ANALYTICAL REPORT

Job Number: 280-115789-1

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 5:09 PM

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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/MS Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.
H	Sample was prepped or analyzed beyond the specified holding time
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

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: 280-115789-1

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.

RECEIPT
The samples were received on 10/19/2018 at 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.5º C, 1.4º C and 1.6º C.

The lab logged in the wrong method for samples FWGER-181001-ER (280-115789-3) and FWGFB-181001-FB (280-115789-4). Instead of logging in method 8330 Explosives as requested on the COC they logged in method 8270D. The client was notified and directed the laboratory to get DI water from the TA North Canton laboratory for the FB sample and to cancel the 8330 for the ER sample as they can not recollect that sample. The DI water from the TestAmerica North Canton laboratory arrived at the Denver laboratory on 11/15/18.

As far as the 8270 samples that were logged and not requested the client requested that only the nitroaromatics be reported. The lab will not charge for these two tests as this was a lab error.

SEMIVOLATILE ORGANIC COMPOUNDS
Samples RQLMW-011-181001-GW (280-115789-1), RQLMW-011-181002-GW (280-115789-2), FWGER-181001-ER (280-115789-3) and FWGFB-181001-FB (280-115789-4) were analyzed for Semivolatile organic compounds in accordance with SW-846 8270D. The samples were prepared on 10/24/2018 and 10/25/2018 and analyzed on 10/29/2018 and 10/31/2018.

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

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)
Samples RQLMW-011-181001-GW (280-115789-1), RQLMW-011-181002-GW (280-115789-2), FWGER-181001-ER (280-115789-3) and FWGFB-181001-FB (280-115789-4) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 10/23/2018 and analyzed on 10/30/2018.

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

NITROAROMATICS AND NITRAMINES (HPLC)
Sample FWGFB-181001-FB (280-115789-4) was analyzed for Nitroaromatics and Nitramines (HPLC) in accordance with 8330B. The samples were prepared on 11/20/2018 and analyzed on 11/26/2018.

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

ALKALINITY
Samples RQLMW-011-181001-GW (280-115789-1) and RQLMW-011-181002-GW (280-115789-2) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 10/24/2018.

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

HEXAVALENT CHROMIUM
Samples RQLMW-011-181001-GW (280-115789-1) and RQLMW-011-181002-GW (280-115789-2) were analyzed for hexavalent chromium in accordance with 7196A. The samples were analyzed on 10/19/2018.

The Hexavalent chromium samples were shipped to the TestAmerica Denver laboratory instead of being kept at the TestAmerica North Canton laboratory for analysis. As such there was insufficient time remaining to perform the analysis within holding time for the following samples: RQLMW-011-181001-GW (280-115789-1), RQLMW-011-181002-GW (280-115789-2), (280-115789-G-1 DU),

(280-115789-G-1 MS) and (280-115789-G-1 MSD). Data was reported and flagged.

The spike recoveries for Hexavalent Chromium in the MS and MSD batch 280-434170 were outside control limits. This MS/MSD batch was performed on sample RQLMW-011-181001-GW (280-115789-1). The associated LCS and LCSD samples were in control and provide evidence that operating procedures were in control.

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

SULFIDE

Samples RQLMW-011-181001-GW (280-115789-1) and RQLMW-011-181002-GW (280-115789-2) were analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 10/23/2018.

Sulfide failed the recovery criteria low for the MS performed on sample RQLMW-011-181001-GW (280-115789-1) in batch 280-434649. Sulfide exceeded the RPD in this batch. The associated LCS was in control and provides evidence that operating procedures were in control.

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

ANIONS, ION CHROMATOGRAPHY

Samples RQLMW-011-181001-GW (280-115789-1) and RQLMW-011-181002-GW (280-115789-2) were analyzed for Anions, Ion Chromatography in accordance with 9056A. The samples were analyzed on 10/19/2018.

Orthophosphate was outside the recovery criteria low in the MS and MSD performed on sample RQLMW-011-181001-GW (280-115789-1) in batch 280-434136. The associated LCS and LCSD samples were in control and provide evidence that operating procedures were in control.

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

ANIONS (28 DAYS)

Samples RQLMW-011-181001-GW (280-115789-1) and RQLMW-011-181002-GW (280-115789-2) were analyzed for anions (28 days) in accordance with 9056A. The samples were analyzed on 10/19/2018 and 10/22/2018.

Sulfate was detected in method blank MB 280-434308/6 at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

Sulfate failed the recovery criteria high for the MS and MSD performed on sample RQLMW-011-181001-GW (280-115789-1) in batch 280-434308. The associated LCS and LCSD samples were in control and provide evidence that operating procedures were in control.

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: 280-115789-1

Client Sample ID: RQLMW-011-181001-GW — Lab Sample ID: 280-115789-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	100	J1	5.0	0.50	0.23	mg/L	1		9056A	Total/NA
Alkalinity	120		5.0	5.0	1.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: RQLMW-011-181002-GW — Lab Sample ID: 280-115789-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.0090	J	0.10	0.013	0.0072	ug/L	1		8270D SIM	Total/NA
Nitrate as N	0.049	J	0.50	0.10	0.042	mg/L	1		9056	Total/NA
Sulfate	96		5.0	0.50	0.23	mg/L	1		9056A	Total/NA
Alkalinity	120		5.0	5.0	1.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: FWGER-181001-ER — Lab Sample ID: 280-115789-3

No Detections.

Client Sample ID: FWGFB-181001-FB — Lab Sample ID: 280-115789-4

No Detections.

Client Sample ID: FWGFB-181001-FB — Lab Sample ID: 280-115789-5

No Detections.

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: RQLMW-011-181001-GW **Lab Sample ID: 280-115789-1**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.014	U	0.11	0.014	0.0067	ug/L		10/30/18 02:05	1
2-Methylnaphthalene	0.014	U	0.11	0.014	0.0068	ug/L		10/30/18 02:05	1
Acenaphthene	0.045	U M	0.11	0.045	0.0047	ug/L		10/30/18 02:05	1
Acenaphthylene	0.045	U	0.11	0.045	0.0058	ug/L		10/30/18 02:05	1
Anthracene	0.045	U	0.11	0.045	0.0063	ug/L		10/30/18 02:05	1
Benzo[a]anthracene	0.014	U	0.11	0.014	0.0047	ug/L		10/30/18 02:05	1
Benzo[a]pyrene	0.014	U M	0.11	0.014	0.0078	ug/L		10/30/18 02:05	1
Benzo[b]fluoranthene	0.014	U	0.11	0.014	0.0035	ug/L		10/30/18 02:05	1
Benzo[g,h,i]perylene	0.014	U	0.11	0.014	0.0070	ug/L		10/30/18 02:05	1
Benzo[k]fluoranthene	0.014	U	0.11	0.014	0.0071	ug/L		10/30/18 02:05	1
Chrysene	0.014	U	0.11	0.014	0.0037	ug/L		10/30/18 02:05	1
Dibenz(a,h)anthracene	0.014	U	0.11	0.014	0.0046	ug/L		10/30/18 02:05	1
Fluoranthene	0.014	U	0.11	0.014	0.0054	ug/L		10/30/18 02:05	1
Fluorene	0.045	U M	0.11	0.045	0.0062	ug/L		10/30/18 02:05	1
Indeno[1,2,3-cd]pyrene	0.045	U	0.11	0.045	0.0051	ug/L		10/30/18 02:05	1
Naphthalene	0.014	U	0.11	0.014	0.0090	ug/L		10/30/18 02:05	1
Phenanthrene	0.023	U	0.11	0.023	0.011	ug/L		10/30/18 02:05	1
Pyrene	0.023	U	0.11	0.023	0.0069	ug/L		10/30/18 02:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*53 - 106*	*10/23/18 16:35*	*10/30/18 02:05*	*1*
Nitrobenzene-d5	*65*		*55 - 111*	*10/23/18 16:35*	*10/30/18 02:05*	*1*
Terphenyl-d14	*81*		*58 - 132*	*10/23/18 16:35*	*10/30/18 02:05*	*1*

Client Sample ID: RQLMW-011-181002-GW **Lab Sample ID: 280-115789-2**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.013	U	0.10	0.013	0.0062	ug/L		10/30/18 03:33	1
2-Methylnaphthalene	0.013	U	0.10	0.013	0.0063	ug/L		10/30/18 03:33	1
Acenaphthene	0.042	U	0.10	0.042	0.0044	ug/L		10/30/18 03:33	1
Acenaphthylene	0.042	U	0.10	0.042	0.0053	ug/L		10/30/18 03:33	1
Anthracene	0.042	U	0.10	0.042	0.0059	ug/L		10/30/18 03:33	1
Benzo[a]anthracene	0.013	U	0.10	0.013	0.0044	ug/L		10/30/18 03:33	1
Benzo[a]pyrene	**0.0090**	**J**	0.10	0.013	0.0072	ug/L		10/30/18 03:33	1
Benzo[b]fluoranthene	0.013	U	0.10	0.013	0.0032	ug/L		10/30/18 03:33	1
Benzo[g,h,i]perylene	0.013	U	0.10	0.013	0.0065	ug/L		10/30/18 03:33	1
Benzo[k]fluoranthene	0.013	U	0.10	0.013	0.0066	ug/L		10/30/18 03:33	1
Chrysene	0.013	U	0.10	0.013	0.0035	ug/L		10/30/18 03:33	1
Dibenz(a,h)anthracene	0.013	U	0.10	0.013	0.0043	ug/L		10/30/18 03:33	1
Fluoranthene	0.013	U	0.10	0.013	0.0050	ug/L		10/30/18 03:33	1
Fluorene	0.042	U	0.10	0.042	0.0058	ug/L		10/30/18 03:33	1
Indeno[1,2,3-cd]pyrene	0.042	U	0.10	0.042	0.0047	ug/L		10/30/18 03:33	1
Naphthalene	0.013	U	0.10	0.013	0.0084	ug/L		10/30/18 03:33	1
Phenanthrene	0.021	U	0.10	0.021	0.0097	ug/L		10/30/18 03:33	1
Pyrene	0.021	U	0.10	0.021	0.0064	ug/L		10/30/18 03:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*53 - 106*	*10/23/18 16:35*	*10/30/18 03:33*	*1*
Nitrobenzene-d5	*59*		*55 - 111*	*10/23/18 16:35*	*10/30/18 03:33*	*1*

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

Client Sample ID: RQLMW-011-181002-GW **Lab Sample ID: 280-115789-2**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*78*		*58 - 132*	*10/23/18 16:35*	*10/30/18 03:33*	*1*

Client Sample ID: FWGER-181001-ER **Lab Sample ID: 280-115789-3**
Date Collected: 10/18/18 07:30 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Naphthalene	0.013	U	0.11	0.013	0.0085	ug/L		10/30/18 04:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*53 - 106*	*10/23/18 16:35*	*10/30/18 04:02*	*1*
Nitrobenzene-d5	*63*		*55 - 111*	*10/23/18 16:35*	*10/30/18 04:02*	*1*
Terphenyl-d14	*80*		*58 - 132*	*10/23/18 16:35*	*10/30/18 04:02*	*1*

Client Sample ID: FWGFB-181001-FB **Lab Sample ID: 280-115789-4**
Date Collected: 10/18/18 07:20 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Naphthalene	0.012	U	0.097	0.012	0.0078	ug/L		10/30/18 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*53 - 106*	*10/23/18 16:35*	*10/30/18 04:32*	*1*
Nitrobenzene-d5	*58*		*55 - 111*	*10/23/18 16:35*	*10/30/18 04:32*	*1*
Terphenyl-d14	*84*		*58 - 132*	*10/23/18 16:35*	*10/30/18 04:32*	*1*

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

Client Sample ID: RQLMW-011-181001-GW **Lab Sample ID: 280-115789-1**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.29	ug/L		10/31/18 21:10	1
1,2-Dichlorobenzene	0.53	U	11	0.53	0.24	ug/L		10/31/18 21:10	1
1,3-Dichlorobenzene	1.1	U	11	1.1	0.32	ug/L		10/31/18 21:10	1
1,4-Dichlorobenzene	1.1	U	11	1.1	0.34	ug/L		10/31/18 21:10	1
1,4-Dioxane	4.6	U	19	4.6	1.8	ug/L		10/31/18 21:10	1
2,4,5-Trichlorophenol	1.1	U	21	1.1	0.47	ug/L		10/31/18 21:10	1
2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31	ug/L		10/31/18 21:10	1
2,4-Dichlorophenol	2.1	U	11	2.1	0.67	ug/L		10/31/18 21:10	1
2,4-Dimethylphenol	2.1	U	11	2.1	0.61	ug/L		10/31/18 21:10	1
2,4-Dinitrophenol	32	U	84	32	11	ug/L		10/31/18 21:10	1
2,4-Dinitrotoluene	4.6	U	21	4.6	1.7	ug/L		10/31/18 21:10	1
2,6-Dinitrotoluene	4.6	U	21	4.6	2.0	ug/L		10/31/18 21:10	1
2-Chloronaphthalene	1.1	U	11	1.1	0.27	ug/L		10/31/18 21:10	1
2-Chlorophenol	4.6	U	11	4.6	2.1	ug/L		10/31/18 21:10	1
2-Methylphenol	2.1	U	11	2.1	1.0	ug/L		10/31/18 21:10	1
2-Nitroaniline	4.6	U	53	4.6	1.8	ug/L		10/31/18 21:10	1
2-Nitrophenol	1.1	U	21	1.1	0.41	ug/L		10/31/18 21:10	1
3 & 4 Methylphenol	0.53	U	21	0.53	0.26	ug/L		10/31/18 21:10	1
3,3'-Dichlorobenzidine	4.6	U	53	4.6	2.1	ug/L		10/31/18 21:10	1
3-Nitroaniline	4.6	U	53	4.6	2.1	ug/L		10/31/18 21:10	1

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

Client Sample ID: RQLMW-011-181001-GW **Lab Sample ID: 280-115789-1**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	9.3	U	84	9.3	4.2	ug/L		10/31/18 21:10	1
4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.45	ug/L		10/31/18 21:10	1
4-Chloro-3-methylphenol	5.3	U	21	5.3	2.5	ug/L		10/31/18 21:10	1
4-Chloroaniline	4.6	U	26	4.6	2.3	ug/L		10/31/18 21:10	1
4-Chlorophenyl phenyl ether	4.6	U	11	4.6	1.7	ug/L		10/31/18 21:10	1
4-Nitroaniline	4.6	U	53	4.6	2.1	ug/L		10/31/18 21:10	1
4-Nitrophenol	4.2	U	53	4.2	1.3	ug/L		10/31/18 21:10	1
Benzoic acid	32	U	84	32	11	ug/L		10/31/18 21:10	1
Benzyl alcohol	0.53	U	26	0.53	0.24	ug/L		10/31/18 21:10	1
bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.29	ug/L		10/31/18 21:10	1
Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0	ug/L		10/31/18 21:10	1
Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.43	ug/L		10/31/18 21:10	1
Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.59	ug/L		10/31/18 21:10	1
Butyl benzyl phthalate	2.1	U	21	2.1	1.1	ug/L		10/31/18 21:10	1
Carbazole	1.1	U	11	1.1	0.45	ug/L		10/31/18 21:10	1
Dibenzofuran	1.1	U	11	1.1	0.31	ug/L		10/31/18 21:10	1
Diethyl phthalate	1.1	U	21	1.1	0.40	ug/L		10/31/18 21:10	1
Dimethyl phthalate	0.53	U	21	0.53	0.22	ug/L		10/31/18 21:10	1
Di-n-butyl phthalate	4.6	U	21	4.6	1.2	ug/L		10/31/18 21:10	1
Di-n-octyl phthalate	1.1	U	21	1.1	0.37	ug/L		10/31/18 21:10	1
Hexachlorobenzene	2.1	U	11	2.1	0.69	ug/L		10/31/18 21:10	1
Hexachlorobutadiene	11	U	32	11	3.5	ug/L		10/31/18 21:10	1
Hexachlorocyclopentadiene	32	U	53	32	11	ug/L		10/31/18 21:10	1
Hexachloroethane	4.6	U	11	4.6	2.2	ug/L		10/31/18 21:10	1
Isophorone	0.53	U	11	0.53	0.22	ug/L		10/31/18 21:10	1
Nitrobenzene	2.1	U	21	2.1	0.85	ug/L		10/31/18 21:10	1
N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37	ug/L		10/31/18 21:10	1
N-Nitrosodiphenylamine	1.1	U	11	1.1	0.46	ug/L		10/31/18 21:10	1
Pentachlorophenol	63	U	84	63	21	ug/L		10/31/18 21:10	1
Phenol	4.6	U	11	4.6	2.1	ug/L		10/31/18 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*43 - 140*	*10/24/18 13:18*	*10/31/18 21:10*	*1*
2-Fluorobiphenyl	*88*		*44 - 119*	*10/24/18 13:18*	*10/31/18 21:10*	*1*
2-Fluorophenol (Surr)	*90*		*19 - 119*	*10/24/18 13:18*	*10/31/18 21:10*	*1*
Nitrobenzene-d5 (Surr)	*88*		*44 - 120*	*10/24/18 13:18*	*10/31/18 21:10*	*1*
Phenol-d5 (Surr)	*93*		*10 - 115*	*10/24/18 13:18*	*10/31/18 21:10*	*1*
Terphenyl-d14 (Surr)	*101*		*50 - 134*	*10/24/18 13:18*	*10/31/18 21:10*	*1*

Client Sample ID: RQLMW-011-181002-GW **Lab Sample ID: 280-115789-2**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.30	ug/L		10/31/18 22:36	1
1,2-Dichlorobenzene	0.53	U	11	0.53	0.24	ug/L		10/31/18 22:36	1
1,3-Dichlorobenzene	1.1	U	11	1.1	0.32	ug/L		10/31/18 22:36	1
1,4-Dichlorobenzene	1.1	U	11	1.1	0.34	ug/L		10/31/18 22:36	1
1,4-Dioxane	4.7	U	19	4.7	1.8	ug/L		10/31/18 22:36	1
2,4,5-Trichlorophenol	1.1	U	21	1.1	0.48	ug/L		10/31/18 22:36	1
2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31	ug/L		10/31/18 22:36	1

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

Client Sample ID: RQLMW-011-181002-GW **Lab Sample ID: 280-115789-2**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,4-Dichlorophenol	2.1	U	11	2.1	0.68	ug/L		10/31/18 22:36	1
2,4-Dimethylphenol	2.1	U	11	2.1	0.62	ug/L		10/31/18 22:36	1
2,4-Dinitrophenol	32	U	85	32	11	ug/L		10/31/18 22:36	1
2,4-Dinitrotoluene	4.7	U	21	4.7	1.8	ug/L		10/31/18 22:36	1
2,6-Dinitrotoluene	4.7	U	21	4.7	2.0	ug/L		10/31/18 22:36	1
2-Chloronaphthalene	1.1	U	11	1.1	0.28	ug/L		10/31/18 22:36	1
2-Chlorophenol	4.7	U	11	4.7	2.1	ug/L		10/31/18 22:36	1
2-Methylphenol	2.1	U	11	2.1	1.0	ug/L		10/31/18 22:36	1
2-Nitroaniline	4.7	U	53	4.7	1.8	ug/L		10/31/18 22:36	1
2-Nitrophenol	1.1	U	21	1.1	0.41	ug/L		10/31/18 22:36	1
3 & 4 Methylphenol	0.53	U	21	0.53	0.27	ug/L		10/31/18 22:36	1
3,3'-Dichlorobenzidine	4.7	U	53	4.7	2.1	ug/L		10/31/18 22:36	1
3-Nitroaniline	4.7	U	53	4.7	2.1	ug/L		10/31/18 22:36	1
4,6-Dinitro-2-methylphenol	9.3	U	85	9.3	4.2	ug/L		10/31/18 22:36	1
4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.46	ug/L		10/31/18 22:36	1
4-Chloro-3-methylphenol	5.3	U	21	5.3	2.6	ug/L		10/31/18 22:36	1
4-Chloroaniline	4.7	U	27	4.7	2.3	ug/L		10/31/18 22:36	1
4-Chlorophenyl phenyl ether	4.7	U	11	4.7	1.8	ug/L		10/31/18 22:36	1
4-Nitroaniline	4.7	U	53	4.7	2.1	ug/L		10/31/18 22:36	1
4-Nitrophenol	4.2	U	53	4.2	1.3	ug/L		10/31/18 22:36	1
Benzoic acid	32	U	85	32	11	ug/L		10/31/18 22:36	1
Benzyl alcohol	0.53	U	27	0.53	0.24	ug/L		10/31/18 22:36	1
bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.30	ug/L		10/31/18 22:36	1
Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0	ug/L		10/31/18 22:36	1
Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.44	ug/L		10/31/18 22:36	1
Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.59	ug/L		10/31/18 22:36	1
Butyl benzyl phthalate	2.1	U	21	2.1	1.1	ug/L		10/31/18 22:36	1
Carbazole	1.1	U	11	1.1	0.46	ug/L		10/31/18 22:36	1
Dibenzofuran	1.1	U	11	1.1	0.31	ug/L		10/31/18 22:36	1
Diethyl phthalate	1.1	U	21	1.1	0.40	ug/L		10/31/18 22:36	1
Dimethyl phthalate	0.53	U	21	0.53	0.22	ug/L		10/31/18 22:36	1
Di-n-butyl phthalate	4.7	U	21	4.7	1.2	ug/L		10/31/18 22:36	1
Di-n-octyl phthalate	1.1	U	21	1.1	0.37	ug/L		10/31/18 22:36	1
Hexachlorobenzene	2.1	U	11	2.1	0.70	ug/L		10/31/18 22:36	1
Hexachlorobutadiene	11	U	32	11	3.5	ug/L		10/31/18 22:36	1
Hexachlorocyclopentadiene	32	U	53	32	11	ug/L		10/31/18 22:36	1
Hexachloroethane	4.7	U	11	4.7	2.2	ug/L		10/31/18 22:36	1
Isophorone	0.53	U	11	0.53	0.22	ug/L		10/31/18 22:36	1
Nitrobenzene	2.1	U	21	2.1	0.86	ug/L		10/31/18 22:36	1
N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37	ug/L		10/31/18 22:36	1
N-Nitrosodiphenylamine	1.1	U	11	1.1	0.47	ug/L		10/31/18 22:36	1
Pentachlorophenol	64	U	85	64	21	ug/L		10/31/18 22:36	1
Phenol	4.7	U	11	4.7	2.1	ug/L		10/31/18 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*94*		*43 - 140*	*10/24/18 13:18*	*10/31/18 22:36*	*1*
2-Fluorobiphenyl	*85*		*44 - 119*	*10/24/18 13:18*	*10/31/18 22:36*	*1*
2-Fluorophenol (Surr)	*86*		*19 - 119*	*10/24/18 13:18*	*10/31/18 22:36*	*1*
Nitrobenzene-d5 (Surr)	*85*		*44 - 120*	*10/24/18 13:18*	*10/31/18 22:36*	*1*
Phenol-d5 (Surr)	*89*		*10 - 115*	*10/24/18 13:18*	*10/31/18 22:36*	*1*

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

Client Sample ID: RQLMW-011-181002-GW **Lab Sample ID: 280-115789-2**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*99*		*50 - 134*	*10/24/18 13:18*	*10/31/18 22:36*	*1*

Client Sample ID: FWGER-181001-ER **Lab Sample ID: 280-115789-3**
Date Collected: 10/18/18 07:30 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,4-Dinitrotoluene	4.5	U	21	4.5	1.7	ug/L		10/29/18 17:27	1
2,6-Dinitrotoluene	4.5	U	21	4.5	2.0	ug/L		10/29/18 17:27	1
Nitrobenzene	2.1	U	21	2.1	0.84	ug/L		10/29/18 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*94*		*43 - 140*	*10/25/18 13:12*	*10/29/18 17:27*	*1*
2-Fluorobiphenyl	*74*		*44 - 119*	*10/25/18 13:12*	*10/29/18 17:27*	*1*
2-Fluorophenol (Surr)	*70*		*19 - 119*	*10/25/18 13:12*	*10/29/18 17:27*	*1*
Nitrobenzene-d5 (Surr)	*73*		*44 - 120*	*10/25/18 13:12*	*10/29/18 17:27*	*1*
Phenol-d5 (Surr)	*74*		*10 - 115*	*10/25/18 13:12*	*10/29/18 17:27*	*1*
Terphenyl-d14 (Surr)	*98*		*50 - 134*	*10/25/18 13:12*	*10/29/18 17:27*	*1*

Client Sample ID: FWGFB-181001-FB **Lab Sample ID: 280-115789-4**
Date Collected: 10/18/18 07:20 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,4-Dinitrotoluene	4.3	U	19	4.3	1.6	ug/L		10/29/18 17:56	1
2,6-Dinitrotoluene	4.3	U	19	4.3	1.8	ug/L		10/29/18 17:56	1
Nitrobenzene	1.9	U	19	1.9	0.78	ug/L		10/29/18 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*91*		*43 - 140*	*10/25/18 13:12*	*10/29/18 17:56*	*1*
2-Fluorobiphenyl	*79*		*44 - 119*	*10/25/18 13:12*	*10/29/18 17:56*	*1*
2-Fluorophenol (Surr)	*78*		*19 - 119*	*10/25/18 13:12*	*10/29/18 17:56*	*1*
Nitrobenzene-d5 (Surr)	*79*		*44 - 120*	*10/25/18 13:12*	*10/29/18 17:56*	*1*
Phenol-d5 (Surr)	*80*		*10 - 115*	*10/25/18 13:12*	*10/29/18 17:56*	*1*
Terphenyl-d14 (Surr)	*104*		*50 - 134*	*10/25/18 13:12*	*10/29/18 17:56*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Client Sample ID: FWGFB-181001-FB **Lab Sample ID: 280-115789-5**
Date Collected: 11/14/18 00:00 **Matrix: Water**
Date Received: 11/15/18 13:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.41	U	1.0	0.41	0.20	ug/L		11/26/18 15:13	1
1,3-Dinitrobenzene	0.20	U	0.41	0.20	0.091	ug/L		11/26/18 15:13	1
2,4,6-Trinitrotoluene	0.20	U	0.41	0.20	0.074	ug/L		11/26/18 15:13	1
2,4-Dinitrotoluene	0.20	U	0.41	0.20	0.086	ug/L		11/26/18 15:13	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.066	ug/L		11/26/18 15:13	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.052	ug/L		11/26/18 15:13	1
2-Nitrotoluene	0.20	U	0.41	0.20	0.088	ug/L		11/26/18 15:13	1
3-Nitrotoluene	0.20	U	0.41	0.20	0.085	ug/L		11/26/18 15:13	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.059	ug/L		11/26/18 15:13	1
4-Nitrotoluene	0.41	U	1.0	0.41	0.20	ug/L		11/26/18 15:13	1

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

Client Sample ID: FWGFB-181001-FB **Lab Sample ID: 280-115789-5**
Date Collected: 11/14/18 00:00 **Matrix: Water**
Date Received: 11/15/18 13:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
HMX	0.20	U	0.41	0.20	0.090	ug/L		11/26/18 15:13	1
Nitrobenzene	0.20	U	0.41	0.20	0.093	ug/L		11/26/18 15:13	1
Nitroglycerin	2.0	U	3.1	2.0	0.94	ug/L		11/26/18 15:13	1
PETN	1.2	U	2.0	1.2	0.43	ug/L		11/26/18 15:13	1
RDX	0.12	U	0.20	0.12	0.054	ug/L		11/26/18 15:13	1
Tetryl	0.20	U	0.25	0.20	0.081	ug/L		11/26/18 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*97*		*83 - 119*	*11/20/18 11:01*	*11/26/18 15:13*	*1*

General Chemistry

Client Sample ID: RQLMW-011-181001-GW **Lab Sample ID: 280-115789-1**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U H J1	0.020	0.010	0.0040	mg/L		10/19/18 14:23	1
Sulfide	1.9	U J1	4.0	1.9	0.79	mg/L		10/23/18 23:07	1
Nitrate as N	0.10	U J1	0.50	0.10	0.042	mg/L		10/19/18 17:25	1
Nitrite as N	0.10	U J1	0.50	0.10	0.049	mg/L		10/19/18 17:25	1
Sulfate	**100**	**J1**	5.0	0.50	0.23	mg/L		10/22/18 09:20	1
Alkalinity	**120**		5.0	5.0	1.1	mg/L		10/24/18 20:22	1

Client Sample ID: RQLMW-011-181002-GW **Lab Sample ID: 280-115789-2**
Date Collected: 10/18/18 11:10 **Matrix: Water**
Date Received: 10/19/18 09:20

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U H	0.020	0.010	0.0040	mg/L		10/19/18 14:23	1
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		10/23/18 23:07	1
Nitrate as N	**0.049**	**J**	0.50	0.10	0.042	mg/L		10/19/18 18:37	1
Nitrite as N	0.10	U	0.50	0.10	0.049	mg/L		10/19/18 18:37	1
Sulfate	**96**		5.0	0.50	0.23	mg/L		10/19/18 18:37	1
Alkalinity	**120**		5.0	5.0	1.1	mg/L		10/24/18 20:28	1

Default Detection Limits

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

TestAmerica Job ID: 280-115789-1

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

Prep: 3510C

Analyte	LOQ	DL	Units	Method
1-Methylnaphthalene	0.10	0.0059	ug/L	8270D SIM
2-Methylnaphthalene	0.10	0.0060	ug/L	8270D SIM
Acenaphthene	0.10	0.0042	ug/L	8270D SIM
Acenaphthylene	0.10	0.0051	ug/L	8270D SIM
Anthracene	0.10	0.0056	ug/L	8270D SIM
Benzo[a]anthracene	0.10	0.0042	ug/L	8270D SIM
Benzo[a]pyrene	0.10	0.0069	ug/L	8270D SIM
Benzo[b]fluoranthene	0.10	0.0031	ug/L	8270D SIM
Benzo[g,h,i]perylene	0.10	0.0062	ug/L	8270D SIM
Benzo[k]fluoranthene	0.10	0.0063	ug/L	8270D SIM
Chrysene	0.10	0.0033	ug/L	8270D SIM
Dibenz(a,h)anthracene	0.10	0.0041	ug/L	8270D SIM
Fluoranthene	0.10	0.0048	ug/L	8270D SIM
Fluorene	0.10	0.0055	ug/L	8270D SIM
Indeno[1,2,3-cd]pyrene	0.10	0.0045	ug/L	8270D SIM
Naphthalene	0.10	0.0080	ug/L	8270D SIM
Phenanthrene	0.10	0.0093	ug/L	8270D SIM
Pyrene	0.10	0.0061	ug/L	8270D SIM

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

Prep: 3520C

Analyte	LOQ	DL	Units	Method
1,2,4-Trichlorobenzene	10	0.28	ug/L	8270D
1,2-Dichlorobenzene	10	0.23	ug/L	8270D
1,3-Dichlorobenzene	10	0.30	ug/L	8270D
1,4-Dichlorobenzene	10	0.32	ug/L	8270D
1,4-Dioxane	18	1.7	ug/L	8270D
2,4,5-Trichlorophenol	20	0.45	ug/L	8270D
2,4,6-Trichlorophenol	20	0.29	ug/L	8270D
2,4-Dichlorophenol	10	0.64	ug/L	8270D
2,4-Dimethylphenol	10	0.58	ug/L	8270D
2,4-Dinitrophenol	80	10	ug/L	8270D
2,4-Dinitrotoluene	20	1.7	ug/L	8270D
2,6-Dinitrotoluene	20	1.9	ug/L	8270D
2-Chloronaphthalene	10	0.26	ug/L	8270D
2-Chlorophenol	10	2.0	ug/L	8270D
2-Methylphenol	10	0.98	ug/L	8270D
2-Nitroaniline	50	1.7	ug/L	8270D
2-Nitrophenol	20	0.39	ug/L	8270D
3 & 4 Methylphenol	20	0.25	ug/L	8270D
3,3'-Dichlorobenzidine	50	2.0	ug/L	8270D
3-Nitroaniline	50	2.0	ug/L	8270D
4,6-Dinitro-2-methylphenol	80	4.0	ug/L	8270D
4-Bromophenyl phenyl ether	10	0.43	ug/L	8270D
4-Chloro-3-methylphenol	20	2.4	ug/L	8270D
4-Chloroaniline	25	2.1	ug/L	8270D
4-Chlorophenyl phenyl ether	10	1.7	ug/L	8270D
4-Nitroaniline	50	2.0	ug/L	8270D
4-Nitrophenol	50	1.2	ug/L	8270D
Benzoic acid	80	10	ug/L	8270D

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

Prep: 3520C

Analyte	LOQ	DL	Units	Method
Benzyl alcohol	25	0.23	ug/L	8270D
bis (2-chloroisopropyl) ether	10	0.28	ug/L	8270D
Bis(2-chloroethoxy)methane	10	0.97	ug/L	8270D
Bis(2-chloroethyl)ether	20	0.41	ug/L	8270D
Bis(2-ethylhexyl) phthalate	10	0.56	ug/L	8270D
Butyl benzyl phthalate	20	1.0	ug/L	8270D
Carbazole	10	0.43	ug/L	8270D
Dibenzofuran	10	0.29	ug/L	8270D
Diethyl phthalate	20	0.38	ug/L	8270D
Dimethyl phthalate	20	0.21	ug/L	8270D
Di-n-butyl phthalate	20	1.2	ug/L	8270D
Di-n-octyl phthalate	20	0.35	ug/L	8270D
Hexachlorobenzene	10	0.66	ug/L	8270D
Hexachlorobutadiene	30	3.3	ug/L	8270D
Hexachlorocyclopentadiene	50	10	ug/L	8270D
Hexachloroethane	10	2.1	ug/L	8270D
Isophorone	10	0.21	ug/L	8270D
Nitrobenzene	20	0.81	ug/L	8270D
N-Nitrosodi-n-propylamine	20	0.35	ug/L	8270D
N-Nitrosodiphenylamine	10	0.44	ug/L	8270D
Pentachlorophenol	80	20	ug/L	8270D
Phenol	10	2.0	ug/L	8270D

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Prep: 3535

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

General Chemistry

Analyte	LOQ	DL	Units	Method
Chromium, hexavalent	0.020	0.0040	mg/L	7196A
Nitrate as N	0.50	0.042	mg/L	9056
Nitrite as N	0.50	0.049	mg/L	9056
Sulfate	5.0	0.23	mg/L	9056A
Alkalinity	5.0	1.1	mg/L	SM 2320B

Default Detection Limits

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

TestAmerica Job ID: 280-115789-1

General Chemistry

Prep: 9030B

Analyte	LOQ	DL	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: 280-115789-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(43-140)	(44-119)	(19-119)	(44-120)	(10-115)	(50-134)
280-115789-1	RQLMW-011-181001-GW	89	88	90	88	93	101
280-115789-1 MS	RQLMW-011-181001-GW	94	93	87	87	89	90
280-115789-1 MSD	RQLMW-011-181001-GW	90	89	83	85	85	88
280-115789-2	RQLMW-011-181002-GW	94	85	86	85	89	99
280-115789-3	FWGER-181001-ER	94	74	70	73	74	98
280-115789-4	FWGFB-181001-FB	91	79	78	79	80	104
LCS 280-434728/2-A	Lab Control Sample	92	96	90	92	92	92
LCS 280-434912/2-A	Lab Control Sample	95	95	93	96	96	92
LCSD 280-434728/3-A	Lab Control Sample Dup	90	94	89	92	91	91
LCSD 280-434912/3-A	Lab Control Sample Dup	96	99	100	98	101	94
MB 280-434728/1-A	Method Blank	84	83	86	85	88	99
MB 280-434912/1-A	Method Blank	91	91	95	96	98	102

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(53-106)	(55-111)	(58-132)
280-115789-1	RQLMW-011-181001-GW	64	65	81
280-115789-1 MS	RQLMW-011-181001-GW	55	56	85
280-115789-1 MSD	RQLMW-011-181001-GW	61	62	92
280-115789-2	RQLMW-011-181002-GW	61	59	78
280-115789-3	FWGER-181001-ER	63	63	80
280-115789-4	FWGFB-181001-FB	59	58	84
LCS 280-434609/2-A	Lab Control Sample	66	64	84
MB 280-434609/1-A	Method Blank	63	62	82

Surrogate Legend

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

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		12DNB1
Lab Sample ID	Client Sample ID	(83-119)
280-115789-5	FWGFB-181001-FB	97
LCS 280-438225/2-A	Lab Control Sample	96
LCSD 280-438225/3-A	Lab Control Sample Dup	100

Surrogate Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-115789-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	12DNB1 (83-119)								
MB 280-438225/1-A	Method Blank	102								

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

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

Lab Sample ID: MB 280-434728/1-A
Matrix: Water
Analysis Batch: 435724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434728

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28	ug/L		10/31/18 14:15	1
1,2-Dichlorobenzene	0.50	U	10	0.50	0.23	ug/L		10/31/18 14:15	1
1,3-Dichlorobenzene	1.0	U	10	1.0	0.30	ug/L		10/31/18 14:15	1
1,4-Dichlorobenzene	1.0	U	10	1.0	0.32	ug/L		10/31/18 14:15	1
1,4-Dioxane	4.4	U	18	4.4	1.7	ug/L		10/31/18 14:15	1
2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45	ug/L		10/31/18 14:15	1
2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29	ug/L		10/31/18 14:15	1
2,4-Dichlorophenol	2.0	U	10	2.0	0.64	ug/L		10/31/18 14:15	1
2,4-Dimethylphenol	2.0	U	10	2.0	0.58	ug/L		10/31/18 14:15	1
2,4-Dinitrophenol	30	U	80	30	10	ug/L		10/31/18 14:15	1
2,4-Dinitrotoluene	4.4	U	20	4.4	1.7	ug/L		10/31/18 14:15	1
2,6-Dinitrotoluene	4.4	U	20	4.4	1.9	ug/L		10/31/18 14:15	1
2-Chloronaphthalene	1.0	U	10	1.0	0.26	ug/L		10/31/18 14:15	1
2-Chlorophenol	4.4	U	10	4.4	2.0	ug/L		10/31/18 14:15	1
2-Methylphenol	2.0	U	10	2.0	0.98	ug/L		10/31/18 14:15	1
2-Nitroaniline	4.4	U	50	4.4	1.7	ug/L		10/31/18 14:15	1
2-Nitrophenol	1.0	U	20	1.0	0.39	ug/L		10/31/18 14:15	1
3 & 4 Methylphenol	0.50	U	20	0.50	0.25	ug/L		10/31/18 14:15	1
3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0	ug/L		10/31/18 14:15	1
3-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		10/31/18 14:15	1
4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0	ug/L		10/31/18 14:15	1
4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43	ug/L		10/31/18 14:15	1
4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4	ug/L		10/31/18 14:15	1
4-Chloroaniline	4.4	U	25	4.4	2.1	ug/L		10/31/18 14:15	1
4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7	ug/L		10/31/18 14:15	1
4-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		10/31/18 14:15	1
4-Nitrophenol	4.0	U	50	4.0	1.2	ug/L		10/31/18 14:15	1
Benzoic acid	30	U	80	30	10	ug/L		10/31/18 14:15	1
Benzyl alcohol	0.50	U	25	0.50	0.23	ug/L		10/31/18 14:15	1
bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28	ug/L		10/31/18 14:15	1
Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97	ug/L		10/31/18 14:15	1
Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41	ug/L		10/31/18 14:15	1
Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56	ug/L		10/31/18 14:15	1
Butyl benzyl phthalate	2.0	U	20	2.0	1.0	ug/L		10/31/18 14:15	1
Carbazole	1.0	U	10	1.0	0.43	ug/L		10/31/18 14:15	1
Dibenzofuran	1.0	U	10	1.0	0.29	ug/L		10/31/18 14:15	1
Diethyl phthalate	1.0	U	20	1.0	0.38	ug/L		10/31/18 14:15	1
Dimethyl phthalate	0.50	U	20	0.50	0.21	ug/L		10/31/18 14:15	1
Di-n-butyl phthalate	4.4	U	20	4.4	1.2	ug/L		10/31/18 14:15	1
Di-n-octyl phthalate	1.0	U	20	1.0	0.35	ug/L		10/31/18 14:15	1
Hexachlorobenzene	2.0	U	10	2.0	0.66	ug/L		10/31/18 14:15	1
Hexachlorobutadiene	10	U	30	10	3.3	ug/L		10/31/18 14:15	1
Hexachlorocyclopentadiene	30	U	50	30	10	ug/L		10/31/18 14:15	1
Hexachloroethane	4.4	U	10	4.4	2.1	ug/L		10/31/18 14:15	1
Isophorone	0.50	U	10	0.50	0.21	ug/L		10/31/18 14:15	1
Nitrobenzene	2.0	U	20	2.0	0.81	ug/L		10/31/18 14:15	1
N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35	ug/L		10/31/18 14:15	1
N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44	ug/L		10/31/18 14:15	1

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

Lab Sample ID: MB 280-434728/1-A
Matrix: Water
Analysis Batch: 435724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434728

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Pentachlorophenol	60	U	80	60	20	ug/L		10/31/18 14:15	1
Phenol	4.4	U	10	4.4	2.0	ug/L		10/31/18 14:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*43 - 140*	*10/24/18 13:18*	*10/31/18 14:15*	*1*
2-Fluorobiphenyl	*83*		*44 - 119*	*10/24/18 13:18*	*10/31/18 14:15*	*1*
2-Fluorophenol (Surr)	*86*		*19 - 119*	*10/24/18 13:18*	*10/31/18 14:15*	*1*
Nitrobenzene-d5 (Surr)	*85*		*44 - 120*	*10/24/18 13:18*	*10/31/18 14:15*	*1*
Phenol-d5 (Surr)	*88*		*10 - 115*	*10/24/18 13:18*	*10/31/18 14:15*	*1*
Terphenyl-d14 (Surr)	*99*		*50 - 134*	*10/24/18 13:18*	*10/31/18 14:15*	*1*

Lab Sample ID: LCS 280-434728/2-A
Matrix: Water
Analysis Batch: 435724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	80.0	68.4		ug/L		85	29 - 116
1,2-Dichlorobenzene	80.0	68.4		ug/L		85	32 - 111
1,3-Dichlorobenzene	80.0	65.3		ug/L		82	28 - 110
1,4-Dichlorobenzene	80.0	65.0		ug/L		81	29 - 112
1,4-Dioxane	80.0	63.5		ug/L		79	47 - 120
2,4,5-Trichlorophenol	80.0	77.6		ug/L		97	53 - 123
2,4,6-Trichlorophenol	80.0	81.6		ug/L		102	50 - 125
2,4-Dichlorophenol	80.0	74.1		ug/L		93	47 - 121
2,4-Dimethylphenol	80.0	64.1		ug/L		80	31 - 124
2,4-Dinitrophenol	160	146		ug/L		91	23 - 143
2,4-Dinitrotoluene	80.0	77.9		ug/L		97	57 - 128
2,6-Dinitrotoluene	80.0	78.9		ug/L		99	57 - 124
2-Chloronaphthalene	80.0	75.7		ug/L		95	40 - 116
2-Chlorophenol	80.0	74.1		ug/L		93	38 - 117
2-Methylphenol	80.0	73.5		ug/L		92	30 - 117
2-Nitroaniline	80.0	77.8		ug/L		97	55 - 127
2-Nitrophenol	80.0	76.4		ug/L		96	47 - 123
3 & 4 Methylphenol	80.0	72.9		ug/L		91	29 - 110
3,3'-Dichlorobenzidine	160	126		ug/L		79	27 - 129
3-Nitroaniline	80.0	50.9		ug/L		64	41 - 128
4-Bromophenyl phenyl ether	80.0	79.0		ug/L		99	55 - 124
4-Chloro-3-methylphenol	80.0	73.4		ug/L		92	52 - 119
4-Chloroaniline	80.0	51.1		ug/L		64	33 - 117
4-Chlorophenyl phenyl ether	80.0	73.1		ug/L		91	53 - 121
4-Nitroaniline	80.0	72.2		ug/L		90	70 - 120
4-Nitrophenol	160	152		ug/L		95	59 - 129
Benzoic acid	80.0	67.2	J	ug/L		84	41 - 120
Benzyl alcohol	80.0	74.9		ug/L		94	31 - 112
bis (2-chloroisopropyl) ether	80.0	79.4		ug/L		99	37 - 130
Bis(2-chloroethoxy)methane	80.0	76.4		ug/L		96	48 - 120
Bis(2-chloroethyl)ether	80.0	79.0		ug/L		99	43 - 118
Bis(2-ethylhexyl) phthalate	80.0	81.4		ug/L		102	55 - 135

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

Lab Sample ID: LCS 280-434728/2-A
Matrix: Water
Analysis Batch: 435724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Butyl benzyl phthalate	80.0	79.0		ug/L		99	53 - 134
Carbazole	80.0	78.0		ug/L		98	60 - 122
Dibenzofuran	80.0	76.3		ug/L		95	53 - 118
Diethyl phthalate	80.0	75.9		ug/L		95	56 - 125
Dimethyl phthalate	80.0	77.4		ug/L		97	45 - 127
Di-n-butyl phthalate	80.0	78.7		ug/L		98	59 - 127
Di-n-octyl phthalate	80.0	73.9		ug/L		92	51 - 140
Hexachlorobenzene	80.0	76.2		ug/L		95	53 - 125
Hexachlorobutadiene	80.0	63.9		ug/L		80	22 - 124
Hexachloroethane	80.0	62.1		ug/L		78	21 - 115
Isophorone	80.0	74.3		ug/L		93	42 - 124
Nitrobenzene	80.0	75.7		ug/L		95	45 - 121
N-Nitrosodi-n-propylamine	80.0	73.6		ug/L		92	49 - 119
N-Nitrosodiphenylamine	80.0	79.5		ug/L		99	51 - 123
Pentachlorophenol	160	149		ug/L		93	35 - 138
Phenol	80.0	73.2		ug/L		91	61 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*92*		*43 - 140*
2-Fluorobiphenyl	*96*		*44 - 119*
2-Fluorophenol (Surr)	*90*		*19 - 119*
Nitrobenzene-d5 (Surr)	*92*		*44 - 120*
Phenol-d5 (Surr)	*92*		*10 - 115*
Terphenyl-d14 (Surr)	*92*		*50 - 134*

Lab Sample ID: LCSD 280-434728/3-A
Matrix: Water
Analysis Batch: 435724

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434728

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	80.0	66.7		ug/L		83	29 - 116	3	20
1,2-Dichlorobenzene	80.0	64.6		ug/L		81	32 - 111	6	20
1,3-Dichlorobenzene	80.0	63.3		ug/L		79	28 - 110	3	20
1,4-Dichlorobenzene	80.0	63.3		ug/L		79	29 - 112	3	20
1,4-Dioxane	80.0	61.7		ug/L		77	47 - 120	3	20
2,4,5-Trichlorophenol	80.0	77.1		ug/L		96	53 - 123	1	20
2,4,6-Trichlorophenol	80.0	79.8		ug/L		100	50 - 125	2	20
2,4-Dichlorophenol	80.0	76.0		ug/L		95	47 - 121	3	20
2,4-Dimethylphenol	80.0	65.1		ug/L		81	31 - 124	2	20
2,4-Dinitrophenol	160	147		ug/L		92	23 - 143	1	20
2,4-Dinitrotoluene	80.0	76.8		ug/L		96	57 - 128	1	20
2,6-Dinitrotoluene	80.0	77.4		ug/L		97	57 - 124	2	20
2-Chloronaphthalene	80.0	75.1		ug/L		94	40 - 116	1	20
2-Chlorophenol	80.0	73.8		ug/L		92	38 - 117	0	20
2-Methylphenol	80.0	73.1		ug/L		91	30 - 117	1	20
2-Nitroaniline	80.0	75.1		ug/L		94	55 - 127	4	20
2-Nitrophenol	80.0	76.8		ug/L		96	47 - 123	1	20
3 & 4 Methylphenol	80.0	72.4		ug/L		90	29 - 110	1	20

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

Lab Sample ID: LCSD 280-434728/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435724 **Prep Batch: 434728**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3,3'-Dichlorobenzidine	160	130		ug/L		81	27 - 129	3	20
3-Nitroaniline	80.0	49.3	J	ug/L		62	41 - 128	3	20
4-Bromophenyl phenyl ether	80.0	78.4		ug/L		98	55 - 124	1	20
4-Chloro-3-methylphenol	80.0	74.3		ug/L		93	52 - 119	1	20
4-Chloroaniline	80.0	53.1		ug/L		66	33 - 117	4	20
4-Chlorophenyl phenyl ether	80.0	73.4		ug/L		92	53 - 121	0	20
4-Nitroaniline	80.0	69.0		ug/L		86	70 - 120	4	20
4-Nitrophenol	160	143		ug/L		89	59 - 129	6	20
Benzoic acid	80.0	67.6	J	ug/L		84	41 - 120	1	20
Benzyl alcohol	80.0	74.5		ug/L		93	31 - 112	1	20
bis (2-chloroisopropyl) ether	80.0	77.8		ug/L		97	37 - 130	2	20
Bis(2-chloroethoxy)methane	80.0	75.7		ug/L		95	48 - 120	1	20
Bis(2-chloroethyl)ether	80.0	79.3		ug/L		99	43 - 118	0	20
Bis(2-ethylhexyl) phthalate	80.0	80.6		ug/L		101	55 - 135	1	20
Butyl benzyl phthalate	80.0	77.4		ug/L		97	53 - 134	2	20
Carbazole	80.0	74.8		ug/L		93	60 - 122	4	20
Dibenzofuran	80.0	75.1		ug/L		94	53 - 118	2	20
Diethyl phthalate	80.0	75.0		ug/L		94	56 - 125	1	20
Dimethyl phthalate	80.0	75.0		ug/L		94	45 - 127	3	20
Di-n-butyl phthalate	80.0	76.6		ug/L		96	59 - 127	3	20
Di-n-octyl phthalate	80.0	73.1		ug/L		91	51 - 140	1	20
Hexachlorobenzene	80.0	76.6		ug/L		96	53 - 125	0	20
Hexachlorobutadiene	80.0	63.0		ug/L		79	22 - 124	1	20
Hexachloroethane	80.0	59.2		ug/L		74	21 - 115	5	20
Isophorone	80.0	75.1		ug/L		94	42 - 124	1	20
Nitrobenzene	80.0	75.8		ug/L		95	45 - 121	0	20
N-Nitrosodi-n-propylamine	80.0	73.4		ug/L		92	49 - 119	0	20
N-Nitrosodiphenylamine	80.0	79.6		ug/L		99	51 - 123	0	20
Pentachlorophenol	160	145		ug/L		91	35 - 138	2	20
Phenol	80.0	71.3		ug/L		89	61 - 120	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*90*		*43 - 140*
2-Fluorobiphenyl	*94*		*44 - 119*
2-Fluorophenol (Surr)	*89*		*19 - 119*
Nitrobenzene-d5 (Surr)	*92*		*44 - 120*
Phenol-d5 (Surr)	*91*		*10 - 115*
Terphenyl-d14 (Surr)	*91*		*50 - 134*

Lab Sample ID: 280-115789-1 MS **Client Sample ID: RQLMW-011-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435724 **Prep Batch: 434728**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.1	U	84.5	72.3		ug/L		86	29 - 116
1,2-Dichlorobenzene	0.53	U	84.5	71.1		ug/L		84	32 - 111
1,3-Dichlorobenzene	1.1	U	84.5	71.0		ug/L		84	28 - 110
1,4-Dichlorobenzene	1.1	U	84.5	70.6		ug/L		84	29 - 112

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

Lab Sample ID: 280-115789-1 MS
Matrix: Water
Analysis Batch: 435724

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA
Prep Batch: 434728

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	4.6	U	84.5	61.5		ug/L		73	47 - 120
2,4,5-Trichlorophenol	1.1	U	84.5	79.5		ug/L		94	53 - 123
2,4,6-Trichlorophenol	1.1	U	84.5	83.8		ug/L		99	50 - 125
2,4-Dichlorophenol	2.1	U	84.5	75.5		ug/L		89	47 - 121
2,4-Dimethylphenol	2.1	U	84.5	70.2		ug/L		83	31 - 124
2,4-Dinitrophenol	32	U	169	153		ug/L		90	23 - 143
2,4-Dinitrotoluene	4.6	U	84.5	81.6		ug/L		97	57 - 128
2,6-Dinitrotoluene	4.6	U	84.5	81.2		ug/L		96	57 - 124
2-Chloronaphthalene	1.1	U	84.5	79.3		ug/L		94	40 - 116
2-Chlorophenol	4.6	U	84.5	74.6		ug/L		88	38 - 117
2-Methylphenol	2.1	U	84.5	75.0		ug/L		89	30 - 117
2-Nitroaniline	4.6	U	84.5	75.7		ug/L		90	55 - 127
2-Nitrophenol	1.1	U	84.5	77.7		ug/L		92	47 - 123
3 & 4 Methylphenol	0.53	U	84.5	72.8		ug/L		86	29 - 110
3,3'-Dichlorobenzidine	4.6	U	169	134		ug/L		79	27 - 129
3-Nitroaniline	4.6	U	84.5	53.0		ug/L		63	41 - 128
4-Bromophenyl phenyl ether	1.1	U	84.5	81.4		ug/L		96	55 - 124
4-Chloro-3-methylphenol	5.3	U	84.5	72.8		ug/L		86	52 - 119
4-Chloroaniline	4.6	U	84.5	55.6		ug/L		66	33 - 117
4-Chlorophenyl phenyl ether	4.6	U	84.5	76.5		ug/L		91	53 - 121
4-Nitroaniline	4.6	U	84.5	73.4		ug/L		87	70 - 120
4-Nitrophenol	4.2	U	169	152		ug/L		90	59 - 129
Benzoic acid	32	U	84.5	78.6	J	ug/L		93	41 - 120
Benzyl alcohol	0.53	U	84.5	74.4		ug/L		88	31 - 112
bis (2-chloroisopropyl) ether	1.1	U	84.5	78.0		ug/L		92	37 - 130
Bis(2-chloroethoxy)methane	2.1	U	84.5	74.4		ug/L		88	48 - 120
Bis(2-chloroethyl)ether	1.1	U	84.5	80.1		ug/L		95	43 - 118
Bis(2-ethylhexyl) phthalate	2.1	U	84.5	87.2		ug/L		103	55 - 135
Butyl benzyl phthalate	2.1	U	84.5	83.7		ug/L		99	53 - 134
Carbazole	1.1	U	84.5	81.1		ug/L		96	60 - 122
Dibenzofuran	1.1	U	84.5	78.4		ug/L		93	53 - 118
Diethyl phthalate	1.1	U	84.5	78.5		ug/L		93	56 - 125
Dimethyl phthalate	0.53	U	84.5	80.1		ug/L		95	45 - 127
Di-n-butyl phthalate	4.6	U	84.5	82.0		ug/L		97	59 - 127
Di-n-octyl phthalate	1.1	U	84.5	81.8		ug/L		97	51 - 140
Hexachlorobenzene	2.1	U	84.5	81.6		ug/L		97	53 - 125
Hexachlorobutadiene	11	U	84.5	73.2		ug/L		87	22 - 124
Hexachloroethane	4.6	U	84.5	68.6		ug/L		81	21 - 115
Isophorone	0.53	U	84.5	72.9		ug/L		86	42 - 124
Nitrobenzene	2.1	U	84.5	74.5		ug/L		88	45 - 121
N-Nitrosodi-n-propylamine	1.1	U	84.5	72.8		ug/L		86	49 - 119
N-Nitrosodiphenylamine	1.1	U	84.5	83.2		ug/L		99	51 - 123
Pentachlorophenol	63	U	169	164		ug/L		97	35 - 138
Phenol	4.6	U	84.5	74.7		ug/L		88	61 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*94*		*43 - 140*
2-Fluorobiphenyl	*93*		*44 - 119*

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

Lab Sample ID: 280-115789-1 MS
Matrix: Water
Analysis Batch: 435724

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA
Prep Batch: 434728

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*87*		*19 - 119*
Nitrobenzene-d5 (Surr)	*87*		*44 - 120*
Phenol-d5 (Surr)	*89*		*10 - 115*
Terphenyl-d14 (Surr)	*90*		*50 - 134*

Lab Sample ID: 280-115789-1 MSD
Matrix: Water
Analysis Batch: 435724

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA
Prep Batch: 434728

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1.1	U	87.4	72.0		ug/L		82	29 - 116	0	20
1,2-Dichlorobenzene	0.53	U	87.4	71.2		ug/L		81	32 - 111	0	20
1,3-Dichlorobenzene	1.1	U	87.4	70.3		ug/L		80	28 - 110	1	20
1,4-Dichlorobenzene	1.1	U	87.4	70.5		ug/L		81	29 - 112	0	20
1,4-Dioxane	4.6	U	87.4	62.6		ug/L		72	47 - 120	2	20
2,4,5-Trichlorophenol	1.1	U	87.4	79.5		ug/L		91	53 - 123	0	20
2,4,6-Trichlorophenol	1.1	U	87.4	82.2		ug/L		94	50 - 125	2	20
2,4-Dichlorophenol	2.1	U	87.4	76.6		ug/L		88	47 - 121	1	20
2,4-Dimethylphenol	2.1	U	87.4	71.6		ug/L		82	31 - 124	2	20
2,4-Dinitrophenol	32	U	175	157		ug/L		90	23 - 143	3	20
2,4-Dinitrotoluene	4.6	U	87.4	82.4		ug/L		94	57 - 128	1	20
2,6-Dinitrotoluene	4.6	U	87.4	82.2		ug/L		94	57 - 124	1	20
2-Chloronaphthalene	1.1	U	87.4	78.4		ug/L		90	40 - 116	1	20
2-Chlorophenol	4.6	U	87.4	74.9		ug/L		86	38 - 117	0	20
2-Methylphenol	2.1	U	87.4	75.4		ug/L		86	30 - 117	1	20
2-Nitroaniline	4.6	U	87.4	77.0		ug/L		88	55 - 127	2	20
2-Nitrophenol	1.1	U	87.4	76.4		ug/L		87	47 - 123	2	20
3 & 4 Methylphenol	0.53	U	87.4	74.4		ug/L		85	29 - 110	2	20
3,3'-Dichlorobenzidine	4.6	U	175	131		ug/L		75	27 - 129	2	20
3-Nitroaniline	4.6	U	87.4	52.9	J	ug/L		61	41 - 128	0	20
4-Bromophenyl phenyl ether	1.1	U	87.4	82.3		ug/L		94	55 - 124	1	20
4-Chloro-3-methylphenol	5.3	U	87.4	76.9		ug/L		88	52 - 119	5	20
4-Chloroaniline	4.6	U	87.4	56.4		ug/L		65	33 - 117	1	20
4-Chlorophenyl phenyl ether	4.6	U	87.4	76.8		ug/L		88	53 - 121	0	20
4-Nitroaniline	4.6	U	87.4	72.7		ug/L		83	70 - 120	1	20
4-Nitrophenol	4.2	U	175	153		ug/L		87	59 - 129	1	20
Benzoic acid	32	U	87.4	84.2	J	ug/L		96	41 - 120	7	20
Benzyl alcohol	0.53	U	87.4	76.3		ug/L		87	31 - 112	3	20
bis (2-chloroisopropyl) ether	1.1	U	87.4	76.5		ug/L		88	37 - 130	2	20
Bis(2-chloroethoxy)methane	2.1	U	87.4	76.4		ug/L		87	48 - 120	3	20
Bis(2-chloroethyl)ether	1.1	U	87.4	78.5		ug/L		90	43 - 118	2	20
Bis(2-ethylhexyl) phthalate	2.1	U	87.4	86.9		ug/L		99	55 - 135	0	20
Butyl benzyl phthalate	2.1	U	87.4	83.4		ug/L		95	53 - 134	0	20
Carbazole	1.1	U	87.4	80.5		ug/L		92	60 - 122	1	20
Dibenzofuran	1.1	U	87.4	79.3		ug/L		91	53 - 118	1	20
Diethyl phthalate	1.1	U	87.4	78.9		ug/L		90	56 - 125	0	20
Dimethyl phthalate	0.53	U	87.4	79.1		ug/L		90	45 - 127	1	20
Di-n-butyl phthalate	4.6	U	87.4	82.1		ug/L		94	59 - 127	0	20

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

Lab Sample ID: 280-115789-1 MSD **Client Sample ID: RQLMW-011-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435724 **Prep Batch: 434728**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Di-n-octyl phthalate	1.1	U	87.4	81.5		ug/L		93	51 - 140	0	20
Hexachlorobenzene	2.1	U	87.4	82.3		ug/L		94	53 - 125	1	20
Hexachlorobutadiene	11	U	87.4	70.7		ug/L		81	22 - 124	4	20
Hexachloroethane	4.6	U	87.4	68.7		ug/L		79	21 - 115	0	20
Isophorone	0.53	U	87.4	75.5		ug/L		86	42 - 124	3	20
Nitrobenzene	2.1	U	87.4	74.3		ug/L		85	45 - 121	0	20
N-Nitrosodi-n-propylamine	1.1	U	87.4	74.4		ug/L		85	49 - 119	2	20
N-Nitrosodiphenylamine	1.1	U	87.4	83.4		ug/L		95	51 - 123	0	20
Pentachlorophenol	63	U	175	158		ug/L		91	35 - 138	4	20
Phenol	4.6	U	87.4	74.2		ug/L		85	61 - 120	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*90*		*43 - 140*
2-Fluorobiphenyl	*89*		*44 - 119*
2-Fluorophenol (Surr)	*83*		*19 - 119*
Nitrobenzene-d5 (Surr)	*85*		*44 - 120*
Phenol-d5 (Surr)	*85*		*10 - 115*
Terphenyl-d14 (Surr)	*88*		*50 - 134*

Lab Sample ID: MB 280-434912/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435306 **Prep Batch: 434912**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,4-Dinitrotoluene	4.4	U	20	4.4	1.7	ug/L		10/29/18 11:18	1
2,6-Dinitrotoluene	4.4	U	20	4.4	1.9	ug/L		10/29/18 11:18	1
Nitrobenzene	2.0	U	20	2.0	0.81	ug/L		10/29/18 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*91*		*43 - 140*	*10/25/18 13:12*	*10/29/18 11:18*	*1*
2-Fluorobiphenyl	*91*		*44 - 119*	*10/25/18 13:12*	*10/29/18 11:18*	*1*
2-Fluorophenol (Surr)	*95*		*19 - 119*	*10/25/18 13:12*	*10/29/18 11:18*	*1*
Nitrobenzene-d5 (Surr)	*96*		*44 - 120*	*10/25/18 13:12*	*10/29/18 11:18*	*1*
Phenol-d5 (Surr)	*98*		*10 - 115*	*10/25/18 13:12*	*10/29/18 11:18*	*1*
Terphenyl-d14 (Surr)	*102*		*50 - 134*	*10/25/18 13:12*	*10/29/18 11:18*	*1*

Lab Sample ID: LCS 280-434912/2-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435306 **Prep Batch: 434912**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	80.0	76.5		ug/L		96	57 - 128
2,6-Dinitrotoluene	80.0	78.2		ug/L		98	57 - 124
Nitrobenzene	80.0	75.0		ug/L		94	45 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*95*		*43 - 140*

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

Lab Sample ID: LCS 280-434912/2-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435306 **Prep Batch: 434912**

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*95*		*44 - 119*
2-Fluorophenol (Surr)	*93*		*19 - 119*
Nitrobenzene-d5 (Surr)	*96*		*44 - 120*
Phenol-d5 (Surr)	*96*		*10 - 115*
Terphenyl-d14 (Surr)	*92*		*50 - 134*

Lab Sample ID: LCSD 280-434912/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435306 **Prep Batch: 434912**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene			80.0	79.2		ug/L		99	57 - 128	3	20
2,6-Dinitrotoluene			80.0	80.3		ug/L		100	57 - 124	3	20
Nitrobenzene			80.0	76.3		ug/L		95	45 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*96*		*43 - 140*
2-Fluorobiphenyl	*99*		*44 - 119*
2-Fluorophenol (Surr)	*100*		*19 - 119*
Nitrobenzene-d5 (Surr)	*98*		*44 - 120*
Phenol-d5 (Surr)	*101*		*10 - 115*
Terphenyl-d14 (Surr)	*94*		*50 - 134*

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

Lab Sample ID: MB 280-434609/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435422 **Prep Batch: 434609**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.012	U	0.10	0.012	0.0059	ug/L		10/29/18 21:39	1
2-Methylnaphthalene	0.012	U	0.10	0.012	0.0060	ug/L		10/29/18 21:39	1
Acenaphthene	0.040	U	0.10	0.040	0.0042	ug/L		10/29/18 21:39	1
Acenaphthylene	0.040	U	0.10	0.040	0.0051	ug/L		10/29/18 21:39	1
Anthracene	0.040	U	0.10	0.040	0.0056	ug/L		10/29/18 21:39	1
Benzo[a]anthracene	0.012	U	0.10	0.012	0.0042	ug/L		10/29/18 21:39	1
Benzo[a]pyrene	0.012	U M	0.10	0.012	0.0069	ug/L		10/29/18 21:39	1
Benzo[b]fluoranthene	0.012	U	0.10	0.012	0.0031	ug/L		10/29/18 21:39	1
Benzo[g,h,i]perylene	0.012	U	0.10	0.012	0.0062	ug/L		10/29/18 21:39	1
Benzo[k]fluoranthene	0.012	U M	0.10	0.012	0.0063	ug/L		10/29/18 21:39	1
Chrysene	0.012	U	0.10	0.012	0.0033	ug/L		10/29/18 21:39	1
Dibenz(a,h)anthracene	0.012	U	0.10	0.012	0.0041	ug/L		10/29/18 21:39	1
Fluoranthene	0.012	U	0.10	0.012	0.0048	ug/L		10/29/18 21:39	1
Fluorene	0.040	U	0.10	0.040	0.0055	ug/L		10/29/18 21:39	1
Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.040	0.0045	ug/L		10/29/18 21:39	1
Naphthalene	0.012	U	0.10	0.012	0.0080	ug/L		10/29/18 21:39	1
Phenanthrene	0.020	U	0.10	0.020	0.0093	ug/L		10/29/18 21:39	1

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

Lab Sample ID: MB 280-434609/1-A
Matrix: Water
Analysis Batch: 435422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434609

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Pyrene	0.020	U	0.10	0.020	0.0061	ug/L		10/29/18 21:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*53 - 106*	*10/23/18 16:35*	*10/29/18 21:39*	*1*
Nitrobenzene-d5	*62*		*55 - 111*	*10/23/18 16:35*	*10/29/18 21:39*	*1*
Terphenyl-d14	*82*		*58 - 132*	*10/23/18 16:35*	*10/29/18 21:39*	*1*

Lab Sample ID: LCS 280-434609/2-A
Matrix: Water
Analysis Batch: 435422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434609

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.900	0.603		ug/L		67	41 - 115
2-Methylnaphthalene	0.900	0.564		ug/L		63	39 - 114
Acenaphthene	0.900	0.593		ug/L		66	48 - 114
Acenaphthylene	0.900	0.536		ug/L		60	35 - 121
Anthracene	0.900	0.610		ug/L		68	53 - 119
Benzo[a]anthracene	0.900	0.647		ug/L		72	59 - 120
Benzo[a]pyrene	0.900	0.592		ug/L		66	53 - 120
Benzo[b]fluoranthene	0.900	0.675		ug/L		75	53 - 126
Benzo[g,h,i]perylene	0.900	0.631		ug/L		70	44 - 128
Benzo[k]fluoranthene	0.900	0.654	M	ug/L		73	54 - 125
Chrysene	0.900	0.772		ug/L		86	57 - 120
Dibenz(a,h)anthracene	0.900	0.571		ug/L		63	44 - 131
Fluoranthene	0.900	0.709		ug/L		79	58 - 120
Fluorene	0.900	0.616		ug/L		68	50 - 118
Indeno[1,2,3-cd]pyrene	0.900	0.592		ug/L		66	48 - 130
Naphthalene	0.900	0.567		ug/L		63	43 - 114
Phenanthrene	0.900	0.694		ug/L		77	53 - 115
Pyrene	0.900	0.693		ug/L		77	53 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*66*		*53 - 106*
Nitrobenzene-d5	*64*		*55 - 111*
Terphenyl-d14	*84*		*58 - 132*

Lab Sample ID: 280-115789-1 MS
Matrix: Water
Analysis Batch: 435422

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA
Prep Batch: 434609

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.014	U	0.969	0.552		ug/L		57	41 - 115
2-Methylnaphthalene	0.014	U	0.969	0.528		ug/L		55	39 - 114
Acenaphthene	0.045	U M	0.969	0.572		ug/L		59	48 - 114
Acenaphthylene	0.045	U	0.969	0.512		ug/L		53	35 - 121
Anthracene	0.045	U	0.969	0.651		ug/L		67	53 - 119
Benzo[a]anthracene	0.014	U	0.969	0.831		ug/L		86	59 - 120
Benzo[a]pyrene	0.014	U M	0.969	0.767		ug/L		79	53 - 120

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

Lab Sample ID: 280-115789-1 MS **Client Sample ID: RQLMW-011-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435422 **Prep Batch: 434609**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	0.014	U	0.969	0.808		ug/L		83	53 - 126
Benzo[g,h,i]perylene	0.014	U	0.969	0.814		ug/L		84	44 - 128
Benzo[k]fluoranthene	0.014	U	0.969	0.722	M	ug/L		75	54 - 125
Chrysene	0.014	U	0.969	1.04		ug/L		108	57 - 120
Dibenz(a,h)anthracene	0.014	U	0.969	0.716		ug/L		74	44 - 131
Fluoranthene	0.014	U	0.969	0.778		ug/L		80	58 - 120
Fluorene	0.045	U M	0.969	0.620		ug/L		64	50 - 118
Indeno[1,2,3-cd]pyrene	0.045	U	0.969	0.692		ug/L		71	48 - 130
Naphthalene	0.014	U	0.969	0.540		ug/L		56	43 - 114
Phenanthrene	0.023	U	0.969	0.728		ug/L		75	53 - 115
Pyrene	0.023	U	0.969	0.822		ug/L		85	53 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*55*		*53 - 106*
Nitrobenzene-d5	*56*		*55 - 111*
Terphenyl-d14	*85*		*58 - 132*

Lab Sample ID: 280-115789-1 MSD **Client Sample ID: RQLMW-011-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435422 **Prep Batch: 434609**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	0.014	U	1.01	0.667		ug/L		66	41 - 115	19	20
2-Methylnaphthalene	0.014	U	1.01	0.621		ug/L		61	39 - 114	16	20
Acenaphthene	0.045	U M	1.01	0.662		ug/L		65	48 - 114	15	20
Acenaphthylene	0.045	U	1.01	0.599		ug/L		59	35 - 121	16	20
Anthracene	0.045	U	1.01	0.679		ug/L		67	53 - 119	4	20
Benzo[a]anthracene	0.014	U	1.01	0.787		ug/L		78	59 - 120	6	20
Benzo[a]pyrene	0.014	U M	1.01	0.679		ug/L		67	53 - 120	12	20
Benzo[b]fluoranthene	0.014	U	1.01	0.775		ug/L		76	53 - 126	4	20
Benzo[g,h,i]perylene	0.014	U	1.01	0.782		ug/L		77	44 - 128	4	20
Benzo[k]fluoranthene	0.014	U	1.01	0.812		ug/L		80	54 - 125	12	20
Chrysene	0.014	U	1.01	0.907		ug/L		89	57 - 120	14	20
Dibenz(a,h)anthracene	0.014	U	1.01	0.725		ug/L		72	44 - 131	1	20
Fluoranthene	0.014	U	1.01	0.814		ug/L		80	58 - 120	4	20
Fluorene	0.045	U M	1.01	0.682		ug/L		67	50 - 118	9	20
Indeno[1,2,3-cd]pyrene	0.045	U	1.01	0.714		ug/L		70	48 - 130	3	20
Naphthalene	0.014	U	1.01	0.638		ug/L		63	43 - 114	17	20
Phenanthrene	0.023	U	1.01	0.760		ug/L		75	53 - 115	4	20
Pyrene	0.023	U	1.01	0.793		ug/L		78	53 - 121	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*61*		*53 - 106*
Nitrobenzene-d5	*62*		*55 - 111*
Terphenyl-d14	*92*		*58 - 132*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-438225/1-A
Matrix: Water
Analysis Batch: 438727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438225

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20	ug/L		11/26/18 14:04	1
1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089	ug/L		11/26/18 14:04	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072	ug/L		11/26/18 14:04	1
2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084	ug/L		11/26/18 14:04	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065	ug/L		11/26/18 14:04	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051	ug/L		11/26/18 14:04	1
2-Nitrotoluene	0.20	U	0.40	0.20	0.086	ug/L		11/26/18 14:04	1
3-Nitrotoluene	0.20	U	0.40	0.20	0.083	ug/L		11/26/18 14:04	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058	ug/L		11/26/18 14:04	1
4-Nitrotoluene	0.40	U	1.0	0.40	0.20	ug/L		11/26/18 14:04	1
HMX	0.20	U	0.40	0.20	0.088	ug/L		11/26/18 14:04	1
Nitrobenzene	0.20	U	0.40	0.20	0.091	ug/L		11/26/18 14:04	1
Nitroglycerin	2.0	U	3.0	2.0	0.92	ug/L		11/26/18 14:04	1
PETN	1.2	U	2.0	1.2	0.42	ug/L		11/26/18 14:04	1
RDX	0.12	U	0.20	0.12	0.052	ug/L		11/26/18 14:04	1
Tetryl	0.20	U	0.24	0.20	0.079	ug/L		11/26/18 14:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*102*		*83 - 119*	*11/20/18 11:01*	*11/26/18 14:04*	*1*

Lab Sample ID: LCS 280-438225/2-A
Matrix: Water
Analysis Batch: 438727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438225

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	2.00	2.21		ug/L		111	73 - 125
1,3-Dinitrobenzene	2.00	2.09		ug/L		104	78 - 120
2,4,6-Trinitrotoluene	2.00	2.01		ug/L		100	71 - 123
2,4-Dinitrotoluene	2.00	1.99		ug/L		99	78 - 120
2,6-Dinitrotoluene	2.00	1.92		ug/L		96	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.85		ug/L		92	79 - 120
2-Nitrotoluene	2.00	1.49		ug/L		74	70 - 127
3-Nitrotoluene	2.00	1.55		ug/L		78	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.65		ug/L		82	76 - 125
4-Nitrotoluene	2.00	1.67		ug/L		83	71 - 127
HMX	2.00	2.04		ug/L		102	65 - 135
Nitrobenzene	2.00	1.78		ug/L		89	65 - 134
Nitroglycerin	20.0	20.5		ug/L		102	74 - 127
PETN	20.0	20.2		ug/L		101	73 - 127
RDX	2.00	2.11		ug/L		106	68 - 130
Tetryl	2.00	2.16		ug/L		108	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*96*		*83 - 119*

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

Lab Sample ID: LCSD 280-438225/3-A
Matrix: Water
Analysis Batch: 438727

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438225

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			2.00	2.20		ug/L		110	73 - 125	0	20
1,3-Dinitrobenzene			2.00	2.09		ug/L		105	78 - 120	0	20
2,4,6-Trinitrotoluene			2.00	2.00		ug/L		100	71 - 123	0	20
2,4-Dinitrotoluene			2.00	2.01		ug/L		101	78 - 120	1	20
2,6-Dinitrotoluene			2.00	2.00		ug/L		100	77 - 127	4	20
2-Amino-4,6-dinitrotoluene			2.00	1.94		ug/L		97	79 - 120	5	20
2-Nitrotoluene			2.00	1.55		ug/L		78	70 - 127	4	20
3-Nitrotoluene			2.00	1.66		ug/L		83	73 - 125	7	20
4-Amino-2,6-dinitrotoluene			2.00	1.78		ug/L		89	76 - 125	8	20
4-Nitrotoluene			2.00	1.72		ug/L		86	71 - 127	3	20
HMX			2.00	2.00		ug/L		100	65 - 135	2	20
Nitrobenzene			2.00	1.83		ug/L		92	65 - 134	3	20
Nitroglycerin			20.0	19.9		ug/L		100	74 - 127	3	20
PETN			20.0	20.1		ug/L		101	73 - 127	1	20
RDX			2.00	2.13		ug/L		106	68 - 130	1	20
Tetryl			2.00	2.16		ug/L		108	64 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*100*		*83 - 119*

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 280-434170/10
Matrix: Water
Analysis Batch: 434170

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chromium, hexavalent	0.010	U	0.020	0.010	0.0040	mg/L		10/19/18 14:23	1

Lab Sample ID: LCS 280-434170/8
Matrix: Water
Analysis Batch: 434170

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium, hexavalent			0.100	0.102		mg/L		102	90 - 111		

Lab Sample ID: LCSD 280-434170/9
Matrix: Water
Analysis Batch: 434170

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
Chromium, hexavalent			0.100	0.101		mg/L		101	90 - 111	2	20

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 280-115789-1 MS
Matrix: Water
Analysis Batch: 434170

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.010	U H J1	0.100	0.0472	J1	mg/L		47	90 - 111

Lab Sample ID: 280-115789-1 MSD
Matrix: Water
Analysis Batch: 434170

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hexavalent	0.010	U H J1	0.100	0.0428	J1	mg/L		43	90 - 111	10	20

Lab Sample ID: 280-115789-1 DU
Matrix: Water
Analysis Batch: 434170

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hexavalent	0.010	U H J1	0.010	U	mg/L		NC	20

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

Lab Sample ID: MB 280-434635/1-A
Matrix: Water
Analysis Batch: 434649

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434635

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		10/23/18 23:07	1

Lab Sample ID: LCS 280-434635/2-A
Matrix: Water
Analysis Batch: 434649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434635

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	19.4	12.0		mg/L		62	50 - 106

Lab Sample ID: 280-115789-1 MS
Matrix: Water
Analysis Batch: 434649

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA
Prep Batch: 434635

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	1.9	U J1	19.4	8.80	J1	mg/L		45	50 - 106

Lab Sample ID: 280-115789-1 MSD
Matrix: Water
Analysis Batch: 434649

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA
Prep Batch: 434635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	1.9	U J1	19.4	12.7	J1	mg/L		66	50 - 106	36	20

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 280-434136/6
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	0.042	mg/L		10/19/18 12:54	1
Nitrite as N	0.10	U	0.50	0.10	0.049	mg/L		10/19/18 12:54	1

Lab Sample ID: LCS 280-434136/4
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.43		mg/L		109	88 - 111
Nitrite as N	5.00	5.26		mg/L		105	87 - 111

Lab Sample ID: LCSD 280-434136/5
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	5.00	5.38		mg/L		108	88 - 111	1	10
Nitrite as N	5.00	5.28		mg/L		106	87 - 111	0	10

Lab Sample ID: MRL 280-434136/3
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.200	0.220	J	mg/L		110	50 - 150
Nitrite as N	0.200	0.229	J	mg/L		115	50 - 150

Lab Sample ID: 280-115789-1 MS
Client Sample ID: RQLMW-011-181001-GW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.10	U J1	5.00	4.74		mg/L		95	88 - 111
Nitrite as N	0.10	U J1	5.00	4.12	J1	mg/L		82	87 - 111

Lab Sample ID: 280-115789-1 MSD
Client Sample ID: RQLMW-011-181001-GW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.10	U J1	5.00	5.47	J1	mg/L		109	88 - 111	14	10
Nitrite as N	0.10	U J1	5.00	4.76	J1	mg/L		95	87 - 111	14	10

Lab Sample ID: 280-115789-1 DU
Client Sample ID: RQLMW-011-181001-GW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 434136

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.10	U J1	0.10	U	mg/L		NC	10

Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-115789-1 DU
Matrix: Water
Analysis Batch: 434136

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite as N	0.10	U J1	0.10	U	mg/L		NC	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-434137/6
Matrix: Water
Analysis Batch: 434137

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	0.50	U	5.0	0.50	0.23	mg/L		10/19/18 12:54	1

Lab Sample ID: LCS 280-434137/4
Matrix: Water
Analysis Batch: 434137

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	110		mg/L		110	87 - 112

Lab Sample ID: LCSD 280-434137/5
Matrix: Water
Analysis Batch: 434137

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
Sulfate	100	110		mg/L		110	87 - 112	0	10

Lab Sample ID: MRL 280-434137/3
Matrix: Water
Analysis Batch: 434137

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2.50	2.65	J	mg/L		106	50 - 150

Lab Sample ID: MB 280-434308/6
Matrix: Water
Analysis Batch: 434308

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	0.384	J	5.0	0.50	0.23	mg/L		10/22/18 01:37	1

Lab Sample ID: LCS 280-434308/4
Matrix: Water
Analysis Batch: 434308

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	109		mg/L		109	87 - 112

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

Lab Sample ID: LCSD 280-434308/5
Matrix: Water
Analysis Batch: 434308

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
Sulfate			100	110		mg/L		110	87 - 112	1	10

Lab Sample ID: MRL 280-434308/3
Matrix: Water
Analysis Batch: 434308

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			2.50	2.55	J	mg/L		102	50 - 150		

Lab Sample ID: 280-115789-1 MS
Matrix: Water
Analysis Batch: 434308

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	100	J1	25.0	133	4	mg/L		120	87 - 112		

Lab Sample ID: 280-115789-1 MSD
Matrix: Water
Analysis Batch: 434308

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100	J1	25.0	132	4	mg/L		116	87 - 112	1	10

Lab Sample ID: 280-115789-1 DU
Matrix: Water
Analysis Batch: 434308

Client Sample ID: RQLMW-011-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	100	J1	104		mg/L		0.2	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-434879/5
Matrix: Water
Analysis Batch: 434879

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	1.1	mg/L		10/24/18 16:17	1

Lab Sample ID: LCS 280-434879/4
Matrix: Water
Analysis Batch: 434879

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	190		mg/L		95	90 - 110		

GC/MS Semi VOA

Prep Batch: 434609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	3510C	
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	3510C	
280-115789-3	FWGER-181001-ER	Total/NA	Water	3510C	
280-115789-4	FWGFB-181001-FB	Total/NA	Water	3510C	
MB 280-434609/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-434609/2-A	Lab Control Sample	Total/NA	Water	3510C	
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	3510C	
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	3510C	

Prep Batch: 434728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	3520C	
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	3520C	
MB 280-434728/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-434728/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-434728/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	3520C	
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	3520C	

Prep Batch: 434912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-3	FWGER-181001-ER	Total/NA	Water	3520C	
280-115789-4	FWGFB-181001-FB	Total/NA	Water	3520C	
MB 280-434912/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-434912/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-434912/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 435306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-3	FWGER-181001-ER	Total/NA	Water	8270D	434912
280-115789-4	FWGFB-181001-FB	Total/NA	Water	8270D	434912
MB 280-434912/1-A	Method Blank	Total/NA	Water	8270D	434912
LCS 280-434912/2-A	Lab Control Sample	Total/NA	Water	8270D	434912
LCSD 280-434912/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	434912

Analysis Batch: 435422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	8270D SIM	434609
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	8270D SIM	434609
280-115789-3	FWGER-181001-ER	Total/NA	Water	8270D SIM	434609
280-115789-4	FWGFB-181001-FB	Total/NA	Water	8270D SIM	434609
MB 280-434609/1-A	Method Blank	Total/NA	Water	8270D SIM	434609
LCS 280-434609/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	434609
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	8270D SIM	434609
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	8270D SIM	434609

Analysis Batch: 435724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	8270D	434728
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	8270D	434728
MB 280-434728/1-A	Method Blank	Total/NA	Water	8270D	434728

GC/MS Semi VOA (Continued)

Analysis Batch: 435724 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-434728/2-A	Lab Control Sample	Total/NA	Water	8270D	434728
LCSD 280-434728/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	434728
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	8270D	434728
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	8270D	434728

HPLC/IC

Prep Batch: 438225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-5	FWGFB-181001-FB	Total/NA	Water	3535	
MB 280-438225/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-438225/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-438225/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 438727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-5	FWGFB-181001-FB	Total/NA	Water	8330B	438225
MB 280-438225/1-A	Method Blank	Total/NA	Water	8330B	438225
LCS 280-438225/2-A	Lab Control Sample	Total/NA	Water	8330B	438225
LCSD 280-438225/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	438225

General Chemistry

Analysis Batch: 434136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	9056	
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	9056	
MB 280-434136/6	Method Blank	Total/NA	Water	9056	
LCS 280-434136/4	Lab Control Sample	Total/NA	Water	9056	
LCSD 280-434136/5	Lab Control Sample Dup	Total/NA	Water	9056	
MRL 280-434136/3	Lab Control Sample	Total/NA	Water	9056	
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	9056	
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	9056	
280-115789-1 DU	RQLMW-011-181001-GW	Total/NA	Water	9056	

Analysis Batch: 434137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	9056A	
MB 280-434137/6	Method Blank	Total/NA	Water	9056A	
LCS 280-434137/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-434137/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-434137/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 434170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	7196A	
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	7196A	
MB 280-434170/10	Method Blank	Total/NA	Water	7196A	
LCS 280-434170/8	Lab Control Sample	Total/NA	Water	7196A	
LCSD 280-434170/9	Lab Control Sample Dup	Total/NA	Water	7196A	

General Chemistry (Continued)

Analysis Batch: 434170 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	7196A	
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	7196A	
280-115789-1 DU	RQLMW-011-181001-GW	Total/NA	Water	7196A	

Analysis Batch: 434308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	9056A	
MB 280-434308/6	Method Blank	Total/NA	Water	9056A	
LCS 280-434308/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-434308/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-434308/3	Lab Control Sample	Total/NA	Water	9056A	
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	9056A	
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	9056A	
280-115789-1 DU	RQLMW-011-181001-GW	Total/NA	Water	9056A	

Prep Batch: 434635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	9030B	
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	9030B	
MB 280-434635/1-A	Method Blank	Total/NA	Water	9030B	
LCS 280-434635/2-A	Lab Control Sample	Total/NA	Water	9030B	
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	9030B	
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	9030B	

Analysis Batch: 434649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	9034	434635
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	9034	434635
MB 280-434635/1-A	Method Blank	Total/NA	Water	9034	434635
LCS 280-434635/2-A	Lab Control Sample	Total/NA	Water	9034	434635
280-115789-1 MS	RQLMW-011-181001-GW	Total/NA	Water	9034	434635
280-115789-1 MSD	RQLMW-011-181001-GW	Total/NA	Water	9034	434635

Analysis Batch: 434879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-115789-1	RQLMW-011-181001-GW	Total/NA	Water	SM 2320B	
280-115789-2	RQLMW-011-181002-GW	Total/NA	Water	SM 2320B	
MB 280-434879/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-434879/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

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

TestAmerica Job ID: 280-115789-1

Client Sample ID: RQLMW-011-181001-GW
Lab Sample ID: 280-115789-1
Date Collected: 10/18/18 11:10
Matrix: Water
Date Received: 10/19/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			949.8 mL	1 mL	434728	10/24/18 13:18	CMR	TAL DEN
Total/NA	Analysis	8270D		1			435724	10/31/18 21:10	DCK	TAL DEN
Total/NA	Prep	3510C			221.4 mL	1 mL	434609	10/23/18 16:35	AJE	TAL DEN
Total/NA	Analysis	8270D SIM		1			435422	10/30/18 02:05	MKW	TAL DEN
Total/NA	Analysis	7196A		1	10 mL	10 mL	434170	10/19/18 14:23	JAP	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	434635	10/23/18 19:34	EC	TAL DEN
Total/NA	Analysis	9034		1			434649	10/23/18 23:07	EC	TAL DEN
Total/NA	Analysis	9056		1	5 mL	5 mL	434136	10/19/18 17:25	ARM	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	434308	10/22/18 09:20	ARM	TAL DEN
Total/NA	Analysis	SM 2320B		1			434879	10/24/18 20:22	SGB	TAL DEN

Client Sample ID: RQLMW-011-181002-GW
Lab Sample ID: 280-115789-2
Date Collected: 10/18/18 11:10
Matrix: Water
Date Received: 10/19/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			941.5 mL	1 mL	434728	10/24/18 13:18	CMR	TAL DEN
Total/NA	Analysis	8270D		1			435724	10/31/18 22:36	DCK	TAL DEN
Total/NA	Prep	3510C			238.7 mL	1 mL	434609	10/23/18 16:35	AJE	TAL DEN
Total/NA	Analysis	8270D SIM		1			435422	10/30/18 03:33	MKW	TAL DEN
Total/NA	Analysis	7196A		1	10 mL	10 mL	434170	10/19/18 14:23	JAP	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	434635	10/23/18 19:34	EC	TAL DEN
Total/NA	Analysis	9034		1			434649	10/23/18 23:07	EC	TAL DEN
Total/NA	Analysis	9056		1	5 mL	5 mL	434136	10/19/18 18:37	ARM	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	434137	10/19/18 18:37	ARM	TAL DEN
Total/NA	Analysis	SM 2320B		1			434879	10/24/18 20:28	SGB	TAL DEN

Client Sample ID: FWGER-181001-ER
Lab Sample ID: 280-115789-3
Date Collected: 10/18/18 07:30
Matrix: Water
Date Received: 10/19/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			968.6 mL	1 mL	434912	10/25/18 13:12	JZ	TAL DEN
Total/NA	Analysis	8270D		1			435306	10/29/18 17:27	DCK	TAL DEN
Total/NA	Prep	3510C			235.4 mL	1 mL	434609	10/23/18 16:35	AJE	TAL DEN
Total/NA	Analysis	8270D SIM		1			435422	10/30/18 04:02	MKW	TAL DEN

Lab Chronicle

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

TestAmerica Job ID: 280-115789-1

Client Sample ID: FWGFB-181001-FB
Date Collected: 10/18/18 07:20
Date Received: 10/19/18 09:20

Lab Sample ID: 280-115789-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1034.3 mL	1 mL	434912	10/25/18 13:12	JZ	TAL DEN
Total/NA	Analysis	8270D		1			435306	10/29/18 17:56	DCK	TAL DEN
Total/NA	Prep	3510C			256.5 mL	1 mL	434609	10/23/18 16:35	AJE	TAL DEN
Total/NA	Analysis	8270D SIM		1			435422	10/30/18 04:32	MKW	TAL DEN

Client Sample ID: FWGFB-181001-FB
Date Collected: 11/14/18 00:00
Date Received: 11/15/18 13:50

Lab Sample ID: 280-115789-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			488.3 mL	5 mL	438225	11/20/18 11:01	MAM	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	438727	11/26/18 15:13	HKF	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-115789-1
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

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-115789-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8330B	Nitroaromatics and Nitramines (HPLC)	EPA	TAL DEN
7196A	Chromium, Hexavalent	SW846	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL DEN
9056	Anions, Ion Chromatography	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL DEN
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Sample Summary

Client: Leidos, Inc.
TestAmerica Job ID: 280-115789-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-115789-1	RQLMW-011-181001-GW	Water	10/18/18 11:10	10/19/18 09:20
280-115789-2	RQLMW-011-181002-GW	Water	10/18/18 11:10	10/19/18 09:20
280-115789-3	FWGER-181001-ER	Water	10/18/18 07:30	10/19/18 09:20
280-115789-4	FWGFB-181001-FB	Water	10/18/18 07:20	10/19/18 09:20
280-115789-5	FWGFB-181001-FB	Water	11/14/18 00:00	11/15/18 13:50

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Analysis Batch Number: 434399

Lab Sample ID: ICIS 280-434399/3 Client Sample ID:

Date Analyzed: 10/23/18 13:33 Lab File ID: K27112.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.03	Split Peak	kiekeld	10/23/18 14:27

Lab Sample ID: STD004 280-434399/4 IC Client Sample ID:

Date Analyzed: 10/23/18 14:01 Lab File ID: K27113.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	1.96	Baseline	kiekeld	10/23/18 14:29
Benzoic acid	5.33	Wrong peak	kiekeld	10/23/18 14:29

Lab Sample ID: STD010 280-434399/5 IC Client Sample ID:

Date Analyzed: 10/23/18 14:30 Lab File ID: K27114.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	1.96	Baseline	kiekeld	10/23/18 15:33
Benzoic acid	5.35	Wrong peak	kiekeld	10/23/18 15:33

Lab Sample ID: STD020 280-434399/6 IC Client Sample ID:

Date Analyzed: 10/23/18 14:59 Lab File ID: K27115.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.36	Wrong peak	kiekeld	10/23/18 15:34

Lab Sample ID: STD050 280-434399/7 IC Client Sample ID:

Date Analyzed: 10/23/18 15:28 Lab File ID: K27116.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.39	Wrong peak	kiekeld	10/23/18 16:25

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Analysis Batch Number: 434399

Lab Sample ID: STD120 280-434399/8 IC Client Sample ID:

Date Analyzed: 10/23/18 15:57 Lab File ID: K27117.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.03	Split Peak	kiekeld	10/23/18 16:27

Lab Sample ID: STD160 280-434399/9 IC Client Sample ID:

Date Analyzed: 10/23/18 16:25 Lab File ID: K27118.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.04	Split Peak	kiekeld	10/23/18 16:53

Lab Sample ID: STD200 280-434399/10 IC Client Sample ID:

Date Analyzed: 10/23/18 16:54 Lab File ID: K27119.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.05	Split Peak	kiekeld	10/24/18 05:19

Lab Sample ID: ICV 280-434399/12 Client Sample ID:

Date Analyzed: 10/23/18 17:52 Lab File ID: K27121.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	6.01	Wrong peak	kiekeld	10/24/18 05:23

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Analysis Batch Number: 435306

Lab Sample ID: CCV 280-435306/3 Client Sample ID:

Date Analyzed: 10/29/18 09:03 Lab File ID: K27217.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N-Nitrosodiphenylamine	7.98	Wrong peak	kiekeld	10/29/18 09:30
4-Bromophenyl phenyl ether	8.35	Wrong peak	kiekeld	10/29/18 09:30
Phenanthrene	8.84	Wrong peak	kiekeld	10/29/18 09:30
Anthracene	8.88	Wrong peak	kiekeld	10/29/18 09:30

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Analysis Batch Number: 435724

Lab Sample ID: CCVC 280-435724/68 Client Sample ID:

Date Analyzed: 11/01/18 01:20 Lab File ID: K27343.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	19.12	Shouldering	kiekeld	11/01/18 06:25

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435404

Lab Sample ID: STD0001 280-435404/4 IC Client Sample ID:

Date Analyzed: 10/29/18 16:32 Lab File ID: F4399.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.26	Assign Peak	wickhamm	10/29/18 19:07
1-Methylnaphthalene	6.76	Assign Peak	wickhamm	10/29/18 19:08
2-Fluorobiphenyl	7.03	Assign Peak	wickhamm	10/29/18 19:07
Acenaphthene-d10	7.71	Baseline	wickhamm	10/29/18 19:07
Benzo[k]fluoranthene		Invalid Compound ID	wickhamm	10/29/18 19:09
Fluoranthene-d10	10.61	Assign Peak	wickhamm	10/29/18 19:09
Terphenyl-d14 (Surr)	11.20	Assign Peak	wickhamm	10/29/18 19:08
Indeno[1,2,3-cd]pyrene	20.52	Incomplete Integration	wickhamm	10/29/18 19:09

Lab Sample ID: STD0002 280-435404/5 IC Client Sample ID:

Date Analyzed: 10/29/18 17:02 Lab File ID: F4400.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.26	Baseline	wickhamm	10/29/18 19:10
2-Fluorobiphenyl	7.03	Baseline	wickhamm	10/29/18 19:10
Acenaphthene-d10	7.71	Baseline	wickhamm	10/29/18 19:09
Acenaphthene	7.75	Baseline	wickhamm	10/29/18 19:10
Terphenyl-d14 (Surr)	11.20	Baseline	wickhamm	10/29/18 19:10
Benzo[k]fluoranthene	16.34	Baseline	wickhamm	10/29/18 19:10
Indeno[1,2,3-cd]pyrene	20.51	Baseline	wickhamm	10/29/18 19:10

Lab Sample ID: STD0500 280-435404/6 IC Client Sample ID:

Date Analyzed: 10/29/18 17:32 Lab File ID: F4401.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.26	Peak assignment corrected	wickhamm	10/29/18 19:11

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435404

Lab Sample ID: STD0100 280-435404/7 IC Client Sample ID:

Date Analyzed: 10/29/18 18:01 Lab File ID: F4402.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene-d10	7.71	Baseline	wickhamm	10/29/18 19:11
Acenaphthene	7.74	Baseline	wickhamm	10/29/18 19:12
Benzo[k]fluoranthene	16.33	Baseline	wickhamm	10/29/18 19:12

Lab Sample ID: STD0300 280-435404/8 IC Client Sample ID:

Date Analyzed: 10/29/18 18:31 Lab File ID: F4403.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene	7.74	Baseline	wickhamm	10/29/18 19:13
Benzo[k]fluoranthene	16.33	Baseline	wickhamm	10/29/18 19:13

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435422

Lab Sample ID: MB 280-434609/1-A Client Sample ID:

Date Analyzed: 10/29/18 21:39 Lab File ID: F4410.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[a]pyrene		Invalid Compound ID	wickhamm	10/30/18 17:39
Benzo[k]fluoranthene		Invalid Compound ID	wickhamm	10/30/18 17:39

Lab Sample ID: LCS 280-434609/2-A Client Sample ID:

Date Analyzed: 10/29/18 22:09 Lab File ID: F4411.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[k]fluoranthene	16.32	Baseline	wickhamm	10/30/18 17:40

Lab Sample ID: 280-115789-1 Client Sample ID: RQLMW-011-181001-GW

Date Analyzed: 10/30/18 02:05 Lab File ID: F4419.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene		Invalid Compound ID	wickhamm	10/30/18 17:45
Benzo[a]pyrene		Invalid Compound ID	wickhamm	10/30/18 17:45
Fluorene		Invalid Compound ID	wickhamm	10/30/18 17:45

Lab Sample ID: 280-115789-1 MS Client Sample ID: RQLMW-011-181001-GW MS

Date Analyzed: 10/30/18 02:34 Lab File ID: F4420.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[k]fluoranthene	16.32	Baseline	wickhamm	10/30/18 18:54

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435422

Lab Sample ID: 280-115789-2 Client Sample ID:

Date Analyzed: 10/30/18 03:33 Lab File ID: F4422.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene-d10	7.71	Baseline	wickhamm	10/30/18 18:58

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8270_LCS_Main_00055	05/31/19	10/01/18	P&T Methanol, Lot MethanolP&T_00214	500 mL	571995_00044	5 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
							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-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-Methylphenol	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	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
							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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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
					571995_00049	5 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
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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-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-Methylphenol	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-chloroisopropyl) ether	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.: 280-115789-1

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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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
					571995_00050	5 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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	80 ug/mL
							3-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-Methylphenol	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-chloroisopropyl) ether	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
							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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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
					571995_00051	5 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
							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-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-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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
					571995_00052	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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-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-Methylphenol	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-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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
					571995_00053	5 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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-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-Methylphenol	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-chloroisopropyl) ether	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
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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
					571995_00055	5 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
							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-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-Methylphenol	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-chloroisopropyl) ether	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
							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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00056	5 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
							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-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-Methylphenol	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							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	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	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-569731_00095	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00096	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00097	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00100	5 mL	Benzoic acid	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indene	80 ug/mL
					OP-572556_00003	5 mL	Hexachlorocyclopentadiene	160 ug/mL
					OP-572556_00006	5 mL	Hexachlorocyclopentadiene	160 ug/mL
.571995_00044	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
							2,3,4,6-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-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-Methylphenol	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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
.571995_00049	10/01/19		Restek, Lot A0140111		(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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-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-Methylphenol	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-chloroisopropyl) ether	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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
.571995_00050	10/01/19		Restek, Lot A0140111		(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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-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-Methylphenol	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-chloroisopropyl) ether	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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
.571995_00051	10/01/19		Restek, Lot A0140111		(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
							2,3,4,6-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-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-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
.571995_00052	10/01/19	Restek, Lot A0140111			(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							2,3,4,6-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-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-Methylphenol	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-chloroisopropyl) ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
.571995_00053	10/01/19		Restek, Lot A0140111		(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
							2,3,4,6-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.: 280-115789-1

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-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-Methylphenol	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-chloroisopropyl) ether	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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
.571995_00055	10/01/19		Restek, Lot A0140111		(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
							2,3,4,6-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-Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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-Methylphenol	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-chloroisopropyl) ether	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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Octadecane	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
.571995_00056	10/01/19		Restek, Lot A0140111		(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
							2,3,4,6-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-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-Methylphenol	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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-569731_00095	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00096	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00097	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indene	2000 ug/mL
.MS-569731_00100	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.OP-572556_00003	10/01/19		Restek, Lot A0127376		(Purchased Reagent)		Hexachlorocyclopentadiene	4000 ug/mL
.OP-572556_00006	10/01/19		Restek, Lot A0127376		(Purchased Reagent)		Hexachlorocyclopentadiene	4000 ug/mL
8270_LCS_Supp_00307	10/25/18	10/18/18	P&T Methanol, Lot MethanolP&T_00215	50 mL	OP-569732_00003	2 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
					OP-CustBenz_00026	2 mL	3,3'-Dichlorobenzidine	160 ug/mL
							Benzidine	160 ug/mL
.OP-569732_00003	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.OP-CustBenz_00026	07/31/22		Restek, Lot A0139914		(Purchased Reagent)		3,3'-Dichlorobenzidine	4000 ug/mL
							Benzidine	4000 ug/mL
8270_LCS_Supp_00308	11/01/18	10/25/18	P&T Methanol, Lot MethanolP&T_00216	50 mL	OP-569732_00001	1 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
					OP-569732_00002	1 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
					OP-CustBenz_00026	2 mL	3,3'-Dichlorobenzidine	160 ug/mL
							Benzidine	160 ug/mL
.OP-569732_00001	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.OP-569732_00002	10/05/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.OP-CustBenz_00026	07/31/22		Restek, Lot A0139914		(Purchased Reagent)		3,3'-Dichlorobenzidine	4000 ug/mL
							Benzidine	4000 ug/mL
8270BO-SIMLCS_00031	09/30/19	10/11/18	P&T Methanol, Lot MethanolP&T_00215	250 mL	571995_00043	225 uL	1,1'-Biphenyl	0.9 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.9 ug/mL
							1,2,4-Trichlorobenzene	0.9 ug/mL
							1,2-Dichlorobenzene	0.9 ug/mL
							1,2-Diphenylhydrazine	0.909877 ug/mL
							1,3-Dichlorobenzene	0.9 ug/mL
							1,3-Dinitrobenzene	0.9 ug/mL
							1,4-Dichlorobenzene	0.9 ug/mL
							1,4-Dioxane	0.9 ug/mL
							1-Methylnaphthalene	0.9 ug/mL
							2,3,4,6-Tetrachlorophenol	0.9 ug/mL
							2,4,5-Trichlorophenol	0.9 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	0.9 ug/mL
							2,4-Dichlorophenol	0.9 ug/mL
							2,4-Dimethylphenol	0.9 ug/mL
							2,4-Dinitrophenol	1.8 ug/mL
							2,4-Dinitrotoluene	0.9 ug/mL
							2,6-Dichlorophenol	0.9 ug/mL
							2,6-Dinitrotoluene	0.9 ug/mL
							2-Chloronaphthalene	0.9 ug/mL
							2-Chlorophenol	0.9 ug/mL
							2-Methylnaphthalene	0.9 ug/mL
							2-Methylphenol	0.9 ug/mL
							2-Nitroaniline	0.9 ug/mL
							2-Nitrophenol	0.9 ug/mL
							3 & 4 Methylphenol	0.9 ug/mL
							3-Methylphenol	0.9 ug/mL
							3-Nitroaniline	0.9 ug/mL
							4,6-Dinitro-2-methylphenol	1.8 ug/mL
							4-Bromophenyl phenyl ether	0.9 ug/mL
							4-Chloro-3-methylphenol	0.9 ug/mL
							4-Chloroaniline	0.9 ug/mL
							4-Chlorophenyl phenyl ether	0.9 ug/mL
							4-Methylphenol	0.9 ug/mL
							4-Nitroaniline	0.9 ug/mL
							4-Nitrophenol	1.8 ug/mL
							Acenaphthene	0.9 ug/mL
							Acenaphthylene	0.9 ug/mL
							Acetophenone	0.9 ug/mL
							Aniline	0.9 ug/mL
							Anthracene	0.9 ug/mL
							Azobenzene	0.9 ug/mL
							Benzo[a]anthracene	0.9 ug/mL
							Benzo[a]pyrene	0.9 ug/mL
							Benzo[b]fluoranthene	0.9 ug/mL
							Benzo[g,h,i]perylene	0.9 ug/mL
							Benzo[k]fluoranthene	0.9 ug/mL
							Benzyl alcohol	0.9 ug/mL
							bis (2-chloroisopropyl) ether	0.9 ug/mL
							Bis(2-chloroethoxy)methane	0.9 ug/mL
							Bis(2-chloroethyl)ether	0.9 ug/mL
							Bis(2-ethylhexyl) phthalate	0.9 ug/mL
							Butyl benzyl phthalate	0.9 ug/mL
							Carbazole	0.9 ug/mL
							Chrysene	0.9 ug/mL
							Di-n-butyl phthalate	0.9 ug/mL
							Di-n-octyl phthalate	0.9 ug/mL
							Dibenz(a,h)anthracene	0.9 ug/mL
							Dibenzofuran	0.9 ug/mL
							Diethyl phthalate	0.9 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	0.9 ug/mL
							Diphenylamine	0.765 ug/mL
							Fluoranthene	0.9 ug/mL
							Fluorene	0.9 ug/mL
							Hexachlorobenzene	0.9 ug/mL
							Hexachlorobutadiene	0.9 ug/mL
							Hexachlorocyclopentadiene	0.9 ug/mL
							Hexachloroethane	0.9 ug/mL
							Hexadecane	0.9 ug/mL
							Indeno[1,2,3-cd]pyrene	0.9 ug/mL
							Isophorone	0.9 ug/mL
							n-Decane	0.9 ug/mL
							N-Nitrosodi-n-propylamine	0.9 ug/mL
							N-Nitrosodimethylamine	0.9 ug/mL
							N-Nitrosodiphenylamine	0.9 ug/mL
							n-Octadecane	0.9 ug/mL
							Naphthalene	0.9 ug/mL
							Nitrobenzene	0.9 ug/mL
							Pentachlorophenol	1.8 ug/mL
							Phenanthrene	0.9 ug/mL
							Phenol	0.9 ug/mL
							Pyrene	0.9 ug/mL
							Pyridine	1.8 ug/mL
.571995_00043	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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	1000 ug/mL
							3-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-Methylphenol	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-chloroisopropyl) ether	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
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	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
8270Surrogate_00127	07/09/19	09/12/18	ACETONE, Lot Acetone_00232	1000 mL	8270SurStkHL_00280	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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00285	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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00286	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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00287	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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
.8270SurStkHL_00280	09/12/19		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	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00285	09/12/19		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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00286	09/12/19		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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00287	09/12/19		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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	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
							2-Fluorophenol (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	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	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
8330 LCS_00078	04/30/18	02/08/18	Acetonitrile, Lot ACN_00209	100 mL	8330 LCSMix2_00102	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00061	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00062	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00069	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00070	1 mL	PETN	100 ug/mL
					8330LCSMix1_00097	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
.8330 LCSMix2_00102	02/08/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00061	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00062	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00069	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00070	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00097	02/08/19		Restek, Lot A0122924		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
8330 LCS_00082	09/07/19	09/07/18	Acetonitrile, Lot ACN_00215	100 mL	8330 LCSMix2_00104	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00067	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00068	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00067	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00068	1 mL	PETN	100 ug/mL
					8330LCSMix1_00105	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					PicricARestek_00080	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00104	09/07/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00067	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00068	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00067	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00068	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00105	09/07/19		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00080	09/07/19		Restek, Lot A0105913		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330IntermStk_00055	07/14/18	05/02/18	Acetonitrile, Lot 184115	10 mL	8330ICALStock_00026	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10.01 ug/mL
							2,4,6-Trinitrotoluene	10.04 ug/mL
							2,4-Dinitrotoluene	10.02 ug/mL
							2,6-Dinitrotoluene	10.03 ug/mL
							2-Amino-4,6-dinitrotoluene	10.03 ug/mL
							2-Nitrotoluene	10.03 ug/mL
							3-Nitrotoluene	10.04 ug/mL
							4-Amino-2,6-dinitrotoluene	10.03 ug/mL
							4-Nitrotoluene	10.04 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10.02 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00054	1 mL	2,4,6-Trinitrophenol	10 ug/mL
					NG_00002	1 mL	Nitroglycerin	100 ug/mL
					PETN_00002	1 mL	PETN	100 ug/mL
.8330ICALStock_00026	07/14/18	07/14/17	Acetonitrile, Lot ACN_00178	10 mL	8330 Stock_TS_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00161	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00009	04/30/20	Ultra Scientific, Lot CR-1002			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00161	08/15/24	AccuStandard, Lot 214081391			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00054	07/19/19	AccuStandard, Lot 216061376-01			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
.NG__00002	07/14/18	07/14/17	Acetonitrile, Lot 0000130057	5 mL	8330_NG_Stk_00049	1 mL	Nitroglycerin	1000 ug/mL
..8330_NG_Stk_00049	01/01/20	Restek, Lot A0124122			(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.PETN_00002	07/14/18	07/14/17	Acetonitrile, Lot 0000130057	5 mL	8330_PETN_Stk_00052	1 mL	PETN	1000 mL
..8330_PETN_Stk_00052	01/01/20	Restek, Lot A0124124			(Purchased Reagent)		PETN	5000 ug/mL
8330IntermStk_00056	01/16/19	07/16/18	Acetonitrile, Lot 194301	5 mL	8330_NG_Stk_00051	200 uL	Nitroglycerin	200 ug/mL
					8330_PETN_Stk_00053	200 uL	PETN	200 ug/mL
					8330ICALStock_00028	1 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,3-Dinitrobenzene	20.02 ug/mL
							2,4,6-Trinitrotoluene	20.08 ug/mL
							2,4-Dinitrotoluene	20.04 ug/mL
							2,6-Dinitrotoluene	20.06 ug/mL
							2-Amino-4,6-dinitrotoluene	20.06 ug/mL
							2-Nitrotoluene	20.06 ug/mL
							3-Nitrotoluene	20.08 ug/mL
							4-Amino-2,6-dinitrotoluene	20.06 ug/mL
							4-Nitrotoluene	20.08 ug/mL
							HMX	20 ug/mL
							Nitrobenzene	20.04 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							RDX	20 ug/mL
							Tetryl	20 ug/mL
							1,2-Dinitrobenzene	20 ug/mL
.8330_NG_Stk_00051	01/01/20		Restek, Lot A0124122		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00053	01/01/20		Restek, Lot A0124124		(Purchased Reagent)		PETN	5000 ug/mL
.8330ICALStock_00028	07/16/19	07/16/18	Acetonitrile, Lot ACN_194301	10 mL	8330 Stock_TS_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00162	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00011	04/30/20		Ultra Scientific, Lot CR-1002		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00162	08/15/24		AccuStandard, Lot 214081391		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00098	03/01/19	03/01/18	Acetonitrile, Lot ACN_00210	500 mL	8330SurrStkSS_00123	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00124	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00125	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00126	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00127	1 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00123	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00124	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00125	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00126	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00127	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330Surrogate_00100	03/07/19	09/07/18	Acetonitrile, Lot ACN_00215	500 mL	8330SurrStkSS_00130	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00131	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00132	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00133	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00141	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00130	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00131	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00132	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00133	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00141	09/07/19		Restek, Lot A0131413		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
Alk daily lcs_00780	10/30/18	10/23/18	Di Water, Lot na	1000 mL	Alk stk std_00014	4 mL	Alkalinity	200 mg/L
.Alk stk std_00014	04/30/19		Fischer, Lot 172632		(Purchased Reagent)		Alkalinity	50 g/L
CR6 ICV int_01502	10/20/18	10/19/18	Di Water, Lot na	100 mL	Cr6 ICV Std_00018	0.1 mL	Chromium, hexavalent	1 mg/L
.Cr6 ICV Std_00018	10/03/22		Hach, Lot A7179		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
CR6 Int cal_01060	10/20/18	10/19/18	Di Water, Lot na	100 mL	CR6 Cal std_00010	0.1 mL	Chromium, hexavalent	1 mg/L
.CR6 Cal std_00010	04/26/19		ERA, Lot 040416		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
CR6 spike sou_01111	10/20/18	10/19/18	Di Water, Lot na	100 mL	CR6 Cal std_00010	1 mL	Chromium, hexavalent	10 mg/L
.CR6 Cal std_00010	04/26/19		ERA, Lot 040416		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
IC CAL cl/so4_00225	10/18/18	10/11/18	Di Water, Lot na	100 mL	IC CL cal_00054	25 mL	Chloride	250 mg/L
					IC sulfatecal_00053	25 mL	Sulfate	250 mg/L
.IC CL cal_00054	08/30/19		SPEX CertiPrep, Lot 4-101CL-2X		(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00226	10/26/18	10/19/18	Di Water, Lot na	100 mL	IC sulfatecal_00053	25 mL	Sulfate	250 mg/L
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00406	10/18/18	10/11/18	Di Water, Lot NA	100 mL	IC Br cal_00015	5 mL	Bromide	50 mg/L
					IC FL cal_00012	5 mL	Fluoride	50 mg/L
					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 Br cal_00015	01/31/19		Ricca, Lot 4707D55		(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00012	10/31/18		Ricca, Lot 4704K15		(Purchased Reagent)		Fluoride	1000 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.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC Cal low_00407	10/23/18	10/16/18	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_00212	10/21/18	10/14/18	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 PO4 ICV_00015	0.5 mL	Orthophosphate as P	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 PO4 ICV_00015	06/30/19		ERA, Lot 060617		(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC LCS_01376	10/20/18	10/19/18	Di Water, Lot 27	200 mL	IC Cal low_00407	20 mL	Nitrite as N	5 mg/L
							Nitrate as N	5 mg/L
							Orthophosphate as P	5 mg/L
					IC sulfatecal_00053	20 mL	Sulfate	100 mg/L
.IC Cal low_00407	10/23/18	10/16/18	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
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC LCS_01378	10/22/18	10/21/18	Di Water, Lot 27	200 mL	IC sulfatecal_00053	20 mL	Sulfate	100 mg/L
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00559	10/20/18	10/13/18	Di Water, Lot NA	10 mL	IC SPK 6 ANIO_00021	5 mL	Nitrate as N	500.003 mg/L
					IC SPK N02SOL_00013	5 mL	Nitrite as N	499.973 mg/L
.IC SPK 6 ANIO_00021	10/01/19	10/01/18	Di Water, Lot NA	1000 mL	IC MS/MSD N03_00005	6.068 g	Nitrate as N	1000.01 mg/L
..IC MS/MSD N03_00005	09/27/28		FISHER, Lot 176192		(Purchased Reagent)		Nitrate as N	0.1648 g/g
.IC SPK N02SOL_00013	06/05/19	06/05/18	Di Water, Lot na	500 mL	IC MS/MSD N02_00002	2.4628 g	Nitrite as N	999.946 mg/L
..IC MS/MSD N02_00002	01/12/27		fisher, Lot 164254		(Purchased Reagent)		Nitrite as N	0.20301 g/g
ICMS/MSD WEEK_00560	10/27/18	10/20/18	Di Water, Lot NA	10 mL	IC SPK 6 ANIO_00021	5 mL	Sulfate	2500.26 mg/L
.IC SPK 6 ANIO_00021	10/01/19	10/01/18	Di Water, Lot NA	1000 mL	IC MS/MSD S04_00005	9.0704 g	Sulfate	5000.51 mg/L
..IC MS/MSD S04_00005	09/29/20		FISHER, Lot 147276		(Purchased Reagent)		Sulfate	0.5513 g/g
MS-AFCACCV080_00074	11/30/18	06/23/18	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
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					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-BZHDA-CCV_00049	11/30/18	06/07/18	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-DFTPP_00047							Aramite, Total	
							Diallate	
							Isosafrole	
							Methyl Phenols,Total	
							Phthalic acid	
							Tentatively Identified Compound	
							Total Cresols	
							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-FAMSSV_100_00020	04/04/19	10/23/18	Methylene Chloride, Lot 203837	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-HSLA004_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	10 uL	2,4,6-Tribromophenol (Surr)	4 ug/mL
							2-Fluorobiphenyl	4 ug/mL
							2-Fluorophenol (Surr)	4 ug/mL
							Nitrobenzene-d5	4 ug/mL
							Phenol-d5 (Surr)	4 ug/mL
							Terphenyl-d14	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
							2,3,4,6-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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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-chloroisopropyl) ether	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
							N-Nitrosodiphenylamine	4 ug/mL
							Naphthalene	4 ug/mL
							Nitrobenzene	4 ug/mL
							Pentachlorophenol	8 ug/mL
							Phenanthrene	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730 HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL_00006	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
							2,3,4,6-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.: 280-115789-1

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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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
							2,3,4,6-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.: 280-115789-1

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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	25 uL	2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14	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
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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-chloroisopropyl) ether	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
							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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	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
							2,3,4,6-Tetrachlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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
							2,3,4,6-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.: 280-115789-1

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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	50 uL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14	20 ug/mL
							Famphur	20 ug/mL
							Alachlor	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							2,3,4,6-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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzyl alcohol	20 ug/mL
							bis (2-chloroisopropyl) ether	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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							2,3,4,6-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-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00040	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	125 uL	2,4,6-Tribromophenol (Surr)	50 ug/mL
							2-Fluorobiphenyl	50 ug/mL
							2-Fluorophenol (Surr)	50 ug/mL
							Nitrobenzene-d5	50 ug/mL
							Phenol-d5 (Surr)	50 ug/mL
							Terphenyl-d14	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
							2,3,4,6-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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							Pentachlorophenol	100 ug/mL
							Phenanthrene	50 ug/mL
							Phenol	50 ug/mL
							Pyrene	50 ug/mL
							Pyridine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	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
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	300 uL	2,4,6-Tribromophenol (Surr)	120 ug/mL
							2-Fluorobiphenyl	120 ug/mL
							2-Fluorophenol (Surr)	120 ug/mL
							Nitrobenzene-d5	120 ug/mL
							Phenol-d5 (Surr)	120 ug/mL
							Terphenyl-d14	120 ug/mL
							Famphur	120 ug/mL
							Alachlor	120 ug/mL
							3,3'-Dichlorobenzidine	120 ug/mL
							Benzoic acid	240 ug/mL
							Atrazine	120 ug/mL
							Caprolactam	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							2,3,4,6-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
							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-chloroisopropyl) ether	120 ug/mL
							Bis(2-chloroethoxy)methane	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							2,3,4,6-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-chloroisopropyl) ether	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							2,3,4,6-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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA160_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	400 uL	2,4,6-Tribromophenol (Surr)	160 ug/mL
							2-Fluorobiphenyl	160 ug/mL
							2-Fluorophenol (Surr)	160 ug/mL
							Nitrobenzene-d5	160 ug/mL
							Phenol-d5 (Surr)	160 ug/mL
							Terphenyl-d14	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
							2,3,4,6-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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	500 uL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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_00048	01/30/19	10/01/18	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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(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_00006	10/31/19		Restek, Lot A0137125		(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
							2,3,4,6-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-chloroisopropyl) ether	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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_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	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Benzoic acid	160 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	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-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	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
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenol	80 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	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	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-571995_00002	2 mL	1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	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-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	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
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenol	200 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	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 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-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	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-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	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
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	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
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenol	1000 ug/mL
MS-HSLB1B3SSV_00052	03/06/19	10/23/18	Methylene Chloride, Lot 203837	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

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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-HSLB1B3SSV_00052	03/06/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLB1_STK_00012	250 uL	Benzoic acid	200 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Benzyl alcohol	100 ug/mL
							bis (2-chloroisopropyl) ether	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Isophorone	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenol	100 ug/mL
.MS-HSLB1_STK_00012	03/31/19	06/18/18	Methylene Chloride, Lot 187286	5 mL	MS-569731.SEC_00003	1 mL	Benzoic acid	400 ug/mL
					MS-571995.SEC_00002	1 mL	1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	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-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	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.: 280-115789-1

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
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	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
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenol	200 ug/mL
..MS-569731.SEC_00003	05/31/19		Restek, Lot A0132859		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-571995.SEC_00002	03/31/19		Restek, Lot A0131190		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	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-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	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
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenol	1000 ug/mL
MS-HSLB2SSV_00047	02/28/19	10/23/18	Methylene Chloride, Lot 203837	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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_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-HSLB2SSV_00047	02/28/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLB2_STK_00010	250 uL	3,3'-Dichlorobenzidine	100 ug/mL
.MS-HSLB2_STK_00010	02/28/19	06/18/18	Methylene Chloride, Lot 187286	10 mL	MS-569730SEC_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
..MS-569730SEC_00004	04/30/19		Restek, Lot A0131614		(Purchased Reagent)		3,3'-Dichlorobenzidine	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-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	6 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM SSV2_00004	03/31/19	07/02/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM SSV2_00004	03/31/19	07/02/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM SSV_00130	30 uL	1-Methylnaphthalene	0.6 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
.MS-SIM SSV_00130	03/31/19	07/02/18	Methylene Chloride, Lot 187286	10 mL	MS-HSLB1_STK_00012	1 mL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
..MS-HSLB1_STK_00012	03/31/19	06/18/18	Methylene Chloride, Lot 187286	5 mL	MS-571995.SEC_00002	1 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-571995.SEC_00002	03/31/19		Restek, Lot A0131190		(Purchased Reagent)		1-Methylnaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	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
							Chrysene	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
MS-SIMSL 0.01_00005	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	5 uL	2-methylnaphthalene-d10	0.01 ug/mL
							Fluoranthene-d10	0.01 ug/mL
							2-Methylnaphthalene	0.02 ug/mL
							1-Methylnaphthalene	0.01 ug/mL
							Acenaphthene	0.01 ug/mL
							Acenaphthylene	0.01 ug/mL
							Anthracene	0.01 ug/mL
							Benzo[a]anthracene	0.01 ug/mL
							Benzo[a]pyrene	0.01 ug/mL
							Benzo[b]fluoranthene	0.01 ug/mL
							Benzo[g,h,i]perylene	0.01 ug/mL
							Benzo[k]fluoranthene	0.01 ug/mL
							Chrysene	0.01 ug/mL
							Dibenz(a,h)anthracene	0.01 ug/mL
							Fluoranthene	0.01 ug/mL
							Fluorene	0.01 ug/mL
							Indeno[1,2,3-cd]pyrene	0.01 ug/mL
							Naphthalene	0.01 ug/mL
							Phenanthrene	0.01 ug/mL
							Pyrene	0.01 ug/mL
							2-Fluorobiphenyl	0.01 ug/mL
							Nitrobenzene-d5	0.01 ug/mL
							Terphenyl-d14	0.01 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.02_00079	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	10 uL	2-methylnaphthalene-d10	0.02 ug/mL
							Fluoranthene-d10	0.02 ug/mL
							2-Methylnaphthalene	0.04 ug/mL
							1-Methylnaphthalene	0.02 ug/mL
							Acenaphthene	0.02 ug/mL
							Acenaphthylene	0.02 ug/mL
							Anthracene	0.02 ug/mL
							Benzo[a]anthracene	0.02 ug/mL
							Benzo[a]pyrene	0.02 ug/mL
							Benzo[b]fluoranthene	0.02 ug/mL
							Benzo[g,h,i]perylene	0.02 ug/mL
							Benzo[k]fluoranthene	0.02 ug/mL
							Chrysene	0.02 ug/mL
							Dibenz(a,h)anthracene	0.02 ug/mL
							Fluoranthene	0.02 ug/mL
							Fluorene	0.02 ug/mL
							Indeno[1,2,3-cd]pyrene	0.02 ug/mL
							Naphthalene	0.02 ug/mL
							Phenanthrene	0.02 ug/mL
							Pyrene	0.02 ug/mL
							2-Fluorobiphenyl	0.02 ug/mL
							Nitrobenzene-d5	0.02 ug/mL
							Terphenyl-d14	0.02 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.05_00007	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	25 uL	2-methylnaphthalene-d10	0.05 ug/mL
							Fluoranthene-d10	0.05 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							1-Methylnaphthalene	0.05 ug/mL
							Acenaphthene	0.05 ug/mL
							Acenaphthylene	0.05 ug/mL
							Anthracene	0.05 ug/mL
							Benzo[a]anthracene	0.05 ug/mL
							Benzo[a]pyrene	0.05 ug/mL
							Benzo[b]fluoranthene	0.05 ug/mL
							Benzo[g,h,i]perylene	0.05 ug/mL
							Benzo[k]fluoranthene	0.05 ug/mL
							Chrysene	0.05 ug/mL
							Dibenz(a,h)anthracene	0.05 ug/mL
							Fluoranthene	0.05 ug/mL
							Fluorene	0.05 ug/mL
							Indeno[1,2,3-cd]pyrene	0.05 ug/mL
							Naphthalene	0.05 ug/mL
							Phenanthrene	0.05 ug/mL
							Pyrene	0.05 ug/mL
							2-Fluorobiphenyl	0.05 ug/mL
							Nitrobenzene-d5	0.05 ug/mL
							Terphenyl-d14	0.05 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.1_00075	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	50 uL	2-methylnaphthalene-d10	0.1 ug/mL
							Fluoranthene-d10	0.1 ug/mL
							2-Methylnaphthalene	0.2 ug/mL
							1-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							2-Fluorobiphenyl	0.1 ug/mL
							Nitrobenzene-d5	0.1 ug/mL
							Terphenyl-d14	0.1 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-SIMSL 0.3_00074	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	150 uL	2-methylnaphthalene-d10	0.3 ug/mL
							Fluoranthene-d10	0.3 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							1-Methylnaphthalene	0.3 ug/mL
							Acenaphthene	0.3 ug/mL
							Acenaphthylene	0.3 ug/mL
							Anthracene	0.3 ug/mL
							Benzo[a]anthracene	0.3 ug/mL
							Benzo[a]pyrene	0.3 ug/mL
							Benzo[b]fluoranthene	0.3 ug/mL
							Benzo[g,h,i]perylene	0.3 ug/mL
							Benzo[k]fluoranthene	0.3 ug/mL
							Chrysene	0.3 ug/mL
							Dibenz(a,h)anthracene	0.3 ug/mL
							Fluoranthene	0.3 ug/mL
							Fluorene	0.3 ug/mL
							Indeno[1,2,3-cd]pyrene	0.3 ug/mL
							Naphthalene	0.3 ug/mL
							Phenanthrene	0.3 ug/mL
							Pyrene	0.3 ug/mL
							2-Fluorobiphenyl	0.3 ug/mL
							Nitrobenzene-d5	0.3 ug/mL
							Terphenyl-d14	0.3 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.6_00144	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-SIMSL_00027	30 uL	2-methylnaphthalene-d10	0.6 ug/mL
							Fluoranthene-d10	0.6 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							1-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
							2-Fluorobiphenyl	0.6 ug/mL
							Nitrobenzene-d5	0.6 ug/mL
							Terphenyl-d14	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 1.2_00075	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	60 uL	2-methylnaphthalene-d10	1.2 ug/mL
							Fluoranthene-d10	1.2 ug/mL
							2-Methylnaphthalene	2.4 ug/mL
							1-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2-Fluorobiphenyl	1.2 ug/mL
							Nitrobenzene-d5	1.2 ug/mL
							Terphenyl-d14	1.2 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19	O2SI, Lot 334026			(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 2.5_00074	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	125 uL	2-methylnaphthalene-d10	2.5 ug/mL
							Fluoranthene-d10	2.5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							1-Methylnaphthalene	2.5 ug/mL
							Acenaphthene	2.5 ug/mL
							Acenaphthylene	2.5 ug/mL
							Anthracene	2.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	2.5 ug/mL
							Benzo[a]pyrene	2.5 ug/mL
							Benzo[b]fluoranthene	2.5 ug/mL
							Benzo[g,h,i]perylene	2.5 ug/mL
							Benzo[k]fluoranthene	2.5 ug/mL
							Chrysene	2.5 ug/mL
							Dibenz(a,h)anthracene	2.5 ug/mL
							Fluoranthene	2.5 ug/mL
							Fluorene	2.5 ug/mL
							Indeno[1,2,3-cd]pyrene	2.5 ug/mL
							Naphthalene	2.5 ug/mL
							Phenanthrene	2.5 ug/mL
							Pyrene	2.5 ug/mL
							2-Fluorobiphenyl	2.5 ug/mL
							Nitrobenzene-d5	2.5 ug/mL
							Terphenyl-d14	2.5 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 5_00076	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	250 uL	2-methylnaphthalene-d10	5 ug/mL
							Fluoranthene-d10	5 ug/mL
							2-Methylnaphthalene	10 ug/mL
							1-Methylnaphthalene	5 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Anthracene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Chrysene	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Naphthalene	5 ug/mL
							Phenanthrene	5 ug/mL
							Pyrene	5 ug/mL
							2-Fluorobiphenyl	5 ug/mL
							Nitrobenzene-d5	5 ug/mL
							Terphenyl-d14	5 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

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
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	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
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19	O2SI, Lot 334026			(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	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
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
SFD ICV INT_01504	10/31/18	10/23/18	Di Water, Lot N/A	500 mL	50% NaOH_00013	2 mL	Sodium Hydroxide	2000 mg/L
					SFD ICV STK_00005	3.63296 g	Sulfide	970 mg/L
.50% NaOH_00013	10/31/18		Fisher, Lot 166472		(Purchased Reagent)		Sodium Hydroxide	50 %
.SFD ICV STK_00005	03/26/23		Acros, Lot B0132482A		(Purchased Reagent)		Sulfide	0.1335 g/g
SIM_LVI_SURR_00006	02/11/19	10/01/18	ACETONE, Lot Acetone_00198	500 mL	8270SIMSurStk_00001	1 mL	2,4,6 - Tribromophenol	2 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							Fluoranthene-d10 (Surr)	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Phenol-d6	2 ug/mL
							Terphenyl-d14	2 ug/mL
.8270SIMSurStk_00001	02/11/19		o2si, Lot 334025		(Purchased Reagent)		2,4,6 - Tribromophenol	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Tribromophenol (Surr)	1000 mg/L
							2-Fluorobiphenyl	1000 mg/L
							2-Fluorophenol (Surr)	1000 mg/L
							2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
							Fluoranthene-d10 (Surr)	1000 mg/L
							Nitrobenzene-d5	1000 mg/L
							Phenol-d5 (Surr)	1000 mg/L
							Phenol-d6	1000 mg/L
							Terphenyl-d14	1000 mg/L

Reagent

50% NaOH_00013

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0090918

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**SS254**	**Quality Test / Release Date**	**10/7/2016**
Lot Number	**166472**	**Expiration Date**	**Oct/18**
Description	**SODIUM HYDROXIDE, 50%, CERTIFIED**		
Country of Origin	**United States**		
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	This product is of mineral origin, not animal origin, and to the best of our knowledge, does not contribute to BSE or TSE.		
Chemical Comment	This product is not manufactured with natural latex rubber or genetically modified organisms. Also it is not manufactured using allergenic materials, including dyes/food dyes, eggs/egg products, fish/shellfish/crustaceans, flavors, glutens, legumes, milk, mollusks, MSG, mustards, plant nuts/seeds/oils, peanuts/peanut products, protein hydrolysates, soybean products, spices, sulfites, sulfates, tree nuts or oils, and wheat.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	CLEAR, COLORLESS LIQUID HAVING NO SEDIMENT OR PARTICULATES
AMMONIUM HYDROX. PPT	%	<= 0.010	<0.010
ASSAY	%	Inclusive Between 50 - 52	50
CARBONATE	%	<= 0.10	0.06
CHLORIDE	%	<= 0.005	<0.005
HEAVY METALS (as Ag)	%	<= 0.001	<0.001
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 5	<5
NITROGEN COMPOUNDS	ppm	<= 5	<5
PHOSPHATE (PO4)	ppm	<= 5	<5
POTASSIUM (K)	%	<= 0.025	<0.003
SILICA (SiO2)	%	<= 0.01	<0.01
SULFATE (SO4)	%	<= 0.002	<0.002



Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis BPF

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 call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Reagent

571995_00043

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.

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

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		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,001.0	µg/mL	+/-	5.8199	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9660	µg/mL	Unstressed
	Purity 99%				+/-	19.0437	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0067	µg/mL	Unstressed
	Purity 99%				+/-	19.1084	µg/mL	Stressed
11	Benzyl alcohol		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7	µg/mL	+/-	5.8528	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 5510800)			+/-	12.0336	µg/mL	Unstressed
	Purity 98%				+/-	19.1513	µg/mL	Stressed
15	Acetophenone		1,005.5	µg/mL	+/-	5.8459	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG7113)			+/-	12.0194	µg/mL	Unstressed
	Purity 99%				+/-	19.1287	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9923	µg/mL	Unstressed
	Purity 99%				+/-	9.5334	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.7	µg/mL	+/-	2.9235	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0002	µg/mL	Unstressed
	Purity 99%				+/-	9.5461	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot NOPCF)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
19	Hexachloroethane		1,003.4	µg/mL	+/-	5.8339	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9947	µg/mL	Unstressed
	Purity 99%				+/-	19.0894	µg/mL	Stressed
20	Nitrobenzene		1,002.3	µg/mL	+/-	5.8273	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	11.9812	µg/mL	Unstressed
	Purity 99%				+/-	19.0678	µg/mL	Stressed
21	Isophorone		1,003.3	µg/mL	+/-	5.8334	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9938	µg/mL	Unstressed
	Purity 98%				+/-	19.0879	µg/mL	Stressed
22	2-Nitrophenol		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0457	µg/mL	Unstressed
	Purity 99%				+/-	19.1706	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.9	µg/mL	+/-	5.8191	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9644	µg/mL	Unstressed
	Purity 99%				+/-	19.0412	µg/mL	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		1,004.5	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0075	µg/mL	Unstressed
	Purity 99%				+/-	19.1097	µg/mL	Stressed
41	Acenaphthylene		1,006.0	µg/mL	+/-	5.8491	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0260	µg/mL	Unstressed
	Purity 97%				+/-	19.1392	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
43	Dimethylphthalate		1,003.7	µg/mL	+/-	5.8358	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9987	µg/mL	Unstressed
	Purity 99%				+/-	19.0957	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
45	3-Nitroaniline		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
46	Acenaphthene		1,005.9	µg/mL	+/-	5.8482	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0242	µg/mL	Unstressed
	Purity 99%				+/-	19.1363	µg/mL	Stressed
47	2,4-Dinitrophenol		2,008.3	µg/mL	+/-	11.6766	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	24.0077	µg/mL	Unstressed
	Purity 99%				+/-	38.2080	µg/mL	Stressed
48	Dibenzofuran		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
49	4-Nitrophenol		2,009.3	µg/mL	+/-	11.6824	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	24.0197	µg/mL	Unstressed
	Purity 99%				+/-	38.2270	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.9	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0003	µg/mL	Unstressed
	Purity 99%				+/-	19.0983	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.9	µg/mL	+/-	5.8253	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B180305L)			+/-	11.9772	µg/mL	Unstressed
	Purity 99%				+/-	19.0615	µg/mL	Stressed
52	Fluorene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG2582V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
54	Diethylphthalate		1,003.3	µg/mL	+/-	5.8335	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9939	µg/mL	Unstressed
	Purity 99%				+/-	19.0881	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	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		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.7	µg/mL	+/-	5.8296	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9859	µg/mL	Unstressed
	Purity 99%				+/-	19.0754	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.9	µg/mL	+/-	5.8602	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 6016000)			+/-	12.0489	µg/mL	Unstressed
	Purity 99%				+/-	19.1756	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9971	µg/mL	Unstressed
	Purity 99%				+/-	19.0932	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012017K)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
77	Benzo(a)pyrene		1,002.1	µg/mL	+/-	5.8261	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9788	µg/mL	Unstressed
	Purity 99%				+/-	19.0640	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	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%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

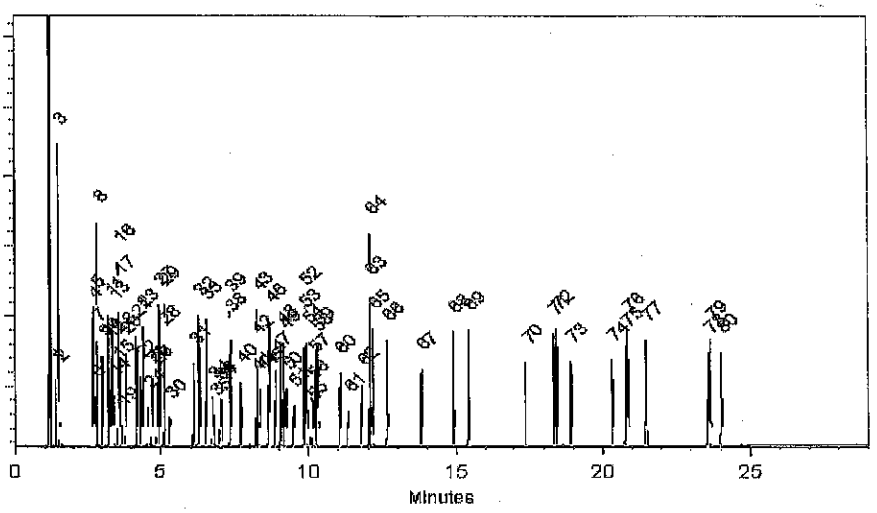
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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.

Joseph Jaglowski - Mix Technician **Date Mixed:** 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

571995_00044

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.

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

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		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,001.0	µg/mL	+/-	5.8199	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9660	µg/mL	Unstressed
	Purity 99%				+/-	19.0437	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0067	µg/mL	Unstressed
	Purity 99%				+/-	19.1084	µg/mL	Stressed
11	Benzyl alcohol		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7	µg/mL	+/-	5.8528	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 5510800)			+/-	12.0336	µg/mL	Unstressed
	Purity 98%				+/-	19.1513	µg/mL	Stressed
15	Acetophenone		1,005.5	µg/mL	+/-	5.8459	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG7113)			+/-	12.0194	µg/mL	Unstressed
	Purity 99%				+/-	19.1287	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9923	µg/mL	Unstressed
	Purity 99%				+/-	9.5334	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.7	µg/mL	+/-	2.9235	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0002	µg/mL	Unstressed
	Purity 99%				+/-	9.5461	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot NOPCF)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
19	Hexachloroethane		1,003.4	µg/mL	+/-	5.8339	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9947	µg/mL	Unstressed
	Purity 99%				+/-	19.0894	µg/mL	Stressed
20	Nitrobenzene		1,002.3	µg/mL	+/-	5.8273	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	11.9812	µg/mL	Unstressed
	Purity 99%				+/-	19.0678	µg/mL	Stressed
21	Isophorone		1,003.3	µg/mL	+/-	5.8334	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9938	µg/mL	Unstressed
	Purity 98%				+/-	19.0879	µg/mL	Stressed
22	2-Nitrophenol		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0457	µg/mL	Unstressed
	Purity 99%				+/-	19.1706	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.9	µg/mL	+/-	5.8191	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9644	µg/mL	Unstressed
	Purity 99%				+/-	19.0412	µg/mL	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		1,004.5	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0075	µg/mL	Unstressed
	Purity 99%				+/-	19.1097	µg/mL	Stressed
41	Acenaphthylene		1,006.0	µg/mL	+/-	5.8491	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0260	µg/mL	Unstressed
	Purity 97%				+/-	19.1392	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
43	Dimethylphthalate		1,003.7	µg/mL	+/-	5.8358	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9987	µg/mL	Unstressed
	Purity 99%				+/-	19.0957	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
45	3-Nitroaniline		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
46	Acenaphthene		1,005.9	µg/mL	+/-	5.8482	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0242	µg/mL	Unstressed
	Purity 99%				+/-	19.1363	µg/mL	Stressed
47	2,4-Dinitrophenol		2,008.3	µg/mL	+/-	11.6766	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	24.0077	µg/mL	Unstressed
	Purity 99%				+/-	38.2080	µg/mL	Stressed
48	Dibenzofuran		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
49	4-Nitrophenol		2,009.3	µg/mL	+/-	11.6824	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	24.0197	µg/mL	Unstressed
	Purity 99%				+/-	38.2270	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.9	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0003	µg/mL	Unstressed
	Purity 99%				+/-	19.0983	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.9	µg/mL	+/-	5.8253	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B180305L)			+/-	11.9772	µg/mL	Unstressed
	Purity 99%				+/-	19.0615	µg/mL	Stressed
52	Fluorene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG2582V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
54	Diethylphthalate		1,003.3	µg/mL	+/-	5.8335	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9939	µg/mL	Unstressed
	Purity 99%				+/-	19.0881	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	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		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.7	µg/mL	+/-	5.8296	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9859	µg/mL	Unstressed
	Purity 99%				+/-	19.0754	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.9	µg/mL	+/-	5.8602	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 6016000)			+/-	12.0489	µg/mL	Unstressed
	Purity 99%				+/-	19.1756	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9971	µg/mL	Unstressed
	Purity 99%				+/-	19.0932	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012017K)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
77	Benzo(a)pyrene		1,002.1	µg/mL	+/-	5.8261	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9788	µg/mL	Unstressed
	Purity 99%				+/-	19.0640	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	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%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

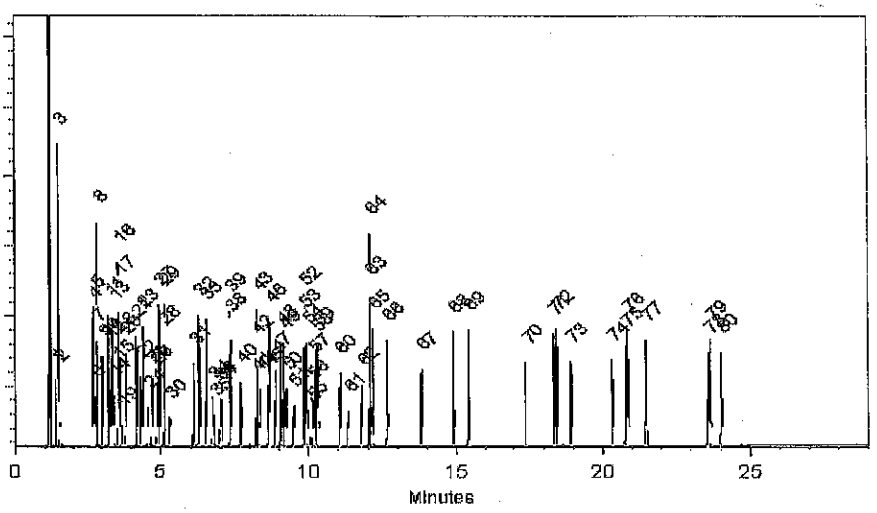
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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.

Joseph Jaglowski - Mix Technician

Date Mixed: 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 27-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

571995_00049

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.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

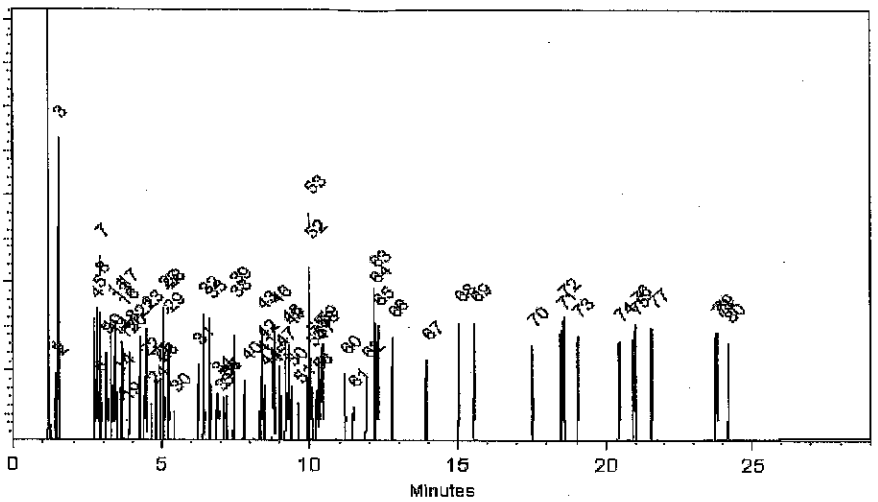
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00050

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

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. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

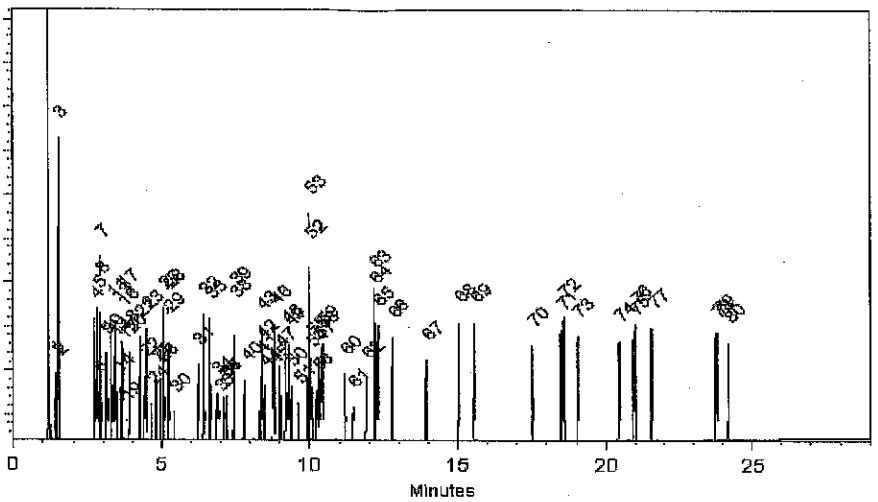
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline		1,007.5	µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/- 12.0437	µg/mL	Unstressed
	Purity 99%				+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2	µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/- 12.0395	µg/mL	Unstressed
	Purity 97%				+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9	µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/- 12.0605	µg/mL	Unstressed
	Purity 99%				+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2	µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/- 12.0640	µg/mL	Unstressed
	Purity 99%				+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1	µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/- 12.0628	µg/mL	Unstressed
	Purity 99%				+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8	µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/- 12.0712	µg/mL	Unstressed
	Purity 99%				+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1	µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/- 12.0509	µg/mL	Unstressed
	Purity 99%				+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2	µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)			+/- 24.0659	µg/mL	Unstressed
	Purity 99%				+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0	µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)			+/- 12.0377	µg/mL	Unstressed
	Purity 99%				+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4	µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/- 24.0922	µg/mL	Unstressed
	Purity 99%				+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3	µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)			+/- 12.0174	µg/mL	Unstressed
	Purity 99%				+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7	µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/- 12.0465	µg/mL	Unstressed
	Purity 98%				+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8	µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)			+/- 12.0712	µg/mL	Unstressed
	Purity 99%				+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4	µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)			+/- 12.0425	µg/mL	Unstressed
	Purity 99%				+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7	µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/- 12.0342	µg/mL	Unstressed
	Purity 99%				+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00051

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

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. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

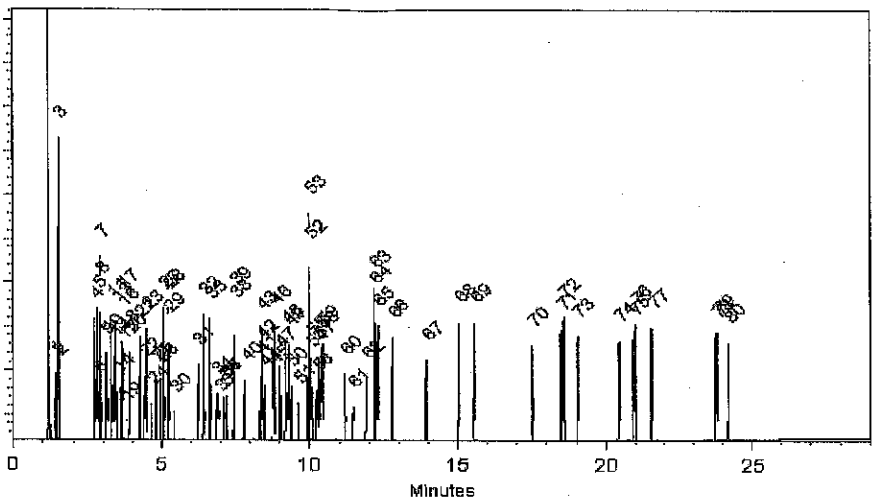
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline		1,007.5	µg/mL	+/-	5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0437	µg/mL	Unstressed
	Purity 99%				+/-	19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2	µg/mL	+/-	5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0395	µg/mL	Unstressed
	Purity 97%				+/-	19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9	µg/mL	+/-	5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	12.0605	µg/mL	Unstressed
	Purity 99%				+/-	19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	12.0628	µg/mL	Unstressed
	Purity 99%				+/-	19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8	µg/mL	+/-	5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0712	µg/mL	Unstressed
	Purity 99%				+/-	19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1	µg/mL	+/-	5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0509	µg/mL	Unstressed
	Purity 99%				+/-	19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2	µg/mL	+/-	11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)			+/-	24.0659	µg/mL	Unstressed
	Purity 99%				+/-	38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4	µg/mL	+/-	11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)			+/-	24.0922	µg/mL	Unstressed
	Purity 99%				+/-	38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5	µg/mL	+/-	5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0676	µg/mL	Unstressed
	Purity 99%				+/-	19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
52	Fluorene		1,007.7	µg/mL	+/-	5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	12.0465	µg/mL	Unstressed
	Purity 98%				+/-	19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8	µg/mL	+/-	5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)			+/-	12.0712	µg/mL	Unstressed
	Purity 99%				+/-	19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4	µg/mL	+/-	5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)			+/-	12.0425	µg/mL	Unstressed
	Purity 99%				+/-	19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7	µg/mL	+/-	5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	12.0342	µg/mL	Unstressed
	Purity 99%				+/-	19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00052

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

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. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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		1,006.6 µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)		+/- 12.0330	µg/mL	Unstressed
	Purity 99%			+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1 µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)		+/- 12.0150	µg/mL	Unstressed
	Purity 99%			+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7 µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)		+/- 24.0599	µg/mL	Unstressed
	Purity 99%			+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6 µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)		+/- 12.0569	µg/mL	Unstressed
	Purity 99%			+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2 µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)		+/- 12.0282	µg/mL	Unstressed
	Purity 99%			+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0 µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)		+/- 12.0736	µg/mL	Unstressed
	Purity 99%			+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

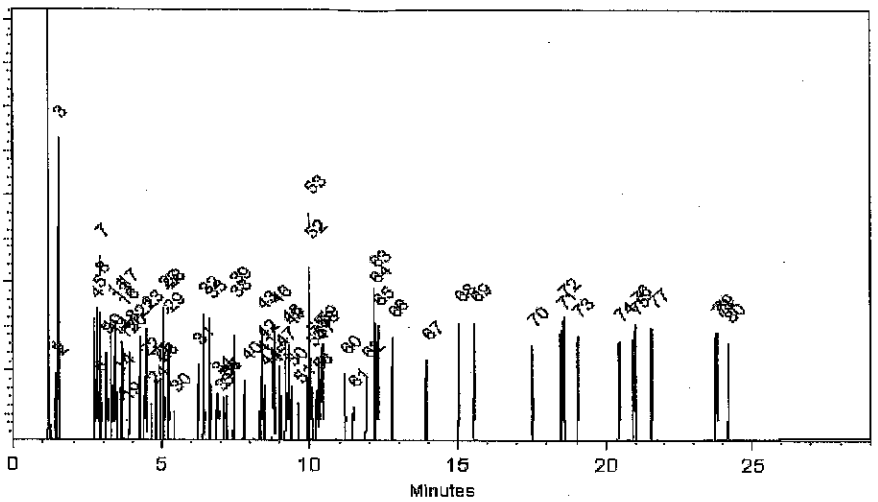
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6 µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)		+/-	12.0210	µg/mL	Unstressed
	Purity 99%			+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7 µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)		+/-	12.0700	µg/mL	Unstressed
	Purity 99%			+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6 µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)		+/-	12.0449	µg/mL	Unstressed
	Purity 99%			+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6 µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)		+/-	12.0688	µg/mL	Unstressed
	Purity 99%			+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7 µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)		+/-	12.0461	µg/mL	Unstressed
	Purity 99%			+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4 µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)		+/-	12.0545	µg/mL	Unstressed
	Purity 99%			+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6 µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)		+/-	12.0449	µg/mL	Unstressed
	Purity 99%			+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4 µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)		+/-	12.0664	µg/mL	Unstressed
	Purity 99%			+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9 µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)		+/-	6.0389	µg/mL	Unstressed
	Purity 99%			+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8 µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)		+/-	6.0018	µg/mL	Unstressed
	Purity 99%			+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6 µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)		+/-	12.0330	µg/mL	Unstressed
	Purity 99%			+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4 µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)		+/-	11.9708	µg/mL	Unstressed
	Purity 99%			+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9 µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)		+/-	12.0246	µg/mL	Unstressed
	Purity 99%			+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1 µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)		+/-	12.0629	µg/mL	Unstressed
	Purity 98%			+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7 µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)		+/-	12.0581	µg/mL	Unstressed
	Purity 99%			+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6 µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)		+/-	12.0569	µg/mL	Unstressed
	Purity 99%			+/-	19.1883	µg/mL	Stressed

Reagent

571995_00053

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

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. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

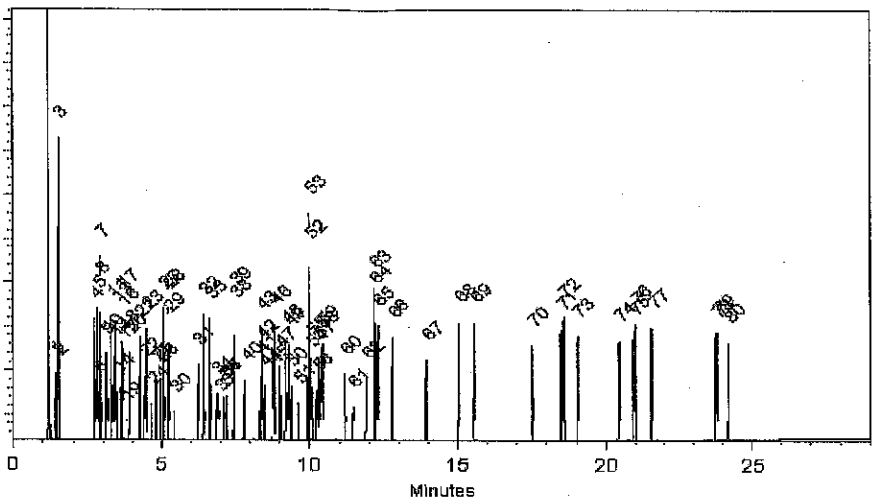
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00055

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

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. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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		1,006.6 µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)		+/- 12.0330	µg/mL	Unstressed
	Purity 99%			+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1 µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)		+/- 12.0150	µg/mL	Unstressed
	Purity 99%			+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7 µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)		+/- 24.0599	µg/mL	Unstressed
	Purity 99%			+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6 µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)		+/- 12.0569	µg/mL	Unstressed
	Purity 99%			+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2 µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)		+/- 12.0282	µg/mL	Unstressed
	Purity 99%			+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0 µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)		+/- 12.0736	µg/mL	Unstressed
	Purity 99%			+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

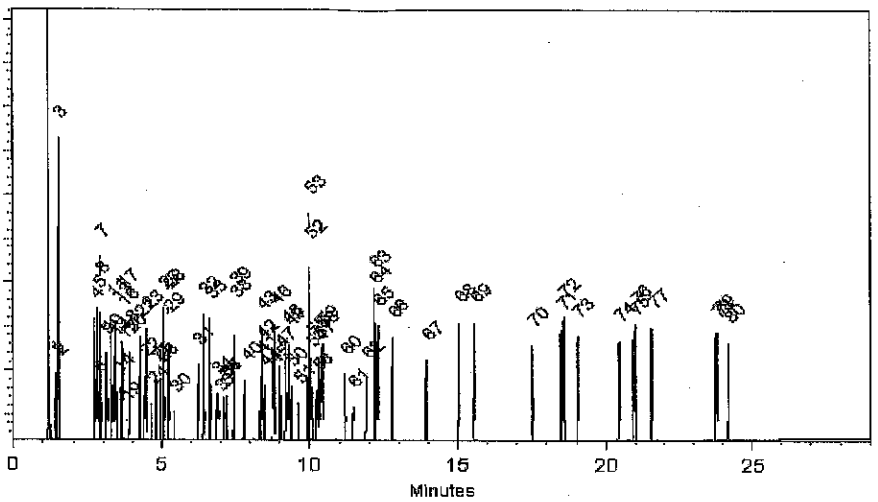
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00056

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.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **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 SHBJ5124) **Purity** 99%	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 180322JLM) **Purity** 99%	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBJ8526) **Purity** 99%	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	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		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

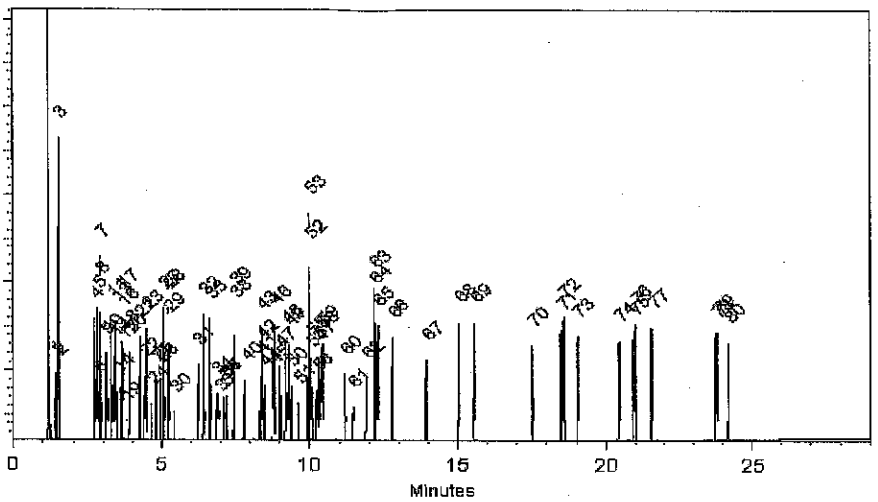
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°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
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-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.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	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%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

8270_LCS_Main_00055

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



Reagent ID: 8270_LCS_Main_00055

Description:	USE IN CONJUCTION WITH 8270_LCS_S	Expiration Date:	05/31/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Matsumoto, Jordan T
Reagent Volume:	500.000 mL	Solvent:	P&T Methanol
Creation Date:	10/01/2018	Solvent Lot:	MethanolP&T_00214
Open Date:			
Container(s):	5335109, 5335110, 5335111, 5335112, 5335262, 5335263		
Comment:	Make full volume.Place all stocks in a sonication bath for 5 minutes before use. Dilute to 500mL in P&T MeOH 40mL of MS-570666 or 571995 "8270 List 1 Std 1 MegaMix" 20mL of MS-569731 "Benzoic Acid" 10mL of "OP-572556" HCP 1 year expiration Exchange /MeCl2 verification All Standards in fridge.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,1'-Biphenyl	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2,4,5-Tetrachlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2,4-Trichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2-Diphenylhydrazine	571995_00044	09/30/2019	1010.97500	ug/mL	80.87796	ug/mL
1,3-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,3-Dinitrobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,4-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,4-Dioxane	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1-Methylnaphthalene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,2'-oxybis[1-chloropropane]	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,3,4,6-Tetrachlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4,5-Trichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4,6-Trichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4-Dichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4-Dimethylphenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D
Lims ID: 8270_LCS_Main_00055 Inj. Date: 03-Oct-2018 16:53:30
Worklist ID: 280-0074684-028 Instrument: SMS_D
Method: SMSD_8270C

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3520C
16 1,4-Dioxane	80.0	61.0	76.3	40-110
17 N-Nitrosodimethylamine	80.0	61.8	77.2	48-121
18 Pyridine	160.0	117.7	73.6	34-112
28 Phenol	80.0	65.8	82.2	50-127
30 Aniline	80.0	64.3	80.4	34-106
32 Bis(2-chloroethyl)ether	80.0	62.8	78.5	53-132
35 n-Decane	80.0	60.1	75.2	14-120
36 2-Chlorophenol	80.0	64.3	80.4	54-124
37 1,3-Dichlorobenzene	80.0	62.6	78.2	31-124
38 1,4-Dichlorobenzene	80.0	61.9	77.4	34-123
39 Benzyl alcohol	80.0	66.1	82.6	54-124
40 1,2-Dichlorobenzene	80.0	62.2	77.8	36-123
41 2-Methylphenol	80.0	66.0	82.4	55-123
43 2,2'-oxybis[1-chloropro	80.0	63.4	79.2	44-132
44 Indene	80.0	66.2	82.7	49-111
45 3-Methylphenol	80.0	66.3	82.9	51-124
46 3 & 4 Methylphenol	80.0	66.3	82.9	51-124
47 4-Methylphenol	80.0	66.3	82.9	51-124
48 N-Nitrosodi-n-propylami	80.0	65.8	82.2	57-117
50 Acetophenone	80.0	66.3	82.9	46-127
53 Hexachloroethane	80.0	60.5	75.6	27-123
54 Nitrobenzene	80.0	64.6	80.8	59-117
57 Isophorone	80.0	70.7	88.4	58-111
59 2-Nitrophenol	80.0	67.6	84.5	61-121
60 2,4-Dimethylphenol	80.0	67.1	83.9	33-117
63 Bis(2-chloroethoxy)meth	80.0	67.2	84.0	62-114
64 Benzoic acid	80.0	69.1	86.4	41-111
68 2,4-Dichlorophenol	80.0	68.9	86.1	62-119
70 1,2,4-Trichlorobenzene	80.0	65.4	81.7	44-117
72 Naphthalene	80.0	65.9	82.4	50-119
73 4-Chloroaniline	80.0	67.4	84.3	30-99
74 2,6-Dichlorophenol	80.0	69.0	86.3	63-118
76 Hexachlorobutadiene	80.0	66.6	83.2	36-118
83 4-Chloro-3-methylphenol	80.0	69.7	87.2	65-121
87 2-Methylnaphthalene	80.0	68.9	86.1	53-119
89 1-Methylnaphthalene	80.0	68.8	86.0	54-116
90 Hexachlorocyclopentadie	160.0	148.3	92.7	10-106
91 1,2,4,5-Tetrachlorobenz	80.0	68.6	85.8	57-117
94 2,4,6-Trichlorophenol	80.0	72.8	91.1	60-137
96 2,4,5-Trichlorophenol	80.0	70.4	88.0	60-129
100 1,1'-Biphenyl	80.0	67.7	84.6	52-130

Preliminary Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3520C
102 2-Chloronaphthalene	80.0	67.4	84.2	51-128
105 2-Nitroaniline	80.0	69.2	86.4	57-133
111 Dimethyl phthalate	80.0	71.3	89.1	59-131
112 1,3-Dinitrobenzene	80.0	72.7	90.8	65-135
113 2,6-Dinitrotoluene	80.0	72.1	90.2	65-135
115 Acenaphthylene	80.0	72.5	90.6	55-123
117 3-Nitroaniline	80.0	68.1	85.1	27-111
119 Acenaphthene	80.0	69.0	86.2	54-129
120 2,4-Dinitrophenol	160.0	127.4	79.6	56-121
121 4-Nitrophenol	160.0	135.0	84.4	50-140
124 2,4-Dinitrotoluene	80.0	72.1	90.1	65-135
125 Dibenzofuran	80.0	70.4	88.1	56-128
129 2,3,4,6-Tetrachlorophen	80.0	71.8	89.8	64-128
131 Hexadecane	80.0	68.1	85.2	47-129
132 Diethyl phthalate	80.0	72.2	90.2	60-133
134 4-Chlorophenyl phenyl e	80.0	70.7	88.3	56-130
135 Fluorene	80.0	71.1	88.9	51-133
138 4-Nitroaniline	80.0	69.9	87.4	54-128
139 4,6-Dinitro-2-methylphe	160.0	147.8	92.4	63-122
140 Diphenylamine	68.0	60.1	88.4	60-124
141 N-Nitrosodiphenylamine	80.0	69.1	86.4	63-116
142 1,2-Diphenylhydrazine	80.9	72.1	89.2	55-128
143 Azobenzene	80.0	71.4	89.2	55-128
152 4-Bromophenyl phenyl et	80.0	69.4	86.8	65-115
153 Hexachlorobenzene	80.0	71.2	89.0	65-114
156 n-Octadecane	80.0	68.5	85.6	
157 Pentachlorophenol	160.0	127.2	79.5	56-115
163 Phenanthrene	80.0	68.7	85.9	63-119
164 Anthracene	80.0	69.5	86.9	65-116
165 Carbazole	80.0	68.7	85.9	68-116
169 Di-n-butyl phthalate	80.0	70.5	88.1	65-118
176 Fluoranthene	80.0	70.7	88.3	65-118
180 Pyrene	80.0	68.7	85.8	59-124
187 Butyl benzyl phthalate	80.0	66.1	82.6	64-121
192 Benzo[a]anthracene	80.0	63.9	79.9	63-120
193 Bis(2-ethylhexyl) phtha	80.0	68.0	85.0	61-123
194 Chrysene	80.0	69.0	86.3	65-122
197 Di-n-octyl phthalate	80.0	66.7	83.4	56-119
198 Benzo[b]fluoranthene	80.0	68.7	85.9	64-122
200 Benzo[k]fluoranthene	80.0	71.3	89.1	69-125
202 Benzo[a]pyrene	80.0	68.7	85.9	62-114
208 Indeno[1,2,3-cd]pyrene	80.0	67.7	84.6	53-116
209 Dibenz(a,h)anthracene	80.0	68.7	85.8	60-120
210 Benzo[g,h,i]perylene	80.0	68.4	85.5	60-122

Preliminary Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D

Samples for Limit Group: 1, Lims Prep Method: 3520C
280-114613-C-3-A

Reagent

8270BO-SIMLCS_00031

Report Date: 17-Oct-2018 14:44:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_F\20181012-75020.b\F4024.D

Lims ID: 8270boSimlcs_00031 Inj. Date: 13-Oct-2018 03:44:30

Worklist ID: 280-0075020-025 Instrument: SMS_F

Method: SMSF_8270SIMX

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3546
8 1,4-Dioxane	900.0	*ND	0.0	
9 N-Nitrosodimethylamine	900.0	849.8	94.4	
10 Naphthalene	900.0	856.8	95.2	38-111
11 2-Methylnaphthalene	900.0	860.2	95.6	39-114
12 1-Methylnaphthalene	900.0	869.4	96.6	43-111
13 Dimethyl phthalate	900.0	*ND	0.0	
14 Acenaphthylene	900.0	768.8	85.4	39-116
15 Acenaphthene	900.0	806.4	89.6	44-111
16 Dibenzofuran	900.0	831.6	92.4	
17 Diethyl phthalate	900.0	*ND	0.0	
18 Fluorene	900.0	790.5	87.8	47-114
19 N-Nitrosodiphenylamine	900.0	772.8	85.9	
20 Phenanthrene	900.0	773.2	85.9	49-113
21 Anthracene	900.0	772.0	85.8	50-114
22 Di-n-butyl phthalate	900.0	756.7	84.1	
23 Fluoranthene	900.0	747.6	83.1	55-119
24 Pyrene	900.0	760.5	84.5	55-117
25 Butyl benzyl phthalate	900.0	760.1	84.5	
26 Benzo[a]anthracene	900.0	753.0	83.7	54-122
27 Chrysene	900.0	771.0	85.7	57-118
28 Bis(2-ethylhexyl) phtha	900.0	*ND	0.0	
29 Di-n-octyl phthalate	900.0	*ND	0.0	
30 Benzo[b]fluoranthene	900.0	798.5	88.7	53-128
31 Benzo[k]fluoranthene	900.0	804.9	89.4	56-123
32 Benzo[a]pyrene	900.0	789.2	87.7	50-125
33 Indeno[1,2,3-cd]pyrene	900.0	818.0	90.9	49-130
34 Dibenz(a,h)anthracene	900.0	812.6	90.3	50-129
35 Benzo[g,h,i]perylene	900.0	814.3	90.5	49-127

Samples for Limit Group: 1, Lims Prep Method: 3546

280-114910-A-16-P 280-114910-A-21-E 280-114910-A-22-E

280-114910-A-23-E 280-114859-A-2-A 280-114859-B-3-A

280-114859-B-4-A

Reagent

8270SIMSurStk_00001

o2si
smart solutions®

Quality System Audited & Registered
by NSF-ISR to ISO 9001:2008

2030 Savage Road
Charleston, South Carolina 29407
Phone: 866.272.0932
Fax: 866.509.5146
www.o2si.com

ACCREDITED

ISO 17025 Accredited Chemical Testing Lab
Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
112220-01 -5PAK	334025	≤ -10 °C	Methylene Chloride	11-Feb-2019	Custom Surrogate Mix, 8-2220, 1000 mg/L, 5 x 1 ml

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
fluoranthene-d_{10}	93951-69-0	98.9	1458.12.2P	1002 +/- 4.54	mg/l
2-fluorobiphenyl	321-60-8	99.7	8.7.1P	1015 +/- 10.59	mg/l
2-fluorophenol	367-12-4	99.9	10.9.2P	1000 +/- 14.42	mg/L
2-methylnaphthalene-d_{10}	7297-45-2	98	1457.18.1P	1007 +/- 50.54	mg/l
nitrobenzene-d_5	4165-60-0	99.9	7.120.1P	1014 +/- 10.58	mg/l
phenol-d5	4165-62-2	99.6	11.12.3.2P	1004 +/- 10.48	mg/L
p-terphenyl-d_{14}	1718-51-0	100	9.12.8.1P	1008 +/- 10.52	mg/l
2,4,6-tribromophenol	118-79-6	99.8	12.1.5P	1001 +/- 14.43	mg/L

Certified By: Jarrett Howard

Jarrett Howard

Manufacture Date 22-Jan-2018

Follow all storage requirements, keep tightly closed when not in use, and use good laboratory practices when handling.
This Reference Material was manufactured, produced, and/or certified under a quality management system that is accredited to ISO 17034 and ISO/IEC 17025.

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.
The stated uncertainty is the expanded uncertainty with a coverage factor of two to give a 95% confidence level.

Reagent

8270Surrogate_00127

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



Reagent ID: 8270Surrogate_00127

Description:	8270 Surrogate 100ug/ml	Expiration Date:	07/09/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Zhang, Jian
Reagent Volume:	1000.000 mL	Solvent:	ACETONE
Creation Date:	09/12/2018	Solvent Lot:	Acetone_00232
Open Date:			
Container(s):	5303798, 5303799, 5303800, 5303801		
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_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00280	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00285	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00286	09/12/2019	5000.00000	ug/mL	100.00000	ug/mL

Preliminary Report

TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_G6\20180914-74021.b\G6_35351.D
Lims ID: 8270Surrogate_00127
Client ID:
Sample Type: Client
Inject. Date: 14-Sep-2018 14:42:30 ALS Bottle#: 4 Worklist Smp#: 36
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 8270Surrogate_00127
Operator ID: KIEKELD Instrument ID: SMS_G6

Method: \\ChromNA\Denver\ChromData\SMS_G6\20180914-74021.b\SMSG6_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 17-Sep-2018 09:31:14 Calib Date: 11-Sep-2018 18:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_G6\20180911-73895.b\G6_35319.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: XAWRK018

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	86.5	86.53
$ 8 Phenol-d5	100.0	82.8	82.78
$ 9 Nitrobenzene-d5	100.0	77.9	77.88
$ 11 2-Fluorobiphenyl	100.0	80.0	80.03
$ 12 2,4,6-Tribromophenol	100.0	75.5	75.53
$ 13 Terphenyl-d14	100.0	79.7	79.65

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_00280

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)

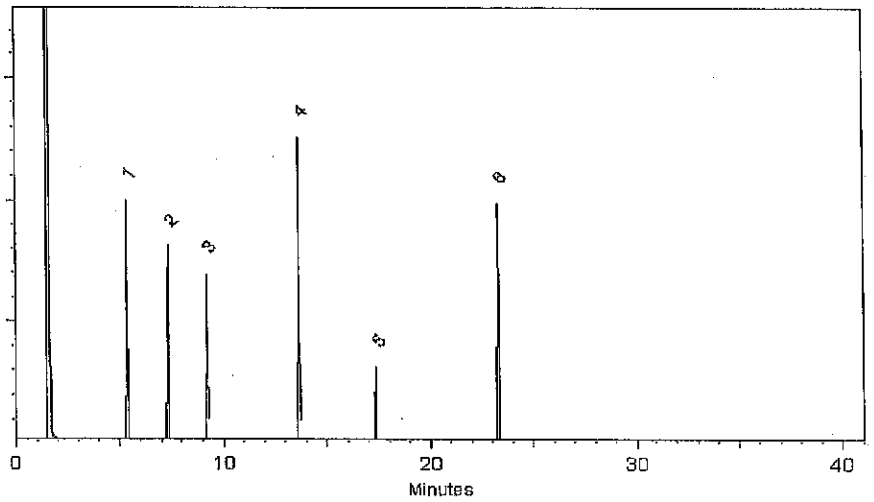
Carrier Gas:
hydrogen-constant pressure 10 psi.

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_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)

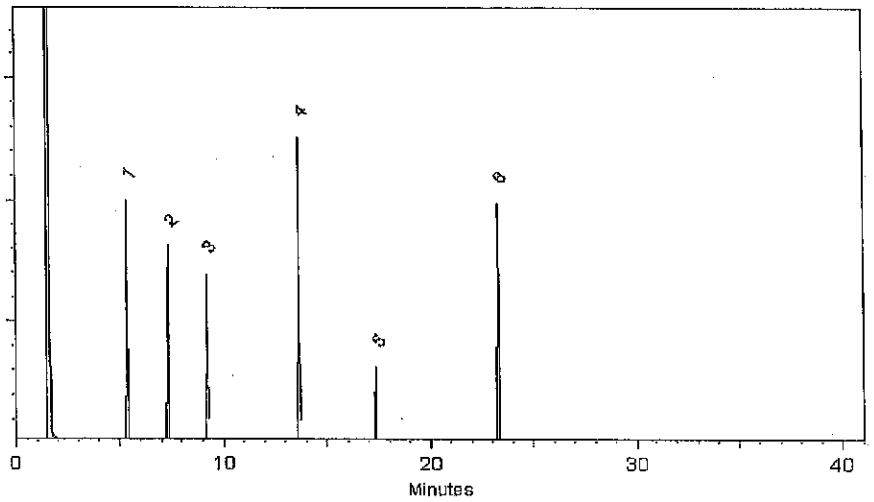
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

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 **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed 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)

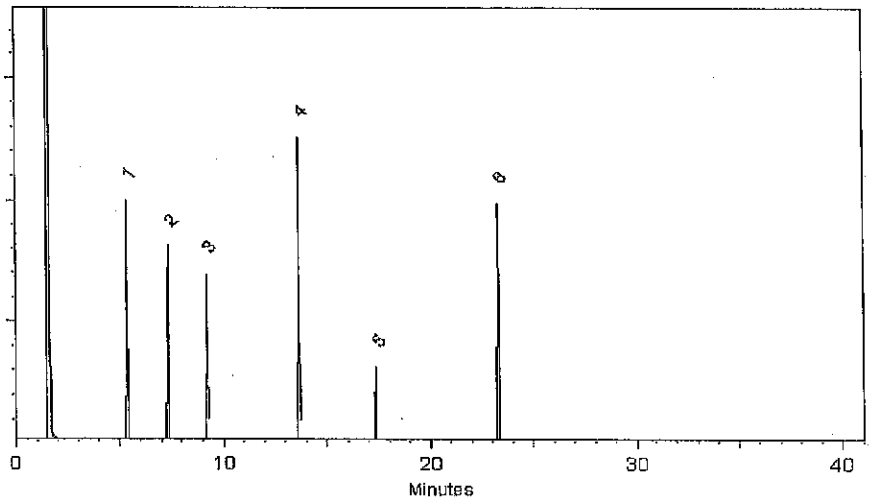
Carrier Gas:
hydrogen-constant pressure 10 psi.

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_00285

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)

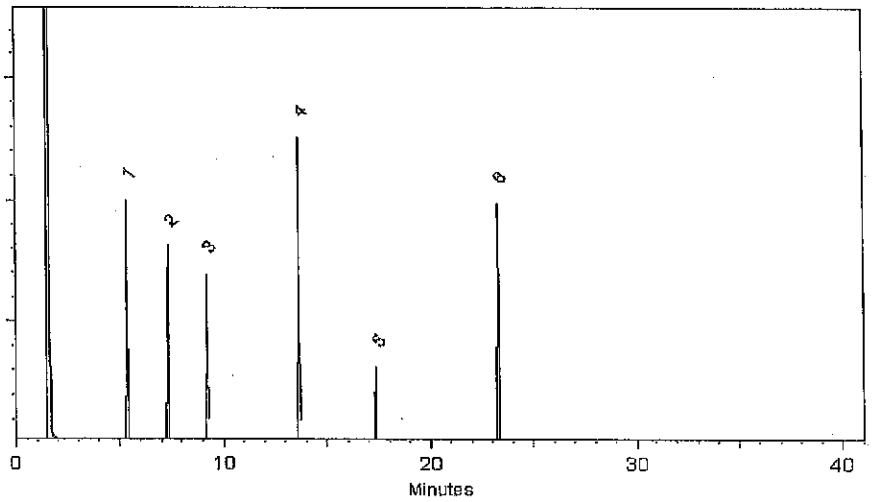
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.
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- 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_00286

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)

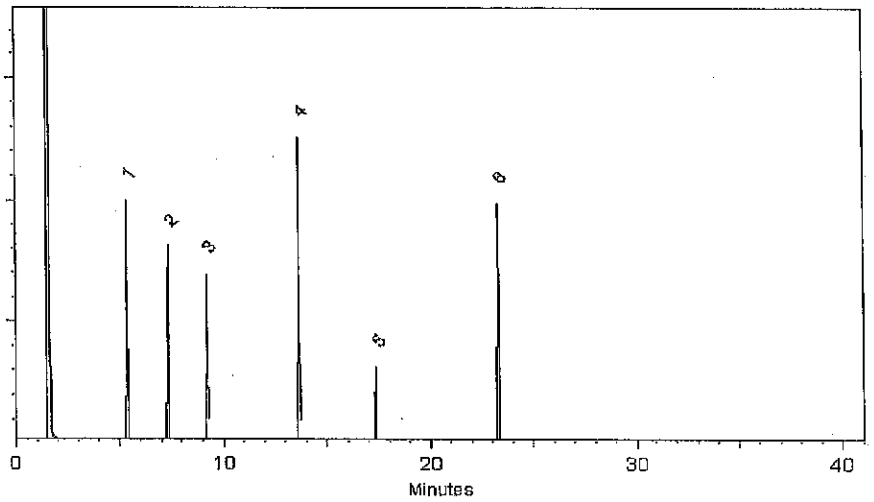
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.
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- 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_00287

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 **CAS #** 367-12-4 **Purity** 99%	(Lot STBD7945V)	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X-479)	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-25462)	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot Z20C043)	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-27278)	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed 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)

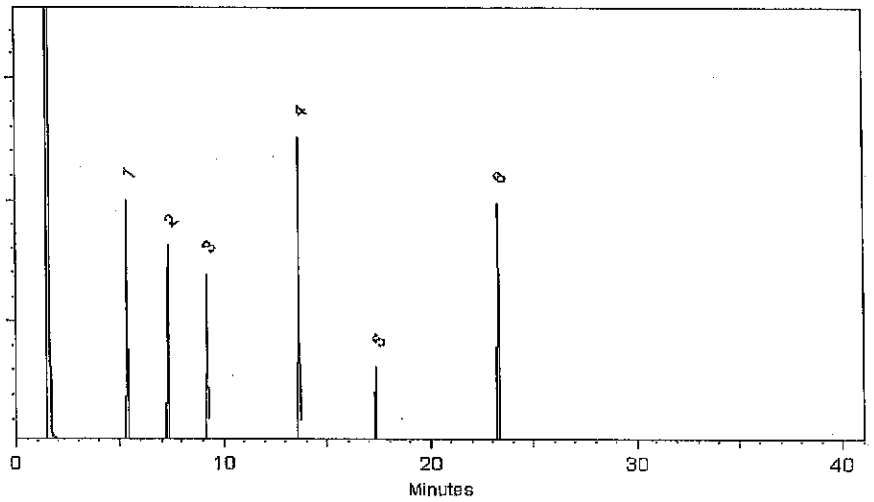
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

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.:** 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 **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed 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)

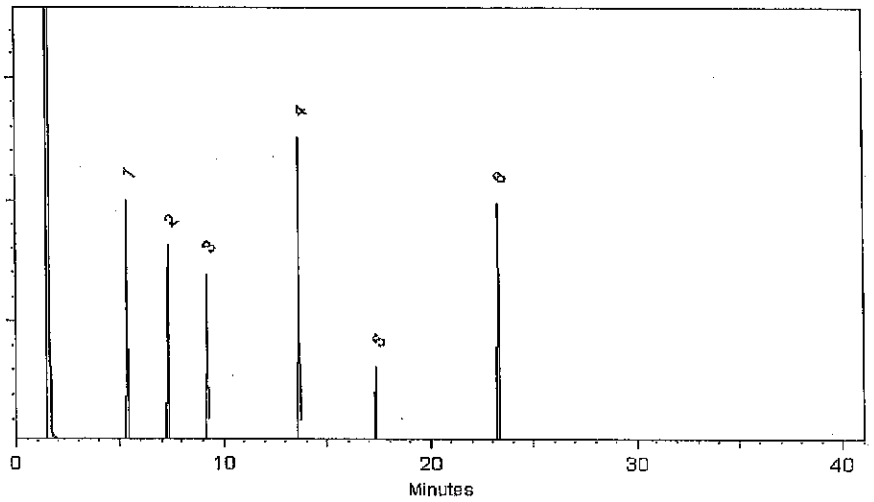
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.
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- 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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- 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.
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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Manufacturing Notes:

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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

8270SurStkHL_00290

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.

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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)

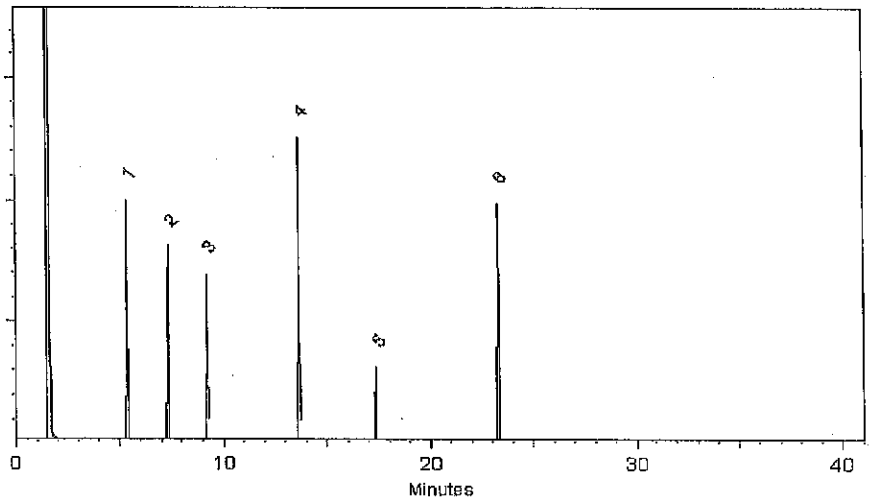
Carrier Gas:
hydrogen-constant pressure 10 psi.

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



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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:

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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.
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Manufacturing Notes:

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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

8330 LCS_00078

*Standard is in the Explosives Room fridge *

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



Reagent ID: 8330 LCS_00078

		Expiration Date:	04/30/2018
Description:	10+100 ug/mL KEEP IN FREEZER	Laboratory:	TestAmerica Denver
No. of Bottles:	2	Prepared By:	Cokley, Cheyana D
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	100.000 mL	Solvent Lot:	ACN_00209
Creation Date:	02/08/2018		
Open Date:			
Container(s):	4957477, 4957478		
Comment:	MNX has been added back 10.22.17; new expiration is 1 year after its creation date		

OK HKF 2/15/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00061	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00062	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00069	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00070	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
MNX	8330MNX_00002	04/30/2018	1000.00000	ug/mL	10.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00078

Reagent ID: 8330 LCS_00078

		Expiration Date:	04/30/2018
Description:	10+100 ug/mL KEEP IN FREEZER	Laboratory:	TestAmerica Denver
No. of Bottles:	2	Prepared By:	Cokley, Cheyana D
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	100.000 mL	Solvent Lot:	ACN_00209
Creation Date:	02/08/2018		
Open Date:			
Container(s):	4957477, 4957478		
Comment:	MNX has been added back 10.22.17; new expiration is 1 year after its creation date		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6-Trinitrophenol	PicricARestek_00056	06/30/2018	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330 LCSMix2_00102	31451 1000ug/mL 8330 Calibration Mix#2	ASTD	02/08/19	Restek	A0122699	31451	1.00000	mL
8330_NG_Stk_00061	Cat#568871 5,000ug/mL	ASTD	02/08/19	Restek	A0128695	568871	1.00000	mL
8330_NG_Stk_00062	Cat#568871 5,000ug/mL	ASTD	02/08/19	Restek	A0128695	568871	1.00000	mL
8330_PETN_Stk_00069	Cat#568872 5,000ug/mL	ASTD	02/08/19	Restek	A0127970	568872	1.00000	mL
8330_PETN_Stk_00070	Cat#568872 5,000ug/mL	ASTD	02/08/19	Restek	A0127970	568872	1.00000	mL
8330LCSMix1_00097	Cat#31450, 1000ug/mL Restek	ASTD	02/08/19	Restek	A0122924	31450	1.00000	mL
8330MNX_00002	8330 MNX	ASTD	04/30/18	Ultra Scientific	CR-1036	CUS-23986	1.00000	mL
PicricARestek_00056	Cat# 31499	ASTD	06/30/18	Restek	A096192	31499	1.00000	mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180214-67233.b\001-1801.D

Lims ID: lcs0078 Inj. Date: 14-Feb-2018 18:29:33

Worklist ID: 280-0067233-022 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535
2 HMX	0.2000	0.1621	81.0	76-120
4 MNX	0.2000	*ND	0.0	* 60-136
5 RDX	0.2000	0.1745	87.2	80-120
6 2,4,6-Trinitrophenol	0.2000	0.1657	82.9	80-120
8 1,3,5-Trinitrobenzene	0.2000	0.1754	87.7	73-120
9 1,3-Dinitrobenzene	0.2000	0.1825	91.3	75-120
11 Nitrobenzene	0.2000	0.1956	97.8	64-120
12 Tetryl	0.2000	0.1897	94.9	10-120
13 Nitroglycerin	2.00	1.83	91.3	77-120
14 2,4,6-Trinitrotoluene	0.2000	0.1636	81.8	73-120
15 4-Amino-2,6-dinitrotolu	0.2000	0.1816	90.8	63-123
16 2-Amino-4,6-dinitrotolu	0.2000	0.1734	86.7	56-120
17 2,6-Dinitrotoluene	0.2000	0.1825	91.2	69-120
18 2,4-Dinitrotoluene	0.2000	0.1829	91.4	71-120
19 o-Nitrotoluene	0.2000	0.1976	98.8	52-120
20 p-Nitrotoluene	0.2000	0.1986	99.3	56-120
21 m-Nitrotoluene	0.2000	0.1924	96.2	61-124
22 PETN	2.00	1.80	90.2	77-123

Samples for Limit Group: 1, Lims Prep Method: 3535

600-160894-C-1-A 550-97259-C-14-A 550-97315-A-6-A

550-97324-A-12-A

Reagent

8330 LCS_00082

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS_00082

OK HKF 9/12/18

Reagent ID: 8330 LCS_00082

Description:	10+100 ug/mL KEEP IN FREEZER	Expiration Date:	06/28/2019
No. of Bottles:	2	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Carroll, Randall P
Reagent Volume:	100.000 mL	Solvent:	Acetonitrile
Creation Date:	09/07/2018	Solvent Lot:	ACN_00204
Open Date:			
Container(s):	5297539, 5297540		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00057	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00063	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00049	06/30/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00066	05/31/2020	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrophenol	PicricARestek_00078	09/30/2020	1000.00000	ug/mL	10.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110010.D

Lims ID: 8330 LCS%O00082 Inj. Date: 11-Sep-2018 20:36:26

Worklist ID: 280-0073899-010 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	80-150	
25 TNX	0	*ND	0.0	50-150	
2 HMX	0.4000	0.3899	97.5	66-115	65-135
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	70-150	
24 DNX	0	*ND	0.0	50-150	
4 MNX	0	*ND	0.0	68-123	50-150
5 RDX	0.4000	0.3916	97.9	69-122	68-130
6 2,4,6-Trinitrophenol	0.4000	0.3998	100.0	63-135	80-120
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	63-127	83-119
8 1,3,5-Trinitrobenzene	0.4000	0.4096	102.4	62-127	73-125
9 1,3-Dinitrobenzene	0.4000	0.4033	100.8	59-131	78-120
11 Nitrobenzene	0.4000	0.4045	101.1	46-144	65-134
10 3,5-Dinitroaniline	0	*ND	0.0	55-119	71-117
12 Tetryl	0.4000	0.4274	106.9	56-131	64-128
13 Nitroglycerin	4.00	3.97	99.4	70-125	74-127
14 2,4,6-Trinitrotoluene	0.4000	0.3842	96.1	46-139	71-123
15 4-Amino-2,6-dinitrotolu	0.4000	0.3737	93.4	43-120	76-125
16 2-Amino-4,6-dinitrotolu	0.4000	0.3998	100.0	46-124	79-120
17 2,6-Dinitrotoluene	0.4000	0.3828	95.7	51-130	77-127
18 2,4-Dinitrotoluene	0.4000	0.3881	97.0	53-127	78-120
19 o-Nitrotoluene	0.4000	0.3903	97.6	37-138	70-127
20 p-Nitrotoluene	0.4000	0.4065	101.6	41-137	71-127
21 m-Nitrotoluene	0.4000	0.3886	97.1	31-140	73-125
22 PETN	4.00	3.95	98.7	67-127	73-127

Samples for Limit Group: 1, Lims Prep Method: 3535

680-157496-D-1-B	680-157496-D-2-B	680-157496-D-3-B
680-157496-D-4-B	680-157496-D-5-B	680-157496-D-6-B
680-157496-D-7-B	680-157496-D-8-B	680-157496-D-9-B
490-158536-D-1-B	490-158590-A-1-B	490-158590-A-2-B
600-171866-C-1-B	280-113921-A-1-B	

Samples for Limit Group: 2, Lims Prep Method: 3535

160-30545-A-1-B	160-30545-A-6-B	160-30545-A-7-B

Reagent

8330 LCSMix2_00102

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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. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl		1,000.0	µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 479-45-8	(Lot 091120JLM)			+/- 54.7830	µg/mL	Unstressed
	Purity 99%				+/- 63.8824	µg/mL	Stressed
2	4-Amino-2,6-dinitrotoluene		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 54.8926	µg/mL	Unstressed
	Purity 99%				+/- 64.0101	µg/mL	Stressed
3	2-Amino-4,6-dinitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot 29550-55)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
4	2,6-Dinitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
5	2-Nitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot GA01)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
6	4-Nitrotoluene		1,001.0	µg/mL	+/- 5.9459	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot FAU01)			+/- 54.8400	µg/mL	Unstressed
	Purity 97%				+/- 63.9488	µg/mL	Stressed
7	3-Nitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed

Reagent

8330 LCSMix2_00104

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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. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Tetryl **CAS #** 479-45-8 (Lot 091120JLM) **Purity** 99%	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 (Lot ER070908-01) **Purity** 99%	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 (Lot 29550-55) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 (Lot 1437483V) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 (Lot GA01) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 (Lot FAU01) **Purity** 97%	1,001.0 µg/mL	+/- 5.9459 µg/mL +/- 54.8400 µg/mL +/- 63.9488 µg/mL	Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 (Lot 07329LG) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

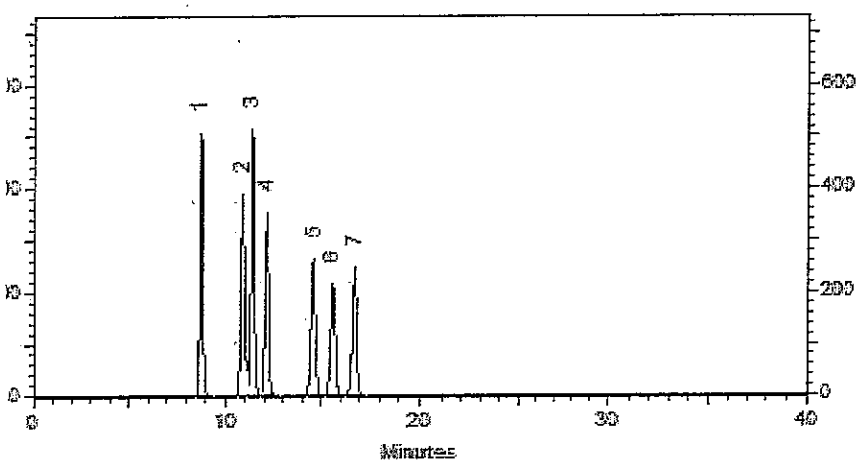
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

Det. Type:
Wavelength: 210 nm



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: 06-Nov-2016 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Nov-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

8330 Stock_TS_00009

Certificate of Analysis

Combined Stock Solution

Product Number: NAIM-833E **Page:** 1 of 1

Lot Number: CR-1002 **Lot Issue Date:** 10-Mar-2017 **Expiration Date:** 30-Apr-2020

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
HMX	002691-41-0	RM06237	1000 ± 5 µg/mL
RDX	000121-82-4	RM10915	1000 ± 5 µg/mL
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 ± 5 µg/mL
m-dinitrobenzene	000099-65-0	RM04448	1001 ± 5 µg/mL
nitrobenzene	000098-95-3	RM11472	1002 ± 5 µg/mL
2,4,6-trinitrotoluene (TNT)	000118-96-7	RM11972	1004 ± 5 µg/mL
2,4-dinitrotoluene	000121-14-2	RM01209	1002 ± 5 µg/mL
tetryl	000479-45-8	RM12295	1000 ± 5 µg/mL
2,6-dinitrotoluene	000606-20-2	RM10763	1003 ± 5 µg/mL
2-nitrotoluene	000088-72-2	NT01996	1003 ± 5 µg/mL
3-nitrotoluene	000099-08-1	NT02212	1004 ± 5 µg/mL
4-nitrotoluene	000099-99-0	NT02096	1004 ± 5 µg/mL
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1003 ± 5 µg/mL
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 ± 5 µg/mL

Matrix: acetonitrile

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

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Reagent

8330_NG_Stk_00061

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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. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00062

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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. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00067

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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. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00068

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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. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00067

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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. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 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	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00068

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Composition

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Certificate #3222.01

ilac-MRA

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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. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00069

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Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00070

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Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330LCSMix1_00097

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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. : 31450 **Lot No.:** A0122924

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

5

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	HMX **CAS #** 2691-41-0 **Purity** 98%	(Lot 111005JLM)	999.6 µg/mL	+/- 5.9373 +/- 54.7611 +/- 63.8568	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 **Purity** 99%	(Lot 080220JLM)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 **Purity** 99%	(Lot UNVVB)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBB1436V)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot 2554100)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

8330LCSMix1_00105

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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. : 31450 **Lot No.:** A0128688

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX		1,002.5 µg/mL	+/- 5.9548 µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 111005JLM)		+/- 54.9222 µg/mL	Unstressed
	Purity 98%			+/- 64.0446 µg/mL	Stressed
2	RDX		1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080220JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%			+/- 64.3934 µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,004.9 µg/mL	+/- 5.9689 µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)		+/- 55.0525 µg/mL	Unstressed
	Purity 97%			+/- 64.1967 µg/mL	Stressed
4	1,3-Dinitrobenzene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed
5	Nitrobenzene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 2554100)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%			+/- 64.1379 µg/mL	Stressed
7	2,4-Dinitrotoluene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed

Reagent

8330PAStkPS_00054

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-8330-ADD-3
Description: Picric acid
Lot: 216061376-01
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Jun 19, 2017
Expiration: Jul 19, 2019
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 % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

Sample

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 9001:2015

QR-ORG/INO-001
Rev. 4/17

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Reagent

8330Surrogate_00098

IN Explosives (Prep) Fridge ☺ Thx

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00098

Reagent ID: 8330Surrogate_00098

Description:	10ug/mL 1,2-Dinitrobenzene	Expiration Date:	03/01/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Cokley, Cheyana D
Reagent Volume:	500.000 mL	Solvent:	Acetonitrile
Creation Date:	03/01/2018	Solvent Lot:	ACN_00210
Open Date:			
Container(s):	4983902, 4983903, 4983904, 4983905		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 100 mL in ACN. Mulitply recipe as needed.		

