm	-0.046	359	2.21		1.00	1.00	1.00
280-116547-A-4-C	UNK	11/15/18 12:46:02 pm	-0.048	335	2.79		1.00	1.00	1.00
280-116587-N-3-B	UNK	11/15/18 12:48:15 pm	-0.055	248	3.73		1.00	1.00	1.00
280-116587-N-4-B	UNK	11/15/18 12:50:28 pm	-0.063	139	3.34		1.00	1.00	1.00
280-116587-N-5-B	UNK	11/15/18 12:52:42 pm	-0.047	350	1.95		1.00	1.00	1.00
280-116587-N-6-B	UNK	11/15/18 12:55:46 pm	-0.048	335	0.28		1.00	1.00	1.00
280-116635-J-3-B	UNK	11/15/18 12:58:00 pm	-0.054	262	2.10		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116635-J-4-B	UNK	11/15/18 01:00:14 pm	-0.050	309	2.36		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 01:02:30 pm	3.184	43136	2.52		1.00	1.00	1.00
% Recovery 106.13									
CCB 280-437490/13-A	CCB	11/15/18 01:04:42 pm	-0.012	808	1.39		1.00	1.00	1.00
280-116635-J-5-B	UNK	11/15/18 01:06:57 pm	-0.064	121	8.40	s	1.00	1.00	1.00
280-116635-L-6-B	UNK	11/15/18 01:09:12 pm	-0.058	207	6.32	s	1.00	1.00	1.00
MB 280-437495/1-A	UNK	11/15/18 01:11:25 pm	-0.059	196	4.44		1.00	1.00	1.00
LCS 280-437495/2-A	UNK	11/15/18 01:13:38 pm	3.041	41235	3.03		1.00	1.00	1.00
280-116408-E-1-E	UNK	11/15/18 01:17:13 pm	-0.052	287	4.66		1.00	1.00	1.00
280-116408-E-2-C	UNK	11/15/18 01:19:26 pm	-0.054	256	5.07	s	1.00	1.00	1.00
280-116408-E-2-D MS	UNK	11/15/18 01:21:39 pm	2.506	34152	2.54		1.00	1.00	1.00
280-116408-E-2-E MSD	UNK	11/15/18 01:23:53 pm	2.803	38085	3.18		1.00	1.00	1.00
280-116408-E-3-C	UNK	11/15/18 01:26:06 pm	-0.051	295	6.10	s	1.00	1.00	1.00
280-116408-E-4-C	UNK	11/15/18 01:28:20 pm	-0.051	303	5.29	s	1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 01:30:35 pm	3.203	43383	2.92		1.00	1.00	1.00
% Recovery 106.76									
CCB 280-437490/13-A	CCB	11/15/18 01:32:48 pm	-0.013	793	0.74		1.00	1.00	1.00
280-116408-E-5-C	UNK	11/15/18 01:35:02 pm	-0.048	338	6.56	s	1.00	1.00	1.00
280-116593-E-1-E	UNK	11/15/18 01:37:33 pm	-0.048	336	4.67		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116642-E-1-E	UNK	11/15/18 01:39:47 pm	-0.049	325	2.35		1.00	1.00	1.00
280-116642-E-2-C	UNK	11/15/18 01:42:02 pm	-0.048	331	3.77		1.00	1.00	1.00
280-116642-E-4-C	UNK	11/15/18 01:44:16 pm	-0.055	249	7.12	s	1.00	1.00	1.00
280-116707-K-1-B	UNK	11/15/18 01:46:29 pm	-0.053	267	2.49		1.00	1.00	1.00
280-116707-K-2-B	UNK	11/15/18 01:48:43 pm	-0.057	212	4.60		1.00	1.00	1.00
280-116413-B-1-E	UNK	11/15/18 01:50:57 pm	-0.055	243	4.65		1.00	1.00	1.00
280-116413-B-2-C	UNK	11/15/18 01:53:10 pm	-0.055	246	3.78		1.00	1.00	1.00
280-116413-B-3-C	UNK	11/15/18 01:55:24 pm	-0.044	393	1.23		1.00	1.00	1.00
CCV 280-437490/12-A % Recovery 106.81	CCV	11/15/18 01:57:39 pm	3.204	43403	3.00		1.00	1.00	1.00
CCB 280-437490/13-A	CCB	11/15/18 01:59:51 pm	-0.012	811	1.46		1.00	1.00	1.00
280-116413-B-4-C	UNK	11/15/18 02:02:05 pm	0.085	2092	1.93		1.00	1.00	1.00
280-116413-B-5-C	UNK	11/15/18 02:04:19 pm	-0.047	347	1.74		1.00	1.00	1.00
280-116413-B-6-C	UNK	11/15/18 02:06:33 pm	-0.041	433	1.11		1.00	1.00	1.00
280-116413-B-7-C	UNK	11/15/18 02:08:47 pm	-0.053	267	2.30		1.00	1.00	1.00
280-116413-B-8-C	UNK	11/15/18 02:11:02 pm	-0.054	261	3.14		1.00	1.00	1.00
280-116413-B-9-C	UNK	11/15/18 02:13:17 pm	-0.052	277	3.18		1.00	1.00	1.00
LB3 280-436732/1-J	UNK	11/15/18 02:15:31 pm	-0.054	254	0.65		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
LCS 280-436732/2-G	UNK	11/15/18 02:17:45 pm	2.971	40321	3.15		1.00	1.00	1.00
LCSD 280-436732/13-D	UNK	11/15/18 02:19:59 pm	2.892	39270	2.01		1.00	1.00	1.00
280-116538-A-4-P	UNK	11/15/18 02:22:12 pm	-0.067	91	14.40		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 02:24:28 pm	3.261	44153	3.09		1.00	1.00	1.00
% Recovery 108.69									
CCB 280-437490/13-A	CCB	11/15/18 02:27:05 pm	-0.009	856	0.22		1.00	1.00	1.00
280-116538-A-4-P SD@5	UNK	11/15/18 02:29:18 pm	-0.053	271	7.64	s	1.00	1.00	1.00
280-116538-A-4-Q MS	UNK	11/15/18 02:31:32 pm	2.982	40466	2.50		1.00	1.00	1.00
280-116538-A-4-R MSD	UNK	11/15/18 02:33:46 pm	3.084	41817	3.45		1.00	1.00	1.00
280-116538-A-4-P PDS	UNK	11/15/18 02:36:00 pm	2.943	39946	3.19		1.00	1.00	1.00
280-116610-A-1-J	UNK	11/15/18 02:38:14 pm	-0.060	172	13.36	s	1.00	1.00	1.00
280-116610-A-3-H	UNK	11/15/18 02:40:29 pm	0.035	1440	0.64		1.00	1.00	1.00
280-116610-D-5-H	UNK	11/15/18 02:43:30 pm	0.189	3477	2.10		1.00	1.00	1.00
280-116610-A-6-J	UNK	11/15/18 02:45:45 pm	-0.057	216	8.01	s	1.00	1.00	1.00
280-116621-D-2-J	UNK	11/15/18 02:47:59 pm	-0.065	111	2.75		1.00	1.00	1.00
280-116621-D-3-H	UNK	11/15/18 02:50:13 pm	-0.070	48	11.34		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 03:02:37 pm	3.070	41626	2.92		1.00	1.00	1.00
% Recovery 102.33									
CCB 280-437490/13-A	CCB	11/15/18 03:04:49 pm	-0.010	837	0.86		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116621-C-4-H	UNK	11/15/18 03:07:04 pm	-0.061	164	4.71		1.00	1.00	1.00
490-162511-B-1-D	UNK	11/15/18 03:09:18 pm	-0.052	280	6.34	s	1.00	1.00	1.00
LB 280-436906/1-C	UNK	11/15/18 03:12:21 pm	-0.058	198	2.32		1.00	1.00	1.00
LCS 280-436906/2-C	UNK	11/15/18 03:14:35 pm	3.229	43735	1.15		1.00	1.00	1.00
490-162509-B-1-E	UNK	11/15/18 03:16:49 pm	-0.050	307	3.13		1.00	1.00	1.00
490-162509-B-1-F MS	UNK	11/15/18 03:19:03 pm	3.365	45527	1.36		1.00	1.00	1.00
490-162509-B-1-G MSD	UNK	11/15/18 03:21:17 pm	3.383	45772	1.37		1.00	1.00	1.00
CCV 280-437490/12-A % Recovery 109.10	CCV	11/15/18 03:23:33 pm	3.273	44314	2.93		1.00	1.00	1.00
CCB 280-437490/13-A	CCB	11/15/18 03:25:45 pm	-0.010	837	2.06		1.00	1.00	1.00
280-116387-D-4-B	UNK	11/15/18 03:27:59 pm	-0.035	504	7.28	s	1.00	1.00	1.00
280-116517-M-11-B	UNK	11/15/18 03:30:13 pm	-0.039	450	4.05		1.00	1.00	1.00
280-116587-N-4-B	UNK	11/15/18 03:32:27 pm	-0.055	245	4.40		1.00	1.00	1.00
280-116635-J-5-B	UNK	11/15/18 03:34:41 pm	-0.060	180	5.99	s	1.00	1.00	1.00
280-116538-A-4-P	UNK	11/15/18 03:36:55 pm	-0.062	148	8.52	s	1.00	1.00	1.00
280-116610-A-1-J	UNK	11/15/18 03:39:25 pm	-0.050	303	4.63		1.00	1.00	1.00
280-116621-D-2-J	UNK	11/15/18 03:41:39 pm	-0.062	149	2.06		1.00	1.00	1.00
280-116621-D-3-H	UNK	11/15/18 03:43:53 pm	-0.064	125	3.62		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116621-C-4-H	UNK	11/15/18 03:46:07 pm	-0.060	180	3.96		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 03:48:23 pm	3.147	42646	2.95		1.00	1.00	1.00
% Recovery 104.90									
CCB 280-437490/13-A	CCB	11/15/18 03:51:07 pm	-0.010	834	1.75		1.00	1.00	1.00
280-116635-J-5-B	UNK	11/15/18 03:53:21 pm	-0.064	128	7.94	s	1.00	1.00	1.00
280-116538-A-4-P	UNK	11/15/18 03:55:35 pm	-0.061	162	4.21		1.00	1.00	1.00
280-116621-D-2-J	UNK	11/15/18 03:57:49 pm	-0.061	170	1.32		1.00	1.00	1.00
280-116621-D-3-H	UNK	11/15/18 04:00:04 pm	-0.064	118	3.79		1.00	1.00	1.00
280-116621-C-4-H	UNK	11/15/18 04:02:18 pm	-0.057	216	0.95		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 04:04:33 pm	3.092	41914	1.50		1.00	1.00	1.00
% Recovery 103.06									
CCB 280-437490/13-A	CCB	11/15/18 04:06:45 pm	-0.012	815	1.02		1.00	1.00	1.00
280-116635-J-5-B	UNK	11/15/18 04:09:53 pm	-0.065	111	13.20	s	1.00	1.00	1.00
280-116538-A-4-P	UNK	11/15/18 04:12:07 pm	-0.062	147	3.68		1.00	1.00	1.00
280-116621-D-2-J	UNK	11/15/18 04:14:21 pm	-0.060	172	2.60		1.00	1.00	1.00
280-116621-D-3-H	UNK	11/15/18 04:16:35 pm	-0.060	179	0.77		1.00	1.00	1.00
280-116635-J-5-B	UNK	11/15/18 04:19:08 pm	-0.069	64	7.03		1.00	1.00	1.00
280-116538-A-4-P	UNK	11/15/18 04:21:22 pm	-0.062	150	0.88		1.00	1.00	1.00
280-116621-D-2-J	UNK	11/15/18 04:23:36 pm	-0.058	197	0.44		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116621-D-3-H	UNK	11/15/18 04:25:50 pm	-0.061	160	1.59		1.00	1.00	1.00
CCV 280-437490/12-A	CCV	11/15/18 04:28:05 pm	-0.047	344	10.99	Q	1.00	1.00	1.00
% Recovery -1.58									

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	35.00	90.00	55.00	4	1.50	50	253.65

ASX Pump Rate (%)
100

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
20.00	24.00		

Standby Mode

Enabled: Yes

Standby Options: pump off, gas off, lamp off

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration (ppb)
0.0600

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration (ppb)
0.0600

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
3.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
2.4000	94.6000	105.4000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.1200	50.0000	150.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
FWGIDW-181001-WW	280-116538-4
FWIDW-181002-WW	280-116538-7

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job Number: 280-116538-2

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
FWGIDW-181001-WW	280-116538-4

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FWGIDW-181001-WW
Lab Sample ID: 280-116538-4
Lab Name: TestAmerica Denver
Job No.: 280-116538-2
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 15:30
Reporting Basis: WET
Date Received: 11/03/2018 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	0.63	0.050	0.010	mg/L			5	9012B
18496-25-8	Sulfide	ND	4.0	0.79	mg/L			1	9034
	pH adj. to 25 deg C	7.8	0.1	0.1	SU		HF	1	9040C
	Temperature	20.3	1.0	1.0	Degrees C		HF	1	9040C
14797-55-8	Nitrate as N	14	2.5	0.21	mg/L			5	9056A
14797-65-0	Nitrite as N	0.52	0.50	0.049	mg/L		B	1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FWIDW-181002-WW
Lab Sample ID: 280-116538-7
Lab Name: TestAmerica Denver
Job No.: 280-116538-2
SDG ID.:
Matrix: Water
Date Sampled: 11/14/2018 15:55
Reporting Basis: WET
Date Received: 11/03/2018 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	0.27	0.010	0.0020	mg/L			1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FWGIDW-181001-WW
Lab Sample ID: 280-116538-4
Lab Name: TestAmerica St. Louis
Job No.: 280-116538-2
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 15:30
Reporting Basis: WET
Date Received: 11/03/2018 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Flashpoint	>60	1.00	1.00	Degrees C			1	1010A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Analyst: RK Batch Start Date: 11/15/2018

Reporting Units: mg/L Analytical Batch No.: 437833

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	17:50	Cyanide, Total	0.104	0.100	104	90-110		CN ICV Daily_01225
15	ICB	17:51	Cyanide, Total	ND					
29	CCV	18:12	Cyanide, Total	0.201	0.200	101	90-110		CN CAL 1 ppm_01458
30	CCB	18:14	Cyanide, Total	ND					
44	CCV	18:35	Cyanide, Total	0.201	0.200	101	90-110		CN CAL 1 ppm_01458
45	CCB	18:36	Cyanide, Total	ND					
74	CCV	19:24	Cyanide, Total	0.204	0.200	102	90-110		CN CAL 1 ppm_01458
75	CCB	19:25	Cyanide, Total	ND					
80	CCV	19:33	Cyanide, Total	0.204	0.200	102	90-110		CN CAL 1 ppm_01458
81	CCB	19:34	Cyanide, Total	ND					

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Analyst: AJA Batch Start Date: 11/21/2018

Reporting Units: mg/L Analytical Batch No.: 438452

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	09:24	Cyanide, Total	0.100	0.100	100	90-110		CN ICV Daily_01228
15	ICB	09:26	Cyanide, Total	0.0050				U	
58	CCV	10:31	Cyanide, Total	0.206	0.200	103	90-110		CN CAL 1 ppm_01461
59	CCB	10:32	Cyanide, Total	0.0050				U	
73	CCV	10:53	Cyanide, Total	0.209	0.200	105	90-110		CN CAL 1 ppm_01461
74	CCB	10:55	Cyanide, Total	0.0050				U	
88	CCV	11:16	Cyanide, Total	0.211	0.200	105	90-110		CN CAL 1 ppm_01461
89	CCB	11:17	Cyanide, Total	0.0050				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Analyst: SGB Batch Start Date: 11/19/2018

Reporting Units: Degrees C Analytical Batch No.: 438182

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:46	Temperature	23.4					
16	CCV	13:50	Temperature	21.0					

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Analyst: SGB Batch Start Date: 11/19/2018

Reporting Units: SU Analytical Batch No.: 438182

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:46	pH adj. to 25 deg C	7.0	7.00	100	97-102		pH 7.0 Buffer 00247
16	CCV	13:50	pH adj. to 25 deg C	7.1	7.00	101	97-102		pH 7.0 Buffer 00248

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Analyst: A1D Batch Start Date: 10/30/2018

Reporting Units: mg/L Analytical Batch No.: 435512

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	12:12	Nitrate as N	4.09	4.00	102	90-110		IC ICV 5_00214
			Nitrite as N	3.70	4.00	92	90-110		IC ICV 5_00214
9	ICB	12:29	Nitrate as N	ND					
			Nitrite as N	ND					

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Analyst: A1D Batch Start Date: 11/03/2018

Reporting Units: mg/L Analytical Batch No.: 436181

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	10:40	Nitrate as N	4.96	5.00	99	90-110		IC LCS_01391
			Nitrite as N	5.03	5.00	101	90-110		IC LCS_01391
2	CCB	10:57	Nitrate as N	ND					
			Nitrite as N	ND					
16	CCV	15:26	Nitrate as N	5.00	5.00	100	90-110		IC LCS_01391
			Nitrite as N	5.14	5.00	103	90-110		IC LCS_01391
17	CCB	15:43	Nitrate as N	ND					
			Nitrite as N	ND					
25	CCV	18:03	Nitrate as N	5.01	5.00	100	90-110		IC LCS_01391
			Nitrite as N	5.14	5.00	103	90-110		IC LCS_01391
26	CCB	18:21	Nitrate as N	ND					
			Nitrite as N	ND					

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job No.: 280-116538-2

SDG No.:

Analyst: JCB Batch Start Date: 11/16/2018

Reporting Units: Degrees C Analytical Batch No.: 401121

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	02:02	Flashpoint	47.50	52.0	91			FlashPointStd_00003

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

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 437833	Date: 11/15/2018 18:00	Prep Batch: 437763	Date: 11/15/2018 11:37				
9012B	MB 280-437763/5-A	Cyanide, Total	ND		mg/L	0.010	1
Batch ID: 438452	Date: 11/21/2018 10:41	Prep Batch: 438264	Date: 11/20/2018 10:20				
9012B	MB 280-438264/5-A	Cyanide, Total	0.0050	U	mg/L	0.010	1
Batch ID: 436735	Date: 11/07/2018 20:06	Prep Batch: 436723	Date: 11/07/2018 17:19				
9034	MB 280-436723/1-A	Sulfide	ND		mg/L	4.0	1
Batch ID: 436181	Date: 11/03/2018 12:07						
9056A	MB 280-436181/6	Nitrate as N	ND		mg/L	0.50	1
9056A	MB 280-436181/6	Nitrite as N	0.0961	J	mg/L	0.50	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job No.: 280-116538-2

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 401121 Date: 11/15/2018 23:43							
1010A	MB 160-401121/1	Flashpoint	>60		Degrees C	1.00	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:57		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCS Source: CN ICV Int_00511					
9012B	LCS 280-437763/3-A	Cyanide, Total	0.102		mg/L	0.100	102	83-116	4	20	
Batch ID: 438452	Date: 11/21/2018 10:38		Prep Batch: 438264			Date: 11/20/2018 10:20					
						LCS Source: CN ICV Int_00512					
9012B	LCS 280-438264/3-A	Cyanide, Total	0.110		mg/L	0.100	110	83-116	5	20	
Batch ID: 436735	Date: 11/07/2018 20:06		Prep Batch: 436723			Date: 11/07/2018 17:19					
						LCS Source: SFD ICV INT_01516					
9034	LCS 280-436723/3-A	Sulfide	16.0		mg/L	22.3	72	50-106			
Batch ID: 438182	Date: 11/19/2018 12:58										
						LCS Source: pH 7.0 Buffer_00248					
9040C	LCS 280-438182/4	pH adj. to 25 deg C	7.0		SU	7.00	100	99-101			
Batch ID: 436181	Date: 11/03/2018 11:32										
						LCS Source: IC LCS_01391					
9056A	LCS 280-436181/4	Nitrate as N	4.96		mg/L	5.00	99	88-111	0	10	
9056A	LCS 280-436181/4	Nitrite as N	5.06		mg/L	5.00	101	87-111	1	10	

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

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:59		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCSD Source: CN ICV Int_00511					
9012B	LCSD 280-437763/4-A	Cyanide, Total	0.0973		mg/L	0.100	97	83-116	4	20	
Batch ID: 438452	Date: 11/21/2018 10:40		Prep Batch: 438264			Date: 11/20/2018 10:20					
						LCSD Source: CN ICV Int_00512					
9012B	LCSD 280-438264/4-A	Cyanide, Total	0.105		mg/L	0.100	105	83-116	5	20	
Batch ID: 436181	Date: 11/03/2018 11:49										
						LCSD Source: IC LCS_01391					
9056A	LCSD 280-436181/5	Nitrate as N	4.97		mg/L	5.00	99	88-111	0	10	
9056A	LCSD 280-436181/5	Nitrite as N	5.13		mg/L	5.00	103	87-111	1	10	

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

FORM VIIA-IN

7A-IN
LOW LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:56		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCS Source: CN 10ppm_00321					
9012B	LLCS 280-437763/2-A	Cyanide, Total	0.0970		mg/L	0.100	97	44-167			
Batch ID: 438452	Date: 11/21/2018 10:37		Prep Batch: 438264			Date: 11/20/2018 10:20					
						LCS Source: CN 10ppm_00323					
9012B	LLCS 280-438264/2-A	Cyanide, Total	0.0979		mg/L	0.100	98	44-167			

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

FORM VIIA-IN

7A-IN
HIGH LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:54		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCS Source: CN 10ppm_00321					
9012B	HLCS 280-437763/1-A	Cyanide, Total	0.342		mg/L	0.350	98	90-110			
Batch ID: 438452	Date: 11/21/2018 10:35		Prep Batch: 438264			Date: 11/20/2018 10:20					
						LCS Source: CN 10ppm_00323					
9012B	HLCS 280-438264/1-A	Cyanide, Total	0.358		mg/L	0.350	102	90-110			

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

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436181	Date: 11/03/2018 11:14										
						LCS Source: IC Cal low_00412					
9056A	MRL 280-436181/3	Nitrate as N	0.241	J	mg/L	0.200	120	50-150			
9056A	MRL 280-436181/3	Nitrite as N	0.234	J	mg/L	0.200	117	50-150			

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

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job No.: 280-116538-2

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 401121	Date: 11/15/2018 23:58										
						LCS Source: p-Xylene_00013					
1010A	LCS 160-401121/2	Flashpoint	27.00		Degrees C	25.0	108	90-110			

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

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B MDL Date: 08/01/2018 00:00

Prep Method: 9012B

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 MDL Date: 03/28/2011 13:37

Prep Method: 9030B

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfide		4	0.793

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 XMDL Date: 03/28/2011 13:37

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfide		4	0.793

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: 9040C RL Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	RL (Degrees C)	
Temperature		1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: 9040C XRL Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	XRL (Degrees C)	
Temperature		1	

FORM IX - IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: 9040C RL Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	RL (SU)	
pH adj. to 25 deg C		0.1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: 9040C XRL Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	XRL (SU)	
pH adj. to 25 deg C		0.1	

FORM IX - IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A MDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate as N		0.5	0.042
Nitrite as N		0.5	0.049

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate as N		0.5	0.042
Nitrite as N		0.5	0.049

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 1010A RL Date: 01/28/2011 13:29

Analyte	Wavelength/ Mass	RL (Degrees C)	
Flashpoint		1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job Number: 280-116538-2

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 1010A XRL Date: 01/28/2011 13:29

Analyte	Wavelength/ Mass	XRL (Degrees C)	
Flashpoint		1	

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-437763/1-A	11/15/2018 11:37	437763		50	50
LLCS 280-437763/2-A	11/15/2018 11:37	437763		50	50
LCS 280-437763/3-A	11/15/2018 11:37	437763		50	50
LCSD 280-437763/4-A	11/15/2018 11:37	437763		50	50
MB 280-437763/5-A	11/15/2018 11:37	437763		50	50
280-116538-4	11/15/2018 11:37	437763		50	50

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-438264/1-A	11/20/2018 10:20	438264		50	50
LLCS 280-438264/2-A	11/20/2018 10:20	438264		50	50
LCS 280-438264/3-A	11/20/2018 10:20	438264		50	50
LCSD 280-438264/4-A	11/20/2018 10:20	438264		50	50
MB 280-438264/5-A	11/20/2018 10:20	438264		50	50
280-116538-7	11/20/2018 10:20	438264		50	50

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Prep Method: 9030B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-436723/1-A	11/07/2018 17:19	436723		50	50
LCS 280-436723/3-A	11/07/2018 17:19	436723		50	50
280-116538-4	11/07/2018 17:19	436723		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/15/2018 17:30 End Date: 11/15/2018 19:52

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			17:30	
ZZZZZZ			17:32	
ZZZZZZ			17:33	
ZZZZZZ			17:35	
IC 280-437833/5			17:36	X
IC 280-437833/6			17:38	X
IC 280-437833/7			17:39	X
IC 280-437833/8			17:41	X
IC 280-437833/9			17:42	X
IC 280-437833/10			17:44	X
IC 280-437833/11			17:45	X
ZZZZZZ			17:47	
ZZZZZZ			17:48	
ICV 280-437833/14	1		17:50	X
ICB 280-437833/15	1		17:51	X
ZZZZZZ			17:53	
HLCS 280-437763/1-A	1	T	17:54	X
LLCS 280-437763/2-A	1	T	17:56	X
LCS 280-437763/3-A	1	T	17:57	X
LCSD 280-437763/4-A	1	T	17:59	X
MB 280-437763/5-A	1	T	18:00	X
ZZZZZZ			18:02	
ZZZZZZ			18:03	
ZZZZZZ			18:05	
ZZZZZZ			18:06	
ZZZZZZ			18:08	
ZZZZZZ			18:09	
ZZZZZZ			18:11	
CCV 280-437833/29	1		18:12	X
CCB 280-437833/30	1		18:14	X
ZZZZZZ			18:15	
ZZZZZZ			18:17	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:21	
ZZZZZZ			18:23	
ZZZZZZ			18:24	
ZZZZZZ			18:26	
ZZZZZZ			18:27	
ZZZZZZ			18:29	
ZZZZZZ			18:30	
ZZZZZZ			18:32	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/15/2018 17:30 End Date: 11/15/2018 19:52

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			18:33	
CCV 280-437833/44	1		18:35	X
CCB 280-437833/45	1		18:36	X
ZZZZZZ			18:38	
ZZZZZZ			18:39	
ZZZZZZ			18:41	
ZZZZZZ			18:42	
ZZZZZZ			18:44	
ZZZZZZ			18:45	
ZZZZZZ			18:47	
ZZZZZZ			18:48	
ZZZZZZ			18:50	
ZZZZZZ			18:55	
ZZZZZZ			18:57	
ZZZZZZ			18:58	
ZZZZZZ			19:00	
CCV 280-437833/59			19:01	
CCB 280-437833/60			19:03	
ZZZZZZ			19:04	
ZZZZZZ			19:06	
ZZZZZZ			19:07	
ZZZZZZ			19:09	
ZZZZZZ			19:10	
ZZZZZZ			19:12	
ZZZZZZ			19:13	
ZZZZZZ			19:15	
ZZZZZZ			19:16	
ZZZZZZ			19:18	
ZZZZZZ			19:19	
ZZZZZZ			19:21	
ZZZZZZ			19:22	
CCV 280-437833/74	1		19:24	X
CCB 280-437833/75	1		19:25	X
ZZZZZZ			19:27	
280-116538-4	5	T	19:28	X
ZZZZZZ			19:30	
ZZZZZZ			19:31	
CCV 280-437833/80	1		19:33	X
CCB 280-437833/81	1		19:34	X
ZZZZZZ			19:36	
ZZZZZZ			19:41	
ZZZZZZ			19:43	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/15/2018 17:30 End Date: 11/15/2018 19:52

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			19:44																									
ZZZZZZ			19:46																									
ZZZZZZ			19:47																									
CCV 280-437833/88			19:49																									
CCB 280-437833/89			19:50																									
ZZZZZZ			19:52																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/21/2018 09:05 End Date: 11/21/2018 12:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			09:05																									
ZZZZZZ			09:06																									
ZZZZZZ			09:08																									
ZZZZZZ			09:09																									
IC 280-438452/5			09:11	X																								
IC 280-438452/6			09:12	X																								
IC 280-438452/7			09:14	X																								
IC 280-438452/8			09:15	X																								
IC 280-438452/9			09:17	X																								
IC 280-438452/10			09:18	X																								
IC 280-438452/11			09:20	X																								
ZZZZZZ			09:21																									
ZZZZZZ			09:23																									
ICV 280-438452/14	1		09:24	X																								
ICB 280-438452/15	1		09:26	X																								
ZZZZZZ			09:27																									
ZZZZZZ			09:29																									
ZZZZZZ			09:30																									
ZZZZZZ			09:32																									
ZZZZZZ			09:33																									
ZZZZZZ			09:35																									
ZZZZZZ			09:36																									
ZZZZZZ			09:38																									
ZZZZZZ			09:39																									
ZZZZZZ			09:41																									
ZZZZZZ			09:42																									
ZZZZZZ			09:44																									
ZZZZZZ			09:45																									
CCV 280-438452/29			09:47																									
CCB 280-438452/30			09:48																									
ZZZZZZ			09:50																									
ZZZZZZ			09:51																									
ZZZZZZ			09:53																									
ZZZZZZ			09:54																									
ZZZZZZ			09:56																									
ZZZZZZ			09:57																									
ZZZZZZ			09:59																									
ZZZZZZ			10:00																									
ZZZZZZ			10:02																									
ZZZZZZ			10:03																									
ZZZZZZ			10:05																									
ZZZZZZ			10:06																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/21/2018 09:05 End Date: 11/21/2018 12:18