HKF
DC 3/7/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_0013	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0014	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0015	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0016	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0017	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

Preliminary Report

TestAmerica Denver
ICV, ICal Verification Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 06-Mar-2018 13:40:54 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0067760-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Mar-2018 14:58:37 Calib Date: 06-Mar-2018 13:17:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

Start Cal Date: 06-Mar-2018 10:37:17
End Cal Date: 06-Mar-2018 13:17:57

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits	
2 HMX	0.4000	0.3593	-10.2	20.0	89.8		
4 MNX	0.4000	4.09	*923.6	20.0	1023.6		
5 RDX	0.4000	0.3939	-1.5	20.0	98.5		
6 2,4,6-Trinitrophen	0.4000	0.3960	-1.0	20.0	99.0		
$ 7 1,2-Dinitrobenzene	0.4000	0.3986	-0.4	20.0	99.6	———	8330 Surr_009 used
8 1,3,5-Trinitrobenz	0.4000	0.4025	0.6	20.0	100.6		
9 1,3-Dinitrobenzene	0.4000	0.4001	0.0	20.0	100.0		
11 Nitrobenzene	0.4000	0.3982	-0.5	20.0	99.5		
12 Tetryl	0.4000	0.3934	-1.7	20.0	98.3		
14 2,4,6-Trinitrotolu	0.4000	0.3669	-8.3	20.0	91.7		
15 4-Amino-2,6-dinitr	0.4000	0.3788	-5.3	20.0	94.7		
16 2-Amino-4,6-dinitr	0.4000	0.3896	-2.6	20.0	97.4		
17 2,6-Dinitrotoluene	0.4000	0.3828	-4.3	20.0	95.7		
18 2,4-Dinitrotoluene	0.4000	0.3932	-1.7	20.0	98.3		
19 o-Nitrotoluene	0.4000	0.3947	-1.3	20.0	98.7		
20 p-Nitrotoluene	0.4000	0.4066	1.6	20.0	101.6		
21 m-Nitrotoluene	0.4000	0.3880	-3.0	20.0	97.0		

Reagent

8330Surrogate_00100

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00100

Reagent ID: 8330Surrogate_00100

		Expiration Date:	03/01/2019
Description:	10ug/mL 1,2-Dinitrobenzene	Laboratory:	TestAmerica Denver
No. of Bottles:	4	Prepared By:	Carroll, Randall P
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	500.000 mL	Solvent Lot:	ACN_00210
Creation Date:	09/07/2018		
Open Date:			
Container(s):	5297535, 5297536, 5297537, 5297538		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 10(mL in ACN. Mulitply recipe as needed.		

OK HKF 9/12/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_00123	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00124	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00125	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00126	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00127	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

In EXP freezer

in O prep

Preliminary Report

TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110009.D				
Lims ID:	8330S+U+R+R+O+G+A+T+E%O00100				
Client ID:					
Sample Type:	Client				
Inject. Date:	11-Sep-2018 20:13:27	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	8330S+U+R+R+O+G+				
Misc. Info.:	280-0073899-009				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	12-Sep-2018 10:03:24	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK011				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.4000	0.4053	101.33

Reagent

8330SurrStkSS_00123

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00124

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00125

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00126

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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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00127

RESTEK®
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Fax: (814)353-1309

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00130

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Bellefonte, PA 16823-8812
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Fax: (814)353-1309

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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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00131

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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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00132

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Certificate of Analysis

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Certificate #3222.01

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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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00133

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Fax: (814)353-1309

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Certificate #3222.01

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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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00141

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
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. : 31453 **Lot No.:** A0131413

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1,2-Dinitrobenzene	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1943	µg/mL	Unstressed
	Purity 99%		+/- 57.5086	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStock_00161

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-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*



Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
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/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

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

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

Reagent

8330SurrStock_00162

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-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*



Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
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/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

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

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

Reagent

CR6 Cal std_00010

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Hexavalent Chromium
CATALOG NUMBER:	019
LOT NUMBER:	040416
ISSUE DATE:	April 14, 2016
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Dichromate ($K_2Cr_2O_7$)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0001 ± 0.0008 g/mL at 21.5°C and 758 mm Hg
TRACEABILITY[3]:	101%
NIST/SRM:	SRM 136f Potassium Dichromate
VERIFICATION METHOD:	Spectrophotometry
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 4/2019**. 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

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

Cr6 ICV Std_00018

Certificate of Analysis List

For request number 934593

Catalog Number Entered	Lot Number Entered	Related Catalog Number	Related Lot Code	Description
1466442	7279	N/A	N/A	Chromium Reference Standard Solution

Total Enclosures: 1

HACH COMPANY

P.O.Box 389
Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

COMMODITY:**Chromium Reference Standard Solution**
COMMODITY NUMBER: **1466442** MANUFACTURE DATE: **10/5/2017** DATE OF ANALYSIS: **10/4/2017**
LOT NUMBER: **A7279**

TEST	*SPECIFICATIONS*	*RESULTS*
Hexavalent Chromium Concentration	995 to 1005 ppm	998.0 ppm
pH of the solution	12 to 14	12.3

The expiration date is Oct 2022

The item 1466442 is traceable to NIST standards SRM 136f Potassium Dichromate LOT N/A.

Certified by _____

Scott Als
Analytical Services Chemist

Reagent

DOD_ADD_SURR_00002

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smart solutions®

Quality System Audited & Registered
by NSF-ISR to ISO 9001:2008

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www.o2si.com

ACCREDITED

ISO 17025 Accredited Chemical Testing Lab
Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
116210-03	334026	≤ -10 °C	Methylene Chloride	22-Jan-2020	2-Methylnaphthalene-d10 and Fluoranthene-d10 Solution, 1,000 mg/L, 1 mL

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
fluoranthene-d_{10}	93951-69-0	98	1458.12.1P	994.7 +/- 11.26	mg/L
2-methylnaphthalene-d_{10}	7297-45-2	98	1457.18.1P	994.7 +/- 50.01	mg/L

Certified By: Jarrett Howard

Jarrett Howard

Manufacture Date 22-Jan-2018

Follow all storage requirements, keep tightly closed when not in use, and use good laboratory practices when handling.
This Reference Material was manufactured, produced, and/or certified under a quality management system that is accredited to ISO 17034 and ISO/IEC 17025.

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.
The stated uncertainty is the expanded uncertainty with a coverage factor of two to give a 95% confidence level.

Reagent

IC Br cal_00015

RICCA CHEMICAL COMPANY®

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Batesville, IN 47006
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customerservice@riccachemical.com

Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 4707D55 **Product Number:** 1180

Manufacture Date: JUL 20, 2017
Expiration Date: JAN 2019

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
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br^-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br^-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

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)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs (07/20/2017)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC CL cal_00054

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 4-101CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 998 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 07131A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 998 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 997 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.05	NO_3^-	<0.04
F^-	<0.006	$PO4^{-3}$	<0.06
NO_2^-	<0.03	$SO4^{-2}$	<0.05

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. 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: AUG - - 2018

Certifying Officer: Kathleen Cullen

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Reagent

IC FL cal_00012

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Pocomoke City, MD 21851
Batesville, IN 47006
http://www.riccachemical.com
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customerservice@riccachemical.com

Certificate of Analysis

Fluoride Standard, 1000 ppm F^-

Lot Number: 4704K15 **Product Number:** 3173

Manufacture Date: APR 26, 2017
Expiration Date: OCT 2018

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.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1000 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F^-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F^-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

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)
3173-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Jim Gibbs (04/26/2017)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC MS/MSD N02_00002

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

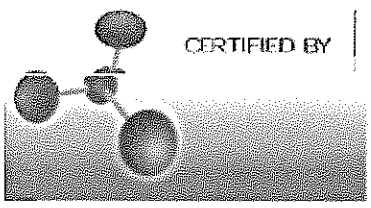
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0090918

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**S347**	**Quality Test / Release Date**	**9/9/2016**
Lot Number	**164254**		
Description	**SODIUM NITRITE, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Sep-2021**
Chemical 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	yELLOW-WHITE CRYSTALS
ASSAY	%	>= 97	98.6
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.005	<0.005
HEAVY METALS (as Pb)	%	<= 0.001	<0.0010
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	%	<= 0.001	<0.0010
POTASSIUM (K)	%	<= 0.005	<0.0010
SULFATE (SO4)	%	<= 0.01	<0.010



Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis 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 call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Reagent

IC MS/MSD N03_00005

Scientific

Reagent Lane
ıir Lawn, NJ 07410
)1.796.7100 tel
)1.796.1329 fax

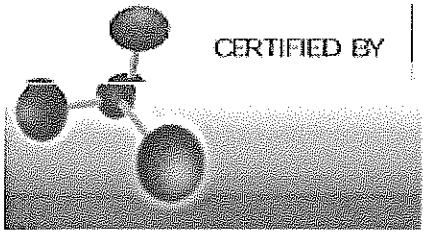
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0090918

s is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been plied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability l fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. ıer does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

ıtalog Number	**S343**	**Quality Test / Release Date**	**8/23/2017**
)t Number	**176192**		
escription	**SODIUM NITRATE, A.C.S.**		
)untry of Origin	**Mexico**	*** Suggested Retest Date**	**Aug-2022**
ıemical Origin	**Inorganic-non animal**		
SE/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.		

sult name	Units	Specifications	Test Value
PEARANCE		REPORT	Clear to white crystals.
SAY	%	>= 99	99.7
LCIUM	%	<= 0.005	0.001
LORIDE	%	<= 0.001	<0.0010
AVY METALS (as Pb)	ppm	<= 5	<5.0
ENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
SOLUBLE MATTER	%	<= 0.005	<0.005
)ATE	ppm	<= 5	<5.0
)N (Fe)	ppm	<= 3	<3.0
.GNESIUM	%	<= 0.002	0.0002
TRITE (NO2)	%	<= 0.001	<0.0010
5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.3	6.7
OSPHATE (PO4)	ppm	<= 5	<5.0
LFATE (SO4)	%	<= 0.003	<0.0030



Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Reagent

IC MS/MSD S04_00005

Fisher Scientific

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Fair Lawn, NJ 07410
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201.796.1329 fax

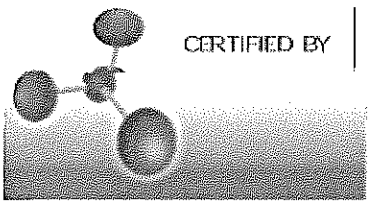
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**P304**	**Quality Test / Release Date**	**3/2/2015**
Lot Number	**147276**		
Description	**POTASSIUM SULFATE, CRYSTAL, CERTIFIED, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Feb-2020**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	This product is not manufactured from, or with, any type of animal product, nor any derivative of an animal product. As such, this product should not be considered a vector for BSE or TSE.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	FINE WHITE CRYSTALS
ASSAY	%	>= 99	99.4
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
MAGNESIUM	%	<= 0.005	<0.0050
NITROGEN COMPOUNDS	ppm	<= 5	<5
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.5	5.5
SODIUM (Na)	%	<= 0.02	<0.020



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 call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

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."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

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."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

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 — ACCREDITED — CHEMICAL TESTING LABORATORY CERTIFICATE NO. 1539.02

Reagent

IC P04 cal_00018

RICCA CHEMICAL COMPANY®

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Pocomoke City, MD 21851
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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

IC PO4 ICV_00015

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Phosphate as P (PO_4-P)
CATALOG NUMBER:	061 -125 mL; 993 - 500 mL
LOT NUMBER:	060617
ISSUE DATE:	June 20, 2017
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Dihydrogen Phosphate (KH_2PO_4)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	0.9996 ± 0.0008 g/mL at 23.5°C and 622 mm Hg
TRACEABILITY[3]:	103%
NIST/SRM:	3186 Phosphate
VERIFICATION METHOD:	Ion Chromatography
STORAGE: THIS	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 6/2019**. 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

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Reagent

IC sulfatecal_00053

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 4-131SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1003 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# 0713D. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 1002 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as $BaSO_4$.

Instrumental Analysis by Ion Chromatography: 1004 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.04	NO_2^-	<0.03
Cl^-	<0.5	NO_3^-	<0.03
F^-	<0.006	$PO4^{-3}$	<0.06

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG - - 2018

Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Reagent

MS-31010_00011

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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. : 31010 **Lot No.:** A0116027

Description : SV Calibration Mix #4

SV Calibration Mix #4 2000 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 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	Hexachloroethane	2,002.0 µg/mL	+/- 11.8913 µg/mL	Gravimetric
	CAS # 67-72-1 (Lot 4H3SF)		+/- 60.6057 µg/mL	Unstressed
	Purity 99%		+/- 60.6057 µg/mL	Stressed
2	Nitrobenzene	2,014.0 µg/mL	+/- 11.9625 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 65096APV)		+/- 60.9690 µg/mL	Unstressed
	Purity 99%		+/- 60.9690 µg/mL	Stressed
3	Isophorone	2,002.0 µg/mL	+/- 11.8913 µg/mL	Gravimetric
	CAS # 78-59-1 (Lot MKBG2442V)		+/- 60.6057 µg/mL	Unstressed
	Purity 99%		+/- 60.6057 µg/mL	Stressed
4	1,2,4-Trichlorobenzene	2,014.0 µg/mL	+/- 11.9625 µg/mL	Gravimetric
	CAS # 120-82-1 (Lot 26896BM)		+/- 60.9690 µg/mL	Unstressed
	Purity 99%		+/- 60.9690 µg/mL	Stressed
5	Hexachlorobutadiene	2,007.0 µg/mL	+/- 11.9212 µg/mL	Gravimetric
	CAS # 87-68-3 (Lot J31X013)		+/- 60.7583 µg/mL	Unstressed
	Purity 98%		+/- 60.7583 µg/mL	Stressed
6	2-Methylnaphthalene	2,000.0 µg/mL	+/- 11.8794 µg/mL	Gravimetric
	CAS # 91-57-6 (Lot 19399MJV)		+/- 60.5452 µg/mL	Unstressed
	Purity 99%		+/- 60.5452 µg/mL	Stressed
7	Hexachlorocyclopentadiene	2,007.9 µg/mL	+/- 11.9263 µg/mL	Gravimetric
	CAS # 77-47-4 (Lot 150909)		+/- 60.7843 µg/mL	Unstressed
	Purity 97%		+/- 60.7843 µg/mL	Stressed

8	2,6-Dinitrotoluene		2,010.0	µg/mL	+/-	11.9388	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	60.8479	µg/mL	Unstressed
	Purity 99%				+/-	60.8479	µg/mL	Stressed
9	Dibenzofuran		2,002.0	µg/mL	+/-	11.8913	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	60.6057	µg/mL	Unstressed
	Purity 99%				+/-	60.6057	µg/mL	Stressed
10	2,4-Dinitrotoluene		2,000.0	µg/mL	+/-	11.8794	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	60.5452	µg/mL	Unstressed
	Purity 99%				+/-	60.5452	µg/mL	Stressed
11	Diethylphthalate		2,016.0	µg/mL	+/-	11.9744	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	61.0295	µg/mL	Unstressed
	Purity 99%				+/-	61.0295	µg/mL	Stressed
12	Hexachlorobenzene		2,018.0	µg/mL	+/-	11.9863	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LB98981V)			+/-	61.0901	µg/mL	Unstressed
	Purity 99%				+/-	61.0901	µg/mL	Stressed
13	Carbazole		1,999.2	µg/mL	+/-	11.8746	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 3715800)			+/-	60.5210	µg/mL	Unstressed
	Purity 98%				+/-	60.5210	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

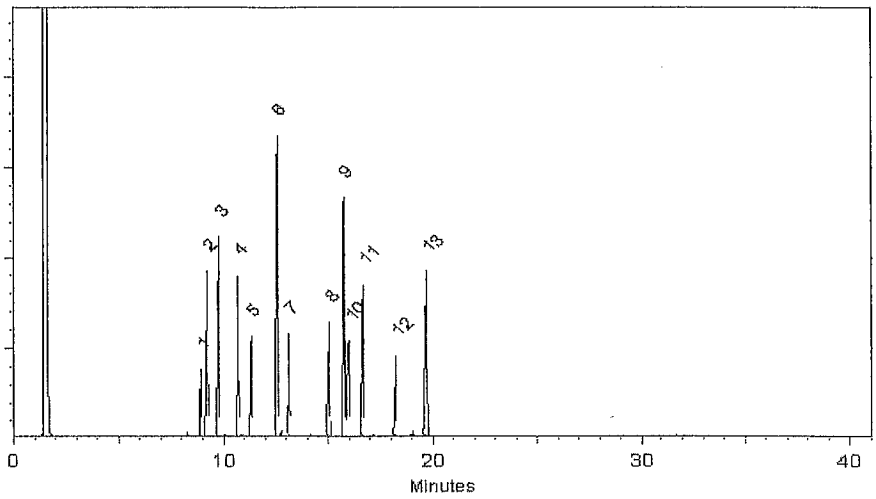
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.

Brandon Reish - Mix Technician

Date Mixed: 17-Dec-2015 **Balance:** B345965662

Jennifer L. Pollino - QC Analyst

Date Passed: 21-Dec-2015

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. : 31995 **Lot No.:** A0108907

Description : 8270 Calibration Mix #5, Revised

8270 Calibration Mix #5, Revised 2,000µg/ml, Methylene Chloride, 1ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

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	Naphthalene		2,000.5 µg/mL	+/- 11.7401	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)		+/- 88.8976	µg/mL	Unstressed
	Purity 99%			+/- 97.6678	µg/mL	Stressed
2	2-Methylnaphthalene		2,000.6 µg/mL	+/- 11.7409	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)		+/- 88.9038	µg/mL	Unstressed
	Purity 96%			+/- 97.6746	µg/mL	Stressed
3	1-Methylnaphthalene		2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)		+/- 88.8754	µg/mL	Unstressed
	Purity 99%			+/- 97.6434	µg/mL	Stressed
4	Acenaphthylene		2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot ER030707-01)		+/- 88.8754	µg/mL	Unstressed
	Purity 99%			+/- 97.6434	µg/mL	Stressed
5	Acenaphthene		2,000.5 µg/mL	+/- 11.7401	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBJ4871V)		+/- 88.8976	µg/mL	Unstressed
	Purity 99%			+/- 97.6678	µg/mL	Stressed
6	Fluorene		2,000.2 µg/mL	+/- 11.7382	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 88.8834	µg/mL	Unstressed
	Purity 98%			+/- 97.6521	µg/mL	Stressed
7	Phenanthrene		2,000.7 µg/mL	+/- 11.7411	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBQ8219V)		+/- 88.9051	µg/mL	Unstressed
	Purity 98%			+/- 97.6761	µg/mL	Stressed

8	Anthracene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	88.8754	µg/mL	Unstressed
	Purity 99%				+/-	97.6434	µg/mL	Stressed
9	Fluoranthene		2,000.7	µg/mL	+/-	11.7411	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	88.9051	µg/mL	Unstressed
	Purity 98%				+/-	97.6761	µg/mL	Stressed
10	Pyrene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
11	Benz(a)anthracene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	88.8976	µg/mL	Unstressed
	Purity 99%				+/-	97.6678	µg/mL	Stressed
12	Chrysene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot ER120810-02)			+/-	88.8976	µg/mL	Unstressed
	Purity 99%				+/-	97.6678	µg/mL	Stressed
13	Benzo(b)fluoranthene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
14	Benzo(k)fluoranthene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot ER041513-01)			+/-	88.8976	µg/mL	Unstressed
	Purity 99%				+/-	97.6678	µg/mL	Stressed
15	Benzo(a)pyrene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
16	Indeno(1,2,3-cd)pyrene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	88.8754	µg/mL	Unstressed
	Purity 99%				+/-	97.6434	µg/mL	Stressed
17	Dibenz(a,h)anthracene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
18	Benzo(g,h,i)perylene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER020708-08)			+/-	88.8754	µg/mL	Unstressed
	Purity 99%				+/-	97.6434	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

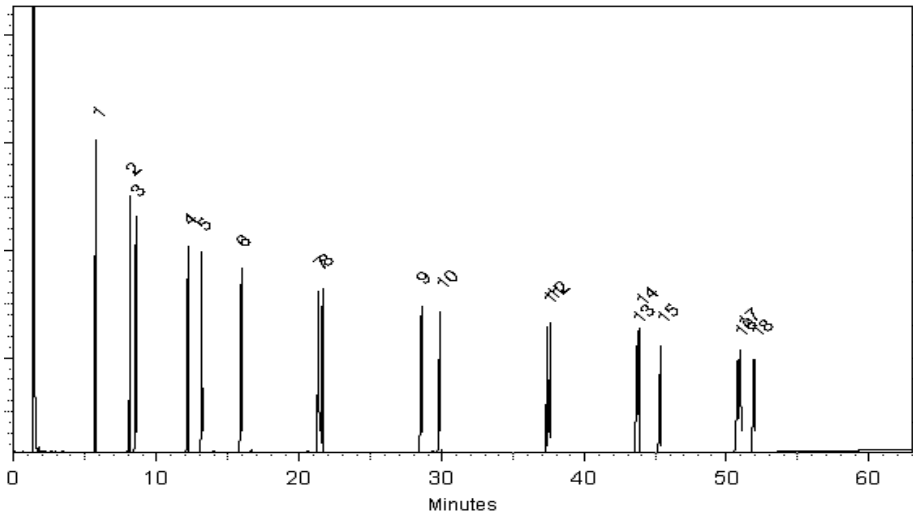
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 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.

Connor Flannery - Mix Technician

Date Mixed: 05-Feb-2015 **Balance:** 1128360905

Jennifer L. Pollino - QC Analyst

Date Passed: 09-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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- 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.
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- Purity values are rounded to the nearest whole number.

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  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.

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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:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Description: EPA 8270 GC/MS Tuning Solution II, 1x1ml, 1000µg/ml in methylene chloride

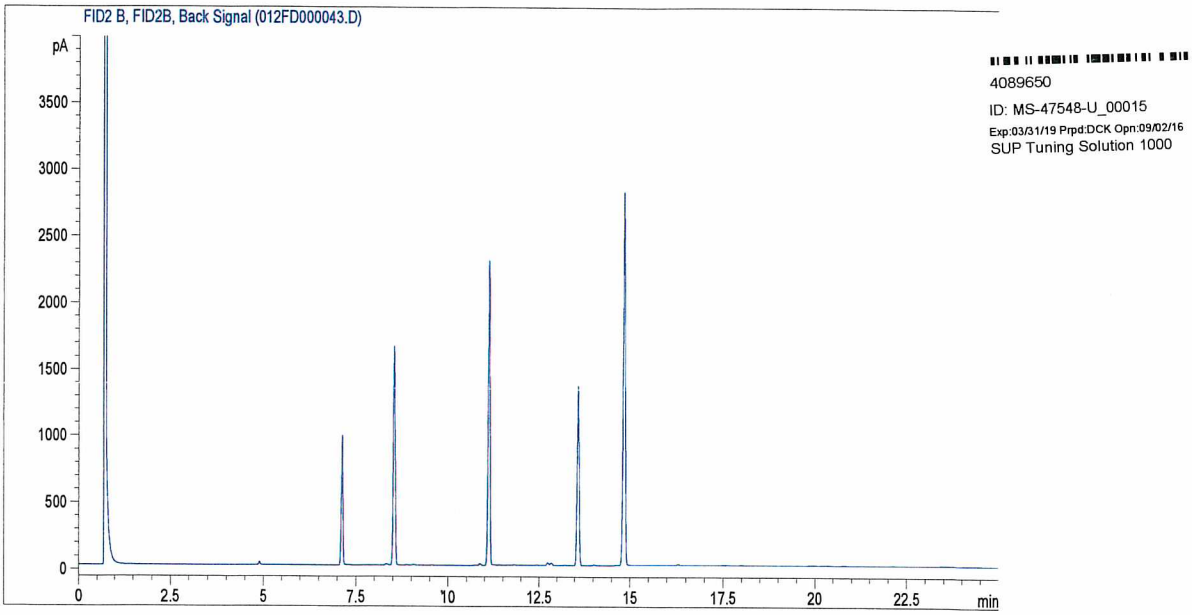
Part Number: 47548-U

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

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Reagent

MS-567684_00019

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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.

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 µg/mL +/- 89.5186 µg/mL +/- 98.3528 µg/mL		Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	(Lot M-1452)	2,015.8 µg/mL	+/- 11.7202 µg/mL +/- 89.5645 µg/mL +/- 98.4032 µg/mL		Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 97%	(Lot PR-21070)	2,002.0 µg/mL	+/- 11.6397 µg/mL +/- 88.9491 µg/mL +/- 97.7271 µg/mL		Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	(Lot PR-23065)	2,007.1 µg/mL	+/- 11.6693 µg/mL +/- 89.1750 µg/mL +/- 97.9753 µg/mL		Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99%	(Lot PR-25081)	2,013.2 µg/mL	+/- 11.7047 µg/mL +/- 89.4460 µg/mL +/- 98.2730 µg/mL		Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	(Lot PR-24113)	2,005.4 µg/mL	+/- 11.6598 µg/mL +/- 89.1024 µg/mL +/- 97.8955 µg/mL		Gravimetric Unstressed Stressed

Reagent

MS-567684_00020

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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.

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 **Purity** 99%	(Lot PR-18488)	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 **Purity** 99%	(Lot M-1452)	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 **Purity** 99%	(Lot PR-25444)	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 **Purity** 99%	(Lot PR-27621)	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 **Purity** 99%	(Lot PR-27952)	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 **Purity** 99%	(Lot PR-27342)	2,012.2 µg/mL	+/- 11.6991 µg/mL +/- 90.6307 µg/mL +/- 100.5659 µg/mL		Gravimetric Unstressed Stressed

Reagent

MS-567685_00004

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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.:** 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_00043

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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.

5199826
ID: MS-568023_00043
Exp: 06/30/20 Prpd: DCK
RES HSLA Famphur 2000ug/m

Catalog No. : 568023 **Lot No.:** A0139090

Description : 8270 Famphur Standard

8270 Famphur Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **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		2,014.9 µg/mL	+/- 18.7373	µg/mL	Gravimetric
	CAS # 52-85-7	(Lot 6789600)		+/- 87.6407	µg/mL	Unstressed
	Purity 98%			+/- 87.6775	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Brandon Reish - Mix Technician

Date Mixed: 21-Jun-2018 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

MS-568033_00026

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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. : 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-569730 HSL_00008

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Catalog No. : 569730 **Lot No.:** A0137351

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

5306168
ID: MS-569730 AFC_00007
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

5306172
ID: MS-569730 HSL_00008
Exp: 10/31/19 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	2,000.3 µg/mL	+/- 11.6301	µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 171228KJA)		+/- 23.9121	µg/mL	Unstressed
	Purity 99%		+/- 38.0558	µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,005.7 µg/mL	+/- 11.6611	µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 180328JNA)		+/- 23.9759	µg/mL	Unstressed
	Purity 99%		+/- 38.1572	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569730SEC_00004

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Catalog No. : 569730.SEC **Lot No.:** A0131614

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

5163418
ID: MS-569730SEC_00004
Exp: 04/30/19 Prpd: DCK
RES HSLB Amine Mix 2000ug

5163449
ID: MS-569730SECa_00004
Exp: 04/30/19 Prpd: DCK
RES Benzidine 2000ug/mL

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine **CAS #** 92-87-5.SEC (Lot 2715900) **Purity** 99%	2,004.0 µg/mL	+/- 11.7606 µg/mL +/- 24.0092 µg/mL +/- 38.1590 µg/mL	Gravimetric Unstressed Stressed
2	3,3'-Dichlorobenzidine **CAS #** 91-94-1.SEC (Lot 5340500) **Purity** 99%	2,014.0 µg/mL	+/- 11.8193 µg/mL +/- 24.1290 µg/mL +/- 38.3494 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731.SEC_00003

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5163391
ID: MS-569731.SEC_00003
Exp: 05/31/19 Prpd: DCK
8270 List 1 #10 2,000ug/m

Catalog No. : 569731.SEC **Lot No.:** A0132859

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 : May 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	2,017.0 µg/mL	+/- 11.7541 µg/mL	Gravimetric
	CAS # 95-13-6.SEC (Lot IG5TI)		+/- 113.0940 µg/mL	Unstressed
	Purity 99%		+/- 115.7401 µg/mL	Stressed
2	Benzoic acid	2,008.5 µg/mL	+/- 11.7046 µg/mL	Gravimetric
	CAS # 65-85-0.SEC (Lot QD3UO)		+/- 112.6174 µg/mL	Unstressed
	Purity 99%		+/- 115.2524 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-569731_00095

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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. : 569731 **Lot No.:** A0132744

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 : May 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	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
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

MS-569731_00096

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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. : 569731 **Lot No.:** A0132744

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 : May 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	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
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

MS-569731_00097

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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. : 569731 **Lot No.:** A0132744

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 : May 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	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
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

MS-569731_00100

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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. : 569731 **Lot No.:** A0132744

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 : May 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	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
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

MS-569732 HSL_00006

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.

Catalog No. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

5335192
ID: MS-569732 HSL_00006
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

5335191
ID: MS-569732 BZH_00008
Exp: 10/31/19 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 (Lot SHBG8690V) **Purity** 99%	2,001.1 µg/mL	+/- 11.6345 µg/mL +/- 64.1460 µg/mL +/- 74.5673 µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 (Lot I16X016) **Purity** 99%	2,002.0 µg/mL	+/- 11.6398 µg/mL +/- 64.1754 µg/mL +/- 74.6014 µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 (Lot 77P7D) **Purity** 99%	2,002.6 µg/mL	+/- 11.6432 µg/mL +/- 64.1941 µg/mL +/- 74.6232 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-571995.SEC_00002

RESTEK®
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Tel: (800)356-1688
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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.

4994417
ID: MS-571995.SEC_00002
Exp:03/31/19 Prpd:DCK Opn:03/09/18
RES HSLB Mega Mix (2017)

Catalog No. : 571995.SEC **Lot No.:** A0131190

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 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.SEC (Lot MUFZH) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine CAS # 62-75-9.SEC (Lot 61H72) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine CAS # 110-86-1.SEC (Lot QN8DK) Purity 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 23.9081 µg/mL +/- 38.0494 µg/mL	Gravimetric Unstressed Stressed
4	Phenol CAS # 108-95-2.SEC (Lot EDPYN) Purity 99%	1,000.6 µg/mL	+/- 5.8310 µg/mL +/- 11.9678 µg/mL +/- 19.0402 µg/mL	Gravimetric Unstressed Stressed
5	Aniline CAS # 62-53-3.SEC (Lot ZCD3N) Purity 99%	1,000.4 µg/mL	+/- 5.8299 µg/mL +/- 11.9654 µg/mL +/- 19.0364 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether CAS # 111-44-4.SEC (Lot FA010143) Purity 99%	1,000.6 µg/mL	+/- 5.8310 µg/mL +/- 11.9678 µg/mL +/- 19.0402 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) CAS # 124-18-5.SEC (Lot UCVNN) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol CAS # 95-57-8.SEC Purity 99%	(Lot GJ01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol CAS # 100-51-6.SEC Purity 99%	(Lot QZBUO)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot R6QDM)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) CAS # 95-48-7.SEC Purity 99%	(Lot NC7HL)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) CAS # 108-60-1.SEC Purity 99%	(Lot 2-KMW-57-8)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone CAS # 98-86-2.SEC Purity 99%	(Lot NSGTI)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) CAS # 108-39-4.SEC Purity 99%	(Lot 6LHTM)	500.0	µg/mL	+/- 2.9138 +/- 5.9803 +/- 9.5144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) CAS # 106-44-5.SEC Purity 99%	(Lot 65S2E)	501.0	µg/mL	+/- 2.9196 +/- 5.9923 +/- 9.5334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine CAS # 621-64-7.SEC Purity 99%	(Lot 4423200)	1,001.4	µg/mL	+/- 5.8357 +/- 11.9773 +/- 19.0555	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane CAS # 67-72-1.SEC Purity 99%	(Lot 10173016)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3.SEC Purity 99%	(Lot FLYIG)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1.SEC Purity 99%	(Lot XHGJI)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5.SEC Purity 99%	(Lot GXJ7J)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9.SEC Purity 99%	(Lot MKBL3650V)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 111-91-1 *	(Lot 5670100)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
25	2,4-Dichlorophenol		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 120-83-2.SEC	(Lot FHM01)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot OGO01)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
27	Naphthalene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
28	2,6-Dichlorophenol		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 87-65-0.SEC	(Lot SIDBB)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
29	4-Chloroaniline		1,000.2	µg/mL	+/-	5.8287	µg/mL	Gravimetric
	CAS # 106-47-8.SEC	(Lot 10171860)			+/-	11.9630	µg/mL	Unstressed
	Purity 99%				+/-	19.0326	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.5	µg/mL	+/-	5.8302	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 1068200)			+/-	11.9661	µg/mL	Unstressed
	Purity 97%				+/-	19.0375	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 59-50-7.SEC	(Lot FDO02)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
32	2-Methylnaphthalene		1,000.8	µg/mL	+/-	5.8320	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)			+/-	11.9699	µg/mL	Unstressed
	Purity 98%				+/-	19.0436	µg/mL	Stressed
33	1-Methylnaphthalene		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 90-12-0.SEC	(Lot UATSA)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 95-94-3.SEC	(Lot AF02)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 77-47-4.SEC	(Lot 5608400)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,000.6	µg/mL	+/-	5.8309	µg/mL	Gravimetric
	CAS # 88-06-2.SEC	(Lot UUMYM)			+/-	11.9675	µg/mL	Unstressed
	Purity 98%				+/-	19.0399	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 95-95-4.SEC	(Lot MKBQ9937V)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 91-58-7.SEC	(Lot LC07783V)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
39	Biphenyl		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 92-52-4.SEC	(Lot 33OQE)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed

40	2-Nitroaniline CAS # 88-74-4.SEC Purity 99%	(Lot T6E7B)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8.SEC Purity 96%	(Lot 0012014)	999.9	µg/mL	+/- 5.8271 +/- 11.9598 +/- 19.0276	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0.SEC Purity 99%	(Lot 3XXLB)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3.SEC Purity 99%	(Lot 483WC)	1,002.0	µg/mL	+/- 5.8392 +/- 11.9845 +/- 19.0669	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2.SEC Purity 99%	(Lot GE01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline CAS # 99-09-2.SEC Purity 99%	(Lot FGN03)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene CAS # 83-32-9.SEC Purity 99%	(Lot BWZJE)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol CAS # 51-28-5.SEC Purity 99%	(Lot YTR6B)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran CAS # 132-64-9.SEC Purity 99%	(Lot 27ZGC)	1,000.8	µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol CAS # 100-02-7.SEC Purity 99%	(Lot 2J5LB)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene CAS # 121-14-2.SEC Purity 99%	(Lot SHRSA)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2.SEC Purity 99%	(Lot LC19623V)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7.SEC Purity 99%	(Lot 5027400)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) CAS # 544-76-3.SEC Purity 99%	(Lot A0328141)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate CAS # 84-66-2.SEC Purity 99%	(Lot UMBJC)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether CAS # 7005-72-3.SEC Purity 99%	(Lot P31G)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 6333400)			+/-	23.9081	µg/mL	Unstressed
	Purity 99%				+/-	38.0494	µg/mL	Stressed
58	Diphenylamine		850.0	µg/mL	+/-	4.9534	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/-	10.1665	µg/mL	Unstressed
	Purity 99%				+/-	16.1745	µg/mL	Stressed
59	Azobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
61	Hexachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot G120431)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
62	Pentachlorophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 5784900)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
63	n-Octadecane (C18)		1,001.0	µg/mL	+/-	5.8333	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/-	11.9726	µg/mL	Unstressed
	Purity 99%				+/-	19.0478	µg/mL	Stressed
64	Phenanthrene		1,002.0	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 4708400)			+/-	11.9839	µg/mL	Unstressed
	Purity 98%				+/-	19.0660	µg/mL	Stressed
65	Anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
68	Fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
69	Pyrene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/-	11.9605	µg/mL	Unstressed
	Purity 98%				+/-	19.0287	µg/mL	Stressed
71	Benz(a)anthracene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed

72	chrysene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 218-01-9.SEC	(Lot NICZC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 117-81-7.SEC	(Lot MT8AG)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
74	Di-n-octyl phthalate		1,000.8	µg/mL	+/-	5.8322	µg/mL	Gravimetric
	CAS # 117-84-0.SEC	(Lot O8DLD)			+/-	11.9702	µg/mL	Unstressed
	Purity 99%				+/-	19.0440	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 205-99-2.SEC	(Lot 022011)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.6	µg/mL	+/-	5.8310	µg/mL	Gravimetric
	CAS # 207-08-9.SEC	(Lot ER041513-01)			+/-	11.9678	µg/mL	Unstressed
	Purity 99%				+/-	19.0402	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.5	µg/mL	+/-	5.8302	µg/mL	Gravimetric
	CAS # 50-32-8.SEC	(Lot M8DFD)			+/-	11.9661	µg/mL	Unstressed
	Purity 97%				+/-	19.0375	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 193-39-5.SEC	(Lot 0012014)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 53-70-3.SEC	(Lot 0012011)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 191-24-2.SEC	(Lot 0022012)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
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.**

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.

Reagent

MS-571995_00002

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.

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		1,002.0	µg/mL	+/- 5.8257	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBH5677)			+/- 11.9780	µg/mL	Unstressed
	Purity 99%				+/- 19.0628	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,002.0	µg/mL	+/- 5.8257	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 161108JLM)			+/- 11.9780	µg/mL	Unstressed
	Purity 99%				+/- 19.0628	µg/mL	Stressed
3	Pyridine		2,011.2	µg/mL	+/- 11.6933	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0420	µg/mL	Unstressed
	Purity 99%				+/- 38.2625	µg/mL	Stressed
4	Phenol		1,005.1	µg/mL	+/- 5.8439	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 12.0154	µg/mL	Unstressed
	Purity 99%				+/- 19.1224	µg/mL	Stressed
5	Aniline		1,002.6	µg/mL	+/- 5.8292	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9851	µg/mL	Unstressed
	Purity 99%				+/- 19.0742	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,001.4	µg/mL	+/- 5.8222	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9708	µg/mL	Unstressed
	Purity 99%				+/- 19.0513	µg/mL	Stressed
7	n-Decane (C10)		1,000.7	µg/mL	+/- 5.8180	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBH3926V)			+/- 11.9620	µg/mL	Unstressed
	Purity 99%				+/- 19.0374	µg/mL	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

OP-569732_00001

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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. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 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	Benzaldehyde **CAS #** 100-52-7 (Lot SHBG8690V) **Purity** 99%	2,001.1 µg/mL	+/- 11.6345 µg/mL +/- 64.1460 µg/mL +/- 74.5673 µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 (Lot I16X016) **Purity** 99%	2,002.0 µg/mL	+/- 11.6398 µg/mL +/- 64.1754 µg/mL +/- 74.6014 µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 (Lot 77P7D) **Purity** 99%	2,002.6 µg/mL	+/- 11.6432 µg/mL +/- 64.1941 µg/mL +/- 74.6232 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

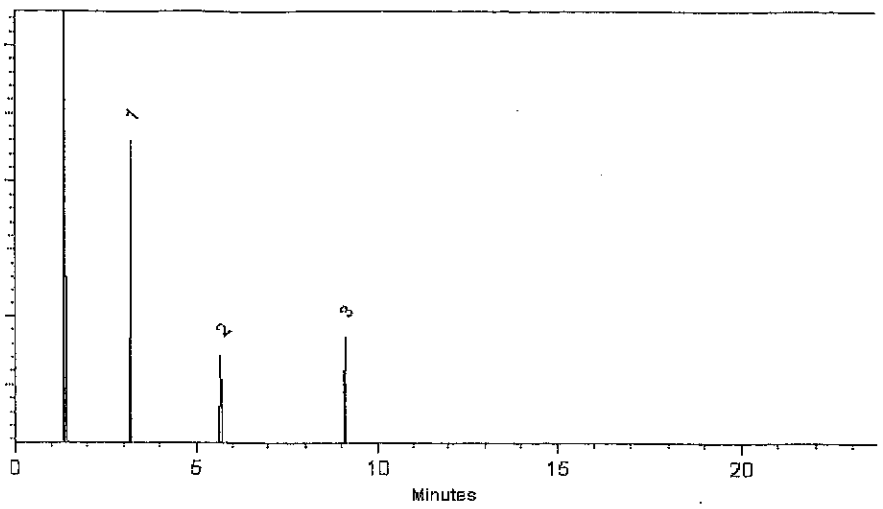
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-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

OP-569732_00002

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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. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 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	Benzaldehyde		2,001.1 µg/mL	+/- 11.6345	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBG8690V)		+/- 64.1460	µg/mL	Unstressed
	Purity 99%			+/- 74.5673	µg/mL	Stressed
2	epsilon-Caprolactam		2,002.0 µg/mL	+/- 11.6398	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.1754	µg/mL	Unstressed
	Purity 99%			+/- 74.6014	µg/mL	Stressed
3	Atrazine		2,002.6 µg/mL	+/- 11.6432	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot 77P7D)		+/- 64.1941	µg/mL	Unstressed
	Purity 99%			+/- 74.6232	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

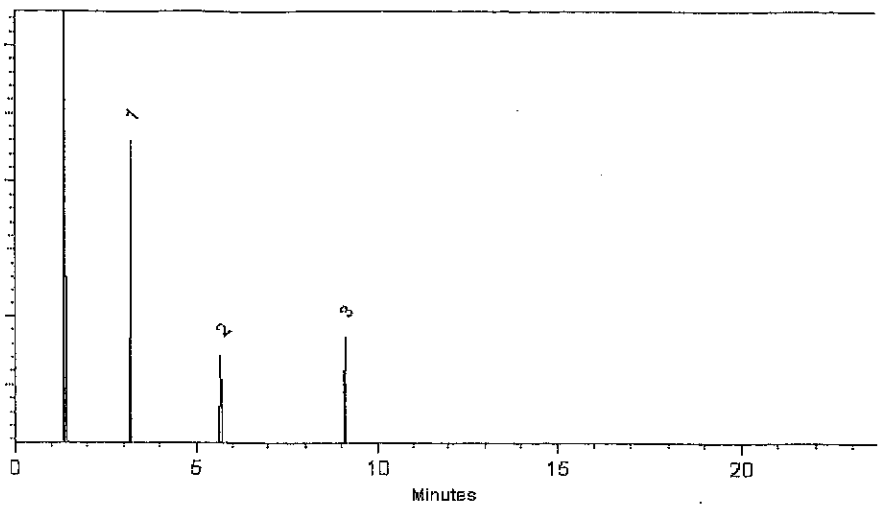
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-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

OP-569732_00003

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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. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 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	Benzaldehyde		2,001.1 µg/mL	+/- 11.6345	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBG8690V)		+/- 64.1460	µg/mL	Unstressed
	Purity 99%			+/- 74.5673	µg/mL	Stressed
2	epsilon-Caprolactam		2,002.0 µg/mL	+/- 11.6398	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.1754	µg/mL	Unstressed
	Purity 99%			+/- 74.6014	µg/mL	Stressed
3	Atrazine		2,002.6 µg/mL	+/- 11.6432	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot 77P7D)		+/- 64.1941	µg/mL	Unstressed
	Purity 99%			+/- 74.6232	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

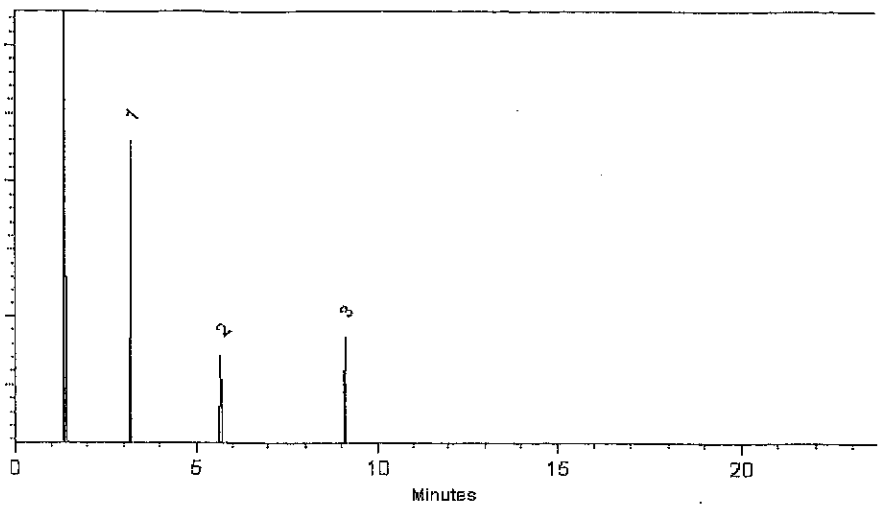
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-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

OP-572556_00003

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Gravimetric Certificate

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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. : 572556 **Lot No.:** A0127376

Description : Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 0012015) **Purity** 99%	4,019.0 µg/mL	+/- 23.585744 µg/mL +/- 225.364148 µg/mL +/- 230.636330 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Rebecca Sawver

Date Mixed: 08-May-2017 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

OP-572556_00006

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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. : 572556 **Lot No.:** A0127376

Description : Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 0012015) **Purity** 99%	4,019.0 µg/mL	+/- 23.585744 µg/mL +/- 225.364148 µg/mL +/- 230.636330 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Rebecca Sawver

Date Mixed: 08-May-2017 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

OP-CustBenz_00026

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Certificate #3222.01

ilac-MRA

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

10x 5mL
Received 7/31/18
AMB

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. : 572555 **Lot No.:** A0139914

Description : Custom Benzidines Standard

Custom Benzidines Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	3,3'-Dichlorobenzidine		4,016.0 µg/mL	+/- 23.568138 µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 170112KJA)		+/- 121.518984 µg/mL	Unstressed
	Purity 99%			+/- 121.518984 µg/mL	Stressed
2	Benzidine		4,033.0 µg/mL	+/- 23.667904 µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 180406JNA)		+/- 122.033382 µg/mL	Unstressed
	Purity 99%			+/- 122.033382 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Lane Kibe - Mix Technician **Date Mixed:** 24-Jul-2018 **Balance:** 1122030677

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 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

PicricARestek_00080

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

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. : 31499 **Lot No.:** A0114009

Description : Picric Acid Standard

1000µg/mL, Methanol, 1mL/ampul *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid **CAS #** 88-89-1 **Purity** 99% (Lot 06130CU)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 53.9873 µg/mL +/- 58.7028 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
This is a derivatized analysis.

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

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

SIM_LVI_SURR_00006

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_F\20181003-74690.b\F3780.D

Lims ID: SIM_LVI_SURR_00006 Inj. Date: 03-Oct-2018 18:34:30

Worklist ID: 280-0074690-004 Instrument: SMS_F

Method: SMSF_8270SIMX

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3510C_LVI
$ 4 Nitrobenzene-d5	2000.0	1816.9	90.8	43-120
$ 5 2-Fluorobiphenyl	2000.0	1789.6	89.5	42-120
$ 6 Terphenyl-d14	2000.0	1805.0	90.3	47-120
$ 53 2-methylnaphthalene-d10	2000.0	1964.1	98.2	
$ 54 Fluoranthene-d10	2000.0	1814.7	90.7	

Samples for Limit Group: 1, Lims Prep Method: 3510C_LVI

280-114217-H-1-A

8270D_DOD5

Semivolatile Organic Compounds (GC/MS)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
RQLMW-011-181001-GW	280-115789-1	90	93	88	88	89	101
RQLMW-011-181002-GW	280-115789-2	86	89	85	85	94	99
FWGER-181001-ER	280-115789-3	70	74	73	74	94	98
FWGFB-181001-FB	280-115789-4	78	80	79	79	91	104
	MB 280-434728/1-A	86	88	85	83	84	99
	MB 280-434912/1-A	95	98	96	91	91	102
	LCS 280-434728/2-A	90	92	92	96	92	92
	LCS 280-434912/2-A	93	96	96	95	95	92
	LCSD 280-434728/3-A	89	91	92	94	90	91
	LCSD 280-434912/3-A	100	101	98	99	96	94
RQLMW-011-181001-GW MS	280-115789-1 MS	87	89	87	93	94	90
RQLMW-011-181001-GW MSD	280-115789-1 MSD	83	85	85	89	90	88

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	19-119
PHL = Phenol-d5 (Surr)	10-115
NBZ = Nitrobenzene-d5 (Surr)	44-120
FBP = 2-Fluorobiphenyl	44-119
TBP = 2,4,6-Tribromophenol (Surr)	43-140
TPHL = Terphenyl-d14 (Surr)	50-134

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.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27320.D

Lab ID: LCS 280-434728/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	80.0	68.4	85	29-116	
1,2-Dichlorobenzene	80.0	68.4	85	32-111	
1,3-Dichlorobenzene	80.0	65.3	82	28-110	
1,4-Dichlorobenzene	80.0	65.0	81	29-112	
1,4-Dioxane	80.0	63.5	79	47-120	
2,4,5-Trichlorophenol	80.0	77.6	97	53-123	
2,4,6-Trichlorophenol	80.0	81.6	102	50-125	
2,4-Dichlorophenol	80.0	74.1	93	47-121	
2,4-Dimethylphenol	80.0	64.1	80	31-124	
2,4-Dinitrophenol	160	146	91	23-143	
2,4-Dinitrotoluene	80.0	77.9	97	57-128	
2,6-Dinitrotoluene	80.0	78.9	99	57-124	
2-Chloronaphthalene	80.0	75.7	95	40-116	
2-Chlorophenol	80.0	74.1	93	38-117	
2-Methylphenol	80.0	73.5	92	30-117	
2-Nitroaniline	80.0	77.8	97	55-127	
2-Nitrophenol	80.0	76.4	96	47-123	
3 & 4 Methylphenol	80.0	72.9	91	29-110	
3,3'-Dichlorobenzidine	160	126	79	27-129	
3-Nitroaniline	80.0	50.9	64	41-128	
4-Bromophenyl phenyl ether	80.0	79.0	99	55-124	
4-Chloro-3-methylphenol	80.0	73.4	92	52-119	
4-Chloroaniline	80.0	51.1	64	33-117	
4-Chlorophenyl phenyl ether	80.0	73.1	91	53-121	
4-Nitroaniline	80.0	72.2	90	70-120	
4-Nitrophenol	160	152	95	59-129	
Benzoic acid	80.0	67.2 J	84	41-120	
Benzyl alcohol	80.0	74.9	94	31-112	
bis (2-chloroisopropyl) ether	80.0	79.4	99	37-130	
Bis(2-chloroethoxy)methane	80.0	76.4	96	48-120	
Bis(2-chloroethyl)ether	80.0	79.0	99	43-118	
Bis(2-ethylhexyl) phthalate	80.0	81.4	102	55-135	
Butyl benzyl phthalate	80.0	79.0	99	53-134	
Carbazole	80.0	78.0	98	60-122	
Dibenzofuran	80.0	76.3	95	53-118	
Diethyl phthalate	80.0	75.9	95	56-125	
Dimethyl phthalate	80.0	77.4	97	45-127	
Di-n-butyl phthalate	80.0	78.7	98	59-127	
Di-n-octyl phthalate	80.0	73.9	92	51-140	
Hexachlorobenzene	80.0	76.2	95	53-125	
Hexachlorobutadiene	80.0	63.9	80	22-124	
Hexachloroethane	80.0	62.1	78	21-115	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27320.D

Lab ID: LCS 280-434728/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isophorone	80.0	74.3	93	42-124	
Nitrobenzene	80.0	75.7	95	45-121	
N-Nitrosodi-n-propylamine	80.0	73.6	92	49-119	
N-Nitrosodiphenylamine	80.0	79.5	99	51-123	
Pentachlorophenol	160	149	93	35-138	
Phenol	80.0	73.2	91	61-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27223.D

Lab ID: LCS 280-434912/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
2,4-Dinitrotoluene	80.0	76.5	96	57-128	
2,6-Dinitrotoluene	80.0	78.2	98	57-124	
Nitrobenzene	80.0	75.0	94	45-121	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27321.D

Lab ID: LCSD 280-434728/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,2,4-Trichlorobenzene	80.0	66.7	83	3	20	29-116	
1,2-Dichlorobenzene	80.0	64.6	81	6	20	32-111	
1,3-Dichlorobenzene	80.0	63.3	79	3	20	28-110	
1,4-Dichlorobenzene	80.0	63.3	79	3	20	29-112	
1,4-Dioxane	80.0	61.7	77	3	20	47-120	
2,4,5-Trichlorophenol	80.0	77.1	96	1	20	53-123	
2,4,6-Trichlorophenol	80.0	79.8	100	2	20	50-125	
2,4-Dichlorophenol	80.0	76.0	95	3	20	47-121	
2,4-Dimethylphenol	80.0	65.1	81	2	20	31-124	
2,4-Dinitrophenol	160	147	92	1	20	23-143	
2,4-Dinitrotoluene	80.0	76.8	96	1	20	57-128	
2,6-Dinitrotoluene	80.0	77.4	97	2	20	57-124	
2-Chloronaphthalene	80.0	75.1	94	1	20	40-116	
2-Chlorophenol	80.0	73.8	92	0	20	38-117	
2-Methylphenol	80.0	73.1	91	1	20	30-117	
2-Nitroaniline	80.0	75.1	94	4	20	55-127	
2-Nitrophenol	80.0	76.8	96	1	20	47-123	
3 & 4 Methylphenol	80.0	72.4	90	1	20	29-110	
3,3'-Dichlorobenzidine	160	130	81	3	20	27-129	
3-Nitroaniline	80.0	49.3 J	62	3	20	41-128	
4-Bromophenyl phenyl ether	80.0	78.4	98	1	20	55-124	
4-Chloro-3-methylphenol	80.0	74.3	93	1	20	52-119	
4-Chloroaniline	80.0	53.1	66	4	20	33-117	
4-Chlorophenyl phenyl ether	80.0	73.4	92	0	20	53-121	
4-Nitroaniline	80.0	69.0	86	4	20	70-120	
4-Nitrophenol	160	143	89	6	20	59-129	
Benzoic acid	80.0	67.6 J	84	1	20	41-120	
Benzyl alcohol	80.0	74.5	93	1	20	31-112	
bis (2-chloroisopropyl) ether	80.0	77.8	97	2	20	37-130	
Bis(2-chloroethoxy)methane	80.0	75.7	95	1	20	48-120	
Bis(2-chloroethyl)ether	80.0	79.3	99	0	20	43-118	
Bis(2-ethylhexyl) phthalate	80.0	80.6	101	1	20	55-135	
Butyl benzyl phthalate	80.0	77.4	97	2	20	53-134	
Carbazole	80.0	74.8	93	4	20	60-122	
Dibenzofuran	80.0	75.1	94	2	20	53-118	
Diethyl phthalate	80.0	75.0	94	1	20	56-125	
Dimethyl phthalate	80.0	75.0	94	3	20	45-127	
Di-n-butyl phthalate	80.0	76.6	96	3	20	59-127	
Di-n-octyl phthalate	80.0	73.1	91	1	20	51-140	
Hexachlorobenzene	80.0	76.6	96	0	20	53-125	
Hexachlorobutadiene	80.0	63.0	79	1	20	22-124	
Hexachloroethane	80.0	59.2	74	5	20	21-115	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27321.D

Lab ID: LCSD 280-434728/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isophorone	80.0	75.1	94	1	20	42-124	
Nitrobenzene	80.0	75.8	95	0	20	45-121	
N-Nitrosodi-n-propylamine	80.0	73.4	92	0	20	49-119	
N-Nitrosodiphenylamine	80.0	79.6	99	0	20	51-123	
Pentachlorophenol	160	145	91	2	20	35-138	
Phenol	80.0	71.3	89	3	20	61-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27224.D

Lab ID: LCSD 280-434912/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,4-Dinitrotoluene	80.0	79.2	99	3	20	57-128	
2,6-Dinitrotoluene	80.0	80.3	100	3	20	57-124	
Nitrobenzene	80.0	76.3	95	2	20	45-121	

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.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27335.D

Lab ID: 280-115789-1 MS Client ID: RQLMW-011-181001-GW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	84.5	1.1 U	72.3	86	29-116	
1,2-Dichlorobenzene	84.5	0.53 U	71.1	84	32-111	
1,3-Dichlorobenzene	84.5	1.1 U	71.0	84	28-110	
1,4-Dichlorobenzene	84.5	1.1 U	70.6	84	29-112	
1,4-Dioxane	84.5	4.6 U	61.5	73	47-120	
2,4,5-Trichlorophenol	84.5	1.1 U	79.5	94	53-123	
2,4,6-Trichlorophenol	84.5	1.1 U	83.8	99	50-125	
2,4-Dichlorophenol	84.5	2.1 U	75.5	89	47-121	
2,4-Dimethylphenol	84.5	2.1 U	70.2	83	31-124	
2,4-Dinitrophenol	169	32 U	153	90	23-143	
2,4-Dinitrotoluene	84.5	4.6 U	81.6	97	57-128	
2,6-Dinitrotoluene	84.5	4.6 U	81.2	96	57-124	
2-Chloronaphthalene	84.5	1.1 U	79.3	94	40-116	
2-Chlorophenol	84.5	4.6 U	74.6	88	38-117	
2-Methylphenol	84.5	2.1 U	75.0	89	30-117	
2-Nitroaniline	84.5	4.6 U	75.7	90	55-127	
2-Nitrophenol	84.5	1.1 U	77.7	92	47-123	
3 & 4 Methylphenol	84.5	0.53 U	72.8	86	29-110	
3,3'-Dichlorobenzidine	169	4.6 U	134	79	27-129	
3-Nitroaniline	84.5	4.6 U	53.0	63	41-128	
4-Bromophenyl phenyl ether	84.5	1.1 U	81.4	96	55-124	
4-Chloro-3-methylphenol	84.5	5.3 U	72.8	86	52-119	
4-Chloroaniline	84.5	4.6 U	55.6	66	33-117	
4-Chlorophenyl phenyl ether	84.5	4.6 U	76.5	91	53-121	
4-Nitroaniline	84.5	4.6 U	73.4	87	70-120	
4-Nitrophenol	169	4.2 U	152	90	59-129	
Benzoic acid	84.5	32 U	78.6 J	93	41-120	
Benzyl alcohol	84.5	0.53 U	74.4	88	31-112	
bis (2-chloroisopropyl) ether	84.5	1.1 U	78.0	92	37-130	
Bis(2-chloroethoxy)methane	84.5	2.1 U	74.4	88	48-120	
Bis(2-chloroethyl)ether	84.5	1.1 U	80.1	95	43-118	
Bis(2-ethylhexyl) phthalate	84.5	2.1 U	87.2	103	55-135	
Butyl benzyl phthalate	84.5	2.1 U	83.7	99	53-134	
Carbazole	84.5	1.1 U	81.1	96	60-122	
Dibenzofuran	84.5	1.1 U	78.4	93	53-118	
Diethyl phthalate	84.5	1.1 U	78.5	93	56-125	
Dimethyl phthalate	84.5	0.53 U	80.1	95	45-127	
Di-n-butyl phthalate	84.5	4.6 U	82.0	97	59-127	
Di-n-octyl phthalate	84.5	1.1 U	81.8	97	51-140	
Hexachlorobenzene	84.5	2.1 U	81.6	97	53-125	
Hexachlorobutadiene	84.5	11 U	73.2	87	22-124	
Hexachloroethane	84.5	4.6 U	68.6	81	21-115	

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.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27335.D

Lab ID: 280-115789-1 MS Client ID: RQLMW-011-181001-GW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Isophorone	84.5	0.53 U	72.9	86	42-124	
Nitrobenzene	84.5	2.1 U	74.5	88	45-121	
N-Nitrosodi-n-propylamine	84.5	1.1 U	72.8	86	49-119	
N-Nitrosodiphenylamine	84.5	1.1 U	83.2	99	51-123	
Pentachlorophenol	169	63 U	164	97	35-138	
Phenol	84.5	4.6 U	74.7	88	61-120	

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.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27336.D

Lab ID: 280-115789-1 MSD Client ID: RQLMW-011-181001-GW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,2,4-Trichlorobenzene	87.4	72.0	82	0	20	29-116	
1,2-Dichlorobenzene	87.4	71.2	81	0	20	32-111	
1,3-Dichlorobenzene	87.4	70.3	80	1	20	28-110	
1,4-Dichlorobenzene	87.4	70.5	81	0	20	29-112	
1,4-Dioxane	87.4	62.6	72	2	20	47-120	
2,4,5-Trichlorophenol	87.4	79.5	91	0	20	53-123	
2,4,6-Trichlorophenol	87.4	82.2	94	2	20	50-125	
2,4-Dichlorophenol	87.4	76.6	88	1	20	47-121	
2,4-Dimethylphenol	87.4	71.6	82	2	20	31-124	
2,4-Dinitrophenol	175	157	90	3	20	23-143	
2,4-Dinitrotoluene	87.4	82.4	94	1	20	57-128	
2,6-Dinitrotoluene	87.4	82.2	94	1	20	57-124	
2-Chloronaphthalene	87.4	78.4	90	1	20	40-116	
2-Chlorophenol	87.4	74.9	86	0	20	38-117	
2-Methylphenol	87.4	75.4	86	1	20	30-117	
2-Nitroaniline	87.4	77.0	88	2	20	55-127	
2-Nitrophenol	87.4	76.4	87	2	20	47-123	
3 & 4 Methylphenol	87.4	74.4	85	2	20	29-110	
3,3'-Dichlorobenzidine	175	131	75	2	20	27-129	
3-Nitroaniline	87.4	52.9 J	61	0	20	41-128	
4-Bromophenyl phenyl ether	87.4	82.3	94	1	20	55-124	
4-Chloro-3-methylphenol	87.4	76.9	88	5	20	52-119	
4-Chloroaniline	87.4	56.4	65	1	20	33-117	
4-Chlorophenyl phenyl ether	87.4	76.8	88	0	20	53-121	
4-Nitroaniline	87.4	72.7	83	1	20	70-120	
4-Nitrophenol	175	153	87	1	20	59-129	
Benzoic acid	87.4	84.2 J	96	7	20	41-120	
Benzyl alcohol	87.4	76.3	87	3	20	31-112	
bis (2-chloroisopropyl) ether	87.4	76.5	88	2	20	37-130	
Bis(2-chloroethoxy)methane	87.4	76.4	87	3	20	48-120	
Bis(2-chloroethyl)ether	87.4	78.5	90	2	20	43-118	
Bis(2-ethylhexyl) phthalate	87.4	86.9	99	0	20	55-135	
Butyl benzyl phthalate	87.4	83.4	95	0	20	53-134	
Carbazole	87.4	80.5	92	1	20	60-122	
Dibenzofuran	87.4	79.3	91	1	20	53-118	
Diethyl phthalate	87.4	78.9	90	0	20	56-125	
Dimethyl phthalate	87.4	79.1	90	1	20	45-127	
Di-n-butyl phthalate	87.4	82.1	94	0	20	59-127	
Di-n-octyl phthalate	87.4	81.5	93	0	20	51-140	
Hexachlorobenzene	87.4	82.3	94	1	20	53-125	
Hexachlorobutadiene	87.4	70.7	81	4	20	22-124	
Hexachloroethane	87.4	68.7	79	0	20	21-115	

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.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27336.D

Lab ID: 280-115789-1 MSD Client ID: RQLMW-011-181001-GW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isophorone	87.4	75.5	86	3	20	42-124	
Nitrobenzene	87.4	74.3	85	0	20	45-121	
N-Nitrosodi-n-propylamine	87.4	74.4	85	2	20	49-119	
N-Nitrosodiphenylamine	87.4	83.4	95	0	20	51-123	
Pentachlorophenol	175	158	91	4	20	35-138	
Phenol	87.4	74.2	85	1	20	61-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: K27319.D Lab Sample ID: MB 280-434728/1-A

Matrix: Water Date Extracted: 10/24/2018 13:18

Instrument ID: SMS_K Date Analyzed: 10/31/2018 14:15

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-434728/2-A	K27320.D	10/31/2018 14:44
	LCSD 280-434728/3-A	K27321.D	10/31/2018 15:13
RQLMW-011-181001-GW	280-115789-1	K27334.D	10/31/2018 21:10
RQLMW-011-181001-GW MS	280-115789-1 MS	K27335.D	10/31/2018 21:39
RQLMW-011-181001-GW MSD	280-115789-1 MSD	K27336.D	10/31/2018 22:08
RQLMW-011-181002-GW	280-115789-2	K27337.D	10/31/2018 22:36

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: K27222.D Lab Sample ID: MB 280-434912/1-A

Matrix: Water Date Extracted: 10/25/2018 13:12

Instrument ID: SMS_K Date Analyzed: 10/29/2018 11:18

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-434912/2-A	K27223.D	10/29/2018 11:47
	LCSD 280-434912/3-A	K27224.D	10/29/2018 12:16
FWGER-181001-ER	280-115789-3	K27235.D	10/29/2018 17:27
FWGFB-181001-FB	280-115789-4	K27236.D	10/29/2018 17:56

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: K27111.D DFTPP Injection Date: 10/23/2018

Instrument ID: SMS_K DFTPP Injection Time: 13:16

Analysis Batch No.: 434399

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	54.2	
68	Less than 2.0 % of mass 69	0.1	(0.2) 1
69	Mass 69 relative abundance	39.7	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	46.5	
197	Less than 1.0 % of mass 198	0.5	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.1	
275	10.0 - 30.0 % of mass 198	22.4	
365	Greater than 1.0 % of mass 198	2.4	
441	Present but less than mass 443	8.9	(74.1) 3
442	Greater than 40.0 % of mass 198	62.0	
443	17.0 - 23.0 % of mass 442	12.0	(19.4) 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 280-434399/3	K27112.D	10/23/2018	13:33
	STD004 280-434399/4	K27113.D	10/23/2018	14:01
	STD010 280-434399/5	K27114.D	10/23/2018	14:30
	STD020 280-434399/6	K27115.D	10/23/2018	14:59
	STD050 280-434399/7	K27116.D	10/23/2018	15:28
	STD120 280-434399/8	K27117.D	10/23/2018	15:57
	STD160 280-434399/9	K27118.D	10/23/2018	16:25
	STD200 280-434399/10	K27119.D	10/23/2018	16:54
	ICV 280-434399/11	K27120.D	10/23/2018	17:23
	ICV 280-434399/12	K27121.D	10/23/2018	17:52
	ICV 280-434399/13	K27122.D	10/23/2018	18:21

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: K27216.D DFTPP Injection Date: 10/29/2018

Instrument ID: SMS_K DFTPP Injection Time: 08:50

Analysis Batch No.: 435306

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	50.4	
68	Less than 2.0 % of mass 69	0.4	(1.1) 1
69	Mass 69 relative abundance	36.7	
70	Less than 2.0 % of mass 69	0.1	(0.4) 1
127	40.0 - 60.0 % of mass 198	45.5	
197	Less than 1.0 % of mass 198	0.5	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.0	
275	10.0 - 30.0 % of mass 198	23.1	
365	Greater than 1.0 % of mass 198	2.2	
441	Present but less than mass 443	10.4	(72.1) 3
442	Greater than 40.0 % of mass 198	73.5	
443	17.0 - 23.0 % of mass 442	14.5	(19.7) 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 280-435306/3	K27217.D	10/29/2018	09:03
	CCV 280-435306/4	K27218.D	10/29/2018	09:31
	CCV 280-435306/5	K27219.D	10/29/2018	09:56
	MB 280-434912/1-A	K27222.D	10/29/2018	11:18
	LCS 280-434912/2-A	K27223.D	10/29/2018	11:47
	LCSD 280-434912/3-A	K27224.D	10/29/2018	12:16
FWGER-181001-ER	280-115789-3	K27235.D	10/29/2018	17:27
FWGFB-181001-FB	280-115789-4	K27236.D	10/29/2018	17:56
	CCVC 280-435306/26	K27240.D	10/29/2018	19:39
	CCVC 280-435306/27	K27241.D	10/29/2018	20:03
	CCVC 280-435306/28	K27242.D	10/29/2018	20:28

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: K27315.D DFTPP Injection Date: 10/31/2018

Instrument ID: SMS_K DFTPP Injection Time: 12:45

Analysis Batch No.: 435724

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	50.8	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	38.6	
70	Less than 2.0 % of mass 69	0.2	(0.5) 1
127	40.0 - 60.0 % of mass 198	46.7	
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	6.7	
275	10.0 - 30.0 % of mass 198	21.7	
365	Greater than 1.0 % of mass 198	2.3	
441	Present but less than mass 443	10.3	(78.7) 3
442	Greater than 40.0 % of mass 198	67.0	
443	17.0 - 23.0 % of mass 442	13.1	(19.6) 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 280-435724/3	K27316.D	10/31/2018	12:58
	CCV 280-435724/4	K27317.D	10/31/2018	13:27
	CCV 280-435724/5	K27318.D	10/31/2018	13:51
	MB 280-434728/1-A	K27319.D	10/31/2018	14:15
	LCS 280-434728/2-A	K27320.D	10/31/2018	14:44
	LCSD 280-434728/3-A	K27321.D	10/31/2018	15:13
RQLMW-011-181001-GW	280-115789-1	K27334.D	10/31/2018	21:10
RQLMW-011-181001-GW MS	280-115789-1 MS	K27335.D	10/31/2018	21:39
RQLMW-011-181001-GW MSD	280-115789-1 MSD	K27336.D	10/31/2018	22:08
RQLMW-011-181002-GW	280-115789-2	K27337.D	10/31/2018	22:36
	CCVC 280-435724/66	K27341.D	11/01/2018	00:32
	CCVC 280-435724/67	K27342.D	11/01/2018	00:56
	CCVC 280-435724/68	K27343.D	11/01/2018	01:20

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Sample No.: ICIS 280-434399/3 Date Analyzed: 10/23/2018 13:33

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): K27112.D Heated Purge: (Y/N) N

Calibration ID: 34118

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		134230	4.43	523656	5.64	248540	7.38
UPPER LIMIT		268460	4.93	1047312	6.14	497080	7.88
LOWER LIMIT		67115	3.93	261828	5.14	124270	6.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434399/11		134518	4.42	517949	5.64	245531	7.38
ICV 280-434399/12		131874	4.42	520626	5.64	272288	7.38
ICV 280-434399/13		132168	4.42	513964	5.64	274012	7.37
CCV 280-435306/3		125176	4.38	476670	5.59	221308	7.33
CCV 280-435306/4		148509	4.38	581980	5.59	297237	7.33
CCV 280-435306/5		148513	4.38	562941	5.59	285067	7.33
MB 280-434912/1-A		124041	4.38	481217	5.59	254574	7.33
LCS 280-434912/2-A		118580	4.38	461086	5.59	232852	7.33
LCSD 280-434912/3-A		124876	4.38	497197	5.59	238800	7.33
280-115789-3	FWGER-181001-ER	126663	4.38	497734	5.59	257088	7.33
280-115789-4	FWGFB-181001-FB	134242	4.38	522362	5.59	278187	7.33
CCVC 280-435306/26		112847	4.38	442982	5.59	232242	7.33
CCVC 280-435306/27		140787	4.38	543385	5.59	294933	7.33
CCVC 280-435306/28		128359	4.38	502403	5.59	242545	7.33
CCV 280-435724/3		132364	4.34	515278	5.56	240082	7.29
CCV 280-435724/4		146576	4.34	558461	5.55	295632	7.29
CCV 280-435724/5		147776	4.34	557041	5.55	287238	7.29
MB 280-434728/1-A		131060	4.34	515177	5.55	275663	7.28
LCS 280-434728/2-A		131808	4.34	510826	5.55	242267	7.29
LCSD 280-434728/3-A		134581	4.34	511876	5.55	247028	7.28
280-115789-1	RQLMW-011-181001-GW	156006	4.34	624620	5.55	316935	7.28
280-115789-1 MS	RQLMW-011-181001-GW MS	147437	4.34	568416	5.55	264766	7.28
280-115789-1 MSD	RQLMW-011-181001-GW MSD	141516	4.34	546434	5.55	267192	7.28
280-115789-2	RQLMW-011-181002-GW	150369	4.34	583947	5.55	297442	7.28
CCVC 280-435724/66		145901	4.34	567068	5.55	298174	7.29
CCVC 280-435724/67		141760	4.34	549754	5.55	289377	7.29
CCVC 280-435724/68		144645	4.34	551300	5.55	255049	7.28

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.: 280-115789-1

SDG No.:

Sample No.: ICIS 280-434399/3 Date Analyzed: 10/23/2018 13:33

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): K27112.D Heated Purge: (Y/N) N

Calibration ID: 34118

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		386822	8.87	304119	12.68	288986	16.43
UPPER LIMIT		773644	9.37	608238	13.18	577972	16.93
LOWER LIMIT		193411	8.37	152060	12.18	144493	15.93
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434399/11		377480	8.86	306147	12.67	286910	16.42
ICV 280-434399/12		453943	8.86	330739	12.66	273298	16.42
ICV 280-434399/13		456581	8.86	299167	12.66	250155	16.42
CCV 280-435306/3		334420	8.81	262439	12.56	237620	16.27
CCV 280-435306/4		473038	8.81	320732	12.56	249116	16.26
CCV 280-435306/5		470787	8.81	311762	12.56	247057	16.26
MB 280-434912/1-A		411011	8.80	280668	12.55	221116	16.25
LCS 280-434912/2-A		349449	8.80	272356	12.55	244848	16.25
LCSD 280-434912/3-A		356037	8.81	273292	12.55	242983	16.25
280-115789-3	FWGER-181001-ER	420296	8.81	296120	12.55	238687	16.25
280-115789-4	FWGFB-181001-FB	450163	8.81	284055	12.55	229146	16.26
CCVC 280-435306/26		383572	8.80	263172	12.55	200318	16.25
CCVC 280-435306/27		484551	8.81	303666	12.55	230044	16.26
CCVC 280-435306/28		367675	8.81	292259	12.56	255229	16.26
CCV 280-435724/3		358666	8.77	275632	12.47	248997	16.13
CCV 280-435724/4		475262	8.76	326267	12.46	266268	16.13
CCV 280-435724/5		470909	8.76	306954	12.46	247745	16.13
MB 280-434728/1-A		452850	8.76	286118	12.46	228906	16.13
LCS 280-434728/2-A		368649	8.76	283303	12.46	253897	16.12
LCSD 280-434728/3-A		374016	8.76	280288	12.46	250652	16.13
280-115789-1	RQLMW-011-181001-GW	474257	8.76	301719	12.45	256549	16.12
280-115789-1 MS	RQLMW-011-181001-GW MS	403684	8.76	313957	12.46	294894	16.12
280-115789-1 MSD	RQLMW-011-181001-GW MSD	408289	8.76	307881	12.46	283158	16.12
280-115789-2	RQLMW-011-181002-GW	470945	8.76	308967	12.45	258631	16.12
CCVC 280-435724/66		483192	8.76	318497	12.45	229609	16.12
CCVC 280-435724/67		475691	8.76	282979	12.45	210532	16.12
CCVC 280-435724/68		394174	8.76	299576	12.46	263687	16.13

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.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW | Lab Sample ID: 280-115789-1

Matrix: Water | Lab File ID: K27334.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 949.8(mL) | Date Analyzed: 10/31/2018 21:10

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.29
95-50-1	1,2-Dichlorobenzene	0.53	U	11	0.53	0.24
541-73-1	1,3-Dichlorobenzene	1.1	U	11	1.1	0.32
106-46-7	1,4-Dichlorobenzene	1.1	U	11	1.1	0.34
123-91-1	1,4-Dioxane	4.6	U	19	4.6	1.8
95-95-4	2,4,5-Trichlorophenol	1.1	U	21	1.1	0.47
88-06-2	2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31
120-83-2	2,4-Dichlorophenol	2.1	U	11	2.1	0.67
105-67-9	2,4-Dimethylphenol	2.1	U	11	2.1	0.61
51-28-5	2,4-Dinitrophenol	32	U	84	32	11
121-14-2	2,4-Dinitrotoluene	4.6	U	21	4.6	1.7
606-20-2	2,6-Dinitrotoluene	4.6	U	21	4.6	2.0
91-58-7	2-Chloronaphthalene	1.1	U	11	1.1	0.27
95-57-8	2-Chlorophenol	4.6	U	11	4.6	2.1
95-48-7	2-Methylphenol	2.1	U	11	2.1	1.0
88-74-4	2-Nitroaniline	4.6	U	53	4.6	1.8
88-75-5	2-Nitrophenol	1.1	U	21	1.1	0.41
15831-10-4	3 & 4 Methylphenol	0.53	U	21	0.53	0.26
91-94-1	3,3'-Dichlorobenzidine	4.6	U	53	4.6	2.1
99-09-2	3-Nitroaniline	4.6	U	53	4.6	2.1
534-52-1	4,6-Dinitro-2-methylphenol	9.3	U	84	9.3	4.2
101-55-3	4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.45
59-50-7	4-Chloro-3-methylphenol	5.3	U	21	5.3	2.5
106-47-8	4-Chloroaniline	4.6	U	26	4.6	2.3
7005-72-3	4-Chlorophenyl phenyl ether	4.6	U	11	4.6	1.7
100-01-6	4-Nitroaniline	4.6	U	53	4.6	2.1
100-02-7	4-Nitrophenol	4.2	U	53	4.2	1.3
65-85-0	Benzoic acid	32	U	84	32	11
100-51-6	Benzyl alcohol	0.53	U	26	0.53	0.24
108-60-1	bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.29
111-91-1	Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0
111-44-4	Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.43
117-81-7	Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.59
85-68-7	Butyl benzyl phthalate	2.1	U	21	2.1	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW | Lab Sample ID: 280-115789-1

Matrix: Water | Lab File ID: K27334.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 949.8(mL) | Date Analyzed: 10/31/2018 21:10

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.1	U	11	1.1	0.45
132-64-9	Dibenzofuran	1.1	U	11	1.1	0.31
84-66-2	Diethyl phthalate	1.1	U	21	1.1	0.40
131-11-3	Dimethyl phthalate	0.53	U	21	0.53	0.22
84-74-2	Di-n-butyl phthalate	4.6	U	21	4.6	1.2
117-84-0	Di-n-octyl phthalate	1.1	U	21	1.1	0.37
118-74-1	Hexachlorobenzene	2.1	U	11	2.1	0.69
87-68-3	Hexachlorobutadiene	11	U	32	11	3.5
77-47-4	Hexachlorocyclopentadiene	32	U	53	32	11
67-72-1	Hexachloroethane	4.6	U	11	4.6	2.2
78-59-1	Isophorone	0.53	U	11	0.53	0.22
98-95-3	Nitrobenzene	2.1	U	21	2.1	0.85
621-64-7	N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37
86-30-6	N-Nitrosodiphenylamine	1.1	U	11	1.1	0.46
87-86-5	Pentachlorophenol	63	U	84	63	21
108-95-2	Phenol	4.6	U	11	4.6	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	89		43-140
321-60-8	2-Fluorobiphenyl	88		44-119
367-12-4	2-Fluorophenol (Surr)	90		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	88		44-120
4165-62-2	Phenol-d5 (Surr)	93		10-115
1718-51-0	Terphenyl-d14 (Surr)	101		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27334.D
Lims ID: 280-115789-B-1-A
Client ID: RQLMW-011-181001-GW
Sample Type: Client
Inject. Date: 31-Oct-2018 21:10:30 ALS Bottle#: 20 Worklist Smp#: 59
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-B-1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:21:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	156006	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	99	624620	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	93	316935	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	97	474257	40.0	
* 5 Chrysene-d12	240	12.449	12.461	-0.012	99	301719	40.0	
* 6 Perylene-d12	264	16.115	16.128	-0.013	98	256549	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	524411	90.1	
$ 8 Phenol-d5	99	3.982	3.982	0.000	95	618101	93.5	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	95	516303	87.5	
$ 10 2,4,6-Trichlorophenol-d2	198		6.920				ND	
$ 11 2-Fluorobiphenyl	172	6.609	6.615	-0.006	100	979114	88.5	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	94	117607	89.0	
$ 13 Terphenyl-d14	244	10.551	10.563	-0.012	100	749811	101.3	
17 Triethyl amine	86		2.185				ND	
18 2-Ethoxyethanol	59		2.337				ND	
19 1,4-Dioxane	88		1.797				ND	
20 N-Nitrosodimethylamine	74		2.020				ND	
21 Pyridine	79		2.067				ND	
22 Dimethylformamide	73		2.819				ND	
23 2-Picoline	93		2.990				ND	U
24 N-Nitrosomethylethylamine	88		3.054				ND	
25 Acrylamide	71		3.254				ND	
26 Methyl methanesulfonate	80		3.289				ND	
27 N-Nitrosodiethylamine	102		3.636				ND	
28 Pentachlorophenol_T	266		3.502				ND	
29 Ethyl methanesulfonate	79		3.877				ND	
31 Benzaldehyde	106		3.930				ND	
32 Phenol	94		3.994				ND	
33 Phenylmercaptan	110		3.988				ND	
34 Aniline	93		4.029				ND	
35 Alpha Methyl Styrene	118		4.082				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
36 Bis(2-chloroethyl)ether	93		4.076				ND	
37 Pentachloroethane	117		4.353				ND	U
38 n-Decane	43		4.188				ND	
39 2-Chlorophenol	128		4.147				ND	
40 1,3-Dichlorobenzene	146		4.288				ND	
41 Methyl styrene	118		4.834				ND	
42 1,4-Dichlorobenzene	146		4.352				ND	
43 Benzyl alcohol	108		4.452				ND	
44 1,2-Dichlorobenzene	146		4.499				ND	
45 2-Methylphenol	108		4.558				ND	
46 2,2'-oxybis[1-chloropropan	45		4.582				ND	
47 Indene	116		4.582				ND	
48 Benzidine_T	184		4.577				ND	
49 3 & 4 Methylphenol	108		4.705				ND	
50 3-Methylphenol	108		4.705				ND	
51 4-Methylphenol	108		4.705				ND	
52 N-Nitrosodi-n-propylamine	70		4.705				ND	
53 N-Nitrosopyrrolidine	100		4.929				ND	
54 Acetophenone	105		4.705				ND	
55 N-Nitrosomorpholine	116		4.964				ND	
57 2-Toluidine	106		5.005				ND	
58 Hexachloroethane	117		4.823				ND	
59 Nitrobenzene	77		4.870				ND	
60 Triethyl phosphate	99		5.346				ND	
61 N-Nitrosopiperidine	114		5.270				ND	
63 Isophorone	82		5.099				ND	
64 2-Nitrophenol	139		5.175				ND	
65 2,4-Dimethylphenol	107		5.216				ND	
66 Benzyl dichloride	125		5.610				ND	
67 o,o',o''-Triethylphosphoro	198		5.528				ND	
68 Benzoic acid	105		5.334				ND	
69 Bis(2-chloroethoxy)methane	93		5.298				ND	
71 3,5-Dimethylphenol	107		5.345				ND	
72 2,4-Xylidine	121		5.769				ND	
73 alpha,alpha-Dimethyl phene	58		5.669				ND	
74 2,4-Dichlorophenol	162		5.416				ND	
75 o-Anisidine	80		5.804				ND	
76 1,2,4-Trichlorobenzene	180		5.498				ND	
77 4-chlorobenzenethiol	144		5.745				ND	
78 Alpha-Terpineol	59		5.581				ND	
79 Naphthalene	128		5.575				ND	
80 4-Chloroaniline	127		5.616				ND	
81 2,6-Dichlorophenol	162		5.633				ND	
82 Hexachloropropene	213		5.933				ND	
83 Hexachlorobutadiene	225		5.710				ND	
84 Quinoline	129		6.163				ND	
85 N-Nitrosodi-n-butylamine	84		6.204				ND	
86 Caprolactam	55		5.945				ND	
87 p-Phenylene diamine	108		6.216				ND	
88 5-Methyl-o-Anisidine	122		6.421				ND	
89 4-Chloro-3-methylphenol	107		6.098				ND	
90 Safrole, Total	162		6.421				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
91 Carbofuran phenol	164		6.568				ND	
92 1,3-phenylenediamine	108		6.545				ND	
93 2-Methylnaphthalene	142		6.256				ND	
94 Methyl 4-chlorophenyl sulf	158		6.979				ND	
95 Phthalic anhydride	76		6.291				ND	
96 1-Methylnaphthalene	142		6.356				ND	
97 Hexachlorocyclopentadiene	237		6.427				ND	
98 1,2,4,5-Tetrachlorobenzene	216		6.427				ND	
99 Isosafrole Peak 1	162		6.715				ND	
100 2,4,6-Trichlorophenol	196		6.532				ND	
101 2,3-Dichlorobenzenamine	161		6.526				ND	
102 2,4,5-Trichlorophenol	196		6.568				ND	
103 Isosafrole Peak 2	104		6.938				ND	
104 1,1'-Biphenyl	154		6.714				ND	
105 Toluene diamine (2,4- + 2,	122		7.091				ND	
106 2-Chloronaphthalene	162		6.738				ND	
107 1-Chloronaphthalene	162		7.032				ND	
108 2-Nitroaniline	65		6.826				ND	
109 1,4-Naphthoquinone	158		7.167				ND	U
110 1,4-Dinitrobenzene	168		7.214				ND	
111 Dimethyl phthalate	163		7.008				ND	
112 1,3-Dinitrobenzene	168		7.032				ND	
113 2,6-Dinitrotoluene	165		7.061				ND	
114 Acenaphthylene	152		7.149				ND	
115 3-Nitroaniline	138		7.232				ND	
116 1,3-Dimethyl-2,4-Dinitrobe	77		7.719				ND	
117 Acenaphthene	153		7.320				ND	
118 2,4-Dinitrophenol	184		7.337				ND	
119 4-Nitrophenol	109		7.402				ND	
120 1,3-Dimethyl-2,5-Dinitrobe	179		7.678				ND	
121 Pentachlorobenzene	250		7.737				ND	
122 2,4-Dinitrotoluene	165		7.467				ND	
123 Dibenzofuran	168		7.490				ND	
124 1-Naphthylamine	143		7.837				ND	
125 2,3,4,6-Tetrachlorophenol	232		7.619				ND	
126 1,4-Dimethyl-2,6-Dinitrobe	179		8.019				ND	
127 Hexadecane	57		7.737				ND	
128 1,4-Dimethyl-2,3-Dinitrobe	77		8.054				ND	
129 2-Naphthylamine	143		7.919				ND	U
130 Diethyl phthalate	149		7.707				ND	
131 n-hydroxymethylphthalimide	147		7.919				ND	
132 1,2-Dimethyl-3,6-Dinitrobe	179		8.131				ND	
133 Thionazin	97		8.055				ND	
134 4-Chlorophenyl phenyl ethe	204		7.825				ND	
135 Fluorene	166		7.831				ND	
136 Tributyl phosphate	99		8.307				ND	
137 N-Nitro-o-toluidine	152		8.107				ND	
138 4-Nitroaniline	138		7.843				ND	
139 4,6-Dinitro-2-methylphenol	198		7.878				ND	
140 1,5-Dimethyl-2,4-Dinitrobe	179		8.283				ND	
141 N-Nitrosodiphenylamine	169		7.942				ND	
142 Diphenylamine	169		7.942				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
143 1,2-Diphenylhydrazine	77		7.984				ND	
144 Azobenzene	77		7.984				ND	
145 1,5-Dimethyl-2,3-Dinitrobe	179		8.383				ND	
146 Sulfotepp	97		8.360				ND	
147 2,4,6 - Tribromophenol	330		8.072				ND	U
148 1,2-Dimethyl-3,5-Dinitrobe	179		8.495				ND	
149 Phenyl sulfide	186		8.465				ND	
150 Diallate Peak 1	86		8.507				ND	
151 1,3,5-Trinitrobenzene	213		8.448				ND	
152 Phorate	121		8.513				ND	
153 Phenacetin	108		8.513				ND	
154 1,2-Dimethyl-3,4-Dinitrobe	179		8.648				ND	
155 Diallate Peak 2	86		8.595				ND	
156 4-Bromophenyl phenyl ether	248		8.313				ND	
157 Hexachlorobenzene	284		8.395				ND	
158 Dimethoate	87		8.677				ND	
159 Atrazine	200		8.465				ND	
160 1,2-Dimethyl-4,5-Dinitrobe	91		8.889				ND	
161 n-Octadecane	85		8.653				ND	
162 4-Aminobiphenyl	169		8.848				ND	
163 Pentachlorophenol	266		8.583				ND	
164 Pentachloronitrobenzene	237		8.883				ND	
165 Pronamide	173		8.907				ND	
166 Disulfoton	88		9.036				ND	
167 Dinoseb	211		9.042				ND	
168 Phenanthrene	178		8.789				ND	
169 Anthracene	178		8.841				ND	
170 Carbazole	167		8.994				ND	
171 Alachlor	188		9.135				ND	
172 Methyl parathion	109		9.412				ND	
173 Di-n-butyl phthalate	149		9.335				ND	
174 Ethyl Parathion	109		9.835				ND	
175 4-Nitroquinoline-1-oxide	190		9.882				ND	
176 Methapyrilene	97		9.976				ND	
177 Phenyl disulfide	109		9.896				ND	
178 Isodrin	193		10.246				ND	
179 Fluoranthene	202		10.052				ND	
180 Diphenylsulfone	125		10.196				ND	
181 Benzidine	184		10.205				ND	
182 Pyrene	202		10.346				ND	
183 Aramite Peak 1	185		10.945				ND	
184 Octachlorostyrene	308		10.392				ND	
185 Aramite Peak 2	185		11.075				ND	
186 p-Dimethylamino azobenzene	120		11.222				ND	
187 Chlorobenzilate	251		11.310				ND	
188 Famphur	218		11.262				ND	
189 4,4-Dichlorobenzil	139		10.657				ND	
190 Butyl benzyl phthalate	149		11.380				ND	
191 3,3'-Dimethylbenzidine	212		11.838				ND	
193 p-chlorophenyl sulfone	159		11.021				ND	
194 2-Acetylaminofluorene	181		12.350				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.643				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
196 4,4'-Methylene bis(2-chlor	231		13.019				ND	
197 3,3'-Dichlorobenzidine	252		12.414				ND	
198 Benzo[a]anthracene	228		12.443				ND	
199 Chrysene	228		12.525				ND	
200 6-Methylchrysene	242		14.300				ND	
201 Di-n-octyl phthalate	149		14.335				ND	
202 7,12-Dimethylbenz(a)anthra	256		15.910				ND	
203 Benzo[b]fluoranthene	252		15.105				ND	
204 Benzo[k]fluoranthene	252		15.181				ND	
205 Hexachlorophene	196		16.144				ND	
206 Benzo[e]pyrene	252		15.839				ND	
207 Benzo[a]pyrene	252		15.980				ND	
208 Perylene	252		17.491				ND	
209 3-Methylcholanthrene	268		17.902				ND	
210 Tris(2,3-dibromopropyl)pho	119		18.971				ND	
211 Dibenz[a,h]acridine	279		19.477				ND	
212 Dibenz[a,j]acridine	279		19.629				ND	
213 Dibenz(a,h)anthracene	278		19.229				ND	
214 Indeno[1,2,3-cd]pyrene	276		19.130				ND	
215 Benzo[g,h,i]perylene	276		19.829				ND	
216 Dibenzo[a,e]pyrene	302		25.523				ND	
S 217 Total Cresols	108		15.496				ND	
S 218 Methyl Phenols,Total	108		15.496				ND	
S 219 Isosafrole	162		15.496				ND	
S 220 Diallate	86		15.496				ND	
S 221 Aramite, Total	185		15.496				ND	
S 222 Phthalic acid	148		19.689				ND	
14 1,2,3,4-Tetrahydronaphthal	1		0.000				ND	
15 2-Butoxyethanol	1		0.000				ND	
16 2-Phenoxyethanol	1		0.000				ND	
56 4,4'-DDE	246		4.718				ND	
62 4,4'-DDD	235		4.988				ND	
70 4,4'-DDT	235		5.182				ND	
T 223 Hexachlorodibenzo-p-dioxin	1		0.000				ND	
T 224 Pentachlorodibenzo-p-dioxi	1		0.000				ND	
T 225 2,6-Dimethylphenol	1		0.000				ND	
T 226 Octadecane (TIC)	1		0.000				ND	
T 227 Tetrachlorodibenzo-p-dioxi	1		0.000				ND	
T 228 Pentachlorodibenzofurans T	1		0.000				ND	
T 229 Hexachlorodibenzofurans TI	1		0.000				ND	
T 230 Tetrachlorodibenzofurans T	1		0.000				ND	
S 231 TPAH	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

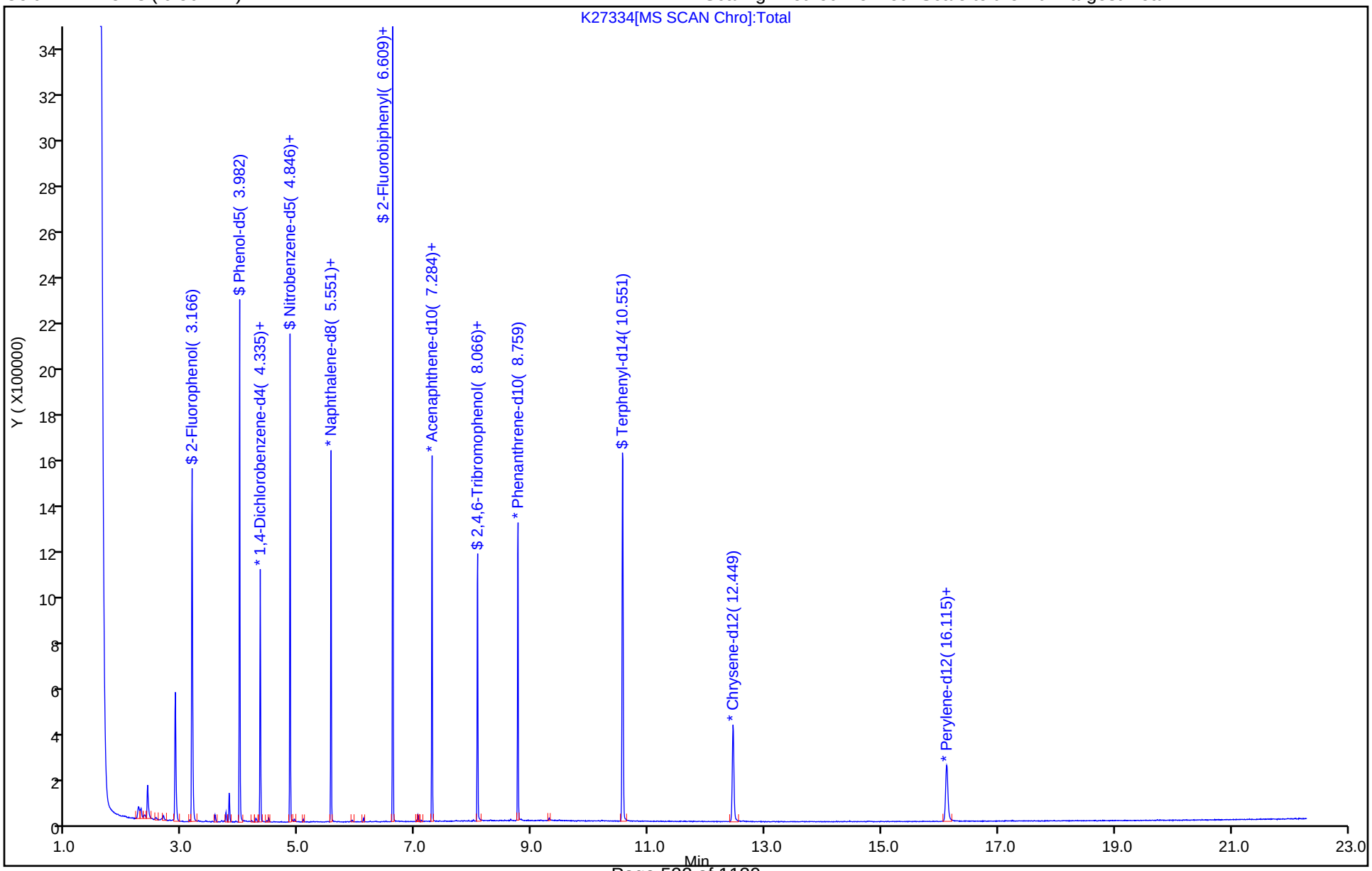
Report Date: 01-Nov-2018 06:26:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27334.D

Injection Date:	31-Oct-2018 21:10:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-115789-B-1-A	Lab Sample ID:	280-115789-1	Worklist Smp#:	59
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	SMSK_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_K\20181031-75679.b\K27334.D				
Lims ID:	280-115789-B-1-A				
Client ID:	RQLMW-011-181001-GW				
Sample Type:	Client				
Inject. Date:	31-Oct-2018 21:10:30	ALS Bottle#:	20	Worklist Smp#:	59
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Sample Info:	280-115789-B-1-A				
Operator ID:	KIEKELD	Instrument ID:	SMS_K		
Method:	\\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m				
Limit Group:	MSSV - 8270C_625				
Method Label:	8270C / 625				
Last Update:	01-Nov-2018 06:26:14	Calib Date:	23-Oct-2018 16:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D				
Column 1 :	VF-5ms (0.50 mm)		Det: MS SCAN		
Process Host:	CTX0310				

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:21:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	90.1	90.06
$ 8 Phenol-d5	100.0	93.5	93.48
$ 9 Nitrobenzene-d5	100.0	87.5	87.51
$ 11 2-Fluorobiphenyl	100.0	88.5	88.49
$ 12 2,4,6-Tribromophenol	100.0	89.0	89.04
$ 13 Terphenyl-d14	100.0	101.3	101.30

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181002-GW | Lab Sample ID: 280-115789-2

Matrix: Water | Lab File ID: K27337.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 941.5(mL) | Date Analyzed: 10/31/2018 22:36

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.30
95-50-1	1,2-Dichlorobenzene	0.53	U	11	0.53	0.24
541-73-1	1,3-Dichlorobenzene	1.1	U	11	1.1	0.32
106-46-7	1,4-Dichlorobenzene	1.1	U	11	1.1	0.34
123-91-1	1,4-Dioxane	4.7	U	19	4.7	1.8
95-95-4	2,4,5-Trichlorophenol	1.1	U	21	1.1	0.48
88-06-2	2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31
120-83-2	2,4-Dichlorophenol	2.1	U	11	2.1	0.68
105-67-9	2,4-Dimethylphenol	2.1	U	11	2.1	0.62
51-28-5	2,4-Dinitrophenol	32	U	85	32	11
121-14-2	2,4-Dinitrotoluene	4.7	U	21	4.7	1.8
606-20-2	2,6-Dinitrotoluene	4.7	U	21	4.7	2.0
91-58-7	2-Chloronaphthalene	1.1	U	11	1.1	0.28
95-57-8	2-Chlorophenol	4.7	U	11	4.7	2.1
95-48-7	2-Methylphenol	2.1	U	11	2.1	1.0
88-74-4	2-Nitroaniline	4.7	U	53	4.7	1.8
88-75-5	2-Nitrophenol	1.1	U	21	1.1	0.41
15831-10-4	3 & 4 Methylphenol	0.53	U	21	0.53	0.27
91-94-1	3,3'-Dichlorobenzidine	4.7	U	53	4.7	2.1
99-09-2	3-Nitroaniline	4.7	U	53	4.7	2.1
534-52-1	4,6-Dinitro-2-methylphenol	9.3	U	85	9.3	4.2
101-55-3	4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.46
59-50-7	4-Chloro-3-methylphenol	5.3	U	21	5.3	2.6
106-47-8	4-Chloroaniline	4.7	U	27	4.7	2.3
7005-72-3	4-Chlorophenyl phenyl ether	4.7	U	11	4.7	1.8
100-01-6	4-Nitroaniline	4.7	U	53	4.7	2.1
100-02-7	4-Nitrophenol	4.2	U	53	4.2	1.3
65-85-0	Benzoic acid	32	U	85	32	11
100-51-6	Benzyl alcohol	0.53	U	27	0.53	0.24
108-60-1	bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.30
111-91-1	Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0
111-44-4	Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.44
117-81-7	Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.59
85-68-7	Butyl benzyl phthalate	2.1	U	21	2.1	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181002-GW | Lab Sample ID: 280-115789-2

Matrix: Water | Lab File ID: K27337.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 941.5(mL) | Date Analyzed: 10/31/2018 22:36

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.1	U	11	1.1	0.46
132-64-9	Dibenzofuran	1.1	U	11	1.1	0.31
84-66-2	Diethyl phthalate	1.1	U	21	1.1	0.40
131-11-3	Dimethyl phthalate	0.53	U	21	0.53	0.22
84-74-2	Di-n-butyl phthalate	4.7	U	21	4.7	1.2
117-84-0	Di-n-octyl phthalate	1.1	U	21	1.1	0.37
118-74-1	Hexachlorobenzene	2.1	U	11	2.1	0.70
87-68-3	Hexachlorobutadiene	11	U	32	11	3.5
77-47-4	Hexachlorocyclopentadiene	32	U	53	32	11
67-72-1	Hexachloroethane	4.7	U	11	4.7	2.2
78-59-1	Isophorone	0.53	U	11	0.53	0.22
98-95-3	Nitrobenzene	2.1	U	21	2.1	0.86
621-64-7	N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37
86-30-6	N-Nitrosodiphenylamine	1.1	U	11	1.1	0.47
87-86-5	Pentachlorophenol	64	U	85	64	21
108-95-2	Phenol	4.7	U	11	4.7	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	94		43-140
321-60-8	2-Fluorobiphenyl	85		44-119
367-12-4	2-Fluorophenol (Surr)	86		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	85		44-120
4165-62-2	Phenol-d5 (Surr)	89		10-115
1718-51-0	Terphenyl-d14 (Surr)	99		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27337.D
Lims ID: 280-115789-B-2-A
Client ID: RQLMW-011-181002-GW
Sample Type: Client
Inject. Date: 31-Oct-2018 22:36:30 ALS Bottle#: 23 Worklist Smp#: 62
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-B-2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:23:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	150369	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	99	583947	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	93	297442	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	98	470945	40.0	
* 5 Chrysene-d12	240	12.449	12.461	-0.012	99	308967	40.0	
* 6 Perylene-d12	264	16.115	16.128	-0.013	98	258631	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	481936	85.9	
$ 8 Phenol-d5	99	3.982	3.982	0.000	95	564322	88.6	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	95	467011	84.7	
$ 11 2-Fluorobiphenyl	172	6.609	6.615	-0.006	100	884318	85.2	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	94	117040	94.4	
$ 13 Terphenyl-d14	244	10.551	10.563	-0.012	99	748606	98.8	
19 1,4-Dioxane	88		1.797				ND	
32 Phenol	94		3.994				ND	
36 Bis(2-chloroethyl)ether	93		4.076				ND	
39 2-Chlorophenol	128		4.147				ND	
40 1,3-Dichlorobenzene	146		4.288				ND	
42 1,4-Dichlorobenzene	146		4.352				ND	
43 Benzyl alcohol	108		4.452				ND	
44 1,2-Dichlorobenzene	146		4.499				ND	
45 2-Methylphenol	108		4.558				ND	
46 2,2'-oxybis[1-chloropropan	45		4.582				ND	
49 3 & 4 Methylphenol	108		4.705				ND	
52 N-Nitrosodi-n-propylamine	70		4.705				ND	
58 Hexachloroethane	117		4.823				ND	
59 Nitrobenzene	77		4.870				ND	
63 Isophorone	82		5.099				ND	
64 2-Nitrophenol	139		5.175				ND	
65 2,4-Dimethylphenol	107		5.216				ND	
68 Benzoic acid	105	5.246	5.334	-0.088	78	1922	5.95	7
69 Bis(2-chloroethoxy)methane	93		5.298				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.416				ND	
76 1,2,4-Trichlorobenzene	180		5.498				ND	
80 4-Chloroaniline	127		5.616				ND	
83 Hexachlorobutadiene	225		5.710				ND	
89 4-Chloro-3-methylphenol	107		6.098				ND	
97 Hexachlorocyclopentadiene	237		6.427				ND	
100 2,4,6-Trichlorophenol	196		6.532				ND	
102 2,4,5-Trichlorophenol	196		6.568				ND	
106 2-Chloronaphthalene	162		6.738				ND	
108 2-Nitroaniline	65		6.826				ND	
111 Dimethyl phthalate	163		7.008				ND	
113 2,6-Dinitrotoluene	165		7.061				ND	
115 3-Nitroaniline	138		7.232				ND	
118 2,4-Dinitrophenol	184		7.337				ND	
119 4-Nitrophenol	109		7.402				ND	
122 2,4-Dinitrotoluene	165		7.467				ND	
123 Dibenzofuran	168		7.490				ND	
130 Diethyl phthalate	149		7.707				ND	
134 4-Chlorophenyl phenyl ethe	204		7.825				ND	
138 4-Nitroaniline	138		7.843				ND	
139 4,6-Dinitro-2-methylphenol	198		7.878				ND	
141 N-Nitrosodiphenylamine	169		7.942				ND	
156 4-Bromophenyl phenyl ether	248		8.313				ND	
157 Hexachlorobenzene	284		8.395				ND	
163 Pentachlorophenol	266		8.583				ND	
170 Carbazole	167		8.994				ND	
173 Di-n-butyl phthalate	149		9.335				ND	
190 Butyl benzyl phthalate	149		11.380				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.643				ND	
197 3,3'-Dichlorobenzidine	252		12.414				ND	
201 Di-n-octyl phthalate	149		14.335				ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

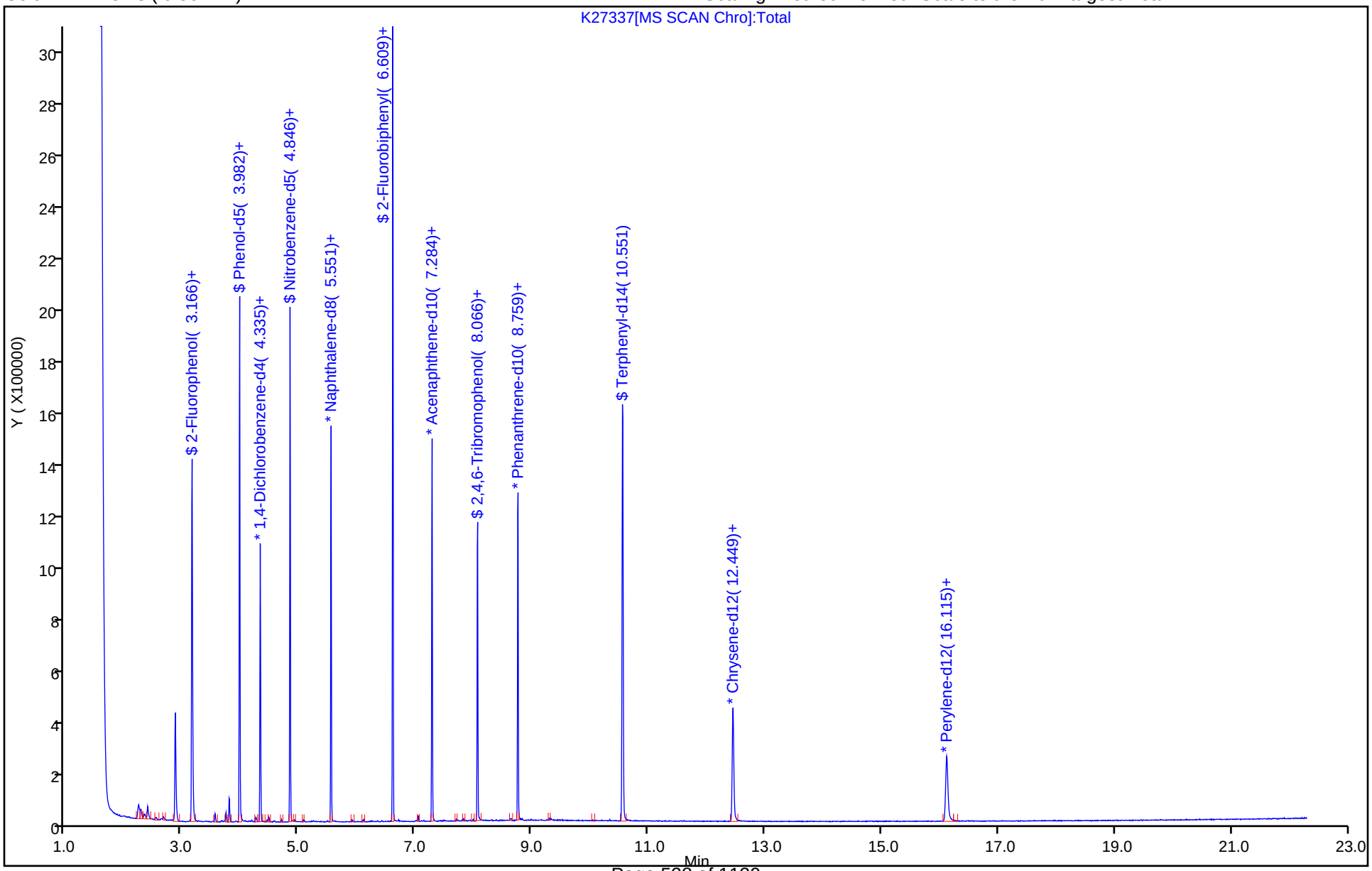
Report Date: 01-Nov-2018 06:27:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27337.D

Injection Date:	31-Oct-2018 22:36:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-115789-B-2-A	Lab Sample ID:	280-115789-2	Worklist Smp#:	62
Client ID:	RQLMW-011-181002-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	SMSK_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_K\20181031-75679.b\K27337.D
Lims ID: 280-115789-B-2-A
Client ID: RQLMW-011-181002-GW
Sample Type: Client
Inject. Date: 31-Oct-2018 22:36:30 ALS Bottle#: 23 Worklist Smp#: 62
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-B-2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:23:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	85.9	85.87
$ 8 Phenol-d5	100.0	88.6	88.55
$ 9 Nitrobenzene-d5	100.0	84.7	84.67
$ 11 2-Fluorobiphenyl	100.0	85.2	85.16
$ 12 2,4,6-Tribromophenol	100.0	94.4	94.42
$ 13 Terphenyl-d14	100.0	98.8	98.76

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: FWGER-181001-ER | Lab Sample ID: 280-115789-3

Matrix: Water | Lab File ID: K27235.D

Analysis Method: 8270D | Date Collected: 10/18/2018 07:30

Extract. Method: 3520C | Date Extracted: 10/25/2018 13:12

Sample wt/vol: 968.6(mL) | Date Analyzed: 10/29/2018 17:27

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435306 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-14-2	2,4-Dinitrotoluene	4.5	U	21	4.5	1.7
606-20-2	2,6-Dinitrotoluene	4.5	U	21	4.5	2.0
98-95-3	Nitrobenzene	2.1	U	21	2.1	0.84

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	94		43-140
321-60-8	2-Fluorobiphenyl	74		44-119
367-12-4	2-Fluorophenol (Surr)	70		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	73		44-120
4165-62-2	Phenol-d5 (Surr)	74		10-115
1718-51-0	Terphenyl-d14 (Surr)	98		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27235.D
Lims ID: 280-115789-A-3-A
Client ID: FWGER-181001-ER
Sample Type: Client
Inject. Date: 29-Oct-2018 17:27:30 ALS Bottle#: 20 Worklist Smp#: 21
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-A-3-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 07:06:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	96	126663	40.0	
* 2 Naphthalene-d8	136	5.592	5.593	-0.001	100	497734	40.0	
* 3 Acenaphthene-d10	164	7.326	7.326	0.000	93	257088	40.0	
* 4 Phenanthrene-d10	188	8.806	8.807	0.000	98	420296	40.0	
* 5 Chrysene-d12	240	12.549	12.555	-0.006	99	296120	40.0	
* 6 Perylene-d12	264	16.251	16.263	-0.012	98	238687	40.0	
$ 7 2-Fluorophenol	112	3.207	3.207	0.000	94	332065	70.2	
$ 8 Phenol-d5	99	4.018	4.018	0.000	95	398722	74.3	
$ 9 Nitrobenzene-d5	82	4.887	4.887	0.000	94	341526	72.6	
$ 11 2-Fluorobiphenyl	172	6.650	6.656	-0.006	100	663372	73.9	
$ 12 2,4,6-Tribromophenol	330	8.107	8.113	-0.006	93	100623	93.9	
$ 13 Terphenyl-d14	244	10.622	10.634	-0.012	99	712500	98.1	
19 1,4-Dioxane	88		1.867				ND	U
32 Phenol	94		4.030				ND	
36 Bis(2-chloroethyl)ether	93		4.112				ND	
39 2-Chlorophenol	128		4.182				ND	
40 1,3-Dichlorobenzene	146		4.329				ND	
42 1,4-Dichlorobenzene	146		4.394				ND	
43 Benzyl alcohol	108		4.494				ND	
44 1,2-Dichlorobenzene	146		4.541				ND	
45 2-Methylphenol	108		4.594				ND	
46 2,2'-oxybis[1-chloropropan	45		4.623				ND	
49 3 & 4 Methylphenol	108		4.741				ND	
52 N-Nitrosodi-n-propylamine	70		4.741				ND	
58 Hexachloroethane	117		4.864				ND	
59 Nitrobenzene	77		4.905				ND	
63 Isophorone	82		5.134				ND	
64 2-Nitrophenol	139		5.216				ND	
65 2,4-Dimethylphenol	107		5.252				ND	
68 Benzoic acid	105	5.281	5.363	-0.082	74	940	5.73	7
69 Bis(2-chloroethoxy)methane	93		5.340				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.451				ND	
76 1,2,4-Trichlorobenzene	180		5.540				ND	
80 4-Chloroaniline	127		5.657				ND	
83 Hexachlorobutadiene	225		5.745				ND	
89 4-Chloro-3-methylphenol	107		6.133				ND	
97 Hexachlorocyclopentadiene	237		6.462				ND	
100 2,4,6-Trichlorophenol	196		6.574				ND	
102 2,4,5-Trichlorophenol	196		6.609				ND	
106 2-Chloronaphthalene	162		6.779				ND	
108 2-Nitroaniline	65		6.867				ND	
111 Dimethyl phthalate	163		7.050				ND	
113 2,6-Dinitrotoluene	165		7.103				ND	
115 3-Nitroaniline	138		7.273				ND	
118 2,4-Dinitrophenol	184		7.379				ND	
119 4-Nitrophenol	109		7.443				ND	
122 2,4-Dinitrotoluene	165		7.508				ND	
123 Dibenzofuran	168		7.531				ND	
130 Diethyl phthalate	149		7.749				ND	
134 4-Chlorophenyl phenyl ethe	204		7.866				ND	
138 4-Nitroaniline	138		7.884				ND	
139 4,6-Dinitro-2-methylphenol	198		7.919				ND	
141 N-Nitrosodiphenylamine	169		7.984				ND	
156 4-Bromophenyl phenyl ether	248		8.354				ND	
157 Hexachlorobenzene	284		8.436				ND	
163 Pentachlorophenol	266		8.624				ND	
170 Carbazole	167		9.036				ND	
173 Di-n-butyl phthalate	149		9.376				ND	
190 Butyl benzyl phthalate	149		11.456				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.737				ND	
197 3,3'-Dichlorobenzidine	252		12.508				ND	
201 Di-n-octyl phthalate	149		14.441				ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

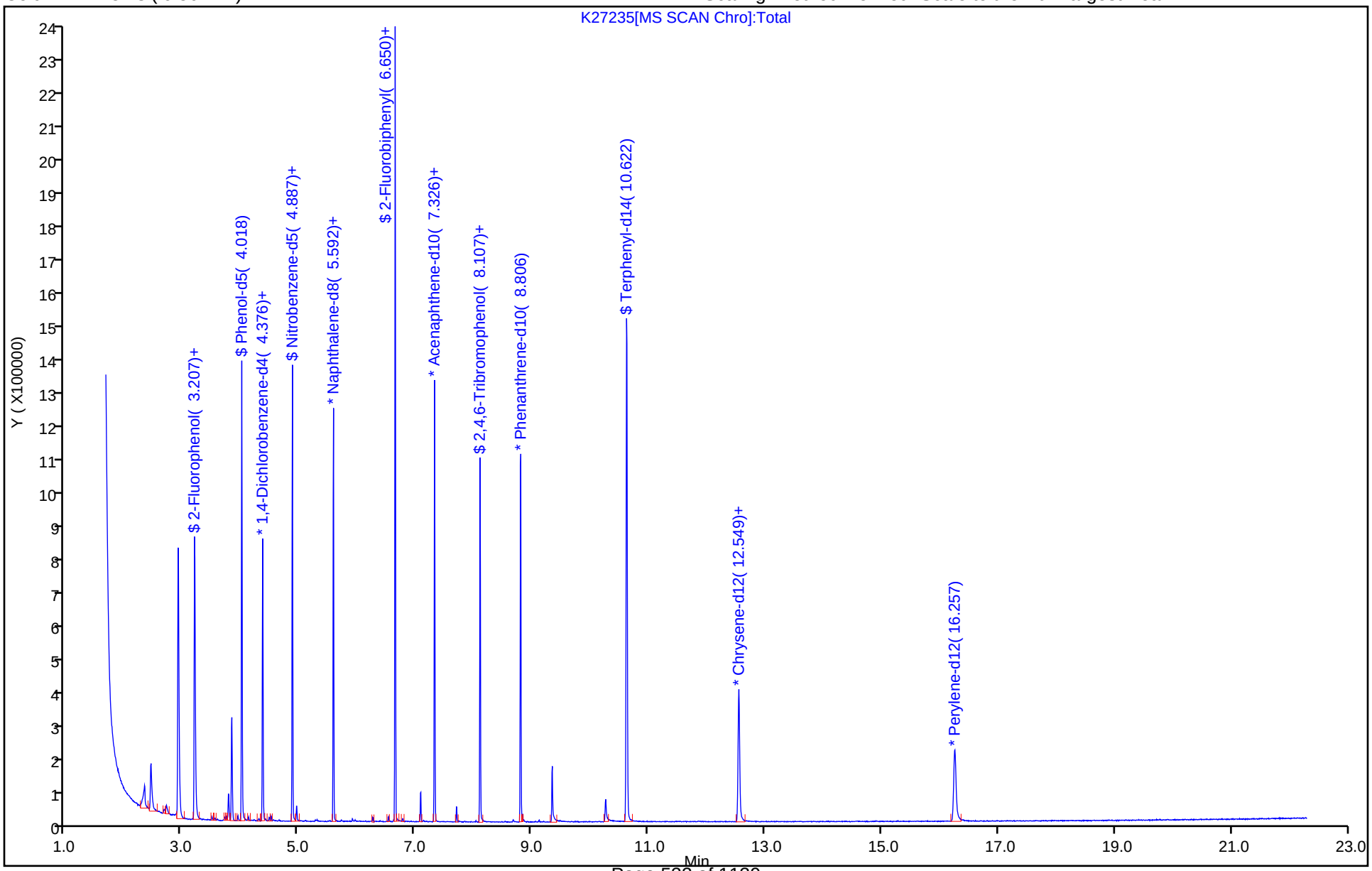
Report Date: 30-Oct-2018 07:24:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27235.D

Injection Date:	29-Oct-2018 17:27:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-115789-A-3-A	Lab Sample ID:	280-115789-3	Worklist Smp#:	21
Client ID:	FWGER-181001-ER				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	SMSK_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_K\20181029-75571.b\K27235.D
Lims ID: 280-115789-A-3-A
Client ID: FWGER-181001-ER
Sample Type: Client
Inject. Date: 29-Oct-2018 17:27:30 ALS Bottle#: 20 Worklist Smp#: 21
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-A-3-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 07:06:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	70.2	70.24
$ 8 Phenol-d5	100.0	74.3	74.27
$ 9 Nitrobenzene-d5	100.0	72.6	72.64
$ 11 2-Fluorobiphenyl	100.0	73.9	73.91
$ 12 2,4,6-Tribromophenol	100.0	93.9	93.91
$ 13 Terphenyl-d14	100.0	98.1	98.08

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: FWGFB-181001-FB | Lab Sample ID: 280-115789-4

Matrix: Water | Lab File ID: K27236.D

Analysis Method: 8270D | Date Collected: 10/18/2018 07:20

Extract. Method: 3520C | Date Extracted: 10/25/2018 13:12

Sample wt/vol: 1034.3(mL) | Date Analyzed: 10/29/2018 17:56

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435306 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-14-2	2,4-Dinitrotoluene	4.3	U	19	4.3	1.6
606-20-2	2,6-Dinitrotoluene	4.3	U	19	4.3	1.8
98-95-3	Nitrobenzene	1.9	U	19	1.9	0.78

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	91		43-140
321-60-8	2-Fluorobiphenyl	79		44-119
367-12-4	2-Fluorophenol (Surr)	78		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	79		44-120
4165-62-2	Phenol-d5 (Surr)	80		10-115
1718-51-0	Terphenyl-d14 (Surr)	104		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27236.D
Lims ID: 280-115789-A-4-A
Client ID: FWGFB-181001-FB
Sample Type: Client
Inject. Date: 29-Oct-2018 17:56:30 ALS Bottle#: 21 Worklist Smp#: 22
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-A-4-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 07:07:17

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	96	134242	40.0	
*	2 Naphthalene-d8	136	5.592	5.593	-0.001	100	522362	40.0	
*	3 Acenaphthene-d10	164	7.326	7.326	0.000	94	278187	40.0	
*	4 Phenanthrene-d10	188	8.806	8.807	0.000	97	450163	40.0	
*	5 Chrysene-d12	240	12.549	12.555	-0.006	99	284055	40.0	
*	6 Perylene-d12	264	16.257	16.263	-0.006	98	229146	40.0	
$	7 2-Fluorophenol	112	3.213	3.207	0.006	94	388611	77.6	
$	8 Phenol-d5	99	4.018	4.018	0.000	95	455000	80.0	
$	9 Nitrobenzene-d5	82	4.887	4.887	0.000	95	390205	79.1	
$	11 2-Fluorobiphenyl	172	6.650	6.656	-0.006	100	767114	79.0	
$	12 2,4,6-Tribromophenol	330	8.113	8.113	0.000	93	105220	90.8	
$	13 Terphenyl-d14	244	10.622	10.634	-0.012	99	723238	103.8	
	19 1,4-Dioxane	88		1.867				ND	
	32 Phenol	94		4.030				ND	
	36 Bis(2-chloroethyl)ether	93		4.112				ND	
	39 2-Chlorophenol	128		4.182				ND	
	40 1,3-Dichlorobenzene	146		4.329				ND	
	42 1,4-Dichlorobenzene	146		4.394				ND	
	43 Benzyl alcohol	108		4.494				ND	
	44 1,2-Dichlorobenzene	146	4.541	4.541	0.000	36	1278	0.2473	
	45 2-Methylphenol	108		4.594				ND	
	46 2,2'-oxybis[1-chloropropan	45		4.623				ND	
	49 3 & 4 Methylphenol	108		4.741				ND	
	52 N-Nitrosodi-n-propylamine	70		4.741				ND	
	58 Hexachloroethane	117		4.864				ND	
	59 Nitrobenzene	77		4.905				ND	
	63 Isophorone	82		5.134				ND	
	64 2-Nitrophenol	139		5.216				ND	
	65 2,4-Dimethylphenol	107		5.252				ND	
	68 Benzoic acid	105		5.363				ND	
	69 Bis(2-chloroethoxy)methane	93		5.340				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.451				ND	
76 1,2,4-Trichlorobenzene	180	5.540	5.540	0.000	92	1457	0.3369	
80 4-Chloroaniline	127		5.657				ND	
83 Hexachlorobutadiene	225		5.745				ND	
89 4-Chloro-3-methylphenol	107		6.133				ND	
97 Hexachlorocyclopentadiene	237		6.462				ND	
100 2,4,6-Trichlorophenol	196		6.574				ND	
102 2,4,5-Trichlorophenol	196		6.609				ND	
106 2-Chloronaphthalene	162		6.779				ND	
108 2-Nitroaniline	65		6.867				ND	
111 Dimethyl phthalate	163		7.050				ND	
113 2,6-Dinitrotoluene	165		7.103				ND	
115 3-Nitroaniline	138		7.273				ND	
118 2,4-Dinitrophenol	184		7.379				ND	
119 4-Nitrophenol	109		7.443				ND	
122 2,4-Dinitrotoluene	165		7.508				ND	
123 Dibenzofuran	168		7.531				ND	
130 Diethyl phthalate	149		7.749				ND	
134 4-Chlorophenyl phenyl ethe	204		7.866				ND	
138 4-Nitroaniline	138		7.884				ND	
139 4,6-Dinitro-2-methylphenol	198		7.919				ND	
141 N-Nitrosodiphenylamine	169		7.984				ND	
156 4-Bromophenyl phenyl ether	248		8.354				ND	
157 Hexachlorobenzene	284		8.436				ND	
163 Pentachlorophenol	266		8.624				ND	
170 Carbazole	167		9.036				ND	
173 Di-n-butyl phthalate	149		9.376				ND	
190 Butyl benzyl phthalate	149		11.456				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.737				ND	
197 3,3'-Dichlorobenzidine	252		12.508				ND	
201 Di-n-octyl phthalate	149		14.441				ND	U

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

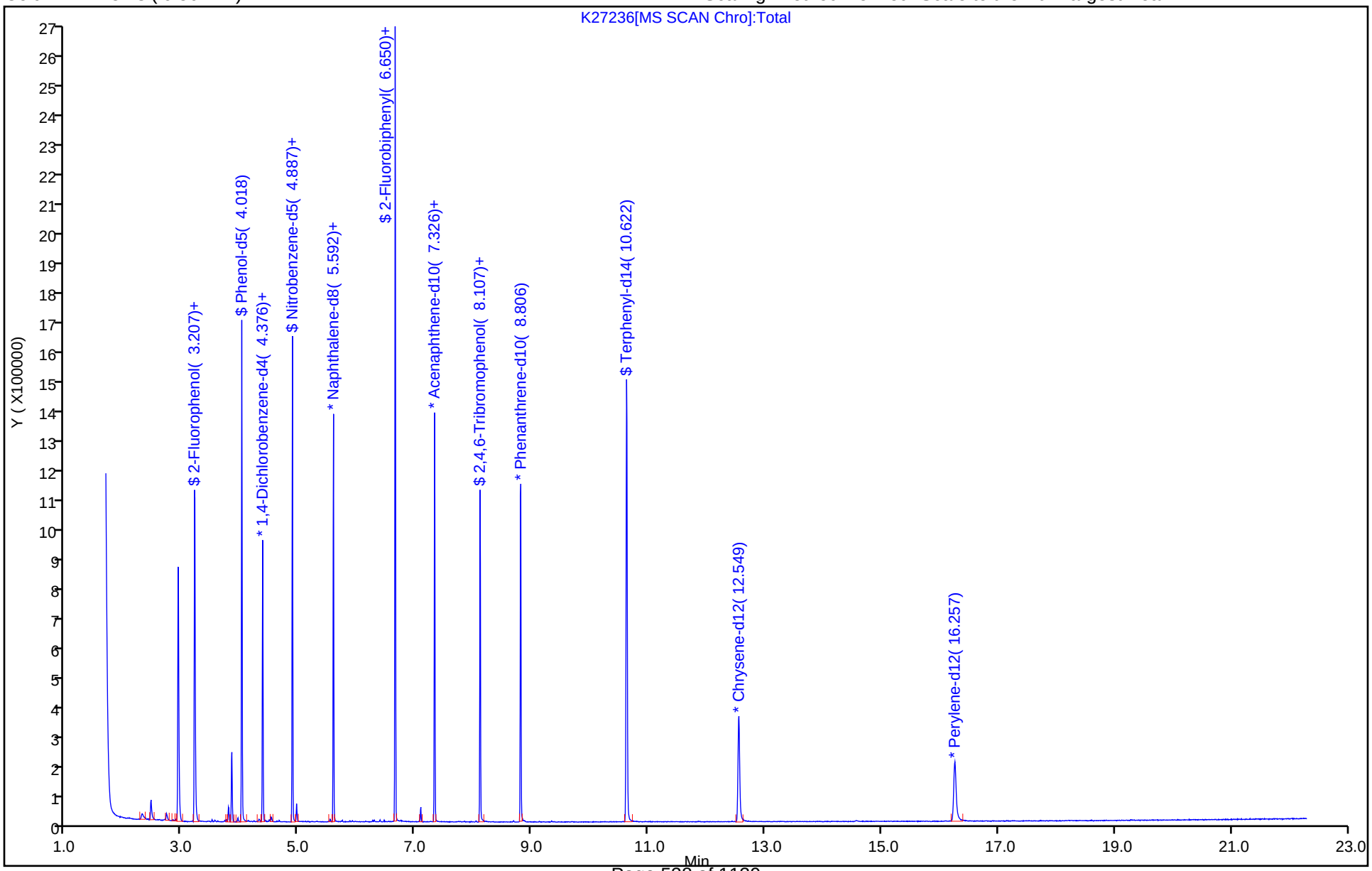
Report Date: 30-Oct-2018 07:24:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27236.D

Injection Date:	29-Oct-2018 17:56:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-115789-A-4-A	Lab Sample ID:	280-115789-4	Worklist Smp#:	22
Client ID:	FWGFB-181001-FB				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	SMSK_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_K\20181029-75571.b\K27236.D
Lims ID: 280-115789-A-4-A
Client ID: FWGFB-181001-FB
Sample Type: Client
Inject. Date: 29-Oct-2018 17:56:30 ALS Bottle#: 21 Worklist Smp#: 22
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-A-4-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 07:07:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	77.6	77.56
$ 8 Phenol-d5	100.0	80.0	79.97
$ 9 Nitrobenzene-d5	100.0	79.1	79.08
$ 11 2-Fluorobiphenyl	100.0	79.0	78.99
$ 12 2,4,6-Tribromophenol	100.0	90.8	90.76
$ 13 Terphenyl-d14	100.0	103.8	103.78

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-434399/4	K27113.D
Level 2	STD010 280-434399/5	K27114.D
Level 3	STD020 280-434399/6	K27115.D
Level 4	STD050 280-434399/7	K27116.D
Level 5	ICIS 280-434399/3	K27112.D
Level 6	STD120 280-434399/8	K27117.D
Level 7	STD160 280-434399/9	K27118.D
Level 8	STD200 280-434399/10	K27119.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	0.6921 0.6213	0.5866 0.6212	0.6447 0.6199	0.6215	0.6628	Ave		0.6338				5.1		15.0			
N-Nitrosodimethylamine	1.0373 0.9614	0.9586 0.9530	0.9473 0.9543	0.9878	1.0255	Ave		0.9782				3.6		15.0			
Pyridine	1.6699 1.5385	1.5849 1.5201	1.5709 1.5099	1.5704	1.6304	Ave		1.5744				3.5		15.0			
Phenol	1.9693 1.6791	1.8300 1.6193	1.7752 1.5926	1.7799	1.8119	Ave		1.7572				7.0		15.0			
Aniline	2.3200 2.0754	2.2244 2.0340	2.1516 2.0746	2.1521	2.1741	Ave		2.1508				4.3		15.0			
Bis(2-chloroethyl)ether	1.4747 1.2216	1.4386 1.1633	1.3705 1.1387	1.3301	1.3215	Ave		1.3074				9.4		15.0			
2-Chlorophenol	1.5710 1.3847	1.4890 1.3557	1.4732 1.3422	1.4504	1.4837	Ave		1.4437				5.4		15.0			
1,3-Dichlorobenzene	1.7940 1.5442	1.7069 1.4806	1.6348 1.4716	1.6310	1.6268	Ave		1.6112				6.8		15.0			
1,4-Dichlorobenzene	1.8509 1.5357	1.6845 1.5022	1.6447 1.4564	1.6355	1.6339	Ave		1.6180				7.6		15.0			
Benzyl alcohol	1.0336 0.9169	1.0075 0.9007	0.9655 0.8908	0.9571	0.9637	Ave		0.9545				5.3		15.0			
1,2-Dichlorobenzene	1.7148 1.4607	1.6208 1.4236	1.5712 1.4095	1.5590	1.5608	Ave		1.5401				6.8		15.0			
2-Methylphenol	1.4663 1.2783	1.3800 1.2458	1.3413 1.2296	1.3098	1.3424	Ave		1.3242				5.8		15.0			
bis (2-chloroisopropyl) ether	3.0989 2.2626	2.9201 2.0980	2.7641 1.9964	2.5872	2.5609	Qua	2.7125	2.7312	-0.003836						0.9990		0.9900
3 & 4 Methylphenol	1.4951 1.2036	1.4144 1.1323	1.3541 1.0865	1.3281	1.2895	Ave		1.2880				10.9		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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	1.0744 0.8442	1.0244 0.8013	0.9545 0.7932	0.9359	0.9063	Ave		0.9168			0.0500	11.1		15.0			
Acetophenone	2.2096 1.6139	1.9444 1.5122	1.9136 1.4800	1.8373	1.7752	Ave		1.7858				13.7		15.0			
Hexachloroethane	0.6465 0.5809	0.6359 0.5675	0.5959 0.5491	0.6120	0.6038	Ave		0.5990				5.5		15.0			
Nitrobenzene	0.4001 0.3552	0.3833 0.3538	0.3698 0.3360	0.3747	0.3615	Ave		0.3668				5.4		15.0			
Isophorone	0.7488 0.6031	0.6722 0.6020	0.6488 0.5988	0.6530	0.6450	Ave		0.6465				7.7		15.0			
2-Nitrophenol	0.1942 0.1929	0.1998 0.1929	0.1923 0.1868	0.2034	0.1999	Ave		0.1953				2.7		15.0			
2,4-Dimethylphenol	0.3839 0.3258	0.3631 0.3222	0.3443 0.3113	0.3471	0.3408	Ave		0.3423				6.8		15.0			
Bis(2-chloroethoxy)methane	0.4499 0.3759	0.4129 0.3716	0.4059 0.3588	0.4000	0.3876	Ave		0.3953				7.3		15.0			
Benzoic acid	+++++ 0.2540	0.1994 0.2622	0.2106 0.2706	0.2389	0.2538	Lin2	-1.426	0.2619							0.9980		0.9900
2,4-Dichlorophenol	0.3116 0.2792	0.3004 0.2772	0.2938 0.2726	0.2960	0.2941	Ave		0.2906				4.5		15.0			
1,2,4-Trichlorobenzene	0.3820 0.3103	0.3498 0.3106	0.3375 0.2959	0.3364	0.3270	Ave		0.3312				8.2		15.0			
Naphthalene	1.1316 0.9071	1.0455 0.8949	1.0190 0.8483	0.9896	0.9598	Ave		0.9745				9.4		15.0			
4-Chloroaniline	0.4459 0.3858	0.4302 0.3779	0.4252 0.3816	0.4186	0.4112	Ave		0.4095				6.1		15.0			
2,6-Dichlorophenol	0.3228 0.2709	0.3003 0.2652	0.2878 0.2586	0.2948	0.2855	Ave		0.2857				7.3		15.0			
Hexachlorobutadiene	0.1986 0.1795	0.1900 0.1760	0.1876 0.1655	0.1880	0.1846	Ave		0.1837				5.5		15.0			
Caprolactam	0.1782 0.1610	0.1651 0.1664	0.1737 0.1974	0.1725	0.1702	Ave		0.1731				6.5		15.0			
4-Chloro-3-methylphenol	0.3140 0.2535	0.2937 0.2556	0.2782 0.2620	0.2797	0.2718	Ave		0.2761				7.4		15.0			
2-Methylnaphthalene	0.7796 0.6353	0.7505 0.6145	0.7196 0.6031	0.7018	0.6720	Ave		0.6846				9.4		15.0			
1-Methylnaphthalene	0.7483 0.5963	0.6932 0.5792	0.6543 0.5629	0.6550	0.6273	Ave		0.6396				9.7		15.0			
Hexachlorocyclopentadiene	0.4007 0.4209	0.4069 0.4171	0.4160 0.3732	0.4364	0.4520	Ave		0.4154			0.0500	5.7		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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	0.3672 0.2761	0.3383 0.2707	0.3157 0.2645	0.3030	0.2914	Ave		0.3034				11.8		15.0			
2,4,6-Trichlorophenol	0.4070 0.3641	0.3875 0.3611	0.4113 0.3336	0.3932	0.3900	Ave		0.3810				6.9		15.0			
2,4,5-Trichlorophenol	0.4281 0.4044	0.4252 0.4090	0.4209 0.3956	0.4205	0.4282	Ave		0.4165				2.9		15.0			
1,1'-Biphenyl	1.7584 1.4798	1.6540 1.4629	1.6516 1.3503	1.5955	1.6129	Ave		1.5707				8.3		15.0			
2-Chloronaphthalene	1.3054 1.1466	1.2519 1.1398	1.2513 1.0573	1.2428	1.2389	Ave		1.2042				6.8		15.0			
2-Nitroaniline	0.3674 0.3408	0.3535 0.3533	0.3620 0.3631	0.3592	0.3739	Ave		0.3591				2.8		15.0			
Dimethyl phthalate	1.3015 1.0885	1.2560 1.1067	1.2496 1.1213	1.1606	1.1694	Ave		1.1817				6.6		15.0			
1,3-Dinitrobenzene	0.1629 0.2040	0.1855 0.2182	0.2058 0.2290	0.2075	0.2119	Ave		0.2031				10.1		15.0			
2,6-Dinitrotoluene	0.2915 0.2865	0.3086 0.2956	0.3186 0.3111	0.3012	0.2994	Ave		0.3016				3.5		15.0			
Acenaphthylene	1.9951 1.7003	1.9230 1.7046	1.8979 1.6142	1.8279	1.8307	Ave		1.8117				7.1		15.0			
3-Nitroaniline	0.3100 0.3134	0.3177 0.3246	0.3304 0.3515	0.3191	0.3250	Ave		0.3240				4.0		15.0			
Acenaphthene	1.3381 1.0943	1.2390 1.0806	1.2522 1.0315	1.1956	1.1808	Ave		1.1765				8.7		15.0			
2,4-Dinitrophenol	+++++ 0.1621	0.1091 0.1818	0.1388 0.2037	0.1536	0.1645	Lin2	-1.540	0.1813			0.0500				0.9910		0.9900
4-Nitrophenol	0.1427 0.1460	0.1436 0.1546	0.1541 0.1743	0.1474	0.1499	Ave		0.1516			0.0500	6.7		15.0			
2,4-Dinitrotoluene	0.3580 0.3576	0.3590 0.3703	0.3948 0.4052	0.3645	0.3771	Ave		0.3733				4.8		15.0			
Dibenzofuran	1.8371 1.5339	1.7528 1.5260	1.7554 1.4968	1.6428	1.6522	Ave		1.6496				7.6		15.0			
2,3,4,6-Tetrachlorophenol	0.3047 0.3171	0.3137 0.3241	0.3399 0.3417	0.3291	0.3260	Ave		0.3245				3.9		15.0			
Diethyl phthalate	1.2596 1.0091	1.2000 1.0413	1.1918 1.0888	1.0977	1.0914	Ave		1.1225				7.7		15.0			
4-Chlorophenyl phenyl ether	0.6942 0.5463	0.6372 0.5530	0.6360 0.5512	0.6032	0.5928	Ave		0.6017				8.7		15.0			
Fluorene	1.4574 1.1205	1.3827 1.1092	1.3567 1.1052	1.2527	1.2088	Ave		1.2491				11.0		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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	0.2975 0.2823	0.2917 0.3074	0.3232 0.3531	0.2889	0.2958	Ave		0.3050				7.6		15.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1240	0.0886 0.1278	0.1051 0.1248	0.1198	0.1270	Lin2	-0.825	0.1286							1.0000		0.9900
Diphenylamine	1.1589 0.9970	1.1411 1.0293	1.1646 1.0596	1.0730	1.0593	Ave		1.0853				5.7		15.0			
N-Nitrosodiphenylamine	0.6022 0.5620	0.6073 0.5473	0.5742 0.4923	0.5921	0.5785	Ave		0.5695				6.5		15.0			
1,2-Diphenylhydrazine	1.3421 1.1304	1.2900 1.1533	1.3000 1.1648	1.2115	1.2225	Ave		1.2268				6.3		15.0			
Azobenzene	1.3569 1.1428	1.3042 1.1659	1.3142 1.1776	1.2248	1.2359	Ave		1.2403				6.3		15.0			
4-Bromophenyl phenyl ether	0.2423 0.2164	0.2311 0.2141	0.2186 0.1956	0.2290	0.2279	Ave		0.2219				6.3		15.0			
Hexachlorobenzene	0.2467 0.2094	0.2332 0.2077	0.2190 0.1897	0.2240	0.2214	Ave		0.2189				7.9		15.0			
Atrazine	0.2028 0.1873	0.1962 0.1867	0.1915 0.1801	0.1936	0.1887	Ave		0.1908				3.6		15.0			
Pentachlorophenol	+++++ 0.1328	0.1142 0.1308	0.1228 0.1273	0.1332	0.1316	Lin2	-0.366	0.1328							0.9990		0.9900
Phenanthrene	1.1614 1.0093	1.1232 0.9941	1.1017 0.9305	1.0869	1.0766	Ave		1.0605				7.2		15.0			
Anthracene	1.2187 1.0486	1.1621 1.0328	1.1367 0.9653	1.1181	1.1145	Ave		1.0996				7.3		15.0			
Carbazole	1.0026 0.9365	0.9711 0.9386	0.9934 0.8885	0.9762	0.9701	Ave		0.9596				3.8		15.0			
Alachlor	0.1341 0.1299	0.1335 0.1329	0.1372 0.1276	0.1311	0.1360	Ave		0.1328				2.4		15.0			
Di-n-butyl phthalate	1.0902 1.0265	1.0816 1.0413	1.0866 0.9887	1.0632	1.0607	Ave		1.0548				3.3		15.0			
Fluoranthene	1.0939 1.0497	1.0690 1.0699	1.0883 1.0486	1.0685	1.0679	Ave		1.0695				1.5		15.0			
Pyrene	1.6137 1.3207	1.5670 1.3189	1.4863 1.2089	1.4029	1.4066	Ave		1.4156				9.6		15.0			
Famphur	0.3971 0.4292	0.4264 0.4076	0.4321 0.3344	0.4471	0.4630	Ave		0.4171				9.4		15.0			
Butyl benzyl phthalate	0.5305 0.5496	0.5539 0.5577	0.5468 0.5332	0.5502	0.5717	Ave		0.5492				2.4		15.0			
3,3'-Dichlorobenzidine	0.3591 0.3506	0.3421 0.3681	0.3475 0.3625	0.3525	0.3631	Ave		0.3557				2.5		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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	1.2952 1.2167	1.2755 1.2413	1.2331 1.1848	1.2405	1.2708	Ave		1.2447				2.8		15.0			
Chrysene	1.2026 1.1914	1.2396 1.2164	1.2129 1.1514	1.2130	1.2412	Ave		1.2086				2.4		15.0			
Bis(2-ethylhexyl) phthalate	0.6234 0.7247	0.6454 0.7401	0.6844 0.7197	0.7042	0.7533	Ave		0.6994				6.5		15.0			
Di-n-octyl phthalate	0.8850 0.1964	0.9353 1.2815	1.0025 1.2510	1.1291	1.2676	Lin2	-1.558	1.2066							0.9930		0.9900
Benzo[b]fluoranthene	1.1656 1.1634	1.1144 1.1741	1.0958 1.1414	1.1444	1.2034	Ave		1.1503				3.0		15.0			
Benzo[k]fluoranthene	1.1694 1.2512	1.2569 1.2389	1.2397 1.1722	1.2861	1.2816	Ave		1.2370				3.6		15.0			
Benzo[a]pyrene	1.0342 1.1850	1.1598 1.2100	1.1222 1.1581	1.1818	1.2271	Ave		1.1598				5.2		15.0			
Indeno[1,2,3-cd]pyrene	0.7336 0.9563	0.7377 1.0093	0.8102 1.0158	0.8744	0.9798	Ave		0.8896				13.2		15.0			
Dibenz(a,h)anthracene	0.7788 1.0290	0.8827 1.0392	0.9266 1.0098	0.9855	1.0556	Ave		0.9634				9.9		15.0			
Benzo[g,h,i]perylene	0.9836 1.1075	1.0277 1.1424	1.0261 1.0927	1.0918	1.1409	Ave		1.0766				5.4		15.0			
2-Fluorophenol (Surr)	1.6210 1.4599	1.5132 1.4362	1.4635 1.4272	1.4879	1.5351	Ave		1.4930				4.2		15.0			
Phenol-d5 (Surr)	1.8916 1.6296	1.7688 1.5793	1.6910 1.5621	1.7130	1.7268	Ave		1.6953				6.3		15.0			
Nitrobenzene-d5 (Surr)	0.4073 0.3659	0.3979 0.3608	0.3835 0.3495	0.3848	0.3730	Ave		0.3778				5.1		15.0			
2-Fluorobiphenyl	1.5017 1.3398	1.4675 1.3290	1.4481 1.2160	1.4344	1.4354	Ave		1.3965				6.7		15.0			
2,4,6-Tribromophenol (Surr)	0.1661 0.1600	0.1592 0.1696	0.1678 0.1767	0.1689	0.1653	Ave		0.1667				3.3		15.0			
Terphenyl-d14 (Surr)	1.0896 0.9307	1.0572 0.9320	1.0064 0.8710	0.9792	0.9847	Ave		0.9813				7.2		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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-434399/4	K27113.D
Level 2	STD010 280-434399/5	K27114.D
Level 3	STD020 280-434399/6	K27115.D
Level 4	STD050 280-434399/7	K27116.D
Level 5	ICIS 280-434399/3	K27112.D
Level 6	STD120 280-434399/8	K27117.D
Level 7	STD160 280-434399/9	K27118.D
Level 8	STD200 280-434399/10	K27119.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	9604 246043	20944 324473	39740 393695	106454	177940	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodimethylamine	DCBd 4	Ave	14394 380707	34224 497801	58391 606080	169184	275310	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyridine	DCBd 4	Ave	46347 1218459	113169 1587997	193658 1917863	537957	875416	8.00 240	20.0 320	40.0 400	100	160
Phenol	DCBd 4	Ave	27328 664889	65336 845808	109419 1011432	304856	486420	4.00 120	10.0 160	20.0 200	50.0	80.0
Aniline	DCBd 4	Ave	32195 821840	79417 1062431	132620 1317520	368614	583663	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethyl)ether	DCBd 4	Ave	20464 483741	51362 607630	84478 723186	227822	354771	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chlorophenol	DCBd 4	Ave	21801 548316	53160 708112	90805 852396	248427	398327	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dichlorobenzene	DCBd 4	Ave	24895 611471	60941 773378	100769 934555	279358	436734	4.00 120	10.0 160	20.0 200	50.0	80.0
1,4-Dichlorobenzene	DCBd 4	Ave	25685 608129	60141 784659	101377 924921	280118	438626	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzyl alcohol	DCBd 4	Ave	14343 363072	35970 470459	59515 565727	163926	258715	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Dichlorobenzene	DCBd 4	Ave	23796 578422	57866 743588	96849 895169	267029	419002	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylphenol	DCBd 4	Ave	20348 506184	49270 650738	82677 780872	224342	360373	4.00 120	10.0 160	20.0 200	50.0	80.0
bis (2-chloroisopropyl) ether	DCBd 4	Qua	43003 895961	104255 1095845	170378 1267878	443135	687503	4.00 120	10.0 160	20.0 200	50.0	80.0
3 & 4 Methylphenol	DCBd 4	Ave	20748 476623	50498 591418	83465 689990	227475	346177	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodi-n-propylamine	DCBd 4	Ave	14909 334309	36572 418563	58833 503716	160306	243318	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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	30663 639078	69421 789897	117954 939950	314687	476573	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachloroethane	DCBd 4	Ave	8971 230014	22704 296429	36733 348747	104828	162092	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene	NPT	Ave	21789 538429	53527 691307	87686 823757	247152	378647	4.00 120	10.0 160	20.0 200	50.0	80.0
Isophorone	NPT	Ave	40780 914181	93878 1176405	153861 1468168	430676	675539	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitrophenol	NPT	Ave	10577 292433	27904 376912	45592 458023	134133	209367	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dimethylphenol	NPT	Ave	20906 493857	50711 629641	81644 763326	228913	356927	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethoxy)methane	NPT	Ave	24504 569686	57660 726216	96256 879688	263791	405914	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzoic acid	NPT	Lin2	+++++ 769991	55690 1024554	99894 1326877	315069	531530	+++++ 240	20.0 320	40.0 400	100	160
2,4-Dichlorophenol	NPT	Ave	16973 423185	41949 541680	69679 668491	195203	307967	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4-Trichlorobenzene	NPT	Ave	20806 470329	48857 607007	80047 725459	221855	342460	4.00 120	10.0 160	20.0 200	50.0	80.0
Naphthalene	NPT	Ave	61630 1374851	146010 1748807	241651 2079988	652648	1005170	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloroaniline	NPT	Ave	24284 584758	60077 738390	100826 935656	276100	430695	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dichlorophenol	NPT	Ave	17582 410581	41938 518163	68243 634081	194419	299058	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobutadiene	NPT	Ave	10819 272056	26539 343986	44480 405687	123996	193294	4.00 120	10.0 160	20.0 200	50.0	80.0
Caprolactam	NPT	Ave	9707 244082	23051 325215	41202 483898	113788	178253	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloro-3-methylphenol	NPT	Ave	17102 384208	41017 499389	65978 642467	184485	284689	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylnaphthalene	NPT	Ave	42461 962904	104813 1200850	170654 1478843	462867	703799	4.00 120	10.0 160	20.0 200	50.0	80.0
1-Methylnaphthalene	NPT	Ave	40755 903894	96806 1131813	155170 1380102	431984	656942	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorocyclopentadiene	ANT	Ave	11592 304466	29258 384728	48434 470449	142176	224656	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4,5-Tetrachlorobenzene	NPT	Ave	20000 418508	47239 529068	74857 648636	199821	305232	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Trichlorophenol	ANT	Ave	11774 263397	27864 333096	47888 420507	128093	193876	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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	12386 292531	30572 377263	49012 498611	136981	212840	4.00 120	10.0 160	20.0 200	50.0	80.0
1,1'-Biphenyl	ANT	Ave	50872 1070372	118927 1349283	192302 1702046	519755	801720	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chloronaphthalene	ANT	Ave	37764 829374	90014 1051253	145689 1332768	404849	615828	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitroaniline	ANT	Ave	10629 246498	25417 325903	42146 457682	117021	185845	4.00 120	10.0 160	20.0 200	50.0	80.0
Dimethyl phthalate	ANT	Ave	37653 787365	90306 1020756	145495 1413397	378089	581262	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dinitrobenzene	ANT	Ave	4713 147550	13340 201254	23958 288701	67599	105309	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dinitrotoluene	ANT	Ave	8432 207218	22188 272641	37099 392124	98117	148850	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthylene	ANT	Ave	57718 1229834	138265 1572215	220982 2034677	595453	909998	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Nitroaniline	ANT	Ave	8968 226696	22842 299418	38469 443090	103961	161570	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthene	ANT	Ave	38711 791508	89087 996673	145794 1300166	389499	586970	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dinitrophenol	ANT	Lin2	+++++ 234441	15689 335434	32328 513584	100089	163562	+++++ 240	20.0 320	40.0 400	100	160
4-Nitrophenol	ANT	Ave	8257 211229	20649 285246	35888 439292	96007	149026	8.00 240	20.0 320	40.0 400	100	160
2,4-Dinitrotoluene	ANT	Ave	10358 258642	25815 341504	45965 510758	118745	187445	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenzofuran	ANT	Ave	53148 1109480	126033 1407539	204388 1886729	535174	821264	4.00 120	10.0 160	20.0 200	50.0	80.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	8814 229363	22554 298957	39576 430677	107211	162053	4.00 120	10.0 160	20.0 200	50.0	80.0
Diethyl phthalate	ANT	Ave	36441 729884	86286 960471	138761 1372470	357575	542528	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chlorophenyl phenyl ether	ANT	Ave	20082 395149	45818 510072	74055 694772	196516	294656	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluorene	ANT	Ave	42162 810470	99419 1023040	157964 1393076	408081	600868	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Nitroaniline	ANT	Ave	8607 204160	20974 283554	37628 445099	94097	147045	4.00 120	10.0 160	20.0 200	50.0	80.0
4,6-Dinitro-2-methylphenol	PHN	Lin2	+++++ 270449	20338 377001	42202 575387	120246	196440	+++++ 240	20.0 320	40.0 400	100	160
Diphenylamine	ANT	Ave	28498 612960	69738 806978	115263 1135262	297106	447569	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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	28498 612960	69738 806978	115263 1135262	297106	447569	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Diphenylhydrazine	ANT	Ave	39254 826606	93775 1075371	153020 1484315	399005	614343	4.04 121	10.1 162	20.2 202	50.5	80.9
Azobenzene	ANT	Ave	39254 826606	93775 1075371	153020 1484315	399005	614343	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Bromophenyl phenyl ether	PHN	Ave	11466 236026	26538 315774	43879 451115	114899	176292	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobenzene	PHN	Ave	11674 228374	26772 306214	43958 437360	112383	171283	4.00 120	10.0 160	20.0 200	50.0	80.0
Atrazine	PHN	Ave	9595 204308	22528 275278	38434 415351	97129	145972	4.00 120	10.0 160	20.0 200	50.0	80.0
Pentachlorophenol	PHN	Lin2	+++++ 289744	26218 385679	49290 587054	133668	203662	+++++ 240	20.0 320	40.0 400	100	160
Phenanthrene	PHN	Ave	54959 1100913	128967 1465907	221152 2145671	545408	832914	4.00 120	10.0 160	20.0 200	50.0	80.0
Anthracene	PHN	Ave	57670 1143820	133440 1522931	228171 2226050	561054	862193	4.00 120	10.0 160	20.0 200	50.0	80.0
Carbazole	PHN	Ave	47445 1021549	111508 1384033	199399 2048930	489871	750514	4.00 120	10.0 160	20.0 200	50.0	80.0
Alachlor	PHN	Ave	6346 141708	15328 196003	27543 294319	65765	105224	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-butyl phthalate	PHN	Ave	51590 1119612	124197 1535501	218104 2279983	533508	820582	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluoranthene	PHN	Ave	51762 1144918	122751 1577733	218444 2418055	536165	826209	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyrene	CRY	Ave	52121 1191627	126077 1654087	226910 2518499	546967	855558	4.00 120	10.0 160	20.0 200	50.0	80.0
Famphur	CRY	Ave	12827 387210	34308 511190	65964 696705	174335	281611	4.00 120	10.0 160	20.0 200	50.0	80.0
Butyl benzyl phthalate	CRY	Ave	17135 495896	44564 699401	83474 1110823	214504	347709	4.00 120	10.0 160	20.0 200	50.0	80.0
3,3'-Dichlorobenzidine	CRY	Ave	11599 316340	27522 461656	53044 755169	137428	220841	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]anthracene	CRY	Ave	41835 1097785	102623 1556759	188260 2468166	483658	772954	4.00 120	10.0 160	20.0 200	50.0	80.0
Chrysene	CRY	Ave	38843 1074958	99732 1525563	185168 2398580	472949	754929	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	20137 653813	51924 928194	104488 1499308	274553	458211	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-octyl phthalate	CRY	Lin2	28585 1079412	75252 1607220	153055 2606177	440225	771023	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.: 280-115789-1 Analy Batch No.: 434399

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/23/2018 13:33 Calibration End Date: 10/23/2018 16:54 Calibration ID: 34118

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	32261 999236	78027 1445354	153318 2372432	416573	695528	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[k]fluoranthene	PRY	Ave	32367 1074645	88002 1525112	173456 2436374	468165	740722	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]pyrene	PRY	Ave	28624 1017763	81200 1489555	157022 2407134	430196	709253	4.00 120	10.0 160	20.0 200	50.0	80.0
Indeno[1,2,3-cd]pyrene	CRY	Ave	23695 862769	59350 1265753	123689 2116080	340918	595951	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenz(a,h)anthracene	PRY	Ave	21556 883744	61798 1279318	129649 2098766	358758	610116	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[g,h,i]perylene	PRY	Ave	27223 951206	71956 1406320	143576 2271057	397431	659404	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorophenol (Surr)	DCBd 4	Ave	22494 578101	54024 750203	90210 906416	254840	412105	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol-d5 (Surr)	DCBd 4	Ave	26249 645279	63149 824915	104233 992075	293396	463589	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene-d5 (Surr)	NPT	Ave	22185 554555	55567 705078	90935 857019	253784	390650	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorobiphenyl	ANT	Ave	43443 969077	105516 1225804	168608 1532807	467275	713491	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	4804 115739	11450 156471	19542 222763	55006	82150	4.00 120	10.0 160	20.0 200	50.0	80.0
Terphenyl-d14 (Surr)	CRY	Ave	35194 839737	85056 1168820	153641 1814405	381775	598921	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_K\20181022-75345.b\K27112.D
Lims ID: ICIS HSL
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 23-Oct-2018 13:33:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:01:57 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 14:26:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.429	4.429	0.000	95	134230	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	523656	40.0	40.0	
* 3 Acenaphthene-d10	164	7.384	7.384	0.000	93	248540	40.0	40.0	
* 4 Phenanthrene-d10	188	8.865	8.865	0.000	97	386822	40.0	40.0	
* 5 Chrysene-d12	240	12.684	12.684	0.000	99	304119	40.0	40.0	
* 6 Perylene-d12	264	16.433	16.433	0.000	98	288986	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	94	412105	80.0	82.3	
$ 8 Phenol-d5	99	4.065	4.065	0.000	96	463589	80.0	81.5	
$ 9 Nitrobenzene-d5	82	4.940	4.940	0.000	94	390650	80.0	79.0	
$ 11 2-Fluorobiphenyl	172	6.703	6.703	0.000	100	713491	80.0	82.2	
$ 12 2,4,6-Tribromophenol	330	8.172	8.172	0.000	94	82150	80.0	79.3	
$ 13 Terphenyl-d14	244	10.716	10.716	0.000	98	598921	80.0	80.3	
19 1,4-Dioxane	88	1.961	1.961	0.000	94	177940	80.0	83.7	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	84	275310	80.0	83.9	
21 Pyridine	79	2.220	2.220	0.000	81	875416	160.0	165.7	
32 Phenol	94	4.082	4.082	0.000	97	486420	80.0	82.5	
34 Aniline	93	4.117	4.117	0.000	96	583663	80.0	80.9	
35 Alpha Methyl Styrene	118	4.170	4.170	0.000	93	400717	80.0	81.1	
36 Bis(2-chloroethyl)ether	93	4.164	4.164	0.000	90	354771	80.0	80.9	
38 n-Decane	43	4.276	4.276	0.000	94	565880	80.0	82.4	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	398327	80.0	82.2	
40 1,3-Dichlorobenzene	146	4.382	4.382	0.000	98	436734	80.0	80.8	
42 1,4-Dichlorobenzene	146	4.446	4.446	0.000	93	438626	80.0	80.8	
43 Benzyl alcohol	108	4.541	4.541	0.000	92	258715	80.0	80.8	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	419002	80.0	81.1	
45 2-Methylphenol	108	4.640	4.640	0.000	96	360373	80.0	81.1	
46 2,2'-oxybis[1-chloropropan	45	4.670	4.670	0.000	92	687503	80.0	83.9	
47 Indene	116	4.670	4.670	0.000	92	1179141	160.0	159.2	
49 3 & 4 Methylphenol	108	4.787	4.787	0.000	79	346177	80.0	80.1	
50 3-Methylphenol	108	4.787	4.787	0.000	89	346177	80.0	80.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.787	4.787	0.000	91	346177	80.0	80.1	
52 N-Nitrosodi-n-propylamine	70	4.787	4.787	0.000	90	243318	80.0	79.1	
54 Acetophenone	105	4.793	4.793	0.000	93	476573	80.0	79.5	
58 Hexachloroethane	117	4.911	4.911	0.000	92	162092	80.0	80.6	
59 Nitrobenzene	77	4.958	4.958	0.000	97	378647	80.0	78.9	
63 Isophorone	82	5.181	5.181	0.000	98	675539	80.0	79.8	
64 2-Nitrophenol	139	5.263	5.263	0.000	94	209367	80.0	81.9	
65 2,4-Dimethylphenol	107	5.298	5.298	0.000	94	356927	80.0	79.6	
68 Benzoic acid	105	5.410	5.410	0.000	92	531530	160.0	160.5	
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	95	405914	80.0	78.4	
71 3,5-Dimethylphenol	107	5.428	5.428	0.000	84	364129	80.0	81.4	
74 2,4-Dichlorophenol	162	5.498	5.498	0.000	95	307967	80.0	80.9	
76 1,2,4-Trichlorobenzene	180	5.586	5.586	0.000	94	342460	80.0	79.0	
79 Naphthalene	128	5.663	5.663	0.000	98	1005170	80.0	78.8	
80 4-Chloroaniline	127	5.704	5.704	0.000	96	430695	80.0	80.3	
81 2,6-Dichlorophenol	162	5.721	5.721	0.000	97	299058	80.0	79.9	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	95	193294	80.0	80.4	
86 Caprolactam	55	6.027	6.027	0.000	73	178253	80.0	78.7	M
89 4-Chloro-3-methylphenol	107	6.180	6.180	0.000	95	284689	80.0	78.8	
93 2-Methylnaphthalene	142	6.344	6.344	0.000	95	703799	80.0	78.5	
96 1-Methylnaphthalene	142	6.444	6.444	0.000	96	656942	80.0	78.5	
97 Hexachlorocyclopentadiene	237	6.515	6.515	0.000	95	224656	80.0	87.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.515	6.515	0.000	97	305232	80.0	76.9	
100 2,4,6-Trichlorophenol	196	6.620	6.620	0.000	94	193876	80.0	81.9	
101 2,3-Dichlorobenzenamine	161	6.620	6.620	0.000	96	318720	80.0	80.5	
102 2,4,5-Trichlorophenol	196	6.656	6.656	0.000	94	212840	80.0	82.2	
104 1,1'-Biphenyl	154	6.803	6.803	0.000	95	801720	80.0	82.1	
106 2-Chloronaphthalene	162	6.826	6.826	0.000	96	615828	80.0	82.3	
108 2-Nitroaniline	65	6.914	6.914	0.000	85	185845	80.0	83.3	
111 Dimethyl phthalate	163	7.096	7.096	0.000	99	581262	80.0	79.2	
112 1,3-Dinitrobenzene	168	7.120	7.120	0.000	89	105309	80.0	83.4	
113 2,6-Dinitrotoluene	165	7.155	7.155	0.000	94	148850	80.0	79.4	
114 Acenaphthylene	152	7.243	7.243	0.000	99	909998	80.0	80.8	
115 3-Nitroaniline	138	7.326	7.326	0.000	94	161570	80.0	80.3	
117 Acenaphthene	153	7.414	7.414	0.000	94	586970	80.0	80.3	
118 2,4-Dinitrophenol	184	7.425	7.425	0.000	82	163562	160.0	153.7	
119 4-Nitrophenol	109	7.490	7.490	0.000	95	149026	160.0	158.2	
122 2,4-Dinitrotoluene	165	7.561	7.561	0.000	95	187445	80.0	80.8	
123 Dibenzofuran	168	7.584	7.584	0.000	98	821264	80.0	80.1	
125 2,3,4,6-Tetrachlorophenol	232	7.707	7.707	0.000	72	162053	80.0	80.4	
127 Hexadecane	57	7.825	7.825	0.000	90	544877	80.0	83.2	
130 Diethyl phthalate	149	7.801	7.801	0.000	99	542528	80.0	77.8	
134 4-Chlorophenyl phenyl ethe	204	7.919	7.919	0.000	94	294656	80.0	78.8	
135 Fluorene	166	7.931	7.931	0.000	94	600868	80.0	77.4	
138 4-Nitroaniline	138	7.937	7.937	0.000	84	147045	80.0	77.6	
139 4,6-Dinitro-2-methylphenol	198	7.972	7.972	0.000	85	196440	160.0	164.3	
141 N-Nitrosodiphenylamine	169	8.036	8.036	0.000	63	447569	80.0	81.3	
142 Diphenylamine	169	8.036	8.036	0.000	95	447569	68.0	66.4	
143 1,2-Diphenylhydrazine	77	8.078	8.078	0.000	41	614343	80.9	80.6	
144 Azobenzene	77	8.078	8.078	0.000	98	614343	80.0	79.7	
147 2,4,6 - Tribromophenol	330	8.172	8.172	0.000	94	83785	80.0	80.4	
156 4-Bromophenyl phenyl ether	248	8.413	8.413	0.000	68	176292	80.0	82.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.495	8.495	0.000	95	171283	80.0	80.9	
159 Atrazine	200	8.565	8.565	0.000	91	145972	80.0	79.1	
161 n-Octadecane	85	8.747	8.747	0.000	91	164252	80.0	83.7	
163 Pentachlorophenol	266	8.683	8.683	0.000	93	203662	160.0	161.3	
168 Phenanthrene	178	8.888	8.888	0.000	97	832914	80.0	81.2	
169 Anthracene	178	8.941	8.941	0.000	97	862193	80.0	81.1	
170 Carbazole	167	9.094	9.094	0.000	95	750514	80.0	80.9	
171 Alachlor	188	9.235	9.235	0.000	92	105224	80.0	81.9	
173 Di-n-butyl phthalate	149	9.435	9.435	0.000	99	820582	80.0	80.4	
179 Fluoranthene	202	10.187	10.187	0.000	98	826209	80.0	79.9	
182 Pyrene	202	10.492	10.492	0.000	97	855558	80.0	79.5	
188 Famphur	218	11.433	11.433	0.000	84	281611	80.0	88.8	
190 Butyl benzyl phthalate	149	11.556	11.556	0.000	97	347709	80.0	83.3	
195 Bis(2-ethylhexyl) phthalat	149	12.860	12.860	0.000	97	458211	80.0	86.2	
197 3,3'-Dichlorobenzidine	252	12.625	12.625	0.000	73	220841	80.0	81.7	
198 Benzo[a]anthracene	228	12.661	12.661	0.000	98	772954	80.0	81.7	
199 Chrysene	228	12.743	12.743	0.000	97	754929	80.0	82.2	
201 Di-n-octyl phthalate	149	14.588	14.588	0.000	99	771023	80.0	85.3	
203 Benzo[b]fluoranthene	252	15.387	15.387	0.000	97	695528	80.0	83.7	
204 Benzo[k]fluoranthene	252	15.463	15.463	0.000	99	740722	80.0	82.9	
206 Benzo[e]pyrene	252	16.139	16.139	0.000	97	665362	80.0	83.9	
207 Benzo[a]pyrene	252	16.280	16.280	0.000	77	709253	80.0	84.6	
213 Dibenz(a,h)anthracene	278	19.570	19.570	0.000	93	610116	80.0	87.7	
214 Indeno[1,2,3-cd]pyrene	276	19.476	19.476	0.000	98	595951	80.0	88.1	
215 Benzo[g,h,i]perylene	276	20.193	20.193	0.000	98	659404	80.0	84.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA080_00039 Amount Added: 200.00 Units: uL

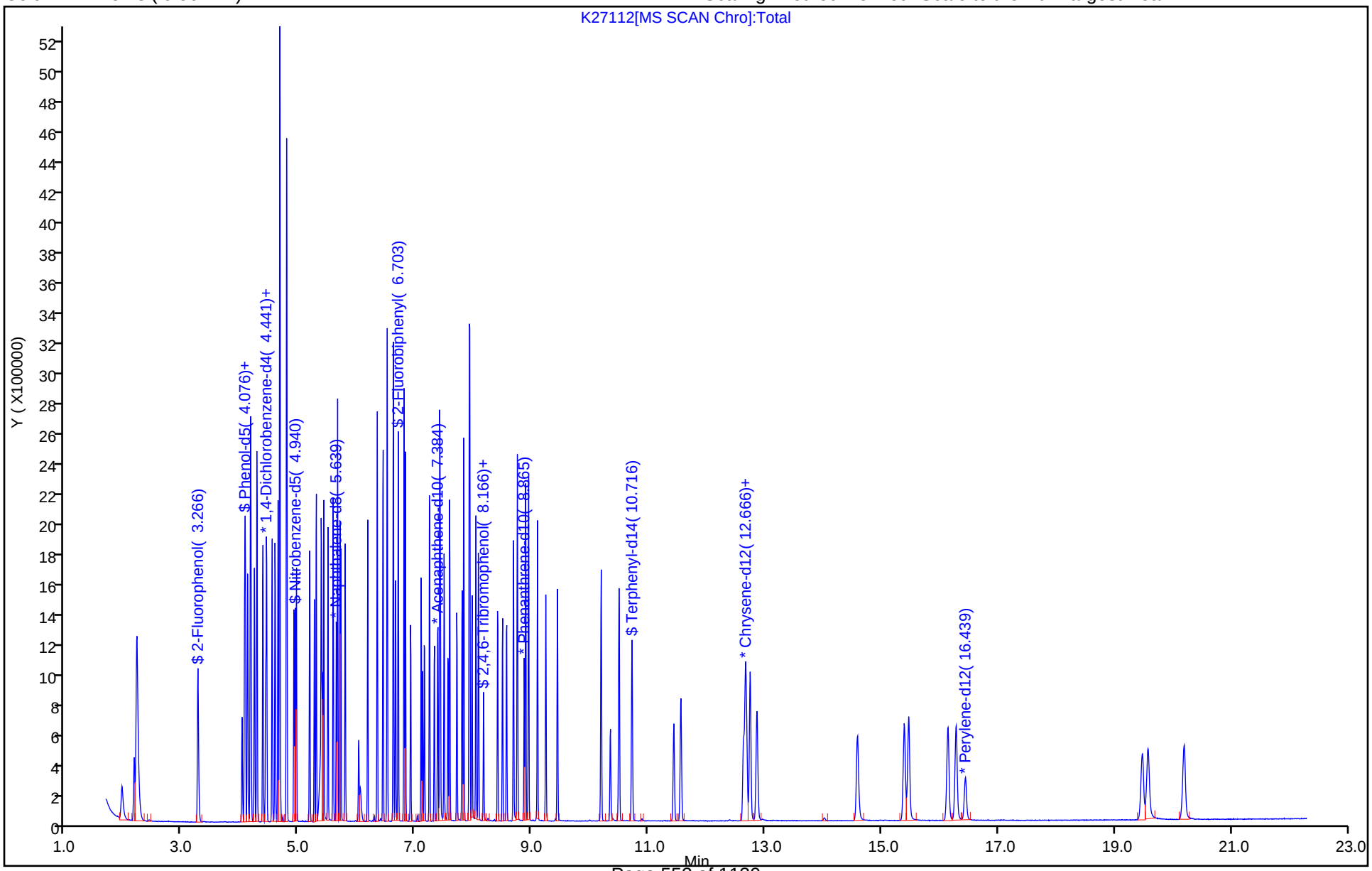
Report Date: 24-Oct-2018 06:01:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27112.D

Injection Date:	23-Oct-2018 13:33:30	Instrument ID:	SMS_K	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:	SMSK_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

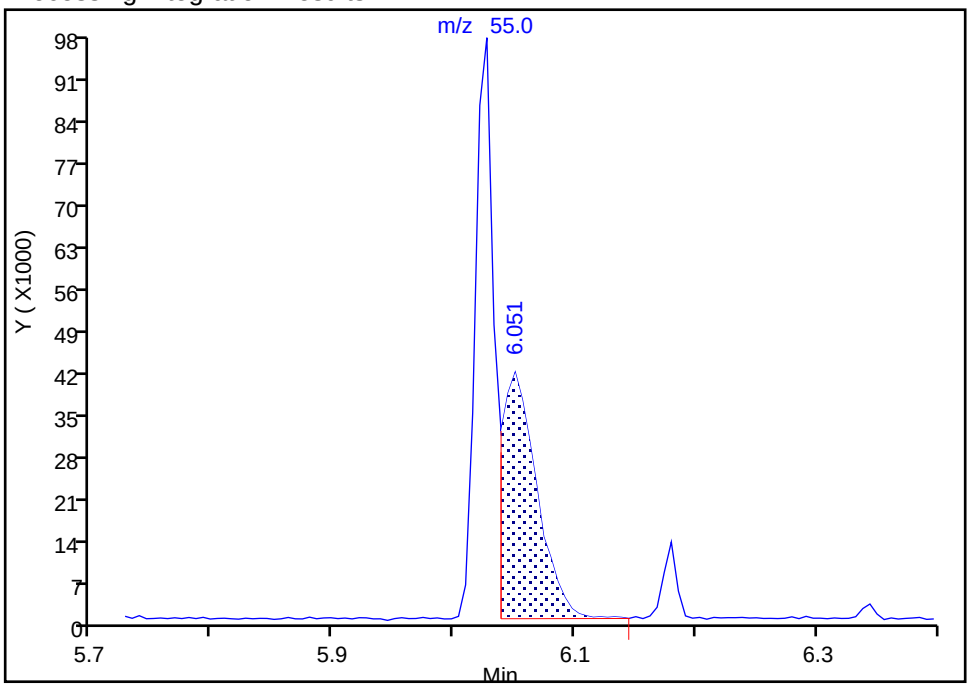
Data File:	\\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27112.D				
Injection Date:	23-Oct-2018 13:33:30	Instrument ID:	SMS_K		
Lims ID:	ICIS HSL				
Client ID:					
Operator ID:	KIEKELD	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

86 Caprolactam, CAS: 105-60-2

Signal: 1

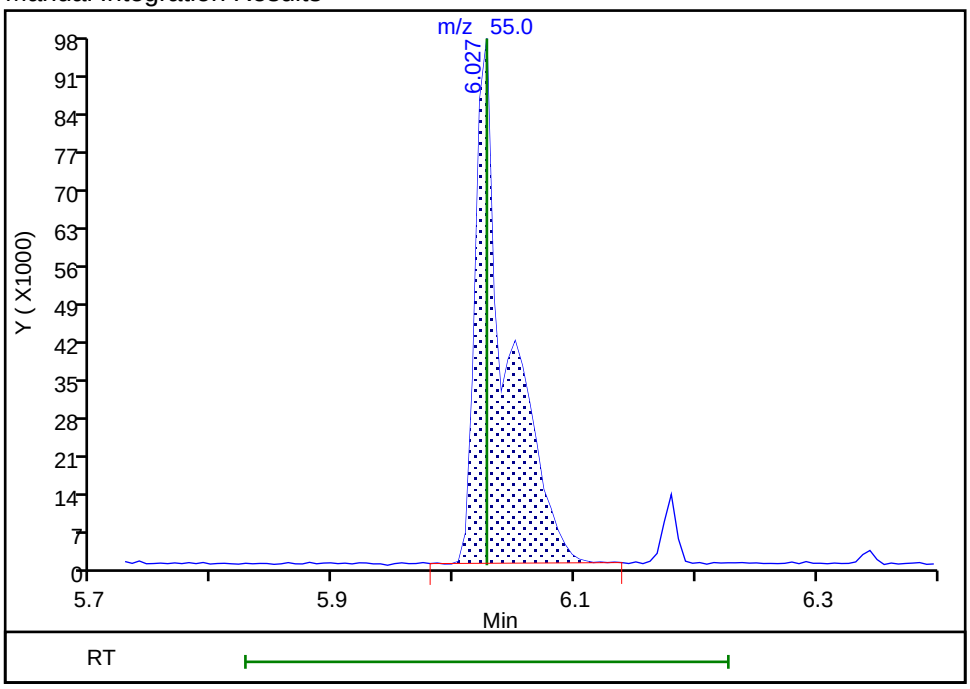
Processing Integration Results

RT: 6.05
Area: 83429
Amount: 80.000000
Amount Units: ug/ml



Manual Integration Results

RT: 6.03
Area: 178253
Amount: 78.672362
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 14:27:09

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27113.D
Lims ID: STD004 HSL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Oct-2018 14:01:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:05 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 14:30:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	96	138769	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	100	544627	40.0	40.0	
* 3 Acenaphthene-d10	164	7.379	7.384	-0.005	94	289301	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	98	473205	40.0	40.0	
* 5 Chrysene-d12	240	12.673	12.684	-0.011	99	322995	40.0	40.0	
* 6 Perylene-d12	264	16.427	16.433	-0.006	98	276779	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	93	22494	4.00	4.34	
$ 8 Phenol-d5	99	4.065	4.065	0.000	97	26249	4.00	4.46	
$ 9 Nitrobenzene-d5	82	4.934	4.940	-0.006	95	22185	4.00	4.31	
$ 11 2-Fluorobiphenyl	172	6.697	6.703	-0.006	100	43443	4.00	4.30	
$ 12 2,4,6-Tribromophenol	330	8.166	8.172	-0.006	93	4804	4.00	3.98	
$ 13 Terphenyl-d14	244	10.710	10.716	-0.006	98	35194	4.00	4.44	
19 1,4-Dioxane	88	1.961	1.961	0.000	95	9604	4.00	4.37	M
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	85	14394	4.00	4.24	
21 Pyridine	79	2.220	2.220	0.000	80	46347	8.00	8.49	
32 Phenol	94	4.077	4.082	-0.005	96	27328	4.00	4.48	
34 Aniline	93	4.112	4.117	-0.005	96	32195	4.00	4.31	
35 Alpha Methyl Styrene	118	4.171	4.170	0.001	94	23879	4.00	4.68	
36 Bis(2-chloroethyl)ether	93	4.159	4.164	-0.005	91	20464	4.00	4.51	
38 n-Decane	43	4.276	4.276	0.000	94	31475	4.00	4.44	
39 2-Chlorophenol	128	4.235	4.235	0.000	99	21801	4.00	4.35	
40 1,3-Dichlorobenzene	146	4.376	4.382	-0.006	97	24895	4.00	4.45	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	93	25685	4.00	4.58	
43 Benzyl alcohol	108	4.535	4.541	-0.005	93	14343	4.00	4.33	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	96	23796	4.00	4.45	
45 2-Methylphenol	108	4.635	4.640	-0.005	96	20348	4.00	4.43	
46 2,2'-oxybis[1-chloropropan	45	4.664	4.670	-0.006	92	43003	4.00	3.56	
47 Indene	116	4.670	4.670	0.000	92	73113	8.00	9.55	
49 3 & 4 Methylphenol	108	4.782	4.787	-0.005	83	20748	4.00	4.64	
50 3-Methylphenol	108	4.782	4.787	-0.005	94	20748	4.00	4.64	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.782	4.787	-0.005	93	20748	4.00	4.64	
52 N-Nitrosodi-n-propylamine	70	4.782	4.787	-0.005	95	14909	4.00	4.69	
54 Acetophenone	105	4.788	4.793	-0.005	93	30663	4.00	4.95	
58 Hexachloroethane	117	4.911	4.911	0.000	91	8971	4.00	4.32	
59 Nitrobenzene	77	4.952	4.958	-0.006	96	21789	4.00	4.36	
63 Isophorone	82	5.175	5.181	-0.006	97	40780	4.00	4.63	
64 2-Nitrophenol	139	5.263	5.263	0.000	92	10577	4.00	3.98	
65 2,4-Dimethylphenol	107	5.293	5.298	-0.005	94	20906	4.00	4.49	
68 Benzoic acid	105	5.328	5.410	-0.082	92	19023	8.00	10.8	a
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	96	24504	4.00	4.55	
71 3,5-Dimethylphenol	107	5.422	5.428	-0.006	82	20899	4.00	4.49	
74 2,4-Dichlorophenol	162	5.493	5.498	-0.005	94	16973	4.00	4.29	
76 1,2,4-Trichlorobenzene	180	5.581	5.586	-0.005	92	20806	4.00	4.61	
79 Naphthalene	128	5.657	5.663	-0.006	97	61630	4.00	4.64	
80 4-Chloroaniline	127	5.698	5.704	-0.006	96	24284	4.00	4.35	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	17582	4.00	4.52	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	96	10819	4.00	4.32	
86 Caprolactam	55	5.998	6.027	-0.029	73	9707	4.00	4.12	
89 4-Chloro-3-methylphenol	107	6.174	6.180	-0.006	95	17102	4.00	4.55	
93 2-Methylnaphthalene	142	6.339	6.344	-0.005	95	42461	4.00	4.56	
96 1-Methylnaphthalene	142	6.439	6.444	-0.005	96	40755	4.00	4.68	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	96	11592	4.00	3.86	
98 1,2,4,5-Tetrachlorobenzene	216	6.509	6.515	-0.006	96	20000	4.00	4.84	
100 2,4,6-Trichlorophenol	196	6.615	6.620	-0.005	76	11774	4.00	4.27	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	92	20728	4.00	4.50	
102 2,4,5-Trichlorophenol	196	6.656	6.656	0.000	95	12386	4.00	4.11	
104 1,1'-Biphenyl	154	6.797	6.803	-0.006	94	50872	4.00	4.48	
106 2-Chloronaphthalene	162	6.820	6.826	-0.006	96	37764	4.00	4.34	
108 2-Nitroaniline	65	6.909	6.914	-0.005	82	10629	4.00	4.09	
111 Dimethyl phthalate	163	7.091	7.096	-0.005	99	37653	4.00	4.41	
112 1,3-Dinitrobenzene	168	7.114	7.120	-0.006	86	4713	4.00	3.21	
113 2,6-Dinitrotoluene	165	7.150	7.155	-0.005	93	8432	4.00	3.87	
114 Acenaphthylene	152	7.238	7.243	-0.005	98	57718	4.00	4.40	
115 3-Nitroaniline	138	7.320	7.326	-0.006	92	8968	4.00	3.83	
117 Acenaphthene	153	7.408	7.414	-0.006	93	38711	4.00	4.55	
118 2,4-Dinitrophenol	184	7.420	7.425	-0.005	76	5344	8.00	12.6	
119 4-Nitrophenol	109	7.484	7.490	-0.006	95	8257	8.00	7.53	
122 2,4-Dinitrotoluene	165	7.555	7.561	-0.006	92	10358	4.00	3.84	
123 Dibenzofuran	168	7.578	7.584	-0.006	97	53148	4.00	4.45	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	72	8814	4.00	3.76	
127 Hexadecane	57	7.825	7.825	0.000	90	32469	4.00	4.26	
130 Diethyl phthalate	149	7.796	7.801	-0.005	99	36441	4.00	4.49	
134 4-Chlorophenyl phenyl ethe	204	7.919	7.919	0.000	91	20082	4.00	4.61	
135 Fluorene	166	7.925	7.931	-0.006	93	42162	4.00	4.67	
138 4-Nitroaniline	138	7.925	7.937	-0.012	57	8607	4.00	3.90	
139 4,6-Dinitro-2-methylphenol	198	7.960	7.972	-0.012	82	7195	8.00	11.1	
141 N-Nitrosodiphenylamine	169	8.031	8.036	-0.005	64	28498	4.00	4.23	
142 Diphenylamine	169	8.031	8.036	-0.005	94	28498	3.40	3.63	
143 1,2-Diphenylhydrazine	77	8.072	8.078	-0.006	41	39254	4.04	4.42	
144 Azobenzene	77	8.072	8.078	-0.006	98	39254	4.00	4.38	
147 2,4,6 - Tribromophenol	330	8.166	8.172	-0.006	93	4804	4.00	3.96	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	68	11466	4.00	4.37	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.489	8.495	-0.006	94	11674	4.00	4.51	
159 Atrazine	200	8.554	8.565	-0.011	90	9595	4.00	4.25	
161 n-Octadecane	85	8.742	8.747	-0.005	92	10682	4.00	4.45	
163 Pentachlorophenol	266	8.677	8.683	-0.006	93	10243	8.00	9.27	
168 Phenanthrene	178	8.883	8.888	-0.005	98	54959	4.00	4.38	
169 Anthracene	178	8.936	8.941	-0.005	97	57670	4.00	4.43	
170 Carbazole	167	9.088	9.094	-0.006	95	47445	4.00	4.18	
171 Alachlor	188	9.229	9.235	-0.006	92	6346	4.00	4.04	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	51590	4.00	4.13	
179 Fluoranthene	202	10.181	10.187	-0.006	97	51762	4.00	4.09	
182 Pyrene	202	10.487	10.492	-0.005	98	52121	4.00	4.56	
188 Famphur	218	11.421	11.433	-0.012	84	12827	4.00	3.81	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	98	17135	4.00	3.86	
195 Bis(2-ethylhexyl) phthalat	149	12.855	12.860	-0.005	95	20137	4.00	3.57	
197 3,3'-Dichlorobenzidine	252	12.614	12.625	-0.011	72	11599	4.00	4.04	
198 Benzo[a]anthracene	228	12.649	12.661	-0.012	97	41835	4.00	4.16	
199 Chrysene	228	12.731	12.743	-0.012	97	38843	4.00	3.98	
201 Di-n-octyl phthalate	149	14.570	14.588	-0.018	99	28585	4.00	4.22	
203 Benzo[b]fluoranthene	252	15.369	15.387	-0.018	96	32261	4.00	4.05	
204 Benzo[k]fluoranthene	252	15.440	15.463	-0.023	98	32367	4.00	3.78	
206 Benzo[e]pyrene	252	16.116	16.139	-0.023	96	29909	4.00	3.94	
207 Benzo[a]pyrene	252	16.251	16.280	-0.029	78	28624	4.00	3.57	
213 Dibenz(a,h)anthracene	278	19.547	19.570	-0.023	92	21556	4.00	3.23	
214 Indeno[1,2,3-cd]pyrene	276	19.447	19.476	-0.029	98	23695	4.00	3.30	
215 Benzo[g,h,i]perylene	276	20.158	20.193	-0.035	99	27223	4.00	3.65	
S 217 Total Cresols	108				0			9.07	
S 218 Methyl Phenols,Total	108				0			9.07	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MS-HSLA004_00039 Amount Added: 200.00 Units: uL

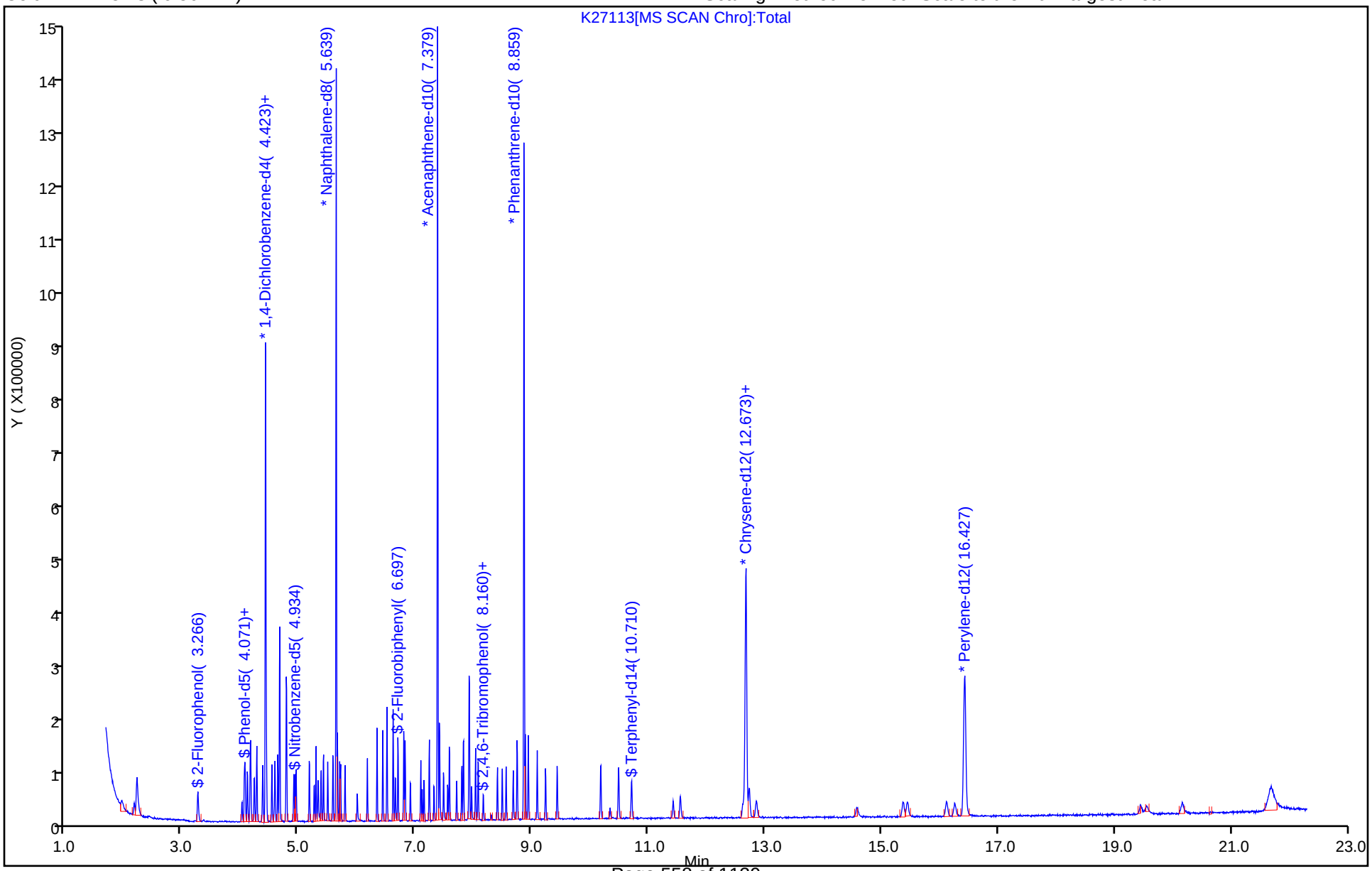
Report Date: 24-Oct-2018 06:02:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27113.D

Injection Date:	23-Oct-2018 14:01:30	Instrument ID:	SMS_K	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:	SMSK_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

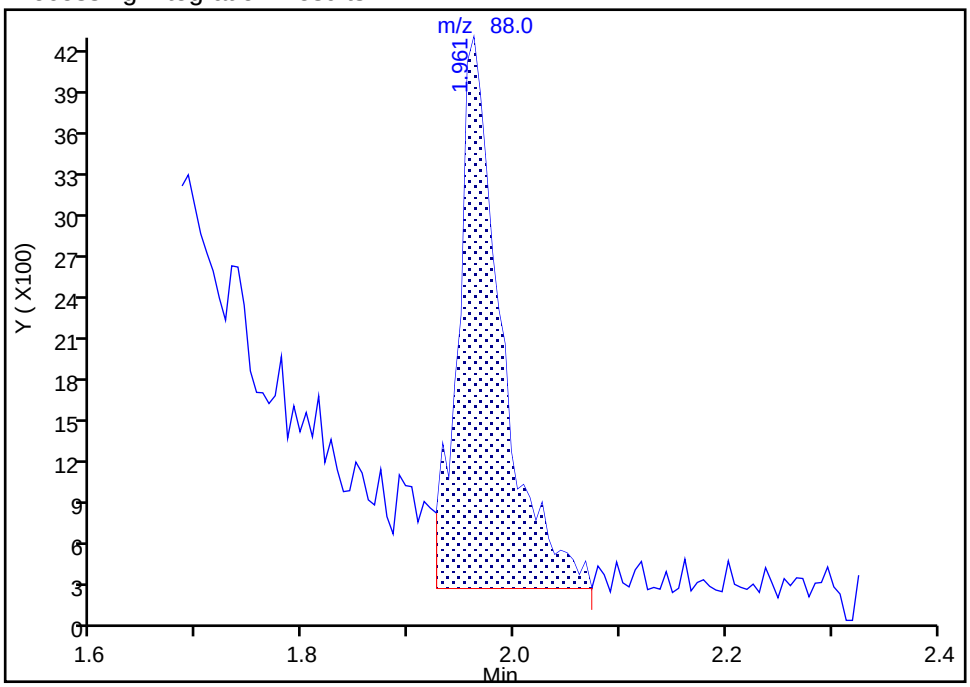
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27113.D
Injection Date: 23-Oct-2018 14:01:30 Instrument ID: SMS_K
Lims ID: STD004 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

19 1,4-Dioxane, CAS: 123-91-1

Signal: 1

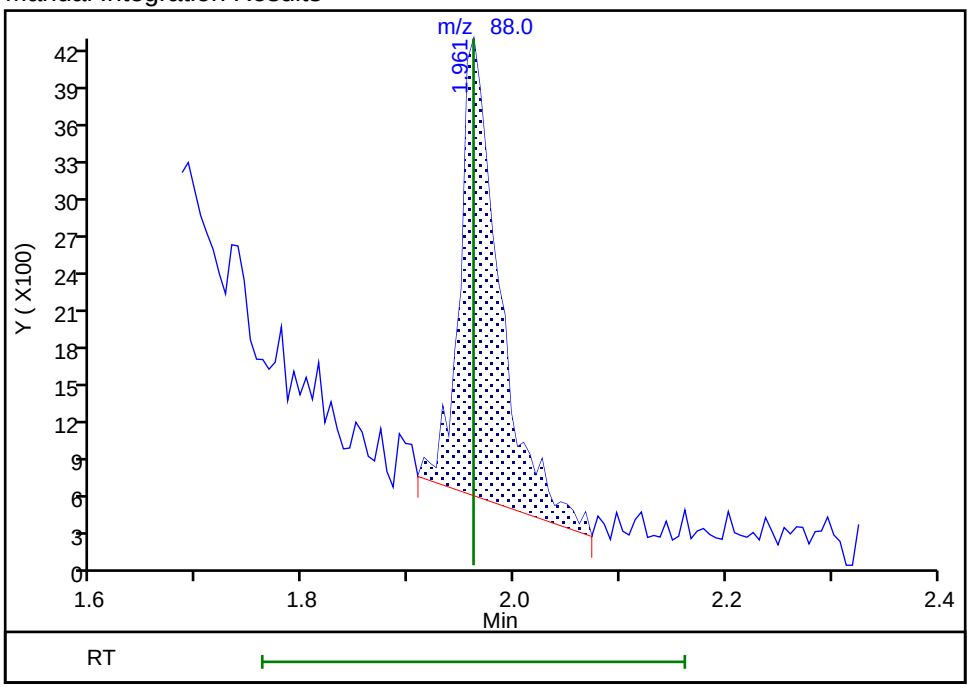
Processing Integration Results

RT: 1.96
Area: 11477
Amount: 4.000000
Amount Units: ug/ml



Manual Integration Results

RT: 1.96
Area: 9604
Amount: 4.367990
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 14:29:14
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

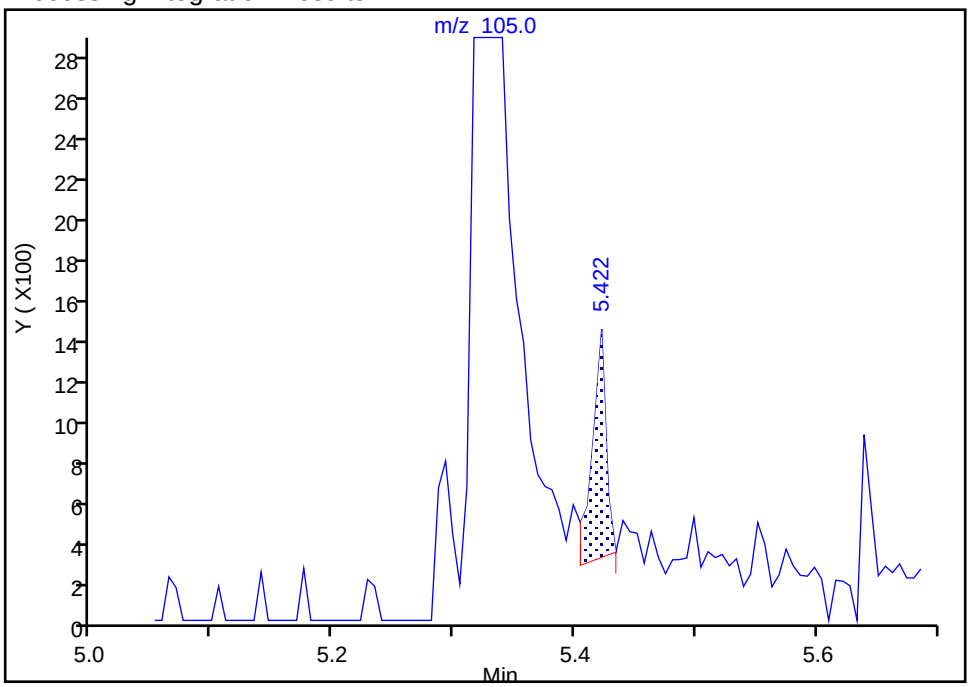
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27113.D
Injection Date: 23-Oct-2018 14:01:30 Instrument ID: SMS_K
Lims ID: STD004 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

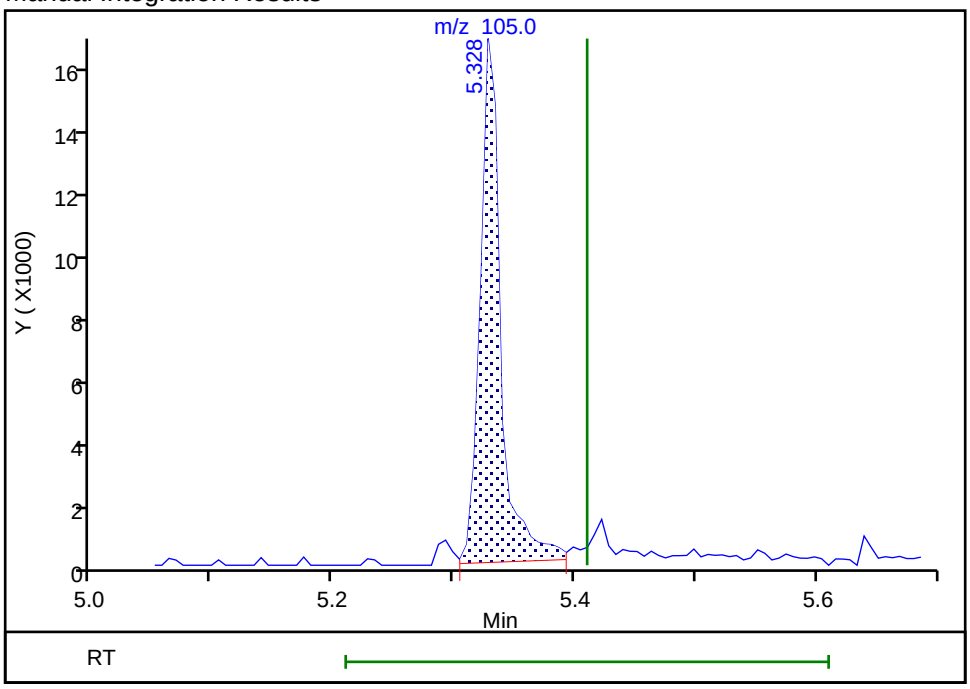
RT: 5.42
Area: 887
Amount: 8.000000
Amount Units: ug/ml

Processing Integration Results



Manual Integration Results

RT: 5.33
Area: 19023
Amount: 10.777449
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 14:29:34
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27114.D
Lims ID: STD010 HSL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Oct-2018 14:30:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:13 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 15:34:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	95	142810	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	100	558610	40.0	40.0	
* 3 Acenaphthene-d10	164	7.379	7.384	-0.005	94	287609	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	98	459302	40.0	40.0	
* 5 Chrysene-d12	240	12.673	12.684	-0.011	99	321825	40.0	40.0	
* 6 Perylene-d12	264	16.421	16.433	-0.012	98	280056	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	95	54024	10.0	10.1	
$ 8 Phenol-d5	99	4.065	4.065	0.000	98	63149	10.0	10.4	
$ 9 Nitrobenzene-d5	82	4.934	4.940	-0.006	95	55567	10.0	10.5	
$ 11 2-Fluorobiphenyl	172	6.697	6.703	-0.006	100	105516	10.0	10.5	
$ 12 2,4,6-Tribromophenol	330	8.166	8.172	-0.006	92	11450	10.0	9.55	
$ 13 Terphenyl-d14	244	10.704	10.716	-0.012	98	85056	10.0	10.8	
19 1,4-Dioxane	88	1.961	1.961	0.000	94	20944	10.0	9.26	M
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	82	34224	10.0	9.80	
21 Pyridine	79	2.220	2.220	0.000	81	113169	20.0	20.1	
32 Phenol	94	4.077	4.082	-0.005	97	65336	10.0	10.4	
34 Aniline	93	4.118	4.117	0.001	96	79417	10.0	10.3	
35 Alpha Methyl Styrene	118	4.171	4.170	0.001	93	55261	10.0	10.5	
36 Bis(2-chloroethyl)ether	93	4.159	4.164	-0.005	91	51362	10.0	11.0	
38 n-Decane	43	4.276	4.276	0.000	94	77593	10.0	10.6	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	53160	10.0	10.3	
40 1,3-Dichlorobenzene	146	4.376	4.382	-0.006	98	60941	10.0	10.6	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	95	60141	10.0	10.4	
43 Benzyl alcohol	108	4.535	4.541	-0.005	93	35970	10.0	10.6	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	57866	10.0	10.5	
45 2-Methylphenol	108	4.635	4.640	-0.005	96	49270	10.0	10.4	
46 2,2'-oxybis[1-chloropropan	45	4.664	4.670	-0.006	91	104255	10.0	9.83	
47 Indene	116	4.670	4.670	0.000	93	179155	20.0	22.7	
49 3 & 4 Methylphenol	108	4.782	4.787	-0.005	83	50498	10.0	11.0	
50 3-Methylphenol	108	4.782	4.787	-0.005	92	50498	10.0	11.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.782	4.787	-0.005	94	50498	10.0	11.0	
52 N-Nitrosodi-n-propylamine	70	4.782	4.787	-0.005	96	36572	10.0	11.2	
54 Acetophenone	105	4.787	4.793	-0.006	93	69421	10.0	10.9	
58 Hexachloroethane	117	4.911	4.911	0.000	94	22704	10.0	10.6	
59 Nitrobenzene	77	4.952	4.958	-0.006	95	53527	10.0	10.4	
63 Isophorone	82	5.175	5.181	-0.006	97	93878	10.0	10.4	
64 2-Nitrophenol	139	5.263	5.263	0.000	93	27904	10.0	10.2	
65 2,4-Dimethylphenol	107	5.293	5.298	-0.005	94	50711	10.0	10.6	
68 Benzoic acid	105	5.346	5.410	-0.064	92	55690	20.0	20.7	a
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	95	57660	10.0	10.4	
71 3,5-Dimethylphenol	107	5.422	5.428	-0.006	84	50619	10.0	10.6	
74 2,4-Dichlorophenol	162	5.493	5.498	-0.005	95	41949	10.0	10.3	
76 1,2,4-Trichlorobenzene	180	5.581	5.586	-0.005	94	48857	10.0	10.6	
79 Naphthalene	128	5.657	5.663	-0.006	97	146010	10.0	10.7	
80 4-Chloroaniline	127	5.698	5.704	-0.006	96	60077	10.0	10.5	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	41938	10.0	10.5	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	96	26539	10.0	10.3	
86 Caprolactam	55	5.998	6.027	-0.029	72	23051	10.0	9.54	
89 4-Chloro-3-methylphenol	107	6.174	6.180	-0.006	95	41017	10.0	10.6	
93 2-Methylnaphthalene	142	6.339	6.344	-0.005	95	104813	10.0	11.0	
96 1-Methylnaphthalene	142	6.439	6.444	-0.005	95	96806	10.0	10.8	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	95	29258	10.0	9.80	
98 1,2,4,5-Tetrachlorobenzene	216	6.509	6.515	-0.006	97	47239	10.0	11.2	
100 2,4,6-Trichlorophenol	196	6.615	6.620	-0.005	77	27864	10.0	10.2	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	92	48782	10.0	10.6	
102 2,4,5-Trichlorophenol	196	6.656	6.656	0.000	93	30572	10.0	10.2	
104 1,1'-Biphenyl	154	6.797	6.803	-0.006	95	118927	10.0	10.5	
106 2-Chloronaphthalene	162	6.820	6.826	-0.006	96	90014	10.0	10.4	
108 2-Nitroaniline	65	6.909	6.914	-0.005	86	25417	10.0	9.84	
111 Dimethyl phthalate	163	7.091	7.096	-0.005	99	90306	10.0	10.6	
112 1,3-Dinitrobenzene	168	7.114	7.120	-0.006	87	13340	10.0	9.13	
113 2,6-Dinitrotoluene	165	7.144	7.155	-0.011	95	22188	10.0	10.2	
114 Acenaphthylene	152	7.238	7.243	-0.005	98	138265	10.0	10.6	
115 3-Nitroaniline	138	7.314	7.326	-0.012	95	22842	10.0	9.81	
117 Acenaphthene	153	7.408	7.414	-0.006	93	89087	10.0	10.5	
118 2,4-Dinitrophenol	184	7.420	7.425	-0.005	79	15689	20.0	20.5	
119 4-Nitrophenol	109	7.479	7.490	-0.012	95	20649	20.0	18.9	
122 2,4-Dinitrotoluene	165	7.549	7.561	-0.012	94	25815	10.0	9.62	
123 Dibenzofuran	168	7.578	7.584	-0.006	97	126033	10.0	10.6	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	72	22554	10.0	9.67	
127 Hexadecane	57	7.819	7.825	-0.006	90	79928	10.0	10.5	
130 Diethyl phthalate	149	7.796	7.801	-0.005	98	86286	10.0	10.7	
134 4-Chlorophenyl phenyl ethe	204	7.913	7.919	-0.006	94	45818	10.0	10.6	
135 Fluorene	166	7.925	7.931	-0.006	95	99419	10.0	11.1	
138 4-Nitroaniline	138	7.925	7.937	-0.012	58	20974	10.0	9.56	
139 4,6-Dinitro-2-methylphenol	198	7.960	7.972	-0.012	83	20338	20.0	20.2	
141 N-Nitrosodiphenylamine	169	8.031	8.036	-0.005	63	69738	10.0	10.7	
142 Diphenylamine	169	8.031	8.036	-0.005	95	69738	8.50	8.94	
143 1,2-Diphenylhydrazine	77	8.072	8.078	-0.006	41	93775	10.1	10.6	
144 Azobenzene	77	8.072	8.078	-0.006	98	93775	10.0	10.5	
147 2,4,6 - Tribromophenol	330	8.166	8.172	-0.006	92	11595	10.0	9.62	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	69	26538	10.0	10.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.489	8.495	-0.006	95	26772	10.0	10.7	
159 Atrazine	200	8.554	8.565	-0.011	90	22528	10.0	10.3	
161 n-Octadecane	85	8.742	8.747	-0.005	91	24113	10.0	10.4	
163 Pentachlorophenol	266	8.677	8.683	-0.006	93	26218	20.0	19.9	
168 Phenanthrene	178	8.883	8.888	-0.005	98	128967	10.0	10.6	
169 Anthracene	178	8.936	8.941	-0.005	97	133440	10.0	10.6	
170 Carbazole	167	9.088	9.094	-0.006	96	111508	10.0	10.1	
171 Alachlor	188	9.229	9.235	-0.006	92	15328	10.0	10.1	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	124197	10.0	10.3	
179 Fluoranthene	202	10.175	10.187	-0.012	97	122751	10.0	10.0	
182 Pyrene	202	10.487	10.492	-0.005	98	126077	10.0	11.1	
188 Famphur	218	11.421	11.433	-0.012	84	34308	10.0	10.2	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	97	44564	10.0	10.1	
195 Bis(2-ethylhexyl) phthalat	149	12.849	12.860	-0.011	96	51924	10.0	9.23	
197 3,3'-Dichlorobenzidine	252	12.614	12.625	-0.011	73	27522	10.0	9.62	
198 Benzo[a]anthracene	228	12.649	12.661	-0.012	98	102623	10.0	10.2	
199 Chrysene	228	12.725	12.743	-0.018	97	99732	10.0	10.3	
201 Di-n-octyl phthalate	149	14.576	14.588	-0.012	99	75252	10.0	9.04	
203 Benzo[b]fluoranthene	252	15.369	15.387	-0.018	97	78027	10.0	9.69	
204 Benzo[k]fluoranthene	252	15.446	15.463	-0.017	99	88002	10.0	10.2	
206 Benzo[e]pyrene	252	16.110	16.139	-0.029	97	76943	10.0	10.0	
207 Benzo[a]pyrene	252	16.257	16.280	-0.023	77	81200	10.0	10.0	
213 Dibenz(a,h)anthracene	278	19.541	19.570	-0.029	93	61798	10.0	9.16	
214 Indeno[1,2,3-cd]pyrene	276	19.441	19.476	-0.035	97	59350	10.0	8.29	
215 Benzo[g,h,i]perylene	276	20.158	20.193	-0.035	98	71956	10.0	9.55	
S 217 Total Cresols	108				0			21.4	
S 218 Methyl Phenols,Total	108				0			21.4	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MS-HSLA010_00039 Amount Added: 200.00 Units: uL

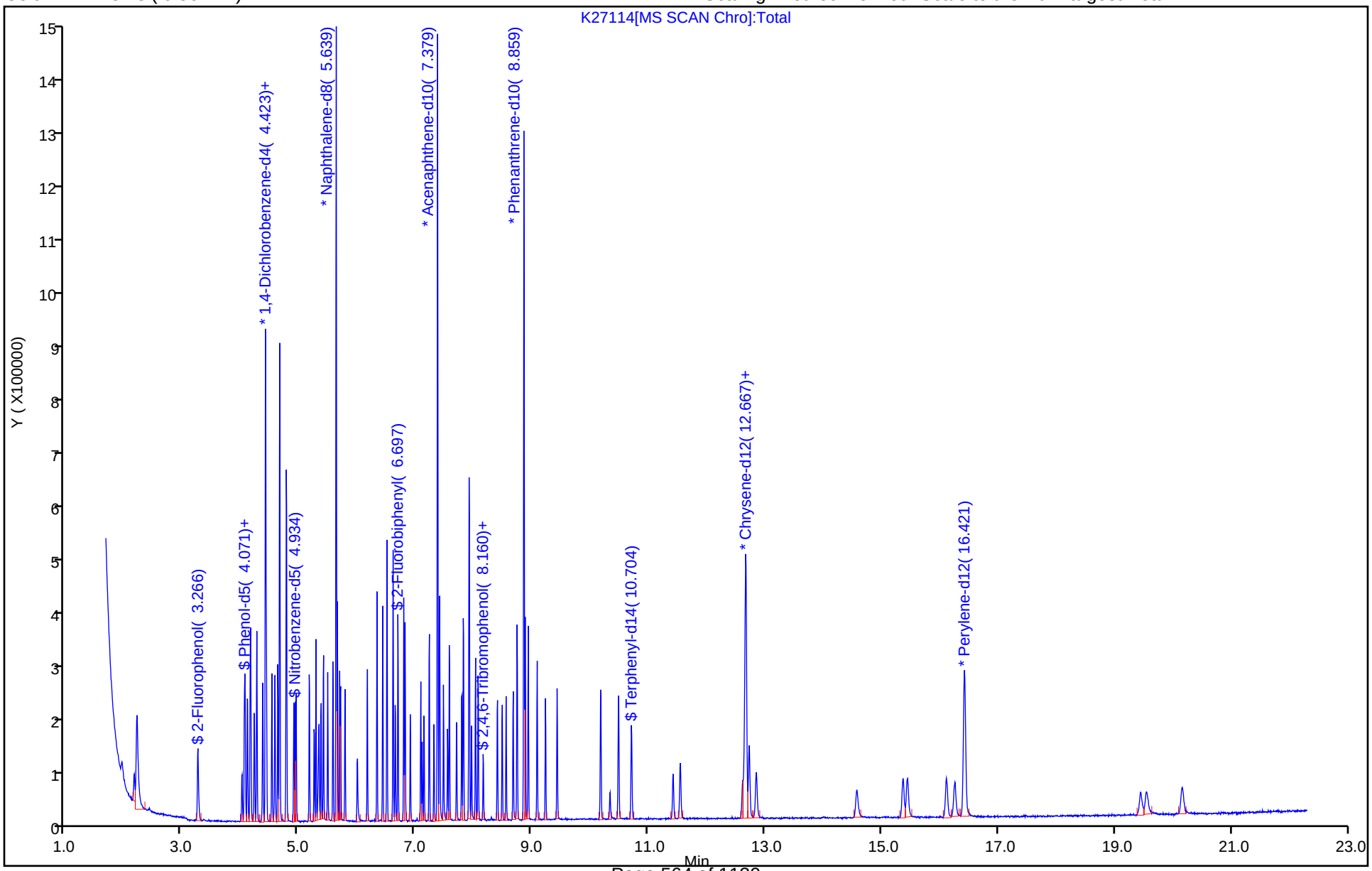
Report Date: 24-Oct-2018 06:02:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27114.D

Injection Date:	23-Oct-2018 14:30:30	Instrument ID:	SMS_K	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:	SMSK_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

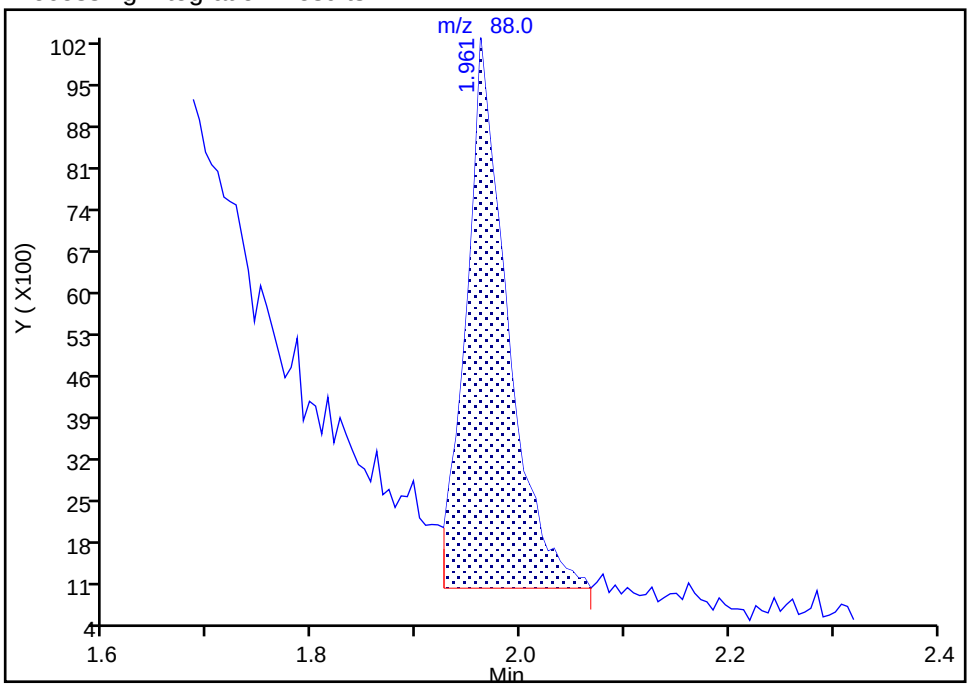
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27114.D
Injection Date: 23-Oct-2018 14:30:30 Instrument ID: SMS_K
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

19 1,4-Dioxane, CAS: 123-91-1

Signal: 1

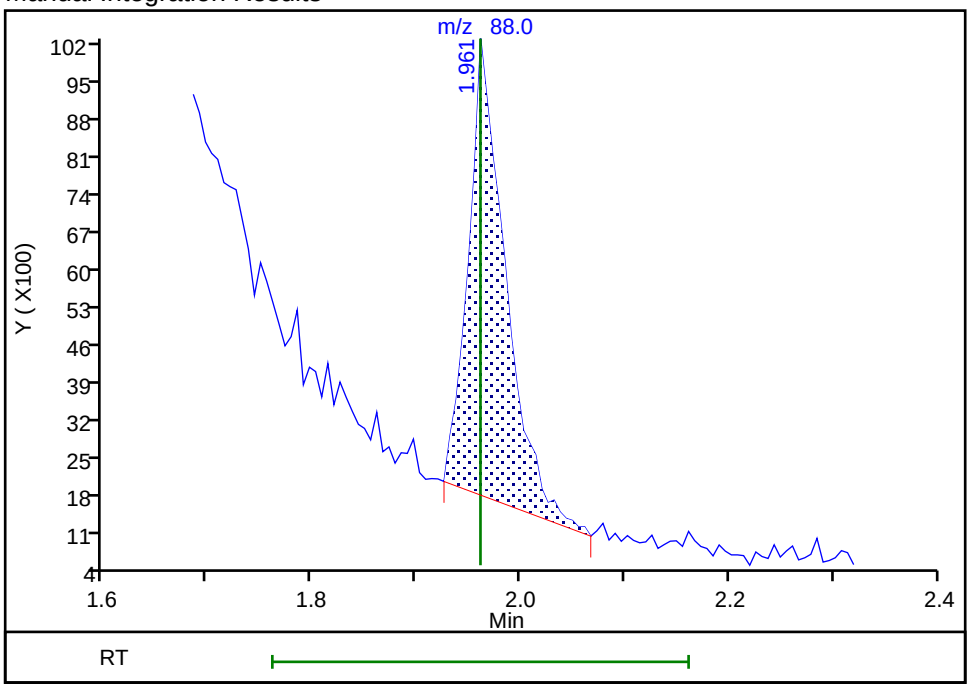
Processing Integration Results

RT: 1.96
Area: 25430
Amount: 10.505920
Amount Units: ug/ml



Manual Integration Results

RT: 1.96
Area: 20944
Amount: 9.255993
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 15:33:07
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

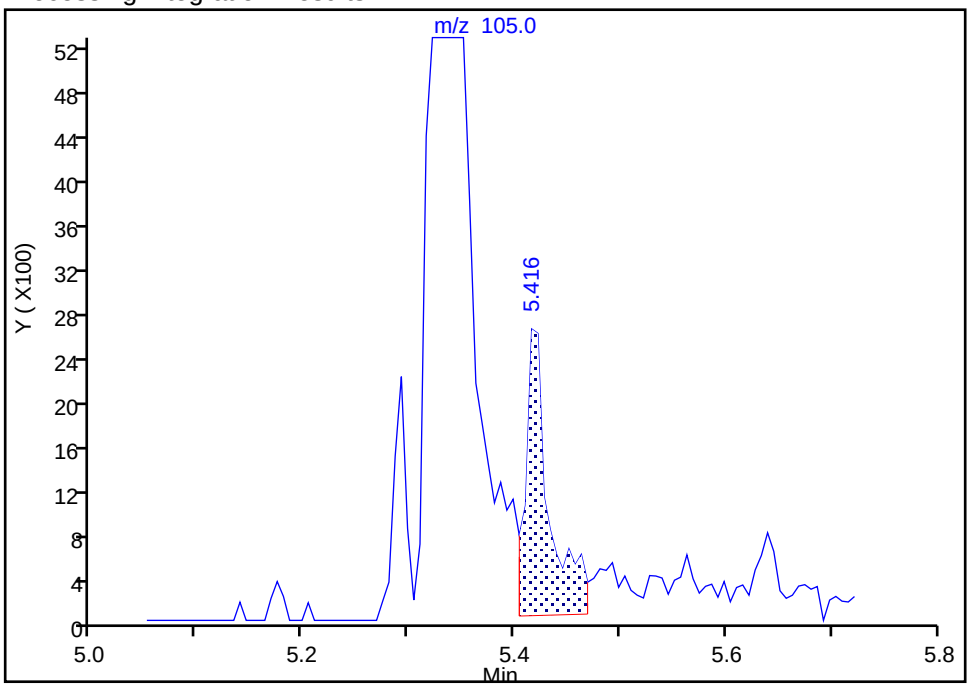
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27114.D
Injection Date: 23-Oct-2018 14:30:30 Instrument ID: SMS_K
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

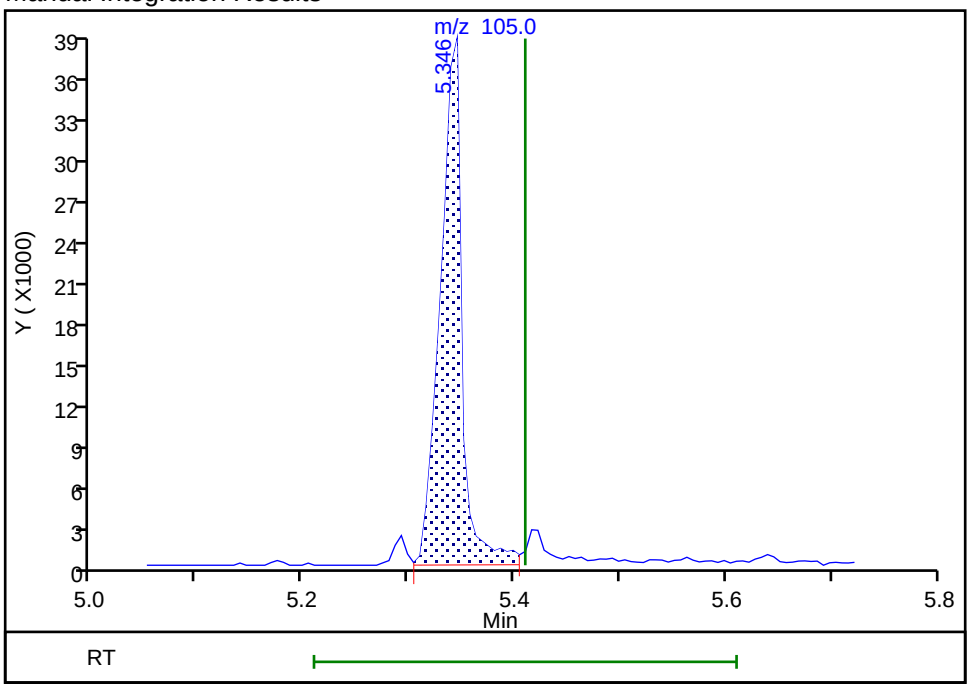
Processing Integration Results

RT: 5.42
Area: 4055
Amount: 1.567411
Amount Units: ug/ml



Manual Integration Results

RT: 5.35
Area: 55690
Amount: 20.668455
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 15:33:50
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27115.D
Lims ID: STD020 HSL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Oct-2018 14:59:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:20 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 15:36:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.429	4.429	0.000	96	123278	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	474291	40.0	40.0	
* 3 Acenaphthene-d10	164	7.378	7.384	-0.006	95	232866	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	98	401459	40.0	40.0	
* 5 Chrysene-d12	240	12.666	12.684	-0.018	99	305332	40.0	40.0	
* 6 Perylene-d12	264	16.421	16.433	-0.012	98	279836	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	94	90210	20.0	19.6	
$ 8 Phenol-d5	99	4.065	4.065	0.000	99	104233	20.0	19.9	
$ 9 Nitrobenzene-d5	82	4.934	4.940	-0.006	94	90935	20.0	20.3	
$ 11 2-Fluorobiphenyl	172	6.697	6.703	-0.006	100	168608	20.0	20.7	
$ 12 2,4,6-Tribromophenol	330	8.166	8.172	-0.006	92	19542	20.0	20.1	
$ 13 Terphenyl-d14	244	10.704	10.716	-0.012	98	153641	20.0	20.5	
19 1,4-Dioxane	88	1.961	1.961	0.000	94	39740	20.0	20.3	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	84	58391	20.0	19.4	
21 Pyridine	79	2.220	2.220	0.000	84	193658	40.0	39.9	
32 Phenol	94	4.076	4.082	-0.006	97	109419	20.0	20.2	
34 Aniline	93	4.118	4.117	0.001	96	132620	20.0	20.0	
35 Alpha Methyl Styrene	118	4.170	4.170	0.000	93	93175	20.0	20.5	
36 Bis(2-chloroethyl)ether	93	4.159	4.164	-0.005	91	84478	20.0	21.0	
38 n-Decane	43	4.276	4.276	0.000	95	129521	20.0	20.5	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	90805	20.0	20.4	
40 1,3-Dichlorobenzene	146	4.376	4.382	-0.006	97	100769	20.0	20.3	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	94	101377	20.0	20.3	
43 Benzyl alcohol	108	4.535	4.541	-0.005	93	59515	20.0	20.2	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	96	96849	20.0	20.4	
45 2-Methylphenol	108	4.635	4.640	-0.005	95	82677	20.0	20.3	
46 2,2'-oxybis[1-chloropropan	45	4.664	4.670	-0.006	91	170378	20.0	19.8	
47 Indene	116	4.670	4.670	0.000	92	296238	40.0	43.6	
49 3 & 4 Methylphenol	108	4.781	4.787	-0.006	84	83465	20.0	21.0	
50 3-Methylphenol	108	4.781	4.787	-0.006	93	83465	20.0	21.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.781	4.787	-0.006	94	83465	20.0	21.0	
52 N-Nitrosodi-n-propylamine	70	4.781	4.787	-0.006	96	58833	20.0	20.8	
54 Acetophenone	105	4.787	4.793	-0.006	94	117954	20.0	21.4	
58 Hexachloroethane	117	4.911	4.911	0.000	92	36733	20.0	19.9	
59 Nitrobenzene	77	4.952	4.958	-0.006	95	87686	20.0	20.2	
63 Isophorone	82	5.175	5.181	-0.006	97	153861	20.0	20.1	
64 2-Nitrophenol	139	5.263	5.263	0.000	93	45592	20.0	19.7	
65 2,4-Dimethylphenol	107	5.293	5.298	-0.005	94	81644	20.0	20.1	
68 Benzoic acid	105	5.357	5.410	-0.053	91	99894	40.0	37.6	a
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	95	96256	20.0	20.5	
71 3,5-Dimethylphenol	107	5.422	5.428	-0.006	85	83321	20.0	20.6	
74 2,4-Dichlorophenol	162	5.492	5.498	-0.006	94	69679	20.0	20.2	
76 1,2,4-Trichlorobenzene	180	5.581	5.586	-0.005	94	80047	20.0	20.4	
79 Naphthalene	128	5.657	5.663	-0.006	98	241651	20.0	20.9	
80 4-Chloroaniline	127	5.698	5.704	-0.006	96	100826	20.0	20.8	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	68243	20.0	20.1	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	95	44480	20.0	20.4	
86 Caprolactam	55	6.004	6.027	-0.023	72	41202	20.0	20.1	
89 4-Chloro-3-methylphenol	107	6.174	6.180	-0.006	95	65978	20.0	20.2	
93 2-Methylnaphthalene	142	6.339	6.344	-0.006	95	170654	20.0	21.0	
96 1-Methylnaphthalene	142	6.438	6.444	-0.006	95	155170	20.0	20.5	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	97	48434	20.0	20.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.509	6.515	-0.006	97	74857	20.0	20.8	
100 2,4,6-Trichlorophenol	196	6.615	6.620	-0.005	94	47888	20.0	21.6	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	95	79006	20.0	21.3	
102 2,4,5-Trichlorophenol	196	6.650	6.656	-0.006	94	49012	20.0	20.2	
104 1,1'-Biphenyl	154	6.797	6.803	-0.006	94	192302	20.0	21.0	
106 2-Chloronaphthalene	162	6.820	6.826	-0.006	96	145689	20.0	20.8	
108 2-Nitroaniline	65	6.908	6.914	-0.006	87	42146	20.0	20.2	
111 Dimethyl phthalate	163	7.091	7.096	-0.005	99	145495	20.0	21.1	
112 1,3-Dinitrobenzene	168	7.114	7.120	-0.006	88	23958	20.0	20.3	
113 2,6-Dinitrotoluene	165	7.143	7.155	-0.012	94	37099	20.0	21.1	
114 Acenaphthylene	152	7.237	7.243	-0.006	98	220982	20.0	21.0	
115 3-Nitroaniline	138	7.314	7.326	-0.012	93	38469	20.0	20.4	
117 Acenaphthene	153	7.408	7.414	-0.006	94	145794	20.0	21.3	
118 2,4-Dinitrophenol	184	7.420	7.425	-0.005	81	32328	40.0	39.1	
119 4-Nitrophenol	109	7.478	7.490	-0.012	94	35888	40.0	40.7	
122 2,4-Dinitrotoluene	165	7.549	7.561	-0.012	94	45965	20.0	21.2	
123 Dibenzofuran	168	7.578	7.584	-0.006	98	204388	20.0	21.3	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	72	39576	20.0	20.9	
127 Hexadecane	57	7.819	7.825	-0.006	90	126214	20.0	20.6	
130 Diethyl phthalate	149	7.796	7.801	-0.005	99	138761	20.0	21.2	
134 4-Chlorophenyl phenyl ethe	204	7.919	7.919	0.000	91	74055	20.0	21.1	
135 Fluorene	166	7.925	7.931	-0.006	94	157964	20.0	21.7	
138 4-Nitroaniline	138	7.925	7.937	-0.012	65	37628	20.0	21.2	
139 4,6-Dinitro-2-methylphenol	198	7.960	7.972	-0.012	85	42202	40.0	39.1	
141 N-Nitrosodiphenylamine	169	8.031	8.036	-0.005	62	115263	20.0	20.2	
142 Diphenylamine	169	8.031	8.036	-0.005	95	115263	17.0	18.2	
143 1,2-Diphenylhydrazine	77	8.072	8.078	-0.006	41	153020	20.2	21.4	
144 Azobenzene	77	8.072	8.078	-0.006	98	153020	20.0	21.2	
147 2,4,6 - Tribromophenol	330	8.166	8.172	-0.006	92	19715	20.0	20.2	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	67	43879	20.0	19.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.489	8.495	-0.006	95	43958	20.0	20.0	
159 Atrazine	200	8.554	8.565	-0.011	91	38434	20.0	20.1	
161 n-Octadecane	85	8.742	8.747	-0.005	91	39946	20.0	19.6	
163 Pentachlorophenol	266	8.677	8.683	-0.006	92	49290	40.0	39.7	
168 Phenanthrene	178	8.883	8.888	-0.005	97	221152	20.0	20.8	
169 Anthracene	178	8.936	8.941	-0.005	97	228171	20.0	20.7	
170 Carbazole	167	9.088	9.094	-0.006	95	199399	20.0	20.7	
171 Alachlor	188	9.229	9.235	-0.006	92	27543	20.0	20.7	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	218104	20.0	20.6	
179 Fluoranthene	202	10.175	10.187	-0.012	98	218444	20.0	20.4	
182 Pyrene	202	10.481	10.492	-0.011	97	226910	20.0	21.0	
188 Famphur	218	11.421	11.433	-0.012	84	65964	20.0	20.7	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	97	83474	20.0	19.9	
195 Bis(2-ethylhexyl) phthalat	149	12.849	12.860	-0.011	97	104488	20.0	19.6	
197 3,3'-Dichlorobenzidine	252	12.614	12.625	-0.011	73	53044	20.0	19.5	
198 Benzo[a]anthracene	228	12.649	12.661	-0.012	98	188260	20.0	19.8	
199 Chrysene	228	12.725	12.743	-0.018	97	185168	20.0	20.1	
201 Di-n-octyl phthalate	149	14.576	14.588	-0.012	99	153055	20.0	17.9	
203 Benzo[b]fluoranthene	252	15.363	15.387	-0.024	97	153318	20.0	19.1	
204 Benzo[k]fluoranthene	252	15.446	15.463	-0.017	99	173456	20.0	20.0	
206 Benzo[e]pyrene	252	16.115	16.139	-0.024	97	149778	20.0	19.5	
207 Benzo[a]pyrene	252	16.256	16.280	-0.024	77	157022	20.0	19.4	
213 Dibenz(a,h)anthracene	278	19.553	19.570	-0.017	94	129649	20.0	19.2	
214 Indeno[1,2,3-cd]pyrene	276	19.447	19.476	-0.029	98	123689	20.0	18.2	
215 Benzo[g,h,i]perylene	276	20.158	20.193	-0.035	98	143576	20.0	19.1	
S 217 Total Cresols	108				0			41.3	
S 218 Methyl Phenols,Total	108				0			41.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA020_00039 Amount Added: 200.00 Units: uL

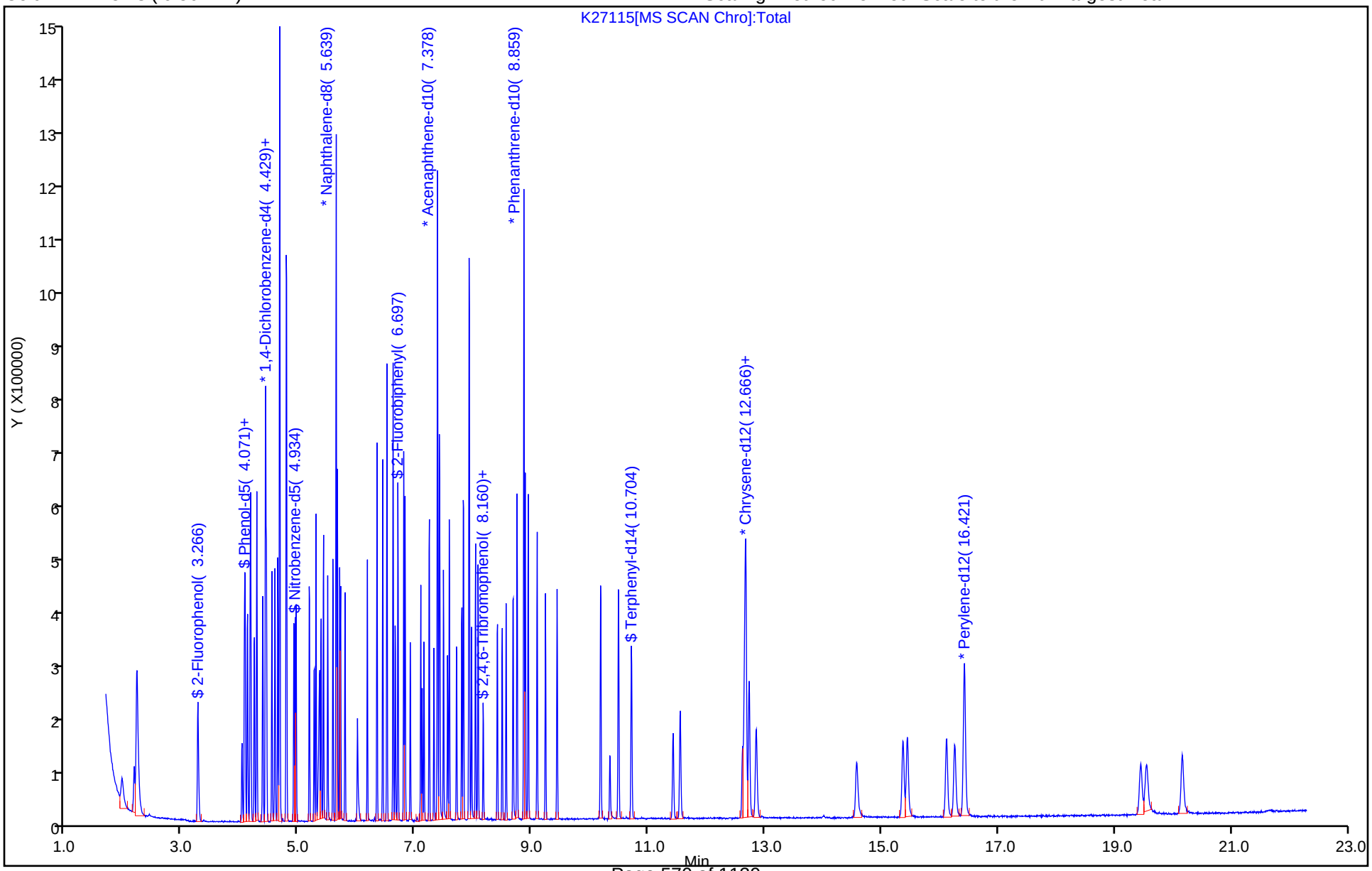
Report Date: 24-Oct-2018 06:02:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27115.D

Injection Date:	23-Oct-2018 14:59:30	Instrument ID:	SMS_K	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:	SMSK_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

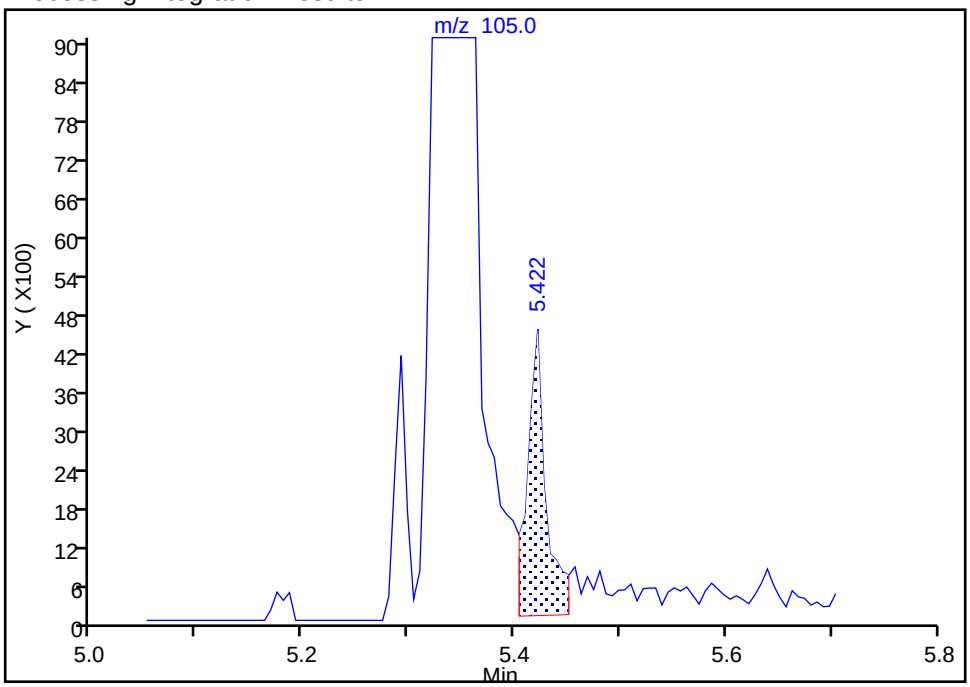
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27115.D
Injection Date: 23-Oct-2018 14:59:30 Instrument ID: SMS_K
Lims ID: STD020 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

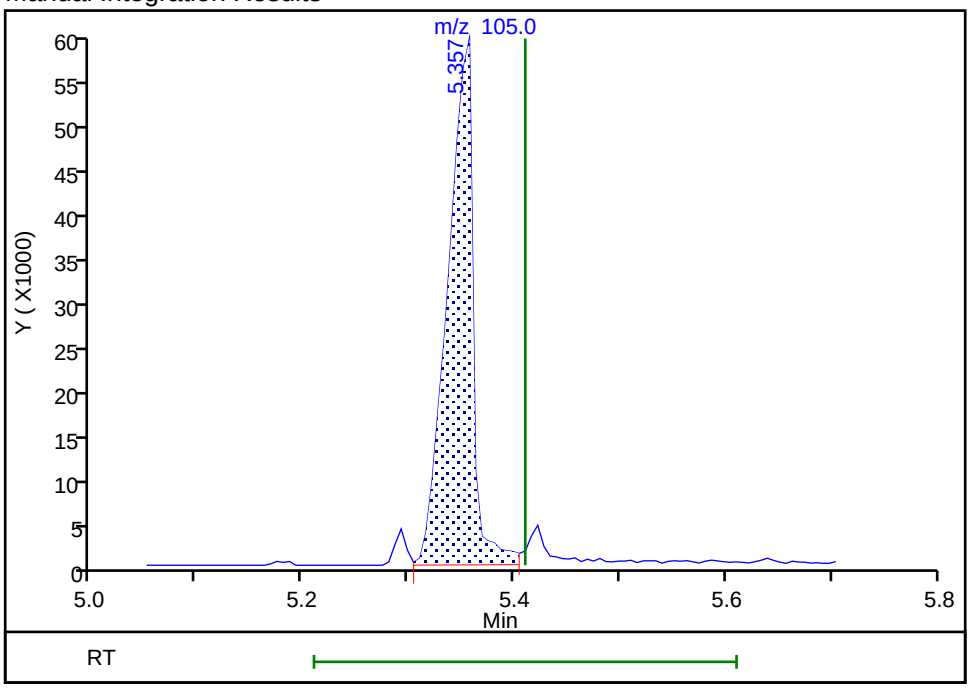
Processing Integration Results

RT: 5.42
Area: 5505
Amount: 2.430000
Amount Units: ug/ml



Manual Integration Results

RT: 5.36
Area: 99894
Amount: 37.608777
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 15:34:53
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27116.D
Lims ID: STD050 HSL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Oct-2018 15:28:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:26 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 16:26:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	96	137022	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	527618	40.0	40.0	
* 3 Acenaphthene-d10	164	7.379	7.384	-0.005	95	260611	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	98	401444	40.0	40.0	
* 5 Chrysene-d12	240	12.673	12.684	-0.011	99	311912	40.0	40.0	
* 6 Perylene-d12	264	16.415	16.433	-0.018	98	291218	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	94	254840	50.0	49.8	
$ 8 Phenol-d5	99	4.065	4.065	0.000	98	293396	50.0	50.5	
$ 9 Nitrobenzene-d5	82	4.934	4.940	-0.006	94	253784	50.0	50.9	
$ 11 2-Fluorobiphenyl	172	6.697	6.703	-0.006	100	467275	50.0	51.4	
$ 12 2,4,6-Tribromophenol	330	8.166	8.172	-0.006	93	55006	50.0	50.6	
$ 13 Terphenyl-d14	244	10.704	10.716	-0.012	98	381775	50.0	49.9	
19 1,4-Dioxane	88	1.961	1.961	0.000	93	106454	50.0	49.0	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	84	169184	50.0	50.5	
21 Pyridine	79	2.220	2.220	0.000	82	537957	100.0	99.7	
32 Phenol	94	4.077	4.082	-0.005	97	304856	50.0	50.6	
34 Aniline	93	4.118	4.117	0.001	96	368614	50.0	50.0	
35 Alpha Methyl Styrene	118	4.171	4.170	0.001	93	254388	50.0	50.5	
36 Bis(2-chloroethyl)ether	93	4.159	4.164	-0.005	91	227822	50.0	50.9	
38 n-Decane	43	4.276	4.276	0.000	94	350802	50.0	50.1	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	248427	50.0	50.2	
40 1,3-Dichlorobenzene	146	4.376	4.382	-0.006	98	279358	50.0	50.6	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	93	280118	50.0	50.5	
43 Benzyl alcohol	108	4.535	4.541	-0.005	92	163926	50.0	50.1	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	267029	50.0	50.6	
45 2-Methylphenol	108	4.641	4.640	0.001	96	224342	50.0	49.5	
46 2,2'-oxybis[1-chloropropan	45	4.664	4.670	-0.006	91	443135	50.0	49.9	
47 Indene	116	4.670	4.670	0.000	92	777918	100.0	102.9	
49 3 & 4 Methylphenol	108	4.782	4.787	-0.005	81	227475	50.0	51.6	
50 3-Methylphenol	108	4.782	4.787	-0.005	90	227475	50.0	51.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.782	4.787	-0.005	92	227475	50.0	51.6	
52 N-Nitrosodi-n-propylamine	70	4.788	4.787	0.001	92	160306	50.0	51.0	
54 Acetophenone	105	4.788	4.793	-0.005	85	314687	50.0	51.4	
58 Hexachloroethane	117	4.911	4.911	0.000	93	104828	50.0	51.1	
59 Nitrobenzene	77	4.952	4.958	-0.006	96	247152	50.0	51.1	
63 Isophorone	82	5.181	5.181	0.000	97	430676	50.0	50.5	
64 2-Nitrophenol	139	5.263	5.263	0.000	93	134133	50.0	52.1	
65 2,4-Dimethylphenol	107	5.293	5.298	-0.005	94	228913	50.0	50.7	
68 Benzoic acid	105	5.387	5.410	-0.023	92	315069	100.0	96.6	a
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	95	263791	50.0	50.6	
71 3,5-Dimethylphenol	107	5.422	5.428	-0.006	83	233564	50.0	51.8	
74 2,4-Dichlorophenol	162	5.493	5.498	-0.005	95	195203	50.0	50.9	
76 1,2,4-Trichlorobenzene	180	5.581	5.586	-0.005	94	221855	50.0	50.8	
79 Naphthalene	128	5.657	5.663	-0.006	98	652648	50.0	50.8	
80 4-Chloroaniline	127	5.698	5.704	-0.006	96	276100	50.0	51.1	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	194419	50.0	51.6	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	95	123996	50.0	51.2	
86 Caprolactam	55	6.016	6.027	-0.011	73	113788	50.0	49.8	
89 4-Chloro-3-methylphenol	107	6.174	6.180	-0.006	96	184485	50.0	50.7	
93 2-Methylnaphthalene	142	6.339	6.344	-0.005	95	462867	50.0	51.3	
96 1-Methylnaphthalene	142	6.439	6.444	-0.005	96	431984	50.0	51.2	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	95	142176	50.0	52.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.509	6.515	-0.006	96	199821	50.0	49.9	
100 2,4,6-Trichlorophenol	196	6.615	6.620	-0.005	94	128093	50.0	51.6	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	96	213731	50.0	51.5	
102 2,4,5-Trichlorophenol	196	6.650	6.656	-0.006	94	136981	50.0	50.5	
104 1,1'-Biphenyl	154	6.797	6.803	-0.006	95	519755	50.0	50.8	
106 2-Chloronaphthalene	162	6.820	6.826	-0.006	96	404849	50.0	51.6	
108 2-Nitroaniline	65	6.909	6.914	-0.005	86	117021	50.0	50.0	
111 Dimethyl phthalate	163	7.091	7.096	-0.005	99	378089	50.0	49.1	
112 1,3-Dinitrobenzene	168	7.114	7.120	-0.006	88	67599	50.0	51.1	
113 2,6-Dinitrotoluene	165	7.149	7.155	-0.006	94	98117	50.0	49.9	
114 Acenaphthylene	152	7.238	7.243	-0.005	98	595453	50.0	50.4	
115 3-Nitroaniline	138	7.320	7.326	-0.006	95	103961	50.0	49.3	
117 Acenaphthene	153	7.408	7.414	-0.006	94	389499	50.0	50.8	
118 2,4-Dinitrophenol	184	7.420	7.425	-0.005	81	100089	100.0	93.2	
119 4-Nitrophenol	109	7.484	7.490	-0.006	94	96007	100.0	97.2	
122 2,4-Dinitrotoluene	165	7.555	7.561	-0.006	94	118745	50.0	48.8	
123 Dibenzofuran	168	7.578	7.584	-0.006	97	535174	50.0	49.8	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	71	107211	50.0	50.7	
127 Hexadecane	57	7.819	7.825	-0.006	90	355893	50.0	51.8	
130 Diethyl phthalate	149	7.796	7.801	-0.005	98	357575	50.0	48.9	
134 4-Chlorophenyl phenyl ethe	204	7.913	7.919	-0.006	94	196516	50.0	50.1	
135 Fluorene	166	7.925	7.931	-0.006	95	408081	50.0	50.1	
138 4-Nitroaniline	138	7.925	7.937	-0.012	86	94097	50.0	47.4	
139 4,6-Dinitro-2-methylphenol	198	7.966	7.972	-0.006	88	120246	100.0	99.6	
141 N-Nitrosodiphenylamine	169	8.031	8.036	-0.005	63	297106	50.0	52.0	
142 Diphenylamine	169	8.031	8.036	-0.005	95	297106	42.5	42.0	
143 1,2-Diphenylhydrazine	77	8.072	8.078	-0.006	41	399005	50.5	49.9	
144 Azobenzene	77	8.072	8.078	-0.006	98	399005	50.0	49.4	
147 2,4,6 - Tribromophenol	330	8.166	8.172	-0.006	93	55278	50.0	50.6	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	67	114899	50.0	51.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.489	8.495	-0.006	94	112383	50.0	51.2	
159 Atrazine	200	8.554	8.565	-0.011	91	97129	50.0	50.7	
161 n-Octadecane	85	8.742	8.747	-0.005	91	108468	50.0	53.3	
163 Pentachlorophenol	266	8.677	8.683	-0.006	93	133668	100.0	103.0	
168 Phenanthrene	178	8.883	8.888	-0.005	97	545408	50.0	51.2	
169 Anthracene	178	8.936	8.941	-0.005	97	561054	50.0	50.8	
170 Carbazole	167	9.088	9.094	-0.006	95	489871	50.0	50.9	
171 Alachlor	188	9.229	9.235	-0.006	93	65765	50.0	49.3	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	533508	50.0	50.4	
179 Fluoranthene	202	10.175	10.187	-0.012	98	536165	50.0	50.0	
182 Pyrene	202	10.481	10.492	-0.011	97	546967	50.0	49.5	
188 Famphur	218	11.421	11.433	-0.012	85	174335	50.0	53.6	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	97	214504	50.0	50.1	
195 Bis(2-ethylhexyl) phthalat	149	12.843	12.860	-0.017	97	274553	50.0	50.3	
197 3,3'-Dichlorobenzidine	252	12.614	12.625	-0.011	73	137428	50.0	49.6	
198 Benzo[a]anthracene	228	12.649	12.661	-0.012	98	483658	50.0	49.8	
199 Chrysene	228	12.725	12.743	-0.018	97	472949	50.0	50.2	
201 Di-n-octyl phthalate	149	14.570	14.588	-0.018	99	440225	50.0	48.1	
203 Benzo[b]fluoranthene	252	15.364	15.387	-0.023	97	416573	50.0	49.7	
204 Benzo[k]fluoranthene	252	15.446	15.463	-0.017	99	468165	50.0	52.0	
206 Benzo[e]pyrene	252	16.116	16.139	-0.023	97	403388	50.0	50.5	
207 Benzo[a]pyrene	252	16.257	16.280	-0.023	84	430196	50.0	50.9	
213 Dibenz(a,h)anthracene	278	19.553	19.570	-0.017	94	358758	50.0	51.1	
214 Indeno[1,2,3-cd]pyrene	276	19.453	19.476	-0.023	98	340918	50.0	49.1	
215 Benzo[g,h,i]perylene	276	20.164	20.193	-0.029	98	397431	50.0	50.7	
S 217 Total Cresols	108				0			101.0	
S 218 Methyl Phenols,Total	108				0			101.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA050_00040 Amount Added: 200.00 Units: uL

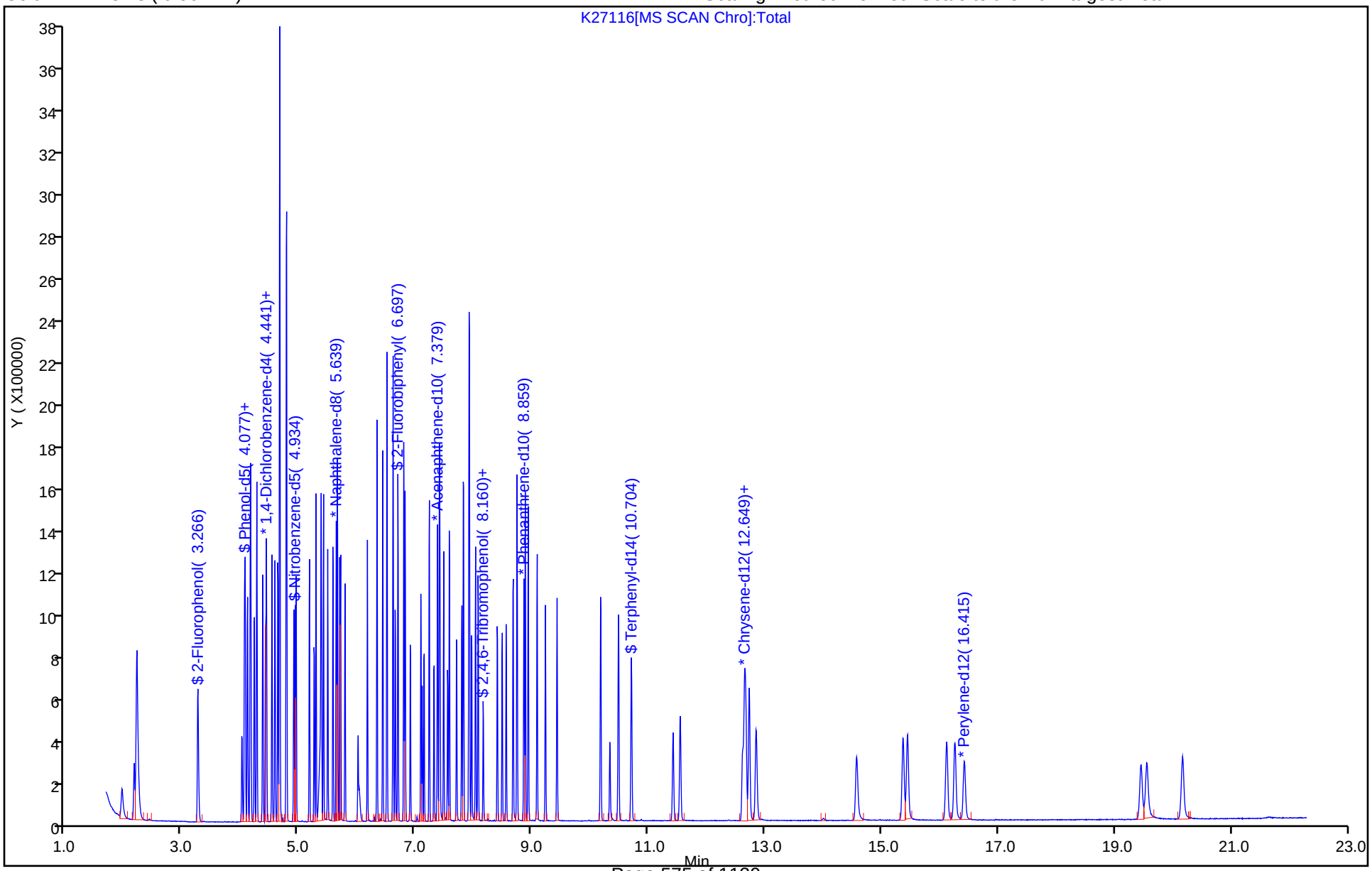
Report Date: 24-Oct-2018 06:02:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27116.D

Injection Date:	23-Oct-2018 15:28:30	Instrument ID:	SMS_K	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:	SMSK_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

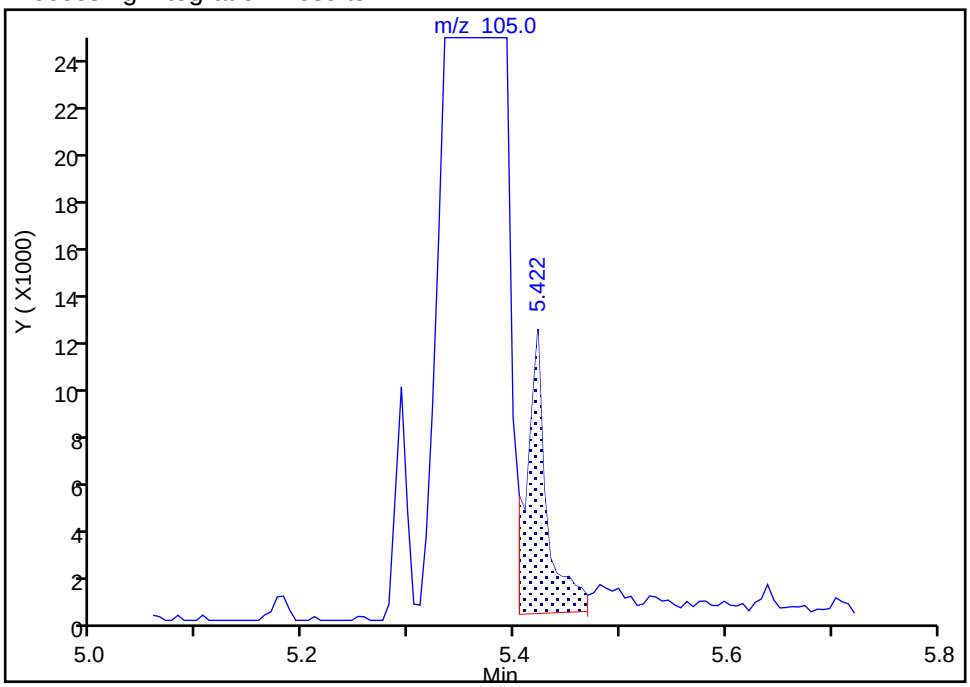
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27116.D
Injection Date: 23-Oct-2018 15:28:30 Instrument ID: SMS_K
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

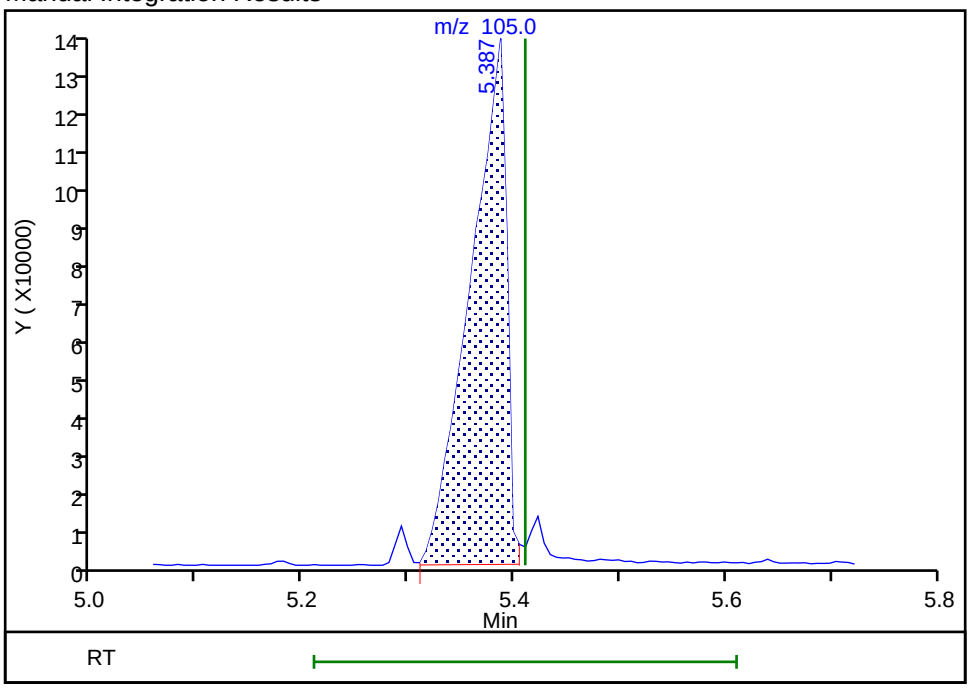
Processing Integration Results

RT: 5.42
Area: 15900
Amount: 6.828435
Amount Units: ug/ml



Manual Integration Results

RT: 5.39
Area: 315069
Amount: 96.640784
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 16:25:44
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27117.D
Lims ID: STD120 HSL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-Oct-2018 15:57:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:32 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 16:52:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	96	131995	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	100	505239	40.0	40.0	
* 3 Acenaphthene-d10	164	7.379	7.384	-0.005	94	241107	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	97	363587	40.0	40.0	
* 5 Chrysene-d12	240	12.672	12.684	-0.012	99	300746	40.0	40.0	
* 6 Perylene-d12	264	16.421	16.433	-0.012	98	286291	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	94	578101	120.0	117.3	
$ 8 Phenol-d5	99	4.065	4.065	0.000	97	645279	120.0	115.3	
$ 9 Nitrobenzene-d5	82	4.934	4.940	-0.006	96	554555	120.0	116.2	
$ 11 2-Fluorobiphenyl	172	6.703	6.703	0.000	100	969077	120.0	115.1	
$ 12 2,4,6-Tribromophenol	330	8.166	8.172	-0.006	95	115739	120.0	115.2	
$ 13 Terphenyl-d14	244	10.710	10.716	-0.006	98	839737	120.0	113.8	
19 1,4-Dioxane	88	1.961	1.961	0.000	94	246043	120.0	117.6	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	84	380707	120.0	117.9	
21 Pyridine	79	2.220	2.220	0.000	81	1218459	240.0	234.5	
32 Phenol	94	4.082	4.082	0.000	97	664889	120.0	114.7	
34 Aniline	93	4.118	4.117	0.001	96	821840	120.0	115.8	
35 Alpha Methyl Styrene	118	4.171	4.170	0.000	93	547019	120.0	112.6	
36 Bis(2-chloroethyl)ether	93	4.165	4.164	0.001	91	483741	120.0	112.1	
38 n-Decane	43	4.276	4.276	0.000	94	771667	120.0	114.3	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	548316	120.0	115.1	
40 1,3-Dichlorobenzene	146	4.376	4.382	-0.006	98	611471	120.0	115.0	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	93	608129	120.0	113.9	
43 Benzyl alcohol	108	4.541	4.541	0.001	92	363072	120.0	115.3	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	578422	120.0	113.8	
45 2-Methylphenol	108	4.641	4.640	0.001	95	506184	120.0	115.8	
46 2,2'-oxybis[1-chloropropan	45	4.664	4.670	-0.006	91	895961	120.0	118.0	
47 Indene	116	4.670	4.670	0.000	92	1575495	240.0	216.3	
49 3 & 4 Methylphenol	108	4.787	4.787	0.000	83	476623	120.0	112.1	
50 3-Methylphenol	108	4.787	4.787	0.000	93	476623	120.0	112.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.787	4.787	0.000	92	476623	120.0	112.1	
52 N-Nitrosodi-n-propylamine	70	4.793	4.787	0.006	87	334309	120.0	110.5	
54 Acetophenone	105	4.793	4.793	0.000	88	639078	120.0	108.4	
58 Hexachloroethane	117	4.911	4.911	0.000	92	230014	120.0	116.4	
59 Nitrobenzene	77	4.958	4.958	0.000	94	538429	120.0	116.2	
63 Isophorone	82	5.181	5.181	0.000	97	914181	120.0	112.0	
64 2-Nitrophenol	139	5.263	5.263	0.000	94	292433	120.0	118.6	
65 2,4-Dimethylphenol	107	5.293	5.298	-0.005	95	493857	120.0	114.2	
68 Benzoic acid	105	5.422	5.410	0.012	69	769991	240.0	238.2	
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	95	569686	120.0	114.1	
71 3,5-Dimethylphenol	107	5.422	5.428	-0.006	88	483398	120.0	112.1	
74 2,4-Dichlorophenol	162	5.498	5.498	0.000	94	423185	120.0	115.3	
76 1,2,4-Trichlorobenzene	180	5.587	5.586	0.001	94	470329	120.0	112.4	
79 Naphthalene	128	5.663	5.663	0.000	98	1374851	120.0	111.7	
80 4-Chloroaniline	127	5.704	5.704	0.000	96	584758	120.0	113.0	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	410581	120.0	113.8	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	95	272056	120.0	117.2	
86 Caprolactam	55	6.033	6.027	0.006	74	244082	120.0	111.7	M
89 4-Chloro-3-methylphenol	107	6.180	6.180	0.000	95	384208	120.0	110.2	
93 2-Methylnaphthalene	142	6.339	6.344	-0.005	95	962904	120.0	111.4	
96 1-Methylnaphthalene	142	6.438	6.444	-0.006	96	903894	120.0	111.9	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	96	304466	120.0	121.6	
98 1,2,4,5-Tetrachlorobenzene	216	6.515	6.515	0.000	96	418508	120.0	109.2	
100 2,4,6-Trichlorophenol	196	6.621	6.620	0.001	92	263397	120.0	114.7	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	97	433773	120.0	112.9	
102 2,4,5-Trichlorophenol	196	6.656	6.656	0.000	94	292531	120.0	116.5	
104 1,1'-Biphenyl	154	6.803	6.803	0.000	95	1070372	120.0	113.1	
106 2-Chloronaphthalene	162	6.826	6.826	0.000	95	829374	120.0	114.3	
108 2-Nitroaniline	65	6.914	6.914	0.000	86	246498	120.0	113.9	
111 Dimethyl phthalate	163	7.097	7.096	0.001	99	787365	120.0	110.5	
112 1,3-Dinitrobenzene	168	7.120	7.120	0.000	88	147550	120.0	120.5	
113 2,6-Dinitrotoluene	165	7.149	7.155	-0.006	94	207218	120.0	114.0	
114 Acenaphthylene	152	7.238	7.243	-0.005	98	1229834	120.0	112.6	
115 3-Nitroaniline	138	7.320	7.326	-0.006	93	226696	120.0	116.1	
117 Acenaphthene	153	7.414	7.414	0.000	93	791508	120.0	111.6	
118 2,4-Dinitrophenol	184	7.426	7.425	0.001	83	234441	240.0	223.0	
119 4-Nitrophenol	109	7.490	7.490	0.000	95	211229	240.0	231.2	
122 2,4-Dinitrotoluene	165	7.555	7.561	-0.006	94	258642	120.0	114.9	
123 Dibenzofuran	168	7.584	7.584	0.000	98	1109480	120.0	111.6	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	71	229363	120.0	117.3	
127 Hexadecane	57	7.825	7.825	0.000	91	731044	120.0	115.1	
130 Diethyl phthalate	149	7.796	7.801	-0.005	98	729884	120.0	107.9	
134 4-Chlorophenyl phenyl ethe	204	7.919	7.919	0.000	93	395149	120.0	108.9	
135 Fluorene	166	7.925	7.931	-0.006	95	810470	120.0	107.6	
138 4-Nitroaniline	138	7.937	7.937	0.000	87	204160	120.0	111.1	
139 4,6-Dinitro-2-methylphenol	198	7.972	7.972	0.000	89	270449	240.0	237.7	
141 N-Nitrosodiphenylamine	169	8.031	8.036	-0.005	63	612960	120.0	118.4	
142 Diphenylamine	169	8.031	8.036	-0.005	95	612960	102.0	93.7	
143 1,2-Diphenylhydrazine	77	8.078	8.078	0.000	41	826606	121.3	111.8	
144 Azobenzene	77	8.078	8.078	0.000	97	826606	120.0	110.6	
147 2,4,6 - Tribromophenol	330	8.166	8.172	-0.006	95	115739	120.0	114.5	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	67	236026	120.0	117.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.489	8.495	-0.006	95	228374	120.0	114.8	
159 Atrazine	200	8.560	8.565	-0.005	91	204308	120.0	117.8	
161 n-Octadecane	85	8.742	8.747	-0.005	91	223173	120.0	121.0	
163 Pentachlorophenol	266	8.677	8.683	-0.006	94	289744	240.0	242.8	
168 Phenanthrene	178	8.889	8.888	0.001	97	1100913	120.0	114.2	
169 Anthracene	178	8.936	8.941	-0.005	97	1143820	120.0	114.4	
170 Carbazole	167	9.088	9.094	-0.006	95	1021549	120.0	117.1	
171 Alachlor	188	9.235	9.235	0.000	95	141708	120.0	117.4	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	1119612	120.0	116.8	
179 Fluoranthene	202	10.181	10.187	-0.006	98	1144918	120.0	117.8	
182 Pyrene	202	10.487	10.492	-0.005	97	1191627	120.0	112.0	
188 Famphur	218	11.427	11.433	-0.006	83	387210	120.0	123.5	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	97	495896	120.0	120.1	
195 Bis(2-ethylhexyl) phthalat	149	12.849	12.860	-0.011	97	653813	120.0	124.3	
197 3,3'-Dichlorobenzidine	252	12.620	12.625	-0.005	73	316340	120.0	118.3	
198 Benzo[a]anthracene	228	12.655	12.661	-0.006	98	1097785	120.0	117.3	
199 Chrysene	228	12.737	12.743	-0.006	97	1074958	120.0	118.3	
201 Di-n-octyl phthalate	149	14.570	14.588	-0.018	99	1079412	120.0	120.3	
203 Benzo[b]fluoranthene	252	15.381	15.387	-0.006	97	999236	120.0	121.4	
204 Benzo[k]fluoranthene	252	15.452	15.463	-0.011	99	1074645	120.0	121.4	
206 Benzo[e]pyrene	252	16.127	16.139	-0.012	97	945155	120.0	120.3	
207 Benzo[a]pyrene	252	16.268	16.280	-0.012	77	1017763	120.0	122.6	
213 Dibenz(a,h)anthracene	278	19.565	19.570	-0.005	94	883744	120.0	128.2	
214 Indeno[1,2,3-cd]pyrene	276	19.465	19.476	-0.011	98	862769	120.0	129.0	
215 Benzo[g,h,i]perylene	276	20.181	20.193	-0.012	98	951206	120.0	123.4	
S 217 Total Cresols	108				0			228.0	
S 218 Methyl Phenols,Total	108				0			228.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA120_00039 Amount Added: 200.00 Units: uL

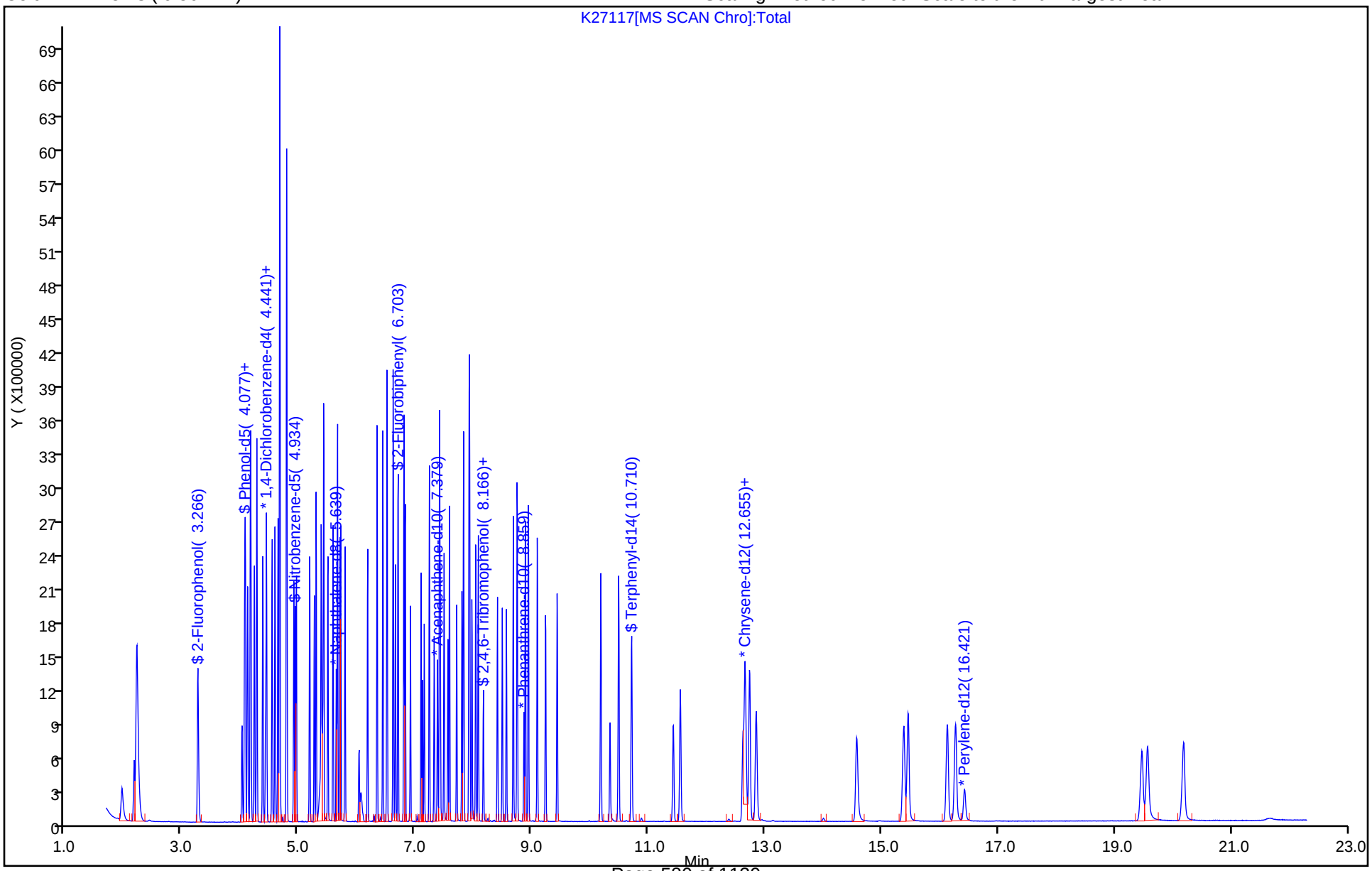
Report Date: 24-Oct-2018 06:02:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27117.D

Injection Date:	23-Oct-2018 15:57:30	Instrument ID:	SMS_K	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:	SMSK_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

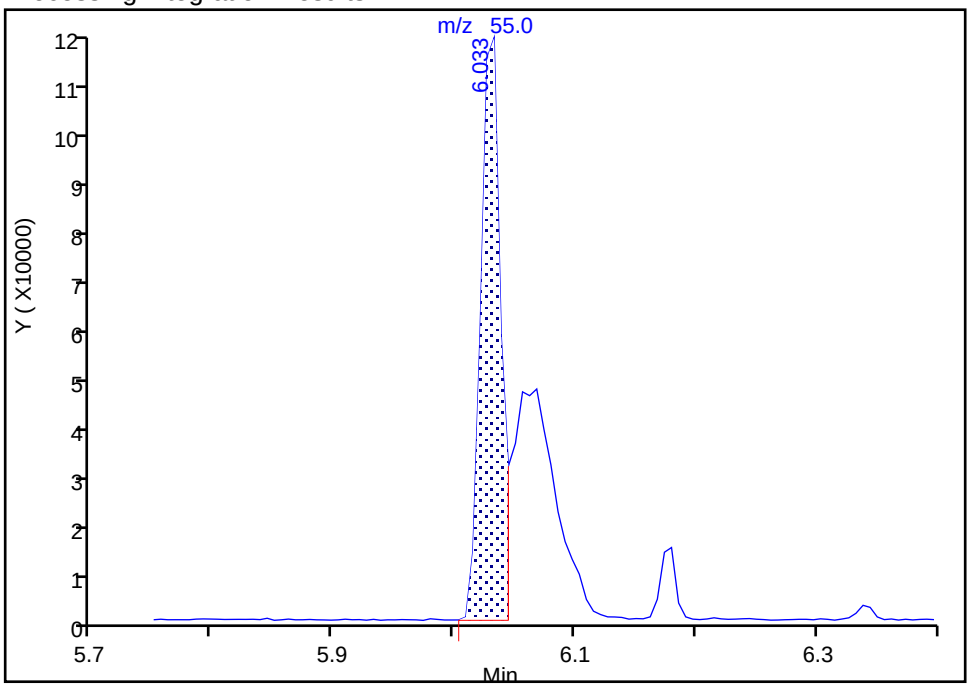
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27117.D
Injection Date: 23-Oct-2018 15:57:30 Instrument ID: SMS_K
Lims ID: STD120 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

86 Caprolactam, CAS: 105-60-2

Signal: 1

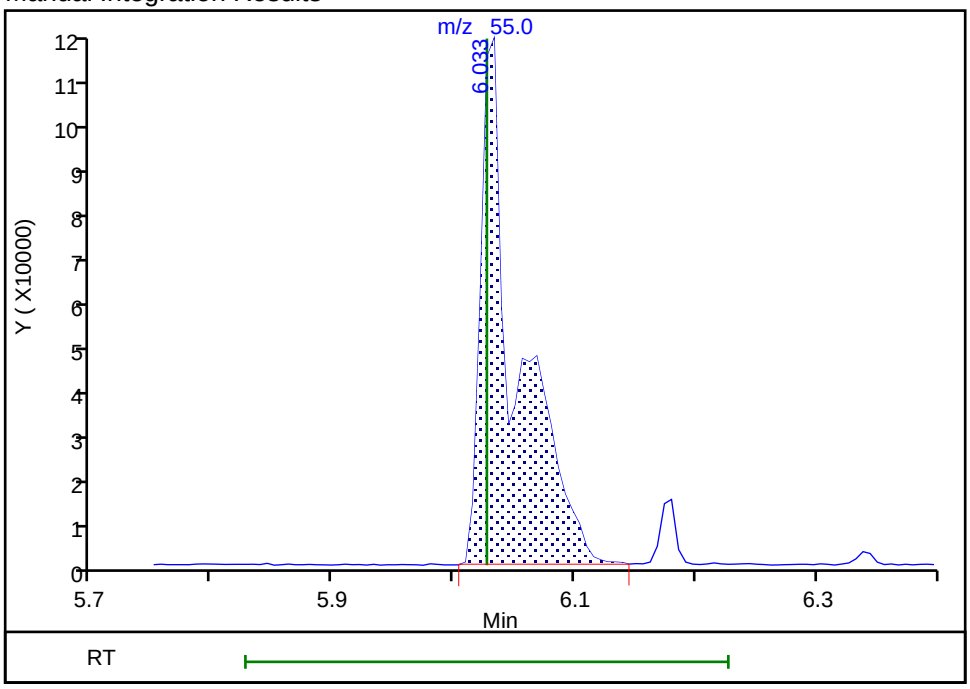
Processing Integration Results

RT: 6.03
Area: 136861
Amount: 68.429513
Amount Units: ug/ml



Manual Integration Results

RT: 6.03
Area: 244082
Amount: 111.6530
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 16:27:02
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27118.D
Lims ID: STD160 HSL
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Oct-2018 16:25:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:39 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 16:57:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.429	4.429	0.000	95	130584	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	488526	40.0	40.0	
* 3 Acenaphthene-d10	164	7.378	7.384	-0.006	95	230586	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	97	368650	40.0	40.0	
* 5 Chrysene-d12	240	12.678	12.684	-0.006	99	313537	40.0	40.0	
* 6 Perylene-d12	264	16.427	16.433	-0.006	98	307756	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	94	750203	160.0	153.9	
$ 8 Phenol-d5	99	4.071	4.065	0.006	98	824915	160.0	149.1	
$ 9 Nitrobenzene-d5	82	4.940	4.940	0.000	95	705078	160.0	152.8	
$ 11 2-Fluorobiphenyl	172	6.703	6.703	0.000	100	1225804	160.0	152.3	
$ 12 2,4,6-Tribromophenol	330	8.166	8.172	-0.006	94	156471	160.0	162.8	
$ 13 Terphenyl-d14	244	10.710	10.716	-0.006	98	1168820	160.0	152.0	
19 1,4-Dioxane	88	1.961	1.961	0.000	94	324473	160.0	156.8	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	85	497801	160.0	155.9	
21 Pyridine	79	2.220	2.220	0.000	81	1587997	320.0	309.0	
32 Phenol	94	4.082	4.082	0.000	97	845808	160.0	147.4	
34 Aniline	93	4.118	4.117	0.001	96	1062431	160.0	151.3	
35 Alpha Methyl Styrene	118	4.170	4.170	0.000	93	694429	160.0	144.5	
36 Bis(2-chloroethyl)ether	93	4.165	4.164	0.001	94	607630	160.0	142.4	
38 n-Decane	43	4.276	4.276	0.000	95	983645	160.0	147.3	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	708112	160.0	150.2	
40 1,3-Dichlorobenzene	146	4.382	4.382	0.000	98	773378	160.0	147.0	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	94	784659	160.0	148.6	
43 Benzyl alcohol	108	4.541	4.541	0.001	92	470459	160.0	151.0	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	743588	160.0	147.9	
45 2-Methylphenol	108	4.640	4.640	0.000	96	650738	160.0	150.5	
46 2,2'-oxybis[1-chloropropan	45	4.670	4.670	0.000	91	1095845	160.0	156.2	
47 Indene	116	4.676	4.670	0.006	92	1955254	320.0	271.4	
49 3 & 4 Methylphenol	108	4.787	4.787	0.000	83	591418	160.0	140.7	
50 3-Methylphenol	108	4.787	4.787	0.000	92	591418	160.0	140.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.787	4.787	0.000	94	591418	160.0	140.7	
52 N-Nitrosodi-n-propylamine	70	4.793	4.787	0.006	92	418563	160.0	139.9	
54 Acetophenone	105	4.793	4.793	0.000	87	789897	160.0	135.5	
58 Hexachloroethane	117	4.911	4.911	0.000	93	296429	160.0	151.6	
59 Nitrobenzene	77	4.958	4.958	0.000	95	691307	160.0	154.3	
63 Isophorone	82	5.187	5.181	0.006	97	1176405	160.0	149.0	
64 2-Nitrophenol	139	5.263	5.263	0.000	94	376912	160.0	158.0	
65 2,4-Dimethylphenol	107	5.299	5.298	0.001	94	629641	160.0	150.6	
68 Benzoic acid	105	5.440	5.410	0.030	91	1024554	320.0	325.7	
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	96	726216	160.0	150.4	
71 3,5-Dimethylphenol	107	5.428	5.428	0.000	89	610268	160.0	146.3	
74 2,4-Dichlorophenol	162	5.498	5.498	0.000	94	541680	160.0	152.6	
76 1,2,4-Trichlorobenzene	180	5.586	5.586	0.000	94	607007	160.0	150.1	
79 Naphthalene	128	5.663	5.663	0.000	98	1748807	160.0	146.9	
80 4-Chloroaniline	127	5.704	5.704	0.000	95	738390	160.0	147.6	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	518163	160.0	148.5	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	95	343986	160.0	153.3	
86 Caprolactam	55	6.039	6.027	0.012	73	325215	160.0	153.9	M
89 4-Chloro-3-methylphenol	107	6.180	6.180	0.000	96	499389	160.0	148.1	
93 2-Methylnaphthalene	142	6.344	6.344	0.000	95	1200850	160.0	143.6	
96 1-Methylnaphthalene	142	6.438	6.444	-0.006	95	1131813	160.0	144.9	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	95	384728	160.0	160.7	
98 1,2,4,5-Tetrachlorobenzene	216	6.515	6.515	0.000	96	529068	160.0	142.8	
100 2,4,6-Trichlorophenol	196	6.621	6.620	0.001	92	333096	160.0	151.7	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	97	542074	160.0	147.6	
102 2,4,5-Trichlorophenol	196	6.656	6.656	0.000	94	377263	160.0	157.1	
104 1,1'-Biphenyl	154	6.803	6.803	0.000	95	1349283	160.0	149.0	
106 2-Chloronaphthalene	162	6.826	6.826	0.000	95	1051253	160.0	151.4	
108 2-Nitroaniline	65	6.914	6.914	0.000	85	325903	160.0	157.4	
111 Dimethyl phthalate	163	7.096	7.096	0.000	99	1020756	160.0	149.8	
112 1,3-Dinitrobenzene	168	7.120	7.120	0.000	89	201254	160.0	171.9	
113 2,6-Dinitrotoluene	165	7.155	7.155	0.000	94	272641	160.0	156.8	
114 Acenaphthylene	152	7.237	7.243	-0.006	98	1572215	160.0	150.5	
115 3-Nitroaniline	138	7.326	7.326	0.000	95	299418	160.0	160.3	
117 Acenaphthene	153	7.414	7.414	0.000	94	996673	160.0	147.0	
118 2,4-Dinitrophenol	184	7.425	7.425	0.000	82	335434	320.0	329.4	
119 4-Nitrophenol	109	7.496	7.490	0.006	95	285246	320.0	326.5	
122 2,4-Dinitrotoluene	165	7.561	7.561	0.000	94	341504	160.0	158.7	
123 Dibenzofuran	168	7.584	7.584	0.000	97	1407539	160.0	148.0	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	71	298957	160.0	159.8	
127 Hexadecane	57	7.825	7.825	0.000	90	929387	160.0	152.9	
130 Diethyl phthalate	149	7.802	7.801	0.001	99	960471	160.0	148.4	
134 4-Chlorophenyl phenyl ethe	204	7.919	7.919	0.000	90	510072	160.0	147.0	
135 Fluorene	166	7.925	7.931	-0.006	94	1023040	160.0	142.1	
138 4-Nitroaniline	138	7.937	7.937	0.000	86	283554	160.0	161.3	
139 4,6-Dinitro-2-methylphenol	198	7.972	7.972	0.000	85	377001	320.0	324.4	
141 N-Nitrosodiphenylamine	169	8.037	8.036	0.001	62	806978	160.0	153.8	
142 Diphenylamine	169	8.037	8.036	0.001	96	806978	136.0	129.0	
143 1,2-Diphenylhydrazine	77	8.078	8.078	0.000	41	1075371	161.8	152.1	
144 Azobenzene	77	8.078	8.078	0.000	97	1075371	160.0	150.4	
147 2,4,6 - Tribromophenol	330	8.166	8.172	-0.006	94	156471	160.0	161.9	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	67	315774	160.0	154.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.489	8.495	-0.006	95	306214	160.0	151.8	
159 Atrazine	200	8.559	8.565	-0.006	91	275278	160.0	156.5	
161 n-Octadecane	85	8.742	8.747	-0.005	92	282871	160.0	151.3	
163 Pentachlorophenol	266	8.677	8.683	-0.006	93	385679	320.0	317.9	
168 Phenanthrene	178	8.888	8.888	0.000	97	1465907	160.0	150.0	
169 Anthracene	178	8.936	8.941	-0.005	97	1522931	160.0	150.3	
170 Carbazole	167	9.088	9.094	-0.006	95	1384033	160.0	156.5	
171 Alachlor	188	9.235	9.235	0.000	95	196003	160.0	160.2	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	1535501	160.0	157.9	
179 Fluoranthene	202	10.181	10.187	-0.006	98	1577733	160.0	160.1	
182 Pyrene	202	10.487	10.492	-0.005	97	1654087	160.0	149.1	
188 Famphur	218	11.427	11.433	-0.006	84	511190	160.0	156.3	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	97	699401	160.0	162.5	
195 Bis(2-ethylhexyl) phthalat	149	12.849	12.860	-0.011	97	928194	160.0	169.3	
197 3,3'-Dichlorobenzidine	252	12.619	12.625	-0.006	73	461656	160.0	165.6	
198 Benzo[a]anthracene	228	12.655	12.661	-0.006	98	1556759	160.0	159.6	
199 Chrysene	228	12.737	12.743	-0.006	97	1525563	160.0	161.0	
201 Di-n-octyl phthalate	149	14.576	14.588	-0.012	99	1607220	160.0	171.2	
203 Benzo[b]fluoranthene	252	15.387	15.387	0.000	97	1445354	160.0	163.3	
204 Benzo[k]fluoranthene	252	15.463	15.463	0.000	99	1525112	160.0	160.2	
206 Benzo[e]pyrene	252	16.133	16.139	-0.006	96	1365296	160.0	161.6	
207 Benzo[a]pyrene	252	16.274	16.280	-0.006	77	1489555	160.0	166.9	
213 Dibenz(a,h)anthracene	278	19.570	19.570	0.000	94	1279318	160.0	172.6	
214 Indeno[1,2,3-cd]pyrene	276	19.476	19.476	0.000	98	1265753	160.0	181.5	
215 Benzo[g,h,i]perylene	276	20.193	20.193	0.000	98	1406320	160.0	169.8	
S 217 Total Cresols	108				0			291.2	
S 218 Methyl Phenols,Total	108				0			291.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA160_00039 Amount Added: 200.00 Units: uL

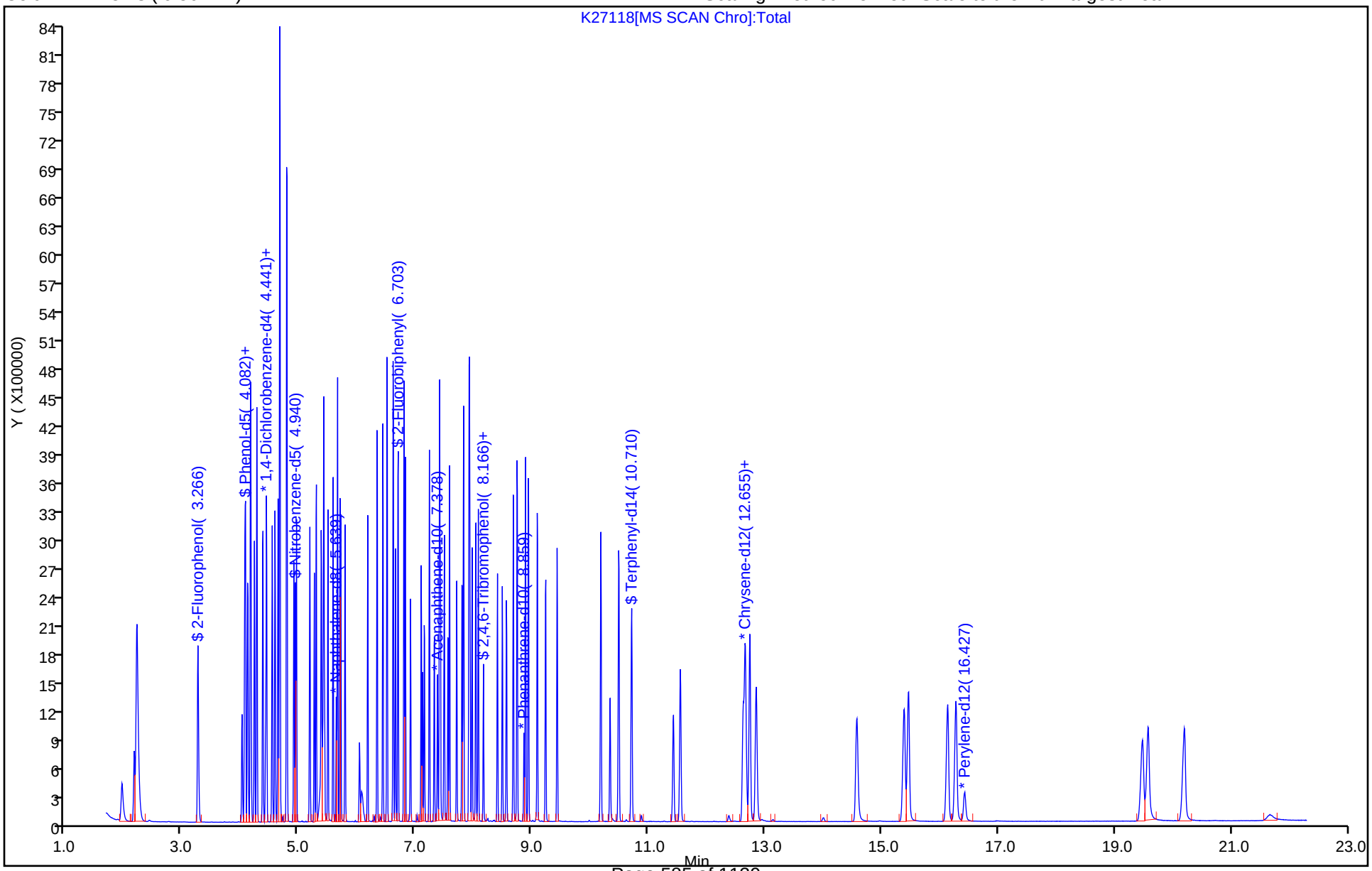
Report Date: 24-Oct-2018 06:02:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27118.D

Injection Date:	23-Oct-2018 16:25:30	Instrument ID:	SMS_K	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:	SMSK_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

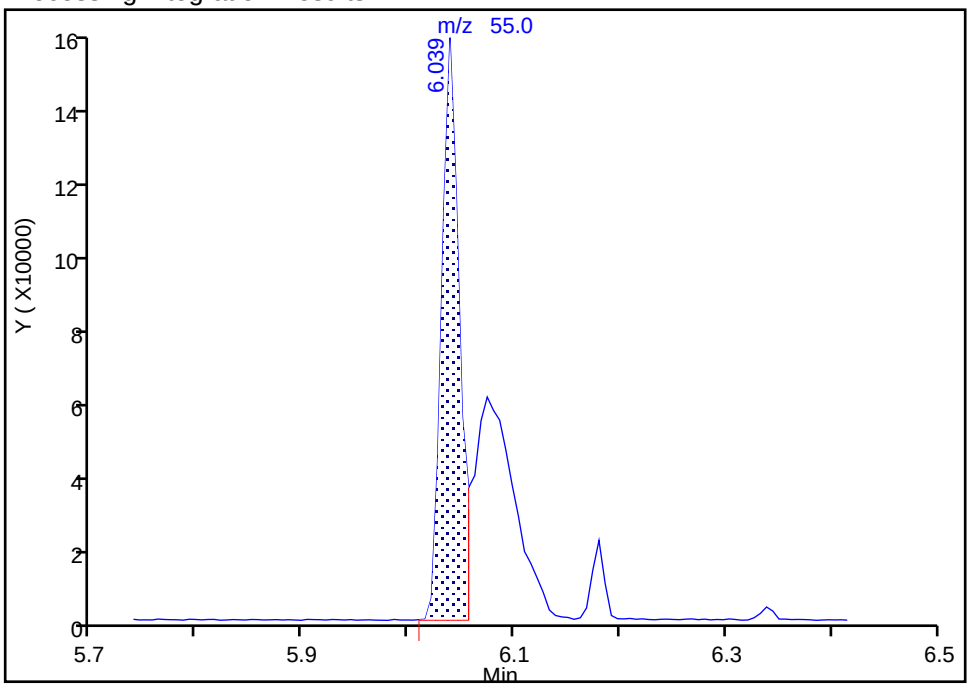
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27118.D
Injection Date: 23-Oct-2018 16:25:30 Instrument ID: SMS_K
Lims ID: STD160 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

86 Caprolactam, CAS: 105-60-2

Signal: 1

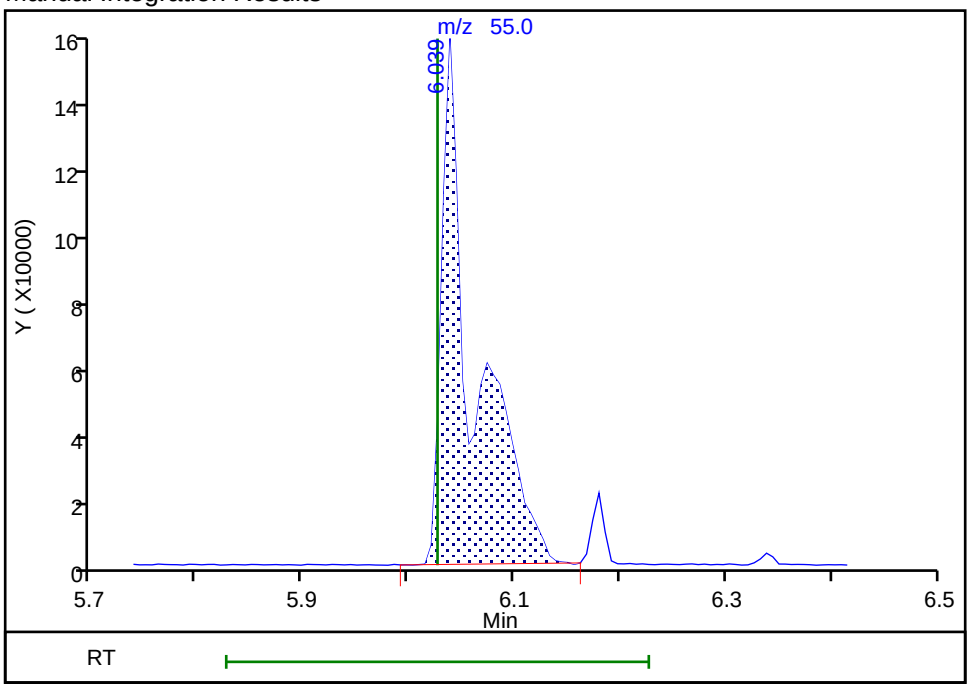
Processing Integration Results

RT: 6.04
Area: 179913
Amount: 92.659356
Amount Units: ug/ml



Manual Integration Results

RT: 6.04
Area: 325215
Amount: 153.8560
Amount Units: ug/ml



Reviewer: kiekeld, 23-Oct-2018 16:53:45
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D
Lims ID: STD200 HSL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-Oct-2018 16:54:30 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_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:43 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 24-Oct-2018 05:21:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.429	4.429	0.000	95	127016	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	490380	40.0	40.0	
* 3 Acenaphthene-d10	164	7.378	7.384	-0.006	94	252099	40.0	40.0	
* 4 Phenanthrene-d10	188	8.865	8.865	0.000	97	461193	40.0	40.0	
* 5 Chrysene-d12	240	12.684	12.684	0.000	99	416647	40.0	40.0	
* 6 Perylene-d12	264	16.433	16.433	0.000	98	415691	40.0	40.0	
$ 7 2-Fluorophenol	112	3.266	3.266	0.000	94	906416	200.0	191.2	
$ 8 Phenol-d5	99	4.070	4.065	0.005	99	992075	200.0	184.3	
$ 9 Nitrobenzene-d5	82	4.940	4.940	0.000	95	857019	200.0	185.0	
$ 11 2-Fluorobiphenyl	172	6.703	6.703	0.000	100	1532807	200.0	174.2	
$ 12 2,4,6-Tribromophenol	330	8.172	8.172	0.000	94	222763	200.0	212.0	
$ 13 Terphenyl-d14	244	10.710	10.716	-0.006	98	1814405	200.0	177.5	
19 1,4-Dioxane	88	1.961	1.961	0.000	94	393695	200.0	195.6	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	85	606080	200.0	195.1	
21 Pyridine	79	2.220	2.220	0.000	81	1917863	400.0	383.6	
32 Phenol	94	4.082	4.082	0.000	97	1011432	200.0	181.3	
34 Aniline	93	4.123	4.117	0.006	96	1317520	200.0	192.9	
35 Alpha Methyl Styrene	118	4.176	4.170	0.006	93	829991	200.0	177.6	
36 Bis(2-chloroethyl)ether	93	4.164	4.164	0.000	95	723186	200.0	174.2	
38 n-Decane	43	4.276	4.276	0.000	94	1163893	200.0	179.2	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	852396	200.0	185.9	
40 1,3-Dichlorobenzene	146	4.382	4.382	0.000	98	934555	200.0	182.7	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	93	924921	200.0	180.0	
43 Benzyl alcohol	108	4.546	4.541	0.006	92	565727	200.0	186.7	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	895169	200.0	183.1	
45 2-Methylphenol	108	4.640	4.640	0.000	95	780872	200.0	185.7	
46 2,2'-oxybis[1-chloropropan	45	4.670	4.670	0.000	90	1267878	200.0	203.2	
47 Indene	116	4.676	4.670	0.006	91	2263846	400.0	323.0	
49 3 & 4 Methylphenol	108	4.787	4.787	0.000	79	689990	200.0	168.7	
50 3-Methylphenol	108	4.787	4.787	0.000	92	689990	200.0	168.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.787	4.787	0.000	91	689990	200.0	168.7	
52 N-Nitrosodi-n-propylamine	70	4.799	4.787	0.012	94	503716	200.0	173.0	
54 Acetophenone	105	4.793	4.793	0.000	87	939950	200.0	165.8	
58 Hexachloroethane	117	4.911	4.911	0.000	92	348747	200.0	183.4	
59 Nitrobenzene	77	4.958	4.958	0.000	96	823757	200.0	183.2	
63 Isophorone	82	5.193	5.181	0.012	97	1468168	200.0	185.2	
64 2-Nitrophenol	139	5.263	5.263	0.000	94	458023	200.0	191.3	
65 2,4-Dimethylphenol	107	5.298	5.298	0.000	95	763326	200.0	181.9	
68 Benzoic acid	105	5.457	5.410	0.047	92	1326877	400.0	418.7	
69 Bis(2-chloroethoxy)methane	93	5.387	5.381	0.006	96	879688	200.0	181.5	
71 3,5-Dimethylphenol	107	5.428	5.428	0.000	86	739442	200.0	176.6	
74 2,4-Dichlorophenol	162	5.498	5.498	0.000	95	668491	200.0	187.6	
76 1,2,4-Trichlorobenzene	180	5.586	5.586	0.000	94	725459	200.0	178.7	
79 Naphthalene	128	5.663	5.663	0.000	98	2079988	200.0	174.1	
80 4-Chloroaniline	127	5.704	5.704	0.000	96	935656	200.0	186.4	
81 2,6-Dichlorophenol	162	5.722	5.721	0.001	96	634081	200.0	181.0	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	95	405687	200.0	180.1	
86 Caprolactam	55	6.051	6.027	0.024	73	483898	200.0	228.1	M
89 4-Chloro-3-methylphenol	107	6.186	6.180	0.006	95	642467	200.0	189.8	
93 2-Methylnaphthalene	142	6.344	6.344	0.000	95	1478843	200.0	176.2	
96 1-Methylnaphthalene	142	6.444	6.444	0.000	96	1380102	200.0	176.0	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	95	470449	200.0	179.7	
98 1,2,4,5-Tetrachlorobenzene	216	6.515	6.515	0.000	97	648636	200.0	174.4	
100 2,4,6-Trichlorophenol	196	6.620	6.620	0.000	93	420507	200.0	175.1	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	97	680918	200.0	169.5	
102 2,4,5-Trichlorophenol	196	6.662	6.656	0.006	94	498611	200.0	190.0	
104 1,1'-Biphenyl	154	6.803	6.803	0.000	95	1702046	200.0	171.9	
106 2-Chloronaphthalene	162	6.826	6.826	0.000	96	1332768	200.0	175.6	
108 2-Nitroaniline	65	6.920	6.914	0.006	86	457682	200.0	202.2	
111 Dimethyl phthalate	163	7.102	7.096	0.006	99	1413397	200.0	189.8	
112 1,3-Dinitrobenzene	168	7.126	7.120	0.006	89	288701	200.0	225.5	
113 2,6-Dinitrotoluene	165	7.155	7.155	0.000	94	392124	200.0	206.3	
114 Acenaphthylene	152	7.237	7.243	-0.006	98	2034677	200.0	178.2	
115 3-Nitroaniline	138	7.326	7.326	0.000	94	443090	200.0	217.0	
117 Acenaphthene	153	7.414	7.414	0.000	94	1300166	200.0	175.3	
118 2,4-Dinitrophenol	184	7.431	7.425	0.006	82	513584	400.0	457.9	
119 4-Nitrophenol	109	7.502	7.490	0.012	95	439292	400.0	459.9	
122 2,4-Dinitrotoluene	165	7.561	7.561	0.000	95	510758	200.0	217.1	
123 Dibenzofuran	168	7.584	7.584	0.000	97	1886729	200.0	181.5	
125 2,3,4,6-Tetrachlorophenol	232	7.707	7.707	0.000	71	430677	200.0	210.6	
127 Hexadecane	57	7.825	7.825	0.000	91	1144989	200.0	172.3	
130 Diethyl phthalate	149	7.801	7.801	0.000	98	1372470	200.0	194.0	
134 4-Chlorophenyl phenyl ethe	204	7.919	7.919	0.000	93	694772	200.0	183.2	
135 Fluorene	166	7.931	7.931	0.000	95	1393076	200.0	177.0	
138 4-Nitroaniline	138	7.948	7.937	0.011	86	445099	200.0	231.6	
139 4,6-Dinitro-2-methylphenol	198	7.978	7.972	0.006	84	575387	400.0	394.4	
141 N-Nitrosodiphenylamine	169	8.036	8.036	0.000	62	1135262	200.0	172.9	
142 Diphenylamine	169	8.036	8.036	0.000	95	1135262	170.0	166.0	
143 1,2-Diphenylhydrazine	77	8.078	8.078	0.000	41	1484315	202.2	192.0	
144 Azobenzene	77	8.078	8.078	0.000	97	1484315	200.0	189.9	
147 2,4,6 - Tribromophenol	330	8.172	8.172	0.000	94	222718	200.0	210.8	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	66	451115	200.0	176.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.495	8.495	0.000	94	437360	200.0	173.3	
159 Atrazine	200	8.565	8.565	0.000	91	415351	200.0	188.8	
161 n-Octadecane	85	8.747	8.747	0.000	91	376092	200.0	160.8	
163 Pentachlorophenol	266	8.683	8.683	0.000	94	587054	400.0	386.2	
168 Phenanthrene	178	8.888	8.888	0.000	98	2145671	200.0	175.5	
169 Anthracene	178	8.941	8.941	0.000	97	2226050	200.0	175.6	
170 Carbazole	167	9.094	9.094	0.000	95	2048930	200.0	185.2	
171 Alachlor	188	9.235	9.235	0.000	94	294319	200.0	192.2	
173 Di-n-butyl phthalate	149	9.435	9.435	0.000	99	2279983	200.0	187.5	
179 Fluoranthene	202	10.187	10.187	0.000	98	2418055	200.0	196.1	
182 Pyrene	202	10.492	10.492	0.000	97	2518499	200.0	170.8	
188 Famphur	218	11.427	11.433	-0.006	84	696705	200.0	160.4	
190 Butyl benzyl phthalate	149	11.550	11.556	-0.006	97	1110823	200.0	194.2	
195 Bis(2-ethylhexyl) phthalat	149	12.849	12.860	-0.011	97	1499308	200.0	205.8	
197 3,3'-Dichlorobenzidine	252	12.631	12.625	0.006	73	755169	200.0	203.8	
198 Benzo[a]anthracene	228	12.661	12.661	0.000	98	2468166	200.0	190.4	
199 Chrysene	228	12.743	12.743	0.000	97	2398580	200.0	190.5	
201 Di-n-octyl phthalate	149	14.582	14.588	-0.006	99	2606177	200.0	208.7	
203 Benzo[b]fluoranthene	252	15.393	15.387	0.006	97	2372432	200.0	198.5	
204 Benzo[k]fluoranthene	252	15.475	15.463	0.012	99	2436374	200.0	189.5	
206 Benzo[e]pyrene	252	16.151	16.139	0.012	97	2213624	200.0	194.0	
207 Benzo[a]pyrene	252	16.292	16.280	0.012	77	2407134	200.0	199.7	
213 Dibenz(a,h)anthracene	278	19.594	19.570	0.024	92	2098766	200.0	209.6	
214 Indeno[1,2,3-cd]pyrene	276	19.494	19.476	0.018	98	2116080	200.0	228.4	
215 Benzo[g,h,i]perylene	276	20.217	20.193	0.024	98	2271057	200.0	203.0	
S 217 Total Cresols	108				0			354.4	
S 218 Methyl Phenols,Total	108				0			354.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLA200_00039 Amount Added: 200.00 Units: uL

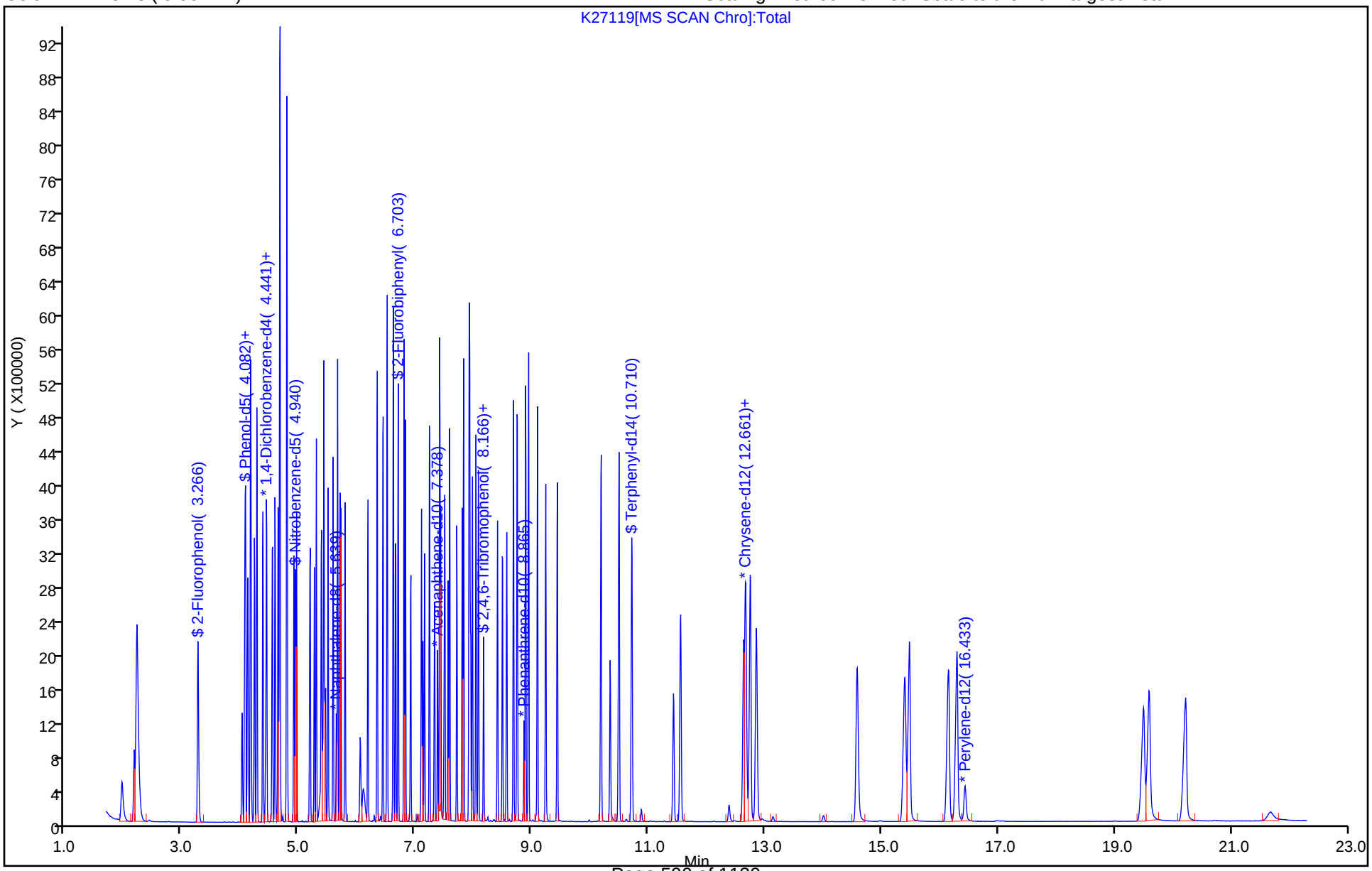
Report Date: 24-Oct-2018 06:02:44 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Injection Date:	23-Oct-2018 16:54:30	Instrument ID:	SMS_K	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:	SMSK_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

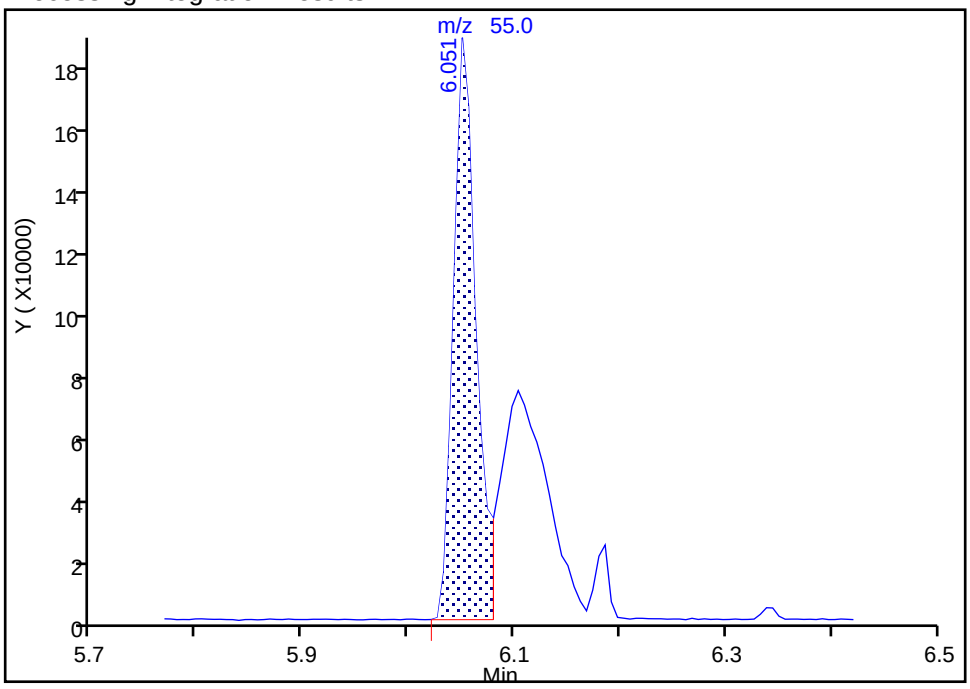
Data File:	\\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D				
Injection Date:	23-Oct-2018 16:54:30	Instrument ID:	SMS_K		
Lims ID:	STD200 HSL				
Client ID:					
Operator ID:	KIEKELD	ALS Bottle#:	9	Worklist Smp#:	10
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

86 Caprolactam, CAS: 105-60-2

Signal: 1

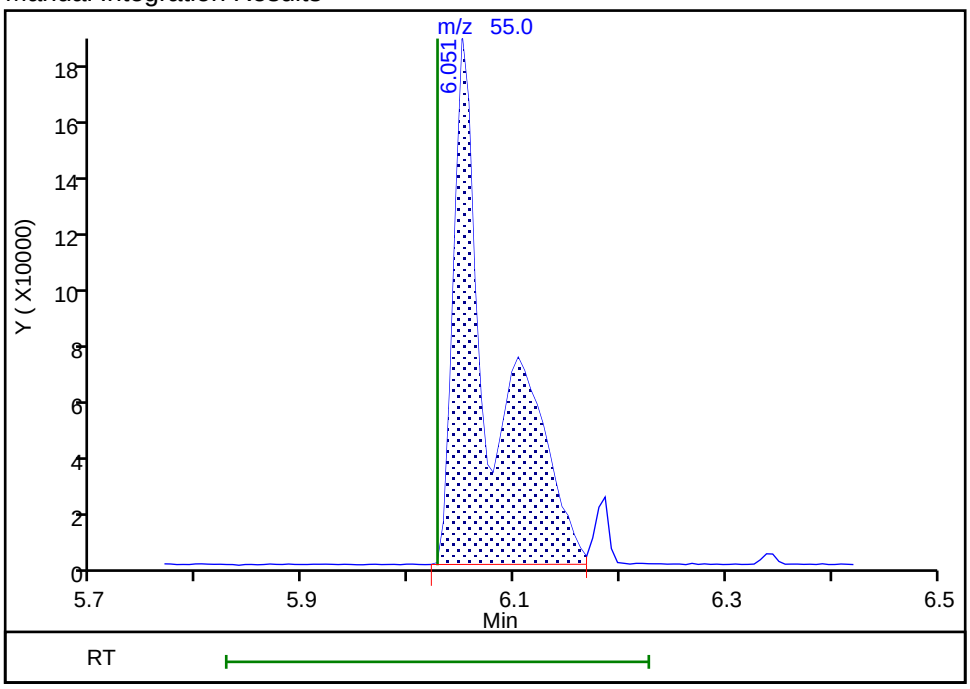
Processing Integration Results

RT: 6.05
Area: 274378
Amount: 137.8206
Amount Units: ug/ml



Manual Integration Results

RT: 6.05
Area: 483898
Amount: 228.0618
Amount Units: ug/ml



Reviewer: kiekeld, 24-Oct-2018 05:19:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-434399/11 Calibration Date: 10/23/2018 17:23

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27120.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6338	0.6334		99900	100000	-0.0	20.0
N-Nitrosodimethylamine	Ave	0.9782	0.9508		97200	100000	-2.8	20.0
Pyridine	Ave	1.574	1.629		207000	200000	3.5	20.0
Phenol	Ave	1.757	1.702	0.8000	96800	100000	-3.2	20.0
Aniline	Ave	2.151	2.065		96000	100000	-4.0	20.0
Bis(2-chloroethyl)ether	Ave	1.307	1.227	0.7000	93900	100000	-6.1	20.0
2-Chlorophenol	Ave	1.444	1.389	0.8000	96200	100000	-3.8	20.0
1,3-Dichlorobenzene	Ave	1.611	1.525		94600	100000	-5.4	20.0
1,4-Dichlorobenzene	Ave	1.618	1.551		95800	100000	-4.2	20.0
Benzyl alcohol	Ave	0.9545	0.9354		98000	100000	-2.0	20.0
1,2-Dichlorobenzene	Ave	1.540	1.473		95700	100000	-4.3	20.0
2-Methylphenol	Ave	1.324	1.266	0.7000	95600	100000	-4.4	20.0
bis (2-chloroisopropyl) ether	Qua		2.123	0.0100	87500	100000	-12.5	20.0
3 & 4 Methylphenol	Ave	1.288	1.222		94900	100000	-5.1	20.0
N-Nitrosodi-n-propylamine	Ave	0.9168	0.8468	0.5000	92400	100000	-7.6	20.0
Acetophenone	Ave	1.786	1.621	0.0100	90800	100000	-9.2	20.0
Hexachloroethane	Ave	0.5990	0.5701	0.3000	95200	100000	-4.8	20.0
Nitrobenzene	Ave	0.3668	0.3514		95800	100000	-4.2	20.0
Isophorone	Ave	0.6465	0.5978	0.4000	92500	100000	-7.5	20.0
2-Nitrophenol	Ave	0.1953	0.1915	0.1000	98100	100000	-1.9	20.0
2,4-Dimethylphenol	Ave	0.3423	0.3217	0.2000	94000	100000	-6.0	20.0
Bis(2-chloroethoxy)methane	Ave	0.3953	0.3751	0.3000	94900	100000	-5.1	20.0
Benzoic acid	Lin2		0.2661		209000	200000	4.3	20.0
2,4-Dichlorophenol	Ave	0.2906	0.2816	0.2000	96900	100000	-3.1	20.0
1,2,4-Trichlorobenzene	Ave	0.3312	0.3104		93700	100000	-6.3	20.0
Naphthalene	Ave	0.9745	0.9108	0.7000	93500	100000	-6.5	20.0
4-Chloroaniline	Ave	0.4095	0.3999	0.0100	97700	100000	-2.3	20.0
2,6-Dichlorophenol	Ave	0.2857	0.2734		95700	100000	-4.3	20.0
Hexachlorobutadiene	Ave	0.1837	0.1812	0.0100	98600	100000	-1.4	20.0
4-Chloro-3-methylphenol	Ave	0.2761	0.2626	0.2000	95100	100000	-4.9	20.0
2-Methylnaphthalene	Ave	0.6846	0.6333	0.4000	92500	100000	-7.5	20.0
1-Methylnaphthalene	Ave	0.6396	0.6023		94200	100000	-5.8	20.0
Hexachlorocyclopentadiene	Ave	0.4154	0.4207	0.0500	101000	100000	1.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3034	0.2795	0.0100	92100	100000	-7.9	20.0
2,4,6-Trichlorophenol	Ave	0.3810	0.3826	0.2000	100000	100000	0.4	20.0
2,4,5-Trichlorophenol	Ave	0.4165	0.4303	0.2000	103000	100000	3.3	20.0
1,1'-Biphenyl	Ave	1.571	1.521		96800	100000	-3.2	20.0
2-Chloronaphthalene	Ave	1.204	1.168	0.8000	97000	100000	-3.0	20.0
2-Nitroaniline	Ave	0.3591	0.3539	0.0100	98500	100000	-1.5	20.0
Dimethyl phthalate	Ave	1.182	1.107	0.0100	93700	100000	-6.3	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-434399/11 Calibration Date: 10/23/2018 17:23

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27120.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3-Dinitrobenzene	Ave	0.2031	0.2102		103000	100000	3.5	20.0
2,6-Dinitrotoluene	Ave	0.3016	0.3019	0.2000	100000	100000	0.1	20.0
Acenaphthylene	Ave	1.812	1.736	0.9000	95800	100000	-4.2	20.0
3-Nitroaniline	Ave	0.3240	0.3222	0.0100	99500	100000	-0.5	20.0
Acenaphthene	Ave	1.177	1.118	0.9000	95000	100000	-5.0	20.0
2,4-Dinitrophenol	Lin2		0.1712	0.0100	197000	200000	-1.3	20.0
4-Nitrophenol	Ave	0.1516	0.1542	0.0100	203000	200000	1.7	20.0
2,4-Dinitrotoluene	Ave	0.3733	0.3633	0.2000	97300	100000	-2.7	20.0
Dibenzofuran	Ave	1.650	1.563	0.8000	94800	100000	-5.2	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3245	0.3239	0.0100	99800	100000	-0.2	20.0
Diethyl phthalate	Ave	1.122	1.052	0.0100	93700	100000	-6.3	20.0
4-Chlorophenyl phenyl ether	Ave	0.6017	0.5610	0.4000	93200	100000	-6.8	20.0
Fluorene	Ave	1.249	1.164	0.9000	93200	100000	-6.8	20.0
4-Nitroaniline	Ave	0.3050	0.2817	0.0100	92400	100000	-7.6	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1436	0.0100	230000	200000	14.9	20.0
Diphenylamine	Ave	1.085	1.045		81800	85000	-3.7	20.0
N-Nitrosodiphenylamine	Ave	0.5695	0.5778	0.0100	101000	100000	1.5	20.0
1,2-Diphenylhydrazine	Ave	1.227	1.163		95800	101000	-5.2	20.0
Azobenzene	Ave	1.240	1.176		94800	100000	-5.2	20.0
4-Bromophenyl phenyl ether	Ave	0.2219	0.2171	0.1000	97900	100000	-2.1	20.0
Hexachlorobenzene	Ave	0.2189	0.2164	0.1000	98900	100000	-1.1	20.0
Pentachlorophenol	Lin2		0.1415	0.0500	216000	200000	7.9	20.0
Phenanthrene	Ave	1.060	1.032	0.7000	97300	100000	-2.7	20.0
Anthracene	Ave	1.100	1.063	0.7000	96700	100000	-3.3	20.0
Carbazole	Ave	0.9596	0.9424	0.0100	98200	100000	-1.8	20.0
Alachlor	Ave	0.1328	0.1281		96500	100000	-3.5	20.0
Di-n-butyl phthalate	Ave	1.055	1.038	0.0100	98400	100000	-1.6	20.0
Fluoranthene	Ave	1.069	1.027	0.6000	96000	100000	-4.0	20.0
Pyrene	Ave	1.416	1.310	0.6000	92500	100000	-7.5	20.0
Butyl benzyl phthalate	Ave	0.5492	0.5430	0.0100	98900	100000	-1.1	20.0
Benzo[a]anthracene	Ave	1.245	1.174	0.8000	94300	100000	-5.7	20.0
Chrysene	Ave	1.209	1.180	0.7000	97700	100000	-2.3	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.6994	0.7126	0.0100	102000	100000	1.9	20.0
Di-n-octyl phthalate	Lin2		1.162	0.0100	97600	100000	-2.4	20.0
Benzo[b]fluoranthene	Ave	1.150	1.130	0.7000	98200	100000	-1.8	20.0
Benzo[k]fluoranthene	Ave	1.237	1.226	0.7000	99100	100000	-0.9	20.0
Benzo[a]pyrene	Ave	1.160	1.182	0.7000	102000	100000	1.9	20.0
Indeno[1,2,3-cd]pyrene	Ave	0.8896	0.8799	0.5000	98900	100000	-1.1	20.0
Dibenz(a,h)anthracene	Ave	0.9634	1.011	0.4000	105000	100000	4.9	20.0
Benzo[g,h,i]perylene	Ave	1.077	1.080	0.5000	100000	100000	0.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27120.D
Lims ID: ICV HSL 1
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 17:23:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 1
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:43 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 24-Oct-2018 05:23:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	95	134518	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	517949	40.0	40.0	
* 3 Acenaphthene-d10	164	7.379	7.384	-0.005	95	245531	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	97	377480	40.0	40.0	
* 5 Chrysene-d12	240	12.672	12.684	-0.012	99	306147	40.0	40.0	
* 6 Perylene-d12	264	16.421	16.433	-0.012	98	286910	40.0	40.0	
19 1,4-Dioxane	88	1.961	1.961	0.000	95	213018	100.0	99.9	
20 N-Nitrosodimethylamine	74	2.173	2.173	0.000	84	319756	100.0	97.2	
21 Pyridine	79	2.220	2.220	0.000	82	1095525	200.0	206.9	
32 Phenol	94	4.077	4.082	-0.005	97	572264	100.0	96.8	
34 Aniline	93	4.118	4.117	0.001	96	694393	100.0	96.0	
35 Alpha Methyl Styrene	118	4.171	4.170	0.001	93	458322	100.0	92.6	
36 Bis(2-chloroethyl)ether	93	4.165	4.164	0.001	91	412769	100.0	93.9	
38 n-Decane	43	4.276	4.276	0.000	94	649681	100.0	94.4	
39 2-Chlorophenol	128	4.235	4.235	0.000	98	467123	100.0	96.2	
40 1,3-Dichlorobenzene	146	4.376	4.382	-0.006	98	512856	100.0	94.6	
42 1,4-Dichlorobenzene	146	4.441	4.446	-0.005	93	521495	100.0	95.8	
43 Benzyl alcohol	108	4.541	4.541	0.001	92	314567	100.0	98.0	
44 1,2-Dichlorobenzene	146	4.588	4.588	0.000	97	495493	100.0	95.7	
45 2-Methylphenol	108	4.641	4.640	0.001	95	425608	100.0	95.6	
46 2,2'-oxybis[1-chloropropan	45	4.670	4.670	0.000	66	713858	100.0	87.5	
47 Indene	116	4.670	4.670	0.000	92	1370254	200.0	184.6	
49 3 & 4 Methylphenol	108	4.782	4.787	-0.005	81	411002	100.0	94.9	
50 3-Methylphenol	108	4.782	4.787	-0.005	89	411002	100.0	94.9	
51 4-Methylphenol	108	4.782	4.787	-0.005	93	411002	100.0	94.9	
52 N-Nitrosodi-n-propylamine	70	4.787	4.787	0.000	94	284775	100.0	92.4	
54 Acetophenone	105	4.793	4.793	0.000	90	545092	100.0	90.8	
58 Hexachloroethane	117	4.911	4.911	0.000	93	191711	100.0	95.2	
59 Nitrobenzene	77	4.952	4.958	-0.006	96	455016	100.0	95.8	
63 Isophorone	82	5.181	5.181	0.000	97	774021	100.0	92.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
64 2-Nitrophenol	139	5.263	5.263	0.000	94	248016	100.0	98.1	
65 2,4-Dimethylphenol	107	5.293	5.298	-0.005	95	416539	100.0	94.0	
68 Benzoic acid	105	5.416	5.410	0.006	95	689013	200.0	208.6	
69 Bis(2-chloroethoxy)methane	93	5.381	5.381	0.000	95	485650	100.0	94.9	
71 3,5-Dimethylphenol	107	5.422	5.428	-0.006	90	412319	100.0	93.2	
74 2,4-Dichlorophenol	162	5.493	5.498	-0.005	96	364629	100.0	96.9	
76 1,2,4-Trichlorobenzene	180	5.587	5.586	0.001	94	401933	100.0	93.7	
79 Naphthalene	128	5.663	5.663	0.000	97	1179396	100.0	93.5	
80 4-Chloroaniline	127	5.698	5.704	-0.006	96	517854	100.0	97.7	
81 2,6-Dichlorophenol	162	5.716	5.721	-0.005	96	353989	100.0	95.7	
83 Hexachlorobutadiene	225	5.792	5.792	0.000	96	234583	100.0	98.6	
89 4-Chloro-3-methylphenol	107	6.174	6.180	-0.006	95	340089	100.0	95.1	
93 2-Methylnaphthalene	142	6.339	6.344	-0.005	95	820038	100.0	92.5	
96 1-Methylnaphthalene	142	6.439	6.444	-0.006	96	779857	100.0	94.2	
97 Hexachlorocyclopentadiene	237	6.509	6.515	-0.006	95	258235	100.0	101.3	
98 1,2,4,5-Tetrachlorobenzene	216	6.515	6.515	0.000	96	361857	100.0	92.1	
100 2,4,6-Trichlorophenol	196	6.615	6.620	-0.005	81	234866	100.0	100.4	
101 2,3-Dichlorobenzenamine	161	6.615	6.620	-0.005	96	374019	100.0	95.6	
102 2,4,5-Trichlorophenol	196	6.650	6.656	-0.006	95	264146	100.0	103.3	
104 1,1'-Biphenyl	154	6.797	6.803	-0.006	95	933451	100.0	96.8	
106 2-Chloronaphthalene	162	6.820	6.826	-0.006	96	716773	100.0	97.0	
108 2-Nitroaniline	65	6.914	6.914	0.000	85	217228	100.0	98.5	
111 Dimethyl phthalate	163	7.097	7.096	0.001	99	679343	100.0	93.7	
112 1,3-Dinitrobenzene	168	7.120	7.120	0.000	91	129011	100.0	103.5	
113 2,6-Dinitrotoluene	165	7.149	7.155	-0.006	94	185315	100.0	100.1	
114 Acenaphthylene	152	7.238	7.243	-0.005	98	1065826	100.0	95.8	
115 3-Nitroaniline	138	7.320	7.326	-0.006	94	197793	100.0	99.5	
117 Acenaphthene	153	7.408	7.414	-0.006	94	686399	100.0	95.0	
118 2,4-Dinitrophenol	184	7.426	7.425	0.001	83	210165	200.0	197.3	
119 4-Nitrophenol	109	7.490	7.490	0.000	94	189294	200.0	203.5	
122 2,4-Dinitrotoluene	165	7.555	7.561	-0.006	94	223029	100.0	97.3	
123 Dibenzofuran	168	7.584	7.584	0.000	98	959455	100.0	94.8	
125 2,3,4,6-Tetrachlorophenol	232	7.708	7.707	0.001	71	198797	100.0	99.8	
127 Hexadecane	57	7.825	7.825	0.000	91	624048	100.0	96.4	
130 Diethyl phthalate	149	7.796	7.801	-0.005	98	645496	100.0	93.7	
134 4-Chlorophenyl phenyl ethe	204	7.913	7.919	-0.006	94	344337	100.0	93.2	
135 Fluorene	166	7.925	7.931	-0.006	95	714253	100.0	93.2	
138 4-Nitroaniline	138	7.931	7.937	-0.006	85	172939	100.0	92.4	
139 4,6-Dinitro-2-methylphenol	198	7.966	7.972	-0.006	84	271097	200.0	229.7	
141 N-Nitrosodiphenylamine	169	8.031	8.036	-0.005	62	545291	100.0	101.5	
142 Diphenylamine	169	8.031	8.036	-0.005	96	545291	85.0	81.8	
143 1,2-Diphenylhydrazine	77	8.078	8.078	0.000	41	721655	101.1	95.8	
144 Azobenzene	77	8.078	8.078	0.000	97	721655	100.0	94.8	
156 4-Bromophenyl phenyl ether	248	8.407	8.413	-0.005	68	204906	100.0	97.9	
157 Hexachlorobenzene	284	8.489	8.495	-0.006	95	204205	100.0	98.9	
161 n-Octadecane	85	8.742	8.747	-0.005	91	191474	100.0	100.0	
163 Pentachlorophenol	266	8.677	8.683	-0.006	94	267092	200.0	215.9	
168 Phenanthrene	178	8.883	8.888	-0.005	98	973712	100.0	97.3	
169 Anthracene	178	8.936	8.941	-0.005	97	1003040	100.0	96.7	
170 Carbazole	167	9.088	9.094	-0.006	95	889344	100.0	98.2	
171 Alachlor	188	9.229	9.235	-0.006	92	120928	100.0	96.5	
173 Di-n-butyl phthalate	149	9.429	9.435	-0.006	99	979722	100.0	98.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
179 Fluoranthene	202	10.175	10.187	-0.012	98	969276	100.0	96.0	
182 Pyrene	202	10.487	10.492	-0.005	97	1002593	100.0	92.5	
190 Butyl benzyl phthalate	149	11.544	11.556	-0.012	97	415617	100.0	98.9	
195 Bis(2-ethylhexyl) phthalat	149	12.843	12.860	-0.017	97	545402	100.0	101.9	
198 Benzo[a]anthracene	228	12.649	12.661	-0.012	98	898203	100.0	94.3	
199 Chrysene	228	12.731	12.743	-0.012	97	903296	100.0	97.7	
201 Di-n-octyl phthalate	149	14.570	14.588	-0.018	99	889691	100.0	97.6	
203 Benzo[b]fluoranthene	252	15.375	15.387	-0.012	97	810173	100.0	98.2	
204 Benzo[k]fluoranthene	252	15.446	15.463	-0.017	99	879062	100.0	99.1	
206 Benzo[e]pyrene	252	16.121	16.139	-0.018	97	775327	100.0	98.4	
207 Benzo[a]pyrene	252	16.262	16.280	-0.018	81	848089	100.0	101.9	
213 Dibenz(a,h)anthracene	278	19.559	19.570	-0.011	93	725011	100.0	104.9	
214 Indeno[1,2,3-cd]pyrene	276	19.459	19.476	-0.017	98	673463	100.0	98.9	
215 Benzo[g,h,i]perylene	276	20.176	20.193	-0.017	99	774323	100.0	100.3	

Reagents:

MS-HSLB1B3SSV_00052 Amount Added: 200.00 Units: uL

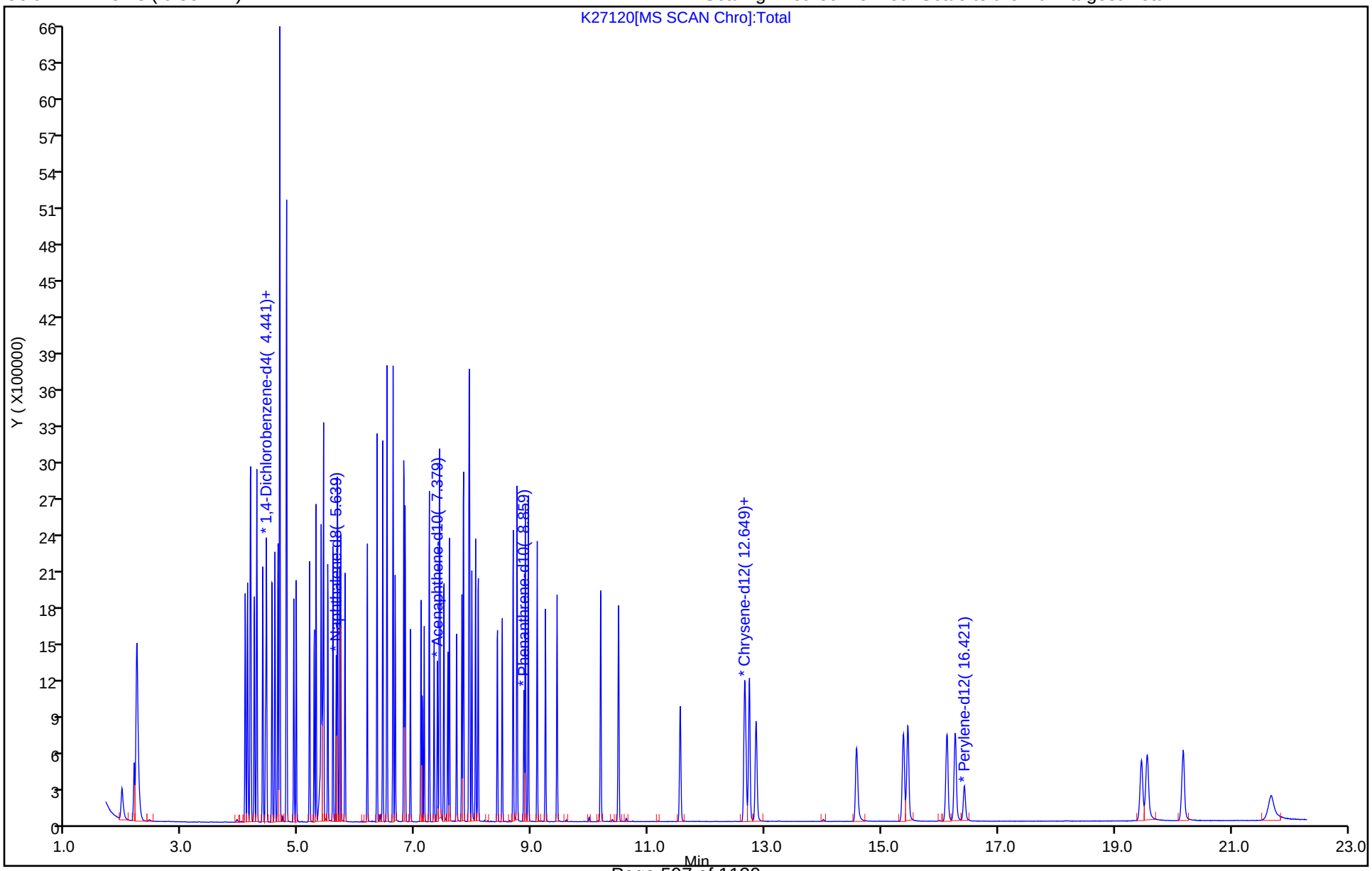
Report Date: 24-Oct-2018 06:02:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27120.D

Injection Date:	23-Oct-2018 17:23:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV HSL 1			Worklist Smp#:	11
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-434399/12 Calibration Date: 10/23/2018 17:52

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27121.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Caprolactam	Ave	0.1731	0.1842		106000	100000	6.4	20.0
Atrazine	Ave	0.1908	0.1858		97400	100000	-2.6	20.0
3,3'-Dichlorobenzidine	Ave	0.3557	0.4257	0.0100	120000	100000	19.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27121.D
Lims ID: ICV HSL 2
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 17:52:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 2
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:43 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 24-Oct-2018 05:23:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	96	131874	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	99	520626	40.0	40.0	
* 3 Acenaphthene-d10	164	7.378	7.384	-0.006	94	272288	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	97	453943	40.0	40.0	
* 5 Chrysene-d12	240	12.661	12.684	-0.023	99	330739	40.0	40.0	
* 6 Perylene-d12	264	16.415	16.433	-0.018	98	273298	40.0	40.0	
86 Caprolactam	55	6.009	6.027	-0.018	73	239728	100.0	106.4	a
159 Atrazine	200	8.559	8.565	-0.006	91	210874	100.0	97.4	
197 3,3'-Dichlorobenzidine	252	12.614	12.625	-0.011	74	352016	100.0	119.7	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

MS-HSLB2SSV_00047 Amount Added: 200.00 Units: uL

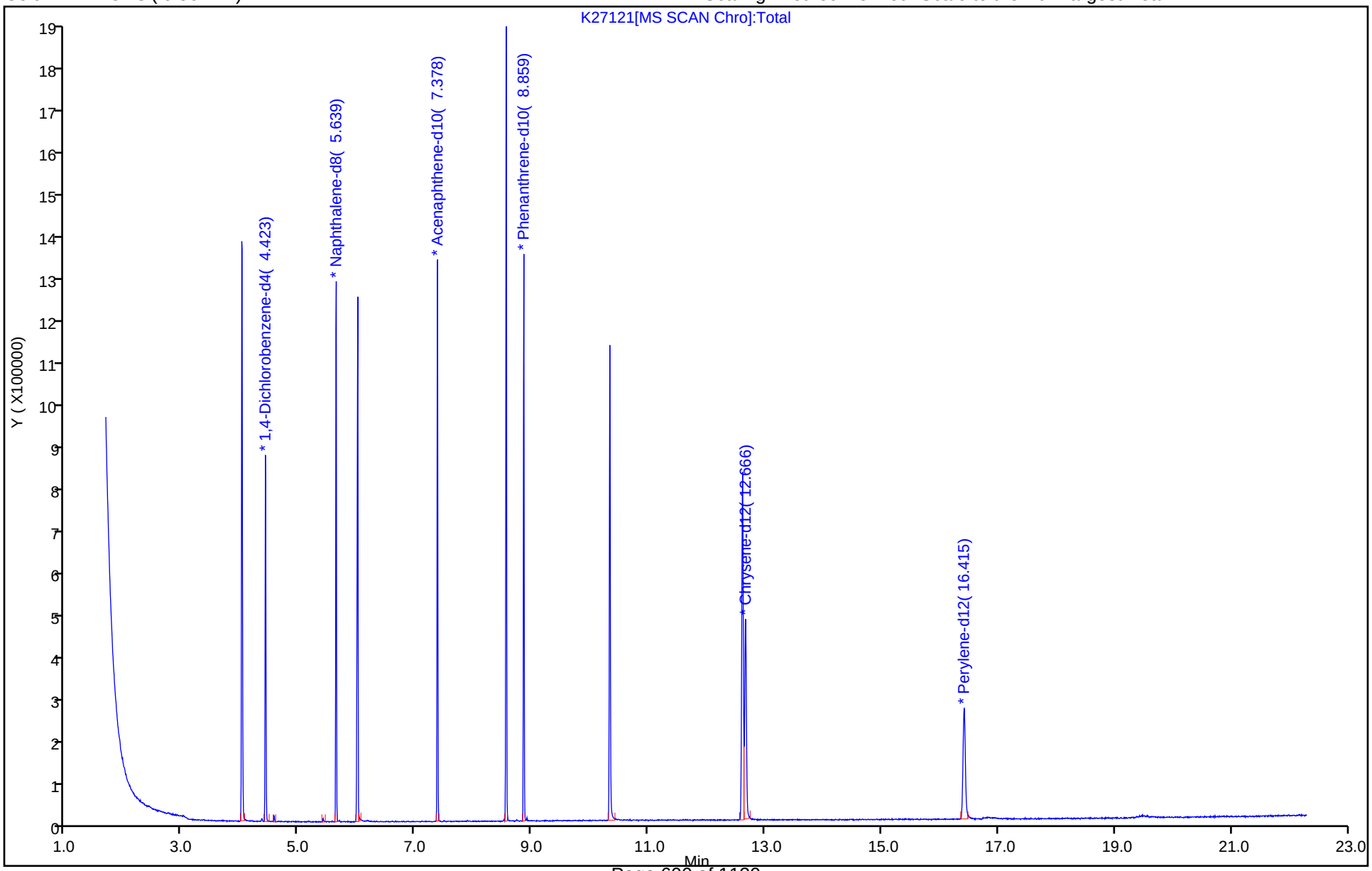
Report Date: 24-Oct-2018 06:02:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27121.D

Injection Date:	23-Oct-2018 17:52:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV HSL 2			Worklist Smp#:	12
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSK_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

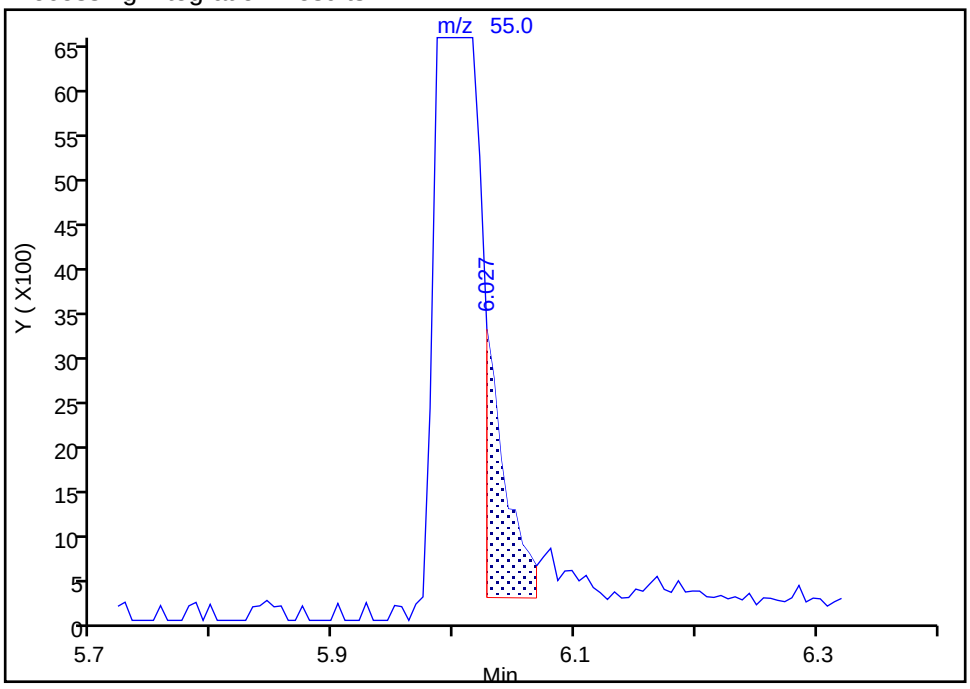
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27121.D
Injection Date: 23-Oct-2018 17:52:30 Instrument ID: SMS_K
Lims ID: ICV HSL 2
Client ID:
Operator ID: KIEKELD ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

86 Caprolactam, CAS: 105-60-2

Signal: 1

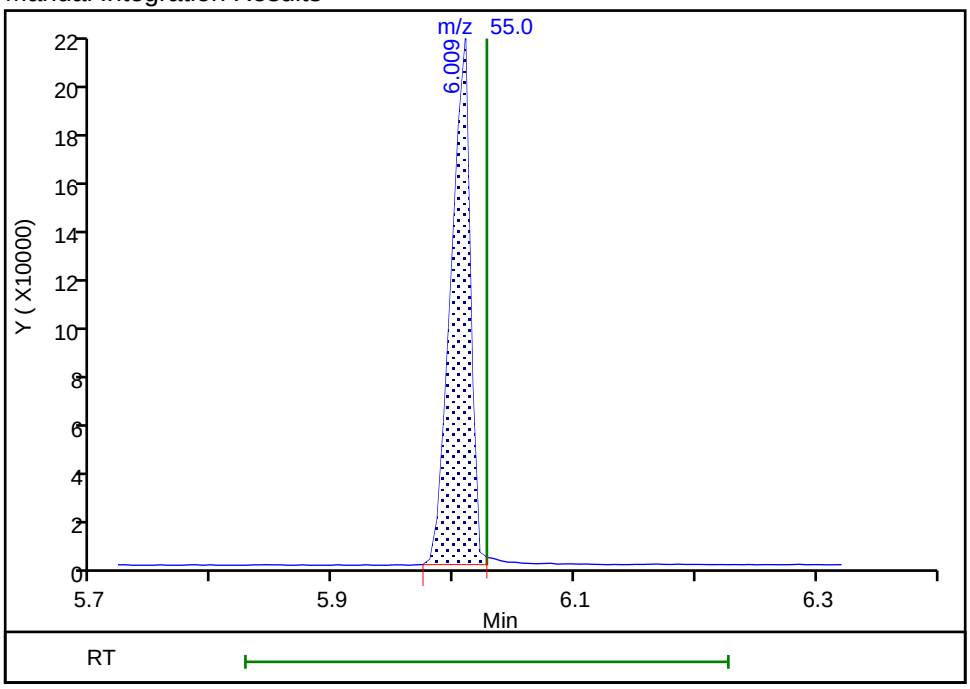
Processing Integration Results

RT: 6.03
Area: 3712
Amount: 1.647834
Amount Units: ug/ml



Manual Integration Results

RT: 6.01
Area: 239728
Amount: 106.4203
Amount Units: ug/ml



Reviewer: kiekeld, 24-Oct-2018 05:23:22
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-434399/13 Calibration Date: 10/23/2018 18:21

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27122.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Famphur	Ave	0.4171	0.4255		102000	100000	2.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27122.D
Lims ID: ICV FAM
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 18:21:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV FAM
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:02:43 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 24-Oct-2018 05:24:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.423	4.429	-0.006	96	132168	40.0	40.0	
* 2 Naphthalene-d8	136	5.639	5.639	0.000	100	513964	40.0	40.0	
* 3 Acenaphthene-d10	164	7.373	7.384	-0.011	94	274012	40.0	40.0	
* 4 Phenanthrene-d10	188	8.859	8.865	-0.006	97	456581	40.0	40.0	
* 5 Chrysene-d12	240	12.661	12.684	-0.023	99	299167	40.0	40.0	
* 6 Perylene-d12	264	16.415	16.433	-0.018	98	250155	40.0	40.0	
188 Famphur	218	11.421	11.433	-0.012	83	318271	100.0	102.0	

Reagents:

MS-FAMSSV_100_00020 Amount Added: 200.00 Units: uL

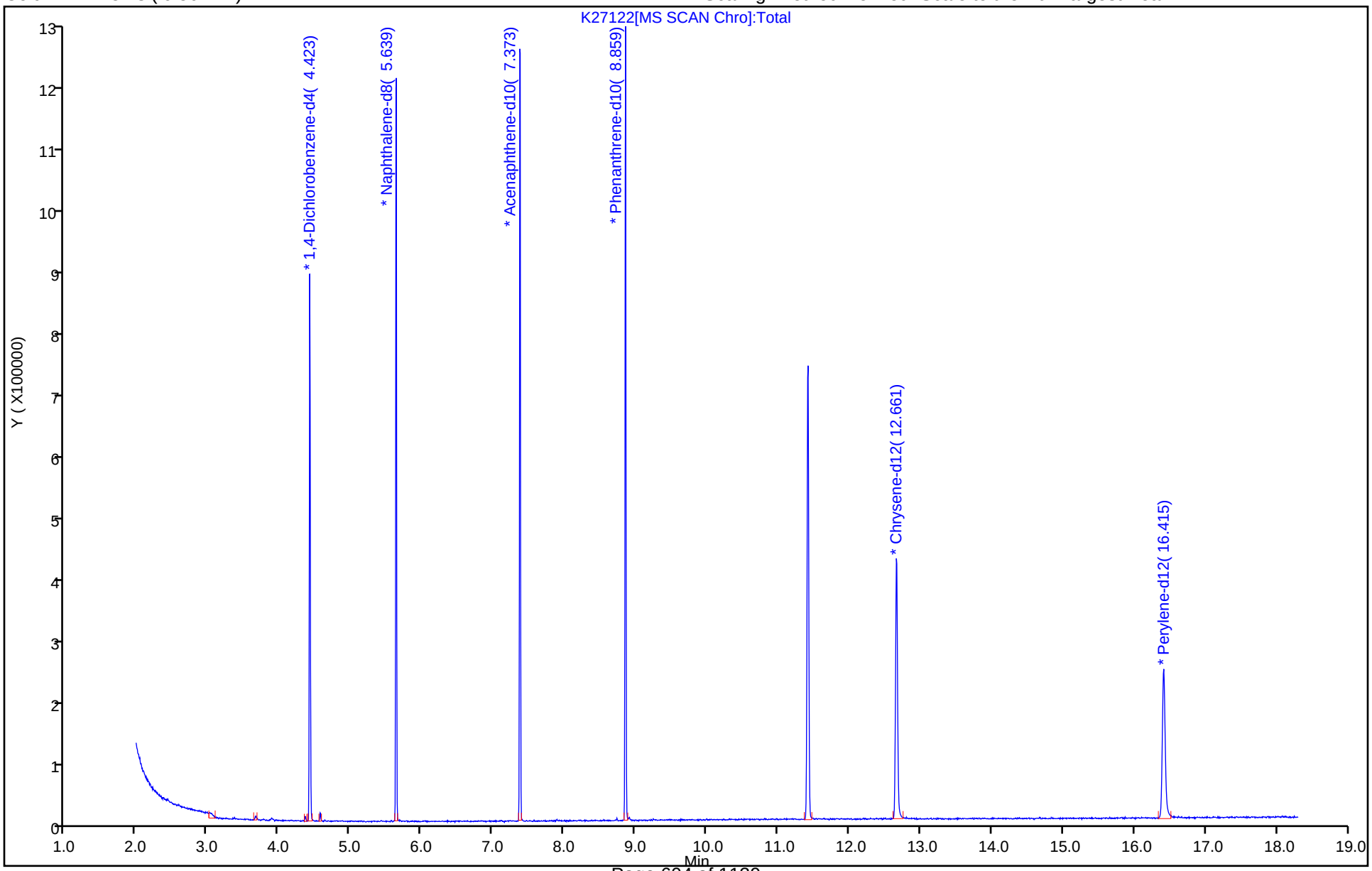
Report Date: 24-Oct-2018 06:02:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27122.D

Injection Date:	23-Oct-2018 18:21:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV FAM			Worklist Smp#:	13
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435306/3 Calibration Date: 10/29/2018 09:03

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27217.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6338	0.6515		82200	80000	2.8	20.0
N-Nitrosodimethylamine	Ave	0.9782	1.006		82200	80000	2.8	20.0
Pyridine	Ave	1.574	1.601		163000	160000	1.7	20.0
Phenol	Ave	1.757	1.768	0.8000	80500	80000	0.6	20.0
Aniline	Ave	2.151	2.144		79800	80000	-0.3	20.0
Bis(2-chloroethyl)ether	Ave	1.307	1.318	0.7000	80700	80000	0.8	20.0
2-Chlorophenol	Ave	1.444	1.476	0.8000	81800	80000	2.2	20.0
1,3-Dichlorobenzene	Ave	1.611	1.635		81200	80000	1.5	20.0
1,4-Dichlorobenzene	Ave	1.618	1.634		80800	80000	1.0	20.0
Benzyl alcohol	Ave	0.9545	0.9663		81000	80000	1.2	20.0
1,2-Dichlorobenzene	Ave	1.540	1.545		80300	80000	0.3	20.0
2-Methylphenol	Ave	1.324	1.320	0.7000	79800	80000	-0.3	20.0
bis (2-chloroisopropyl) ether	Qua		2.446	0.0100	79500	80000	-0.6	20.0
3 & 4 Methylphenol	Ave	1.288	1.260		78300	80000	-2.2	20.0
N-Nitrosodi-n-propylamine	Ave	0.9168	0.8880	0.5000	77500	80000	-3.1	20.0
Acetophenone	Ave	1.786	1.729	0.0100	77500	80000	-3.2	20.0
Hexachloroethane	Ave	0.5990	0.6132	0.3000	81900	80000	2.4	20.0
Nitrobenzene	Ave	0.3668	0.3693		80500	80000	0.7	20.0
Isophorone	Ave	0.6465	0.6344	0.4000	78500	80000	-1.9	20.0
2-Nitrophenol	Ave	0.1953	0.2011	0.1000	82400	80000	3.0	20.0
2,4-Dimethylphenol	Ave	0.3423	0.3448	0.2000	80600	80000	0.7	20.0
Bis(2-chloroethoxy)methane	Ave	0.3953	0.3954	0.3000	80000	80000	0.0	20.0
Benzoic acid	Lin2		0.2209		140000	160000	-12.3	20.0
2,4-Dichlorophenol	Ave	0.2906	0.2923	0.2000	80500	80000	0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.3312	0.3359		81100	80000	1.4	20.0
Naphthalene	Ave	0.9745	0.9723	0.7000	79800	80000	-0.2	20.0
4-Chloroaniline	Ave	0.4095	0.4036	0.0100	78800	80000	-1.5	20.0
2,6-Dichlorophenol	Ave	0.2857	0.2861		80100	80000	0.1	20.0
Hexachlorobutadiene	Ave	0.1837	0.1822	0.0100	79300	80000	-0.8	20.0
Caprolactam	Ave	0.1731	0.1591		73500	80000	-8.1	20.0
4-Chloro-3-methylphenol	Ave	0.2761	0.2679	0.2000	77600	80000	-2.9	20.0
2-Methylnaphthalene	Ave	0.6846	0.6802	0.4000	79500	80000	-0.6	20.0
1-Methylnaphthalene	Ave	0.6396	0.6322		79100	80000	-1.2	20.0
Hexachlorocyclopentadiene	Ave	0.4154	0.4474	0.0500	86200	80000	7.7	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3034	0.2927	0.0100	77200	80000	-3.5	20.0
2,4,6-Trichlorophenol	Ave	0.3810	0.3933	0.2000	82600	80000	3.2	20.0
2,4,5-Trichlorophenol	Ave	0.4165	0.4320	0.2000	83000	80000	3.7	20.0
1,1'-Biphenyl	Ave	1.571	1.642		83700	80000	4.6	20.0
2-Chloronaphthalene	Ave	1.204	1.236	0.8000	82100	80000	2.6	20.0
2-Nitroaniline	Ave	0.3591	0.3610	0.0100	80400	80000	0.5	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435306/3 Calibration Date: 10/29/2018 09:03

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27217.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.182	1.163	0.0100	78800	80000	-1.6	20.0
1,3-Dinitrobenzene	Ave	0.2031	0.2102		82800	80000	3.5	20.0
2,6-Dinitrotoluene	Ave	0.3016	0.3092	0.2000	82000	80000	2.5	20.0
Acenaphthylene	Ave	1.812	1.839	0.9000	81200	80000	1.5	20.0
3-Nitroaniline	Ave	0.3240	0.3188	0.0100	78700	80000	-1.6	20.0
Acenaphthene	Ave	1.177	1.181	0.9000	80300	80000	0.4	20.0
2,4-Dinitrophenol	Lin2		0.1577	0.0100	148000	160000	-7.7	20.0
4-Nitrophenol	Ave	0.1516	0.1497	0.0100	158000	160000	-1.2	20.0
2,4-Dinitrotoluene	Ave	0.3733	0.3680	0.2000	78900	80000	-1.4	20.0
Dibenzofuran	Ave	1.650	1.634	0.8000	79300	80000	-0.9	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3245	0.3192	0.0100	78700	80000	-1.6	20.0
Diethyl phthalate	Ave	1.122	1.087	0.0100	77400	80000	-3.2	20.0
4-Chlorophenyl phenyl ether	Ave	0.6017	0.5691	0.4000	75700	80000	-5.4	20.0
Fluorene	Ave	1.249	1.213	0.9000	77700	80000	-2.9	20.0
4-Nitroaniline	Ave	0.3050	0.2899	0.0100	76100	80000	-4.9	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1259	0.0100	163000	160000	1.9	20.0
Diphenylamine	Ave	1.085	1.070		67000	68000	-1.4	20.0
N-Nitrosodiphenylamine	Ave	0.5695	0.6018	0.0100	84500	80000	5.7	20.0
1,2-Diphenylhydrazine	Ave	1.227	1.213		80000	80900	-1.1	20.0
Azobenzene	Ave	1.240	1.227		79100	80000	-1.1	20.0
4-Bromophenyl phenyl ether	Ave	0.2219	0.2233	0.1000	80500	80000	0.6	20.0
Hexachlorobenzene	Ave	0.2189	0.2171	0.1000	79400	80000	-0.8	20.0
Atrazine	Ave	0.1908	0.1940		81300	80000	1.7	20.0
Pentachlorophenol	Lin2		0.1357	0.0500	166000	160000	3.9	20.0
Phenanthrene	Ave	1.060	1.086	0.7000	81900	80000	2.4	20.0
Anthracene	Ave	1.100	1.122	0.7000	81700	80000	2.1	20.0
Carbazole	Ave	0.9596	1.003	0.0100	83600	80000	4.5	20.0
Alachlor	Ave	0.1328	0.1356		81700	80000	2.1	20.0
Di-n-butyl phthalate	Ave	1.055	1.100	0.0100	83400	80000	4.2	20.0
Fluoranthene	Ave	1.069	1.076	0.6000	80500	80000	0.7	20.0
Pyrene	Ave	1.416	1.418	0.6000	80100	80000	0.2	20.0
Famphur	Ave	0.4171	0.4530		86900	80000	8.6	20.0
Butyl benzyl phthalate	Ave	0.5492	0.5772	0.0100	84100	80000	5.1	20.0
3,3'-Dichlorobenzidine	Ave	0.3557	0.3447	0.0100	77500	80000	-3.1	20.0
Benzo[a]anthracene	Ave	1.245	1.243	0.8000	79900	80000	-0.1	20.0
Chrysene	Ave	1.209	1.257	0.7000	83200	80000	4.0	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.6994	0.7494	0.0100	85700	80000	7.1	20.0
Di-n-octyl phthalate	Lin2		1.216	0.0100	81900	80000	2.4	20.0
Benzo[b]fluoranthene	Ave	1.150	1.169	0.7000	81300	80000	1.6	20.0
Benzo[k]fluoranthene	Ave	1.237	1.381	0.7000	89300	80000	11.7	20.0
Benzo[a]pyrene	Ave	1.160	1.266	0.7000	87400	80000	9.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435306/3 Calibration Date: 10/29/2018 09:03

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27217.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	0.8896	0.9140	0.5000	82200	80000	2.7	20.0
Dibenz(a,h)anthracene	Ave	0.9634	1.017	0.4000	84500	80000	5.6	20.0
Benzo[g,h,i]perylene	Ave	1.077	1.141	0.5000	84800	80000	5.9	20.0
2-Fluorophenol (Surr)	Ave	1.493	1.524		81700	80000	2.1	20.0
Phenol-d5 (Surr)	Ave	1.695	1.722		81300	80000	1.6	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3778	0.3832		81100	80000	1.4	20.0
2-Fluorobiphenyl	Ave	1.396	1.478		84700	80000	5.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1667	0.1557		74700	80000	-6.6	20.0
Terphenyl-d14 (Surr)	Ave	0.9813	0.9949		81100	80000	1.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 29-Oct-2018 09:03:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:12 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 29-Oct-2018 10:27:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	96	125176	40.0	40.0	
* 2 Naphthalene-d8	136	5.592	5.592	0.000	100	476670	40.0	40.0	
* 3 Acenaphthene-d10	164	7.332	7.332	0.000	95	221308	40.0	40.0	
* 4 Phenanthrene-d10	188	8.806	8.806	0.000	98	334420	40.0	40.0	a
* 5 Chrysene-d12	240	12.561	12.561	0.000	99	262439	40.0	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	98	237620	40.0	40.0	
$ 7 2-Fluorophenol	112	3.207	3.207	0.000	94	381660	80.0	81.7	
$ 8 Phenol-d5	99	4.018	4.018	0.000	97	431196	80.0	81.3	
$ 9 Nitrobenzene-d5	82	4.887	4.887	0.000	96	365361	80.0	81.1	
$ 11 2-Fluorobiphenyl	172	6.656	6.656	0.000	100	654155	80.0	84.7	
$ 12 2,4,6-Tribromophenol	330	8.113	8.113	0.000	92	68900	80.0	74.7	
$ 13 Terphenyl-d14	244	10.634	10.634	0.000	98	522173	80.0	81.1	
19 1,4-Dioxane	88	1.867	1.867	0.000	95	163096	80.0	82.2	
20 N-Nitrosodimethylamine	74	2.085	2.085	0.000	86	251735	80.0	82.2	
21 Pyridine	79	2.132	2.132	0.000	82	801401	160.0	162.7	
32 Phenol	94	4.030	4.030	0.000	97	442704	80.0	80.5	
34 Aniline	93	4.065	4.065	0.000	96	536840	80.0	79.8	
35 Alpha Methyl Styrene	118	4.124	4.124	0.000	93	367040	80.0	79.7	
36 Bis(2-chloroethyl)ether	93	4.112	4.112	0.000	96	329977	80.0	80.7	
38 n-Decane	43	4.229	4.229	0.000	94	507379	80.0	79.3	
39 2-Chlorophenol	128	4.182	4.182	0.000	98	369514	80.0	81.8	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	98	409405	80.0	81.2	
42 1,4-Dichlorobenzene	146	4.394	4.394	0.000	94	408996	80.0	80.8	
43 Benzyl alcohol	108	4.494	4.494	0.000	93	241925	80.0	81.0	
44 1,2-Dichlorobenzene	146	4.541	4.541	0.000	97	386783	80.0	80.3	
45 2-Methylphenol	108	4.594	4.594	0.000	96	330493	80.0	79.8	
46 2,2'-oxybis[1-chloropropan	45	4.623	4.623	0.000	90	612419	80.0	79.5	
47 Indene	116	4.623	4.623	0.000	92	1086076	160.0	157.2	
49 3 & 4 Methylphenol	108	4.741	4.741	0.000	82	315428	80.0	78.3	
50 3-Methylphenol	108	4.741	4.741	0.000	91	315428	80.0	78.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.741	4.741	0.000	93	315428	80.0	78.3	
52 N-Nitrosodi-n-propylamine	70	4.741	4.741	0.000	86	222320	80.0	77.5	
54 Acetophenone	105	4.746	4.746	0.000	86	432932	80.0	77.5	
58 Hexachloroethane	117	4.864	4.864	0.000	93	153503	80.0	81.9	
59 Nitrobenzene	77	4.905	4.905	0.000	96	352049	80.0	80.5	
63 Isophorone	82	5.134	5.134	0.000	97	604787	80.0	78.5	
64 2-Nitrophenol	139	5.216	5.216	0.000	93	191678	80.0	82.4	
65 2,4-Dimethylphenol	107	5.252	5.252	0.000	94	328720	80.0	80.6	
68 Benzoic acid	105	5.363	5.363	0.000	90	421135	160.0	140.4	
69 Bis(2-chloroethoxy)methane	93	5.340	5.340	0.000	95	376956	80.0	80.0	
71 3,5-Dimethylphenol	107	5.381	5.381	0.000	84	331579	80.0	81.5	
74 2,4-Dichlorophenol	162	5.451	5.451	0.000	95	278633	80.0	80.5	
76 1,2,4-Trichlorobenzene	180	5.540	5.540	0.000	94	320203	80.0	81.1	
79 Naphthalene	128	5.616	5.616	0.000	97	926969	80.0	79.8	
80 4-Chloroaniline	127	5.657	5.657	0.000	96	384743	80.0	78.8	
81 2,6-Dichlorophenol	162	5.669	5.669	0.000	96	272726	80.0	80.1	
83 Hexachlorobutadiene	225	5.745	5.745	0.000	96	173714	80.0	79.3	
86 Caprolactam	55	5.980	5.980	0.000	75	151632	80.0	73.5	
89 4-Chloro-3-methylphenol	107	6.133	6.133	0.000	96	255430	80.0	77.6	
93 2-Methylnaphthalene	142	6.292	6.292	0.000	95	648472	80.0	79.5	
96 1-Methylnaphthalene	142	6.392	6.392	0.000	96	602660	80.0	79.1	
97 Hexachlorocyclopentadiene	237	6.462	6.462	0.000	96	198022	80.0	86.2	
98 1,2,4,5-Tetrachlorobenzene	216	6.468	6.468	0.000	97	279082	80.0	77.2	
100 2,4,6-Trichlorophenol	196	6.574	6.574	0.000	92	174092	80.0	82.6	
101 2,3-Dichlorobenzenamine	161	6.568	6.568	0.000	96	281328	80.0	79.8	
102 2,4,5-Trichlorophenol	196	6.609	6.609	0.000	94	191222	80.0	83.0	
104 1,1'-Biphenyl	154	6.756	6.756	0.000	94	726928	80.0	83.7	
106 2-Chloronaphthalene	162	6.779	6.779	0.000	96	546968	80.0	82.1	
108 2-Nitroaniline	65	6.867	6.867	0.000	85	159772	80.0	80.4	
111 Dimethyl phthalate	163	7.050	7.050	0.000	99	514910	80.0	78.8	
112 1,3-Dinitrobenzene	168	7.073	7.073	0.000	90	93028	80.0	82.8	
113 2,6-Dinitrotoluene	165	7.103	7.103	0.000	94	136839	80.0	82.0	
114 Acenaphthylene	152	7.191	7.191	0.000	98	813966	80.0	81.2	
115 3-Nitroaniline	138	7.273	7.273	0.000	94	141099	80.0	78.7	
117 Acenaphthene	153	7.361	7.361	0.000	94	522587	80.0	80.3	
118 2,4-Dinitrophenol	184	7.379	7.379	0.000	85	139574	160.0	147.6	
119 4-Nitrophenol	109	7.443	7.443	0.000	94	132518	160.0	158.0	
122 2,4-Dinitrotoluene	165	7.508	7.508	0.000	94	162886	80.0	78.9	
123 Dibenzofuran	168	7.531	7.531	0.000	98	723427	80.0	79.3	
125 2,3,4,6-Tetrachlorophenol	232	7.655	7.655	0.000	73	141291	80.0	78.7	
127 Hexadecane	57	7.778	7.778	0.000	90	482657	80.0	82.8	
130 Diethyl phthalate	149	7.749	7.749	0.000	98	480902	80.0	77.4	
134 4-Chlorophenyl phenyl ethe	204	7.866	7.866	0.000	94	251891	80.0	75.7	
135 Fluorene	166	7.878	7.878	0.000	94	536891	80.0	77.7	
138 4-Nitroaniline	138	7.884	7.884	0.000	89	128331	80.0	76.1	
139 4,6-Dinitro-2-methylphenol	198	7.919	7.919	0.000	88	168434	160.0	163.0	
141 N-Nitrosodiphenylamine	169	7.984	7.984	0.000	61	402530	80.0	84.5	a
142 Diphenylamine	169	7.984	7.984	0.000	95	402530	68.0	67.0	
143 1,2-Diphenylhydrazine	77	8.025	8.025	0.000	41	542881	80.9	80.0	
144 Azobenzene	77	8.025	8.025	0.000	98	542881	80.0	79.1	
147 2,4,6 - Tribromophenol	330	8.113	8.113	0.000	92	68900	80.0	74.3	
156 4-Bromophenyl phenyl ether	248	8.354	8.354	0.000	68	149359	80.0	80.5	a

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.436	8.436	0.000	95	145199	80.0	79.4	
159 Atrazine	200	8.513	8.513	0.000	90	129767	80.0	81.3	
161 n-Octadecane	85	8.695	8.695	0.000	92	148228	80.0	87.4	
163 Pentachlorophenol	266	8.624	8.624	0.000	93	181493	160.0	166.2	
168 Phenanthrene	178	8.836	8.836	0.000	97	726199	80.0	81.9	a
169 Anthracene	178	8.883	8.883	0.000	96	750639	80.0	81.7	a
170 Carbazole	167	9.036	9.036	0.000	95	670860	80.0	83.6	
171 Alachlor	188	9.182	9.182	0.000	94	90722	80.0	81.7	
173 Di-n-butyl phthalate	149	9.376	9.376	0.000	99	735502	80.0	83.4	
179 Fluoranthene	202	10.111	10.111	0.000	98	720001	80.0	80.5	
182 Pyrene	202	10.410	10.410	0.000	97	744362	80.0	80.1	
188 Famphur	218	11.333	11.333	0.000	84	237769	80.0	86.9	
190 Butyl benzyl phthalate	149	11.456	11.456	0.000	97	302973	80.0	84.1	
195 Bis(2-ethylhexyl) phthalat	149	12.737	12.737	0.000	97	393343	80.0	85.7	
197 3,3'-Dichlorobenzidine	252	12.508	12.508	0.000	73	180944	80.0	77.5	
198 Benzo[a]anthracene	228	12.543	12.543	0.000	99	652373	80.0	79.9	
199 Chrysene	228	12.620	12.620	0.000	97	659632	80.0	83.2	
201 Di-n-octyl phthalate	149	14.441	14.441	0.000	99	638160	80.0	81.9	
203 Benzo[b]fluoranthene	252	15.228	15.228	0.000	97	555412	80.0	81.3	
204 Benzo[k]fluoranthene	252	15.305	15.305	0.000	99	656487	80.0	89.3	
206 Benzo[e]pyrene	252	15.969	15.969	0.000	97	551396	80.0	84.5	
207 Benzo[a]pyrene	252	16.110	16.110	0.000	79	601877	80.0	87.4	
213 Dibenz(a,h)anthracene	278	19.377	19.377	0.000	94	483538	80.0	84.5	
214 Indeno[1,2,3-cd]pyrene	276	19.277	19.277	0.000	99	479726	80.0	82.2	
215 Benzo[g,h,i]perylene	276	19.988	19.988	0.000	98	542050	80.0	84.8	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

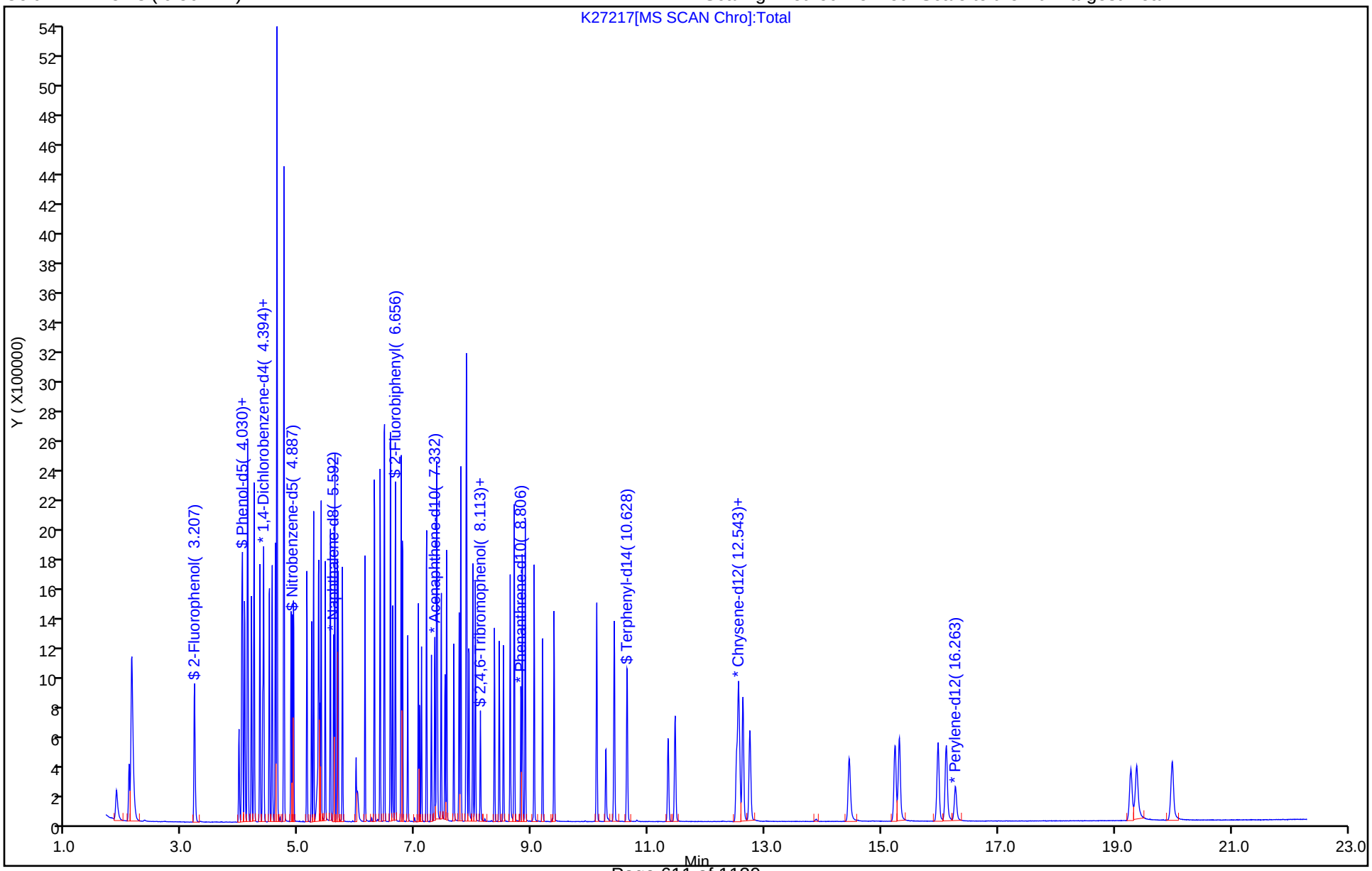
Report Date: 30-Oct-2018 07:24:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D

Injection Date:	29-Oct-2018 09:03:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCV HSL			Worklist Smp#:	3
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSK_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

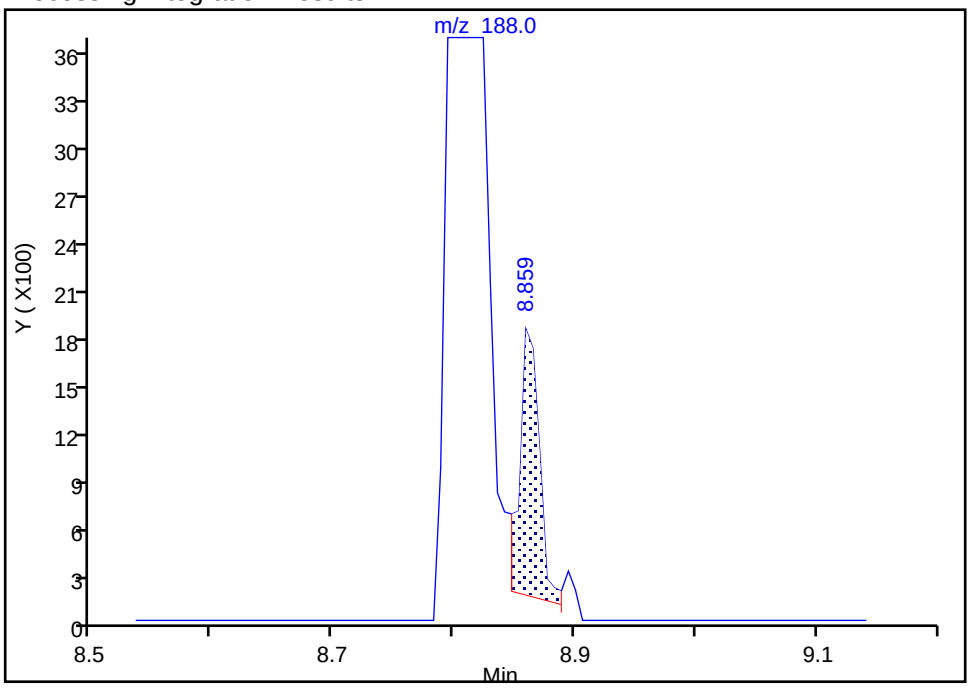
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D
Injection Date: 29-Oct-2018 09:03:30 Instrument ID: SMS_K
Lims ID: CCV HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

* 4 Phenanthrene-d10, CAS: 1517-22-2

Signal: 1

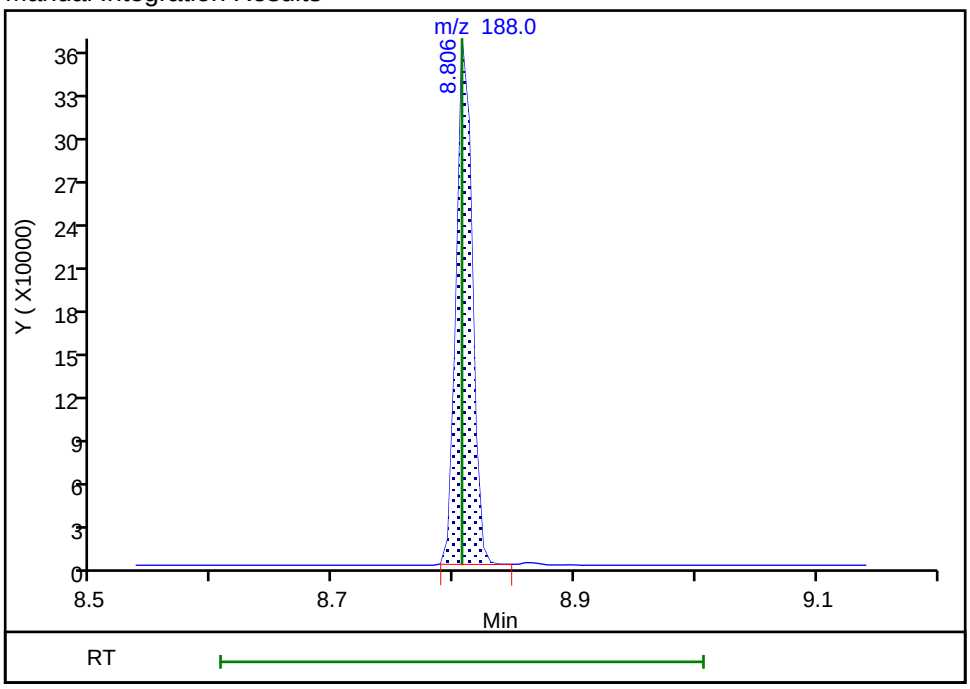
Processing Integration Results

RT: 8.86
Area: 1932
Amount: 40.000000
Amount Units: ug/ml



Manual Integration Results

RT: 8.81
Area: 334420
Amount: 40.000000
Amount Units: ug/ml



Reviewer: kiekeld, 29-Oct-2018 09:29:40
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

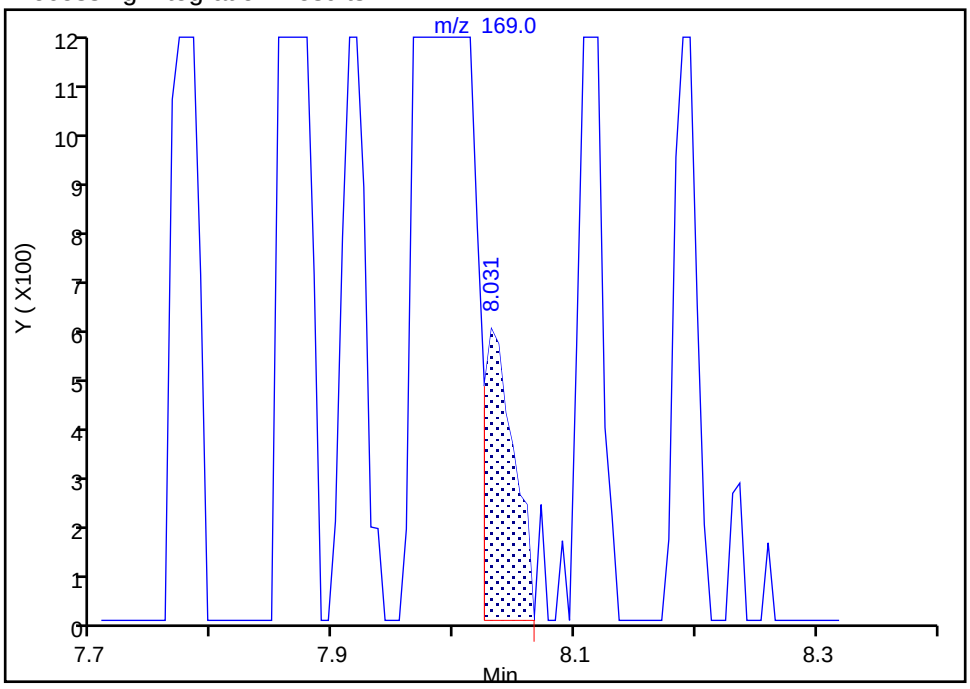
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D
Injection Date: 29-Oct-2018 09:03:30 Instrument ID: SMS_K
Lims ID: CCV HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

141 N-Nitrosodiphenylamine, CAS: 86-30-6

Signal: 1

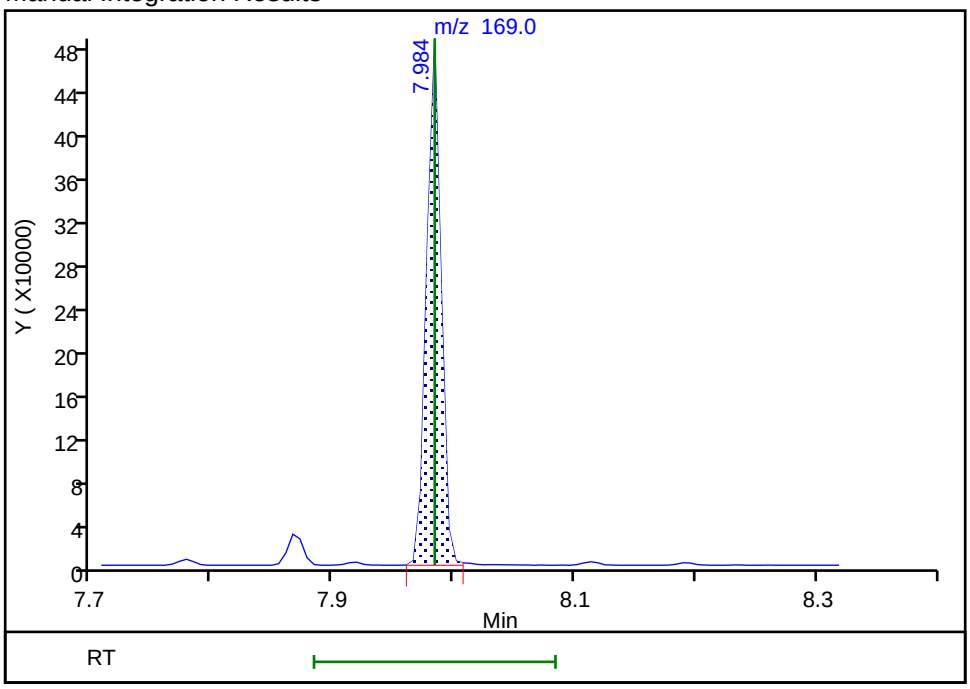
Processing Integration Results

RT: 8.03
Area: 985
Amount: 0.206880
Amount Units: ug/ml



Manual Integration Results

RT: 7.98
Area: 402530
Amount: 84.543582
Amount Units: ug/ml



Reviewer: kiekeld, 29-Oct-2018 09:30:10
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

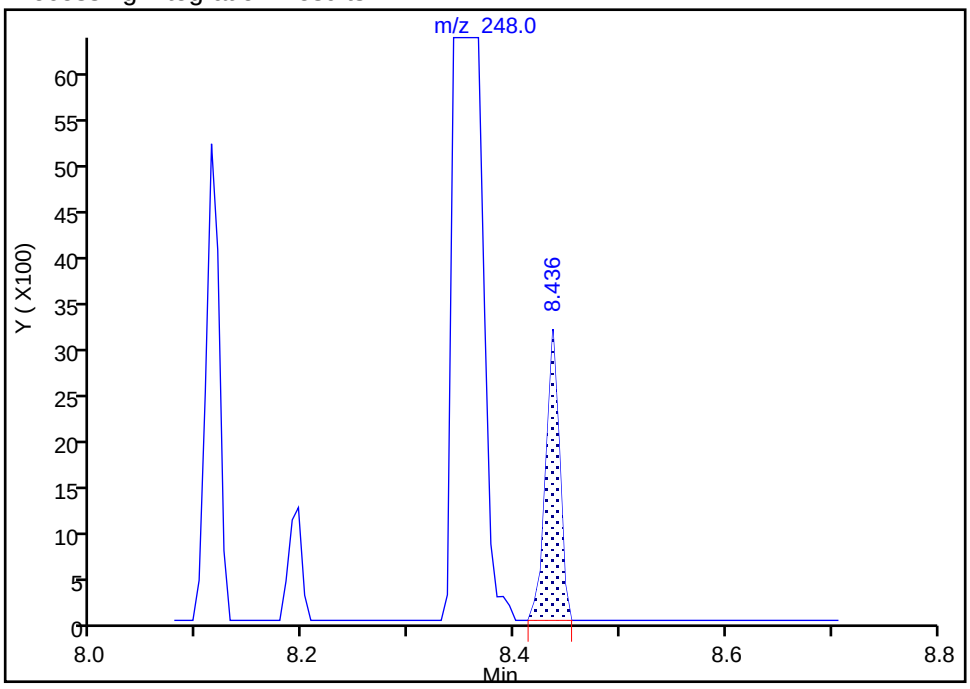
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D
Injection Date: 29-Oct-2018 09:03:30 Instrument ID: SMS_K
Lims ID: CCV HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

156 4-Bromophenyl phenyl ether, CAS: 101-55-3

Signal: 1

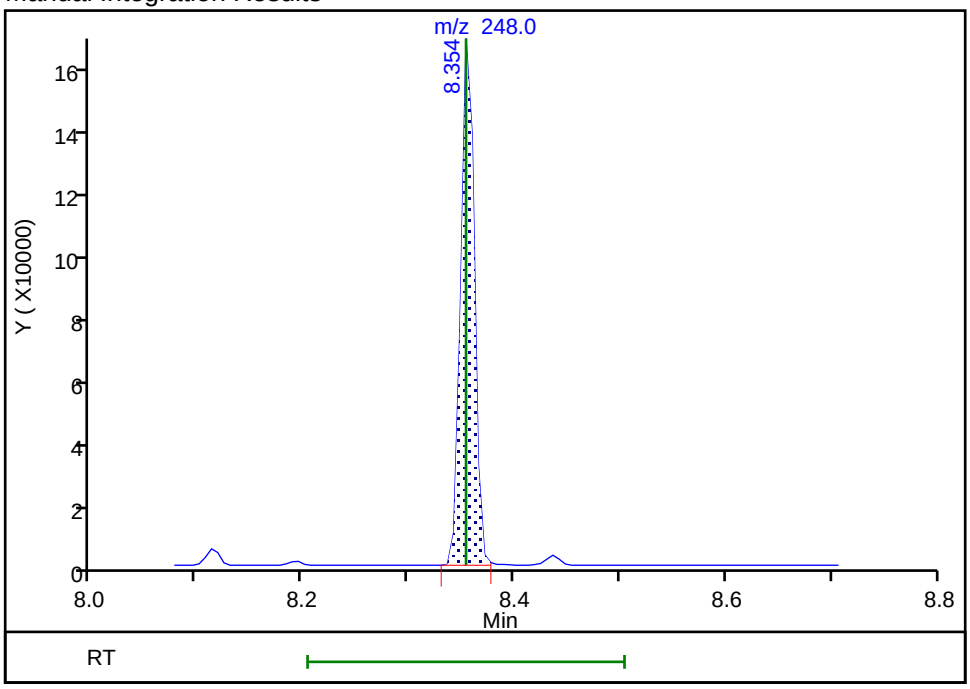
Processing Integration Results

RT: 8.44
Area: 2860
Amount: 1.541773
Amount Units: ug/ml



Manual Integration Results

RT: 8.35
Area: 149359
Amount: 80.516655
Amount Units: ug/ml



Reviewer: kiekeld, 29-Oct-2018 09:30:20
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