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			10:08	
CCV 280-438452/44			10:10	
CCB 280-438452/45			10:11	
ZZZZZZ			10:13	
ZZZZZZ			10:14	
ZZZZZZ			10:16	
ZZZZZZ			10:17	
ZZZZZZ			10:19	
ZZZZZZ			10:20	
ZZZZZZ			10:22	
ZZZZZZ			10:23	
ZZZZZZ			10:25	
ZZZZZZ			10:26	
ZZZZZZ			10:28	
ZZZZZZ			10:29	
CCV 280-438452/58	1		10:31	X
CCB 280-438452/59	1		10:32	X
ZZZZZZ			10:34	
HLCS 280-438264/1-A	1	T	10:35	X
LLCS 280-438264/2-A	1	T	10:37	X
LCS 280-438264/3-A	1	T	10:38	X
LCSD 280-438264/4-A	1	T	10:40	X
MB 280-438264/5-A	1	T	10:41	X
ZZZZZZ			10:43	
ZZZZZZ			10:44	
ZZZZZZ			10:46	
ZZZZZZ			10:47	
ZZZZZZ			10:49	
ZZZZZZ			10:50	
ZZZZZZ			10:52	
CCV 280-438452/73	1		10:53	X
CCB 280-438452/74	1		10:55	X
ZZZZZZ			10:56	
ZZZZZZ			10:58	
ZZZZZZ			10:59	
ZZZZZZ			11:01	
ZZZZZZ			11:02	
ZZZZZZ			11:04	
ZZZZZZ			11:05	
280-116538-7	1	T	11:07	X
ZZZZZZ			11:08	
ZZZZZZ			11:10	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/21/2018 09:05 End Date: 11/21/2018 12:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			11:11																									
ZZZZZZ			11:13																									
ZZZZZZ			11:14																									
CCV 280-438452/88	1		11:16	X																								
CCB 280-438452/89	1		11:17	X																								
ZZZZZZ			11:19																									
ZZZZZZ			11:20																									
ZZZZZZ			11:22																									
ZZZZZZ			11:23																									
ZZZZZZ			11:25																									
ZZZZZZ			11:26																									
ZZZZZZ			11:28																									
ZZZZZZ			11:29																									
ZZZZZZ			11:31																									
ZZZZZZ			11:32																									
ZZZZZZ			11:34																									
ZZZZZZ			11:35																									
ZZZZZZ			11:37																									
CCV 280-438452/103			11:38																									
CCB 280-438452/104			11:40																									
ZZZZZZ			11:41																									
ZZZZZZ			11:43																									
ZZZZZZ			11:44																									
ZZZZZZ			11:46																									
ZZZZZZ			11:47																									
ZZZZZZ			11:49																									
ZZZZZZ			11:50																									
ZZZZZZ			11:52																									
ZZZZZZ			11:53																									
ZZZZZZ			11:55																									
ZZZZZZ			11:56																									
ZZZZZZ			11:58																									
ZZZZZZ			11:59																									
CCV 280-438452/118			12:01																									
CCB 280-438452/119			12:02																									
ZZZZZZ			12:04																									
ZZZZZZ			12:09																									
ZZZZZZ			12:10																									
ZZZZZZ			12:12																									
ZZZZZZ			12:13																									
CCV 280-438452/125			12:15																									
CCB 280-438452/126			12:16																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/21/2018 09:05 End Date: 11/21/2018 12:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			12:18																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 9034

Start Date: 11/07/2018 20:06 End Date: 11/07/2018 20:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				S2																								
MB 280-436723/1-A	1	T	20:06	X																								
ZZZZZZ			20:06																									
LCS 280-436723/3-A	1	T	20:06	X																								
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
280-116538-4	1	T	20:06	X																								
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC-AT3 Analysis Method: 9040C

Start Date: 11/19/2018 12:46 End Date: 11/19/2018 16:47

Lab Sample Id	D/F	Type	Time	Analytes																										
				pH	Temp																									
ICV 280-438182/1	1		12:46	X	X																									
ZZZZZZ			12:50																											
ZZZZZZ			12:54																											
LCS 280-438182/4	1	T	12:58	X	X																									
RINSE 280-438182/5			13:04																											
ZZZZZZ			13:09																											
ZZZZZZ			13:13																											
ZZZZZZ			13:17																											
ZZZZZZ			13:21																											
ZZZZZZ			13:25																											
ZZZZZZ			13:29																											
ZZZZZZ			13:33																											
ZZZZZZ			13:37																											
ZZZZZZ			13:41																											
280-116538-4	1	T	13:46	X	X																									
CCV 280-438182/16	1		13:50	X	X																									
RINSE 280-438182/17			13:57																											
ZZZZZZ			14:01																											
ZZZZZZ			14:05																											
ZZZZZZ			14:10																											
ZZZZZZ			14:15																											
ZZZZZZ			14:19																											
ZZZZZZ			14:25																											
ZZZZZZ			14:30																											
ZZZZZZ			14:34																											
ZZZZZZ			14:38																											
ZZZZZZ			14:42																											
CCV 280-438182/28			14:46																											
ZZZZZZ			14:50																											
RINSE 280-438182/30			14:57																											
ZZZZZZ			15:01																											
ZZZZZZ			15:05																											
ZZZZZZ			15:09																											
ZZZZZZ			15:13																											
ZZZZZZ			15:17																											
ZZZZZZ			15:21																											
ZZZZZZ			15:25																											
ZZZZZZ			15:29																											
ZZZZZZ			15:33																											
ZZZZZZ			15:37																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC-AT3 Analysis Method: 9040C

Start Date: 11/19/2018 12:46 End Date: 11/19/2018 16:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				pH	Temp																								
CCV 280-438182/41			15:41																										
RINSE 280-438182/42			15:48																										
CCV 280-438182/43			15:56																										
ZZZZZZ			16:00																										
RINSE 280-438182/45			16:07																										
ZZZZZZ			16:11																										
ZZZZZZ			16:15																										
ZZZZZZ			16:21																										
ZZZZZZ			16:25																										
ZZZZZZ			16:29																										
ZZZZZZ			16:33																										
ZZZZZZ			16:37																										
ZZZZZZ			16:43																										
CCV 280-438182/54			16:47																										

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 10/30/2018 10:10 End Date: 10/31/2018 08:25

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
RTC 280-435512/1			10:10																											
STD1 280-435512/2 IC	1		10:27	X	X																									
STD2 280-435512/3 IC	1		10:45	X	X																									
STD3 280-435512/4 IC	1		11:02	X	X																									
STD4 280-435512/5 IC	1		11:19	X	X																									
STD5 280-435512/6 IC	1		11:37	X	X																									
STD6 280-435512/7 IC	1		11:54	X	X																									
ICV 280-435512/8	1		12:12	X	X																									
ICB 280-435512/9	1		12:29	X	X																									
ZZZZZZ			12:46																											
ZZZZZZ			13:04																											
ZZZZZZ			13:21																											
ZZZZZZ			13:39																											
ZZZZZZ			21:05																											
ZZZZZZ			21:22																											
ZZZZZZ			21:40																											
ZZZZZZ			21:57																											
ZZZZZZ			22:14																											
ZZZZZZ			22:32																											
ZZZZZZ			22:49																											
ZZZZZZ			23:07																											
ZZZZZZ			23:24																											
ZZZZZZ			23:42																											
CCV 280-435512/24			23:59																											
CCB 280-435512/25			00:17																											
ZZZZZZ			00:34																											
ZZZZZZ			00:52																											
ZZZZZZ			01:09																											
ZZZZZZ			01:27																											
ZZZZZZ			01:44																											
ZZZZZZ			02:02																											
ZZZZZZ			02:19																											
ZZZZZZ			02:37																											
CCV 280-435512/34			02:54																											
CCB 280-435512/35			03:12																											
ZZZZZZ			03:29																											
ZZZZZZ			03:47																											
ZZZZZZ			04:04																											
ZZZZZZ			04:22																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 10/30/2018 10:10 End Date: 10/31/2018 08:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				NO2-N	NO3																							
CCV 280-435512/46			06:24																									
CCB 280-435512/47			06:41																									
ZZZZZZ			07:33																									
CCV 280-435512/52			08:08																									
CCB 280-435512/53			08:25																									

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 11/03/2018 10:40 End Date: 11/03/2018 21:16

Lab Sample Id	D/F	Type	Time	Analytes																									
				NO2-N	NO3																								
CCV 280-436181/1	1		10:40	X	X																								
CCB 280-436181/2	1		10:57	X	X																								
MRL 280-436181/3	1	T	11:14	X	X																								
LCS 280-436181/4	1	T	11:32	X	X																								
LCSD 280-436181/5	1	T	11:49	X	X																								
MB 280-436181/6	1	T	12:07	X	X																								
ZZZZZZ			12:49																										
ZZZZZZ			13:06																										
ZZZZZZ			13:24																										
ZZZZZZ			13:41																										
ZZZZZZ			13:59																										
280-116538-4	1	T	14:16	X																									
ZZZZZZ			14:33																										
ZZZZZZ			14:51																										
ZZZZZZ			15:08																										
CCV 280-436181/16	1		15:26	X	X																								
CCB 280-436181/17	1		15:43	X	X																								
ZZZZZZ			16:01																										
ZZZZZZ			16:18																										
280-116538-4	5	T	16:36		X																								
ZZZZZZ			16:53																										
ZZZZZZ			17:11																										
ZZZZZZ			17:28																										
ZZZZZZ			17:46																										
CCV 280-436181/25	1		18:03	X	X																								
CCB 280-436181/26	1		18:21	X	X																								
ZZZZZZ			19:13																										
ZZZZZZ			19:31																										
ZZZZZZ			19:48																										
ZZZZZZ			20:06																										
CCV 280-436181/35			20:58																										
CCB 280-436181/36			21:16																										

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica St. Louis Job No.: 280-116538-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 1010A

Start Date: 11/15/2018 23:43 End Date: 11/16/2018 02:02

Lab Sample Id	D/F	Type	Time	Analytes																								
				FP																								
MB 160-401121/1	1	T	23:43	X																								
LCS 160-401121/2	1	T	23:58	X																								
ZZZZZZ			00:14																									
ZZZZZZ			00:29																									
ZZZZZZ			00:45																									
ZZZZZZ			01:00																									
ZZZZZZ			01:16																									
280-116538-4	1	T	01:31	X																								
ZZZZZZ			01:47																									
ICV 160-401121/10	1		02:02	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437763 Batch Start Date: 11/15/18 12:58 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/15/18 17:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	SulfideCheck	ChlorineCheck	DistillpHCheck	CN 10ppm 00321
HLCS 280-437763/1		9012B, 9012B		50 mL	50 mL				1.75 mL
LLCS 280-437763/2		9012B, 9012B		50 mL	50 mL				0.5 mL
LCS 280-437763/3		9012B, 9012B		50 mL	50 mL				
LCSD 280-437763/4		9012B, 9012B		50 mL	50 mL				
MB 280-437763/5		9012B, 9012B		50 mL	50 mL				
280-116538-H-4	FWGIDW-181001-WW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00511					
HLCS 280-437763/1		9012B, 9012B							
LLCS 280-437763/2		9012B, 9012B							
LCS 280-437763/3		9012B, 9012B		0.5 mL					
LCSD 280-437763/4		9012B, 9012B		0.5 mL					
MB 280-437763/5		9012B, 9012B							
280-116538-H-4	FWGIDW-181001-WW	9012B, 9012B	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437763 Batch Start Date: 11/15/18 12:58 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/15/18 17:20

Batch Notes	
Acetate Buffer ID	Acetate Buffer_00005
Balance ID	M19170
Batch Comment	DA training RK/AL
Cadmium Carbonate ID	CAD CHL CN_00004
Distillation End Time	11/15/2018 17:20
Distillation Start Time	11/15/2018 12:58
Magnesium Chloride Reagent ID Number	CN Mag Chl_00084
Sodium Hydroxide ID	2% NaOH_00357
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Sulfamic Acid ID	CN SULFAMIC_00093
Sulfuric Acid Reagent ID Number	SulfuricAcid_00223

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437833 Batch Start Date: 11/15/18 17:30 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01458	CN ICV Daily 01225		
ICV 280-437833/14		9012B		50 mL	50 mL		50 mL		
ICB 280-437833/15		9012B		50 mL	50 mL				
HLCS 280-437763/1-A		9012B		50 mL	50 mL				
LLCS 280-437763/2-A		9012B		50 mL	50 mL				
LCS 280-437763/3-A		9012B		50 mL	50 mL				
LCSD 280-437763/4-A		9012B		50 mL	50 mL				
MB 280-437763/5-A		9012B		50 mL	50 mL				
CCV 280-437833/29		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/30		9012B		50 mL	50 mL				
CCV 280-437833/44		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/45		9012B		50 mL	50 mL				
CCV 280-437833/74		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/75		9012B		50 mL	50 mL				
280-116538-H-4-A	FWGIDW-181001-WW	9012B	T	50 mL	50 mL				
CCV 280-437833/80		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/81		9012B		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 437833 Batch Start Date: 11/15/18 17:30 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date:

Batch Notes	
Batch Comment	DA trained RK/AL
Buffer Reagent ID	CN Buffer_00118
Chloramine-T ID	CN Chlor-T_01011
Sodium Hydroxide ID	1% NaOH_00364
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Pyridine-Barbituric Acid ID	CN Pyr/Barb_00207

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438264 Batch Start Date: 11/20/18 11:50 Batch Analyst: Lizotte, Aimee M

Batch Method: 9012B Batch End Date: 11/20/18 13:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	SulfideCheck	ChlorineCheck	DistillpHCheck	CN 10ppm 00323
HLCS 280-438264/1		9012B, 9012B		50 mL	50 mL			>12	1.75 mL
LLCS 280-438264/2		9012B, 9012B		50 mL	50 mL			>12	0.5 mL
LCS 280-438264/3		9012B, 9012B		50 mL	50 mL			>12	
LCSD 280-438264/4		9012B, 9012B		50 mL	50 mL			>12	
MB 280-438264/5		9012B, 9012B		50 mL	50 mL			>12	
280-116538-A-7	FWIDW-181002-WW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00512					
HLCS 280-438264/1		9012B, 9012B							
LLCS 280-438264/2		9012B, 9012B							
LCS 280-438264/3		9012B, 9012B		0.5 mL					
LCSD 280-438264/4		9012B, 9012B		0.5 mL					
MB 280-438264/5		9012B, 9012B							
280-116538-A-7	FWIDW-181002-WW	9012B, 9012B	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438264 Batch Start Date: 11/20/18 11:50 Batch Analyst: Lizotte, Aimee M

Batch Method: 9012B Batch End Date: 11/20/18 13:20

Batch Notes	
Acetate Buffer ID	Acetate Buffer_00005
Balance ID	M19170
Batch Comment	DA training RK/AL
Cadmium Carbonate ID	CAD CHL CN_00004
Distillation End Time	11/20/2018 13:20
Distillation Start Time	11/20/2018 11:50
Magnesium Chloride Reagent ID Number	CN Mag Chl_00085
Sodium Hydroxide ID	2% NaOH_00358
Pipette/Syringe/Dispenser ID	1000LL, 5000LL
Sulfamic Acid ID	CN SULFAMIC_00095
Sulfuric Acid Reagent ID Number	SulfuricAcid_00223

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438452 Batch Start Date: 11/21/18 09:05 Batch Analyst: Allen, Andrew J

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01461	CN ICV Daily 01228		
ICV 280-438452/14		9012B		50 mL	50 mL		50 mL		
ICB 280-438452/15		9012B		50 mL	50 mL				
CCV 280-438452/58		9012B		50 mL	50 mL	10 mL			
CCB 280-438452/59		9012B		50 mL	50 mL				
HLCS 280-438264/1-A		9012B		50 mL	50 mL				
LLCS 280-438264/2-A		9012B		50 mL	50 mL				
LCS 280-438264/3-A		9012B		50 mL	50 mL				
LCSD 280-438264/4-A		9012B		50 mL	50 mL				
MB 280-438264/5-A		9012B		50 mL	50 mL				
CCV 280-438452/73		9012B		50 mL	50 mL	10 mL			
CCB 280-438452/74		9012B		50 mL	50 mL				
280-116538-A-7-A	FWIDW-181002-WW	9012B	T	50 mL	50 mL				
CCV 280-438452/88		9012B		50 mL	50 mL	10 mL			
CCB 280-438452/89		9012B		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438452 Batch Start Date: 11/21/18 09:05 Batch Analyst: Allen, Andrew J

Batch Method: 9012B Batch End Date:

Batch Notes	
Buffer Reagent ID	CN Buffer 00118
Chloramine-T ID	Cn Chlor-T 01015
First End time	11/21/2018 13:35
Second End time	11/21/2018 13:35
Sodium Hydroxide ID	1% NaOH 00364
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Pyridine-Barbituric Acid ID	CN Pry/Barb 00207
First Start time	11/21/2018 13:35
Second Start time	11/21/2018 13:35

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436723 Batch Start Date: 11/07/18 18:36 Batch Analyst: Citrone, Elias

Batch Method: 9030B Batch End Date: 11/07/18 19:41

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillUnitPort	Initial pH	Final pH	AcidVolAdded
MB 280-436723/1		9030B, 9034		50 mL	50 mL	1		<2 SU	5 mL
LCS 280-436723/3		9030B, 9034		50 mL	50 mL	3		<2 SU	5 mL
280-116538-G-4	FWGIDW-181001-WW	9030B, 9034	T	50 mL	50 mL	11	>12 SU	<2 SU	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	SFD ICV INT 01516					
MB 280-436723/1		9030B, 9034							
LCS 280-436723/3		9030B, 9034		1 mL					
280-116538-G-4	FWGIDW-181001-WW	9030B, 9034	T						

Batch Notes	
Distillation End Time	11/07/2018 19:41
Distillation Start Time	11/07/2018 18:36
pH Indicator ID	HC854592
Pipette/Syringe/Dispenser ID	AZ1000, AZ5000
Sulfuric Acid Reagent ID Number	H2SO4_00190
Zinc Acetate Buffer ID	znac_00102

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436735 Batch Start Date: 11/07/18 20:06 Batch Analyst: Citrone, Elias

Batch Method: 9034 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStart1	BuretStop1	IodineAmount	TitrantVolume1	FinalAmount	
MB 280-436723/1-A		9034		0.00 mL	1.00 mL	1 mL	1 mL	50 mL	
LCS 280-436723/3-A		9034		2.10 mL	5.10 mL	5 mL	3 mL	50 mL	
280-116538-G-4-B	FWGIDW-181001-WW	9034	T	15.70 mL	16.70 mL	1 mL	1 mL	50 mL	

Batch Notes	
Hydrochloric Acid ID	HCL Sol_00160
Iodine ID	Iod_00209
Normality of Iodine Solution	0.0250 N
Sodium Thiosulfate ID	Na Thio_00139
Pipette/Syringe/Dispenser ID	AZ1000, AZ5000
Starch Reagent ID	Starch Ind_ 00051
Normality of First Titrant	0.0250 N
Zinc Acetate Buffer ID	znac_00100

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 438182 Batch Start Date: 11/19/18 12:46 Batch Analyst: Barker, Scott G

Batch Method: 9040C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pH 7.0 Buffer 00247	pH 7.0 Buffer 00248				
ICV 280-438182/1		9040C		30 mL					
LCS 280-438182/4		9040C			30 mL				
CCV 280-438182/16		9040C			30 mL				

Batch Notes	
Batch Comment	SGB trained by LL
pH Buffer 1 ID	pH 2 buffer_00074
pH Buffer 2 ID	pH 4 buffer_00171
pH Buffer 3 ID	pH 7 buffer_00248
pH Buffer 4 ID	pH 10 buffer_00139
pH Buffer 5 ID	pH 12 buffer_00143
pH Buffer 6 ID	pH 7 buffer_00247
Calibration Date and Time	see attached
pH Meter Calibration Slope	see attached
Probe ID	PCE 86 pH 1105 sep14
Sufficient volume for sample dup	Yes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 435512 Batch Start Date: 10/30/18 10:10 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00227	IC Cal low 00411	IC CL ICV 00014	IC ICV 5 00214
STD1 280-435512/2 IC		9056A		5 mL	5 mL	0.04 mL	0.04 mL		
STD2 280-435512/3 IC		9056A		5 mL	5 mL	0.1 mL	0.1 mL		
STD3 280-435512/4 IC		9056A		5 mL	5 mL	0.2 mL	0.2 mL		
STD4 280-435512/5 IC		9056A		5 mL	5 mL	2.4 mL	0.8 mL		
STD5 280-435512/6 IC		9056A		5 mL	5 mL	4.8 mL	1.6 mL		
STD6 280-435512/7 IC		9056A		5 mL	5 mL	8 mL	2 mL		
ICV 280-435512/8		9056A		5 mL	5 mL			0.8 mL	0.8 mL
ICB 280-435512/9		9056A		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00017					
STD1 280-435512/2 IC		9056A							
STD2 280-435512/3 IC		9056A							
STD3 280-435512/4 IC		9056A							
STD4 280-435512/5 IC		9056A							
STD5 280-435512/6 IC		9056A							
STD6 280-435512/7 IC		9056A							
ICV 280-435512/8		9056A		0.8 mL					
ICB 280-435512/9		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 435512 Batch Start Date: 10/30/18 10:10 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Batch Notes	
Batch Comment	AD training with AA
Eluent 1 ID	M18021202
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc1000-d ic100
Regeneration Solution ID	M17060701
Sufficient Volume for Batch QC	Yes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-2

SDG No.:

Batch Number: 436181 Batch Start Date: 11/03/18 10:40 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00228	IC Cal low 00412	IC LCS 01391	
CCV 280-436181/1		9056A		5 mL	5 mL			10 mL	
CCB 280-436181/2		9056A		5 mL	5 mL				
MRL 280-436181/3		9056A		5 mL	5 mL	0.1 mL	0.04 mL		
LCS 280-436181/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-436181/5		9056A		5 mL	5 mL			10 mL	
MB 280-436181/6		9056A		5 mL	5 mL				
280-116538-J-4	FWGIDW-181001-WW	9056A	T	5 mL	5 mL				
CCV 280-436181/16		9056A		5 mL	5 mL			10 mL	
CCB 280-436181/17		9056A		5 mL	5 mL				
280-116538-J-4	FWGIDW-181001-WW	9056A	T	5 mL	5 mL				
CCV 280-436181/25		9056A		5 mL	5 mL			10 mL	
CCB 280-436181/26		9056A		5 mL	5 mL				

Batch Notes	
Batch Comment	AD training with AA
Eluent 1 ID	M18021202
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc100-d ic100
Regeneration Solution ID	M18072401
Sufficient Volume for Batch QC	Yes

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica St. Louis Job No.: 280-116538-2

SDG No.:

Batch Number: 401121 Batch Start Date: 11/15/18 23:43 Batch Analyst: Banner, Justin C

Batch Method: 1010A Batch End Date: 11/16/18 02:18

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialTemp	ObsFlash	FlashPointStd 00003	p-Xylene 00013
MB 160-401121/1		1010A		70 mL	70 mL	22 Celsius	>60 Celsius		
LCS 160-401121/2		1010A		70 mL	70 mL	17 Celsius	26.5 Celsius		70 mL
280-116538-E-4	FWGIDW-181001-WW	1010A	T	70 mL	70 mL	8 Celsius	>60 Celsius		
ICV 160-401121/10		1010A		70 mL	70 mL	22 Celsius	47 Celsius	70 mL	

Batch Notes	
Barometer ID	Lambert Airport
Barometric Pressure - Corrected	762.82 mm Hg (sea-level) mmHg
Equipment ID	Pensky Marten Closed Cup
Thermometer ID	22235
Barometric Pressure - Uncorrected	747.56 mm Hg (Ambient) mmHg

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Run Results Report

Facility Name
Facility Location
Department
Operator Name RK
Operator ID RK
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C111518.RST
Sample table path C:\FLOW_4\c111518.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 15-Nov-18
Time acquired 19:57

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
15-Nov-18	17:30	107	Sync	367402	396.767	
15-Nov-18	17:32	0	Carryover	355	-1.492	LO
15-Nov-18	17:33	0	Carryover	33	-1.842	LO
15-Nov-18	17:35	0	Baseline	0	-1.878	BL
15-Nov-18	17:36	101	CAL 0.00 ppb	122	-1.745	LO
15-Nov-18	17:38	102	CAL 10.0 ppb	9674	8.619	
15-Nov-18	17:39	103	CAL 20.0 ppb	19153	18.904	
15-Nov-18	17:41	104	CAL 50.0 ppb	48456	50.699	
15-Nov-18	17:42	105	CAL 100 ppb	96751	103.101	
15-Nov-18	17:44	106	Cal 200 ppb	188259	202.391	
15-Nov-18	17:45	107	Cal 400 ppb	368566	398.031	
15-Nov-18	17:47	0	BLK	238	-1.619	LO
15-Nov-18	17:48	0	Baseline	0	-1.878	BL
15-Nov-18	17:50	108	ICV 100 ppb	97777	104.214	
15-Nov-18	17:51	0	ICB	37	-1.837	LO
15-Nov-18	17:53	0	Baseline	0	-1.878	BL
15-Nov-18	17:54	113	HLCS 280-437763/1-A	316772	341.833	
15-Nov-18	17:56	114	LLCS 280-437763/2-A	91138	97.011	
15-Nov-18	17:57	115	LCS 280-437763/3-A	95364	101.596	
15-Nov-18	17:59	116	LCSD 280-437763/4-A	91415	97.311	
15-Nov-18	18:00	117	MB 280-437763/5-A	2832	1.195	
15-Nov-18	18:02	118	280-116469-N-3-A	2684	1.035	
15-Nov-18	18:03	119	280-116469-N-3-B MS	89197	94.904	
15-Nov-18	18:05	120	280-116469-N-3-C MSD	85280	90.654	
15-Nov-18	18:06	121	280-116481-E-1-A	2734	1.089	
15-Nov-18	18:08	122	280-116481-E-2-A	8079	6.888	
15-Nov-18	18:09	0	BLK	64	-1.808	LO
15-Nov-18	18:11	0	baseline	0	-1.878	BL
15-Nov-18	18:12	109	CCV 200PPB	187342	201.396	
15-Nov-18	18:14	0	CCB	-108	-1.995	LO
15-Nov-18	18:15	0	Baseline	0	-1.878	BL
15-Nov-18	18:17	123	280-116481-E-3-A	38505	39.902	
15-Nov-18	18:18	124	280-116481-E-4-A	1873	0.155	
15-Nov-18	18:20	125	280-116481-E-5-A	2535	0.873	
15-Nov-18	18:21	126	280-116481-E-6-A	2481	0.814	
15-Nov-18	18:23	127	280-116481-E-7-A	150567	161.494	
15-Nov-18	18:24	128	280-116481-E-8-A	160394	172.156	
15-Nov-18	18:26	129	280-116517-S-9-A	159094	170.745	
15-Nov-18	18:27	130	280-116481-E-9-A	36097	37.289	
15-Nov-18	18:29	131	280-116517-S-10-B MS	116620	124.659	
15-Nov-18	18:30	132	280-116517-S-10-C MS	84674	89.997	
15-Nov-18	18:32	0	BLK	32	-1.843	LO
15-Nov-18	18:33	0	baseline	0	-1.878	BL
15-Nov-18	18:35	109	CCV 200PPB	187308	201.359	
15-Nov-18	18:36	0	CCB	-82	-1.967	LO
15-Nov-18	18:38	0	Baseline	0	-1.878	BL

Result path C:\FLOW_4\C111518.RST
Sample table path C:\FLOW_4\c111518.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 15-Nov-18
Time acquired 19:57

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
15-Nov-18	18:39	133	280-116517-S-10-D	19873	19.685	
15-Nov-18	18:41	134	280-116517-S-11-A	8505	7.350	
15-Nov-18	18:42	135	280-116538-N-1-A	10289	9.287	
15-Nov-18	18:44	136	280-116538-N-2-A	7275	6.016	
15-Nov-18	18:45	137	x280-116538-H-4-A	610678	660.731	HI
15-Nov-18	18:47	138	280-116596-N-1-A	3585	2.012	FL
15-Nov-18	18:48	139	280-116610-J-5-A	13907	13.212	FL
15-Nov-18	18:50	140	280-116610-J-6-A	8868	7.744	
15-Nov-18	18:55	141	HLCS 280-437781/1-A	300744	324.441	
15-Nov-18	18:57	142	LLCS 280-437781/2-A	88285	93.915	
15-Nov-18	18:58	0	BLK	130	-1.737	LO
15-Nov-18	19:00	0	baseline	0	-1.878	BL
15-Nov-18	19:01	109	CCV 200PPB	189487	203.723	
15-Nov-18	19:03	0	CCB	7	-1.870	LO
15-Nov-18	19:04	0	Baseline	0	-1.878	BL
15-Nov-18	19:06	143	xLCS 280-437781/3-A	906574	981.791	HI
15-Nov-18	19:07	144	xMB 280-437781/4-A	1393680	1510.319	HI
15-Nov-18	19:09	145	280-116874-A-15-B	69096	73.094	FL
15-Nov-18	19:10	146	280-116874-A-16-E	3830	2.279	FL
15-Nov-18	19:12	147	280-116874-A-16-F MS	102777	109.639	
15-Nov-18	19:13	148	280-116874-A-16-G MS	105282	112.357	
15-Nov-18	19:15	149	280-116874-A-17-B	26753	27.150	
15-Nov-18	19:16	150	280-116874-A-18-B	11445	10.540	
15-Nov-18	19:18	151	280-116867-A-15-B	12784	11.994	
15-Nov-18	19:19	152	x280-116867-A-18-B	2505238	2716.404	HI
15-Nov-18	19:21	0	BLK	58	-1.814	LO
15-Nov-18	19:22	0	baseline	0	-1.878	BL
15-Nov-18	19:24	109	CCV 200PPB	189466	203.700	
15-Nov-18	19:25	0	CCB	-230	-2.127	LO
15-Nov-18	19:27	0	Baseline	0	-1.878	BL
15-Nov-18	19:28	153	280-116538-H-4-A	118340	632.632	
15-Nov-18	19:30	0	BLK	-31	-1.911	LO
15-Nov-18	19:31	0	baseline	0	-1.878	BL
15-Nov-18	19:33	109	CCV 200PPB	189600	203.846	
15-Nov-18	19:34	0	CCB	45	-1.829	LO
15-Nov-18	19:36	0	Baseline	0	-1.878	BL
15-Nov-18	19:41	154	LCS 280-437781/3-A	89466	95.196	
15-Nov-18	19:43	155	MB 280-437781/4-A	3399	1.810	
15-Nov-18	19:44	156	280-116867-A-18-B	250149	2695.441	
15-Nov-18	19:46	0	BLK	24	-1.852	LO
15-Nov-18	19:47	0	baseline	0	-1.878	BL
15-Nov-18	19:49	109	CCV 200PPB	191304	205.694	
15-Nov-18	19:50	0	CCB	26	-1.849	LO
15-Nov-18	19:52	0	Baseline	0	-1.878	BL