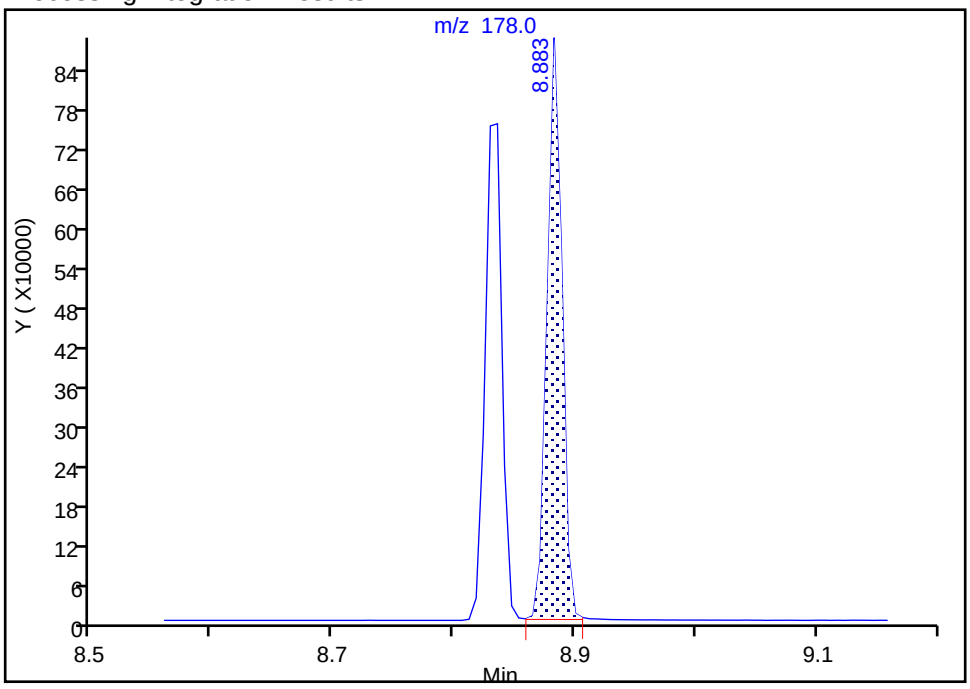
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D
Injection Date: 29-Oct-2018 09:03:30 Instrument ID: SMS_K
Lims ID: CCV HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

168 Phenanthrene, CAS: 85-01-8

Signal: 1

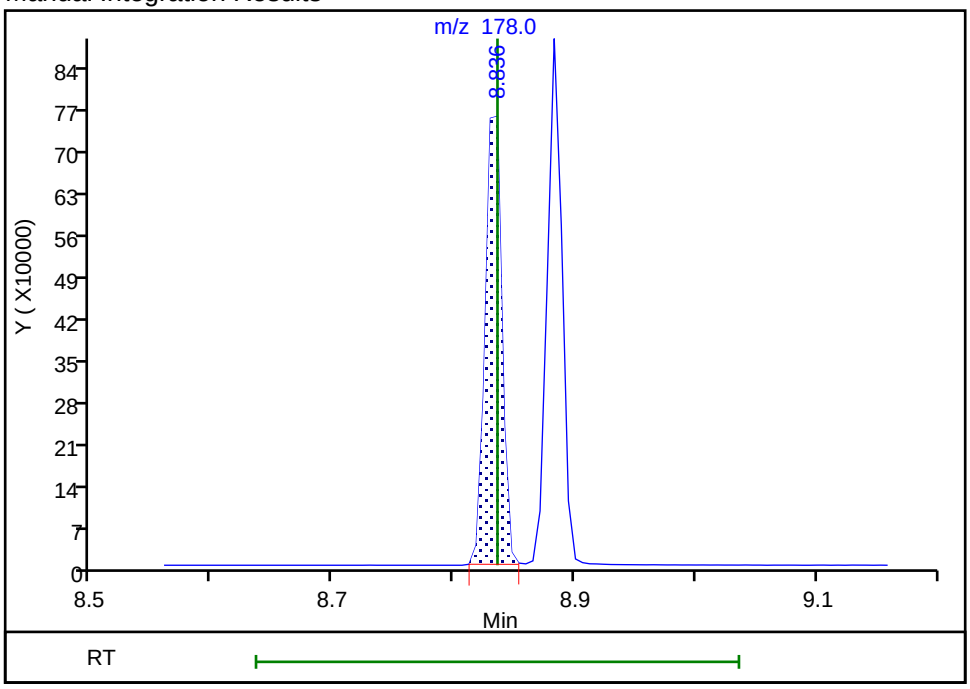
Processing Integration Results

RT: 8.88
Area: 750639
Amount: 84.664716
Amount Units: ug/ml



Manual Integration Results

RT: 8.84
Area: 726199
Amount: 81.908124
Amount Units: ug/ml



Reviewer: kiekeld, 29-Oct-2018 09:30:28
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

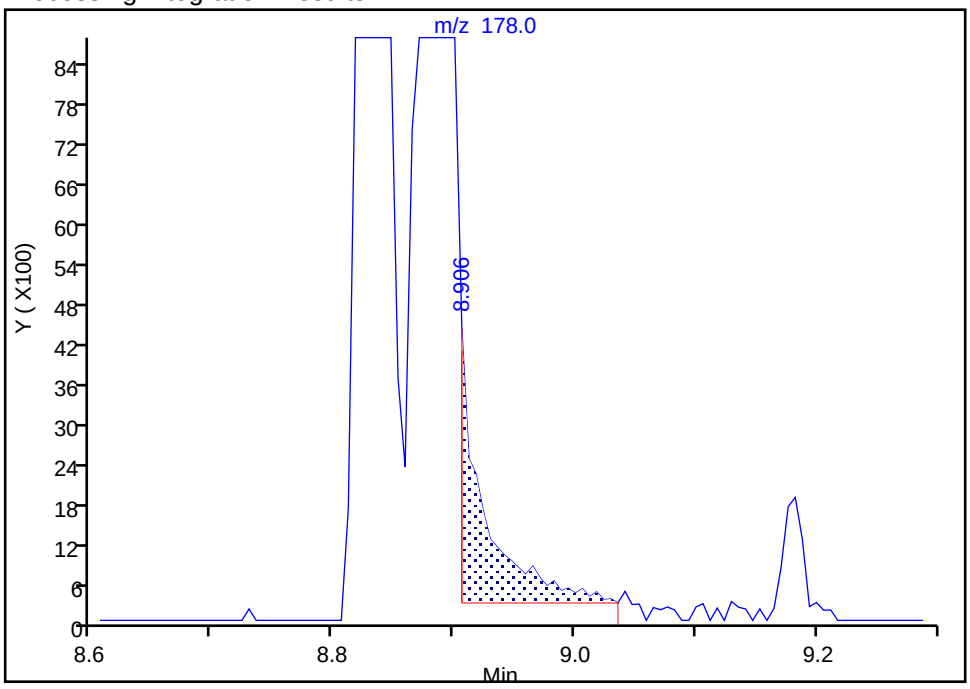
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27217.D
Injection Date: 29-Oct-2018 09:03:30 Instrument ID: SMS_K
Lims ID: CCV HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

169 Anthracene, CAS: 120-12-7

Signal: 1

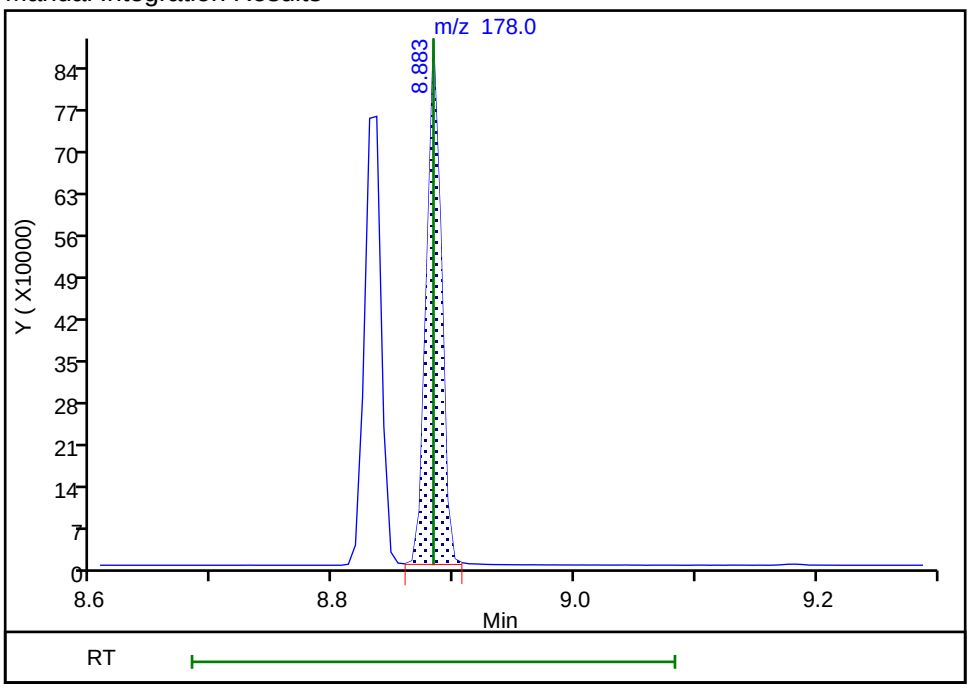
Processing Integration Results

RT: 8.91
Area: 5749
Amount: 0.625351
Amount Units: ug/ml



Manual Integration Results

RT: 8.88
Area: 750639
Amount: 81.651277
Amount Units: ug/ml



Reviewer: kiekeld, 29-Oct-2018 09:30:31
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435306/28 Calibration Date: 10/29/2018 20:28

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27242.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6338	0.6047		76300	80000	-4.6	50.0
N-Nitrosodimethylamine	Ave	0.9782	0.9334		76300	80000	-4.6	50.0
Pyridine	Ave	1.574	1.508		153000	160000	-4.2	50.0
Phenol	Ave	1.757	1.691	0.8000	77000	80000	-3.8	50.0
Aniline	Ave	2.151	2.026		75400	80000	-5.8	50.0
Bis(2-chloroethyl)ether	Ave	1.307	1.240	0.7000	75900	80000	-5.1	50.0
2-Chlorophenol	Ave	1.444	1.413	0.8000	78300	80000	-2.1	50.0
1,3-Dichlorobenzene	Ave	1.611	1.560		77500	80000	-3.2	50.0
1,4-Dichlorobenzene	Ave	1.618	1.574		77800	80000	-2.7	50.0
Benzyl alcohol	Ave	0.9545	0.9031		75700	80000	-5.4	50.0
1,2-Dichlorobenzene	Ave	1.540	1.492		77500	80000	-3.1	50.0
2-Methylphenol	Ave	1.324	1.274	0.7000	77000	80000	-3.8	50.0
bis (2-chloroisopropyl) ether	Qua		2.256	0.0100	72500	80000	-9.4	50.0
3 & 4 Methylphenol	Ave	1.288	1.218		75700	80000	-5.4	50.0
N-Nitrosodi-n-propylamine	Ave	0.9168	0.8559	0.5000	74700	80000	-6.6	50.0
Acetophenone	Ave	1.786	1.678	0.0100	75200	80000	-6.1	50.0
Hexachloroethane	Ave	0.5990	0.5904	0.3000	78900	80000	-1.4	50.0
Nitrobenzene	Ave	0.3668	0.3506		76500	80000	-4.4	50.0
Isophorone	Ave	0.6465	0.5978	0.4000	74000	80000	-7.5	50.0
2-Nitrophenol	Ave	0.1953	0.1903	0.1000	78000	80000	-2.6	50.0
2,4-Dimethylphenol	Ave	0.3423	0.3259	0.2000	76200	80000	-4.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.3953	0.3731	0.3000	75500	80000	-5.6	50.0
Benzoic acid	Lin2		0.2316		147000	160000	-8.2	50.0
2,4-Dichlorophenol	Ave	0.2906	0.2756	0.2000	75900	80000	-5.2	50.0
1,2,4-Trichlorobenzene	Ave	0.3312	0.3196		77200	80000	-3.5	50.0
Naphthalene	Ave	0.9745	0.9395	0.7000	77100	80000	-3.6	50.0
4-Chloroaniline	Ave	0.4095	0.3799	0.0100	74200	80000	-7.2	50.0
2,6-Dichlorophenol	Ave	0.2857	0.2725		76300	80000	-4.6	50.0
Hexachlorobutadiene	Ave	0.1837	0.1731	0.0100	75400	80000	-5.8	50.0
Caprolactam	Ave	0.1731	0.1530		70700	80000	-11.6	50.0
4-Chloro-3-methylphenol	Ave	0.2761	0.2557	0.2000	74100	80000	-7.4	50.0
2-Methylnaphthalene	Ave	0.6846	0.6633	0.4000	77500	80000	-3.1	50.0
1-Methylnaphthalene	Ave	0.6396	0.5990		74900	80000	-6.3	50.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3034	0.2842	0.0100	74900	80000	-6.3	50.0
Hexachlorocyclopentadiene	Ave	0.4154	0.3888	0.0500	74900	80000	-6.4	50.0
2,4,6-Trichlorophenol	Ave	0.3810	0.3712	0.2000	77900	80000	-2.6	50.0
2,4,5-Trichlorophenol	Ave	0.4165	0.4066	0.2000	78100	80000	-2.4	50.0
1,1'-Biphenyl	Ave	1.571	1.530		77900	80000	-2.6	50.0
2-Chloronaphthalene	Ave	1.204	1.152	0.8000	76500	80000	-4.4	50.0
2-Nitroaniline	Ave	0.3591	0.3328	0.0100	74100	80000	-7.3	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435306/28 Calibration Date: 10/29/2018 20:28

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27242.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.182	1.091	0.0100	73900	80000	-7.7	50.0
1,3-Dinitrobenzene	Ave	0.2031	0.1953		76900	80000	-3.8	50.0
2,6-Dinitrotoluene	Ave	0.3016	0.2834	0.2000	75200	80000	-6.0	50.0
Acenaphthylene	Ave	1.812	1.729	0.9000	76400	80000	-4.5	50.0
3-Nitroaniline	Ave	0.3240	0.2880	0.0100	71100	80000	-11.1	50.0
Acenaphthene	Ave	1.177	1.126	0.9000	76600	80000	-4.3	50.0
2,4-Dinitrophenol	Lin2		0.1386	0.0100	131000	160000	-18.3	50.0
4-Nitrophenol	Ave	0.1516	0.1373	0.0100	145000	160000	-9.4	50.0
2,4-Dinitrotoluene	Ave	0.3733	0.3373	0.2000	72300	80000	-9.7	50.0
Dibenzofuran	Ave	1.650	1.572	0.8000	76200	80000	-4.7	50.0
2,3,4,6-Tetrachlorophenol	Ave	0.3245	0.3068	0.0100	75600	80000	-5.5	50.0
Diethyl phthalate	Ave	1.122	1.013	0.0100	72200	80000	-9.7	50.0
4-Chlorophenyl phenyl ether	Ave	0.6017	0.5543	0.4000	73700	80000	-7.9	50.0
Fluorene	Ave	1.249	1.143	0.9000	73200	80000	-8.5	50.0
4-Nitroaniline	Ave	0.3050	0.2653	0.0100	69600	80000	-13.0	50.0
4,6-Dinitro-2-methylphenol	Lin2		0.1132	0.0100	147000	160000	-8.0	50.0
Diphenylamine	Ave	1.085	1.003		62800	68000	-7.6	50.0
N-Nitrosodiphenylamine	Ave	0.5695	0.5623	0.0100	79000	80000	-1.3	50.0
1,2-Diphenylhydrazine	Ave	1.227	1.115		73500	80900	-9.1	50.0
Azobenzene	Ave	1.240	1.128		72700	80000	-9.1	50.0
4-Bromophenyl phenyl ether	Ave	0.2219	0.2143	0.1000	77300	80000	-3.4	50.0
Hexachlorobenzene	Ave	0.2189	0.2108	0.1000	77000	80000	-3.7	50.0
Atrazine	Ave	0.1908	0.1748		73300	80000	-8.4	50.0
Pentachlorophenol	Lin2		0.1221	0.0500	150000	160000	-6.3	50.0
Phenanthrene	Ave	1.060	1.006	0.7000	75900	80000	-5.2	50.0
Anthracene	Ave	1.100	1.036	0.7000	75400	80000	-5.8	50.0
Carbazole	Ave	0.9596	0.8896	0.0100	74200	80000	-7.3	50.0
Alachlor	Ave	0.1328	0.1217		73300	80000	-8.3	50.0
Di-n-butyl phthalate	Ave	1.055	0.9811	0.0100	74400	80000	-7.0	50.0
Fluoranthene	Ave	1.069	0.9859	0.6000	73700	80000	-7.8	50.0
Pyrene	Ave	1.416	1.279	0.6000	72300	80000	-9.7	50.0
Famphur	Ave	0.4171	0.3920		75200	80000	-6.0	50.0
Butyl benzyl phthalate	Ave	0.5492	0.5085	0.0100	74100	80000	-7.4	50.0
3,3'-Dichlorobenzidine	Ave	0.3557	0.2874	0.0100	64700	80000	-19.2	50.0
Benzo[a]anthracene	Ave	1.245	1.100	0.8000	70700	80000	-11.6	50.0
Chrysene	Ave	1.209	1.131	0.7000	74900	80000	-6.4	50.0
Bis(2-ethylhexyl) phthalate	Ave	0.6994	0.6336	0.0100	72500	80000	-9.4	50.0
Di-n-octyl phthalate	Lin2		0.8790	0.0100	59600	80000	-25.5	50.0
Benzo[b]fluoranthene	Ave	1.150	1.029	0.7000	71600	80000	-10.5	50.0
Benzo[k]fluoranthene	Ave	1.237	1.293	0.7000	83600	80000	4.5	50.0
Benzo[a]pyrene	Ave	1.160	1.138	0.7000	78500	80000	-1.9	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435306/28 Calibration Date: 10/29/2018 20:28

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27242.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	0.8896	0.6851	0.5000	61600	80000	-23.0	50.0
Dibenz(a,h)anthracene	Ave	0.9634	0.8685	0.4000	72100	80000	-9.9	50.0
Benzo[g,h,i]perylene	Ave	1.077	1.021	0.5000	75900	80000	-5.2	50.0
2-Fluorophenol (Surr)	Ave	1.493	1.414		75700	80000	-5.3	50.0
Phenol-d5 (Surr)	Ave	1.695	1.627		76800	80000	-4.0	50.0
Nitrobenzene-d5 (Surr)	Ave	0.3778	0.3548		75100	80000	-6.1	50.0
2-Fluorobiphenyl	Ave	1.396	1.355		77600	80000	-3.0	50.0
2,4,6-Tribromophenol (Surr)	Ave	0.1667	0.1476		70800	80000	-11.4	50.0
Terphenyl-d14 (Surr)	Ave	0.9813	0.8706		71000	80000	-11.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27242.D
Lims ID: CCVC HSL
Client ID:
Sample Type: CCVC
Inject. Date: 29-Oct-2018 20:28:30 ALS Bottle#: 27 Worklist Smp#: 28
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCVC HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:25:08 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 07:10:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	96	128359	40.0	40.0	
* 2 Naphthalene-d8	136	5.592	5.593	-0.001	100	502403	40.0	40.0	
* 3 Acenaphthene-d10	164	7.326	7.326	0.000	94	242545	40.0	40.0	
* 4 Phenanthrene-d10	188	8.806	8.807	0.000	97	367675	40.0	40.0	
* 5 Chrysene-d12	240	12.555	12.555	0.000	99	292259	40.0	40.0	
* 6 Perylene-d12	264	16.257	16.263	-0.006	98	255229	40.0	40.0	
$ 7 2-Fluorophenol	112	3.207	3.207	0.000	94	362892	80.0	75.7	
$ 8 Phenol-d5	99	4.018	4.018	0.000	97	417613	80.0	76.8	
$ 9 Nitrobenzene-d5	82	4.887	4.887	0.000	94	356488	80.0	75.1	
$ 11 2-Fluorobiphenyl	172	6.650	6.656	-0.006	100	657320	80.0	77.6	
$ 12 2,4,6-Tribromophenol	330	8.113	8.113	0.000	94	71611	80.0	70.8	
$ 13 Terphenyl-d14	244	10.622	10.634	-0.012	98	508886	80.0	71.0	
19 1,4-Dioxane	88	1.867	1.867	0.000	96	155228	80.0	76.3	
20 N-Nitrosodimethylamine	74	2.085	2.085	0.000	85	239608	80.0	76.3	
21 Pyridine	79	2.132	2.132	0.000	83	774180	160.0	153.2	
32 Phenol	94	4.029	4.030	-0.001	98	434030	80.0	77.0	
34 Aniline	93	4.065	4.065	0.000	97	520184	80.0	75.4	
35 Alpha Methyl Styrene	118	4.123	4.124	-0.001	93	357646	80.0	75.7	
36 Bis(2-chloroethyl)ether	93	4.112	4.112	0.000	95	318434	80.0	75.9	
38 n-Decane	43	4.229	4.229	0.000	93	474297	80.0	72.3	
39 2-Chlorophenol	128	4.182	4.182	0.000	98	362686	80.0	78.3	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	98	400532	80.0	77.5	
42 1,4-Dichlorobenzene	146	4.394	4.394	0.000	94	404004	80.0	77.8	
43 Benzyl alcohol	108	4.494	4.494	0.000	92	231830	80.0	75.7	
44 1,2-Dichlorobenzene	146	4.541	4.541	0.000	97	382939	80.0	77.5	
45 2-Methylphenol	108	4.594	4.594	0.000	96	327015	80.0	77.0	
46 2,2'-oxybis[1-chloropropan	45	4.623	4.623	0.000	90	579247	80.0	72.5	
47 Indene	116	4.623	4.623	0.000	91	1067360	160.0	150.7	
49 3 & 4 Methylphenol	108	4.740	4.741	-0.001	84	312723	80.0	75.7	
50 3-Methylphenol	108	4.740	4.741	-0.001	92	312723	80.0	75.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.740	4.741	-0.001	93	312723	80.0	75.7	
52 N-Nitrosodi-n-propylamine	70	4.740	4.741	-0.001	83	219719	80.0	74.7	
54 Acetophenone	105	4.746	4.746	0.000	90	430660	80.0	75.2	
58 Hexachloroethane	117	4.864	4.864	0.000	93	151569	80.0	78.9	
59 Nitrobenzene	77	4.905	4.905	0.000	95	352283	80.0	76.5	
63 Isophorone	82	5.134	5.134	0.000	97	600683	80.0	74.0	
64 2-Nitrophenol	139	5.216	5.216	0.000	94	191203	80.0	78.0	
65 2,4-Dimethylphenol	107	5.252	5.252	0.000	94	327429	80.0	76.2	
68 Benzoic acid	105	5.369	5.363	0.006	89	465351	160.0	146.9	
69 Bis(2-chloroethoxy)methane	93	5.334	5.340	-0.006	96	374931	80.0	75.5	
71 3,5-Dimethylphenol	107	5.381	5.381	0.000	84	331446	80.0	77.3	
74 2,4-Dichlorophenol	162	5.451	5.451	0.000	94	276908	80.0	75.9	
76 1,2,4-Trichlorobenzene	180	5.540	5.540	0.000	94	321102	80.0	77.2	
79 Naphthalene	128	5.616	5.616	0.000	98	944008	80.0	77.1	
80 4-Chloroaniline	127	5.657	5.657	0.000	96	381686	80.0	74.2	
81 2,6-Dichlorophenol	162	5.669	5.669	0.000	96	273787	80.0	76.3	
83 Hexachlorobutadiene	225	5.745	5.745	0.000	96	173899	80.0	75.4	
86 Caprolactam	55	5.980	5.980	0.000	74	153773	80.0	70.7	
89 4-Chloro-3-methylphenol	107	6.133	6.133	0.000	95	256948	80.0	74.1	
93 2-Methylnaphthalene	142	6.292	6.292	0.000	95	666524	80.0	77.5	
96 1-Methylnaphthalene	142	6.391	6.392	-0.001	95	601918	80.0	74.9	
97 Hexachlorocyclopentadiene	237	6.462	6.462	0.000	96	188593	80.0	74.9	
98 1,2,4,5-Tetrachlorobenzene	216	6.462	6.468	-0.006	96	285520	80.0	74.9	
100 2,4,6-Trichlorophenol	196	6.568	6.574	-0.006	78	180064	80.0	77.9	
101 2,3-Dichlorobenzenamine	161	6.568	6.568	0.000	93	299144	80.0	77.4	
102 2,4,5-Trichlorophenol	196	6.609	6.609	0.000	95	197252	80.0	78.1	
104 1,1'-Biphenyl	154	6.750	6.756	-0.006	95	741984	80.0	77.9	
106 2-Chloronaphthalene	162	6.773	6.779	-0.006	96	558691	80.0	76.5	
108 2-Nitroaniline	65	6.862	6.867	-0.005	85	161415	80.0	74.1	
111 Dimethyl phthalate	163	7.050	7.050	0.000	99	529349	80.0	73.9	
112 1,3-Dinitrobenzene	168	7.067	7.073	-0.006	89	94742	80.0	76.9	
113 2,6-Dinitrotoluene	165	7.102	7.103	0.000	95	137460	80.0	75.2	
114 Acenaphthylene	152	7.185	7.191	-0.006	99	838944	80.0	76.4	
115 3-Nitroaniline	138	7.273	7.273	0.000	95	139724	80.0	71.1	
117 Acenaphthene	153	7.361	7.361	0.000	94	546189	80.0	76.6	
118 2,4-Dinitrophenol	184	7.373	7.379	-0.006	84	134440	160.0	130.8	
119 4-Nitrophenol	109	7.437	7.443	-0.006	95	133238	160.0	145.0	
122 2,4-Dinitrotoluene	165	7.502	7.508	-0.006	95	163602	80.0	72.3	
123 Dibenzofuran	168	7.531	7.531	0.000	98	762365	80.0	76.2	
125 2,3,4,6-Tetrachlorophenol	232	7.655	7.655	0.000	72	148844	80.0	75.6	
127 Hexadecane	57	7.772	7.778	-0.006	91	482405	80.0	75.5	
130 Diethyl phthalate	149	7.749	7.749	0.000	98	491497	80.0	72.2	
134 4-Chlorophenyl phenyl ethe	204	7.866	7.866	0.000	95	268874	80.0	73.7	
135 Fluorene	166	7.872	7.878	-0.006	95	554529	80.0	73.2	
138 4-Nitroaniline	138	7.878	7.884	-0.006	85	128681	80.0	69.6	
139 4,6-Dinitro-2-methylphenol	198	7.913	7.919	-0.006	84	166425	160.0	147.2	
141 N-Nitrosodiphenylamine	169	7.978	7.984	-0.006	62	413518	80.0	79.0	
142 Diphenylamine	169	7.978	7.984	-0.006	96	413518	68.0	62.8	
143 1,2-Diphenylhydrazine	77	8.025	8.025	0.000	41	547022	80.9	73.5	
144 Azobenzene	77	8.025	8.025	0.000	97	547022	80.0	72.7	
147 2,4,6 - Tribromophenol	330	8.113	8.113	0.000	94	71451	80.0	70.3	
156 4-Bromophenyl phenyl ether	248	8.354	8.354	0.000	67	157598	80.0	77.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.436	8.436	0.000	95	154993	80.0	77.0	
159 Atrazine	200	8.507	8.513	-0.006	91	128557	80.0	73.3	
161 n-Octadecane	85	8.689	8.695	-0.006	92	151010	80.0	81.0	
163 Pentachlorophenol	266	8.624	8.624	0.000	93	179620	160.0	149.9	
168 Phenanthrene	178	8.830	8.836	-0.006	97	739534	80.0	75.9	
169 Anthracene	178	8.877	8.883	-0.006	97	761814	80.0	75.4	
170 Carbazole	167	9.035	9.036	-0.001	95	654170	80.0	74.2	
171 Alachlor	188	9.176	9.182	-0.006	94	89516	80.0	73.3	
173 Di-n-butyl phthalate	149	9.376	9.376	0.000	99	721423	80.0	74.4	
179 Fluoranthene	202	10.105	10.111	-0.006	98	724987	80.0	73.7	
182 Pyrene	202	10.404	10.410	-0.006	97	747372	80.0	72.3	
188 Famphur	218	11.327	11.333	-0.006	83	229145	80.0	75.2	
190 Butyl benzyl phthalate	149	11.444	11.456	-0.012	96	297232	80.0	74.1	
195 Bis(2-ethylhexyl) phthalat	149	12.731	12.737	-0.006	97	370375	80.0	72.5	
197 3,3'-Dichlorobenzidine	252	12.502	12.508	-0.006	76	168010	80.0	64.7	
198 Benzo[a]anthracene	228	12.531	12.543	-0.012	98	643099	80.0	70.7	
199 Chrysene	228	12.608	12.620	-0.012	97	661160	80.0	74.9	
201 Di-n-octyl phthalate	149	14.441	14.441	0.000	99	513760	80.0	59.6	
203 Benzo[b]fluoranthene	252	15.222	15.228	-0.006	97	525354	80.0	71.6	
204 Benzo[k]fluoranthene	252	15.299	15.305	-0.006	99	659993	80.0	83.6	
206 Benzo[e]pyrene	252	15.957	15.969	-0.012	97	541947	80.0	77.4	
207 Benzo[a]pyrene	252	16.098	16.110	-0.012	77	581029	80.0	78.5	
213 Dibenz(a,h)anthracene	278	19.371	19.377	-0.006	94	443322	80.0	72.1	
214 Indeno[1,2,3-cd]pyrene	276	19.265	19.277	-0.012	98	400463	80.0	61.6	
215 Benzo[g,h,i]perylene	276	19.982	19.988	-0.006	98	521173	80.0	75.9	
S 217 Total Cresols	108				0			152.6	
S 218 Methyl Phenols,Total	108				0			152.6	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

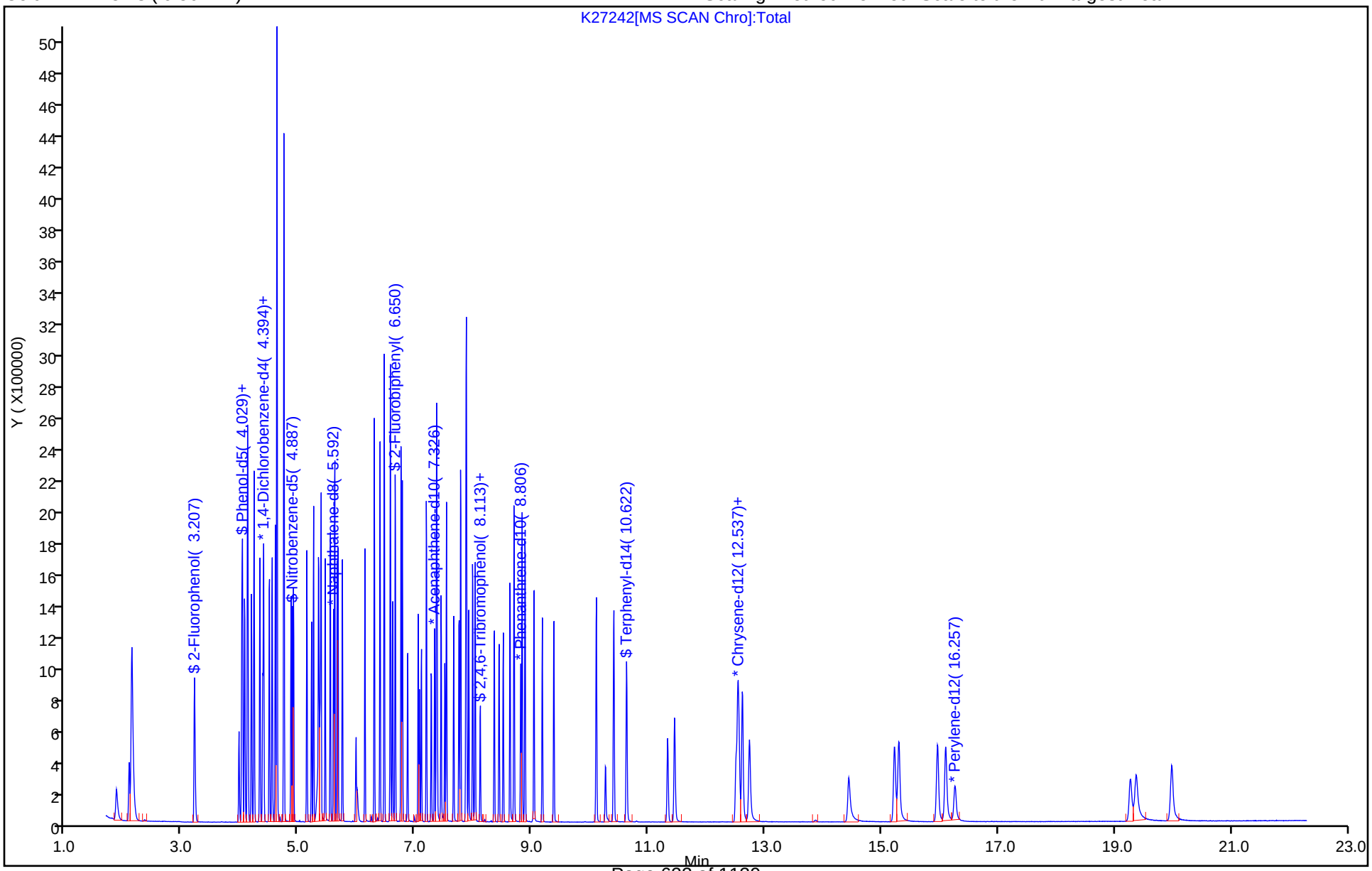
Report Date: 30-Oct-2018 07:25:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27242.D

Injection Date:	29-Oct-2018 20:28:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCVC HSL			Worklist Smp#:	28
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435724/3 Calibration Date: 10/31/2018 12:58

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27316.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6338	0.6533		82500	80000	3.1	20.0
N-Nitrosodimethylamine	Ave	0.9782	0.9784		80000	80000	0.0	20.0
Pyridine	Ave	1.574	1.573		160000	160000	-0.1	20.0
Phenol	Ave	1.757	1.738	0.8000	79100	80000	-1.1	20.0
Aniline	Ave	2.151	2.152		80100	80000	0.0	20.0
Bis(2-chloroethyl)ether	Ave	1.307	1.281	0.7000	78400	80000	-2.0	20.0
2-Chlorophenol	Ave	1.444	1.456	0.8000	80700	80000	0.8	20.0
1,3-Dichlorobenzene	Ave	1.611	1.609		79900	80000	-0.1	20.0
1,4-Dichlorobenzene	Ave	1.618	1.612		79700	80000	-0.3	20.0
Benzyl alcohol	Ave	0.9545	0.9431		79000	80000	-1.2	20.0
1,2-Dichlorobenzene	Ave	1.540	1.537		79800	80000	-0.2	20.0
2-Methylphenol	Ave	1.324	1.310	0.7000	79100	80000	-1.1	20.0
bis (2-chloroisopropyl) ether	Qua		2.416	0.0100	78400	80000	-2.0	20.0
3 & 4 Methylphenol	Ave	1.288	1.239		77000	80000	-3.8	20.0
Acetophenone	Ave	1.786	1.704	0.0100	76300	80000	-4.6	20.0
N-Nitrosodi-n-propylamine	Ave	0.9168	0.8902	0.5000	77700	80000	-2.9	20.0
Hexachloroethane	Ave	0.5990	0.6056	0.3000	80900	80000	1.1	20.0
Nitrobenzene	Ave	0.3668	0.3638		79300	80000	-0.8	20.0
Isophorone	Ave	0.6465	0.6287	0.4000	77800	80000	-2.8	20.0
2-Nitrophenol	Ave	0.1953	0.1965	0.1000	80500	80000	0.6	20.0
2,4-Dimethylphenol	Ave	0.3423	0.3352	0.2000	78300	80000	-2.1	20.0
Bis(2-chloroethoxy)methane	Ave	0.3953	0.3846	0.3000	77800	80000	-2.7	20.0
Benzoic acid	Lin2		0.2410		153000	160000	-4.6	20.0
2,4-Dichlorophenol	Ave	0.2906	0.2847	0.2000	78400	80000	-2.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3312	0.3237		78200	80000	-2.3	20.0
Naphthalene	Ave	0.9745	0.9614	0.7000	78900	80000	-1.3	20.0
4-Chloroaniline	Ave	0.4095	0.4024	0.0100	78600	80000	-1.7	20.0
2,6-Dichlorophenol	Ave	0.2857	0.2803		78500	80000	-1.9	20.0
Hexachlorobutadiene	Ave	0.1837	0.1804	0.0100	78500	80000	-1.8	20.0
Caprolactam	Ave	0.1731	0.1663		76900	80000	-3.9	20.0
4-Chloro-3-methylphenol	Ave	0.2761	0.2635	0.2000	76300	80000	-4.6	20.0
2-Methylnaphthalene	Ave	0.6846	0.6722	0.4000	78600	80000	-1.8	20.0
1-Methylnaphthalene	Ave	0.6396	0.6171		77200	80000	-3.5	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3034	0.2864	0.0100	75500	80000	-5.6	20.0
Hexachlorocyclopentadiene	Ave	0.4154	0.4415	0.0500	85000	80000	6.3	20.0
2,4,6-Trichlorophenol	Ave	0.3810	0.3834	0.2000	80500	80000	0.6	20.0
2,4,5-Trichlorophenol	Ave	0.4165	0.4204	0.2000	80700	80000	0.9	20.0
1,1'-Biphenyl	Ave	1.571	1.612		82100	80000	2.6	20.0
2-Chloronaphthalene	Ave	1.204	1.227	0.8000	81500	80000	1.9	20.0
2-Nitroaniline	Ave	0.3591	0.3533	0.0100	78700	80000	-1.6	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435724/3 Calibration Date: 10/31/2018 12:58

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27316.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.182	1.149	0.0100	77800	80000	-2.8	20.0
1,3-Dinitrobenzene	Ave	0.2031	0.2069		81500	80000	1.9	20.0
2,6-Dinitrotoluene	Ave	0.3016	0.2940	0.2000	78000	80000	-2.5	20.0
Acenaphthylene	Ave	1.812	1.806	0.9000	79800	80000	-0.3	20.0
3-Nitroaniline	Ave	0.3240	0.3165	0.0100	78200	80000	-2.3	20.0
Acenaphthene	Ave	1.177	1.169	0.9000	79500	80000	-0.6	20.0
2,4-Dinitrophenol	Lin2		0.1606	0.0100	150000	160000	-6.1	20.0
4-Nitrophenol	Ave	0.1516	0.1493	0.0100	158000	160000	-1.5	20.0
2,4-Dinitrotoluene	Ave	0.3733	0.3620	0.2000	77600	80000	-3.0	20.0
Dibenzofuran	Ave	1.650	1.631	0.8000	79100	80000	-1.1	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3245	0.3253	0.0100	80200	80000	0.2	20.0
Diethyl phthalate	Ave	1.122	1.066	0.0100	76000	80000	-5.0	20.0
4-Chlorophenyl phenyl ether	Ave	0.6017	0.5675	0.4000	75400	80000	-5.7	20.0
Fluorene	Ave	1.249	1.208	0.9000	77400	80000	-3.3	20.0
4-Nitroaniline	Ave	0.3050	0.2927	0.0100	76800	80000	-4.0	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1262	0.0100	163000	160000	2.1	20.0
Diphenylamine	Ave	1.085	1.050		65800	68000	-3.3	20.0
N-Nitrosodiphenylamine	Ave	0.5695	0.5973	0.0100	83900	80000	4.9	20.0
1,2-Diphenylhydrazine	Ave	1.227	1.186		78200	80900	-3.3	20.0
Azobenzene	Ave	1.240	1.199		77300	80000	-3.3	20.0
4-Bromophenyl phenyl ether	Ave	0.2219	0.2232	0.1000	80500	80000	0.6	20.0
Hexachlorobenzene	Ave	0.2189	0.2158	0.1000	78900	80000	-1.4	20.0
Atrazine	Ave	0.1908	0.1897		79500	80000	-0.6	20.0
Pentachlorophenol	Lin2		0.1280	0.0500	157000	160000	-1.9	20.0
Phenanthrene	Ave	1.060	1.086	0.7000	82000	80000	2.4	20.0
Anthracene	Ave	1.100	1.116	0.7000	81200	80000	1.5	20.0
Carbazole	Ave	0.9596	0.9638	0.0100	80300	80000	0.4	20.0
Alachlor	Ave	0.1328	0.1290		77700	80000	-2.9	20.0
Di-n-butyl phthalate	Ave	1.055	1.065	0.0100	80800	80000	1.0	20.0
Fluoranthene	Ave	1.069	1.048	0.6000	78400	80000	-2.0	20.0
Pyrene	Ave	1.416	1.408	0.6000	79600	80000	-0.5	20.0
Famphur	Ave	0.4171	0.4397		84300	80000	5.4	20.0
Butyl benzyl phthalate	Ave	0.5492	0.5665	0.0100	82500	80000	3.1	20.0
3,3'-Dichlorobenzidine	Ave	0.3557	0.3312	0.0100	74500	80000	-6.9	20.0
Benzo[a]anthracene	Ave	1.245	1.232	0.8000	79200	80000	-1.0	20.0
Chrysene	Ave	1.209	1.236	0.7000	81800	80000	2.3	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.6994	0.7406	0.0100	84700	80000	5.9	20.0
Di-n-octyl phthalate	Lin2		1.181	0.0100	79600	80000	-0.5	20.0
Benzo[b]fluoranthene	Ave	1.150	1.147	0.7000	79800	80000	-0.2	20.0
Benzo[k]fluoranthene	Ave	1.237	1.350	0.7000	87300	80000	9.1	20.0
Benzo[a]pyrene	Ave	1.160	1.230	0.7000	84800	80000	6.0	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435724/3 Calibration Date: 10/31/2018 12:58

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27316.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	0.8896	0.8628	0.5000	77600	80000	-3.0	20.0
Dibenz(a,h)anthracene	Ave	0.9634	1.008	0.4000	83700	80000	4.6	20.0
Benzo[g,h,i]perylene	Ave	1.077	1.115	0.5000	82900	80000	3.6	20.0
2-Fluorophenol (Surr)	Ave	1.493	1.493		80000	80000	0.0	20.0
Phenol-d5 (Surr)	Ave	1.695	1.703		80400	80000	0.5	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3778	0.3692		78200	80000	-2.3	20.0
2-Fluorobiphenyl	Ave	1.396	1.451		83100	80000	3.9	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1667	0.1562		75000	80000	-6.3	20.0
Terphenyl-d14 (Surr)	Ave	0.9813	0.9720		79200	80000	-1.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27316.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 31-Oct-2018 12:58:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:09 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 31-Oct-2018 13:39:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	132364	40.0	40.0	
* 2 Naphthalene-d8	136	5.557	5.557	0.000	99	515278	40.0	40.0	
* 3 Acenaphthene-d10	164	7.290	7.290	0.000	92	240082	40.0	40.0	
* 4 Phenanthrene-d10	188	8.765	8.765	0.000	97	358666	40.0	40.0	
* 5 Chrysene-d12	240	12.467	12.467	0.000	99	275632	40.0	40.0	
* 6 Perylene-d12	264	16.133	16.133	0.000	98	248997	40.0	40.0	
$ 7 2-Fluorophenol	112	3.160	3.160	0.000	94	395291	80.0	80.0	
$ 8 Phenol-d5	99	3.982	3.982	0.000	98	450894	80.0	80.4	
$ 9 Nitrobenzene-d5	82	4.852	4.852	0.000	94	380468	80.0	78.2	
$ 11 2-Fluorobiphenyl	172	6.615	6.615	0.000	100	696513	80.0	83.1	
$ 12 2,4,6-Tribromophenol	330	8.072	8.072	0.000	93	75009	80.0	75.0	
$ 13 Terphenyl-d14	244	10.563	10.563	0.000	98	535801	80.0	79.2	
19 1,4-Dioxane	88	1.797	1.797	0.000	96	172936	80.0	82.5	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	85	259004	80.0	80.0	
21 Pyridine	79	2.067	2.067	0.000	83	832710	160.0	159.8	
32 Phenol	94	3.994	3.994	0.000	97	460100	80.0	79.1	
34 Aniline	93	4.029	4.029	0.000	97	569774	80.0	80.1	
35 Alpha Methyl Styrene	118	4.082	4.082	0.000	93	384019	80.0	78.8	
36 Bis(2-chloroethyl)ether	93	4.076	4.076	0.000	90	339023	80.0	78.4	
38 n-Decane	43	4.188	4.188	0.000	94	535528	80.0	79.1	
39 2-Chlorophenol	128	4.147	4.147	0.000	98	385434	80.0	80.7	
40 1,3-Dichlorobenzene	146	4.288	4.288	0.000	98	426003	80.0	79.9	
42 1,4-Dichlorobenzene	146	4.352	4.352	0.000	93	426865	80.0	79.7	
43 Benzyl alcohol	108	4.452	4.452	0.000	92	249661	80.0	79.0	
44 1,2-Dichlorobenzene	146	4.499	4.499	0.000	97	406886	80.0	79.8	
45 2-Methylphenol	108	4.558	4.558	0.000	95	346677	80.0	79.1	
46 2,2'-oxybis[1-chloropropan	45	4.582	4.582	0.000	92	639466	80.0	78.4	
47 Indene	116	4.582	4.582	0.000	92	1139007	160.0	156.0	
49 3 & 4 Methylphenol	108	4.705	4.705	0.000	65	328082	80.0	77.0	
50 3-Methylphenol	108	4.705	4.705	0.000	71	328082	80.0	77.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.705	4.705	0.000	68	328082	80.0	77.0	
52 N-Nitrosodi-n-propylamine	70	4.705	4.705	0.000	82	235667	80.0	77.7	
54 Acetophenone	105	4.705	4.705	0.000	76	451123	80.0	76.3	
58 Hexachloroethane	117	4.823	4.823	0.000	93	160310	80.0	80.9	
59 Nitrobenzene	77	4.870	4.870	0.000	95	374929	80.0	79.3	
63 Isophorone	82	5.099	5.099	0.000	97	647879	80.0	77.8	
64 2-Nitrophenol	139	5.175	5.175	0.000	94	202529	80.0	80.5	
65 2,4-Dimethylphenol	107	5.216	5.216	0.000	94	345428	80.0	78.3	
68 Benzoic acid	105	5.334	5.334	0.000	91	496648	160.0	152.6	
69 Bis(2-chloroethoxy)methane	93	5.298	5.298	0.000	96	396372	80.0	77.8	
71 3,5-Dimethylphenol	107	5.345	5.345	0.000	86	345725	80.0	78.6	
74 2,4-Dichlorophenol	162	5.416	5.416	0.000	94	293424	80.0	78.4	
76 1,2,4-Trichlorobenzene	180	5.498	5.498	0.000	94	333636	80.0	78.2	
79 Naphthalene	128	5.575	5.575	0.000	98	990809	80.0	78.9	
80 4-Chloroaniline	127	5.616	5.616	0.000	96	414697	80.0	78.6	
81 2,6-Dichlorophenol	162	5.633	5.633	0.000	96	288888	80.0	78.5	
83 Hexachlorobutadiene	225	5.710	5.710	0.000	95	185900	80.0	78.5	
86 Caprolactam	55	5.945	5.945	0.000	73	171375	80.0	76.9	
89 4-Chloro-3-methylphenol	107	6.098	6.098	0.000	95	271513	80.0	76.3	
93 2-Methylnaphthalene	142	6.256	6.256	0.000	95	692734	80.0	78.6	
96 1-Methylnaphthalene	142	6.356	6.356	0.000	95	635956	80.0	77.2	
97 Hexachlorocyclopentadiene	237	6.427	6.427	0.000	95	211984	80.0	85.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.427	6.427	0.000	97	295170	80.0	75.5	
100 2,4,6-Trichlorophenol	196	6.532	6.532	0.000	93	184073	80.0	80.5	
101 2,3-Dichlorobenzenamine	161	6.526	6.526	0.000	97	307388	80.0	80.4	
102 2,4,5-Trichlorophenol	196	6.568	6.568	0.000	94	201860	80.0	80.7	
104 1,1'-Biphenyl	154	6.714	6.714	0.000	94	774078	80.0	82.1	
106 2-Chloronaphthalene	162	6.738	6.738	0.000	95	589258	80.0	81.5	
108 2-Nitroaniline	65	6.826	6.826	0.000	86	169628	80.0	78.7	
111 Dimethyl phthalate	163	7.008	7.008	0.000	99	551498	80.0	77.8	
112 1,3-Dinitrobenzene	168	7.032	7.032	0.000	89	99341	80.0	81.5	
113 2,6-Dinitrotoluene	165	7.061	7.061	0.000	94	141182	80.0	78.0	
114 Acenaphthylene	152	7.149	7.149	0.000	98	867239	80.0	79.8	
115 3-Nitroaniline	138	7.232	7.232	0.000	93	151980	80.0	78.2	
117 Acenaphthene	153	7.320	7.320	0.000	94	561302	80.0	79.5	
118 2,4-Dinitrophenol	184	7.337	7.337	0.000	84	154258	160.0	150.2	
119 4-Nitrophenol	109	7.402	7.402	0.000	95	143415	160.0	157.6	
122 2,4-Dinitrotoluene	165	7.467	7.467	0.000	95	173806	80.0	77.6	
123 Dibenzofuran	168	7.490	7.490	0.000	98	783066	80.0	79.1	
125 2,3,4,6-Tetrachlorophenol	232	7.619	7.619	0.000	72	156214	80.0	80.2	
127 Hexadecane	57	7.737	7.737	0.000	91	515236	80.0	81.4	
130 Diethyl phthalate	149	7.707	7.707	0.000	98	512034	80.0	76.0	
134 4-Chlorophenyl phenyl ethe	204	7.825	7.825	0.000	94	272497	80.0	75.4	
135 Fluorene	166	7.831	7.831	0.000	96	580259	80.0	77.4	
138 4-Nitroaniline	138	7.843	7.843	0.000	87	140526	80.0	76.8	
139 4,6-Dinitro-2-methylphenol	198	7.878	7.878	0.000	88	181056	160.0	163.4	
141 N-Nitrosodiphenylamine	169	7.942	7.942	0.000	62	428437	80.0	83.9	
142 Diphenylamine	169	7.942	7.942	0.000	95	428437	68.0	65.8	
143 1,2-Diphenylhydrazine	77	7.984	7.984	0.000	41	575604	80.9	78.2	
144 Azobenzene	77	7.984	7.984	0.000	97	575604	80.0	77.3	
147 2,4,6 - Tribromophenol	330	8.072	8.072	0.000	93	75827	80.0	75.4	
156 4-Bromophenyl phenyl ether	248	8.313	8.313	0.000	67	160085	80.0	80.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.395	8.395	0.000	95	154767	80.0	78.9	
159 Atrazine	200	8.465	8.465	0.000	91	136090	80.0	79.5	
161 n-Octadecane	85	8.653	8.653	0.000	91	156620	80.0	86.1	
163 Pentachlorophenol	266	8.583	8.583	0.000	92	183578	160.0	156.9	
168 Phenanthrene	178	8.789	8.789	0.000	97	779287	80.0	82.0	
169 Anthracene	178	8.841	8.841	0.000	97	800815	80.0	81.2	
170 Carbazole	167	8.994	8.994	0.000	95	691346	80.0	80.3	
171 Alachlor	188	9.135	9.135	0.000	92	92519	80.0	77.7	
173 Di-n-butyl phthalate	149	9.335	9.335	0.000	99	763879	80.0	80.8	
179 Fluoranthene	202	10.052	10.052	0.000	98	751973	80.0	78.4	
182 Pyrene	202	10.346	10.346	0.000	97	776129	80.0	79.6	
188 Famphur	218	11.262	11.262	0.000	84	242391	80.0	84.3	
190 Butyl benzyl phthalate	149	11.380	11.380	0.000	97	312267	80.0	82.5	
195 Bis(2-ethylhexyl) phthalat	149	12.643	12.643	0.000	97	408250	80.0	84.7	
197 3,3'-Dichlorobenzidine	252	12.414	12.414	0.000	73	182583	80.0	74.5	
198 Benzo[a]anthracene	228	12.443	12.443	0.000	99	679254	80.0	79.2	
199 Chrysene	228	12.525	12.525	0.000	97	681403	80.0	81.8	
201 Di-n-octyl phthalate	149	14.335	14.335	0.000	99	651016	80.0	79.6	
203 Benzo[b]fluoranthene	252	15.105	15.105	0.000	97	571421	80.0	79.8	
204 Benzo[k]fluoranthene	252	15.181	15.181	0.000	99	672327	80.0	87.3	
206 Benzo[e]pyrene	252	15.839	15.839	0.000	97	567919	80.0	83.1	
207 Benzo[a]pyrene	252	15.980	15.980	0.000	77	612336	80.0	84.8	
213 Dibenz(a,h)anthracene	278	19.229	19.229	0.000	94	501893	80.0	83.7	
214 Indeno[1,2,3-cd]pyrene	276	19.130	19.130	0.000	98	475605	80.0	77.6	
215 Benzo[g,h,i]perylene	276	19.829	19.829	0.000	98	555393	80.0	82.9	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

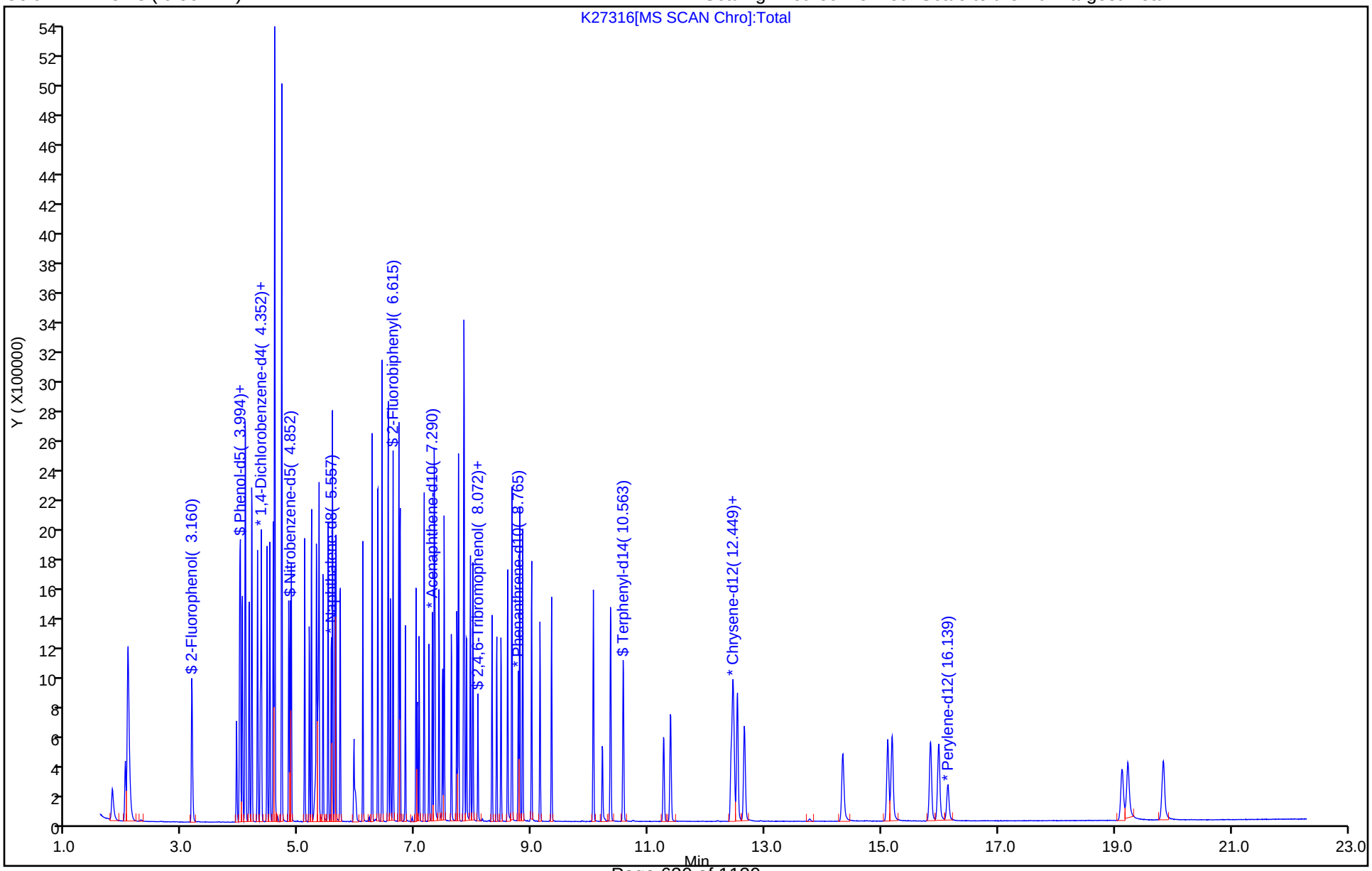
Report Date: 01-Nov-2018 06:26:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27316.D

Injection Date:	31-Oct-2018 12:58:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCV HSL			Worklist Smp#:	3
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435724/68 Calibration Date: 11/01/2018 01:20

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27343.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6338	0.5971		75400	80000	-5.8	50.0
N-Nitrosodimethylamine	Ave	0.9782	0.9203		75300	80000	-5.9	50.0
Pyridine	Ave	1.574	1.482		151000	160000	-5.9	50.0
Phenol	Ave	1.757	1.655	0.8000	75400	80000	-5.8	50.0
Aniline	Ave	2.151	2.021		75200	80000	-6.0	50.0
Bis(2-chloroethyl)ether	Ave	1.307	1.224	0.7000	74900	80000	-6.3	50.0
2-Chlorophenol	Ave	1.444	1.401	0.8000	77700	80000	-2.9	50.0
1,3-Dichlorobenzene	Ave	1.611	1.547		76800	80000	-4.0	50.0
1,4-Dichlorobenzene	Ave	1.618	1.574		77800	80000	-2.7	50.0
Benzyl alcohol	Ave	0.9545	0.9096		76200	80000	-4.7	50.0
1,2-Dichlorobenzene	Ave	1.540	1.487		77200	80000	-3.5	50.0
2-Methylphenol	Ave	1.324	1.253	0.7000	75700	80000	-5.4	50.0
bis (2-chloroisopropyl) ether	Qua		2.227	0.0100	71400	80000	-10.8	50.0
3 & 4 Methylphenol	Ave	1.288	1.180		73300	80000	-8.4	50.0
Acetophenone	Ave	1.786	1.625	0.0100	72800	80000	-9.0	50.0
N-Nitrosodi-n-propylamine	Ave	0.9168	0.8258	0.5000	72100	80000	-9.9	50.0
Hexachloroethane	Ave	0.5990	0.5745	0.3000	76700	80000	-4.1	50.0
Nitrobenzene	Ave	0.3668	0.3499		76300	80000	-4.6	50.0
Isophorone	Ave	0.6465	0.5994	0.4000	74200	80000	-7.3	50.0
2-Nitrophenol	Ave	0.1953	0.1886	0.1000	77300	80000	-3.4	50.0
2,4-Dimethylphenol	Ave	0.3423	0.3310	0.2000	77400	80000	-3.3	50.0
Bis(2-chloroethoxy)methane	Ave	0.3953	0.3777	0.3000	76400	80000	-4.4	50.0
Benzoic acid	Lin2		0.2430		154000	160000	-3.8	50.0
2,4-Dichlorophenol	Ave	0.2906	0.2803	0.2000	77200	80000	-3.6	50.0
1,2,4-Trichlorobenzene	Ave	0.3312	0.3204		77400	80000	-3.3	50.0
Naphthalene	Ave	0.9745	0.9543	0.7000	78300	80000	-2.1	50.0
4-Chloroaniline	Ave	0.4095	0.3842	0.0100	75100	80000	-6.2	50.0
2,6-Dichlorophenol	Ave	0.2857	0.2733		76500	80000	-4.3	50.0
Hexachlorobutadiene	Ave	0.1837	0.1786	0.0100	77700	80000	-2.8	50.0
Caprolactam	Ave	0.1731	0.1480		68400	80000	-14.5	50.0
4-Chloro-3-methylphenol	Ave	0.2761	0.2523	0.2000	73100	80000	-8.6	50.0
2-Methylnaphthalene	Ave	0.6846	0.6541	0.4000	76400	80000	-4.4	50.0
1-Methylnaphthalene	Ave	0.6396	0.5991		74900	80000	-6.3	50.0
1,2,4,5-Tetrachlorobenzene	Ave	0.3034	0.2817	0.0100	74300	80000	-7.1	50.0
Hexachlorocyclopentadiene	Ave	0.4154	0.3916	0.0500	75400	80000	-5.7	50.0
2,4,6-Trichlorophenol	Ave	0.3810	0.3714	0.2000	78000	80000	-2.5	50.0
2,4,5-Trichlorophenol	Ave	0.4165	0.4130	0.2000	79300	80000	-0.8	50.0
1,1'-Biphenyl	Ave	1.571	1.565		79700	80000	-0.4	50.0
2-Chloronaphthalene	Ave	1.204	1.215	0.8000	80700	80000	0.9	50.0
2-Nitroaniline	Ave	0.3591	0.3286	0.0100	73200	80000	-8.5	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435724/68 Calibration Date: 11/01/2018 01:20

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27343.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.182	1.095	0.0100	74100	80000	-7.4	50.0
1,3-Dinitrobenzene	Ave	0.2031	0.1974		77700	80000	-2.8	50.0
2,6-Dinitrotoluene	Ave	0.3016	0.2892	0.2000	76700	80000	-4.1	50.0
Acenaphthylene	Ave	1.812	1.762	0.9000	77800	80000	-2.7	50.0
3-Nitroaniline	Ave	0.3240	0.2915	0.0100	72000	80000	-10.0	50.0
Acenaphthene	Ave	1.177	1.124	0.9000	76400	80000	-4.5	50.0
2,4-Dinitrophenol	Lin2		0.1412	0.0100	133000	160000	-16.8	50.0
4-Nitrophenol	Ave	0.1516	0.1344	0.0100	142000	160000	-11.3	50.0
2,4-Dinitrotoluene	Ave	0.3733	0.3483	0.2000	74600	80000	-6.7	50.0
Dibenzofuran	Ave	1.650	1.576	0.8000	76400	80000	-4.4	50.0
2,3,4,6-Tetrachlorophenol	Ave	0.3245	0.3100	0.0100	76400	80000	-4.5	50.0
Diethyl phthalate	Ave	1.122	1.028	0.0100	73300	80000	-8.4	50.0
4-Chlorophenyl phenyl ether	Ave	0.6017	0.5608	0.4000	74600	80000	-6.8	50.0
Fluorene	Ave	1.249	1.170	0.9000	74900	80000	-6.4	50.0
4-Nitroaniline	Ave	0.3050	0.2722	0.0100	71400	80000	-10.7	50.0
4,6-Dinitro-2-methylphenol	Lin2		0.1158	0.0100	150000	160000	-6.0	50.0
Diphenylamine	Ave	1.085	1.011		63300	68000	-6.9	50.0
N-Nitrosodiphenylamine	Ave	0.5695	0.5559	0.0100	78100	80000	-2.4	50.0
1,2-Diphenylhydrazine	Ave	1.227	1.127		74300	80900	-8.2	50.0
Azobenzene	Ave	1.240	1.139		73500	80000	-8.2	50.0
4-Bromophenyl phenyl ether	Ave	0.2219	0.2110	0.1000	76100	80000	-4.9	50.0
Hexachlorobenzene	Ave	0.2189	0.2037	0.1000	74400	80000	-6.9	50.0
Atrazine	Ave	0.1908	0.1753		73500	80000	-8.1	50.0
Pentachlorophenol	Lin2		0.1223	0.0500	150000	160000	-6.2	50.0
Phenanthrene	Ave	1.060	1.010	0.7000	76200	80000	-4.7	50.0
Anthracene	Ave	1.100	1.045	0.7000	76000	80000	-5.0	50.0
Carbazole	Ave	0.9596	0.8893	0.0100	74100	80000	-7.3	50.0
Alachlor	Ave	0.1328	0.1271		76600	80000	-4.3	50.0
Di-n-butyl phthalate	Ave	1.055	0.9898	0.0100	75100	80000	-6.2	50.0
Fluoranthene	Ave	1.069	0.9848	0.6000	73700	80000	-7.9	50.0
Pyrene	Ave	1.416	1.347	0.6000	76100	80000	-4.8	50.0
Famphur	Ave	0.4171	0.3694		70800	80000	-11.4	50.0
Butyl benzyl phthalate	Ave	0.5492	0.5323	0.0100	77500	80000	-3.1	50.0
3,3'-Dichlorobenzidine	Ave	0.3557	0.3272	0.0100	73600	80000	-8.0	50.0
Benzo[a]anthracene	Ave	1.245	1.151	0.8000	74000	80000	-7.5	50.0
Chrysene	Ave	1.209	1.182	0.7000	78300	80000	-2.2	50.0
Bis(2-ethylhexyl) phthalate	Ave	0.6994	0.6516	0.0100	74500	80000	-6.8	50.0
Di-n-octyl phthalate	Lin2		0.9247	0.0100	62600	80000	-21.8	50.0
Benzo[b]fluoranthene	Ave	1.150	1.053	0.7000	73200	80000	-8.5	50.0
Benzo[k]fluoranthene	Ave	1.237	1.357	0.7000	87700	80000	9.7	50.0
Benzo[a]pyrene	Ave	1.160	1.218	0.7000	84000	80000	5.0	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435724/68 Calibration Date: 11/01/2018 01:20

Instrument ID: SMS_K Calib Start Date: 10/23/2018 13:33

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/23/2018 16:54

Lab File ID: K27343.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	0.8896	0.6744	0.5000	60600	80000	-24.2	50.0
Dibenz(a,h)anthracene	Ave	0.9634	0.9016	0.4000	74900	80000	-6.4	50.0
Benzo[g,h,i]perylene	Ave	1.077	1.061	0.5000	78900	80000	-1.4	50.0
2-Fluorophenol (Surr)	Ave	1.493	1.396		74800	80000	-6.5	50.0
Phenol-d5 (Surr)	Ave	1.695	1.600		75500	80000	-5.6	50.0
Nitrobenzene-d5 (Surr)	Ave	0.3778	0.3512		74400	80000	-7.1	50.0
2-Fluorobiphenyl	Ave	1.396	1.410		80800	80000	1.0	50.0
2,4,6-Tribromophenol (Surr)	Ave	0.1667	0.1531		73500	80000	-8.1	50.0
Terphenyl-d14 (Surr)	Ave	0.9813	0.9298		75800	80000	-5.2	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27343.D
Lims ID: CCVC HSL
Client ID:
Sample Type: CCVC
Inject. Date: 01-Nov-2018 01:20:30 ALS Bottle#: 29 Worklist Smp#: 68
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCVC HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:27:09 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:25:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	144645	40.0	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	100	551300	40.0	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	94	255049	40.0	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	97	394174	40.0	40.0	
* 5 Chrysene-d12	240	12.455	12.461	-0.006	99	299576	40.0	40.0	
* 6 Perylene-d12	264	16.127	16.128	-0.001	98	263687	40.0	40.0	
$ 7 2-Fluorophenol	112	3.160	3.160	0.000	94	403953	80.0	74.8	
$ 8 Phenol-d5	99	3.982	3.982	0.000	99	462930	80.0	75.5	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	95	387210	80.0	74.4	
$ 11 2-Fluorobiphenyl	172	6.609	6.615	-0.006	100	719154	80.0	80.8	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	93	78106	80.0	73.5	
$ 13 Terphenyl-d14	244	10.551	10.563	-0.012	98	557115	80.0	75.8	
19 1,4-Dioxane	88	1.802	1.797	0.005	95	172742	80.0	75.4	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	85	266231	80.0	75.3	
21 Pyridine	79	2.067	2.067	0.000	82	857189	160.0	150.6	
32 Phenol	94	3.994	3.994	0.000	98	478912	80.0	75.4	
34 Aniline	93	4.023	4.029	-0.006	97	584740	80.0	75.2	
35 Alpha Methyl Styrene	118	4.082	4.082	0.000	93	403676	80.0	75.8	
36 Bis(2-chloroethyl)ether	93	4.070	4.076	-0.006	94	354230	80.0	74.9	
38 n-Decane	43	4.188	4.188	0.000	94	529262	80.0	71.6	
39 2-Chlorophenol	128	4.141	4.147	-0.006	98	405431	80.0	77.7	
40 1,3-Dichlorobenzene	146	4.288	4.288	0.000	98	447422	80.0	76.8	
42 1,4-Dichlorobenzene	146	4.352	4.352	0.000	93	455295	80.0	77.8	
43 Benzyl alcohol	108	4.452	4.452	0.000	92	263139	80.0	76.2	
44 1,2-Dichlorobenzene	146	4.499	4.499	0.000	97	430059	80.0	77.2	
45 2-Methylphenol	108	4.558	4.558	0.000	95	362340	80.0	75.7	
46 2,2'-oxybis[1-chloropropan	45	4.582	4.582	0.000	64	644256	80.0	71.4	
47 Indene	116	4.582	4.582	0.000	92	1193628	160.0	149.6	
49 3 & 4 Methylphenol	108	4.705	4.705	0.000	65	341420	80.0	73.3	
50 3-Methylphenol	108	4.705	4.705	0.000	70	341420	80.0	73.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.705	4.705	0.000	66	341420	80.0	73.3	
52 N-Nitrosodi-n-propylamine	70	4.705	4.705	0.000	80	238886	80.0	72.1	
54 Acetophenone	105	4.705	4.705	0.000	79	470002	80.0	72.8	
58 Hexachloroethane	117	4.822	4.823	-0.001	93	166208	80.0	76.7	
59 Nitrobenzene	77	4.869	4.870	-0.001	94	385770	80.0	76.3	
63 Isophorone	82	5.093	5.099	-0.006	98	660929	80.0	74.2	
64 2-Nitrophenol	139	5.175	5.175	0.000	94	207947	80.0	77.3	
65 2,4-Dimethylphenol	107	5.210	5.216	-0.006	95	364979	80.0	77.4	
68 Benzoic acid	105	5.334	5.334	0.000	93	535801	160.0	153.9	
69 Bis(2-chloroethoxy)methane	93	5.298	5.298	0.000	96	416486	80.0	76.4	
71 3,5-Dimethylphenol	107	5.339	5.345	-0.006	83	364022	80.0	77.3	
74 2,4-Dichlorophenol	162	5.410	5.416	-0.006	95	309036	80.0	77.2	
76 1,2,4-Trichlorobenzene	180	5.498	5.498	0.000	94	353254	80.0	77.4	
79 Naphthalene	128	5.574	5.575	-0.001	97	1052197	80.0	78.3	
80 4-Chloroaniline	127	5.616	5.616	0.000	96	423653	80.0	75.1	
81 2,6-Dichlorophenol	162	5.633	5.633	0.000	97	301348	80.0	76.5	
83 Hexachlorobutadiene	225	5.704	5.710	-0.006	96	196865	80.0	77.7	
86 Caprolactam	55	5.945	5.945	0.000	74	163196	80.0	68.4	
89 4-Chloro-3-methylphenol	107	6.092	6.098	-0.006	96	278168	80.0	73.1	
93 2-Methylnaphthalene	142	6.250	6.256	-0.006	95	721255	80.0	76.4	
96 1-Methylnaphthalene	142	6.350	6.356	-0.006	95	660593	80.0	74.9	
97 Hexachlorocyclopentadiene	237	6.421	6.427	-0.006	95	199743	80.0	75.4	
98 1,2,4,5-Tetrachlorobenzene	216	6.421	6.427	-0.006	97	310638	80.0	74.3	
100 2,4,6-Trichlorophenol	196	6.532	6.532	0.000	93	189448	80.0	78.0	
101 2,3-Dichlorobenzenamine	161	6.526	6.526	0.000	97	317298	80.0	78.1	
102 2,4,5-Trichlorophenol	196	6.567	6.568	-0.001	94	210662	80.0	79.3	
104 1,1'-Biphenyl	154	6.708	6.714	-0.006	95	798185	80.0	79.7	
106 2-Chloronaphthalene	162	6.732	6.738	-0.006	95	620012	80.0	80.7	
108 2-Nitroaniline	65	6.820	6.826	-0.006	86	167602	80.0	73.2	
111 Dimethyl phthalate	163	7.002	7.008	-0.006	98	558470	80.0	74.1	
112 1,3-Dinitrobenzene	168	7.026	7.032	-0.006	89	100668	80.0	77.7	
113 2,6-Dinitrotoluene	165	7.061	7.061	0.000	94	147541	80.0	76.7	
114 Acenaphthylene	152	7.143	7.149	-0.006	99	898845	80.0	77.8	
115 3-Nitroaniline	138	7.226	7.232	-0.006	94	148681	80.0	72.0	
117 Acenaphthene	153	7.320	7.320	0.000	93	573303	80.0	76.4	
118 2,4-Dinitrophenol	184	7.331	7.337	-0.006	84	144071	160.0	133.1	
119 4-Nitrophenol	109	7.402	7.402	0.000	94	137096	160.0	141.9	
122 2,4-Dinitrotoluene	165	7.461	7.467	-0.006	94	177688	80.0	74.6	
123 Dibenzofuran	168	7.490	7.490	0.000	97	804097	80.0	76.4	
125 2,3,4,6-Tetrachlorophenol	232	7.613	7.619	-0.006	72	158141	80.0	76.4	
127 Hexadecane	57	7.731	7.737	-0.006	91	517249	80.0	77.0	
130 Diethyl phthalate	149	7.701	7.707	-0.006	98	524308	80.0	73.3	
134 4-Chlorophenyl phenyl ethe	204	7.819	7.825	-0.006	94	286042	80.0	74.6	
135 Fluorene	166	7.825	7.831	-0.006	95	596679	80.0	74.9	
138 4-Nitroaniline	138	7.837	7.843	-0.006	88	138848	80.0	71.4	
139 4,6-Dinitro-2-methylphenol	198	7.872	7.878	-0.006	88	182530	160.0	150.4	
141 N-Nitrosodiphenylamine	169	7.936	7.942	-0.006	62	438236	80.0	78.1	
142 Diphenylamine	169	7.936	7.942	-0.006	95	438236	68.0	63.3	
143 1,2-Diphenylhydrazine	77	7.978	7.984	-0.006	41	580939	80.9	74.3	
144 Azobenzene	77	7.978	7.984	-0.006	98	580939	80.0	73.5	
147 2,4,6 - Tribromophenol	330	8.066	8.072	-0.006	93	79356	80.0	74.2	
156 4-Bromophenyl phenyl ether	248	8.307	8.313	-0.006	67	166349	80.0	76.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.389	8.395	-0.006	94	160552	80.0	74.4	
159 Atrazine	200	8.459	8.465	-0.006	91	138231	80.0	73.5	
161 n-Octadecane	85	8.647	8.653	-0.006	92	157398	80.0	78.7	
163 Pentachlorophenol	266	8.577	8.583	-0.006	93	192837	160.0	150.1	
168 Phenanthrene	178	8.783	8.789	-0.006	97	796616	80.0	76.2	
169 Anthracene	178	8.835	8.841	-0.006	97	823639	80.0	76.0	
170 Carbazole	167	8.988	8.994	-0.006	95	701043	80.0	74.1	
171 Alachlor	188	9.129	9.135	-0.006	94	100200	80.0	76.6	
173 Di-n-butyl phthalate	149	9.329	9.335	-0.006	99	780341	80.0	75.1	
179 Fluoranthene	202	10.040	10.052	-0.012	98	776324	80.0	73.7	
182 Pyrene	202	10.340	10.346	-0.006	97	807107	80.0	76.1	
188 Famphur	218	11.250	11.262	-0.012	83	221317	80.0	70.8	
190 Butyl benzyl phthalate	149	11.368	11.380	-0.012	96	318911	80.0	77.5	
195 Bis(2-ethylhexyl) phthalat	149	12.631	12.643	-0.012	97	390378	80.0	74.5	
197 3,3'-Dichlorobenzidine	252	12.408	12.414	-0.006	73	196026	80.0	73.6	
198 Benzo[a]anthracene	228	12.437	12.443	-0.006	99	689899	80.0	74.0	
199 Chrysene	228	12.514	12.525	-0.011	97	708294	80.0	78.3	
201 Di-n-octyl phthalate	149	14.323	14.335	-0.012	99	554008	80.0	62.6	
203 Benzo[b]fluoranthene	252	15.093	15.105	-0.012	97	555193	80.0	73.2	
204 Benzo[k]fluoranthene	252	15.169	15.181	-0.012	99	715516	80.0	87.7	
206 Benzo[e]pyrene	252	15.827	15.839	-0.012	97	567344	80.0	78.4	
207 Benzo[a]pyrene	252	15.963	15.980	-0.017	77	642200	80.0	84.0	
213 Dibenz(a,h)anthracene	278	19.218	19.229	-0.011	94	475488	80.0	74.9	
214 Indeno[1,2,3-cd]pyrene	276	19.118	19.130	-0.012	98	404092	80.0	60.6	M
215 Benzo[g,h,i]perylene	276	19.823	19.829	-0.006	98	559737	80.0	78.9	
S 217 Total Cresols	108				0			149.0	
S 218 Methyl Phenols,Total	108				0			149.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

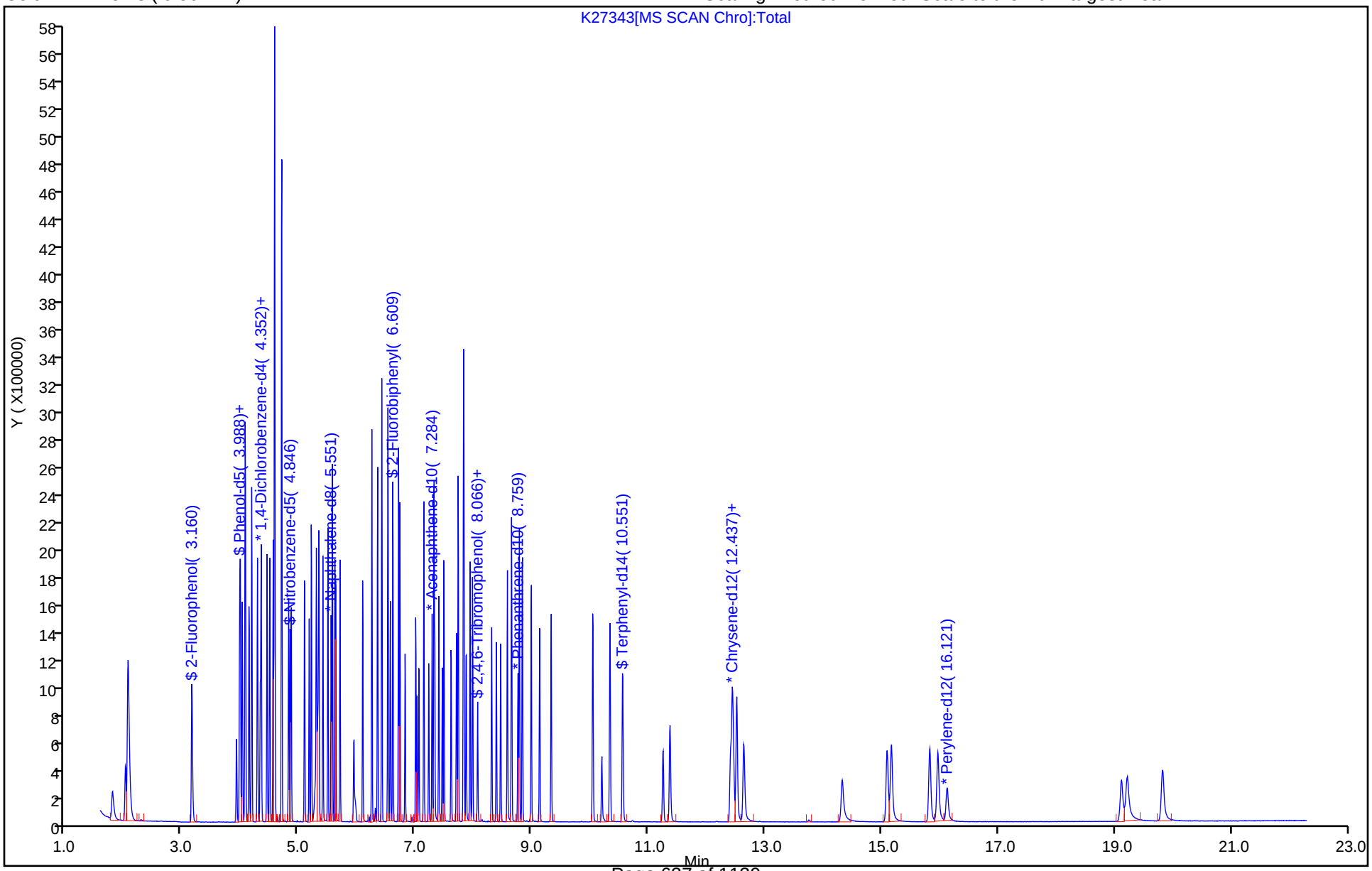
Report Date: 01-Nov-2018 06:27:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27343.D

Injection Date:	01-Nov-2018 01:20:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCVC HSL			Worklist Smp#:	68
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	SMSK_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

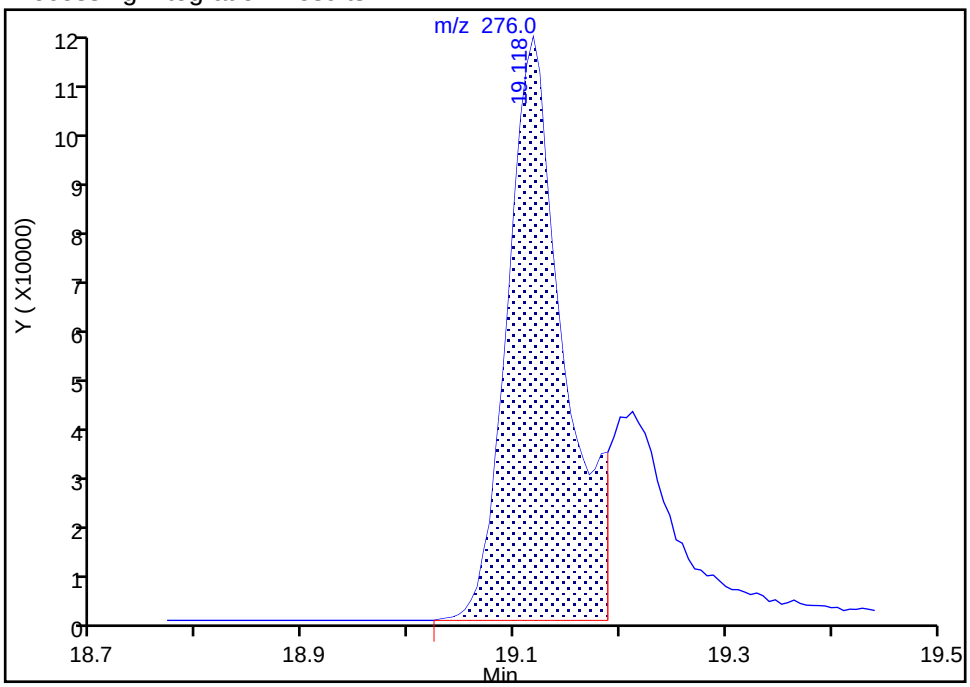
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27343.D
Injection Date: 01-Nov-2018 01:20:30 Instrument ID: SMS_K
Lims ID: CCVC HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 29 Worklist Smp#: 68
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

214 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

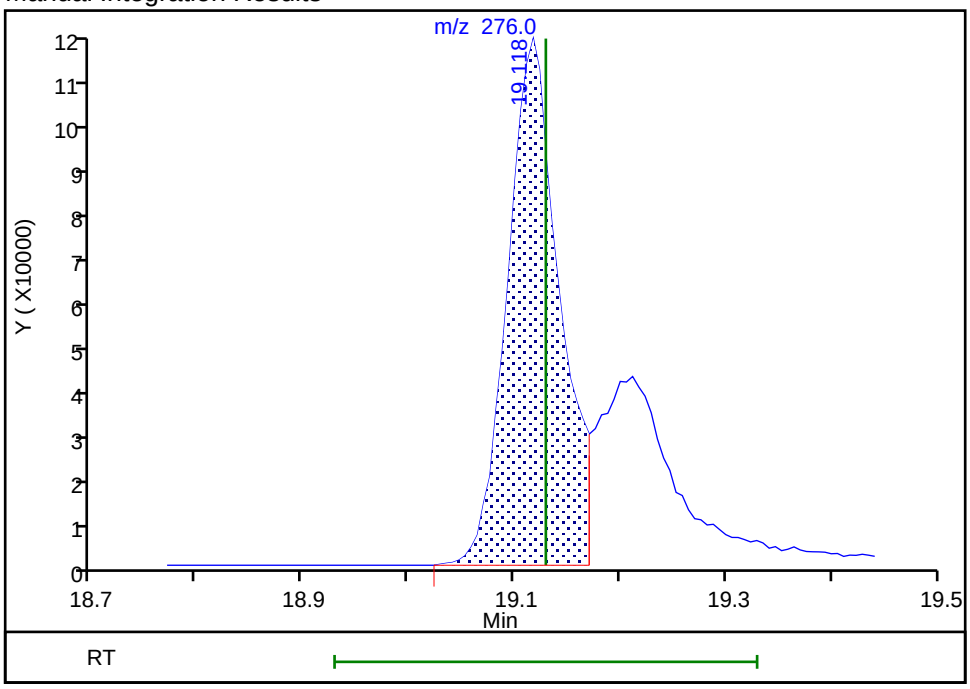
Processing Integration Results

RT: 19.12
Area: 438624
Amount: 65.832827
Amount Units: ug/ml



Manual Integration Results

RT: 19.12
Area: 404092
Amount: 60.649939
Amount Units: ug/ml



Reviewer: kiekeld, 01-Nov-2018 06:25:45
Audit Action: Split an Integrated Peak Audit Reason: Shouldering

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 23-Oct-2018 13:16:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 24-Oct-2018 06:01:52 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: kiekeld Date: 23-Oct-2018 13:30:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.584	3.584	0.000	93	90847	NR	NR	
48 Benzidine_T	184	4.660	4.660	0.000	100	616468	NR	NR	
30 DFTPP									
56 4,4'-DDE	246	4.801	4.801	0.000	1	211	NR	NR	a
62 4,4'-DDD	235	5.077	5.077	0.000	96	3610	NR	NR	a
70 4,4'-DDT	235	5.277	5.277	0.000	98	251686	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

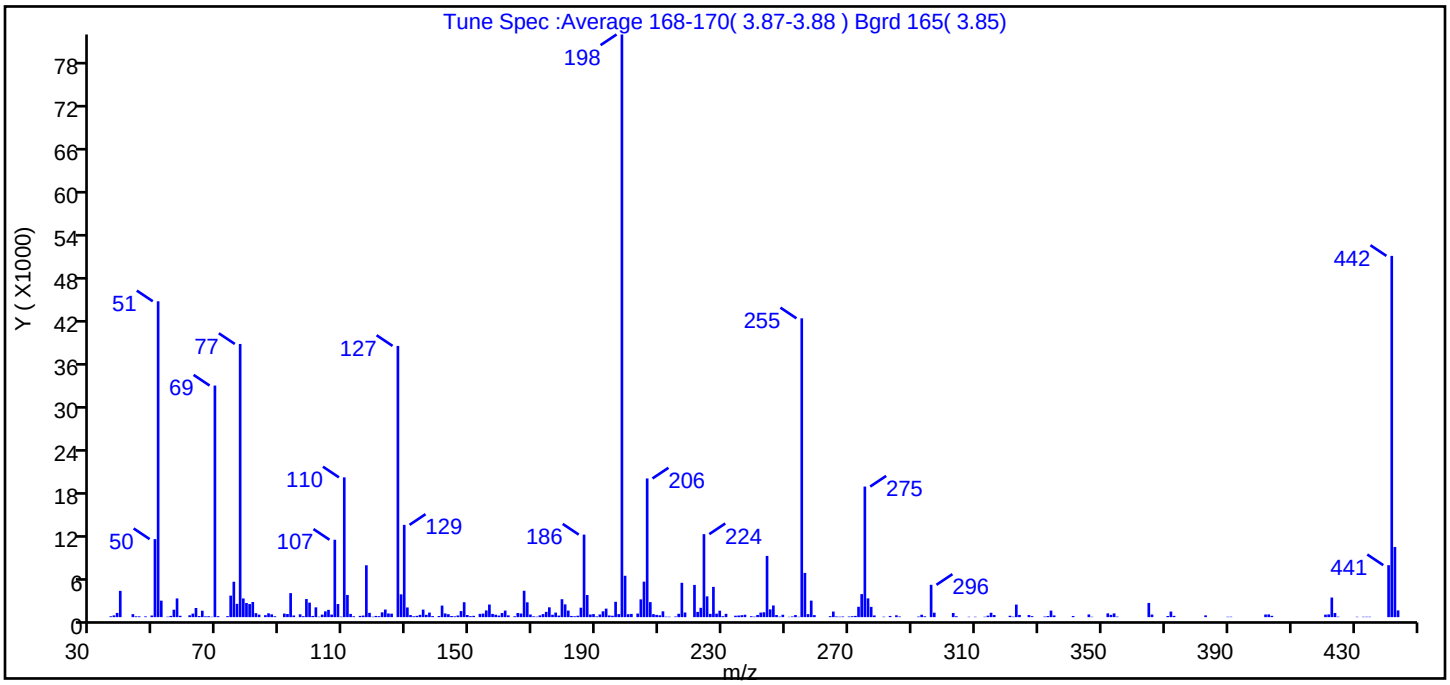
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D
Injection Date: 23-Oct-2018 13:16:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	54.2
68	<2% of mass 69	0.1 (0.2)
69	Present	39.7
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	46.5
197	<1% of mass 198	0.5
199	5-9% of mass 198	7.1
275	10-30% of mass 198	22.4
365	>1% of mass 198	2.4
441	Present but less than mass 443	8.9 (74.1)
442	>40% of mass 198	62.0
443	17-23% of mass 442	12.0 (19.4)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D\SMSK_8270C.rslt\spectra.d
Injection Date: 23-Oct-2018 13:16:30
Spectrum: Tune Spec :Average 168-170(3.87-3.88) Bgrd 165(3.85)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 271

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	118	117.00	7214	189.00	422	270.00	86
37.00	245	118.00	598	190.00	101	271.00	124
38.00	587	119.00	60	191.00	370	272.00	173
39.00	3653	120.00	170	192.00	811	273.00	1443
43.00	417	121.00	132	193.00	1186	274.00	3205
44.00	112	122.00	668	194.00	234	275.00	18160
45.00	110	123.00	1058	195.00	192	276.00	2608
47.00	105	124.00	510	196.00	2136	277.00	1427
49.00	224	125.00	483	197.00	421	278.00	233
50.00	10852	127.00	37720	198.00	81032	281.00	63
51.00	43928	128.00	3169	199.00	5754	283.00	170
52.00	2292	129.00	12835	200.00	410	285.00	257
54.00	62	130.00	1346	201.00	449	286.00	90
55.00	173	131.00	292	203.00	499	292.00	82
56.00	1035	132.00	120	204.00	2473	293.00	333
57.00	2606	133.00	180	205.00	4936	294.00	116
58.00	188	134.00	320	206.00	19288	296.00	4496
61.00	258	135.00	1050	207.00	2087	297.00	620
62.00	489	136.00	322	208.00	417	303.00	581
63.00	1274	137.00	633	209.00	316	304.00	126
64.00	150	138.00	146	210.00	254	308.00	53
65.00	892	140.00	155	211.00	811	310.00	56
66.00	108	141.00	1609	212.00	66	313.00	58
67.00	125	142.00	513	213.00	62	314.00	209
68.00	49	143.00	406	215.00	91	315.00	611
69.00	32208	144.00	158	216.00	465	316.00	292
70.00	133	145.00	110	217.00	4776	321.00	192
73.00	139	146.00	231	218.00	646	322.00	65
74.00	2992	147.00	846	221.00	4483	323.00	1748
75.00	4925	148.00	2075	222.00	732	324.00	307
76.00	1850	149.00	297	223.00	1296	327.00	291
77.00	37992	150.00	137	224.00	11544	328.00	136
78.00	2598	151.00	184	225.00	2891	332.00	79

Report Date: 24-Oct-2018 06:01:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D\SMSK_8270C.rslt\spectra.d
Injection Date: 23-Oct-2018 13:16:30
Spectrum: Tune Spec :Average 168-170(3.87-3.88) Bgrd 165(3.85)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 271

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	1971	153.00	455	226.00	455	333.00	154
80.00	1821	154.00	496	227.00	4210	334.00	911
81.00	2103	155.00	931	228.00	485	335.00	236
82.00	555	156.00	1754	229.00	895	341.00	162
83.00	343	157.00	448	230.00	136	346.00	375
84.00	3	158.00	338	231.00	461	347.00	53
85.00	271	159.00	216	234.00	199	352.00	527
86.00	533	160.00	571	235.00	224	353.00	315
87.00	389	161.00	913	236.00	273	354.00	522
88.00	124	162.00	249	237.00	338	355.00	72
91.00	495	164.00	122	239.00	127	365.00	1974
92.00	436	165.00	578	240.00	69	366.00	362
93.00	3342	166.00	505	241.00	306	371.00	160
94.00	229	167.00	3671	242.00	634	372.00	777
95.00	10	168.00	2064	243.00	682	373.00	177
96.00	394	169.00	369	244.00	8518	383.00	244
97.00	131	170.00	112	245.00	1079	390.00	54
98.00	2519	171.00	66	246.00	1622	391.00	61
99.00	2016	172.00	248	247.00	297	402.00	365
100.00	167	173.00	425	248.00	73	403.00	382
101.00	1363	174.00	737	249.00	335	404.00	183
102.00	61	175.00	1366	251.00	50	421.00	346
103.00	350	176.00	328	252.00	94	422.00	383
104.00	804	177.00	632	253.00	291	423.00	2728
105.00	1012	178.00	217	254.00	50	424.00	575
106.00	354	179.00	2495	255.00	41560	425.00	64
107.00	10765	180.00	1779	256.00	6151	431.00	55
108.00	1823	181.00	913	257.00	419	433.00	54
109.00	69	182.00	170	258.00	2301	434.00	55
110.00	19440	183.00	120	259.00	282	435.00	56
111.00	3087	184.00	198	264.00	136	441.00	7229
112.00	449	185.00	1312	265.00	777	442.00	50240
113.00	120	186.00	11481	266.00	93	443.00	9759
115.00	178	187.00	3078	267.00	62	444.00	935

Report Date: 24-Oct-2018 06:01:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D\SMSK_8270C.rslt\spectra.d
Injection Date: 23-Oct-2018 13:16:30
Spectrum: Tune Spec :Average 168-170(3.87-3.88) Bgrd 165(3.85)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 271

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	218	188.00	370	268.00	86		

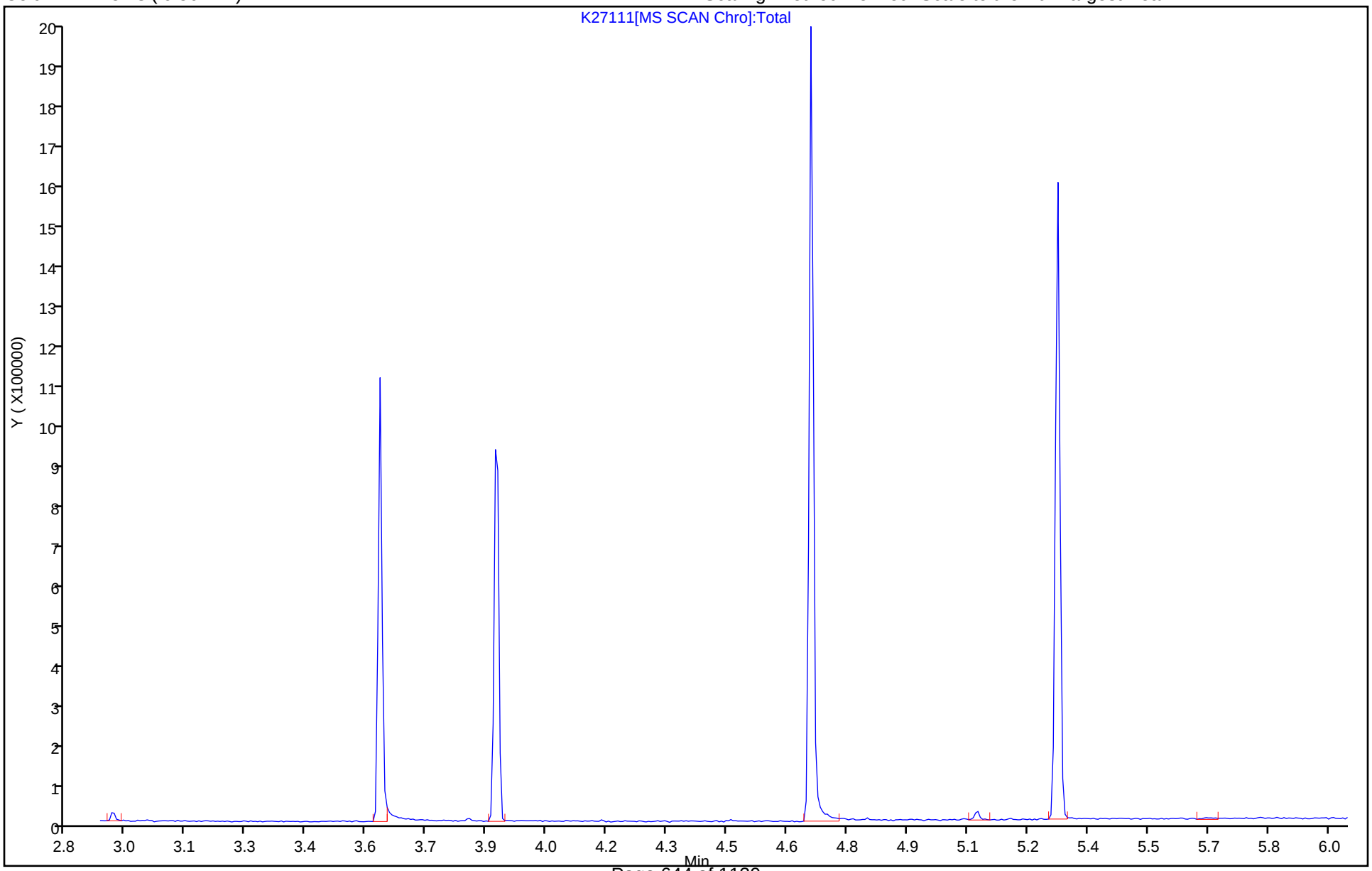
Report Date: 24-Oct-2018 06:01:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D

Injection Date:	23-Oct-2018 13:16:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

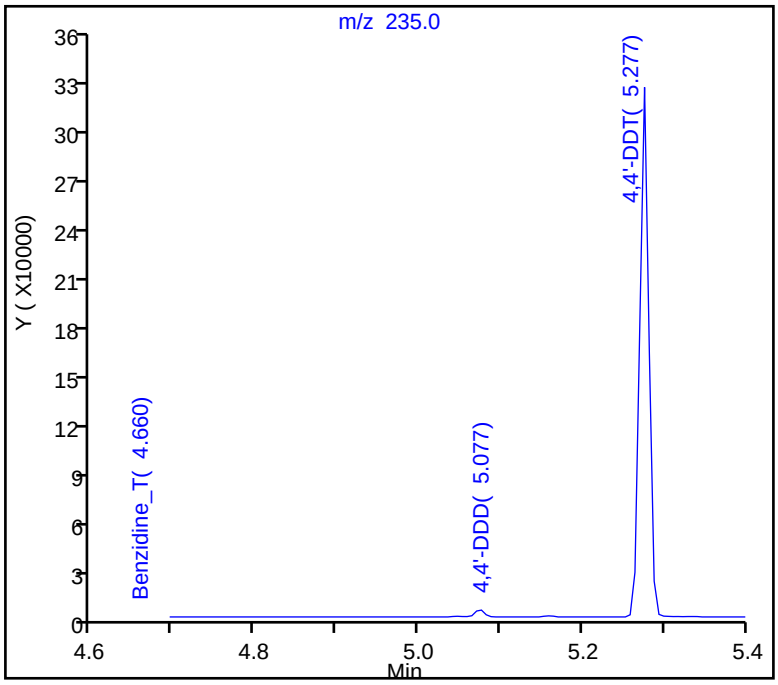


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D
Injection Date: 23-Oct-2018 13:16:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 251686
62 4,4'-DDD, Area = 3610
56 4,4'-DDE, Area = 211

%Breakdown: 1.50%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

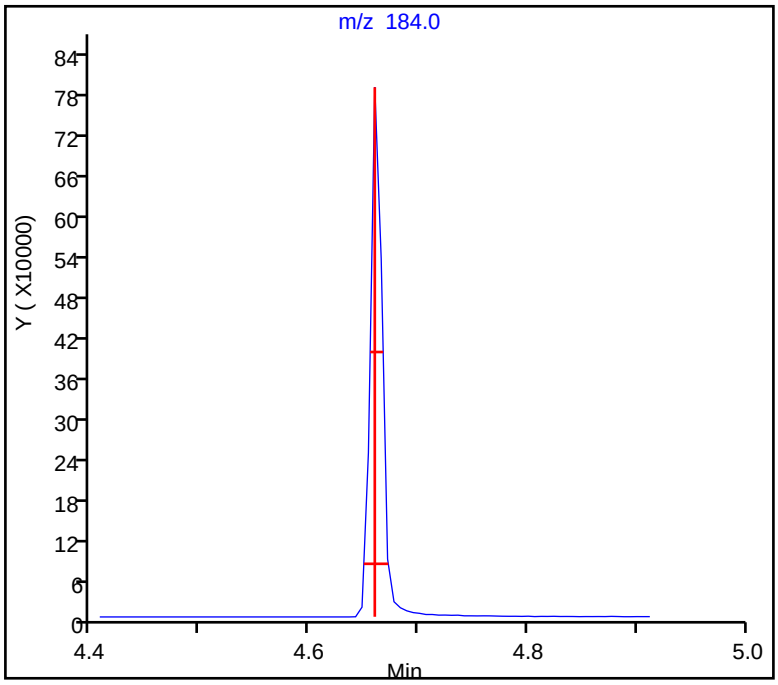
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D
Injection Date: 23-Oct-2018 13:16:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.2, Max. Tailing < 3.00
Passed



Peak Tailing Report

TestAmerica Denver

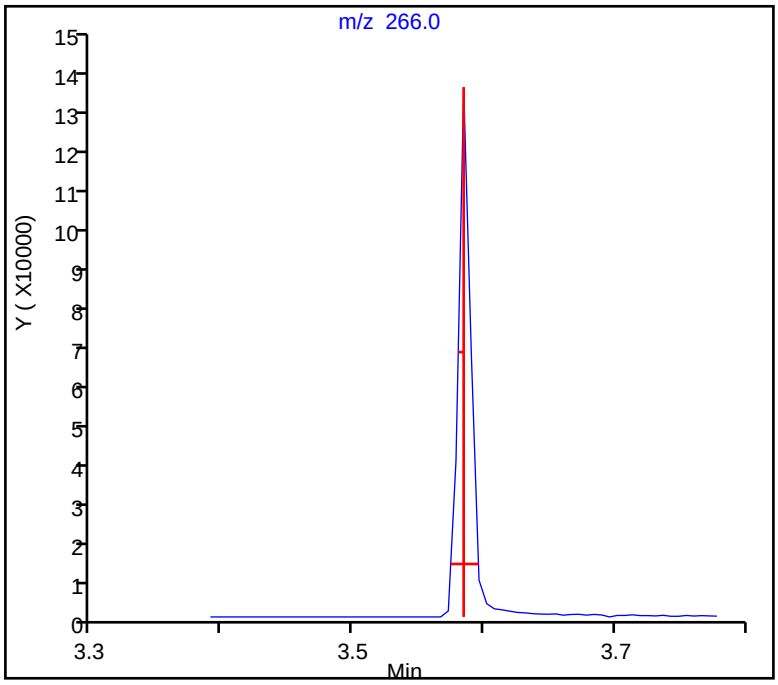
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27111.D
Injection Date: 23-Oct-2018 13:16:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.1, Max. Tailing < 5.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 29-Oct-2018 08:50:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:08 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 29-Oct-2018 09:00:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.537	3.537	0.000	93	68681	NR	NR	
48 Benzidine_T	184	4.612	4.612	0.000	99	529231	NR	NR	
30 DFTPP									
56 4,4'-DDE	246	4.754	4.754	0.000	1	236	NR	NR	a
62 4,4'-DDD	235	5.024	5.024	0.000	94	2719	NR	NR	a
70 4,4'-DDT	235	5.218	5.218	0.000	98	217330	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

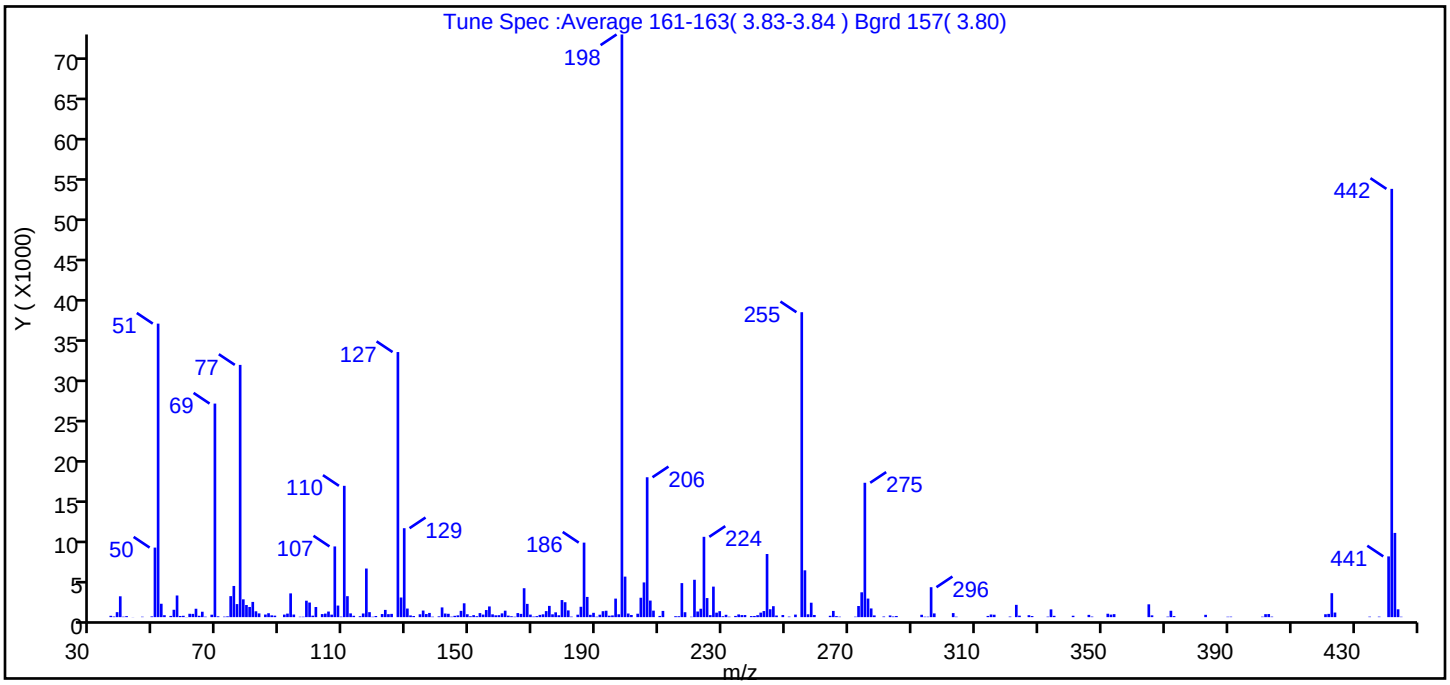
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D
Injection Date: 29-Oct-2018 08:50:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	50.4
68	<2% of mass 69	0.4 (1.1)
69	Present	36.7
70	<2% of mass 69	0.1 (0.4)
127	40-60% of mass 198	45.5
197	<1% of mass 198	0.5
199	5-9% of mass 198	7.0
275	10-30% of mass 198	23.1
365	>1% of mass 198	2.2
441	Present but less than mass 443	10.4 (72.1)
442	>40% of mass 198	73.5
443	17-23% of mass 442	14.5 (19.7)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D\SMSK_8270C.rslt\spectra.d
Injection Date: 29-Oct-2018 08:50:30
Spectrum: Tune Spec :Average 161-163(3.83-3.84) Bgrd 157(3.80)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 255

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	167	113.00	168	182.00	66	259.00	269
37.00	76	115.00	114	184.00	305	264.00	170
38.00	620	116.00	456	185.00	1291	265.00	776
39.00	2600	117.00	6061	186.00	9291	266.00	125
40.00	61	118.00	621	187.00	2520	267.00	56
41.00	127	119.00	52	188.00	289	272.00	60
43.00	14	120.00	144	189.00	540	273.00	1388
46.00	53	122.00	387	190.00	58	274.00	3097
49.00	93	123.00	904	191.00	302	275.00	16752
50.00	8670	124.00	374	192.00	742	276.00	2316
51.00	36592	125.00	408	193.00	798	277.00	1086
52.00	1669	127.00	33048	194.00	181	278.00	214
53.00	241	128.00	2449	195.00	215	281.00	80
55.00	152	129.00	11089	196.00	2311	283.00	212
56.00	920	130.00	1072	197.00	355	284.00	83
57.00	2700	131.00	214	198.00	72640	285.00	145
58.00	147	132.00	139	199.00	5053	293.00	295
59.00	170	134.00	359	200.00	450	294.00	56
60.00	18	135.00	821	201.00	268	295.00	57
61.00	418	136.00	385	203.00	427	296.00	3732
62.00	407	137.00	526	204.00	2417	297.00	465
63.00	1048	138.00	60	205.00	4328	303.00	505
64.00	168	140.00	98	206.00	17440	304.00	56
65.00	675	141.00	1214	207.00	2065	314.00	151
66.00	60	142.00	450	208.00	809	315.00	331
68.00	304	143.00	419	210.00	151	316.00	301
69.00	26624	144.00	62	211.00	777	321.00	73
70.00	101	145.00	165	215.00	116	323.00	1533
72.00	64	146.00	222	216.00	112	324.00	185
73.00	97	147.00	783	217.00	4243	327.00	241
74.00	2619	148.00	1726	218.00	613	328.00	136
75.00	3888	149.00	360	220.00	52	333.00	63
76.00	1627	150.00	111	221.00	4659	334.00	968

Report Date: 30-Oct-2018 07:24:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D\SMSK_8270C.rslt\spectra.d
Injection Date: 29-Oct-2018 08:50:30
Spectrum: Tune Spec :Average 161-163(3.83-3.84) Bgrd 157(3.80)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 255

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	31448	151.00	248	222.00	706	335.00	164
78.00	2221	152.00	115	223.00	1047	341.00	174
79.00	1512	153.00	503	224.00	10014	346.00	283
80.00	1267	154.00	320	225.00	2378	347.00	70
81.00	1898	155.00	885	226.00	250	352.00	426
82.00	730	156.00	1335	227.00	3806	353.00	316
83.00	467	157.00	350	228.00	559	354.00	374
85.00	325	158.00	227	229.00	745	365.00	1600
86.00	488	159.00	244	230.00	113	366.00	224
87.00	224	160.00	471	231.00	294	371.00	63
88.00	185	161.00	806	232.00	58	372.00	795
91.00	319	162.00	191	234.00	152	373.00	129
92.00	442	163.00	112	235.00	339	383.00	290
93.00	2963	164.00	54	236.00	256	390.00	52
94.00	325	165.00	508	237.00	261	391.00	61
96.00	51	166.00	407	239.00	133	401.00	61
97.00	54	167.00	3606	240.00	145	402.00	372
98.00	2049	168.00	1654	241.00	243	403.00	387
99.00	1822	169.00	315	242.00	562	404.00	66
100.00	183	170.00	71	243.00	761	421.00	362
101.00	1263	171.00	126	244.00	7871	422.00	407
103.00	382	172.00	281	245.00	985	423.00	2986
104.00	439	173.00	352	246.00	1366	424.00	573
105.00	699	174.00	754	247.00	202	435.00	62
106.00	310	175.00	1402	249.00	263	438.00	64
107.00	8815	176.00	353	251.00	68	441.00	7574
108.00	1444	177.00	600	253.00	317	442.00	53392
109.00	65	178.00	234	255.00	38016	443.00	10500
110.00	16372	179.00	2130	256.00	5838	444.00	980
111.00	2614	180.00	1861	257.00	355	445.00	51
112.00	471	181.00	841	258.00	1799		

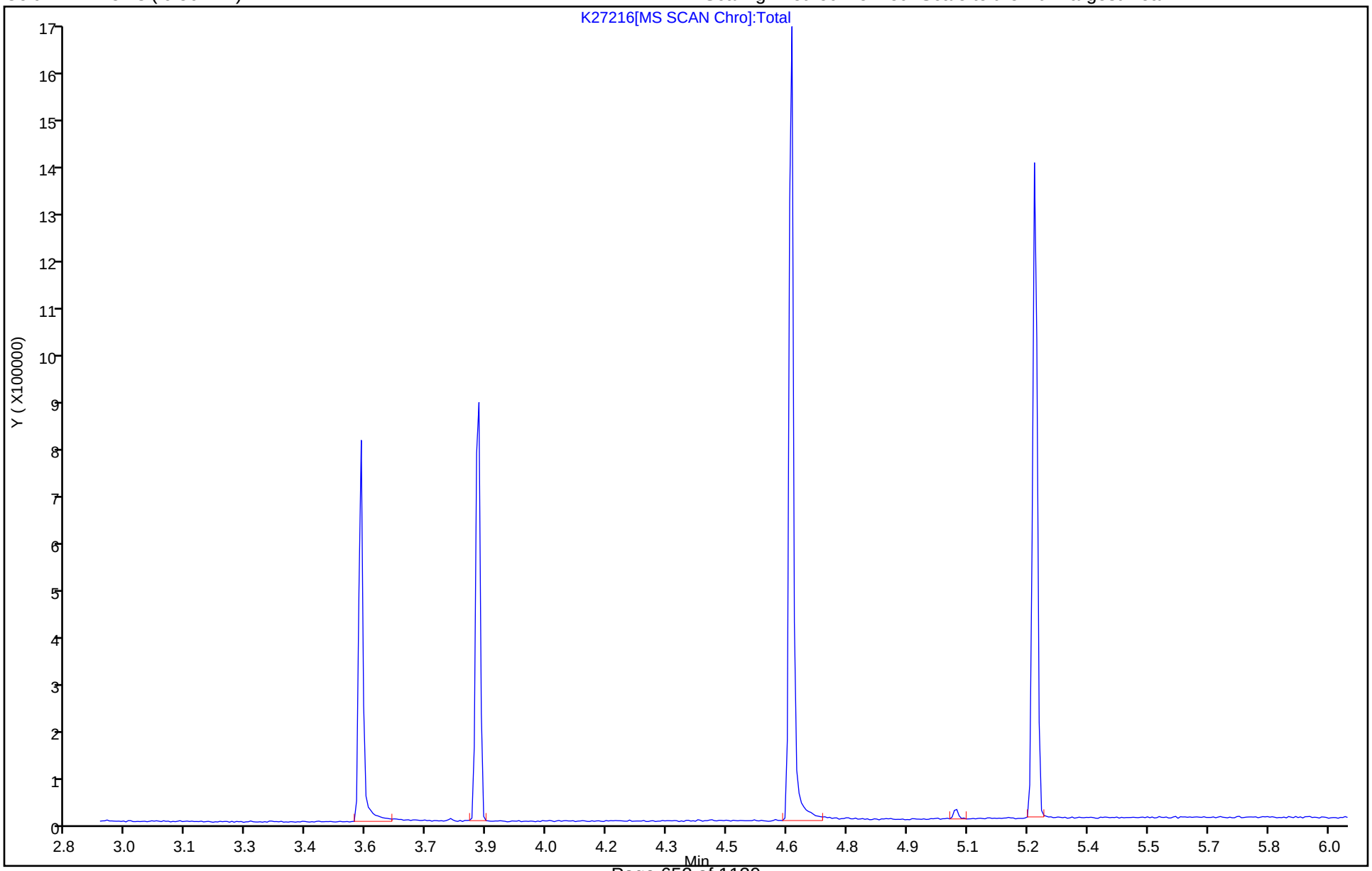
Report Date: 30-Oct-2018 07:24:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D

Injection Date:	29-Oct-2018 08:50:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

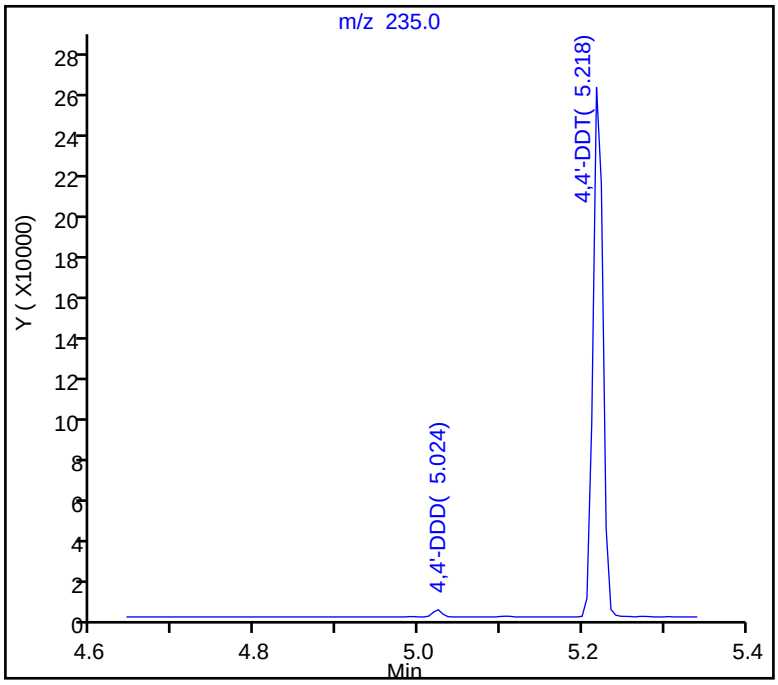


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D
Injection Date: 29-Oct-2018 08:50:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 217330
62 4,4'-DDD, Area = 2719
56 4,4'-DDE, Area = 236

%Breakdown: 1.34%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

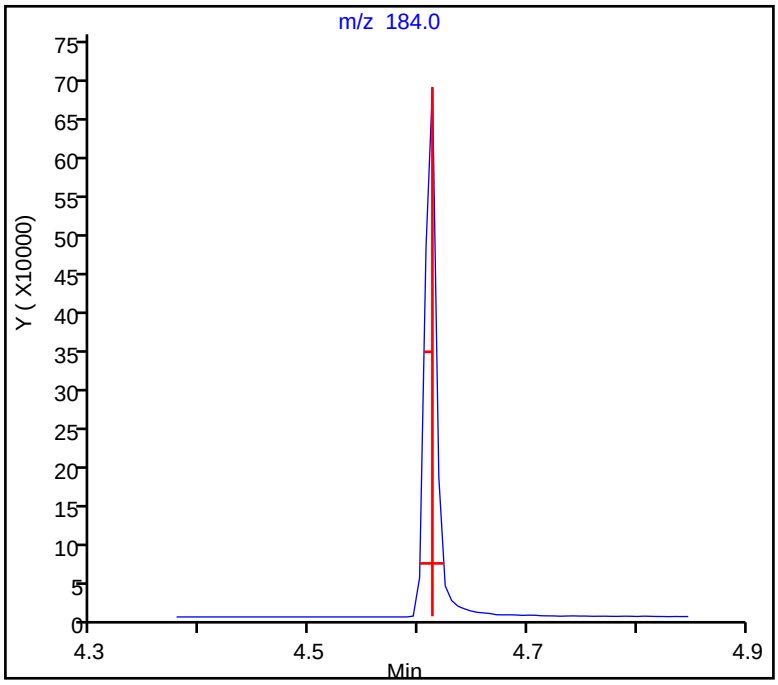
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D
Injection Date: 29-Oct-2018 08:50:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 0.9, Max. Tailing < 3.00
Passed



Peak Tailing Report

TestAmerica Denver

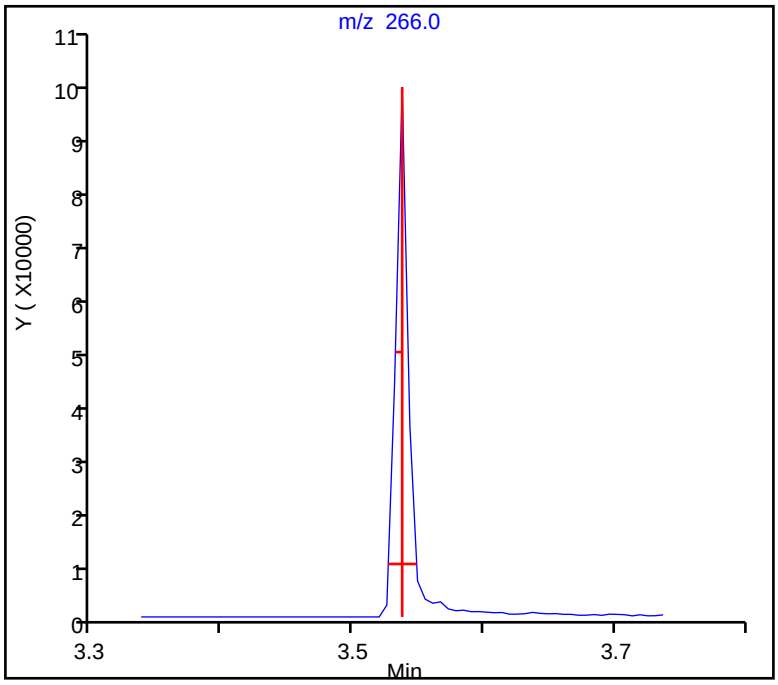
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27216.D
Injection Date: 29-Oct-2018 08:50:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.0, Max. Tailing < 5.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 31-Oct-2018 12:45:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:07 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 31-Oct-2018 13:24:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.502	3.502	0.000	93	85705	NR	NR	
48 Benzidine_T	184	4.577	4.577	0.000	99	584868	NR	NR	
30 DFTPP									
56 4,4'-DDE	246	4.718	4.718	0.000	1	264	NR	NR	a
62 4,4'-DDD	235	4.988	4.988	0.000	96	3291	NR	NR	a
70 4,4'-DDT	235	5.182	5.182	0.000	98	251277	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

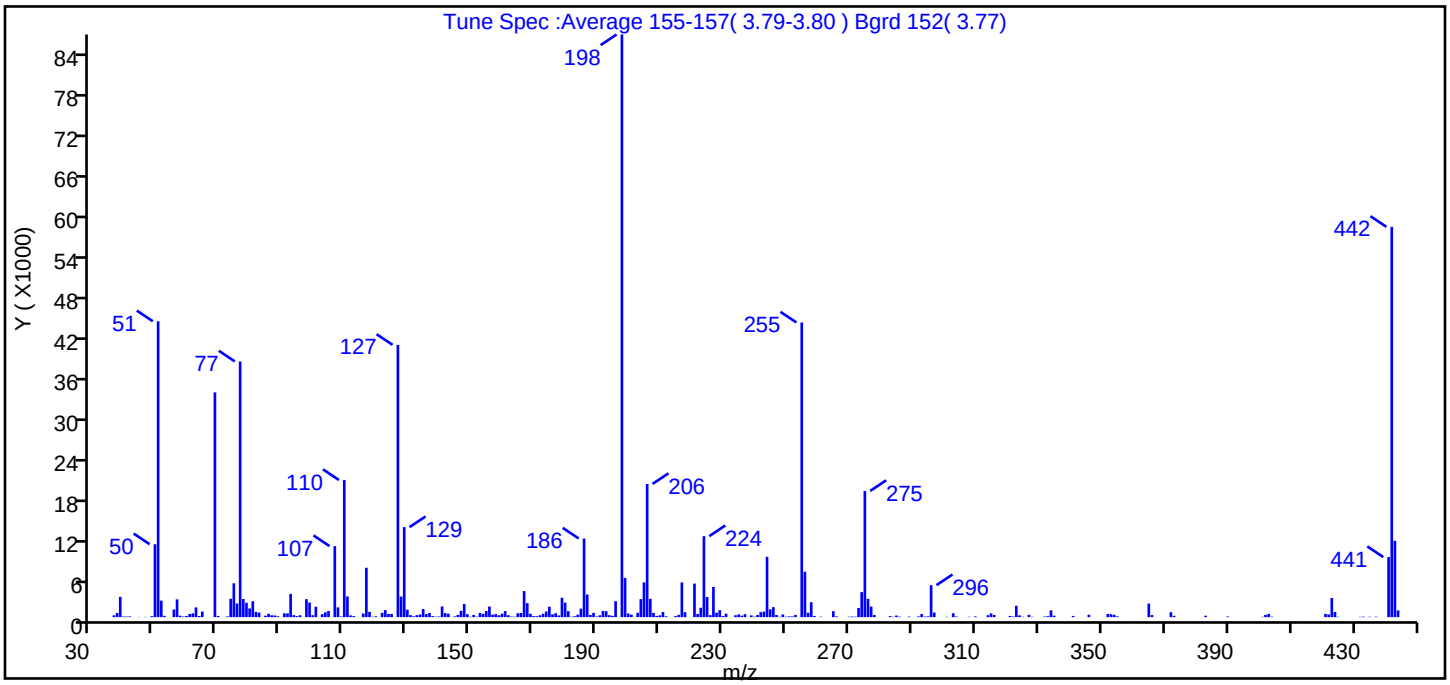
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D
Injection Date: 31-Oct-2018 12:45:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	50.8
68	<2% of mass 69	0.0 (0.0)
69	Present	38.6
70	<2% of mass 69	0.2 (0.5)
127	40-60% of mass 198	46.7
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-30% of mass 198	21.7
365	>1% of mass 198	2.3
441	Present but less than mass 443	10.3 (78.7)
442	>40% of mass 198	67.0
443	17-23% of mass 442	13.1 (19.6)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D\SMSK_8270C.rslt\spectra.d
Injection Date: 31-Oct-2018 12:45:30
Spectrum: Tune Spec :Average 155-157(3.79-3.80) Bgrd 152(3.77)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	268	120.00	129	189.00	636	272.00	70
38.00	617	122.00	633	190.00	87	273.00	1356
39.00	2988	123.00	1035	191.00	273	274.00	3696
40.00	92	124.00	478	192.00	921	275.00	18632
41.00	91	125.00	475	193.00	884	276.00	2705
42.00	110	127.00	40200	194.00	290	277.00	1559
45.00	32	128.00	3037	195.00	192	278.00	308
47.00	41	129.00	13291	196.00	2357	283.00	161
49.00	149	130.00	1096	198.00	86024	284.00	51
50.00	10767	131.00	301	199.00	5795	285.00	235
51.00	43688	132.00	128	200.00	535	286.00	73
52.00	2434	133.00	289	201.00	360	289.00	81
53.00	190	134.00	391	203.00	638	292.00	108
56.00	1136	135.00	1209	204.00	2663	293.00	463
57.00	2627	136.00	448	205.00	5128	294.00	87
58.00	213	137.00	621	206.00	19664	295.00	114
59.00	82	138.00	150	207.00	2702	296.00	4720
60.00	175	139.00	68	208.00	624	297.00	678
61.00	469	140.00	92	209.00	182	301.00	50
62.00	557	141.00	1575	210.00	260	303.00	573
63.00	1437	142.00	605	211.00	755	304.00	96
64.00	162	143.00	510	212.00	124	308.00	56
65.00	826	145.00	107	215.00	166	310.00	112
67.00	14	146.00	329	216.00	333	314.00	290
69.00	33184	147.00	931	217.00	5126	315.00	555
70.00	180	148.00	1943	218.00	727	316.00	319
73.00	110	149.00	430	221.00	4957	321.00	181
74.00	2711	150.00	51	222.00	473	322.00	87
75.00	5003	151.00	327	223.00	1384	323.00	1685
76.00	2016	152.00	75	224.00	11958	324.00	264
77.00	37752	153.00	619	225.00	2975	325.00	51
78.00	2678	154.00	490	226.00	294	327.00	343
79.00	2116	155.00	903	227.00	4456	328.00	56

Report Date: 01-Nov-2018 06:26:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D\SMSK_8270C.rslt\spectra.d
Injection Date: 31-Oct-2018 12:45:30
Spectrum: Tune Spec :Average 155-157(3.79-3.80) Bgrd 152(3.77)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	1287	156.00	1562	228.00	652	332.00	90
81.00	2353	157.00	363	229.00	1025	333.00	141
82.00	763	158.00	442	230.00	164	334.00	998
83.00	674	159.00	280	231.00	511	335.00	215
85.00	211	160.00	510	234.00	282	341.00	179
86.00	494	161.00	892	235.00	401	346.00	353
87.00	274	162.00	291	236.00	223	352.00	477
88.00	247	163.00	87	237.00	441	353.00	433
89.00	132	164.00	62	239.00	259	354.00	353
91.00	569	165.00	565	240.00	62	355.00	120
92.00	560	166.00	612	241.00	313	365.00	2005
93.00	3433	167.00	3852	242.00	740	366.00	306
94.00	296	168.00	2063	243.00	826	372.00	725
95.00	154	169.00	499	244.00	8909	373.00	201
96.00	276	170.00	154	245.00	1151	383.00	213
98.00	2657	171.00	137	246.00	1475	390.00	107
99.00	2154	172.00	279	247.00	309	401.00	56
100.00	285	173.00	496	248.00	54	402.00	339
101.00	1540	174.00	838	249.00	400	403.00	483
103.00	437	175.00	1537	250.00	67	404.00	70
104.00	713	176.00	415	251.00	120	421.00	482
105.00	902	177.00	581	252.00	103	422.00	399
107.00	10490	178.00	250	253.00	324	423.00	2819
108.00	1439	179.00	2867	255.00	43504	424.00	761
109.00	98	180.00	2145	256.00	6707	425.00	56
110.00	20248	181.00	889	257.00	644	432.00	52
111.00	3056	182.00	53	258.00	2205	433.00	76
112.00	252	183.00	132	259.00	173	435.00	58
113.00	158	184.00	361	261.00	67	437.00	69
116.00	536	185.00	1254	265.00	886	441.00	8871
117.00	7291	186.00	11608	266.00	116	442.00	57624
118.00	781	187.00	3344	270.00	64	443.00	11267
119.00	52	188.00	325	271.00	89	444.00	996

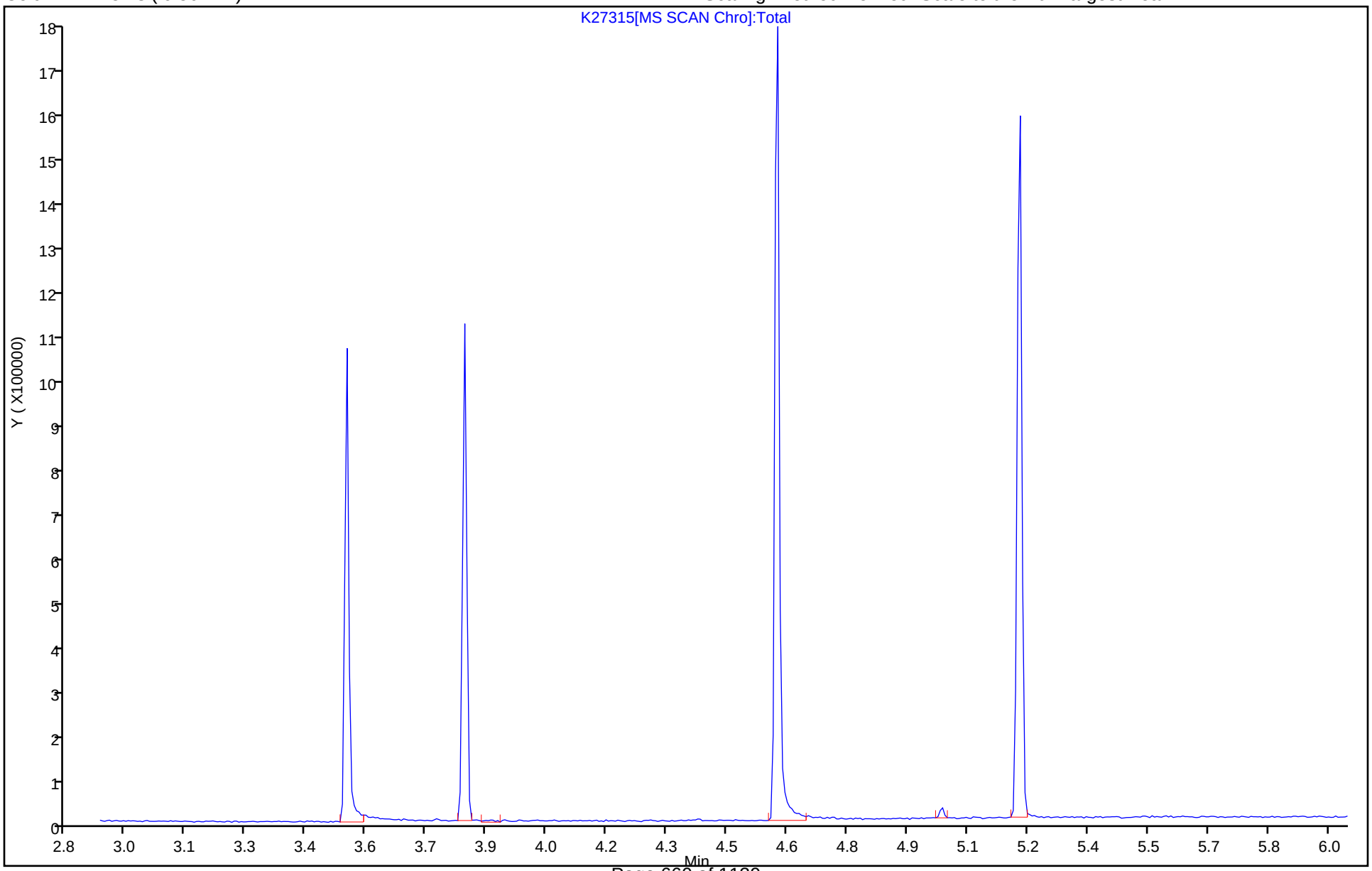
Report Date: 01-Nov-2018 06:26:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D

Injection Date:	31-Oct-2018 12:45:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

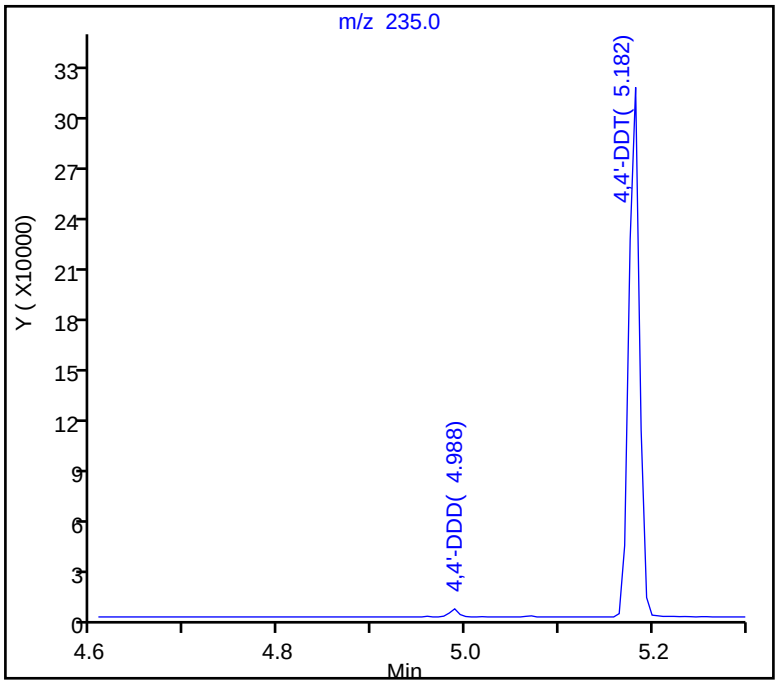


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D
Injection Date: 31-Oct-2018 12:45:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 251277
62 4,4'-DDD, Area = 3291
56 4,4'-DDE, Area = 264

%Breakdown: 1.40%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

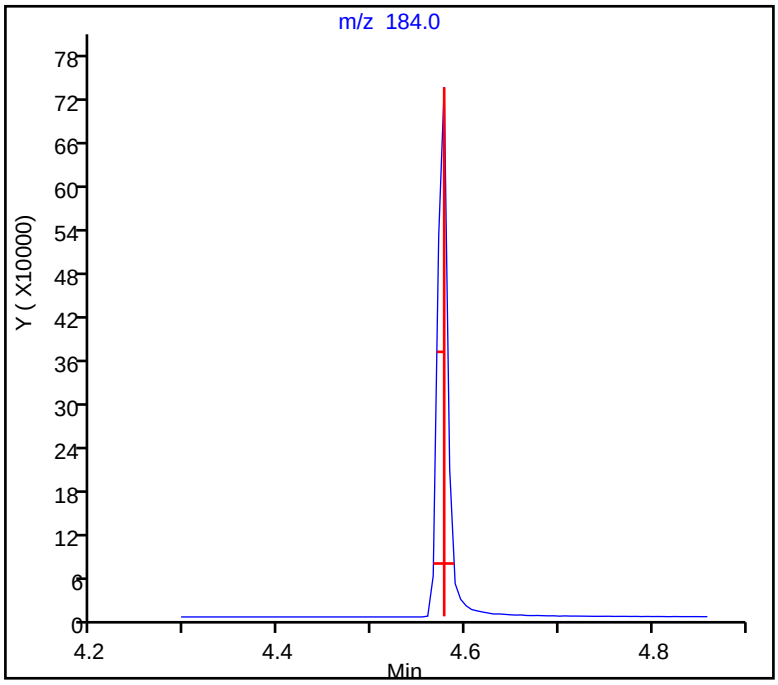
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D
Injection Date: 31-Oct-2018 12:45:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 0.9, Max. Tailing < 3.00
Passed



Peak Tailing Report

TestAmerica Denver

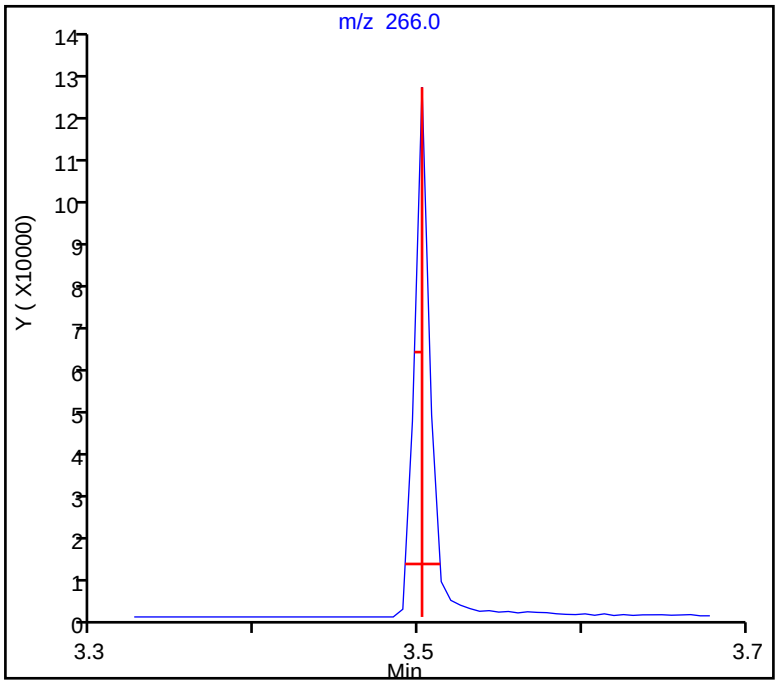
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27315.D
Injection Date: 31-Oct-2018 12:45:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.1, Max. Tailing < 5.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-434728/1-A

Matrix: Water | Lab File ID: K27319.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 1000(mL) | Date Analyzed: 10/31/2018 14:15

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	0.50	U	10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	1.0	U	10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	1.0	U	10	1.0	0.32
123-91-1	1,4-Dioxane	4.4	U	18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29
120-83-2	2,4-Dichlorophenol	2.0	U	10	2.0	0.64
105-67-9	2,4-Dimethylphenol	2.0	U	10	2.0	0.58
51-28-5	2,4-Dinitrophenol	30	U	80	30	10
121-14-2	2,4-Dinitrotoluene	4.4	U	20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	4.4	U	20	4.4	1.9
91-58-7	2-Chloronaphthalene	1.0	U	10	1.0	0.26
95-57-8	2-Chlorophenol	4.4	U	10	4.4	2.0
95-48-7	2-Methylphenol	2.0	U	10	2.0	0.98
88-74-4	2-Nitroaniline	4.4	U	50	4.4	1.7
88-75-5	2-Nitrophenol	1.0	U	20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	0.50	U	20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0
99-09-2	3-Nitroaniline	4.4	U	50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4
106-47-8	4-Chloroaniline	4.4	U	25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7
100-01-6	4-Nitroaniline	4.4	U	50	4.4	2.0
100-02-7	4-Nitrophenol	4.0	U	50	4.0	1.2
65-85-0	Benzoic acid	30	U	80	30	10
100-51-6	Benzyl alcohol	0.50	U	25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56
85-68-7	Butyl benzyl phthalate	2.0	U	20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-434728/1-A

Matrix: Water | Lab File ID: K27319.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 1000(mL) | Date Analyzed: 10/31/2018 14:15

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.0	U	10	1.0	0.43
132-64-9	Dibenzofuran	1.0	U	10	1.0	0.29
84-66-2	Diethyl phthalate	1.0	U	20	1.0	0.38
131-11-3	Dimethyl phthalate	0.50	U	20	0.50	0.21
84-74-2	Di-n-butyl phthalate	4.4	U	20	4.4	1.2
117-84-0	Di-n-octyl phthalate	1.0	U	20	1.0	0.35
118-74-1	Hexachlorobenzene	2.0	U	10	2.0	0.66
87-68-3	Hexachlorobutadiene	10	U	30	10	3.3
77-47-4	Hexachlorocyclopentadiene	30	U	50	30	10
67-72-1	Hexachloroethane	4.4	U	10	4.4	2.1
78-59-1	Isophorone	0.50	U	10	0.50	0.21
98-95-3	Nitrobenzene	2.0	U	20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44
87-86-5	Pentachlorophenol	60	U	80	60	20
108-95-2	Phenol	4.4	U	10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	84		43-140
321-60-8	2-Fluorobiphenyl	83		44-119
367-12-4	2-Fluorophenol (Surr)	86		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	85		44-120
4165-62-2	Phenol-d5 (Surr)	88		10-115
1718-51-0	Terphenyl-d14 (Surr)	99		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27319.D
Lims ID: MB 280-434728/1-A
Client ID:
Sample Type: MB
Inject. Date: 31-Oct-2018 14:15:30 ALS Bottle#: 5 Worklist Smp#: 44
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-434728_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:10:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	131060	40.0	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	99	515177	40.0	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	94	275663	40.0	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	98	452850	40.0	40.0	
* 5 Chrysene-d12	240	12.455	12.461	-0.006	99	286118	40.0	40.0	
* 6 Perylene-d12	264	16.127	16.128	-0.001	98	228906	40.0	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	422482	100.0	86.4	
$ 8 Phenol-d5	99	3.982	3.982	0.000	95	489319	100.0	88.1	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	95	414269	100.0	85.1	
$ 10 2,4,6-Trichlorophenol-d2	198		6.920					ND	
$ 11 2-Fluorobiphenyl	172	6.614	6.615	-0.001	100	802108	100.0	83.3	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	93	95977	100.0	83.5	
$ 13 Terphenyl-d14	244	10.563	10.563	0.000	100	692203	100.0	98.6	
17 Triethyl amine	86		2.185					ND	
18 2-Ethoxyethanol	59		2.337					ND	
19 1,4-Dioxane	88		1.797					ND	
20 N-Nitrosodimethylamine	74		2.020					ND	
21 Pyridine	79		2.067					ND	
22 Dimethylformamide	73		2.819					ND	
23 2-Picoline	93		2.990					ND	U
24 N-Nitrosomethylethylamine	88		3.054					ND	
25 Acrylamide	71		3.254					ND	
26 Methyl methanesulfonate	80		3.289					ND	
27 N-Nitrosodiethylamine	102		3.636					ND	
28 Pentachlorophenol_T	266		3.502					ND	
29 Ethyl methanesulfonate	79		3.877					ND	
31 Benzaldehyde	106		3.930					ND	
32 Phenol	94		3.994					ND	
33 Phenylmercaptan	110		3.988					ND	
34 Aniline	93		4.029					ND	
35 Alpha Methyl Styrene	118		4.082					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
36 Bis(2-chloroethyl)ether	93		4.076					ND	
37 Pentachloroethane	117		4.353					ND	U
38 n-Decane	43		4.188					ND	
39 2-Chlorophenol	128		4.147					ND	
40 1,3-Dichlorobenzene	146		4.288					ND	
41 Methyl styrene	118		4.834					ND	
42 1,4-Dichlorobenzene	146		4.352					ND	
43 Benzyl alcohol	108		4.452					ND	
44 1,2-Dichlorobenzene	146		4.499					ND	
45 2-Methylphenol	108		4.558					ND	
46 2,2'-oxybis[1-chloropropan	45		4.582					ND	
47 Indene	116		4.582					ND	
48 Benzidine_T	184		4.577					ND	
49 3 & 4 Methylphenol	108		4.705					ND	
50 3-Methylphenol	108		4.705					ND	
51 4-Methylphenol	108		4.705					ND	
52 N-Nitrosodi-n-propylamine	70		4.705					ND	
53 N-Nitrosopyrrolidine	100		4.929					ND	
54 Acetophenone	105		4.705					ND	
55 N-Nitrosomorpholine	116		4.964					ND	
57 2-Toluidine	106		5.005					ND	
58 Hexachloroethane	117		4.823					ND	
59 Nitrobenzene	77		4.870					ND	
60 Triethyl phosphate	99		5.346					ND	
61 N-Nitrosopiperidine	114		5.270					ND	
63 Isophorone	82		5.099					ND	
64 2-Nitrophenol	139		5.175					ND	
65 2,4-Dimethylphenol	107		5.216					ND	
66 Benzyl dichloride	125		5.610					ND	
67 o,o',o''-Triethylphosphoro	198		5.528					ND	
68 Benzoic acid	105		5.334					ND	
69 Bis(2-chloroethoxy)methane	93		5.298					ND	
71 3,5-Dimethylphenol	107		5.345					ND	
72 2,4-Xylidine	121		5.769					ND	
73 alpha,alpha-Dimethyl phene	58		5.669					ND	
74 2,4-Dichlorophenol	162		5.416					ND	
75 o-Anisidine	80		5.804					ND	
76 1,2,4-Trichlorobenzene	180		5.498					ND	
77 4-chlorobenzenethiol	144		5.745					ND	
78 Alpha-Terpineol	59		5.581					ND	
79 Naphthalene	128		5.575					ND	
80 4-Chloroaniline	127		5.616					ND	
81 2,6-Dichlorophenol	162		5.633					ND	
82 Hexachloropropene	213		5.933					ND	
83 Hexachlorobutadiene	225		5.710					ND	
84 Quinoline	129		6.163					ND	
85 N-Nitrosodi-n-butylamine	84		6.204					ND	
86 Caprolactam	55		5.945					ND	
87 p-Phenylene diamine	108		6.216					ND	
88 5-Methyl-o-Anisidine	122		6.421					ND	
89 4-Chloro-3-methylphenol	107		6.098					ND	
90 Safrole, Total	162		6.421					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
91 Carbofuran phenol	164		6.568					ND	
92 1,3-phenylenediamine	108		6.545					ND	
93 2-Methylnaphthalene	142		6.256					ND	
94 Methyl 4-chlorophenyl sulf	158		6.979					ND	
95 Phthalic anhydride	76		6.291					ND	
96 1-Methylnaphthalene	142		6.356					ND	
97 Hexachlorocyclopentadiene	237		6.427					ND	
98 1,2,4,5-Tetrachlorobenzene	216		6.427					ND	
99 Isosafrole Peak 1	162		6.715					ND	
100 2,4,6-Trichlorophenol	196		6.532					ND	
101 2,3-Dichlorobenzenamine	161		6.526					ND	
102 2,4,5-Trichlorophenol	196		6.568					ND	
103 Isosafrole Peak 2	104		6.938					ND	
104 1,1'-Biphenyl	154		6.714					ND	
105 Toluene diamine (2,4- + 2,	122		7.091					ND	
106 2-Chloronaphthalene	162		6.738					ND	
107 1-Chloronaphthalene	162		7.032					ND	
108 2-Nitroaniline	65		6.826					ND	
109 1,4-Naphthoquinone	158		7.167					ND	U
110 1,4-Dinitrobenzene	168		7.214					ND	
111 Dimethyl phthalate	163		7.008					ND	
112 1,3-Dinitrobenzene	168		7.032					ND	
113 2,6-Dinitrotoluene	165		7.061					ND	
114 Acenaphthylene	152		7.149					ND	
115 3-Nitroaniline	138		7.232					ND	
116 1,3-Dimethyl-2,4-Dinitrobe	77		7.719					ND	
117 Acenaphthene	153		7.320					ND	
118 2,4-Dinitrophenol	184		7.337					ND	
119 4-Nitrophenol	109		7.402					ND	
120 1,3-Dimethyl-2,5-Dinitrobe	179		7.678					ND	
121 Pentachlorobenzene	250		7.737					ND	
122 2,4-Dinitrotoluene	165		7.467					ND	
123 Dibenzofuran	168		7.490					ND	
124 1-Naphthylamine	143		7.837					ND	
125 2,3,4,6-Tetrachlorophenol	232		7.619					ND	
126 1,4-Dimethyl-2,6-Dinitrobe	179		8.019					ND	
127 Hexadecane	57		7.737					ND	
128 1,4-Dimethyl-2,3-Dinitrobe	77		8.054					ND	
129 2-Naphthylamine	143		7.919					ND	U
130 Diethyl phthalate	149		7.707					ND	
131 n-hydroxymethylphthalimide	147		7.919					ND	
132 1,2-Dimethyl-3,6-Dinitrobe	179		8.131					ND	
133 Thionazin	97		8.055					ND	
134 4-Chlorophenyl phenyl ethe	204		7.825					ND	
135 Fluorene	166		7.831					ND	
136 Tributyl phosphate	99		8.307					ND	
137 N-Nitro-o-toluidine	152		8.107					ND	
138 4-Nitroaniline	138		7.843					ND	
139 4,6-Dinitro-2-methylphenol	198		7.878					ND	
140 1,5-Dimethyl-2,4-Dinitrobe	179		8.283					ND	
141 N-Nitrosodiphenylamine	169		7.942					ND	
142 Diphenylamine	169		7.942					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
143 1,2-Diphenylhydrazine	77		7.984					ND	
144 Azobenzene	77		7.984					ND	
145 1,5-Dimethyl-2,3-Dinitrobe	179		8.383					ND	
146 Sulfotepp	97		8.360					ND	
147 2,4,6 - Tribromophenol	330		8.072				ND	ND	U
148 1,2-Dimethyl-3,5-Dinitrobe	179		8.495					ND	
149 Phenyl sulfide	186		8.465					ND	
150 Diallate Peak 1	86		8.507					ND	
151 1,3,5-Trinitrobenzene	213		8.448					ND	
152 Phorate	121		8.513					ND	
153 Phenacetin	108		8.513					ND	
154 1,2-Dimethyl-3,4-Dinitrobe	179		8.648					ND	
155 Diallate Peak 2	86		8.595					ND	
156 4-Bromophenyl phenyl ether	248		8.313					ND	
157 Hexachlorobenzene	284		8.395					ND	
158 Dimethoate	87		8.677					ND	
159 Atrazine	200		8.465					ND	
160 1,2-Dimethyl-4,5-Dinitrobe	91		8.889					ND	
161 n-Octadecane	85		8.653					ND	
162 4-Aminobiphenyl	169		8.848					ND	
163 Pentachlorophenol	266		8.583					ND	
164 Pentachloronitrobenzene	237		8.883					ND	
165 Pronamide	173		8.907					ND	
166 Disulfoton	88		9.036					ND	
167 Dinoseb	211		9.042					ND	
168 Phenanthrene	178		8.789					ND	
169 Anthracene	178		8.841					ND	
170 Carbazole	167		8.994					ND	
171 Alachlor	188		9.135					ND	
172 Methyl parathion	109		9.412					ND	
173 Di-n-butyl phthalate	149		9.335					ND	
174 Ethyl Parathion	109		9.835					ND	
175 4-Nitroquinoline-1-oxide	190		9.882					ND	
176 Methapyrilene	97		9.976					ND	
177 Phenyl disulfide	109		9.896					ND	
178 Isodrin	193		10.246					ND	
179 Fluoranthene	202		10.052					ND	
180 Diphenylsulfone	125		10.196					ND	
181 Benzidine	184		10.205					ND	
182 Pyrene	202		10.346					ND	
183 Aramite Peak 1	185		10.945					ND	
184 Octachlorostyrene	308		10.392					ND	
185 Aramite Peak 2	185		11.075					ND	
186 p-Dimethylamino azobenzene	120		11.222					ND	
187 Chlorobenzilate	251		11.310					ND	
188 Famphur	218		11.262					ND	
189 4,4-Dichlorobenzil	139		10.657					ND	
190 Butyl benzyl phthalate	149		11.380					ND	
191 3,3'-Dimethylbenzidine	212		11.838					ND	
193 p-chlorophenyl sulfone	159		11.021					ND	
194 2-Acetylaminofluorene	181		12.350					ND	
195 Bis(2-ethylhexyl) phthalat	149		12.643					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
196 4,4'-Methylene bis(2-chlor	231		13.019					ND	
197 3,3'-Dichlorobenzidine	252		12.414					ND	
198 Benzo[a]anthracene	228		12.443					ND	
199 Chrysene	228		12.525					ND	
200 6-Methylchrysene	242		14.300					ND	
201 Di-n-octyl phthalate	149		14.335					ND	
202 7,12-Dimethylbenz(a)anthra	256		15.910					ND	
203 Benzo[b]fluoranthene	252		15.105					ND	
204 Benzo[k]fluoranthene	252		15.181					ND	
205 Hexachlorophene	196		16.144					ND	
206 Benzo[e]pyrene	252		15.839					ND	
207 Benzo[a]pyrene	252		15.980					ND	
208 Perylene	252		17.491					ND	
209 3-Methylcholanthrene	268		17.902					ND	
210 Tris(2,3-dibromopropyl)pho	119		18.971					ND	
211 Dibenz[a,h]acridine	279		19.477					ND	
212 Dibenz[a,j]acridine	279		19.629					ND	
213 Dibenz(a,h)anthracene	278		19.229					ND	
214 Indeno[1,2,3-cd]pyrene	276		19.130					ND	
215 Benzo[g,h,i]perylene	276		19.829					ND	
216 Dibenzo[a,e]pyrene	302		25.523					ND	
S 217 Total Cresols	108		15.496					ND	
S 218 Methyl Phenols,Total	108		15.496					ND	
S 219 Isosafrole	162		15.496					ND	
S 220 Diallate	86		15.496					ND	
S 221 Aramite, Total	185		15.496					ND	
S 222 Phthalic acid	148		19.689					ND	
14 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
15 2-Butoxyethanol	1		0.000					ND	
16 2-Phenoxyethanol	1		0.000					ND	
56 4,4'-DDE	246		4.718					ND	
62 4,4'-DDD	235		4.988					ND	
70 4,4'-DDT	235		5.182					ND	
S 231 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

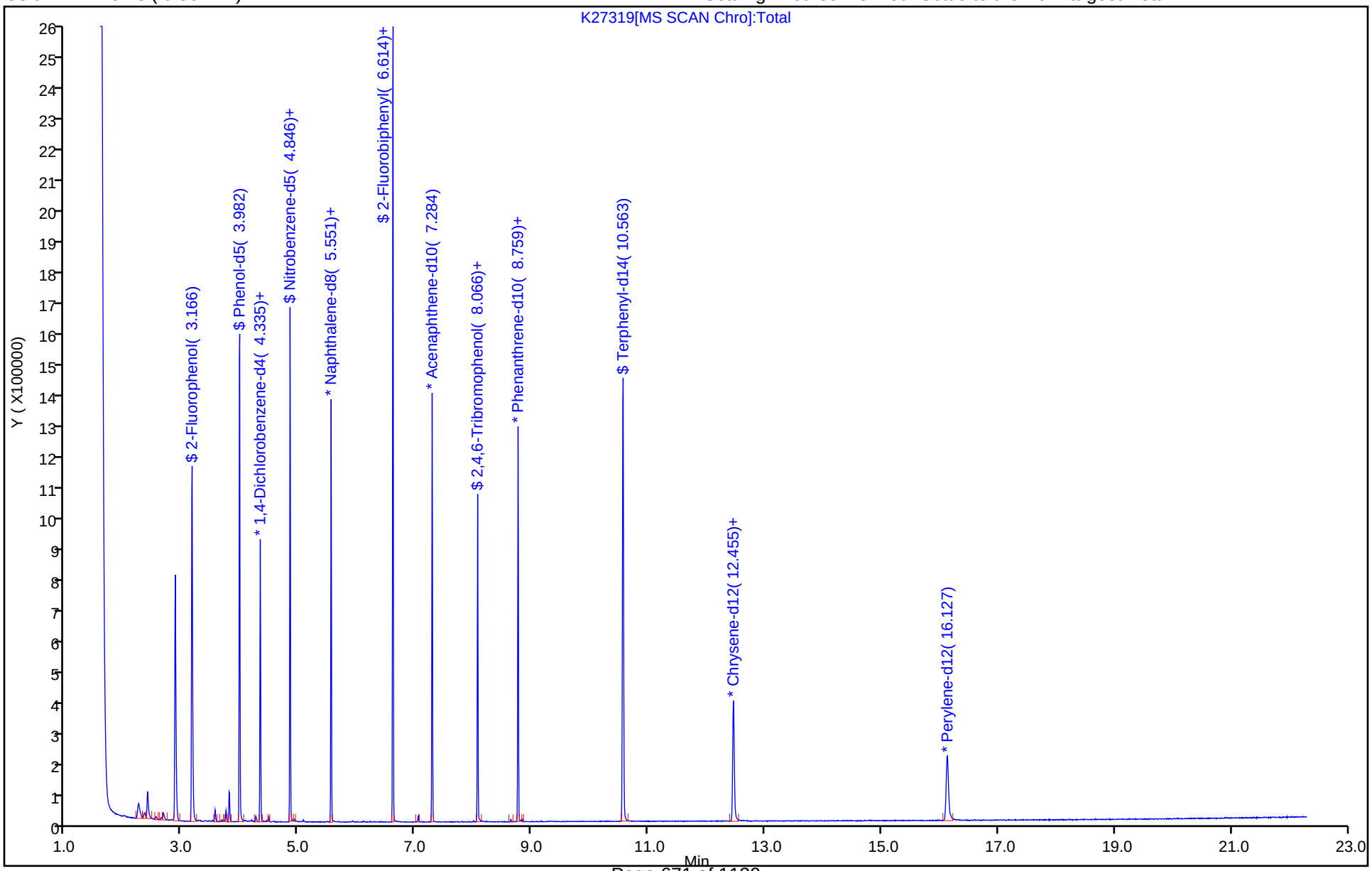
Report Date: 01-Nov-2018 06:26:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27319.D

Injection Date:	31-Oct-2018 14:15:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	MB 280-434728/1-A			Worklist Smp#:	44
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSK_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_K\20181031-75679.b\K27319.D
Lims ID: MB 280-434728/1-A
Client ID:
Sample Type: MB
Inject. Date: 31-Oct-2018 14:15:30 ALS Bottle#: 5 Worklist Smp#: 44
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-434728_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:10:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	86.4	86.37
$ 8 Phenol-d5	100.0	88.1	88.09
$ 9 Nitrobenzene-d5	100.0	85.1	85.13
$ 11 2-Fluorobiphenyl	100.0	83.3	83.35
$ 12 2,4,6-Tribromophenol	100.0	83.5	83.54
$ 13 Terphenyl-d14	100.0	98.6	98.61

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-434912/1-A

Matrix: Water | Lab File ID: K27222.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/25/2018 13:12

Sample wt/vol: 1000(mL) | Date Analyzed: 10/29/2018 11:18

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435306 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-14-2	2,4-Dinitrotoluene	4.4	U	20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	4.4	U	20	4.4	1.9
98-95-3	Nitrobenzene	2.0	U	20	2.0	0.81

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	91		43-140
321-60-8	2-Fluorobiphenyl	91		44-119
367-12-4	2-Fluorophenol (Surr)	95		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	96		44-120
4165-62-2	Phenol-d5 (Surr)	98		10-115
1718-51-0	Terphenyl-d14 (Surr)	102		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27222.D
Lims ID: MB 280-434912/1-A
Client ID:
Sample Type: MB
Inject. Date: 29-Oct-2018 11:18:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-434912_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 06:54:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	96	124041	40.0	40.0	
* 2 Naphthalene-d8	136	5.592	5.593	-0.001	99	481217	40.0	40.0	
* 3 Acenaphthene-d10	164	7.326	7.326	0.000	94	254574	40.0	40.0	
* 4 Phenanthrene-d10	188	8.800	8.807	-0.006	98	411011	40.0	40.0	
* 5 Chrysene-d12	240	12.549	12.555	-0.006	99	280668	40.0	40.0	
* 6 Perylene-d12	264	16.251	16.263	-0.012	98	221116	40.0	40.0	
$ 7 2-Fluorophenol	112	3.207	3.207	0.000	94	438495	100.0	94.7	
$ 8 Phenol-d5	99	4.018	4.018	0.000	95	514231	100.0	97.8	
$ 9 Nitrobenzene-d5	82	4.887	4.887	0.000	94	435029	100.0	95.7	
$ 10 2,4,6-Trichlorophenol-d2	198		6.920					ND	
$ 11 2-Fluorobiphenyl	172	6.650	6.656	-0.006	100	805366	100.0	90.6	
$ 12 2,4,6-Tribromophenol	330	8.107	8.113	-0.006	93	96522	100.0	91.0	
$ 13 Terphenyl-d14	244	10.622	10.634	-0.012	99	702685	100.0	102.0	
17 Triethyl amine	86		2.185					ND	
18 2-Ethoxyethanol	59		2.337					ND	
19 1,4-Dioxane	88		1.867					ND	U
20 N-Nitrosodimethylamine	74		2.085					ND	
21 Pyridine	79		2.132					ND	
22 Dimethylformamide	73		2.819					ND	
23 2-Picoline	93		2.990					ND	
24 N-Nitrosomethylethylamine	88		3.054					ND	
25 Acrylamide	71		3.254					ND	
26 Methyl methanesulfonate	80		3.289					ND	U
27 N-Nitrosodiethylamine	102		3.636					ND	
28 Pentachlorophenol_T	266		3.537					ND	
29 Ethyl methanesulfonate	79		3.877					ND	
31 Benzaldehyde	106		3.971					ND	
32 Phenol	94		4.030					ND	
33 Phenylmercaptan	110		4.018					ND	
34 Aniline	93		4.065					ND	
35 Alpha Methyl Styrene	118		4.124					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
36 Bis(2-chloroethyl)ether	93		4.112					ND	
37 Pentachloroethane	117		4.353					ND	U
38 n-Decane	43		4.229					ND	
39 2-Chlorophenol	128		4.182					ND	
40 1,3-Dichlorobenzene	146		4.329					ND	
41 Methyl styrene	118		4.834					ND	
42 1,4-Dichlorobenzene	146		4.394					ND	
43 Benzyl alcohol	108		4.494					ND	
44 1,2-Dichlorobenzene	146		4.541					ND	
45 2-Methylphenol	108		4.594					ND	
46 2,2'-oxybis[1-chloropropan	45		4.623					ND	
47 Indene	116		4.623					ND	
48 Benzidine_T	184		4.612					ND	
49 3 & 4 Methylphenol	108		4.741					ND	
50 3-Methylphenol	108		4.741					ND	
51 4-Methylphenol	108		4.741					ND	
52 N-Nitrosodi-n-propylamine	70		4.741					ND	
53 N-Nitrosopyrrolidine	100		4.929					ND	
54 Acetophenone	105		4.746					ND	
55 N-Nitrosomorpholine	116		4.964					ND	
57 2-Toluidine	106		5.005					ND	
58 Hexachloroethane	117		4.864					ND	
59 Nitrobenzene	77		4.905					ND	
60 Triethyl phosphate	99		5.346					ND	
61 N-Nitrosopiperidine	114		5.270					ND	
63 Isophorone	82		5.134					ND	
64 2-Nitrophenol	139		5.216					ND	
65 2,4-Dimethylphenol	107		5.252					ND	
66 Benzyl dichloride	125		5.610					ND	
67 o,o',o''-Triethylphosphoro	198		5.528					ND	
68 Benzoic acid	105		5.363					ND	
69 Bis(2-chloroethoxy)methane	93		5.340					ND	
71 3,5-Dimethylphenol	107		5.381					ND	
72 2,4-Xylidine	121		5.769					ND	
73 alpha,alpha-Dimethyl phene	58		5.669					ND	
74 2,4-Dichlorophenol	162		5.451					ND	
75 o-Anisidine	80		5.804					ND	
76 1,2,4-Trichlorobenzene	180		5.540					ND	
77 4-chlorobenzenethiol	144		5.745					ND	
78 Alpha-Terpineol	59		5.616					ND	
79 Naphthalene	128		5.616					ND	
80 4-Chloroaniline	127		5.657					ND	
81 2,6-Dichlorophenol	162		5.669					ND	
82 Hexachloropropene	213		5.933					ND	
83 Hexachlorobutadiene	225		5.745					ND	
84 Quinoline	129		6.163					ND	
85 N-Nitrosodi-n-butylamine	84		6.204					ND	
86 Caprolactam	55		5.980					ND	
87 p-Phenylene diamine	108		6.216					ND	
88 5-Methyl-o-Anisidine	122		6.421					ND	
89 4-Chloro-3-methylphenol	107		6.133					ND	
90 Safrole, Total	162		6.421					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
91 Carbofuran phenol	164		6.568					ND	
92 1,3-phenylenediamine	108		6.545					ND	
93 2-Methylnaphthalene	142		6.292					ND	
94 Methyl 4-chlorophenyl sulf	158		6.979					ND	
95 Phthalic anhydride	76		6.327					ND	
96 1-Methylnaphthalene	142		6.392					ND	
97 Hexachlorocyclopentadiene	237		6.462					ND	
98 1,2,4,5-Tetrachlorobenzene	216		6.468					ND	
99 Isosafrole Peak 1	162		6.715					ND	
100 2,4,6-Trichlorophenol	196		6.574					ND	
101 2,3-Dichlorobenzenamine	161		6.568					ND	
102 2,4,5-Trichlorophenol	196		6.609					ND	
103 Isosafrole Peak 2	104		6.938					ND	
104 1,1'-Biphenyl	154		6.756					ND	
105 Toluene diamine (2,4- + 2,	122		7.091					ND	
106 2-Chloronaphthalene	162		6.779					ND	
107 1-Chloronaphthalene	162		7.032					ND	
108 2-Nitroaniline	65		6.867					ND	
109 1,4-Naphthoquinone	158		7.167					ND	U
110 1,4-Dinitrobenzene	168		7.214					ND	
111 Dimethyl phthalate	163		7.050					ND	
112 1,3-Dinitrobenzene	168		7.073					ND	
113 2,6-Dinitrotoluene	165		7.103					ND	
114 Acenaphthylene	152		7.191					ND	
115 3-Nitroaniline	138		7.273					ND	
116 1,3-Dimethyl-2,4-Dinitrobe	77		7.719					ND	
117 Acenaphthene	153		7.361					ND	
118 2,4-Dinitrophenol	184		7.379					ND	
119 4-Nitrophenol	109		7.443					ND	
120 1,3-Dimethyl-2,5-Dinitrobe	179		7.678					ND	
121 Pentachlorobenzene	250		7.737					ND	
122 2,4-Dinitrotoluene	165		7.508					ND	
123 Dibenzofuran	168		7.531					ND	
124 1-Naphthylamine	143		7.837					ND	
125 2,3,4,6-Tetrachlorophenol	232		7.655					ND	
126 1,4-Dimethyl-2,6-Dinitrobe	179		8.019					ND	
127 Hexadecane	57		7.778					ND	
128 1,4-Dimethyl-2,3-Dinitrobe	77		8.054					ND	
129 2-Naphthylamine	143		7.919					ND	U
130 Diethyl phthalate	149		7.749					ND	
131 n-hydroxymethylphthalimide	147		7.919					ND	
132 1,2-Dimethyl-3,6-Dinitrobe	179		8.131					ND	
133 Thionazin	97		8.055					ND	
134 4-Chlorophenyl phenyl ethe	204		7.866					ND	
135 Fluorene	166		7.878					ND	
136 Tributyl phosphate	99		8.307					ND	
137 N-Nitro-o-toluidine	152		8.107					ND	
138 4-Nitroaniline	138		7.884					ND	
139 4,6-Dinitro-2-methylphenol	198		7.919					ND	
140 1,5-Dimethyl-2,4-Dinitrobe	179		8.283					ND	
141 N-Nitrosodiphenylamine	169		7.984					ND	
142 Diphenylamine	169		7.984					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
143 1,2-Diphenylhydrazine	77		8.025					ND	
144 Azobenzene	77		8.025					ND	
145 1,5-Dimethyl-2,3-Dinitrobe	179		8.383					ND	
146 Sulfotepp	97		8.360					ND	
147 2,4,6 - Tribromophenol	330		8.113				ND	ND	U
148 1,2-Dimethyl-3,5-Dinitrobe	179		8.495					ND	
149 Phenyl sulfide	186		8.465					ND	
150 Diallate Peak 1	86		8.507					ND	
151 1,3,5-Trinitrobenzene	213		8.448					ND	
152 Phorate	121		8.513					ND	
153 Phenacetin	108		8.513					ND	
154 1,2-Dimethyl-3,4-Dinitrobe	179		8.648					ND	
155 Diallate Peak 2	86		8.595					ND	
156 4-Bromophenyl phenyl ether	248		8.354					ND	
157 Hexachlorobenzene	284		8.436					ND	
158 Dimethoate	87		8.677					ND	
159 Atrazine	200		8.513					ND	
160 1,2-Dimethyl-4,5-Dinitrobe	91		8.889					ND	
161 n-Octadecane	85		8.695					ND	
162 4-Aminobiphenyl	169		8.848					ND	
163 Pentachlorophenol	266		8.624					ND	
164 Pentachloronitrobenzene	237		8.883					ND	
165 Pronamide	173		8.907					ND	
166 Disulfoton	88		9.036					ND	
167 Dinoseb	211		9.042					ND	
168 Phenanthrene	178		8.836					ND	
169 Anthracene	178		8.883					ND	
170 Carbazole	167		9.036					ND	
171 Alachlor	188		9.182					ND	
172 Methyl parathion	109		9.412					ND	
173 Di-n-butyl phthalate	149		9.376					ND	
174 Ethyl Parathion	109		9.835					ND	
175 4-Nitroquinoline-1-oxide	190		9.882					ND	
176 Methapyrilene	97		9.976					ND	
177 Phenyl disulfide	109		9.896					ND	
178 Isodrin	193		10.246					ND	
179 Fluoranthene	202		10.111					ND	
180 Diphenylsulfone	125		10.196					ND	
181 Benzidine	184		10.270					ND	
182 Pyrene	202		10.410					ND	
183 Aramite Peak 1	185		10.945					ND	
184 Octachlorostyrene	308		10.392					ND	
185 Aramite Peak 2	185		11.075					ND	
186 p-Dimethylamino azobenzene	120		11.222					ND	
187 Chlorobenzilate	251		11.310					ND	
188 Famphur	218		11.333					ND	
189 4,4-Dichlorobenzil	139		10.657					ND	
190 Butyl benzyl phthalate	149		11.456					ND	
191 3,3'-Dimethylbenzidine	212		11.838					ND	
193 p-chlorophenyl sulfone	159		11.021					ND	
194 2-Acetylaminofluorene	181		12.350					ND	
195 Bis(2-ethylhexyl) phthalat	149		12.737					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
196 4,4'-Methylene bis(2-chlor	231		13.019					ND	
197 3,3'-Dichlorobenzidine	252		12.508					ND	
198 Benzo[a]anthracene	228		12.543					ND	
199 Chrysene	228		12.620					ND	
200 6-Methylchrysene	242		14.300					ND	
201 Di-n-octyl phthalate	149		14.441					ND	
202 7,12-Dimethylbenz(a)anthra	256		15.910					ND	
203 Benzo[b]fluoranthene	252		15.228					ND	
204 Benzo[k]fluoranthene	252		15.305					ND	
205 Hexachlorophene	196		16.144					ND	
206 Benzo[e]pyrene	252		15.969					ND	
207 Benzo[a]pyrene	252		16.110					ND	
208 Perylene	252		17.491					ND	
209 3-Methylcholanthrene	268		17.902					ND	
210 Tris(2,3-dibromopropyl)pho	119		18.971					ND	
211 Dibenz[a,h]acridine	279		19.477					ND	
212 Dibenz[a,j]acridine	279		19.629					ND	
213 Dibenz(a,h)anthracene	278		19.377					ND	
214 Indeno[1,2,3-cd]pyrene	276		19.277					ND	
215 Benzo[g,h,i]perylene	276		19.988					ND	
216 Dibenzo[a,e]pyrene	302		25.523					ND	
S 217 Total Cresols	108		15.496					ND	
S 218 Methyl Phenols,Total	108		15.496					ND	
S 219 Isosafrole	162		15.496					ND	
S 220 Diallate	86		15.496					ND	
S 221 Aramite, Total	185		15.496					ND	
S 222 Phthalic acid	148		19.689					ND	
14 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
15 2-Butoxyethanol	1		0.000					ND	
16 2-Phenoxyethanol	1		0.000					ND	
56 4,4'-DDE	246		4.754					ND	
62 4,4'-DDD	235		5.024					ND	
70 4,4'-DDT	235		5.218					ND	
S 231 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

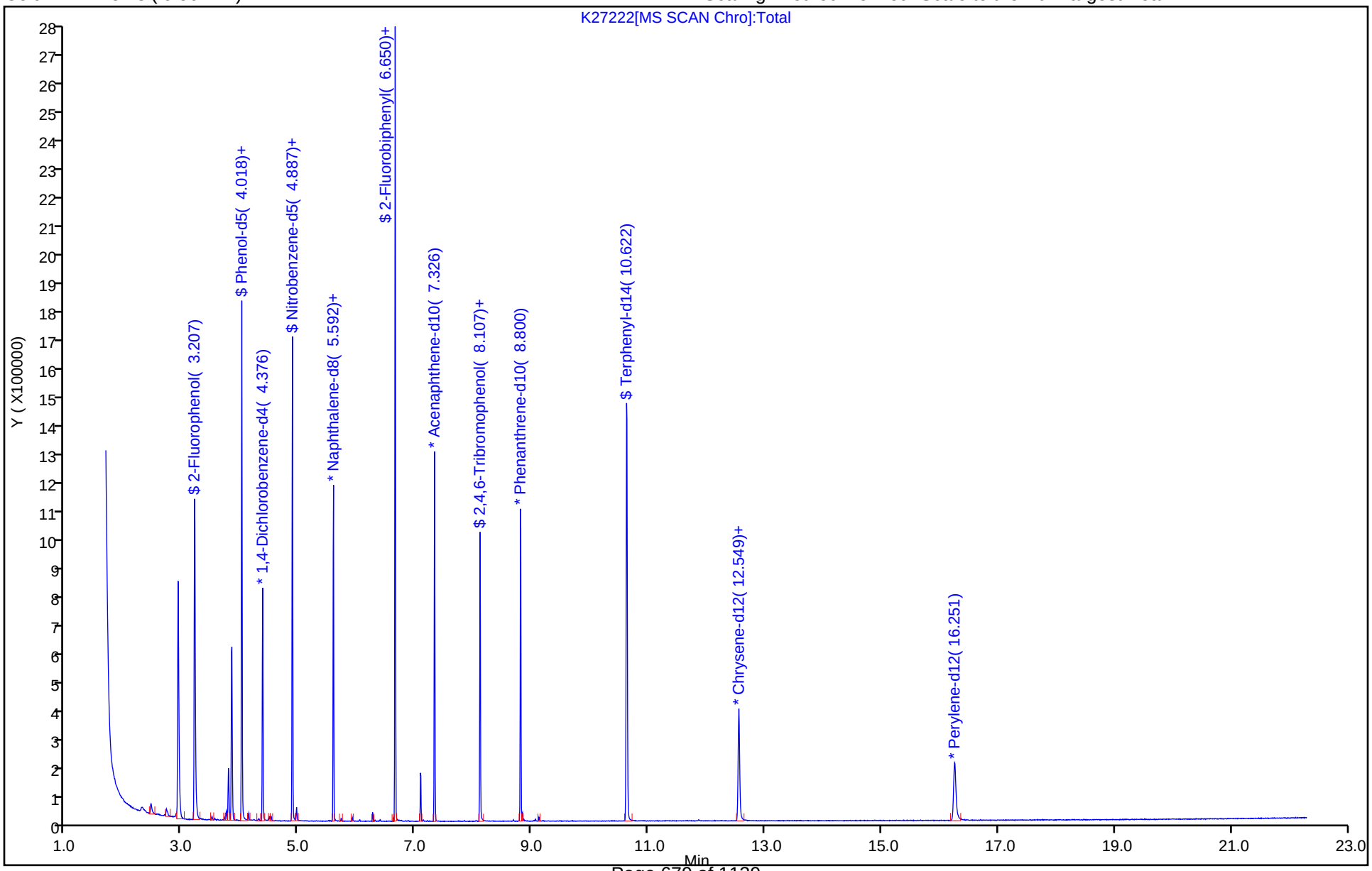
Report Date: 30-Oct-2018 07:24:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27222.D

Injection Date:	29-Oct-2018 11:18:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	MB 280-434912/1-A			Worklist Smp#:	8
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSK_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_K\20181029-75571.b\K27222.D
Lims ID: MB 280-434912/1-A
Client ID:
Sample Type: MB
Inject. Date: 29-Oct-2018 11:18:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-434912_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 06:54:56

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	94.7	94.71
$ 8 Phenol-d5	100.0	97.8	97.82
$ 9 Nitrobenzene-d5	100.0	95.7	95.70
$ 11 2-Fluorobiphenyl	100.0	90.6	90.62
$ 12 2,4,6-Tribromophenol	100.0	91.0	90.98
$ 13 Terphenyl-d14	100.0	102.0	102.05

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-434728/2-A

Matrix: Water | Lab File ID: K27320.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 1000(mL) | Date Analyzed: 10/31/2018 14:44

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	68.4		10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	68.4		10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	65.3		10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	65.0		10	1.0	0.32
123-91-1	1,4-Dioxane	63.5		18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	77.6		20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	81.6		20	1.0	0.29
120-83-2	2,4-Dichlorophenol	74.1		10	2.0	0.64
105-67-9	2,4-Dimethylphenol	64.1		10	2.0	0.58
51-28-5	2,4-Dinitrophenol	146		80	30	10
121-14-2	2,4-Dinitrotoluene	77.9		20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	78.9		20	4.4	1.9
91-58-7	2-Chloronaphthalene	75.7		10	1.0	0.26
95-57-8	2-Chlorophenol	74.1		10	4.4	2.0
95-48-7	2-Methylphenol	73.5		10	2.0	0.98
88-74-4	2-Nitroaniline	77.8		50	4.4	1.7
88-75-5	2-Nitrophenol	76.4		20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	72.9		20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	126		50	4.4	2.0
99-09-2	3-Nitroaniline	50.9		50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	174		80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	79.0		10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	73.4		20	5.0	2.4
106-47-8	4-Chloroaniline	51.1		25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	73.1		10	4.4	1.7
100-01-6	4-Nitroaniline	72.2		50	4.4	2.0
100-02-7	4-Nitrophenol	152		50	4.0	1.2
65-85-0	Benzoic acid	67.2	J	80	30	10
100-51-6	Benzyl alcohol	74.9		25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	79.4		10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	76.4		10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	79.0		20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	81.4		10	2.0	0.56
85-68-7	Butyl benzyl phthalate	79.0		20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-434728/2-A

Matrix: Water | Lab File ID: K27320.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 1000(mL) | Date Analyzed: 10/31/2018 14:44

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	78.0		10	1.0	0.43
132-64-9	Dibenzofuran	76.3		10	1.0	0.29
84-66-2	Diethyl phthalate	75.9		20	1.0	0.38
131-11-3	Dimethyl phthalate	77.4		20	0.50	0.21
84-74-2	Di-n-butyl phthalate	78.7		20	4.4	1.2
117-84-0	Di-n-octyl phthalate	73.9		20	1.0	0.35
118-74-1	Hexachlorobenzene	76.2		10	2.0	0.66
87-68-3	Hexachlorobutadiene	63.9		30	10	3.3
77-47-4	Hexachlorocyclopentadiene	89.0		50	30	10
67-72-1	Hexachloroethane	62.1		10	4.4	2.1
78-59-1	Isophorone	74.3		10	0.50	0.21
98-95-3	Nitrobenzene	75.7		20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	73.6		20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	79.5		10	1.0	0.44
87-86-5	Pentachlorophenol	149		80	60	20
108-95-2	Phenol	73.2		10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	92		43-140
321-60-8	2-Fluorobiphenyl	96		44-119
367-12-4	2-Fluorophenol (Surr)	90		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	92		44-120
4165-62-2	Phenol-d5 (Surr)	92		10-115
1718-51-0	Terphenyl-d14 (Surr)	92		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27320.D
Lims ID: LCS 280-434728/2-A
Client ID:
Sample Type: LCS
Inject. Date: 31-Oct-2018 14:44:30 ALS Bottle#: 6 Worklist Smp#: 45
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-434728_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:11:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	131808	40.0	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	100	510826	40.0	40.0	
* 3 Acenaphthene-d10	164	7.285	7.285	0.000	94	242267	40.0	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	97	368649	40.0	40.0	
* 5 Chrysene-d12	240	12.461	12.461	0.000	99	283303	40.0	40.0	
* 6 Perylene-d12	264	16.121	16.128	-0.007	97	253897	40.0	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	441431	100.0	89.7	
$ 8 Phenol-d5	99	3.982	3.982	0.000	97	513668	100.0	92.0	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	95	445474	100.0	92.3	
$ 11 2-Fluorobiphenyl	172	6.609	6.615	-0.006	100	808528	100.0	95.6	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	92	92389	100.0	91.5	
$ 13 Terphenyl-d14	244	10.557	10.563	-0.006	99	640974	100.0	92.2	
19 1,4-Dioxane	88	1.797	1.797	0.000	95	132709	80.0	63.5	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	84	239361	80.0	74.3	
21 Pyridine	79	2.067	2.067	0.000	82	627832	160.0	121.0	
31 Benzaldehyde	106	3.930	3.930	0.000	90	188512	80.0	47.6	
32 Phenol	94	3.994	3.994	0.000	97	423553	80.0	73.2	
34 Aniline	93	4.024	4.029	-0.005	97	392050	80.0	55.3	
36 Bis(2-chloroethyl)ether	93	4.071	4.076	-0.005	93	340474	80.0	79.0	
38 n-Decane	43	4.188	4.188	0.000	94	385823	80.0	57.2	
39 2-Chlorophenol	128	4.141	4.147	-0.006	98	352726	80.0	74.1	
40 1,3-Dichlorobenzene	146	4.288	4.288	0.000	98	346475	80.0	65.3	
42 1,4-Dichlorobenzene	146	4.353	4.352	0.001	93	346705	80.0	65.0	
43 Benzyl alcohol	108	4.452	4.452	0.000	92	235582	80.0	74.9	
44 1,2-Dichlorobenzene	146	4.499	4.499	0.000	97	346931	80.0	68.4	
45 2-Methylphenol	108	4.558	4.558	0.000	96	320825	80.0	73.5	
46 2,2'-oxybis[1-chloropropan	45	4.582	4.582	0.000	92	644067	80.0	79.4	
47 Indene	116	4.582	4.582	0.000	92	523753	80.0	72.0	
49 3 & 4 Methylphenol	108	4.699	4.705	-0.006	63	309425	80.0	72.9	
50 3-Methylphenol	108	4.699	4.705	-0.006	73	309425	80.0	72.9	
51 4-Methylphenol	108	4.699	4.705	-0.006	71	309425	80.0	72.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.699	4.705	-0.006	87	222322	80.0	73.6	
54 Acetophenone	105	4.705	4.705	0.000	79	428933	80.0	72.9	
58 Hexachloroethane	117	4.823	4.823	0.000	93	122500	80.0	62.1	
59 Nitrobenzene	77	4.870	4.870	0.000	95	354447	80.0	75.7	
63 Isophorone	82	5.093	5.099	-0.006	97	613790	80.0	74.3	
64 2-Nitrophenol	139	5.175	5.175	0.000	94	190570	80.0	76.4	
65 2,4-Dimethylphenol	107	5.210	5.216	-0.006	95	280029	80.0	64.1	
68 Benzoic acid	105	5.299	5.334	-0.035	38	206588	80.0	67.2	
69 Bis(2-chloroethoxy)methane	93	5.299	5.298	0.001	95	385937	80.0	76.4	
74 2,4-Dichlorophenol	162	5.410	5.416	-0.006	95	274903	80.0	74.1	
76 1,2,4-Trichlorobenzene	180	5.498	5.498	0.000	94	289176	80.0	68.4	
79 Naphthalene	128	5.575	5.575	0.000	98	889504	80.0	71.5	
80 4-Chloroaniline	127	5.616	5.616	0.000	96	267494	80.0	51.1	
81 2,6-Dichlorophenol	162	5.628	5.633	-0.005	96	269247	80.0	73.8	
83 Hexachlorobutadiene	225	5.704	5.710	-0.006	96	150040	80.0	63.9	
86 Caprolactam	55	5.933	5.945	-0.012	73	157859	80.0	71.4	M
89 4-Chloro-3-methylphenol	107	6.092	6.098	-0.006	95	258701	80.0	73.4	
93 2-Methylnaphthalene	142	6.250	6.256	-0.006	95	637817	80.0	73.0	
96 1-Methylnaphthalene	142	6.350	6.356	-0.006	95	596685	80.0	73.1	
97 Hexachlorocyclopentadiene	237	6.421	6.427	-0.006	96	223876	160.0	89.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.421	6.427	-0.006	97	267685	80.0	69.1	
100 2,4,6-Trichlorophenol	196	6.532	6.532	0.000	92	188360	80.0	81.6	
102 2,4,5-Trichlorophenol	196	6.568	6.568	0.000	94	195742	80.0	77.6	
104 1,1'-Biphenyl	154	6.709	6.714	-0.005	95	726331	80.0	76.4	
106 2-Chloronaphthalene	162	6.732	6.738	-0.006	96	551935	80.0	75.7	
108 2-Nitroaniline	65	6.820	6.826	-0.006	85	169322	80.0	77.8	
111 Dimethyl phthalate	163	7.008	7.008	0.000	99	553918	80.0	77.4	
112 1,3-Dinitrobenzene	168	7.026	7.032	-0.006	88	100676	80.0	81.8	
113 2,6-Dinitrotoluene	165	7.061	7.061	0.000	94	144057	80.0	78.9	
114 Acenaphthylene	152	7.144	7.149	-0.005	99	818908	80.0	74.6	
115 3-Nitroaniline	138	7.226	7.232	-0.006	95	99832	80.0	50.9	
117 Acenaphthene	153	7.320	7.320	0.000	94	546129	80.0	76.6	
118 2,4-Dinitrophenol	184	7.332	7.337	-0.005	84	151170	160.0	146.1	
119 4-Nitrophenol	109	7.402	7.402	0.000	95	139889	160.0	152.4	
122 2,4-Dinitrotoluene	165	7.461	7.467	-0.006	94	176218	80.0	77.9	
123 Dibenzofuran	168	7.490	7.490	0.000	98	762128	80.0	76.3	
125 2,3,4,6-Tetrachlorophenol	232	7.614	7.619	-0.005	72	151619	80.0	77.1	
127 Hexadecane	57	7.731	7.737	-0.006	90	499288	80.0	78.2	
130 Diethyl phthalate	149	7.708	7.707	0.001	99	515965	80.0	75.9	
134 4-Chlorophenyl phenyl ethe	204	7.825	7.825	0.000	91	266387	80.0	73.1	
135 Fluorene	166	7.831	7.831	0.000	95	574075	80.0	75.9	
138 4-Nitroaniline	138	7.837	7.843	-0.006	90	133283	80.0	72.2	
139 4,6-Dinitro-2-methylphenol	198	7.872	7.878	-0.006	84	199221	160.0	174.5	
141 N-Nitrosodiphenylamine	169	7.937	7.942	-0.005	63	417002	80.0	79.5	
142 Diphenylamine	169	7.937	7.942	-0.005	95	417002	68.0	63.4	
143 1,2-Diphenylhydrazine	77	7.978	7.984	-0.006	41	583289	80.9	78.5	
144 Azobenzene	77	7.978	7.984	-0.006	98	583289	80.0	77.6	
147 2,4,6 - Tribromophenol	330	8.066	8.072	-0.006	92	92183	100.0	90.8	
156 4-Bromophenyl phenyl ether	248	8.307	8.313	-0.006	68	161598	80.0	79.0	
157 Hexachlorobenzene	284	8.389	8.395	-0.006	94	153782	80.0	76.2	
159 Atrazine	200	8.466	8.465	0.001	91	133031	80.0	75.6	
161 n-Octadecane	85	8.648	8.653	-0.005	91	155648	80.0	83.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.577	8.583	-0.006	93	178435	160.0	148.5	
168 Phenanthrene	178	8.783	8.789	-0.006	97	772282	80.0	79.0	
169 Anthracene	178	8.836	8.841	-0.005	97	790411	80.0	78.0	
170 Carbazole	167	8.988	8.994	-0.006	95	690239	80.0	78.0	
173 Di-n-butyl phthalate	149	9.329	9.335	-0.006	99	765119	80.0	78.7	
179 Fluoranthene	202	10.046	10.052	-0.006	98	752764	80.0	76.4	
181 Benzidine	184	10.199	10.205	-0.006	100	394714	160.0	73.7	
182 Pyrene	202	10.340	10.346	-0.006	97	783146	80.0	78.1	
190 Butyl benzyl phthalate	149	11.368	11.380	-0.012	97	307172	80.0	79.0	
195 Bis(2-ethylhexyl) phthalat	149	12.637	12.643	-0.006	97	403079	80.0	81.4	
197 3,3'-Dichlorobenzidine	252	12.408	12.414	-0.006	75	317891	160.0	126.2	
198 Benzo[a]anthracene	228	12.437	12.443	-0.006	98	645935	80.0	73.3	
199 Chrysene	228	12.514	12.525	-0.011	97	682588	80.0	79.7	
201 Di-n-octyl phthalate	149	14.318	14.335	-0.017	99	620790	80.0	73.9	
203 Benzo[b]fluoranthene	252	15.093	15.105	-0.012	97	580169	80.0	79.5	
204 Benzo[k]fluoranthene	252	15.170	15.181	-0.011	99	663109	80.0	84.5	
207 Benzo[a]pyrene	252	15.963	15.980	-0.017	77	569975	80.0	77.4	
213 Dibenz(a,h)anthracene	278	19.218	19.229	-0.011	94	468702	80.0	76.6	
214 Indeno[1,2,3-cd]pyrene	276	19.118	19.130	-0.012	98	432596	80.0	68.7	M
215 Benzo[g,h,i]perylene	276	19.823	19.829	-0.006	97	550514	80.0	80.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

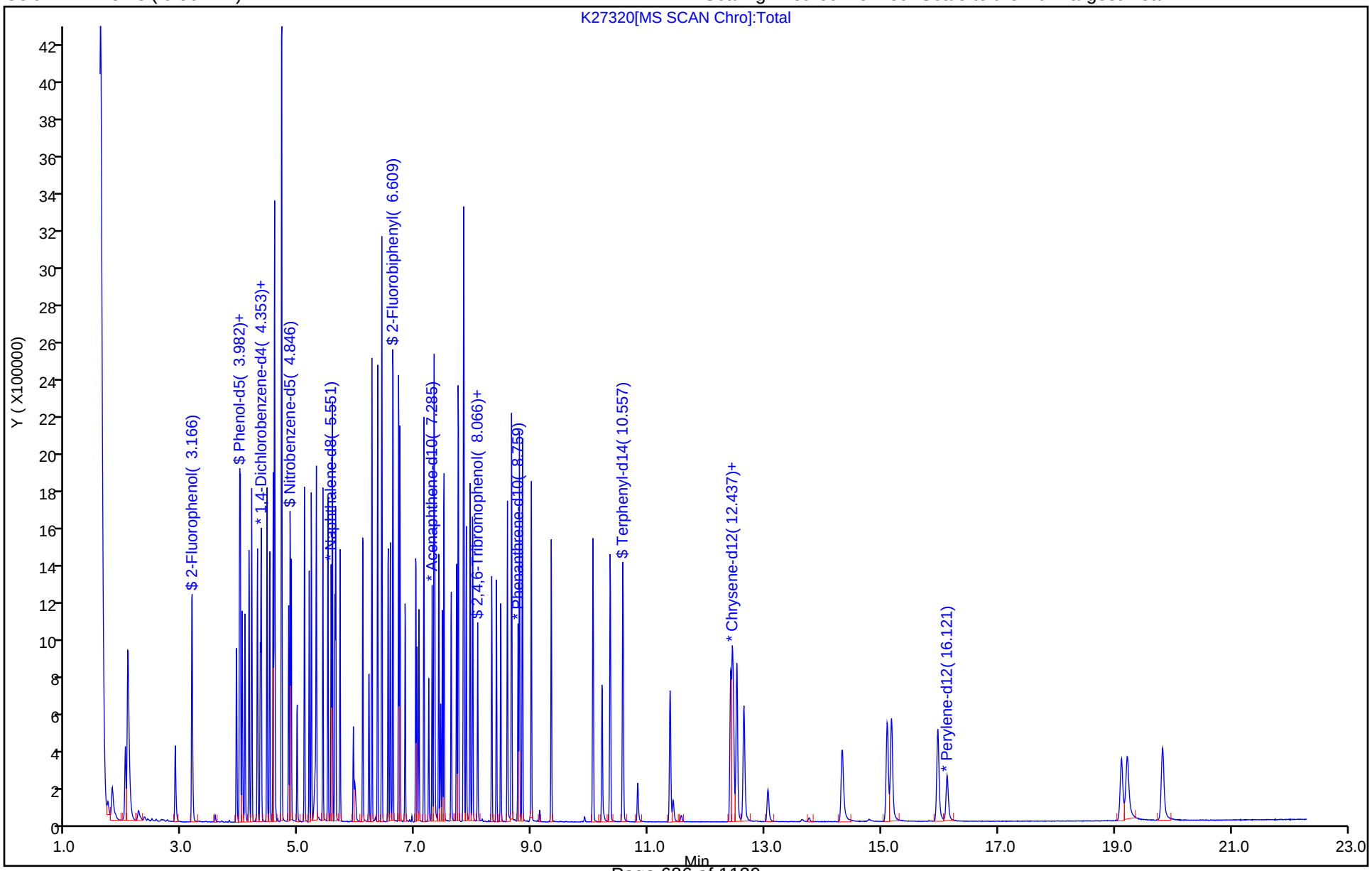
Report Date: 01-Nov-2018 06:26:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27320.D

Injection Date:	31-Oct-2018 14:44:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	LCS 280-434728/2-A			Worklist Smp#:	45
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSK_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_K\20181031-75679.b\K27320.D
Lims ID: LCS 280-434728/2-A
Client ID:
Sample Type: LCS
Inject. Date: 31-Oct-2018 14:44:30 ALS Bottle#: 6 Worklist Smp#: 45
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-434728_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:11:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	89.7	89.73
$ 8 Phenol-d5	100.0	92.0	91.95
$ 9 Nitrobenzene-d5	100.0	92.3	92.32
$ 11 2-Fluorobiphenyl	100.0	95.6	95.59
$ 12 2,4,6-Tribromophenol	100.0	91.5	91.50
$ 13 Terphenyl-d14	100.0	92.2	92.22

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-434912/2-A

Matrix: Water | Lab File ID: K27223.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/25/2018 13:12

Sample wt/vol: 1000(mL) | Date Analyzed: 10/29/2018 11:47

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435306 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-14-2	2,4-Dinitrotoluene	76.5		20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	78.2		20	4.4	1.9
98-95-3	Nitrobenzene	75.0		20	2.0	0.81

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	95		43-140
321-60-8	2-Fluorobiphenyl	95		44-119
367-12-4	2-Fluorophenol (Surr)	93		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	96		44-120
4165-62-2	Phenol-d5 (Surr)	96		10-115
1718-51-0	Terphenyl-d14 (Surr)	92		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27223.D
Lims ID: LCS 280-434912/2-A
Client ID:
Sample Type: LCS
Inject. Date: 29-Oct-2018 11:47:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-434912_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 06:56:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	95	118580	40.0	40.0	
* 2 Naphthalene-d8	136	5.592	5.593	-0.001	100	461086	40.0	40.0	
* 3 Acenaphthene-d10	164	7.326	7.326	0.000	93	232852	40.0	40.0	
* 4 Phenanthrene-d10	188	8.800	8.807	-0.006	98	349449	40.0	40.0	
* 5 Chrysene-d12	240	12.549	12.555	-0.006	99	272356	40.0	40.0	
* 6 Perylene-d12	264	16.251	16.263	-0.012	98	244848	40.0	40.0	
$ 7 2-Fluorophenol	112	3.213	3.207	0.006	94	413376	100.0	93.4	
$ 8 Phenol-d5	99	4.018	4.018	0.000	95	480888	100.0	95.7	
$ 9 Nitrobenzene-d5	82	4.887	4.887	0.000	94	418077	100.0	96.0	
$ 11 2-Fluorobiphenyl	172	6.650	6.656	-0.006	100	770090	100.0	94.7	
$ 12 2,4,6-Tribromophenol	330	8.107	8.113	-0.006	93	92570	100.0	95.4	
$ 13 Terphenyl-d14	244	10.622	10.634	-0.012	99	616264	100.0	92.2	
19 1,4-Dioxane	88	1.867	1.867	0.000	96	126158	80.0	67.1	
20 N-Nitrosodimethylamine	74	2.085	2.085	0.000	85	218543	80.0	75.4	
21 Pyridine	79	2.132	2.132	0.000	83	583312	160.0	125.0	
31 Benzaldehyde	106	3.971	3.971	0.000	90	206063	80.0	57.9	
32 Phenol	94	4.035	4.030	0.005	98	383539	80.0	73.6	
34 Aniline	93	4.065	4.065	0.000	96	386268	80.0	60.6	
36 Bis(2-chloroethyl)ether	93	4.112	4.112	0.000	93	308460	80.0	79.6	
38 n-Decane	43	4.229	4.229	0.000	94	328612	80.0	54.2	
39 2-Chlorophenol	128	4.182	4.182	0.000	98	321328	80.0	75.1	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	98	306523	80.0	64.2	
42 1,4-Dichlorobenzene	146	4.394	4.394	0.000	93	309091	80.0	64.4	
43 Benzyl alcohol	108	4.488	4.494	-0.006	92	212480	80.0	75.1	
44 1,2-Dichlorobenzene	146	4.541	4.541	0.000	97	299699	80.0	65.6	
45 2-Methylphenol	108	4.594	4.594	0.000	96	285860	80.0	72.8	
46 2,2'-oxybis[1-chloropropan	45	4.623	4.623	0.000	92	572018	80.0	78.3	
47 Indene	116	4.623	4.623	0.000	91	468454	80.0	71.6	
49 3 & 4 Methylphenol	108	4.740	4.741	-0.001	63	271980	80.0	71.2	
50 3-Methylphenol	108	4.740	4.741	-0.001	69	271980	80.0	71.2	
51 4-Methylphenol	108	4.740	4.741	-0.001	66	271980	80.0	71.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.740	4.741	-0.001	85	199305	80.0	73.3	
54 Acetophenone	105	4.740	4.746	-0.006	77	393740	80.0	74.4	
58 Hexachloroethane	117	4.864	4.864	0.000	94	107462	80.0	60.5	
59 Nitrobenzene	77	4.905	4.905	0.000	95	316900	80.0	75.0	
63 Isophorone	82	5.134	5.134	0.000	97	560968	80.0	75.3	
64 2-Nitrophenol	139	5.216	5.216	0.000	93	172031	80.0	76.4	
65 2,4-Dimethylphenol	107	5.252	5.252	0.000	94	194250	80.0	49.2	
68 Benzoic acid	105	5.328	5.363	-0.035	93	194198	80.0	69.8	
69 Bis(2-chloroethoxy)methane	93	5.334	5.340	-0.006	96	344941	80.0	75.7	
74 2,4-Dichlorophenol	162	5.451	5.451	0.000	94	250052	80.0	74.6	
76 1,2,4-Trichlorobenzene	180	5.534	5.540	-0.006	94	256605	80.0	67.2	
79 Naphthalene	128	5.610	5.616	-0.006	98	804536	80.0	71.6	
80 4-Chloroaniline	127	5.651	5.657	-0.006	97	285132	80.0	60.4	
81 2,6-Dichlorophenol	162	5.669	5.669	0.000	96	244746	80.0	74.3	
83 Hexachlorobutadiene	225	5.745	5.745	0.000	96	133504	80.0	63.0	
86 Caprolactam	55	5.974	5.980	-0.006	74	156682	80.0	78.5	M
89 4-Chloro-3-methylphenol	107	6.133	6.133	0.000	96	240704	80.0	75.6	
93 2-Methylnaphthalene	142	6.292	6.292	0.000	95	584177	80.0	74.0	
96 1-Methylnaphthalene	142	6.392	6.392	0.000	95	552759	80.0	75.0	
97 Hexachlorocyclopentadiene	237	6.462	6.462	0.000	97	83045	160.0	34.3	
98 1,2,4,5-Tetrachlorobenzene	216	6.462	6.468	-0.006	97	259621	80.0	74.2	
100 2,4,6-Trichlorophenol	196	6.568	6.574	-0.006	92	172893	80.0	78.0	
102 2,4,5-Trichlorophenol	196	6.609	6.609	0.000	94	183516	80.0	75.7	
104 1,1'-Biphenyl	154	6.750	6.756	-0.006	94	683190	80.0	74.7	
106 2-Chloronaphthalene	162	6.773	6.779	-0.006	95	521737	80.0	74.4	
108 2-Nitroaniline	65	6.862	6.867	-0.005	85	158028	80.0	75.6	
111 Dimethyl phthalate	163	7.044	7.050	-0.006	99	532291	80.0	77.4	
112 1,3-Dinitrobenzene	168	7.067	7.073	-0.006	88	93108	80.0	78.8	
113 2,6-Dinitrotoluene	165	7.102	7.103	0.000	94	137239	80.0	78.2	
114 Acenaphthylene	152	7.185	7.191	-0.006	99	779929	80.0	74.0	
115 3-Nitroaniline	138	7.267	7.273	-0.006	94	102048	80.0	54.1	
117 Acenaphthene	153	7.361	7.361	0.000	93	518432	80.0	75.7	
118 2,4-Dinitrophenol	184	7.373	7.379	-0.006	83	138947	160.0	140.1	
119 4-Nitrophenol	109	7.437	7.443	-0.006	95	127063	160.0	144.0	
122 2,4-Dinitrotoluene	165	7.502	7.508	-0.006	95	166278	80.0	76.5	
123 Dibenzofuran	168	7.531	7.531	0.000	98	728578	80.0	75.9	
125 2,3,4,6-Tetrachlorophenol	232	7.655	7.655	0.000	72	143121	80.0	75.8	
127 Hexadecane	57	7.772	7.778	-0.006	90	461634	80.0	75.2	
130 Diethyl phthalate	149	7.743	7.749	-0.006	98	499699	80.0	76.5	
134 4-Chlorophenyl phenyl ethe	204	7.866	7.866	0.000	92	261462	80.0	74.6	
135 Fluorene	166	7.872	7.878	-0.006	95	548010	80.0	75.4	
138 4-Nitroaniline	138	7.878	7.884	-0.006	87	130312	80.0	73.4	
139 4,6-Dinitro-2-methylphenol	198	7.913	7.919	-0.006	84	183918	160.0	170.1	
141 N-Nitrosodiphenylamine	169	7.978	7.984	-0.006	63	391488	80.0	78.7	
142 Diphenylamine	169	7.978	7.984	-0.006	95	391488	68.0	62.0	
143 1,2-Diphenylhydrazine	77	8.019	8.025	-0.006	41	559125	80.9	78.3	
144 Azobenzene	77	8.019	8.025	-0.006	98	559125	80.0	77.4	
147 2,4,6 - Tribromophenol	330	8.107	8.113	-0.006	93	92479	100.0	94.8	
156 4-Bromophenyl phenyl ether	248	8.348	8.354	-0.006	67	153945	80.0	79.4	
157 Hexachlorobenzene	284	8.430	8.436	-0.006	94	149161	80.0	78.0	
159 Atrazine	200	8.507	8.513	-0.006	91	130549	80.0	78.3	
161 n-Octadecane	85	8.689	8.695	-0.006	91	147172	80.0	83.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.618	8.624	-0.006	93	173419	160.0	152.2	
168 Phenanthrene	178	8.824	8.836	-0.012	98	735832	80.0	79.4	
169 Anthracene	178	8.877	8.883	-0.006	97	752965	80.0	78.4	
170 Carbazole	167	9.030	9.036	-0.006	95	667232	80.0	79.6	
173 Di-n-butyl phthalate	149	9.370	9.376	-0.006	99	735656	80.0	79.8	
179 Fluoranthene	202	10.099	10.111	-0.012	98	713545	80.0	76.4	
181 Benzidine	184	10.258	10.270	-0.012	99	314146	160.0	61.9	
182 Pyrene	202	10.399	10.410	-0.011	97	745209	80.0	77.3	
190 Butyl benzyl phthalate	149	11.445	11.456	-0.012	97	288655	80.0	77.2	
195 Bis(2-ethylhexyl) phthalat	149	12.725	12.737	-0.012	97	373324	80.0	78.4	
197 3,3'-Dichlorobenzidine	252	12.496	12.508	-0.012	73	370062	160.0	152.8	
198 Benzo[a]anthracene	228	12.526	12.543	-0.017	98	615312	80.0	72.6	
199 Chrysene	228	12.608	12.620	-0.012	97	645792	80.0	78.5	
201 Di-n-octyl phthalate	149	14.429	14.441	-0.012	99	581195	80.0	72.0	
203 Benzo[b]fluoranthene	252	15.217	15.228	-0.011	97	548624	80.0	77.9	
204 Benzo[k]fluoranthene	252	15.287	15.305	-0.018	99	639985	80.0	84.5	
207 Benzo[a]pyrene	252	16.092	16.110	-0.018	77	536501	80.0	75.6	
213 Dibenz(a,h)anthracene	278	19.365	19.377	-0.012	93	459438	80.0	77.9	
214 Indeno[1,2,3-cd]pyrene	276	19.259	19.277	-0.018	98	407373	80.0	67.3	
215 Benzo[g,h,i]perylene	276	19.970	19.988	-0.018	98	519253	80.0	78.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

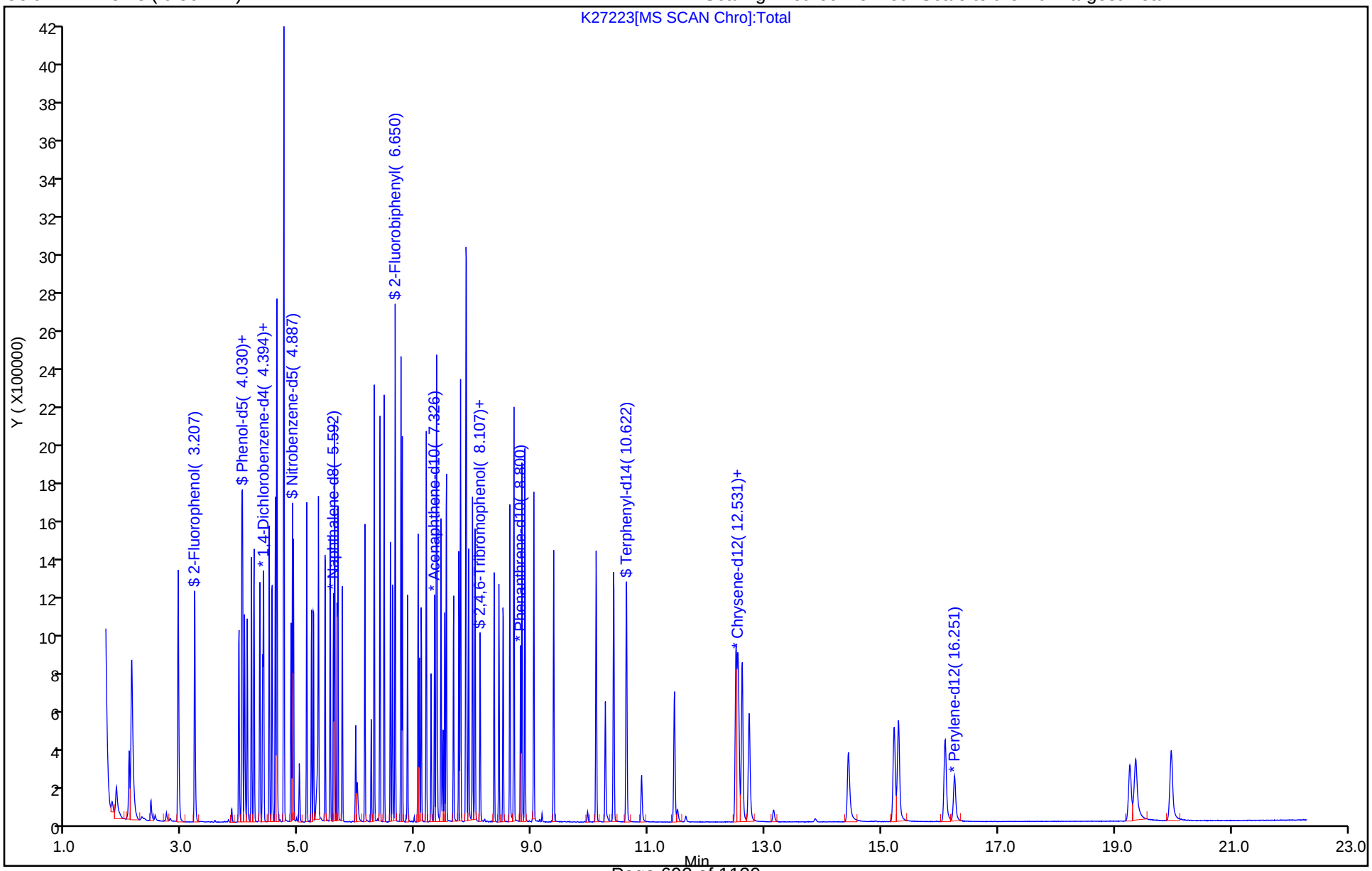
Report Date: 30-Oct-2018 07:24:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27223.D

Injection Date:	29-Oct-2018 11:47:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	LCS 280-434912/2-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSK_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_K\20181029-75571.b\K27223.D
Lims ID: LCS 280-434912/2-A
Client ID:
Sample Type: LCS
Inject. Date: 29-Oct-2018 11:47:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-434912_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 06:56:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	93.4	93.40
$ 8 Phenol-d5	100.0	95.7	95.69
$ 9 Nitrobenzene-d5	100.0	96.0	95.99
$ 11 2-Fluorobiphenyl	100.0	94.7	94.73
$ 12 2,4,6-Tribromophenol	100.0	95.4	95.39
$ 13 Terphenyl-d14	100.0	92.2	92.23

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-434728/3-A

Matrix: Water | Lab File ID: K27321.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 1000(mL) | Date Analyzed: 10/31/2018 15:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	66.7		10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	64.6		10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	63.3		10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	63.3		10	1.0	0.32
123-91-1	1,4-Dioxane	61.7		18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	77.1		20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	79.8		20	1.0	0.29
120-83-2	2,4-Dichlorophenol	76.0		10	2.0	0.64
105-67-9	2,4-Dimethylphenol	65.1		10	2.0	0.58
51-28-5	2,4-Dinitrophenol	147		80	30	10
121-14-2	2,4-Dinitrotoluene	76.8		20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	77.4		20	4.4	1.9
91-58-7	2-Chloronaphthalene	75.1		10	1.0	0.26
95-57-8	2-Chlorophenol	73.8		10	4.4	2.0
95-48-7	2-Methylphenol	73.1		10	2.0	0.98
88-74-4	2-Nitroaniline	75.1		50	4.4	1.7
88-75-5	2-Nitrophenol	76.8		20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	72.4		20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	130		50	4.4	2.0
99-09-2	3-Nitroaniline	49.3	J	50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	174		80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	78.4		10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	74.3		20	5.0	2.4
106-47-8	4-Chloroaniline	53.1		25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	73.4		10	4.4	1.7
100-01-6	4-Nitroaniline	69.0		50	4.4	2.0
100-02-7	4-Nitrophenol	143		50	4.0	1.2
65-85-0	Benzoic acid	67.6	J	80	30	10
100-51-6	Benzyl alcohol	74.5		25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	77.8		10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	75.7		10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	79.3		20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	80.6		10	2.0	0.56
85-68-7	Butyl benzyl phthalate	77.4		20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-434728/3-A

Matrix: Water | Lab File ID: K27321.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 1000(mL) | Date Analyzed: 10/31/2018 15:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	74.8		10	1.0	0.43
132-64-9	Dibenzofuran	75.1		10	1.0	0.29
84-66-2	Diethyl phthalate	75.0		20	1.0	0.38
131-11-3	Dimethyl phthalate	75.0		20	0.50	0.21
84-74-2	Di-n-butyl phthalate	76.6		20	4.4	1.2
117-84-0	Di-n-octyl phthalate	73.1		20	1.0	0.35
118-74-1	Hexachlorobenzene	76.6		10	2.0	0.66
87-68-3	Hexachlorobutadiene	63.0		30	10	3.3
77-47-4	Hexachlorocyclopentadiene	87.2		50	30	10
67-72-1	Hexachloroethane	59.2		10	4.4	2.1
78-59-1	Isophorone	75.1		10	0.50	0.21
98-95-3	Nitrobenzene	75.8		20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	73.4		20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	79.6		10	1.0	0.44
87-86-5	Pentachlorophenol	145		80	60	20
108-95-2	Phenol	71.3		10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	90		43-140
321-60-8	2-Fluorobiphenyl	94		44-119
367-12-4	2-Fluorophenol (Surr)	89		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	92		44-120
4165-62-2	Phenol-d5 (Surr)	91		10-115
1718-51-0	Terphenyl-d14 (Surr)	91		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27321.D
Lims ID: LCSD 280-434728/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 31-Oct-2018 15:13:30 ALS Bottle#: 7 Worklist Smp#: 46
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-434728_3-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:12:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	134581	40.0	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	100	511876	40.0	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	94	247028	40.0	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	97	374016	40.0	40.0	
* 5 Chrysene-d12	240	12.461	12.461	0.000	99	280288	40.0	40.0	
* 6 Perylene-d12	264	16.127	16.128	-0.001	98	250652	40.0	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	446159	100.0	88.8	
$ 8 Phenol-d5	99	3.982	3.982	0.000	96	517279	100.0	90.7	
$ 9 Nitrobenzene-d5	82	4.852	4.852	0.000	94	446882	100.0	92.4	
$ 11 2-Fluorobiphenyl	172	6.615	6.615	-0.001	100	812094	100.0	94.2	
$ 12 2,4,6-Tribromophenol	330	8.072	8.072	0.000	94	92634	100.0	90.0	
$ 13 Terphenyl-d14	244	10.563	10.563	0.000	100	627810	100.0	91.3	
19 1,4-Dioxane	88	1.797	1.797	0.000	93	131623	80.0	61.7	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	84	240773	80.0	73.2	
21 Pyridine	79	2.061	2.067	-0.006	82	638353	160.0	120.5	
31 Benzaldehyde	106	3.929	3.930	-0.001	90	137084	80.0	33.9	
32 Phenol	94	3.994	3.994	0.000	97	421766	80.0	71.3	
34 Aniline	93	4.023	4.029	-0.006	96	392161	80.0	54.2	
36 Bis(2-chloroethyl)ether	93	4.076	4.076	0.000	93	348676	80.0	79.3	
38 n-Decane	43	4.188	4.188	0.000	94	379517	80.0	55.1	
39 2-Chlorophenol	128	4.147	4.147	0.000	98	358676	80.0	73.8	
40 1,3-Dichlorobenzene	146	4.288	4.288	0.000	98	343034	80.0	63.3	
42 1,4-Dichlorobenzene	146	4.352	4.352	0.000	94	344695	80.0	63.3	
43 Benzyl alcohol	108	4.452	4.452	0.000	92	239314	80.0	74.5	
44 1,2-Dichlorobenzene	146	4.499	4.499	0.000	97	334941	80.0	64.6	
45 2-Methylphenol	108	4.558	4.558	0.000	96	325702	80.0	73.1	
46 2,2'-oxybis[1-chloropropan	45	4.582	4.582	0.000	91	645609	80.0	77.8	
47 Indene	116	4.582	4.582	0.000	92	523152	80.0	70.5	
49 3 & 4 Methylphenol	108	4.705	4.705	0.000	65	313542	80.0	72.4	
50 3-Methylphenol	108	4.705	4.705	0.000	71	313542	80.0	72.4	
51 4-Methylphenol	108	4.705	4.705	0.000	68	313542	80.0	72.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.705	4.705	0.000	82	226283	80.0	73.4	
54 Acetophenone	105	4.705	4.705	0.000	77	434623	80.0	72.3	
58 Hexachloroethane	117	4.822	4.823	-0.001	92	119306	80.0	59.2	
59 Nitrobenzene	77	4.869	4.870	-0.001	94	355720	80.0	75.8	
63 Isophorone	82	5.099	5.099	0.000	97	621317	80.0	75.1	
64 2-Nitrophenol	139	5.175	5.175	0.000	94	191948	80.0	76.8	
65 2,4-Dimethylphenol	107	5.216	5.216	0.000	95	285128	80.0	65.1	
68 Benzoic acid	105	5.298	5.334	-0.036	38	208252	80.0	67.6	
69 Bis(2-chloroethoxy)methane	93	5.298	5.298	0.000	95	382716	80.0	75.7	
74 2,4-Dichlorophenol	162	5.410	5.416	-0.006	96	282508	80.0	76.0	
76 1,2,4-Trichlorobenzene	180	5.498	5.498	0.000	94	282559	80.0	66.7	
79 Naphthalene	128	5.575	5.575	0.000	98	884121	80.0	70.9	
80 4-Chloroaniline	127	5.616	5.616	0.000	96	278267	80.0	53.1	
81 2,6-Dichlorophenol	162	5.633	5.633	0.000	96	274522	80.0	75.1	
83 Hexachlorobutadiene	225	5.704	5.710	-0.006	96	148215	80.0	63.0	
86 Caprolactam	55	5.933	5.945	-0.012	74	157078	80.0	70.9	M
89 4-Chloro-3-methylphenol	107	6.097	6.098	-0.001	96	262615	80.0	74.3	
93 2-Methylnaphthalene	142	6.250	6.256	-0.006	95	634583	80.0	72.4	
96 1-Methylnaphthalene	142	6.350	6.356	-0.006	96	602679	80.0	73.6	
97 Hexachlorocyclopentadiene	237	6.421	6.427	-0.006	95	223751	160.0	87.2	
98 1,2,4,5-Tetrachlorobenzene	216	6.426	6.427	-0.001	96	269660	80.0	69.5	
100 2,4,6-Trichlorophenol	196	6.532	6.532	0.000	92	187792	80.0	79.8	
102 2,4,5-Trichlorophenol	196	6.568	6.568	0.000	94	198202	80.0	77.1	
104 1,1'-Biphenyl	154	6.714	6.714	0.000	94	726191	80.0	74.9	
106 2-Chloronaphthalene	162	6.732	6.738	-0.006	96	558369	80.0	75.1	
108 2-Nitroaniline	65	6.826	6.826	0.000	86	166465	80.0	75.1	
111 Dimethyl phthalate	163	7.008	7.008	0.000	99	547045	80.0	75.0	
112 1,3-Dinitrobenzene	168	7.026	7.032	-0.006	88	100797	80.0	80.4	
113 2,6-Dinitrotoluene	165	7.061	7.061	0.000	94	144220	80.0	77.4	
114 Acenaphthylene	152	7.143	7.149	-0.006	98	815557	80.0	72.9	
115 3-Nitroaniline	138	7.231	7.232	-0.001	95	98695	80.0	49.3	
117 Acenaphthene	153	7.320	7.320	0.000	93	545947	80.0	75.1	
118 2,4-Dinitrophenol	184	7.331	7.337	-0.006	82	155348	160.0	147.2	
119 4-Nitrophenol	109	7.402	7.402	0.000	95	133736	160.0	142.9	
122 2,4-Dinitrotoluene	165	7.461	7.467	-0.006	95	177020	80.0	76.8	
123 Dibenzofuran	168	7.490	7.490	0.000	97	764655	80.0	75.1	
125 2,3,4,6-Tetrachlorophenol	232	7.613	7.619	-0.006	72	147314	80.0	73.5	
127 Hexadecane	57	7.737	7.737	0.000	91	498172	80.0	76.5	
130 Diethyl phthalate	149	7.707	7.707	0.000	98	519776	80.0	75.0	
134 4-Chlorophenyl phenyl ethe	204	7.825	7.825	0.000	95	272693	80.0	73.4	
135 Fluorene	166	7.831	7.831	0.000	95	578737	80.0	75.0	
138 4-Nitroaniline	138	7.837	7.843	-0.006	86	130018	80.0	69.0	
139 4,6-Dinitro-2-methylphenol	198	7.872	7.878	-0.006	84	201967	160.0	174.3	
141 N-Nitrosodiphenylamine	169	7.942	7.942	0.000	63	423609	80.0	79.6	
142 Diphenylamine	169	7.942	7.942	0.000	95	423609	68.0	63.2	
143 1,2-Diphenylhydrazine	77	7.984	7.984	0.000	41	582876	80.9	76.9	
144 Azobenzene	77	7.984	7.984	0.000	97	582876	80.0	76.1	
147 2,4,6 - Tribromophenol	330	8.072	8.072	0.000	94	93616	100.0	90.4	
156 4-Bromophenyl phenyl ether	248	8.313	8.313	0.000	67	162605	80.0	78.4	
157 Hexachlorobenzene	284	8.389	8.395	-0.006	94	156664	80.0	76.6	
159 Atrazine	200	8.465	8.465	0.000	91	129149	80.0	72.4	
161 n-Octadecane	85	8.653	8.653	0.000	91	152885	80.0	80.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.577	8.583	-0.006	94	177070	160.0	145.4	
168 Phenanthrene	178	8.788	8.789	-0.001	97	765268	80.0	77.2	
169 Anthracene	178	8.835	8.841	-0.006	97	788905	80.0	76.7	
170 Carbazole	167	8.988	8.994	-0.006	95	670969	80.0	74.8	
173 Di-n-butyl phthalate	149	9.329	9.335	-0.006	99	755087	80.0	76.6	
179 Fluoranthene	202	10.046	10.052	-0.006	98	744913	80.0	74.5	
181 Benzidine	184	10.204	10.205	-0.001	99	349927	160.0	66.6	
182 Pyrene	202	10.346	10.346	0.000	97	771387	80.0	77.8	
190 Butyl benzyl phthalate	149	11.374	11.380	-0.006	97	298022	80.0	77.4	
195 Bis(2-ethylhexyl) phthalat	149	12.643	12.643	0.000	97	394986	80.0	80.6	
197 3,3'-Dichlorobenzidine	252	12.414	12.414	0.000	74	324442	160.0	130.2	
198 Benzo[a]anthracene	228	12.443	12.443	0.000	98	640984	80.0	73.5	
199 Chrysene	228	12.519	12.525	-0.006	97	681504	80.0	80.5	
201 Di-n-octyl phthalate	149	14.323	14.335	-0.012	99	606898	80.0	73.1	
203 Benzo[b]fluoranthene	252	15.099	15.105	-0.006	97	563081	80.0	78.1	
204 Benzo[k]fluoranthene	252	15.175	15.181	-0.006	99	667304	80.0	86.1	
207 Benzo[a]pyrene	252	15.968	15.980	-0.012	80	571105	80.0	78.6	
213 Dibenz(a,h)anthracene	278	19.223	19.229	-0.006	93	473750	80.0	78.5	
214 Indeno[1,2,3-cd]pyrene	276	19.124	19.130	-0.006	98	444553	80.0	71.3	
215 Benzo[g,h,i]perylene	276	19.829	19.829	0.000	98	531682	80.0	78.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

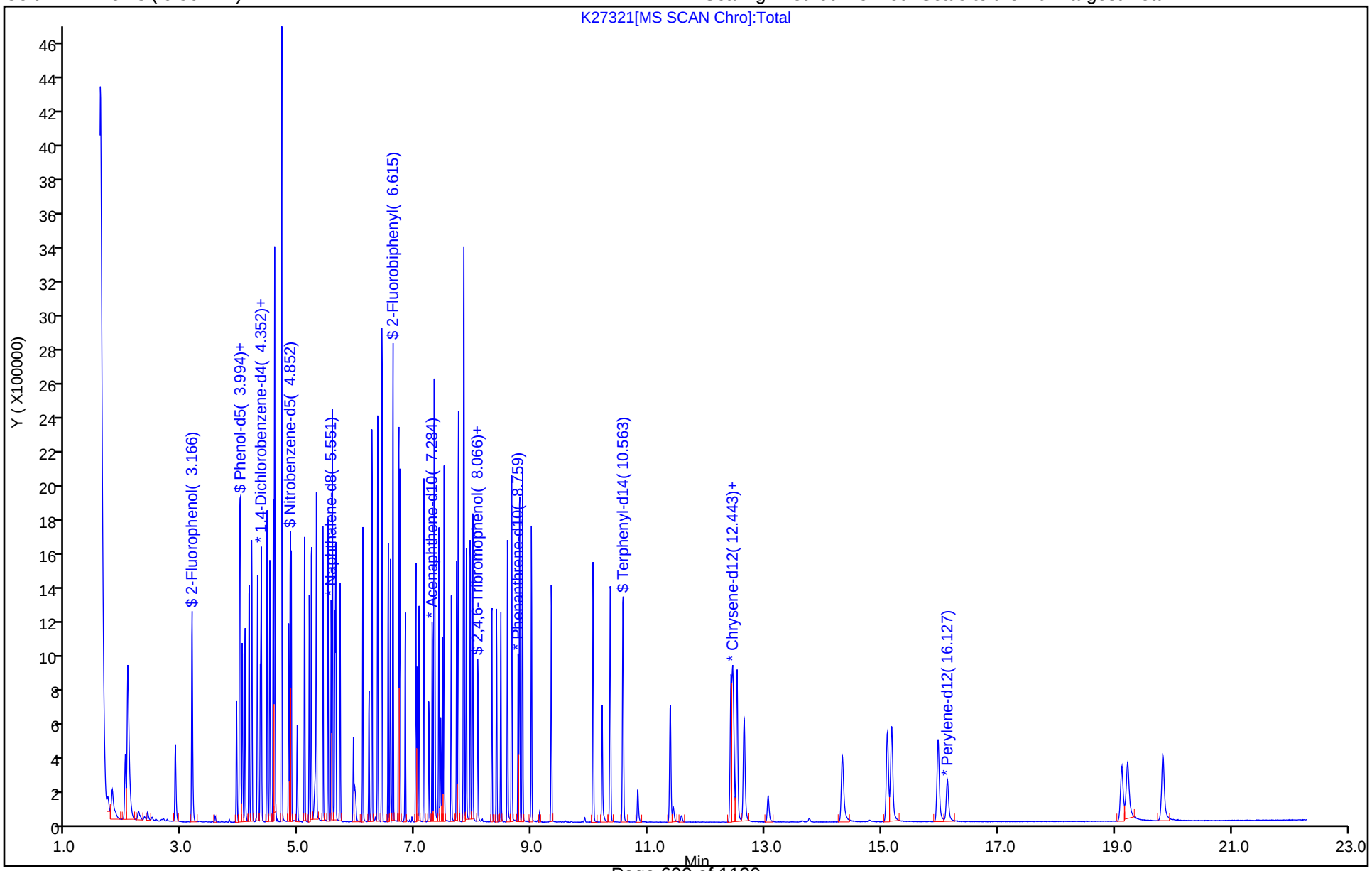
Report Date: 01-Nov-2018 06:26:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27321.D

Injection Date:	31-Oct-2018 15:13:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	LCSD 280-434728/3-A			Worklist Smp#:	46
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSK_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_K\20181031-75679.b\K27321.D
Lims ID: LCSD 280-434728/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 31-Oct-2018 15:13:30 ALS Bottle#: 7 Worklist Smp#: 46
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-434728_3-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:12:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	88.8	88.82
$ 8 Phenol-d5	100.0	90.7	90.69
$ 9 Nitrobenzene-d5	100.0	92.4	92.42
$ 11 2-Fluorobiphenyl	100.0	94.2	94.16
$ 12 2,4,6-Tribromophenol	100.0	90.0	89.98
$ 13 Terphenyl-d14	100.0	91.3	91.30

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-434912/3-A

Matrix: Water | Lab File ID: K27224.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/25/2018 13:12

Sample wt/vol: 1000(mL) | Date Analyzed: 10/29/2018 12:16

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435306 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-14-2	2,4-Dinitrotoluene	79.2		20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	80.3		20	4.4	1.9
98-95-3	Nitrobenzene	76.3		20	2.0	0.81

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	96		43-140
321-60-8	2-Fluorobiphenyl	99		44-119
367-12-4	2-Fluorophenol (Surr)	100		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	98		44-120
4165-62-2	Phenol-d5 (Surr)	101		10-115
1718-51-0	Terphenyl-d14 (Surr)	94		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27224.D
Lims ID: LCSD 280-434912/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 29-Oct-2018 12:16:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-434912_3-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 06:58:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.376	4.376	0.000	96	124876	40.0	40.0	
* 2 Naphthalene-d8	136	5.592	5.593	-0.001	99	497197	40.0	40.0	
* 3 Acenaphthene-d10	164	7.326	7.326	0.000	94	238800	40.0	40.0	
* 4 Phenanthrene-d10	188	8.806	8.807	0.000	97	356037	40.0	40.0	
* 5 Chrysene-d12	240	12.549	12.555	-0.006	99	273292	40.0	40.0	
* 6 Perylene-d12	264	16.251	16.263	-0.012	98	242983	40.0	40.0	
$ 7 2-Fluorophenol	112	3.213	3.207	0.006	94	466344	100.0	100.1	
$ 8 Phenol-d5	99	4.023	4.018	0.005	99	533556	100.0	100.8	
$ 9 Nitrobenzene-d5	82	4.887	4.887	0.000	95	457933	100.0	97.5	
$ 11 2-Fluorobiphenyl	172	6.650	6.656	-0.006	100	824238	100.0	98.9	
$ 12 2,4,6-Tribromophenol	330	8.113	8.113	0.000	94	95858	100.0	96.3	
$ 13 Terphenyl-d14	244	10.622	10.634	-0.012	99	629381	100.0	93.9	
19 1,4-Dioxane	88	1.867	1.867	0.000	95	145963	80.0	73.8	
20 N-Nitrosodimethylamine	74	2.085	2.085	0.000	85	242552	80.0	79.4	
21 Pyridine	79	2.132	2.132	0.000	82	653331	160.0	132.9	
31 Benzaldehyde	106	3.971	3.971	0.000	90	268029	80.0	71.5	
32 Phenol	94	4.035	4.030	0.005	98	424523	80.0	77.4	
34 Aniline	93	4.065	4.065	0.000	96	502437	80.0	74.8	
36 Bis(2-chloroethyl)ether	93	4.112	4.112	0.000	92	340204	80.0	83.4	
38 n-Decane	43	4.229	4.229	0.000	94	382790	80.0	59.9	
39 2-Chlorophenol	128	4.182	4.182	0.000	98	359020	80.0	79.7	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	98	339143	80.0	67.4	
42 1,4-Dichlorobenzene	146	4.394	4.394	0.000	93	346039	80.0	68.5	
43 Benzyl alcohol	108	4.494	4.494	0.000	93	237812	80.0	79.8	
44 1,2-Dichlorobenzene	146	4.541	4.541	0.000	97	334184	80.0	69.5	
45 2-Methylphenol	108	4.593	4.594	-0.001	96	318859	80.0	77.1	
46 2,2'-oxybis[1-chloropropan	45	4.623	4.623	0.000	88	621937	80.0	81.2	
47 Indene	116	4.623	4.623	0.000	92	516461	80.0	75.0	
49 3 & 4 Methylphenol	108	4.740	4.741	-0.001	86	301206	80.0	74.9	
50 3-Methylphenol	108	4.740	4.741	-0.001	89	301206	80.0	74.9	
51 4-Methylphenol	108	4.740	4.741	-0.001	93	301206	80.0	74.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.740	4.741	-0.001	91	218389	80.0	76.3	
54 Acetophenone	105	4.746	4.746	0.000	91	427382	80.0	76.7	
58 Hexachloroethane	117	4.864	4.864	0.000	94	121683	80.0	65.1	
59 Nitrobenzene	77	4.905	4.905	0.000	95	347676	80.0	76.3	
63 Isophorone	82	5.134	5.134	0.000	97	619636	80.0	77.1	
64 2-Nitrophenol	139	5.216	5.216	0.000	94	185589	80.0	76.5	
65 2,4-Dimethylphenol	107	5.251	5.252	-0.001	94	222236	80.0	52.2	
68 Benzoic acid	105	5.334	5.363	-0.029	38	219479	80.0	72.9	
69 Bis(2-chloroethoxy)methane	93	5.334	5.340	-0.006	96	383515	80.0	78.0	
74 2,4-Dichlorophenol	162	5.451	5.451	0.000	94	275396	80.0	76.2	
76 1,2,4-Trichlorobenzene	180	5.539	5.540	-0.001	93	277155	80.0	67.3	
79 Naphthalene	128	5.610	5.616	-0.006	98	882828	80.0	72.9	
80 4-Chloroaniline	127	5.657	5.657	0.000	96	369914	80.0	72.7	
81 2,6-Dichlorophenol	162	5.669	5.669	0.000	96	269411	80.0	75.9	
83 Hexachlorobutadiene	225	5.745	5.745	0.000	95	149737	80.0	65.6	
86 Caprolactam	55	5.974	5.980	-0.006	73	160915	80.0	74.8	M
89 4-Chloro-3-methylphenol	107	6.133	6.133	0.000	96	258595	80.0	75.4	
93 2-Methylnaphthalene	142	6.291	6.292	-0.001	95	631381	80.0	74.2	
96 1-Methylnaphthalene	142	6.391	6.392	-0.001	96	594077	80.0	74.7	
97 Hexachlorocyclopentadiene	237	6.462	6.462	0.000	96	97981	160.0	39.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.462	6.468	-0.006	97	273803	80.0	72.6	
100 2,4,6-Trichlorophenol	196	6.568	6.574	-0.006	93	187216	80.0	82.3	
102 2,4,5-Trichlorophenol	196	6.609	6.609	0.000	95	202447	80.0	81.4	
104 1,1'-Biphenyl	154	6.750	6.756	-0.006	95	728629	80.0	77.7	
106 2-Chloronaphthalene	162	6.773	6.779	-0.006	96	551738	80.0	76.7	
108 2-Nitroaniline	65	6.861	6.867	-0.006	86	165326	80.0	77.1	
111 Dimethyl phthalate	163	7.044	7.050	-0.006	99	547085	80.0	77.5	
112 1,3-Dinitrobenzene	168	7.067	7.073	-0.006	89	100497	80.0	82.9	
113 2,6-Dinitrotoluene	165	7.102	7.103	0.000	94	144559	80.0	80.3	
114 Acenaphthylene	152	7.185	7.191	-0.006	99	817217	80.0	75.6	
115 3-Nitroaniline	138	7.267	7.273	-0.006	95	130514	80.0	67.5	
117 Acenaphthene	153	7.361	7.361	0.000	93	541429	80.0	77.1	
118 2,4-Dinitrophenol	184	7.373	7.379	-0.006	85	149355	160.0	146.5	
119 4-Nitrophenol	109	7.437	7.443	-0.006	95	133341	160.0	147.4	
122 2,4-Dinitrotoluene	165	7.502	7.508	-0.006	94	176439	80.0	79.2	
123 Dibenzofuran	168	7.531	7.531	0.000	97	761507	80.0	77.3	
125 2,3,4,6-Tetrachlorophenol	232	7.655	7.655	0.000	72	151005	80.0	77.9	
127 Hexadecane	57	7.772	7.778	-0.006	90	489880	80.0	77.8	
130 Diethyl phthalate	149	7.743	7.749	-0.006	98	514572	80.0	76.8	
134 4-Chlorophenyl phenyl ethe	204	7.866	7.866	0.000	94	274382	80.0	76.4	
135 Fluorene	166	7.872	7.878	-0.006	94	573413	80.0	76.9	
138 4-Nitroaniline	138	7.878	7.884	-0.006	85	131638	80.0	72.3	
139 4,6-Dinitro-2-methylphenol	198	7.913	7.919	-0.006	85	193985	160.0	175.8	
141 N-Nitrosodiphenylamine	169	7.978	7.984	-0.006	63	400576	80.0	79.0	
142 Diphenylamine	169	7.978	7.984	-0.006	95	400576	68.0	61.8	
143 1,2-Diphenylhydrazine	77	8.025	8.025	0.000	42	573434	80.9	78.3	
144 Azobenzene	77	8.025	8.025	0.000	97	573434	80.0	77.4	
147 2,4,6 - Tribromophenol	330	8.113	8.113	0.000	94	97014	100.0	96.9	
156 4-Bromophenyl phenyl ether	248	8.354	8.354	0.000	68	158976	80.0	80.5	
157 Hexachlorobenzene	284	8.430	8.436	-0.006	95	154799	80.0	79.5	
159 Atrazine	200	8.507	8.513	-0.006	91	132954	80.0	78.3	
161 n-Octadecane	85	8.689	8.695	-0.006	91	153926	80.0	85.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.618	8.624	-0.006	93	178339	160.0	153.6	
168 Phenanthrene	178	8.830	8.836	-0.006	97	755618	80.0	80.1	
169 Anthracene	178	8.877	8.883	-0.006	97	778655	80.0	79.6	
170 Carbazole	167	9.029	9.036	-0.007	95	675916	80.0	79.1	
173 Di-n-butyl phthalate	149	9.370	9.376	-0.006	99	743702	80.0	79.2	
179 Fluoranthene	202	10.099	10.111	-0.012	98	738667	80.0	77.6	
181 Benzidine	184	10.263	10.270	-0.007	99	515281	160.0	97.9	
182 Pyrene	202	10.404	10.410	-0.006	97	762495	80.0	78.8	
190 Butyl benzyl phthalate	149	11.444	11.456	-0.012	97	295322	80.0	78.7	
195 Bis(2-ethylhexyl) phthalat	149	12.725	12.737	-0.012	97	383166	80.0	80.2	
197 3,3'-Dichlorobenzidine	252	12.502	12.508	-0.006	73	414140	160.0	170.4	
198 Benzo[a]anthracene	228	12.531	12.543	-0.012	98	635408	80.0	74.7	
199 Chrysene	228	12.608	12.620	-0.012	97	666151	80.0	80.7	
201 Di-n-octyl phthalate	149	14.429	14.441	-0.012	99	588479	80.0	72.7	
203 Benzo[b]fluoranthene	252	15.216	15.228	-0.012	97	555561	80.0	79.5	
204 Benzo[k]fluoranthene	252	15.293	15.305	-0.012	99	661259	80.0	88.0	
207 Benzo[a]pyrene	252	16.092	16.110	-0.018	81	529401	80.0	75.1	
213 Dibenz(a,h)anthracene	278	19.359	19.377	-0.018	93	461954	80.0	78.9	
214 Indeno[1,2,3-cd]pyrene	276	19.259	19.277	-0.018	98	410702	80.0	67.6	M
215 Benzo[g,h,i]perylene	276	19.976	19.988	-0.012	98	517649	80.0	79.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

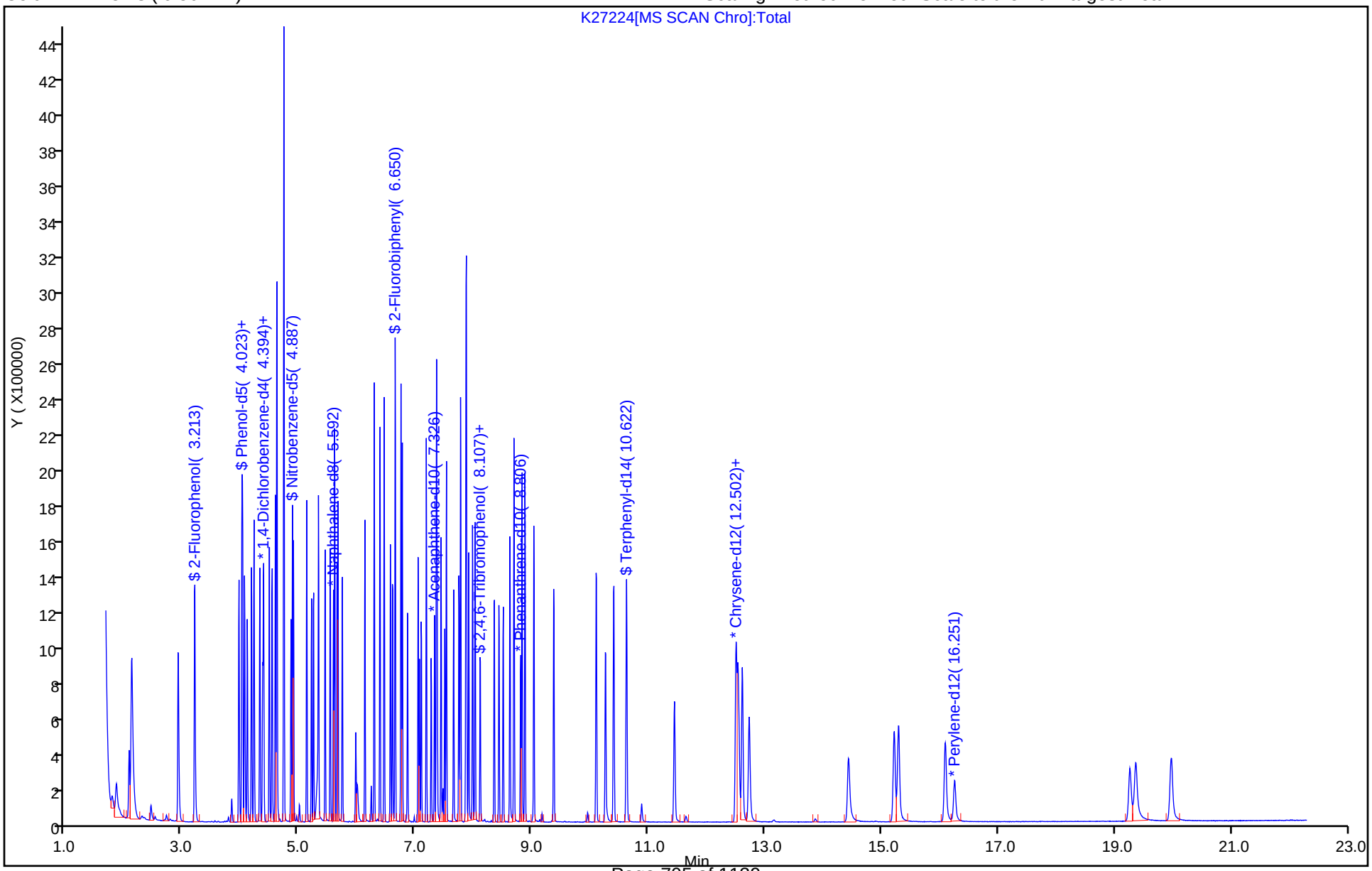
Report Date: 30-Oct-2018 07:24:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\K27224.D

Injection Date:	29-Oct-2018 12:16:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	LCSD 280-434912/3-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSK_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_K\20181029-75571.b\K27224.D
Lims ID: LCSD 280-434912/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 29-Oct-2018 12:16:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-434912_3-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181029-75571.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 30-Oct-2018 07:24:18 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: kiekeld Date: 30-Oct-2018 06:58:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	100.1	100.05
$ 8 Phenol-d5	100.0	100.8	100.81
$ 9 Nitrobenzene-d5	100.0	97.5	97.50
$ 11 2-Fluorobiphenyl	100.0	98.9	98.87
$ 12 2,4,6-Tribromophenol	100.0	96.3	96.32
$ 13 Terphenyl-d14	100.0	93.9	93.87

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW MS | Lab Sample ID: 280-115789-1 MS

Matrix: Water | Lab File ID: K27335.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 947.2(mL) | Date Analyzed: 10/31/2018 21:39

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	72.3		11	1.1	0.30
95-50-1	1,2-Dichlorobenzene	71.1		11	0.53	0.24
541-73-1	1,3-Dichlorobenzene	71.0		11	1.1	0.32
106-46-7	1,4-Dichlorobenzene	70.6		11	1.1	0.34
123-91-1	1,4-Dioxane	61.5		19	4.6	1.8
95-95-4	2,4,5-Trichlorophenol	79.5		21	1.1	0.48
88-06-2	2,4,6-Trichlorophenol	83.8		21	1.1	0.31
120-83-2	2,4-Dichlorophenol	75.5		11	2.1	0.68
105-67-9	2,4-Dimethylphenol	70.2		11	2.1	0.61
51-28-5	2,4-Dinitrophenol	153		84	32	11
121-14-2	2,4-Dinitrotoluene	81.6		21	4.6	1.8
606-20-2	2,6-Dinitrotoluene	81.2		21	4.6	2.0
91-58-7	2-Chloronaphthalene	79.3		11	1.1	0.27
95-57-8	2-Chlorophenol	74.6		11	4.6	2.1
95-48-7	2-Methylphenol	75.0		11	2.1	1.0
88-74-4	2-Nitroaniline	75.7		53	4.6	1.8
88-75-5	2-Nitrophenol	77.7		21	1.1	0.41
15831-10-4	3 & 4 Methylphenol	72.8		21	0.53	0.26
91-94-1	3,3'-Dichlorobenzidine	134		53	4.6	2.1
99-09-2	3-Nitroaniline	53.0		53	4.6	2.1
534-52-1	4,6-Dinitro-2-methylphenol	185		84	9.3	4.2
101-55-3	4-Bromophenyl phenyl ether	81.4		11	1.1	0.45
59-50-7	4-Chloro-3-methylphenol	72.8		21	5.3	2.5
106-47-8	4-Chloroaniline	55.6		26	4.6	2.3
7005-72-3	4-Chlorophenyl phenyl ether	76.5		11	4.6	1.8
100-01-6	4-Nitroaniline	73.4		53	4.6	2.1
100-02-7	4-Nitrophenol	152		53	4.2	1.3
65-85-0	Benzoic acid	78.6	J	84	32	11
100-51-6	Benzyl alcohol	74.4		26	0.53	0.24
108-60-1	bis (2-chloroisopropyl) ether	78.0		11	1.1	0.30
111-91-1	Bis(2-chloroethoxy)methane	74.4		11	2.1	1.0
111-44-4	Bis(2-chloroethyl)ether	80.1		21	1.1	0.43
117-81-7	Bis(2-ethylhexyl) phthalate	87.2		11	2.1	0.59
85-68-7	Butyl benzyl phthalate	83.7		21	2.1	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW MS | Lab Sample ID: 280-115789-1 MS

Matrix: Water | Lab File ID: K27335.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 947.2(mL) | Date Analyzed: 10/31/2018 21:39

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	81.1		11	1.1	0.45
132-64-9	Dibenzofuran	78.4		11	1.1	0.31
84-66-2	Diethyl phthalate	78.5		21	1.1	0.40
131-11-3	Dimethyl phthalate	80.1		21	0.53	0.22
84-74-2	Di-n-butyl phthalate	82.0		21	4.6	1.2
117-84-0	Di-n-octyl phthalate	81.8		21	1.1	0.37
118-74-1	Hexachlorobenzene	81.6		11	2.1	0.70
87-68-3	Hexachlorobutadiene	73.2		32	11	3.5
77-47-4	Hexachlorocyclopentadiene	102		53	32	11
67-72-1	Hexachloroethane	68.6		11	4.6	2.2
78-59-1	Isophorone	72.9		11	0.53	0.22
98-95-3	Nitrobenzene	74.5		21	2.1	0.86
621-64-7	N-Nitrosodi-n-propylamine	72.8		21	1.1	0.37
86-30-6	N-Nitrosodiphenylamine	83.2		11	1.1	0.46
87-86-5	Pentachlorophenol	164		84	63	21
108-95-2	Phenol	74.7		11	4.6	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	94		43-140
321-60-8	2-Fluorobiphenyl	93		44-119
367-12-4	2-Fluorophenol (Surr)	87		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	87		44-120
4165-62-2	Phenol-d5 (Surr)	89		10-115
1718-51-0	Terphenyl-d14 (Surr)	90		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27335.D
Lims ID: 280-115789-A-1-A MS
Client ID: RQLMW-011-181001-GW
Sample Type: MS
Inject. Date: 31-Oct-2018 21:39:30 ALS Bottle#: 21 Worklist Smp#: 60
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-A-1-A MS
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:22:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	95	147437	40.0	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	99	568416	40.0	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	94	264766	40.0	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	97	403684	40.0	40.0	
* 5 Chrysene-d12	240	12.455	12.461	-0.006	99	313957	40.0	40.0	
* 6 Perylene-d12	264	16.121	16.128	-0.007	98	294894	40.0	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	476530	100.0	86.6	
$ 8 Phenol-d5	99	3.982	3.982	0.000	97	553392	100.0	88.6	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	96	469364	100.0	87.4	
$ 11 2-Fluorobiphenyl	172	6.614	6.615	-0.001	100	863960	100.0	93.5	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	93	103254	100.0	93.6	
$ 13 Terphenyl-d14	244	10.551	10.563	-0.012	100	694727	100.0	90.2	
19 1,4-Dioxane	88	1.796	1.797	-0.001	96	136147	80.0	58.3	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	86	251835	80.0	69.8	
21 Pyridine	79	2.067	2.067	0.000	83	651912	160.0	112.3	
31 Benzaldehyde	106	3.929	3.930	-0.001	90	76654	80.0	17.3	
32 Phenol	94	3.994	3.994	0.000	97	458088	80.0	70.7	
34 Aniline	93	4.023	4.029	-0.006	97	429841	80.0	54.2	
36 Bis(2-chloroethyl)ether	93	4.076	4.076	0.000	93	365749	80.0	75.9	
38 n-Decane	43	4.188	4.188	0.000	94	448889	80.0	59.5	
39 2-Chlorophenol	128	4.141	4.147	-0.006	98	376148	80.0	70.7	
40 1,3-Dichlorobenzene	146	4.288	4.288	0.000	98	399618	80.0	67.3	
42 1,4-Dichlorobenzene	146	4.352	4.352	0.000	94	398567	80.0	66.8	
43 Benzyl alcohol	108	4.452	4.452	0.000	92	248035	80.0	70.5	
44 1,2-Dichlorobenzene	146	4.499	4.499	0.000	97	382117	80.0	67.3	
45 2-Methylphenol	108	4.558	4.558	0.000	95	346900	80.0	71.1	
46 2,2'-oxybis[1-chloropropan	45	4.582	4.582	0.000	91	676773	80.0	73.9	
47 Indene	116	4.582	4.582	0.000	92	579372	80.0	71.2	
49 3 & 4 Methylphenol	108	4.705	4.705	0.000	65	327185	80.0	68.9	
50 3-Methylphenol	108	4.705	4.705	0.000	71	327185	80.0	68.9	
51 4-Methylphenol	108	4.705	4.705	0.000	67	327185	80.0	68.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.705	4.705	0.000	81	233072	80.0	69.0	
54 Acetophenone	105	4.705	4.705	0.000	79	450639	80.0	68.5	
58 Hexachloroethane	117	4.822	4.823	-0.001	93	143526	80.0	65.0	
59 Nitrobenzene	77	4.869	4.870	-0.001	94	367711	80.0	70.5	
63 Isophorone	82	5.093	5.099	-0.006	98	634445	80.0	69.1	
64 2-Nitrophenol	139	5.175	5.175	0.000	94	204137	80.0	73.6	
65 2,4-Dimethylphenol	107	5.210	5.216	-0.006	95	323642	80.0	66.5	
68 Benzoic acid	105	5.304	5.334	-0.030	92	257001	80.0	74.5	
69 Bis(2-chloroethoxy)methane	93	5.298	5.298	0.000	95	395827	80.0	70.5	
74 2,4-Dichlorophenol	162	5.410	5.416	-0.006	95	295278	80.0	71.5	
76 1,2,4-Trichlorobenzene	180	5.498	5.498	0.000	94	322319	80.0	68.5	
79 Naphthalene	128	5.574	5.575	-0.001	97	968929	80.0	70.0	
80 4-Chloroaniline	127	5.616	5.616	0.000	96	306387	80.0	52.6	
81 2,6-Dichlorophenol	162	5.627	5.633	-0.006	96	285785	80.0	70.4	
83 Hexachlorobutadiene	225	5.704	5.710	-0.006	95	181006	80.0	69.3	
86 Caprolactam	55	5.933	5.945	-0.012	73	162196	80.0	65.9	M
89 4-Chloro-3-methylphenol	107	6.097	6.098	-0.001	96	270473	80.0	68.9	
93 2-Methylnaphthalene	142	6.250	6.256	-0.006	95	693368	80.0	71.3	
96 1-Methylnaphthalene	142	6.350	6.356	-0.006	96	643666	80.0	70.8	
97 Hexachlorocyclopentadiene	237	6.421	6.427	-0.006	96	265794	160.0	96.7	
98 1,2,4,5-Tetrachlorobenzene	216	6.421	6.427	-0.006	97	295223	80.0	68.5	
100 2,4,6-Trichlorophenol	196	6.532	6.532	0.000	92	200289	80.0	79.4	
102 2,4,5-Trichlorophenol	196	6.567	6.568	-0.001	94	207570	80.0	75.3	
104 1,1'-Biphenyl	154	6.708	6.714	-0.006	95	768647	80.0	73.9	
106 2-Chloronaphthalene	162	6.732	6.738	-0.006	95	598726	80.0	75.1	
108 2-Nitroaniline	65	6.820	6.826	-0.006	88	170493	80.0	71.7	
111 Dimethyl phthalate	163	7.002	7.008	-0.006	99	593621	80.0	75.9	
112 1,3-Dinitrobenzene	168	7.026	7.032	-0.006	87	104768	80.0	77.9	
113 2,6-Dinitrotoluene	165	7.061	7.061	0.000	95	153567	80.0	76.9	
114 Acenaphthylene	152	7.143	7.149	-0.006	99	872668	80.0	72.8	
115 3-Nitroaniline	138	7.226	7.232	-0.006	94	107707	80.0	50.2	
117 Acenaphthene	153	7.320	7.320	0.000	94	577259	80.0	74.1	
118 2,4-Dinitrophenol	184	7.331	7.337	-0.006	84	163252	160.0	144.5	
119 4-Nitrophenol	109	7.402	7.402	0.000	94	143979	160.0	143.5	
122 2,4-Dinitrotoluene	165	7.461	7.467	-0.006	94	191079	80.0	77.3	
123 Dibenzofuran	168	7.490	7.490	0.000	98	810821	80.0	74.3	
125 2,3,4,6-Tetrachlorophenol	232	7.613	7.619	-0.006	71	163041	80.0	75.9	
127 Hexadecane	57	7.731	7.737	-0.006	91	524295	80.0	75.1	
130 Diethyl phthalate	149	7.701	7.707	-0.006	98	552504	80.0	74.4	
134 4-Chlorophenyl phenyl ethe	204	7.819	7.825	-0.006	95	288650	80.0	72.5	
135 Fluorene	166	7.831	7.831	0.000	95	614115	80.0	74.3	
138 4-Nitroaniline	138	7.837	7.843	-0.006	89	140417	80.0	69.6	
139 4,6-Dinitro-2-methylphenol	198	7.872	7.878	-0.006	87	219644	160.0	175.6	
141 N-Nitrosodiphenylamine	169	7.936	7.942	-0.006	62	453166	80.0	78.8	
142 Diphenylamine	169	7.936	7.942	-0.006	95	453166	68.0	63.1	
143 1,2-Diphenylhydrazine	77	7.978	7.984	-0.006	41	608945	80.9	75.0	
144 Azobenzene	77	7.978	7.984	-0.006	98	608945	80.0	74.2	
147 2,4,6 - Tribromophenol	330	8.066	8.072	-0.006	93	103254	100.0	93.0	
156 4-Bromophenyl phenyl ether	248	8.307	8.313	-0.006	67	172720	80.0	77.1	
157 Hexachlorobenzene	284	8.389	8.395	-0.006	94	170624	80.0	77.2	
159 Atrazine	200	8.459	8.465	-0.006	91	132804	80.0	69.0	
161 n-Octadecane	85	8.647	8.653	-0.006	92	164820	80.0	80.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.577	8.583	-0.006	93	204692	160.0	155.5	
168 Phenanthrene	178	8.783	8.789	-0.006	97	830327	80.0	77.6	
169 Anthracene	178	8.835	8.841	-0.006	97	857823	80.0	77.3	
170 Carbazole	167	8.988	8.994	-0.006	95	743730	80.0	76.8	
173 Di-n-butyl phthalate	149	9.329	9.335	-0.006	99	827181	80.0	77.7	
179 Fluoranthene	202	10.040	10.052	-0.012	98	824674	80.0	76.4	
181 Benzidine	184	10.199	10.205	-0.006	99	336806	160.0	57.9	
182 Pyrene	202	10.340	10.346	-0.006	97	869651	80.0	78.3	
190 Butyl benzyl phthalate	149	11.368	11.380	-0.012	97	341800	80.0	79.3	
195 Bis(2-ethylhexyl) phthalat	149	12.631	12.643	-0.012	97	453346	80.0	82.6	
197 3,3'-Dichlorobenzidine	252	12.402	12.414	-0.012	74	353581	160.0	126.7	
198 Benzo[a]anthracene	228	12.437	12.443	-0.006	98	720612	80.0	73.8	
199 Chrysene	228	12.514	12.525	-0.011	97	762321	80.0	80.4	
201 Di-n-octyl phthalate	149	14.317	14.335	-0.018	99	721310	80.0	77.5	
203 Benzo[b]fluoranthene	252	15.093	15.105	-0.012	98	658827	80.0	77.7	
204 Benzo[k]fluoranthene	252	15.163	15.181	-0.018	99	744093	80.0	81.6	
207 Benzo[a]pyrene	252	15.957	15.980	-0.023	77	654035	80.0	76.5	
213 Dibenz(a,h)anthracene	278	19.218	19.229	-0.011	94	568223	80.0	80.0	
214 Indeno[1,2,3-cd]pyrene	276	19.112	19.130	-0.018	98	530058	80.0	75.9	
215 Benzo[g,h,i]perylene	276	19.823	19.829	-0.006	98	642715	80.0	81.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

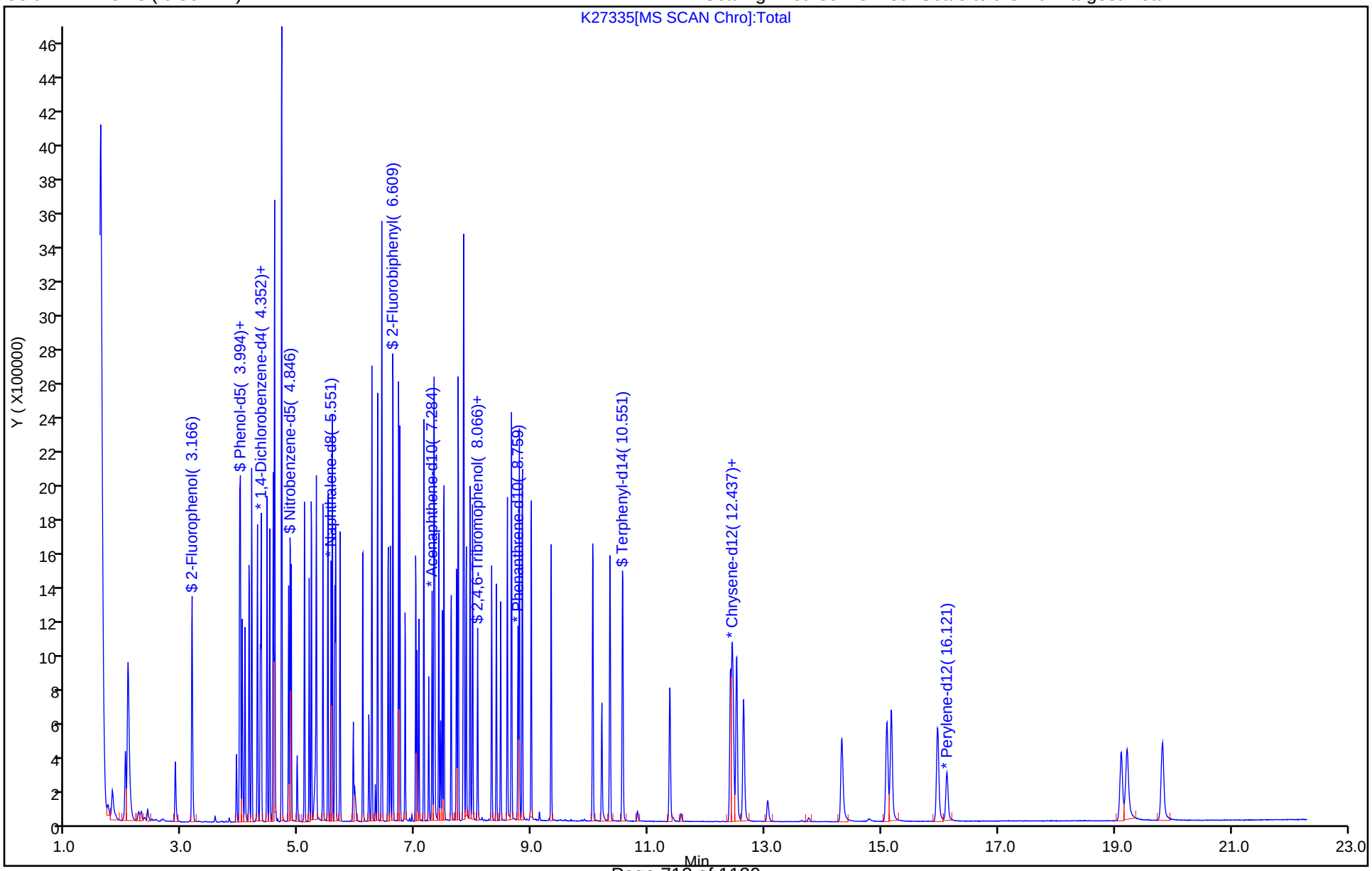
Report Date: 01-Nov-2018 06:26:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27335.D

Injection Date:	31-Oct-2018 21:39:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-115789-A-1-A MS			Worklist Smp#:	60
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	SMSK_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_K\20181031-75679.b\K27335.D				
Lims ID:	280-115789-A-1-A MS				
Client ID:	RQLMW-011-181001-GW				
Sample Type:	MS				
Inject. Date:	31-Oct-2018 21:39:30	ALS Bottle#:	21	Worklist Smp#:	60
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Sample Info:	280-115789-A-1-A MS				
Operator ID:	KIEKELD	Instrument ID:	SMS_K		
Method:	\\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m				
Limit Group:	MSSV - 8270C_625				
Method Label:	8270C / 625				
Last Update:	01-Nov-2018 06:26:14	Calib Date:	23-Oct-2018 16:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D				
Column 1 :	VF-5ms (0.50 mm)		Det: MS SCAN		
Process Host:	CTX0310				

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:22:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	86.6	86.59
$ 8 Phenol-d5	100.0	88.6	88.56
$ 9 Nitrobenzene-d5	100.0	87.4	87.42
$ 11 2-Fluorobiphenyl	100.0	93.5	93.47
$ 12 2,4,6-Tribromophenol	100.0	93.6	93.57
$ 13 Terphenyl-d14	100.0	90.2	90.20

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW MSD | Lab Sample ID: 280-115789-1 MSD

Matrix: Water | Lab File ID: K27336.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 915(mL) | Date Analyzed: 10/31/2018 22:08

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	72.0		11	1.1	0.31
95-50-1	1,2-Dichlorobenzene	71.2		11	0.55	0.25
541-73-1	1,3-Dichlorobenzene	70.3		11	1.1	0.33
106-46-7	1,4-Dichlorobenzene	70.5		11	1.1	0.35
123-91-1	1,4-Dioxane	62.6		20	4.8	1.8
95-95-4	2,4,5-Trichlorophenol	79.5		22	1.1	0.49
88-06-2	2,4,6-Trichlorophenol	82.2		22	1.1	0.32
120-83-2	2,4-Dichlorophenol	76.6		11	2.2	0.70
105-67-9	2,4-Dimethylphenol	71.6		11	2.2	0.63
51-28-5	2,4-Dinitrophenol	157		87	33	11
121-14-2	2,4-Dinitrotoluene	82.4		22	4.8	1.8
606-20-2	2,6-Dinitrotoluene	82.2		22	4.8	2.1
91-58-7	2-Chloronaphthalene	78.4		11	1.1	0.28
95-57-8	2-Chlorophenol	74.9		11	4.8	2.2
95-48-7	2-Methylphenol	75.4		11	2.2	1.1
88-74-4	2-Nitroaniline	77.0		55	4.8	1.9
88-75-5	2-Nitrophenol	76.4		22	1.1	0.43
15831-10-4	3 & 4 Methylphenol	74.4		22	0.55	0.27
91-94-1	3,3'-Dichlorobenzidine	131		55	4.8	2.2
99-09-2	3-Nitroaniline	52.9	J	55	4.8	2.2
534-52-1	4,6-Dinitro-2-methylphenol	183		87	9.6	4.4
101-55-3	4-Bromophenyl phenyl ether	82.3		11	1.1	0.47
59-50-7	4-Chloro-3-methylphenol	76.9		22	5.5	2.6
106-47-8	4-Chloroaniline	56.4		27	4.8	2.3
7005-72-3	4-Chlorophenyl phenyl ether	76.8		11	4.8	1.8
100-01-6	4-Nitroaniline	72.7		55	4.8	2.2
100-02-7	4-Nitrophenol	153		55	4.4	1.3
65-85-0	Benzoic acid	84.2	J	87	33	11
100-51-6	Benzyl alcohol	76.3		27	0.55	0.25
108-60-1	bis (2-chloroisopropyl) ether	76.5		11	1.1	0.31
111-91-1	Bis(2-chloroethoxy)methane	76.4		11	2.2	1.1
111-44-4	Bis(2-chloroethyl)ether	78.5		22	1.1	0.45
117-81-7	Bis(2-ethylhexyl) phthalate	86.9		11	2.2	0.61
85-68-7	Butyl benzyl phthalate	83.4		22	2.2	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW MSD | Lab Sample ID: 280-115789-1 MSD

Matrix: Water | Lab File ID: K27336.D

Analysis Method: 8270D | Date Collected: 10/18/2018 11:10

Extract. Method: 3520C | Date Extracted: 10/24/2018 13:18

Sample wt/vol: 915(mL) | Date Analyzed: 10/31/2018 22:08

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435724 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	80.5		11	1.1	0.47
132-64-9	Dibenzofuran	79.3		11	1.1	0.32
84-66-2	Diethyl phthalate	78.9		22	1.1	0.42
131-11-3	Dimethyl phthalate	79.1		22	0.55	0.23
84-74-2	Di-n-butyl phthalate	82.1		22	4.8	1.3
117-84-0	Di-n-octyl phthalate	81.5		22	1.1	0.38
118-74-1	Hexachlorobenzene	82.3		11	2.2	0.72
87-68-3	Hexachlorobutadiene	70.7		33	11	3.6
77-47-4	Hexachlorocyclopentadiene	98.9		55	33	11
67-72-1	Hexachloroethane	68.7		11	4.8	2.3
78-59-1	Isophorone	75.5		11	0.55	0.23
98-95-3	Nitrobenzene	74.3		22	2.2	0.89
621-64-7	N-Nitrosodi-n-propylamine	74.4		22	1.1	0.38
86-30-6	N-Nitrosodiphenylamine	83.4		11	1.1	0.48
87-86-5	Pentachlorophenol	158		87	66	22
108-95-2	Phenol	74.2		11	4.8	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	90		43-140
321-60-8	2-Fluorobiphenyl	89		44-119
367-12-4	2-Fluorophenol (Surr)	83		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	85		44-120
4165-62-2	Phenol-d5 (Surr)	85		10-115
1718-51-0	Terphenyl-d14 (Surr)	88		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27336.D
Lims ID: 280-115789-B-1-B MSD
Client ID: RQLMW-011-181001-GW
Sample Type: MSD
Inject. Date: 31-Oct-2018 22:08:30 ALS Bottle#: 22 Worklist Smp#: 61
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-B-1-B MSD
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:23:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.335	4.335	0.000	96	141516	40.0	40.0	
* 2 Naphthalene-d8	136	5.551	5.552	-0.001	99	546434	40.0	40.0	
* 3 Acenaphthene-d10	164	7.284	7.285	-0.001	95	267192	40.0	40.0	
* 4 Phenanthrene-d10	188	8.759	8.760	-0.001	97	408289	40.0	40.0	
* 5 Chrysene-d12	240	12.455	12.461	-0.006	99	307881	40.0	40.0	
* 6 Perylene-d12	264	16.121	16.128	-0.007	98	283158	40.0	40.0	
$ 7 2-Fluorophenol	112	3.166	3.160	0.006	94	436648	100.0	82.7	
$ 8 Phenol-d5	99	3.982	3.982	0.000	97	509808	100.0	85.0	
$ 9 Nitrobenzene-d5	82	4.846	4.852	-0.006	95	436413	100.0	84.5	
$ 11 2-Fluorobiphenyl	172	6.609	6.615	-0.006	100	834056	100.0	89.4	
$ 12 2,4,6-Tribromophenol	330	8.066	8.072	-0.006	93	100601	100.0	90.3	
$ 13 Terphenyl-d14	244	10.551	10.563	-0.012	99	668299	100.0	88.5	
19 1,4-Dioxane	88	1.796	1.797	-0.001	96	128423	80.0	57.3	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	84	229147	80.0	66.2	
21 Pyridine	79	2.067	2.067	0.000	82	585181	160.0	105.1	
31 Benzaldehyde	106	3.929	3.930	-0.001	89	99388	80.0	23.4	
32 Phenol	94	3.994	3.994	0.000	97	421967	80.0	67.9	
34 Aniline	93	4.023	4.029	-0.006	97	385008	80.0	50.6	
36 Bis(2-chloroethyl)ether	93	4.070	4.076	-0.006	93	332022	80.0	71.8	
38 n-Decane	43	4.188	4.188	0.000	94	414107	80.0	57.2	
39 2-Chlorophenol	128	4.141	4.147	-0.006	98	349927	80.0	68.5	
40 1,3-Dichlorobenzene	146	4.288	4.288	0.000	99	366479	80.0	64.3	
42 1,4-Dichlorobenzene	146	4.352	4.352	0.000	94	369226	80.0	64.5	
43 Benzyl alcohol	108	4.452	4.452	0.000	92	235854	80.0	69.8	
44 1,2-Dichlorobenzene	146	4.499	4.499	0.000	97	355163	80.0	65.2	
45 2-Methylphenol	108	4.558	4.558	0.000	95	323286	80.0	69.0	
46 2,2'-oxybis[1-chloropropan	45	4.582	4.582	0.000	91	619611	80.0	70.0	
47 Indene	116	4.582	4.582	0.000	92	530202	80.0	67.9	
49 3 & 4 Methylphenol	108	4.705	4.705	0.000	65	310071	80.0	68.0	
50 3-Methylphenol	108	4.705	4.705	0.000	71	310071	80.0	68.0	
51 4-Methylphenol	108	4.705	4.705	0.000	68	310071	80.0	68.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.699	4.705	-0.006	88	220867	80.0	68.1	
54 Acetophenone	105	4.705	4.705	0.000	78	419347	80.0	66.4	
58 Hexachloroethane	117	4.822	4.823	-0.001	93	133161	80.0	62.8	
59 Nitrobenzene	77	4.869	4.870	-0.001	94	340472	80.0	67.9	
63 Isophorone	82	5.093	5.099	-0.006	98	610012	80.0	69.1	
64 2-Nitrophenol	139	5.175	5.175	0.000	93	186527	80.0	69.9	
65 2,4-Dimethylphenol	107	5.210	5.216	-0.006	95	306403	80.0	65.5	
68 Benzoic acid	105	5.304	5.334	-0.030	90	256225	80.0	77.1	
69 Bis(2-chloroethoxy)methane	93	5.298	5.298	0.000	96	377294	80.0	69.9	
74 2,4-Dichlorophenol	162	5.410	5.416	-0.006	95	278084	80.0	70.0	
76 1,2,4-Trichlorobenzene	180	5.498	5.498	0.000	94	297892	80.0	65.8	
79 Naphthalene	128	5.574	5.575	-0.001	97	909765	80.0	68.3	
80 4-Chloroaniline	127	5.616	5.616	0.000	96	288755	80.0	51.6	
81 2,6-Dichlorophenol	162	5.627	5.633	-0.006	97	277412	80.0	71.1	
83 Hexachlorobutadiene	225	5.704	5.710	-0.006	96	162272	80.0	64.7	
86 Caprolactam	55	5.933	5.945	-0.012	74	161742	80.0	68.4	M
89 4-Chloro-3-methylphenol	107	6.097	6.098	-0.001	96	265227	80.0	70.3	
93 2-Methylnaphthalene	142	6.250	6.256	-0.006	95	657282	80.0	70.3	
96 1-Methylnaphthalene	142	6.350	6.356	-0.006	95	619001	80.0	70.8	
97 Hexachlorocyclopentadiene	237	6.421	6.427	-0.006	96	251030	160.0	90.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.421	6.427	-0.006	97	276953	80.0	66.8	
100 2,4,6-Trichlorophenol	196	6.532	6.532	0.000	91	191445	80.0	75.2	
102 2,4,5-Trichlorophenol	196	6.567	6.568	-0.001	94	202334	80.0	72.7	
104 1,1'-Biphenyl	154	6.708	6.714	-0.006	95	762058	80.0	72.6	
106 2-Chloronaphthalene	162	6.732	6.738	-0.006	95	577395	80.0	71.8	
108 2-Nitroaniline	65	6.820	6.826	-0.006	87	169034	80.0	70.5	
111 Dimethyl phthalate	163	7.002	7.008	-0.006	99	571024	80.0	72.3	
112 1,3-Dinitrobenzene	168	7.026	7.032	-0.006	88	102580	80.0	75.6	
113 2,6-Dinitrotoluene	165	7.061	7.061	0.000	95	151558	80.0	75.2	
114 Acenaphthylene	152	7.143	7.149	-0.006	99	862272	80.0	71.3	
115 3-Nitroaniline	138	7.226	7.232	-0.006	94	104757	80.0	48.4	
117 Acenaphthene	153	7.320	7.320	0.000	93	563207	80.0	71.7	
118 2,4-Dinitrophenol	184	7.331	7.337	-0.006	85	163618	160.0	143.6	
119 4-Nitrophenol	109	7.402	7.402	0.000	93	141568	160.0	139.8	
122 2,4-Dinitrotoluene	165	7.461	7.467	-0.006	95	188075	80.0	75.4	
123 Dibenzofuran	168	7.490	7.490	0.000	98	799054	80.0	72.5	
125 2,3,4,6-Tetrachlorophenol	232	7.613	7.619	-0.006	72	159730	80.0	73.7	
127 Hexadecane	57	7.731	7.737	-0.006	91	504218	80.0	71.6	
130 Diethyl phthalate	149	7.701	7.707	-0.006	98	541287	80.0	72.2	
134 4-Chlorophenyl phenyl ethe	204	7.819	7.825	-0.006	94	282372	80.0	70.3	
135 Fluorene	166	7.831	7.831	0.000	95	600013	80.0	71.9	
138 4-Nitroaniline	138	7.837	7.843	-0.006	89	135448	80.0	66.5	
139 4,6-Dinitro-2-methylphenol	198	7.872	7.878	-0.006	86	211242	160.0	167.3	
141 N-Nitrosodiphenylamine	169	7.936	7.942	-0.006	63	443788	80.0	76.3	
142 Diphenylamine	169	7.936	7.942	-0.006	95	443788	68.0	61.2	
143 1,2-Diphenylhydrazine	77	7.978	7.984	-0.006	41	597503	80.9	72.9	
144 Azobenzene	77	7.978	7.984	-0.006	98	597503	80.0	72.1	
147 2,4,6 - Tribromophenol	330	8.066	8.072	-0.006	93	100601	100.0	89.8	
156 4-Bromophenyl phenyl ether	248	8.307	8.313	-0.006	67	170546	80.0	75.3	
157 Hexachlorobenzene	284	8.389	8.395	-0.006	95	168206	80.0	75.3	
159 Atrazine	200	8.459	8.465	-0.006	91	131759	80.0	67.6	
161 n-Octadecane	85	8.647	8.653	-0.006	91	162369	80.0	78.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.577	8.583	-0.006	93	192566	160.0	144.8	
168 Phenanthrene	178	8.783	8.789	-0.006	97	810387	80.0	74.9	
169 Anthracene	178	8.835	8.841	-0.006	97	843942	80.0	75.2	
170 Carbazole	167	8.988	8.994	-0.006	95	721149	80.0	73.6	
173 Di-n-butyl phthalate	149	9.329	9.335	-0.006	99	809319	80.0	75.2	
179 Fluoranthene	202	10.040	10.052	-0.012	98	793276	80.0	72.7	
181 Benzidine	184	10.199	10.205	-0.006	99	342399	160.0	59.8	
182 Pyrene	202	10.340	10.346	-0.006	98	816067	80.0	74.9	
190 Butyl benzyl phthalate	149	11.368	11.380	-0.012	97	322450	80.0	76.3	
195 Bis(2-ethylhexyl) phthalat	149	12.631	12.643	-0.012	97	427942	80.0	79.5	
197 3,3'-Dichlorobenzidine	252	12.408	12.414	-0.006	74	328000	160.0	119.8	
198 Benzo[a]anthracene	228	12.431	12.443	-0.012	99	695343	80.0	72.6	
199 Chrysene	228	12.514	12.525	-0.011	97	726026	80.0	78.0	
201 Di-n-octyl phthalate	149	14.317	14.335	-0.018	99	680294	80.0	74.5	
203 Benzo[b]fluoranthene	252	15.093	15.105	-0.012	97	624336	80.0	76.7	
204 Benzo[k]fluoranthene	252	15.163	15.181	-0.018	99	720897	80.0	82.3	
207 Benzo[a]pyrene	252	15.963	15.980	-0.018	78	616562	80.0	75.1	
213 Dibenz(a,h)anthracene	278	19.212	19.229	-0.017	93	543851	80.0	79.7	
214 Indeno[1,2,3-cd]pyrene	276	19.112	19.130	-0.018	98	483238	80.0	70.6	
215 Benzo[g,h,i]perylene	276	19.823	19.829	-0.006	98	596429	80.0	78.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

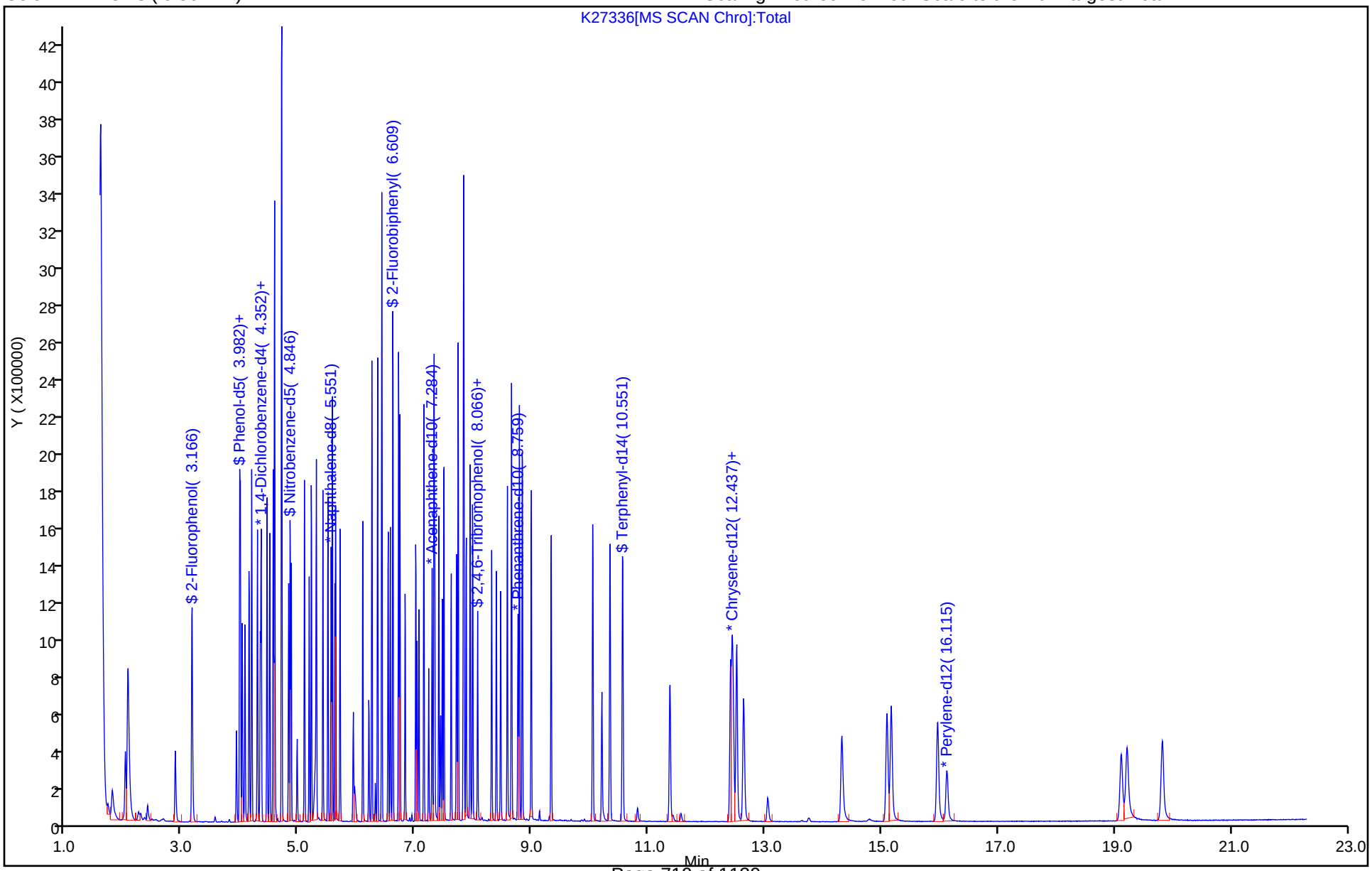
Report Date: 01-Nov-2018 06:26:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\K27336.D

Injection Date:	31-Oct-2018 22:08:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-115789-B-1-B MSD			Worklist Smp#:	61
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	SMSK_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_K\20181031-75679.b\K27336.D
Lims ID: 280-115789-B-1-B MSD
Client ID: RQLMW-011-181001-GW
Sample Type: MSD
Inject. Date: 31-Oct-2018 22:08:30 ALS Bottle#: 22 Worklist Smp#: 61
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-115789-B-1-B MSD
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181031-75679.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 01-Nov-2018 06:26:14 Calib Date: 23-Oct-2018 16:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181022-75345.b\K27119.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0310

First Level Reviewer: kiekeld Date: 01-Nov-2018 06:23:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	82.7	82.67
$ 8 Phenol-d5	100.0	85.0	85.00
$ 9 Nitrobenzene-d5	100.0	84.5	84.55
$ 11 2-Fluorobiphenyl	100.0	89.4	89.41
$ 12 2,4,6-Tribromophenol	100.0	90.3	90.34
$ 13 Terphenyl-d14	100.0	88.5	88.48

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Start Date: 10/23/2018 13:16

Analysis Batch Number: 434399 End Date: 10/23/2018 18:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-434399/2		10/23/2018 13:16	1	K27111.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-434399/3		10/23/2018 13:33	1	K27112.D	Rxi-5Sil MS 0.25(mm)
STD004 280-434399/4 IC		10/23/2018 14:01	1	K27113.D	Rxi-5Sil MS 0.25(mm)
STD010 280-434399/5 IC		10/23/2018 14:30	1	K27114.D	Rxi-5Sil MS 0.25(mm)
STD020 280-434399/6 IC		10/23/2018 14:59	1	K27115.D	Rxi-5Sil MS 0.25(mm)
STD050 280-434399/7 IC		10/23/2018 15:28	1	K27116.D	Rxi-5Sil MS 0.25(mm)
STD120 280-434399/8 IC		10/23/2018 15:57	1	K27117.D	Rxi-5Sil MS 0.25(mm)
STD160 280-434399/9 IC		10/23/2018 16:25	1	K27118.D	Rxi-5Sil MS 0.25(mm)
STD200 280-434399/10 IC		10/23/2018 16:54	1	K27119.D	Rxi-5Sil MS 0.25(mm)
ICV 280-434399/11		10/23/2018 17:23	1	K27120.D	Rxi-5Sil MS 0.25(mm)
ICV 280-434399/12		10/23/2018 17:52	1	K27121.D	Rxi-5Sil MS 0.25(mm)
ICV 280-434399/13		10/23/2018 18:21	1	K27122.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Start Date: 10/29/2018 08:50

Analysis Batch Number: 435306 End Date: 10/30/2018 07:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-435306/2		10/29/2018 08:50	1	K27216.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435306/3		10/29/2018 09:03	1	K27217.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435306/4		10/29/2018 09:31	1	K27218.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435306/5		10/29/2018 09:56	1	K27219.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435306/6		10/29/2018 10:20	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 10:49	1		Rxi-5Sil MS 0.25(mm)
MB 280-434912/1-A		10/29/2018 11:18	1	K27222.D	Rxi-5Sil MS 0.25(mm)
LCS 280-434912/2-A		10/29/2018 11:47	1	K27223.D	Rxi-5Sil MS 0.25(mm)
LCSD 280-434912/3-A		10/29/2018 12:16	1	K27224.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 12:45	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 13:10	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 13:34	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 14:03	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 14:32	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 15:02	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 15:31	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 16:00	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 16:29	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 16:58	1		Rxi-5Sil MS 0.25(mm)
280-115789-3		10/29/2018 17:27	1	K27235.D	Rxi-5Sil MS 0.25(mm)
280-115789-4		10/29/2018 17:56	1	K27236.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 18:25	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 18:50	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 19:14	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-435306/26		10/29/2018 19:39	1	K27240.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-435306/27		10/29/2018 20:03	1	K27241.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-435306/28		10/29/2018 20:28	1	K27242.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 20:57	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 21:26	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 21:55	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 22:24	5		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 22:53	20		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 06:30	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 06:58	4		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 07:27	1		Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_K Start Date: 10/31/2018 12:45

Analysis Batch Number: 435724 End Date: 11/01/2018 01:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-435724/2		10/31/2018 12:45	1	K27315.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435724/3		10/31/2018 12:58	1	K27316.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435724/4		10/31/2018 13:27	1	K27317.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435724/5		10/31/2018 13:51	1	K27318.D	Rxi-5Sil MS 0.25(mm)
MB 280-434728/1-A		10/31/2018 14:15	1	K27319.D	Rxi-5Sil MS 0.25(mm)
LCS 280-434728/2-A		10/31/2018 14:44	1	K27320.D	Rxi-5Sil MS 0.25(mm)
LCSD 280-434728/3-A		10/31/2018 15:13	1	K27321.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 15:42	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 16:06	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 16:31	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 16:55	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 17:24	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 17:53	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 18:22	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 18:46	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 19:15	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 19:44	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 20:12	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 20:41	1		Rxi-5Sil MS 0.25(mm)
280-115789-1		10/31/2018 21:10	1	K27334.D	Rxi-5Sil MS 0.25(mm)
280-115789-1 MS		10/31/2018 21:39	1	K27335.D	Rxi-5Sil MS 0.25(mm)
280-115789-1 MSD		10/31/2018 22:08	1	K27336.D	Rxi-5Sil MS 0.25(mm)
280-115789-2		10/31/2018 22:36	1	K27337.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 23:05	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/31/2018 23:34	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 00:03	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-435724/66		11/01/2018 00:32	1	K27341.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-435724/67		11/01/2018 00:56	1	K27342.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-435724/68		11/01/2018 01:20	1	K27343.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 434728 Batch Start Date: 10/24/18 13:18 Batch Analyst: Rood, Coady M

Batch Method: 3520C Batch End Date: 10/27/18 12:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 280-434728/1		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
LCS 280-434728/2		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
LCSD 280-434728/3		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
280-115789-B-1	RQLMW-011-181001-GW	3520C, 8270D	T	1451.2 g	501.4 g	949.8 mL	1 mL	7 SU	1-2 SU
280-115789-A-1 MS	RQLMW-011-181001-GW	3520C, 8270D	T	1449.0 g	501.8 g	947.2 mL	1 mL	7 SU	1-2 SU
280-115789-B-1 MSD	RQLMW-011-181001-GW	3520C, 8270D	T	1415.8 g	500.8 g	915 mL	1 mL	7 SU	1-2 SU
280-115789-B-2	RQLMW-011-181002-GW	3520C, 8270D	T	1443.3 g	501.8 g	941.5 mL	1 mL	7 SU	1-2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270_LCS_Main 00055	8270_LCS_Supp 00307	8270Surrogate 00127	AnalysisComment	
MB 280-434728/1		3520C, 8270D		11-12 SU			1 mL		
LCS 280-434728/2		3520C, 8270D		11-12 SU	1 mL	1 mL	1 mL		
LCSD 280-434728/3		3520C, 8270D		11-12 SU	1 mL	1 mL	1 mL		
280-115789-B-1	RQLMW-011-181001-GW	3520C, 8270D	T	11-12 SU			1 mL	8270D Rebatched in 435214	
280-115789-A-1 MS	RQLMW-011-181001-GW	3520C, 8270D	T	11-12 SU	1 mL	1 mL	1 mL	8270D Rebatched in 435214	
280-115789-B-1 MSD	RQLMW-011-181001-GW	3520C, 8270D	T	11-12 SU	1 mL	1 mL	1 mL	8270D Rebatched in 435214	
280-115789-B-2	RQLMW-011-181002-GW	3520C, 8270D	T	11-12 SU			1 mL	8270D Rebatched in 435214	

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.: 280-115789-1

SDG No.:

Batch Number: 434728 Batch Start Date: 10/24/18 13:18 Batch Analyst: Rood, Coady M

Batch Method: 3520C Batch End Date: 10/27/18 12:15

Batch Notes	
Acid Used for pH Adjustment ID	1:1 H2SO4_00077
Balance ID	B318295195
Base Used to Adjust pH ID	10N_NaOH_00131
Batch Comment	DV-OP-0008/0007; H2O N.ELGA
Analyst ID - Concentration	MF
Concentration 1 Corrected Temperature	84/84 Degrees C
Equipment ID - Concentration 1	A/B
Analyst ID - Extraction	JZ(Trainer)/CR(Trainee)
Extraction 1 End Time	10/25/2018 07:25
Extraction 1 Start Time	10/24/2018 13:25
Method/Fraction	3520C/8270D/8270D_DOD5
Na2SO4 ID	0000205461_00007
NaCl ID	173831
Pipette/Syringe/Dispenser ID	Woo!
Prep Solvent ID	MeCl2_Cycl_00409/410
Extraction 2 End Time	10/26/2018 06:19
Extraction 2 Start Time	10/25/2018 08:45
Analyst ID - Spike Analyst	JZ
Analyst ID - Spike Witness Analyst	Reviewer:KS
Sufficient Volume for Batch QC	YES
Concentration 1 Uncorrected Temperature	85/83 Degrees C

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.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 434912 Batch Start Date: 10/25/18 13:12 Batch Analyst: Zhang, Jian

Batch Method: 3520C Batch End Date: 11/28/18 16:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 280-434912/1		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
LCS 280-434912/2		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
LCSD 280-434912/3		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
280-115789-A-3	FWGER-181001-ER	3520C, 8270D	T	1539.0 g	570.4 g	968.6 mL	1 mL	5 SU	1-2 SU
280-115789-A-4	FWGFB-181001-FB	3520C, 8270D	T	1606.1 g	571.8 g	1034.3 mL	1 mL	5 SU	1-2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270_LCS_Main 00055	8270_LCS_Supp 00308	8270Surrogate 00128	AnalysisComment	
MB 280-434912/1		3520C, 8270D		11-12 SU			1 mL		
LCS 280-434912/2		3520C, 8270D		11-12 SU	1 mL	1 mL	1 mL		
LCSD 280-434912/3		3520C, 8270D		11-12 SU	1 mL	1 mL	1 mL		
280-115789-A-3	FWGER-181001-ER	3520C, 8270D	T	11-12 SU			1 mL	Also Use B	
280-115789-A-4	FWGFB-181001-FB	3520C, 8270D	T	11-12 SU			1 mL	Also Use B	

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.: 280-115789-1

SDG No.:

Batch Number: 434912 Batch Start Date: 10/25/18 13:12 Batch Analyst: Zhang, Jian

Batch Method: 3520C Batch End Date: 11/28/18 16:30

Batch Notes	
Acid Used for pH Adjustment ID	1:1 H2SO4_00077
Balance ID	B318295195
Base Used to Adjust pH ID	10N_NaOH_00131
Batch Comment	DV-OP-0008/0007; H2O N.ELGA
Analyst ID - Concentration	AP
Concentration 1 Corrected Temperature	84 Degrees C
Equipment ID - Concentration 1	A
Analyst ID - Extraction	JZ
Extraction 1 End Time	10/26/2018 07:21
Extraction 1 Start Time	10/25/2018 13:15
Method/Fraction	3520C/8270C/8270D_DOD5
Na2SO4 ID	0025461_00007
NaCl ID	173831
Pipette/Syringe/Dispenser ID	Woo!
Prep Solvent ID	MeCl2_Cycl_00410
Extraction 2 End Time	10/27/2018 08:40
Extraction 2 Start Time	10/26/2018 09:02
Analyst ID - Spike Analyst	JZ
Analyst ID - Spike Witness Analyst	Reviewer:KS
Sufficient Volume for Batch QC	No
Concentration 1 Uncorrected Temperature	85 Degrees C

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.

8270D_SIM_DOD5

Semivolatile Organic Compounds (GC/MS SIM)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #	FBP #	TPHL #
RQLMW-011-181001-GW	280-115789-1	65	64	81
RQLMW-011-181002-GW	280-115789-2	59	61	78
FWGER-181001-ER	280-115789-3	63	63	80
FWGFB-181001-FB	280-115789-4	58	59	84
	MB 280-434609/1-A	62	63	82
	LCS 280-434609/2-A	64	66	84
RQLMW-011-181001-GW MS	280-115789-1 MS	56	55	85
RQLMW-011-181001-GW MSD	280-115789-1 MSD	62	61	92

	QC LIMITS
NBZ = Nitrobenzene-d5	55-111
FBP = 2-Fluorobiphenyl	53-106
TPHL = Terphenyl-d14	58-132

Column to be used to flag recovery values

FORM II 8270D SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F4411.D

Lab ID: LCS 280-434609/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1-Methylnaphthalene	0.900	0.603	67	41-115	
2-Methylnaphthalene	0.900	0.564	63	39-114	
Acenaphthene	0.900	0.593	66	48-114	
Acenaphthylene	0.900	0.536	60	35-121	
Anthracene	0.900	0.610	68	53-119	
Benzo[a]anthracene	0.900	0.647	72	59-120	
Benzo[a]pyrene	0.900	0.592	66	53-120	
Benzo[b]fluoranthene	0.900	0.675	75	53-126	
Benzo[g,h,i]perylene	0.900	0.631	70	44-128	
Benzo[k]fluoranthene	0.900	0.654	73	54-125	M
Chrysene	0.900	0.772	86	57-120	
Dibenz(a,h)anthracene	0.900	0.571	63	44-131	
Fluoranthene	0.900	0.709	79	58-120	
Fluorene	0.900	0.616	68	50-118	
Indeno[1,2,3-cd]pyrene	0.900	0.592	66	48-130	
Naphthalene	0.900	0.567	63	43-114	
Phenanthrene	0.900	0.694	77	53-115	
Pyrene	0.900	0.693	77	53-121	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F4420.D

Lab ID: 280-115789-1 MS Client ID: RQLMW-011-181001-GW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1-Methylnaphthalene	0.969	0.014 U	0.552	57	41-115	
2-Methylnaphthalene	0.969	0.014 U	0.528	55	39-114	
Acenaphthene	0.969	0.045 U	0.572	59	48-114	
Acenaphthylene	0.969	0.045 U	0.512	53	35-121	
Anthracene	0.969	0.045 U	0.651	67	53-119	
Benzo[a]anthracene	0.969	0.014 U	0.831	86	59-120	
Benzo[a]pyrene	0.969	0.014 U	0.767	79	53-120	
Benzo[b]fluoranthene	0.969	0.014 U	0.808	83	53-126	
Benzo[g,h,i]perylene	0.969	0.014 U	0.814	84	44-128	
Benzo[k]fluoranthene	0.969	0.014 U	0.722	75	54-125	M
Chrysene	0.969	0.014 U	1.04	108	57-120	
Dibenz(a,h)anthracene	0.969	0.014 U	0.716	74	44-131	
Fluoranthene	0.969	0.014 U	0.778	80	58-120	
Fluorene	0.969	0.045 U	0.620	64	50-118	
Indeno[1,2,3-cd]pyrene	0.969	0.045 U	0.692	71	48-130	
Naphthalene	0.969	0.014 U	0.540	56	43-114	
Phenanthrene	0.969	0.023 U	0.728	75	53-115	
Pyrene	0.969	0.023 U	0.822	85	53-121	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F4421.D

Lab ID: 280-115789-1 MSD Client ID: RQLMW-011-181001-GW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1-Methylnaphthalene	1.01	0.667	66	19	20	41-115	
2-Methylnaphthalene	1.01	0.621	61	16	20	39-114	
Acenaphthene	1.01	0.662	65	15	20	48-114	
Acenaphthylene	1.01	0.599	59	16	20	35-121	
Anthracene	1.01	0.679	67	4	20	53-119	
Benzo[a]anthracene	1.01	0.787	78	6	20	59-120	
Benzo[a]pyrene	1.01	0.679	67	12	20	53-120	
Benzo[b]fluoranthene	1.01	0.775	76	4	20	53-126	
Benzo[g,h,i]perylene	1.01	0.782	77	4	20	44-128	
Benzo[k]fluoranthene	1.01	0.812	80	12	20	54-125	
Chrysene	1.01	0.907	89	14	20	57-120	
Dibenz(a,h)anthracene	1.01	0.725	72	1	20	44-131	
Fluoranthene	1.01	0.814	80	4	20	58-120	
Fluorene	1.01	0.682	67	9	20	50-118	
Indeno[1,2,3-cd]pyrene	1.01	0.714	70	3	20	48-130	
Naphthalene	1.01	0.638	63	17	20	43-114	
Phenanthrene	1.01	0.760	75	4	20	53-115	
Pyrene	1.01	0.793	78	4	20	53-121	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: F4410.D Lab Sample ID: MB 280-434609/1-A

Matrix: Water Date Extracted: 10/23/2018 16:35

Instrument ID: SMS_F Date Analyzed: 10/29/2018 21:39

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-434609/2-A	F4411.D	10/29/2018 22:09
RQLMW-011-181001-GW	280-115789-1	F4419.D	10/30/2018 02:05
RQLMW-011-181001-GW MS	280-115789-1 MS	F4420.D	10/30/2018 02:34
RQLMW-011-181001-GW MSD	280-115789-1 MSD	F4421.D	10/30/2018 03:04
RQLMW-011-181002-GW	280-115789-2	F4422.D	10/30/2018 03:33
FWGER-181001-ER	280-115789-3	F4423.D	10/30/2018 04:02
FWGFB-181001-FB	280-115789-4	F4424.D	10/30/2018 04:32

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: F4397.D DFTPP Injection Date: 10/29/2018

Instrument ID: SMS_F DFTPP Injection Time: 15:45

Analysis Batch No.: 435404

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	48.2	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	50.4	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	54.1	
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	7.1	
275	10.0 - 30.0 % of mass 198	25.0	
365	Greater than 1.0 % of mass 198	3.3	
441	Present but less than mass 443	11.7	(74.1) 3
442	Greater than 40.0 % of mass 198	74.9	
443	17.0 - 23.0 % of mass 442	15.8	(21.1) 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 280-435404/3	F4398.D	10/29/2018	16:02
	STD0001 280-435404/4	F4399.D	10/29/2018	16:32
	STD0002 280-435404/5	F4400.D	10/29/2018	17:02
	STD0500 280-435404/6	F4401.D	10/29/2018	17:32
	STD0100 280-435404/7	F4402.D	10/29/2018	18:01
	STD0300 280-435404/8	F4403.D	10/29/2018	18:31
	STD1200 280-435404/9	F4404.D	10/29/2018	19:01
	STD2500 280-435404/10	F4405.D	10/29/2018	19:31
	STD5000 280-435404/11	F4406.D	10/29/2018	20:00
	ICV 280-435404/12	F4407.D	10/29/2018	20:30

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab File ID: F4408.D DFTPP Injection Date: 10/29/2018

Instrument ID: SMS_F DFTPP Injection Time: 20:56

Analysis Batch No.: 435422

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	46.0	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	48.5	
70	Less than 2.0 % of mass 69	0.2	(0.5) 1
127	40.0 - 60.0 % of mass 198	51.7	
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	6.8	
275	10.0 - 30.0 % of mass 198	25.4	
365	Greater than 1.0 % of mass 198	3.0	
441	Present but less than mass 443	13.3	(83.0) 3
442	Greater than 40.0 % of mass 198	79.8	
443	17.0 - 23.0 % of mass 442	16.0	(20.1) 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 280-435422/3	F4409.D	10/29/2018	21:09
	MB 280-434609/1-A	F4410.D	10/29/2018	21:39
	LCS 280-434609/2-A	F4411.D	10/29/2018	22:09
RQLMW-011-181001-GW	280-115789-1	F4419.D	10/30/2018	02:05
RQLMW-011-181001-GW MS	280-115789-1 MS	F4420.D	10/30/2018	02:34
RQLMW-011-181001-GW MSD	280-115789-1 MSD	F4421.D	10/30/2018	03:04
RQLMW-011-181002-GW	280-115789-2	F4422.D	10/30/2018	03:33
FWGER-181001-ER	280-115789-3	F4423.D	10/30/2018	04:02
FWGFB-181001-FB	280-115789-4	F4424.D	10/30/2018	04:32
	CCVC 280-435422/25	F4431.D	10/30/2018	07:57

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Sample No.: ICIS 280-435404/3 Date Analyzed: 10/29/2018 16:02

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): F4398.D Heated Purge: (Y/N) N

Calibration ID: 34170

		ANT		PHN		CRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		24976	7.71	52568	9.21	52726	13.38
UPPER LIMIT		49952	8.21	105136	9.71	105452	13.88
LOWER LIMIT		12488	7.21	26284	8.71	26363	12.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-435404/12		24945	7.71	53849	9.21	53312	13.36
MB 280-434609/1-A		25915	7.71	59598	9.21	56865	13.36
LCS 280-434609/2-A		25321	7.71	55273	9.21	53847	13.36
280-115789-1	RQLMW-011-181001-GW	26395	7.71	59787	9.21	54500	13.36
280-115789-1 MS	RQLMW-011-181001-GW MS	26809	7.71	59007	9.21	55474	13.36
280-115789-1 MSD	RQLMW-011-181001-GW MSD	25604	7.71	57177	9.21	53748	13.36
280-115789-2	RQLMW-011-181002-GW	25438	7.71	56654	9.21	51152	13.36
280-115789-3	FWGER-181001-ER	27233	7.71	57858	9.21	51728	13.36
280-115789-4	FWGFB-181001-FB	27542	7.71	61265	9.21	56714	13.36
CCVC 280-435422/25		34536	7.71	72779	9.21	70616	13.36

ANT = Acenaphthene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-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 SIM

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW | Lab Sample ID: 280-115789-1

Matrix: Water | Lab File ID: F4419.D

Analysis Method: 8270D SIM | Date Collected: 10/18/2018 11:10

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 221.4(mL) | Date Analyzed: 10/30/2018 02:05

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.014	U	0.11	0.014	0.0067
91-57-6	2-Methylnaphthalene	0.014	U	0.11	0.014	0.0068
83-32-9	Acenaphthene	0.045	U M	0.11	0.045	0.0047
208-96-8	Acenaphthylene	0.045	U	0.11	0.045	0.0058
120-12-7	Anthracene	0.045	U	0.11	0.045	0.0063
56-55-3	Benzo[a]anthracene	0.014	U	0.11	0.014	0.0047
50-32-8	Benzo[a]pyrene	0.014	U M	0.11	0.014	0.0078
205-99-2	Benzo[b]fluoranthene	0.014	U	0.11	0.014	0.0035
191-24-2	Benzo[g,h,i]perylene	0.014	U	0.11	0.014	0.0070
207-08-9	Benzo[k]fluoranthene	0.014	U	0.11	0.014	0.0071
218-01-9	Chrysene	0.014	U	0.11	0.014	0.0037
53-70-3	Dibenz(a,h)anthracene	0.014	U	0.11	0.014	0.0046
206-44-0	Fluoranthene	0.014	U	0.11	0.014	0.0054
86-73-7	Fluorene	0.045	U M	0.11	0.045	0.0062
193-39-5	Indeno[1,2,3-cd]pyrene	0.045	U	0.11	0.045	0.0051
91-20-3	Naphthalene	0.014	U	0.11	0.014	0.0090
85-01-8	Phenanthrene	0.023	U	0.11	0.023	0.011
129-00-0	Pyrene	0.023	U	0.11	0.023	0.0069

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	64		53-106
4165-60-0	Nitrobenzene-d5	65		55-111
1718-51-0	Terphenyl-d14	81		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4419.D
Lims ID: 280-115789-D-1-A
Client ID: RQLMW-011-181001-GW
Sample Type: Client
Inject. Date: 30-Oct-2018 02:05:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 17:46:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	26395	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	59787	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	90	54500	600.0	
$ 4 Nitrobenzene-d5	82	5.257	5.256	0.000	99	8968	325.8	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	21506	321.3	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	35890	406.4	
8 1,4-Dioxane	88		1.692				ND	
9 N-Nitrosodimethylamine	74		2.550				ND	U
10 Naphthalene	128		5.980				ND	
11 2-Methylnaphthalene	142		6.663				ND	
12 1-Methylnaphthalene	142		6.761				ND	
13 Dimethyl phthalate	163		7.410				ND	
14 Acenaphthylene	152		7.566				ND	
15 Acenaphthene	153		7.739				ND	U
16 Dibenzofuran	168		7.914				ND	U
17 Diethyl phthalate	149		8.109				ND	U
18 Fluorene	166		8.254				ND	U
19 N-Nitrosodiphenylamine	169		8.361				ND	
20 Phenanthrene	178		9.223				ND	
21 Anthracene	178		9.275				ND	
22 Di-n-butyl phthalate	149	9.768	9.776	-0.008	1	2065	40.2	
23 Fluoranthene	202		10.632				ND	
24 Pyrene	202		10.969				ND	
25 Butyl benzyl phthalate	149		10.969				ND	
26 Benzo[a]anthracene	228		13.340				ND	
27 Chrysene	228		13.421				ND	
28 Bis(2-ethylhexyl) phthalat	149		12.097				ND	
29 Di-n-octyl phthalate	149		15.301				ND	U
30 Benzo[b]fluoranthene	252		16.246				ND	
31 Benzo[k]fluoranthene	252		16.325				ND	
32 Benzo[a]pyrene	252		17.186				ND	U
33 Indeno[1,2,3-cd]pyrene	276		20.498				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
	34 Dibenz(a,h)anthracene	278		20.585				ND	
	35 Benzo[g,h,i]perylene	276		21.242				ND	
$	53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	89	14281	311.9	
$	54 Fluoranthene-d10	212	10.598	10.606	-0.008	98	40070	401.1	
	38 Pentachlorophenol_T	266		3.885				ND	
	40 Benzidine_T	184		4.977				ND	
	41 4,4'-DDE	246		4.149				ND	
	42 4,4'-DDD	235		5.415				ND	
	43 4,4'-DDT	235		5.642				ND	
S	44 TPAH	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

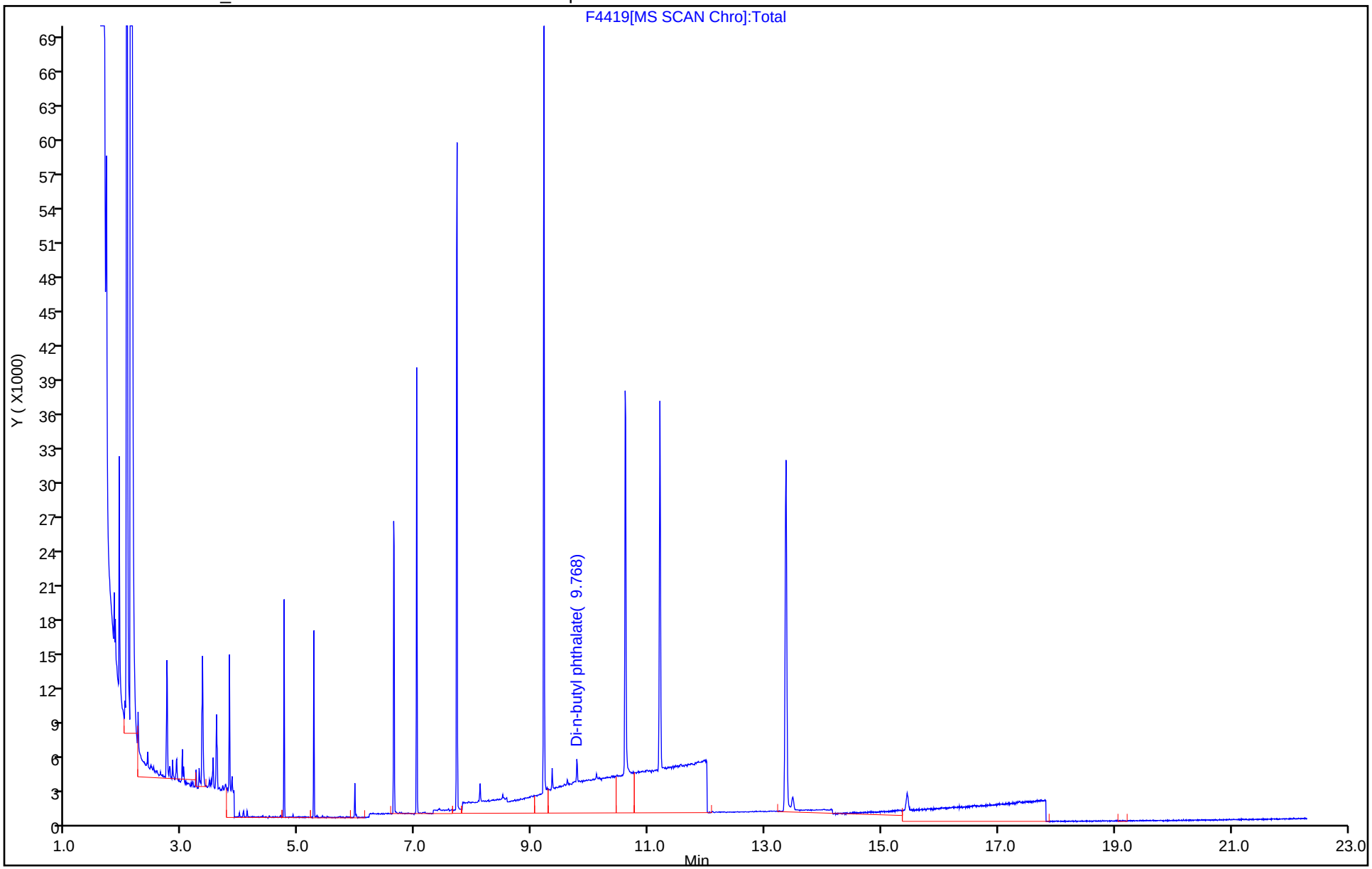
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:06:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4419.D

Injection Date:	30-Oct-2018 02:05:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-115789-D-1-A	Lab Sample ID:	280-115789-1	Worklist Smp#:	13
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4419.D
Lims ID: 280-115789-D-1-A
Client ID: RQLMW-011-181001-GW
Sample Type: Client
Inject. Date: 30-Oct-2018 02:05:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 17:46:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	325.8	65.16
$ 5 2-Fluorobiphenyl	500.0	321.3	64.25
$ 6 Terphenyl-d14	500.0	406.4	81.28
$ 53 2-methylnaphthalene-d10	500.0	311.9	62.38
$ 54 Fluoranthene-d10	500.0	401.1	80.21

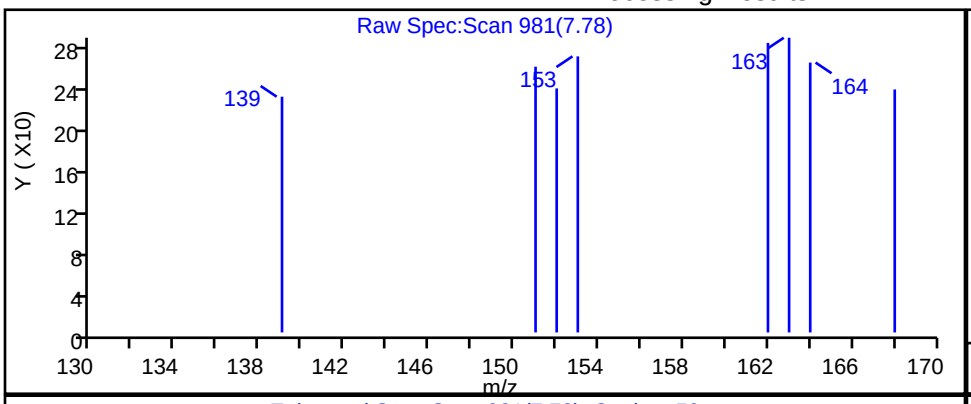
User Disabled Compound Report

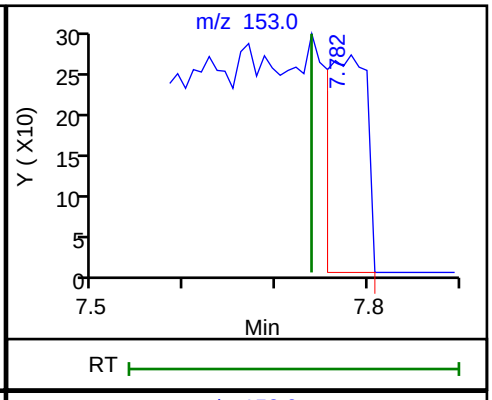
TestAmerica Denver

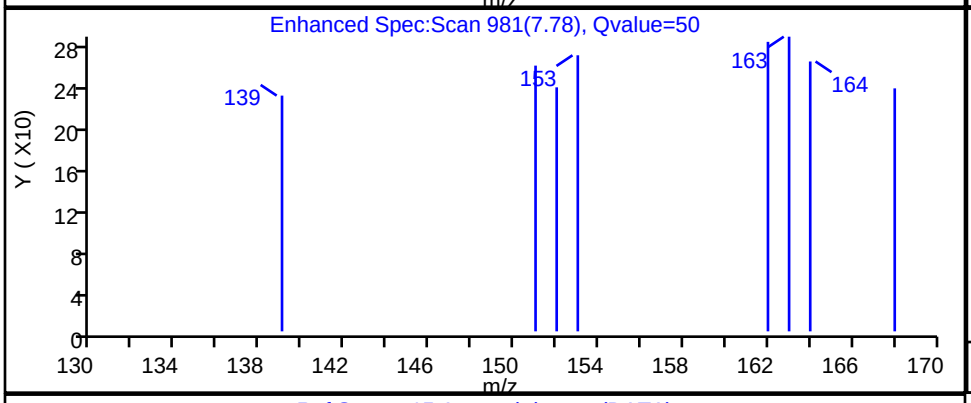
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4419.D				
Injection Date:	30-Oct-2018 02:05:30	Instrument ID:	SMS_F		
Lims ID:	280-115789-D-1-A	Lab Sample ID:	280-115789-1		
Client ID:	RQLMW-011-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	12	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

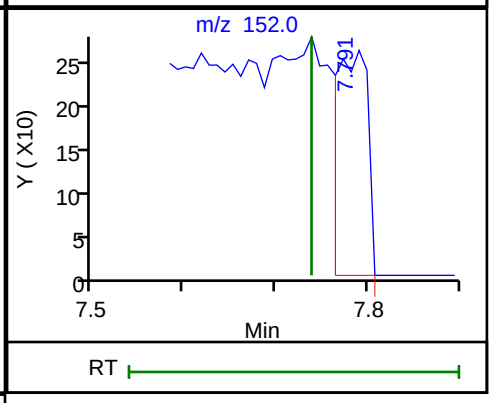
15 Acenaphthene, CAS: 83-32-9

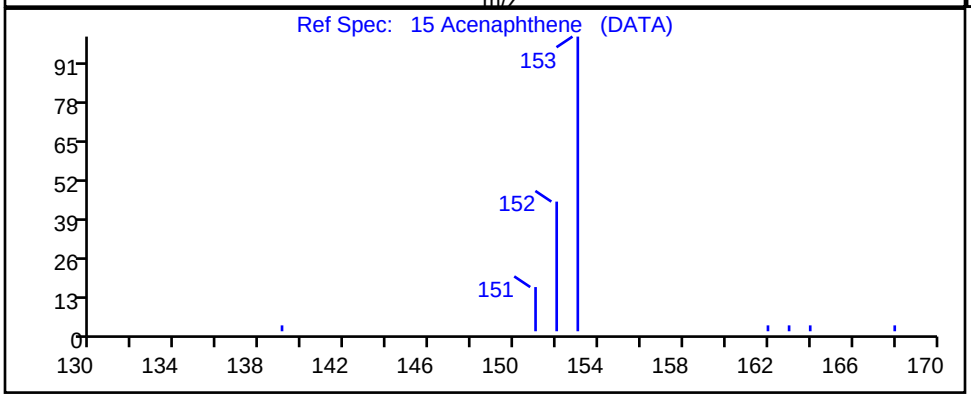
Processing Results











RT	Mass	Response	Amount
7.78	153.00	793	13.699362
7.79	152.00	632	

Reviewer: wickhamm, 30-Oct-2018 17:45:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

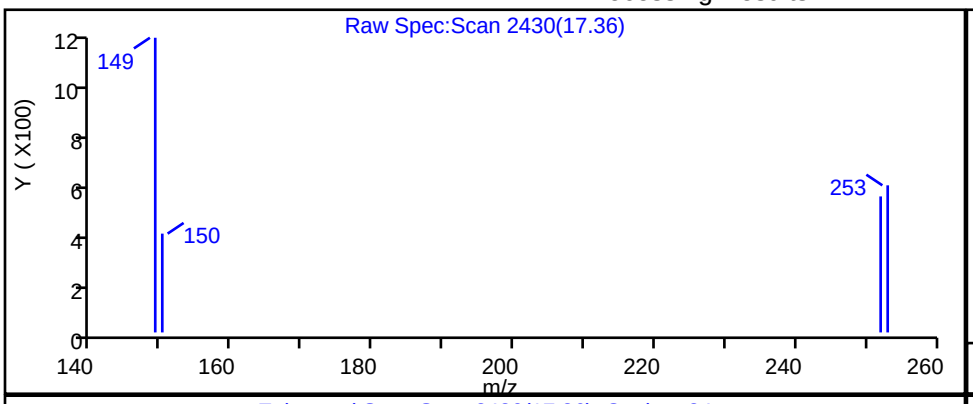
User Disabled Compound Report

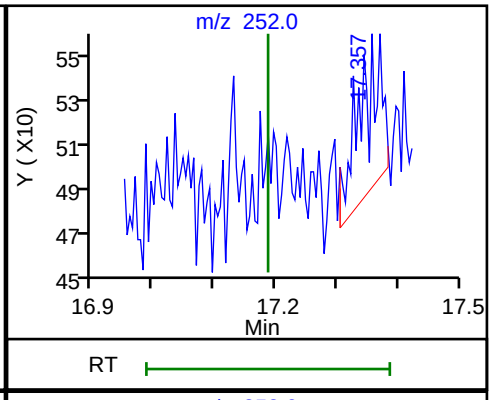
TestAmerica Denver

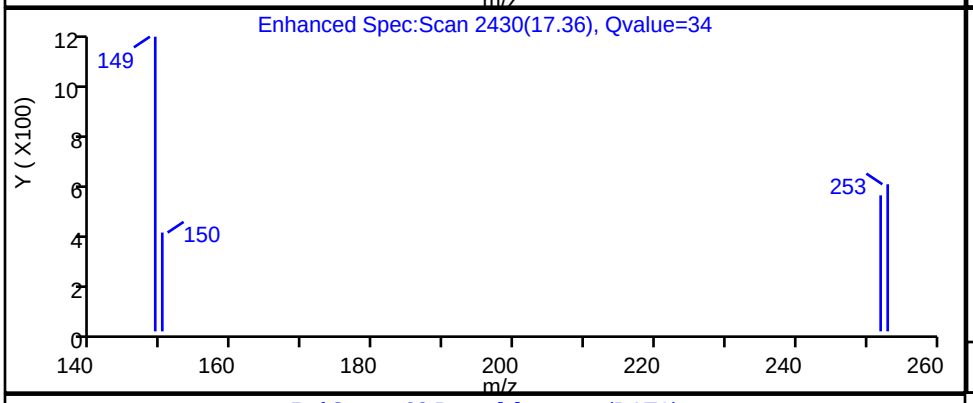
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4419.D				
Injection Date:	30-Oct-2018 02:05:30	Instrument ID:	SMS_F		
Lims ID:	280-115789-D-1-A	Lab Sample ID:	280-115789-1		
Client ID:	RQLMW-011-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	12	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

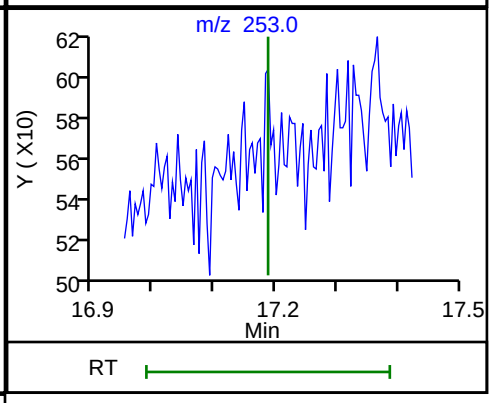
32 Benzo[a]pyrene, CAS: 50-32-8

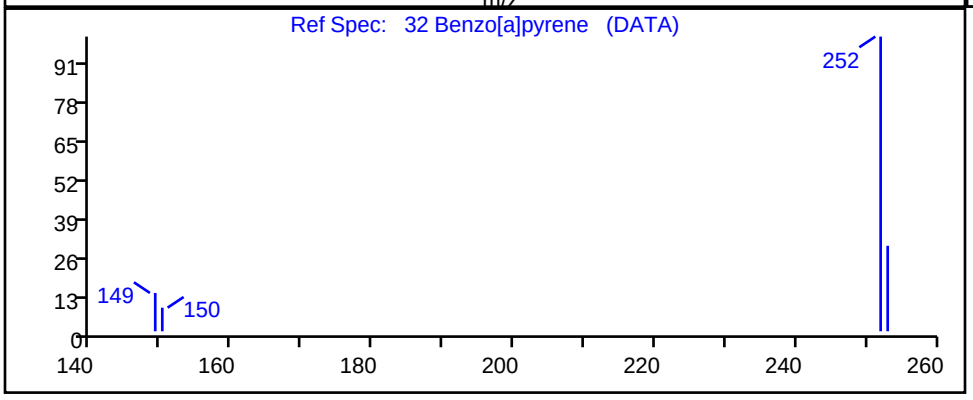
Processing Results











RT	Mass	Response	Amount
17.36	252.00	163	1.883266
17.19	253.00	0	

Reviewer: wickhamm, 30-Oct-2018 17:45:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181002-GW | Lab Sample ID: 280-115789-2

Matrix: Water | Lab File ID: F4422.D

Analysis Method: 8270D SIM | Date Collected: 10/18/2018 11:10

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 238.7(mL) | Date Analyzed: 10/30/2018 03:33

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.013	U	0.10	0.013	0.0062
91-57-6	2-Methylnaphthalene	0.013	U	0.10	0.013	0.0063
83-32-9	Acenaphthene	0.042	U	0.10	0.042	0.0044
208-96-8	Acenaphthylene	0.042	U	0.10	0.042	0.0053
120-12-7	Anthracene	0.042	U	0.10	0.042	0.0059
56-55-3	Benzo[a]anthracene	0.013	U	0.10	0.013	0.0044
50-32-8	Benzo[a]pyrene	0.0090	J	0.10	0.013	0.0072
205-99-2	Benzo[b]fluoranthene	0.013	U	0.10	0.013	0.0032
191-24-2	Benzo[g,h,i]perylene	0.013	U	0.10	0.013	0.0065
207-08-9	Benzo[k]fluoranthene	0.013	U	0.10	0.013	0.0066
218-01-9	Chrysene	0.013	U	0.10	0.013	0.0035
53-70-3	Dibenz(a,h)anthracene	0.013	U	0.10	0.013	0.0043
206-44-0	Fluoranthene	0.013	U	0.10	0.013	0.0050
86-73-7	Fluorene	0.042	U	0.10	0.042	0.0058
193-39-5	Indeno[1,2,3-cd]pyrene	0.042	U	0.10	0.042	0.0047
91-20-3	Naphthalene	0.013	U	0.10	0.013	0.0084
85-01-8	Phenanthrene	0.021	U	0.10	0.021	0.0097
129-00-0	Pyrene	0.021	U	0.10	0.021	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	61		53-106
4165-60-0	Nitrobenzene-d5	59		55-111
1718-51-0	Terphenyl-d14	78		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4422.D
Lims ID: 280-115789-D-2-A
Client ID: RQLMW-011-181002-GW
Sample Type: Client
Inject. Date: 30-Oct-2018 03:33:30 ALS Bottle#: 15 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:59:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	25438	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	56654	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	90	51152	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	7837	295.4	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	19548	303.0	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	32629	389.9	
10 Naphthalene	128		5.980				ND	
11 2-Methylnaphthalene	142		6.663				ND	
12 1-Methylnaphthalene	142		6.761				ND	
14 Acenaphthylene	152		7.566				ND	
15 Acenaphthene	153		7.739				ND	
18 Fluorene	166		8.254				ND	
20 Phenanthrene	178		9.223				ND	
21 Anthracene	178		9.275				ND	
23 Fluoranthene	202		10.632				ND	
24 Pyrene	202		10.969				ND	
26 Benzo[a]anthracene	228		13.340				ND	
27 Chrysene	228		13.421				ND	
30 Benzo[b]fluoranthene	252		16.246				ND	
31 Benzo[k]fluoranthene	252	16.321	16.325	-0.004	38	154	1.52	
32 Benzo[a]pyrene	252	17.353	17.186	0.167	36	175	2.15	
33 Indeno[1,2,3-cd]pyrene	276		20.498				ND	
34 Dibenz(a,h)anthracene	278		20.585				ND	
35 Benzo[g,h,i]perylene	276	21.242	21.242	0.000	40	119	0.9026	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

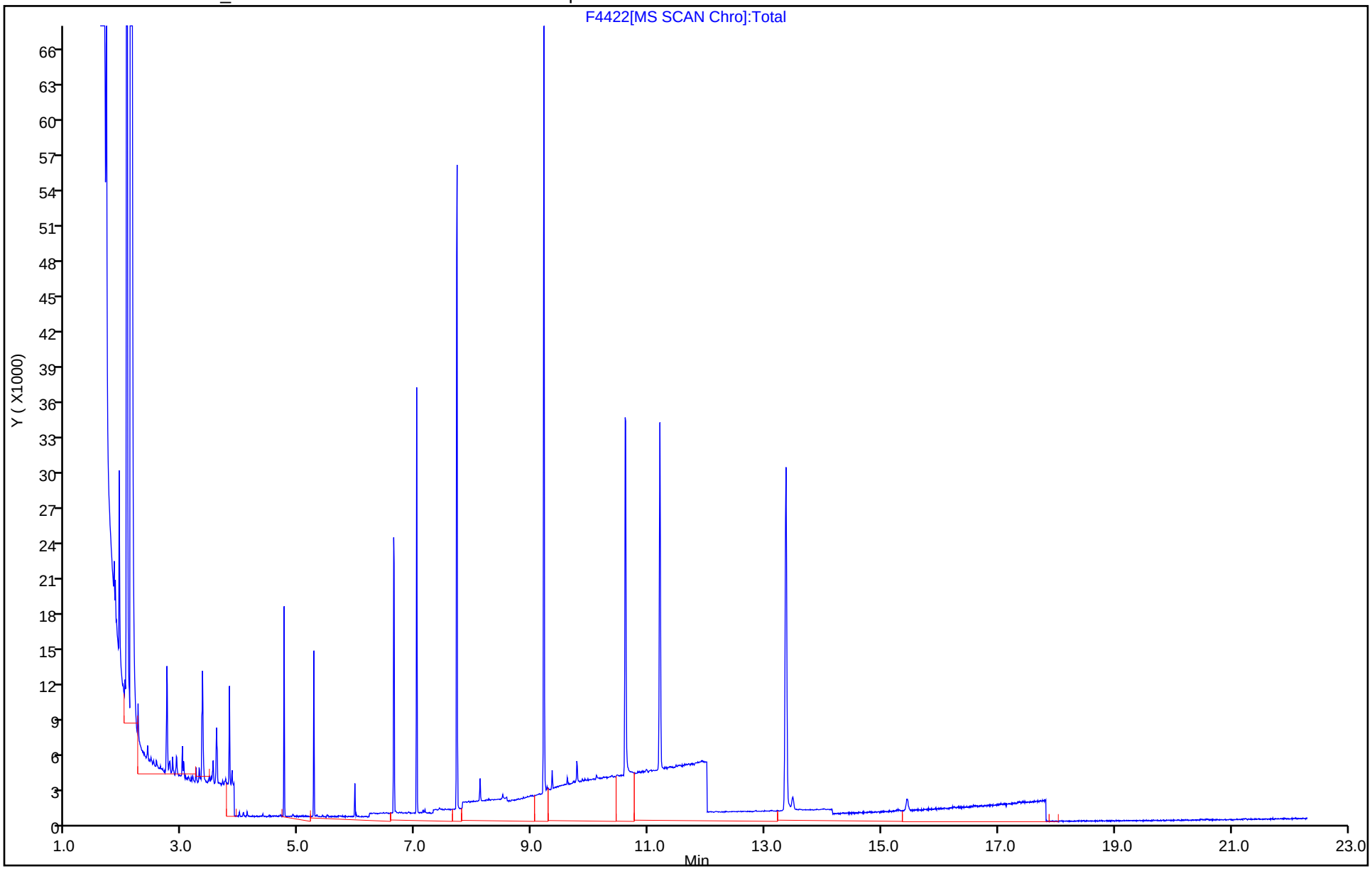
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:07:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4422.D

Injection Date:	30-Oct-2018 03:33:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-115789-D-2-A	Lab Sample ID:	280-115789-2	Worklist Smp#:	16
Client ID:	RQLMW-011-181002-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4422.D
Lims ID: 280-115789-D-2-A
Client ID: RQLMW-011-181002-GW
Sample Type: Client
Inject. Date: 30-Oct-2018 03:33:30 ALS Bottle#: 15 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:59:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	295.4	59.09
$ 5 2-Fluorobiphenyl	500.0	303.0	60.60
$ 6 Terphenyl-d14	500.0	389.9	77.98
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

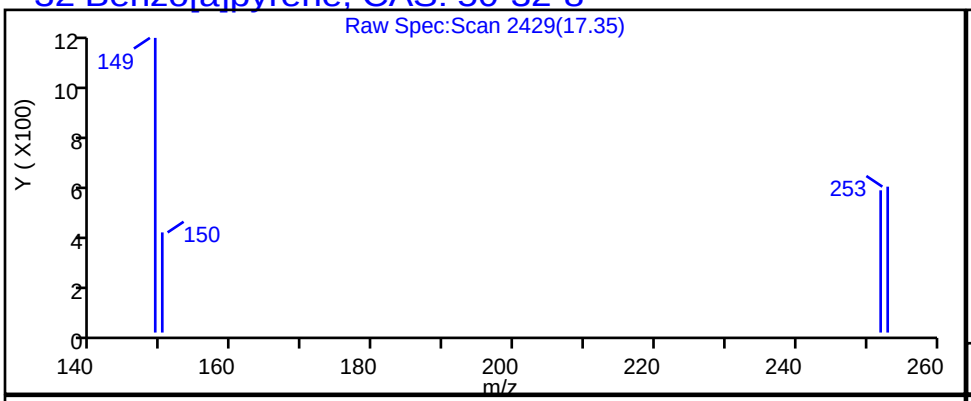
Report Date: 30-Oct-2018 19:07:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

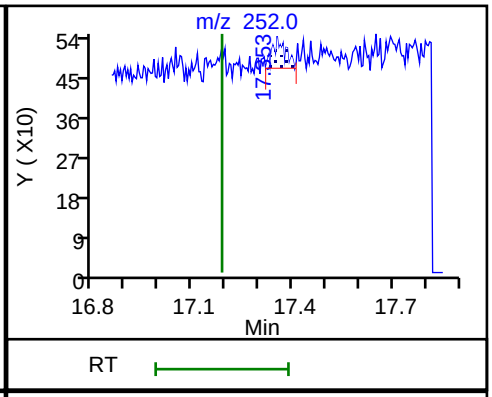
TestAmerica Denver

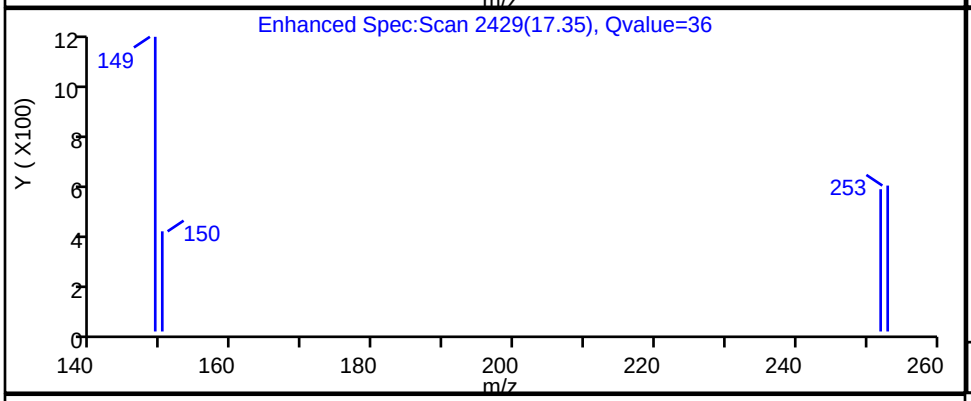
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4422.D

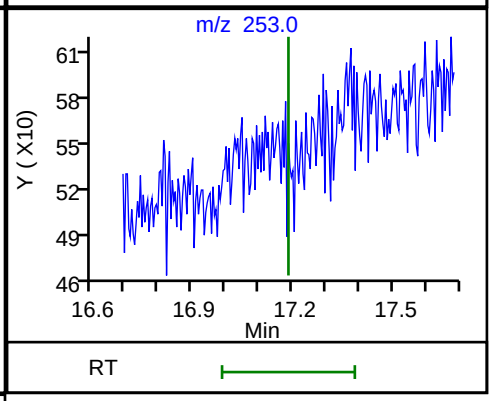
Injection Date:	30-Oct-2018 03:33:30	Instrument ID:	SMS_F		
Lims ID:	280-115789-D-2-A	Lab Sample ID:	280-115789-2		
Client ID:	RQLMW-011-181002-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	15	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

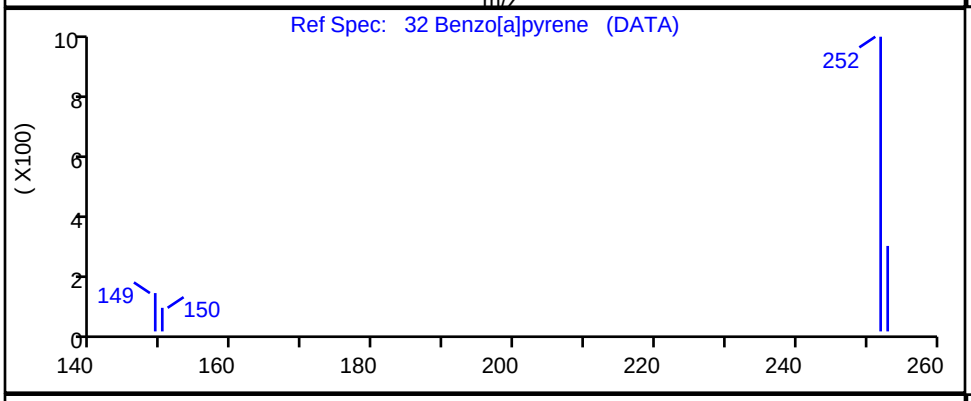
32 Benzo[a]pyrene, CAS: 50-32-8

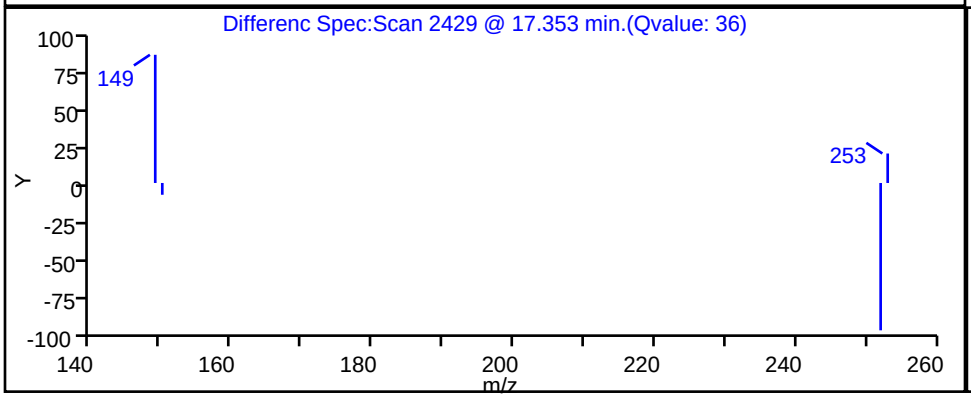


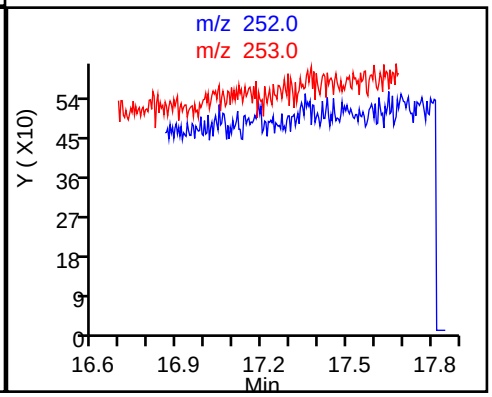












Manual Integration/User Assign Peak Report

TestAmerica Denver

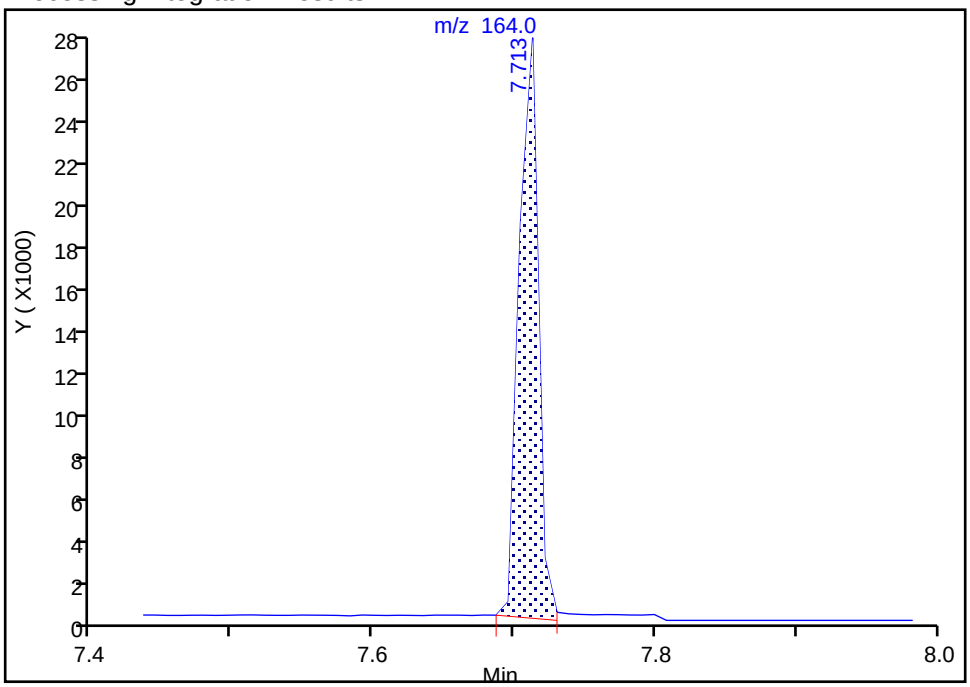
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4422.D				
Injection Date:	30-Oct-2018 03:33:30	Instrument ID:	SMS_F		
Lims ID:	280-115789-D-2-A	Lab Sample ID:	280-115789-2		
Client ID:	RQLMW-011-181002-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	15	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

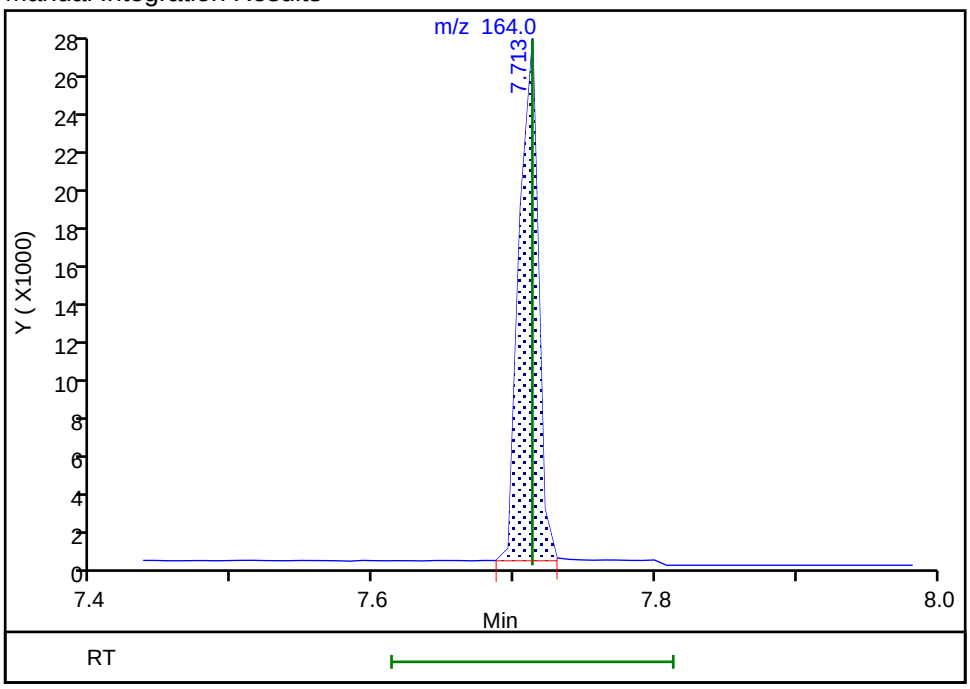
Processing Integration Results

RT: 7.71
Area: 25777
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 25438
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 30-Oct-2018 18:58:44
Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: FWGER-181001-ER | Lab Sample ID: 280-115789-3

Matrix: Water | Lab File ID: F4423.D

Analysis Method: 8270D SIM | Date Collected: 10/18/2018 07:30

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 235.4(mL) | Date Analyzed: 10/30/2018 04:02

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
91-20-3	Naphthalene	0.013	U	0.11	0.013	0.0085

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	63		53-106
4165-60-0	Nitrobenzene-d5	63		55-111
1718-51-0	Terphenyl-d14	80		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4423.D
Lims ID: 280-115789-D-3-A
Client ID: FWGER-181001-ER
Sample Type: Client
Inject. Date: 30-Oct-2018 04:02:30 ALS Bottle#: 16 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-3-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:59:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	96	27233	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	57858	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	91	51728	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	99	8979	316.2	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	21883	316.8	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	34100	399.0	
10 Naphthalene	128		5.980				ND	
11 2-Methylnaphthalene	142		6.663				ND	
12 1-Methylnaphthalene	142		6.761				ND	
14 Acenaphthylene	152		7.566				ND	
15 Acenaphthene	153		7.739				ND	
18 Fluorene	166		8.254				ND	
20 Phenanthrene	178		9.223				ND	
21 Anthracene	178		9.275				ND	
23 Fluoranthene	202		10.632				ND	
24 Pyrene	202		10.969				ND	
26 Benzo[a]anthracene	228		13.340				ND	
27 Chrysene	228		13.421				ND	
30 Benzo[b]fluoranthene	252		16.246				ND	
31 Benzo[k]fluoranthene	252		16.325				ND	
32 Benzo[a]pyrene	252		17.186				ND	U
33 Indeno[1,2,3-cd]pyrene	276		20.498				ND	
34 Dibenz(a,h)anthracene	278		20.585				ND	
35 Benzo[g,h,i]perylene	276		21.242				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

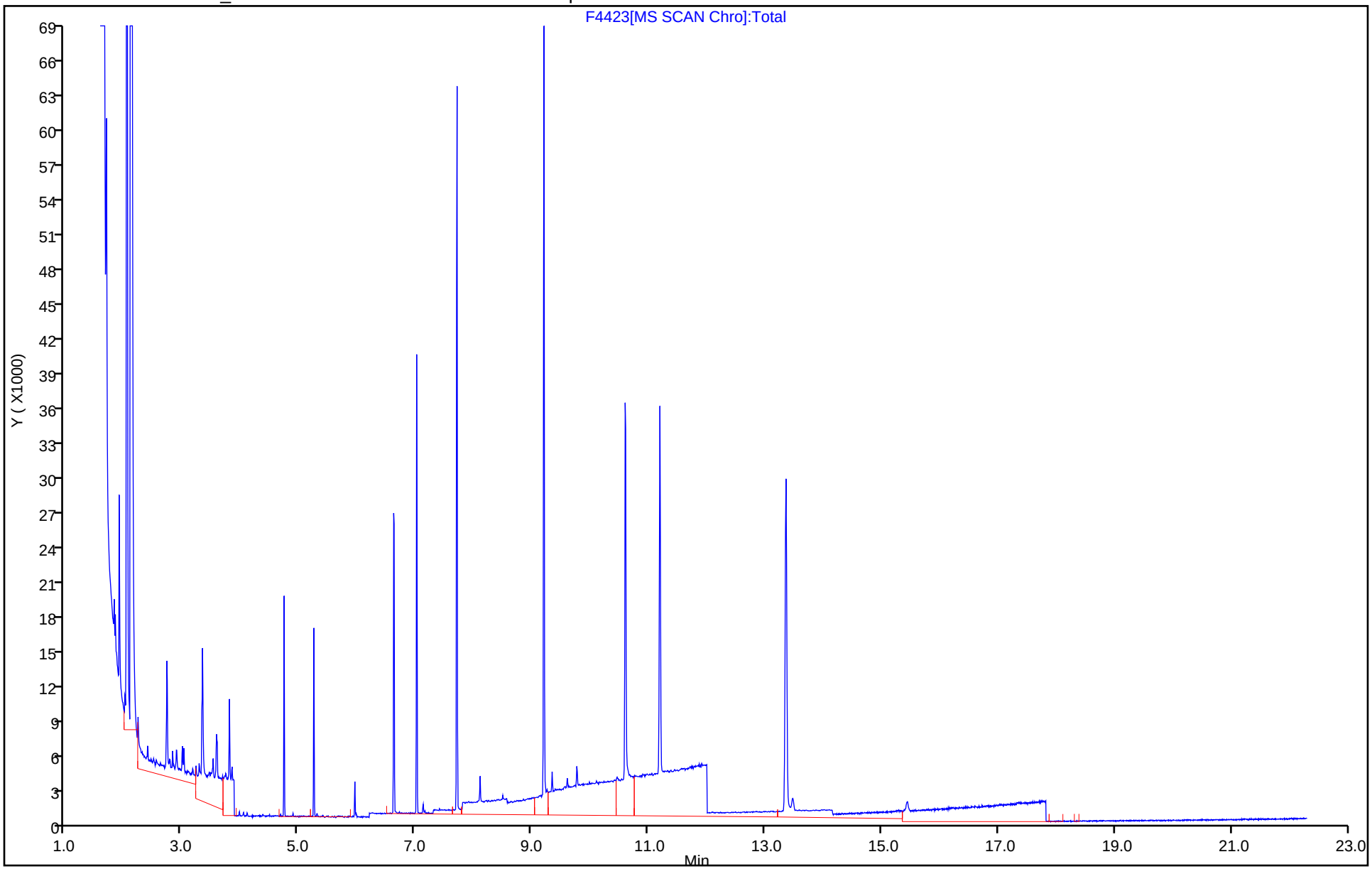
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:07:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4423.D

Injection Date:	30-Oct-2018 04:02:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-115789-D-3-A	Lab Sample ID:	280-115789-3	Worklist Smp#:	17
Client ID:	FWGER-181001-ER				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4423.D
Lims ID: 280-115789-D-3-A
Client ID: FWGER-181001-ER
Sample Type: Client
Inject. Date: 30-Oct-2018 04:02:30 ALS Bottle#: 16 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-3-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:59:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	316.2	63.24
$ 5 2-Fluorobiphenyl	500.0	316.8	63.37
$ 6 Terphenyl-d14	500.0	399.0	79.80
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: FWGFB-181001-FB | Lab Sample ID: 280-115789-4

Matrix: Water | Lab File ID: F4424.D

Analysis Method: 8270D SIM | Date Collected: 10/18/2018 07:20

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 256.5(mL) | Date Analyzed: 10/30/2018 04:32

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
91-20-3	Naphthalene	0.012	U	0.097	0.012	0.0078

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	59		53-106
4165-60-0	Nitrobenzene-d5	58		55-111
1718-51-0	Terphenyl-d14	84		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4424.D
Lims ID: 280-115789-D-4-A
Client ID: FWGFB-181001-FB
Sample Type: Client
Inject. Date: 30-Oct-2018 04:32:30 ALS Bottle#: 17 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-4-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 19:00:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	96	27542	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	61265	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	91	56714	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	8289	288.6	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	20460	292.9	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	38117	421.2	
10 Naphthalene	128		5.980				ND	
11 2-Methylnaphthalene	142		6.663				ND	
12 1-Methylnaphthalene	142		6.761				ND	
14 Acenaphthylene	152		7.566				ND	
15 Acenaphthene	153		7.739				ND	
18 Fluorene	166		8.254				ND	
20 Phenanthrene	178	9.223	9.223	0.000	75	802	6.46	
21 Anthracene	178	9.266	9.275	-0.009	1	0	0	a
23 Fluoranthene	202	10.624	10.632	-0.008	53	1926	14.6	
24 Pyrene	202	10.969	10.969	0.000	70	2375	17.9	
26 Benzo[a]anthracene	228	13.331	13.340	-0.009	80	1851	19.2	
27 Chrysene	228	13.421	13.421	0.000	92	4291	36.2	
30 Benzo[b]fluoranthene	252	16.242	16.246	-0.004	81	2570	22.5	
31 Benzo[k]fluoranthene	252	16.321	16.325	-0.004	66	1177	10.5	
32 Benzo[a]pyrene	252	17.178	17.186	-0.008	71	1914	21.3	
33 Indeno[1,2,3-cd]pyrene	276	20.489	20.498	-0.009	86	1867	16.2	
34 Dibenz(a,h)anthracene	278	20.581	20.585	-0.004	79	721	6.01	
35 Benzo[g,h,i]perylene	276	21.233	21.242	-0.009	91	3619	24.8	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

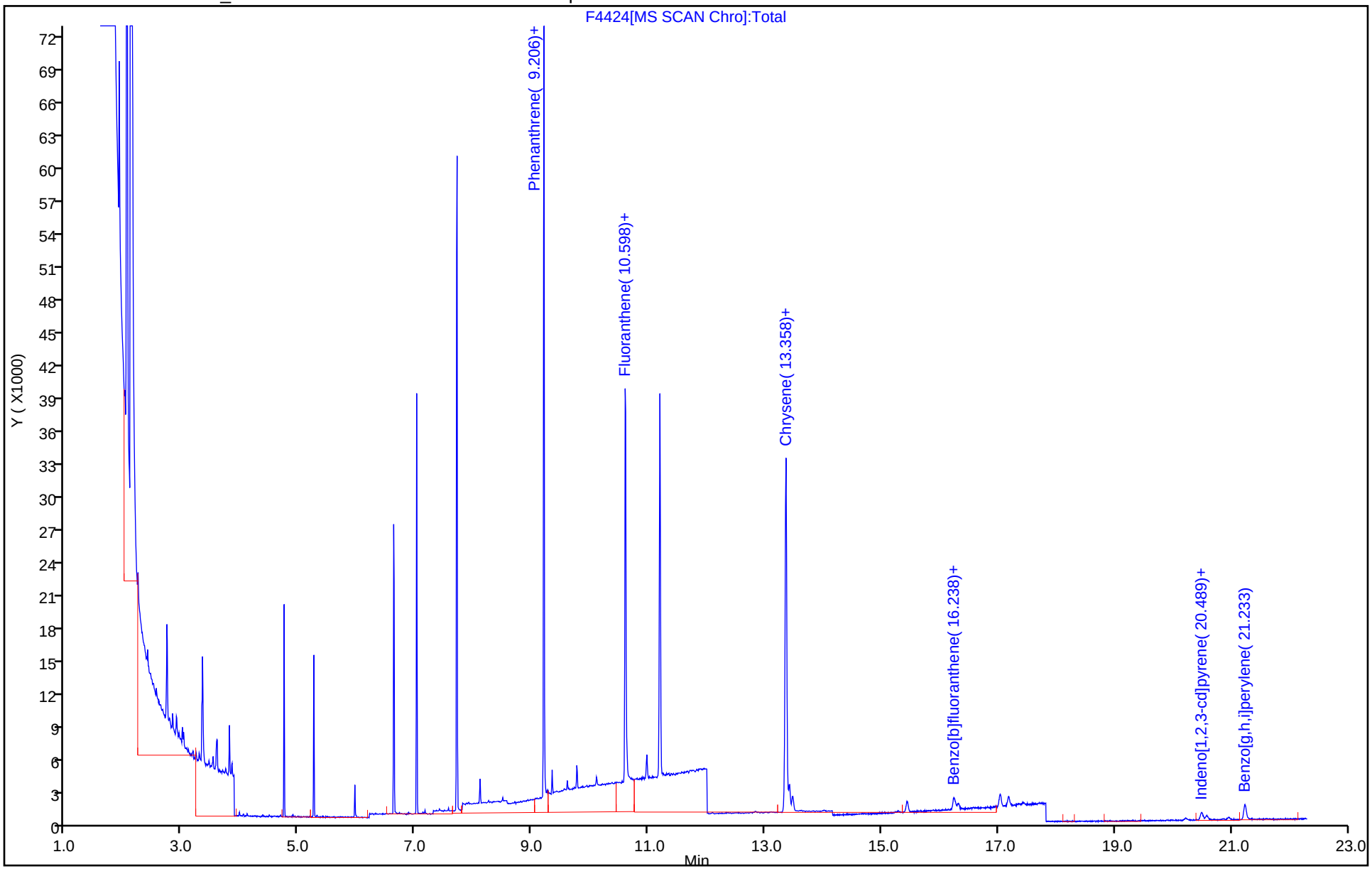
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:07:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4424.D

Injection Date:	30-Oct-2018 04:32:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-115789-D-4-A	Lab Sample ID:	280-115789-4	Worklist Smp#:	18
Client ID:	FWGFB-181001-FB				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4424.D
Lims ID: 280-115789-D-4-A
Client ID: FWGFB-181001-FB
Sample Type: Client
Inject. Date: 30-Oct-2018 04:32:30 ALS Bottle#: 17 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-4-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 19:00:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	288.6	57.72
$ 5 2-Fluorobiphenyl	500.0	292.9	58.58
$ 6 Terphenyl-d14	500.0	421.2	84.24
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0001 280-435404/4	F4399.D
Level 2	STD0002 280-435404/5	F4400.D
Level 3	STD0500 280-435404/6	F4401.D
Level 4	STD0100 280-435404/7	F4402.D
Level 5	STD0300 280-435404/8	F4403.D
Level 6	ICIS 280-435404/3	F4398.D
Level 7	STD1200 280-435404/9	F4404.D
Level 8	STD2500 280-435404/10	F4405.D
Level 9	STD5000 280-435404/11	F4406.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 9	LVL 5		B	M1	M2								
Naphthalene	2.1846 1.9317	2.1325 1.9242	1.9253 2.1369	2.0155 1.8473	1.9859	Ave		2.0093			0.7000	5.8		15.0			
2-Methylnaphthalene	1.4108 1.3067	1.4210 1.3357	1.2881 1.4942	1.3272 1.3101	1.3564	Ave		1.3611			0.4000	5.0		15.0			
1-Methylnaphthalene	1.2577 1.1758	1.3333 1.1903	1.1627 1.3407	1.1929 1.1799	1.2141	Ave		1.2275			0.0500	5.5		15.0			
Acenaphthylene	1.5393 1.4653	1.5290 1.5556	1.3767 1.8684	1.3803 1.7999	1.4370	Ave		1.5502			0.9000	11.2		15.0			
Acenaphthene	1.3971 1.2438	1.3888 1.2810	1.1957 1.4589	1.2847 1.2943	1.2982	Ave		1.3158			0.9000	6.3		15.0			
Fluorene	1.6924 1.4483	1.4532 1.5425	1.3833 1.8129	1.4356 1.5643	1.4878	Ave		1.5356			0.9000	9.0		15.0			
Phenanthrene	1.3869 1.1491	1.2554 1.1710	1.1148 1.3249	1.1521 1.2101	1.1765	Ave		1.2156			0.7000	7.4		15.0			
Anthracene	0.9752 0.8551	0.9151 0.9103	0.7843 1.1002	0.7672 1.0875	0.8217	Ave		0.9130			0.7000	13.4		15.0			
Fluoranthene	1.5024 1.2170	1.2737 1.2795	1.1208 1.5075	1.1335 1.3694	1.2213	Ave		1.2917			0.6000	11.0		15.0			
Pyrene	1.5440 1.1839	1.3828 1.2574	1.1509 1.4693	1.1557 1.3735	1.1972	Ave		1.3016			0.6000	11.2		15.0			
Benzo[a]anthracene	1.1454 0.9645	1.1393 0.9706	0.8939 1.1429	0.9025 1.0842	0.9172	Ave		1.0178			0.8000	10.7		15.0			
Chrysene	1.4073 1.2088	1.2828 1.2210	1.1494 1.3836	1.1879 1.2272	1.2189	Ave		1.2541			0.7000	7.0		15.0			
Benzo[b]fluoranthene	1.3643 1.1831	1.2519 1.1537	1.1198 1.3197	1.1430 1.1828	1.1485	Ave		1.2074			0.7000	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.: 280-115789-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

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 9	LVL 5		B	M1	M2								
Benzo[k]fluoranthene	+++++ 1.1826	1.0702 1.2834	1.0247 1.4444	1.0510 1.3213	1.1054	Ave		1.1854			0.7000	12.7		15.0			
Benzo[a]pyrene	+++++ 0.9879	1.0406 0.9140	0.8863 1.1244	0.8696 +++++	0.8472	Ave		0.9529			0.7000	10.7		15.0			
Indeno[1,2,3-cd]pyrene	1.4047 1.2420	1.3985 1.1114	1.1114 1.2556	1.1980 1.1220	1.1497	Ave		1.2215			0.5000	9.4		15.0			
Dibenz(a,h)anthracene	1.3839 1.3169	1.3083 1.2157	1.1503 1.3642	1.2406 1.2331	1.2137	Ave		1.2696			0.4000	6.1		15.0			
Benzo[g,h,i]perylene	1.9573 1.5238	1.7220 1.3909	1.4009 1.5476	1.5399 1.3376	1.4976	Ave		1.5464			0.5000	12.3		15.0			
Nitrobenzene-d5	0.7546 0.6055	0.6363 0.5921	0.5726 0.6809	0.5763 0.6359	0.5769	Ave		0.6257				9.6		15.0			
2-methylnaphthalene-d10	1.1620 0.9878	1.1351 0.9900	0.9766 1.1155	1.0065 0.9769	1.0174	Ave		1.0408				7.2		15.0			
2-Fluorobiphenyl	1.6541 1.4461	1.6275 1.4470	1.4592 1.6605	1.4692 1.4496	1.4823	Ave		1.5217				6.3		15.0			
Fluoranthene-d10	1.0103 0.9642	0.9922 1.0026	0.9242 1.1650	0.9182 1.0836	0.9638	Ave		1.0027				7.8		15.0			
Terphenyl-d14	0.9129 0.8120	0.9193 0.8628	0.7922 1.0015	0.8063 0.9261	0.9437	Ave		0.8863				8.1		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
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0001 280-435404/4	F4399.D
Level 2	STD0002 280-435404/5	F4400.D
Level 3	STD0500 280-435404/6	F4401.D
Level 4	STD0100 280-435404/7	F4402.D
Level 5	STD0300 280-435404/8	F4403.D
Level 6	ICIS 280-435404/3	F4398.D
Level 7	STD1200 280-435404/9	F4404.D
Level 8	STD2500 280-435404/10	F4405.D
Level 9	STD5000 280-435404/11	F4406.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Naphthalene	ANT	Ave	799 48246	1689 129326	4085 208192	8519 448120	24560	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-Methylnaphthalene	ANT	Ave	1032 65273	2251 179548	5466 291162	11219 635609	33550	20.0 1200	40.0 2400	100 5000	200 10000	600
1-Methylnaphthalene	ANT	Ave	460 29366	1056 79998	2467 130622	5042 286227	15015	10.0 600	20.0 1200	50.0 2500	100 5000	300
Acenaphthylene	ANT	Ave	563 36597	1211 104551	2921 182035	5834 436620	17771	10.0 600	20.0 1200	50.0 2500	100 5000	300
Acenaphthene	ANT	Ave	511 31066	1100 86093	2537 142141	5430 313964	16055	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluorene	ANT	Ave	619 36172	1151 103673	2935 176625	6068 379461	18400	10.0 600	20.0 1200	50.0 2500	100 5000	300
Phenanthrene	PHN	Ave	1068 60407	2118 172037	5059 284570	10412 611829	31665	10.0 600	20.0 1200	50.0 2500	100 5000	300
Anthracene	PHN	Ave	751 44949	1544 133735	3559 236321	6933 549841	22115	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluoranthene	PHN	Ave	1157 63976	2149 187968	5086 323789	10244 692368	32871	10.0 600	20.0 1200	50.0 2500	100 5000	300
Pyrene	PHN	Ave	1189 62237	2333 184722	5223 315592	10444 694454	32223	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[a]anthracene	CRY	Ave	879 50852	1881 152521	3978 267604	7777 612573	24476	10.0 600	20.0 1200	50.0 2500	100 5000	300
Chrysene	CRY	Ave	1080 63737	2118 191863	5115 323973	10237 693366	32528	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[b]fluoranthene	CRY	Ave	1047 62382	2067 181300	4983 309018	9850 668265	30648	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[k]fluoranthene	CRY	Ave	+++++ 62355	1767 201669	4560 338217	9057 746517	29499	+++++ 600	20.0 1200	50.0 2500	100 5000	300

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzo[a]pyrene	CRY	Ave	+++++ 52087	1718 143629	3944 263293	7494 +++++	22609	+++++ 600	20.0 1200	50.0 2500	100 +++++	300
Indeno[1,2,3-cd]pyrene	CRY	Ave	1078 65485	2309 174647	4946 294007	10324 633911	30679	10.0 600	20.0 1200	50.0 2500	100 5000	300
Dibenz(a,h)anthracene	CRY	Ave	1062 69433	2160 191031	5119 319437	10691 696717	32389	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[g,h,i]perylene	CRY	Ave	1502 80345	2843 218564	6234 362369	13270 755750	39963	10.0 600	20.0 1200	50.0 2500	100 5000	300
Nitrobenzene-d5	ANT	Ave	276 15122	504 39792	1215 66335	2436 154261	7134	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-methylnaphthalene-d10	ANT	Ave	425 24672	899 66535	2072 108683	4254 236976	12582	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-Fluorobiphenyl	ANT	Ave	605 36119	1289 97251	3096 161780	6210 351658	18332	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluoranthene-d10	PHN	Ave	778 50686	1674 147296	4194 250239	8298 547857	25942	10.0 600	20.0 1200	50.0 2500	100 5000	300
Terphenyl-d14	PHN	Ave	703 42687	1551 126747	3595 215115	7287 468240	25400	10.0 600	20.0 1200	50.0 2500	100 5000	300

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4398.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 29-Oct-2018 16:02:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: icis
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:24 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 18:55:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	82	24976	600.0	600.0	
* 2 Phenanthrene-d10	188	9.214	9.214	0.000	97	52568	600.0	600.0	
* 3 Chrysene-d12	240	13.376	13.376	0.000	98	52726	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	100	15122	600.0	580.6	
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	99	36119	600.0	570.2	
$ 6 Terphenyl-d14	244	11.211	11.211	0.000	98	42687	600.0	549.7	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.557	0.000	44	11236	600.0	585.3	
10 Naphthalene	128	5.985	5.985	0.000	100	48246	600.0	576.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	96	65273	1200.0	1152.0	
12 1-Methylnaphthalene	142	6.769	6.769	0.000	92	29366	600.0	574.7	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	55965	1200.0	1143.2	
14 Acenaphthylene	152	7.574	7.574	0.000	98	36597	600.0	567.2	
15 Acenaphthene	153	7.747	7.747	0.000	100	31066	600.0	567.2	
16 Dibenzofuran	168	7.915	7.915	0.000	98	46652	600.6	564.6	
17 Diethyl phthalate	149	8.118	8.118	0.000	97	50922	1204.8	1067.7	
18 Fluorene	166	8.264	8.264	0.000	100	36172	600.0	565.9	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	100	23094	600.0	590.5	
20 Phenanthrene	178	9.232	9.232	0.000	100	60407	600.0	567.2	
21 Anthracene	178	9.284	9.284	0.000	1	44949	600.0	562.0	
22 Di-n-butyl phthalate	149	9.785	9.785	0.000	1	64945	1200.0	1220.7	
23 Fluoranthene	202	10.641	10.641	0.000	100	63976	600.0	565.3	
24 Pyrene	202	10.987	10.987	0.000	100	62237	600.0	545.7	
25 Butyl benzyl phthalate	149	10.987	10.987	0.000	1	531	1200.0	0	
26 Benzo[a]anthracene	228	13.358	13.358	0.000	50	50852	600.0	568.5	
27 Chrysene	228	13.439	13.439	0.000	95	63737	600.0	578.3	
28 Bis(2-ethylhexyl) phthalat	149	12.115	12.115	0.000	1	22182	1200.0	1165.6	
29 Di-n-octyl phthalate	149	15.332	15.332	0.000	1	42928	1200.0	1273.1	
30 Benzo[b]fluoranthene	252	16.268	16.268	0.000	99	62382	600.0	587.9	
31 Benzo[k]fluoranthene	252	16.347	16.347	0.000	99	62355	600.0	598.6	
32 Benzo[a]pyrene	252	17.213	17.213	0.000	98	52087	600.0	622.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.529	20.529	0.000	91	65485	600.0	610.1	
34 Dibenz(a,h)anthracene	278	20.616	20.616	0.000	84	69433	600.0	622.3	
35 Benzo[g,h,i]perylene	276	21.272	21.272	0.000	94	80345	600.0	591.2	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.000	96	24672	600.0	569.4	
$ 54 Fluoranthene-d10	212	10.615	10.615	0.000	98	50686	600.0	577.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

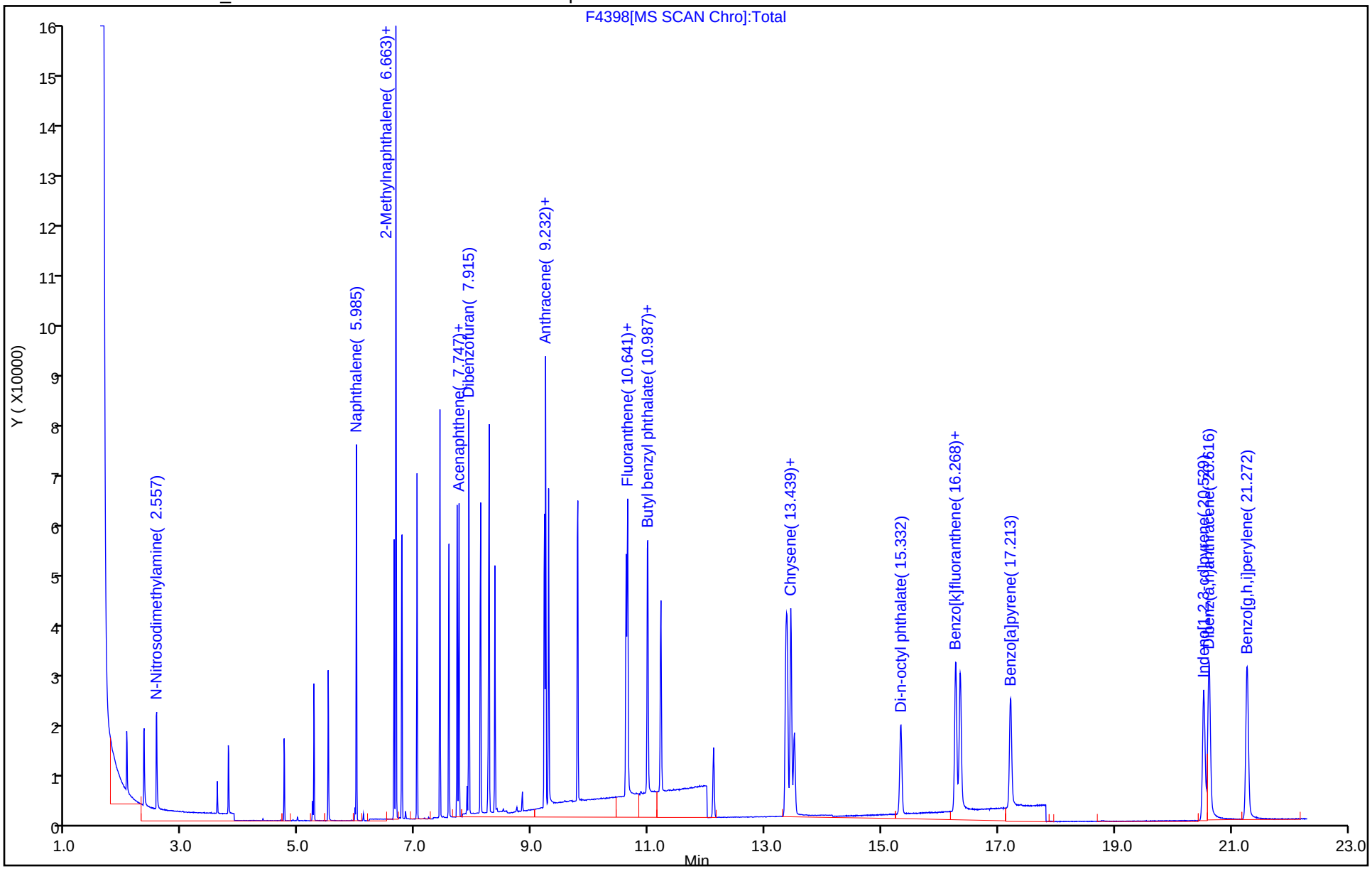
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4398.D

Injection Date:	29-Oct-2018 16:02:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	icis			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Lims ID: STD0001
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Oct-2018 16:32:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0001
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:28 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 19:09:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	90	21945	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.214	-0.008	99	46205	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.376	-0.009	91	46044	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	85	276	10.0	12.1	Ma
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	91	605	10.0	10.9	a
$ 6 Terphenyl-d14	244	11.203	11.211	-0.008	24	703	10.0	10.3	a
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.564	2.557	0.007	15	266	10.0	15.8	
10 Naphthalene	128	5.985	5.985	0.000	95	799	10.0	10.9	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	1032	20.0	20.7	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	96	460	10.0	10.2	Ma
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	896	20.0	20.8	
14 Acenaphthylene	152	7.566	7.574	-0.008	86	563	10.0	9.93	
15 Acenaphthene	153	7.739	7.747	-0.008	75	511	10.0	10.6	
16 Dibenzofuran	168	7.915	7.915	0.000	94	812	10.0	11.2	
17 Diethyl phthalate	149	8.109	8.118	-0.009	98	1420	20.1	33.9	
18 Fluorene	166	8.264	8.264	0.000	90	619	10.0	11.0	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	82	396	10.0	11.5	Ma
20 Phenanthrene	178	9.232	9.232	0.000	75	1068	10.0	11.4	
21 Anthracene	178	9.284	9.284	0.000	1	751	10.0	10.7	
22 Di-n-butyl phthalate	149	9.776	9.785	-0.009	1	974	20.0	24.8	
23 Fluoranthene	202	10.632	10.641	-0.009	33	1157	10.0	11.6	
24 Pyrene	202	10.978	10.987	-0.009	30	1189	10.0	11.9	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.349	13.358	-0.009	74	879	10.0	11.3	
27 Chrysene	228	13.430	13.439	-0.009	71	1080	10.0	11.2	
28 Bis(2-ethylhexyl) phthalat	149		12.115				ND	ND	
29 Di-n-octyl phthalate	149		15.332				ND	ND	U
30 Benzo[b]fluoranthene	252	16.255	16.268	-0.013	49	1047	10.0	11.3	
31 Benzo[k]fluoranthene	252		16.347				ND	ND	MU
32 Benzo[a]pyrene	252	17.195	17.213	-0.018	41	812	10.0	11.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.520	20.529	-0.009	70	1078	10.0	11.5	M
34 Dibenz(a,h)anthracene	278	20.599	20.616	-0.017	78	1062	10.0	10.9	
35 Benzo[g,h,i]perylene	276	21.255	21.272	-0.017	72	1502	10.0	12.7	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.001	96	425	10.0	11.2	
$ 54 Fluoranthene-d10	212	10.606	10.615	-0.009	0	778	10.0	10.1	M

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

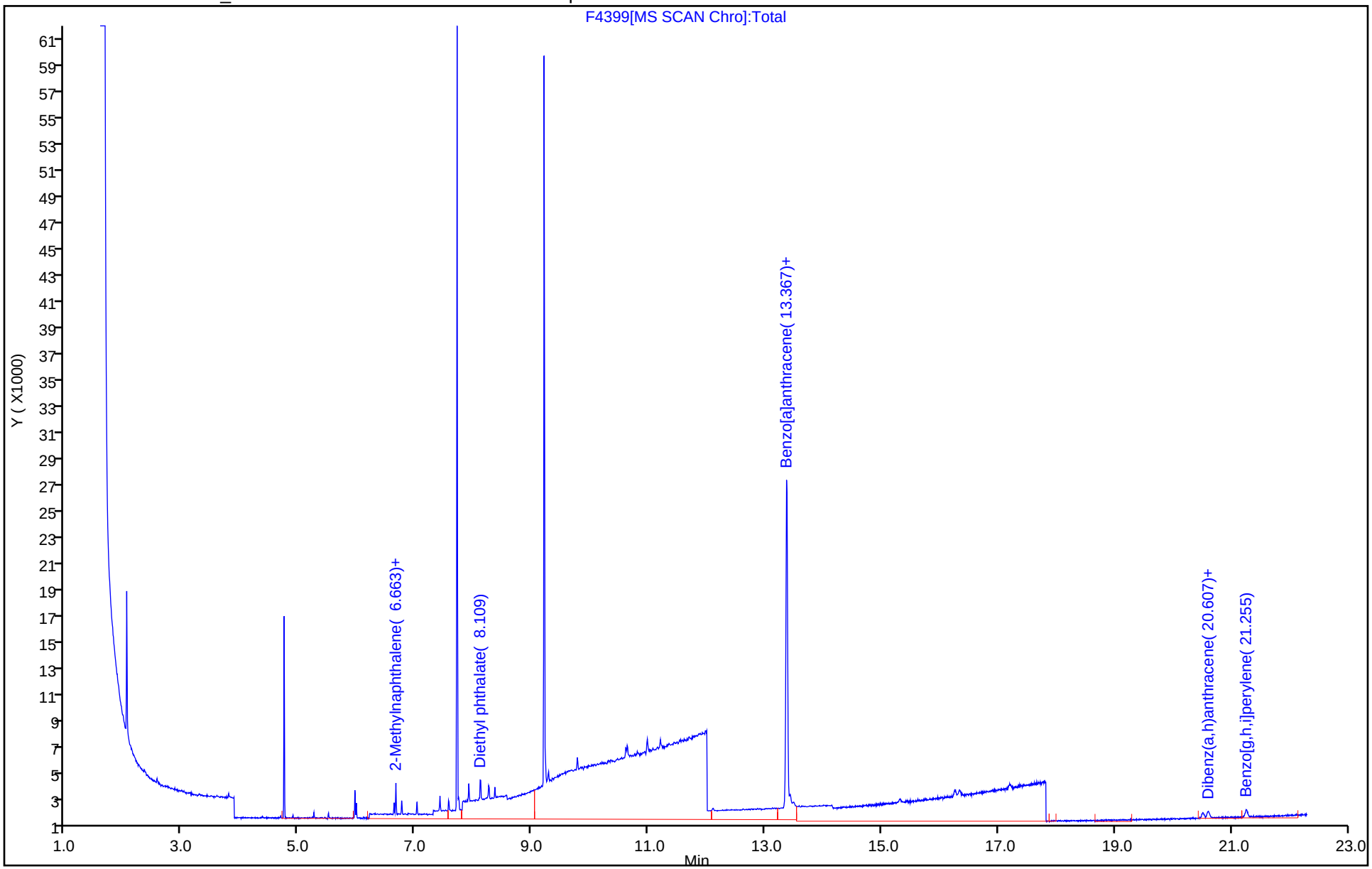
MS-SIMSL 0.01_00005 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D

Injection Date:	29-Oct-2018 16:32:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0001			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

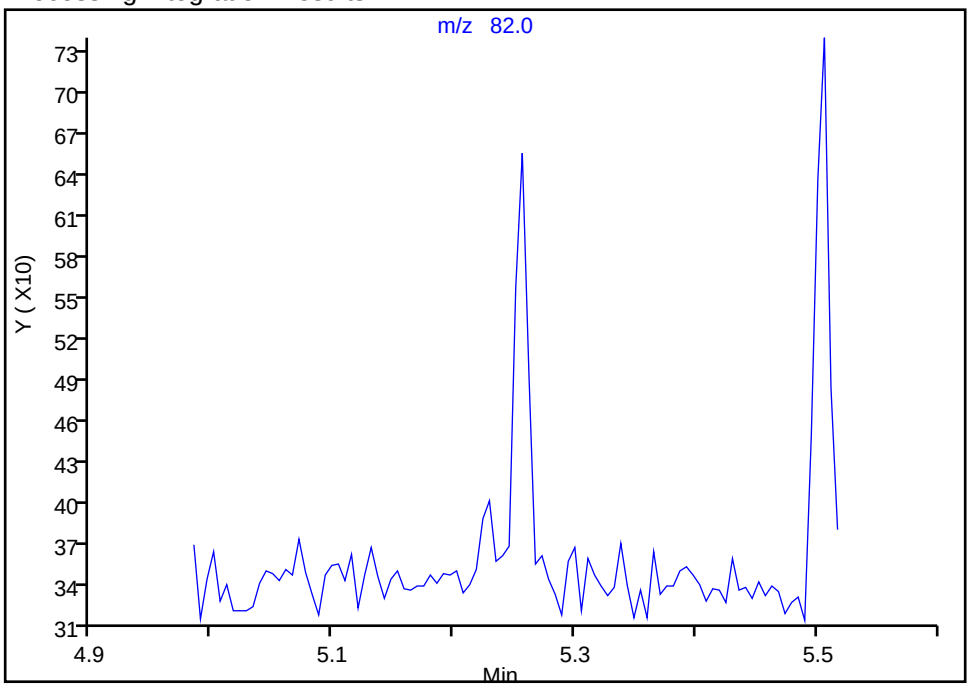
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

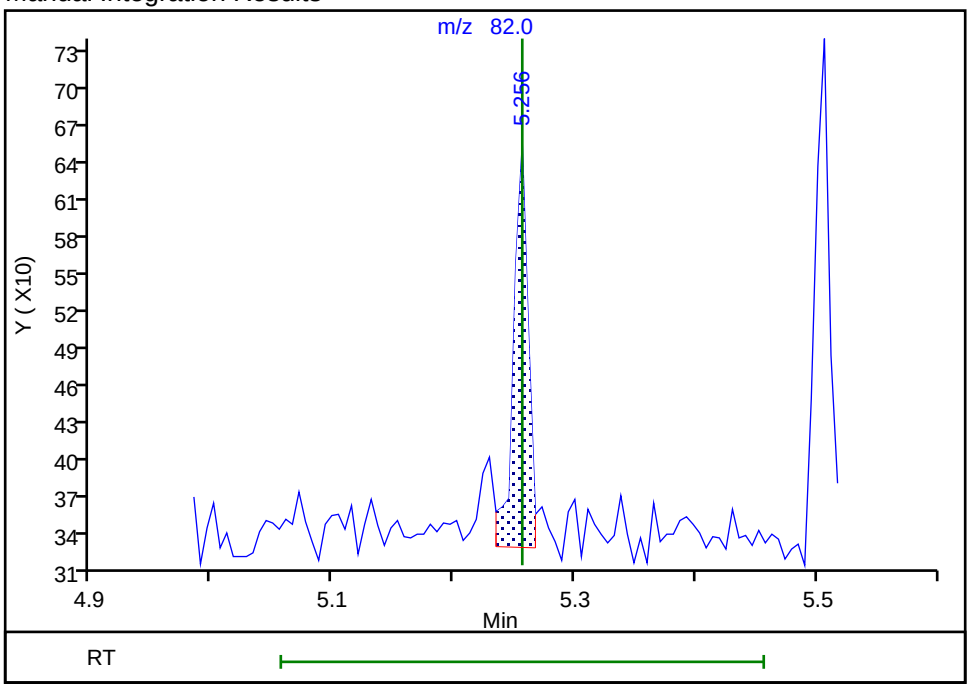
Not Detected
Expected RT: 5.26

Processing Integration Results



Manual Integration Results

RT: 5.26
Area: 276
Amount: 12.060809
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:07:52
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

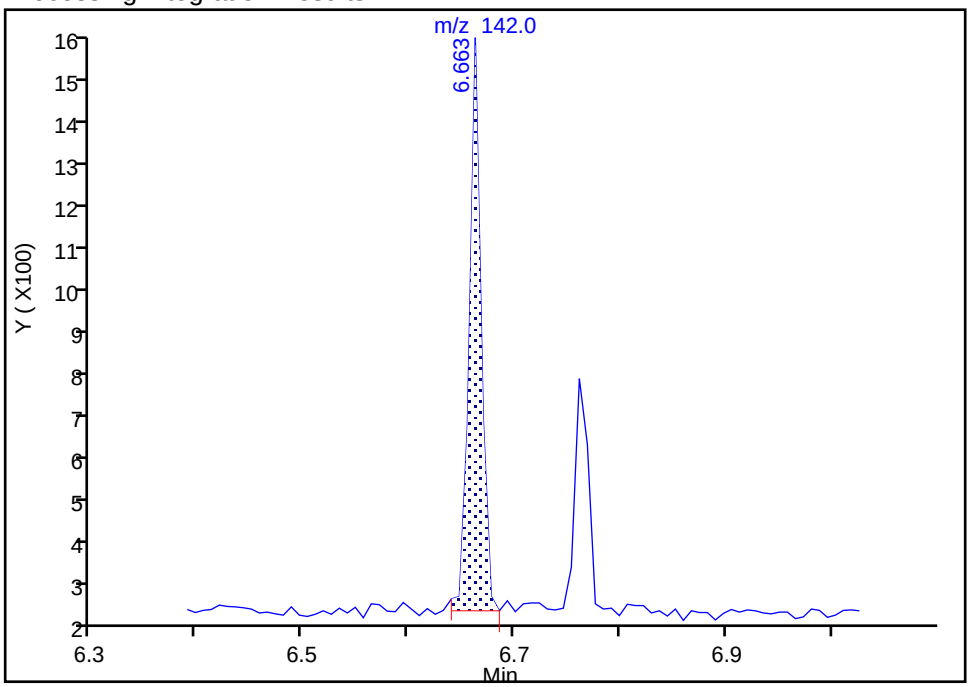
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

12 1-Methylnaphthalene, CAS: 90-12-0

Signal: 1

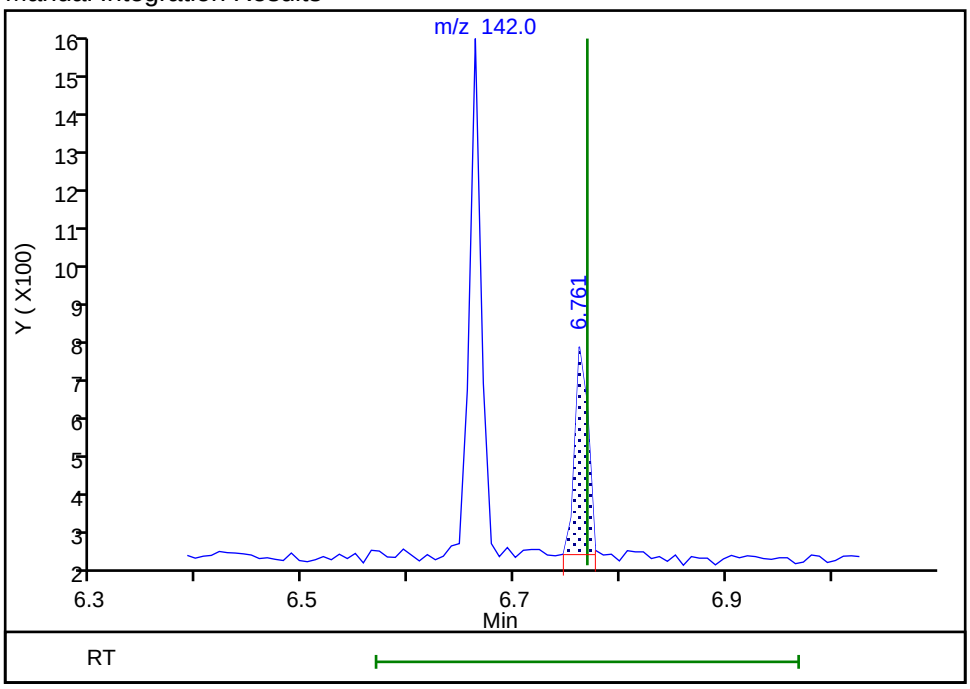
Processing Integration Results

RT: 6.66
Area: 1032
Amount: 14.920564
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 460
Amount: 10.246089
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:08:12
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

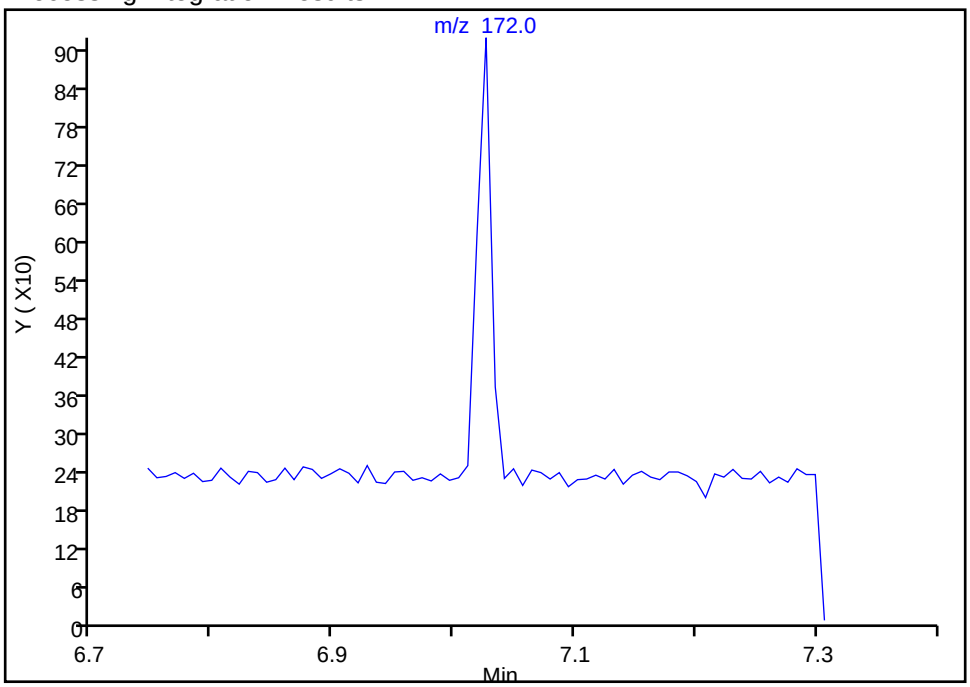
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 5 2-Fluorobiphenyl, CAS: 321-60-8