Peak Table:Cyanide, Total

File name: C:\FLOW_4\C111518.RST
Date: 15-Nov-18
Operator: RK

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	107	Sync	1	SYNC	1	1	367402	396.767456	
2	0	Carryover	1	CO	1	1	355	-1.492386	LO
3	0	Carryover	2	CO	1	1	33	-1.841514	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
5	101	CAL 0.00 ppb	1	C	1	1	122	-1.745456	LO
6	102	CAL 10.0 ppb	1	C	1	1	9674	8.619259	
7	103	CAL 20.0 ppb	1	C	1	1	19153	18.903898	
8	104	CAL 50.0 ppb	1	C	1	1	48456	50.699245	
9	105	CAL 100 ppb	1	C	1	1	96751	103.101234	
10	106	Cal 200 ppb	1	C	1	1	188259	202.390533	
11	107	Cal 400 ppb	1	C	1	1	368566	398.031311	
12	0	BLK	1	BLNK	1	1	238	-1.618934	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
14	108	ICV 100 ppb	1	CCV	1	1	97777	104.214424	
15	0	ICB	1	U	1	1	37	-1.837493	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
17	113	HLCS 280-437763/1-A 1	U		1	1	316772	341.832825	
18	114	LLCS 280-437763/2-A 1	U		1	1	91138	97.010872	
19	115	LCS 280-437763/3-A 1	U		1	1	95364	101.595558	
20	116	LCSD 280-437763/4-A 1	U		1	1	91415	97.310928	
21	117	MB 280-437763/5-A 1	U		1	1	2832	1.195242	
22	118	280-116469-N-3-A 1	U		1	1	2684	1.035046	
23	119	280-116469-N-3-B MS 1	U		1	1	89197	94.904366	
24	120	280-116469-N-3-C MSD 1	U		1	1	85280	90.654289	
25	121	280-116481-E-1-A 1	U		1	1	2734	1.088997	
26	122	280-116481-E-2-A 1	U		1	1	8079	6.888444	
27	0	BLK	1	BLNK	1	1	64	-1.807684	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
29	109	CCV 200PPB	1	CCV	1	1	187342	201.396042	
30	0	CCB	1	U	1	1	-108	-1.995112	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
32	123	280-116481-E-3-A 1	U		1	1	38505	39.901749	
33	124	280-116481-E-4-A 1	U		1	1	1873	0.155050	
34	125	280-116481-E-5-A 1	U		1	1	2535	0.873474	
35	126	280-116481-E-6-A 1	U		1	1	2481	0.814052	
36	127	280-116481-E-7-A 1	U		1	1	150567	161.493561	
37	128	280-116481-E-8-A 1	U		1	1	160394	172.156464	
38	129	280-116517-S-9-A 1	U		1	1	159094	170.745300	
39	130	280-116481-E-9-A 1	U		1	1	36097	37.288937	
40	131	280-116517-S-10-B MS 1	U		1	1	116620	124.659172	
41	132	280-116517-S-10-C MS 1	U		1	1	84674	89.997040	
42	0	BLK	1	BLNK	1	1	32	-1.842658	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
44	109	CCV 200PPB	1	CCV	1	1	187308	201.358749	
45	0	CCB	1	U	1	1	-82	-1.966949	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
47	133	280-116517-S-10-D 1	U		1	1	19873	19.685228	
48	134	280-116517-S-11-A 1	U		1	1	8505	7.350399	
49	135	280-116538-N-1-A 1	U		1	1	10289	9.286872	
50	136	280-116538-N-2-A 1	U		1	1	7275	6.016179	
51	137	x280-116538-H-4-A 1	U		1	1	610678	660.731323	HI
52	138	280-116596-N-1-A 1	U		1	1	3585	2.012334	FL
53	139	280-116610-J-5-A 1	U		1	1	13907	13.211982	FL
54	140	280-116610-J-6-A 1	U		1	1	8868	7.744169	
55	141	HLCS 280-437781/1-A 1	U		1	1	300744	324.441101	
56	142	LLCS 280-437781/2-A 1	U		1	1	88285	93.915192	
57	0	BLK	1	BLNK	1	1	130	-1.736809	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
59	109	CCV 200PPB	1	CCV	1	1	189487	203.723389	
60	0	CCB	1	U	1	1	7	-1.869779	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
62	143	xLCS 280-437781/3-A 1	U		1	1	906574	981.790588	HI
63	144	xMB 280-437781/4-A 1	U		1	1	1393680	1510.319458	HI
64	145	280-116874-A-15-B 1	U		1	1	69096	73.094185	FL
65	146	280-116874-A-16-E 1	U		1	1	3830	2.278598	FL
66	147	280-116874-A-16-F MS 1	U		1	1	102777	109.639168	
67	148	280-116874-A-16-G MS 1	U		1	1	105282	112.357430	
68	149	280-116874-A-17-B 1	U		1	1	26753	27.149874	
69	150	280-116874-A-18-B 1	U		1	1	11445	10.540126	
70	151	280-116867-A-15-B 1	U		1	1	12784	11.994044	

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	152	x280-116867-A-18-B	1	U	1	1	2505238	2716.403809	HI
72	0	BLK	1	BLNK	1	1	58	-1.814377	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
74	109	CCV 200PPB	1	CCV	1	1	189466	203.699936	
75	0	CCB	1	U	1	1	-230	-2.127230	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
77	153	280-116538-H-4-A	1	U	5	1	118340	632.631836	
78	0	BLK	1	BLNK	1	1	-31	-1.910965	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
80	109	CCV 200PPB	1	CCV	1	1	189600	203.846115	
81	0	CCB	1	U	1	1	45	-1.828532	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
83	154	LCS 280-437781/3-A	1	U	1	1	89466	95.196297	
84	155	MB 280-437781/4-A	1	U	1	1	3399	1.809990	
85	156	280-116867-A-18-B	1	U	10	1	250149	2695.440918	
86	0	BLK	1	BLNK	1	1	24	-1.851562	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
88	109	CCV 200PPB	1	CCV	1	1	191304	205.694244	
89	0	CCB	1	U	1	1	26	-1.849490	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL

Cyanide, Total:Calibration 1: Peak 5-90

File name: C:\FLOW_4\C111518.RST
Date: 15-Nov-18
Operator: RK

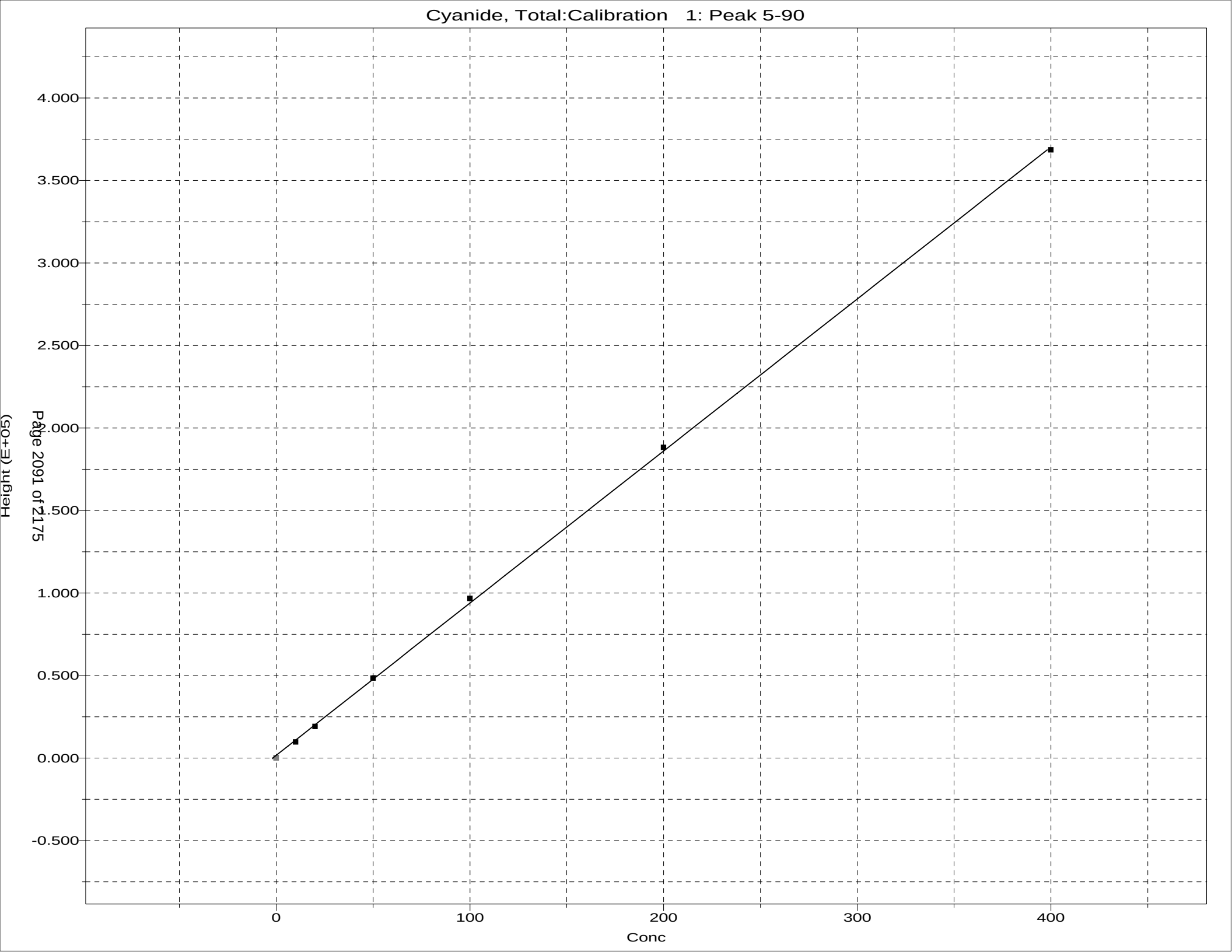
*	Name	Conc	Height
*	CAL 0.00 ppb	0.000000	121.820770
*	CAL 10.0 ppb	10.000000	9674.208984
*	CAL 20.0 ppb	20.000000	19152.796875
*	CAL 50.0 ppb	50.000000	48456.210938
*	CAL 100 ppb	100.000000	96751.234375
*	Cal 200 ppb	200.000000	188258.812500
*	Cal 400 ppb	400.000000	368566.406250

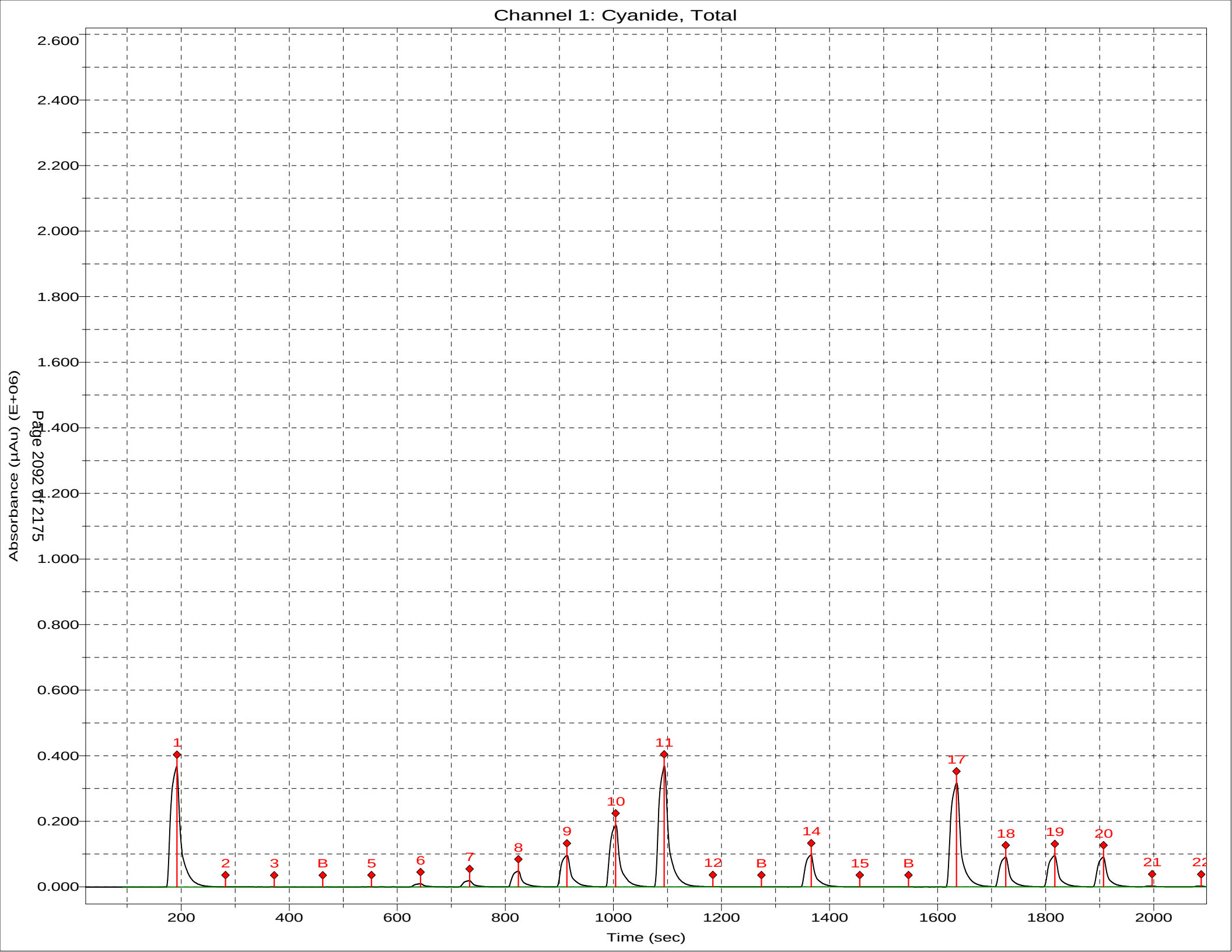
Calib Coef:
y=bx+a
a: (intercept) 1.7305e+03
b: 9.2163e+02

Corr Coef: 0.999897

Carryover: 0.0966%

No Drift Peaks


Cyanide, Total:Calibration 1: Peak 5-90
Height (E+05)
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
-0.500
0
100
200
300
400
Conc


Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
200
400
600
800
1000
1200
1400
1600
1800
2000
1
2
3
B
5
6
7
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9
10
11
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B
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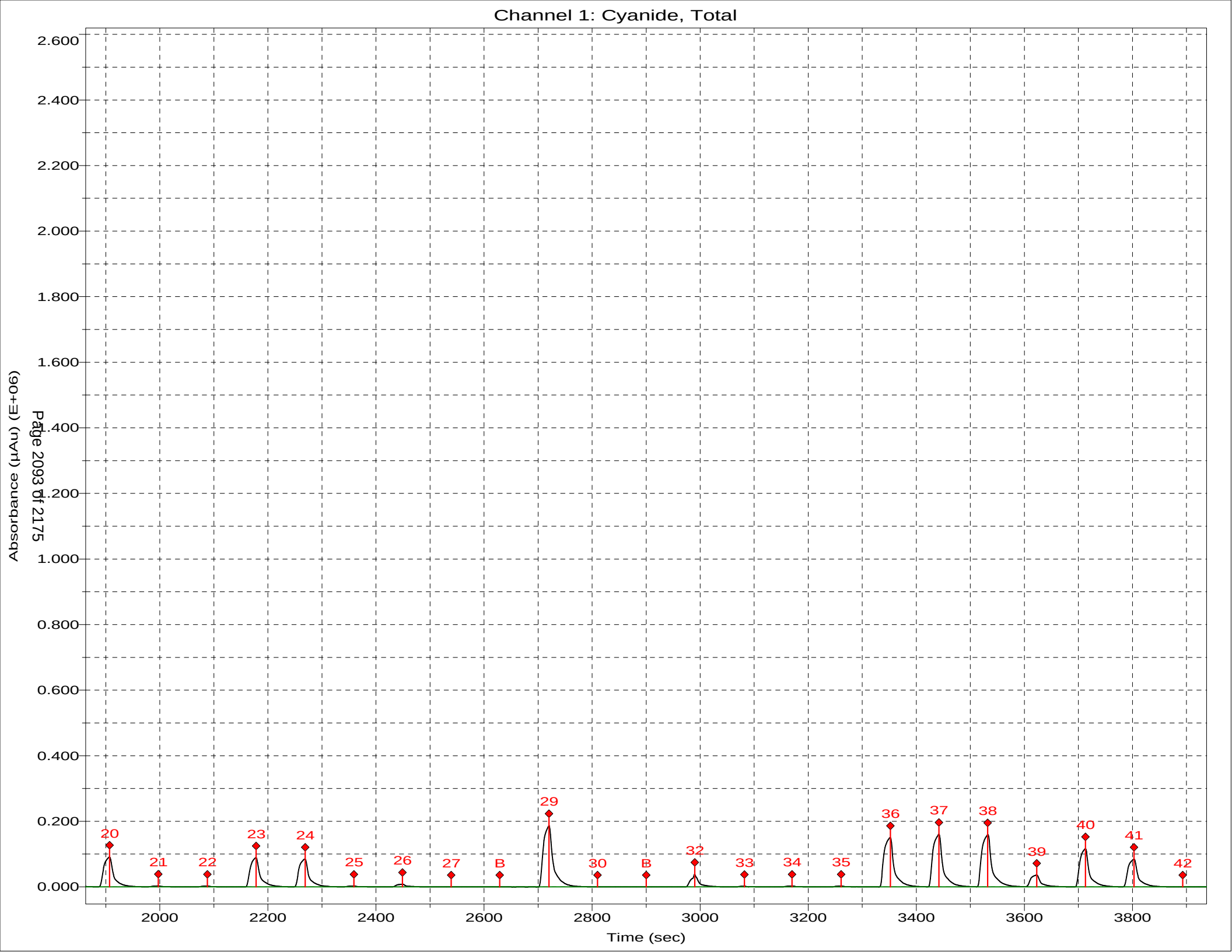
15
B
17
18
19
20
21
22


Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
2000
2200
2400
2600
2800
3000
3200
3400
3600
3800
20
21
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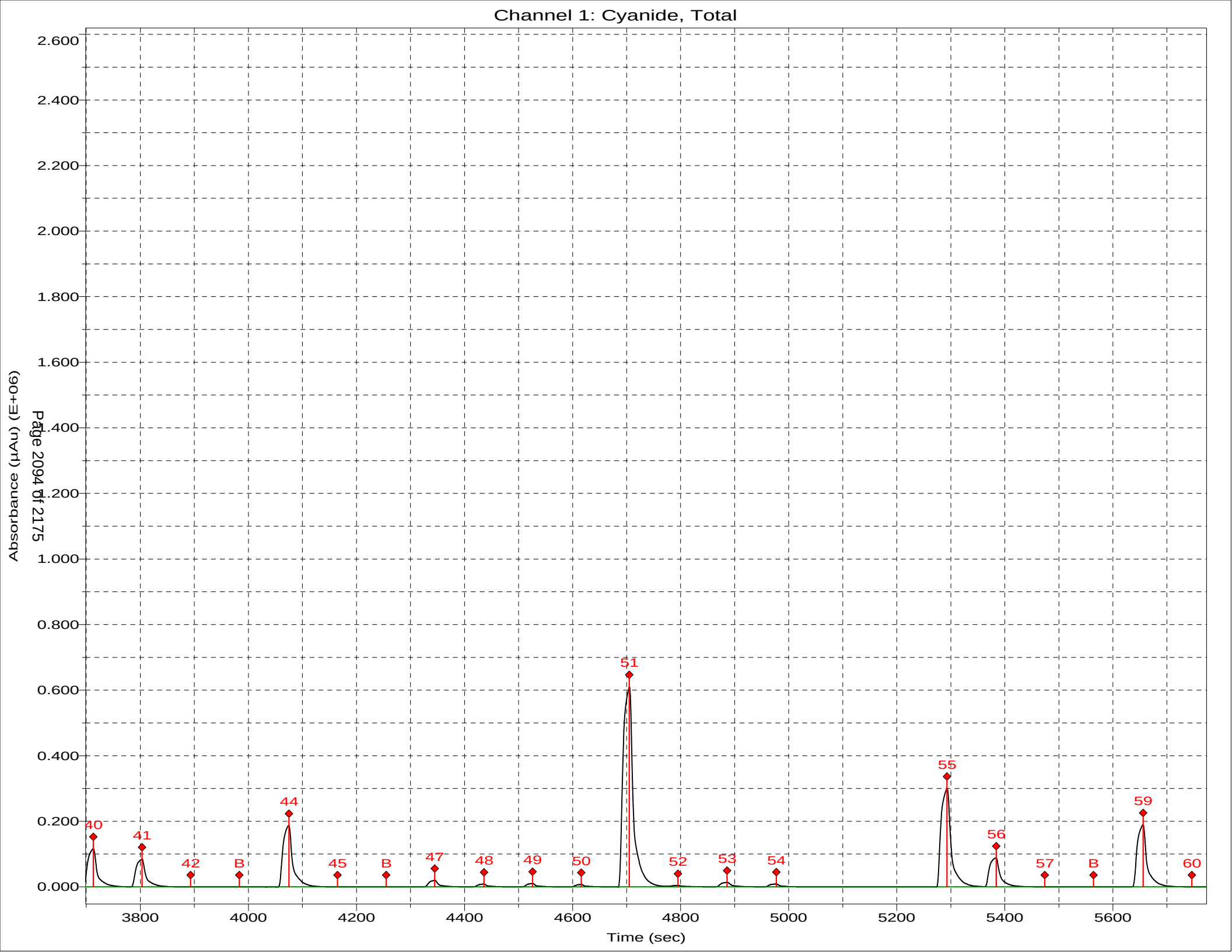
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
3800
4000
4200
4400
4600
4800
5000
5200
5400
5600
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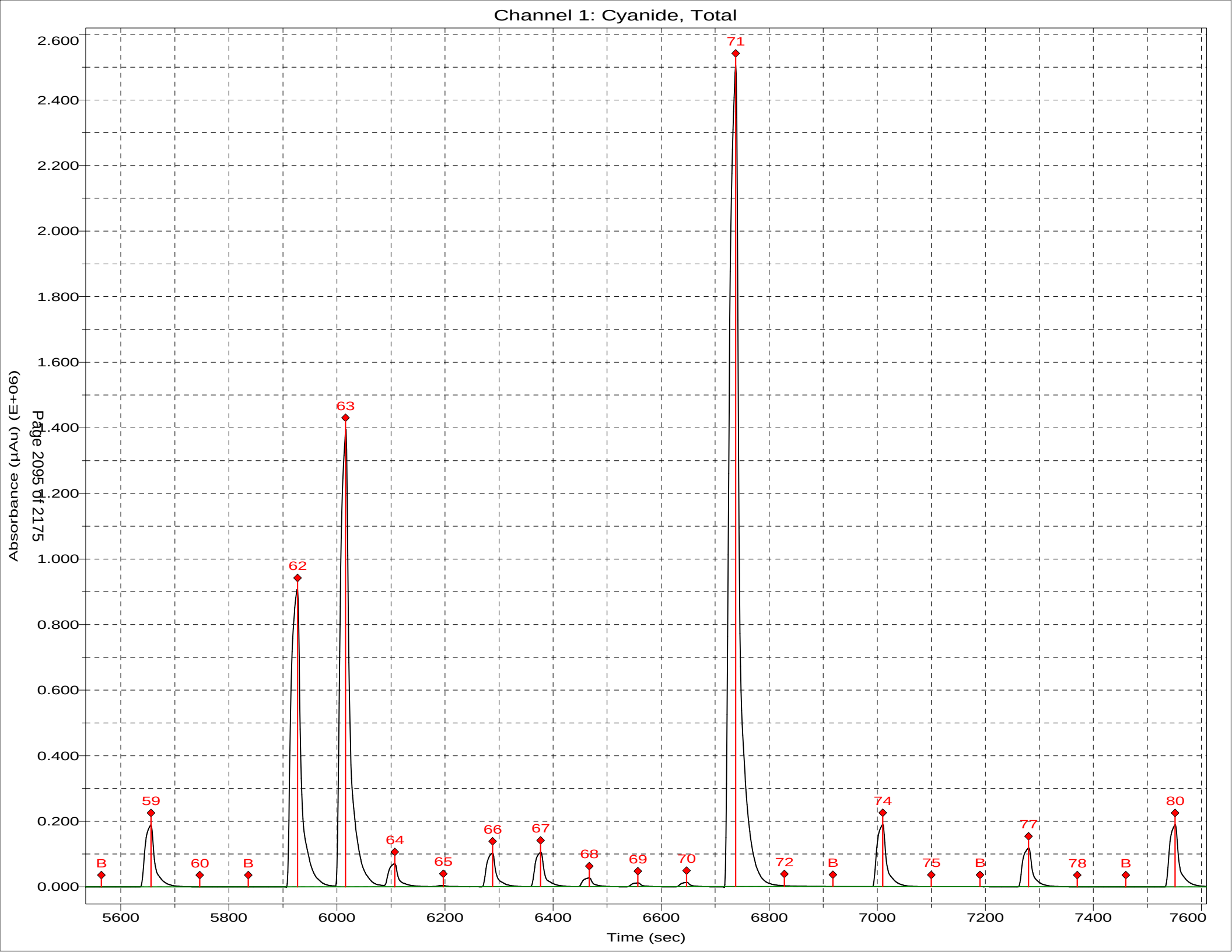
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
5600
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
B
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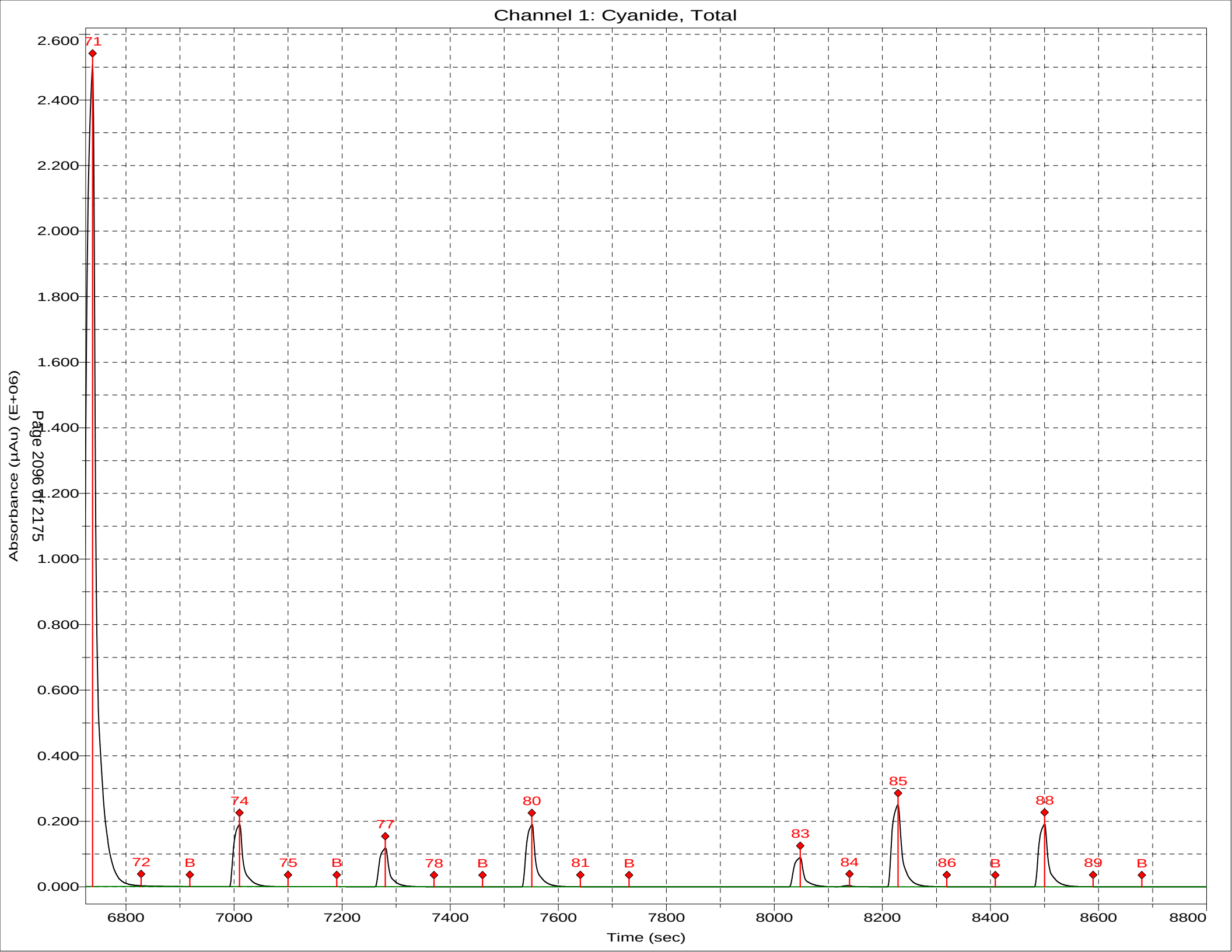
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
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2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
71
72
B
74
75
B
77
78
B
80
81
B
83
84
85
86
B
88
89
B

Run Results Report

Facility Name
Facility Location
Department
Operator Name AA
Operator ID AA
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C112118.RST
Sample table path C:\FLOW_4\c112118.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 21-Nov-18
Time acquired 12:23

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
21-Nov-18	09:05	107	Sync	345945	389.957	
21-Nov-18	09:06	0	Carryover	296	-0.526	LO
21-Nov-18	09:08	0	Carryover	19	-0.839	LO
21-Nov-18	09:09	0	Baseline	0	-0.861	BL
21-Nov-18	09:11	101	CAL 0.00 ppb	203	-0.632	LO
21-Nov-18	09:12	102	CAL 10.0 ppb	9169	9.498	
21-Nov-18	09:14	103	CAL 20.0 ppb	17783	19.229	
21-Nov-18	09:15	104	CAL 50.0 ppb	44996	49.972	
21-Nov-18	09:17	105	CAL 100 ppb	90108	100.935	
21-Nov-18	09:18	106	Cal 200 ppb	179880	202.352	
21-Nov-18	09:20	107	Cal 400 ppb	353635	398.645	
21-Nov-18	09:21	0	BLK	137	-0.706	LO
21-Nov-18	09:23	0	Baseline	0	-0.861	BL
21-Nov-18	09:24	108	ICV 100 ppb	89367	100.098	
21-Nov-18	09:26	0	ICB	3	-0.858	LO
21-Nov-18	09:27	0	Baseline	0	-0.861	BL
21-Nov-18	09:29	113	HLCS 280-438095/1-A	315627	355.707	
21-Nov-18	09:30	114	LLCS 280-438095/2-A	85034	95.203	
21-Nov-18	09:32	115	LCS 280-438095/3-A	92413	103.539	
21-Nov-18	09:33	116	LCSD 280-438095/4-A	90575	101.463	
21-Nov-18	09:35	117	MB 280-438095/5-A	2752	2.249	
21-Nov-18	09:36	118	280-116705-U-3-A	2708	2.199	
21-Nov-18	09:38	119	280-116705-U-3-B MS	86059	96.361	
21-Nov-18	09:39	120	280-116705-U-3-C MSD	95059	106.528	
21-Nov-18	09:41	121	280-116705-U-4-A	1709	1.070	
21-Nov-18	09:42	122	280-116705-Y-5-A	2806	2.309	
21-Nov-18	09:44	0	BLK	-9	-0.871	LO
21-Nov-18	09:45	0	baseline	0	-0.861	BL
21-Nov-18	09:47	109	CCV 200PPB	180825	203.420	
21-Nov-18	09:48	0	CCB	12	-0.848	LO
21-Nov-18	09:50	0	Baseline	0	-0.861	BL
21-Nov-18	09:51	123	280-116705-R-6-A	27696	30.427	
21-Nov-18	09:53	124	280-116726-J-1-C	9010	9.318	
21-Nov-18	09:54	125	280-116737-A-4-A	8851	9.139	
21-Nov-18	09:56	126	280-116737-A-5-A	142	-0.700	LO
21-Nov-18	09:57	127	280-116752-U-3-A	3769	3.397	
21-Nov-18	09:59	128	280-116752-R-4-A	7043	7.097	
21-Nov-18	10:00	129	280-116766-A-1-A	7326	7.416	
21-Nov-18	10:02	130	280-116830-A-1-A	11975	12.668	
21-Nov-18	10:03	131	280-116830-A-2-A	8239	8.447	
21-Nov-18	10:05	132	280-116840-A-1-A	7015	7.064	
21-Nov-18	10:06	0	BLK	-9	-0.871	LO
21-Nov-18	10:08	0	baseline	0	-0.861	BL
21-Nov-18	10:10	109	CCV 200PPB	185380	208.565	
21-Nov-18	10:11	0	CCB	-23	-0.886	LO
21-Nov-18	10:13	0	Baseline	0	-0.861	BL