Signal: 1

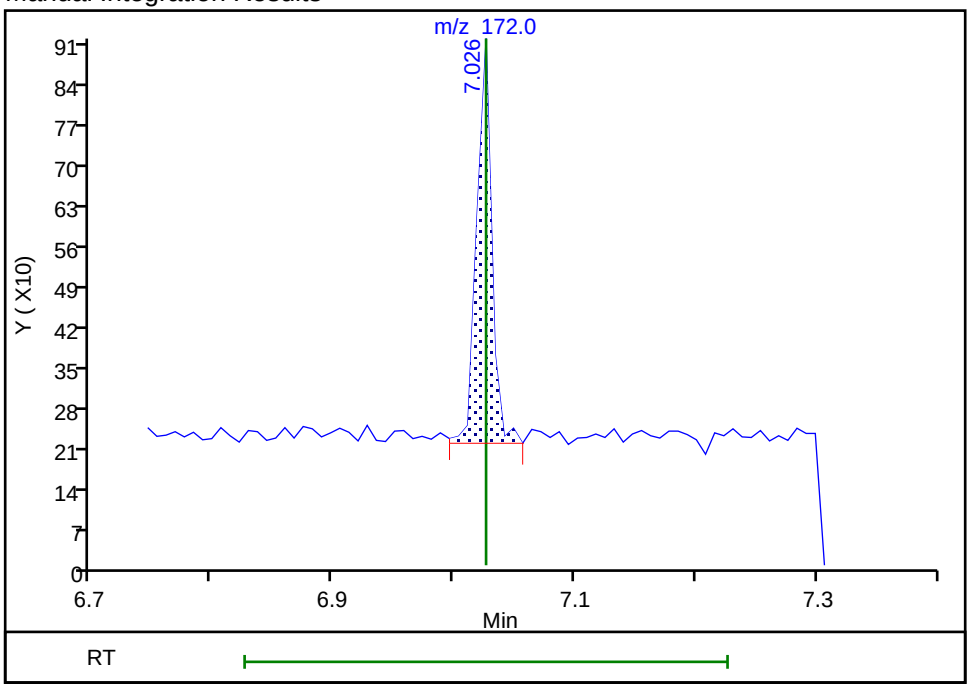
Not Detected
Expected RT: 7.03

Processing Integration Results



Manual Integration Results

RT: 7.03
Area: 605
Amount: 10.870084
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:07:57
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

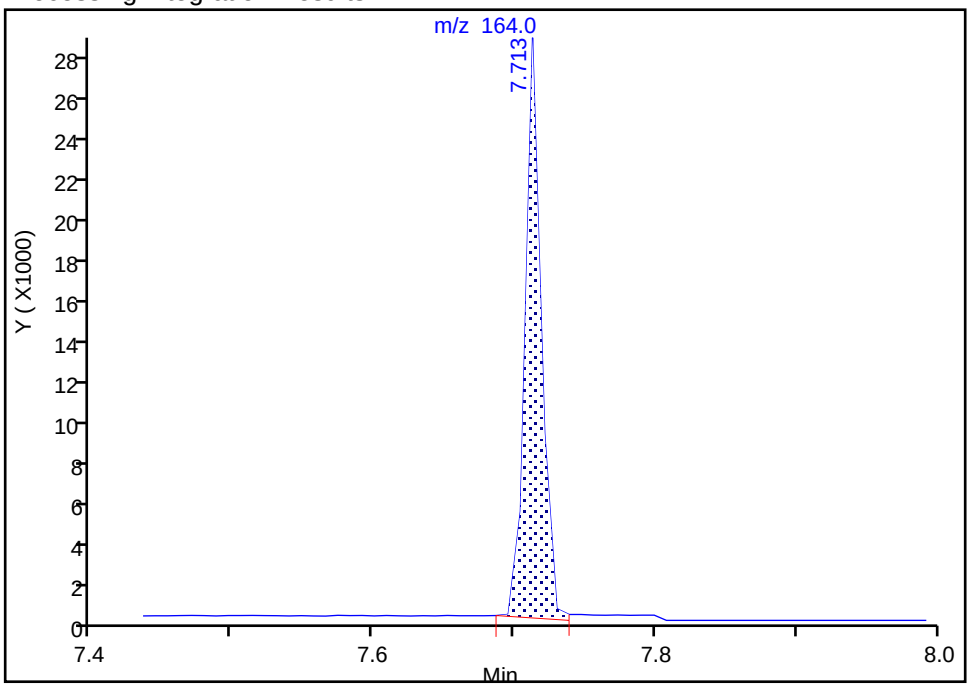
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

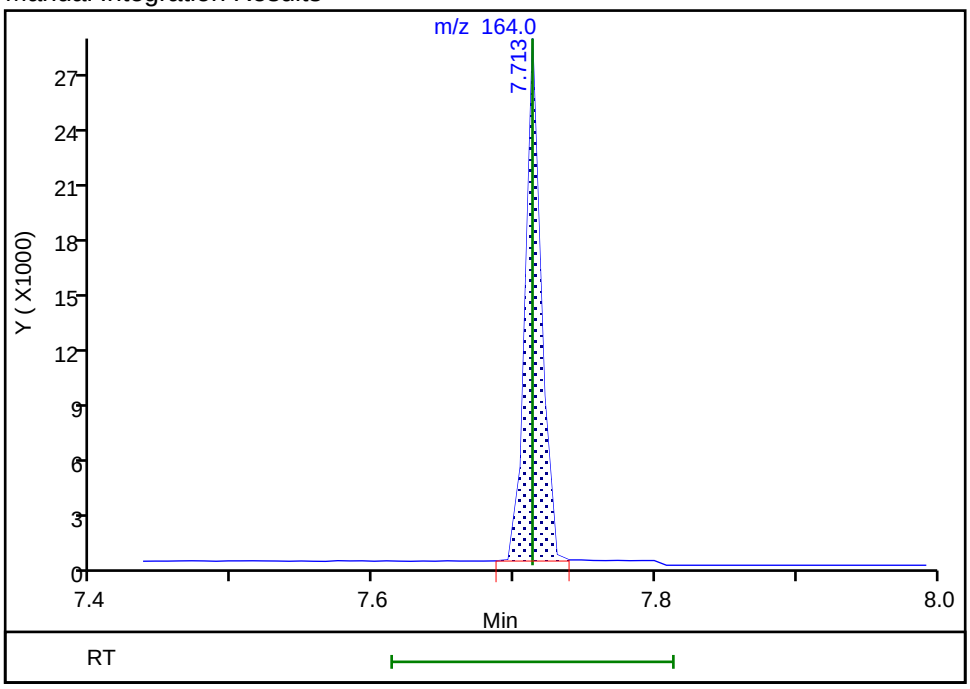
Processing Integration Results

RT: 7.71
Area: 22335
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 21945
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:07:30
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

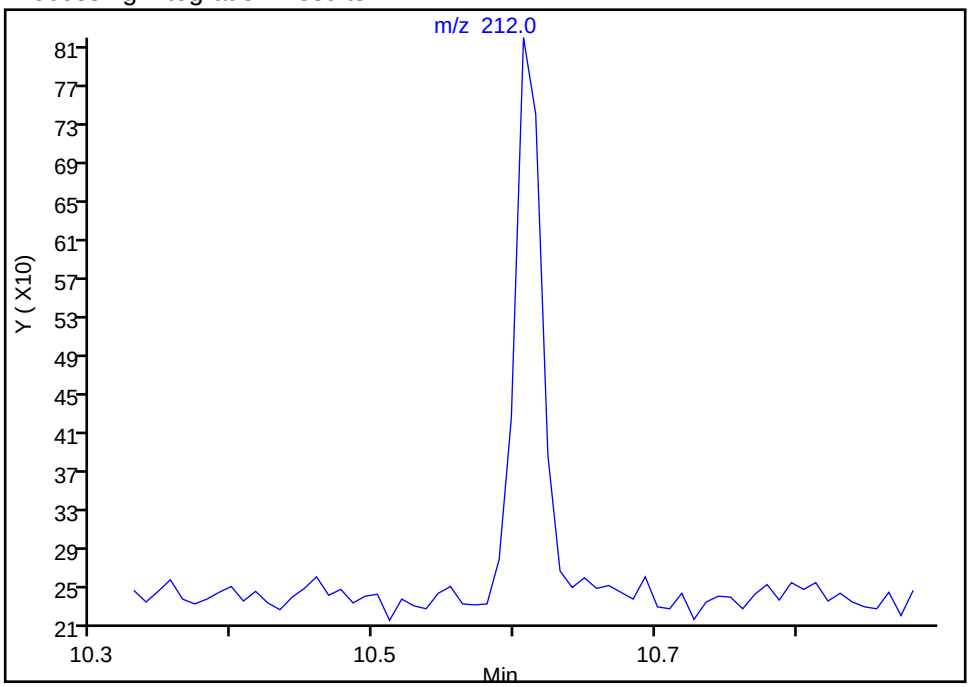
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 54 Fluoranthene-d10, CAS: 93951-69-0

Signal: 1

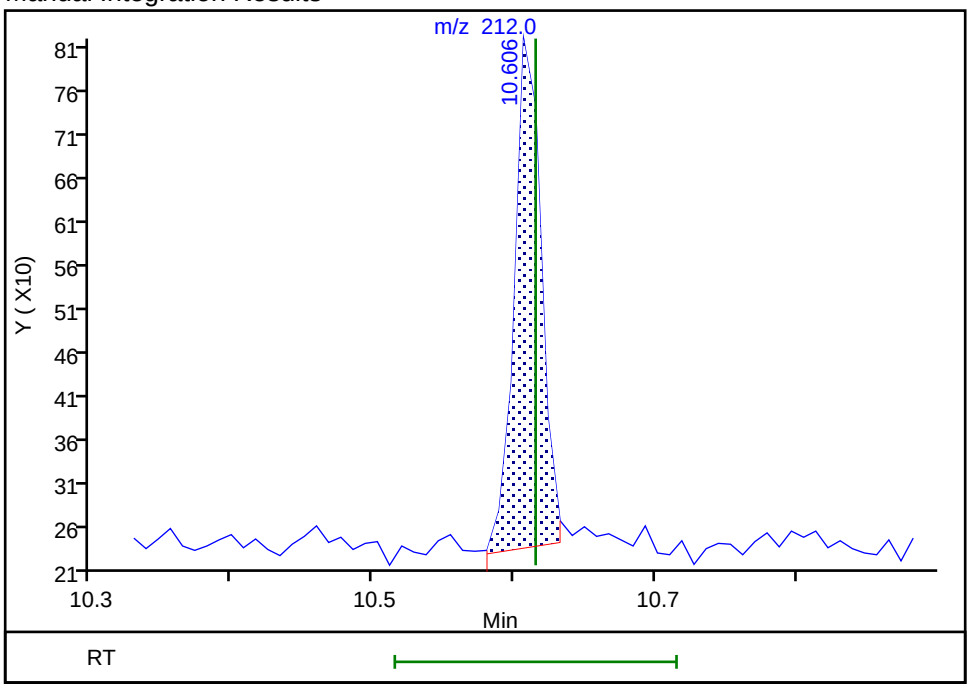
Not Detected
Expected RT: 10.61

Processing Integration Results



Manual Integration Results

RT: 10.61
Area: 778
Amount: 10.075750
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:09:31
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

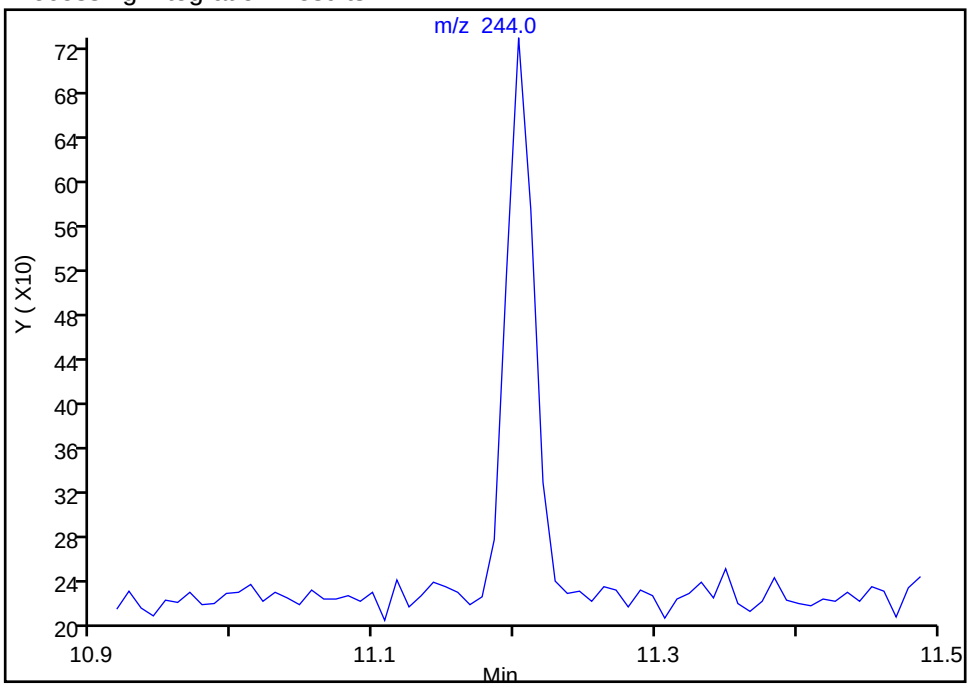
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 6 Terphenyl-d14, CAS: 1718-51-0

Signal: 1

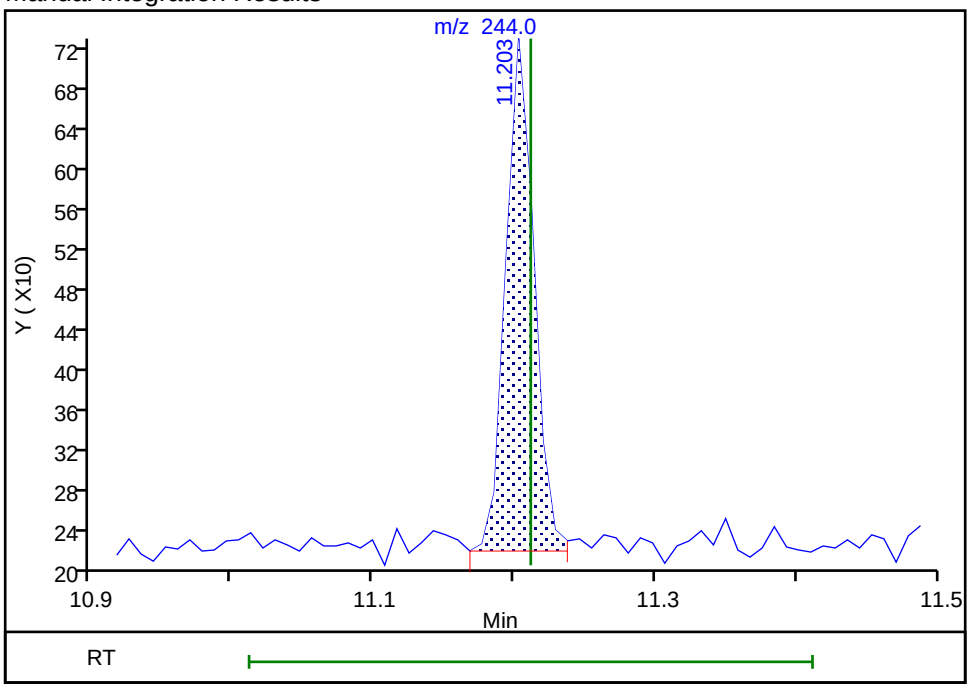
Not Detected
Expected RT: 11.21

Processing Integration Results



Manual Integration Results

RT: 11.20
Area: 703
Amount: 10.299826
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:08:01
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

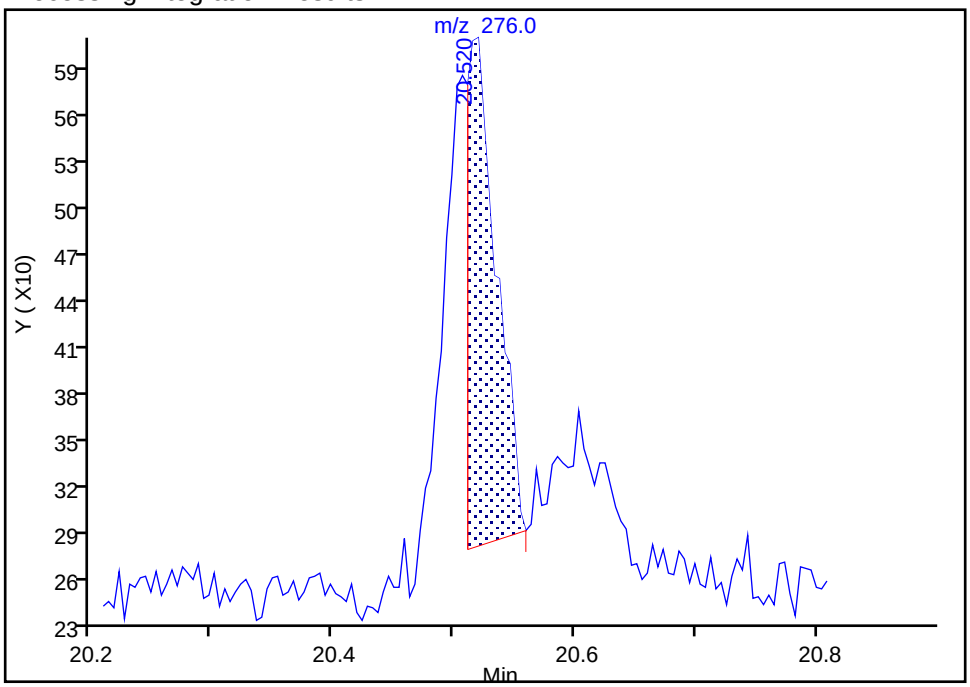
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

33 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

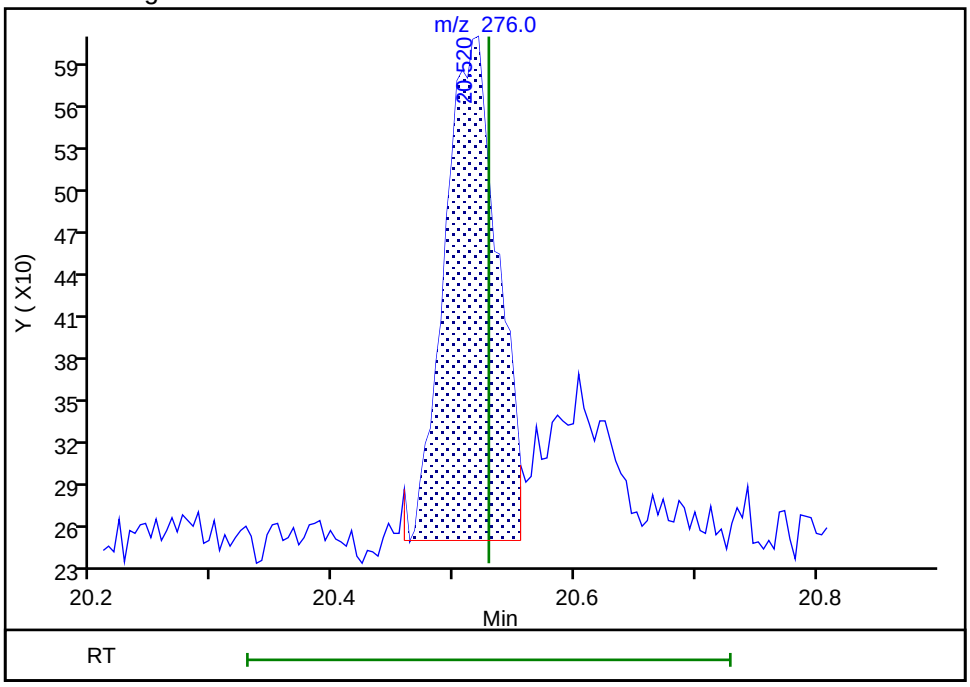
Processing Integration Results

RT: 20.52
Area: 543
Amount: 11.679407
Amount Units: ng/ml



Manual Integration Results

RT: 20.52
Area: 1078
Amount: 11.500284
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:09:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

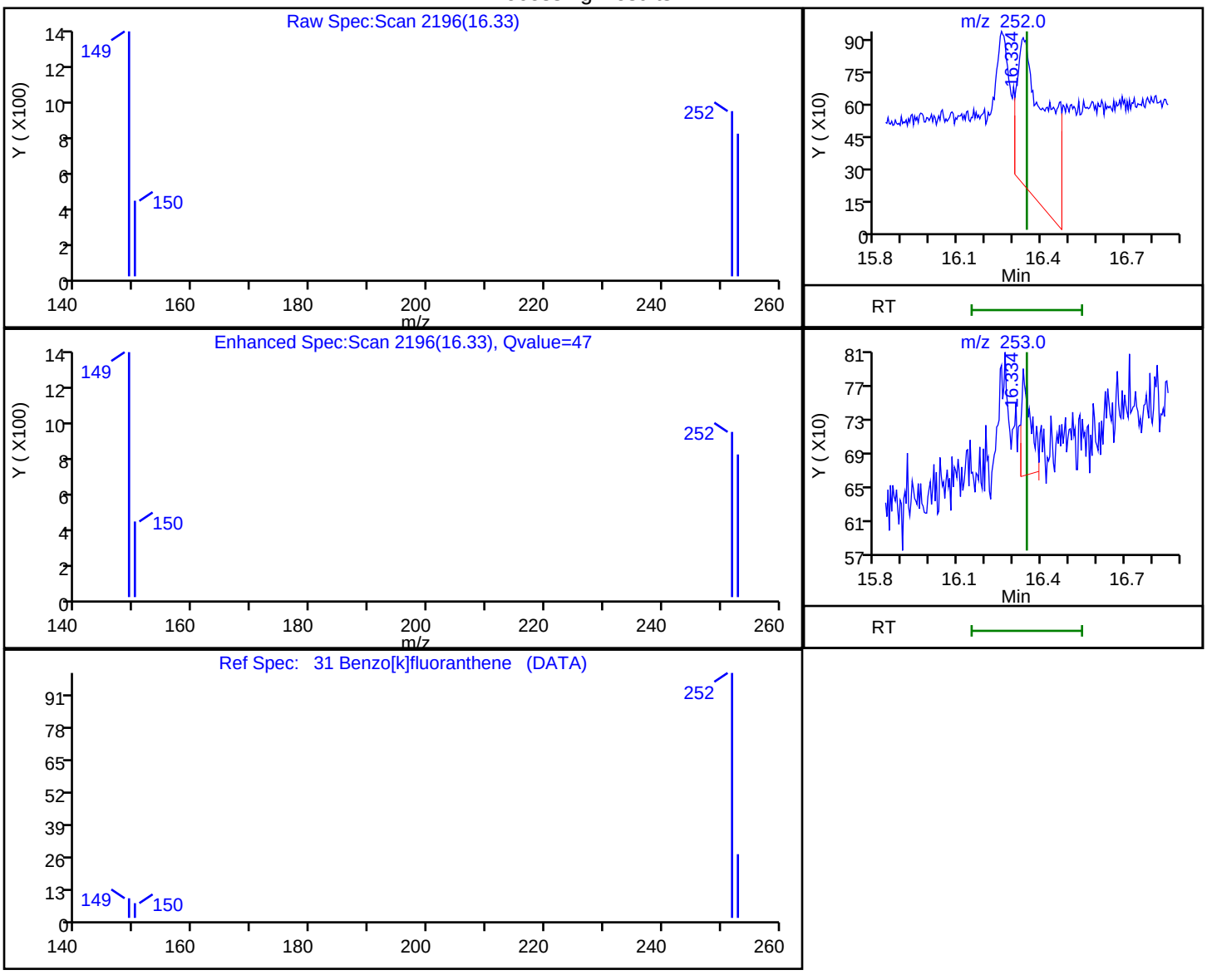
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D				
Injection Date:	29-Oct-2018 16:32:30	Instrument ID:	SMS_F		
Lims ID:	STD0001				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

31 Benzo[k]fluoranthene, CAS: 207-08-9

Processing Results



RT	Mass	Response	Amount
16.33	252.00	5536	31.733538
16.33	253.00	276	

Reviewer: wickhamm, 29-Oct-2018 19:09:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Lims ID: STD0002
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Oct-2018 17:02:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0002
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:32 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:53:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	-0.001	89	23761	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.214	-0.008	99	50615	600.0	600.0	
* 3 Chrysene-d12	240	13.376	13.376	0.000	90	49531	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	91	504	20.0	20.3	a
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	97	1289	20.0	21.4	a
$ 6 Terphenyl-d14	244	11.203	11.211	-0.008	34	1551	20.0	20.7	a
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.563	2.557	0.006	17	404	20.0	22.1	
10 Naphthalene	128	5.985	5.985	0.000	98	1689	20.0	21.2	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	100	2251	40.0	41.8	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	97	1056	20.0	21.7	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	1815	40.0	39.0	
14 Acenaphthylene	152	7.566	7.574	-0.008	93	1211	20.0	19.7	
15 Acenaphthene	153	7.747	7.747	0.000	92	1100	20.0	21.1	M
16 Dibenzofuran	168	7.914	7.915	-0.001	96	1669	20.0	21.2	
17 Diethyl phthalate	149	8.109	8.118	-0.009	98	2364	40.2	52.1	
18 Fluorene	166	8.264	8.264	0.000	94	1151	20.0	18.9	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	767	20.0	20.4	
20 Phenanthrene	178	9.232	9.232	0.000	93	2118	20.0	20.7	
21 Anthracene	178	9.283	9.284	-0.001	1	1544	20.0	20.0	
22 Di-n-butyl phthalate	149	9.776	9.785	-0.009	1	2026	40.0	46.5	
23 Fluoranthene	202	10.632	10.641	-0.009	50	2149	20.0	19.7	
24 Pyrene	202	10.978	10.987	-0.009	50	2333	20.0	21.2	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.349	13.358	-0.009	77	1881	20.0	22.4	
27 Chrysene	228	13.430	13.439	-0.009	84	2118	20.0	20.5	
28 Bis(2-ethylhexyl) phthalat	149	12.106	12.115	-0.009	1	723	40.0	39.5	
29 Di-n-octyl phthalate	149		15.332				ND	ND	U
30 Benzo[b]fluoranthene	252	16.259	16.268	-0.009	72	2067	20.0	20.7	
31 Benzo[k]fluoranthene	252	16.338	16.347	-0.009	66	1767	20.0	18.1	M
32 Benzo[a]pyrene	252	17.195	17.213	-0.018	51	1718	20.0	21.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.511	20.529	-0.018	84	2309	20.0	22.9	M
34 Dibenz(a,h)anthracene	278	20.607	20.616	-0.009	93	2160	20.0	20.6	
35 Benzo[g,h,i]perylene	276	21.259	21.272	-0.013	86	2843	20.0	22.3	
$ 53 2-methylnaphthalene-d10	152	6.632	6.633	0.000	98	899	20.0	21.8	
$ 54 Fluoranthene-d10	212	10.615	10.615	0.000	21	1674	20.0	19.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

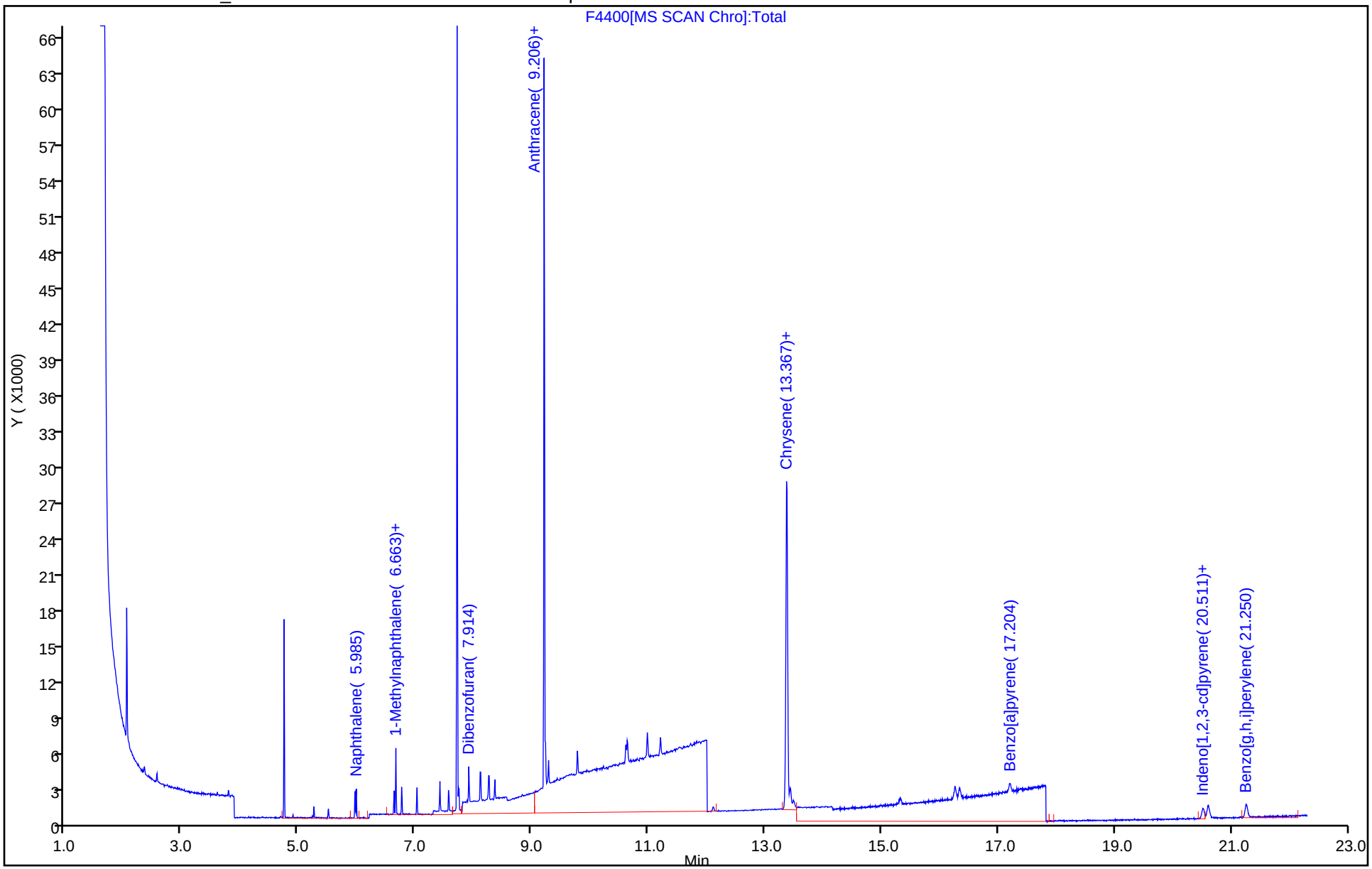
MS-SIMSL 0.02_00079 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D

Injection Date:	29-Oct-2018 17:02:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0002			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

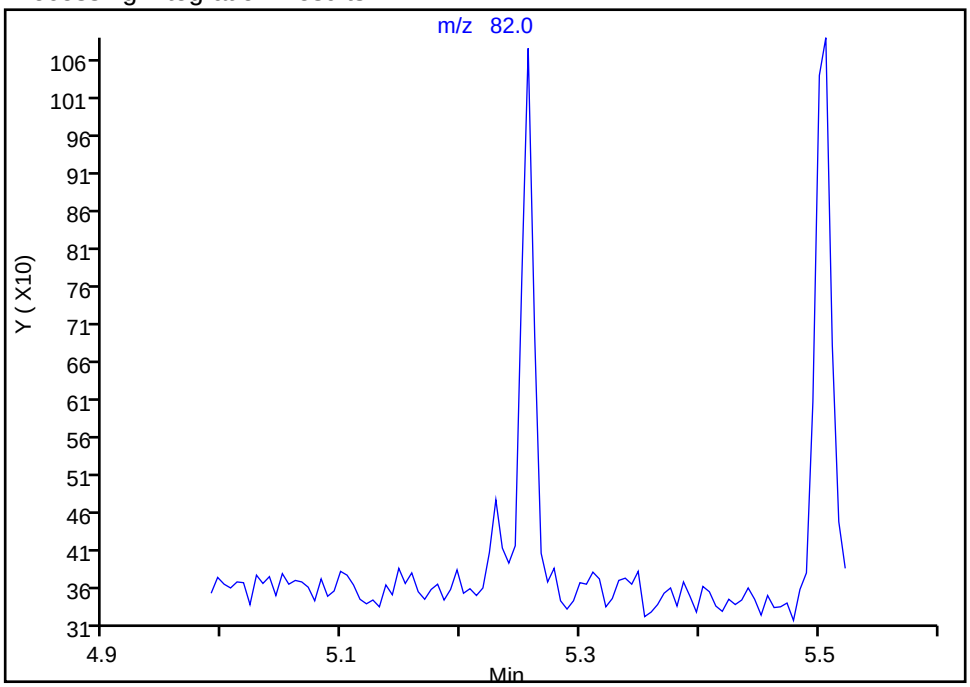
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

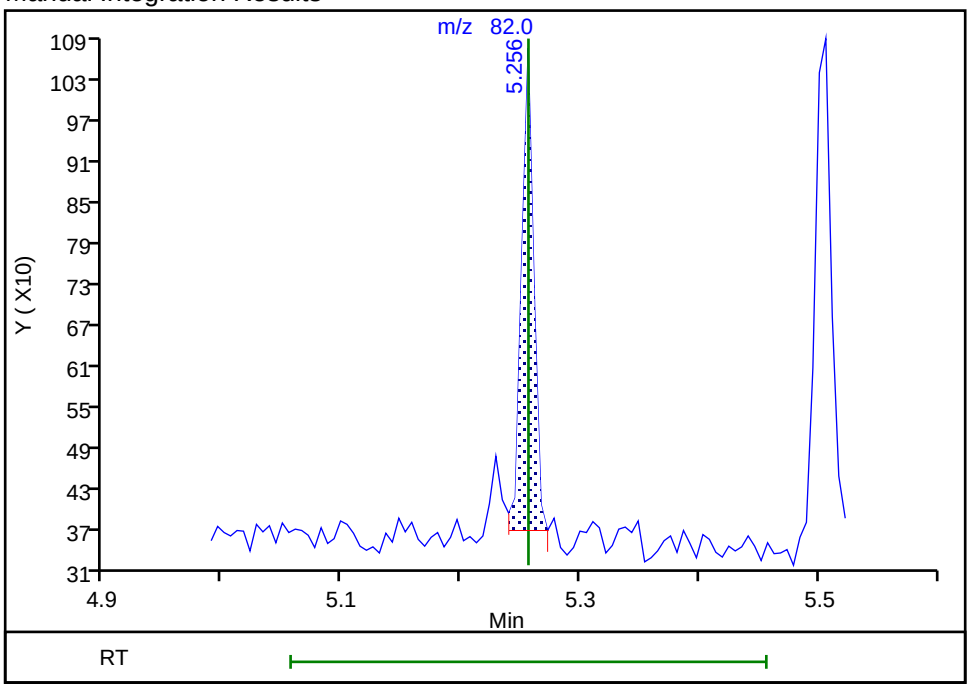
Processing Integration Results

Not Detected
Expected RT: 5.26



Manual Integration Results

RT: 5.26
Area: 504
Amount: 20.340835
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:03
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

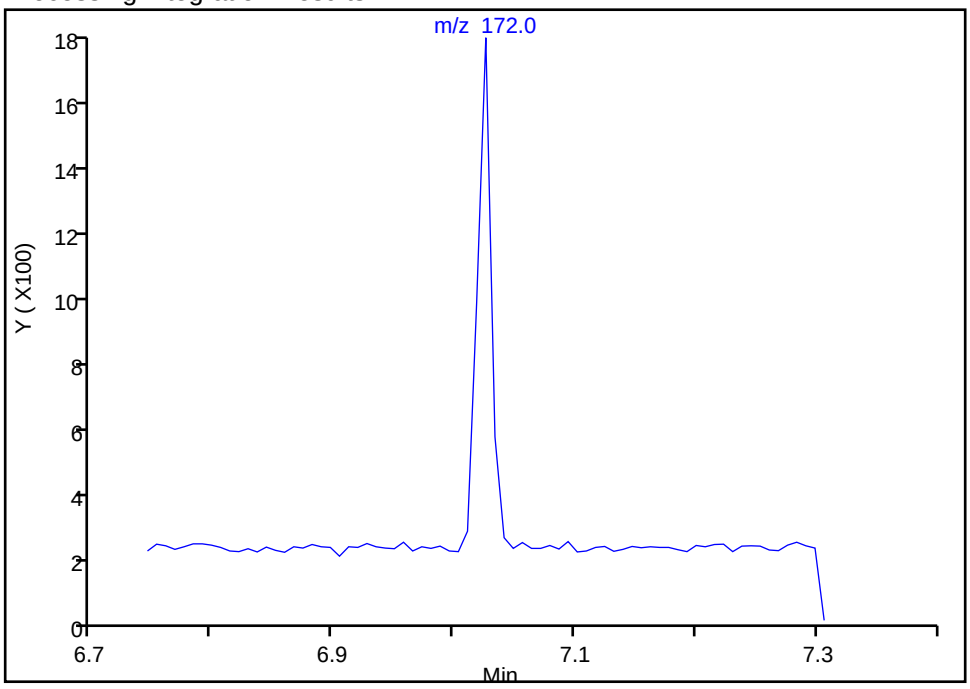
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 5 2-Fluorobiphenyl, CAS: 321-60-8

Signal: 1

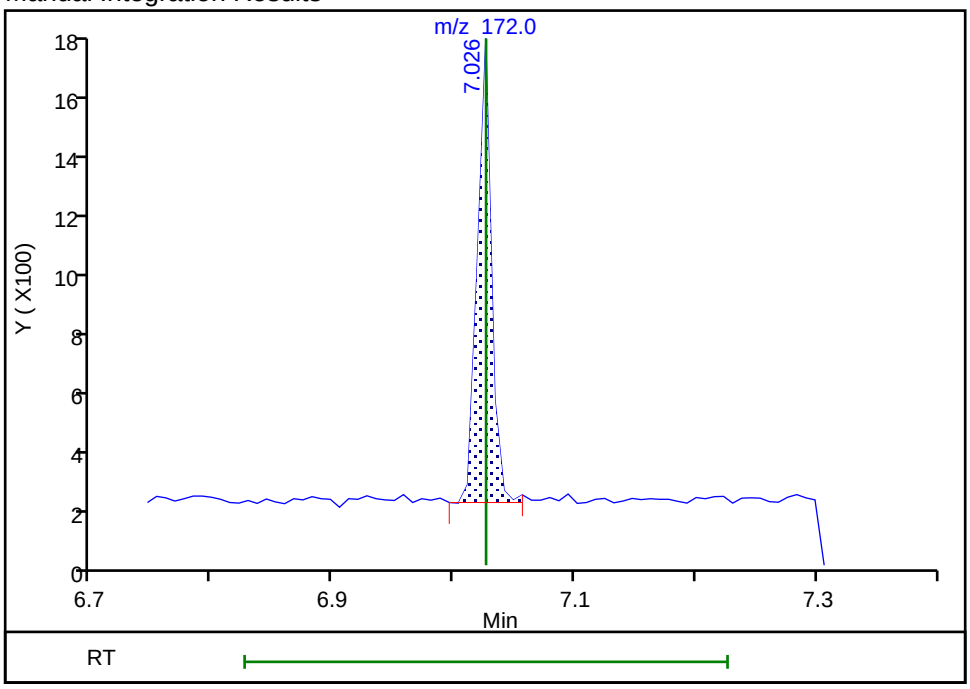
Not Detected
Expected RT: 7.03

Processing Integration Results



Manual Integration Results

RT: 7.03
Area: 1289
Amount: 21.389534
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:06
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

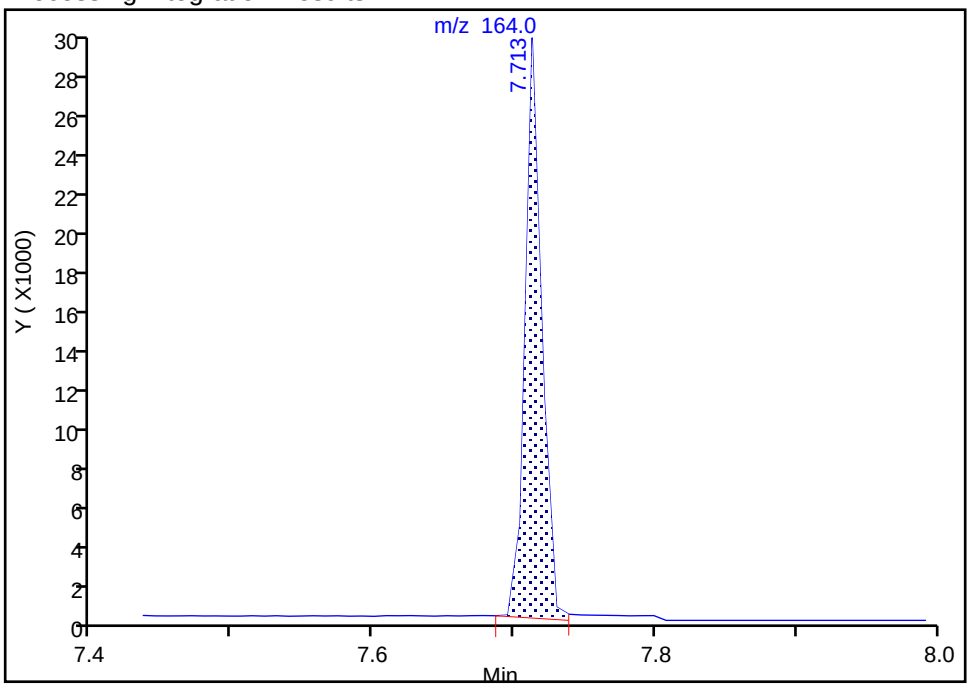
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

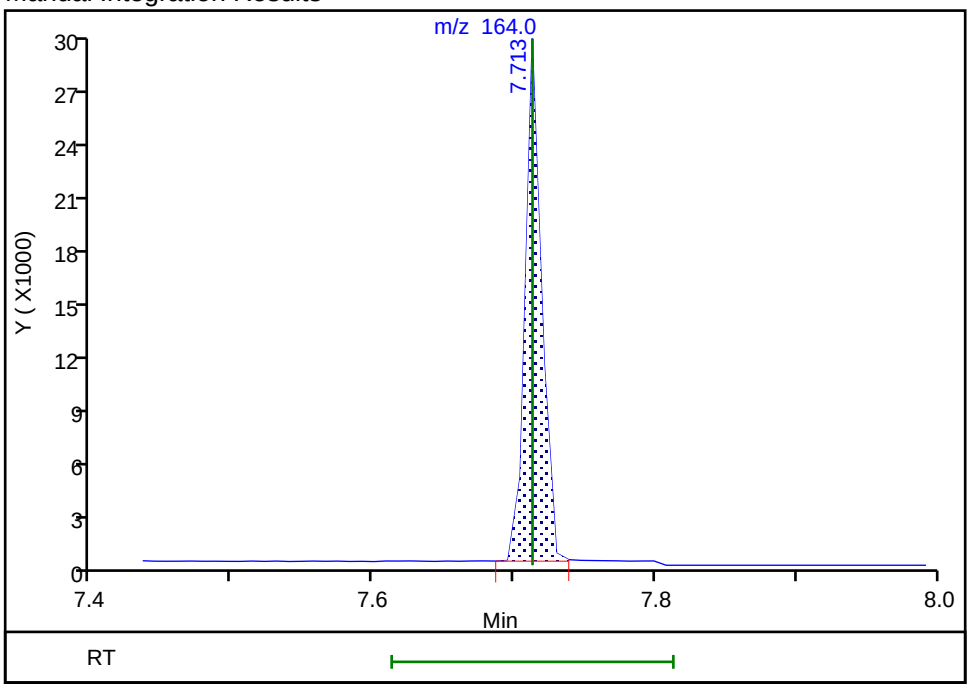
Processing Integration Results

RT: 7.71
Area: 24169
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 23761
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:09:51
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

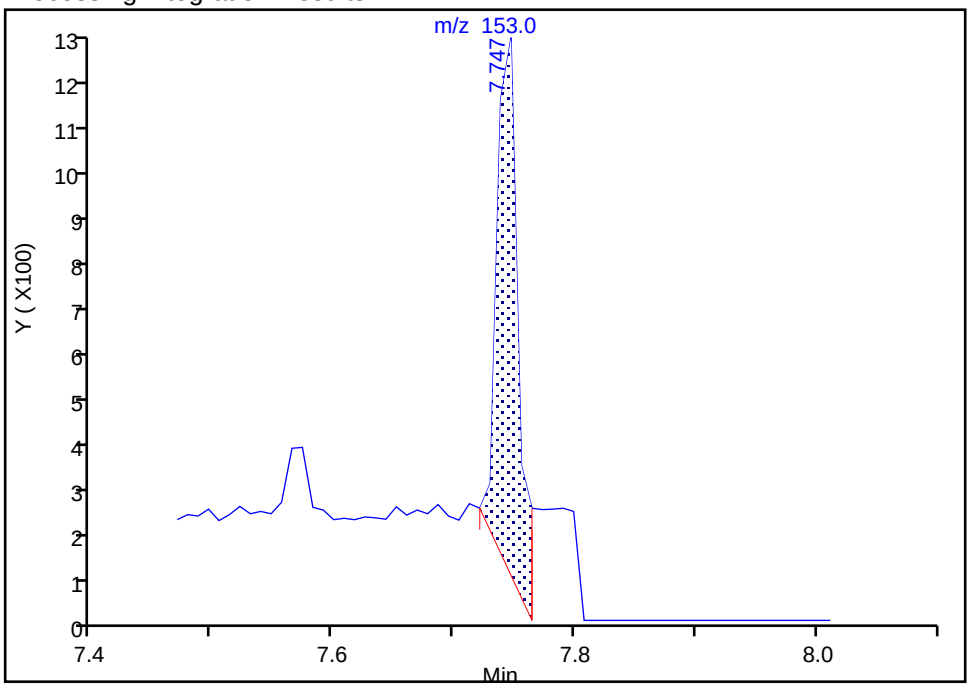
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

15 Acenaphthene, CAS: 83-32-9

Signal: 1

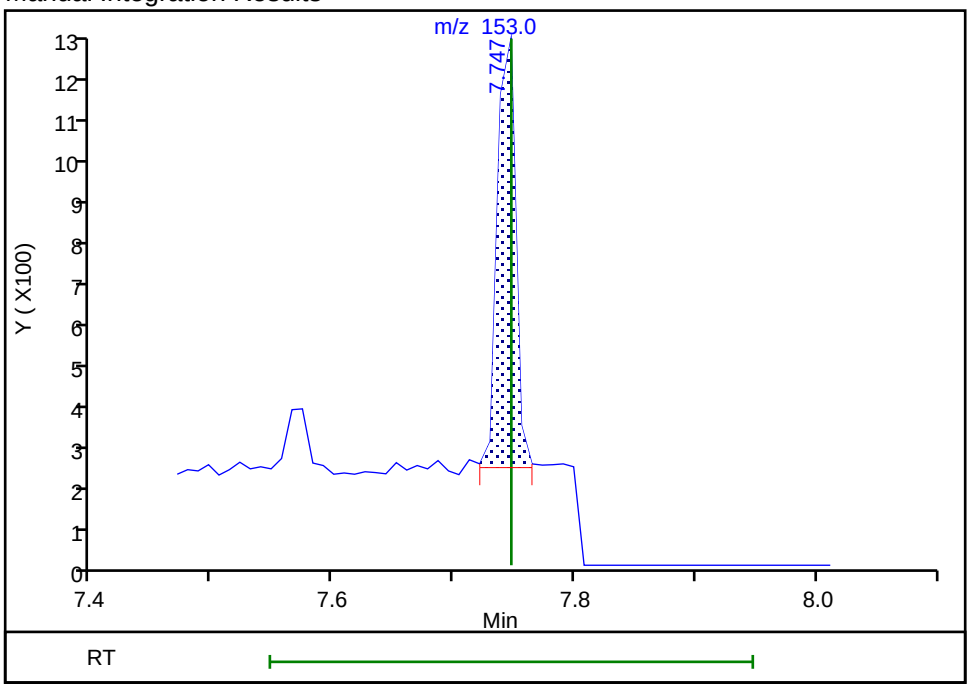
Processing Integration Results

RT: 7.75
Area: 1454
Amount: 25.981549
Amount Units: ng/ml



Manual Integration Results

RT: 7.75
Area: 1100
Amount: 21.109445
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:20
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

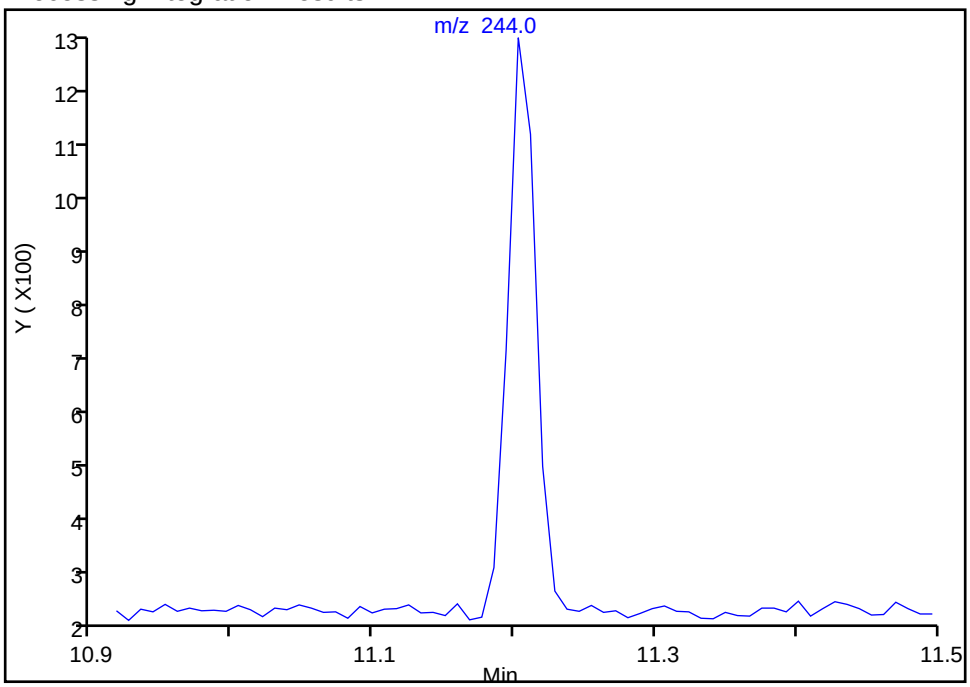
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 6 Terphenyl-d14, CAS: 1718-51-0

Signal: 1

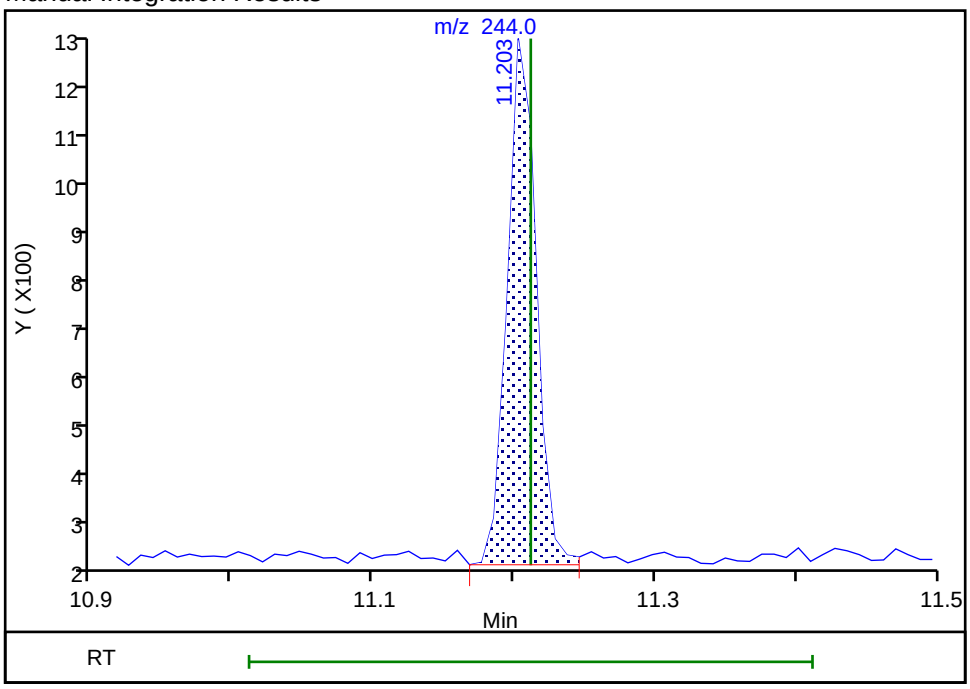
Not Detected
Expected RT: 11.21

Processing Integration Results



Manual Integration Results

RT: 11.20
Area: 1551
Amount: 20.744171
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:10
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

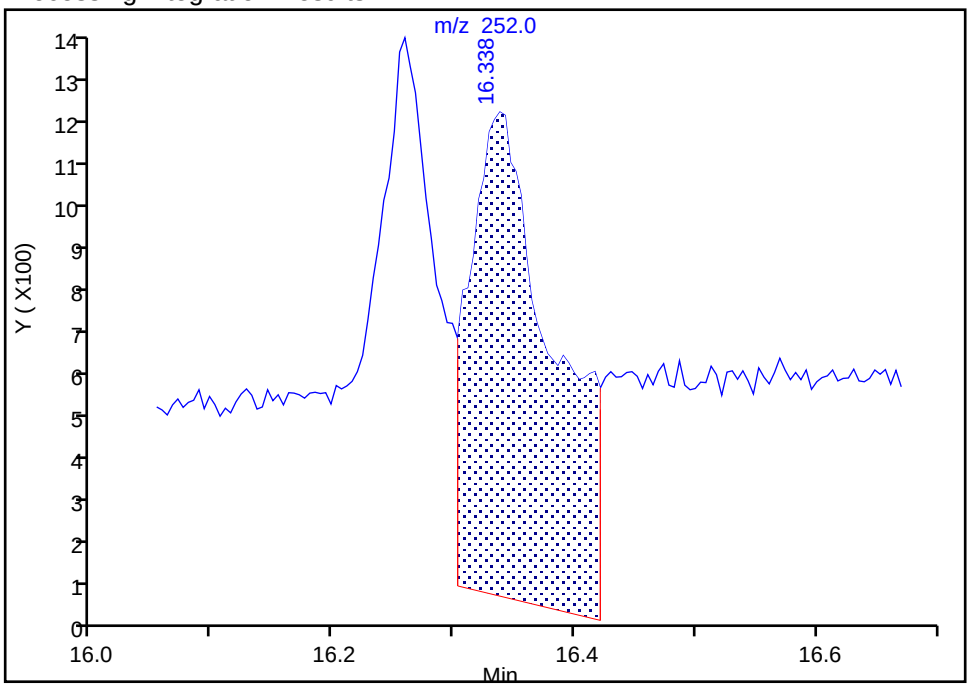
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

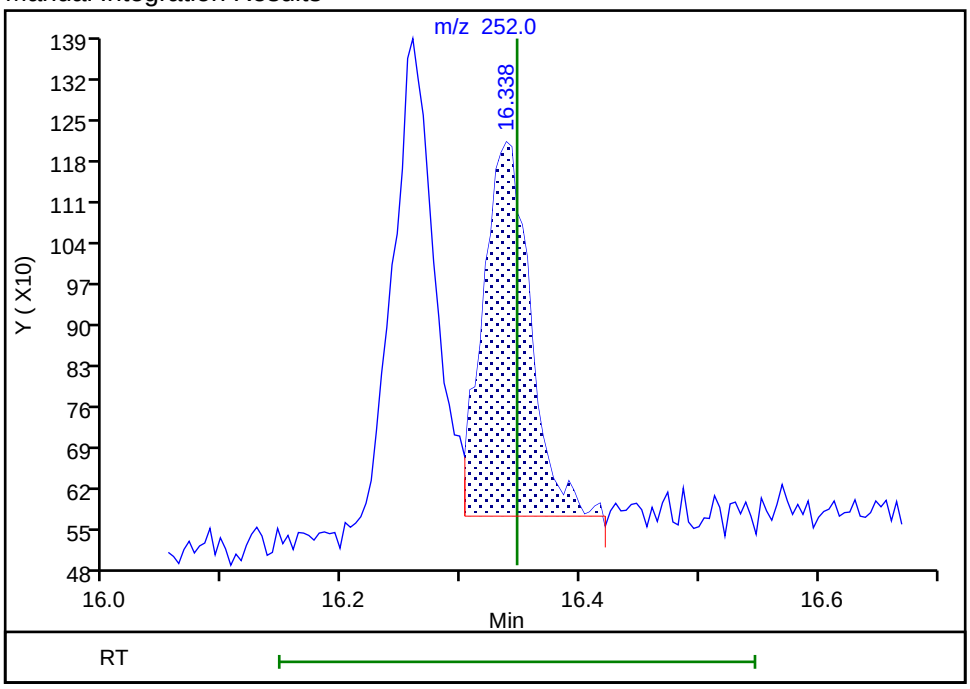
Processing Integration Results

RT: 16.34
Area: 5654
Amount: 40.212900
Amount Units: ng/ml



Manual Integration Results

RT: 16.34
Area: 1767
Amount: 18.057246
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:41
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

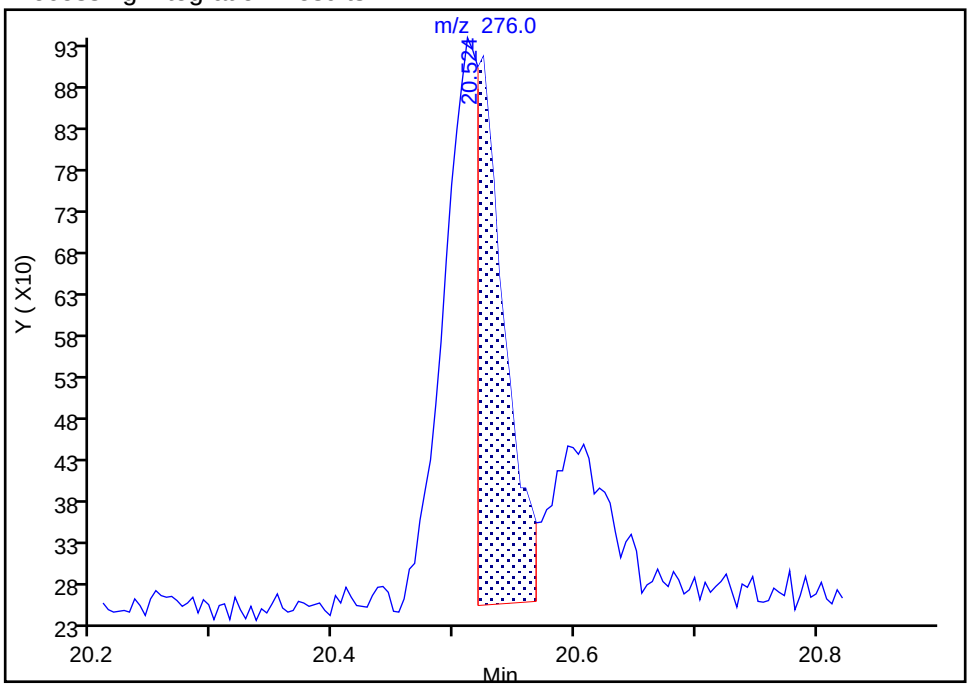
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

33 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

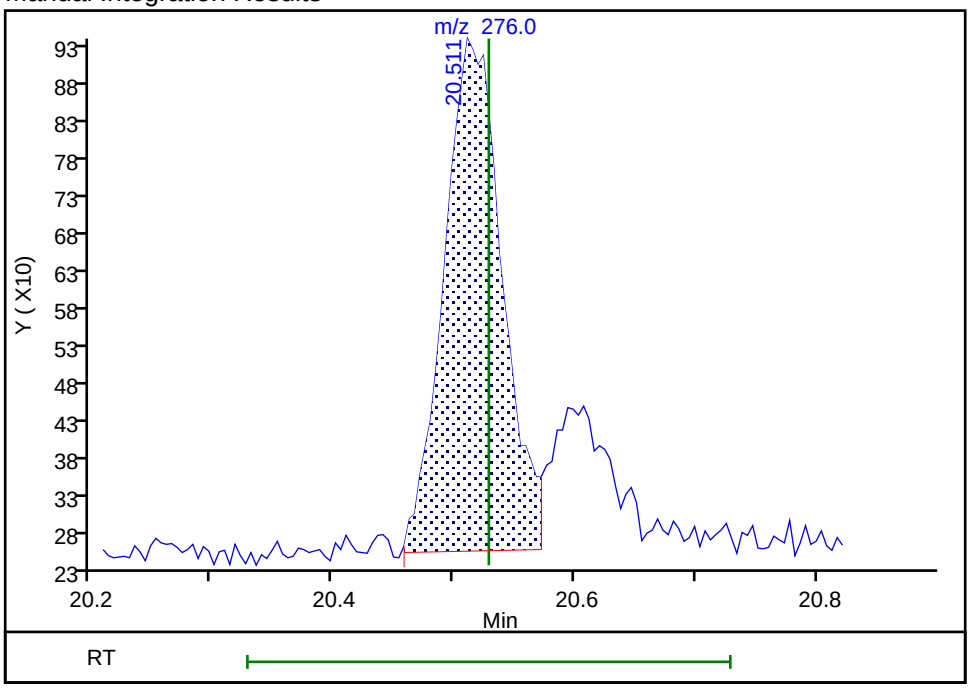
Processing Integration Results

RT: 20.52
Area: 1079
Amount: 13.124137
Amount Units: ng/ml



Manual Integration Results

RT: 20.51
Area: 2309
Amount: 22.898639
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:50
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 29-Oct-2018 21:58:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4401.D
Lims ID: STD0500
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Oct-2018 17:32:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0500
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:35 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:54:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	93	25461	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.214	-0.008	98	54456	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.376	-0.009	91	53401	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	96	1215	50.0	45.8	a
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	97	3096	50.0	47.9	
$ 6 Terphenyl-d14	244	11.203	11.211	-0.008	61	3595	50.0	44.7	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.564	2.557	0.007	24	1021	50.0	52.2	
10 Naphthalene	128	5.985	5.985	0.000	99	4085	50.0	47.9	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	100	5466	100.0	94.6	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	99	2467	50.0	47.4	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	4253	100.0	85.2	
14 Acenaphthylene	152	7.566	7.574	-0.008	98	2921	50.0	44.4	
15 Acenaphthene	153	7.739	7.747	-0.008	92	2537	50.0	45.4	
16 Dibenzofuran	168	7.915	7.915	0.000	96	3911	50.1	46.4	
17 Diethyl phthalate	149	8.109	8.118	-0.009	98	4645	100.4	95.5	
18 Fluorene	166	8.254	8.264	-0.010	89	2935	50.0	45.0	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	93	1864	50.0	46.0	
20 Phenanthrene	178	9.232	9.232	0.000	96	5059	50.0	45.9	
21 Anthracene	178	9.284	9.284	0.000	1	3559	50.0	43.0	
22 Di-n-butyl phthalate	149	9.776	9.785	-0.009	1	4749	100.0	99.7	
23 Fluoranthene	202	10.632	10.641	-0.009	92	5086	50.0	43.4	
24 Pyrene	202	10.978	10.987	-0.009	91	5223	50.0	44.2	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.358	-0.018	90	3978	50.0	43.9	
27 Chrysene	228	13.430	13.439	-0.009	97	5115	50.0	45.8	
28 Bis(2-ethylhexyl) phthalat	149	12.106	12.115	-0.009	1	1736	100.0	88.1	
29 Di-n-octyl phthalate	149	15.310	15.332	-0.022	1	3137	100.0	116.7	
30 Benzo[b]fluoranthene	252	16.251	16.268	-0.017	87	4983	50.0	46.4	
31 Benzo[k]fluoranthene	252	16.334	16.347	-0.013	82	4560	50.0	43.2	
32 Benzo[a]pyrene	252	17.191	17.213	-0.022	75	3944	50.0	46.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.511	20.529	-0.018	99	4946	50.0	45.5	
34 Dibenz(a,h)anthracene	278	20.599	20.616	-0.017	95	5119	50.0	45.3	
35 Benzo[g,h,i]perylene	276	21.251	21.272	-0.021	98	6234	50.0	45.3	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.001	93	2072	50.0	46.9	
$ 54 Fluoranthene-d10	212	10.606	10.615	-0.009	62	4194	50.0	46.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

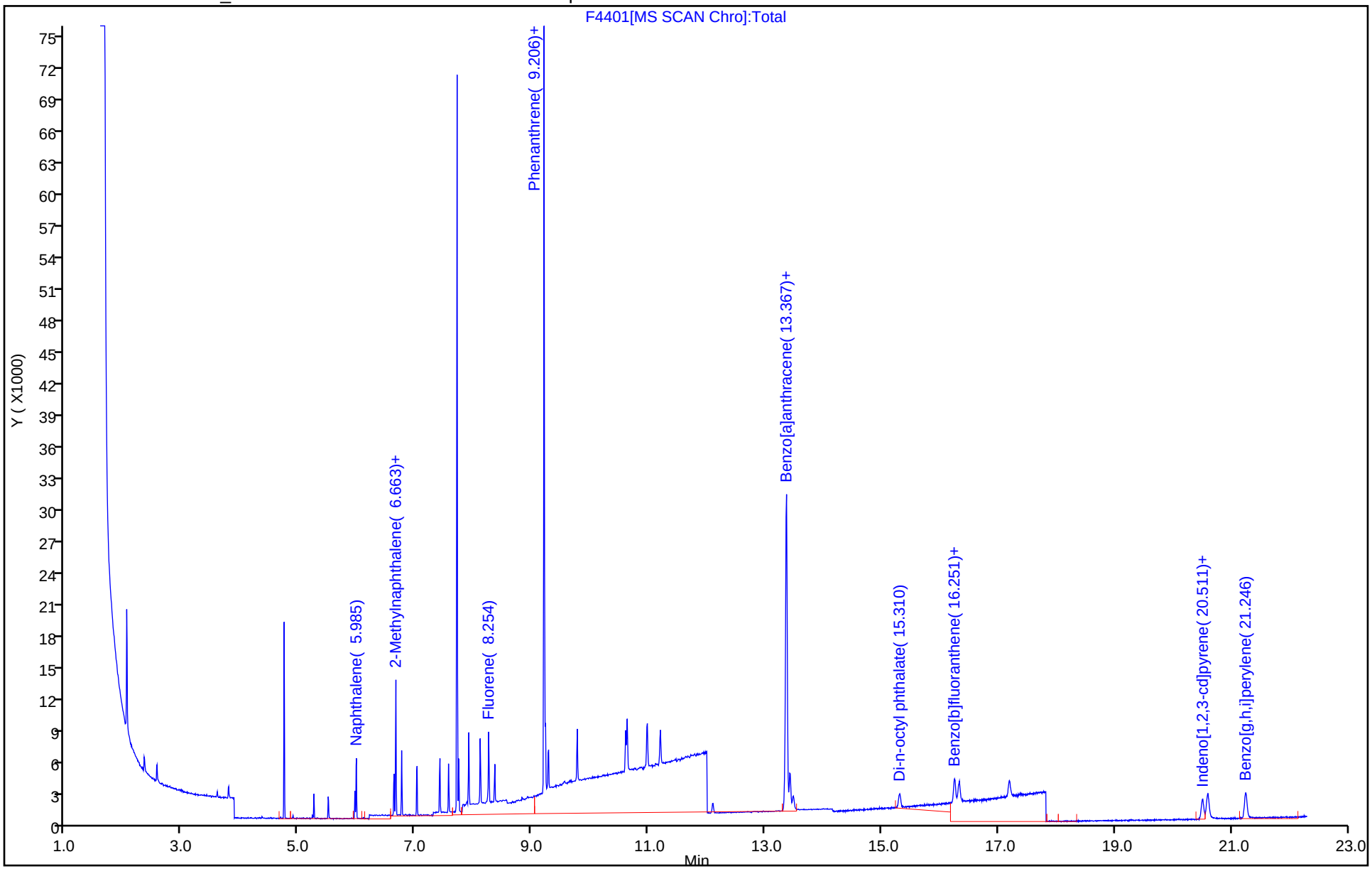
MS-SIMSL 0.05_00007 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4401.D

Injection Date:	29-Oct-2018 17:32:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0500			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

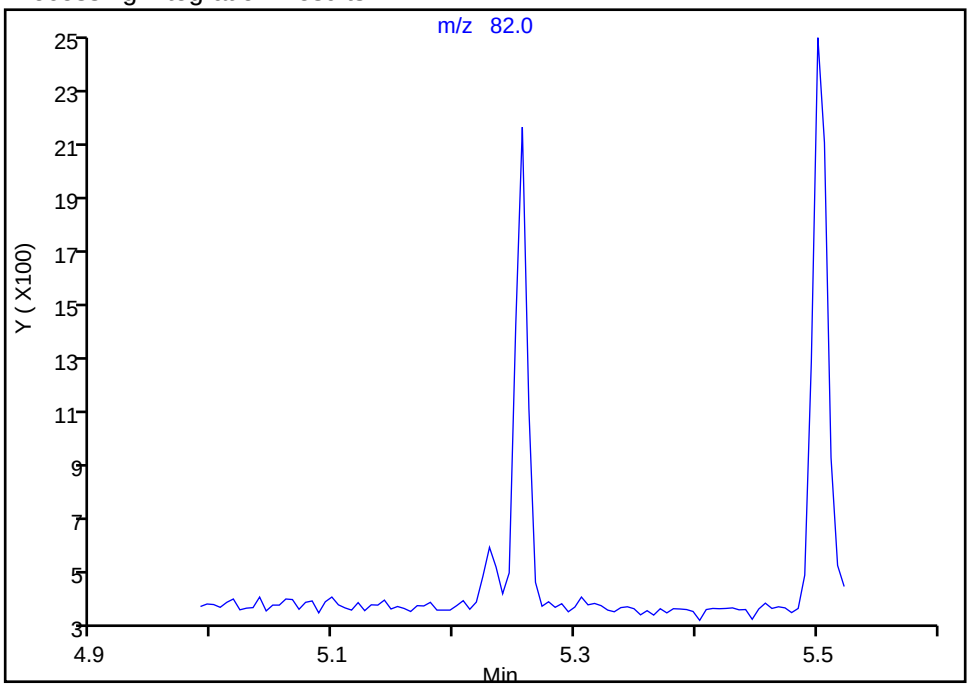
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4401.D
Injection Date: 29-Oct-2018 17:32:30 Instrument ID: SMS_F
Lims ID: STD0500
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

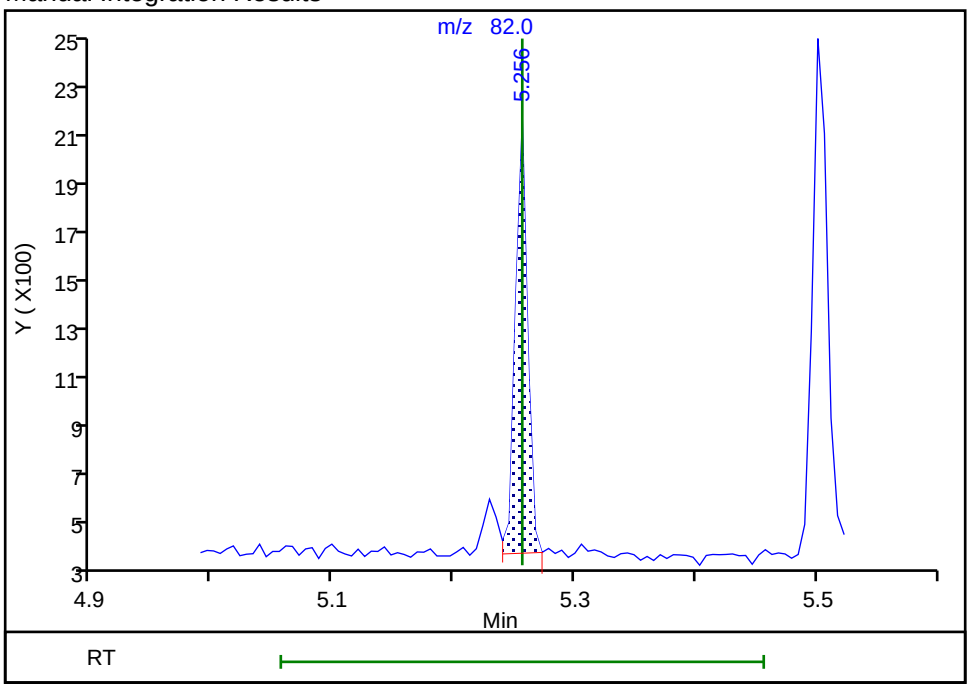
Not Detected
Expected RT: 5.26

Processing Integration Results



Manual Integration Results

RT: 5.26
Area: 1215
Amount: 45.761870
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:11:13
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Lims ID: STD0100
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Oct-2018 18:01:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0100
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:37 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 19:12:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	96	25360	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	54223	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.367	0.000	91	51705	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	97	2436	100.0	92.1	
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	98	6210	100.0	96.6	
$ 6 Terphenyl-d14	244	11.203	11.203	0.000	88	7287	100.0	91.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.563	2.563	0.000	32	1907	100.0	97.8	
10 Naphthalene	128	5.980	5.980	0.000	100	8519	100.0	100.3	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	99	11219	200.0	195.0	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	99	5042	100.0	97.2	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	8891	200.0	178.9	
14 Acenaphthylene	152	7.566	7.566	0.000	100	5834	100.0	89.0	
15 Acenaphthene	153	7.739	7.739	0.000	95	5430	100.0	97.6	M
16 Dibenzofuran	168	7.915	7.915	0.000	95	8017	100.1	95.5	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	8830	200.8	182.3	
18 Fluorene	166	8.254	8.254	0.000	91	6068	100.0	93.5	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	94	3831	100.0	95.0	
20 Phenanthrene	178	9.223	9.223	0.000	99	10412	100.0	94.8	
21 Anthracene	178	9.275	9.275	0.000	1	6933	100.0	84.0	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	9634	200.0	199.8	
23 Fluoranthene	202	10.632	10.632	0.000	96	10244	100.0	87.8	
24 Pyrene	202	10.969	10.969	0.000	95	10444	100.0	88.8	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	93	7777	100.0	88.7	
27 Chrysene	228	13.430	13.430	0.000	97	10237	100.0	94.7	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	3311	200.0	168.7	
29 Di-n-octyl phthalate	149	15.306	15.306	0.000	1	6237	200.0	218.5	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	95	9850	100.0	94.7	
31 Benzo[k]fluoranthene	252	16.329	16.329	0.000	92	9057	100.0	88.7	M
32 Benzo[a]pyrene	252	17.186	17.186	0.000	87	7494	100.0	91.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.507	20.507	0.000	97	10324	100.0	98.1	
34 Dibenz(a,h)anthracene	278	20.599	20.599	0.000	89	10691	100.0	97.7	
35 Benzo[g,h,i]perylene	276	21.250	21.250	0.000	99	13270	100.0	99.6	
$ 53 2-methylnaphthalene-d10	152	6.632	6.632	0.000	92	4254	100.0	96.7	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	84	8298	100.0	91.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

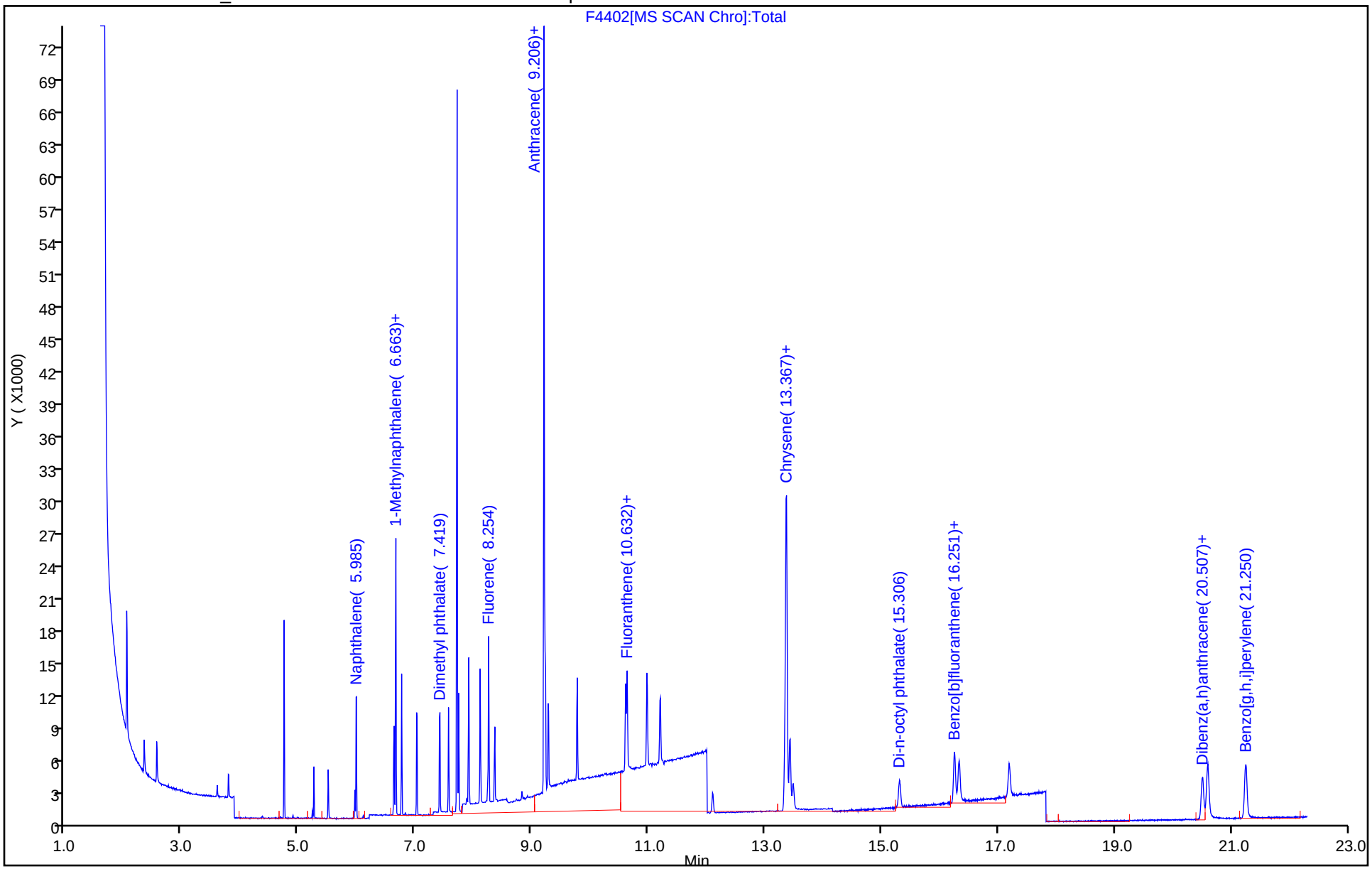
MS-SIMSL 0.1_00075 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D

Injection Date:	29-Oct-2018 18:01:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0100			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

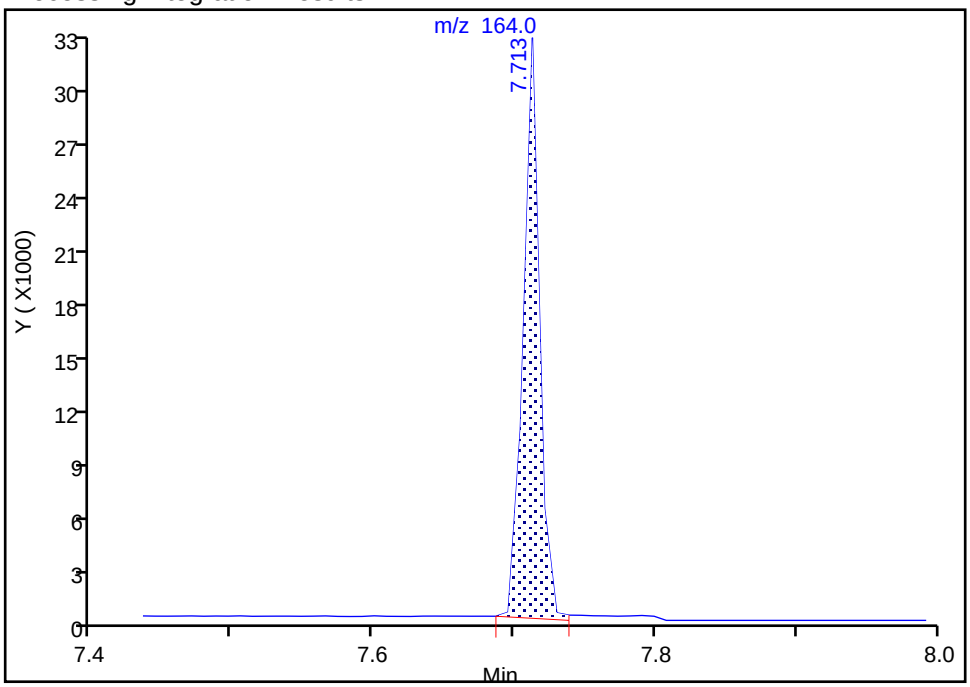
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Injection Date: 29-Oct-2018 18:01:30 Instrument ID: SMS_F
Lims ID: STD0100
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

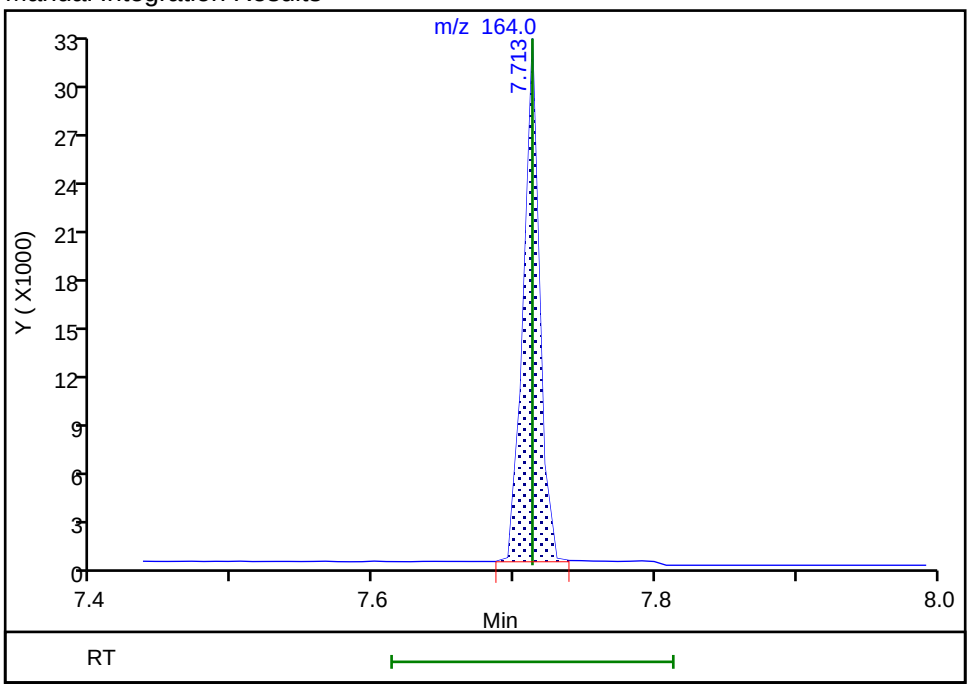
Processing Integration Results

RT: 7.71
Area: 25715
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 25360
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:11:59
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

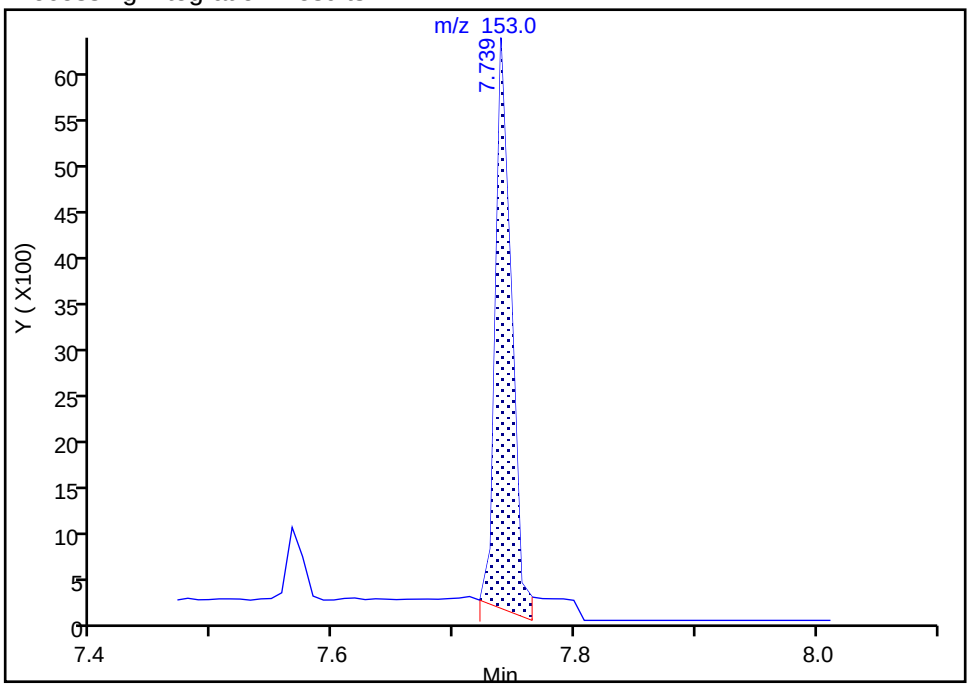
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Injection Date: 29-Oct-2018 18:01:30 Instrument ID: SMS_F
Lims ID: STD0100
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

15 Acenaphthene, CAS: 83-32-9

Signal: 1

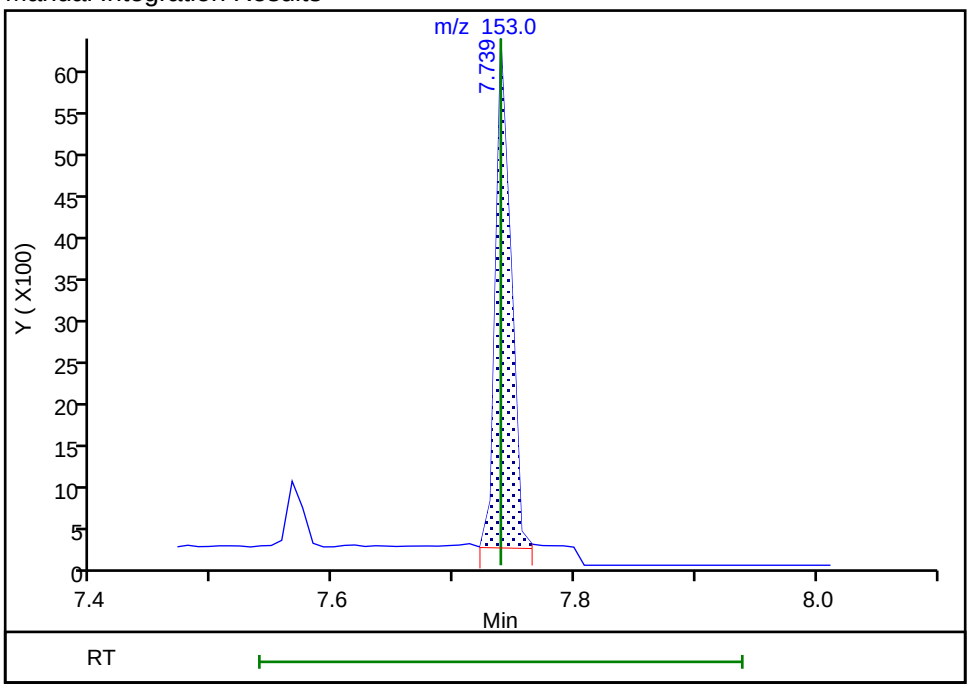
Processing Integration Results

RT: 7.74
Area: 5737
Amount: 103.0078
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 5430
Amount: 97.633625
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:12:13
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

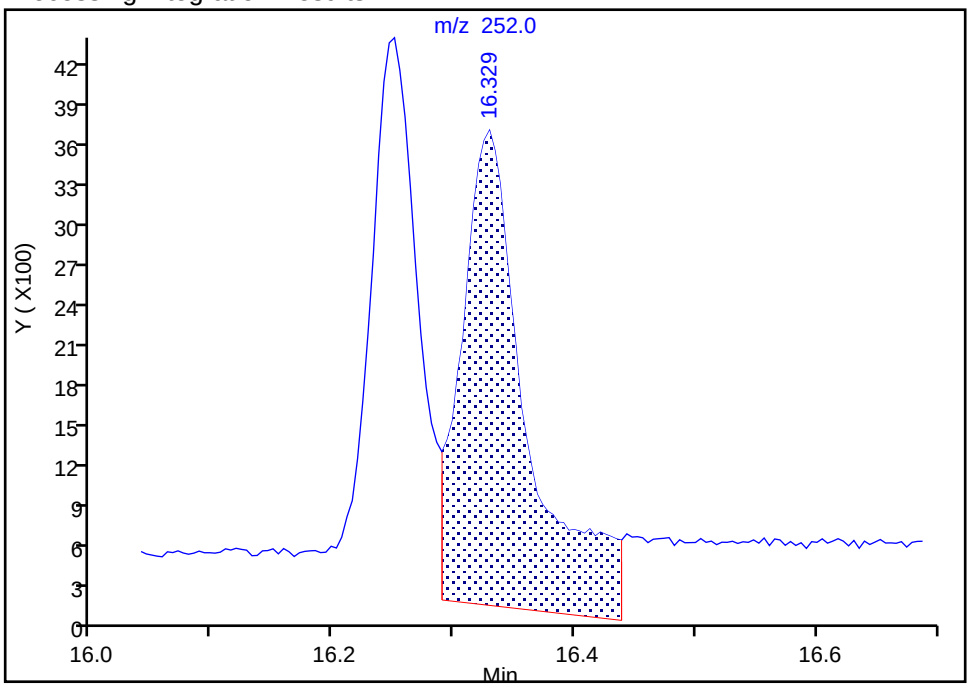
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Injection Date: 29-Oct-2018 18:01:30 Instrument ID: SMS_F
Lims ID: STD0100
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

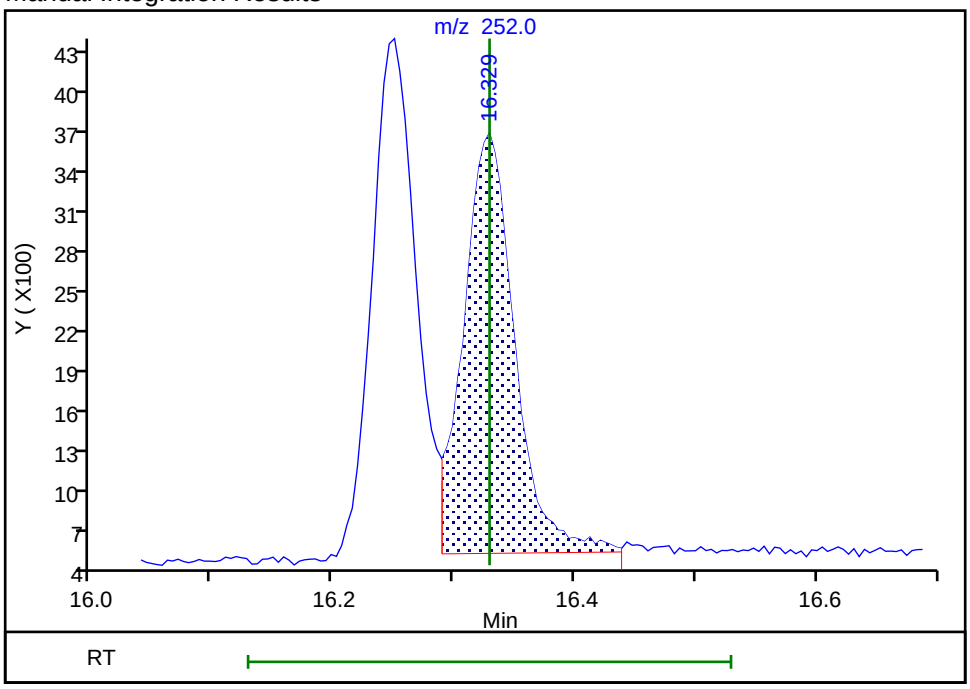
Processing Integration Results

RT: 16.33
Area: 13516
Amount: 116.2875
Amount Units: ng/ml



Manual Integration Results

RT: 16.33
Area: 9057
Amount: 88.663297
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:12:31
Audit Action: Assigned New Baseline Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D
Lims ID: STD0300
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Oct-2018 18:31:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0300
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:40 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 19:14:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	24734	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	98	53830	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.367	0.000	93	53371	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	99	7134	300.0	276.6	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	99	18332	300.0	292.2	
$ 6 Terphenyl-d14	244	11.203	11.203	0.000	97	25400	300.0	319.4	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.563	-0.006	31	5372	300.0	282.6	
10 Naphthalene	128	5.980	5.980	0.000	100	24560	300.0	296.5	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	98	33550	600.0	597.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	98	15015	300.0	296.7	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	27212	600.0	561.3	
14 Acenaphthylene	152	7.566	7.566	0.000	100	17771	300.0	278.1	
15 Acenaphthene	153	7.739	7.739	0.000	96	16055	300.0	296.0	M
16 Dibenzofuran	168	7.915	7.915	0.001	94	23943	300.3	292.6	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	24452	602.4	517.7	
18 Fluorene	166	8.254	8.254	0.000	93	18400	300.0	290.7	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	93	11463	300.0	286.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	31665	300.0	290.3	
21 Anthracene	178	9.275	9.275	0.000	1	22115	300.0	270.0	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	29593	600.0	586.9	
23 Fluoranthene	202	10.632	10.632	0.000	100	32871	300.0	283.7	
24 Pyrene	202	10.969	10.969	0.000	98	32223	300.0	275.9	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	60	24476	300.0	270.3	
27 Chrysene	228	13.430	13.430	0.000	95	32528	300.0	291.6	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	9865	600.0	506.2	
29 Di-n-octyl phthalate	149	15.306	15.306	0.000	1	18714	600.0	584.7	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	100	30648	300.0	285.4	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	99	29499	300.0	279.8	M
32 Benzo[a]pyrene	252	17.191	17.186	0.005	99	22609	300.0	266.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.502	20.507	-0.005	92	30679	300.0	282.4	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	85	32389	300.0	286.8	
35 Benzo[g,h,i]perylene	276	21.246	21.250	-0.004	95	39963	300.0	290.5	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	90	12582	300.0	293.2	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	96	25942	300.0	288.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

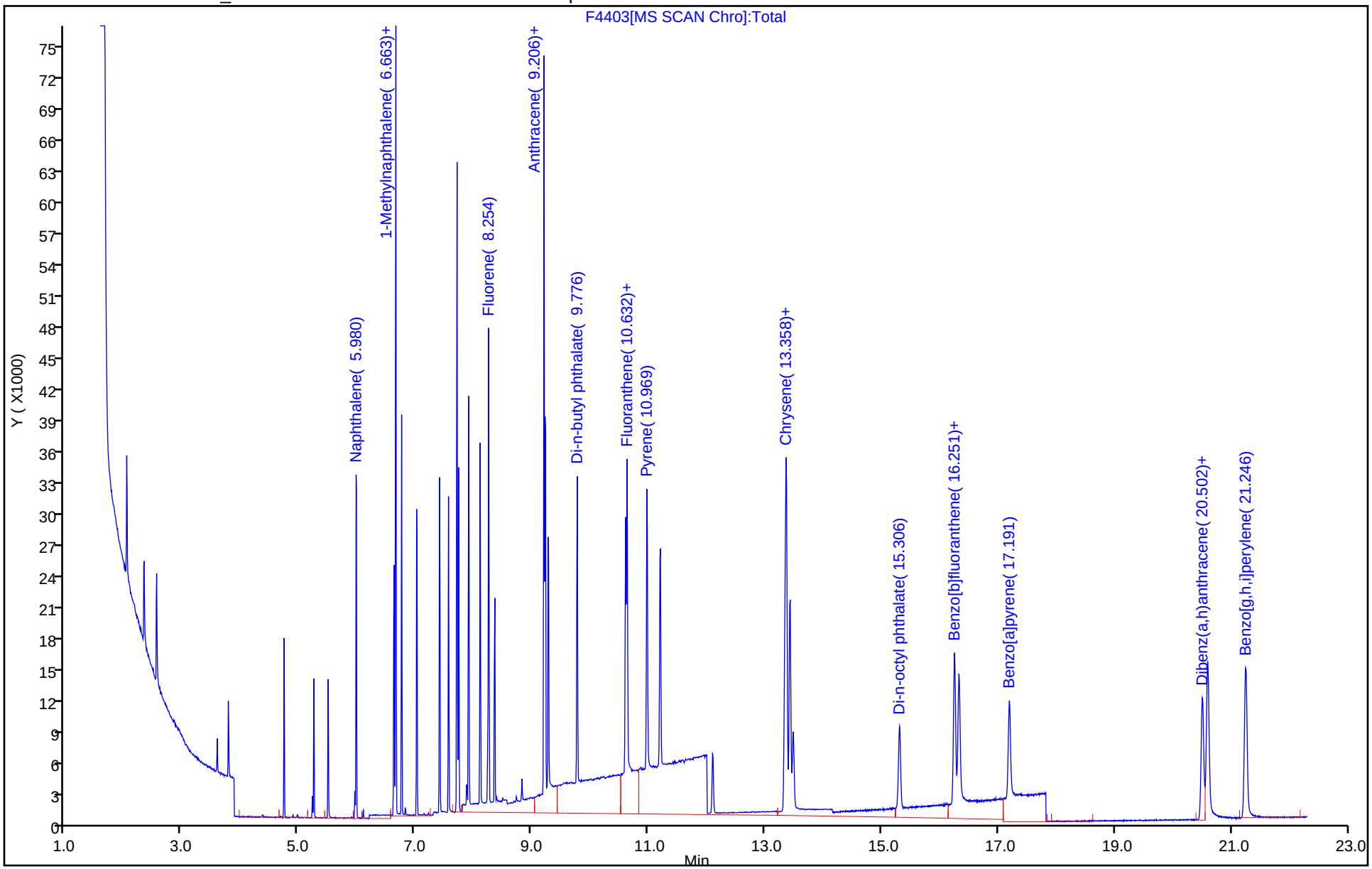
MS-SIMSL 0.3_00074 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D

Injection Date:	29-Oct-2018 18:31:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0300			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

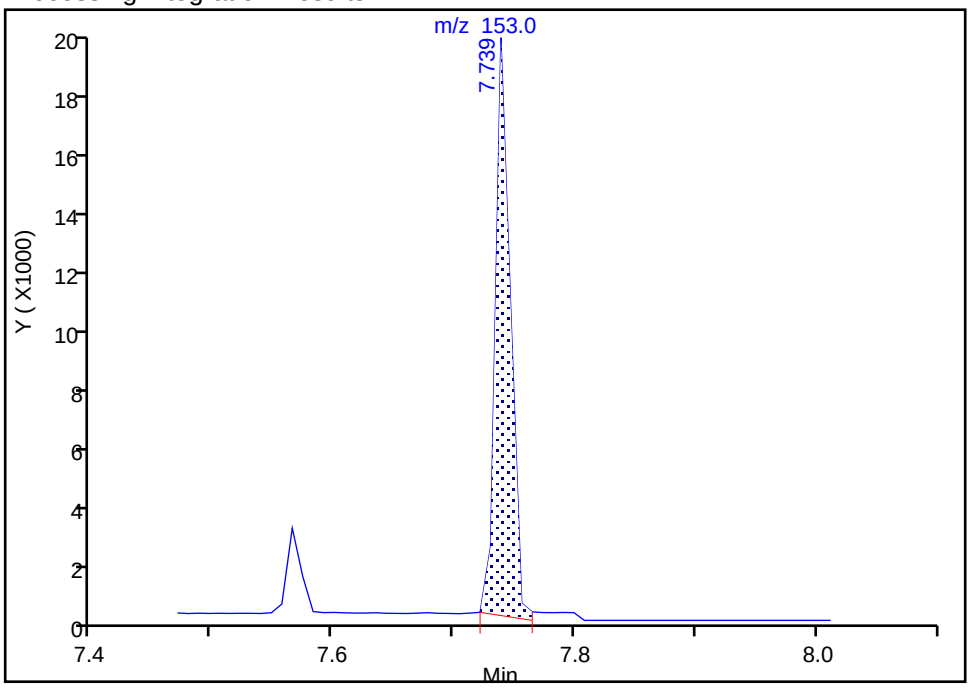
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D
Injection Date: 29-Oct-2018 18:31:30 Instrument ID: SMS_F
Lims ID: STD0300
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

15 Acenaphthene, CAS: 83-32-9

Signal: 1

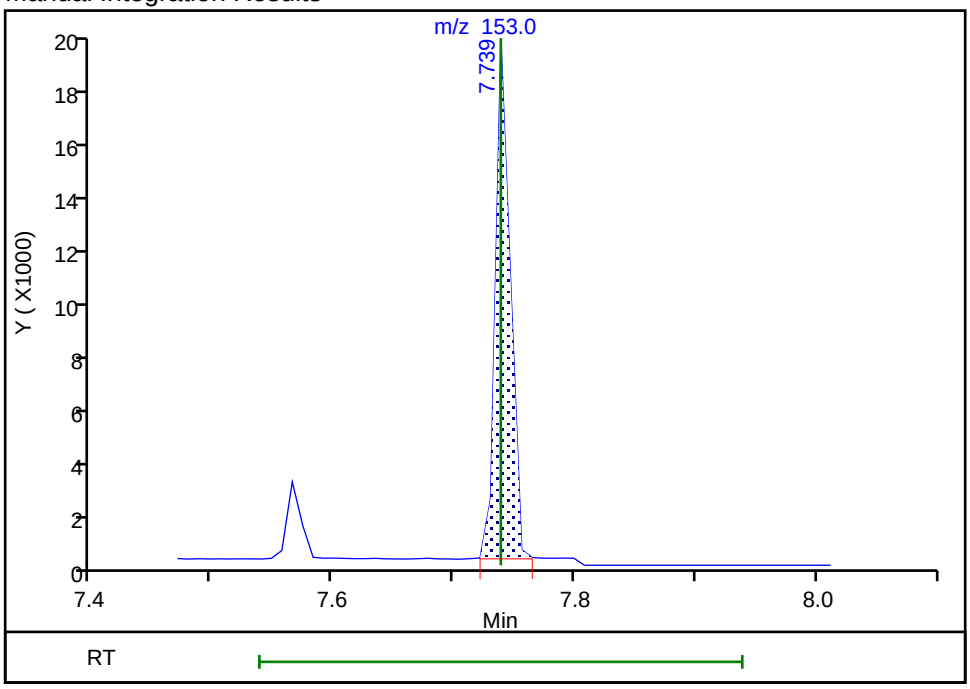
Processing Integration Results

RT: 7.74
Area: 16366
Amount: 304.0823
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 16055
Amount: 295.9817
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:13:25
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

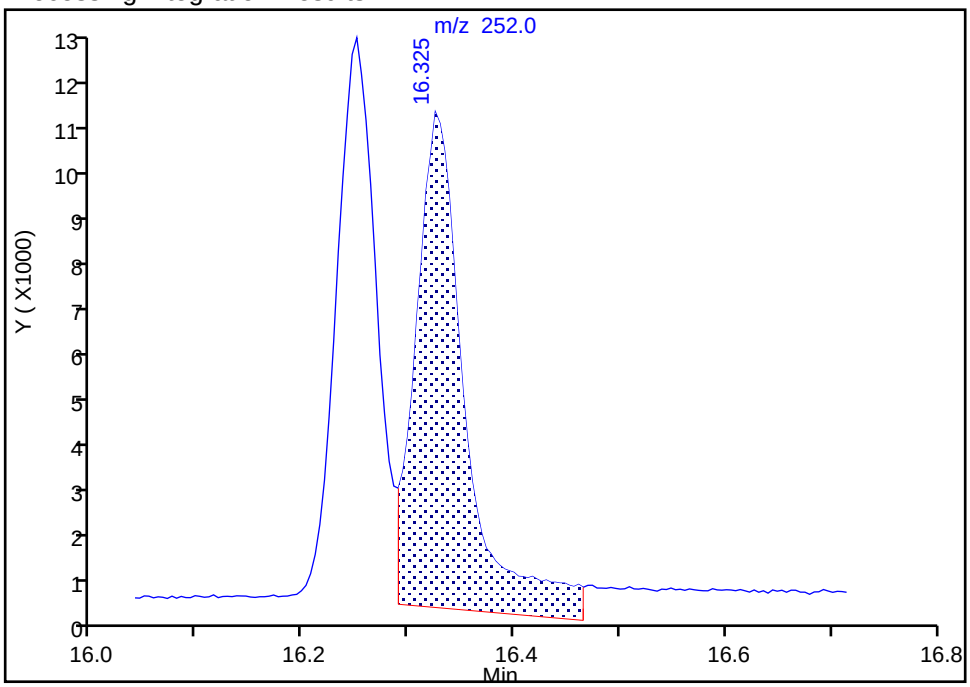
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D
Injection Date: 29-Oct-2018 18:31:30 Instrument ID: SMS_F
Lims ID: STD0300
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

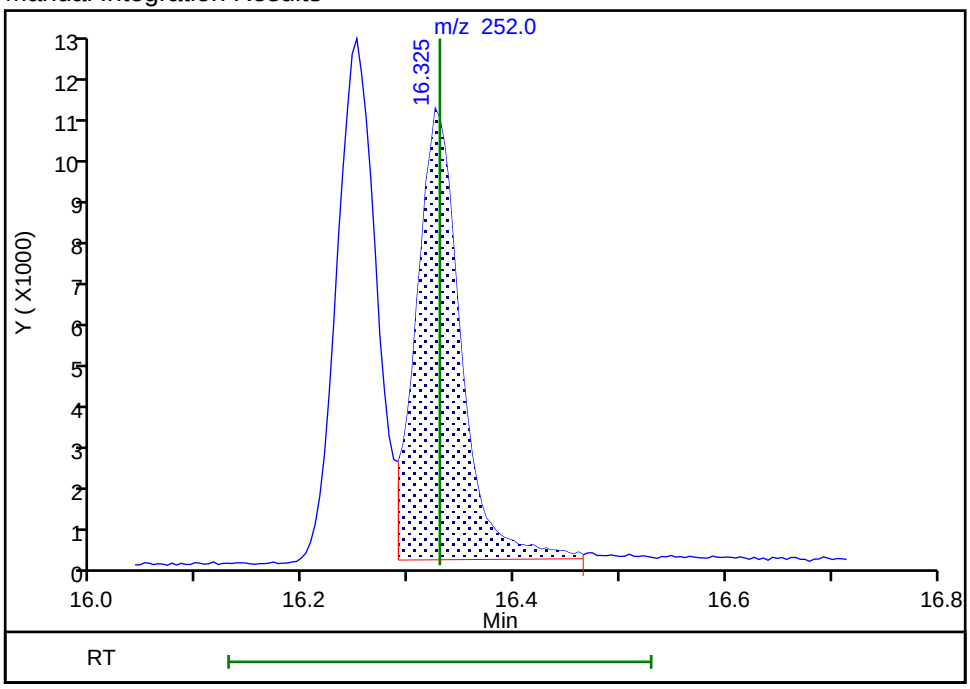
Processing Integration Results

RT: 16.32
Area: 34013
Amount: 341.2154
Amount Units: ng/ml



Manual Integration Results

RT: 16.32
Area: 29499
Amount: 279.7654
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:13:49
Audit Action: Assigned New Baseline Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4404.D
Lims ID: STD1200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Oct-2018 19:01:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std1200
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:43 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:55:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	98	33605	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	73455	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.367	0.000	98	78570	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	39792	1200.0	1135.5	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	97251	1200.0	1141.0	
$ 6 Terphenyl-d14	244	11.203	11.203	0.000	99	126747	1200.0	1168.1	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.551	2.563	-0.012	43	30045	1200.0	1163.2	
10 Naphthalene	128	5.980	5.980	0.000	100	129326	1200.0	1149.2	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	179548	2400.0	2355.2	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	79998	1200.0	1163.6	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	159540	2400.0	2422.1	
14 Acenaphthylene	152	7.566	7.566	0.000	99	104551	1200.0	1204.2	
15 Acenaphthene	153	7.739	7.739	0.000	97	86093	1200.0	1168.2	
16 Dibenzofuran	168	7.915	7.915	0.001	92	129484	1201.2	1164.6	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	157153	2409.6	2449.0	
18 Fluorene	166	8.255	8.254	0.001	95	103673	1200.0	1205.4	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	61347	1200.0	1122.6	
20 Phenanthrene	178	9.223	9.223	0.000	100	172037	1200.0	1156.0	
21 Anthracene	178	9.275	9.275	0.000	1	133735	1200.0	1196.5	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	202164	2400.0	2391.8	
23 Fluoranthene	202	10.632	10.632	0.000	100	187968	1200.0	1188.7	
24 Pyrene	202	10.970	10.969	0.001	99	184722	1200.0	1159.2	
25 Butyl benzyl phthalate	149	10.970	10.987	-0.017	1	1353	2400.0	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	42	152521	1200.0	1144.3	
27 Chrysene	228	13.421	13.430	-0.009	95	191863	1200.0	1168.3	
28 Bis(2-ethylhexyl) phthalat	149	12.106	12.097	0.009	1	68082	2400.0	2560.2	
29 Di-n-octyl phthalate	149	15.310	15.306	0.004	1	121239	2400.0	2251.6	
30 Benzo[b]fluoranthene	252	16.246	16.251	-0.005	97	181300	1200.0	1146.6	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	98	201669	1200.0	1299.2	
32 Benzo[a]pyrene	252	17.191	17.186	0.005	95	143629	1200.0	1151.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.507	20.507	0.000	90	174647	1200.0	1091.9	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	83	191031	1200.0	1149.0	
35 Benzo[g,h,i]perylene	276	21.251	21.250	0.001	93	218564	1200.0	1079.3	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	89	66535	1200.0	1141.3	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	100	147296	1200.0	1199.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

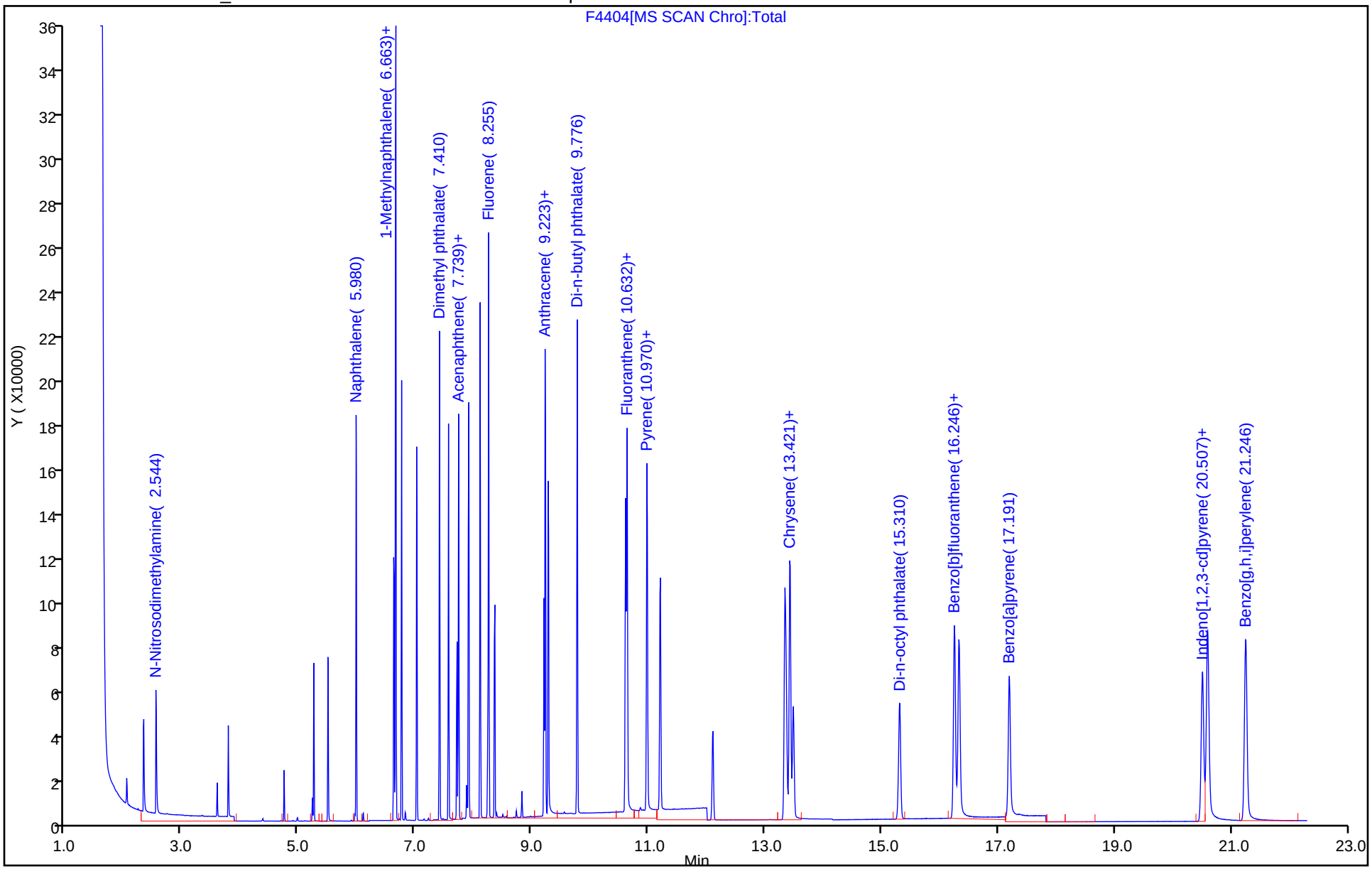
MS-SIMSL 1.2_00075 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4404.D

Injection Date:	29-Oct-2018 19:01:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD1200			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4405.D
Lims ID: STD2500
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 29-Oct-2018 19:31:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std2500
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:45 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 20:07:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	23383	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	51550	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.367	-0.009	47	56197	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	66335	2500.0	2720.5	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	161780	2500.0	2728.0	
$ 6 Terphenyl-d14	244	11.194	11.203	-0.009	98	215115	2500.0	2824.9	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.544	2.563	-0.019	44	47383	2500.0	2636.4	
10 Naphthalene	128	5.980	5.980	0.000	100	208192	2500.0	2658.7	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	291162	5000.0	5488.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	130622	2500.0	2730.6	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	278989	5000.0	6087.2	
14 Acenaphthylene	152	7.566	7.566	0.000	99	182035	2500.0	3013.2	
15 Acenaphthene	153	7.739	7.739	0.000	97	142141	2500.0	2771.8	
16 Dibenzofuran	168	7.915	7.915	0.001	91	215284	2502.5	2782.8	
17 Diethyl phthalate	149	8.109	8.109	0.000	99	274435	5020.0	6146.1	
18 Fluorene	166	8.254	8.254	0.000	96	176625	2500.0	2951.4	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	91	104402	2500.0	2722.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	284570	2500.0	2724.6	
21 Anthracene	178	9.275	9.275	0.000	1	236321	2500.0	3012.8	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	376147	5000.0	5000.8	
23 Fluoranthene	202	10.632	10.632	0.000	100	323789	2500.0	2917.6	
24 Pyrene	202	10.969	10.969	0.000	99	315592	2500.0	2822.0	
25 Butyl benzyl phthalate	149	10.969	10.987	-0.018	1	2047	5000.0	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	38	267604	2500.0	2807.1	
27 Chrysene	228	13.421	13.430	-0.009	94	323973	2500.0	2758.1	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	131365	5000.0	7039.1	
29 Di-n-octyl phthalate	149	15.310	15.306	0.004	1	230150	5000.0	5063.6	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	97	309018	2500.0	2732.5	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	97	338217	2500.0	3046.3	
32 Benzo[a]pyrene	252	17.191	17.186	0.005	95	263293	2500.0	2950.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.502	20.507	-0.005	90	294007	2500.0	2569.8	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	83	319437	2500.0	2686.2	
35 Benzo[g,h,i]perylene	276	21.251	21.250	0.001	93	362369	2500.0	2501.9	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	88	108683	2500.0	2679.3	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	100	250239	2500.0	2904.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

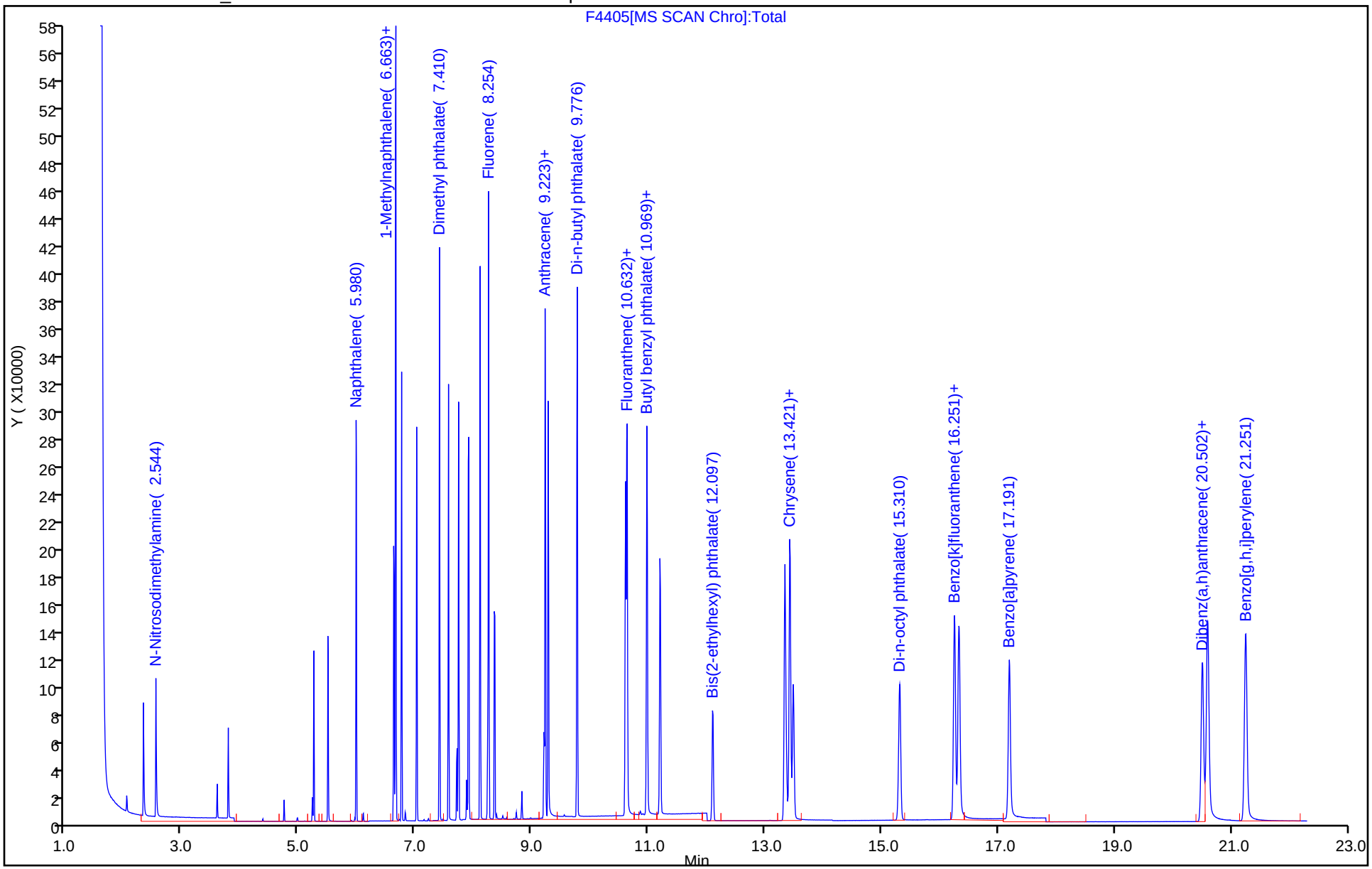
MS-SIMSL 2.5_00074 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4405.D

Injection Date:	29-Oct-2018 19:31:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD2500			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D
Lims ID: STD5000
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 29-Oct-2018 20:00:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std5000
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:48 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:00:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	29110	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	60672	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.367	-0.009	32	67799	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	97	154261	5000.0	5081.8	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	351658	5000.0	4763.1	
$ 6 Terphenyl-d14	244	11.194	11.203	-0.009	98	468240	5000.0	5224.5	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.544	2.563	-0.019	42	104151	5000.0	4654.8	
10 Naphthalene	128	5.980	5.980	0.000	100	448120	5000.0	4596.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	635609	10000	9624.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	286227	5000.0	4806.2	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	640600	10000	11227	
14 Acenaphthylene	152	7.566	7.566	0.000	99	436620	5000.0	5805.5	
15 Acenaphthene	153	7.739	7.739	0.000	98	313964	5000.0	4918.0	
16 Dibenzofuran	168	7.915	7.915	0.001	91	455166	5005.0	4726.0	
17 Diethyl phthalate	149	8.109	8.109	0.000	100	644109	10040	11587	
18 Fluorene	166	8.255	8.254	0.000	97	379461	5000.0	5093.3	
19 N-Nitrosodiphenylamine	169	8.352	8.361	-0.009	97	225054	5000.0	4985.8	
20 Phenanthrene	178	9.223	9.223	0.000	100	611829	5000.0	4977.2	
21 Anthracene	178	9.275	9.275	0.000	1	549841	5000.0	5956.0	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	974337	10000	8549.0	
23 Fluoranthene	202	10.632	10.632	0.000	100	692368	5000.0	5300.9	
24 Pyrene	202	10.970	10.969	0.001	99	694454	5000.0	5276.1	
25 Butyl benzyl phthalate	149	10.970	10.987	-0.017	1	4451	10000	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	37	612573	5000.0	5326.1	
27 Chrysene	228	13.421	13.430	-0.009	95	693366	5000.0	4892.7	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	370566	10000	16871	
29 Di-n-octyl phthalate	149	15.310	15.306	0.004	1	692105	10000	9993.0	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	97	668265	5000.0	4897.9	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	97	746517	5000.0	5573.2	
32 Benzo[a]pyrene	252	17.187	17.186	0.001	94	608628	5000.0	5652.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.503	20.507	-0.005	90	633911	5000.0	4592.7	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	83	696717	5000.0	4856.3	
35 Benzo[g,h,i]perylene	276	21.246	21.250	-0.004	93	755750	5000.0	4325.0	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	88	236976	5000.0	4692.7	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	100	547857	5000.0	5403.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

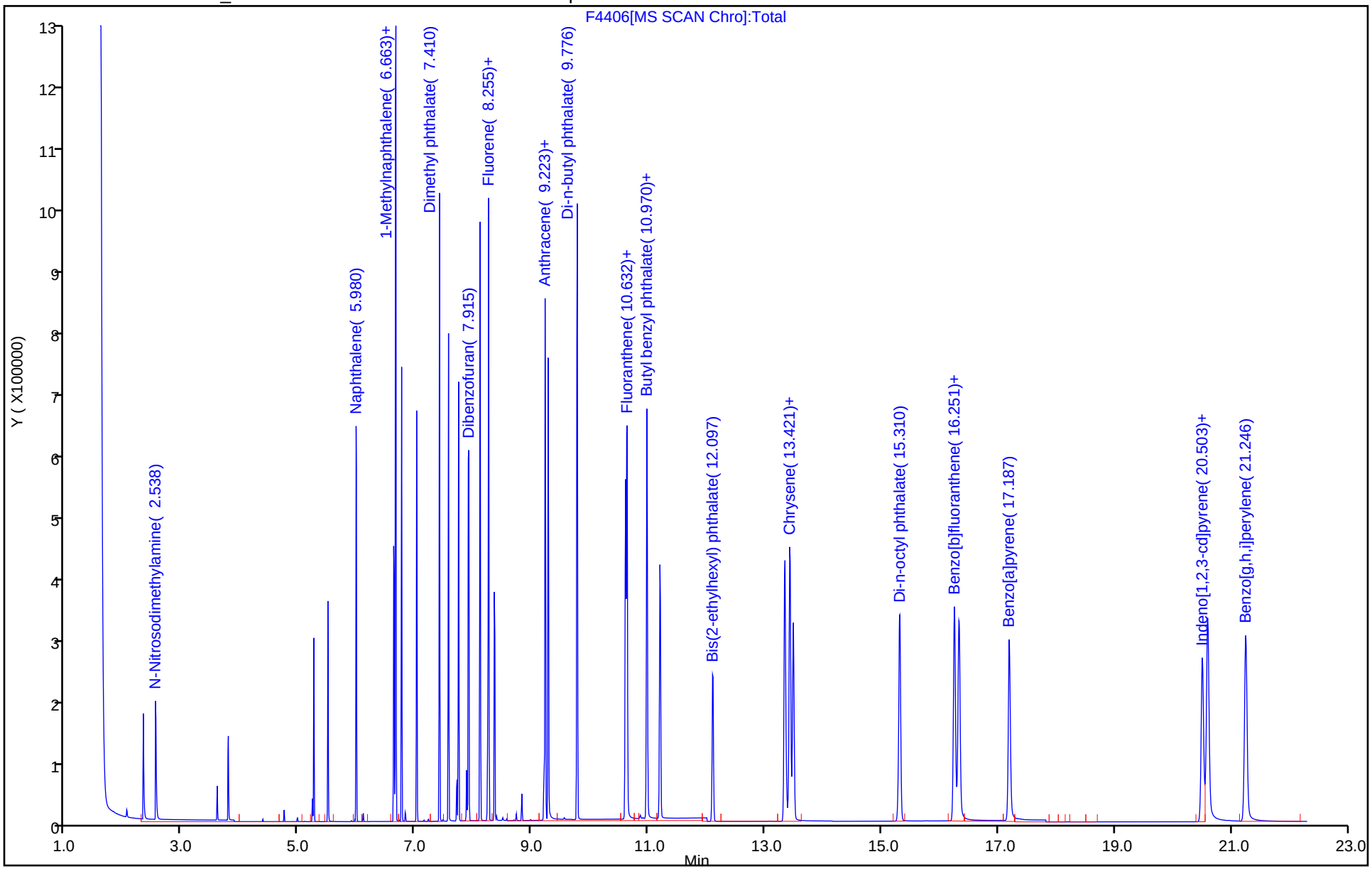
MS-SIMSL 5_00076 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Injection Date:	29-Oct-2018 20:00:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD5000			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-435404/12 Calibration Date: 10/29/2018 20:30

Instrument ID: SMS_F Calib Start Date: 10/29/2018 16:02

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/29/2018 20:00

Lab File ID: F4407.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	2.009	1.988	0.7000	594000	600000	-1.0	20.0
2-Methylnaphthalene	Ave	1.361	1.341	0.4000	591000	600000	-1.5	20.0
1-Methylnaphthalene	Ave	1.227	1.282	0.0500	626000	600000	4.4	20.0
Acenaphthylene	Ave	1.550	1.482	0.9000	573000	600000	-4.4	20.0
Acenaphthene	Ave	1.316	1.296	0.9000	591000	600000	-1.5	20.0
Fluorene	Ave	1.536	1.568	0.9000	613000	600000	2.1	20.0
Phenanthrene	Ave	1.216	1.208	0.7000	596000	600000	-0.6	20.0
Anthracene	Ave	0.9130	0.8833	0.7000	580000	600000	-3.3	20.0
Fluoranthene	Ave	1.292	1.193	0.6000	554000	600000	-7.6	20.0
Pyrene	Ave	1.302	1.239	0.6000	571000	600000	-4.8	20.0
Benzo[a]anthracene	Ave	1.018	0.9412	0.8000	555000	600000	-7.5	20.0
Chrysene	Ave	1.254	1.330	0.7000	636000	600000	6.0	20.0
Benzo[b]fluoranthene	Ave	1.207	1.111	0.7000	552000	600000	-8.0	20.0
Benzo[k]fluoranthene	Ave	1.185	1.197	0.7000	606000	600000	1.0	20.0
Benzo[a]pyrene	Ave	0.9529	0.8365	0.7000	527000	600000	-12.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.221	1.061	0.5000	521000	600000	-13.2	20.0
Dibenz(a,h)anthracene	Ave	1.270	1.190	0.4000	562000	600000	-6.3	20.0
Benzo[g,h,i]perylene	Ave	1.546	1.388	0.5000	539000	600000	-10.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4407.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Oct-2018 20:30:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: icv
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:48 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:00:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	98	24945	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	53849	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.367	-0.009	99	53312	600.0	600.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.551	2.563	-0.012	38	11591	600.0	604.5	
10 Naphthalene	128	5.980	5.980	0.000	100	49602	600.0	593.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	33457	600.0	591.2	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	31971	600.0	626.5	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	28341	600.0	579.6	
14 Acenaphthylene	152	7.566	7.566	0.000	99	36958	600.0	573.5	
15 Acenaphthene	153	7.739	7.739	0.000	97	32331	600.0	591.0	
16 Dibenzofuran	168	7.915	7.915	0.001	92	49912	600.0	604.8	
17 Diethyl phthalate	149	8.109	8.109	0.000	99	26909	600.0	564.9	
18 Fluorene	166	8.255	8.254	0.001	96	39120	600.0	612.8	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	23887	600.0	596.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	65050	600.0	596.2	
21 Anthracene	178	9.275	9.275	0.000	1	47562	600.0	580.5	
22 Di-n-butyl phthalate	149	9.777	9.776	0.000	1	30011	600.0	594.4	
23 Fluoranthene	202	10.632	10.632	0.000	100	64262	600.0	554.3	
24 Pyrene	202	10.970	10.969	0.001	99	66709	600.0	571.0	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	51	50177	600.0	554.8	
27 Chrysene	228	13.421	13.430	-0.009	95	70890	600.0	636.2	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	9620	600.0	493.5	
29 Di-n-octyl phthalate	149	15.302	15.306	-0.004	1	17200	600.0	541.1	
30 Benzo[b]fluoranthene	252	16.246	16.251	-0.005	99	59221	600.0	552.0	
31 Benzo[k]fluoranthene	252	16.321	16.329	-0.008	98	63832	600.0	606.0	
32 Benzo[a]pyrene	252	17.191	17.186	0.005	97	44594	600.0	526.7	
33 Indeno[1,2,3-cd]pyrene	276	20.503	20.507	-0.004	91	56553	600.0	521.1	
34 Dibenz(a,h)anthracene	278	20.590	20.599	-0.009	84	63428	600.0	562.2	
35 Benzo[g,h,i]perylene	276	21.246	21.250	-0.004	94	74019	600.0	538.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

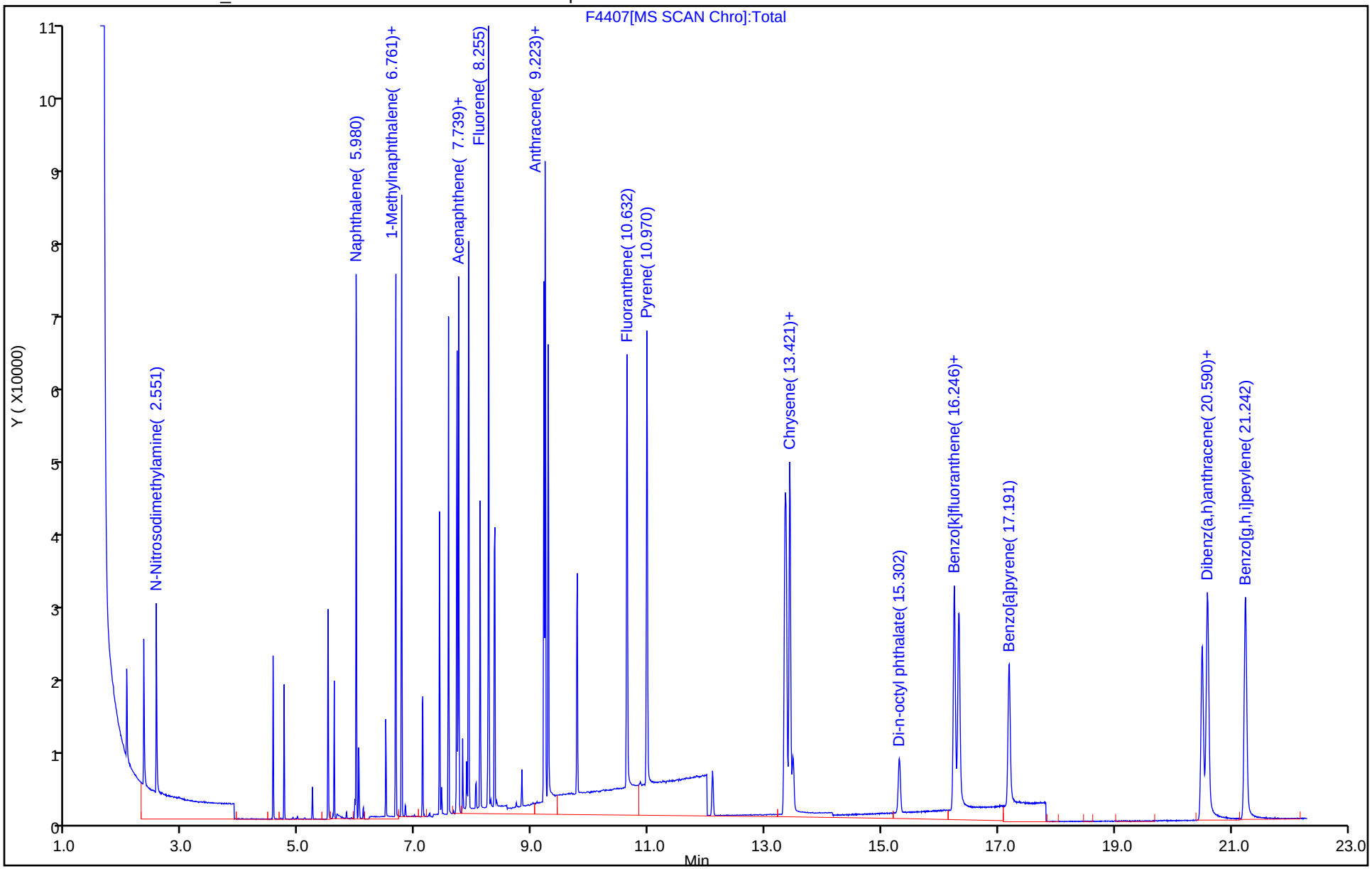
MS-SIM SSV2_00004 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4407.D

Injection Date:	29-Oct-2018 20:30:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	icv			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-435422/3 Calibration Date: 10/29/2018 21:09

Instrument ID: SMS_F Calib Start Date: 10/29/2018 16:02

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/29/2018 20:00

Lab File ID: F4409.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	2.009	1.888	0.7000	564000	600000	-6.0	20.0
2-Methylnaphthalene	Ave	1.361	1.286	0.4000	1130000	1200000	-5.5	20.0
1-Methylnaphthalene	Ave	1.227	1.161	0.0500	567000	600000	-5.4	20.0
Acenaphthylene	Ave	1.550	1.422	0.9000	551000	600000	-8.2	20.0
Acenaphthene	Ave	1.316	1.238	0.9000	565000	600000	-5.9	20.0
Fluorene	Ave	1.536	1.484	0.9000	580000	600000	-3.3	20.0
Phenanthrene	Ave	1.216	1.138	0.7000	562000	600000	-6.4	20.0
Anthracene	Ave	0.9130	0.8073	0.7000	531000	600000	-11.6	20.0
Fluoranthene	Ave	1.292	1.204	0.6000	559000	600000	-6.8	20.0
Pyrene	Ave	1.302	1.186	0.6000	547000	600000	-8.9	20.0
Benzo[a]anthracene	Ave	1.018	0.8693	0.8000	512000	600000	-14.6	20.0
Chrysene	Ave	1.254	1.162	0.7000	556000	600000	-7.3	20.0
Benzo[b]fluoranthene	Ave	1.207	1.048	0.7000	521000	600000	-13.2	20.0
Benzo[k]fluoranthene	Ave	1.185	1.098	0.7000	556000	600000	-7.4	20.0
Benzo[a]pyrene	Ave	0.9529	0.7654	0.7000	482000	600000	-19.7	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.221	0.9947	0.5000	489000	600000	-18.6	20.0
Dibenz(a,h)anthracene	Ave	1.270	1.085	0.4000	513000	600000	-14.6	20.0
Benzo[g,h,i]perylene	Ave	1.546	1.316	0.5000	511000	600000	-14.9	20.0
Nitrobenzene-d5	Ave	0.6257	0.5512		529000	600000	-11.9	20.0
2-methylnaphthalene-d10	Ave	1.041	0.9748		562000	600000	-6.3	35.0
2-Fluorobiphenyl	Ave	1.522	1.453		573000	600000	-4.5	20.0
Fluoranthene-d10	Ave	1.003	0.9451		566000	600000	-5.7	35.0
Terphenyl-d14	Ave	0.8863	0.8398		569000	600000	-5.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4409.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 29-Oct-2018 21:09:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:41:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	26379	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	57478	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	99	57797	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	14541	600.0	528.6	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	99	38322	600.0	572.8	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	98	48272	600.0	568.5	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.550	2.550	0.000	37	11349	600.0	559.7	
10 Naphthalene	128	5.980	5.980	0.000	100	49800	600.0	563.7	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	98	67846	1200.0	1133.7	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	98	30620	600.0	567.4	
13 Dimethyl phthalate	163	7.410	7.410	0.000	1	58522	1200.0	1131.9	
14 Acenaphthylene	152	7.566	7.566	0.000	99	37520	600.0	550.5	
15 Acenaphthene	153	7.739	7.739	0.000	96	32668	600.0	564.7	
16 Dibenzofuran	168	7.914	7.914	0.000	92	50520	600.6	578.9	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	55130	1204.8	1094.4	
18 Fluorene	166	8.254	8.254	0.000	95	39159	600.0	580.0	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	24164	600.0	565.1	
20 Phenanthrene	178	9.223	9.223	0.000	100	65429	600.0	561.8	
21 Anthracene	178	9.275	9.275	0.000	1	46401	600.0	530.6	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	66162	1200.0	1147.2	
23 Fluoranthene	202	10.632	10.632	0.000	100	69228	600.0	559.5	
24 Pyrene	202	10.969	10.969	0.000	99	68179	600.0	546.8	
25 Butyl benzyl phthalate	149	10.969	10.969	0.000	1	562	1200.0	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	52	50242	600.0	512.4	
27 Chrysene	228	13.421	13.421	0.000	95	67162	600.0	555.9	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	20851	1200.0	1002.1	
29 Di-n-octyl phthalate	149	15.301	15.301	0.000	1	38548	1200.0	1060.9	
30 Benzo[b]fluoranthene	252	16.246	16.246	0.000	98	60580	600.0	520.8	
31 Benzo[k]fluoranthene	252	16.325	16.325	0.000	99	63438	600.0	555.6	
32 Benzo[a]pyrene	252	17.186	17.186	0.000	97	44239	600.0	482.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.498	20.498	0.000	91	57489	600.0	488.6	
34 Dibenz(a,h)anthracene	278	20.585	20.585	0.000	84	62697	600.0	512.6	
35 Benzo[g,h,i]perylene	276	21.242	21.242	0.000	94	76048	600.0	510.5	
$ 53 2-methylnaphthalene-d10	152	6.632	6.632	0.000	90	25715	600.0	561.9	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	99	54325	600.0	565.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

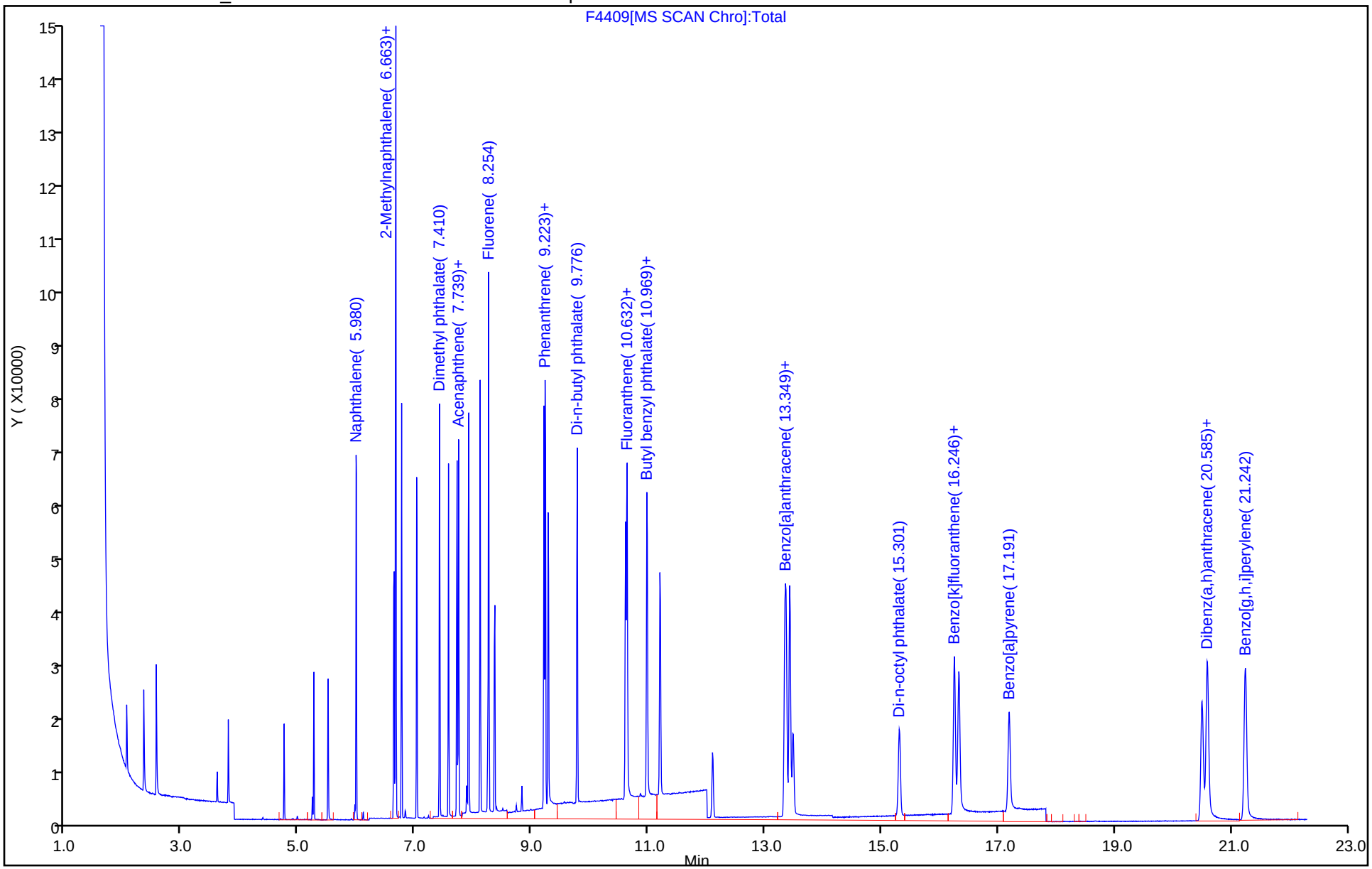
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 30-Oct-2018 19:06:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4409.D

Injection Date:	29-Oct-2018 21:09:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCVC 280-435422/25 Calibration Date: 10/30/2018 07:57

Instrument ID: SMS_F Calib Start Date: 10/29/2018 16:02

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/29/2018 20:00

Lab File ID: F4431.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	2.009	1.932	0.7000	577000	600000	-3.8	50.0
2-Methylnaphthalene	Ave	1.361	1.323	0.4000	1170000	1200000	-2.8	50.0
1-Methylnaphthalene	Ave	1.227	1.184	0.0500	579000	600000	-3.5	50.0
Acenaphthylene	Ave	1.550	1.461	0.9000	565000	600000	-5.8	50.0
Acenaphthene	Ave	1.316	1.276	0.9000	582000	600000	-3.0	50.0
Fluorene	Ave	1.536	1.499	0.9000	586000	600000	-2.4	50.0
Phenanthrene	Ave	1.216	1.214	0.7000	599000	600000	-0.1	50.0
Anthracene	Ave	0.9130	0.8409	0.7000	553000	600000	-7.9	50.0
Fluoranthene	Ave	1.292	1.222	0.6000	568000	600000	-5.4	50.0
Pyrene	Ave	1.302	1.193	0.6000	550000	600000	-8.3	50.0
Benzo[a]anthracene	Ave	1.018	0.8743	0.8000	515000	600000	-14.1	50.0
Chrysene	Ave	1.254	1.274	0.7000	610000	600000	1.6	50.0
Benzo[b]fluoranthene	Ave	1.207	1.044	0.7000	519000	600000	-13.5	50.0
Benzo[k]fluoranthene	Ave	1.185	1.225	0.7000	620000	600000	3.3	50.0
Benzo[a]pyrene	Ave	0.9529	0.7416	0.7000	467000	600000	-22.2	50.0
Indeno[1,2,3-cd]pyrene	Ave	1.221	0.9188	0.5000	451000	600000	-24.8	50.0
Dibenz(a,h)anthracene	Ave	1.270	1.033	0.4000	488000	600000	-18.6	50.0
Benzo[g,h,i]perylene	Ave	1.546	1.301	0.5000	505000	600000	-15.8	50.0
Nitrobenzene-d5	Ave	0.6257	0.5525		530000	600000	-11.7	50.0
2-methylnaphthalene-d10	Ave	1.041	0.9691		559000	600000	-6.9	50.0
2-Fluorobiphenyl	Ave	1.522	1.456		574000	600000	-4.3	50.0
Fluoranthene-d10	Ave	1.003	0.9306		557000	600000	-7.2	50.0
Terphenyl-d14	Ave	0.8863	0.8127		550000	600000	-8.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4431.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 30-Oct-2018 07:57:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:07:23 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 15:01:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	95	34536	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	72779	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	95	70616	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	97	19082	600.0	529.9	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	50290	600.0	574.1	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	59145	600.0	550.1	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.550	2.550	0.000	43	14368	600.0	541.3	
10 Naphthalene	128	5.980	5.980	0.000	100	66725	600.0	576.9	
11 2-Methylnaphthalene	142	6.655	6.663	-0.008	93	91368	1200.0	1166.2	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	95	40904	600.0	578.9	
13 Dimethyl phthalate	163	7.410	7.410	0.000	1	76249	1200.0	1126.4	
14 Acenaphthylene	152	7.566	7.566	0.000	98	50448	600.0	565.4	
15 Acenaphthene	153	7.739	7.739	0.000	99	44072	600.0	581.9	
16 Dibenzofuran	168	7.915	7.914	0.001	90	65062	600.6	569.4	
17 Diethyl phthalate	149	8.109	8.109	0.000	100	68674	1204.8	1041.3	
18 Fluorene	166	8.254	8.254	0.000	97	51784	600.0	585.9	
19 N-Nitrosodiphenylamine	169	8.351	8.361	-0.010	99	30767	600.0	568.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	88373	600.0	599.3	
21 Anthracene	178	9.275	9.275	0.000	1	61197	600.0	552.6	
22 Di-n-butyl phthalate	149	9.768	9.776	-0.008	1	81793	1200.0	1123.2	
23 Fluoranthene	202	10.624	10.632	-0.008	100	88943	600.0	567.7	
24 Pyrene	202	10.969	10.969	0.000	100	86849	600.0	550.1	
25 Butyl benzyl phthalate	149	10.969	10.969	0.000	1	839	1200.0	0	
26 Benzo[a]anthracene	228	13.331	13.340	-0.009	48	61737	600.0	515.4	
27 Chrysene	228	13.412	13.421	-0.009	95	89967	600.0	609.5	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	23483	1200.0	891.3	
29 Di-n-octyl phthalate	149	15.297	15.301	-0.004	1	43010	1200.0	975.9	
30 Benzo[b]fluoranthene	252	16.237	16.246	-0.009	98	73723	600.0	518.8	
31 Benzo[k]fluoranthene	252	16.316	16.325	-0.009	98	86481	600.0	619.9	
32 Benzo[a]pyrene	252	17.178	17.186	-0.008	96	52372	600.0	467.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.489	20.498	-0.009	91	64883	600.0	451.3	
34 Dibenz(a,h)anthracene	278	20.581	20.585	-0.004	84	72942	600.0	488.1	
35 Benzo[g,h,i]perylene	276	21.229	21.242	-0.013	94	91902	600.0	505.0	
$ 53 2-methylnaphthalene-d10	152	6.625	6.632	-0.007	99	33469	600.0	558.6	
$ 54 Fluoranthene-d10	212	10.598	10.606	-0.008	99	67727	600.0	556.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

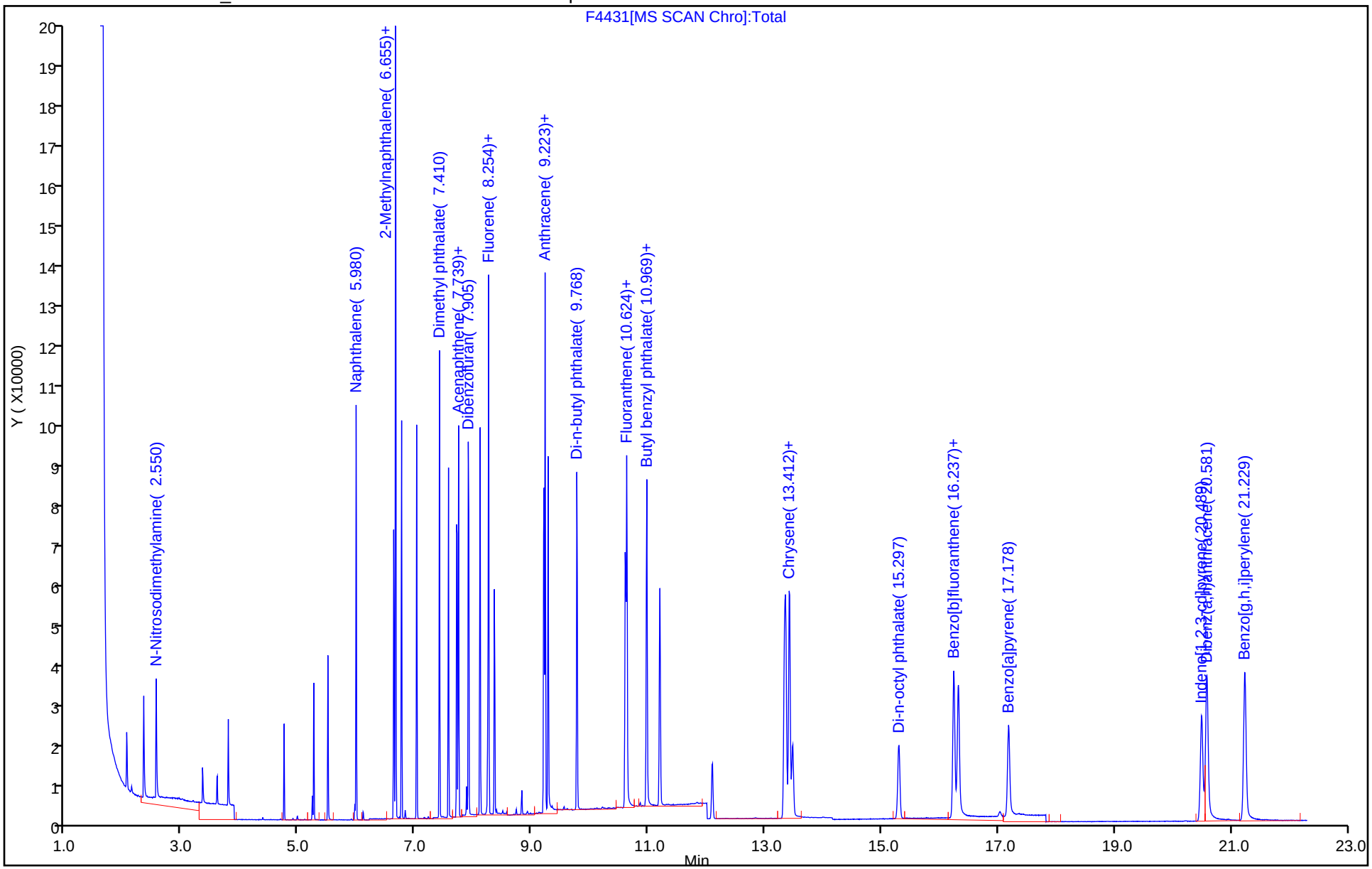
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 30-Oct-2018 19:07:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4431.D

Injection Date:	30-Oct-2018 07:57:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	ccvc			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 29-Oct-2018 15:45:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:20 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 18:56:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
38 Pentachlorophenol_T	266	3.885	3.885	0.000	80	328371	NR	NR	
39 DFTPP									
40 Benzidine_T	184	4.977	4.977	0.000	96	2499541	NR	NR	
41 4,4'-DDE	246	4.149	4.149	0.000	42	7831	NR	NR	
42 4,4'-DDD	235	5.415	5.415	0.000	62	12474	NR	NR	a
43 4,4'-DDT	235	5.642	5.642	0.000	96	1044699	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

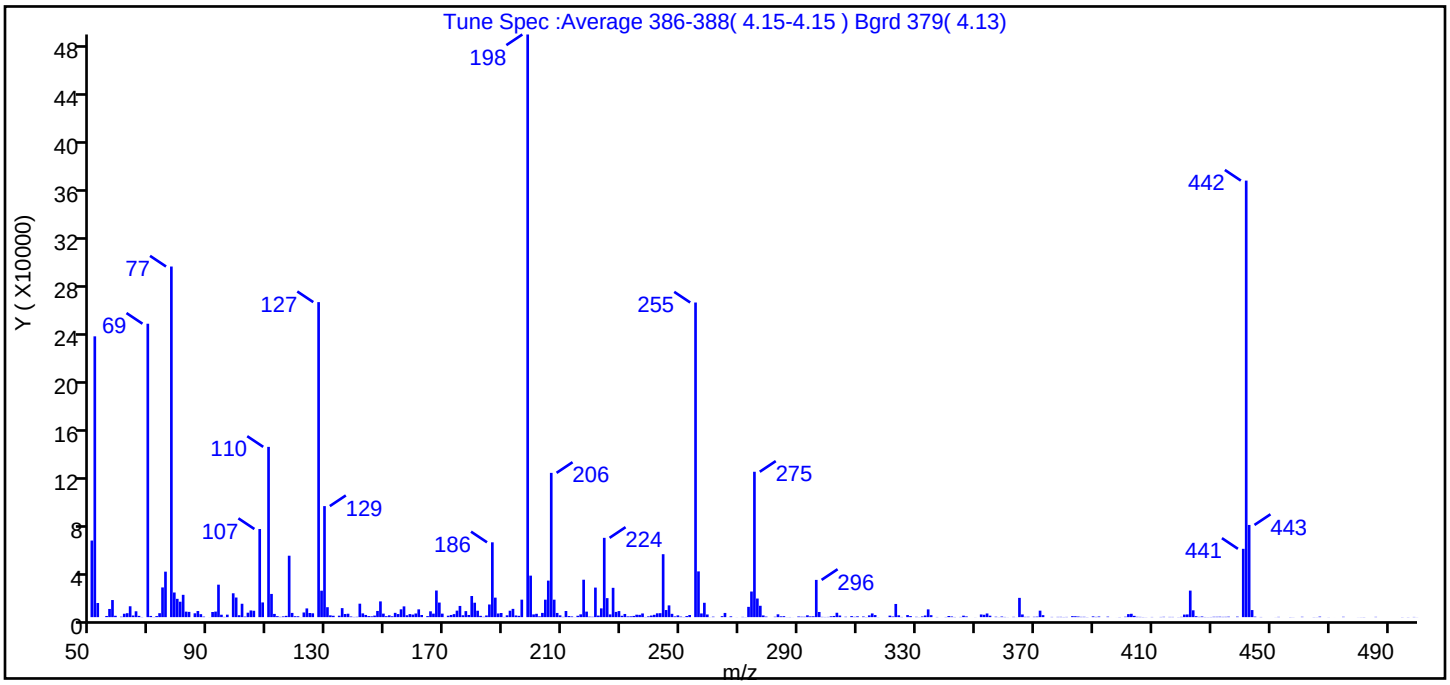
MS-DFTPP_00047 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

39 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	48.2
68	<2% of mass 69	0.0 (0.0)
69	Present	50.4
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	54.1
197	<1% of mass 198	0.0
199	5-9% of mass 198	7.1
275	10-30% of mass 198	25.0
365	>1% of mass 198	3.3
441	Present but less than mass 443	11.7 (74.1)
442	>40% of mass 198	74.9
443	17-23% of mass 442	15.8 (21.1)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 15:45:30
Spectrum: Tune Spec :Average 386-388(4.15-4.15) Bgrd 379(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	63336	154.00	2550	248.00	602	361.00	56
51.00	232192	155.00	6473	249.00	1470	363.00	261
52.00	11685	156.00	8905	250.00	434	364.00	35
55.00	958	157.00	1569	251.00	132	365.00	15938
56.00	6769	158.00	2527	252.00	894	366.00	2232
57.00	14139	159.00	2126	253.00	1778	367.00	247
58.00	1137	160.00	3009	255.00	260160	368.00	304
60.00	368	161.00	6442	256.00	37832	370.00	306
61.00	2801	162.00	1769	257.00	3075	371.00	395
62.00	3263	164.00	844	258.00	11876	372.00	5362
63.00	9000	165.00	4819	259.00	2194	373.00	1635
64.00	1342	166.00	2896	260.00	48	376.00	191
65.00	4853	167.00	22016	261.00	391	378.00	214
66.00	1052	168.00	12056	264.00	814	379.00	239
67.00	129	169.00	2910	265.00	3479	380.00	132
69.00	242624	170.00	34	266.00	39	381.00	189
70.00	1003	171.00	1194	267.00	661	383.00	840
71.00	112	172.00	1796	269.00	45	384.00	752
72.00	875	173.00	2498	271.00	231	385.00	521
73.00	3276	174.00	5371	272.00	92	386.00	245
74.00	24576	175.00	9260	273.00	8499	387.00	272
75.00	37608	176.00	1547	274.00	21184	388.00	103
77.00	289920	177.00	4987	275.00	120208	390.00	629
78.00	20376	178.00	1798	276.00	15389	391.00	209
79.00	15127	179.00	17472	277.00	9398	392.00	532
80.00	12746	180.00	11923	278.00	1402	393.00	3
81.00	18456	181.00	5305	279.00	443	395.00	432
82.00	4553	182.00	1093	282.00	343	396.00	9
83.00	4352	183.00	244	283.00	2338	398.00	19
85.00	3173	184.00	1380	284.00	677	399.00	123
86.00	5067	185.00	10470	285.00	808	401.00	360
87.00	2466	186.00	61872	286.00	75	402.00	2491
88.00	436	187.00	16130	287.00	135	403.00	2782

Report Date: 29-Oct-2018 21:58:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 15:45:30
Spectrum: Tune Spec :Average 386-388(4.15-4.15) Bgrd 379(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
90.00	43	188.00	3025	288.00	26	404.00	1056
91.00	4254	189.00	3425	290.00	539	405.00	279
92.00	4594	190.00	153	291.00	354	406.00	204
93.00	26848	191.00	1512	292.00	320	407.00	125
94.00	1991	192.00	5323	293.00	1537	408.00	69
95.00	203	193.00	6843	294.00	607	410.00	160
96.00	2057	194.00	1386	295.00	674	413.00	169
98.00	19736	195.00	1082	296.00	30800	414.00	274
99.00	16224	196.00	14476	297.00	4266	416.00	195
100.00	1593	198.00	481792	298.00	223	417.00	189
101.00	11069	199.00	34320	299.00	154	419.00	100
102.00	466	200.00	2272	300.00	202	420.00	239
103.00	3671	201.00	2780	301.00	701	421.00	2125
104.00	5535	202.00	645	302.00	984	422.00	2237
105.00	5269	203.00	3511	303.00	3630	423.00	21944
107.00	72872	204.00	14443	304.00	1342	424.00	5644
108.00	12162	205.00	30208	305.00	12	425.00	767
110.00	140800	206.00	119304	306.00	329	426.00	238
111.00	19192	207.00	14443	308.00	855	427.00	542
112.00	2680	208.00	3478	309.00	249	428.00	142
113.00	815	209.00	1498	310.00	681	429.00	101
114.00	234	210.00	222	312.00	534	430.00	141
115.00	621	211.00	5081	313.00	121	431.00	304
116.00	1067	212.00	888	314.00	1459	432.00	302
117.00	50800	213.00	570	315.00	3073	433.00	360
118.00	3505	214.00	59	316.00	1702	434.00	237
119.00	746	215.00	1138	317.00	85	435.00	269
120.00	718	216.00	2314	319.00	2	436.00	398
121.00	46	217.00	30952	320.00	18	438.00	10
122.00	3857	218.00	4575	321.00	1237	439.00	437
123.00	7219	219.00	396	322.00	527	441.00	56496
124.00	3426	220.00	309	323.00	10900	442.00	360960
125.00	3187	221.00	24440	324.00	1498	443.00	76232
127.00	260480	222.00	1279	325.00	167	444.00	5850

Report Date: 29-Oct-2018 21:58:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 15:45:30
Spectrum: Tune Spec :Average 386-388(4.15-4.15) Bgrd 379(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 365

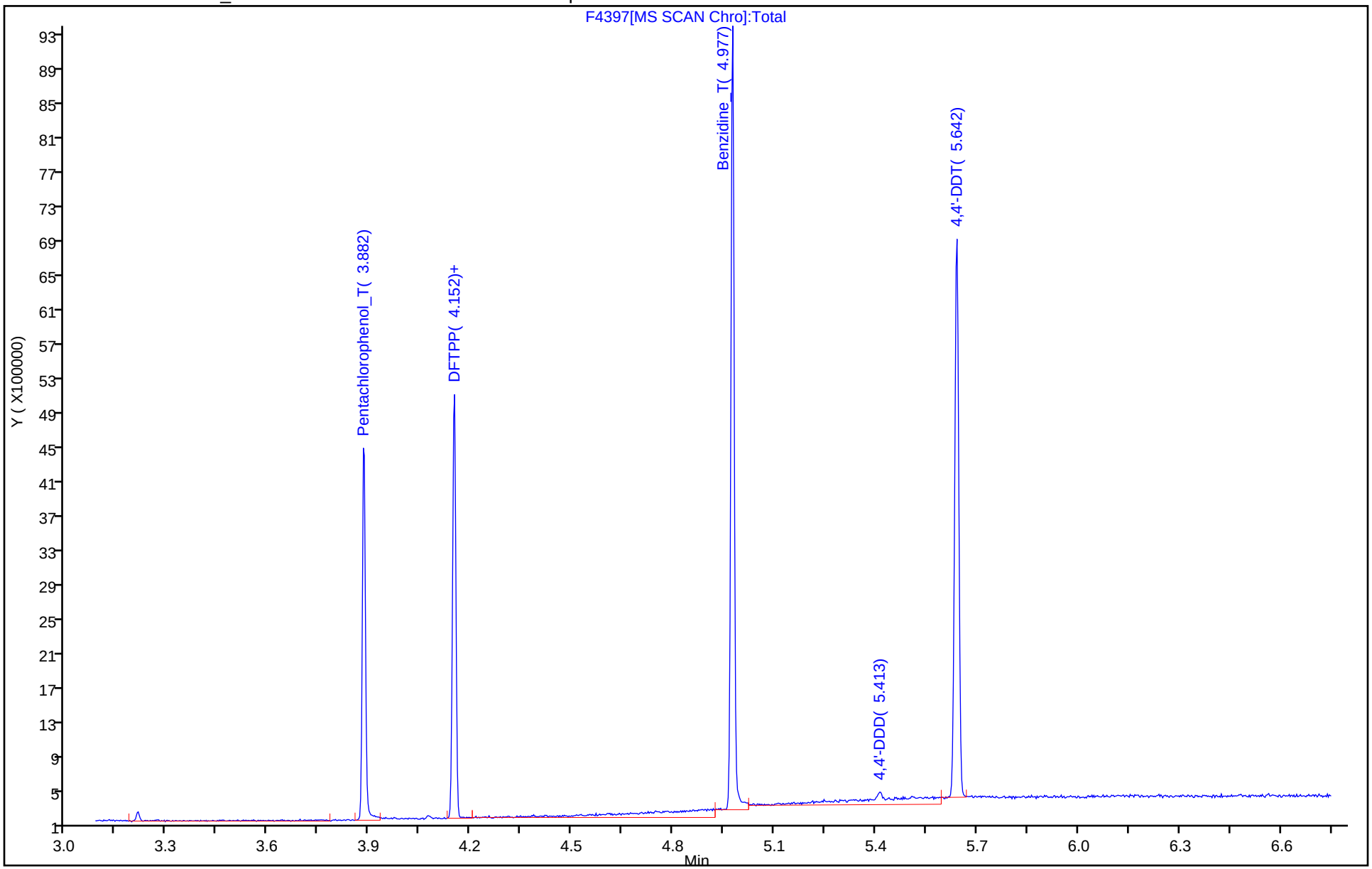
m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	21880	223.00	7257	327.00	1721	445.00	418
129.00	91816	224.00	65576	328.00	880	447.00	147
130.00	8210	225.00	15720	330.00	282	452.00	47
131.00	1494	226.00	2279	331.00	73	453.00	219
132.00	1143	227.00	24248	332.00	557	457.00	121
134.00	1199	228.00	4334	333.00	1357	458.00	72
135.00	7460	229.00	5023	334.00	6428	461.00	292
136.00	2605	230.00	1135	335.00	1618	465.00	104
137.00	2830	231.00	2630	337.00	156	466.00	70
138.00	520	232.00	623	340.00	146	467.00	427
139.00	177	233.00	674	341.00	938	470.00	66
140.00	270	234.00	1012	342.00	546	472.00	7
141.00	11129	235.00	2021	343.00	146	475.00	292
142.00	3117	236.00	1904	345.00	180	480.00	43
143.00	1824	237.00	3059	346.00	1216	481.00	71
144.00	866	238.00	144	347.00	597	482.00	108
145.00	665	239.00	643	350.00	49	486.00	235
146.00	1273	240.00	1335	352.00	2214	490.00	4
147.00	5122	241.00	1930	353.00	1965	495.00	102
148.00	13021	242.00	3169	354.00	3036	497.00	98
149.00	2917	243.00	3275	355.00	1204	499.00	167
150.00	772	244.00	52048	357.00	361	500.00	51
151.00	1494	245.00	5880	358.00	77		
152.00	725	246.00	9721	359.00	504		
153.00	3545	247.00	2746	360.00	171		

Report Date: 29-Oct-2018 21:58:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D

Injection Date:	29-Oct-2018 15:45:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

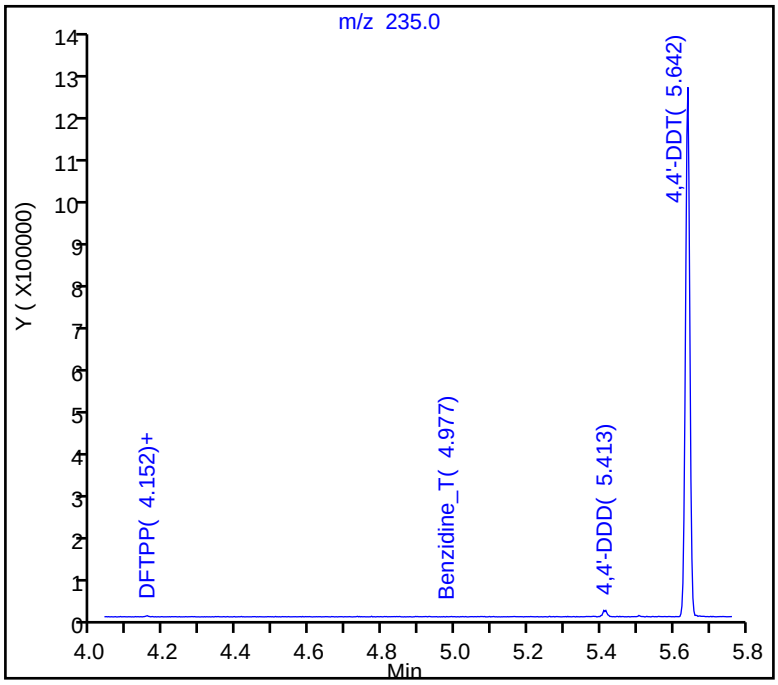


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

43 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

43 4,4'-DDT, Area = 1044699
41 4,4'-DDE, Area = 7831
42 4,4'-DDD, Area = 12474

%Breakdown: 1.91%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

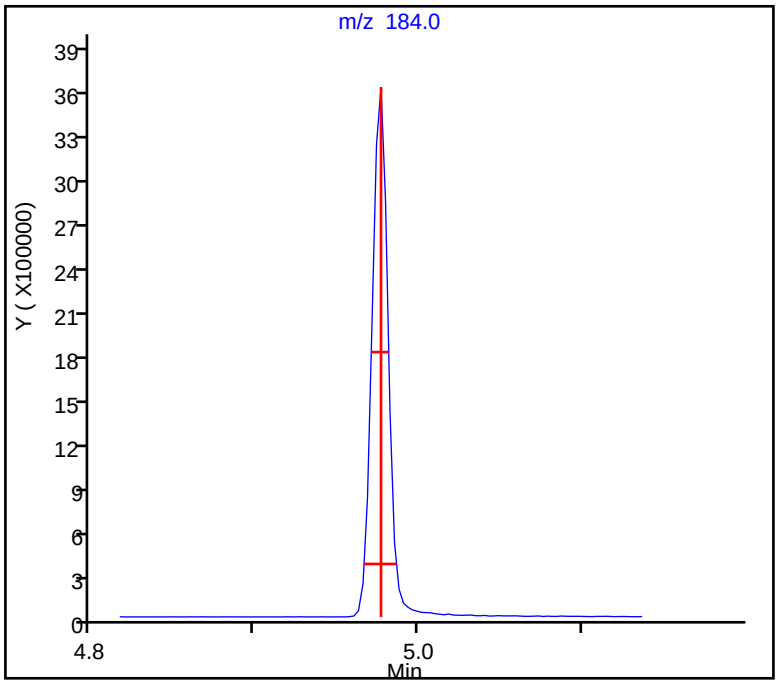
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

40 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 0.9, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

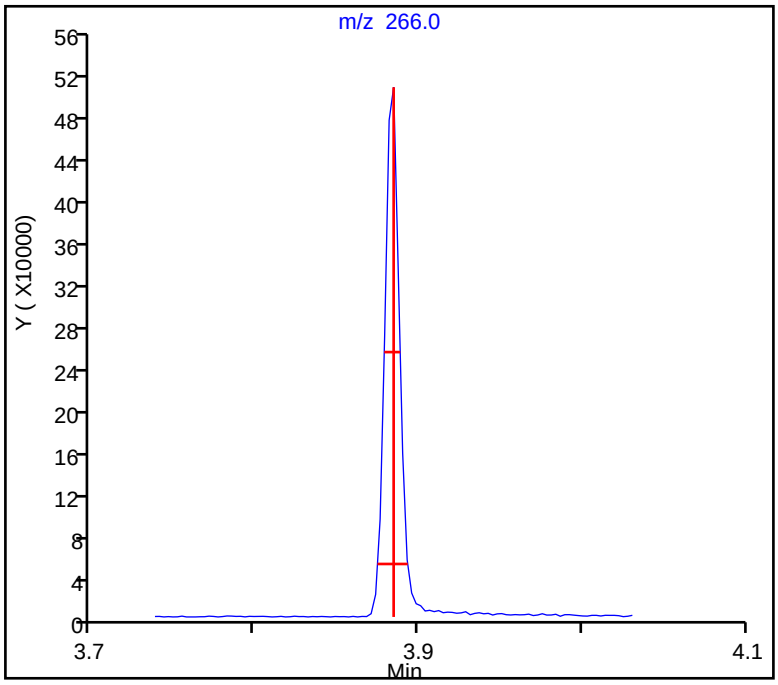
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

38 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 < 2.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 29-Oct-2018 20:56:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:04 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:12:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
38 Pentachlorophenol_T	266	3.868	3.868	0.000	77	483118	NR	NR	
39 DFTPP									
40 Benzidine_T	184	4.949	4.949	0.000	96	3452188	NR	NR	
41 4,4'-DDE	246	4.133	4.133	0.000	35	11045	NR	NR	a
42 4,4'-DDD	235	5.377	5.377	0.000	63	17166	NR	NR	a
43 4,4'-DDT	235	5.603	5.603	0.000	96	1488185	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

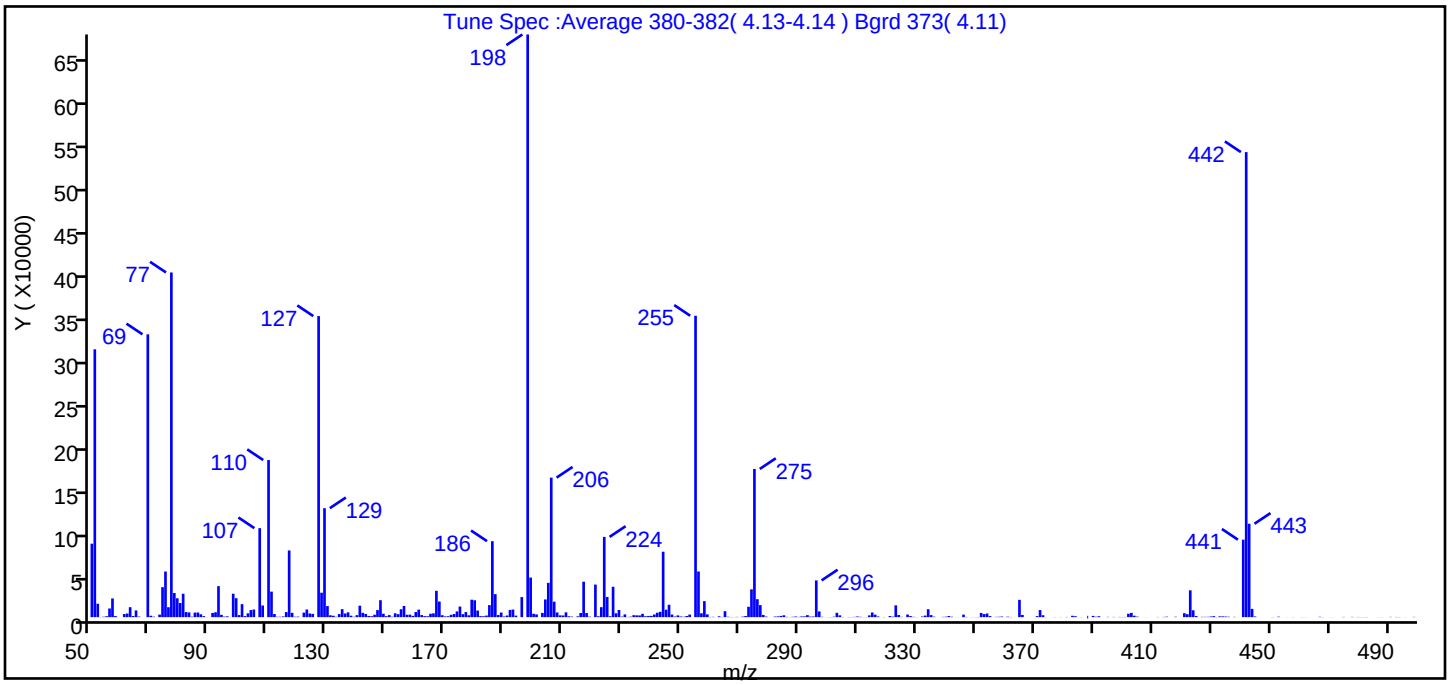
MS-DFTPP_00047 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D
Injection Date: 29-Oct-2018 20:56:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

39 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	46.0
68	<2% of mass 69	0.0 (0.0)
69	Present	48.5
70	<2% of mass 69	0.2 (0.5)
127	40-60% of mass 198	51.7
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-30% of mass 198	25.4
365	>1% of mass 198	3.0
441	Present but less than mass 443	13.3 (83.0)
442	>40% of mass 198	79.8
443	17-23% of mass 442	16.0 (20.1)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 20:56:30
Spectrum: Tune Spec :Average 380-382(4.13-4.14) Bgrd 373(4.11)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	84720	152.00	501	247.00	2974	352.00	4828
51.00	308992	153.00	4425	248.00	708	353.00	3529
52.00	15477	154.00	3432	249.00	2018	354.00	4175
53.00	143	155.00	9113	250.00	717	355.00	1253
54.00	468	156.00	12878	251.00	482	357.00	305
55.00	1073	157.00	2770	252.00	1343	358.00	438
56.00	10003	158.00	2904	253.00	2965	359.00	705
57.00	21568	159.00	1489	255.00	347712	360.00	34
58.00	1278	160.00	5875	256.00	52688	361.00	553
61.00	3586	161.00	8651	257.00	4433	362.00	221
62.00	4183	162.00	2391	258.00	18448	365.00	19952
63.00	11474	163.00	1161	259.00	3187	366.00	2524
64.00	1280	164.00	1052	260.00	214	371.00	1189
65.00	7766	165.00	3922	261.00	352	372.00	8137
66.00	654	166.00	4402	263.00	988	373.00	2175
69.00	326272	167.00	30400	264.00	252	374.00	118
70.00	1608	168.00	18016	265.00	6846	377.00	164
71.00	562	169.00	2189	266.00	453	379.00	130
73.00	2924	170.00	865	267.00	227	381.00	238
74.00	34560	171.00	1049	268.00	125	383.00	1574
75.00	52664	172.00	2671	269.00	310	384.00	1080
76.00	11448	173.00	3595	270.00	84	386.00	140
77.00	397632	174.00	6613	271.00	586	388.00	2
78.00	27808	175.00	12255	272.00	1298	390.00	1412
79.00	21768	176.00	3448	273.00	11970	391.00	484
80.00	16295	177.00	5824	274.00	32088	392.00	1079
81.00	27008	178.00	2142	275.00	170944	395.00	305
82.00	5834	179.00	20152	276.00	20720	396.00	17
83.00	5430	180.00	19472	277.00	13858	397.00	255
84.00	514	181.00	7605	278.00	2523	399.00	242
85.00	5224	182.00	1171	279.00	624	400.00	201
86.00	5342	183.00	1038	282.00	658	401.00	255
87.00	3277	184.00	1832	283.00	862	402.00	3921

Report Date: 30-Oct-2018 19:06:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 20:56:30
Spectrum: Tune Spec :Average 380-382(4.13-4.14) Bgrd 373(4.11)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	1189	185.00	13898	284.00	1426	403.00	4929
89.00	89	186.00	87648	285.00	2125	404.00	1642
91.00	4832	187.00	26512	286.00	334	405.00	584
92.00	5613	188.00	2426	287.00	116	408.00	66
93.00	35752	189.00	5338	288.00	395	412.00	201
94.00	2716	190.00	758	289.00	734	414.00	259
95.00	610	191.00	1869	290.00	282	415.00	534
96.00	946	192.00	8333	291.00	839	418.00	456
97.00	96	193.00	8758	292.00	902	421.00	4585
98.00	27032	194.00	1773	293.00	2337	422.00	3415
99.00	21856	195.00	4	294.00	655	423.00	30936
100.00	2356	196.00	23128	295.00	719	424.00	7921
101.00	14994	198.00	672192	296.00	42392	425.00	1280
102.00	1199	199.00	45672	297.00	6600	427.00	344
103.00	4393	200.00	3918	298.00	373	428.00	353
104.00	8148	201.00	3160	299.00	28	429.00	371
105.00	8821	203.00	4848	300.00	129	430.00	723
107.00	102664	204.00	20416	301.00	162	431.00	1167
108.00	13430	205.00	39544	302.00	494	432.00	159
110.00	181248	206.00	160960	303.00	4983	433.00	876
111.00	29440	207.00	17872	304.00	2068	434.00	873
112.00	3627	208.00	5407	305.00	208	435.00	687
113.00	472	209.00	2052	307.00	176	436.00	494
114.00	436	210.00	1900	308.00	184	438.00	314
115.00	801	211.00	5523	309.00	311	439.00	58
116.00	5839	212.00	984	310.00	761	441.00	89384
117.00	76920	213.00	605	311.00	393	442.00	536512
118.00	4969	214.00	71	312.00	91	443.00	107728
119.00	481	215.00	925	313.00	152	444.00	9542
120.00	623	216.00	4803	314.00	2024	445.00	773
122.00	5236	217.00	40896	315.00	5357	451.00	183
123.00	8845	218.00	4745	316.00	2851	453.00	531
124.00	4224	219.00	575	317.00	781	454.00	11
125.00	3753	221.00	37568	319.00	179	456.00	81

Report Date: 30-Oct-2018 19:06:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 20:56:30
Spectrum: Tune Spec :Average 380-382(4.13-4.14) Bgrd 373(4.11)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 366

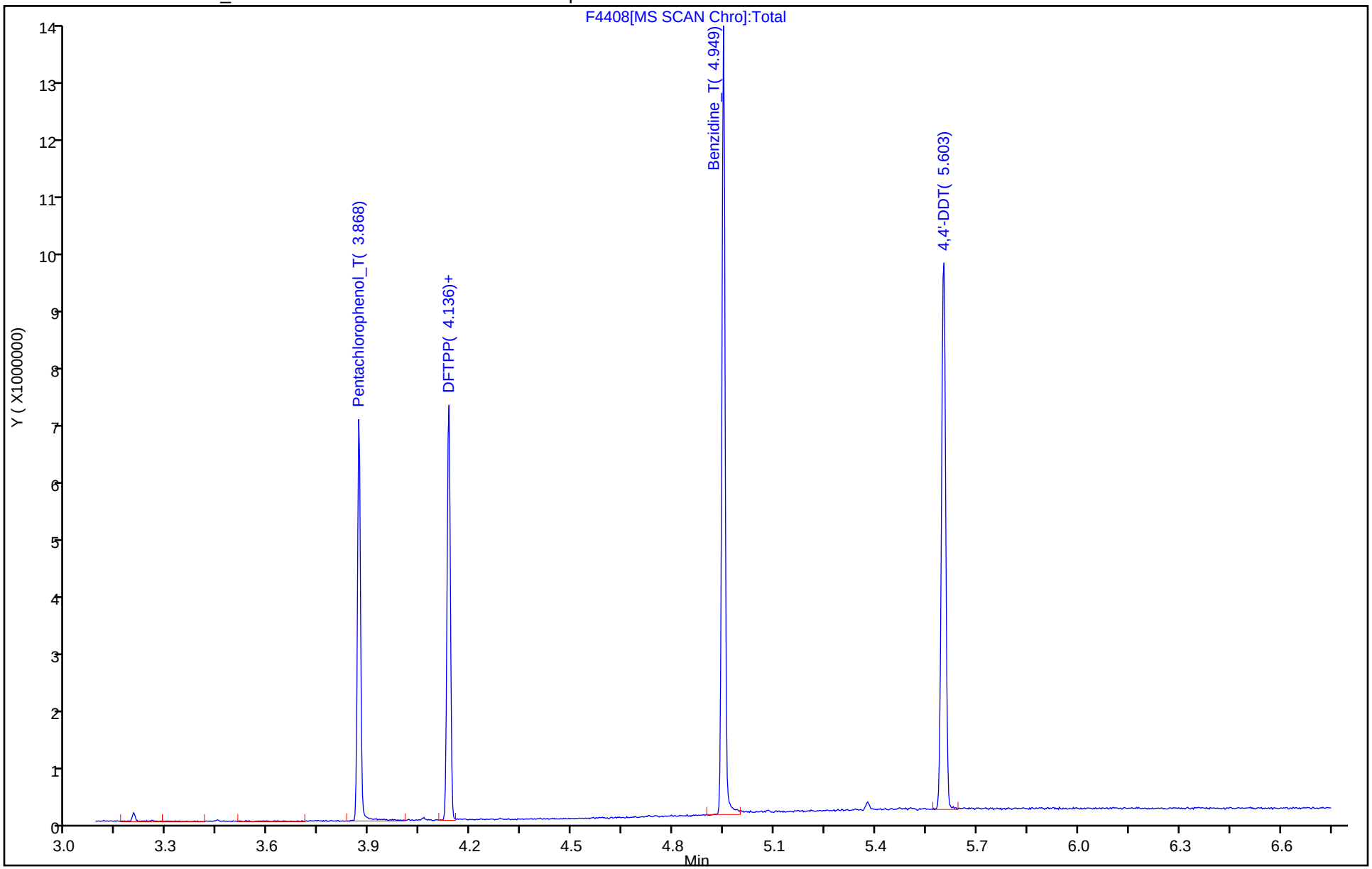
m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	347328	222.00	1033	321.00	1245	458.00	125
128.00	28192	223.00	11488	322.00	573	461.00	126
129.00	125712	224.00	92584	323.00	13594	462.00	74
130.00	12764	225.00	23272	324.00	2445	463.00	61
131.00	2133	226.00	1040	325.00	320	466.00	19
132.00	1609	227.00	35024	327.00	3020	467.00	395
133.00	423	228.00	4465	328.00	1225	468.00	158
134.00	3512	229.00	8233	329.00	363	470.00	43
135.00	9212	230.00	628	330.00	151	471.00	109
136.00	4205	231.00	3165	332.00	725	472.00	52
137.00	5548	232.00	250	333.00	1780	475.00	250
138.00	1673	233.00	555	334.00	9146	478.00	284
139.00	413	234.00	2246	335.00	2372	480.00	218
140.00	2283	235.00	2076	336.00	526	481.00	127
141.00	13205	236.00	1972	339.00	309	482.00	145
142.00	4985	237.00	3858	340.00	485	483.00	180
143.00	3705	238.00	1042	341.00	1292	487.00	59
144.00	1362	239.00	1383	342.00	516	488.00	120
145.00	1078	240.00	1497	344.00	113	491.00	300
146.00	2777	241.00	3065	346.00	2861	493.00	231
147.00	8176	242.00	5120	347.00	250	494.00	160
148.00	19552	243.00	6153	348.00	47	496.00	109
149.00	3920	244.00	75456	349.00	95	499.00	284
150.00	1128	245.00	8578	350.00	96		
151.00	2376	246.00	14279	351.00	210		

Report Date: 30-Oct-2018 19:06:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D

Injection Date:	29-Oct-2018 20:56:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

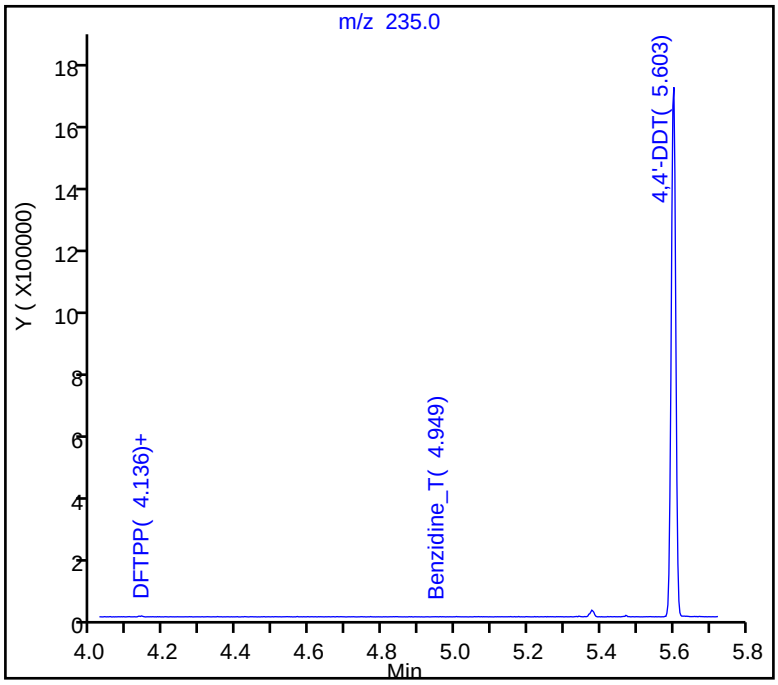


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D
Injection Date: 29-Oct-2018 20:56:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

43 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

43 4,4'-DDT, Area = 1488185
41 4,4'-DDE, Area = 11045
42 4,4'-DDD, Area = 17166

%Breakdown: 1.86%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

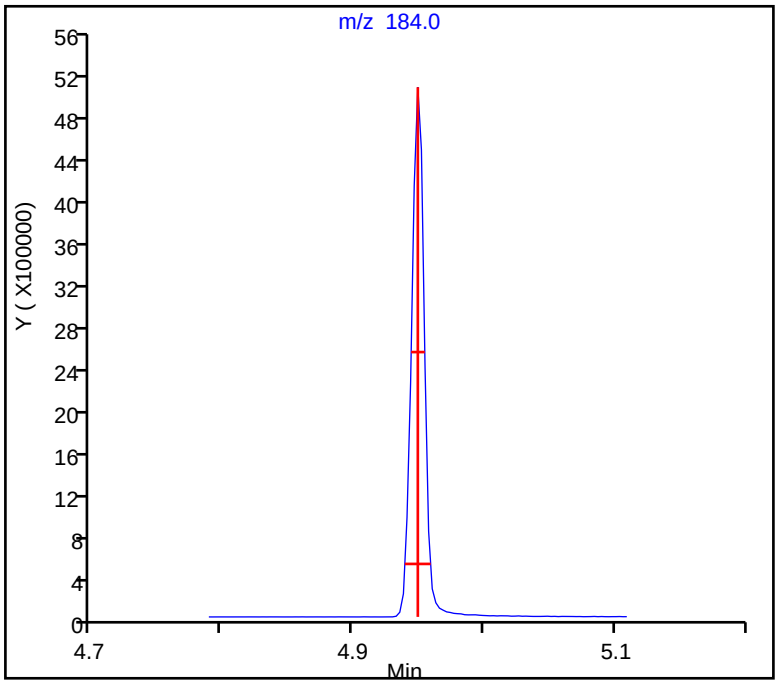
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D
Injection Date: 29-Oct-2018 20:56:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

40 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

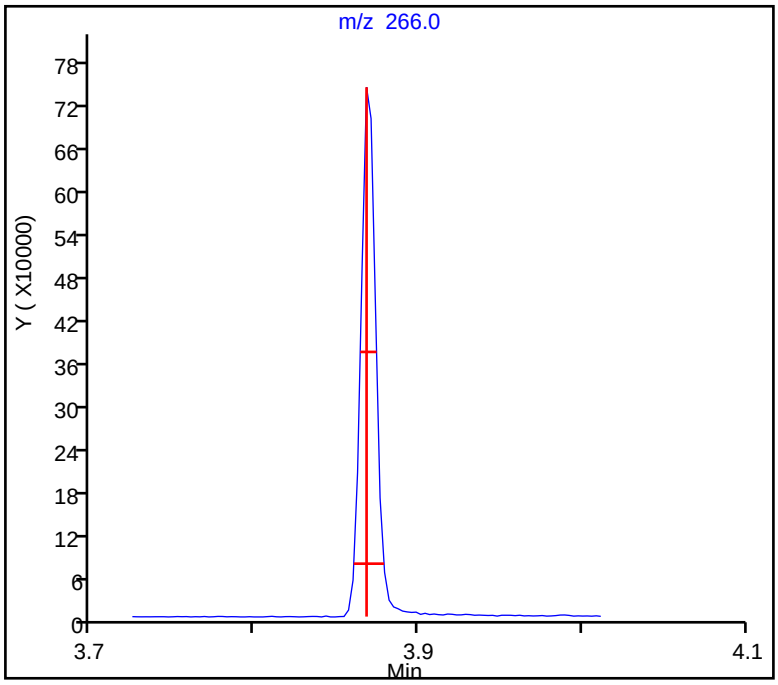
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4408.D
Injection Date: 29-Oct-2018 20:56:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

38 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.008 (min.)