Result path C:\FLOW_4\C112118.RST
Sample table path C:\FLOW_4\c112118.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 21-Nov-18
Time acquired 12:23

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
21-Nov-18	10:14	133	280-116885-W-3-A	11860	12.538	
21-Nov-18	10:16	134	280-116885-V-4-A	8261	8.472	
21-Nov-18	10:17	135	490-162947-A-1-D	1344	0.658	
21-Nov-18	10:19	136	500-154440-A-1-A	8400	8.630	
21-Nov-18	10:20	137	280-116823-K-1-A	14859	15.925	
21-Nov-18	10:22	138	280-116892-L-1-A	2670	2.156	
21-Nov-18	10:23	139	280-116885-Y-5-A	3450	3.037	
21-Nov-18	10:25	140	280-116885-Y-5-B MS	98327	110.220	
21-Nov-18	10:26	141	280-116885-Y-5-C MSD	90350	101.208	
21-Nov-18	10:28	0	BLK	-12	-0.874	LO
21-Nov-18	10:29	0	baseline	0	-0.861	BL
21-Nov-18	10:31	109	CCV 200PPB	182668	205.502	
21-Nov-18	10:32	0	CCB	-1	-0.862	LO
21-Nov-18	10:34	0	Baseline	0	-0.861	BL
21-Nov-18	10:35	142	HLCS 280-438264/1-A	317934	358.313	
21-Nov-18	10:37	143	LLCS 280-438264/2-A	87388	97.863	
21-Nov-18	10:38	144	LCS 280-438264/3-A	98411	110.315	
21-Nov-18	10:40	145	LCSD 280-438264/4-A	93717	105.012	
21-Nov-18	10:41	146	MB 280-438264/5-A	2390	1.839	
21-Nov-18	10:43	147	280-116892-L-2-A	2241	1.671	
21-Nov-18	10:44	148	280-116892-L-2-B MS	91043	101.991	
21-Nov-18	10:46	149	280-116892-L-2-C MSD	92156	103.250	
21-Nov-18	10:47	150	280-116892-L-3-A	3098	2.639	
21-Nov-18	10:49	151	280-116892-L-4-A	2418	1.871	
21-Nov-18	10:50	0	BLK	0	-0.860	LO
21-Nov-18	10:52	0	baseline	0	-0.861	BL
21-Nov-18	10:53	109	CCV 200PPB	186050	209.322	
21-Nov-18	10:55	0	CCB	-21	-0.885	LO
21-Nov-18	10:56	0	Baseline	0	-0.861	BL
21-Nov-18	10:58	152	280-116892-L-5-A	2531	1.999	
21-Nov-18	10:59	153	280-116920-Y-3-A	2359	1.805	
21-Nov-18	11:01	154	280-116920-Y-4-A	511	-0.283	LO
21-Nov-18	11:02	155	280-116923-O-1-A	5368	5.204	
21-Nov-18	11:04	156	280-116928-J-3-A	19751	21.453	
21-Nov-18	11:05	157	280-116950-K-1-A	8536	8.783	
21-Nov-18	11:07	158	280-116538-A-7-A	240689	271.049	
21-Nov-18	11:08	159	280-116961-A-1-A	24591	26.920	
21-Nov-18	11:10	160	280-116961-A-1-B MS	111054	124.599	
21-Nov-18	11:11	201	280-116961-A-1-C MSD	117037	131.357	
21-Nov-18	11:13	0	BLK	101	-0.746	LO
21-Nov-18	11:14	0	baseline	0	-0.861	BL
21-Nov-18	11:16	109	CCV 200PPB	187154	210.570	
21-Nov-18	11:17	0	CCB	-22	-0.885	LO
21-Nov-18	11:19	0	Baseline	0	-0.861	BL
21-Nov-18	11:20	202	HLCS 280-438294/1-A	339904	383.133	
21-Nov-18	11:22	203	LLCS 280-438294/2-A	95008	106.471	
21-Nov-18	11:23	204	.LCS 280-438294/3-A	102229	114.628	
21-Nov-18	11:25	205	MB 280-438294/4-A	6780	6.799	
21-Nov-18	11:26	206	280-117016-J-1-A	5331	5.162	
21-Nov-18	11:28	207	280-117016-J-1-B MS	96852	108.554	
21-Nov-18	11:29	208	280-117016-J-1-C MSD	101427	113.723	
21-Nov-18	11:31	209	280-117006-I-1-A	11966	12.658	
21-Nov-18	11:32	210	280-117016-K-2-A	3075	2.614	
21-Nov-18	11:34	211	280-117016-J-3-A	2740	2.235	
21-Nov-18	11:35	0	BLK	28	-0.829	LO
21-Nov-18	11:37	0	baseline	0	-0.861	BL
21-Nov-18	11:38	109	CCV 200PPB	191021	214.938	

Result path C:\FLOW_4\C112118.RST
Sample table path C:\FLOW_4\c112118.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 21-Nov-18
Time acquired 12:23

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
21-Nov-18	11:40	0	CCB	-61	-0.930	LO
21-Nov-18	11:41	0	Baseline	0	-0.861	BL
21-Nov-18	11:43	212	.280-117016-J-4-A	12383	13.129	
21-Nov-18	11:44	213	280-116928-B-5-A	2565	2.037	
21-Nov-18	11:46	214	280-116950-K-2-A	2793	2.295	
21-Nov-18	11:47	215	280-116972-E-1-A	1772	1.141	
21-Nov-18	11:49	216	280-116976-N-1-A	2669	2.155	
21-Nov-18	11:50	217	280-116980-A-1-A	2175	1.597	
21-Nov-18	11:52	218	280-117085-A-5-A	60628	67.631	
21-Nov-18	11:53	219	280-116976-N-4-A	1487	0.819	
21-Nov-18	11:55	220	280-116976-N-4-B MS	23695	25.908	
21-Nov-18	11:56	221	280-116976-N-4-C MSD	47989	53.353	
21-Nov-18	11:58	0	BLK	29	-0.828	LO
21-Nov-18	11:59	0	baseline	0	-0.861	BL
21-Nov-18	12:01	109	CCV 200PPB	189809	213.569	
21-Nov-18	12:02	0	CCB	1	-0.860	LO
21-Nov-18	12:04	0	Baseline	0	-0.861	BL
21-Nov-18	12:09	204	LCS 280-438294/3-A	97272	109.029	
21-Nov-18	12:10	212	280-117016-J-4-A	2984	2.510	
21-Nov-18	12:12	0	BLK	-24	-0.888	LO
21-Nov-18	12:13	0	baseline	0	-0.861	BL
21-Nov-18	12:15	109	CCV 200PPB	187743	211.235	
21-Nov-18	12:16	0	CCB	-70	-0.939	LO
21-Nov-18	12:18	0	Baseline	0	-0.861	BL

Peak Table:Cyanide, Total

File name: C:\FLOW_4\C112118.RST
Date: 21-Nov-18
Operator: AA

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	107	Sync	1	SYNC	1	1	345945	389.956940	
2	0	Carryover	1	CO	1	1	296	-0.526476	LO
3	0	Carryover	2	CO	1	1	19	-0.839130	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
5	101	CAL 0.00 ppb	1	C	1	1	203	-0.631602	LO
6	102	CAL 10.0 ppb	1	C	1	1	9169	9.498050	
7	103	CAL 20.0 ppb	1	C	1	1	17783	19.229214	
8	104	CAL 50.0 ppb	1	C	1	1	44996	49.972355	
9	105	CAL 100 ppb	1	C	1	1	90108	100.935219	
10	106	Cal 200 ppb	1	C	1	1	179880	202.352127	
11	107	Cal 400 ppb	1	C	1	1	353635	398.644653	
12	0	BLK	1	BLNK	1	1	137	-0.705527	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
14	108	ICV 100 ppb	1	CCV	1	1	89367	100.098137	
15	0	ICB	1	U	1	1	3	-0.857575	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
17	113	HLCS 280-438095/1-A 1	U		1	1	315627	355.706757	
18	114	LLCS 280-438095/2-A 1	U		1	1	85034	95.203094	
19	115	LCS 280-438095/3-A 1	U		1	1	92413	103.538979	
20	116	LCSD 280-438095/4-A 1	U		1	1	90575	101.463074	
21	117	MB 280-438095/5-A 1	U		1	1	2752	2.248886	
22	118	280-116705-U-3-A 1	U		1	1	2708	2.198607	
23	119	280-116705-U-3-B MS 1	U		1	1	86059	96.361313	
24	120	280-116705-U-3-C MSD 1	U		1	1	95059	106.528130	
25	121	280-116705-U-4-A 1	U		1	1	1709	1.069868	
26	122	280-116705-Y-5-A 1	U		1	1	2806	2.309031	
27	0	BLK	1	BLNK	1	1	-9	-0.870998	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
29	109	CCV 200PPB	1	CCV	1	1	180825	203.419815	
30	0	CCB	1	U	1	1	12	-0.847561	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
32	123	280-116705-R-6-A 1	U		1	1	27696	30.427401	
33	124	280-116726-J-1-C 1	U		1	1	9010	9.317637	
34	125	280-116737-A-4-A 1	U		1	1	8851	9.138753	
35	126	280-116737-A-5-A 1	U		1	1	142	-0.699607	LO
36	127	280-116752-U-3-A 1	U		1	1	3769	3.396937	
37	128	280-116752-R-4-A 1	U		1	1	7043	7.096528	
38	129	280-116766-A-1-A 1	U		1	1	7326	7.415960	
39	130	280-116830-A-1-A 1	U		1	1	11975	12.667897	
40	131	280-116830-A-2-A 1	U		1	1	8239	8.446959	
41	132	280-116840-A-1-A 1	U		1	1	7015	7.063946	
42	0	BLK	1	BLNK	1	1	-9	-0.870694	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
44	109	CCV 200PPB	1	CCV	1	1	185380	208.565277	
45	0	CCB	1	U	1	1	-23	-0.886176	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
47	133	280-116885-W-3-A 1	U		1	1	11860	12.537884	
48	134	280-116885-V-4-A 1	U		1	1	8261	8.471612	
49	135	490-162947-A-1-D 1	U		1	1	1344	0.657912	
50	136	500-154440-A-1-A 1	U		1	1	8400	8.629526	
51	137	280-116823-K-1-A 1	U		1	1	14859	15.925456	
52	138	280-116892-L-1-A 1	U		1	1	2670	2.155926	
53	139	280-116885-Y-5-A 1	U		1	1	3450	3.036919	
54	140	280-116885-Y-5-B MS 1	U		1	1	98327	110.220139	
55	141	280-116885-Y-5-C MSD 1	U		1	1	90350	101.208351	
56	0	BLK	1	BLNK	1	1	-12	-0.873684	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
58	109	CCV 200PPB	1	CCV	1	1	182668	205.501617	
59	0	CCB	1	U	1	1	-1	-0.861892	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
61	142	HLCS 280-438264/1-A 1	U		1	1	317934	358.312622	
62	143	LLCS 280-438264/2-A 1	U		1	1	87388	97.862831	
63	144	LCS 280-438264/3-A 1	U		1	1	98411	110.315353	
64	145	LCSD 280-438264/4-A 1	U		1	1	93717	105.012207	
65	146	MB 280-438264/5-A 1	U		1	1	2390	1.838936	
66	147	280-116892-L-2-A 1	U		1	1	2241	1.670666	
67	148	280-116892-L-2-B MS 1	U		1	1	91043	101.991272	
68	149	280-116892-L-2-C MSD 1	U		1	1	92156	103.249611	
69	150	280-116892-L-3-A 1	U		1	1	3098	2.639414	
70	151	280-116892-L-4-A 1	U		1	1	2418	1.871194	

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	0	BLK	1	BLNK	1	1	0	-0.860438	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
73	109	CCV 200PPB	1	CCV	1	1	186050	209.322281	
74	0	CCB	1	U	1	1	-21	-0.884636	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
76	152	280-116892-L-5-A	1	U	1	1	2531	1.999051	
77	153	280-116920-Y-3-A	1	U	1	1	2359	1.804514	
78	154	280-116920-Y-4-A	1	U	1	1	511	-0.282956	LO
79	155	280-116923-O-1-A	1	U	1	1	5368	5.203839	
80	156	280-116928-J-3-A	1	U	1	1	19751	21.452543	
81	157	280-116950-K-1-A	1	U	1	1	8536	8.783119	
82	158	280-116538-A-7-A	1	U	1	1	240689	271.048828	
83	159	280-116961-A-1-A	1	U	1	1	24591	26.920357	
84	160	280-116961-A-1-B MS	1	U	1	1	111054	124.598839	
85	201	280-116961-A-1-C MSD	1	U	1	1	117037	131.357468	
86	0	BLK	1	BLNK	1	1	101	-0.746022	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
88	109	CCV 200PPB	1	CCV	1	1	187154	210.569687	
89	0	CCB	1	U	1	1	-22	-0.885048	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
91	202	HLCS 280-438294/1-A	1	U	1	1	339904	383.132721	
92	203	LLCS 280-438294/2-A	1	U	1	1	95008	106.471146	
93	204	.LCS 280-438294/3-A	1	U	1	1	102229	114.628128	
94	205	MB 280-438294/4-A	1	U	1	1	6780	6.798870	
95	206	280-117016-J-1-A	1	U	1	1	5331	5.161738	
96	207	280-117016-J-1-B MS	1	U	1	1	96852	108.554359	
97	208	280-117016-J-1-C MSD	1	U	1	1	101427	113.722633	
98	209	280-117006-I-1-A	1	U	1	1	11966	12.657870	
99	210	280-117016-K-2-A	1	U	1	1	3075	2.613714	
100	211	280-117016-J-3-A	1	U	1	1	2740	2.234535	
101	0	BLK	1	BLNK	1	1	28	-0.828515	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
103	109	CCV 200PPB	1	CCV	1	1	191021	214.937561	
104	0	CCB	1	U	1	1	-61	-0.929702	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
106	212	.280-117016-J-4-A	1	U	1	1	12383	13.128956	
107	213	280-116928-B-5-A	1	U	1	1	2565	2.037305	
108	214	280-116950-K-2-A	1	U	1	1	2793	2.294949	
109	215	280-116972-E-1-A	1	U	1	1	1772	1.140785	
110	216	280-116976-N-1-A	1	U	1	1	2669	2.155019	
111	217	280-116980-A-1-A	1	U	1	1	2175	1.596892	
112	218	280-117085-A-5-A	1	U	1	1	60628	67.631279	
113	219	280-116976-N-4-A	1	U	1	1	1487	0.819143	
114	220	280-116976-N-4-B MS	1	U	1	1	23695	25.908289	
115	221	280-116976-N-4-C MSD	1	U	1	1	47989	53.353390	
116	0	BLK	1	BLNK	1	1	29	-0.827787	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
118	109	CCV 200PPB	1	CCV	1	1	189809	213.569016	
119	0	CCB	1	U	1	1	1	-0.859900	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL
121	204	LCS 280-438294/3-A	1	U	1	1	97272	109.028969	
122	212	280-117016-J-4-A	1	U	1	1	2984	2.509994	
123	0	BLK	1	BLNK	1	1	-24	-0.888209	LO
B	0	baseline	1	RB	1	1	0	-0.860589	BL
125	109	CCV 200PPB	1	CCV	1	1	187743	211.235291	
126	0	CCB	1	U	1	1	-70	-0.939289	LO
B	0	Baseline	1	RB	1	1	0	-0.860589	BL

Cyanide, Total:Calibration   1: Peak 5-127

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Date: 21-Nov-18
Operator: AA

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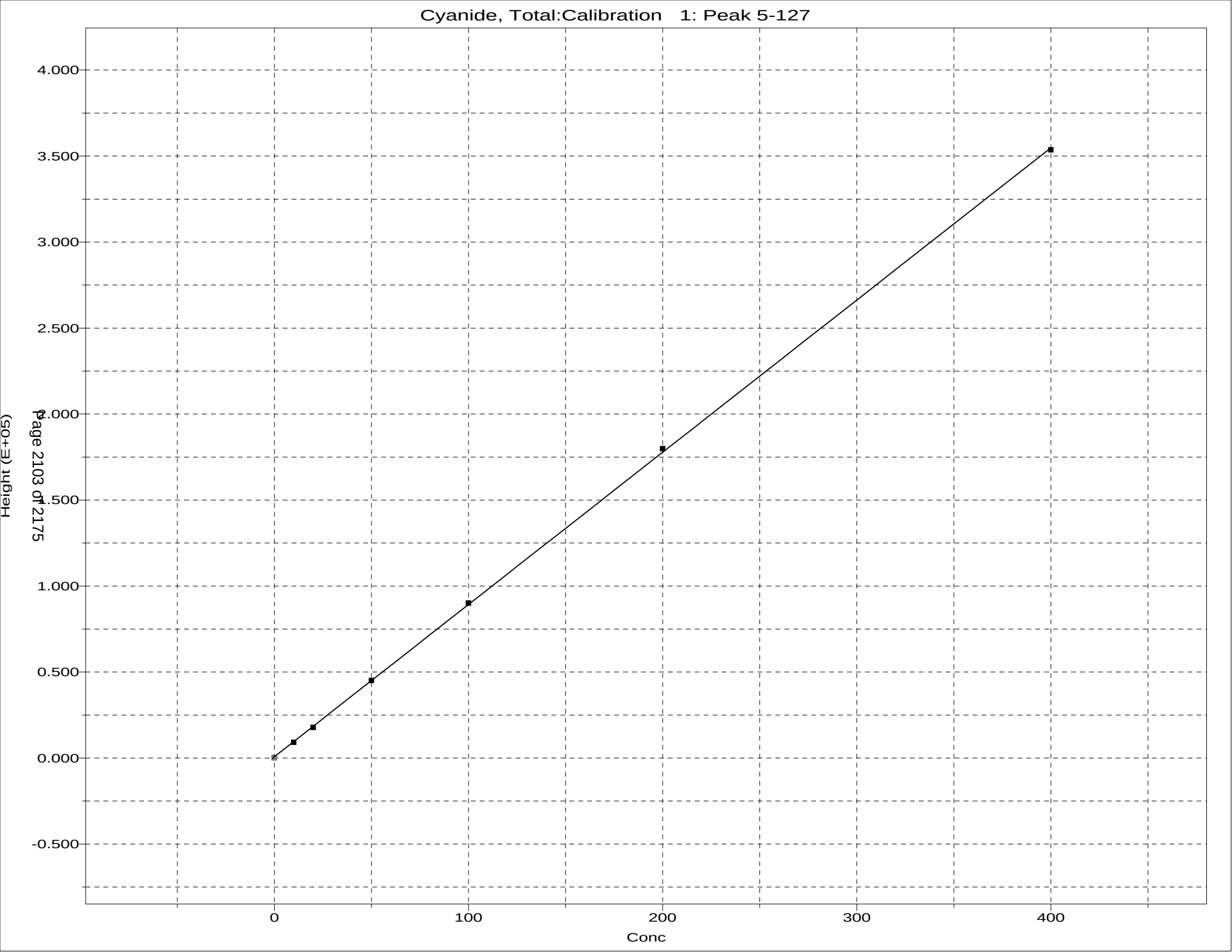
*	CAL 10.0 ppb	10.000000	9169.279297
*	CAL 20.0 ppb	20.000000	17783.128906
*	CAL 50.0 ppb	50.000000	44996.402344
*	CAL 100 ppb	100.000000	90107.804688
*	Cal 200 ppb	200.000000	179880.218750
*	Cal 400 ppb	400.000000	353634.812500

Calib Coef:
y=bx+a
a: (intercept) 7.6178e+02
b: 8.8518e+02

Corr Coef: 0.999962

Carryover: 0.0855%

No Drift Peaks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1.000
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Height (E+05)
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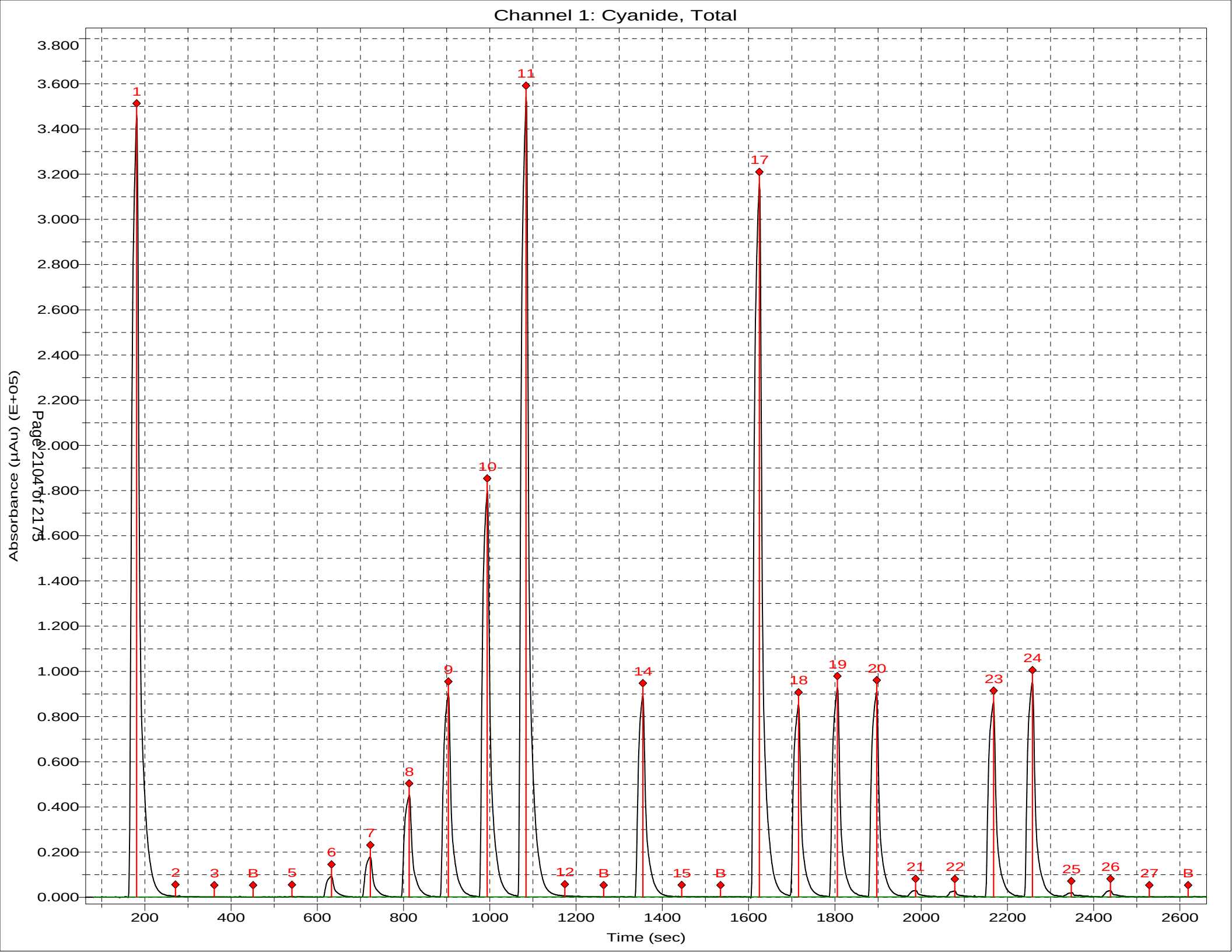
100
200
300
400
Conc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1.000
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1600
1800
2000
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2600
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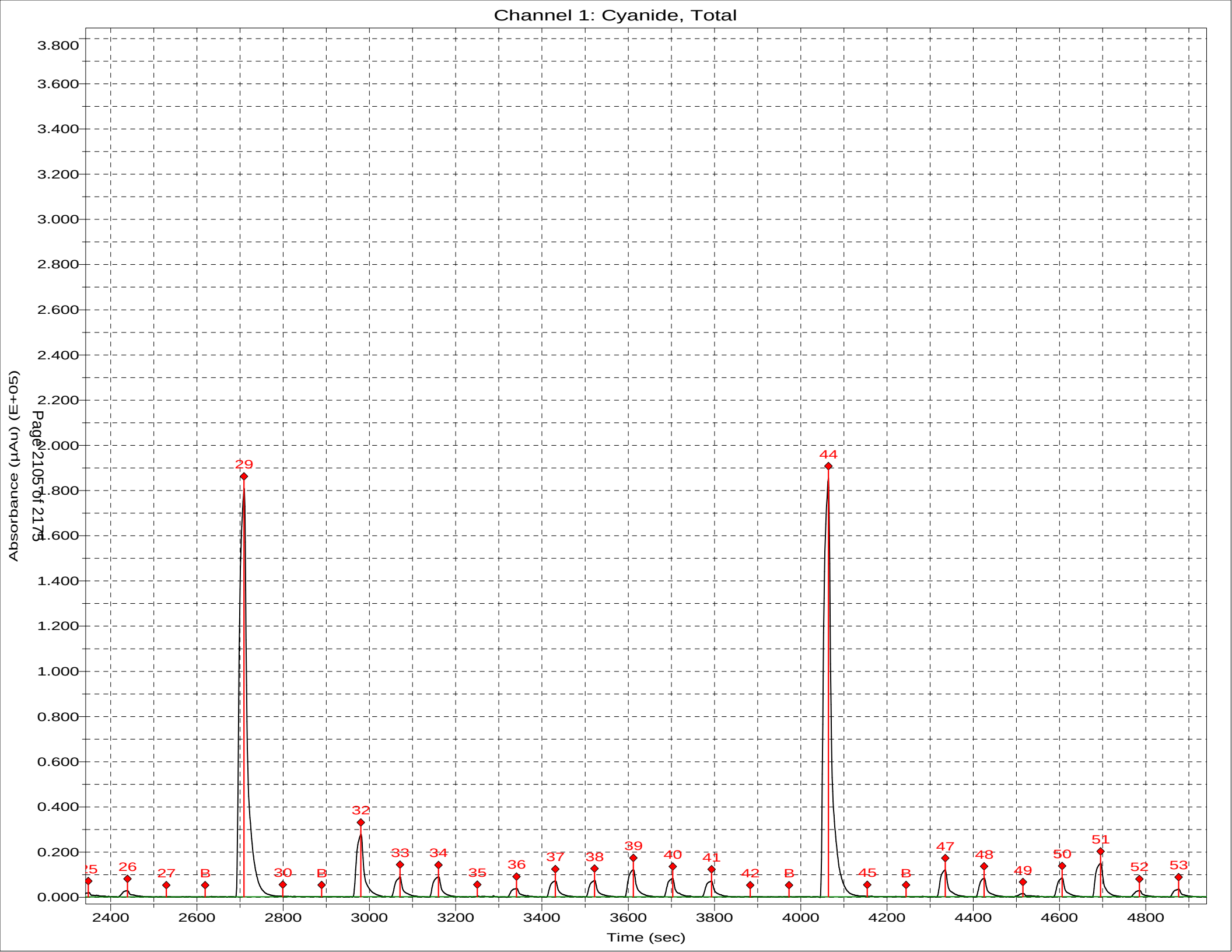
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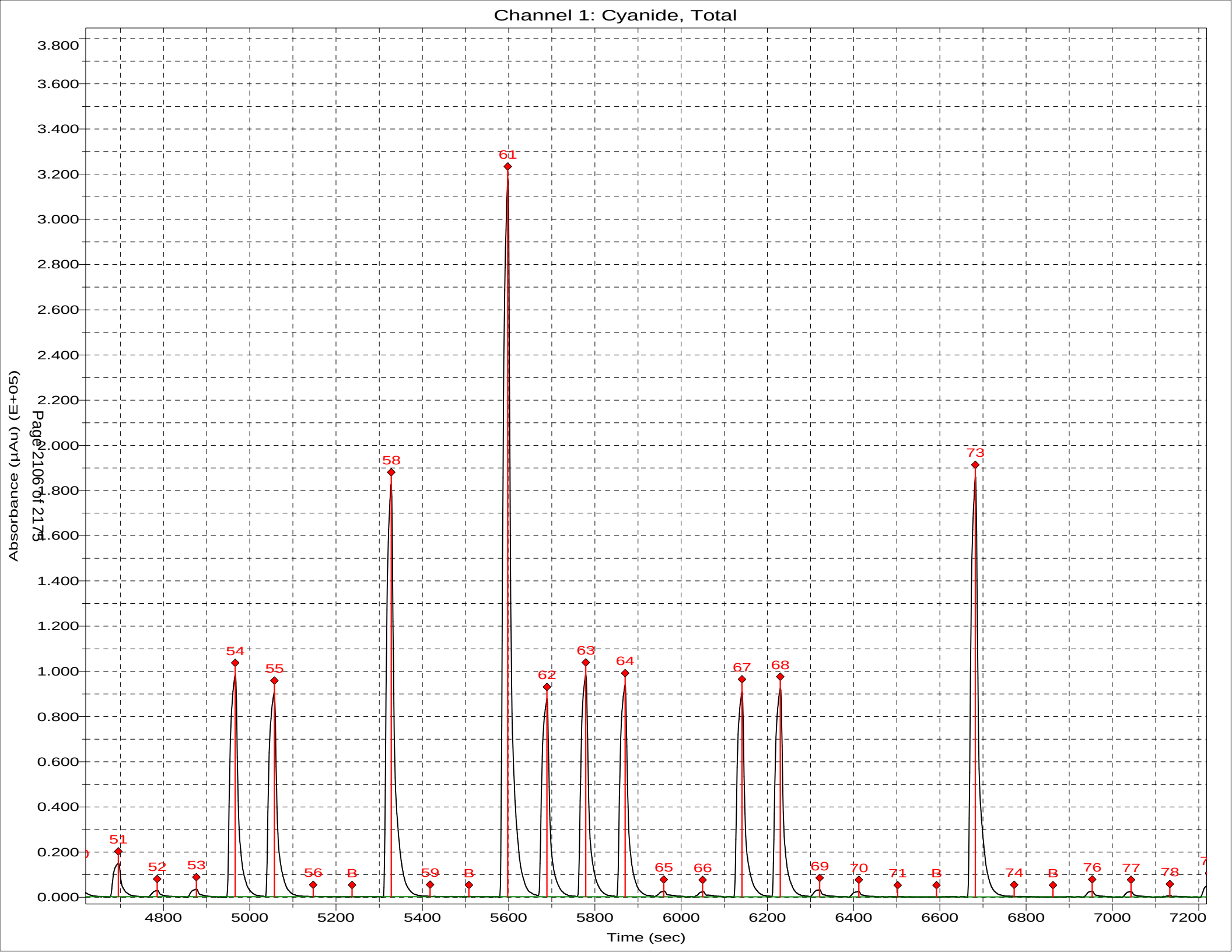
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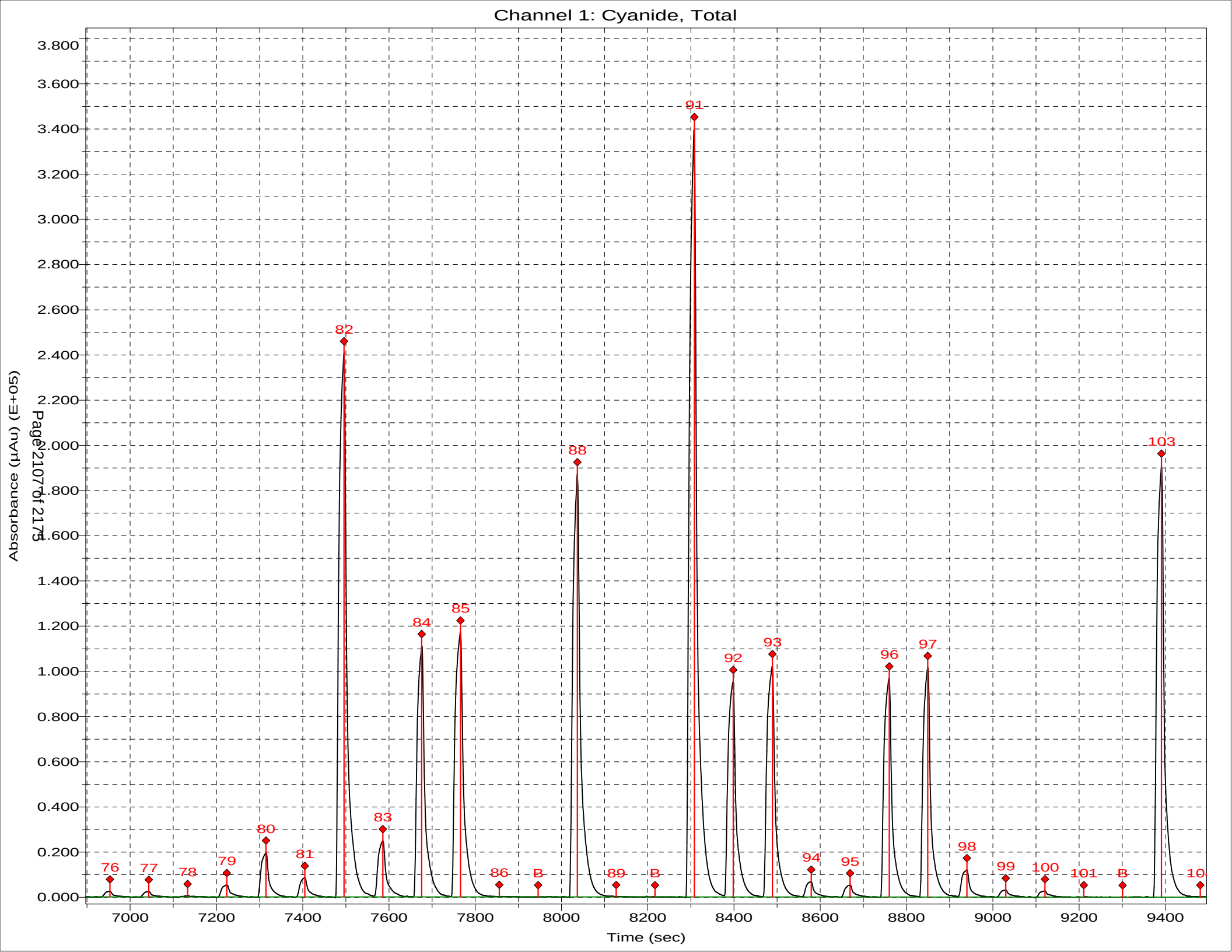
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1.000
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0.600
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0.000
7000
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7600
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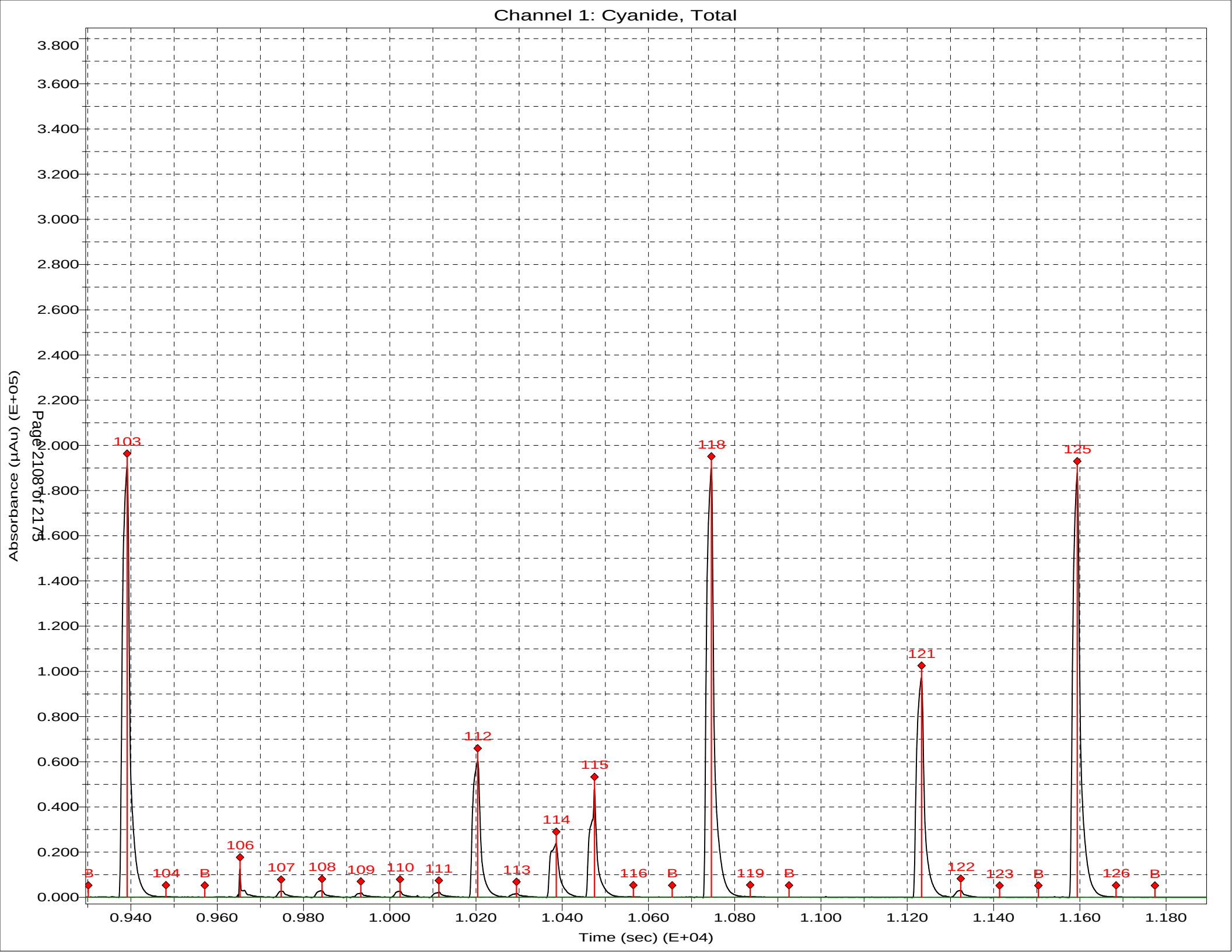
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Absorbance (µAu) (E+05)
Time (sec) (E+04)
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1.080
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1.180
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104
106
107
108
109
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123
125
126
B

Sulfide by Titration

Analyst:	EC	SOP Information:	
Date:	11/7/2018	Number:	91

Titration Solutions		Calibration Information	
Solution 1:	Iodine	Source/Ver-Lot#:	INT_01586
TALS ID	Iod_00210	Prep Date:	11/1/2018
Normality:	0.025	Made By:	EC
Solution 2:	sodium thiosulfate	Concentration:	1052
TALS ID	Na Thio_00139	Expiration Date:	2/1/2019
Normality:	0.025		
	Starch Indicator		
TALS ID	Starch Ind_00051		

ICV Information	
Source/Ver-Lot#:	INT_01516
Prep Date:	11/1/2018
Made By:	EC
Concentration:	1114
Expiration Date:	2/1/2019

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
CAL	5	0.00	6.70	20	6.70	1064.000
CAL	5	6.70	13.70	20	7.00	1040.000

For SM4500 S2 D colorimetric

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
ICV	5	13.70	19.70	20	6.00	1120.000
ICV	5	14.65	20.79	20	6.14	1108.800

TALS Raw Data Report

Job Number: 280-116404-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/Kg				
Sulfide as H2S		0 mg/L	mg/Kg				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/Kg	72	38 104		
Sulfide as H2S		17 mg/L	mg/Kg				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/Kg				
Sulfide as H2S		-0.595 mg/L	mg/Kg				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/Kg	89	38 104		
Sulfide as H2S		20.995 mg/L	mg/Kg				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/Kg	61	38 104	37	35
Sulfide as H2S		14.45 mg/L	mg/Kg				

TALS Raw Data Report

Job Number: 280-116516-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 5 Lab ID: **280-116516-G-1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0.4 mg/L	mg/L				
Sulfide as H2S		0.425 mg/L	mg/L				

RS# 6 Lab ID: **280-116516-F-2-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0.48 mg/L	mg/L				
Sulfide as H2S		0.51 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116538-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 7 Lab ID: **280-116538-M-1-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.08 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.085 mg/L	2.0 U mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.595 mg/L	2.0 U mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116538-2
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

RS# 11 Lab ID: **280-116538-G-4-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116610-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

RS# 12 Lab ID: **280-116610-I-5-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		36.88 mg/L	mg/L				
Sulfide as H2S		39.185 mg/L	mg/L				

RS# 13 Lab ID: **280-116610-I-6-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		1.52 mg/L	mg/L				
Sulfide as H2S		1.615 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116621-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

RS# 14 Lab ID: **280-116621-F-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		3.2 mg/L	mg/L				
Sulfide as H2S		3.4 mg/L	mg/L				

RS# 15 Lab ID: **280-116621-F-3-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0.72 mg/L	mg/L				
Sulfide as H2S		0.765 mg/L	mg/L				

RS# 16 Lab ID: **280-116621-F-4-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		4.88 mg/L	mg/L				
Sulfide as H2S		5.185 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-44775-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 2 Lab ID: **320-44775-G-2-D** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.85 mg/L	2.0 U mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.595 mg/L	2.0 U mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

9030B

TestAmerica *Denver*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Titration Data Review Checklist

LIMS Batch Number: 436735	Method (circle one):	QC Type (circle):
Analyst/1st Reviewer: EC	2310B 2320B 2340C	(Standard) DoD QAPP Other
Date: 11/07/18	4500 S2 F 4500 SO3 B (9030B/9034)	
Matrix (circle): (Water) Solid	Automated or (Manual) (circle one)	Instrument ID (circle one if applicable): AT2 AT3

Review Items	Yes	No	2nd Rev	If No, why is data reportable?
A. Sample Storage and Pretreatment				
1. Is sample pH verified and documented prior to analysis? (if required)	✓		✓	
2. For samples requiring pH adjustment is the amount of acid/base used documented?		MA	✓	If no, list details:
3. Are samples analyzed within the required hold time?	✓		✓	NCM:
4. Pre-treatment reagents used to remove interferences are documented.		MA	✓	
B. Calibration / Instrument				
5. Was the normality of the titrant verified and found acceptable?	✓		✓	Comments:
6. For potentiometric titration, the pH meter is calibrated with 5 buffers bracketing range of samples and QC.		MA	✓	Comments:
7. Calibration standards are analyzed at the beginning and end of the analytical sequence and after every 10 sample analyses. (samples/dilutions/reanalyses).		MA	✓	Comments:
8. Calibrations standards (ICV/CCV) are within 90-110% recovery.		MA	✓	
C. Sample and Batch QC				
9. Blanks are analyzed at the beginning, end and after every 10 sample analyses in the sequence.	✓		✓	
10. Results of blank analyses (MB, ICB, CCB) are < ½ RL (<RL for alkalinity unless DoD)	✓		✓	□ No analyte > ½ RL in associated samples □ Sample results >10x blank
11. A standard from a second source (SRM, CRM, LCS) is included in the analytical sequence.	✓		✓	
12. The recovery of the 2nd source material falls within 90-110% or manufacturer's limits.	✓		✓	
13. Samples analyses are bracketing by acceptable CCV/CCBs.		MA	✓	□ No analyte > RL in associated samples □ Sample results >10x blank □ Sample results qualified
14. MS/MSD analyzed at required frequency and recoveries within limits. (If recoveries out of limits, verify not due to lab error) (Required for 2340C, 4500 S2 F, 9030B/9034)	✓		✓	□ Non-conformance (NCM) added □ Sample results >4X spike conc.
15. Duplicate analyzed at required frequency and RPD within limits. (Required for 2310B, 2320B, 4500 SO3 B)		MA	✓	□ Non-conformance (NCM) added □ Sample results ND or <2X RL

Review Items	Yes	No	2nd Rev	If No, why is data reportable?
16. Are all MS/MSD RPDs <50%? Note: Excessive RPDs (>50%) require evaluation, correction or explanation.		X	/	Non-conformance (NCM) added
D. Raw Data & TALS Data Entry				
17. Raw Data	✓		/	
a. Unused data is clearly identified with reason	✓		/	
b. All crossed out data is initialed and dated	✓		/	
c. Out of control QC is clearly identified	✓		/	
d. Any data that has a qualifier is commented on with appropriate action taken	✓		/	
e. The first page of the run includes the filename, instrument, and analyst initials/signature	✓		/	
f. 100% of manual calculations are verified.	✓		/	
18. TALS Samples Tab	✓		/	
a. LIMS Sample IDs / Containers are correct	✓		/	
b. Method and matrix are correct	✓		/	
c. Date and time match raw data	✓		/	
d. Dilutions are correct	✓		/	
e. Correct suffix designated (where applicable)	✓		/	
19. TALS Worksheet Tab is complete and correct	✓		/	
20. TALS Reagent Tab is complete and correct	✓		/	
21. TALS QC Links Tab is correct	✓		/	
22. TALS Sample Results Tab	✓			
a. All unused data are marked Rejected or Accepted	✓		/	
b. All reported analytes are marked Primary or Secondary	✓		/	
c. Data manually transcribed from benchsheet into TALS verified 100% including significant figures SM 4500 SO3 B).	✓		/	
d. TALS Batch Information Screen documentation is complete	✓		/	
e. TALS Status set to appropriate review level	✓		/	
E. Final Report and NCMs (2nd level review only)				
f. Were all job/project requirements met?			/	
g. Results for samples and QC correct on final report?			/	
h. Are all necessary scanned documents in TALS?			/	
i. NCMs reviewed for applicability, correct references to batches, grammar/typographical errors?			/	

Comments: ~~Analyte calc. error.~~

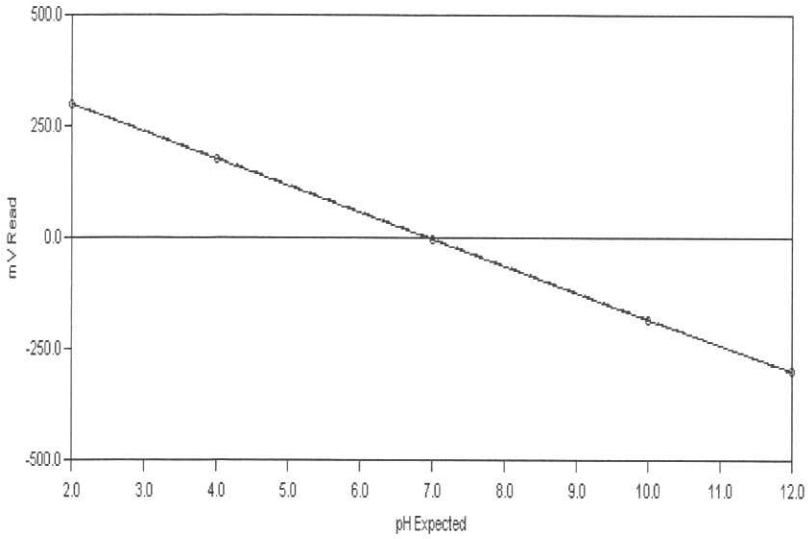
2nd Reviewer: [signature] **Review Date:** 11/13/18

MANTECH INC.

Report Date: 11/19/2018 : 11:29 AM

Calibration Report

Calibration Record # 318



Calibration Settings

Calibration ID	PH	Date	11/19/2018
Channel	1	Time	11:00 AM
Probe Type	pH	Temperature	297.69 K 24.54 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-60.079	CorrCoeff	1.0000
Intercept	-1.952	Equation: Y = (-60.079) X + (-1.952)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-60.079	-65.00	-54.00
Intercept	-1.952	-100.00	100.00
Correlation Coefficient	1.0000	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	2.00	299.31
	4.00	178.22
	7.00	-3.17
	10.00	-183.22
	12.00	-300.90

Report Date: 11/19/2018 : 4:49 PM

Test America
Water Analysis Report

Analyst: SGB

Run Number 1359 **Order Number** 20181119-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
icv	11/19/2018	12:46 PM	23.38	-1.00	7.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ph low	11/19/2018	12:50 PM	23.01	-1.00	1.97	1.96	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ph high	11/19/2018	12:54 PM	22.60	-1.00	12.06	12.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	11/19/2018	12:58 PM	22.31	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	11/19/2018	1:04 PM	22.51	-1.00	6.17	5.72	5.45	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116398-F-1	11/19/2018	1:09 PM	21.44	-1.00	7.94	7.92	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du 280-116398-F-1	11/19/2018	1:13 PM	20.74	-1.00	7.95	7.93	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116398-F-2	11/19/2018	1:17 PM	20.08	-1.00	8.15	8.15	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116398-G-3	11/19/2018	1:21 PM	20.41	-1.00	7.83	7.79	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116398-G-4	11/19/2018	1:25 PM	20.31	-1.00	8.09	8.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116470-F-10	11/19/2018	1:29 PM	20.95	-1.00	8.07	8.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116516-A-1	11/19/2018	1:33 PM	20.51	-1.00	8.27	8.27	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116516-A-2	11/19/2018	1:37 PM	19.89	-1.00	8.25	8.24	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116527-C-1	11/19/2018	1:41 PM	19.73	-1.00	8.13	8.13	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116538-I-4	11/19/2018	1:46 PM	20.33	-1.00	7.82	7.75	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	11/19/2018	1:50 PM	21.02	-1.00	7.05	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	11/19/2018	1:57 PM	22.26	-1.00	6.29	6.01	5.81	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116544-A-1	11/19/2018	2:01 PM	22.29	-1.00	7.91	7.87	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116544-A-2	11/19/2018	2:05 PM	21.16	-1.00	6.07	6.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116638-E-1	11/19/2018	2:10 PM	20.99	-1.00	7.85	7.84	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116638-E-2	11/19/2018	2:15 PM	20.63	-1.00	7.85	7.80	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116638-E-3	11/19/2018	2:19 PM	21.14	-1.00	7.87	7.80	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116638-E-4	11/19/2018	2:25 PM	21.57	-1.00	7.67	7.60	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116638-E-5	11/19/2018	2:30 PM	22.08	-1.00	7.62	7.58	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116643-E-1	11/19/2018	2:34 PM	21.64	-1.00	8.06	8.06	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116643-E-2	11/19/2018	2:38 PM	20.85	-1.00	8.15	8.16	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116643-E-3	11/19/2018	2:42 PM	20.73	-1.00	8.32	8.33	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

GENERAL RESULTS REPORT.SRW

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Run Number 1359 **Order Number** 20181119-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
ccv	11/19/2018	2:46 PM	20.83	-1.00	7.05	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	11/19/2018	2:50 PM	21.15	-1.00	7.05	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	11/19/2018	2:57 PM	21.95	-1.00	6.28	6.03	5.81	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116643-A-4	11/19/2018	3:01 PM	22.25	-1.00	9.02	9.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du 280-116643-A-4	11/19/2018	3:05 PM	21.43	-1.00	6.94	6.94	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116716-C-1	11/19/2018	3:09 PM	22.57	-1.00	9.06	9.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116670-C-1	11/19/2018	3:13 PM	21.40	-1.00	6.73	6.73	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116729-E-2	11/19/2018	3:17 PM	21.31	-1.00	8.04	8.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116729-E-1	11/19/2018	3:21 PM	21.63	-1.00	8.12	8.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116729-E-3	11/19/2018	3:25 PM	21.67	-1.00	8.15	8.16	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116729-E-4	11/19/2018	3:29 PM	22.07	-1.00	8.20	8.19	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116729-E-5	11/19/2018	3:33 PM	22.43	-1.00	8.91	8.91	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116726-D-1	11/19/2018	3:37 PM	22.20	-1.00	6.89	6.87	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	11/19/2018	3:41 PM	21.95	-1.00	7.04	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	11/19/2018	3:48 PM	22.19	-1.00	6.24	5.90	5.74	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	11/19/2018	3:56 PM	23.88	-1.00	7.03	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	11/19/2018	4:00 PM	23.83	-1.00	7.03	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	11/19/2018	4:07 PM	24.22	-1.00	6.36	6.04	5.85	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116756-C-1	11/19/2018	4:11 PM	22.46	-1.00	8.08	8.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116758-C-1	11/19/2018	4:15 PM	22.57	-1.00	8.13	8.13	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116785-C-3	11/19/2018	4:21 PM	23.07	-1.00	5.50	5.22	5.08	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116785-C-7	11/19/2018	4:25 PM	23.59	-1.00	8.36	8.39	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116785-C-1	11/19/2018	4:29 PM	23.25	-1.00	8.46	8.46	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116785-C-11	11/19/2018	4:33 PM	23.07	-1.00	8.39	8.39	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116785-C-5	11/19/2018	4:37 PM	22.96	-1.00	8.34	8.35	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-116785-C-9	11/19/2018	4:43 PM	23.17	-1.00	5.68	5.50	5.39	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	11/19/2018	4:47 PM	23.17	-1.00	7.03	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-10
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Oct-2018 10:27:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-002
Misc. Info.: 280-0075619-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:48:51 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

First Level Reviewer: allena Date: 30-Oct-2018 12:00:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.255	0.002	1071094	0.2000	0.2325	
2 Chloride	4.480	4.475	0.005	3071420	1.00	1.15	
3 Nitrite as N	5.202	5.188	0.014	1440251	0.2000	0.2354	
4 Bromide	6.300	6.282	0.018	267623	0.2000	0.2317	
5 Nitrate as N	7.118	7.073	0.045	1399962	0.2000	0.2419	
6 Orthophosphate as P	9.852	9.827	0.025	813941	0.2000	0.2150	
7 Sulfate	11.577	11.540	0.037	2779250	1.00	1.21	

Reagents:

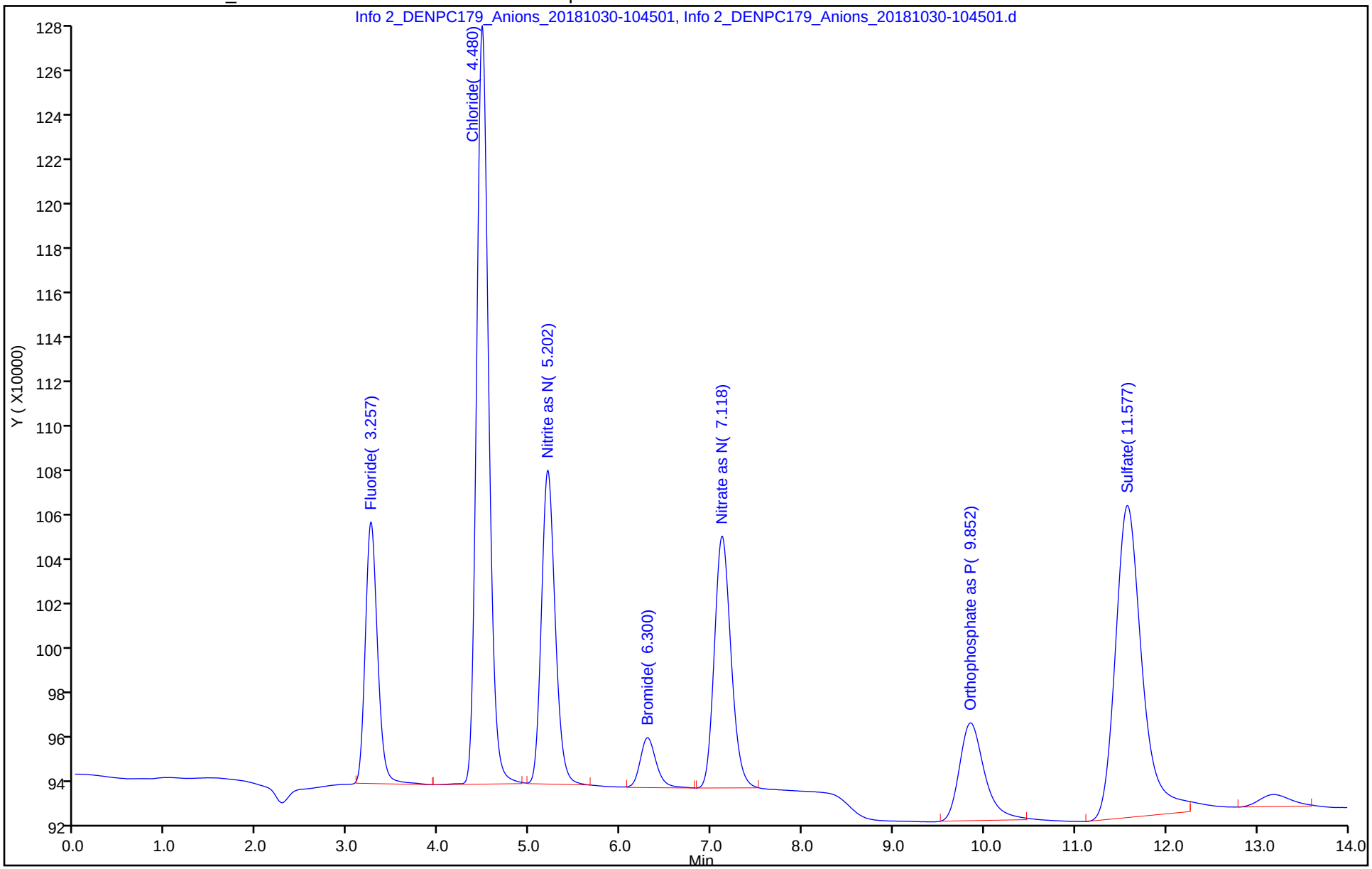
IC CAL cl/so4_00227 Amount Added: 0.04 Units: mL
IC Cal low_00411 Amount Added: 0.04 Units: mL

Report Date: 31-Oct-2018 12:48:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-104501.d

Injection Date:	30-Oct-2018 10:27:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD1			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Oct-2018 10:45:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-003
Misc. Info.: 280-0075619-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:48:55 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.255	3.255	0.000	2816245	0.5000	0.4710	
2 Chloride	4.478	4.475	0.003	8239899	2.50	2.34	
3 Nitrite as N	5.198	5.188	0.010	3822599	0.5000	0.4681	
4 Bromide	6.293	6.282	0.011	652794	0.5000	0.4836	
5 Nitrate as N	7.108	7.073	0.035	3690848	0.5000	0.4702	
6 Orthophosphate as P	9.845	9.827	0.018	1908867	0.5000	0.5021	
7 Sulfate	11.572	11.540	0.032	6323521	2.50	2.33	

Reagents:

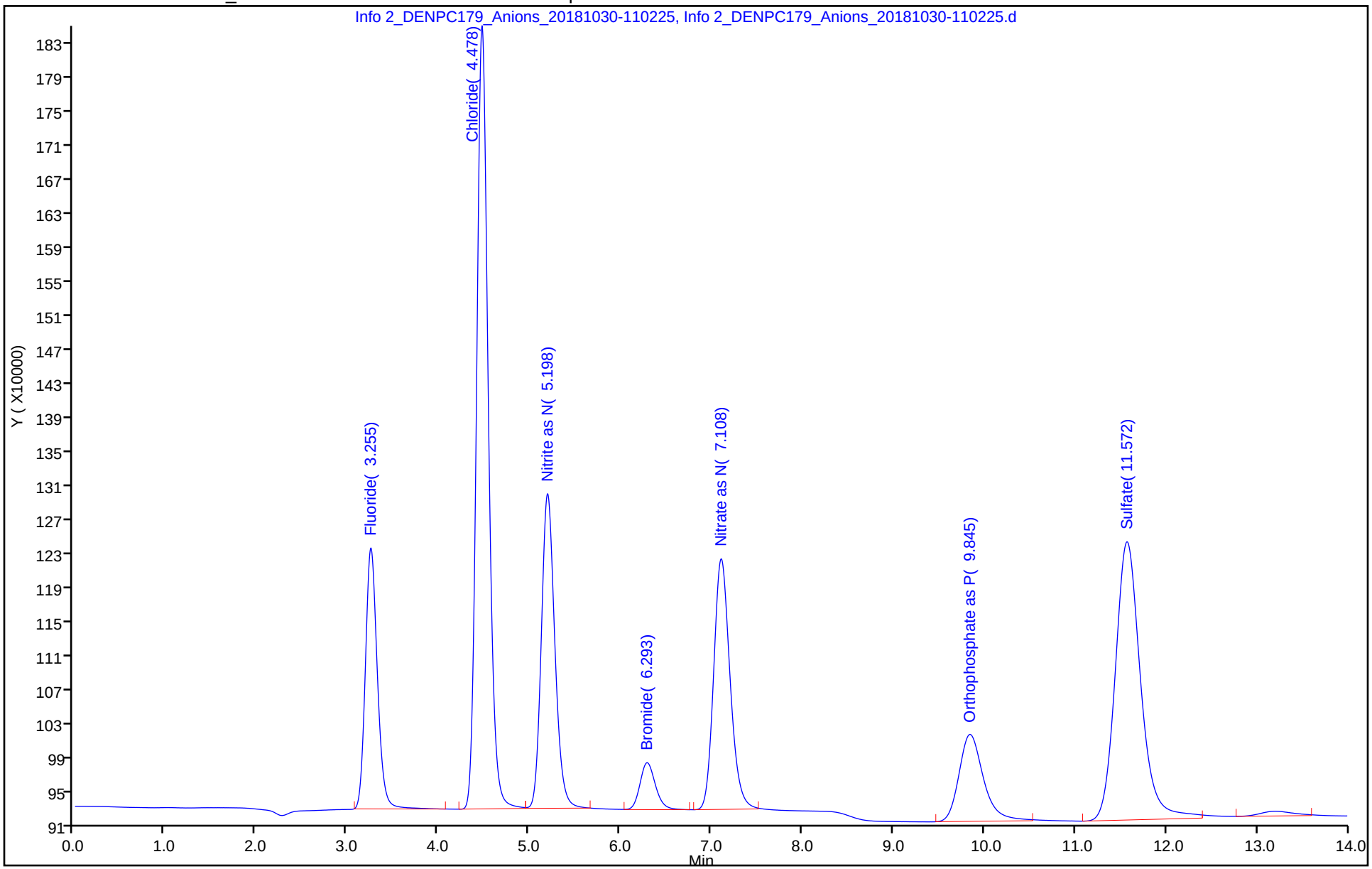
IC CAL cl/so4_00227 Amount Added: 0.10 Units: mL
IC Cal low_00411 Amount Added: 0.10 Units: mL

Report Date: 31-Oct-2018 12:48:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-110225.d

Injection Date:	30-Oct-2018 10:45:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD2			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Oct-2018 11:02:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-004
Misc. Info.: 280-0075619-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:00 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.255	0.002	5954529	1.00	0.8999	
2 Chloride	4.478	4.475	0.003	17980833	5.00	4.59	
3 Nitrite as N	5.198	5.188	0.010	8167538	1.00	0.8926	
4 Bromide	6.293	6.282	0.011	1298912	1.00	0.9062	
5 Nitrate as N	7.102	7.073	0.029	7705980	1.00	0.8704	
6 Orthophosphate as P	9.845	9.827	0.018	3631973	1.00	0.9539	
7 Sulfate	11.573	11.540	0.033	12761418	5.00	4.35	

Reagents:

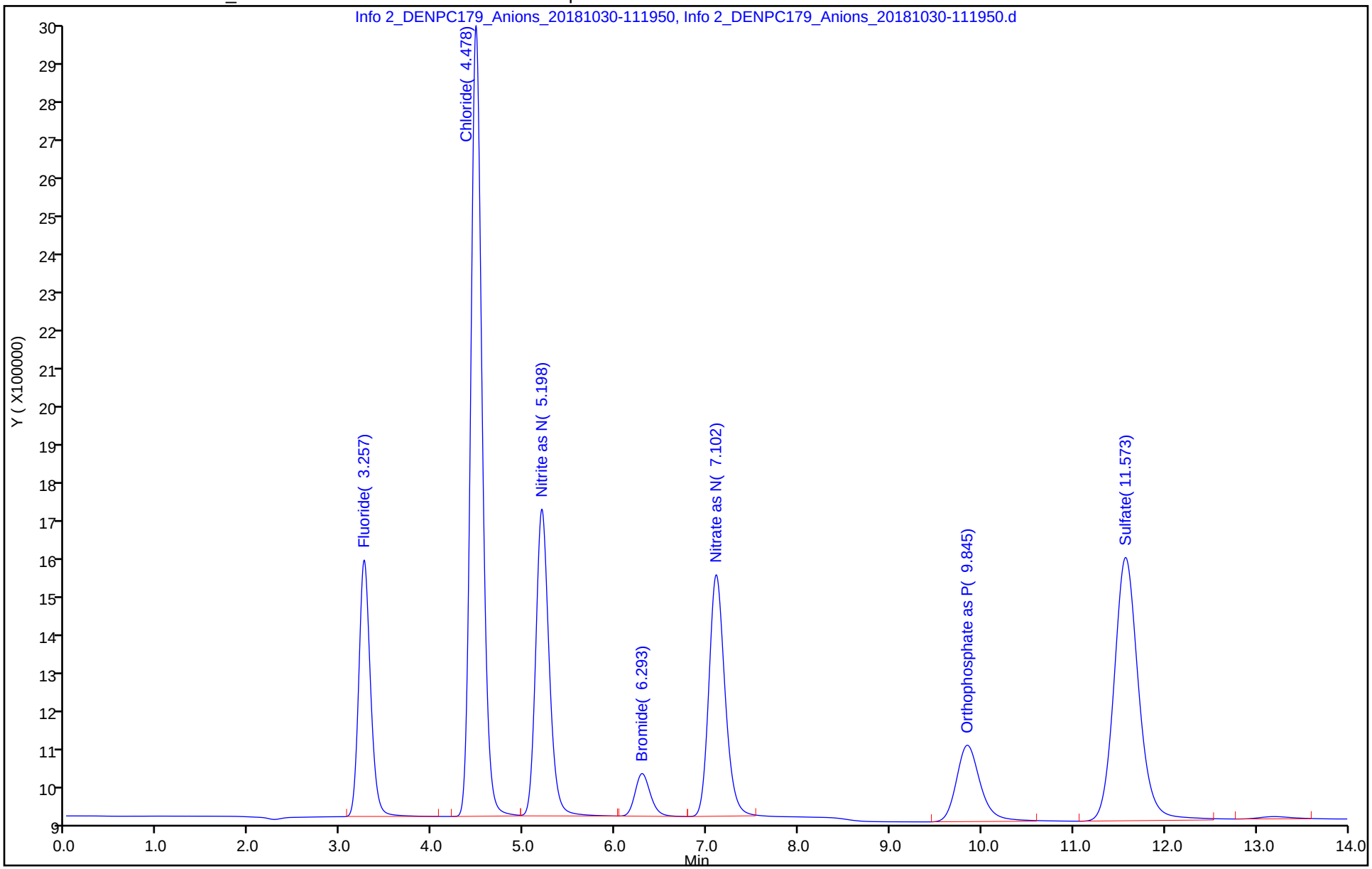
IC CAL cl/so4_00227 Amount Added: 0.20 Units: mL
IC Cal low_00411 Amount Added: 0.20 Units: mL

Report Date: 31-Oct-2018 12:49:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-111950.d

Injection Date:	30-Oct-2018 11:02:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD3			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Oct-2018 11:19:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-005
Misc. Info.: 280-0075619-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:04 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.260	0.000	27878173	4.00	3.90	
2 Chloride	4.477	4.477	0.000	256824281	60.0	59.7	
3 Nitrite as N	5.193	5.193	0.000	38665594	4.00	3.87	
4 Bromide	6.287	6.287	0.000	5621787	4.00	3.73	
5 Nitrate as N	7.082	7.082	0.000	36858444	4.00	3.78	
6 Orthophosphate as P	9.842	9.842	0.000	14344226	4.00	3.76	
7 Sulfate	11.563	11.563	0.000	185331333	60.0	58.7	

Reagents:

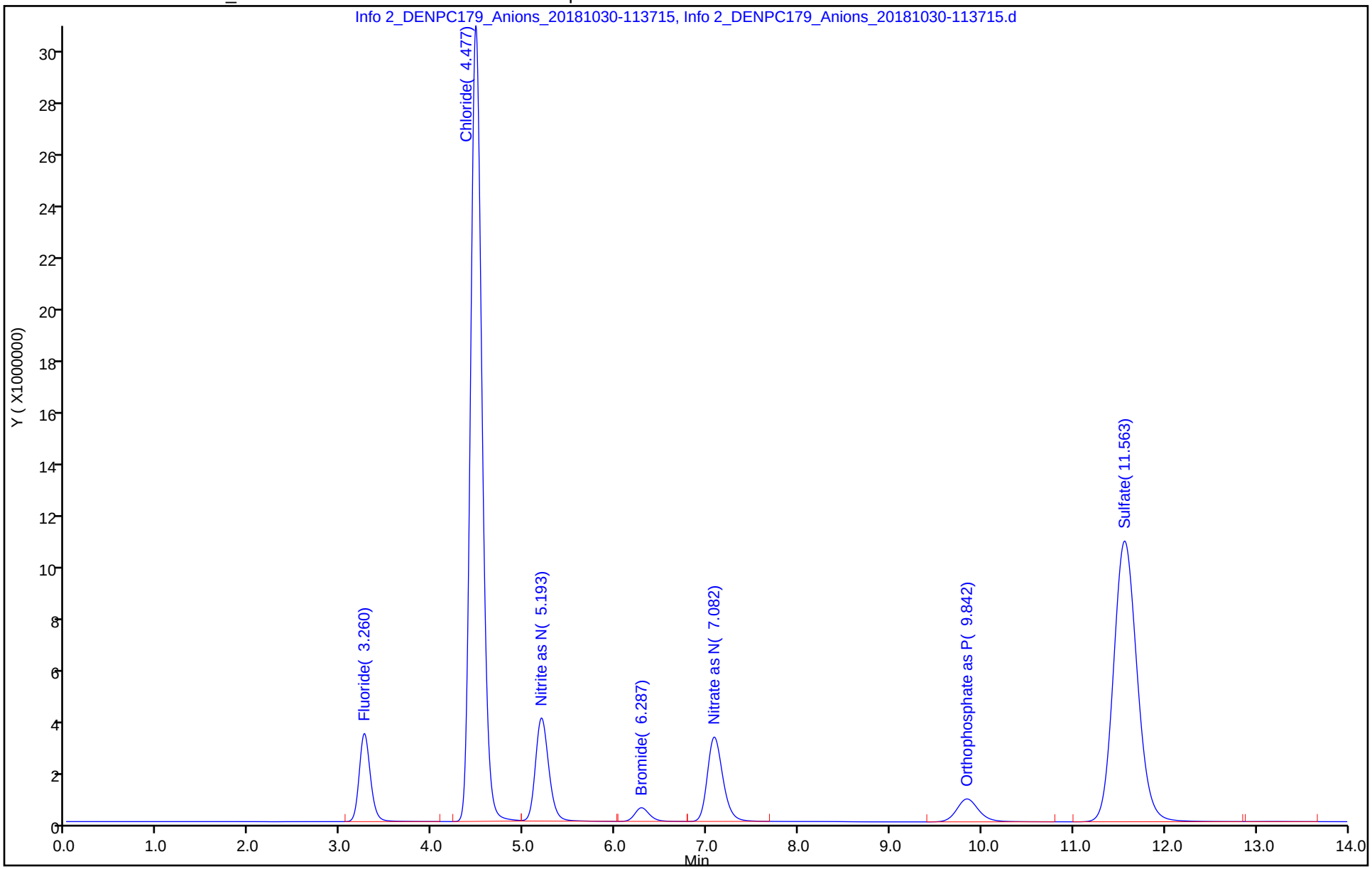
IC CAL cl/so4_00227 Amount Added: 2.40 Units: mL
IC Cal low_00411 Amount Added: 0.80 Units: mL

Report Date: 31-Oct-2018 12:49:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-113715.d

Injection Date:	30-Oct-2018 11:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD4			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Oct-2018 11:37:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-006
Misc. Info.: 280-0075619-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:08 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

First Level Reviewer: allena Date: 30-Oct-2018 12:22:00

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.260	0.000	58334967	8.00	8.06	
2 Chloride	4.477	4.477	0.000	517755699	120.0	119.8	
3 Nitrite as N	5.187	5.193	-0.006	82200253	8.00	8.12	
4 Bromide	6.277	6.287	-0.010	12163239	8.00	8.01	
5 Nitrate as N	7.062	7.082	-0.020	79872607	8.00	8.06	
6 Orthophosphate as P	9.832	9.842	-0.010	30476352	8.00	7.99	
7 Sulfate	11.545	11.563	-0.018	378814367	120.0	119.6	

Reagents:

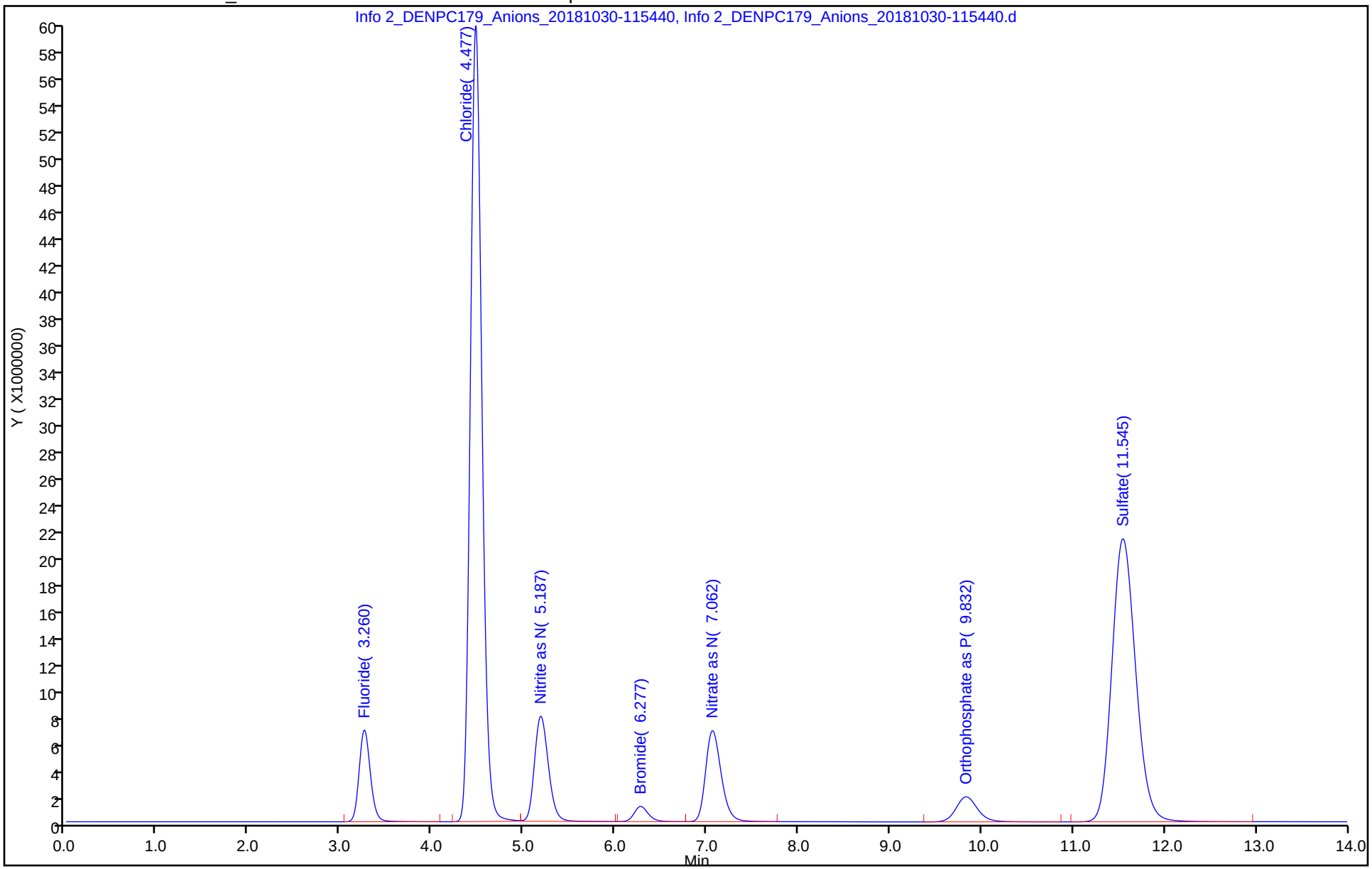
IC CAL cl/so4_00227 Amount Added: 4.80 Units: mL
IC Cal low_00411 Amount Added: 1.60 Units: mL

Report Date: 31-Oct-2018 12:49:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-115440.d

Injection Date:	30-Oct-2018 11:37:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD5			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Oct-2018 11:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-007
Misc. Info.: 280-0075619-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:12 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.260	-0.002	73583459	10.0	10.1	
2 Chloride	4.478	4.477	0.001	869672551	200.0	201.0	
3 Nitrite as N	5.183	5.193	-0.010	102493289	10.0	10.1	
4 Bromide	6.273	6.287	-0.014	15712093	10.0	10.3	
5 Nitrate as N	7.055	7.082	-0.027	102080026	10.0	10.3	
6 Orthophosphate as P	9.828	9.842	-0.014	39175938	10.0	10.3	
7 Sulfate	11.528	11.563	-0.035	641936064	200.0	202.4	

Reagents:

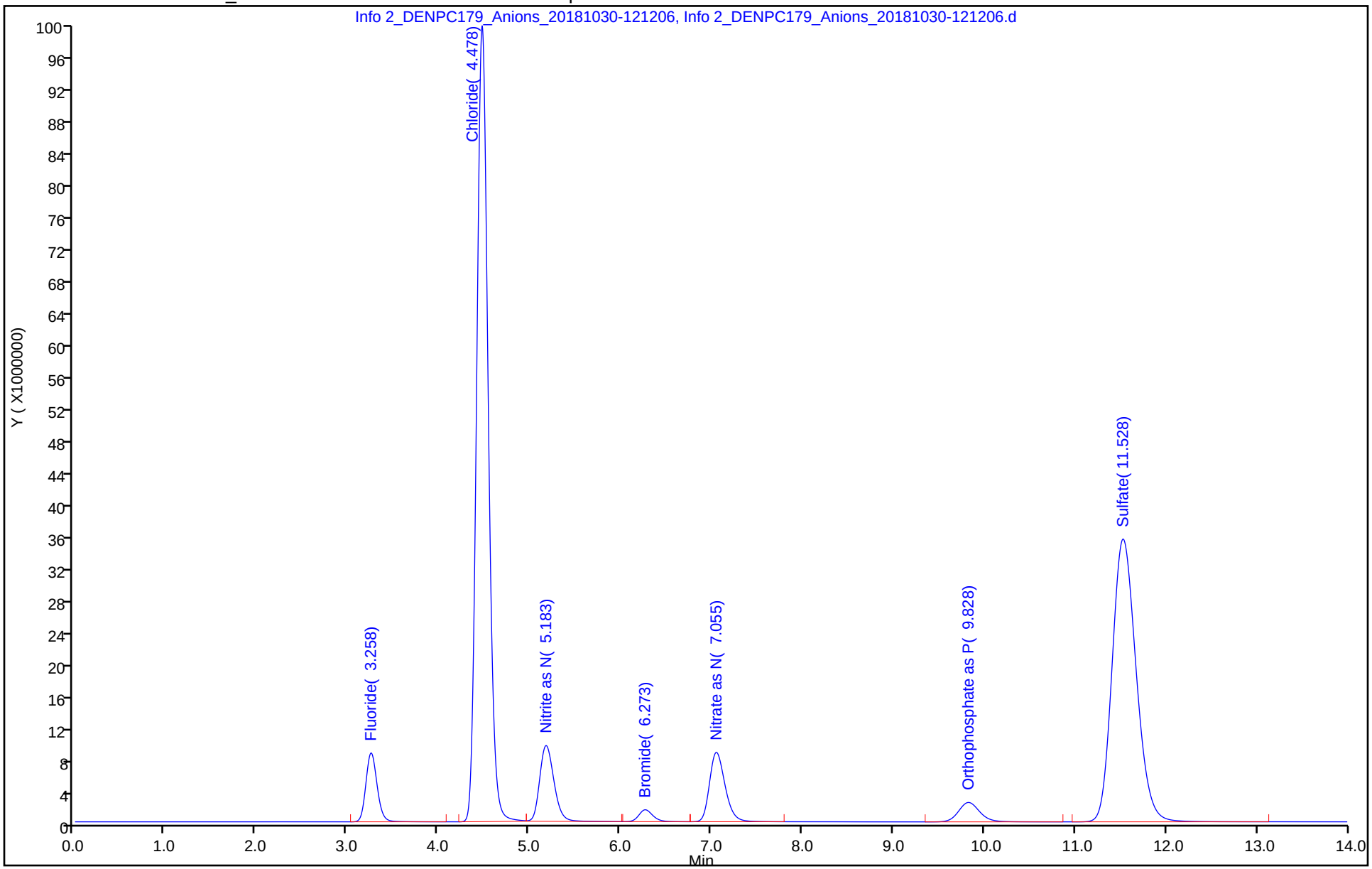
IC CAL cl/so4_00227 Amount Added: 8.00 Units: mL
IC Cal low_00411 Amount Added: 2.00 Units: mL

Report Date: 31-Oct-2018 12:49:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-121206.d

Injection Date:	30-Oct-2018 11:54:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD6			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



IC Instrument Information

WL: 75619 Inst ID: 10 Analysis Date: 10/30/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	116322	7	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	Don't report PO4 (Total 3)
☐	115507	8	F Cl NO2 Br NO3 PO4 SO4	(MS/D) 1	2
☐	115926	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	115457	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	confirm per Alysha
☐	115546	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	4
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
✓ 116322	1,2,4,5,6,7,8,10	F (Cl) NO2 Br (NO3) PO4 (SO4)	2x, 50x	conductivity
✓ 115507	1,2,3,4,5,6,7,8,9	F Cl NO2 Br NO3 PO4 (SO4)	20x, 50x, 100x	run dil.
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

435512 / 435513

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IC Instrument Information

WL: 75619 Inst ID: 10 Analysis Date: 10/30/18 Analyst: TT

Rush	Job No.	Samples	Anions	QC Req	HT Exp (Total)
=	116322	7	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	Don't report PO4
=	115507	8	F Cl NO2 Br NO3 PO4 (SO4)	(MS/D)	2
=	115926	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
=	115457	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	Confirm per Alysha
=	115546	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	0
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

	Job No.	Samples	Anions	Dilution	Reason
✓	116322	1,2,4,5,6,7,8,10	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	2x, 50x	Conductivity
✓	115507	1,2,3,4,5,6,7,8,9	F Cl NO2 Br NO3 PO4 (SO4)	20x, 50x, 100x	run dil.
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		

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TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Oct-2018 12:12:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-008
Misc. Info.: 280-0075619-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:17 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	28025272	4.00	3.92	
2 Chloride	4.475	4.475	0.000	352908673	80.0	81.8	
3 Nitrite as N	5.192	5.192	0.000	36889330	4.00	3.70	
4 Bromide	6.282	6.282	0.000	5759019	4.00	3.82	
5 Nitrate as N	7.075	7.075	0.000	39971250	4.00	4.09	
6 Orthophosphate as P	9.835	9.835	0.000	14500191	4.00	3.80	
7 Sulfate	11.552	11.552	0.000	255766731	80.0	80.8	

Reagents:

IC CL ICV_00014 Amount Added: 0.80 Units: mL
IC SO4 ICV_00017 Amount Added: 0.80 Units: mL
IC ICV 5_00214 Amount Added: 0.80 Units: mL

Report Date: 31-Oct-2018 12:49:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

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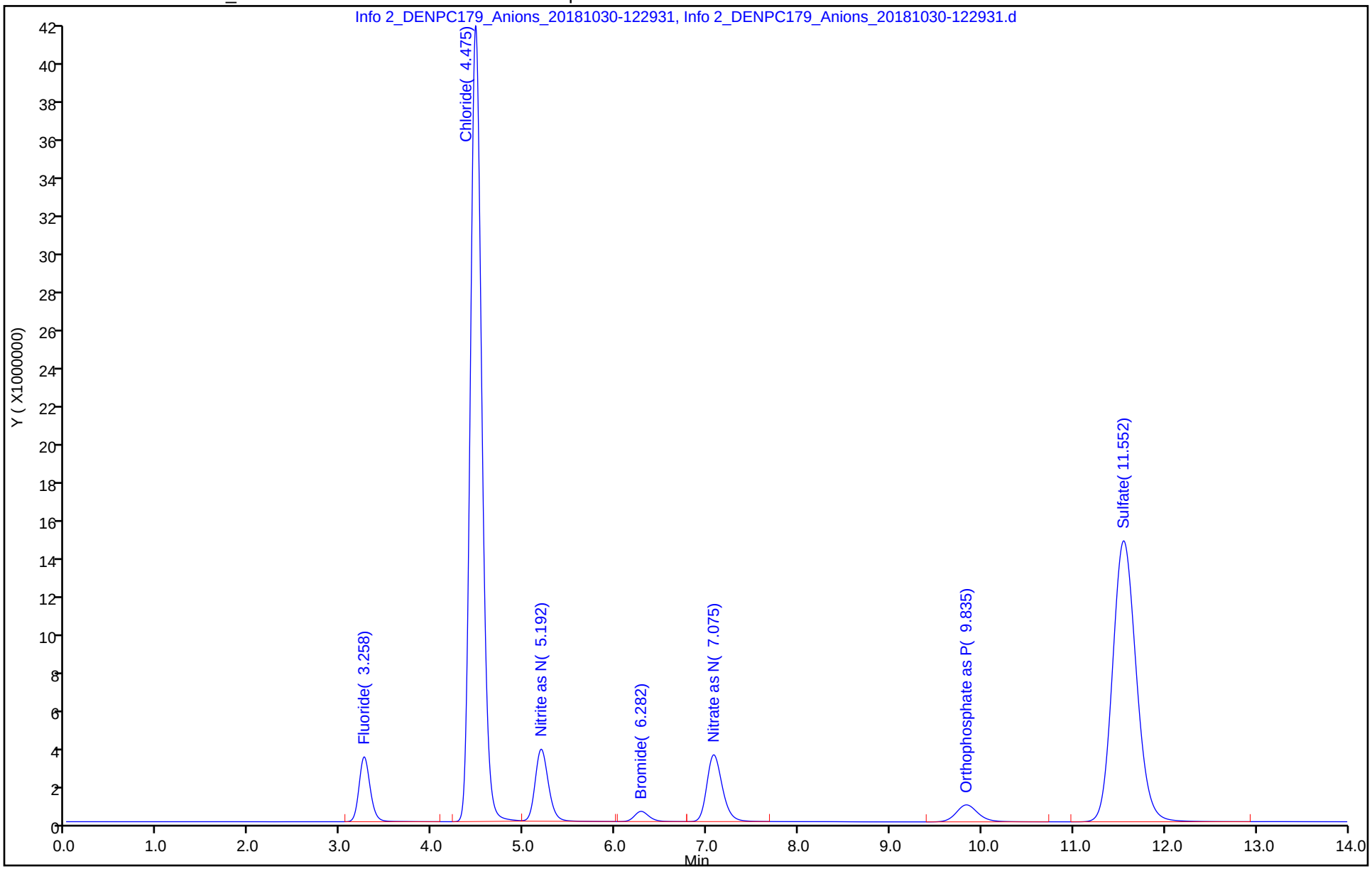
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-122931.d

Injection Date:	30-Oct-2018 12:12:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 30-Oct-2018 12:29:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-009
Misc. Info.: 280-0075619-009
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:17 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

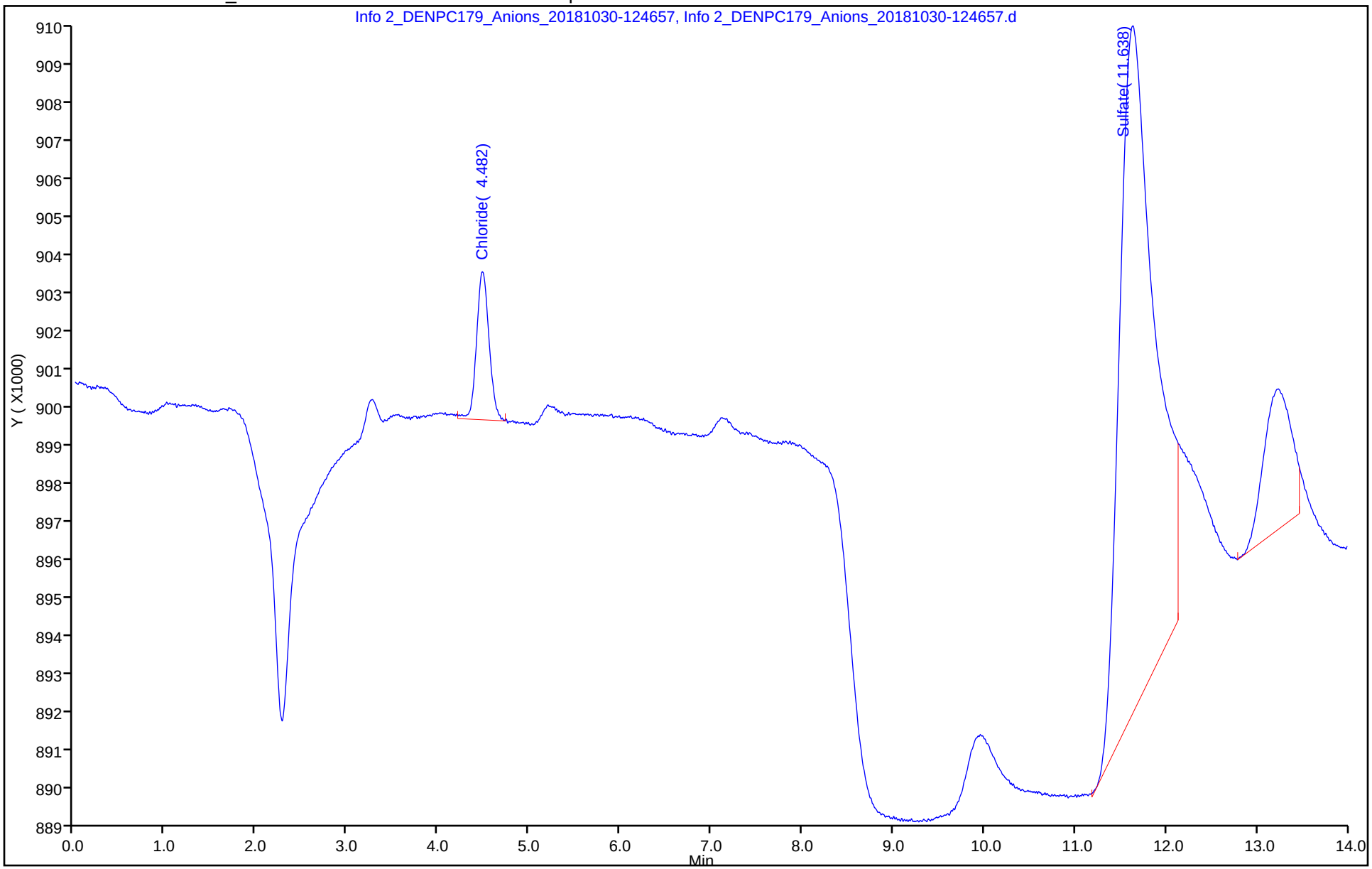
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.260				ND	
2 Chloride	4.482	4.477	0.005	36048		0.4491	
3 Nitrite as N		5.193				ND	
4 Bromide		6.287				ND	
5 Nitrate as N		7.082				ND	
6 Orthophosphate as P		9.842				ND	
7 Sulfate	11.638	11.563	0.075	464746		0.4837	