Tailing Factor = 1.4, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-434609/1-A

Matrix: Water | Lab File ID: F4410.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 250(mL) | Date Analyzed: 10/29/2018 21:39

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.012	U	0.10	0.012	0.0059
91-57-6	2-Methylnaphthalene	0.012	U	0.10	0.012	0.0060
83-32-9	Acenaphthene	0.040	U	0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.040	U	0.10	0.040	0.0051
120-12-7	Anthracene	0.040	U	0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.012	U	0.10	0.012	0.0042
50-32-8	Benzo[a]pyrene	0.012	U M	0.10	0.012	0.0069
205-99-2	Benzo[b]fluoranthene	0.012	U	0.10	0.012	0.0031
191-24-2	Benzo[g,h,i]perylene	0.012	U	0.10	0.012	0.0062
207-08-9	Benzo[k]fluoranthene	0.012	U M	0.10	0.012	0.0063
218-01-9	Chrysene	0.012	U	0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.012	U	0.10	0.012	0.0041
206-44-0	Fluoranthene	0.012	U	0.10	0.012	0.0048
86-73-7	Fluorene	0.040	U	0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.040	0.0045
91-20-3	Naphthalene	0.012	U	0.10	0.012	0.0080
85-01-8	Phenanthrene	0.020	U	0.10	0.020	0.0093
129-00-0	Pyrene	0.020	U	0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	63		53-106
4165-60-0	Nitrobenzene-d5	62		55-111
1718-51-0	Terphenyl-d14	82		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4410.D
Lims ID: MB 280-434609/1-A
Client ID:
Sample Type: MB
Inject. Date: 29-Oct-2018 21:39:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-434609_1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 17:39:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	98	25915	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	59598	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	91	56865	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	99	8325	500.0	308.1	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	20713	500.0	315.1	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	36095	500.0	410.0	
8 1,4-Dioxane	88		1.692					ND	
9 N-Nitrosodimethylamine	74		2.550					ND	U
10 Naphthalene	128		5.980					ND	
11 2-Methylnaphthalene	142		6.663					ND	
12 1-Methylnaphthalene	142		6.761					ND	
13 Dimethyl phthalate	163		7.410					ND	U
14 Acenaphthylene	152		7.566					ND	
15 Acenaphthene	153		7.739					ND	
16 Dibenzofuran	168		7.914					ND	
17 Diethyl phthalate	149	8.109	8.109	0.000	95	1259		25.4	
18 Fluorene	166		8.254					ND	
19 N-Nitrosodiphenylamine	169		8.361					ND	
20 Phenanthrene	178		9.223					ND	
21 Anthracene	178		9.275					ND	
22 Di-n-butyl phthalate	149	9.768	9.776	-0.008	1	1074		21.3	
23 Fluoranthene	202		10.632					ND	
24 Pyrene	202		10.969					ND	
25 Butyl benzyl phthalate	149		10.969					ND	
26 Benzo[a]anthracene	228		13.340					ND	
27 Chrysene	228		13.421					ND	
28 Bis(2-ethylhexyl) phthalat	149		12.097					ND	
29 Di-n-octyl phthalate	149		15.301					ND	U
30 Benzo[b]fluoranthene	252		16.246					ND	
31 Benzo[k]fluoranthene	252		16.325					ND	U
32 Benzo[a]pyrene	252		17.186					ND	U
33 Indeno[1,2,3-cd]pyrene	276		20.498					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
	34 Dibenz(a,h)anthracene	278		20.585					ND	
	35 Benzo[g,h,i]perylene	276		21.242					ND	
$	53 2-methylnaphthalene-d10	152	6.632	6.632	0.000	90	13735	500.0	305.5	
$	54 Fluoranthene-d10	212	10.606	10.606	0.000	98	38429	500.0	385.8	
	38 Pentachlorophenol_T	266		3.885					ND	
	40 Benzidine_T	184		4.977					ND	
	41 4,4'-DDE	246		4.149					ND	
	42 4,4'-DDD	235		5.415					ND	
	43 4,4'-DDT	235		5.642					ND	
S	44 TPAH	1		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

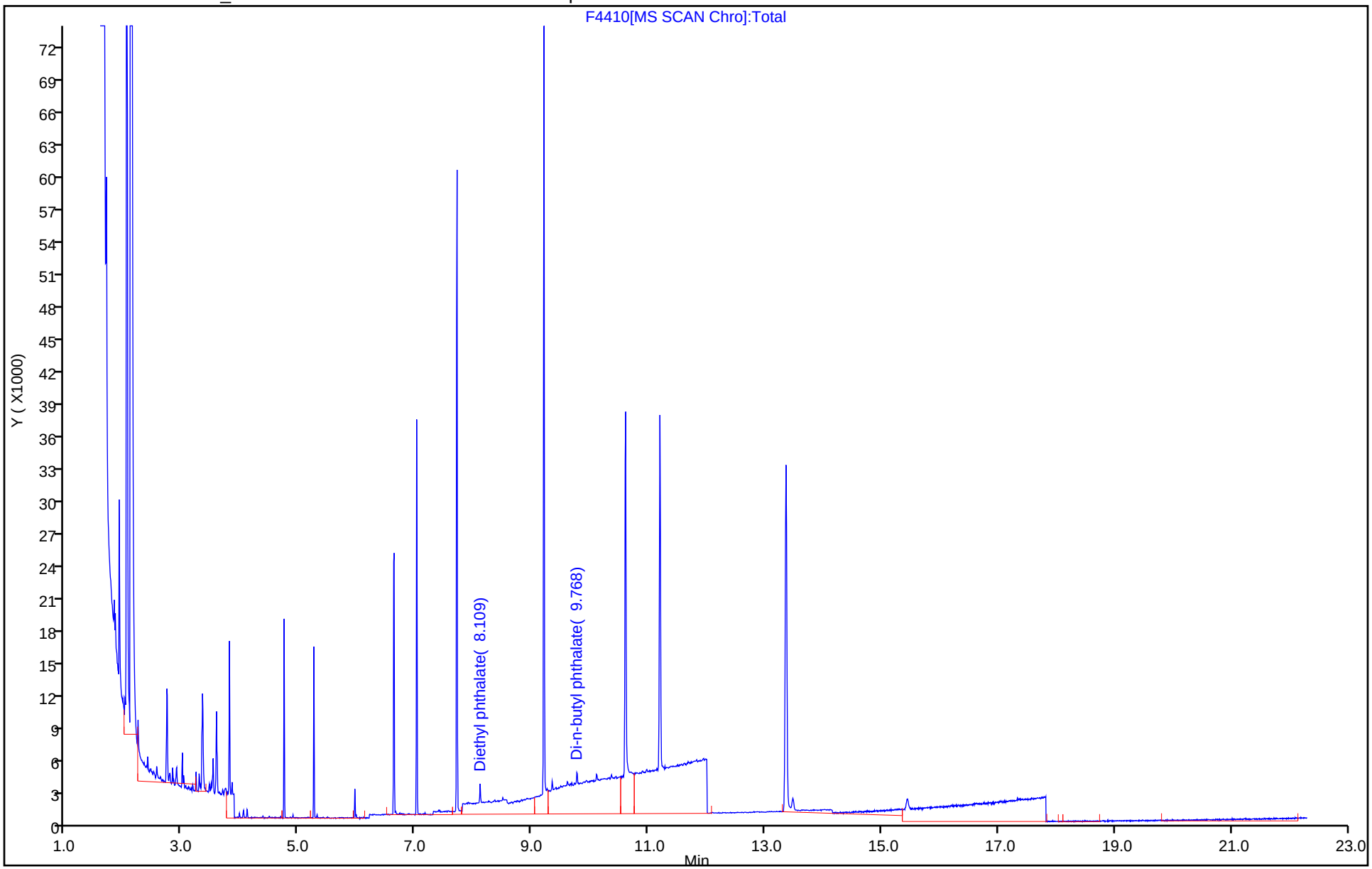
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:06:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4410.D

Injection Date:	29-Oct-2018 21:39:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	MB 280-434609/1-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4410.D
Lims ID: MB 280-434609/1-A
Client ID:
Sample Type: MB
Inject. Date: 29-Oct-2018 21:39:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-434609_1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 17:39:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	308.1	61.61
$ 5 2-Fluorobiphenyl	500.0	315.1	63.03
$ 6 Terphenyl-d14	500.0	410.0	82.00
$ 53 2-methylnaphthalene-d10	500.0	305.5	61.10
$ 54 Fluoranthene-d10	500.0	385.8	77.17

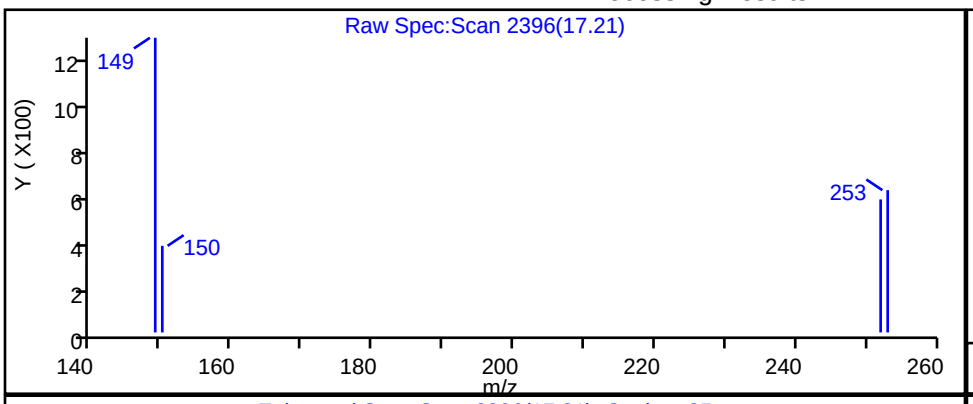
User Disabled Compound Report

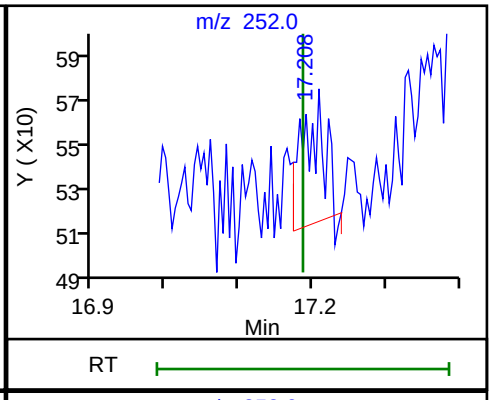
TestAmerica Denver

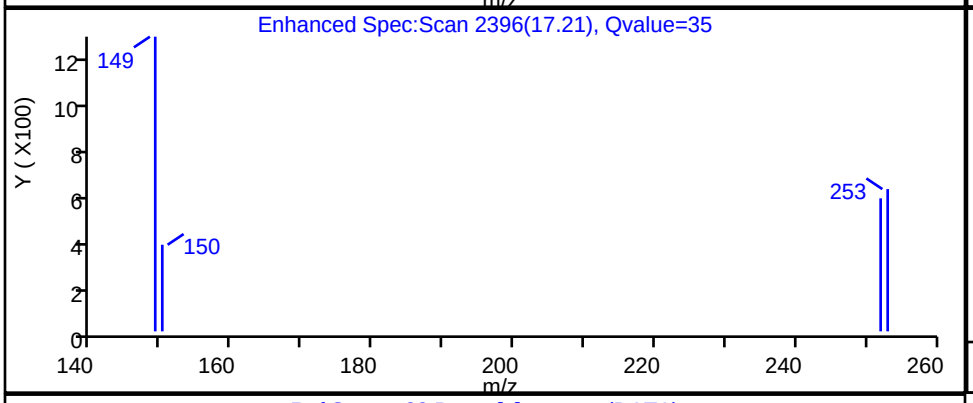
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4410.D				
Injection Date:	29-Oct-2018 21:39:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-434609/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

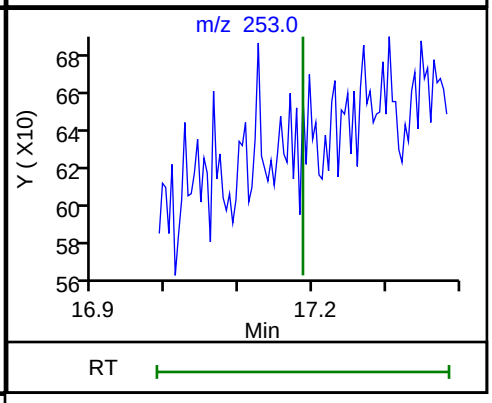
32 Benzo[a]pyrene, CAS: 50-32-8

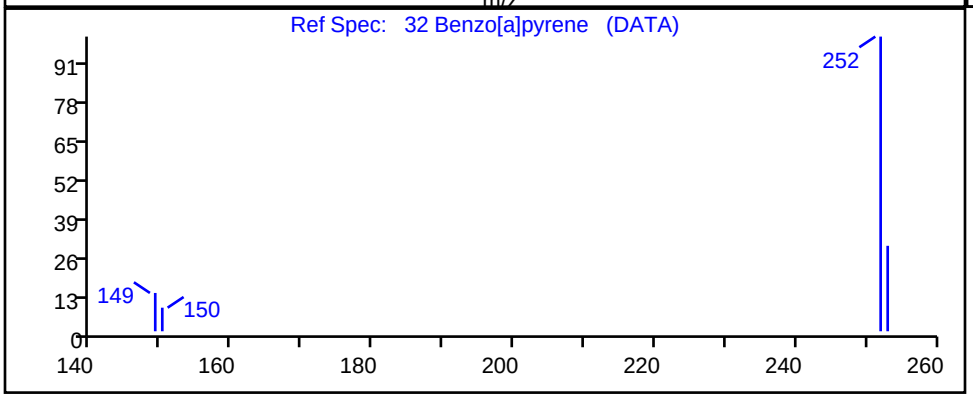
Processing Results











RT	Mass	Response	Amount
17.21	252.00	113	1.251279
17.19	253.00	0	

Reviewer: wickhamm, 30-Oct-2018 17:39:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

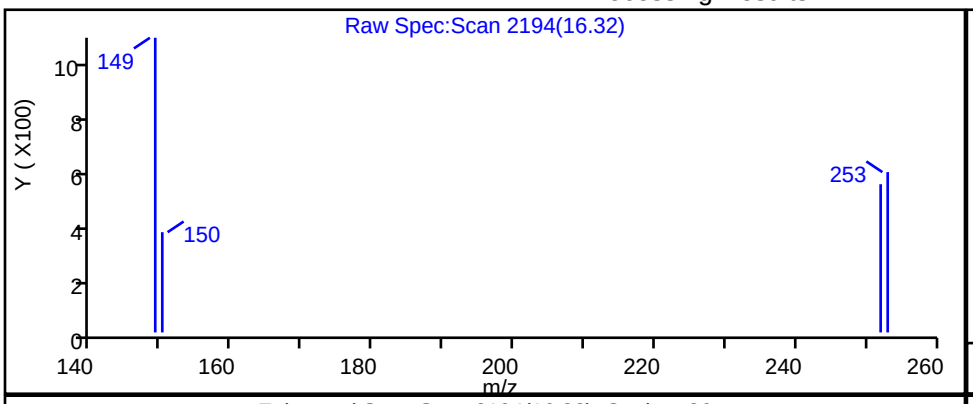
User Disabled Compound Report

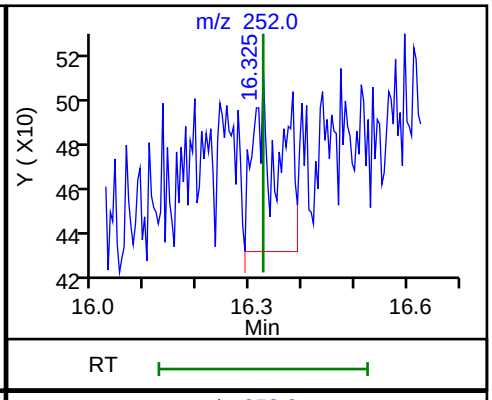
TestAmerica Denver

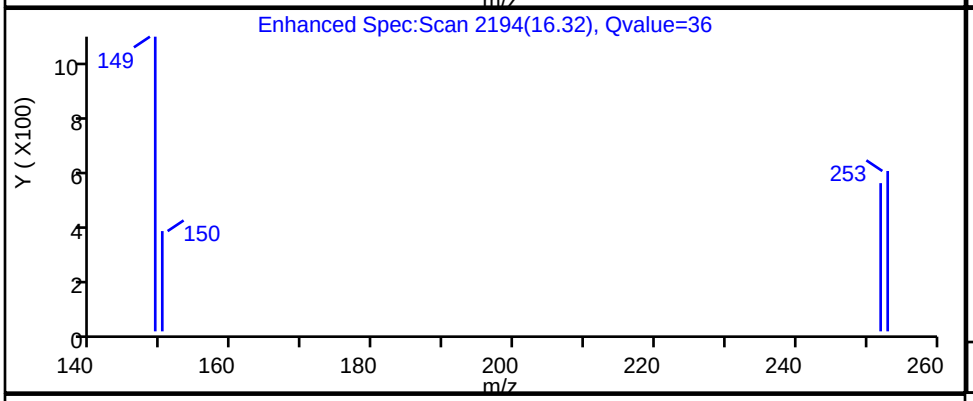
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4410.D				
Injection Date:	29-Oct-2018 21:39:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-434609/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

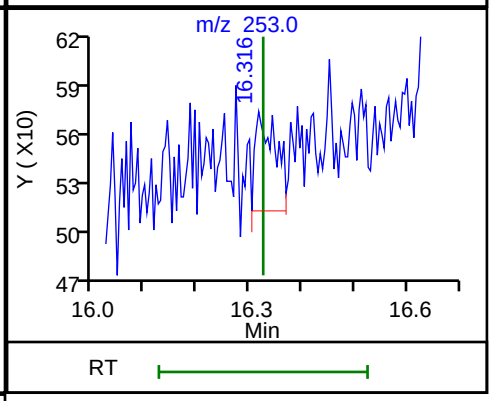
31 Benzo[k]fluoranthene, CAS: 207-08-9

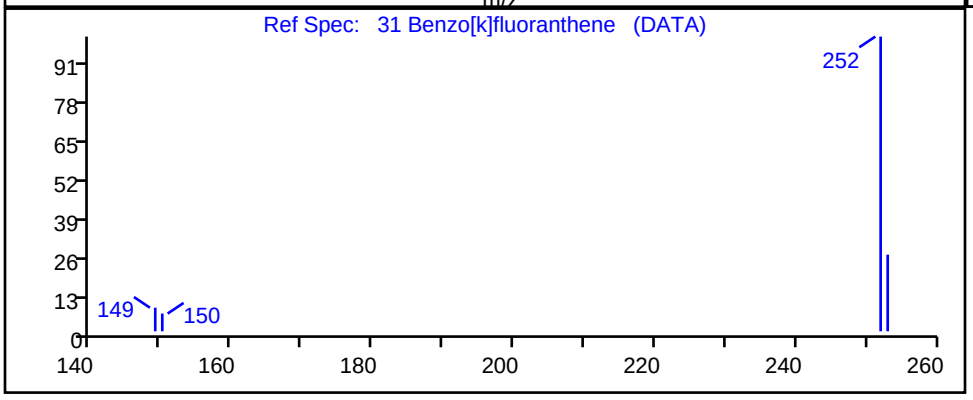
Processing Results











RT	Mass	Response	Amount
16.32	252.00	264	2.349908
16.32	253.00	153	

Reviewer: wickhamm, 30-Oct-2018 17:39:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-434609/2-A

Matrix: Water | Lab File ID: F4411.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 250(mL) | Date Analyzed: 10/29/2018 22:09

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.603		0.10	0.012	0.0059
91-57-6	2-Methylnaphthalene	0.564		0.10	0.012	0.0060
83-32-9	Acenaphthene	0.593		0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.536		0.10	0.040	0.0051
120-12-7	Anthracene	0.610		0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.647		0.10	0.012	0.0042
50-32-8	Benzo[a]pyrene	0.592		0.10	0.012	0.0069
205-99-2	Benzo[b]fluoranthene	0.675		0.10	0.012	0.0031
191-24-2	Benzo[g,h,i]perylene	0.631		0.10	0.012	0.0062
207-08-9	Benzo[k]fluoranthene	0.654	M	0.10	0.012	0.0063
218-01-9	Chrysene	0.772		0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.571		0.10	0.012	0.0041
206-44-0	Fluoranthene	0.709		0.10	0.012	0.0048
86-73-7	Fluorene	0.616		0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.592		0.10	0.040	0.0045
91-20-3	Naphthalene	0.567		0.10	0.012	0.0080
85-01-8	Phenanthrene	0.694		0.10	0.020	0.0093
129-00-0	Pyrene	0.693		0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	66		53-106
4165-60-0	Nitrobenzene-d5	64		55-111
1718-51-0	Terphenyl-d14	84		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4411.D
Lims ID: LCS 280-434609/2-A
Client ID:
Sample Type: LCS
Inject. Date: 29-Oct-2018 22:09:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-434609_2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 17:40:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	98	25321	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	55273	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	93	53847	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	8406	500.0	318.4	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	21096	500.0	328.5	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	34293	500.0	420.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.550	0.007	30	2391	225.0	122.9	
10 Naphthalene	128	5.980	5.980	0.000	100	12026	225.0	141.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	98	8098	225.0	141.0	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	7814	225.0	150.8	
13 Dimethyl phthalate	163	7.410	7.410	0.000	1	8285	225.0	166.9	
14 Acenaphthylene	152	7.566	7.566	0.000	99	8770	225.0	134.1	
15 Acenaphthene	153	7.739	7.739	0.000	96	8229	225.0	148.2	
16 Dibenzofuran	168	7.915	7.914	0.001	92	12965	225.0	154.8	
17 Diethyl phthalate	149	8.109	8.109	0.000	100	8567	225.0	177.2	
18 Fluorene	166	8.255	8.254	0.001	96	9976	225.0	153.9	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	6490	225.0	157.8	
20 Phenanthrene	178	9.223	9.223	0.000	100	19417	225.0	173.4	
21 Anthracene	178	9.275	9.275	0.000	1	12823	225.0	152.5	
22 Di-n-butyl phthalate	149	9.768	9.776	-0.008	1	10606	225.0	215.3	
23 Fluoranthene	202	10.624	10.632	-0.008	97	21084	225.0	177.2	
24 Pyrene	202	10.970	10.969	0.001	98	20765	225.0	173.2	
25 Butyl benzyl phthalate	149		10.969				ND	ND	
26 Benzo[a]anthracene	228	13.331	13.340	-0.009	56	14772	225.0	161.7	
27 Chrysene	228	13.421	13.421	0.000	96	21720	225.0	193.0	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	3103	225.0	155.1	
29 Di-n-octyl phthalate	149	15.302	15.301	0.001	1	4766	225.0	165.9	
30 Benzo[b]fluoranthene	252	16.242	16.246	-0.004	99	18287	225.0	168.8	
31 Benzo[k]fluoranthene	252	16.321	16.325	-0.004	98	17385	225.0	163.4	M
32 Benzo[a]pyrene	252	17.182	17.186	-0.004	96	12649	225.0	147.9	
33 Indeno[1,2,3-cd]pyrene	276	20.494	20.498	-0.004	95	16226	225.0	148.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278	20.586	20.585	0.001	87	16258	225.0	142.7	
35 Benzo[g,h,i]perylene	276	21.238	21.242	-0.004	96	21884	225.0	157.7	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	90	13828	500.0	314.8	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	98	37892	500.0	410.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

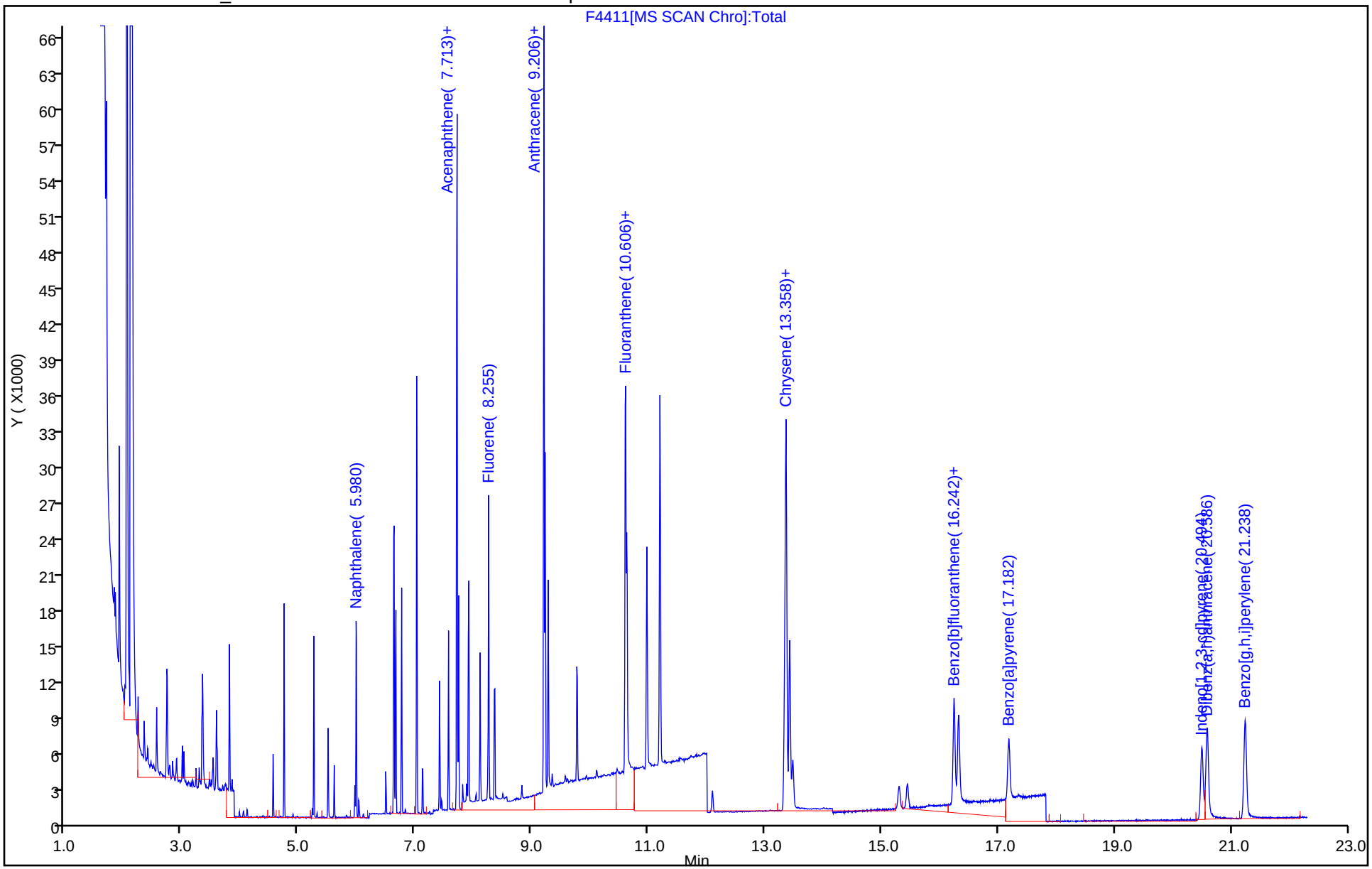
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:06:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4411.D

Injection Date:	29-Oct-2018 22:09:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	LCS 280-434609/2-A			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4411.D
Lims ID: LCS 280-434609/2-A
Client ID:
Sample Type: LCS
Inject. Date: 29-Oct-2018 22:09:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-434609_2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 17:40:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	318.4	63.67
$ 5 2-Fluorobiphenyl	500.0	328.5	65.70
$ 6 Terphenyl-d14	500.0	420.0	84.00
$ 53 2-methylnaphthalene-d10	500.0	314.8	62.96
$ 54 Fluoranthene-d10	500.0	410.2	82.04

Manual Integration/User Assign Peak Report

TestAmerica Denver

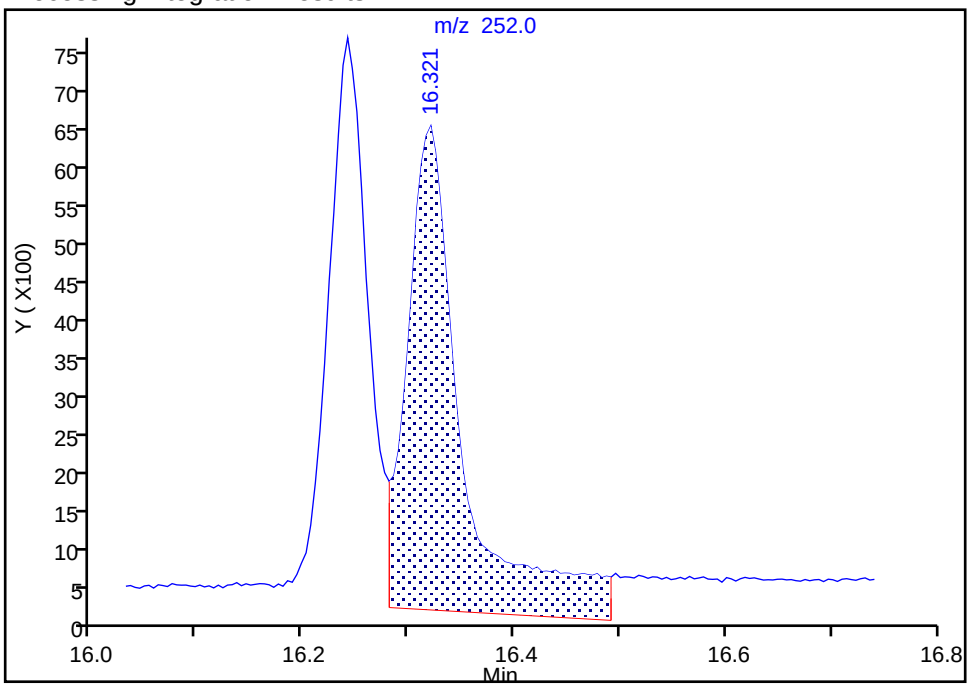
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4411.D
Injection Date: 29-Oct-2018 22:09:30 Instrument ID: SMS_F
Lims ID: LCS 280-434609/2-A
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

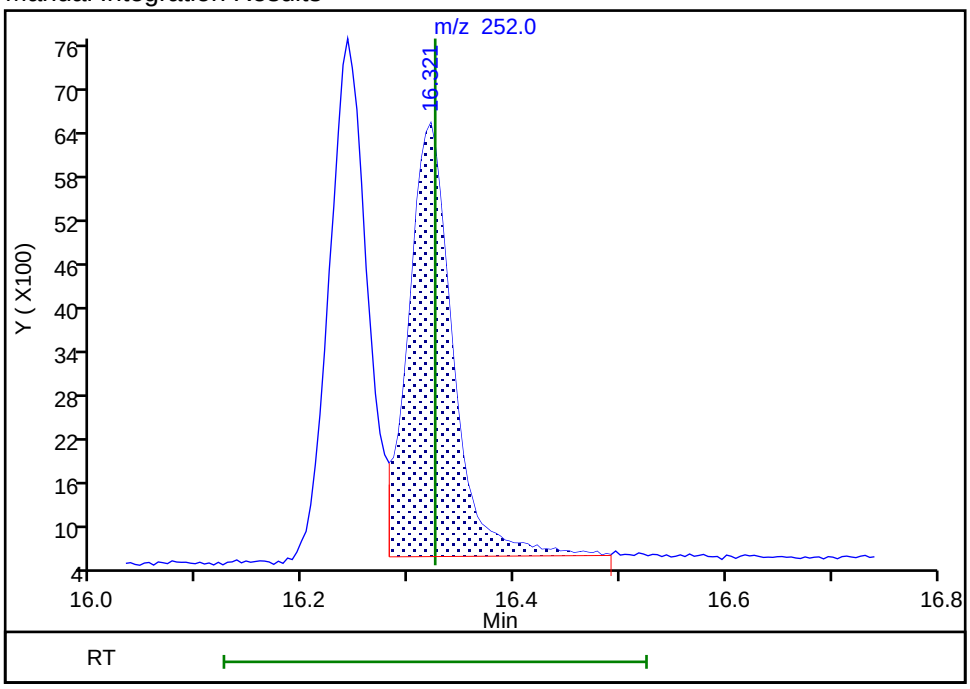
Processing Integration Results

RT: 16.32
Area: 23320
Amount: 219.2094
Amount Units: ng/ml



Manual Integration Results

RT: 16.32
Area: 17385
Amount: 163.4200
Amount Units: ng/ml



Reviewer: wickhamm, 30-Oct-2018 17:40:03
Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW MS | Lab Sample ID: 280-115789-1 MS

Matrix: Water | Lab File ID: F4420.D

Analysis Method: 8270D SIM | Date Collected: 10/18/2018 11:10

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 232.2(mL) | Date Analyzed: 10/30/2018 02:34

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.552		0.11	0.013	0.0064
91-57-6	2-Methylnaphthalene	0.528		0.11	0.013	0.0065
83-32-9	Acenaphthene	0.572		0.11	0.043	0.0045
208-96-8	Acenaphthylene	0.512		0.11	0.043	0.0055
120-12-7	Anthracene	0.651		0.11	0.043	0.0060
56-55-3	Benzo[a]anthracene	0.831		0.11	0.013	0.0045
50-32-8	Benzo[a]pyrene	0.767		0.11	0.013	0.0074
205-99-2	Benzo[b]fluoranthene	0.808		0.11	0.013	0.0033
191-24-2	Benzo[g,h,i]perylene	0.814		0.11	0.013	0.0067
207-08-9	Benzo[k]fluoranthene	0.722	M	0.11	0.013	0.0068
218-01-9	Chrysene	1.04		0.11	0.013	0.0036
53-70-3	Dibenz(a,h)anthracene	0.716		0.11	0.013	0.0044
206-44-0	Fluoranthene	0.778		0.11	0.013	0.0052
86-73-7	Fluorene	0.620		0.11	0.043	0.0059
193-39-5	Indeno[1,2,3-cd]pyrene	0.692		0.11	0.043	0.0048
91-20-3	Naphthalene	0.540		0.11	0.013	0.0086
85-01-8	Phenanthrene	0.728		0.11	0.022	0.010
129-00-0	Pyrene	0.822		0.11	0.022	0.0066

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	55		53-106
4165-60-0	Nitrobenzene-d5	56		55-111
1718-51-0	Terphenyl-d14	85		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4420.D
Lims ID: 280-115789-D-1-B MS
Client ID: RQLMW-011-181001-GW
Sample Type: MS
Inject. Date: 30-Oct-2018 02:34:30 ALS Bottle#: 13 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-1-bms
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:54:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	95	26809	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	59007	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	93	55474	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	7767	500.0	277.8	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	18720	500.0	275.3	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	36955	500.0	424.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.550	0.007	29	1971	225.0	95.7	
10 Naphthalene	128	5.980	5.980	0.000	100	11257	225.0	125.4	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	7462	225.0	122.7	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	95	7026	225.0	128.1	
13 Dimethyl phthalate	163	7.410	7.410	0.000	1	7797	225.0	148.4	
14 Acenaphthylene	152	7.566	7.566	0.000	99	8240	225.0	119.0	
15 Acenaphthene	153	7.739	7.739	0.000	98	7814	225.0	132.9	
16 Dibenzofuran	168	7.915	7.914	0.001	91	12366	225.0	139.4	
17 Diethyl phthalate	149	8.109	8.109	0.000	99	8789	225.0	171.7	
18 Fluorene	166	8.254	8.254	0.000	96	9883	225.0	144.0	
19 N-Nitrosodiphenylamine	169	8.351	8.361	-0.010	98	6724	225.0	153.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	20210	225.0	169.0	
21 Anthracene	178	9.275	9.275	0.000	1	13581	225.0	151.3	
22 Di-n-butyl phthalate	149	9.768	9.776	-0.008	1	12110	225.0	229.8	
23 Fluoranthene	202	10.624	10.632	-0.008	98	22961	225.0	180.8	
24 Pyrene	202	10.969	10.969	0.000	99	24422	225.0	190.8	
25 Butyl benzyl phthalate	149		10.969				ND	ND	
26 Benzo[a]anthracene	228	13.331	13.340	-0.009	59	18166	225.0	193.0	
27 Chrysene	228	13.421	13.421	0.000	96	28050	225.0	241.9	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	3392	225.0	158.8	
29 Di-n-octyl phthalate	149	15.293	15.301	-0.008	1	5967	225.0	197.1	
30 Benzo[b]fluoranthene	252	16.242	16.246	-0.004	100	20940	225.0	187.6	
31 Benzo[k]fluoranthene	252	16.321	16.325	-0.004	99	18372	225.0	167.6	M
32 Benzo[a]pyrene	252	17.178	17.186	-0.008	99	15680	225.0	178.0	
33 Indeno[1,2,3-cd]pyrene	276	20.494	20.498	-0.004	93	18151	225.0	160.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278	20.585	20.585	0.000	86	19516	225.0	166.3	
35 Benzo[g,h,i]perylene	276	21.233	21.242	-0.009	96	27025	225.0	189.0	
$ 53 2-methylnaphthalene-d10	152	6.625	6.632	-0.007	97	12266	500.0	263.7	
$ 54 Fluoranthene-d10	212	10.598	10.606	-0.008	98	42304	500.0	429.0	
38 Pentachlorophenol_T	266		3.885					ND	
40 Benzidine_T	184		4.977					ND	
41 4,4'-DDE	246		4.149					ND	
42 4,4'-DDD	235		5.415					ND	
43 4,4'-DDT	235		5.642					ND	
S 44 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

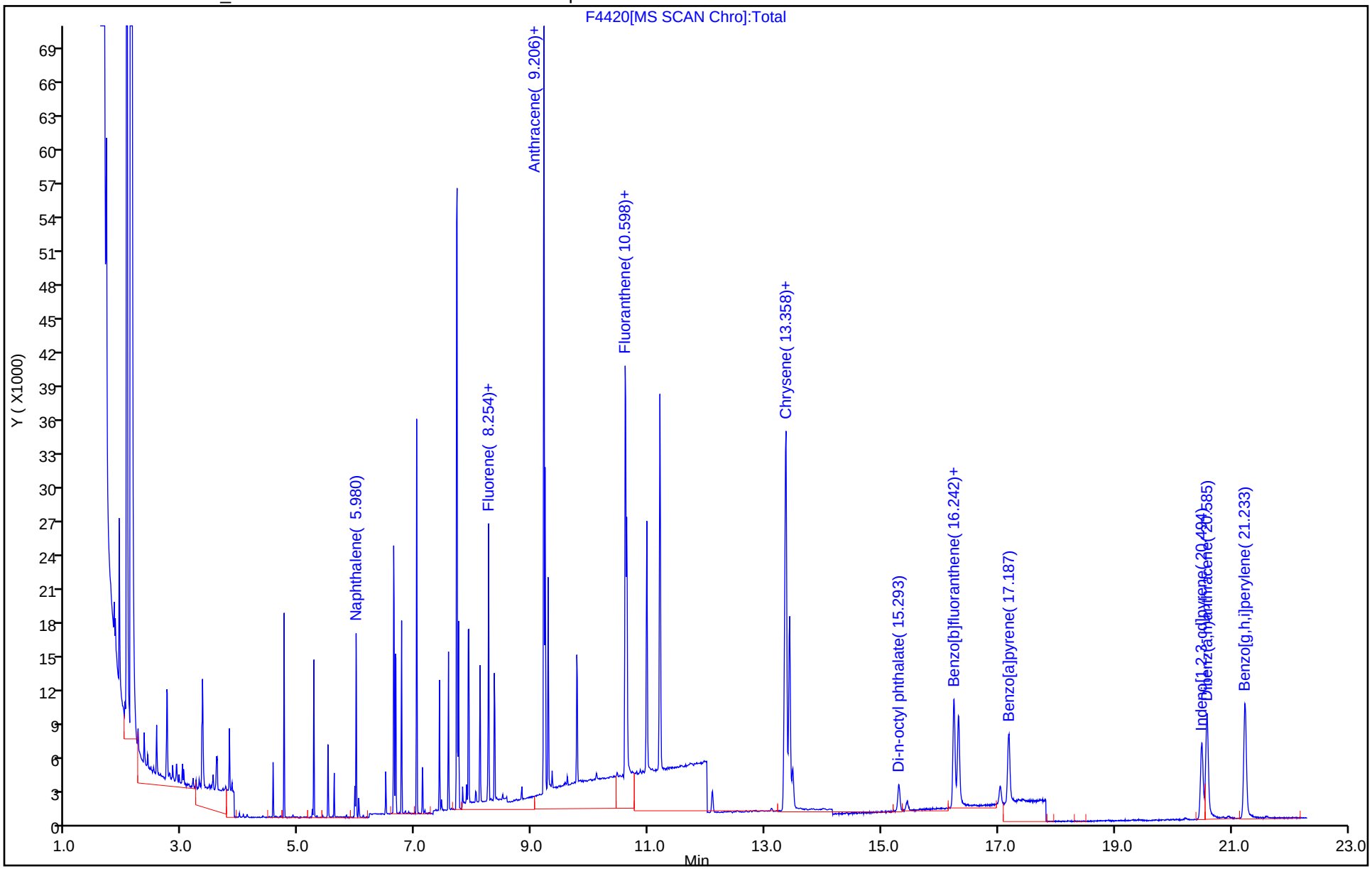
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:06:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4420.D

Injection Date:	30-Oct-2018 02:34:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-115789-D-1-B MS			Worklist Smp#:	14
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4420.D
Lims ID: 280-115789-D-1-B MS
Client ID: RQLMW-011-181001-GW
Sample Type: MS
Inject. Date: 30-Oct-2018 02:34:30 ALS Bottle#: 13 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-1-bms
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:54:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	277.8	55.57
$ 5 2-Fluorobiphenyl	500.0	275.3	55.06
$ 6 Terphenyl-d14	500.0	424.0	84.79
$ 53 2-methylnaphthalene-d10	500.0	263.7	52.75
$ 54 Fluoranthene-d10	500.0	429.0	85.80

Manual Integration/User Assign Peak Report

TestAmerica Denver

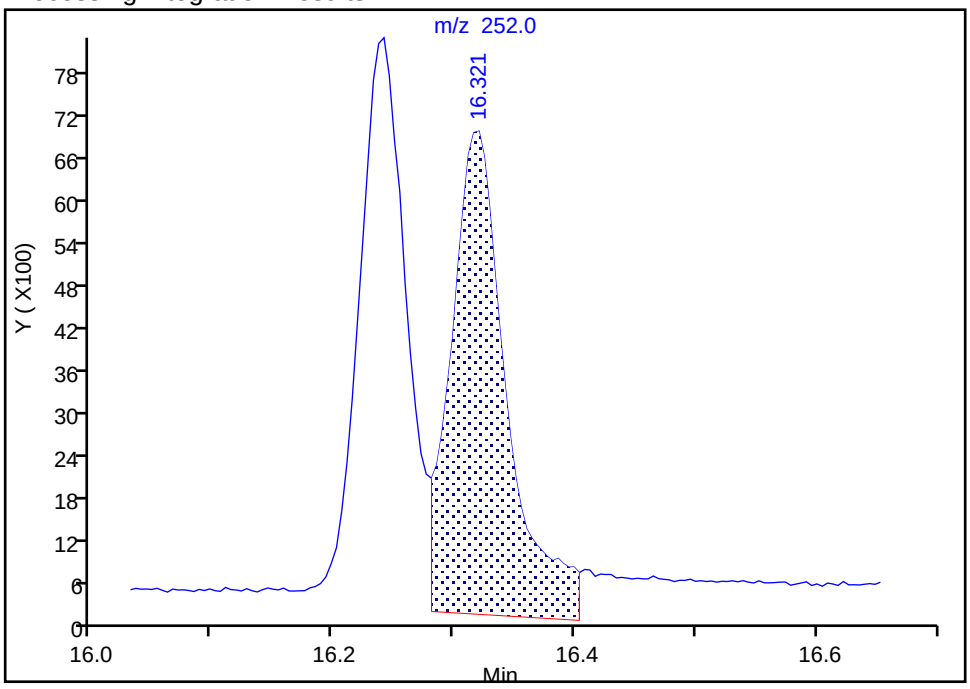
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4420.D				
Injection Date:	30-Oct-2018 02:34:30	Instrument ID:	SMS_F		
Lims ID:	280-115789-D-1-B MS				
Client ID:	RQLMW-011-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	13	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

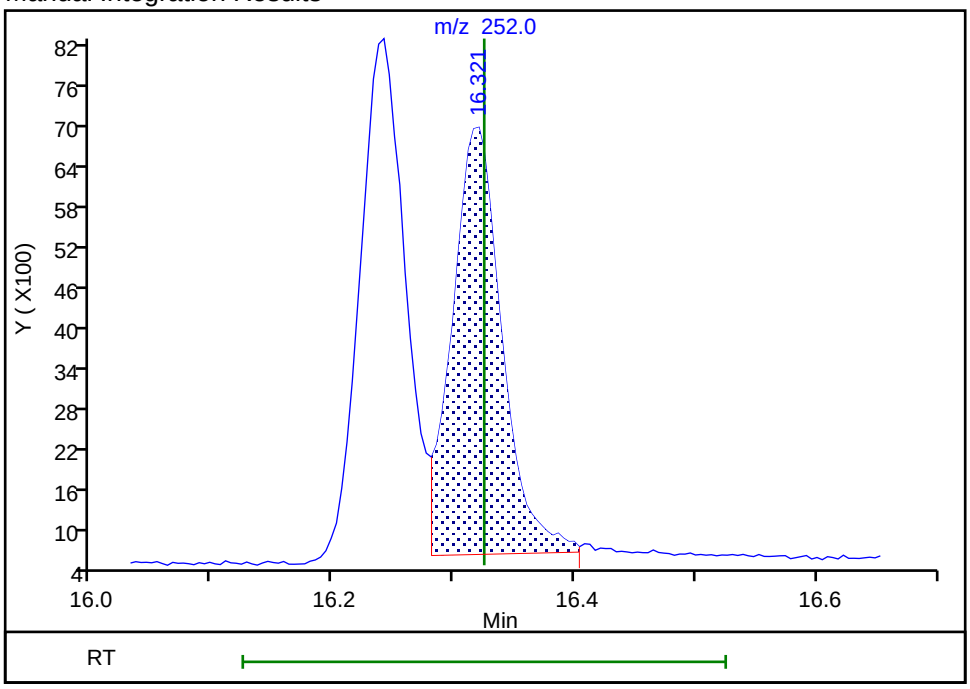
Processing Integration Results

RT: 16.32
Area: 22241
Amount: 202.9350
Amount Units: ng/ml



Manual Integration Results

RT: 16.32
Area: 18372
Amount: 167.6328
Amount Units: ng/ml



Reviewer: wickhamm, 30-Oct-2018 18:54:09
Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: RQLMW-011-181001-GW MSD | Lab Sample ID: 280-115789-1 MSD

Matrix: Water | Lab File ID: F4421.D

Analysis Method: 8270D SIM | Date Collected: 10/18/2018 11:10

Extract. Method: 3510C | Date Extracted: 10/23/2018 16:35

Sample wt/vol: 221.9(mL) | Date Analyzed: 10/30/2018 03:04

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.: 435422 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.667		0.11	0.014	0.0066
91-57-6	2-Methylnaphthalene	0.621		0.11	0.014	0.0068
83-32-9	Acenaphthene	0.662		0.11	0.045	0.0047
208-96-8	Acenaphthylene	0.599		0.11	0.045	0.0057
120-12-7	Anthracene	0.679		0.11	0.045	0.0063
56-55-3	Benzo[a]anthracene	0.787		0.11	0.014	0.0047
50-32-8	Benzo[a]pyrene	0.679		0.11	0.014	0.0078
205-99-2	Benzo[b]fluoranthene	0.775		0.11	0.014	0.0035
191-24-2	Benzo[g,h,i]perylene	0.782		0.11	0.014	0.0070
207-08-9	Benzo[k]fluoranthene	0.812		0.11	0.014	0.0071
218-01-9	Chrysene	0.907		0.11	0.014	0.0037
53-70-3	Dibenz(a,h)anthracene	0.725		0.11	0.014	0.0046
206-44-0	Fluoranthene	0.814		0.11	0.014	0.0054
86-73-7	Fluorene	0.682		0.11	0.045	0.0062
193-39-5	Indeno[1,2,3-cd]pyrene	0.714		0.11	0.045	0.0051
91-20-3	Naphthalene	0.638		0.11	0.014	0.0090
85-01-8	Phenanthrene	0.760		0.11	0.023	0.010
129-00-0	Pyrene	0.793		0.11	0.023	0.0069

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	61		53-106
4165-60-0	Nitrobenzene-d5	62		55-111
1718-51-0	Terphenyl-d14	92		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4421.D
Lims ID: 280-115789-D-1-C MSD
Client ID: RQLMW-011-181001-GW
Sample Type: MSD
Inject. Date: 30-Oct-2018 03:04:30 ALS Bottle#: 14 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-1-cmsd
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:58:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	25604	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	57177	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.358	0.000	92	53748	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	99	8305	500.0	311.1	
$ 5 2-Fluorobiphenyl	172	7.019	7.019	0.000	100	19964	500.0	307.4	
$ 6 Terphenyl-d14	244	11.194	11.194	0.000	99	38785	500.0	459.2	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.550	0.007	25	2004	225.0	101.8	
10 Naphthalene	128	5.980	5.980	0.000	100	12137	225.0	141.5	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	98	8010	225.0	137.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	7750	225.0	148.0	
13 Dimethyl phthalate	163	7.410	7.410	0.000	1	7608	225.0	151.6	
14 Acenaphthylene	152	7.566	7.566	0.000	99	8790	225.0	132.9	
15 Acenaphthene	153	7.739	7.739	0.000	97	8254	225.0	147.0	
16 Dibenzofuran	168	7.914	7.914	0.000	92	12813	225.0	151.3	
17 Diethyl phthalate	149	8.109	8.109	0.000	100	8503	225.0	173.9	
18 Fluorene	166	8.254	8.254	0.000	96	9918	225.0	151.4	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	93	6213	225.0	146.1	
20 Phenanthrene	178	9.223	9.223	0.000	100	19544	225.0	168.7	
21 Anthracene	178	9.275	9.275	0.000	1	13113	225.0	150.7	
22 Di-n-butyl phthalate	149	9.768	9.776	-0.008	1	11641	225.0	228.0	
23 Fluoranthene	202	10.624	10.632	-0.008	98	22230	225.0	180.6	
24 Pyrene	202	10.969	10.969	0.000	99	21835	225.0	176.0	
25 Butyl benzyl phthalate	149		10.969				ND	ND	
26 Benzo[a]anthracene	228	13.331	13.340	-0.009	62	15915	225.0	174.6	
27 Chrysene	228	13.421	13.421	0.000	96	22606	225.0	201.2	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	3128	225.0	151.1	
29 Di-n-octyl phthalate	149	15.293	15.301	-0.008	1	5239	225.0	180.6	
30 Benzo[b]fluoranthene	252	16.237	16.246	-0.009	100	18594	225.0	171.9	
31 Benzo[k]fluoranthene	252	16.316	16.325	-0.009	99	19142	225.0	180.3	
32 Benzo[a]pyrene	252	17.178	17.186	-0.008	98	12862	225.0	150.7	
33 Indeno[1,2,3-cd]pyrene	276	20.494	20.498	-0.004	94	17327	225.0	158.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278	20.581	20.585	-0.004	86	18302	225.0	160.9	
35 Benzo[g,h,i]perylene	276	21.233	21.242	-0.009	96	24030	225.0	173.5	
$ 53 2-methylnaphthalene-d10	152	6.632	6.632	0.000	89	13159	500.0	296.3	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	98	39797	500.0	416.5	
38 Pentachlorophenol_T	266		3.885					ND	
40 Benzidine_T	184		4.977					ND	
41 4,4'-DDE	246		4.149					ND	
42 4,4'-DDD	235		5.415					ND	
43 4,4'-DDT	235		5.642					ND	
S 44 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

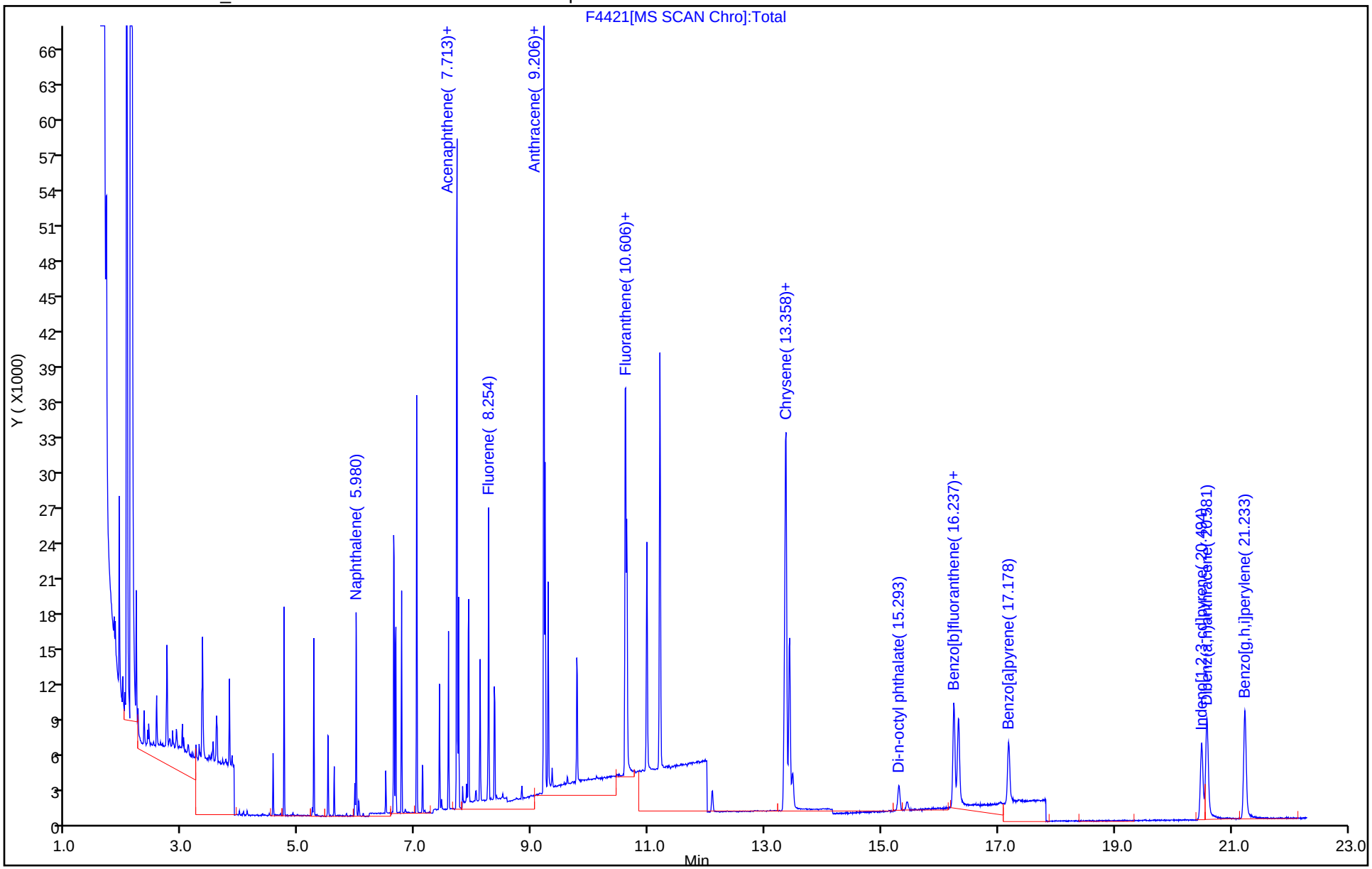
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 30-Oct-2018 19:06:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4421.D

Injection Date:	30-Oct-2018 03:04:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-115789-D-1-C MSD			Worklist Smp#:	15
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\F4421.D
Lims ID: 280-115789-D-1-C MSD
Client ID: RQLMW-011-181001-GW
Sample Type: MSD
Inject. Date: 30-Oct-2018 03:04:30 ALS Bottle#: 14 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-d-1-cmsd
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75602.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 30-Oct-2018 19:06:12 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK001

First Level Reviewer: wickhamm Date: 30-Oct-2018 18:58:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	311.1	62.21
$ 5 2-Fluorobiphenyl	500.0	307.4	61.49
$ 6 Terphenyl-d14	500.0	459.2	91.84
$ 53 2-methylnaphthalene-d10	500.0	296.3	59.25
$ 54 Fluoranthene-d10	500.0	416.5	83.30

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_F Start Date: 10/29/2018 15:45

Analysis Batch Number: 435404 End Date: 10/29/2018 20:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-435404/2		10/29/2018 15:45	1	F4397.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-435404/3		10/29/2018 16:02	1	F4398.D	Rxi-5Sil MS 0.25(mm)
STD0001 280-435404/4 IC		10/29/2018 16:32	1	F4399.D	Rxi-5Sil MS 0.25(mm)
STD0002 280-435404/5 IC		10/29/2018 17:02	1	F4400.D	Rxi-5Sil MS 0.25(mm)
STD0500 280-435404/6 IC		10/29/2018 17:32	1	F4401.D	Rxi-5Sil MS 0.25(mm)
STD0100 280-435404/7 IC		10/29/2018 18:01	1	F4402.D	Rxi-5Sil MS 0.25(mm)
STD0300 280-435404/8 IC		10/29/2018 18:31	1	F4403.D	Rxi-5Sil MS 0.25(mm)
STD1200 280-435404/9 IC		10/29/2018 19:01	1	F4404.D	Rxi-5Sil MS 0.25(mm)
STD2500 280-435404/10 IC		10/29/2018 19:31	1	F4405.D	Rxi-5Sil MS 0.25(mm)
STD5000 280-435404/11 IC		10/29/2018 20:00	1	F4406.D	Rxi-5Sil MS 0.25(mm)
ICV 280-435404/12		10/29/2018 20:30	1	F4407.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: SMS_F Start Date: 10/29/2018 20:56

Analysis Batch Number: 435422 End Date: 10/30/2018 07:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-435422/2		10/29/2018 20:56	1	F4408.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435422/3		10/29/2018 21:09	1	F4409.D	Rxi-5Sil MS 0.25(mm)
MB 280-434609/1-A		10/29/2018 21:39	1	F4410.D	Rxi-5Sil MS 0.25(mm)
LCS 280-434609/2-A		10/29/2018 22:09	1	F4411.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 22:39	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 23:08	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/29/2018 23:38	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 00:07	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 00:37	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 01:06	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 01:35	1		Rxi-5Sil MS 0.25(mm)
280-115789-1		10/30/2018 02:05	1	F4419.D	Rxi-5Sil MS 0.25(mm)
280-115789-1 MS		10/30/2018 02:34	1	F4420.D	Rxi-5Sil MS 0.25(mm)
280-115789-1 MSD		10/30/2018 03:04	1	F4421.D	Rxi-5Sil MS 0.25(mm)
280-115789-2		10/30/2018 03:33	1	F4422.D	Rxi-5Sil MS 0.25(mm)
280-115789-3		10/30/2018 04:02	1	F4423.D	Rxi-5Sil MS 0.25(mm)
280-115789-4		10/30/2018 04:32	1	F4424.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 05:01	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 05:30	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 06:00	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 06:29	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 06:58	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		10/30/2018 07:27	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-435422/25		10/30/2018 07:57	1	F4431.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 434609 Batch Start Date: 10/23/18 16:35 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 10/24/18 12:46

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8270BO-SIMLCS 00031
MB 280-434609/1		3510C, 8270D SIM				250 mL	1 mL	7 SU	
LCS 280-434609/2		3510C, 8270D SIM				250 mL	1 mL	7 SU	0.25 mL
280-115789-D-1	RQLMW-011-181001-GW	3510C, 8270D SIM	T	403.5 g	182.1 g	221.4 mL	1 mL	6 SU	
280-115789-D-1 MS	RQLMW-011-181001-GW	3510C, 8270D SIM	T	414.9 g	182.7 g	232.2 mL	1 mL	6 SU	0.25 mL
280-115789-D-1 MSD	RQLMW-011-181001-GW	3510C, 8270D SIM	T	404.5 g	182.6 g	221.9 mL	1 mL	7 SU	0.25 mL
280-115789-D-2	RQLMW-011-181002-GW	3510C, 8270D SIM	T	422.7 g	184.0 g	238.7 mL	1 mL	7 SU	
280-115789-D-3	FWGER-181001-ER	3510C, 8270D SIM	T	417.5 g	182.1 g	235.4 mL	1 mL	5 SU	
280-115789-D-4	FWGFB-181001-FB	3510C, 8270D SIM	T	439.3 g	182.8 g	256.5 mL	1 mL	5 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	SIM_LVI_SURR 00006					
MB 280-434609/1		3510C, 8270D SIM		0.25 mL					
LCS 280-434609/2		3510C, 8270D SIM		0.25 mL					
280-115789-D-1	RQLMW-011-181001-GW	3510C, 8270D SIM	T	0.25 mL					
280-115789-D-1 MS	RQLMW-011-181001-GW	3510C, 8270D SIM	T	0.25 mL					
280-115789-D-1 MSD	RQLMW-011-181001-GW	3510C, 8270D SIM	T	0.25 mL					
280-115789-D-2	RQLMW-011-181002-GW	3510C, 8270D SIM	T	0.25 mL					
280-115789-D-3	FWGER-181001-ER	3510C, 8270D SIM	T	0.25 mL					
280-115789-D-4	FWGFB-181001-FB	3510C, 8270D SIM	T	0.25 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.: 280-115789-1

SDG No.:

Batch Number: 434609 Batch Start Date: 10/23/18 16:35 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 10/24/18 12:46

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007
Analyst ID - Concentration	MF
Concentration 1 Corrected Temperature	84/84 Degrees C
Equipment ID - Concentration 1	A/B
Analyst ID - Extraction	AE
Method/Fraction	3510C_LVI/8270D_SIM_DOD5
Na2SO4 ID	0000205461_00006
NaCl ID	181957
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00409
Prep Solvent Volume Used	90 mL
Analyst ID - Spike Analyst	AE
Analyst ID - Spike Witness Analyst	Reviewer: AAG
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	85/83 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.

8330B_DOD5

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): UltraCarb5u ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	12DNB1 #
FWGFB-181001-FB	280-115789-5	97
	MB 280-438225/1-A	102
	LCS 280-438225/2-A	96
	LCSD 280-438225/3-A	100

	QC LIMITS
12DNB = 1,2-Dinitrobenzene	83-119

Column to be used to flag recovery values

FORM II 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11260010.D

Lab ID: LCS 280-438225/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.21	111	73-125	
1,3-Dinitrobenzene	2.00	2.09	104	78-120	
2,4,6-Trinitrotoluene	2.00	2.01	100	71-123	
2,4-Dinitrotoluene	2.00	1.99	99	78-120	
2,6-Dinitrotoluene	2.00	1.92	96	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.85	92	79-120	
2-Nitrotoluene	2.00	1.49	74	70-127	
3-Nitrotoluene	2.00	1.55	78	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.65	82	76-125	
4-Nitrotoluene	2.00	1.67	83	71-127	
HMX	2.00	2.04	102	65-135	
Nitrobenzene	2.00	1.78	89	65-134	
Nitroglycerin	20.0	20.5	102	74-127	
PETN	20.0	20.2	101	73-127	
RDX	2.00	2.11	106	68-130	
Tetryl	2.00	2.16	108	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11260011.D

Lab ID: LCSD 280-438225/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.20	110	0	20	73-125	
1,3-Dinitrobenzene	2.00	2.09	105	0	20	78-120	
2,4,6-Trinitrotoluene	2.00	2.00	100	0	20	71-123	
2,4-Dinitrotoluene	2.00	2.01	101	1	20	78-120	
2,6-Dinitrotoluene	2.00	2.00	100	4	20	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.94	97	5	20	79-120	
2-Nitrotoluene	2.00	1.55	78	4	20	70-127	
3-Nitrotoluene	2.00	1.66	83	7	20	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.78	89	8	20	76-125	
4-Nitrotoluene	2.00	1.72	86	3	20	71-127	
HMX	2.00	2.00	100	2	20	65-135	
Nitrobenzene	2.00	1.83	92	3	20	65-134	
Nitroglycerin	20.0	19.9	100	3	20	74-127	
PETN	20.0	20.1	101	1	20	73-127	
RDX	2.00	2.13	106	1	20	68-130	
Tetryl	2.00	2.16	108	0	20	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: MB 280-438225/1-A

Matrix: Water Date Extracted: 11/20/2018 11:01

Lab File ID:(1) 11260009.D Lab File ID:(2)

Date Analyzed:(1) 11/26/2018 14:04 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2)

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-438225/2-A	11/26/2018 14:27	
	LCSD 280-438225/3-A	11/26/2018 14:50	
FWGFB-181001-FB	280-115789-5	11/26/2018 15:13	

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: FWGFB-181001-FB | Lab Sample ID: 280-115789-5

Matrix: Water | Lab File ID: 11260012.D

Analysis Method: 8330B | Date Collected: 11/14/2018 00:00

Extraction Method: 3535 | Date Extracted: 11/20/2018 11:01

Sample wt/vol: 488.3(mL) | Date Analyzed: 11/26/2018 15:13

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438727 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.41	U	1.0	0.41	0.20
99-65-0	1,3-Dinitrobenzene	0.20	U	0.41	0.20	0.091
118-96-7	2,4,6-Trinitrotoluene	0.20	U	0.41	0.20	0.074
121-14-2	2,4-Dinitrotoluene	0.20	U	0.41	0.20	0.086
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.066
35572-78-2	2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.052
88-72-2	2-Nitrotoluene	0.20	U	0.41	0.20	0.088
99-08-1	3-Nitrotoluene	0.20	U	0.41	0.20	0.085
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.059
99-99-0	4-Nitrotoluene	0.41	U	1.0	0.41	0.20
2691-41-0	HMX	0.20	U	0.41	0.20	0.090
98-95-3	Nitrobenzene	0.20	U	0.41	0.20	0.093
55-63-0	Nitroglycerin	2.0	U	3.1	2.0	0.94
78-11-5	PETN	1.2	U	2.0	1.2	0.43
121-82-4	RDX	0.12	U	0.20	0.12	0.054
479-45-8	Tetryl	0.20	U	0.25	0.20	0.081

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	97		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260012.D
Lims ID: 280-115789-A-5-A
Client ID: FWGFB-181001-FB
Sample Type: Client
Inject. Date: 26-Nov-2018 15:13:05 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-115789-A-5-A
Misc. Info.: 280-0076526-012
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:24:08 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0320

First Level Reviewer: fiedlerh Date: 30-Nov-2018 15:04:22

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
2 HMX	1		6.661			ND	
5 RDX	1		7.761			ND	
$ 7 1,2-Dinitrobenzene	1	8.741	8.734	0.007	24865	0.1932	
8 1,3,5-Trinitrobenzene	1		8.894			ND	
9 1,3-Dinitrobenzene	1		9.547			ND	
11 Nitrobenzene	1		9.934			ND	
12 Tetryl	1		10.247			ND	
13 Nitroglycerin	2		10.754			ND	
14 2,4,6-Trinitrotoluene	1		11.207			ND	
15 4-Amino-2,6-dinitrotoluene	1		11.374			ND	
16 2-Amino-4,6-dinitrotoluene	1		11.661			ND	
17 2,6-Dinitrotoluene	1		11.814			ND	
18 2,4-Dinitrotoluene	1		12.007			ND	
19 o-Nitrotoluene	1		12.847			ND	
20 p-Nitrotoluene	1		13.281			ND	
21 m-Nitrotoluene	1		13.874			ND	
22 PETN	2		14.961			ND	

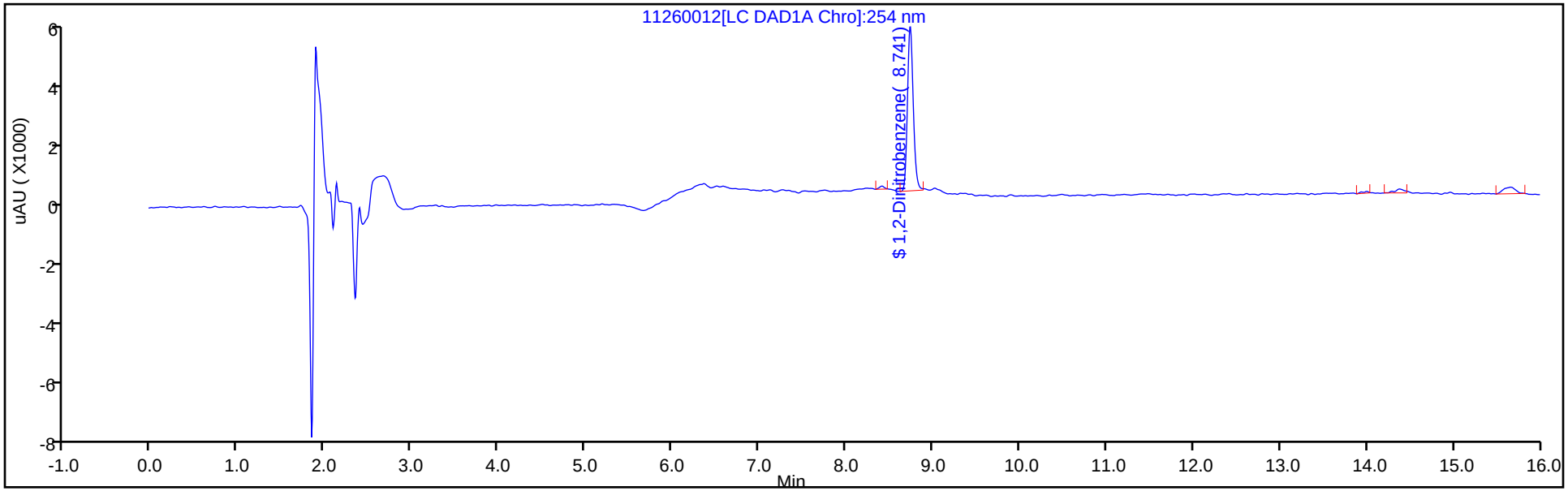
Report Date: 12-Dec-2018 14:41:24 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

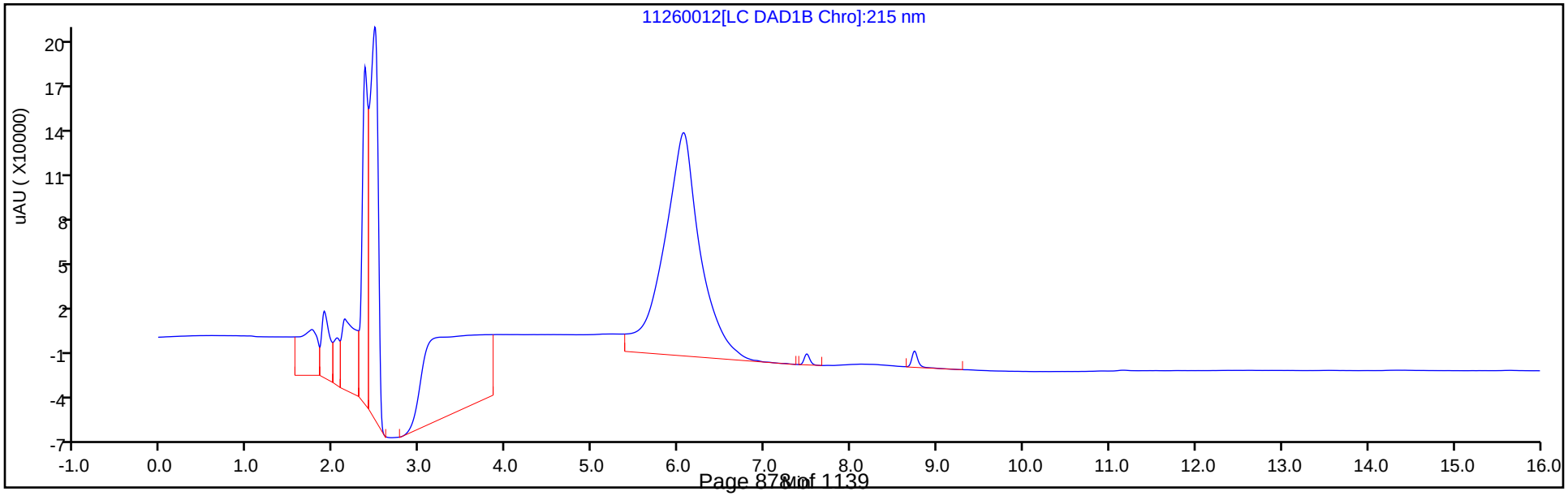
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260012.D

Injection Date:	26-Nov-2018 15:13:05	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-115789-A-5-A	Lab Sample ID:	280-115789-4	Worklist Smp#:	12
Client ID:	FWGFB-181001-FB				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260012.D				
Lims ID:	280-115789-A-5-A				
Client ID:	FWGFB-181001-FB				
Sample Type:	Client				
Inject. Date:	26-Nov-2018 15:13:05	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-115789-A-5-A				
Misc. Info.:	280-0076526-012				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	27-Nov-2018 09:24:08	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0320				
First Level Reviewer: fiedlerh		Date:	30-Nov-2018 15:04:22		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1932	96.58

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	6.625	6.622	6.623	6.622	6.624	6.625	6.624	6.622			6.472 - 6.772	6.623
RDX	7.718	7.722	7.723	7.722	7.717	7.719	7.724	7.715			7.572 - 7.872	7.720
Picric acid	8.065	8.062	8.056	8.049	8.037	8.025	8.018	7.968			7.899 - 8.199	8.035
1,3,5-Trinitrobenzene	8.865	8.869	8.869	8.862	8.857	8.859	8.864	8.855			8.712 - 9.012	8.863
1,3-Dinitrobenzene	9.512	9.516	9.516	9.509	9.503	9.512	9.511	9.502			9.359 - 9.659	9.510
Nitrobenzene	9.898	9.902	9.902	9.895	9.890	9.892	9.898	9.888			9.745 - 10.045	9.896
Tetryl	10.218	10.216	10.216	10.209	10.210	10.212	10.211	10.208			10.059 - 10.359	10.213
Nitroglycerin	10.725	10.722	10.722	10.715	10.710	10.712	10.711	10.708			10.565 - 10.865	10.716
2,4,6-Trinitrotoluene	11.165	11.162	11.162	11.155	11.157	11.159	11.158	11.155			11.055 - 11.255	11.159
4-Amino-2,6-dinitrotoluene	11.318	11.316	11.322	11.315	11.310	11.312	11.311	11.308			11.215 - 11.415	11.314
2-Amino-4,6-dinitrotoluene	11.598	11.596	11.602	11.595	11.590	11.592	11.591	11.588			11.495 - 11.695	11.594
2,6-Dinitrotoluene	11.765	11.756	11.762	11.755	11.750	11.752	11.751	11.748			11.655 - 11.855	11.755
2,4-Dinitrotoluene	11.952	11.949	11.956	11.942	11.943	11.945	11.944	11.942			11.842 - 12.042	11.947
2-Nitrotoluene	12.785	12.789	12.789	12.782	12.777	12.785	12.778	12.775			12.632 - 12.932	12.783
4-Nitrotoluene	13.218	13.216	13.216	13.209	13.210	13.212	13.211	13.208			13.059 - 13.359	13.213
3-Nitrotoluene	13.812	13.809	13.809	13.802	13.797	13.799	13.798	13.795			13.652 - 13.952	13.803
PETN		14.916	14.916	14.909	14.910	14.905	14.904	14.895			14.759 - 15.059	14.908
1,2-Dinitrobenzene	8.705	8.702	8.703	8.702	8.697	8.699	8.704	8.695			8.552 - 8.852	8.701

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.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 LVL 8		B	M1	M2								
HMX	80950 85940	83640 87649	81370 87246	83844 88926	Ave		84945.5714				3.5		20.0			
RDX	102150 107003	101000 105186	105630 105400	103860 106390	Ave		104577.327				2.0		20.0			
Picric acid	93950 80905	89880 82509	80500 84211	76192 86576	Ave		84340.3214				6.7		20.0			
1,3,5-Trinitrobenzene	202100 234028	227660 235761	222530 236230	227420 241536	Ave		228408.166				5.4		20.0			
1,3-Dinitrobenzene	277572 307465	303437 304447	303027 304477	298725 309038	Ave		301023.443				3.3		20.0			
Nitrobenzene	191717 200245	201876 200781	198214 198631	193980 204804	Ave		198780.920				2.1		20.0			
Tetryl	139850 166665	164520 170279	162800 170312	160332 172830	Ave		163448.446				6.4		20.0			
Nitroglycerin	59530 70785	65386 70242	68459 70136	68518 70507	Ave		67945.3646				5.6		20.0			
2,4,6-Trinitrotoluene	206026 213254	224442 215804	210707 214814	209992 220784	Ave		214477.993				2.8		20.0			
4-Amino-2,6-dinitrotoluene	173779 167448	169831 161815	164606 161970	161779 162780	Ave		165500.847				2.7		20.0			
2-Amino-4,6-dinitrotoluene	191376 201012	204327 198084	197906 202480	197823 202720	Ave		199465.924				2.1		20.0			
2,6-Dinitrotoluene	155783 152159	159342 155008	150588 150226	148247 153167	Ave		153065.012				2.3		20.0			
2,4-Dinitrotoluene	286926 302290	305649 297850	299481 296720	293297 303937	Ave		298268.777				2.0		20.0			
2-Nitrotoluene	137637 130803	137886 130219	132742 128507	127864 132138	Ave		132224.576				2.9		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

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 LVL 8		B	M1	M2								
4-Nitrotoluene	117281 112786	117211 112420	114412 111061	110291 113768	Ave		113653.797				2.3		20.0			
3-Nitrotoluene	161604 145301	155100 144859	146165 142855	142582 146418	Ave		148110.392				4.5		20.0			
PETN	 76935	68194 76788	73842 76779	74512 77633	Ave		74954.8292				4.4		20.0			
1,2-Dinitrobenzene	113900 131463	133300 131203	126380 133312	125372 134889	Ave		128727.320				5.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	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
HMX	Ave	1619 61354	4182 87246	8137 222315	20961	34376	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	2043 73630	5050 105400	10563 265976	25965	42801	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Ave	1879 57756	4494 84211	8050 216440	19048	32362	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Ave	4042 165033	11383 236230	22253 603841	56855	93611	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Ave	5557 213326	15187 304781	30333 773367	74756	123109	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	3842 140828	10114 199028	19861 513035	48592	80258	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
Tetryl	Ave	2797 119195	8226 170312	16280 432075	40083	66666	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	11906 491693	32693 701363	68459 1762679	171294	283140	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2,4,6-Trinitrotoluene	Ave	4137 151667	11267 215673	21155 554169	52708	85643	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	3486 113610	8517 162456	16510 408172	40566	67180	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2-Amino-4,6-dinitrotoluene	Ave	3839 139075	10247 203087	19850 508320	49604	80646	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,6-Dinitrotoluene	Ave	3125 108831	7991 150677	15104 384067	37173	61046	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	5750 208912	15313 297313	30008 761362	73471	121158	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
2-Nitrotoluene	Ave	2761 91427	6915 128893	13314 331335	32062	52478	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	2355 79009	5884 111505	11487 285557	27683	45295	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-115789-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	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
3-Nitrotoluene	Ave	3245 101807	7786 143426	14675 367509	35788	58353	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	 537514	34097 767790	73842 1940836	186281	307741	 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	2278 91842	6665 133312	12638 337223	31343	52585	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:
Ave = Average

Report Date: 22-May-2018 12:01:17 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D
Lims ID: IC MAIN L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-May-2018 10:34:02 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L8
Misc. Info.: 280-0070054-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:16 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:54:21

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	222315	2.50	2.62	
5 RDX	1	7.715	7.722	-0.007	265976	2.50	2.54	
6 2,4,6-Trinitrophenol	1	7.968	8.049	-0.081	216440	2.50	2.57	
$ 7 1,2-Dinitrobenzene	1	8.695	8.702	-0.007	337223	2.50	2.62	
8 1,3,5-Trinitrobenzene	1	8.855	8.862	-0.007	603841	2.50	2.64	
9 1,3-Dinitrobenzene	1	9.502	9.509	-0.007	773367	2.50	2.57	
11 Nitrobenzene	1	9.888	9.895	-0.007	513035	2.51	2.58	
12 Tetryl	1	10.208	10.209	-0.001	432075	2.50	2.64	
13 Nitroglycerin	2	10.708	10.715	-0.007	1762679	25.0	25.9	
14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	554169	2.51	2.58	
15 4-Amino-2,6-dinitrotoluene	1	11.308	11.315	-0.007	408172	2.51	2.47	
16 2-Amino-4,6-dinitrotoluene	1	11.588	11.595	-0.007	508320	2.51	2.55	
17 2,6-Dinitrotoluene	1	11.748	11.755	-0.007	384067	2.51	2.51	
18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	761362	2.51	2.55	
19 o-Nitrotoluene	1	12.775	12.782	-0.007	331335	2.51	2.51	
20 p-Nitrotoluene	1	13.208	13.209	-0.001	285557	2.51	2.51	
21 m-Nitrotoluene	1	13.795	13.802	-0.007	367509	2.51	2.48	
22 PETN	2	14.895	14.909	-0.014	1940836	25.0	25.9	

Reagents:

8330IntermStk_00055 Amount Added: 250.00 Units: uL

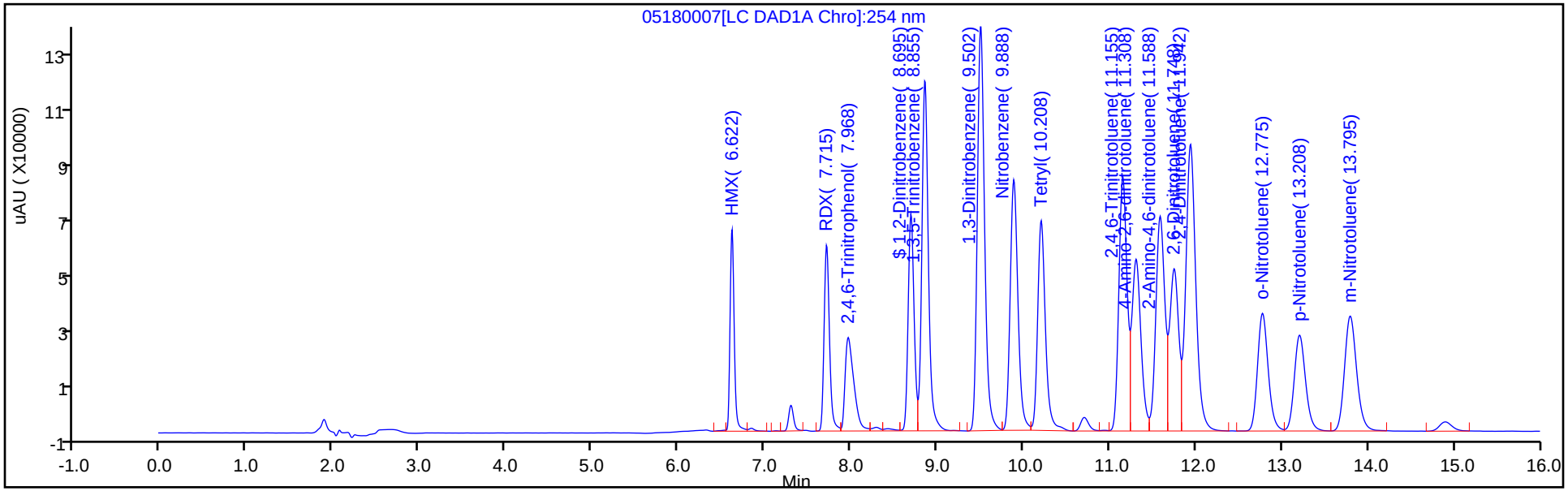
Report Date: 22-May-2018 12:01:17 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

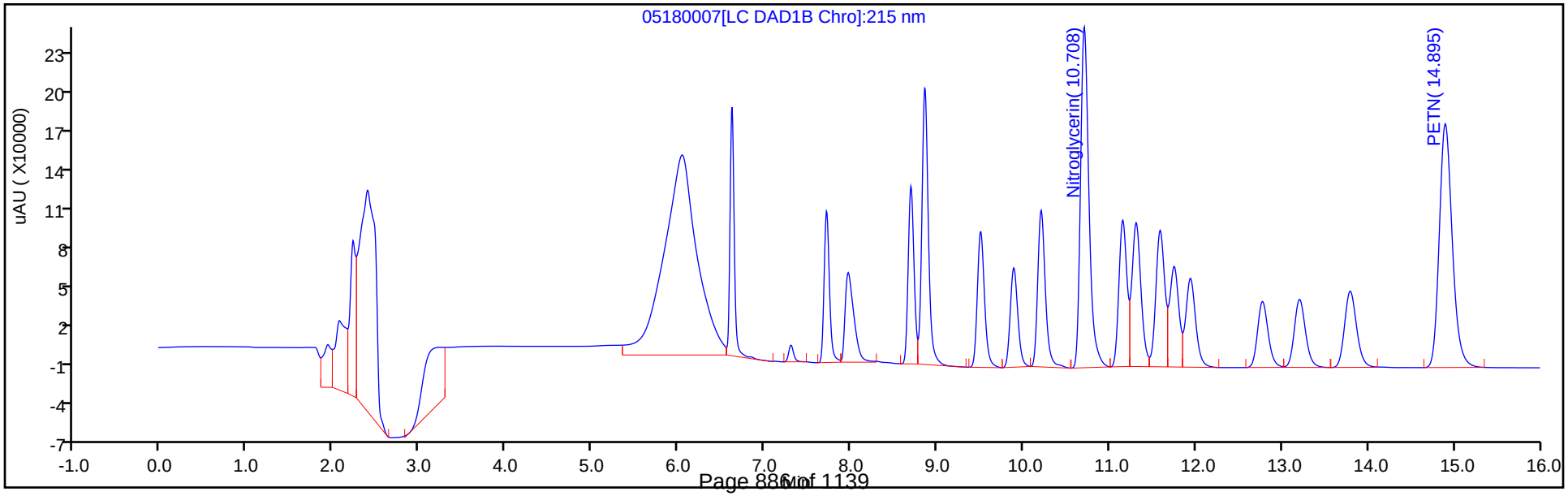
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D

Injection Date:	18-May-2018 10:34:02	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D
Lims ID: IC MAIN L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-May-2018 10:57:00 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L7
Misc. Info.: 280-0070054-008
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:17 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:06:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	87246	1.00	1.03	
5 RDX	1	7.724	7.722	0.002	105400	1.00	1.01	
6 2,4,6-Trinitrophenol	1	8.018	8.049	-0.031	84211	1.00	1.00	
$ 7 1,2-Dinitrobenzene	1	8.704	8.702	0.002	133312	1.00	1.04	
8 1,3,5-Trinitrobenzene	1	8.864	8.862	0.002	236230	1.00	1.03	
9 1,3-Dinitrobenzene	1	9.511	9.509	0.002	304781	1.00	1.01	
11 Nitrobenzene	1	9.898	9.895	0.003	199028	1.00	1.00	
12 Tetryl	1	10.211	10.209	0.002	170312	1.00	1.04	
13 Nitroglycerin	2	10.711	10.715	-0.004	701363	10.0	10.3	
14 2,4,6-Trinitrotoluene	1	11.158	11.155	0.003	215673	1.00	1.01	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.315	-0.004	162456	1.00	0.9816	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.595	-0.004	203087	1.00	1.02	
17 2,6-Dinitrotoluene	1	11.751	11.755	-0.004	150677	1.00	0.9844	
18 2,4-Dinitrotoluene	1	11.944	11.942	0.002	297313	1.00	1.00	
19 o-Nitrotoluene	1	12.778	12.782	-0.004	128893	1.00	0.9748	
20 p-Nitrotoluene	1	13.211	13.209	0.002	111505	1.00	0.9811	
21 m-Nitrotoluene	1	13.798	13.802	-0.004	143426	1.00	0.9684	
22 PETN	2	14.904	14.909	-0.005	767790	10.0	10.2	

Reagents:

8330IntermStk_00055 Amount Added: 100.00 Units: uL

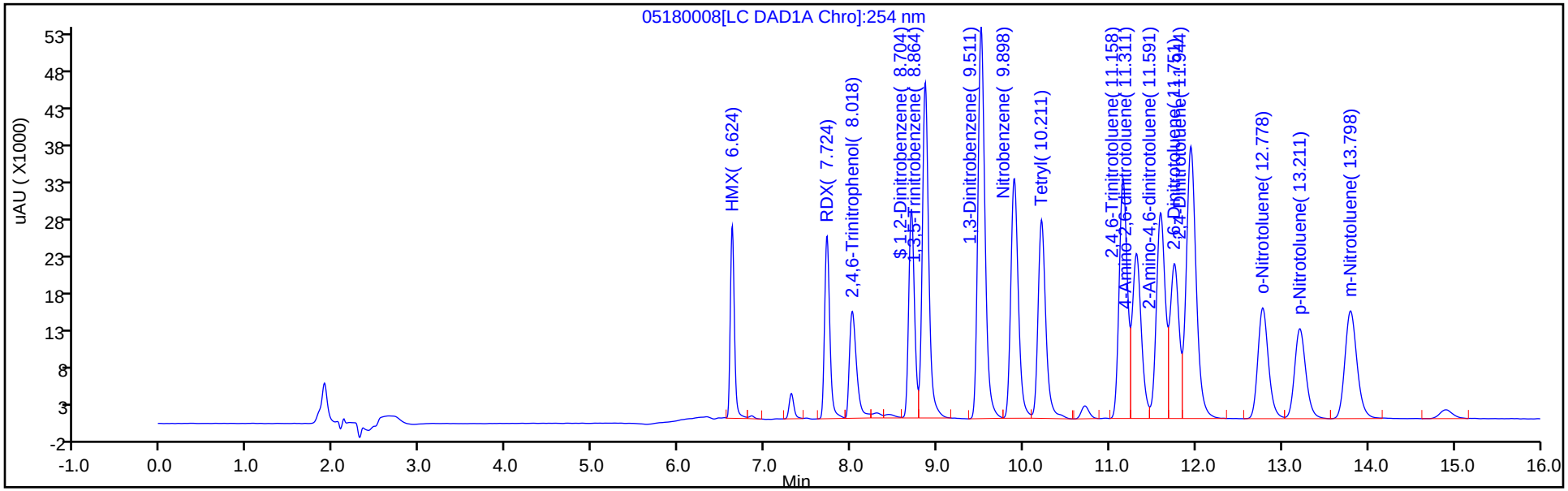
Report Date: 22-May-2018 12:01:18 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

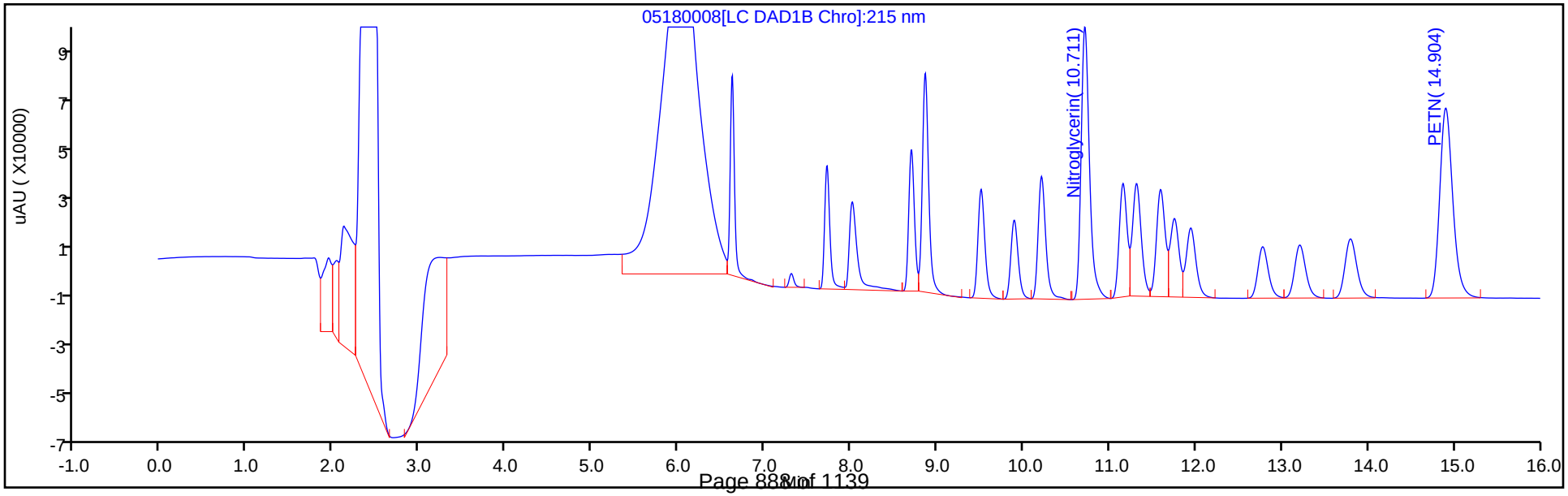
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D

Injection Date:	18-May-2018 10:57:00	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D
Lims ID: IC MAIN L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-May-2018 11:19:59 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L6
Misc. Info.: 280-0070054-009
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:19 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:09:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.625	6.622	0.003	61354	0.7000	0.7223	
5 RDX	1	7.719	7.722	-0.003	73630	0.7000	0.7041	
6 2,4,6-Trinitrophenol	1	8.025	8.049	-0.024	57756	0.7000	0.6848	
$ 7 1,2-Dinitrobenzene	1	8.699	8.702	-0.003	91842	0.7000	0.7135	
8 1,3,5-Trinitrobenzene	1	8.859	8.862	-0.003	165033	0.7000	0.7225	
9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	213326	0.7007	0.7087	
11 Nitrobenzene	1	9.892	9.895	-0.003	140828	0.7014	0.7085	
12 Tetryl	1	10.212	10.209	0.003	119195	0.7000	0.7293	
13 Nitroglycerin	2	10.712	10.715	-0.003	491693	7.00	7.24	
14 2,4,6-Trinitrotoluene	1	11.159	11.155	0.004	151667	0.7028	0.7071	
15 4-Amino-2,6-dinitrotoluene	1	11.312	11.315	-0.003	113610	0.7021	0.6865	
16 2-Amino-4,6-dinitrotoluene	1	11.592	11.595	-0.003	139075	0.7021	0.6972	
17 2,6-Dinitrotoluene	1	11.752	11.755	-0.003	108831	0.7021	0.7110	
18 2,4-Dinitrotoluene	1	11.945	11.942	0.003	208912	0.7014	0.7004	
19 o-Nitrotoluene	1	12.785	12.782	0.003	91427	0.7021	0.6915	
20 p-Nitrotoluene	1	13.212	13.209	0.003	79009	0.7028	0.6952	
21 m-Nitrotoluene	1	13.799	13.802	-0.003	101807	0.7028	0.6874	
22 PETN	2	14.905	14.909	-0.004	537514	7.00	7.17	

Reagents:

8330IntermStk_00055 Amount Added: 70.00 Units: uL

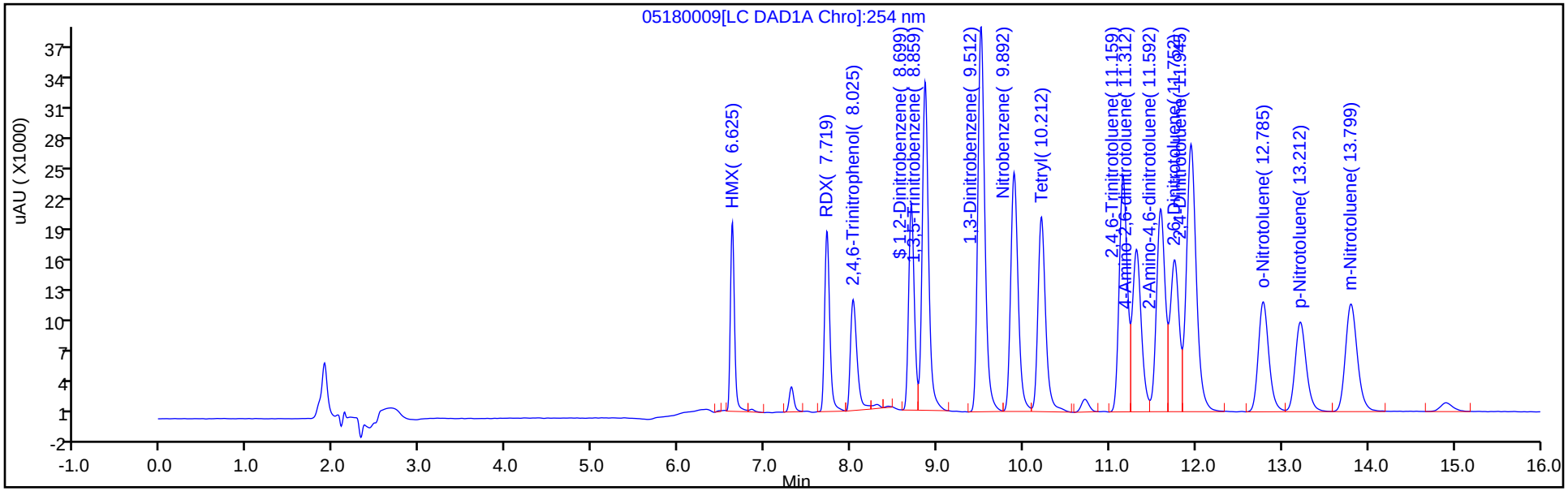
Report Date: 22-May-2018 12:01:20 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

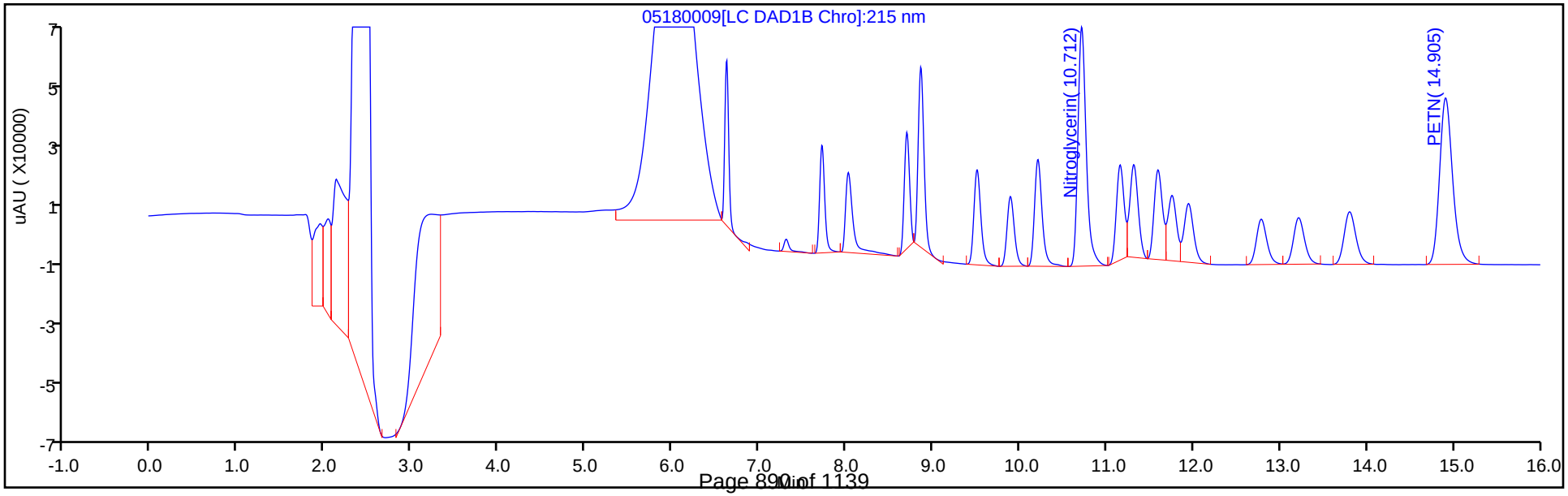
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D

Injection Date:	18-May-2018 11:19:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D
Lims ID: IC MAIN L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-May-2018 11:42:59 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L5
Misc. Info.: 280-0070054-010
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:21 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:13:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	34376	0.4000	0.4047	
5 RDX	1	7.717	7.722	-0.005	42801	0.4000	0.4093	
6 2,4,6-Trinitrophenol	1	8.037	8.049	-0.012	32362	0.4000	0.3837	
$ 7 1,2-Dinitrobenzene	1	8.697	8.702	-0.005	52585	0.4000	0.4085	
8 1,3,5-Trinitrobenzene	1	8.857	8.862	-0.005	93611	0.4000	0.4098	
9 1,3-Dinitrobenzene	1	9.503	9.509	-0.006	123109	0.4004	0.4090	
11 Nitrobenzene	1	9.890	9.895	-0.005	80258	0.4008	0.4038	
12 Tetryl	1	10.210	10.209	0.001	66666	0.4000	0.4079	
13 Nitroglycerin	2	10.710	10.715	-0.005	283140	4.00	4.17	
14 2,4,6-Trinitrotoluene	1	11.157	11.155	0.002	85643	0.4016	0.3993	
15 4-Amino-2,6-dinitrotoluene	1	11.310	11.315	-0.005	67180	0.4012	0.4059	
16 2-Amino-4,6-dinitrotoluene	1	11.590	11.595	-0.005	80646	0.4012	0.4043	
17 2,6-Dinitrotoluene	1	11.750	11.755	-0.005	61046	0.4012	0.3988	
18 2,4-Dinitrotoluene	1	11.943	11.942	0.001	121158	0.4008	0.4062	
19 o-Nitrotoluene	1	12.777	12.782	-0.005	52478	0.4012	0.3969	
20 p-Nitrotoluene	1	13.210	13.209	0.001	45295	0.4016	0.3985	
21 m-Nitrotoluene	1	13.797	13.802	-0.005	58353	0.4016	0.3940	
22 PETN	2	14.910	14.909	0.001	307741	4.00	4.11	

Reagents:

8330IntermStk_00055 Amount Added: 40.00 Units: uL

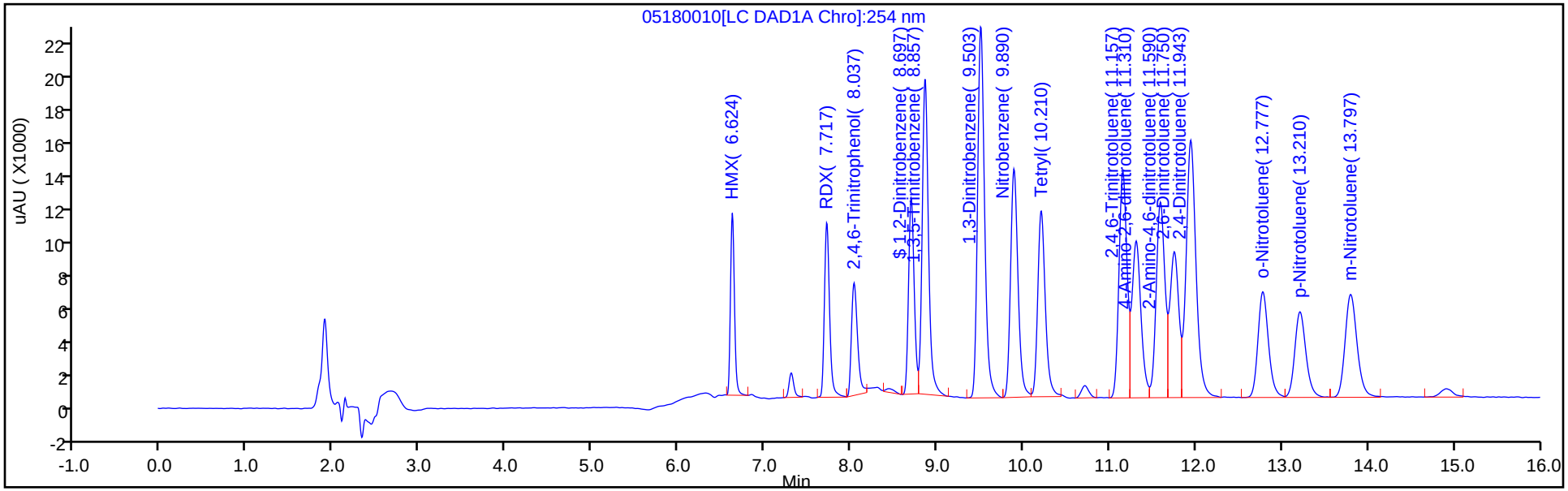
Report Date: 22-May-2018 12:01:22 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

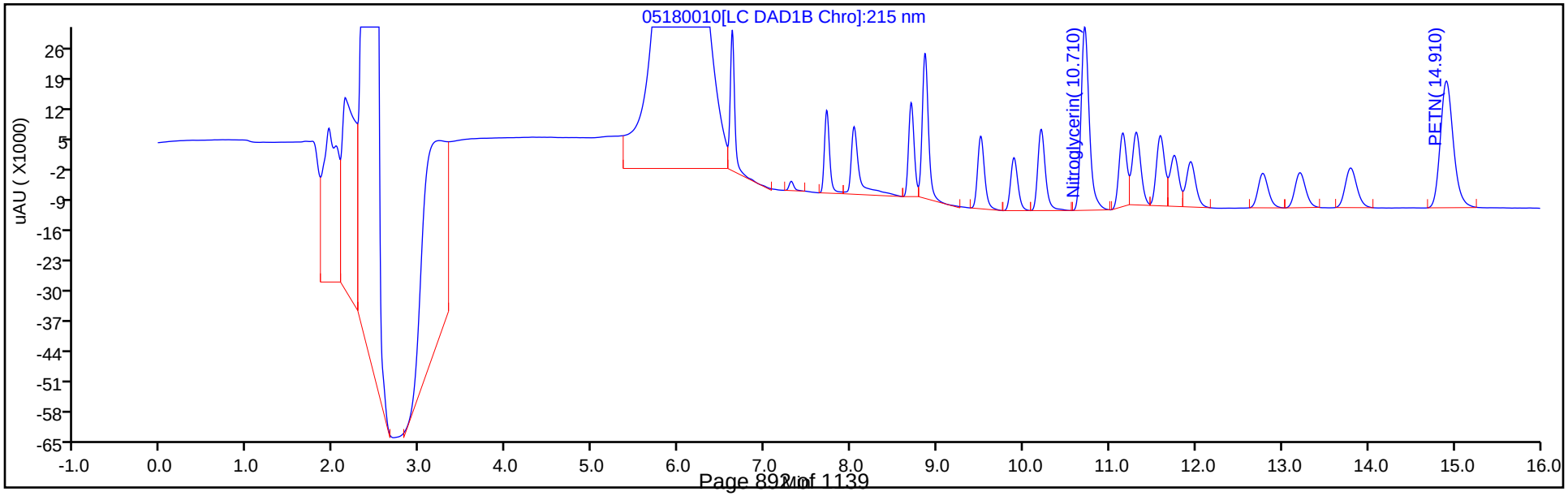
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D

Injection Date:	18-May-2018 11:42:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D
Lims ID: IC MAIN L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-May-2018 12:05:58 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L4
Misc. Info.: 280-0070054-011
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:23 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:16:46

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.622	6.622	0.000	20961	0.2500	0.2468	
	5 RDX	1	7.722	7.722	0.000	25965	0.2500	0.2483	
	6 2,4,6-Trinitrophenol	1	8.049	8.049	0.000	19048	0.2500	0.2258	
$	7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	31343	0.2500	0.2435	
	8 1,3,5-Trinitrobenzene	1	8.862	8.862	0.000	56855	0.2500	0.2489	
	9 1,3-Dinitrobenzene	1	9.509	9.509	0.000	74756	0.2503	0.2483	
	11 Nitrobenzene	1	9.895	9.895	0.000	48592	0.2505	0.2445	
	12 Tetryl	1	10.209	10.209	0.000	40083	0.2500	0.2452	
	13 Nitroglycerin	2	10.715	10.715	0.000	171294	2.50	2.52	
	14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	52708	0.2510	0.2458	
	15 4-Amino-2,6-dinitrotoluene	1	11.315	11.315	0.000	40566	0.2508	0.2451	
	16 2-Amino-4,6-dinitrotoluene	1	11.595	11.595	0.000	49604	0.2508	0.2487	
	17 2,6-Dinitrotoluene	1	11.755	11.755	0.000	37173	0.2508	0.2429	
	18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	73471	0.2505	0.2463	
	19 o-Nitrotoluene	1	12.782	12.782	0.000	32062	0.2508	0.2425	
	20 p-Nitrotoluene	1	13.209	13.209	0.000	27683	0.2510	0.2436	
	21 m-Nitrotoluene	1	13.802	13.802	0.000	35788	0.2510	0.2416	
	22 PETN	2	14.909	14.909	0.000	186281	2.50	2.49	

Reagents:

8330IntermStk_00055 Amount Added: 25.00 Units: uL

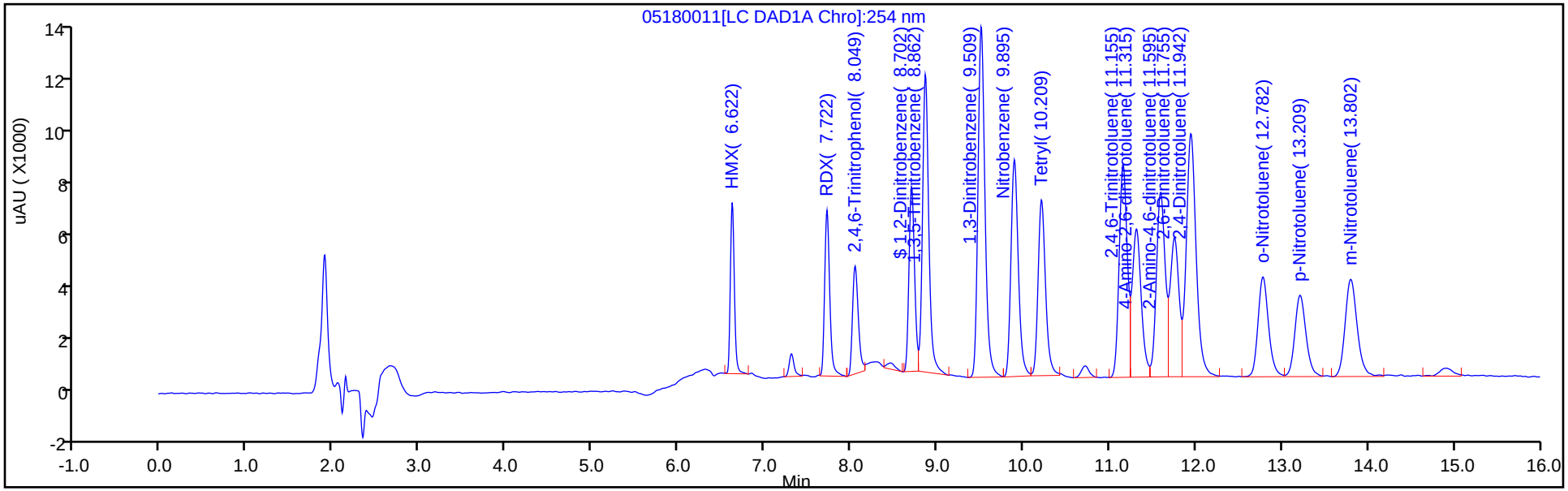
Report Date: 22-May-2018 12:01:24 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

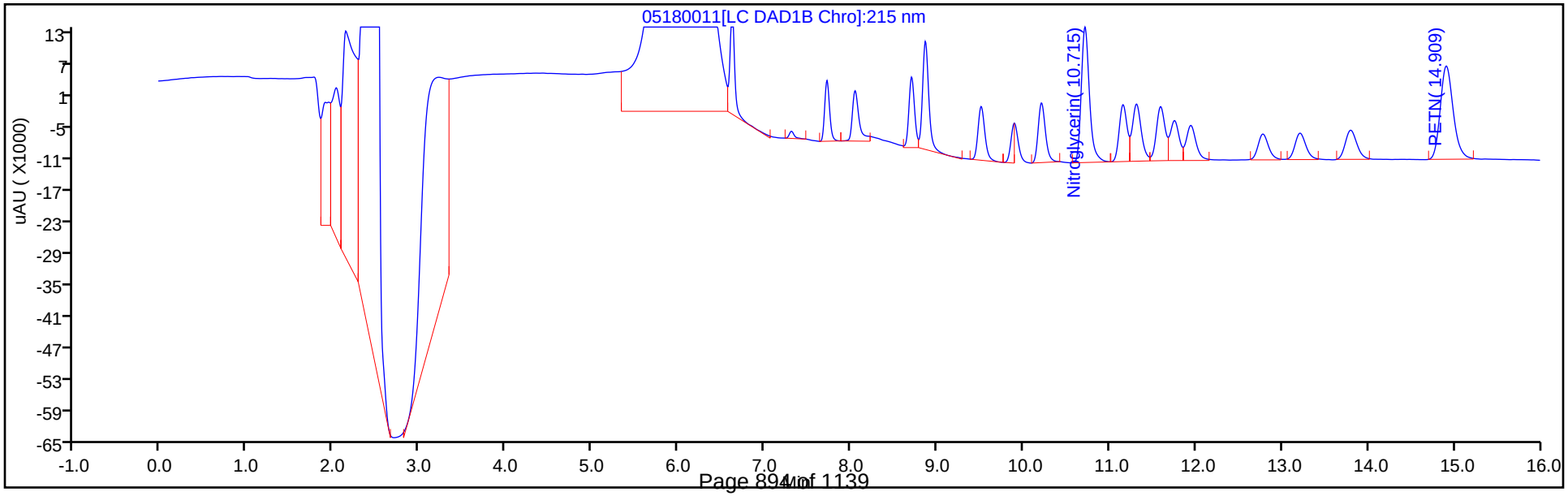
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D

Injection Date:	18-May-2018 12:05:58	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D
Lims ID: IC MAIN L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-May-2018 12:28:55 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L3
Misc. Info.: 280-0070054-012
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:24 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:17:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.623	6.622	0.001	8137	0.1000	0.0958	
5 RDX	1	7.723	7.722	0.001	10563	0.1000	0.1010	
6 2,4,6-Trinitrophenol	1	8.056	8.049	0.007	8050	0.1000	0.0954	
$ 7 1,2-Dinitrobenzene	1	8.703	8.702	0.001	12638	0.1000	0.0982	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	22253	0.1000	0.0974	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	30333	0.1001	0.1008	
11 Nitrobenzene	1	9.902	9.895	0.007	19861	0.1002	0.0999	
12 Tetryl	1	10.216	10.209	0.007	16280	0.1000	0.0996	
13 Nitroglycerin	2	10.722	10.715	0.007	68459	1.00	1.01	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	21155	0.1004	0.0986	
15 4-Amino-2,6-dinitrotoluene	1	11.322	11.315	0.007	16510	0.1003	0.0998	
16 2-Amino-4,6-dinitrotoluene	1	11.602	11.595	0.007	19850	0.1003	0.0995	
17 2,6-Dinitrotoluene	1	11.762	11.755	0.007	15104	0.1003	0.0987	
18 2,4-Dinitrotoluene	1	11.956	11.942	0.014	30008	0.1002	0.1006	
19 o-Nitrotoluene	1	12.789	12.782	0.007	13314	0.1003	0.1007	
20 p-Nitrotoluene	1	13.216	13.209	0.007	11487	0.1004	0.1011	
21 m-Nitrotoluene	1	13.809	13.802	0.007	14675	0.1004	0.0991	
22 PETN	2	14.916	14.909	0.007	73842	1.00	0.9852	

Reagents:

8330IntermStk_00055 Amount Added: 10.00 Units: uL

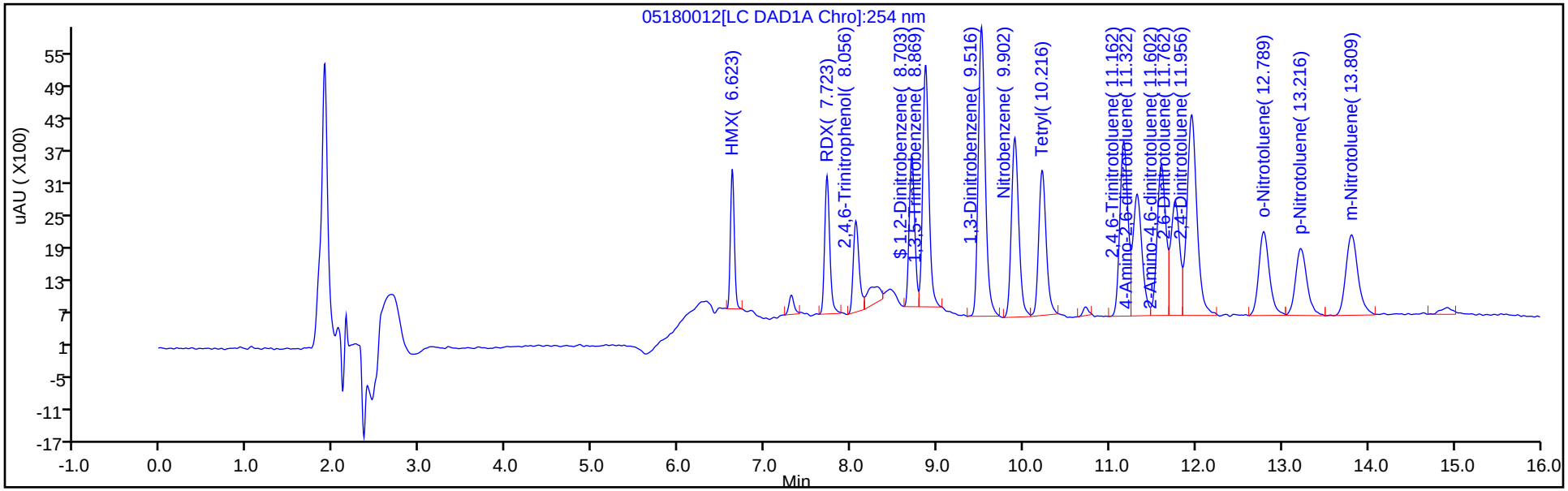
Report Date: 22-May-2018 12:01:25 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

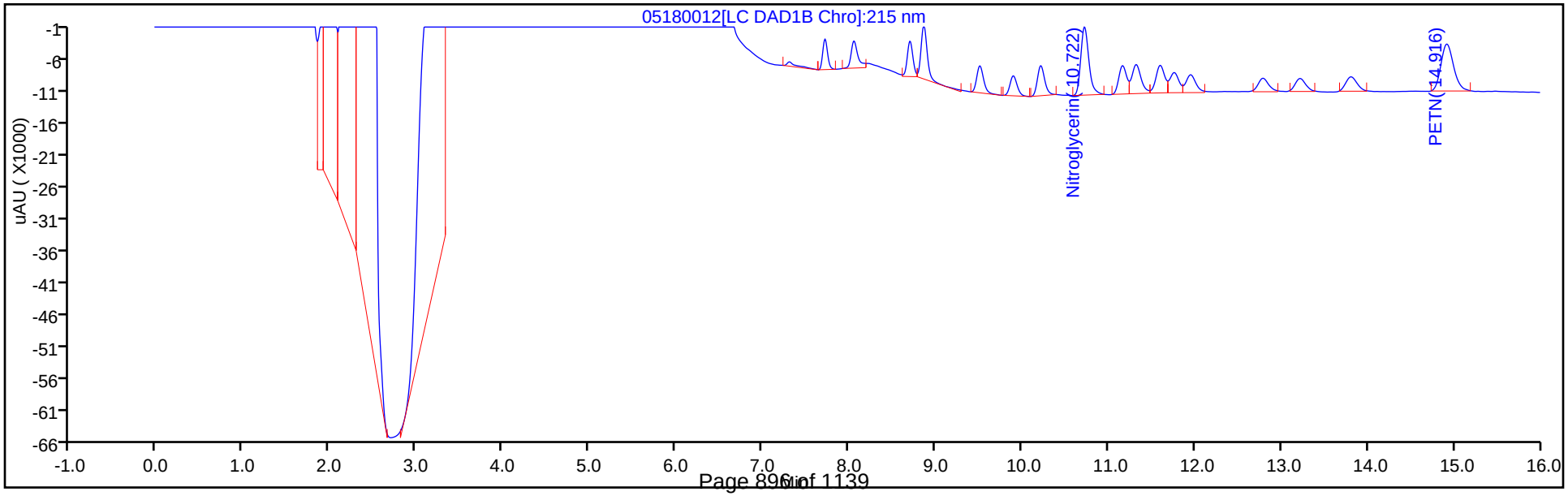
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D

Injection Date:	18-May-2018 12:28:55	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D
Lims ID: IC MAIN L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-May-2018 12:51:52 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2
Misc. Info.: 280-0070054-013
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:26 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:08:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	4182	0.0500	0.0492	
5 RDX	1	7.722	7.722	0.000	5050	0.0500	0.0483	
6 2,4,6-Trinitrophenol	1	8.062	8.049	0.013	4494	0.0500	0.0533	
$ 7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	6665	0.0500	0.0518	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	11383	0.0500	0.0498	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	15187	0.0501	0.0505	
11 Nitrobenzene	1	9.902	9.895	0.007	10114	0.0501	0.0509	
12 Tetryl	1	10.216	10.209	0.007	8226	0.0500	0.0503	
13 Nitroglycerin	2	10.722	10.715	0.007	32693	0.5000	0.4812	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	11267	0.0502	0.0525	
15 4-Amino-2,6-dinitrotoluene	1	11.316	11.315	0.001	8517	0.0502	0.0515	
16 2-Amino-4,6-dinitrotoluene	1	11.596	11.595	0.001	10247	0.0502	0.0514	
17 2,6-Dinitrotoluene	1	11.756	11.755	0.001	7991	0.0502	0.0522	
18 2,4-Dinitrotoluene	1	11.949	11.942	0.007	15313	0.0501	0.0513	
19 o-Nitrotoluene	1	12.789	12.782	0.007	6915	0.0502	0.0523	
20 p-Nitrotoluene	1	13.216	13.209	0.007	5884	0.0502	0.0518	
21 m-Nitrotoluene	1	13.809	13.802	0.007	7786	0.0502	0.0526	
22 PETN	2	14.916	14.909	0.007	34097	0.5000	0.4549	

Reagents:

8330IntermStk_00055 Amount Added: 5.00 Units: uL

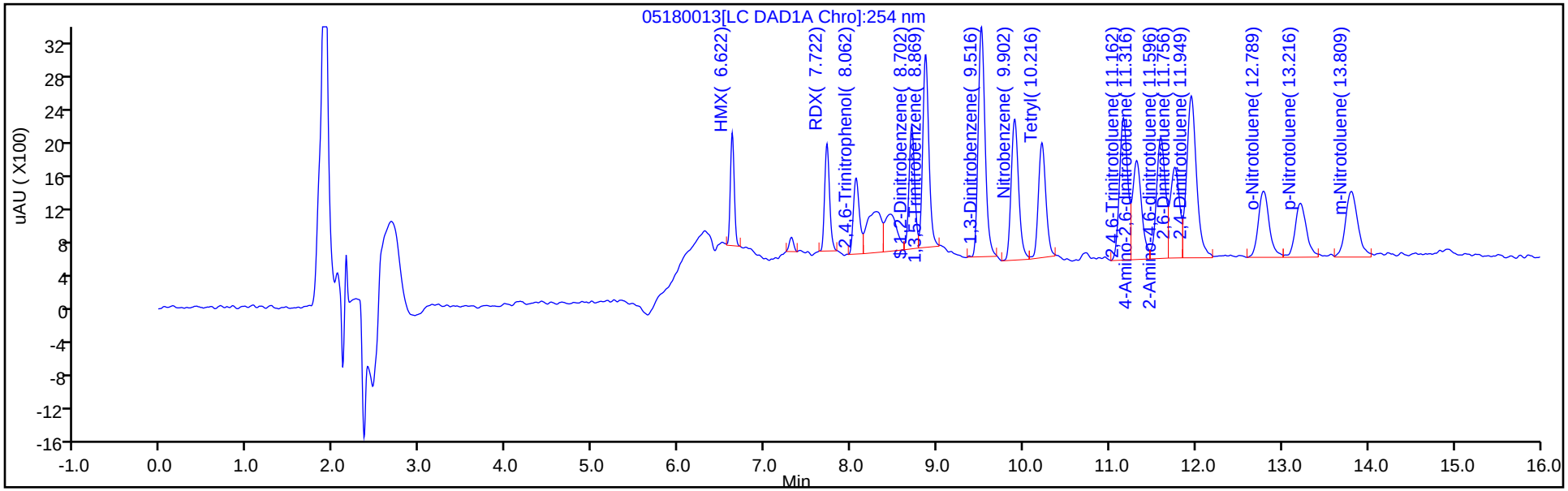
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

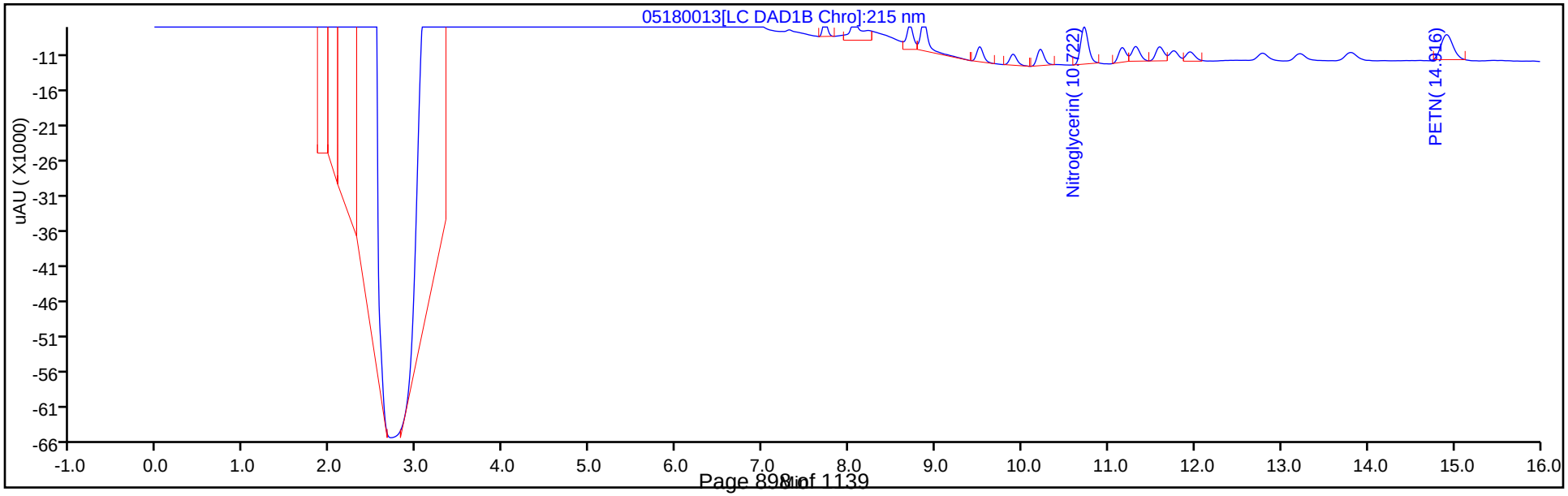
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D

Injection Date:	18-May-2018 12:51:52	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D
Lims ID: IC MAIN L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-May-2018 13:14:50 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L1
Misc. Info.: 280-0070054-014
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:27 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:19:59

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.625	6.622	0.003	1619	0.0200	0.0191	
	5 RDX	1	7.718	7.722	-0.004	2043	0.0200	0.0195	
	6 2,4,6-Trinitrophenol	1	8.065	8.049	0.016	1879	0.0200	0.0223	
$	7 1,2-Dinitrobenzene	1	8.705	8.702	0.003	2278	0.0200	0.0177	
	8 1,3,5-Trinitrobenzene	1	8.865	8.862	0.003	4042	0.0200	0.0177	
	9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	5557	0.0200	0.0185	
	11 Nitrobenzene	1	9.898	9.895	0.003	3842	0.0200	0.0193	
	12 Tetryl	1	10.218	10.209	0.009	2797	0.0200	0.0171	
	13 Nitroglycerin	2	10.725	10.715	0.010	11906	0.2000	0.1752	
	14 2,4,6-Trinitrotoluene	1	11.165	11.155	0.010	4137	0.0201	0.0193	
	15 4-Amino-2,6-dinitrotoluene	1	11.318	11.315	0.003	3486	0.0201	0.0211	
	16 2-Amino-4,6-dinitrotoluene	1	11.598	11.595	0.003	3839	0.0201	0.0192	
	17 2,6-Dinitrotoluene	1	11.765	11.755	0.010	3125	0.0201	0.0204	
	18 2,4-Dinitrotoluene	1	11.952	11.942	0.010	5750	0.0200	0.0193	
	19 o-Nitrotoluene	1	12.785	12.782	0.003	2761	0.0201	0.0209	
	20 p-Nitrotoluene	1	13.218	13.209	0.009	2355	0.0201	0.0207	
	21 m-Nitrotoluene	1	13.812	13.802	0.010	3245	0.0201	0.0219	
	22 PETN	2		14.909			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

8330IntermStk_00055 Amount Added: 2.00 Units: uL

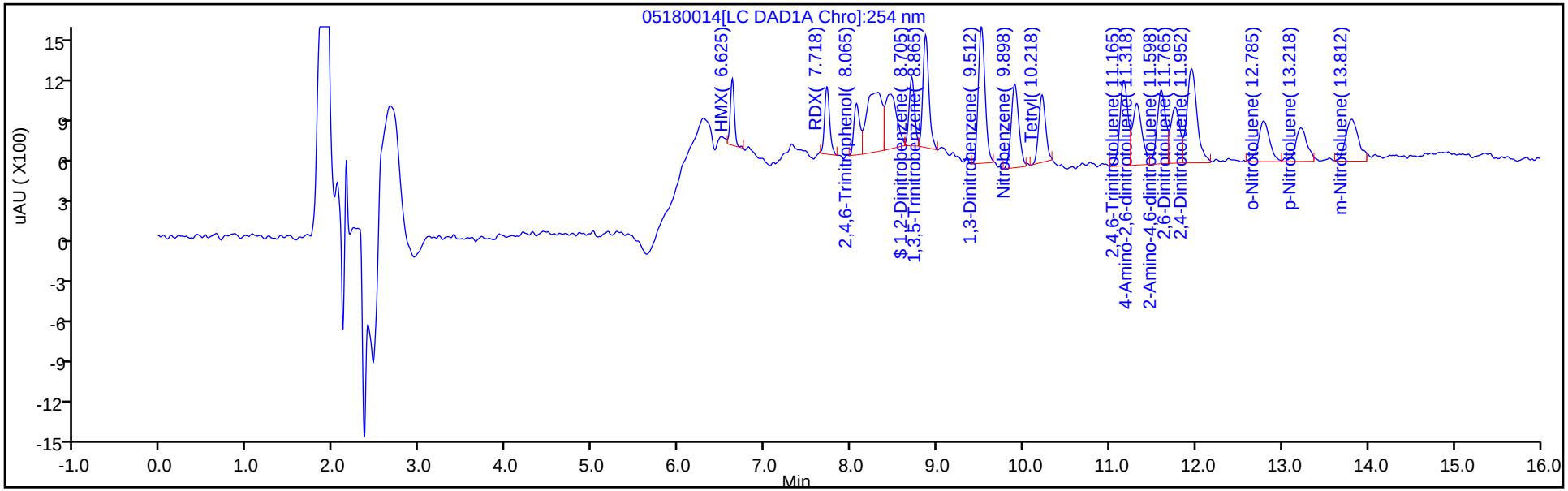
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

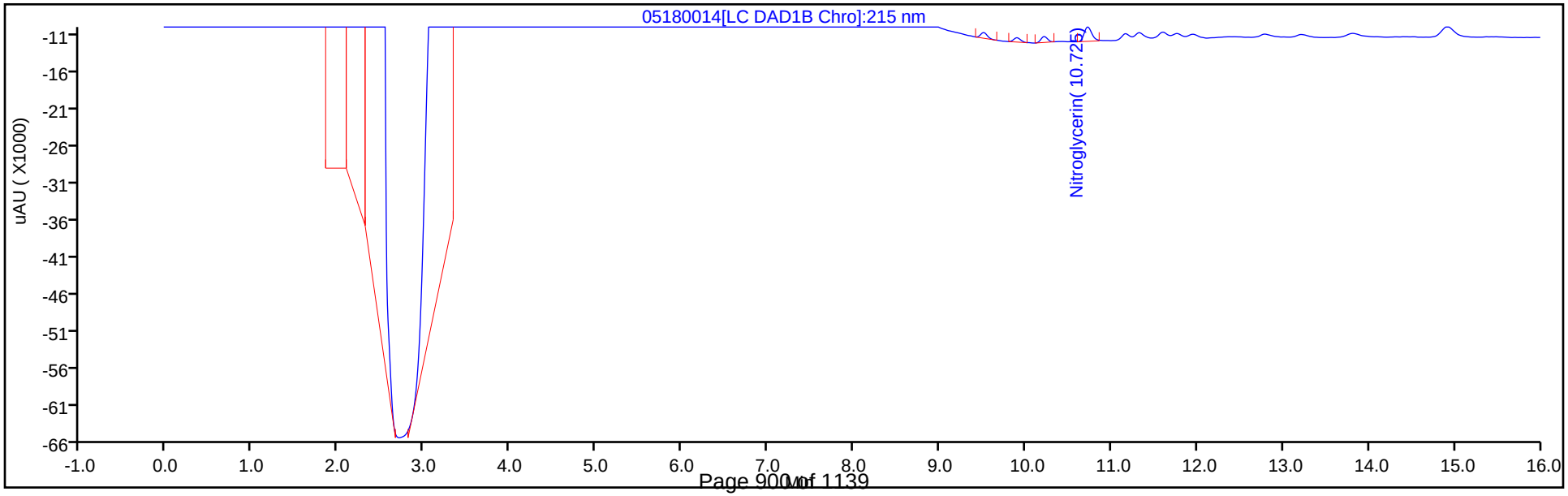
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Injection Date:	18-May-2018 13:14:50	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / HMX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

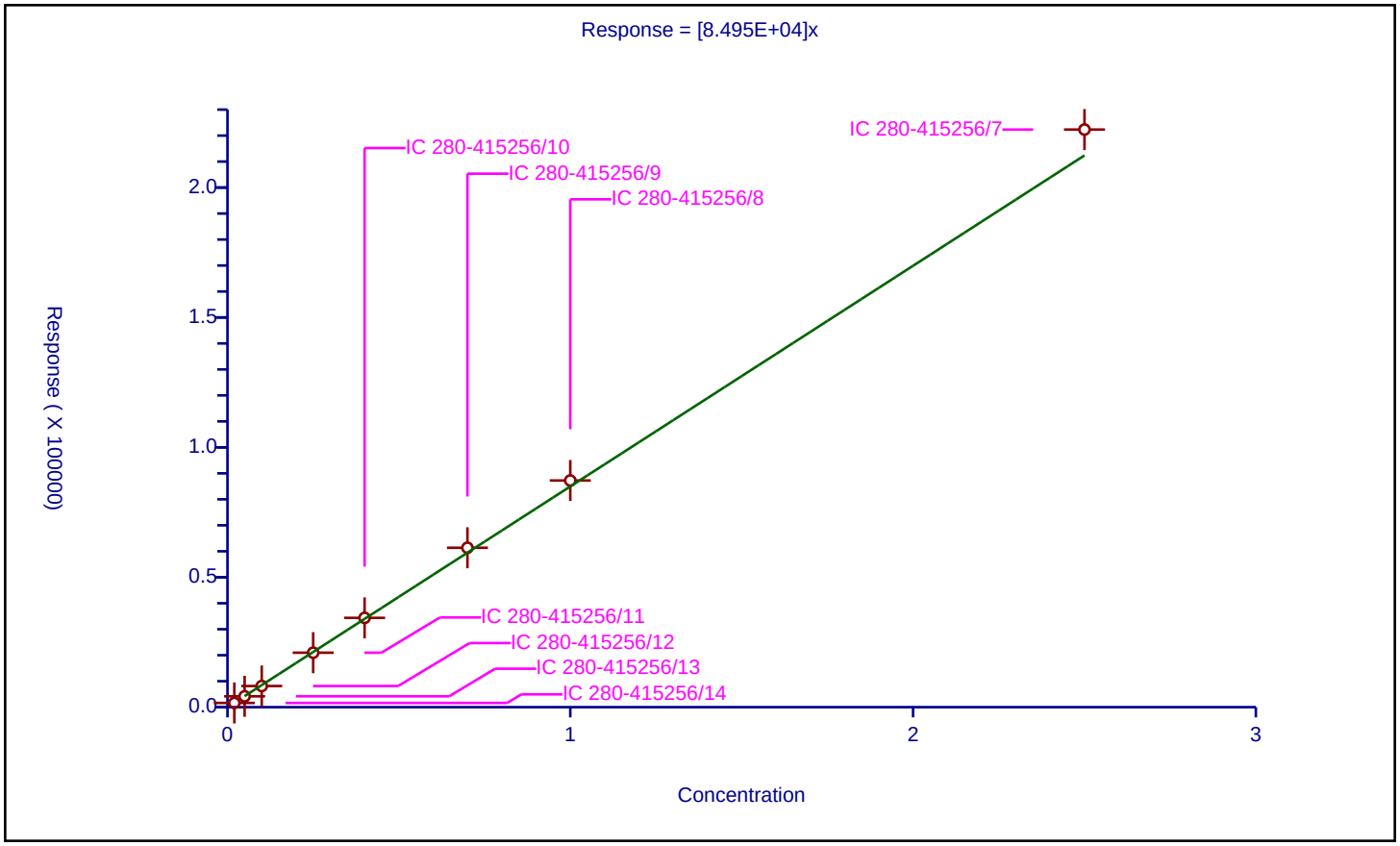
Curve Coefficients

Intercept:	0
Slope:	8.495E+04

Error Coefficients

Standard Error:	3930
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1619.0			80950.0	Y
2	IC 280-415256/13	0.05	4182.0			83640.0	Y
3	IC 280-415256/12	0.1	8137.0			81370.0	Y
4	IC 280-415256/11	0.25	20961.0			83844.0	Y
5	IC 280-415256/10	0.4	34376.0			85940.0	Y
6	IC 280-415256/9	0.7	61354.0			87648.571429	Y
7	IC 280-415256/8	1.0	87246.0			87246.0	Y
8	IC 280-415256/7	2.5	222315.0			88926.0	Y



Calibration / RDX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

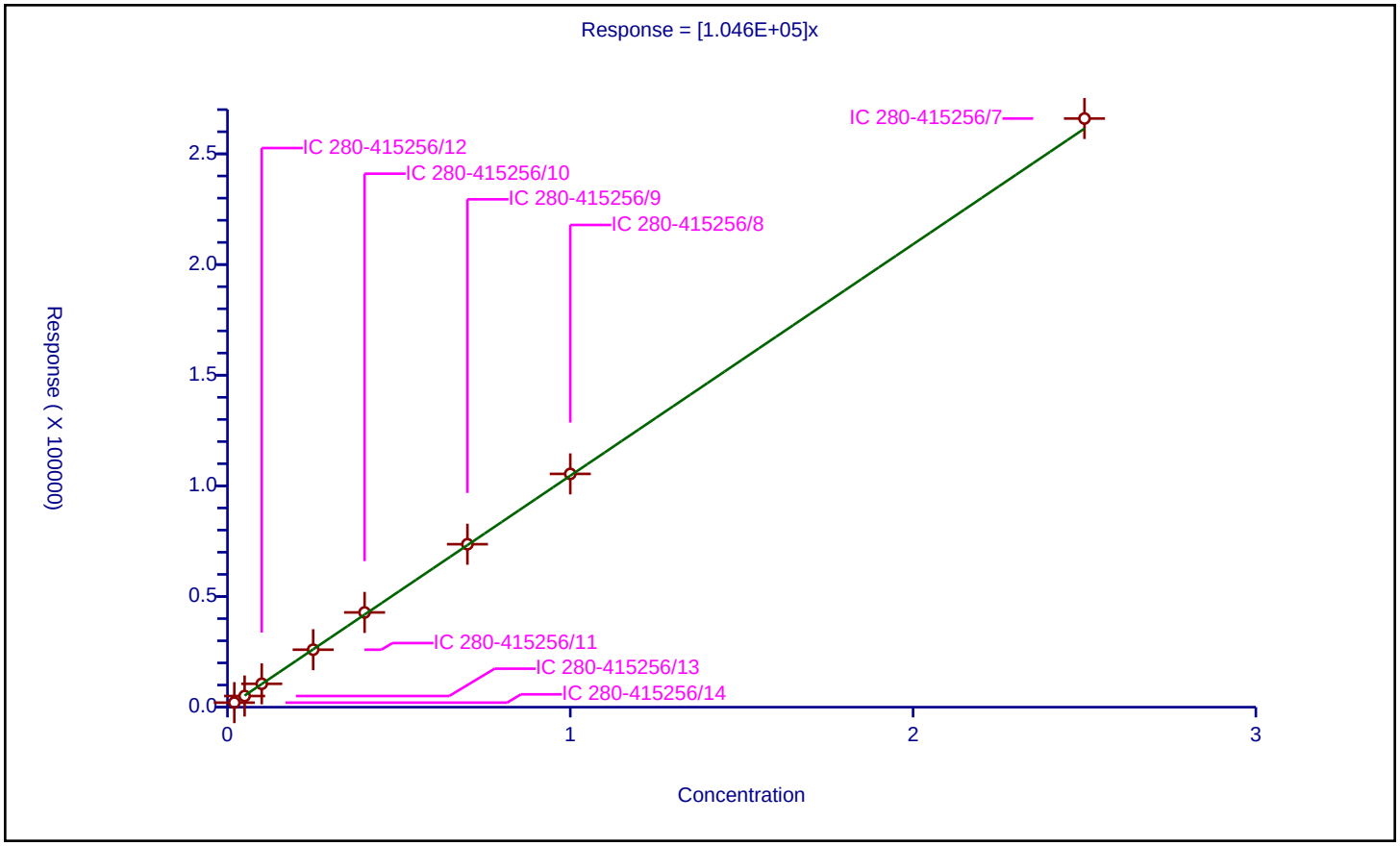
Curve Coefficients

Intercept:	0
Slope:	1.046E+05

Error Coefficients

Standard Error:	1790
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2043.0			102150.0	Y
2	IC 280-415256/13	0.05	5050.0			101000.0	Y
3	IC 280-415256/12	0.1	10563.0			105630.0	Y
4	IC 280-415256/11	0.25	25965.0			103860.0	Y
5	IC 280-415256/10	0.4	42801.0			107002.5	Y
6	IC 280-415256/9	0.7	73630.0			105185.714286	Y
7	IC 280-415256/8	1.0	105400.0			105400.0	Y
8	IC 280-415256/7	2.5	265976.0			106390.4	Y



Calibration / 2,4,6-Trinitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

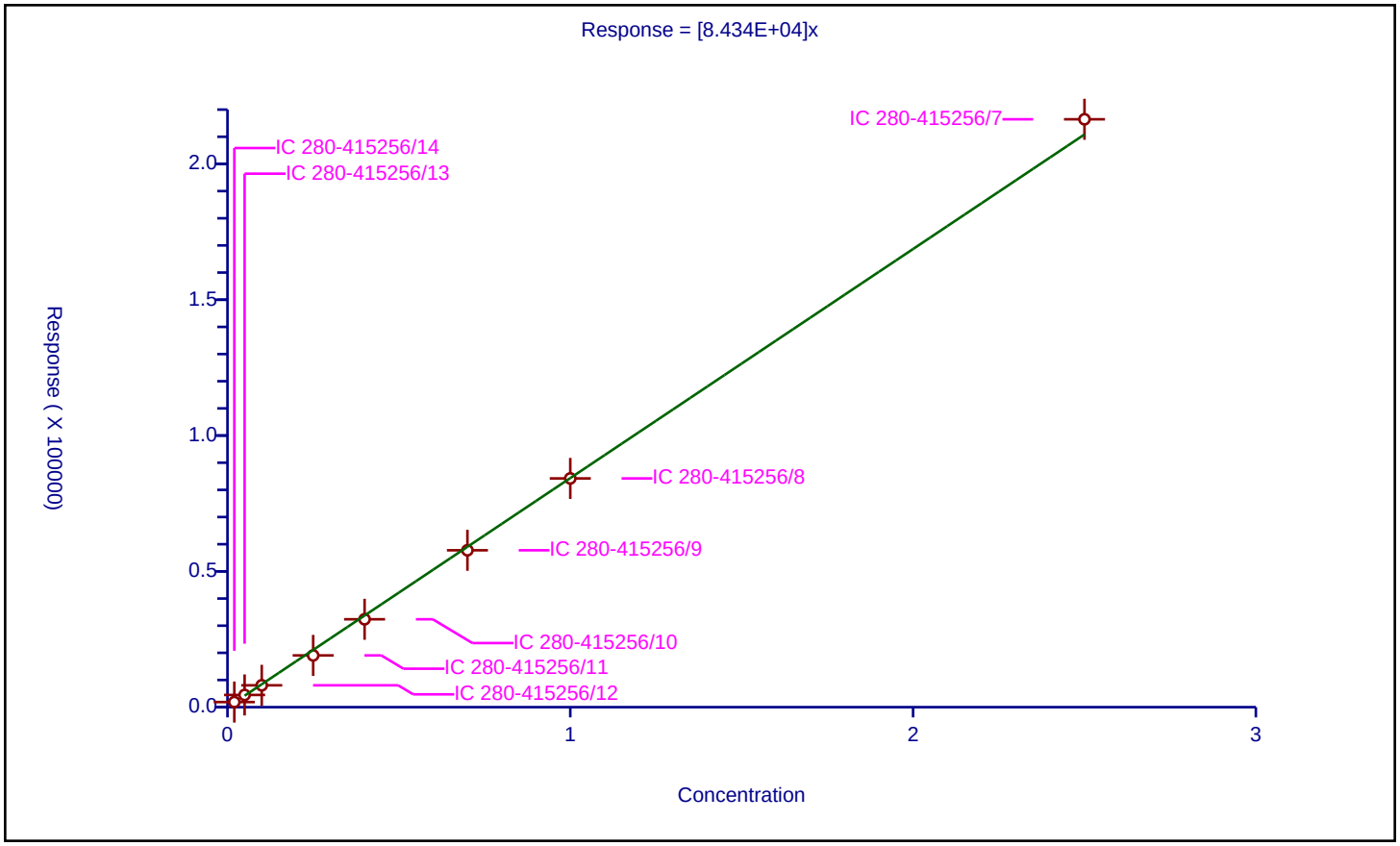
Curve Coefficients

Intercept:	0
Slope:	8.434E+04

Error Coefficients

Standard Error:	2370
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1879.0			93950.0	Y
2	IC 280-415256/13	0.05	4494.0			89880.0	Y
3	IC 280-415256/12	0.1	8050.0			80500.0	Y
4	IC 280-415256/11	0.25	19048.0			76192.0	Y
5	IC 280-415256/10	0.4	32362.0			80905.0	Y
6	IC 280-415256/9	0.7	57756.0			82508.571429	Y
7	IC 280-415256/8	1.0	84211.0			84211.0	Y
8	IC 280-415256/7	2.5	216440.0			86576.0	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

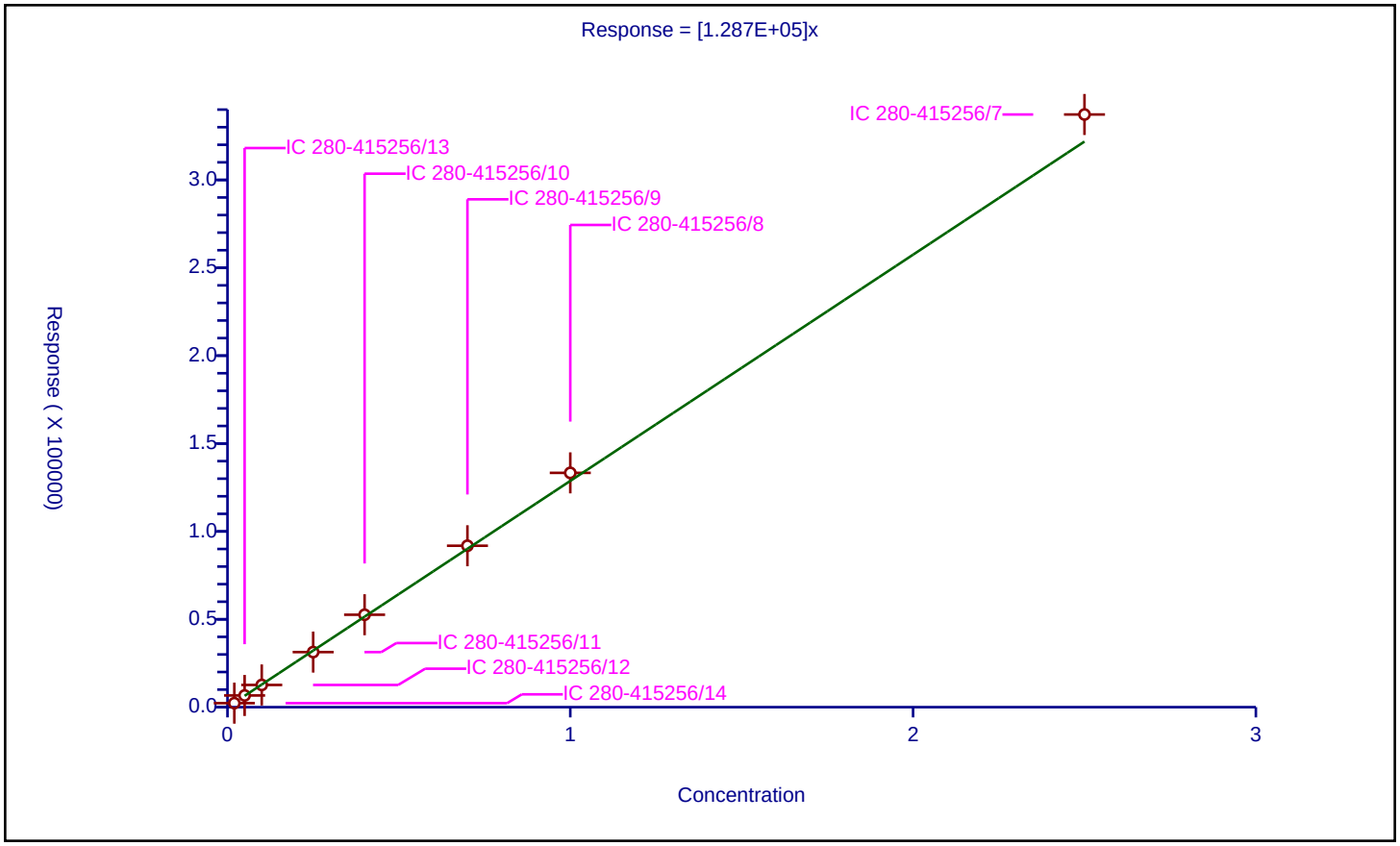
Curve Coefficients

Intercept:	0
Slope:	1.287E+05

Error Coefficients

Standard Error:	6130
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2278.0			113900.0	Y
2	IC 280-415256/13	0.05	6665.0			133300.0	Y
3	IC 280-415256/12	0.1	12638.0			126380.0	Y
4	IC 280-415256/11	0.25	31343.0			125372.0	Y
5	IC 280-415256/10	0.4	52585.0			131462.5	Y
6	IC 280-415256/9	0.7	91842.0			131202.857143	Y
7	IC 280-415256/8	1.0	133312.0			133312.0	Y
8	IC 280-415256/7	2.5	337223.0			134889.2	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

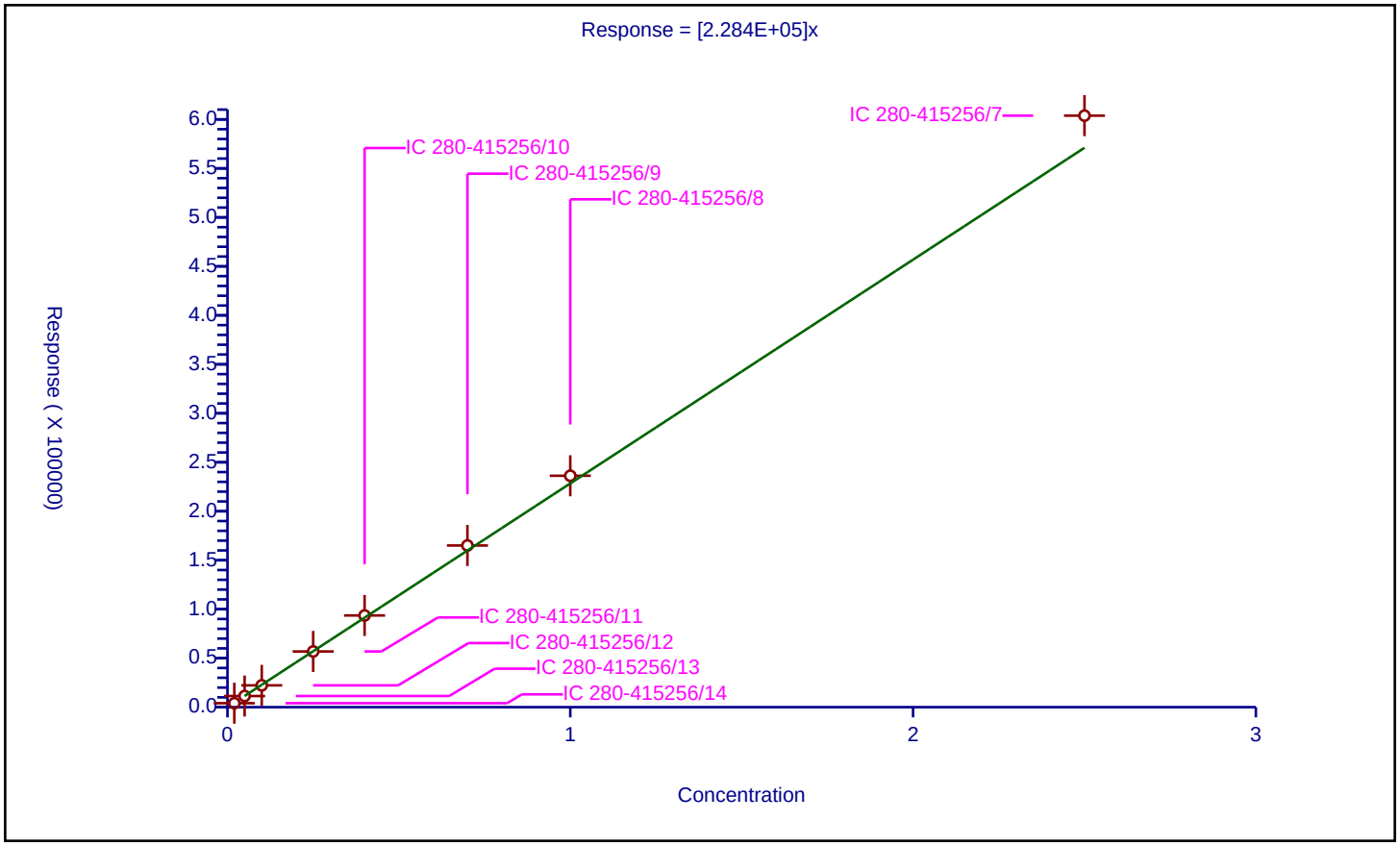
Curve Coefficients

Intercept:	0
Slope:	2.284E+05

Error Coefficients

Standard Error:	12900
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	4042.0			202100.0	Y
2	IC 280-415256/13	0.05	11383.0			227660.0	Y
3	IC 280-415256/12	0.1	22253.0			222530.0	Y
4	IC 280-415256/11	0.25	56855.0			227420.0	Y
5	IC 280-415256/10	0.4	93611.0			234027.5	Y
6	IC 280-415256/9	0.7	165033.0			235761.428571	Y
7	IC 280-415256/8	1.0	236230.0			236230.0	Y
8	IC 280-415256/7	2.5	603841.0			241536.4	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

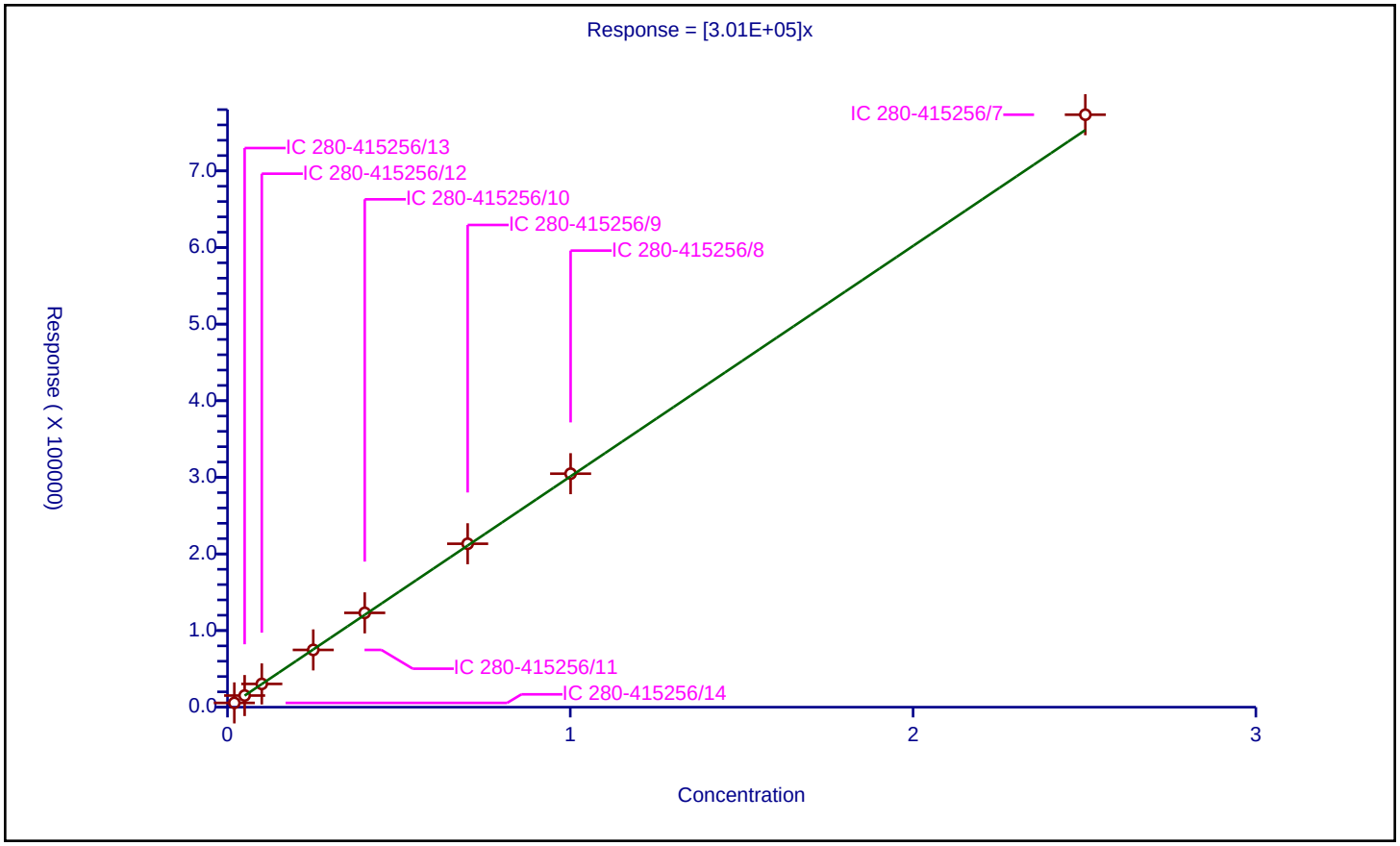
Curve Coefficients

Intercept:	0
Slope:	3.01E+05

Error Coefficients

Standard Error:	7810
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02002	5557.0			277572.427572	Y
2	IC 280-415256/13	0.05005	15187.0			303436.563437	Y
3	IC 280-415256/12	0.1001	30333.0			303026.973027	Y
4	IC 280-415256/11	0.25025	74756.0			298725.274725	Y
5	IC 280-415256/10	0.4004	123109.0			307465.034965	Y
6	IC 280-415256/9	0.7007	213326.0			304446.98159	Y
7	IC 280-415256/8	1.001	304781.0			304476.523477	Y
8	IC 280-415256/7	2.5025	773367.0			309037.762238	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

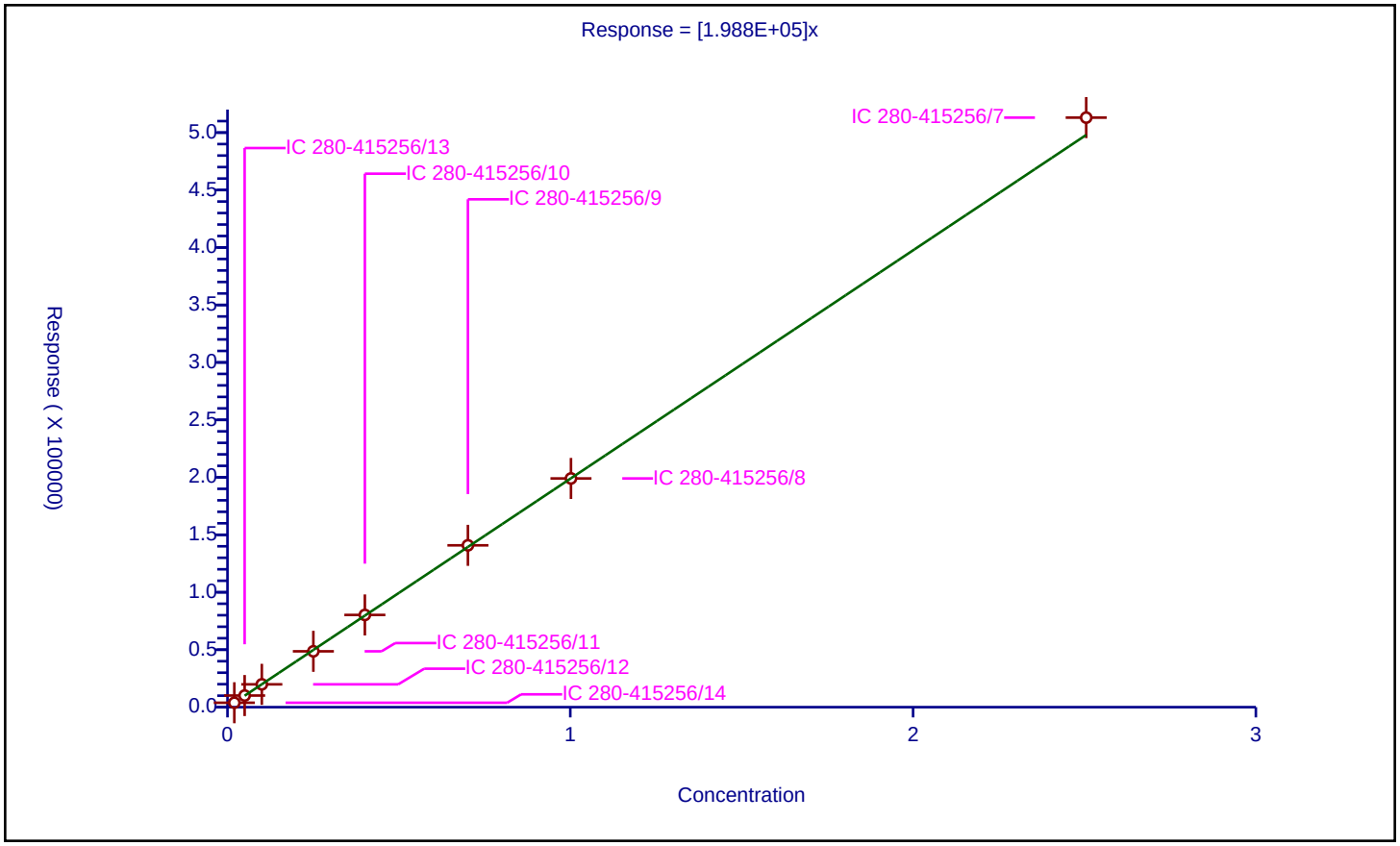
Curve Coefficients

Intercept:	0
Slope:	1.988E+05

Error Coefficients

Standard Error:	5750
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	3842.0			191716.566866	Y
2	IC 280-415256/13	0.0501	10114.0			201876.247505	Y
3	IC 280-415256/12	0.1002	19861.0			198213.572854	Y
4	IC 280-415256/11	0.2505	48592.0			193980.03992	Y
5	IC 280-415256/10	0.4008	80258.0			200244.510978	Y
6	IC 280-415256/9	0.7014	140828.0			200781.294554	Y
7	IC 280-415256/8	1.002	199028.0			198630.738523	Y
8	IC 280-415256/7	2.505	513035.0			204804.391218	Y



Calibration / Tetryl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

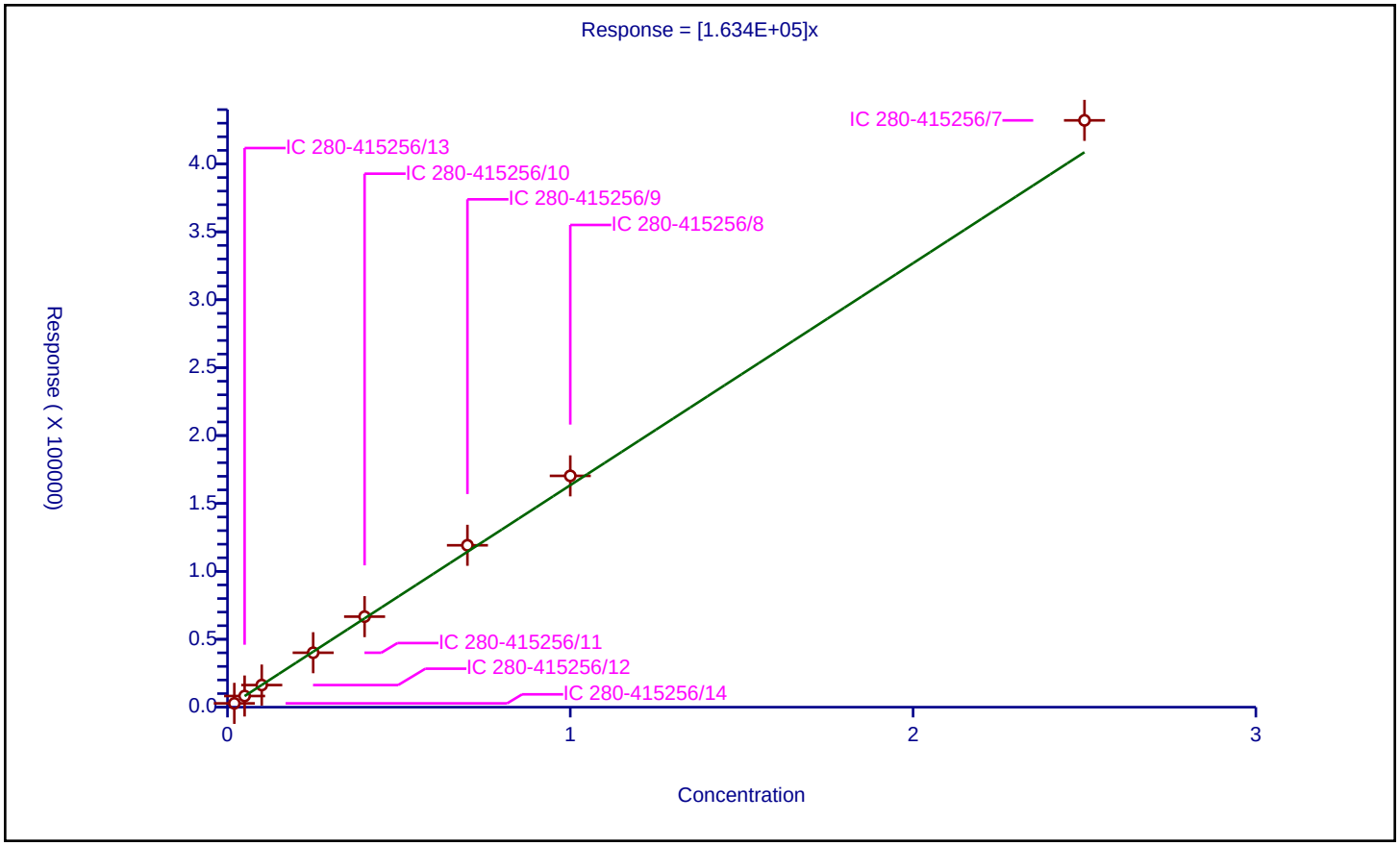
Curve Coefficients

Intercept:	0
Slope:	1.634E+05

Error Coefficients

Standard Error:	9430
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2797.0			139850.0	Y
2	IC 280-415256/13	0.05	8226.0			164520.0	Y
3	IC 280-415256/12	0.1	16280.0			162800.0	Y
4	IC 280-415256/11	0.25	40083.0			160332.0	Y
5	IC 280-415256/10	0.4	66666.0			166665.0	Y
6	IC 280-415256/9	0.7	119195.0			170278.571429	Y
7	IC 280-415256/8	1.0	170312.0			170312.0	Y
8	IC 280-415256/7	2.5	432075.0			172830.0	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

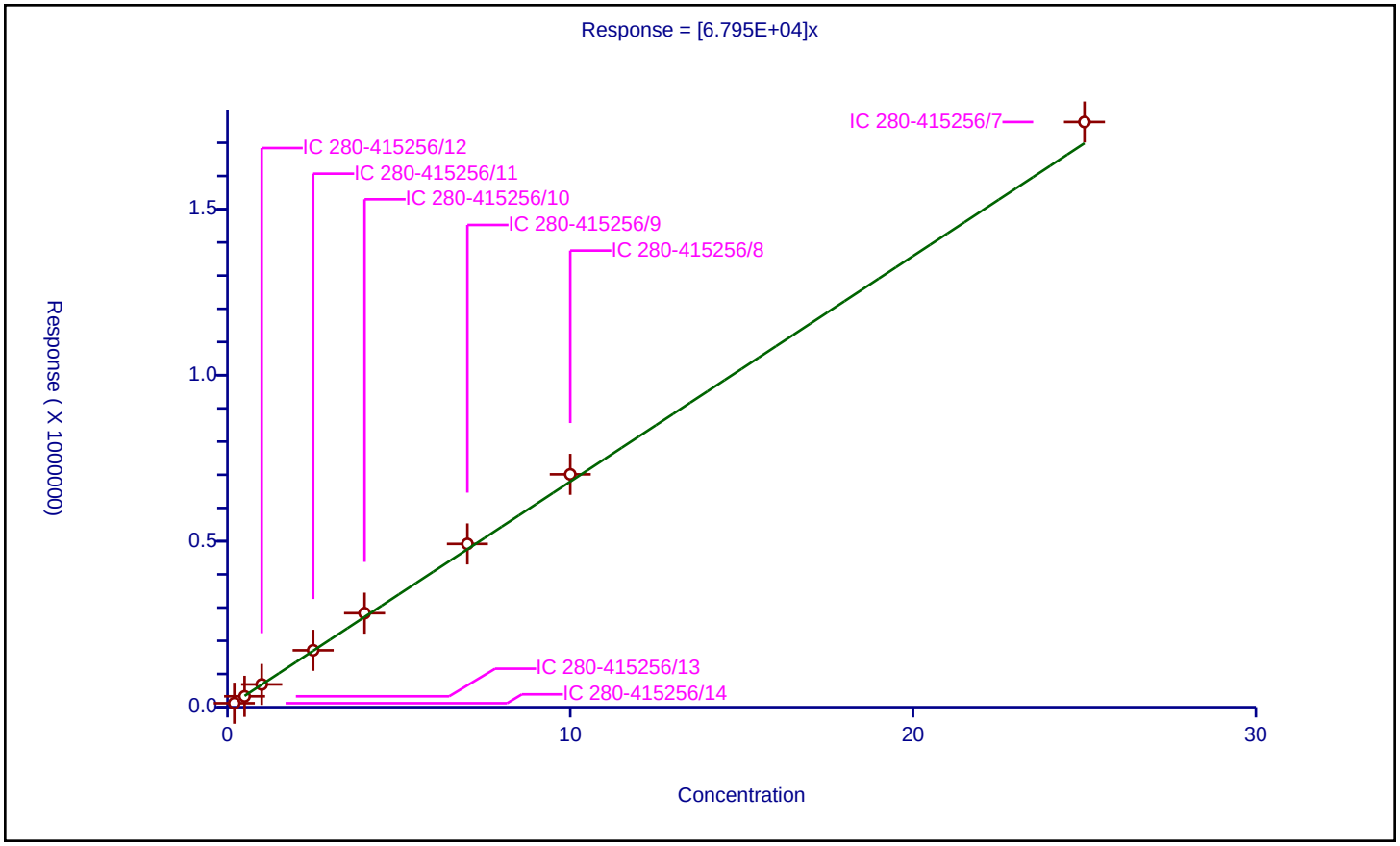
Curve Coefficients

Intercept:	0
Slope:	6.795E+04

Error Coefficients

Standard Error:	26700
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	11906.0			59530.0	Y
2	IC 280-415256/13	0.5	32693.0			65386.0	Y
3	IC 280-415256/12	1.0	68459.0			68459.0	Y
4	IC 280-415256/11	2.5	171294.0			68517.6	Y
5	IC 280-415256/10	4.0	283140.0			70785.0	Y
6	IC 280-415256/9	7.0	491693.0			70241.857143	Y
7	IC 280-415256/8	10.0	701363.0			70136.3	Y
8	IC 280-415256/7	25.0	1762679.0			70507.16	Y



Calibration / 2,4,6-Trinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

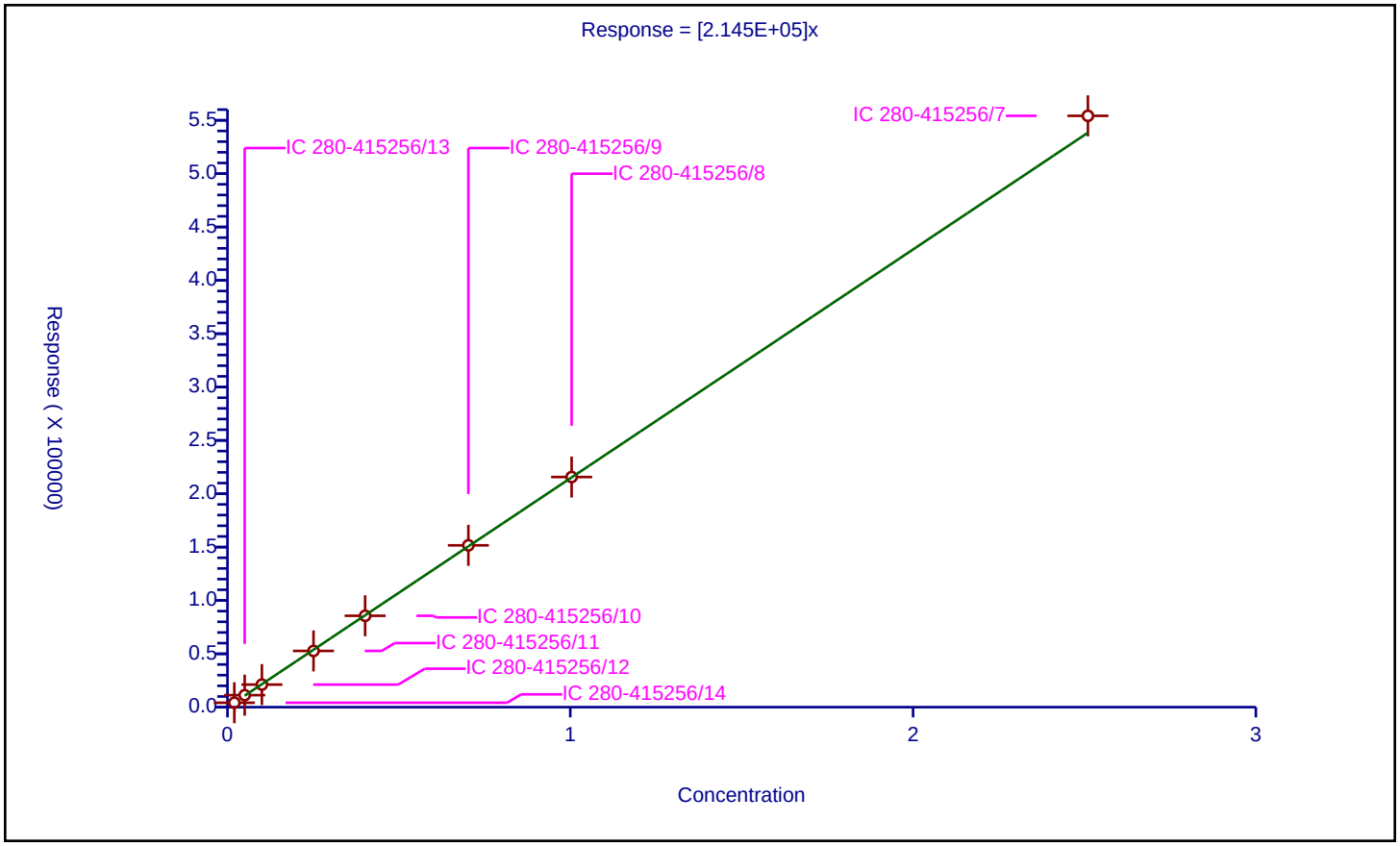
Curve Coefficients

Intercept:	0
Slope:	2.145E+05

Error Coefficients

Standard Error:	6020
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	4137.0			206025.896414	Y
2	IC 280-415256/13	0.0502	11267.0			224442.231076	Y
3	IC 280-415256/12	0.1004	21155.0			210707.171315	Y
4	IC 280-415256/11	0.251	52708.0			209992.031873	Y
5	IC 280-415256/10	0.4016	85643.0			213254.482072	Y
6	IC 280-415256/9	0.7028	151667.0			215803.927149	Y
7	IC 280-415256/8	1.004	215673.0			214813.74502	Y
8	IC 280-415256/7	2.51	554169.0			220784.462151	Y



Calibration / 4-Amino-2,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

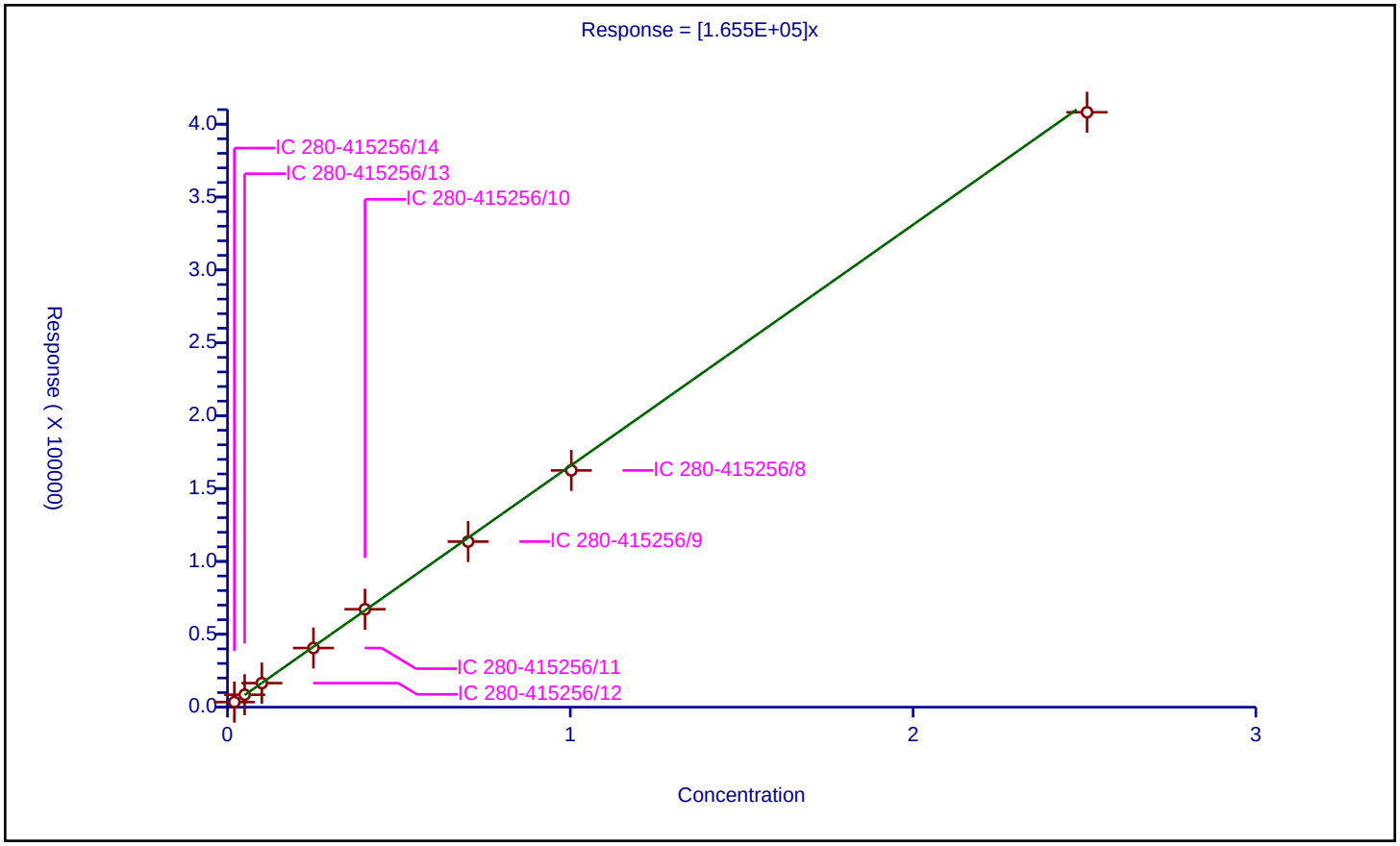
Curve Coefficients

Intercept:	0
Slope:	1.655E+05

Error Coefficients

Standard Error:	3100
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3486.0			173778.664008	Y
2	IC 280-415256/13	0.05015	8517.0			169830.508475	Y
3	IC 280-415256/12	0.1003	16510.0			164606.181456	Y
4	IC 280-415256/11	0.25075	40566.0			161778.664008	Y
5	IC 280-415256/10	0.4012	67180.0			167447.657029	Y
6	IC 280-415256/9	0.7021	113610.0			161814.556331	Y
7	IC 280-415256/8	1.003	162456.0			161970.089731	Y
8	IC 280-415256/7	2.5075	408172.0			162780.458624	Y



Calibration / 2-Amino-4,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

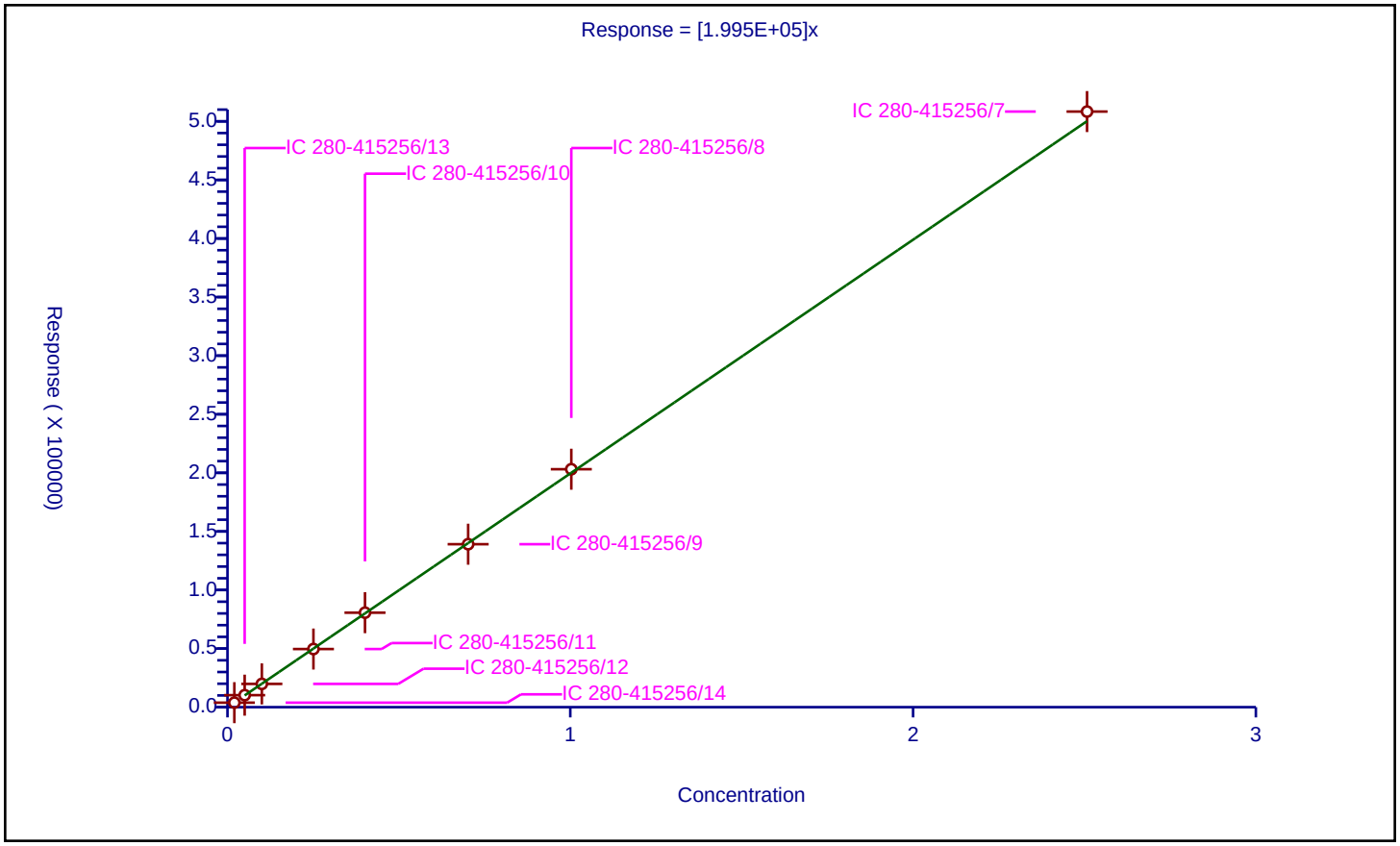
Curve Coefficients

Intercept:	0
Slope:	1.995E+05

Error Coefficients

Standard Error:	3320
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3839.0			191375.872383	Y
2	IC 280-415256/13	0.05015	10247.0			204327.018943	Y
3	IC 280-415256/12	0.1003	19850.0			197906.281157	Y
4	IC 280-415256/11	0.25075	49604.0			197822.532403	Y
5	IC 280-415256/10	0.4012	80646.0			201011.964108	Y
6	IC 280-415256/9	0.7021	139075.0			198084.318473	Y
7	IC 280-415256/8	1.003	203087.0			202479.561316	Y
8	IC 280-415256/7	2.5075	508320.0			202719.840479	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

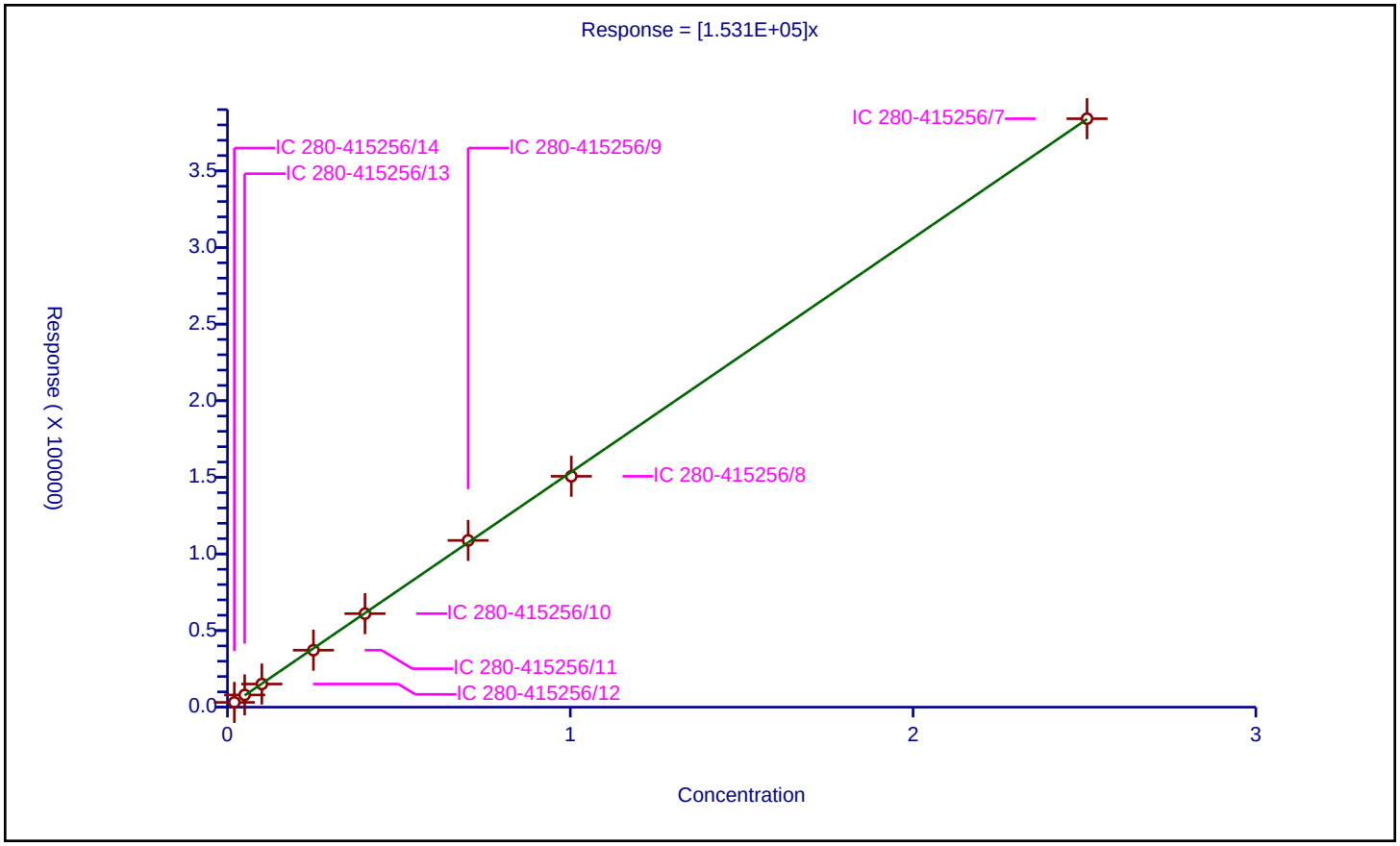
Curve Coefficients

Intercept:	0
Slope:	1.531E+05

Error Coefficients

Standard Error:	1300
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3125.0			155782.652044	Y
2	IC 280-415256/13	0.05015	7991.0			159341.974078	Y
3	IC 280-415256/12	0.1003	15104.0			150588.235294	Y
4	IC 280-415256/11	0.25075	37173.0			148247.258225	Y
5	IC 280-415256/10	0.4012	61046.0			152158.524427	Y
6	IC 280-415256/9	0.7021	108831.0			155007.833642	Y
7	IC 280-415256/8	1.003	150677.0			150226.321037	Y
8	IC 280-415256/7	2.5075	384067.0			153167.298106	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

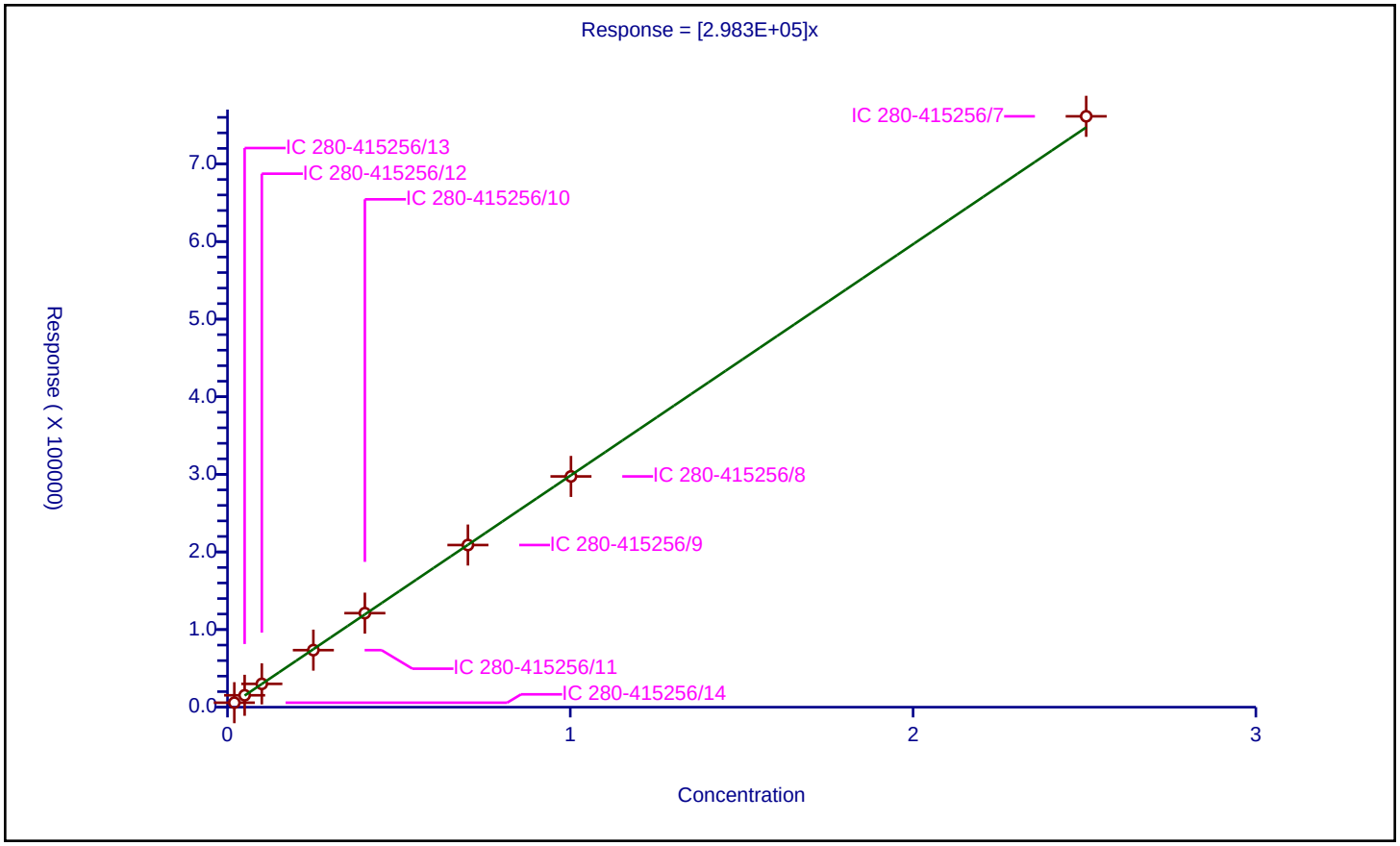
Curve Coefficients

Intercept:	0
Slope:	2.983E+05

Error Coefficients

Standard Error:	5460
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	5750.0			286926.147705	Y
2	IC 280-415256/13	0.0501	15313.0			305648.702595	Y
3	IC 280-415256/12	0.1002	30008.0			299481.037924	Y
4	IC 280-415256/11	0.2505	73471.0			293297.40519	Y
5	IC 280-415256/10	0.4008	121158.0			302290.419162	Y
6	IC 280-415256/9	0.7014	208912.0			297850.014257	Y
7	IC 280-415256/8	1.002	297313.0			296719.560878	Y
8	IC 280-415256/7	2.505	761362.0			303936.926148	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

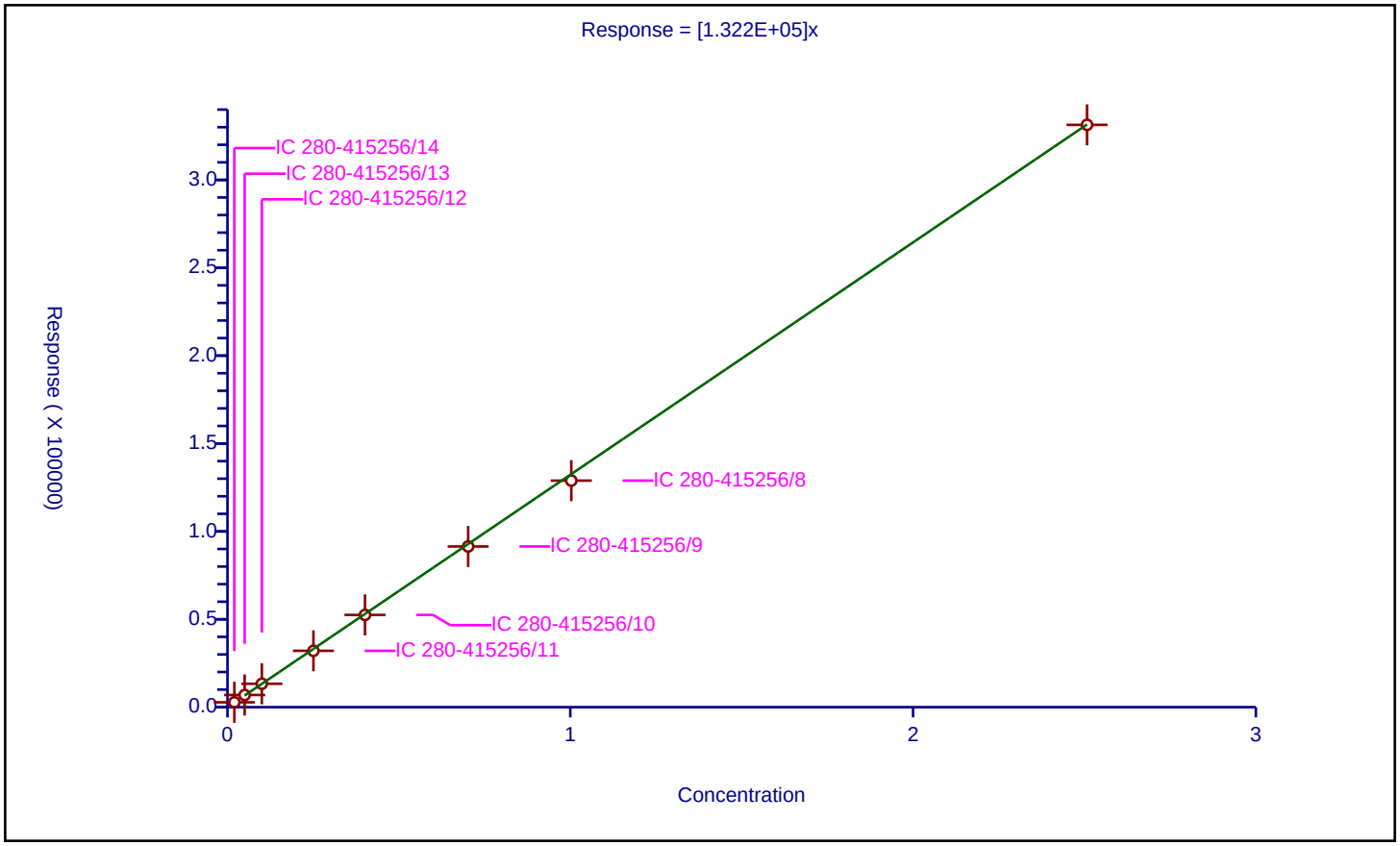
Curve Coefficients

Intercept:	0
Slope:	1.322E+05

Error Coefficients

Standard Error:	1580
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	2761.0			137637.088734	Y
2	IC 280-415256/13	0.05015	6915.0			137886.340977	Y
3	IC 280-415256/12	0.1003	13314.0			132741.774676	Y
4	IC 280-415256/11	0.25075	32062.0			127864.40678	Y
5	IC 280-415256/10	0.4012	52478.0			130802.592223	Y
6	IC 280-415256/9	0.7021	91427.0			130219.341974	Y
7	IC 280-415256/8	1.003	128893.0			128507.477567	Y
8	IC 280-415256/7	2.5075	331335.0			132137.587238	Y