Report Date: 31-Oct-2018 12:49:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-124657.d

Injection Date:	30-Oct-2018 12:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



IC Instrument Information

WL: 75802 Inst ID: 10 Analysis Date: 11/03/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	116538	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	116544	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	116555	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	115794	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
116544	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
116555	1	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	cond.
116538	1	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
116538	4	F Cl NO2 Br NO3 PO4 SO4	5x	high
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

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IC Instrument Information

WL: 7580-2 Inst ID: IC Analysis Date: 11/03/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	116538	3	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	
=	116544	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116555	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	115794	5	F Cl NO2 Br NO3 PO4 SO4	MS/D 3	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
116544	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
116555	1	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	conc
116538	1	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
116538	4	F Cl NO2 Br NO3 PO4 SO4	5x	high
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

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TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-10
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 10:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-001
Misc. Info.: 280-0075802-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.258	-0.001	34439301	5.00	4.79	
2 Chloride	4.473	4.475	-0.002	438837451	100.0	101.6	
3 Nitrite as N	5.188	5.192	-0.004	50555239	5.00	5.03	
4 Bromide	6.280	6.282	-0.002	7121010	5.00	4.71	
5 Nitrate as N	7.072	7.075	-0.003	48723670	5.00	4.96	
6 Orthophosphate as P	9.820	9.835	-0.015	17439519	5.00	4.57	
7 Sulfate	11.568	11.552	0.016	322249116	100.0	101.8	

Reagents:

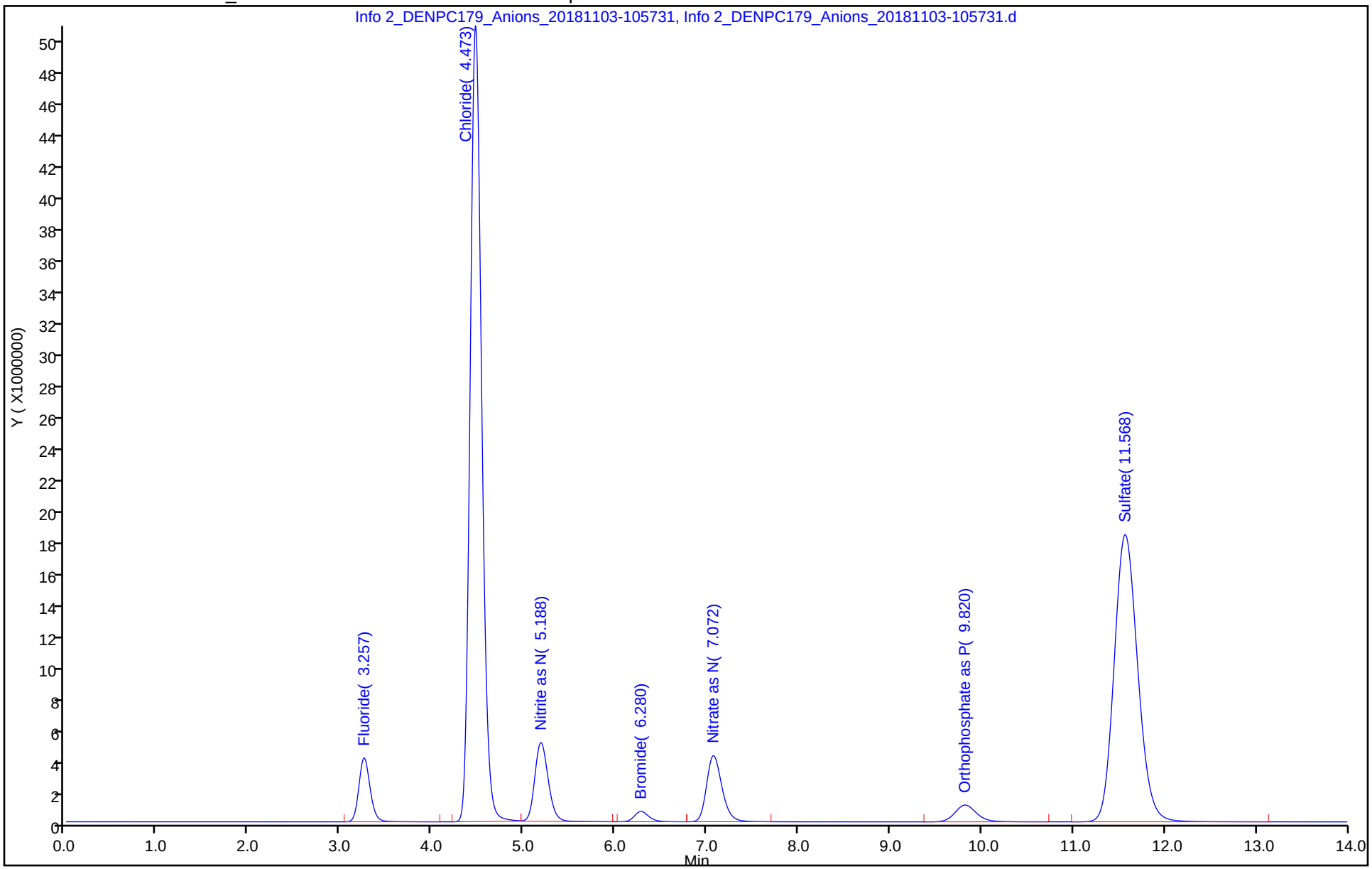
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-105731.d

Injection Date:	03-Nov-2018 10:40:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 03-Nov-2018 10:57:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-002
Misc. Info.: 280-0075802-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

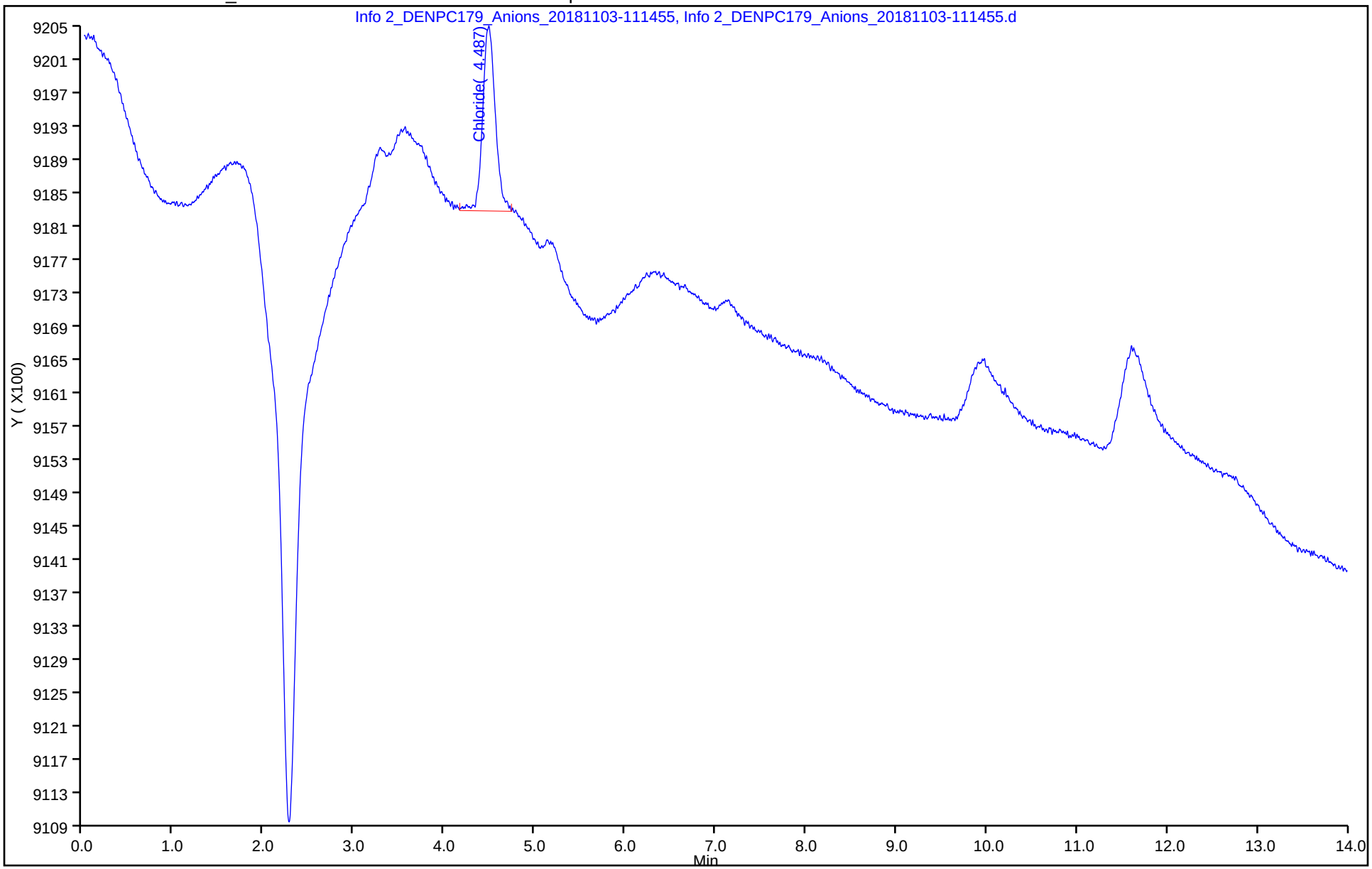
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.487	4.475	0.012	21454		0.4458	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-111455.d

Injection Date:	03-Nov-2018 10:57:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 03-Nov-2018 11:14:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-003
Misc. Info.: 280-0075802-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	991955	0.2000	0.2217	
2 Chloride	4.480	4.475	0.005	7982452	2.50	2.28	
3 Nitrite as N	5.202	5.192	0.010	1423184	0.2000	0.2337	
4 Bromide	6.300	6.282	0.018	249779	0.2000	0.2200	
5 Nitrate as N	7.117	7.075	0.042	1388392	0.2000	0.2407	
6 Orthophosphate as P	9.835	9.835	0.000	521529	0.2000	0.1383	
7 Sulfate	11.595	11.552	0.043	5233589	2.50	1.98	

Reagents:

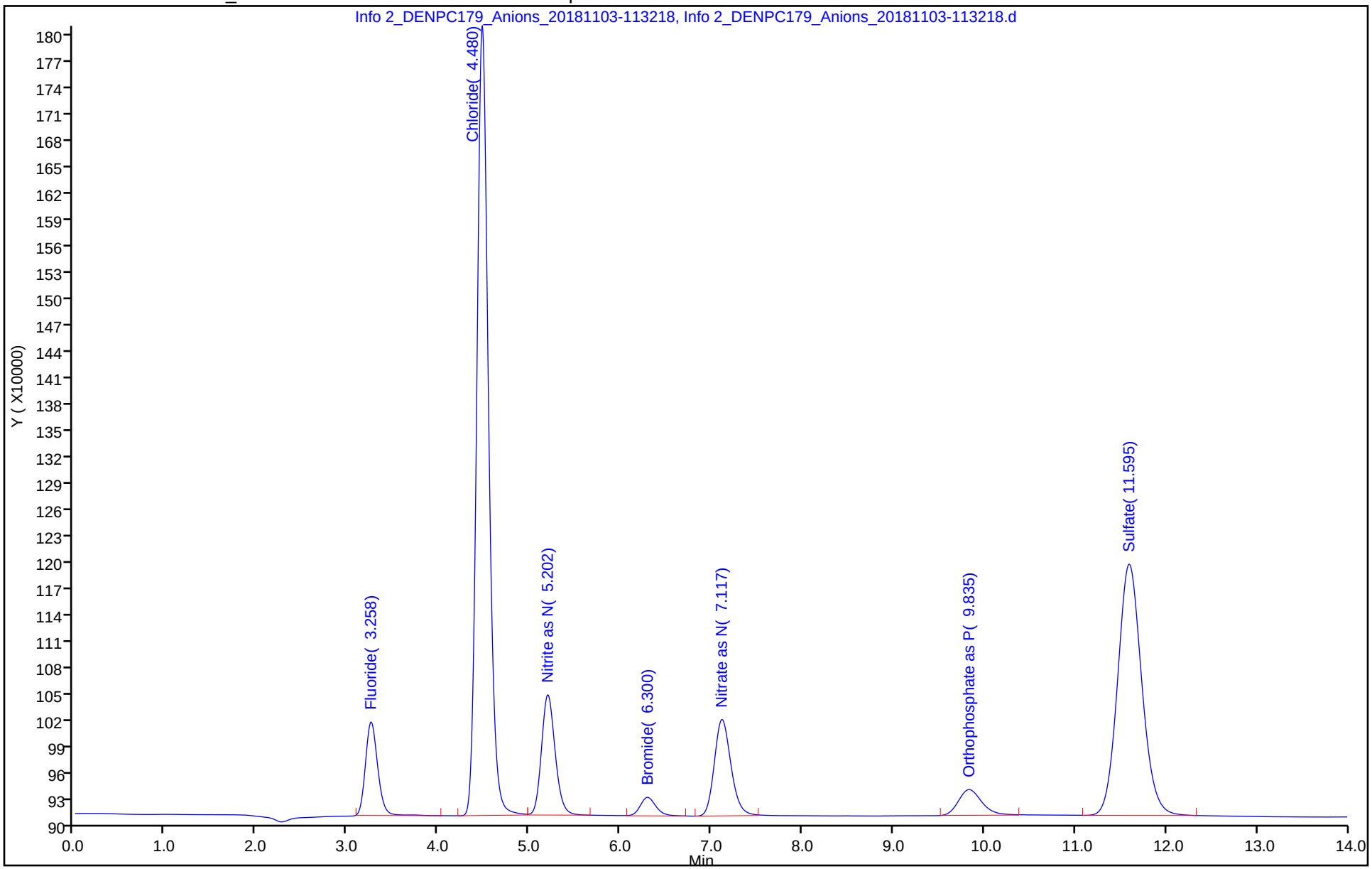
IC Cal low_00412 Amount Added: 0.04 Units: mL
IC CAL cl/so4_00228 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:36:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-113218.d

Injection Date:	03-Nov-2018 11:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Nov-2018 11:32:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-004
Misc. Info.: 280-0075802-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	34626666	5.00	4.82	
2 Chloride	4.475	4.475	0.000	439471345	100.0	101.8	
3 Nitrite as N	5.190	5.192	-0.002	50803274	5.00	5.06	
4 Bromide	6.282	6.282	0.000	7101438	5.00	4.70	
5 Nitrate as N	7.073	7.075	-0.002	48714668	5.00	4.96	
6 Orthophosphate as P	9.827	9.835	-0.008	17440761	5.00	4.57	
7 Sulfate	11.577	11.552	0.025	322780668	100.0	101.9	

Reagents:

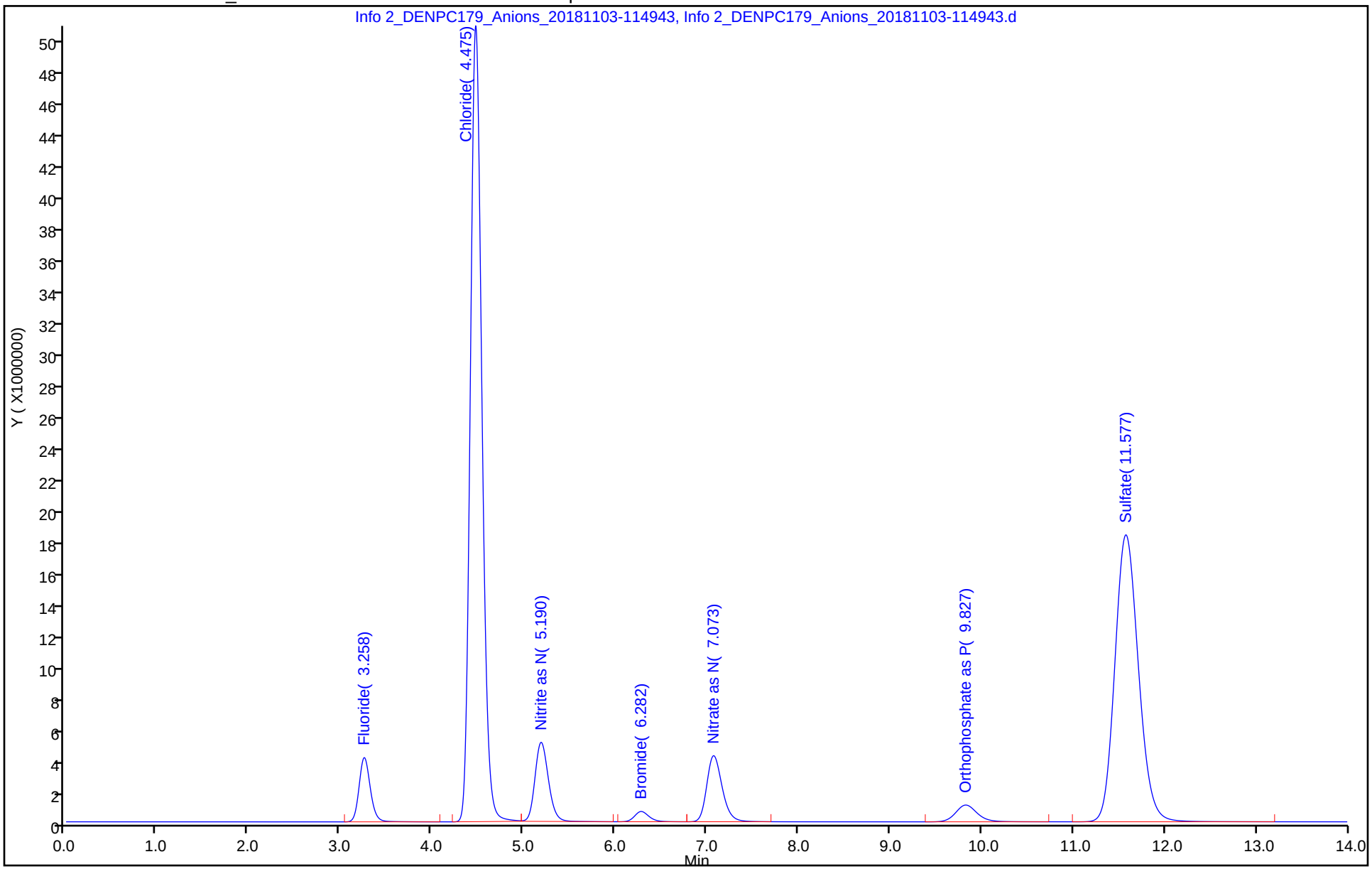
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-114943.d

Injection Date:	03-Nov-2018 11:32:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-12
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 03-Nov-2018 11:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-005
Misc. Info.: 280-0075802-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34589785	5.00	4.81	
2 Chloride	4.477	4.475	0.002	439806815	100.0	101.8	
3 Nitrite as N	5.192	5.192	0.000	51569361	5.00	5.13	
4 Bromide	6.285	6.282	0.003	7103226	5.00	4.70	
5 Nitrate as N	7.077	7.075	0.002	48812004	5.00	4.97	
6 Orthophosphate as P	9.830	9.835	-0.005	17133962	5.00	4.49	
7 Sulfate	11.578	11.552	0.026	322878264	100.0	102.0	

Reagents:

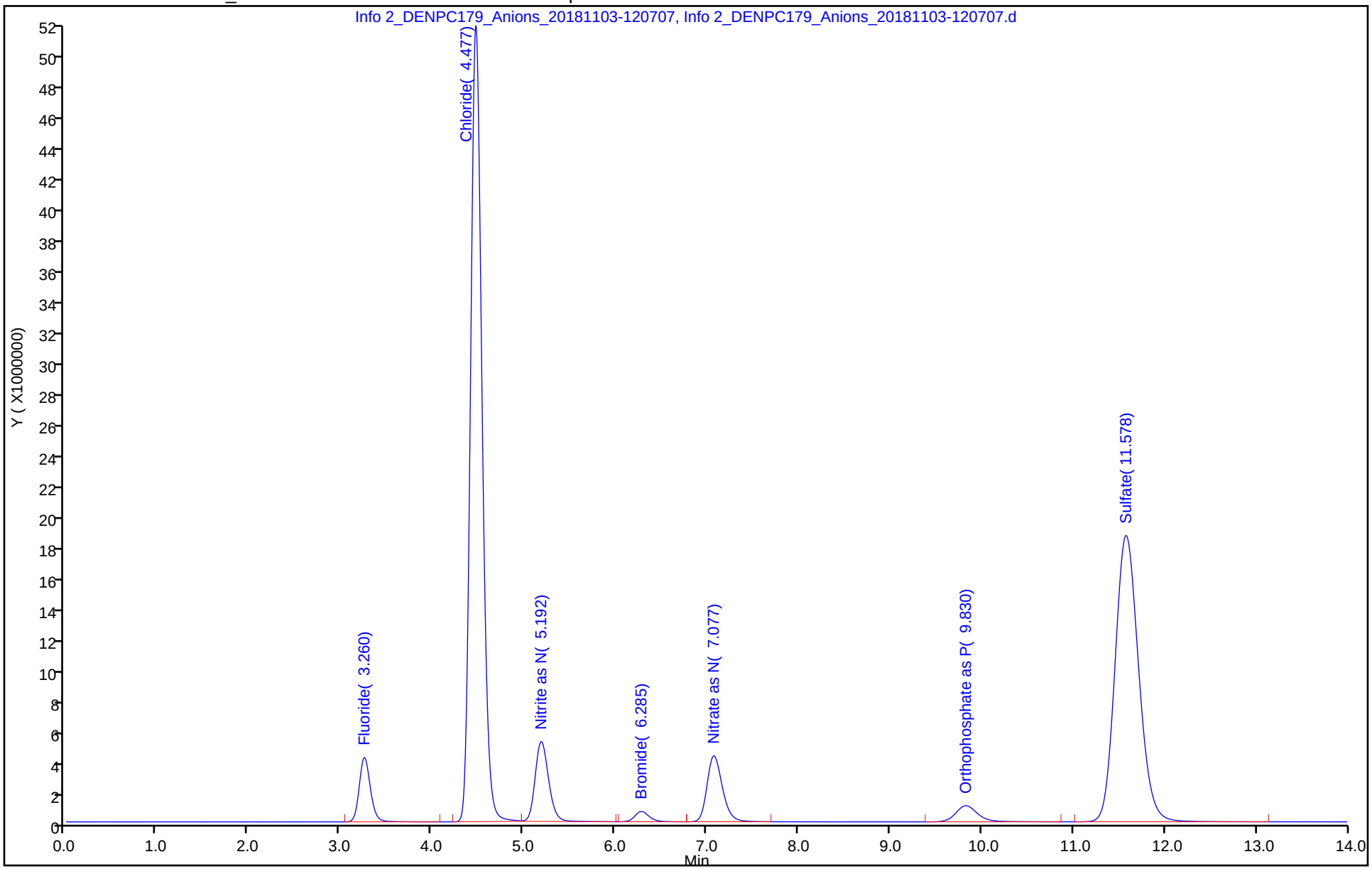
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-120707.d

Injection Date:	03-Nov-2018 11:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-12
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Nov-2018 12:07:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-006
Misc. Info.: 280-0075802-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

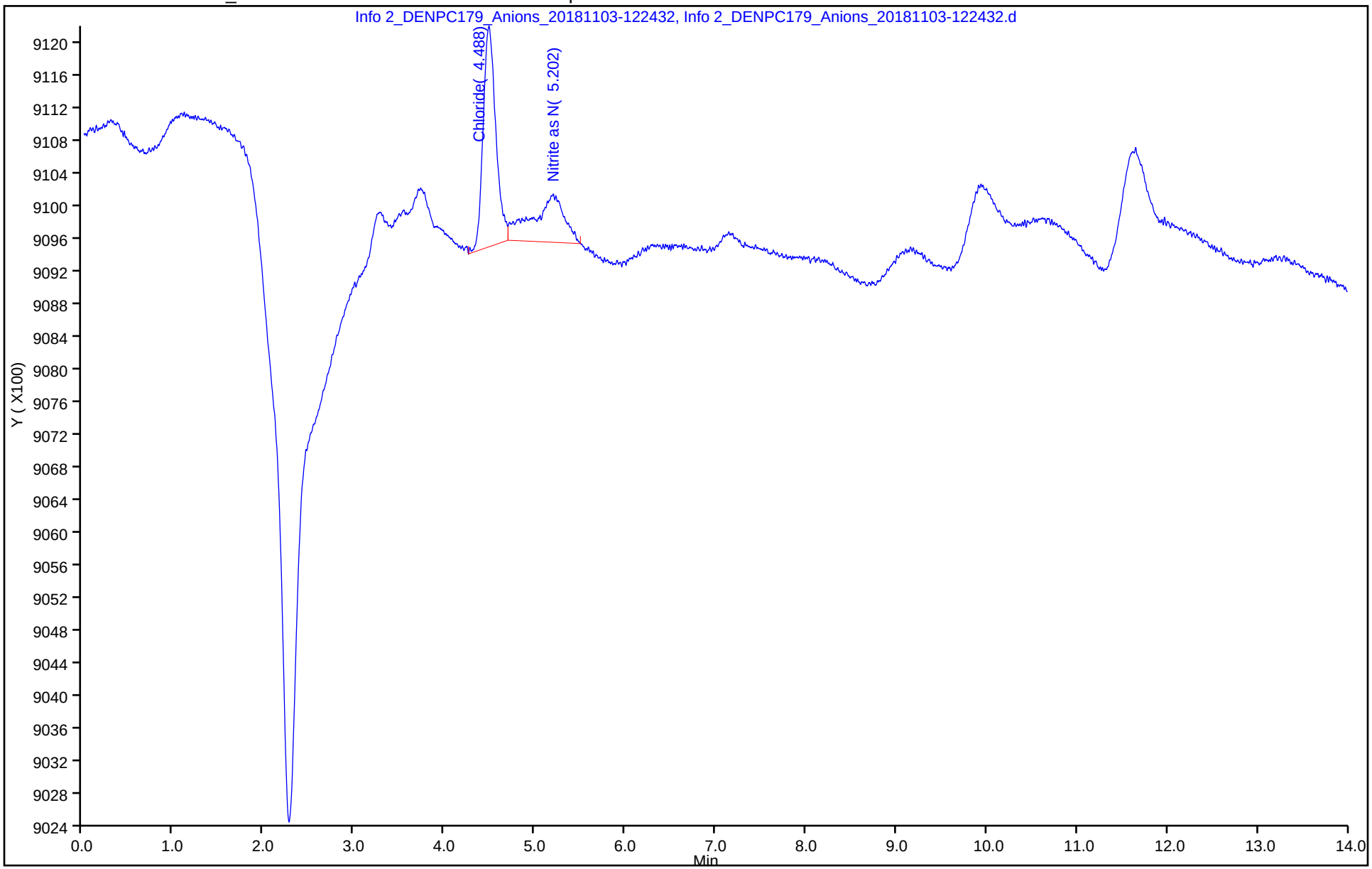
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.488	4.475	0.013	26360		0.4469	
3 Nitrite as N	5.202	5.192	0.010	14250		0.0961	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-122432.d

Injection Date:	03-Nov-2018 12:07:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-14
Lims ID: 280-116538-J-4
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 03-Nov-2018 14:16:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-012
Misc. Info.: 280-0075802-012
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

First Level Reviewer: phantl Date: 03-Nov-2018 14:52:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	1328241	0.2677	
2 Chloride	4.493	4.475	0.018	56018513	13.4	
3 Nitrite as N	5.272	5.192	0.080	4341282	0.5188	
4 Bromide	6.307	6.282	0.025	117312	0.1334	
5 Nitrate as N	7.062	7.075	-0.013	156521429	15.7	E
6 Orthophosphate as P		9.835			ND	
7 Sulfate	11.593	11.552	0.041	209975007	66.4	

QC Flag Legend

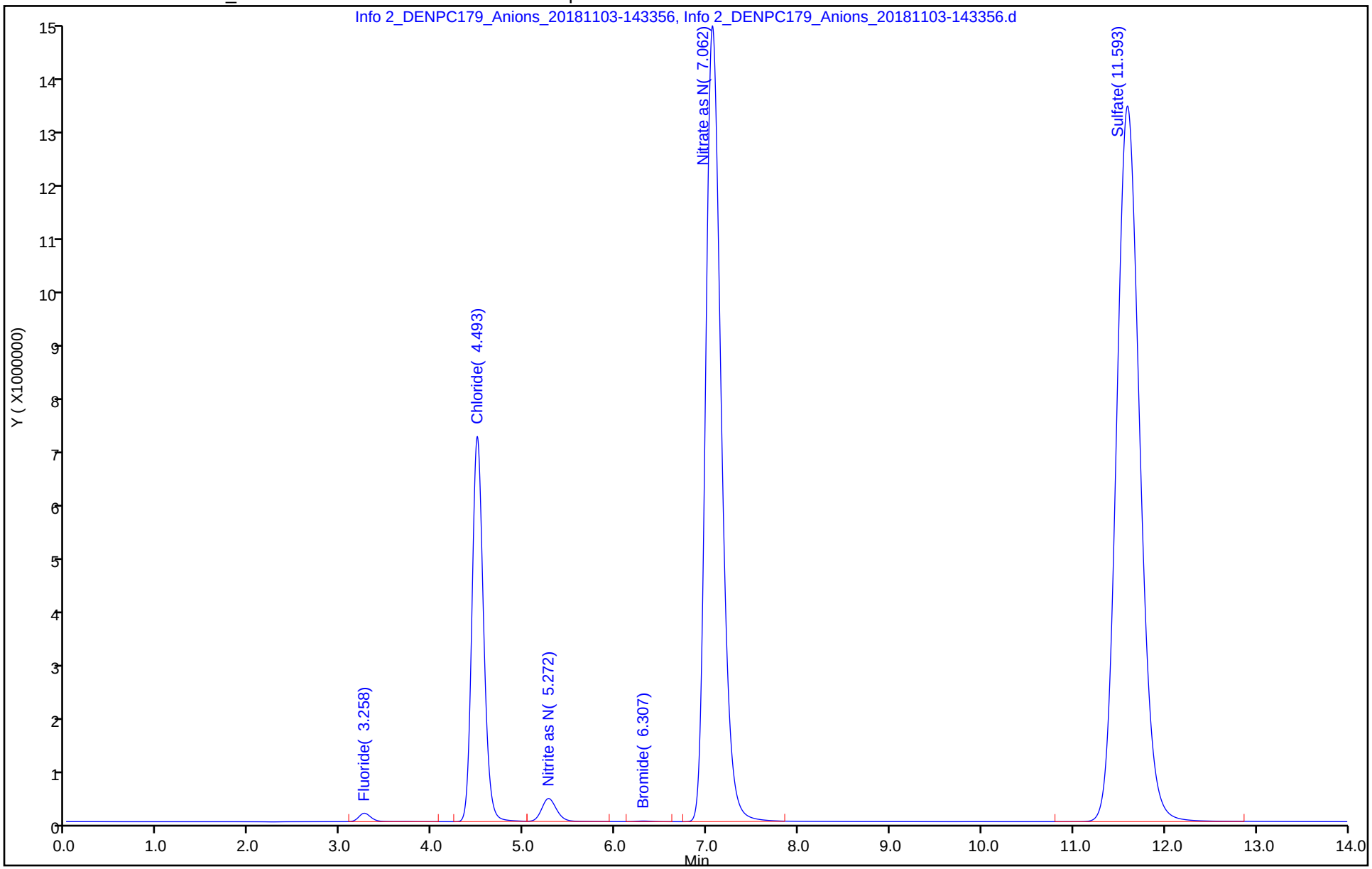
Processing Flags

E - Exceeded Maximum Amount

Report Date: 04-Nov-2018 08:36:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-143356.d				
Injection Date:	03-Nov-2018 14:16:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-J-4	Lab Sample ID:	280-116538-4	Worklist Smp#:	12
Client ID:	FWGIDW-181001-WW				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-15
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 15:26:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-016
Misc. Info.: 280-0075802-016
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	34624141	5.00	4.82	
2 Chloride	4.477	4.475	0.002	442822120	100.0	102.5	
3 Nitrite as N	5.190	5.192	-0.002	51623970	5.00	5.14	
4 Bromide	6.285	6.282	0.003	7161678	5.00	4.74	
5 Nitrate as N	7.077	7.075	0.002	49135436	5.00	5.00	
6 Orthophosphate as P	9.827	9.835	-0.008	17471912	5.00	4.58	
7 Sulfate	11.578	11.552	0.026	325200129	100.0	102.7	

Reagents:

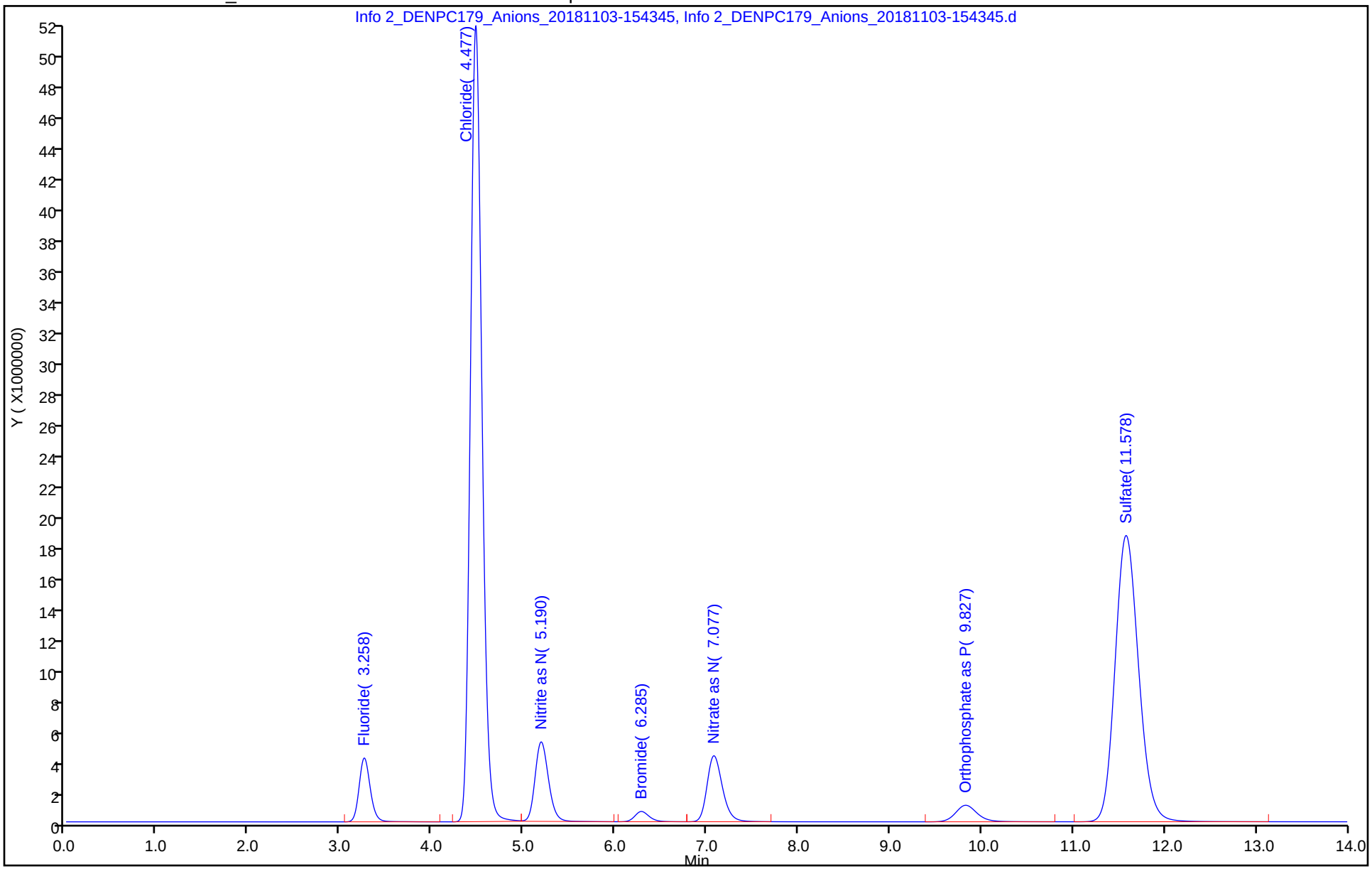
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-154345.d

Injection Date:	03-Nov-2018 15:26:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	16
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-16				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	03-Nov-2018 15:43:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-017				
Misc. Info.:	280-0075802-017				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	04-Nov-2018 08:36:53	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

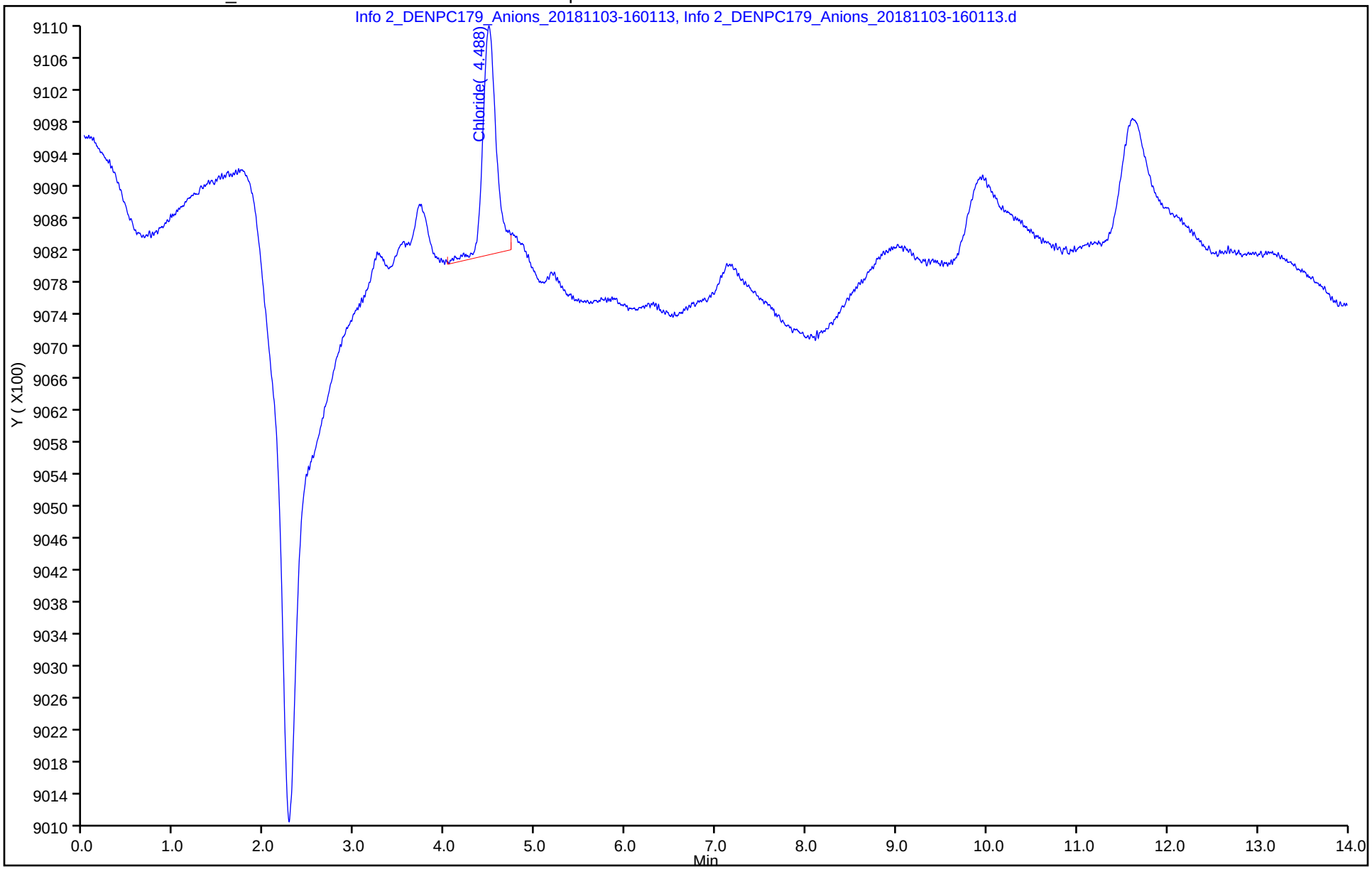
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.488	4.475	0.013	29512		0.4476	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-160113.d

Injection Date:	03-Nov-2018 15:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-16
Lims ID: 280-116538-J-4
Client ID: FWGIDW-181001-WW
Sample Type: Client
Inject. Date: 03-Nov-2018 16:36:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 5.0000
Sample Info: 280-0075802-020
Misc. Info.: 280-0075802-020
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

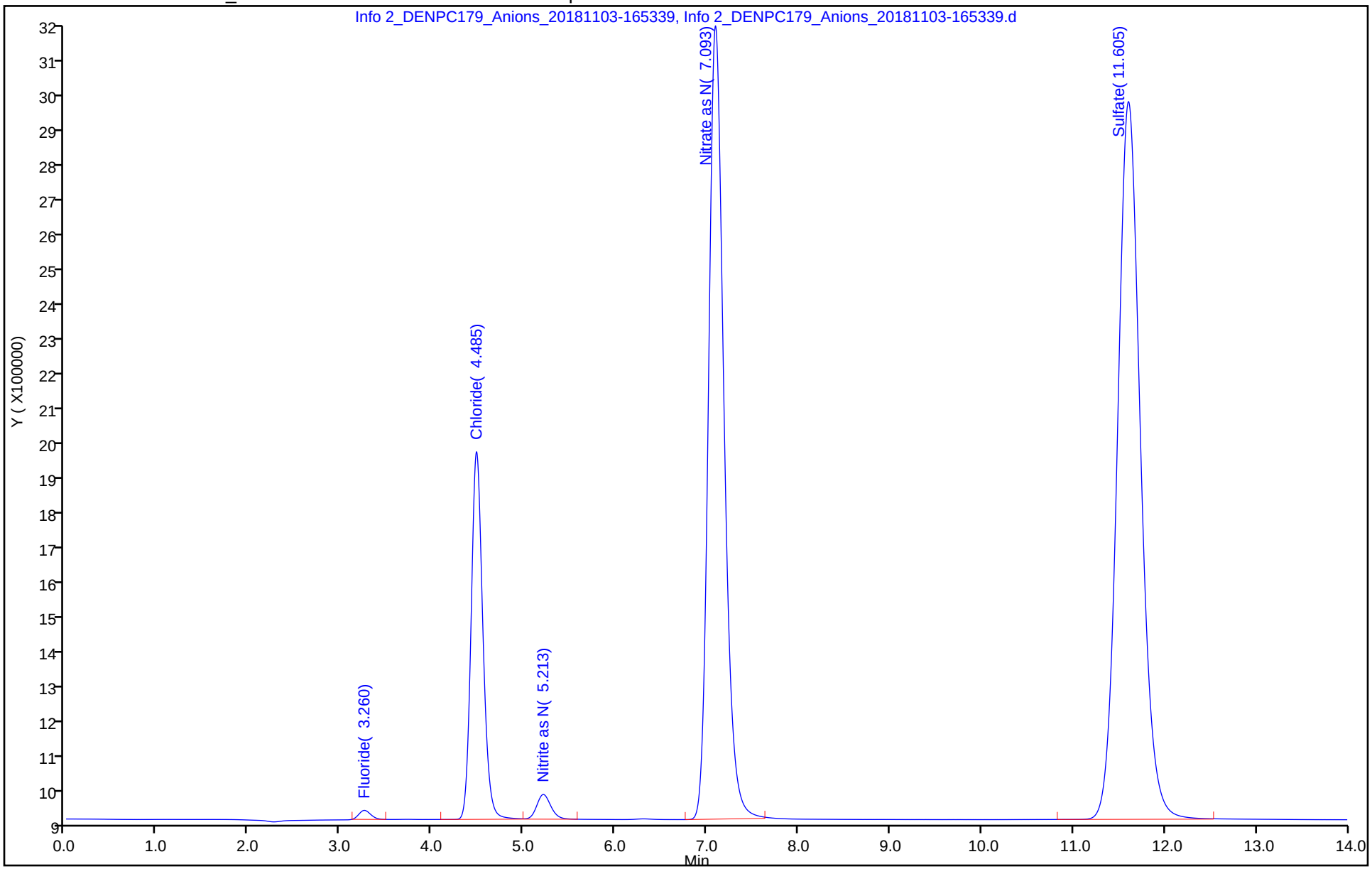
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	231063	0.1177	
2 Chloride	4.485	4.475	0.010	9433843	2.62	
3 Nitrite as N	5.213	5.192	0.021	763190	0.1692	
4 Bromide		6.282			ND	
5 Nitrate as N	7.093	7.075	0.018	26816264	2.78	
6 Orthophosphate as P		9.835			ND	
7 Sulfate	11.605	11.552	0.053	36057302	11.7	

Report Date: 04-Nov-2018 08:36:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-165339.d

Injection Date:	03-Nov-2018 16:36:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-J-4	Lab Sample ID:	280-116538-4	Worklist Smp#:	20
Client ID:	FWGIDW-181001-WW				
Injection Vol:	5.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 18:03:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-025
Misc. Info.: 280-0075802-025
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:37:02 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34568727	5.00	4.81	
2 Chloride	4.478	4.475	0.003	443189068	100.0	102.6	
3 Nitrite as N	5.193	5.192	0.001	51606042	5.00	5.14	
4 Bromide	6.288	6.282	0.006	7169133	5.00	4.75	
5 Nitrate as N	7.080	7.075	0.005	49206445	5.00	5.01	
6 Orthophosphate as P	9.832	9.835	-0.003	17492819	5.00	4.59	
7 Sulfate	11.585	11.552	0.033	325399621	100.0	102.8	

Reagents:

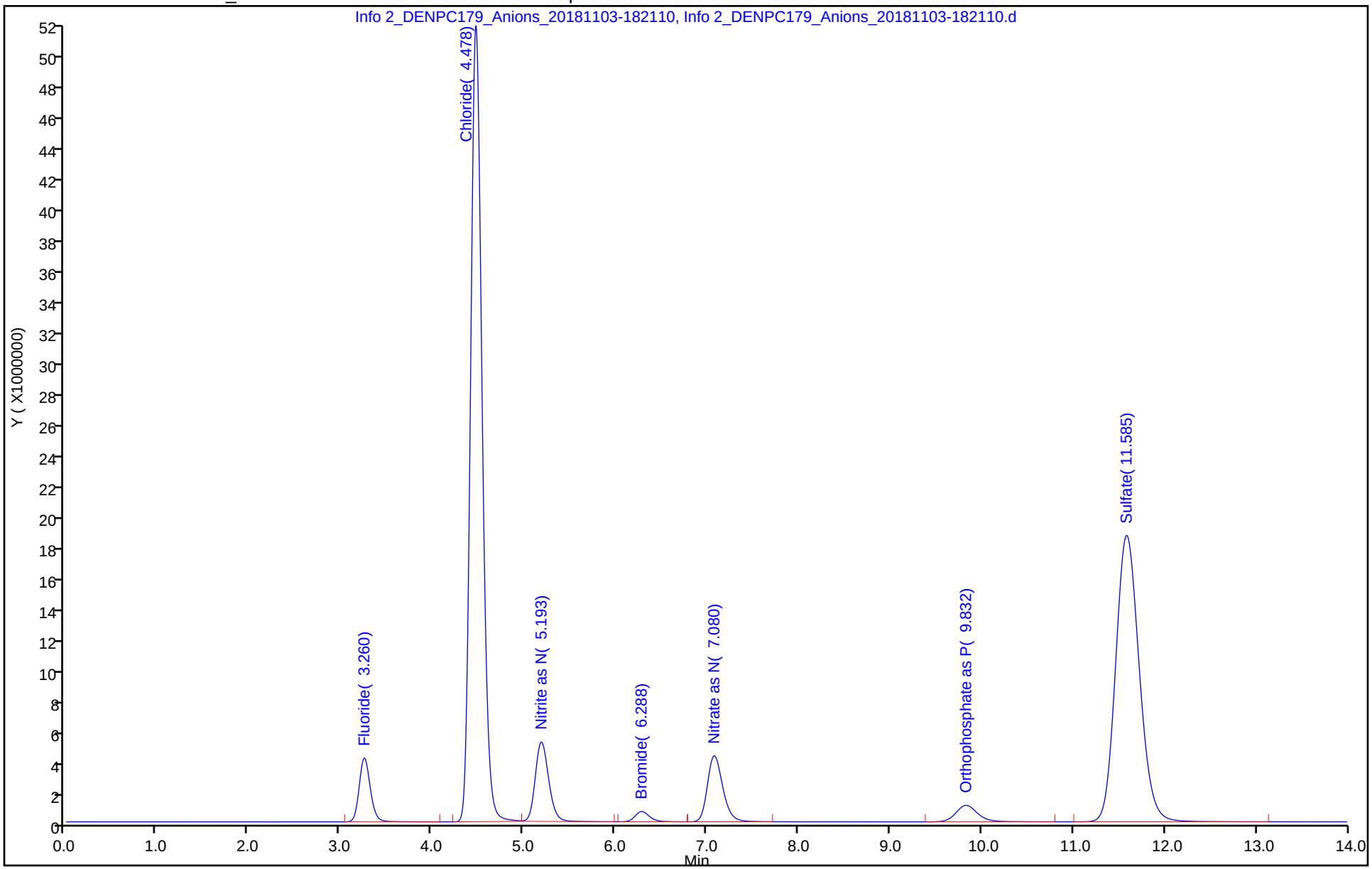
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:37:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-182110.d

Injection Date:	03-Nov-2018 18:03:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	25
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	03-Nov-2018 18:21:00	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-026				
Misc. Info.:	280-0075802-026				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	04-Nov-2018 08:37:02	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

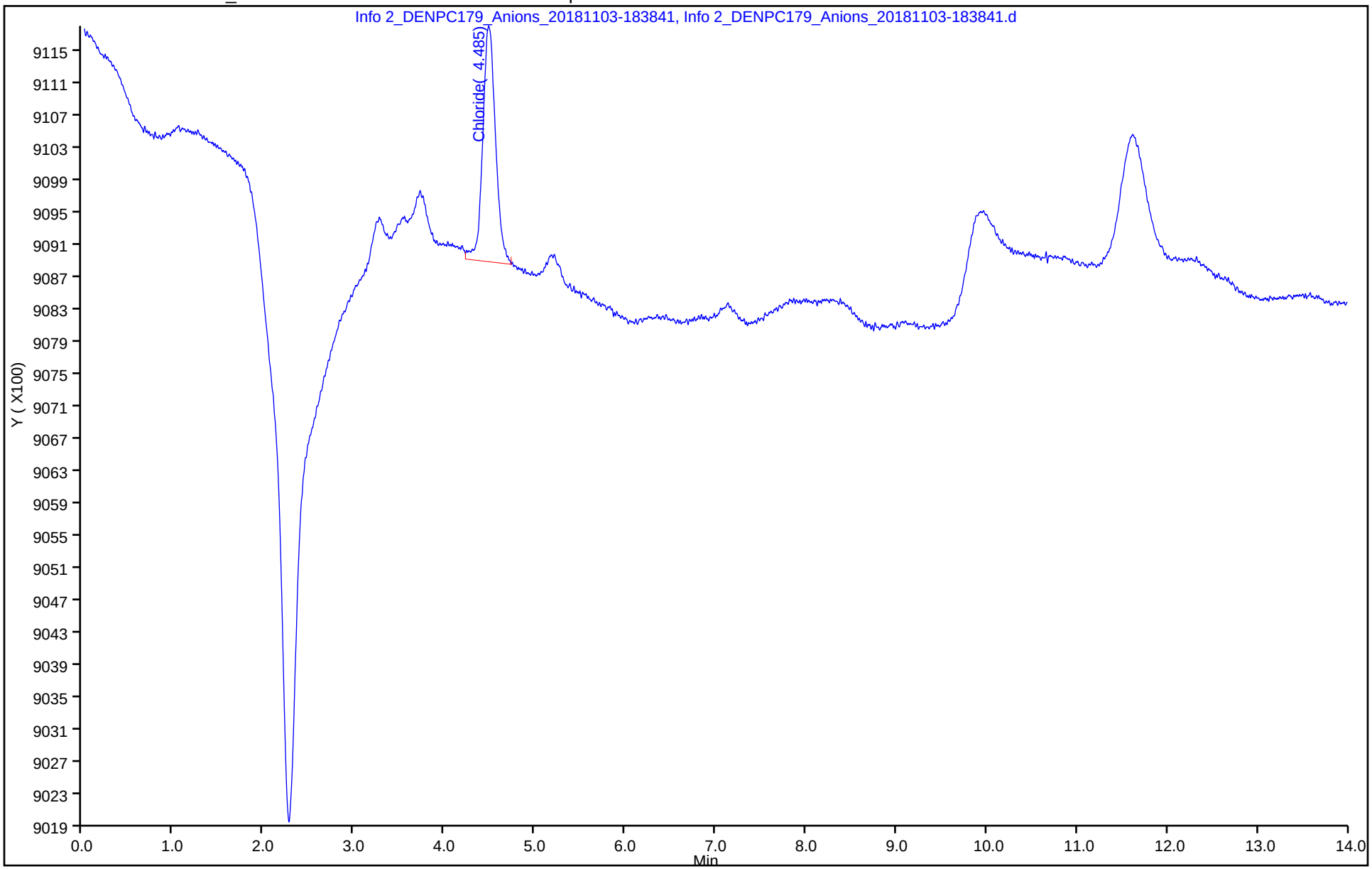
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.485	4.475	0.010	28711		0.4474	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:37:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-183841.d

Injection Date:	03-Nov-2018 18:21:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	26
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



Laboratory Bench Sheet
Flashpoint
Closed Cup: SW 1010A & ASTM D-93
Open Cup: ASTM D-92

Analyst:	**J Banner**	**BATCH #**	**401121**
Date:	**11/15/18**	**Sea Level Pressure (mbar)[1]**	**1017**
		Sea Level Pressure (mmHg)[2]	**762.82**

Sample ID	Start Temp ℃	Observed Flashpoint ℃	Ambient Barometric Pressure[3] mm Hg	Corrected Flashpoint[4] ℃	Comment
MB	22.0	>60	747.56	>60	
LCS	17.0	26.5	747.56	26.9	
160-31692-I-7	13.0	>60	747.56	>60	
160-31692-I-7 DU	13.0	>60	747.56	>60	
160-31692-A-8	9.0	>60	747.56	>60	
160-31692-A-9	9.0	>60	747.56	>60	
280-116404-H-1	13.0	>60	747.56	>60	
280-116538-E-4	8.0	>60	747.56	>60	
160-31611-A-4	9.0	55.0	747.56	55.4	PT sample
ICV	22.0	47.0	747.56	47.4	Yearly Check
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	
			0.00	0.0	

1) The barometric pressure reading is taken from Lambert-St. Louis International Airport. This data is found at http://w1.weather.gov/data/obhistory/KSTL.html
2) 1 mbar = 0.75006 mm Hg

3) The sea level to ambient barometric pressure conversion factor for St. Louis is 0.98. This is calculated using data found at http://dnr.wi.gov/regulations/labcert/BODCalibration2.html
Correction Factor = [760 - (Altitude X 0.026)] / 760
Altitude of Lambert- St. Louis International Airport = 563' (Altitude was obtained at https://viewer.nationalmap.gov/theme/elevation)
Correction Factor = [760 - (563 X 0.026)] / 760 = 0.98

4) The equation for corrected flashpoint is taken from the ASTM methods D92 and D93.
Corrected Flashpoint = C + 0.033 * (760 - P)
C = observed flash point, °C
P = ambient barometric pressure, mmHg

Subcontract Data

Shipping and Receiving Documents

leidos

Chain of Custody Record

COC No.: RVAAP-083

Page 1 of 1 Date: 11/2/2018

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426

Sampler (Signature) (Printed Name)

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-8396
Fax:
Contact:

Requested Parameters

Laboratory No.	Sample ID	Date	Time	Matrix	TCLP VOCs (1)(A)	TCLP SVOCs (2)(A), TCLP Pesticides (3)(A), TCLP Herbicides (5)(A), TCLP Metals (7)(A)	Total PCBs (12)(A) / (4)(A)	Ignitability (11)(A)	pH (10)(A) / (6)(A)	Total Sulfide (9)(A), Total Cyanide (8)(A), Nitrate, Nitrite (10)(A)	Total Cyanide (8)(D)	Total Sulfide (9)(E)	Nitrate and Nitrite (10)(A)					Temperature Blank	NO. OF CONTAINERS	
	~~FWGIDW-181001-WS~~			S	1	2	1	1	1	1									7	
	FWGIDW-181001-WW	11/2/18	1530	W	3	2	2	2	1		1	1	1						13	
	FWGqa-015-TB	11/2/18	1530	W	2														2	Trip Blank

Total Number of Containers: 20

Shipment Method: Courier

Relinquished by		Date	Time
[signature]	Test America	11/2/2018	1600
Signature			
Heather L. Adams	RC Robison		
Printed Name			
Leidos	Rick Robison		
Company			
Relinquished by: Test America	[signature]	Date: 11-03-18	Time: 0900
Signature: R Robison	Krista Dunlap		
Printed Name: Rick Robison	TADEN		
Company			

Notes:
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 1311, 8260
2. SW 1311, 8270
3. SW 1311, 8081
4. SW 3510C/8082A (W)
5. SW 1311, 8151
6. SW 9040 (W)
7. SW 1311, 6010, 7470
8. SW 9012A
9. SW 9034
10. SW 9056
11. SW 1010
12. SW 3540C/8082A (S)
13. SW 9045 (S)

S=Soil / W=Water

Notes:

Temperature Blank
Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

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Chain of Custody Record

leidos

COC No.: RVAAP-084

Page 1 of 1 Date: 11/14/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426

Sampler (Signature) Jed Thomas (Printed Name) Jed Thomas

Requested Parameters

Laboratory No.	Sample ID	Date	Time	Matrix	TCLP VOCs (1)(A)	TCLP SVOCs (2)(A), TCLP Pesticides (3)(A), TCLP Herbicides (5)(A), TCLP Metals (7)(A)	Total PCBs (12)(A) / (4)(A)	Ignitability (11)(A)	pH (13)(A) / (6)(A)	Total Sulfide (9)(A), Total Cyanide (8)(A), Nitrate, Nitrite (10)(A)	Total Cyanide (8)(D)	Total Sulfide (9)('E')	Nitrate and Nitrite (10)(A)	Temperature Blank	NO. OF CONTAINERS	
	FWGIDW-181002-WW	11/14/18	1555	W							1				1	10-day TAT

Jed Thomas 11/14/18

280-116538 Chain of Custody

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS

Total Number of Containers: 1

Shipment Method: Courier

Relinquished by		Date	Notes:
Jed Thomas	to UPS Shipping	11/15/18 1345	A. Cool, 4C; B. HCl, pH<2, Cool, 4C; C. HNO3, pH<2, Cool, 4C; D. NaOH, pH>12, Cool 4C; E. NaOH/Zn Acetate, pH>9, Cool 4C
Signature: Jed Thomas		Time: See above	1. SW 1311, 8260; 2. SW 1311, 8270; 3. SW 1311, 8081; 4. SW 3510C/8082A (W); 5. SW 1311, 8151; 6. SW 9040 (W); 7. SW 1311, 6010, 7470; 8. SW 9012A; 9. SW 9034; 10. SW 9056; 11. SW 1010; 12. SW 3540C/8082A (S); 13. SW 9045 (S)
Printed Name			Notes:
Leidos			
Company			
Relinquished by		Date	
Signature		Time	
Printed Name			
Company			

S=Soil / W=Water

Temperature Blank
Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

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TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No: 280-461228.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: donna.rydberg@testamericainc.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA		Job #: 280-116538-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/21/2018			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Leidos RFP# 001088 - Ravenna AAP-66	Project #: 28018729			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1010A	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FWGIDW-181001-WW (280-116538-4)	11/2/18	15:30 Eastern		Water			X	1	Q5.0

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Jamie Castro	11-5-18 1545	TA Den	Received by: Michael Allen	11/6/18 0900	TA-STL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 09/20/2016

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116538-2

Login Number: 116538
List Number: 1
Creator: Dunlap, Krista M

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116538-2

Login Number: 116538
List Number: 4
Creator: Paul, Amanda E

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116538-2

Login Number: 116538
List Number: 2
Creator: Hellm, Michael

List Source: TestAmerica St. Louis
List Creation: 11/06/18 03:12 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	