Calibration / p-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

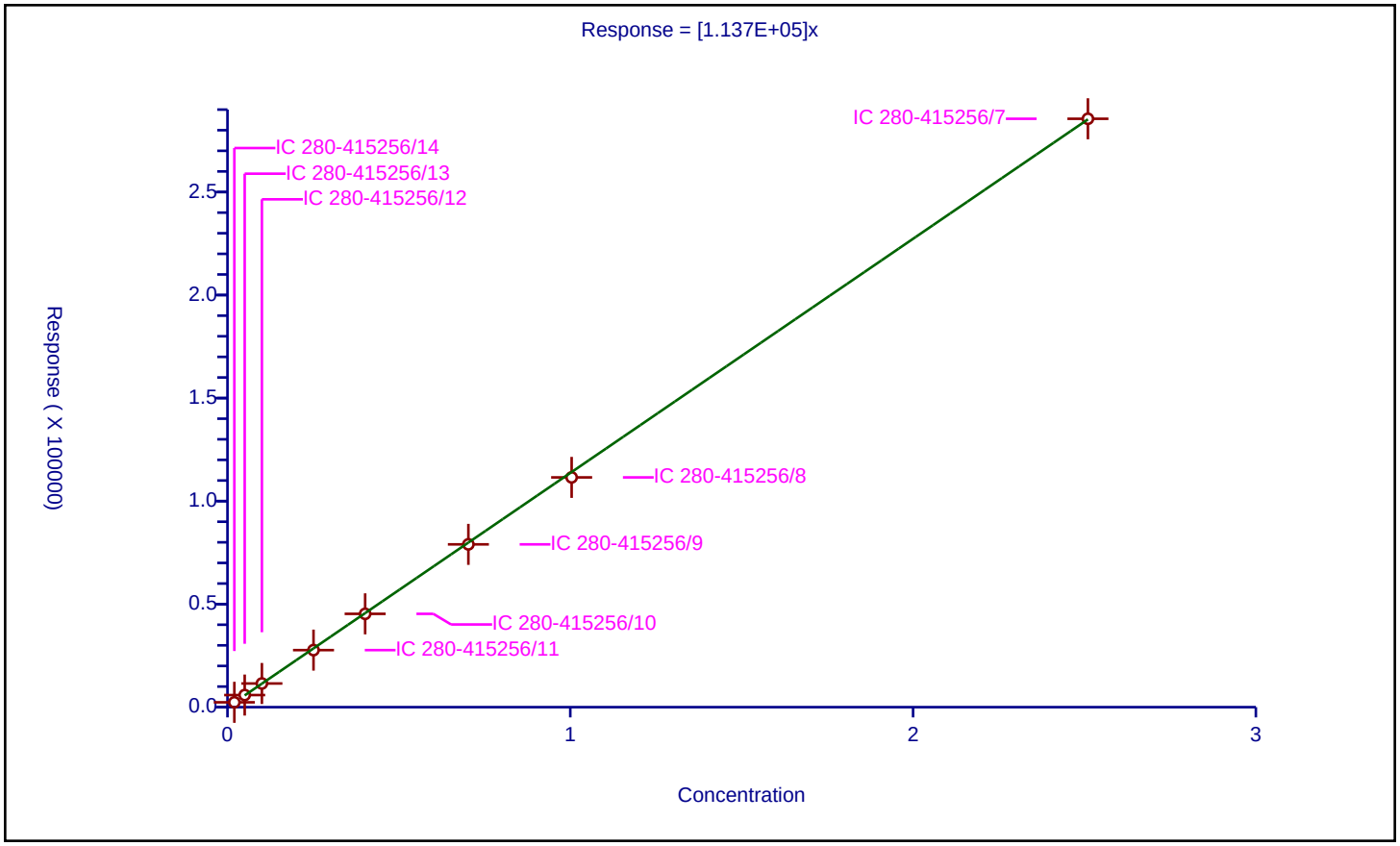
Curve Coefficients

Intercept:	0
Slope:	1.137E+05

Error Coefficients

Standard Error:	1100
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	2355.0			117280.876494	Y
2	IC 280-415256/13	0.0502	5884.0			117211.155378	Y
3	IC 280-415256/12	0.1004	11487.0			114412.350598	Y
4	IC 280-415256/11	0.251	27683.0			110290.836653	Y
5	IC 280-415256/10	0.4016	45295.0			112786.354582	Y
6	IC 280-415256/9	0.7028	79009.0			112420.318725	Y
7	IC 280-415256/8	1.004	111505.0			111060.756972	Y
8	IC 280-415256/7	2.51	285557.0			113767.729084	Y



Calibration / m-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

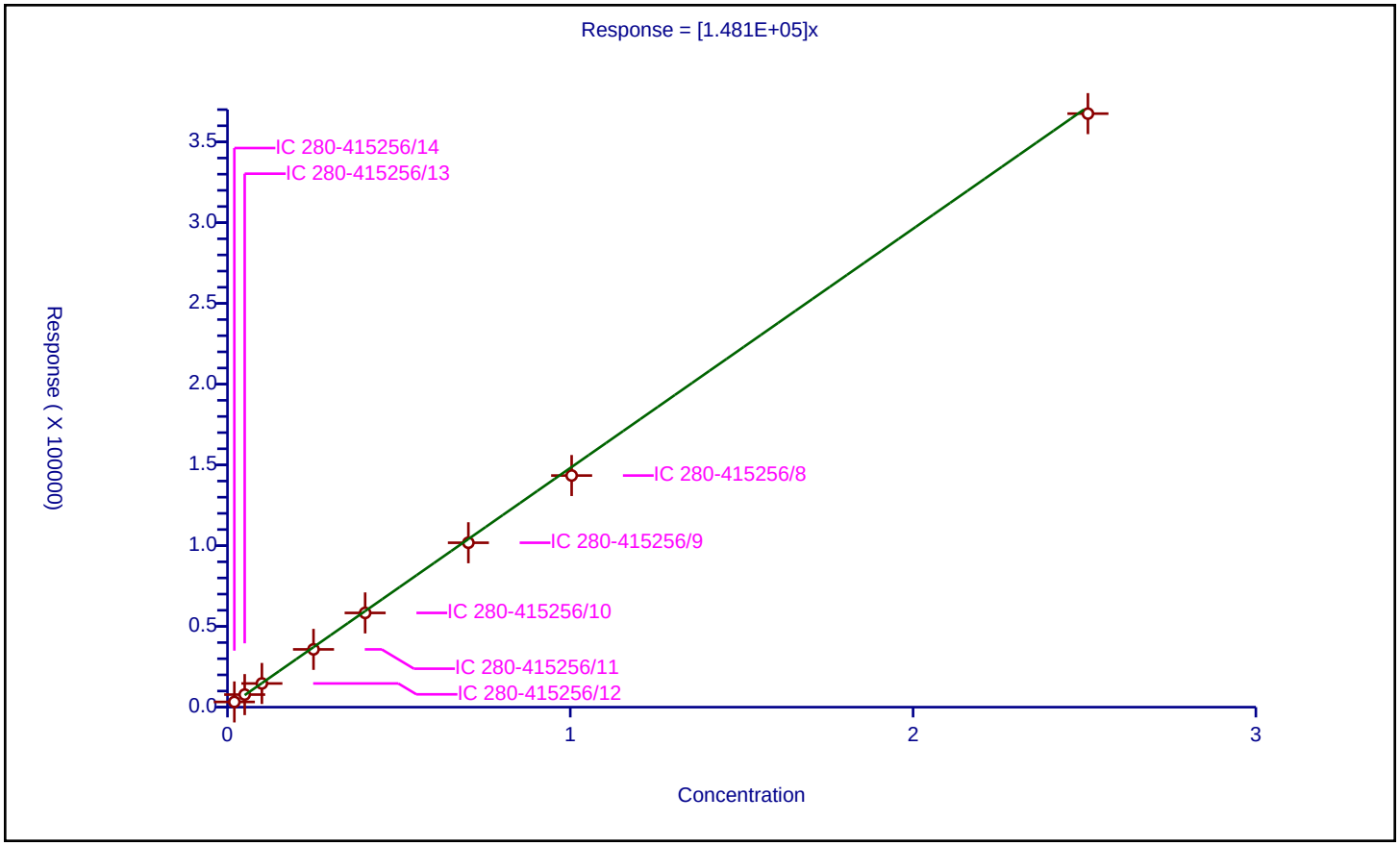
Curve Coefficients

Intercept:	0
Slope:	1.481E+05

Error Coefficients

Standard Error:	2790
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	3245.0			161603.585657	Y
2	IC 280-415256/13	0.0502	7786.0			155099.601594	Y
3	IC 280-415256/12	0.1004	14675.0			146165.338645	Y
4	IC 280-415256/11	0.251	35788.0			142581.673307	Y
5	IC 280-415256/10	0.4016	58353.0			145301.294821	Y
6	IC 280-415256/9	0.7028	101807.0			144859.134889	Y
7	IC 280-415256/8	1.004	143426.0			142854.581673	Y
8	IC 280-415256/7	2.51	367509.0			146417.928287	Y



Calibration / PETN

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

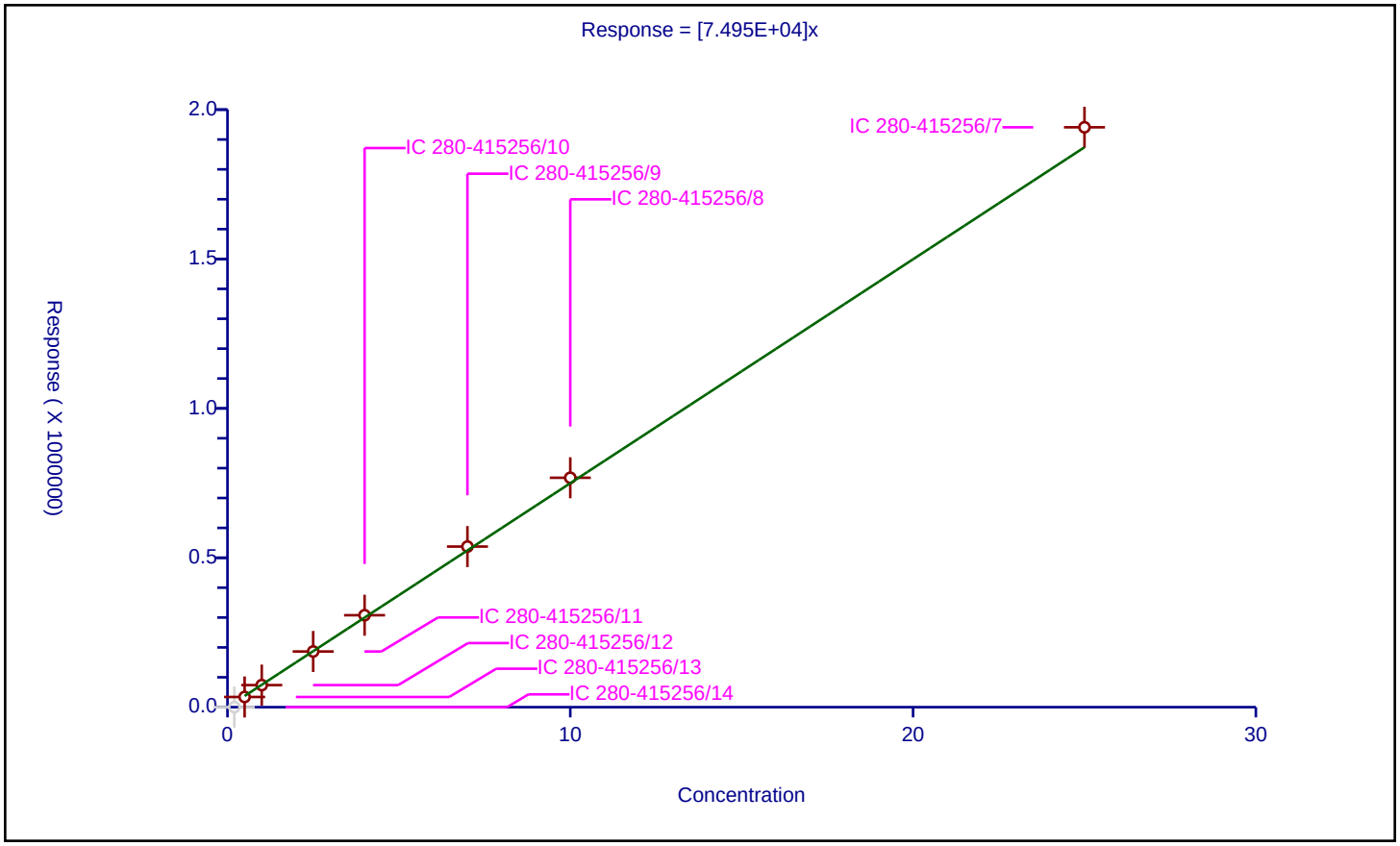
Curve Coefficients

Intercept:	0
Slope:	7.495E+04

Error Coefficients

Standard Error:	29000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	0.0			0.0	N
2	IC 280-415256/13	0.5	34097.0			68194.0	Y
3	IC 280-415256/12	1.0	73842.0			73842.0	Y
4	IC 280-415256/11	2.5	186281.0			74512.4	Y
5	IC 280-415256/10	4.0	307741.0			76935.25	Y
6	IC 280-415256/9	7.0	537514.0			76787.714286	Y
7	IC 280-415256/8	10.0	767790.0			76779.0	Y
8	IC 280-415256/7	25.0	1940836.0			77633.44	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
MNX	Ave	13140	139188			400	959.2*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
MNX	7.30	7.15	7.45

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

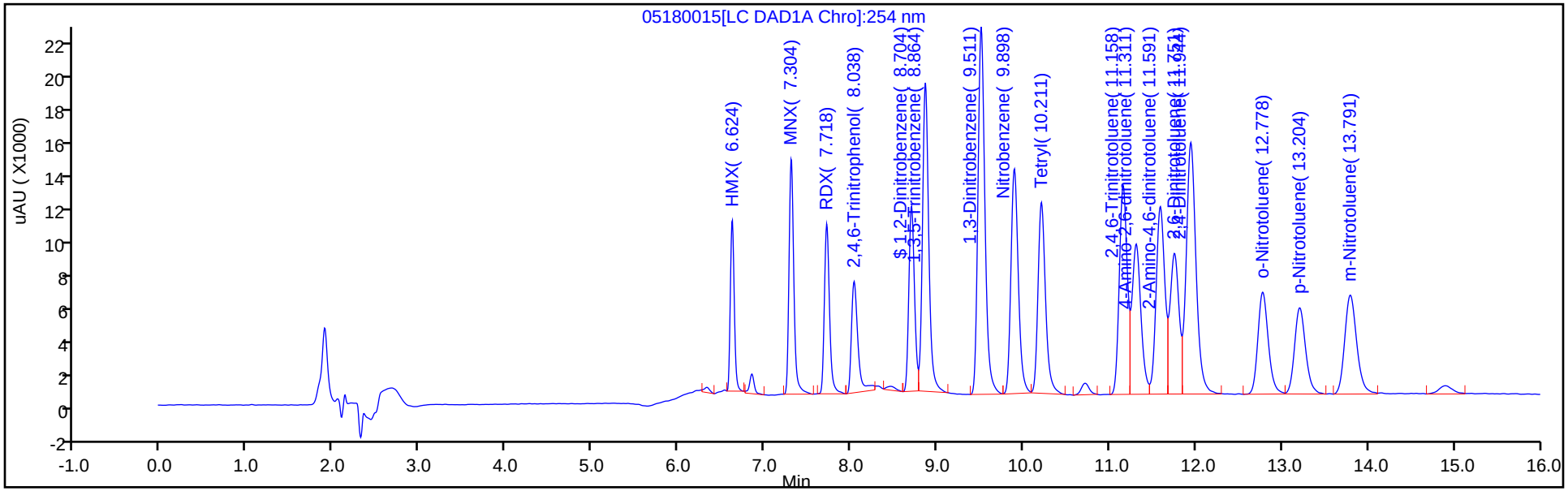
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

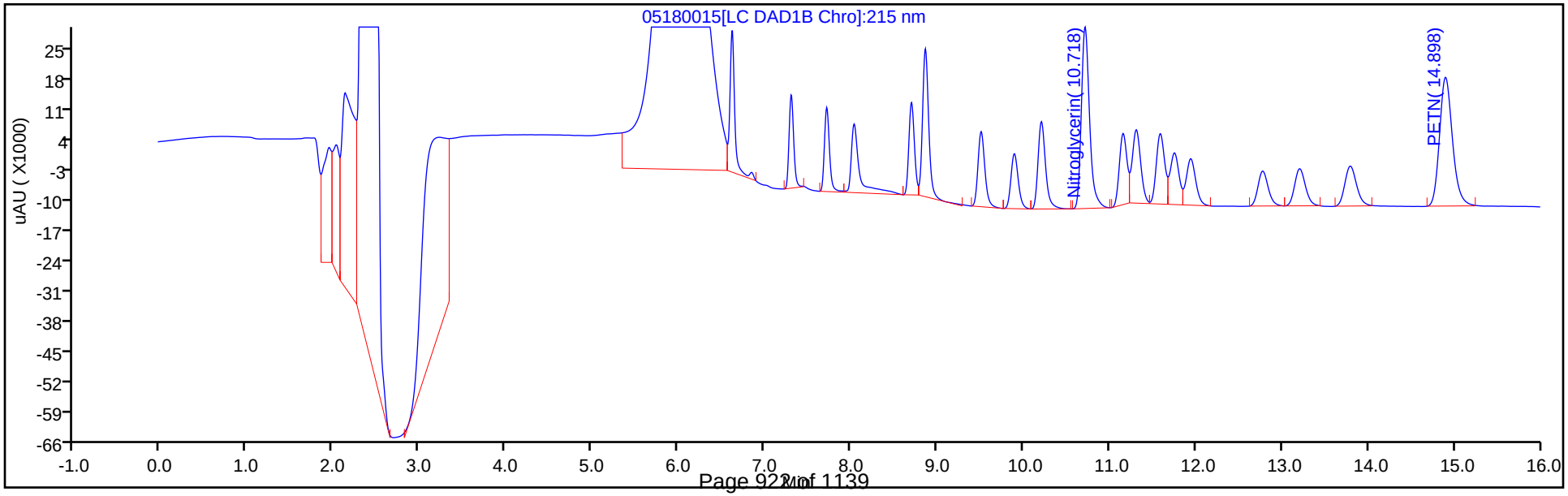
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	82798		390	400	-2.5	20.0
RDX	Ave	104577	107300		410	400	2.6	20.0
Picric acid	Ave	84340	88468		420	400	4.9	20.0
1,3,5-Trinitrobenzene	Ave	228408	236678		414	400	3.6	20.0
1,3-Dinitrobenzene	Ave	301023	314290		418	400	4.4	20.0
Nitrobenzene	Ave	198781	203228		409	400	2.2	20.0
Tetryl	Ave	163448	176798		433	400	8.2	20.0
Nitroglycerin	Ave	67945	69335		4080	4000	2.0	20.0
2,4,6-Trinitrotoluene	Ave	214478	203085		379	400	-5.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	166093		401	400	0.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	200635		402	400	0.6	20.0
2,6-Dinitrotoluene	Ave	153065	155268		406	400	1.4	20.0
2,4-Dinitrotoluene	Ave	298269	302013		405	400	1.3	20.0
2-Nitrotoluene	Ave	132225	130453		395	400	-1.3	20.0
4-Nitrotoluene	Ave	113654	117055		412	400	3.0	20.0
3-Nitrotoluene	Ave	148110	145963		394	400	-1.5	20.0
PETN	Ave	74955	77410		4130	4000	3.3	20.0
1,2-Dinitrobenzene	Ave	128727	128060		398	400	-0.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.62	6.47	6.77
RDX	7.72	7.57	7.87
Picric acid	8.04	7.89	8.19
1,3,5-Trinitrobenzene	8.86	8.71	9.01
1,3-Dinitrobenzene	9.51	9.36	9.66
Nitrobenzene	9.90	9.75	10.05
Tetryl	10.21	10.06	10.36
Nitroglycerin	10.72	10.57	10.87
2,4,6-Trinitrotoluene	11.16	11.06	11.26
4-Amino-2,6-dinitrotoluene	11.31	11.21	11.41
2-Amino-4,6-dinitrotoluene	11.59	11.49	11.69
2,6-Dinitrotoluene	11.75	11.65	11.85
2,4-Dinitrotoluene	11.94	11.84	12.04
2-Nitrotoluene	12.78	12.63	12.93
4-Nitrotoluene	13.20	13.05	13.35
3-Nitrotoluene	13.79	13.64	13.94
PETN	14.90	14.75	15.05
1,2-Dinitrobenzene	8.70	8.55	8.85

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

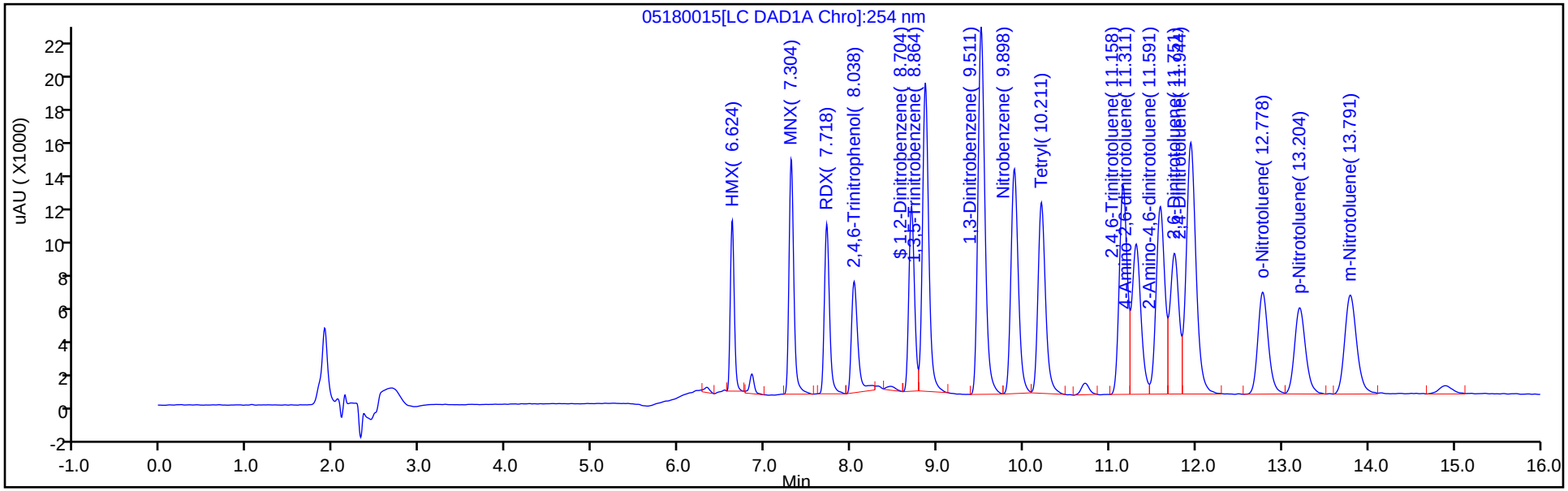
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

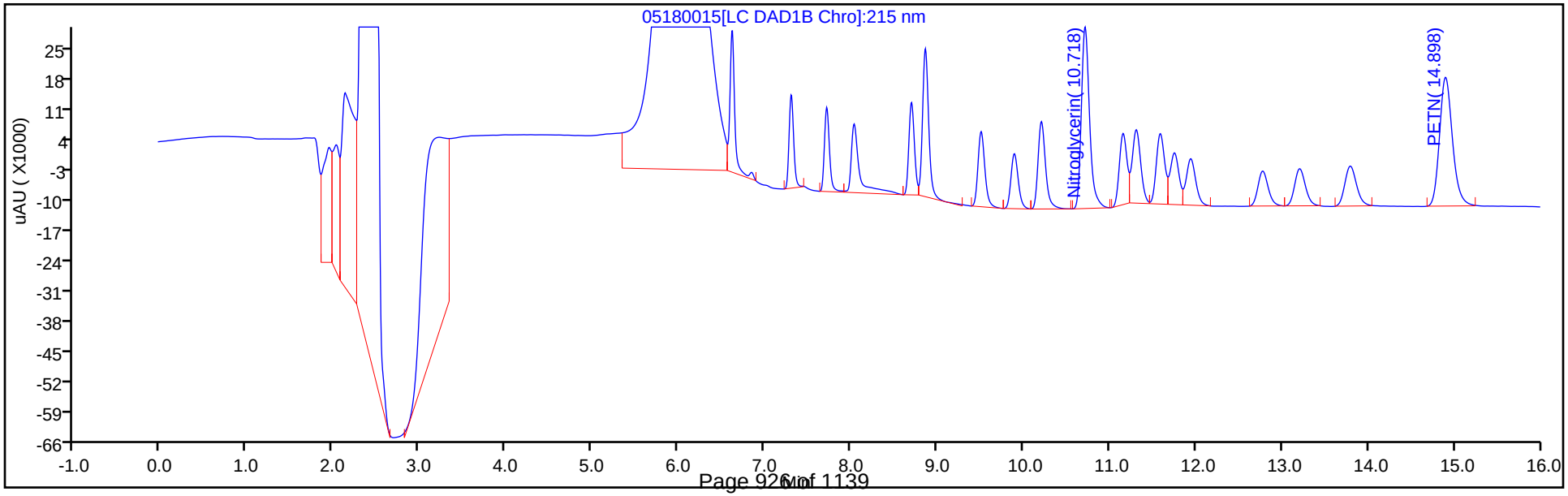
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-438727/7 Calibration Date: 11/26/2018 13:18

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11260007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	94976		280	250	11.8	20.0
RDX	Ave	104577	111868		267	250	7.0	20.0
Picric acid	Ave	84340	89852		266	250	6.5	20.0
1,3,5-Trinitrobenzene	Ave	228408	243588		267	250	6.6	20.0
1,3-Dinitrobenzene	Ave	301023	313083		260	250	4.0	20.0
Nitrobenzene	Ave	198781	198359		250	251	-0.2	20.0
Tetryl	Ave	163448	185224		283	250	13.3	20.0
Nitroglycerin	Ave	67945	74777		2750	2500	10.1	20.0
2,4,6-Trinitrotoluene	Ave	214478	234669		275	251	9.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	163817		248	251	-1.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	210217		264	251	5.4	20.0
2,6-Dinitrotoluene	Ave	153065	157336		258	251	2.8	20.0
2,4-Dinitrotoluene	Ave	298269	303301		255	251	1.7	20.0
2-Nitrotoluene	Ave	132225	128602		244	251	-2.7	20.0
4-Nitrotoluene	Ave	113654	110064		243	251	-3.2	20.0
3-Nitrotoluene	Ave	148110	141865		240	251	-4.2	20.0
PETN	Ave	74955	80376		2680	2500	7.2	20.0
1,2-Dinitrobenzene	Ave	128727	140264		272	250	9.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-438727/7 Calibration Date: 11/26/2018 13:18

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11260007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.51	6.81
RDX	7.76	7.61	7.91
Picric acid	8.13	7.98	8.28
1,3,5-Trinitrobenzene	8.89	8.74	9.04
1,3-Dinitrobenzene	9.55	9.40	9.70
Nitrobenzene	9.93	9.78	10.08
Tetryl	10.25	10.10	10.40
Nitroglycerin	10.75	10.60	10.90
2,4,6-Trinitrotoluene	11.21	11.11	11.31
4-Amino-2,6-dinitrotoluene	11.37	11.27	11.47
2-Amino-4,6-dinitrotoluene	11.66	11.56	11.76
2,6-Dinitrotoluene	11.81	11.71	11.91
2,4-Dinitrotoluene	12.01	11.91	12.11
2-Nitrotoluene	12.85	12.70	13.00
4-Nitrotoluene	13.28	13.13	13.43
3-Nitrotoluene	13.87	13.72	14.02
PETN	14.96	14.81	15.11
1,2-Dinitrobenzene	8.73	8.58	8.88

Report Date: 27-Nov-2018 09:23:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260007.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 26-Nov-2018 13:18:10 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0076526-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:23:30 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0311

First Level Reviewer: fiedlerh Date: 26-Nov-2018 14:54:10

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.661	6.661	0.000	23744	0.2500	0.2795	
5 RDX	1	7.761	7.761	0.000	27967	0.2500	0.2674	
6 2,4,6-Trinitrophenol	1	8.127	8.127	0.000	22463	0.2500	0.2663	
$ 7 1,2-Dinitrobenzene	1	8.734	8.734	0.000	35066	0.2500	0.2724	
8 1,3,5-Trinitrobenzene	1	8.894	8.894	0.000	60897	0.2500	0.2666	
9 1,3-Dinitrobenzene	1	9.547	9.547	0.000	78349	0.2503	0.2603	
11 Nitrobenzene	1	9.934	9.934	0.000	49689	0.2505	0.2500	
12 Tetryl	1	10.247	10.247	0.000	46306	0.2500	0.2833	
13 Nitroglycerin	2	10.754	10.754	0.000	186943	2.50	2.75	
14 2,4,6-Trinitrotoluene	1	11.207	11.207	0.000	58902	0.2510	0.2746	
15 4-Amino-2,6-dinitrotoluene	1	11.374	11.374	0.000	41077	0.2508	0.2482	
16 2-Amino-4,6-dinitrotoluene	1	11.661	11.661	0.000	52712	0.2508	0.2643	
17 2,6-Dinitrotoluene	1	11.814	11.814	0.000	39452	0.2508	0.2577	
18 2,4-Dinitrotoluene	1	12.007	12.007	0.000	75977	0.2505	0.2547	
19 o-Nitrotoluene	1	12.847	12.847	0.000	32247	0.2508	0.2439	
20 p-Nitrotoluene	1	13.281	13.281	0.000	27626	0.2510	0.2431	
21 m-Nitrotoluene	1	13.874	13.874	0.000	35608	0.2510	0.2404	
22 PETN	2	14.961	14.961	0.000	200939	2.50	2.68	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

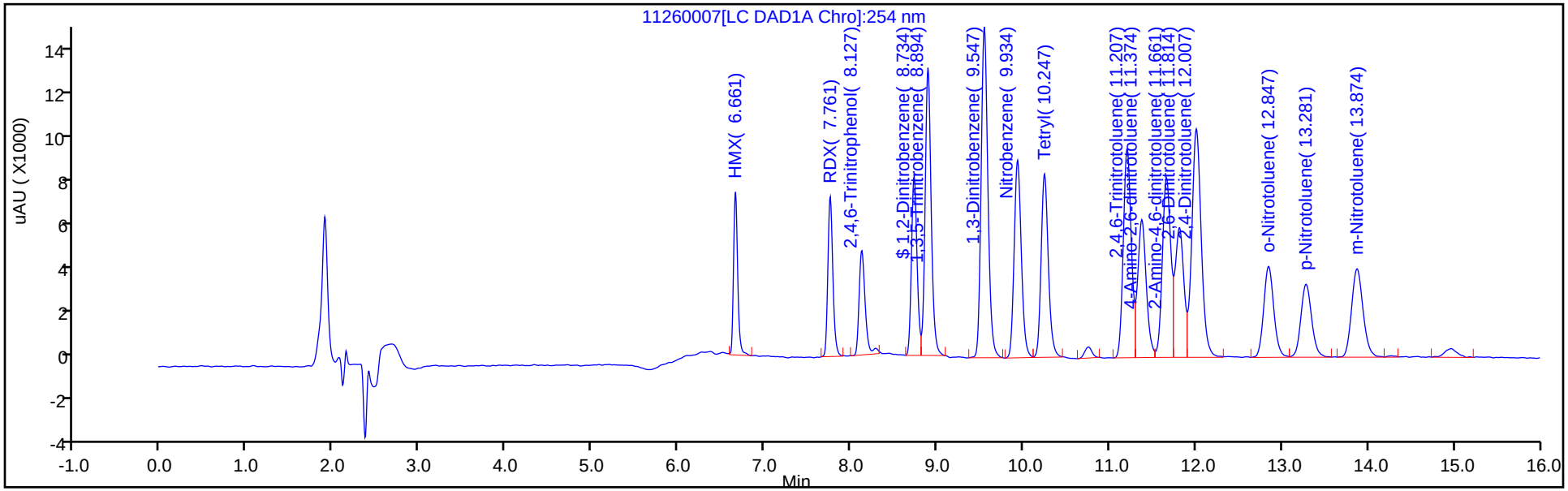
Report Date: 27-Nov-2018 09:23:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

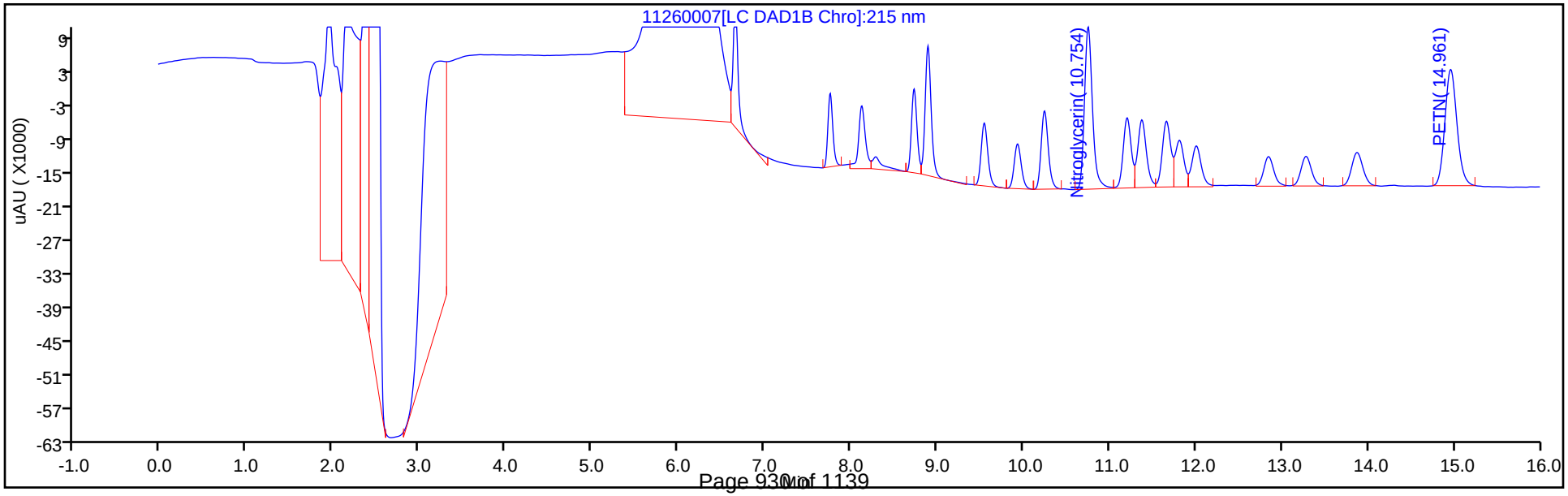
Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260007.D

Injection Date:	26-Nov-2018 13:18:10	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-438727/19 Calibration Date: 11/26/2018 17:53

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11260019.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	92276		272	250	8.6	20.0
RDX	Ave	104577	113200		271	250	8.2	20.0
Picric acid	Ave	84340	91892		272	250	9.0	20.0
1,3,5-Trinitrobenzene	Ave	228408	247372		271	250	8.3	20.0
1,3-Dinitrobenzene	Ave	301023	311908		259	250	3.6	20.0
Nitrobenzene	Ave	198781	194782		245	251	-2.0	20.0
Tetryl	Ave	163448	185108		283	250	13.3	20.0
Nitroglycerin	Ave	67945	74742		2750	2500	10.0	20.0
2,4,6-Trinitrotoluene	Ave	214478	236570		277	251	10.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	164953		250	251	-0.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	215007		270	251	7.8	20.0
2,6-Dinitrotoluene	Ave	153065	153834		252	251	0.5	20.0
2,4-Dinitrotoluene	Ave	298269	302834		254	251	1.5	20.0
2-Nitrotoluene	Ave	132225	126879		241	251	-4.0	20.0
4-Nitrotoluene	Ave	113654	108920		241	251	-4.2	20.0
3-Nitrotoluene	Ave	148110	141896		240	251	-4.2	20.0
PETN	Ave	74955	80189		2670	2500	7.0	20.0
1,2-Dinitrobenzene	Ave	128727	139868		272	250	8.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Lab Sample ID: CCV 280-438727/19 Calibration Date: 11/26/2018 17:53

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11260019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.51	6.81
RDX	7.76	7.61	7.91
Picric acid	8.15	7.98	8.28
1,3,5-Trinitrobenzene	8.89	8.74	9.04
1,3-Dinitrobenzene	9.55	9.40	9.70
Nitrobenzene	9.93	9.78	10.08
Tetryl	10.25	10.10	10.40
Nitroglycerin	10.75	10.60	10.90
2,4,6-Trinitrotoluene	11.20	11.11	11.31
4-Amino-2,6-dinitrotoluene	11.38	11.27	11.47
2-Amino-4,6-dinitrotoluene	11.67	11.56	11.76
2,6-Dinitrotoluene	11.81	11.71	11.91
2,4-Dinitrotoluene	12.01	11.91	12.11
2-Nitrotoluene	12.84	12.70	13.00
4-Nitrotoluene	13.27	13.13	13.43
3-Nitrotoluene	13.87	13.72	14.02
PETN	14.95	14.81	15.11
1,2-Dinitrobenzene	8.73	8.58	8.88

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260019.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 26-Nov-2018 17:53:49 ALS Bottle#: 7 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0076526-019
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:23:39 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0311

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.658	6.661	-0.003	23069	0.2500	0.2716	
	5 RDX	1	7.758	7.761	-0.003	28300	0.2500	0.2706	
	6 2,4,6-Trinitrophenol	1	8.145	8.127	0.018	22973	0.2500	0.2724	
$	7 1,2-Dinitrobenzene	1	8.732	8.734	-0.002	34967	0.2500	0.2716	
	8 1,3,5-Trinitrobenzene	1	8.892	8.894	-0.002	61843	0.2500	0.2708	
	9 1,3-Dinitrobenzene	1	9.545	9.547	-0.002	78055	0.2503	0.2593	
	11 Nitrobenzene	1	9.931	9.934	-0.003	48793	0.2505	0.2455	
	12 Tetryl	1	10.245	10.247	-0.002	46277	0.2500	0.2831	
	13 Nitroglycerin	2	10.745	10.754	-0.009	186854	2.50	2.75	
	14 2,4,6-Trinitrotoluene	1	11.198	11.207	-0.009	59379	0.2510	0.2769	
	15 4-Amino-2,6-dinitrotoluene	1	11.378	11.374	0.004	41362	0.2508	0.2499	
	16 2-Amino-4,6-dinitrotoluene	1	11.665	11.661	0.004	53913	0.2508	0.2703	
	17 2,6-Dinitrotoluene	1	11.805	11.814	-0.009	38574	0.2508	0.2520	
	18 2,4-Dinitrotoluene	1	12.005	12.007	-0.002	75860	0.2505	0.2543	
	19 o-Nitrotoluene	1	12.838	12.847	-0.009	31815	0.2508	0.2406	
	20 p-Nitrotoluene	1	13.271	13.281	-0.010	27339	0.2510	0.2405	
	21 m-Nitrotoluene	1	13.865	13.874	-0.009	35616	0.2510	0.2405	
	22 PETN	2	14.945	14.961	-0.016	200473	2.50	2.67	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

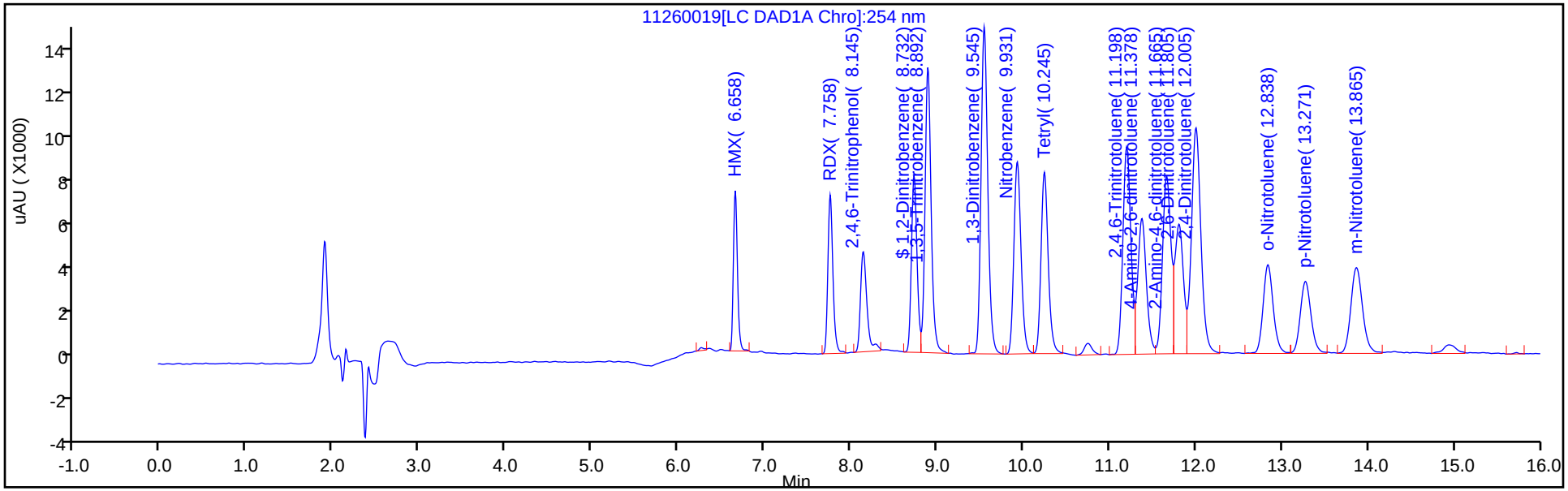
Report Date: 27-Nov-2018 09:23:40 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

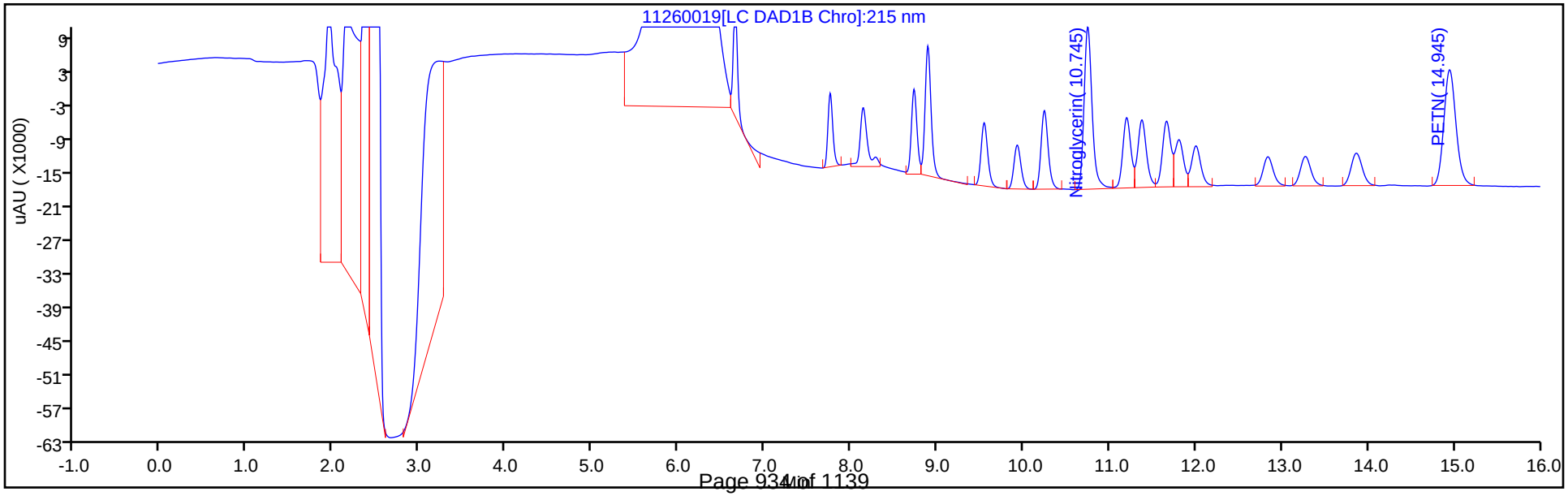
Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260019.D

Injection Date:	26-Nov-2018 17:53:49	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-438225/1-A

Matrix: Water | Lab File ID: 11260009.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/20/2018 11:01

Sample wt/vol: 500(mL) | Date Analyzed: 11/26/2018 14:04

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438727 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.40	0.20	0.086
99-08-1	3-Nitrotoluene	0.20	U	0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	1.0	0.40	0.20
2691-41-0	HMX	0.20	U	0.40	0.20	0.088
98-95-3	Nitrobenzene	0.20	U	0.40	0.20	0.091
55-63-0	Nitroglycerin	2.0	U	3.0	2.0	0.92
78-11-5	PETN	1.2	U	2.0	1.2	0.42
121-82-4	RDX	0.12	U	0.20	0.12	0.052
479-45-8	Tetryl	0.20	U	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260009.D
Lims ID: MB 280-438225/1-A
Client ID:
Sample Type: MB
Inject. Date: 26-Nov-2018 14:04:11 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-438225/1-
Misc. Info.: 280-0076526-009
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:23:31 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0311

First Level Reviewer: fiedlerh Date: 26-Nov-2018 14:54:25

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
1 2,6-diamino-4-nitrotoluene	1		6.520				ND	
25 TNX	1		6.546				ND	
2 HMX	1		6.661				ND	
3 2,4-diamino-6-nitrotoluene	1		6.700				ND	
24 DNX	1		6.866				ND	
4 MNX	1		7.326				ND	
5 RDX	1		7.761				ND	
6 2,4,6-Trinitrophenol	1		8.127				ND	
$ 7 1,2-Dinitrobenzene	1	8.738	8.734	0.004	26310	0.2000	0.2044	
8 1,3,5-Trinitrobenzene	1		8.894				ND	
9 1,3-Dinitrobenzene	1		9.547				ND	
11 Nitrobenzene	1		9.934				ND	
10 3,5-Dinitroaniline	1		10.166				ND	
12 Tetryl	1		10.247				ND	
13 Nitroglycerin	2		10.754				ND	
14 2,4,6-Trinitrotoluene	1		11.207				ND	
15 4-Amino-2,6-dinitrotoluene	1		11.374				ND	
16 2-Amino-4,6-dinitrotoluene	1		11.661				ND	
17 2,6-Dinitrotoluene	1		11.814				ND	
18 2,4-Dinitrotoluene	1		12.007				ND	
19 o-Nitrotoluene	1		12.847				ND	
20 p-Nitrotoluene	1		13.281				ND	
21 m-Nitrotoluene	1		13.874				ND	
22 PETN	2		14.961				ND	
23 Ammonium Picrate	1		0.000				ND	

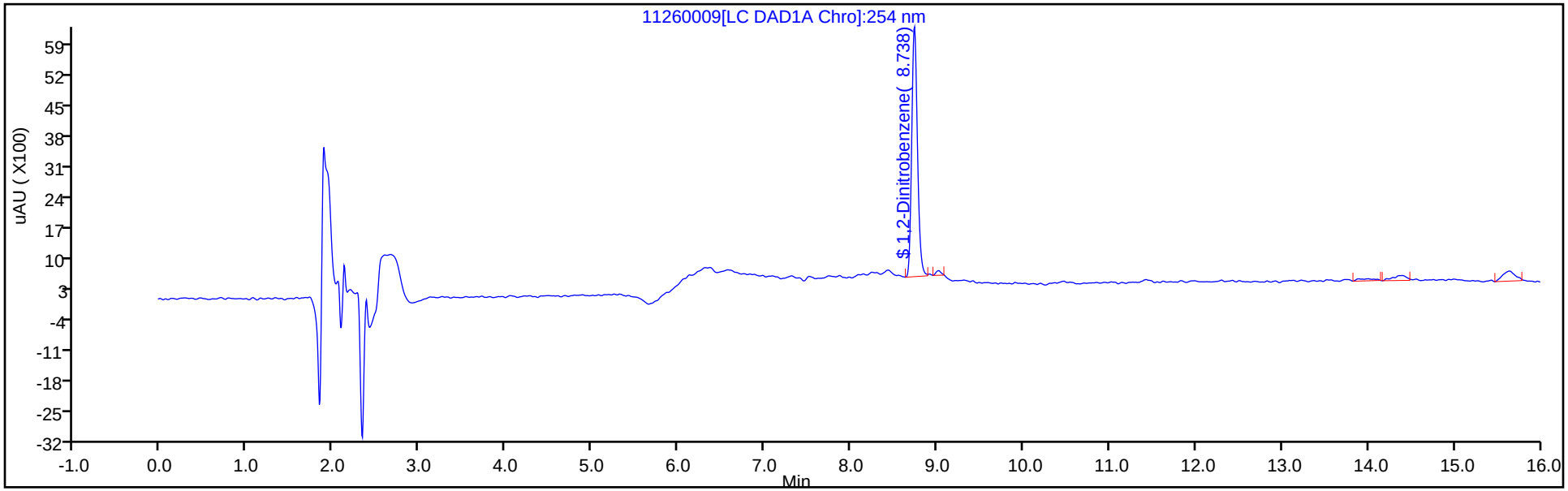
Report Date: 27-Nov-2018 09:23:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

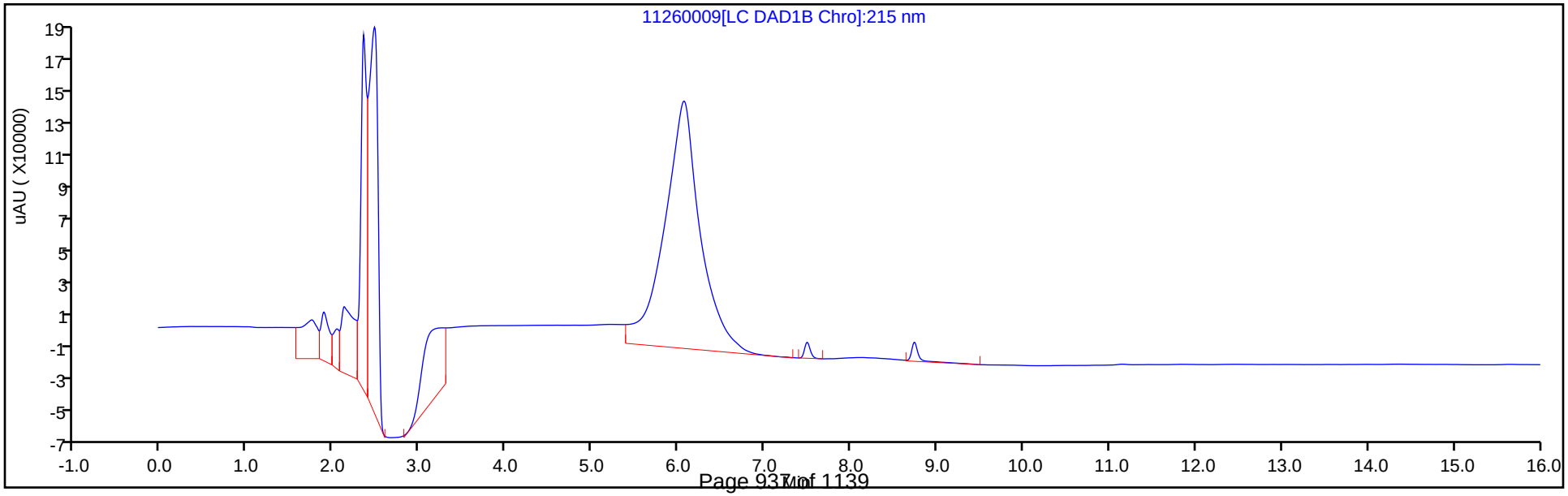
Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260009.D

Injection Date:	26-Nov-2018 14:04:11	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	MB 280-438225/1-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260009.D
Lims ID: MB 280-438225/1-A
Client ID:
Sample Type: MB
Inject. Date: 26-Nov-2018 14:04:11 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-438225/1-
Misc. Info.: 280-0076526-009
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:23:31 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0311

First Level Reviewer: fiedlerh Date: 26-Nov-2018 14:54:25

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2044	102.19

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-438225/2-A

Matrix: Water | Lab File ID: 11260010.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/20/2018 11:01

Sample wt/vol: 500(mL) | Date Analyzed: 11/26/2018 14:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438727 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.21		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.09		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	2.01		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	1.99		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.92		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.85		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.49		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.55		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.65		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	1.67		1.0	0.40	0.20
2691-41-0	HMX	2.04		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.78		0.40	0.20	0.091
55-63-0	Nitroglycerin	20.5		3.0	2.0	0.92
78-11-5	PETN	20.2		2.0	1.2	0.42
121-82-4	RDX	2.11		0.20	0.12	0.052
479-45-8	Tetryl	2.16		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	96		83-119

Report Date: 27-Nov-2018 09:23:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260010.D
Lims ID: LCS 280-438225/2-A
Client ID:
Sample Type: LCS
Inject. Date: 26-Nov-2018 14:27:10 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-438225/2
Misc. Info.: 280-0076526-010
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:23:31 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0311

First Level Reviewer: fiedlerh Date: 26-Nov-2018 14:54:33

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.666	6.661	0.005	17313	0.2000	0.2038	
	5 RDX	1	7.766	7.761	0.005	22084	0.2000	0.2112	
	6 2,4,6-Trinitrophenol	1	8.133	8.127	0.006	16254	0.2000	0.1927	
$	7 1,2-Dinitrobenzene	1	8.740	8.734	0.006	24669	0.2000	0.1916	
	8 1,3,5-Trinitrobenzene	1	8.900	8.894	0.006	50513	0.2000	0.2212	
	9 1,3-Dinitrobenzene	1	9.553	9.547	0.006	62859	0.2000	0.2088	
	11 Nitrobenzene	1	9.933	9.934	-0.001	35365	0.2000	0.1779	
	12 Tetryl	1	10.246	10.247	-0.001	35224	0.2000	0.2155	
	13 Nitroglycerin	2	10.746	10.754	-0.008	139194	2.00	2.05	
	14 2,4,6-Trinitrotoluene	1	11.200	11.207	-0.007	43070	0.2000	0.2008	
	15 4-Amino-2,6-dinitrotoluene	1	11.373	11.374	-0.001	27296	0.2000	0.1649	
	16 2-Amino-4,6-dinitrotoluene	1	11.660	11.661	-0.001	36872	0.2000	0.1849	
	17 2,6-Dinitrotoluene	1	11.806	11.814	-0.008	29361	0.2000	0.1918	
	18 2,4-Dinitrotoluene	1	12.000	12.007	-0.007	59312	0.2000	0.1989	
	19 o-Nitrotoluene	1	12.826	12.847	-0.021	19667	0.2000	0.1487	
	20 p-Nitrotoluene	1	13.266	13.281	-0.015	18930	0.2000	0.1666	
	21 m-Nitrotoluene	1	13.853	13.874	-0.021	23001	0.2000	0.1553	
	22 PETN	2	14.920	14.961	-0.041	151545	2.00	2.02	

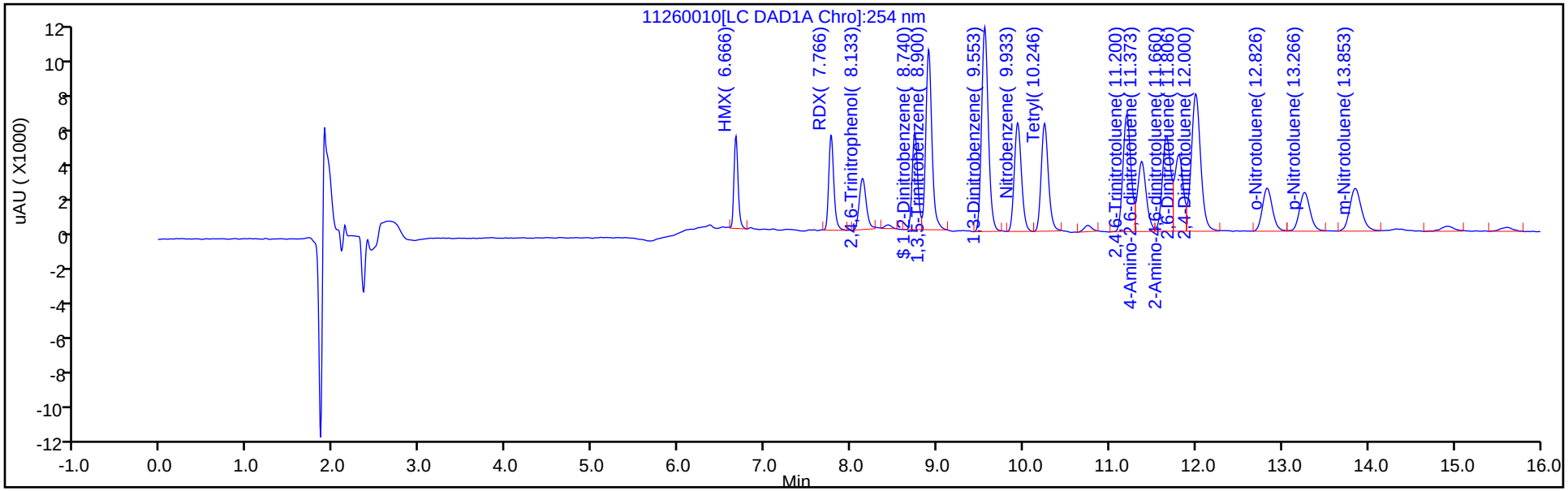
Report Date: 27-Nov-2018 09:23:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

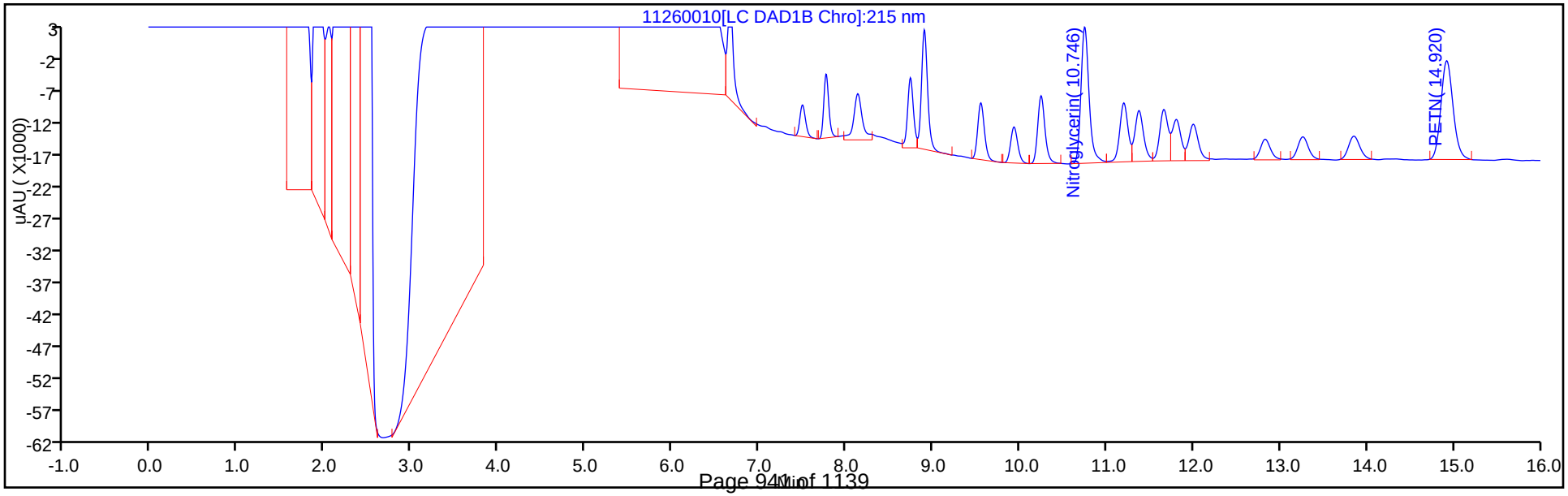
Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260010.D

Injection Date:	26-Nov-2018 14:27:10	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCS 280-438225/2-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260010.D				
Lims ID:	LCS 280-438225/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	26-Nov-2018 14:27:10	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-438225/2				
Misc. Info.:	280-0076526-010				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	27-Nov-2018 09:23:31	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0311				
First Level Reviewer: fiedlerh		Date:	26-Nov-2018 14:54:33		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1916	95.82

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-115789-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-438225/3-A

Matrix: Water | Lab File ID: 11260011.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/20/2018 11:01

Sample wt/vol: 500(mL) | Date Analyzed: 11/26/2018 14:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438727 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.20		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.09		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	2.00		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	2.01		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	2.00		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.94		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.55		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.66		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.78		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	1.72		1.0	0.40	0.20
2691-41-0	HMX	2.00		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.83		0.40	0.20	0.091
55-63-0	Nitroglycerin	19.9		3.0	2.0	0.92
78-11-5	PETN	20.1		2.0	1.2	0.42
121-82-4	RDX	2.13		0.20	0.12	0.052
479-45-8	Tetryl	2.16		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	100		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260011.D
Lims ID: LCSD 280-438225/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 26-Nov-2018 14:50:08 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-438225/
Misc. Info.: 280-0076526-011
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 27-Nov-2018 09:23:31 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0311

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.662	6.661	0.001	16991	0.2000	0.2000	
	5 RDX	1	7.755	7.761	-0.006	22239	0.2000	0.2127	
	6 2,4,6-Trinitrophenol	1	8.122	8.127	-0.005	17972	0.2000	0.2131	
$	7 1,2-Dinitrobenzene	1	8.728	8.734	-0.006	25873	0.2000	0.2010	
	8 1,3,5-Trinitrobenzene	1	8.888	8.894	-0.006	50316	0.2000	0.2203	
	9 1,3-Dinitrobenzene	1	9.542	9.547	-0.005	63002	0.2000	0.2093	
	11 Nitrobenzene	1	9.928	9.934	-0.006	36466	0.2000	0.1834	
	12 Tetryl	1	10.242	10.247	-0.005	35377	0.2000	0.2164	
	13 Nitroglycerin	2	10.748	10.754	-0.006	135538	2.00	1.99	
	14 2,4,6-Trinitrotoluene	1	11.195	11.207	-0.012	42978	0.2000	0.2004	
	15 4-Amino-2,6-dinitrotoluene	1	11.368	11.374	-0.006	29531	0.2000	0.1784	
	16 2-Amino-4,6-dinitrotoluene	1	11.655	11.661	-0.006	38636	0.2000	0.1937	
	17 2,6-Dinitrotoluene	1	11.802	11.814	-0.012	30556	0.2000	0.1996	
	18 2,4-Dinitrotoluene	1	12.002	12.007	-0.005	59968	0.2000	0.2011	
	19 o-Nitrotoluene	1	12.835	12.847	-0.012	20553	0.2000	0.1554	
	20 p-Nitrotoluene	1	13.275	13.281	-0.006	19540	0.2000	0.1719	
	21 m-Nitrotoluene	1	13.862	13.874	-0.012	24602	0.2000	0.1661	
	22 PETN	2	14.948	14.961	-0.013	150723	2.00	2.01	

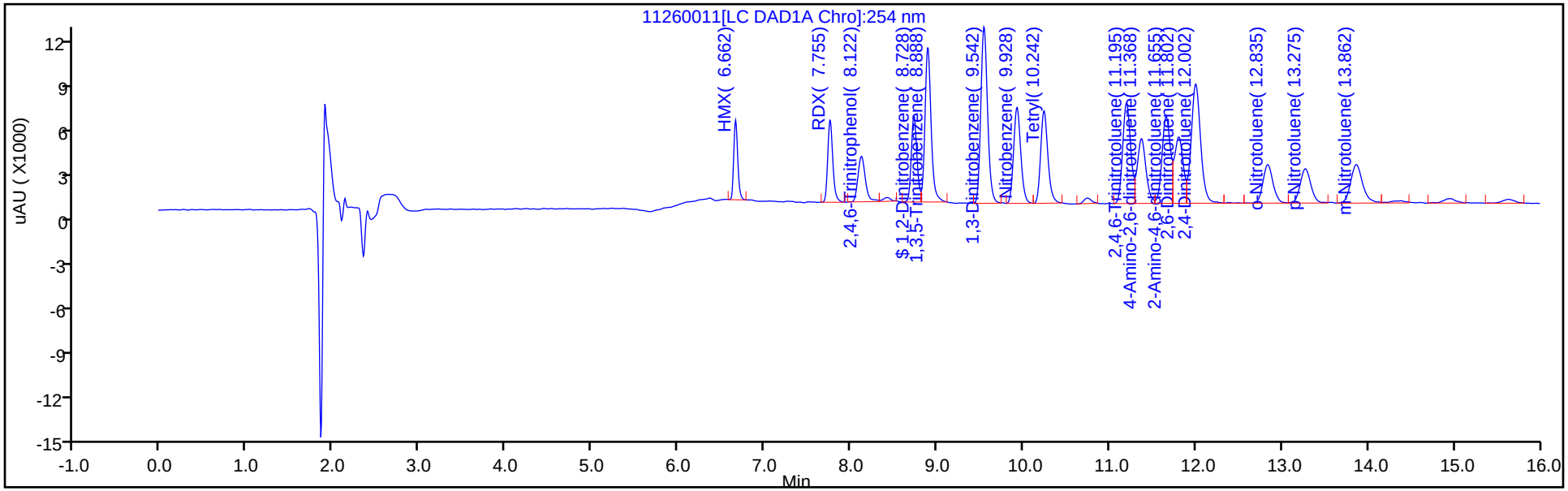
Report Date: 27-Nov-2018 09:23:33 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

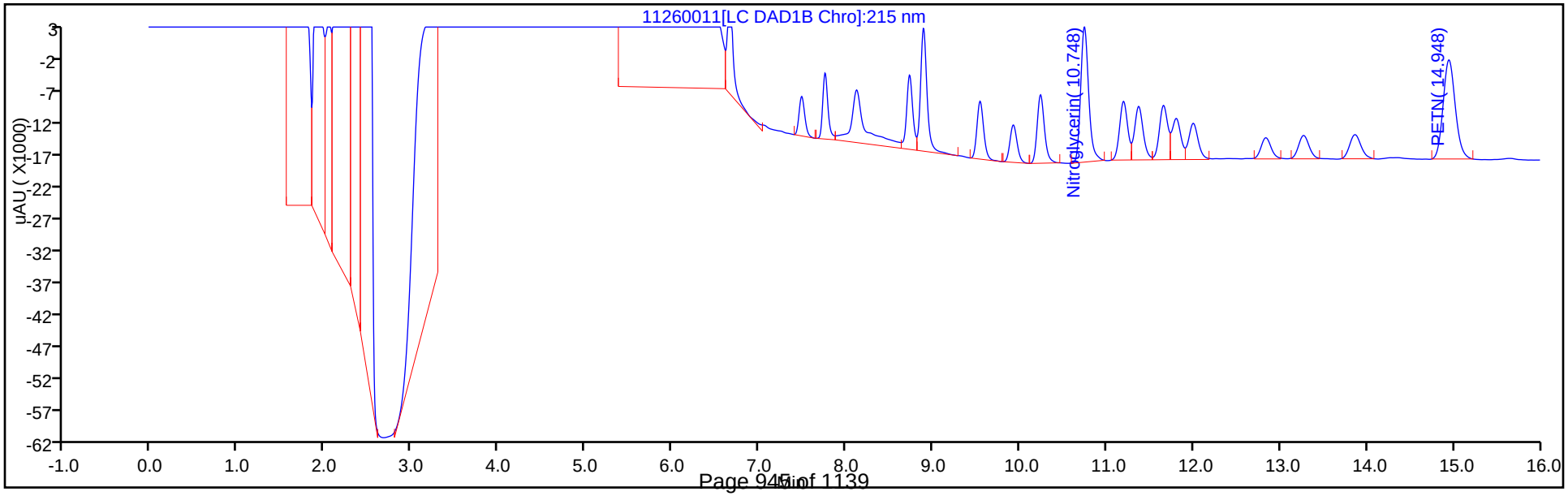
Data File: \\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260011.D

Injection Date:	26-Nov-2018 14:50:08	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCSD 280-438225/3-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\11260011.D				
Lims ID:	LCSD 280-438225/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	26-Nov-2018 14:50:08	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 280-438225/				
Misc. Info.:	280-0076526-011				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\chromdocs2018\q3\Denver\ChromData\CHHPLC_X\20181126-76526.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	27-Nov-2018 09:23:31	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0311				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2010	100.50

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/18/2018 10:34

Analysis Batch Number: 415256 End Date: 05/18/2018 18:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-415256/7		05/18/2018 10:34	1	05180007.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/8		05/18/2018 10:57	1	05180008.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/9		05/18/2018 11:19	1	05180009.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/10		05/18/2018 11:42	1	05180010.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/11		05/18/2018 12:05	1	05180011.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/12		05/18/2018 12:28	1	05180012.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/13		05/18/2018 12:51	1	05180013.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/14		05/18/2018 13:14	1	05180014.D	UltraCarb5uODS 4.6(mm)
ICV 280-415256/15		05/18/2018 13:37	1	05180015.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/16		05/18/2018 14:00	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/17		05/18/2018 14:23	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/18		05/18/2018 14:46	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/19		05/18/2018 15:09	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/20		05/18/2018 15:32	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/21		05/18/2018 15:55	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/22		05/18/2018 16:18	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/23		05/18/2018 16:41	1		UltraCarb5uODS 4.6(mm)
ICV 280-415256/24		05/18/2018 17:04	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:50	10		UltraCarb5uODS 4.6(mm)
CCV 280-415256/27		05/18/2018 18:13	1		UltraCarb5uODS 4.6(mm)
CCV 280-415256/28		05/18/2018 18:36	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 11/26/2018 13:18

Analysis Batch Number: 438727 End Date: 11/26/2018 21:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-438727/7		11/26/2018 13:18	1	11260007.D	UltraCarb5uODS 4.6(mm)
CCV 280-438727/8		11/26/2018 13:41	1		UltraCarb5uODS 4.6(mm)
MB 280-438225/1-A		11/26/2018 14:04	1	11260009.D	UltraCarb5uODS 4.6(mm)
LCS 280-438225/2-A		11/26/2018 14:27	1	11260010.D	UltraCarb5uODS 4.6(mm)
LCSD 280-438225/3-A		11/26/2018 14:50	1	11260011.D	UltraCarb5uODS 4.6(mm)
280-115789-5		11/26/2018 15:13	1	11260012.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 15:36	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 15:59	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 16:21	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 16:44	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 17:07	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 17:30	1		UltraCarb5uODS 4.6(mm)
CCV 280-438727/19		11/26/2018 17:53	1	11260019.D	UltraCarb5uODS 4.6(mm)
CCV 280-438727/20		11/26/2018 18:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 18:39	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 19:02	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 19:25	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 19:48	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 20:11	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/26/2018 20:34	1		UltraCarb5uODS 4.6(mm)
CCV 280-438727/27		11/26/2018 20:57	1		UltraCarb5uODS 4.6(mm)
CCV 280-438727/28		11/26/2018 21:20	1		UltraCarb5uODS 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 438225 Batch Start Date: 11/20/18 11:01 Batch Analyst: McAleese, Maura A

Batch Method: 3535 Batch End Date: 11/30/18 14:42

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00082	8330Surrogate 00100
MB 280-438225/1		3535, 8330B				500 mL	5 mL		0.1 mL
LCS 280-438225/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-438225/3		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-115789-A-5	FWGFB-181001-FB	3535, 8330B	T	773.9 g	285.6 g	488.3 mL	5 mL		0.1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment					
MB 280-438225/1		3535, 8330B							
LCS 280-438225/2		3535, 8330B							
LCSD 280-438225/3		3535, 8330B							
280-115789-A-5	FWGFB-181001-FB	3535, 8330B	T	Not actually extracted; same as 280-115789-4 per PM.					

Batch Notes	
Acid ID	0.1%AAinACN_00119
Acid Name	0.1%AAinACN
Balance ID	24350888
Batch Comment	N. Elga, CaCl_Sol_00062 Reviewer: MF
First End time	11/20/2018 14:00
Pipette/Syringe/Dispenser ID	JiJi, soot
Solvent Lot #	Acetonitrile_00018, MeCl2_Cycl_00414
Solvent Name	ACN, MeCl2
SPE Cartridge Lot ID	004838184A / 004938274A
SPE Cartridge Type	Porapak Rdx WAT047220
Solid Phase Extraction Disk ID	S18-003691
Analyst ID - Spike Analyst	CB (trainer) / MM(trainee)
Analyst ID - Spike Witness Analyst	MM
First Start time	11/20/2018 11:15

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.

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 438225 Batch Start Date: 11/20/18 11:01 Batch Analyst: McAleese, Maura A

Batch Method: 3535 Batch End Date: 11/30/18 14:42

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

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
RQLMW-011-181001-GW	280-115789-1
RQLMW-011-181002-GW	280-115789-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: RQLMW-011-181001-GW
Lab Sample ID: 280-115789-1
Lab Name: TestAmerica Denver
Job No.: 280-115789-1
SDG ID.:
Matrix: Water
Date Sampled: 10/18/2018 11:10
Reporting Basis: WET
Date Received: 10/19/2018 09:20

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Chromium, hexavalent	0.010	0.020	0.010	0.0040	mg/L	U	H J1	1	7196A
Sulfide	1.9	4.0	1.9	0.79	mg/L	U	J1	1	9034
Nitrate as N	0.10	0.50	0.10	0.042	mg/L	U	J1	1	9056
Nitrite as N	0.10	0.50	0.10	0.049	mg/L	U	J1	1	9056
Sulfate	100	5.0	0.50	0.23	mg/L		J1	1	9056A
Alkalinity	120	5.0	5.0	1.1	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: RQLMW-011-181002-GW
Lab Sample ID: 280-115789-2
Lab Name: TestAmerica Denver
Job No.: 280-115789-1
SDG ID.:
Matrix: Water
Date Sampled: 10/18/2018 11:10
Reporting Basis: WET
Date Received: 10/19/2018 09:20

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Chromium, hexavalent	0.010	0.020	0.010	0.0040	mg/L	U	H	1	7196A
Sulfide	1.9	4.0	1.9	0.79	mg/L	U		1	9034
Nitrate as N	0.049	0.50	0.10	0.042	mg/L	J		1	9056
Nitrite as N	0.10	0.50	0.10	0.049	mg/L	U		1	9056
Sulfate	96	5.0	0.50	0.23	mg/L			1	9056A
Alkalinity	120	5.0	5.0	1.1	mg/L			1	SM 2320B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Analyst: JAP Batch Start Date: 10/19/2018

Reporting Units: mg/L Analytical Batch No.: 434170

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
6	ICV	14:23	Chromium, hexavalent	0.0525	0.0500	105	90-110		CR6 ICV int_01502
7	ICB	14:23	Chromium, hexavalent	0.0040				U	
16	CCV	14:23	Chromium, hexavalent	0.109	0.100	109	90-110		CR6 ICV int_01502
17	CCB	14:23	Chromium, hexavalent	0.0040				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.: 280-115789-1

SDG No.:

Analyst: TLP Batch Start Date: 10/14/2018

Reporting Units: mg/L Analytical Batch No.: 433354

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	14:26	Nitrate as N	3.76	4.00	94	90-110		IC ICV 5_00212
			Nitrite as N	3.75	4.00	94	90-110		IC ICV 5_00212
9	ICB	14:42	Nitrate as N	0.10				U	
			Nitrite as N	0.10				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.: 280-115789-1

SDG No.:

Analyst: ARM Batch Start Date: 10/19/2018

Reporting Units: mg/L Analytical Batch No.: 434136

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:32	Nitrate as N	5.44	5.00	109	90-110		IC LCS_01376
			Nitrite as N	5.26	5.00	105	90-110		IC LCS_01376
2	CCB	11:48	Nitrate as N	0.10				U	
			Nitrite as N	0.10				U	
12	CCV	19:24	Nitrate as N	4.96	5.00	99	90-110		IC LCS_01376
			Nitrite as N	4.81	5.00	96	90-110		IC LCS_01376
13	CCB	19:42	Nitrate as N	0.10				U	
			Nitrite as N	0.10				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.: 280-115789-1

SDG No.:

Analyst: ARM Batch Start Date: 10/19/2018

Reporting Units: mg/L Analytical Batch No.: 434137

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:32	Sulfate	110	100	110	90-110		IC LCS_01376
2	CCB	11:48	Sulfate	0.370				J	
12	CCV	19:24	Sulfate	103	100	103	90-110		IC LCS_01376
13	CCB	19:42	Sulfate	0.50				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.: 280-115789-1

SDG No.:

Analyst: ARM Batch Start Date: 10/22/2018

Reporting Units: mg/L Analytical Batch No.: 434308

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	00:15	Sulfate	109	100	109	90-110		IC LCS_01378
2	CCB	00:31	Sulfate	0.50				U	
17	CCV	04:04	Sulfate	110	100	110	90-110		IC LCS_01378
18	CCB	04:21	Sulfate	0.370				J	
22	CCV	05:26	Sulfate	110	100	110	90-110		IC LCS_01378
23	CCB	05:43	Sulfate	0.50				U	
24	CCV	15:13	Sulfate	107	100	107	90-110		IC LCS_01378
25	CCB	15:29	Sulfate	0.464				J	

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.: 280-115789-1

SDG No.:

Analyst: SGB Batch Start Date: 10/24/2018

Reporting Units: mg/L Analytical Batch No.: 434879

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
16	CCV	18:50	Alkalinity	192	200	96	90-110		Alk daily lcs 00780
17	CCB	18:58	Alkalinity	1.38				J	
28	CCV	20:38	Alkalinity	192	200	96	90-110		Alk daily lcs 00780
29	CCB	20:44	Alkalinity	5.0				U	

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.: 280-115789-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 434170 Date: 10/19/2018 14:23							
7196A	MB 280-434170/10	Chromium, hexavalent	0.010	U	mg/L	0.020	1
Batch ID: 434649 Date: 10/23/2018 23:07 Prep Batch: 434635 Date: 10/23/2018 19:34							
9034	MB 280-434635/1-A	Sulfide	1.9	U	mg/L	4.0	1
Batch ID: 434136 Date: 10/19/2018 12:54							
9056	MB 280-434136/6	Nitrate as N	0.10	U	mg/L	0.50	1
9056	MB 280-434136/6	Nitrite as N	0.10	U	mg/L	0.50	1
Batch ID: 434137 Date: 10/19/2018 12:54							
9056A	MB 280-434137/6	Sulfate	0.50	U	mg/L	5.0	1
Batch ID: 434308 Date: 10/22/2018 01:37							
9056A	MB 280-434308/6	Sulfate	0.384	J	mg/L	5.0	1
Batch ID: 434879 Date: 10/24/2018 16:17							
SM 2320B	MB 280-434879/5	Alkalinity	5.0	U	mg/L	5.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 434170	Date: 10/19/2018 14:23										
7196A	280-115789-1	Chromium, hexavalent	0.010	U	mg/L						H J1
7196A	280-115789-1 MS	Chromium, hexavalent	0.0472		mg/L	0.100	47	90-111			J1
Batch ID: 434649	Date: 10/23/2018 23:07	Prep Batch: 434635	Date: 10/23/2018 19:34								
9034	280-115789-1	Sulfide	1.9	U	mg/L						J1
9034	280-115789-1 MS	Sulfide	8.80		mg/L	19.4	45	50-106			J1
Batch ID: 434136	Date: 10/19/2018 17:58										
9056	280-115789-1	Nitrate as N	0.10	U	mg/L						J1
9056	280-115789-1 MS	Nitrate as N	4.74		mg/L	5.00	95	88-111			
9056	280-115789-1	Nitrite as N	0.10	U	mg/L						J1
9056	280-115789-1 MS	Nitrite as N	4.12		mg/L	5.00	82	87-111			J1
Batch ID: 434308	Date: 10/22/2018 09:36										
9056A	280-115789-1	Sulfate	100		mg/L						J1
9056A	280-115789-1 MS	Sulfate	133		mg/L	25.0	120	87-112			4

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

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 434170 Date: 10/19/2018 14:23											
7196A	280-115789-1 MSD	Chromium, hexavalent	0.0428		mg/L	0.100	43	90-111	10	20	J1
Batch ID: 434649 Date: 10/23/2018 23:07			Prep Batch: 434635		Date: 10/23/2018 19:34						
9034	280-115789-1 MSD	Sulfide	12.7		mg/L	19.4	66	50-106	36	20	J1
Batch ID: 434136 Date: 10/19/2018 18:18											
9056	280-115789-1 MSD	Nitrate as N	5.47		mg/L	5.00	109	88-111	14	10	J1
9056	280-115789-1 MSD	Nitrite as N	4.76		mg/L	5.00	95	87-111	14	10	J1
Batch ID: 434308 Date: 10/22/2018 02:10											
9056A	280-115789-1 MSD	Sulfate	132		mg/L	25.0	116	87-112	1	10	4

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

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 434170 Date: 10/19/2018 14:23								
7196A	RQLMW-011-181001-G W	280-115789-1	Chromium, hexavalent	0.010	mg/L			U
7196A	RQLMW-011-181001-G W	280-115789-1 DU	Chromium, hexavalent	0.010	mg/L	NC	20	U
Batch ID: 434136 Date: 10/19/2018 17:40								
9056	RQLMW-011-181001-G W	280-115789-1	Nitrate as N	0.10	mg/L			U
9056	RQLMW-011-181001-G W	280-115789-1 DU	Nitrate as N	0.10	mg/L	NC	10	U
9056	RQLMW-011-181001-G W	280-115789-1	Nitrite as N	0.10	mg/L			U
9056	RQLMW-011-181001-G W	280-115789-1 DU	Nitrite as N	0.10	mg/L	NC	10	U
Batch ID: 434308 Date: 10/22/2018 01:54								
9056A	RQLMW-011-181001-G W	280-115789-1	Sulfate	100	mg/L			
9056A	RQLMW-011-181001-G W	280-115789-1 DU	Sulfate	104	mg/L	0.2	10	

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

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 434170	Date: 10/19/2018 14:23										
						LCS Source: CR6 spike sou_01111					
7196A	LCS 280-434170/8	Chromium, hexavalent	0.102		mg/L	0.100	102	90-111	2	20	
Batch ID: 434649	Date: 10/23/2018 23:07	Prep Batch: 434635	Date: 10/23/2018 19:34								
						LCS Source: SFD ICV INT_01504					
9034	LCS 280-434635/2-A	Sulfide	12.0		mg/L	19.4	62	50-106			
Batch ID: 434136	Date: 10/19/2018 12:21										
						LCS Source: IC LCS_01376					
9056	LCS 280-434136/4	Nitrate as N	5.43		mg/L	5.00	109	88-111	1	10	
9056	LCS 280-434136/4	Nitrite as N	5.26		mg/L	5.00	105	87-111	0	10	
Batch ID: 434137	Date: 10/19/2018 12:21										
						LCS Source: IC LCS_01376					
9056A	LCS 280-434137/4	Sulfate	110		mg/L	100	110	87-112	0	10	
Batch ID: 434308	Date: 10/22/2018 01:04										
						LCS Source: IC LCS_01378					
9056A	LCS 280-434308/4	Sulfate	109		mg/L	100	109	87-112	1	10	
Batch ID: 434879	Date: 10/24/2018 16:10										
						LCS Source: Alk daily lcs_00780					
SM 2320B	LCS 280-434879/4	Alkalinity	190		mg/L	200	95	90-110			

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.: 280-115789-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 434170	Date: 10/19/2018 14:23										
						LCSD Source: CR6 spike sou_01111					
7196A	LCSD 280-434170/9	Chromium, hexavalent	0.101		mg/L	0.100	101	90-111	2	20	
Batch ID: 434136	Date: 10/19/2018 12:37										
						LCSD Source: IC LCS_01376					
9056	LCSD 280-434136/5	Nitrate as N	5.38		mg/L	5.00	108	88-111	1	10	
9056	LCSD 280-434136/5	Nitrite as N	5.28		mg/L	5.00	106	87-111	0	10	
Batch ID: 434137	Date: 10/19/2018 12:37										
						LCSD Source: IC LCS_01376					
9056A	LCSD 280-434137/5	Sulfate	110		mg/L	100	110	87-112	0	10	
Batch ID: 434308	Date: 10/22/2018 01:20										
						LCSD Source: IC LCS_01378					
9056A	LCSD 280-434308/5	Sulfate	110		mg/L	100	110	87-112	1	10	

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.: 280-115789-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 434136	Date: 10/19/2018 12:04										
						LCS Source: IC Cal low_00407					
9056	MRL 280-434136/3	Nitrate as N	0.220	J	mg/L	0.200	110	50-150			
9056	MRL 280-434136/3	Nitrite as N	0.229	J	mg/L	0.200	115	50-150			
Batch ID: 434137	Date: 10/19/2018 12:04										
						LCS Source: IC CAL cl/so4_00226					
9056A	MRL 280-434137/3	Sulfate	2.65	J	mg/L	2.50	106	50-150			
Batch ID: 434308	Date: 10/22/2018 00:47										
						LCS Source: IC CAL cl/so4_00226					
9056A	MRL 280-434308/3	Sulfate	2.55	J	mg/L	2.50	102	50-150			

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: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_HACH SPEC

Method: 7196A DL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Chromium, hexavalent		0.02	0.004

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_HACH SPEC

Method: 7196A XMDL Date: 05/16/2013 14:49

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chromium, hexavalent		0.02	0.004

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 DL Date: 03/28/2011 13:37

Prep Method: 9030B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfide		4	0.793

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

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: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom11

Method: 9056 DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (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: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom11

Method: 9056 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 Denver Job Number: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom11

Method: 9056A DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfate		5	0.232

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom11

Method: 9056A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		5	0.232

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_AT2

Method: SM 2320B DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Alkalinity		5	1.07

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-115789-1

SDG Number:

Matrix: Water Instrument ID: WC_AT2

Method: SM 2320B XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	1.07

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Prep Method: 9030B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-434635/1-A	10/23/2018 19:34	434635		50	50
LCS 280-434635/2-A	10/23/2018 19:34	434635		50	50
280-115789-1	10/23/2018 19:34	434635		50	50
280-115789-1 MS	10/23/2018 19:34	434635		50	50
280-115789-1 MSD	10/23/2018 19:34	434635		50	50
280-115789-2	10/23/2018 19:34	434635		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_HACH SPEC Analysis Method: 7196A

Start Date: 10/19/2018 14:23 End Date: 10/19/2018 14:23

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cr6																								
IC 280-434170/1	1		14:23	X																								
IC 280-434170/2	1		14:23	X																								
IC 280-434170/3	1		14:23	X																								
IC 280-434170/4	1		14:23	X																								
IC 280-434170/5	1		14:23	X																								
ICV 280-434170/6	1		14:23	X																								
ICB 280-434170/7	1		14:23	X																								
LCS 280-434170/8	1	T	14:23	X																								
LCSD 280-434170/9	1	T	14:23	X																								
MB 280-434170/10	1	T	14:23	X																								
280-115789-1	1	T	14:23	X																								
280-115789-1 DU	1	T	14:23	X																								
280-115789-1 MS	1	T	14:23	X																								
280-115789-1 MSD	1	T	14:23	X																								
280-115789-2	1	T	14:23	X																								
CCV 280-434170/16	1		14:23	X																								
CCB 280-434170/17	1		14:23	X																								
ZZZZZZ			14:23																									
ZZZZZZ			14:23																									
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Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 9034

Start Date: 10/23/2018 23:07 End Date: 10/23/2018 23:07

Lab Sample Id	D/F	Type	Time	Analytes																								
				S2																								
MB 280-434635/1-A	1	T	23:07	X																								
LCS 280-434635/2-A	1	T	23:07	X																								
280-115789-1	1	T	23:07	X																								
280-115789-1 MS	1	T	23:07	X																								
280-115789-1 MSD	1	T	23:07	X																								
280-115789-2	1	T	23:07	X																								
ZZZZZZ			23:07																									
ZZZZZZ			23:07																									
ZZZZZZ			23:07																									
ZZZZZZ			23:07																									
ZZZZZZ			23:07																									
ZZZZZZ			23:07																									
ZZZZZZ			23:07																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056

Start Date: 10/14/2018 11:50 End Date: 10/14/2018 23:58

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
RTC 280-433354/1			11:50																											
STD 280-433354/2 IC	1		12:06	X	X																									
STD 280-433354/3 IC	1		12:23	X	X																									
STD 280-433354/4 IC	1		12:39	X	X																									
STD 280-433354/5 IC	1		12:55	X	X																									
STD 280-433354/6 IC	1		13:12	X	X																									
STD 280-433354/7 IC	1		13:28	X	X																									
ICV 280-433354/8	1		14:26	X	X																									
ICB 280-433354/9	1		14:42	X	X																									
ZZZZZZ			14:59																											
ZZZZZZ			15:15																											
ZZZZZZ			15:32																											
ZZZZZZ			15:48																											
ZZZZZZ			16:53																											
ZZZZZZ			17:10																											
ZZZZZZ			17:26																											
ZZZZZZ			17:42																											
ZZZZZZ			17:59																											
ZZZZZZ			18:15																											
ZZZZZZ			18:31																											
CCV 280-433354/24			18:48																											
CCB 280-433354/25			19:04																											
ZZZZZZ			19:21																											
ZZZZZZ			20:10																											
ZZZZZZ			20:26																											
ZZZZZZ			20:42																											
ZZZZZZ			20:59																											
CCV 280-433354/36			22:04																											
CCB 280-433354/37			22:20																											
CCV 280-433354/42			23:42																											
CCB 280-433354/43			23:58																											

Prep Types:
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FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056

Start Date: 10/19/2018 11:32 End Date: 10/19/2018 19:42

Lab Sample Id	D/F	Type	Time	Analytes																									
				NO2-N	NO3																								
CCV 280-434136/1	1		11:32	X	X																								
CCB 280-434136/2	1		11:48	X	X																								
MRL 280-434136/3	1	T	12:04	X	X																								
LCS 280-434136/4	1	T	12:21	X	X																								
LCSD 280-434136/5	1	T	12:37	X	X																								
MB 280-434136/6	1	T	12:54	X	X																								
280-115789-1	1	T	17:25	X	X																								
280-115789-1 DU	1	T	17:40	X	X																								
280-115789-1 MS	1	T	17:58	X	X																								
280-115789-1 MSD	1	T	18:18	X	X																								
280-115789-2	1	T	18:37	X	X																								
CCV 280-434136/12	1		19:24	X	X																								
CCB 280-434136/13	1		19:42	X	X																								

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 10/19/2018 11:32 End Date: 10/19/2018 19:42

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
CCV 280-434137/1	1		11:32	X																								
CCB 280-434137/2	1		11:48	X																								
MRL 280-434137/3	1	T	12:04	X																								
LCS 280-434137/4	1	T	12:21	X																								
LCSD 280-434137/5	1	T	12:37	X																								
MB 280-434137/6	1	T	12:54	X																								
ZZZZZZ			17:25																									
ZZZZZZ			17:40																									
ZZZZZZ			17:58																									
ZZZZZZ			18:18																									
280-115789-2	1	T	18:37	X																								
CCV 280-434137/12	1		19:24	X																								
CCB 280-434137/13	1		19:42	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 10/22/2018 00:15 End Date: 10/22/2018 15:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
CCV 280-434308/1	1		00:15	X																								
CCB 280-434308/2	1		00:31	X																								
MRL 280-434308/3	1	T	00:47	X																								
LCS 280-434308/4	1	T	01:04	X																								
LCSD 280-434308/5	1	T	01:20	X																								
MB 280-434308/6	1	T	01:37	X																								
280-115789-1 DU	1	T	01:54	X																								
280-115789-1 MSD	1	T	02:10	X																								
ZZZZZZ			02:26																									
ZZZZZZ			02:42																									
ZZZZZZ			02:59																									
ZZZZZZ			03:15																									
ZZZZZZ			03:32																									
ZZZZZZ			03:48																									
CCV 280-434308/17	1		04:04	X																								
CCB 280-434308/18	1		04:21	X																								
ZZZZZZ			04:37																									
ZZZZZZ			04:54																									
ZZZZZZ			05:10																									
CCV 280-434308/22	1		05:26	X																								
CCB 280-434308/23	1		05:43	X																								
280-115789-1	1	T	09:20	X																								
280-115789-1 MS	1	T	09:36	X																								
CCV 280-434308/24	1		15:13	X																								
CCB 280-434308/25	1		15:29	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_AT2 Analysis Method: SM 2320B

Start Date: 10/24/2018 15:48 End Date: 10/25/2018 00:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			15:48																									
ZZZZZZ			15:57																									
ZZZZZZ			16:00																									
LCS 280-434879/4	1	T	16:10	X																								
MB 280-434879/5	1	T	16:17	X																								
ZZZZZZ			16:23																									
ZZZZZZ			16:30																									
ZZZZZZ			16:48																									
ZZZZZZ			17:06																									
ZZZZZZ			17:23																									
ZZZZZZ			17:31																									
ZZZZZZ			17:49																									
ZZZZZZ			18:06																									
ZZZZZZ			18:23																									
ZZZZZZ			18:41																									
CCV 280-434879/16	1		18:50	X																								
CCB 280-434879/17	1		18:58	X																								
ZZZZZZ			19:09																									
ZZZZZZ			19:20																									
ZZZZZZ			19:30																									
ZZZZZZ			19:44																									
ZZZZZZ			19:53																									
ZZZZZZ			20:01																									
ZZZZZZ			20:08																									
ZZZZZZ			20:15																									
280-115789-1	1	T	20:22	X																								
280-115789-2	1	T	20:28	X																								
CCV 280-434879/28	1		20:38	X																								
CCB 280-434879/29	1		20:44	X																								
ZZZZZZ			20:54																									
ZZZZZZ			21:01																									
ZZZZZZ			21:09																									
ZZZZZZ			21:17																									
ZZZZZZ			21:26																									
ZZZZZZ			21:36																									
ZZZZZZ			21:45																									
ZZZZZZ			21:54																									
ZZZZZZ			22:02																									
ZZZZZZ			22:10																									
ZZZZZZ			22:19																									
ZZZZZZ			22:27																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Instrument ID: WC_AT2 Analysis Method: SM 2320B

Start Date: 10/24/2018 15:48 End Date: 10/25/2018 00:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
CCV 280-434879/42			22:37																									
CCB 280-434879/43			22:44																									
ZZZZZZ			22:54																									
ZZZZZZ			23:05																									
ZZZZZZ			23:19																									
ZZZZZZ			23:28																									
ZZZZZZ			23:38																									
ZZZZZZ			23:48																									
ZZZZZZ			23:58																									
ZZZZZZ			00:07																									
ZZZZZZ			00:17																									
CCV 280-434879/53			00:26																									
CCB 280-434879/54			00:33																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 434170 Batch Start Date: 10/19/18 14:23 Batch Analyst: Pedrick, Joshua A

Batch Method: 7196A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ColorBlk	UnCorResp	Initial pH	Final pH
IC 280-434170/1		7196A		10 mL	10 mL				
IC 280-434170/2		7196A		10 mL	10 mL				
IC 280-434170/3		7196A		10 mL	10 mL				
IC 280-434170/4		7196A		10 mL	10 mL				
IC 280-434170/5		7196A		10 mL	10 mL				
ICV 280-434170/6		7196A		10 mL	10 mL				
ICB 280-434170/7		7196A		10 mL	10 mL				
LCS 280-434170/8		7196A		10 mL	10 mL				
LCSD 280-434170/9		7196A		10 mL	10 mL				
MB 280-434170/10		7196A		10 mL	10 mL				
280-115789-G-1	RQLMW-011-181001-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.001 Absorbance	7 SU	1.6 SU
280-115789-G-1 DU	RQLMW-011-181001-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.003 Absorbance	7 SU	1.6 SU
280-115789-G-1 MS	RQLMW-011-181001-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.056 Absorbance	7 SU	1.6 SU
280-115789-G-1 MSD	RQLMW-011-181001-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.051 Absorbance	7 SU	1.6 SU
280-115789-G-2	RQLMW-011-181002-GW	7196A	T	10 mL	10 mL	0.004 Absorbance	0.001 Absorbance	6 SU	1.6 SU
CCV 280-434170/16		7196A		10 mL	10 mL				
CCB 280-434170/17		7196A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	CR6 ICV int 01502	CR6 Int cal 01060	CR6 spike sou 01111			
IC 280-434170/1		7196A			0.1 mL				
IC 280-434170/2		7196A			0.2 mL				
IC 280-434170/3		7196A			0.5 mL				
IC 280-434170/4		7196A			1 mL				
IC 280-434170/5		7196A			2 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.: 280-115789-1

SDG No.:

Batch Number: 434170 Batch Start Date: 10/19/18 14:23 Batch Analyst: Pedrick, Joshua A

Batch Method: 7196A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CR6 ICV int 01502	CR6 Int cal 01060	CR6 spike sou 01111			
ICV 280-434170/6		7196A		0.5 mL					
ICB 280-434170/7		7196A							
LCS 280-434170/8		7196A				0.1 mL			
LCSD 280-434170/9		7196A				0.1 mL			
MB 280-434170/10		7196A							
280-115789-G-1	RQLMW-011-181001-GW	7196A	T						
280-115789-G-1 DU	RQLMW-011-181001-GW	7196A	T						
280-115789-G-1 MS	RQLMW-011-181001-GW	7196A	T			0.1 mL			
280-115789-G-1 MSD	RQLMW-011-181001-GW	7196A	T			0.1 mL			
280-115789-G-2	RQLMW-011-181002-GW	7196A	T						
CCV 280-434170/16		7196A		1 mL					
CCB 280-434170/17		7196A							

Batch Notes	
Acid Used for pH Adjustment ID	10% H2SO4_00013
Spectrophotometer Cell Path Length	540 nm cm
Color Reagent ID	CR^6 Color_00364
pH Indicator ID	HC849161 HC606169
Pipette/Syringe/Dispenser ID	5000LL, 1000LL, 100LL

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.: 280-115789-1

SDG No.:

Batch Number: 434635 Batch Start Date: 10/23/18 20:55 Batch Analyst: Citrone, Elias

Batch Method: 9030B Batch End Date: 10/23/18 22:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillUnitPort	Initial pH	Final pH	AcidVolAdded
MB 280-434635/1		9030B, 9034		50 mL	50 mL	1		<2 SU	5 mL
LCS 280-434635/2		9030B, 9034		50 mL	50 mL	4		<2 SU	5 mL
280-115789-F-1	RQLMW-011-181001-GW	9030B, 9034	T	50 mL	50 mL	5	>12 SU	<2 SU	5 mL
280-115789-F-1 MS	RQLMW-011-181001-GW	9030B, 9034	T	50 mL	50 mL	6	>12 SU	<2 SU	5 mL
280-115789-F-1 MSD	RQLMW-011-181001-GW	9030B, 9034	T	50 mL	50 mL	7	>12 SU	<2 SU	5 mL
280-115789-F-2	RQLMW-011-181002-GW	9030B, 9034	T	50 mL	50 mL	8	>12 SU	<2 SU	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	SFD ICV INT 01504					
MB 280-434635/1		9030B, 9034							
LCS 280-434635/2		9030B, 9034		1 mL					
280-115789-F-1	RQLMW-011-181001-GW	9030B, 9034	T						
280-115789-F-1 MS	RQLMW-011-181001-GW	9030B, 9034	T	1 mL					
280-115789-F-1 MSD	RQLMW-011-181001-GW	9030B, 9034	T	1 mL					
280-115789-F-2	RQLMW-011-181002-GW	9030B, 9034	T						

Batch Notes	
Distillation End Time	10/23/2018 22:07
Distillation Start Time	10/23/2018 20:55
pH Indicator ID	HC697954
Pipette/Syringe/Dispenser ID	AZ1000, AZ5000
Sulfuric Acid Reagent ID Number	H2SO4_00189
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.: 280-115789-1

SDG No.:

Batch Number: 434649 Batch Start Date: 10/23/18 23:07 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 280-434635/1-A		9034		0.00 mL	1.00 mL	1 mL	1 mL	50 mL	
LCS 280-434635/2-A		9034		1.00 mL	4.50 mL	5 mL	3.5 mL	50 mL	
280-115789-F-1-A	RQLMW-011-181001-GW	9034	T	4.50 mL	5.50 mL	1 mL	1 mL	50 mL	
280-115789-F-1-B MS	RQLMW-011-181001-GW	9034	T	5.50 mL	9.40 mL	5 mL	3.9 mL	50 mL	
280-115789-F-1-C MSD	RQLMW-011-181001-GW	9034	T	9.40 mL	12.81 mL	5 mL	3.41 mL	50 mL	
280-115789-F-2-A	RQLMW-011-181002-GW	9034	T	12.81 mL	13.90 mL	1 mL	1.09 mL	50 mL	

Batch Notes	
Hydrochloric Acid ID	HCL Sol_00160
Iodine ID	Iod_00208
Normality of Iodine Solution	0.0250 N
Sodium Thiosulfate ID	Na Thio_00137
Pipette/Syringe/Dispenser ID	AZ1000, AZ5000
Starch Reagent ID	Starch Ind_ 00050
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.: 280-115789-1

SDG No.:

Batch Number: 433354 Batch Start Date: 10/14/18 11:50 Batch Analyst: Phan, Thu L

Batch Method: 9056 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00225	IC Cal low 00406	IC CL ICV 00014	IC ICV 5 00212
STD 280-433354/2 IC		9056		5 mL	5 mL	0.02 mL	0.02 mL		
STD 280-433354/3 IC		9056		5 mL	5 mL	0.05 mL	0.05 mL		
STD 280-433354/4 IC		9056		5 mL	5 mL	0.1 mL	0.1 mL		
STD 280-433354/5 IC		9056		5 mL	5 mL	1.2 mL	0.4 mL		
STD 280-433354/6 IC		9056		5 mL	5 mL	2.4 mL	0.8 mL		
STD 280-433354/7 IC		9056		5 mL	5 mL	4 mL	1 mL		
ICV 280-433354/8		9056		5 mL	5 mL			0.4 mL	0.4 mL
ICB 280-433354/9		9056		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00017					
STD 280-433354/2 IC		9056							
STD 280-433354/3 IC		9056							
STD 280-433354/4 IC		9056							
STD 280-433354/5 IC		9056							
STD 280-433354/6 IC		9056							
STD 280-433354/7 IC		9056							
ICV 280-433354/8		9056		0.4 mL					
ICB 280-433354/9		9056							

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.: 280-115789-1

SDG No.:

Batch Number: 433354 Batch Start Date: 10/14/18 11:50 Batch Analyst: Phan, Thu L

Batch Method: 9056 Batch End Date:

Batch Notes	
Eluent 1 ID	ic11 eluent_00525
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics, 1000d, ic100
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.: 280-115789-1

SDG No.:

Batch Number: 434136 Batch Start Date: 10/19/18 11:32 Batch Analyst: Moser, Angela R

Batch Method: 9056 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00226	IC Cal low 00407	IC LCS 01376	ICMS/MSD WEEK 00559
CCV 280-434136/1		9056		5 mL	5 mL			5 mL	
CCB 280-434136/2		9056		5 mL	5 mL				
MRL 280-434136/3		9056		5 mL	5 mL	0.05 mL	0.02 mL		
LCS 280-434136/4		9056		5 mL	5 mL			5 mL	
LCSD 280-434136/5		9056		5 mL	5 mL			5 mL	
MB 280-434136/6		9056		5 mL	5 mL				
280-115789-C-1	RQLMW-011-181001-GW	9056	T	5 mL	5 mL				
280-115789-C-1 DU	RQLMW-011-181001-GW	9056	T	5 mL	5 mL				
280-115789-C-1 MS	RQLMW-011-181001-GW	9056	T	5 mL	5 mL				0.05 mL
280-115789-C-1 MSD	RQLMW-011-181001-GW	9056	T	5 mL	5 mL				0.05 mL
280-115789-C-2	RQLMW-011-181002-GW	9056	T	5 mL	5 mL				
CCV 280-434136/12		9056		5 mL	5 mL			5 mL	
CCB 280-434136/13		9056		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	IC11 Eluent_00527
Pipette/Syringe/Dispenser ID	5000ics, wc1000-d, ic100
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 Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 433355 Batch Start Date: 10/14/18 11:50 Batch Analyst: Phan, Thu L

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00225	IC Cal low 00406		
STD 280-433355/2 IC		9056A		5 mL	5 mL	0.02 mL	0.02 mL		
STD 280-433355/3 IC		9056A		5 mL	5 mL	0.05 mL	0.05 mL		
STD 280-433355/4 IC		9056A		5 mL	5 mL	0.1 mL	0.1 mL		
STD 280-433355/5 IC		9056A		5 mL	5 mL	1.2 mL	0.4 mL		
STD 280-433355/6 IC		9056A		5 mL	5 mL	2.4 mL	0.8 mL		
STD 280-433355/7 IC		9056A		5 mL	5 mL	4 mL	1 mL		

Batch Notes	
Eluent 1 ID	ic11 eluent_00525
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics, 1000d, ic100
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.: 280-115789-1

SDG No.:

Batch Number: 434137 Batch Start Date: 10/19/18 11:32 Batch Analyst: Moser, Angela R

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00226	IC Cal low 00407	IC LCS 01376	ICMS/MSD WEEK 00559
CCV 280-434137/1		9056A		5 mL	5 mL			5 mL	
CCB 280-434137/2		9056A		5 mL	5 mL				
MRL 280-434137/3		9056A		5 mL	5 mL	0.05 mL	0.02 mL		
LCS 280-434137/4		9056A		5 mL	5 mL			5 mL	
LCSD 280-434137/5		9056A		5 mL	5 mL			5 mL	
MB 280-434137/6		9056A		5 mL	5 mL				
280-115789-C-1	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				
280-115789-C-1 DU	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				
280-115789-C-1 MS	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				0.05 mL
280-115789-C-1 MSD	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				0.05 mL
280-115789-C-2	RQLMW-011-181002-GW	9056A	T	5 mL	5 mL				
CCV 280-434137/12		9056A		5 mL	5 mL			5 mL	
CCB 280-434137/13		9056A		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	IC11 Eluent_00527
Pipette/Syringe/Dispenser ID	5000ics, wc1000-d, ic100
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 Denver Job No.: 280-115789-1

SDG No.:

Batch Number: 434308 Batch Start Date: 10/22/18 00:15 Batch Analyst: Moser, Angela R

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00226	IC Cal low 00408	IC LCS 01378	ICMS/MSD WEEK 00560
CCV 280-434308/1		9056A		5 mL	5 mL			5 mL	
CCB 280-434308/2		9056A		5 mL	5 mL				
MRL 280-434308/3		9056A		5 mL	5 mL	0.05 mL	0.02 mL		
LCS 280-434308/4		9056A		5 mL	5 mL			5 mL	
LCSD 280-434308/5		9056A		5 mL	5 mL			5 mL	
MB 280-434308/6		9056A		5 mL	5 mL				
280-115789-G-1	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				
280-115789-G-1 DU	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				
280-115789-G-1 MS	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				0.05 mL
280-115789-G-1 MSD	RQLMW-011-181001-GW	9056A	T	5 mL	5 mL				0.05 mL
CCV 280-434308/17		9056A		5 mL	5 mL			5 mL	
CCB 280-434308/18		9056A		5 mL	5 mL				
CCV 280-434308/22		9056A		5 mL	5 mL			5 mL	
CCB 280-434308/23		9056A		5 mL	5 mL				
CCV 280-434308/24		9056A		5 mL	5 mL			5 mL	
CCB 280-434308/25		9056A		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	IC11 Eluent_00527
Pipette/Syringe/Dispenser ID	5000ics, wc1000-d, ic100
Sufficient Volume for Batch QC	yes

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.: 280-115789-1

SDG No.:

Batch Number: 434308 Batch Start Date: 10/22/18 00:15 Batch Analyst: Moser, Angela R

Batch Method: 9056A Batch End Date:

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.: 280-115789-1

SDG No.:

Batch Number: 434879 Batch Start Date: 10/24/18 15:48 Batch Analyst: Barker, Scott G

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	Alk daily lcs 00780				
LCS 280-434879/4		SM 2320B		InitialAmount is blank	25 mL				
MB 280-434879/5		SM 2320B		InitialAmount is blank					
CCV 280-434879/16		SM 2320B		InitialAmount is blank	25 mL				
CCB 280-434879/17		SM 2320B		InitialAmount is blank					
280-115789-C-1	RQLMW-011-181001-GW	SM 2320B	T	InitialAmount is blank					
280-115789-C-2	RQLMW-011-181002-GW	SM 2320B	T	InitialAmount is blank					
CCV 280-434879/28		SM 2320B		InitialAmount is blank	25 mL				
CCB 280-434879/29		SM 2320B		InitialAmount is blank					

Batch Notes	
Acid ID	0.02N H2SO4_00249
Batch Comment	SGB trained by LL
pH Buffer 1 ID	pH 2.0 buffer_00073
pH Buffer 2 ID	pH 4.0 buffer_00171
pH Buffer 3 ID	pH 7.0 buffer_00248
pH Buffer 4 ID	pH 10.0 buffer_00136
pH Buffer 5 ID	pH 12.0 buffer_00139
pH Buffer 6 ID	pH 7.0 buffer_00247
Sodium Carbonate ID	Sodium Carbon_00015
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	5000 LL
Probe ID	PCE 86 pH 1105 5241
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

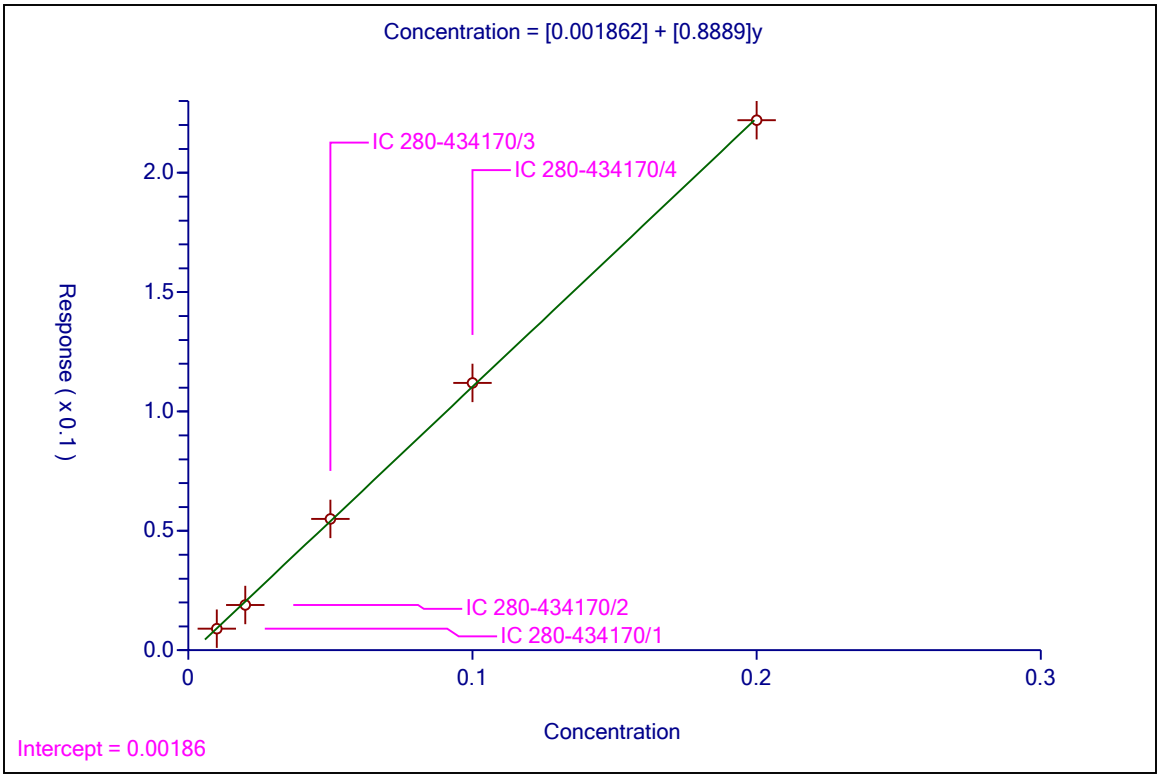
The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Concentration
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients	
Intercept:	0.001862
Slope:	0.8889

Error Coefficients	
Standard Error:	0.00126
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000 (1.000)

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-434170/1	0.01	0.009			0.9	Y
2	IC 280-434170/2	0.02	0.019			0.95	Y
3	IC 280-434170/3	0.05	0.055			1.1	Y
4	IC 280-434170/4	0.1	0.112			1.12	Y
5	IC 280-434170/5	0.2	0.222			1.11	Y



TALS Raw Data Report

Job Number: 280-115789-1
LIMS Batch: 434170
Equipment: WC_HACH SPEC

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-434170/6** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.057	.05252930 mg/L	mg/L	105	90 110		

RS# 7 Lab ID: **ICB 280-434170/7** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.003	)08047000 mg/L	.0040 U mg/L				

RS# 8 Lab ID: **LCS 280-434170/8** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.113	0.1023077 mg/L	mg/L	102	90 111		

RS# 9 Lab ID: **LCSD 280-434170/9** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.111	0.1005299 mg/L	mg/L	101	90 111	2	20

RS# 10 Lab ID: **MB 280-434170/10** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.000	)01862000 mg/L	0.010 U mg/L				

RS# 11 Lab ID: **280-115789-G-1** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0040	)16936000 mg/L	0.010 U mg/L				

RS# 12 Lab ID: **280-115789-G-1 DU** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0020	)84200000 mg/L	0.010 U mg/L			NC	20

RS# 13 Lab ID: **280-115789-G-1 MS** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0510	)47195900 mg/L	mg/L	47	90 111		

RS# 14 Lab ID: **280-115789-G-1 MSD** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0460	)42751400 mg/L	mg/L	43	90 111	10	20

RS# 15 Lab ID: **280-115789-G-2** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	)80470000 mg/L	0.010 U mg/L				

RS# 16 Lab ID: **CCV 280-434170/16** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.121	0.1094189 mg/L	mg/L	109	90 110		

RS# 17 Lab ID: **CCB 280-434170/17** Inj Date: 10/19/2018 2:23:59PM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.002	)08420000 mg/L	.0040 U mg/L				

Sulfide by Titration

Analyst:	EC	SOP Information:	
Date:	10/23/2018	Number:	91
Titration Solutions		**Calibration Information**	
Solution 1:	Iodine	Source/Ver-Lot#:	INT_01573
TALS ID	Iod_00208	Prep Date:	9/18/2018
Normality:	0.025	Made By:	AW
Solution 2:	sodium thiosulfate	Concentration:	1076
TALS ID	Na Thio_00137	Expiration Date:	10/31/2018
Normality:	0.025		
	Starch Indicator		
TALS ID	Starch Ind_00050		

ICV Information	
Source/Ver-Lot#:	INT_01504
Prep Date:	9/18/2018
Made By:	AW
Concentration:	970
Expiration Date:	10/31/2018

	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	4.00	10.40	20	6.40	1088.000

For SM4500 S2 D colorimetric

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
ICV	5	10.40	18.40	20	8.00	960.000
ICV	5	9.20	16.95	20	7.75	980.000

TALS Raw Data Report

Job Number: 280-115772-1
LIMS Batch: 434649
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-434635/1-A** Inj Date: 10/23/2018 11:07:21PM 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# 2 Lab ID: **LCS 280-434635/2-A** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12 mg/L	mg/L	62	50 106		
Sulfide as H2S		12.75 mg/L	mg/L				

RS# 3 Lab ID: **280-115789-F-1-A** Inj Date: 10/23/2018 11:07:21PM 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# 4 Lab ID: **280-115789-F-1-B MS** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		8.8 mg/L	mg/L	45	50 106		
Sulfide as H2S		9.35 mg/L	mg/L				

RS# 5 Lab ID: **280-115789-F-1-C MSD** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12.72 mg/L	mg/L	66	50 106	36	20
Sulfide as H2S		13.515 mg/L	mg/L				

RS# 14 Lab ID: **280-115772-K-1-A** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-6.16 mg/L	mg/L				
Sulfide as H2S		-6.545 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-115789-1
LIMS Batch: 434649
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-434635/1-A** Inj Date: 10/23/2018 11:07:21PM 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: **LCS 280-434635/2-A** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12 mg/L	mg/L	62	50 106		
Sulfide as H2S		12.75 mg/L	mg/L				

RS# 3 Lab ID: **280-115789-F-1-A** Inj Date: 10/23/2018 11:07:21PM 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# 4 Lab ID: **280-115789-F-1-B MS** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		8.8 mg/L	mg/L	45	50 106		
Sulfide as H2S		9.35 mg/L	mg/L				

RS# 5 Lab ID: **280-115789-F-1-C MSD** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12.72 mg/L	mg/L	66	50 106	36	20
Sulfide as H2S		13.515 mg/L	mg/L				

RS# 6 Lab ID: **280-115789-F-2-A** Inj Date: 10/23/2018 11:07:21PM 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	1.9 U mg/L				
Sulfide as H2S		-0.765 mg/L	2.0 U mg/L				

TALS Raw Data Report

Job Number: 280-115806-1
LIMS Batch: 434649
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-434635/1-A** Inj Date: 10/23/2018 11:07:21PM 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# 2 Lab ID: **LCS 280-434635/2-A** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12 mg/L	mg/L	62	50 106		
Sulfide as H2S		12.75 mg/L	mg/L				

RS# 3 Lab ID: **280-115789-F-1-A** Inj Date: 10/23/2018 11:07:21PM 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# 4 Lab ID: **280-115789-F-1-B MS** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		8.8 mg/L	mg/L	45	50 106		
Sulfide as H2S		9.35 mg/L	mg/L				

RS# 5 Lab ID: **280-115789-F-1-C MSD** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12.72 mg/L	mg/L	66	50 106	36	20
Sulfide as H2S		13.515 mg/L	mg/L				

RS# 7 Lab ID: **280-115806-L-8-A** Inj Date: 10/23/2018 11:07:21PM 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	mg/L				
Sulfide as H2S		-0.85 mg/L	mg/L				

RS# 8 Lab ID: **280-115806-L-9-A** Inj Date: 10/23/2018 11:07:21PM 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# 9 Lab ID: **280-115806-L-10-A** Inj Date: 10/23/2018 11:07:21PM 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# 10 Lab ID: **280-115806-L-11-A** Inj Date: 10/23/2018 11:07:21PM 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# 11 Lab ID: **280-115806-L-12-A** Inj Date: 10/23/2018 11:07:21PM 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	mg/L				
Sulfide as H2S		-0.085 mg/L	mg/L				

TALS Raw Data Report

RS# 12 Lab ID: **280-115806-L-13-A** Inj Date: 10/23/2018 11:07:21PM 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				

TALS Raw Data Report

Job Number: 280-115954-1
LIMS Batch: 434649
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-434635/1-A** Inj Date: 10/23/2018 11:07:21PM 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: **LCS 280-434635/2-A** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12 mg/L	mg/L	62	50 106		
Sulfide as H2S		12.75 mg/L	mg/L				

RS# 3 Lab ID: **280-115789-F-1-A** Inj Date: 10/23/2018 11:07:21PM 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# 4 Lab ID: **280-115789-F-1-B MS** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		8.8 mg/L	mg/L	45	50 106		
Sulfide as H2S		9.35 mg/L	mg/L				

RS# 5 Lab ID: **280-115789-F-1-C MSD** Inj Date: 10/23/2018 11:07:21PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		12.72 mg/L	mg/L	66	50 106	36	20
Sulfide as H2S		13.515 mg/L	mg/L				

RS# 13 Lab ID: **280-115954-C-1-A** Inj Date: 10/23/2018 11:07:21PM 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	9.5 U mg/L				
Sulfide as H2S		-0.085 mg/L	10 U mg/L				

TestAmerica *Denver*

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THE LEADER IN ENVIRONMENTAL TESTING

Titration Data Review Checklist

LIMS Batch Number: 434649	Method (circle one):	QC Type (circle):
Analyst/1st Reviewer: EC	2310B 2320B 2340C	Standard DoD QAPP Other
Date: 10/23/18	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?		N/A	✓	If no, list details:
3. Are samples analyzed within the required hold time?	✓		✓	NCM:
4. Pre-treatment reagents used to remove interferences are documented.		N/A	✓	
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.		N/A	✓	Comments:
7. Calibration standards are analyzed at the beginning and end of the analytical sequence and after every 10 sample analyses. (samples/dilutions/reanalyses).		N/A	✓	Comments:
8. Calibrations standards (ICV/CCV) are within 90-110% recovery.		N/A	✓	
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.		N/A	✓	□ 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)		X	✓	☒ 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)		N/A	✓	□ 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: _____

_____

_____

2nd Reviewer: CT **Review Date:** 10/24/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0002.d
Lims ID: std L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 14-Oct-2018 12:06:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-002
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:52 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	1240658	0.2000	0.2163	
2 Chloride	3.567	3.609	-0.042	4533296	1.00	1.30	
3 Nitrite as N	4.317	4.326	-0.009	2236057	0.2000	0.2190	
4 Bromide	5.201	5.201	0.000	402829	0.2000	0.2075	
5 Nitrate as N	5.884	5.876	0.008	2467199	0.2000	0.2279	
7 Orthophosphate as P	8.917	8.892	0.025	1041930	0.2000	0.2250	
6 Sulfate	9.701	9.751	-0.050	3543575	1.00	1.22	

Reagents:

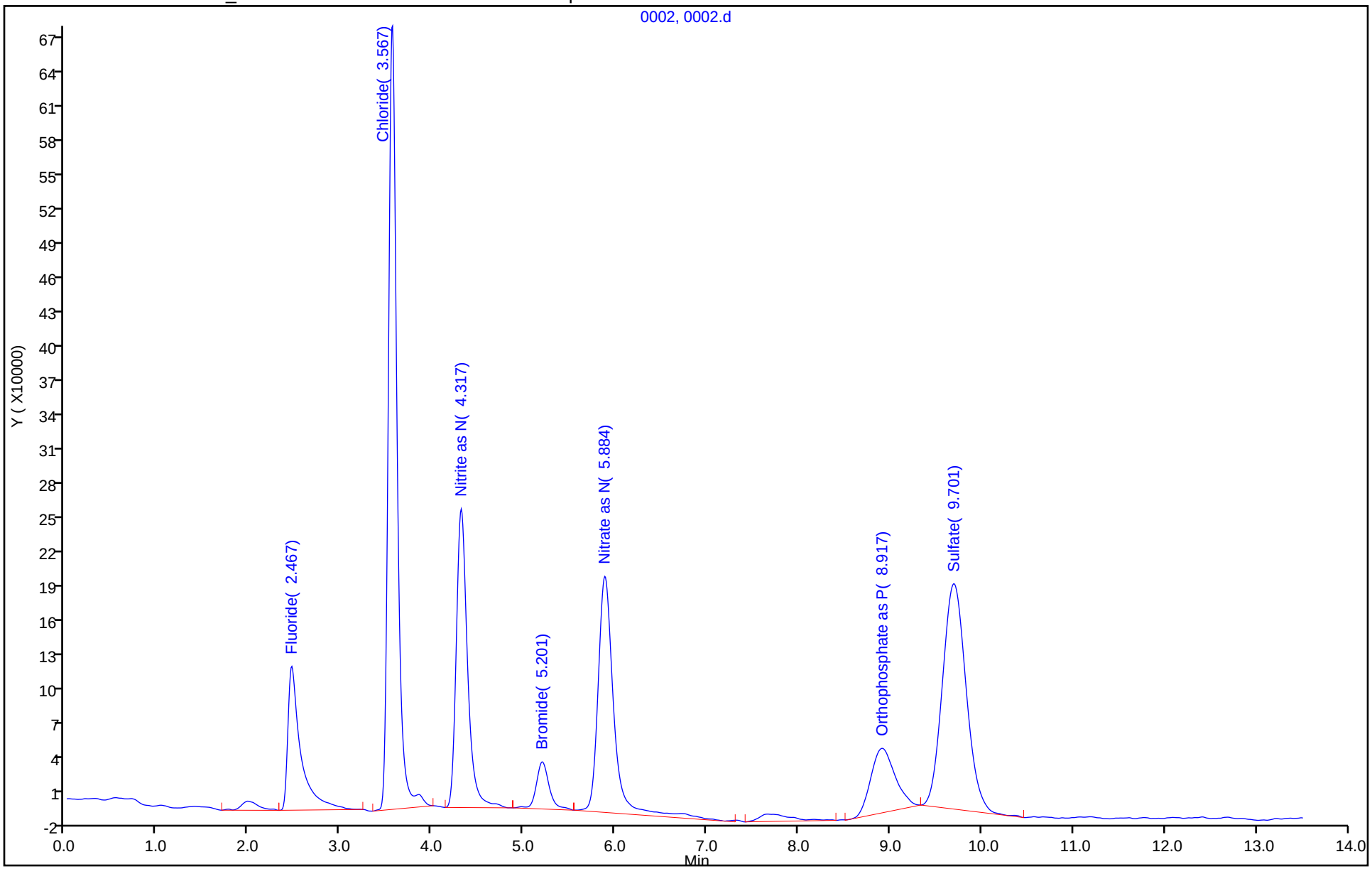
IC CAL cl/so4_00225 Amount Added: 0.02 Units: mL
IC Cal low_00406 Amount Added: 0.02 Units: mL

Report Date: 16-Oct-2018 20:06:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0002.d

Injection Date:	14-Oct-2018 12:06:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L1			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0003.d
Lims ID: std L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Oct-2018 12:23:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-003
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:54 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

First Level Reviewer: newcomer Date: 15-Oct-2018 20:14:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	3046545	0.5000	0.4880	
2 Chloride	3.567	3.609	-0.042	11202757	2.50	2.34	
3 Nitrite as N	4.317	4.326	-0.009	5409758	0.5000	0.4859	
4 Bromide	5.200	5.201	-0.001	951306	0.5000	0.4948	
5 Nitrate as N	5.884	5.876	0.008	5471686	0.5000	0.4745	
7 Orthophosphate as P	8.909	8.892	0.017	2072741	0.5000	0.4742	
6 Sulfate	9.700	9.751	-0.051	8346719	2.50	2.41	

Reagents:

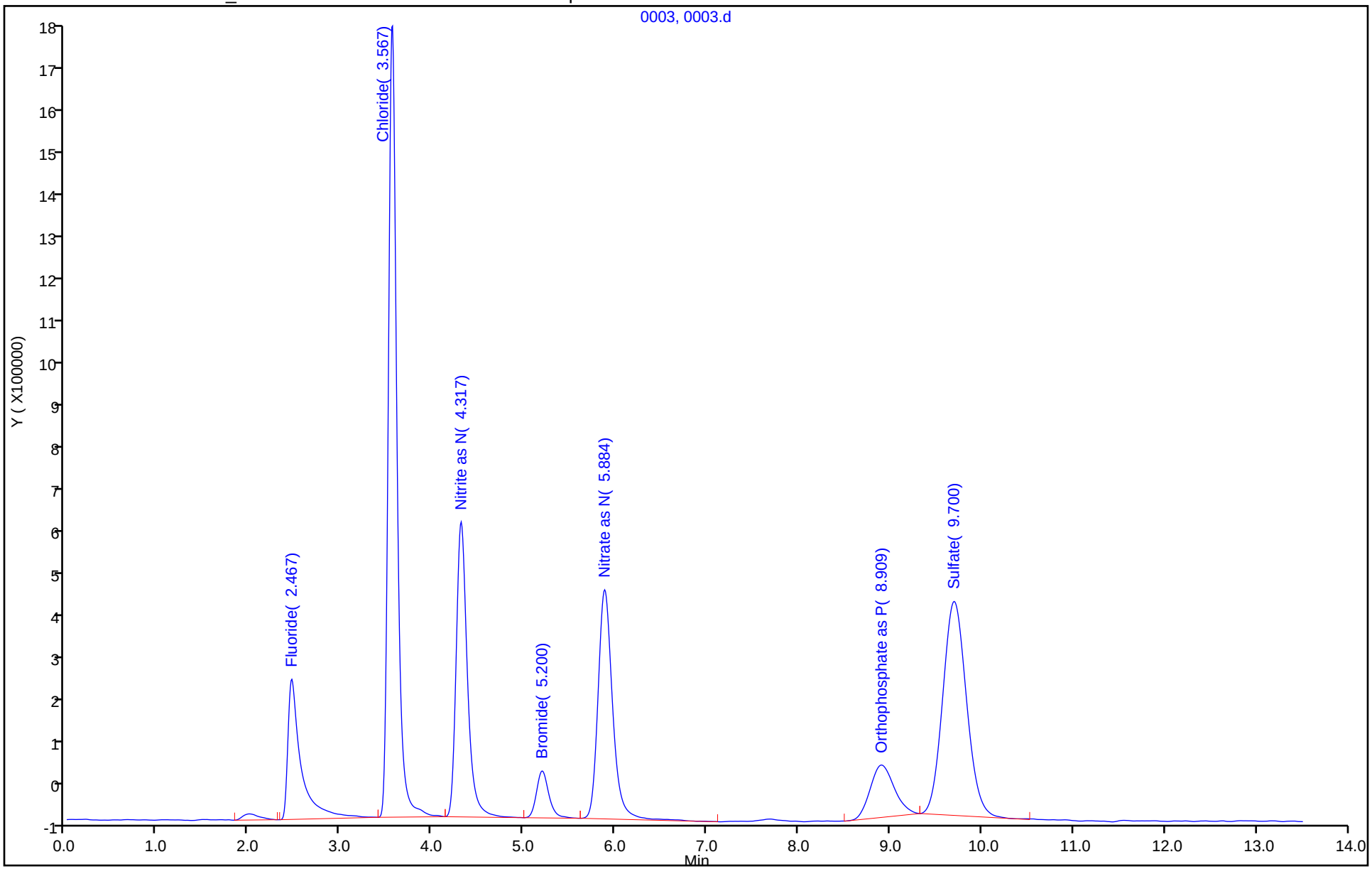
IC CAL cl/so4_00225 Amount Added: 0.05 Units: mL
IC Cal low_00406 Amount Added: 0.05 Units: mL

Report Date: 16-Oct-2018 20:06:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0003.d

Injection Date:	14-Oct-2018 12:23:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L2			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0004.d
Lims ID: std L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Oct-2018 12:39:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-004
Misc. Info.: 4 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:18:16 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

First Level Reviewer: newcomer Date: 16-Oct-2018 20:18:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	6183258	1.00	0.9600	
2 Chloride	3.567	3.600	-0.033	22509409	5.00	4.09	
3 Nitrite as N	4.317	4.325	-0.008	10952198	1.00	0.9519	
4 Bromide	5.201	5.200	0.001	1874188	1.00	0.9782	
5 Nitrate as N	5.884	5.875	0.009	11091584	1.00	0.9356	
7 Orthophosphate as P	8.901	8.884	0.017	4004461	1.00	0.9411	
6 Sulfate	9.701	9.734	-0.033	16608239	5.00	4.45	

Reagents:

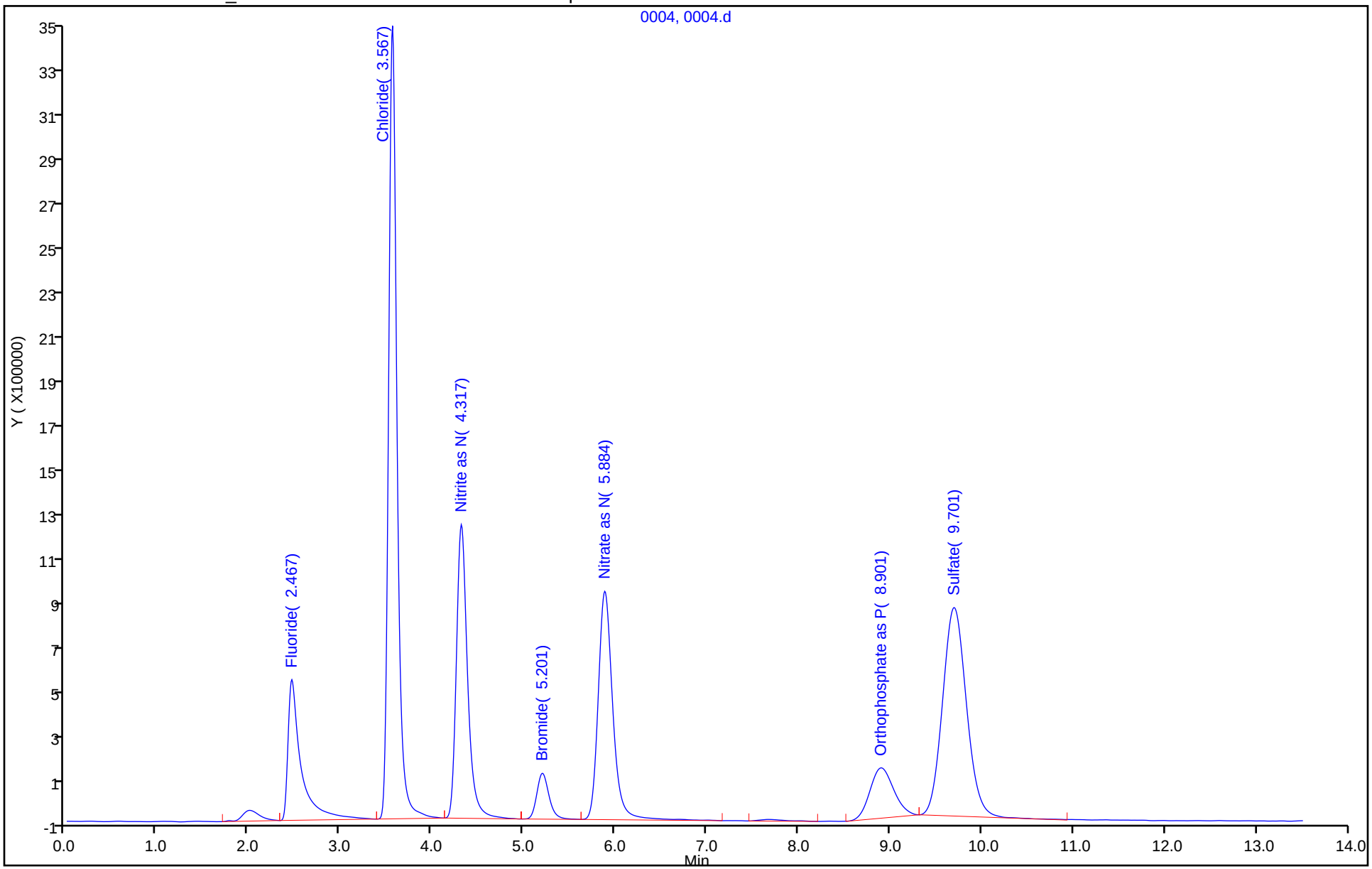
IC CAL cl/so4_00225 Amount Added: 0.10 Units: mL
IC Cal low_00406 Amount Added: 0.10 Units: mL

Report Date: 16-Oct-2018 20:18:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0004.d

Injection Date:	14-Oct-2018 12:39:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L3			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0005.d
Lims ID: std L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Oct-2018 12:55:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-005
Misc. Info.: 5 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:56 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

First Level Reviewer: phantl Date: 16-Oct-2018 15:07:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	25486951	4.00	3.86	
2 Chloride	3.592	3.592	0.000	354949252	60.0	55.7	
3 Nitrite as N	4.325	4.325	0.000	45428845	4.00	3.85	
4 Bromide	5.200	5.200	0.000	7559221	4.00	3.96	
5 Nitrate as N	5.884	5.884	0.000	46034088	4.00	3.80	
7 Orthophosphate as P	8.892	8.892	0.000	16112007	4.00	3.87	
6 Sulfate	9.734	9.734	0.000	218889537	60.0	54.5	

Reagents:

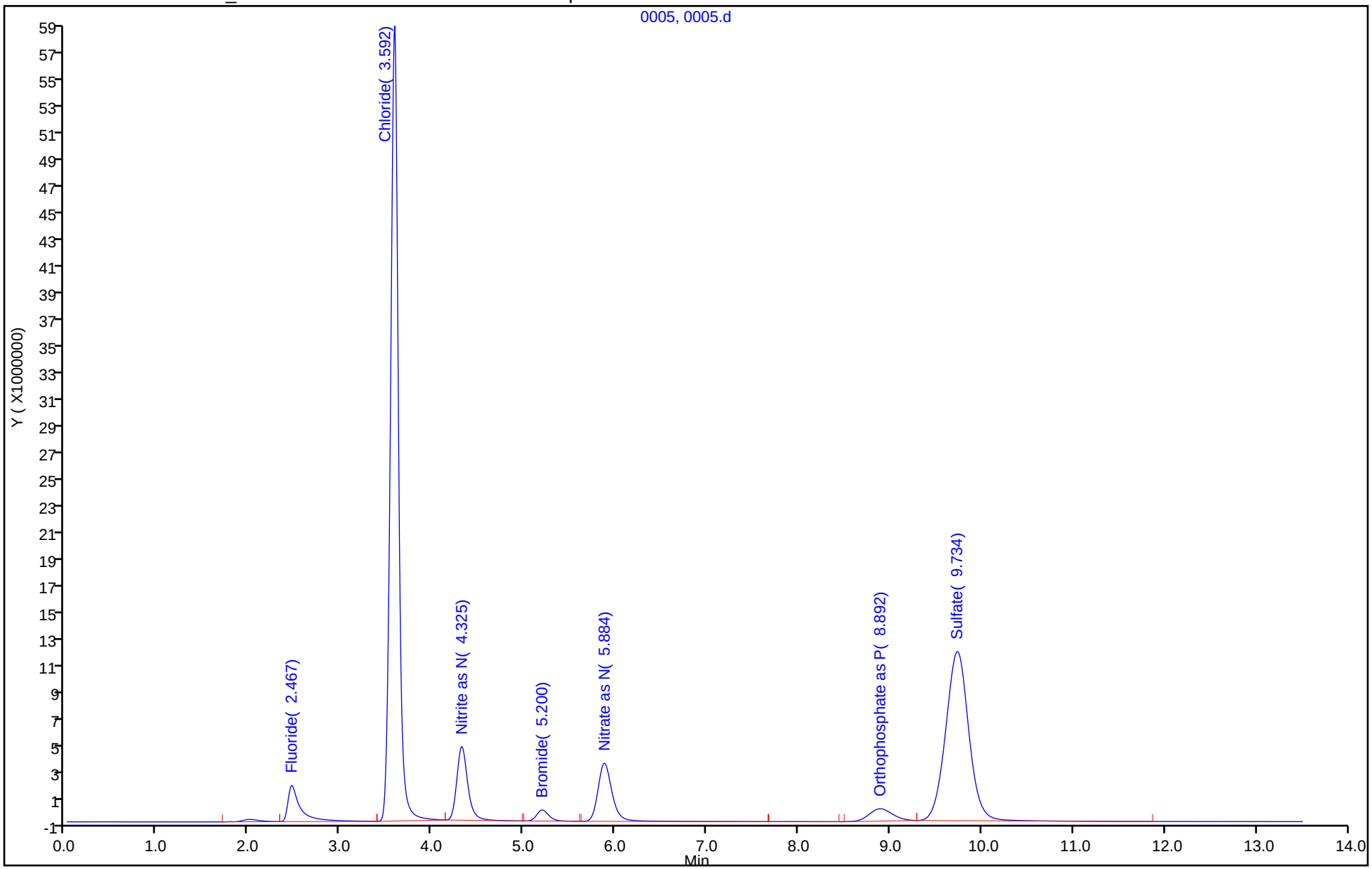
IC CAL cl/so4_00225 Amount Added: 1.20 Units: mL
IC Cal low_00406 Amount Added: 0.40 Units: mL

Report Date: 16-Oct-2018 20:06:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0005.d

Injection Date:	14-Oct-2018 12:55:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L4			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0006.d
Lims ID: std L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Oct-2018 13:12:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-006
Misc. Info.: 6 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:57 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	52761942	8.00	7.97	
2 Chloride	3.617	3.592	0.025	754510664	120.0	117.8	
3 Nitrite as N	4.334	4.325	0.009	94489104	8.00	7.98	
4 Bromide	5.200	5.200	0.000	15236658	8.00	7.98	
5 Nitrate as N	5.875	5.884	-0.009	96777197	8.00	7.97	
7 Orthophosphate as P	8.884	8.892	-0.008	33108518	8.00	7.98	
6 Sulfate	9.767	9.734	0.033	466051198	120.0	115.7	

Reagents:

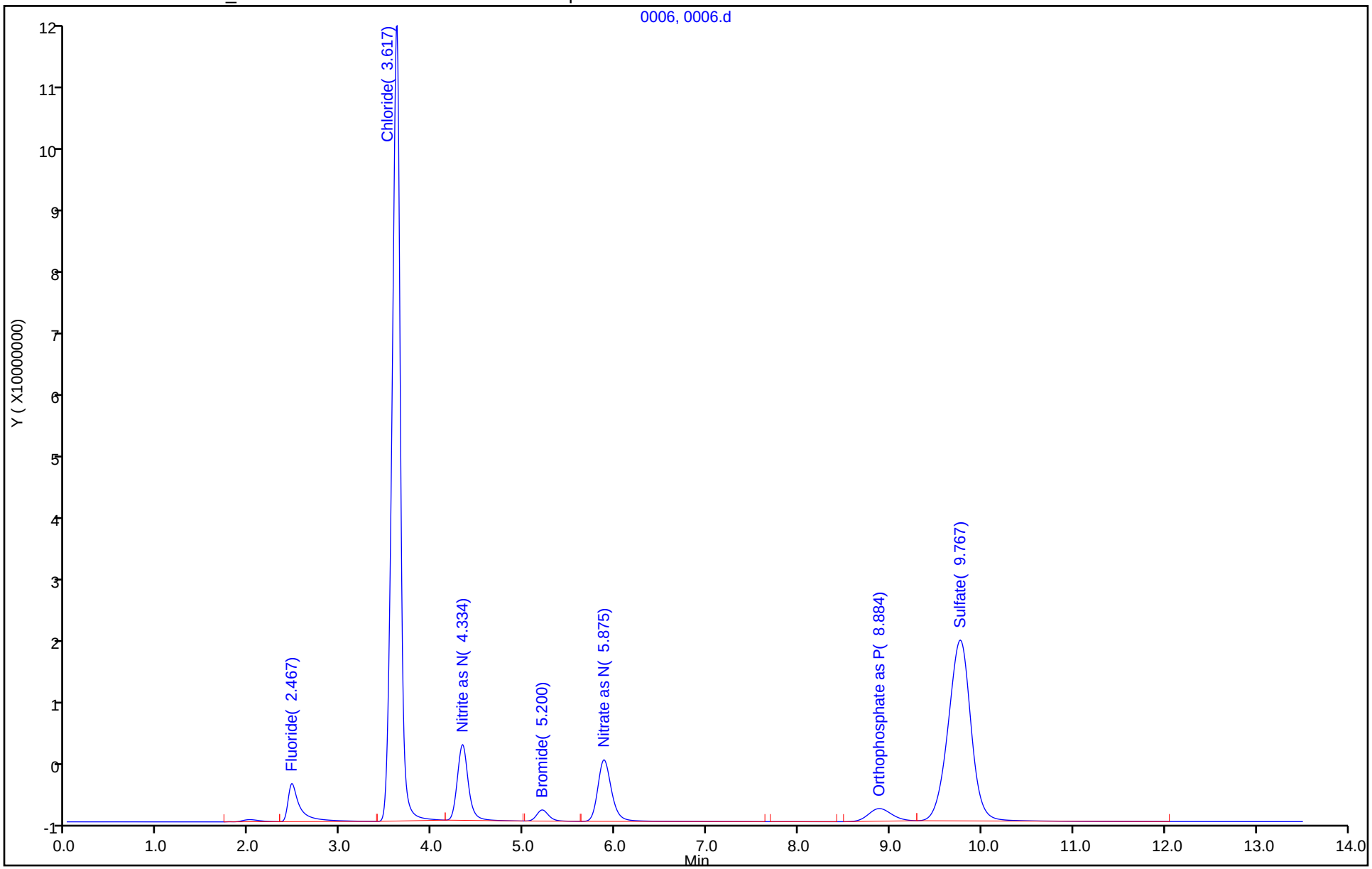
IC CAL cl/so4_00225 Amount Added: 2.40 Units: mL
IC Cal low_00406 Amount Added: 0.80 Units: mL

Report Date: 16-Oct-2018 20:06:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0006.d

Injection Date:	14-Oct-2018 13:12:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L5			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d
Lims ID: std L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Oct-2018 13:28:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-007
Misc. Info.: 2438 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:58 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	67621065	10.0	10.2	
2 Chloride	3.642	3.592	0.050	1331004347	200.0	207.3	
3 Nitrite as N	4.342	4.325	0.017	121128137	10.0	10.2	
4 Bromide	5.201	5.200	0.001	19264476	10.0	10.1	
5 Nitrate as N	5.876	5.884	-0.008	125104355	10.0	10.3	
7 Orthophosphate as P	8.876	8.892	-0.016	42371320	10.0	10.2	
6 Sulfate	9.801	9.734	0.067	847847466	200.0	210.2	

Reagents:

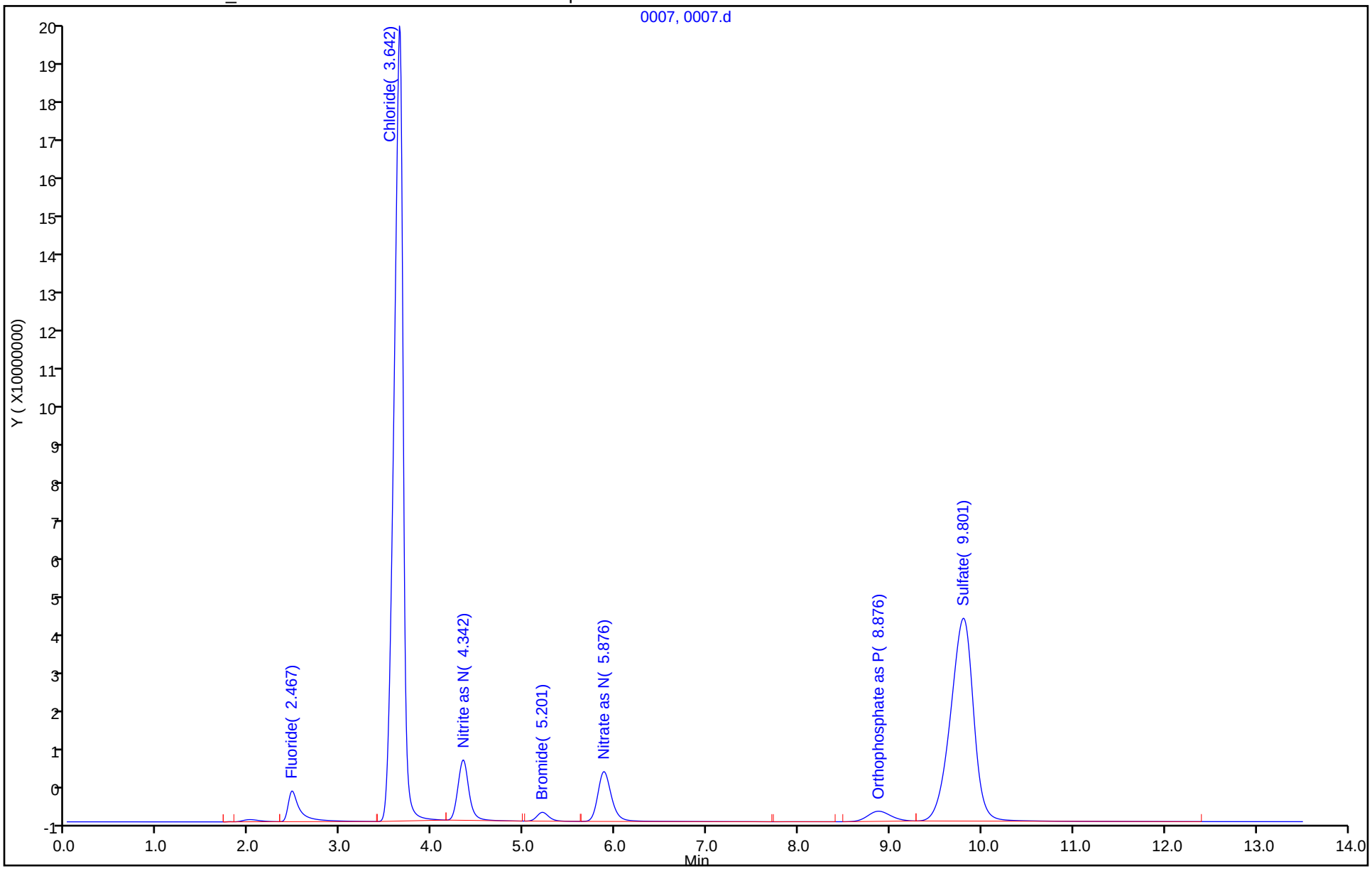
IC CAL cl/so4_00225 Amount Added: 4.00 Units: mL
IC Cal low_00406 Amount Added: 1.00 Units: mL

Report Date: 16-Oct-2018 20:06:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Injection Date:	14-Oct-2018 13:28:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L6			Worklist Smp#:	7
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



IC Instrument Information

WL: 75074 Inst ID: 11 Analysis Date: 10/4/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	115218	AM 10/4/18 3	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D -8	client
☐	115229	2	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	115357	8	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D 3	client
☐			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	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
115218	7	F Cl NO2 Br NO3 PO4 SO4	10×	conductivity
115229	5,6,2,4	F Cl NO2 Br NO3 PO4 SO4	5×,10×	conductivity
		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		

TestAmerica Denver

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433354/55

IC Instrument Information

WL: 75074 Inst ID: 11 Analysis Date: 10/4/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	115218	3	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D -8	client
☐	115229	2	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	115357	8	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D 3	client
☐			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	
☐			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
115218	7	F Cl NO2 Br NO3 PO4 SO4	10x	conductivity
115229	5,6,2,4	F Cl NO2 Br NO3 PO4 SO4	5x, 10x	conductivity
		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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10/17/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0008.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Oct-2018 14:26:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-008
Misc. Info.: 3463 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:59 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	25982758	4.00	3.94	
2 Chloride	3.600	3.600	0.000	499637253	80.0	78.2	
3 Nitrite as N	4.325	4.325	0.000	44271402	4.00	3.75	
4 Bromide	5.200	5.200	0.000	7424200	4.00	3.89	
5 Nitrate as N	5.875	5.875	0.000	45524337	4.00	3.76	
7 Orthophosphate as P	8.884	8.884	0.000	16083103	4.00	3.86	
6 Sulfate	9.734	9.734	0.000	308513688	80.0	76.7	

Reagents:

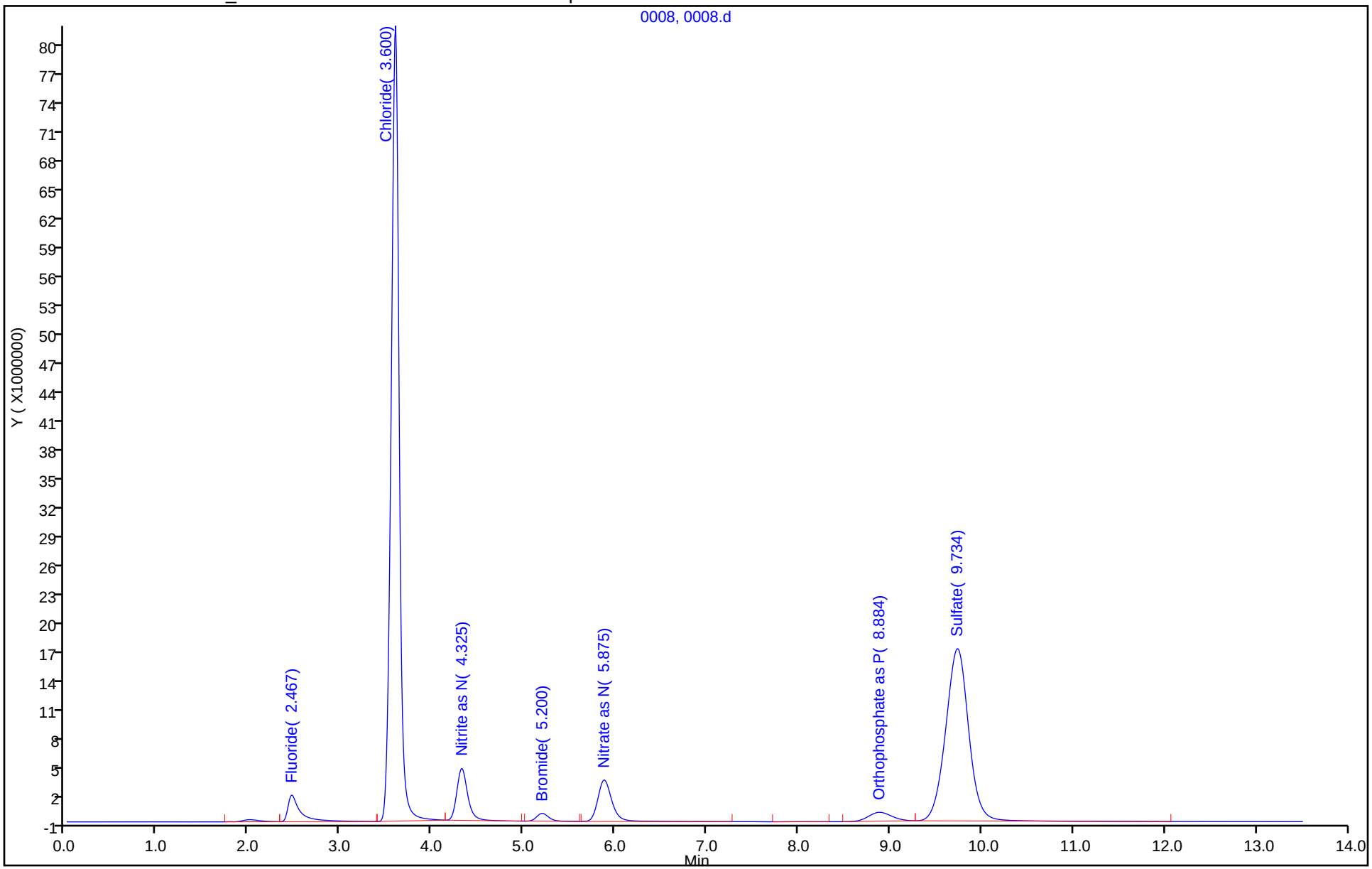
IC CL ICV_00014 Amount Added: 0.40 Units: mL
IC SO4 ICV_00017 Amount Added: 0.40 Units: mL
IC ICV 5_00212 Amount Added: 0.40 Units: mL

Report Date: 16-Oct-2018 20:07:00 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0008.d

Injection Date:	14-Oct-2018 14:26:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0009.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 14-Oct-2018 14:42:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-009
Misc. Info.: 15826 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 16-Oct-2018 20:06:59 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

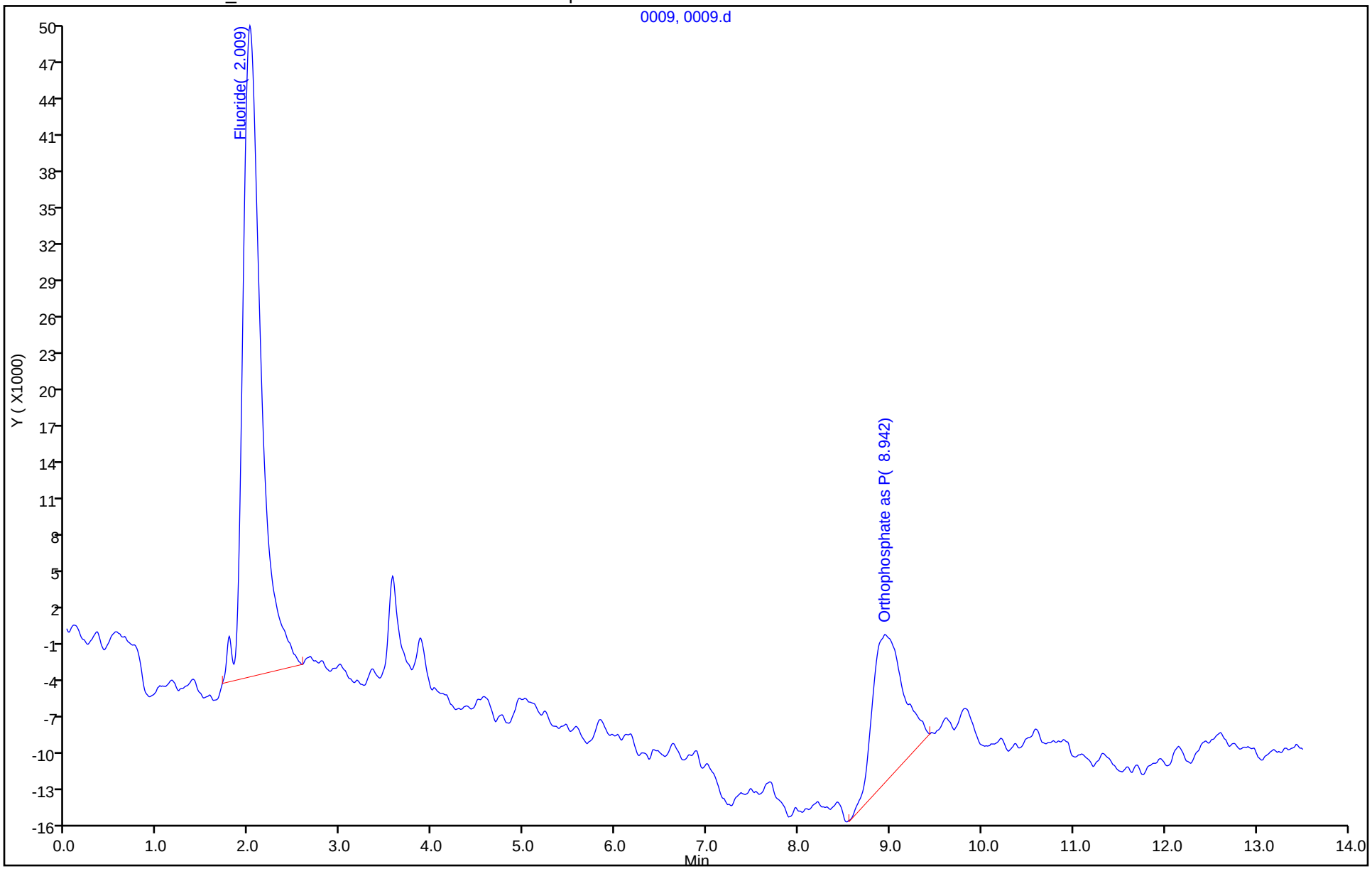
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.009	2.467	-0.458	745358		0.1418	
2 Chloride		3.592				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.884				ND	
7 Orthophosphate as P	8.942	8.892	0.050	282127		0.0413	
6 Sulfate		9.734				ND	

Report Date: 16-Oct-2018 20:07:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0009.d

Injection Date:	14-Oct-2018 14:42:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ICB			Worklist Smp#:	9
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



Batch 434136
434137
cal 433354

TestAmerica Denver

TestAmerica

IC Instrument Information

WL: 75273 Inst ID: 11 Analysis Date: 10/19/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	115789	2	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	client
=	~~115796~~	~~2~~	~~F Cl NO2 Br NO3 PO4 SO4~~	~~MS/D~~	
=	~~115809~~	~~4~~	~~F Cl NO2 Br NO3 PO4 SO4~~	~~MS/D~~ AM 10/21/18	
=			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	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
115809	4,5,13	F Cl NO2 Br NO3 PO4 SO4	10x	high
115809	15	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	conductivity
115809	5,4,13	F Cl NO2 Br NO3 PO4 SO4	20x	high
115809	15	F Cl NO2 Br NO3 PO4 SO4	50x	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		

Batch 434136
434137
cal 433354

TestAmerica Denver

TestAmerica

IC Instrument Information

WL: 75273 Inst ID: 11 Analysis Date: 10/19/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	115789	2	F Cl (NO2) Br (NO3) (PO4) (SO4)	MS/D 1	client
=	~~115796~~	~~2~~	~~F Cl NO2 Br NO3 PO4 SO4~~	~~MS/D~~	
=	~~115809~~	~~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	
=			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
115809	4,5,13	F (Cl) NO2 Br NO3 PO4 (SO4)	10x	high
115809	15	F (Cl) (NO2) Br (NO3) PO4 (SO4)	2x 20x	conductivity
115809	5,14,13	F Cl NO2 Br NO3 PO4 (SO4)	20x	high
115809	15	F Cl NO2 Br NO3 PO4 (SO4)	50x	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		

Panida R
10/30/18

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	21-Oct-2018 13:35:56

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b
Inj Date : 14-Oct-2018 12:06:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-197114	6646544		0.999	-197114	6646544		0.999
2 Chloride	-384204	6439542		0.998	-384204	6439542		0.998
3 Nitrite as N	-368431	1189260		0.999	-368431	1189260		0.999
4 Bromide	6655	1909230		1.000	6655	1909230		1.000
5 Nitrate as N	-310167	1218595		0.999	-310167	1218595		0.999
7 Orthophosphate as P	111151	4136881		0.999	111151	4136881		0.999
6 Sulfate	-139037	4040229		0.997	-139037	4040229		0.997

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Instrument: WC_IonChrom11 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 21-Oct-2018 13:35:56
No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b
Inj Date : 14-Oct-2018 12:06:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-197114	6646544		0.999	-197114	6646544		0.999
2 Chloride	-384204	6439542		0.998	-384204	6439542		0.998
3 Nitrite as N	-368431	118926C		0.999	-368431	118926C		0.999
4 Bromide	6655	190923C		1.000	6655	190923C		1.000
5 Nitrate as N	-310167	121859E		0.999	-310167	121859E		0.999
7 Orthophosphate as P	111151	4136881		0.999	111151	4136881		0.999
6 Sulfate	-139037	404022E		0.997	-139037	404022E		0.997

Panida R.
10/30/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Oct-2018 11:32:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-001
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.451	2.467	-0.016	36759520	5.00	5.56	
2 Chloride	3.576	3.600	-0.024	700530577	100.0	109.4	
3 Nitrite as N	4.276	4.325	-0.049	62157143	5.00	5.26	
4 Bromide	5.117	5.200	-0.083	10513771	5.00	5.50	
5 Nitrate as N	5.784	5.875	-0.091	65983383	5.00	5.44	
7 Orthophosphate as P	8.751	8.884	-0.133	22446792	5.00	5.40	
6 Sulfate	9.617	9.734	-0.117	442581633	100.0	109.9	

Reagents:

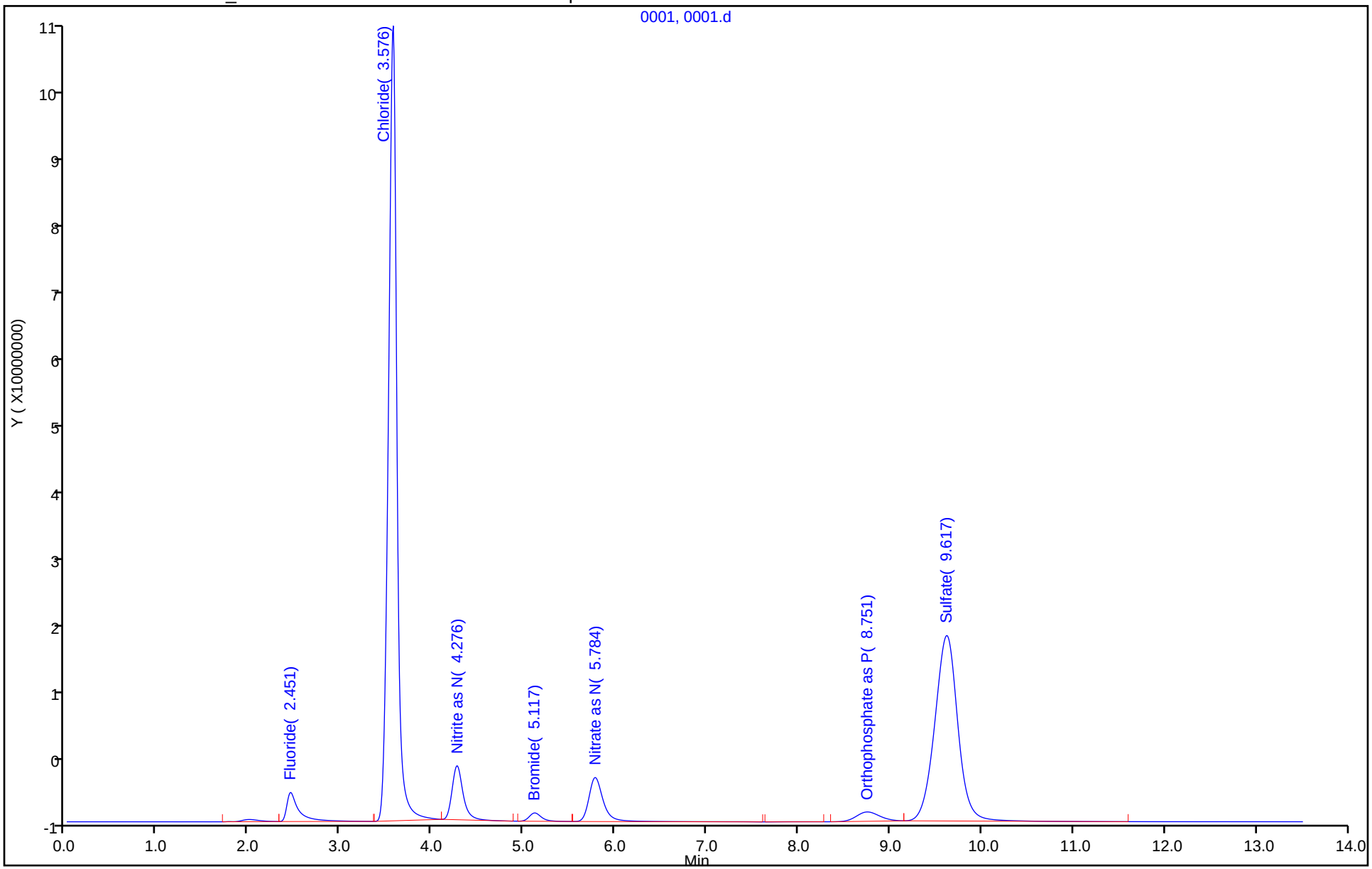
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0001.d

Injection Date:	19-Oct-2018 11:32:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0002.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Oct-2018 11:48:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-002
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

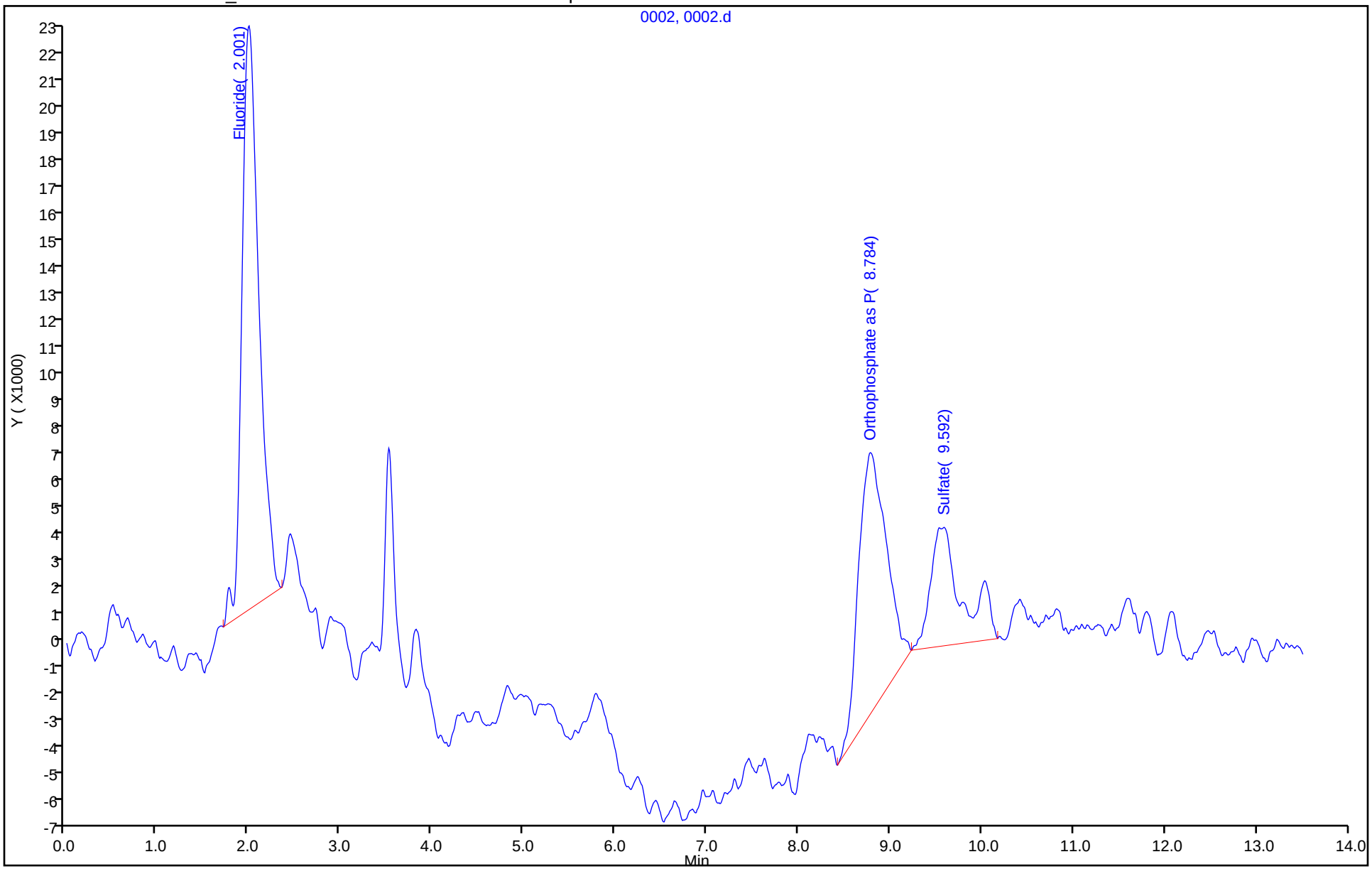
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.001	2.467	-0.466	278284		0.0715	
2 Chloride		3.600				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P	8.784	8.884	-0.100	202297		0.0220	
6 Sulfate	9.592	9.734	-0.142	103028		0.3696	

Report Date: 21-Oct-2018 13:35:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0002.d

Injection Date:	19-Oct-2018 11:48:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0003.d
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 19-Oct-2018 12:04:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-003
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	1405500	0.2000	0.2411	
2 Chloride	3.525	3.600	-0.075	12512398	2.50	2.54	
3 Nitrite as N	4.259	4.325	-0.066	2355787	0.2000	0.2291	
4 Bromide	5.117	5.200	-0.083	417322	0.2000	0.2151	
5 Nitrate as N	5.784	5.875	-0.091	2370947	0.2000	0.2200	
7 Orthophosphate as P	8.775	8.884	-0.109	952842	0.2000	0.2035	
6 Sulfate	9.567	9.734	-0.167	9307765	2.50	2.65	

Reagents:

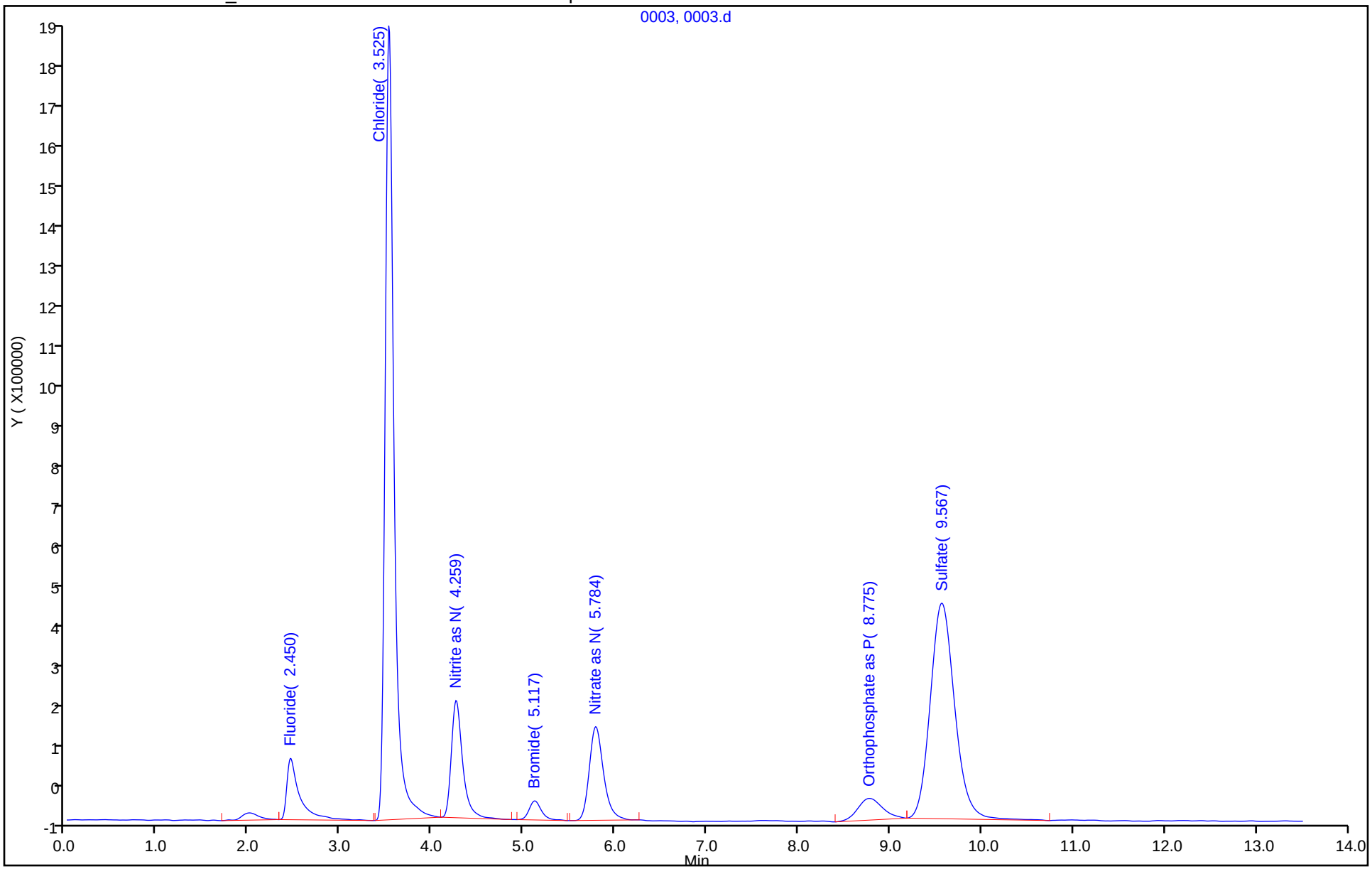
IC CAL cl/so4_00226 Amount Added: 0.05 Units: mL
IC Cal low_00407 Amount Added: 0.02 Units: mL

Report Date: 21-Oct-2018 13:35:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0003.d

Injection Date:	19-Oct-2018 12:04:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0004.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Oct-2018 12:21:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-004
Misc. Info.: 13024
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.467	-0.008	36758554	5.00	5.56	
2 Chloride	3.575	3.600	-0.025	701383203	100.0	109.5	
3 Nitrite as N	4.267	4.325	-0.058	62186142	5.00	5.26	
4 Bromide	5.109	5.200	-0.091	10539880	5.00	5.52	
5 Nitrate as N	5.775	5.875	-0.100	65850614	5.00	5.43	
7 Orthophosphate as P	8.750	8.884	-0.134	22174907	5.00	5.33	
6 Sulfate	9.625	9.734	-0.109	442318313	100.0	109.8	

Reagents:

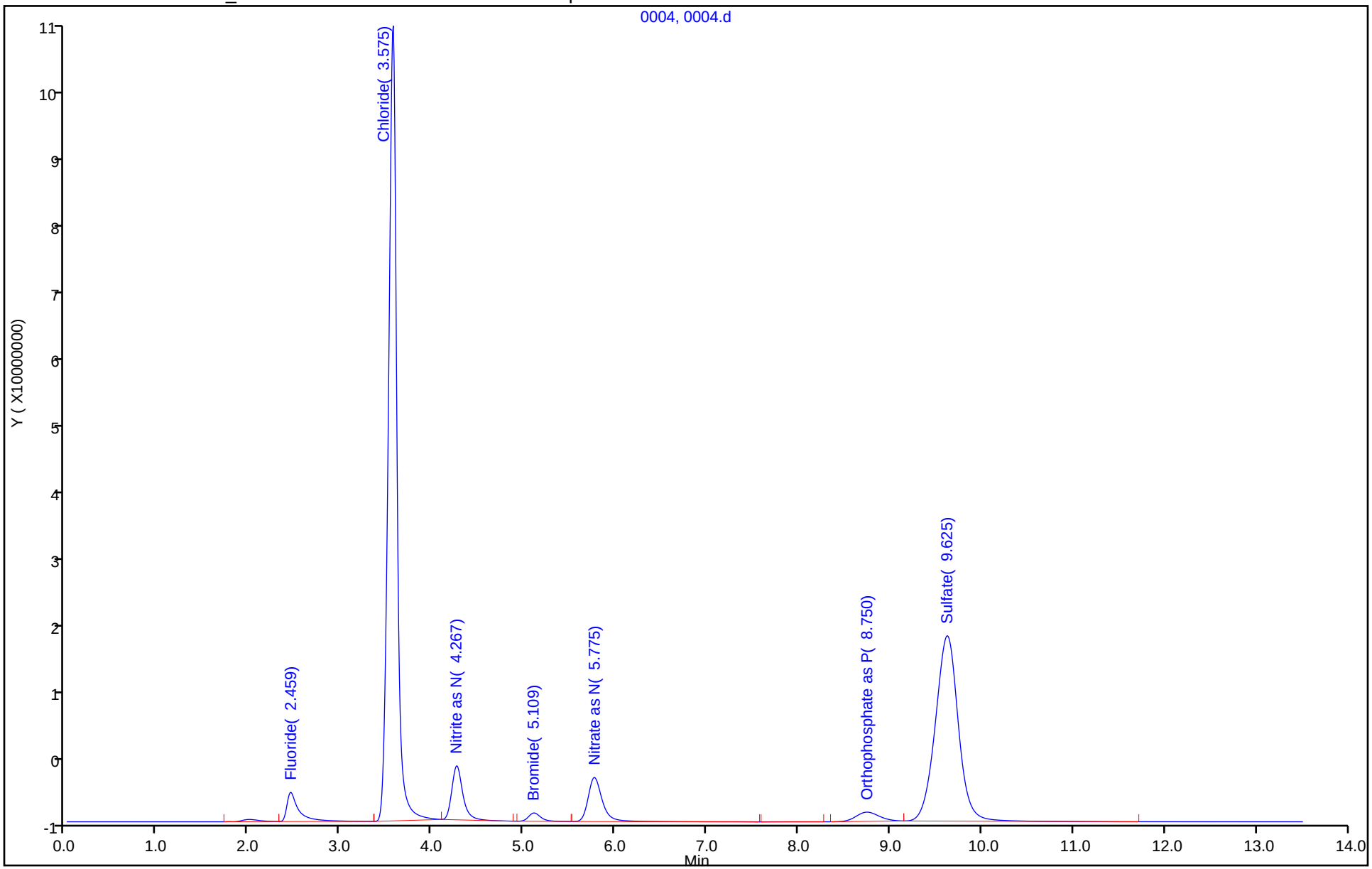
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0004.d

Injection Date:	19-Oct-2018 12:21:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0005.d
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 19-Oct-2018 12:37:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-005
Misc. Info.: 19748
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.451	2.467	-0.016	36990507	5.00	5.60	
2 Chloride	3.567	3.600	-0.033	701150059	100.0	109.5	
3 Nitrite as N	4.267	4.325	-0.058	62478680	5.00	5.28	
4 Bromide	5.109	5.200	-0.091	10595395	5.00	5.55	
5 Nitrate as N	5.767	5.875	-0.108	65276279	5.00	5.38	
7 Orthophosphate as P	8.742	8.884	-0.142	22465209	5.00	5.40	
6 Sulfate	9.626	9.734	-0.108	443859555	100.0	110.2	

Reagents:

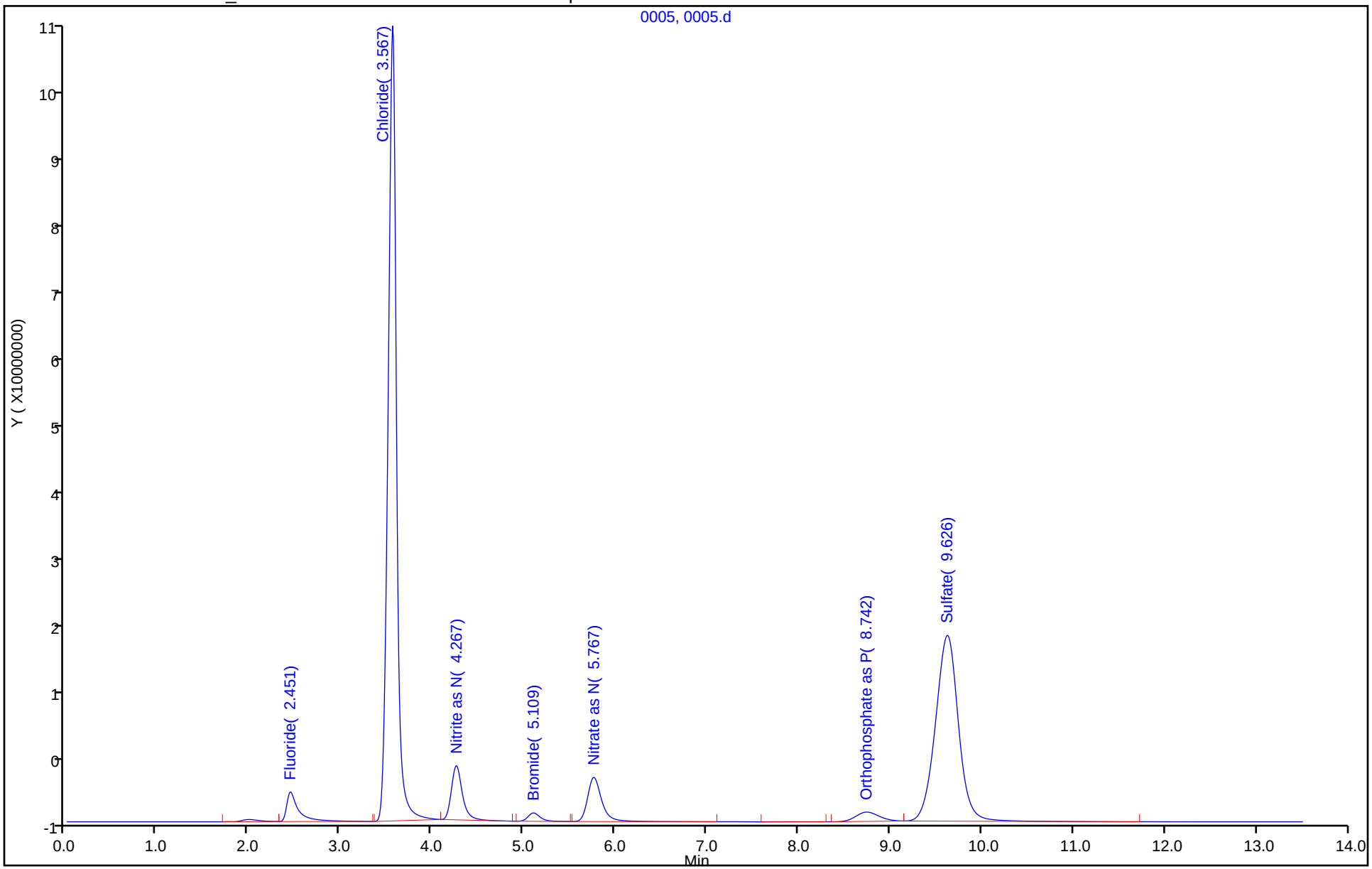
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0005.d

Injection Date:	19-Oct-2018 12:37:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0006.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Oct-2018 12:54:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-006
Misc. Info.: 25652
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

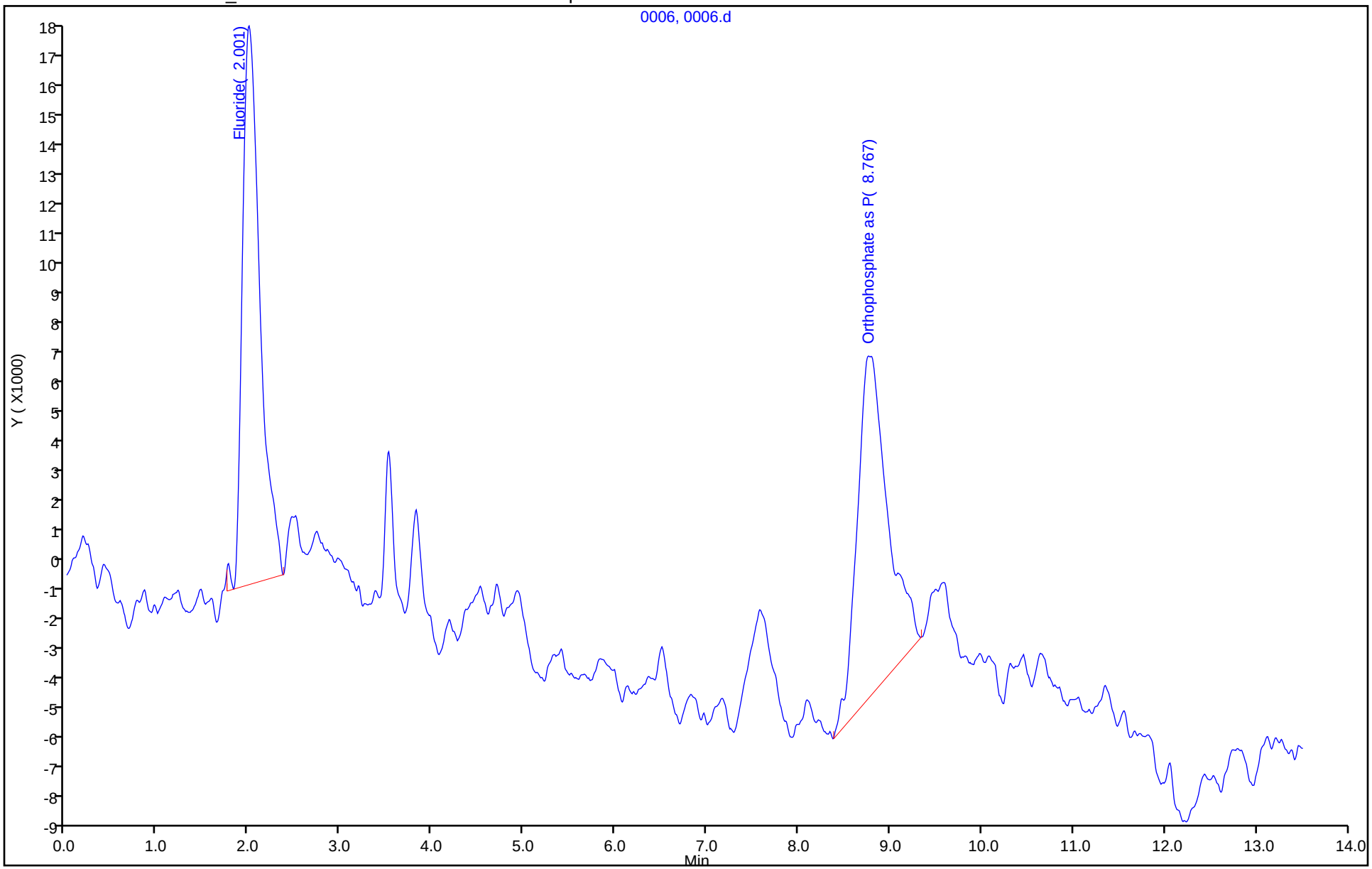
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.001	2.467	-0.466	245433		0.0666	
2 Chloride		3.600				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P	8.767	8.884	-0.117	258053		0.0355	
6 Sulfate		9.734				ND	

Report Date: 21-Oct-2018 13:35:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0006.d

Injection Date:	19-Oct-2018 12:54:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0007.d
Lims ID: 280-115789-C-1
Client ID: RQLMW-011-181001-GW
Sample Type: Client
Inject. Date: 19-Oct-2018 17:25:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-007
Misc. Info.: 22745 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

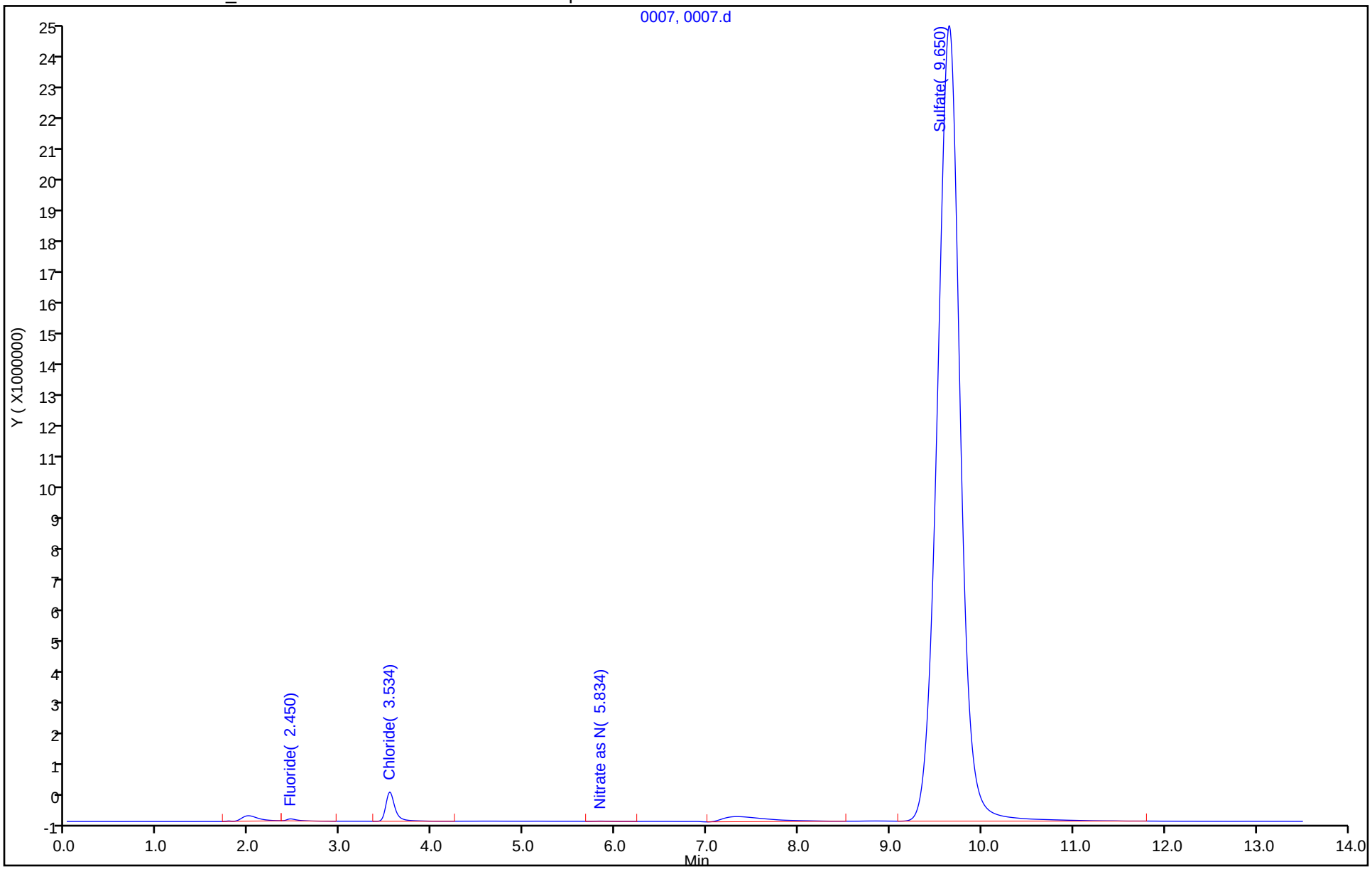
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	457038	0.0984	
2 Chloride	3.534	3.600	-0.066	6294658	1.57	
3 Nitrite as N		4.325			ND	
4 Bromide		5.200			ND	
5 Nitrate as N	5.834	5.875	-0.041	108666	0.0344	
7 Orthophosphate as P		8.884			ND	
6 Sulfate	9.650	9.734	-0.084	417629414	103.7	

Report Date: 21-Oct-2018 13:35:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0007.d

Injection Date:	19-Oct-2018 17:25:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-C-1	Lab Sample ID:	280-115789-1	Worklist Smp#:	7
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0008.d
Lims ID: 280-115789-C-1 DU
Client ID:
Sample Type: DU
Inject. Date: 19-Oct-2018 17:40:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-008
Misc. Info.: 3418 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

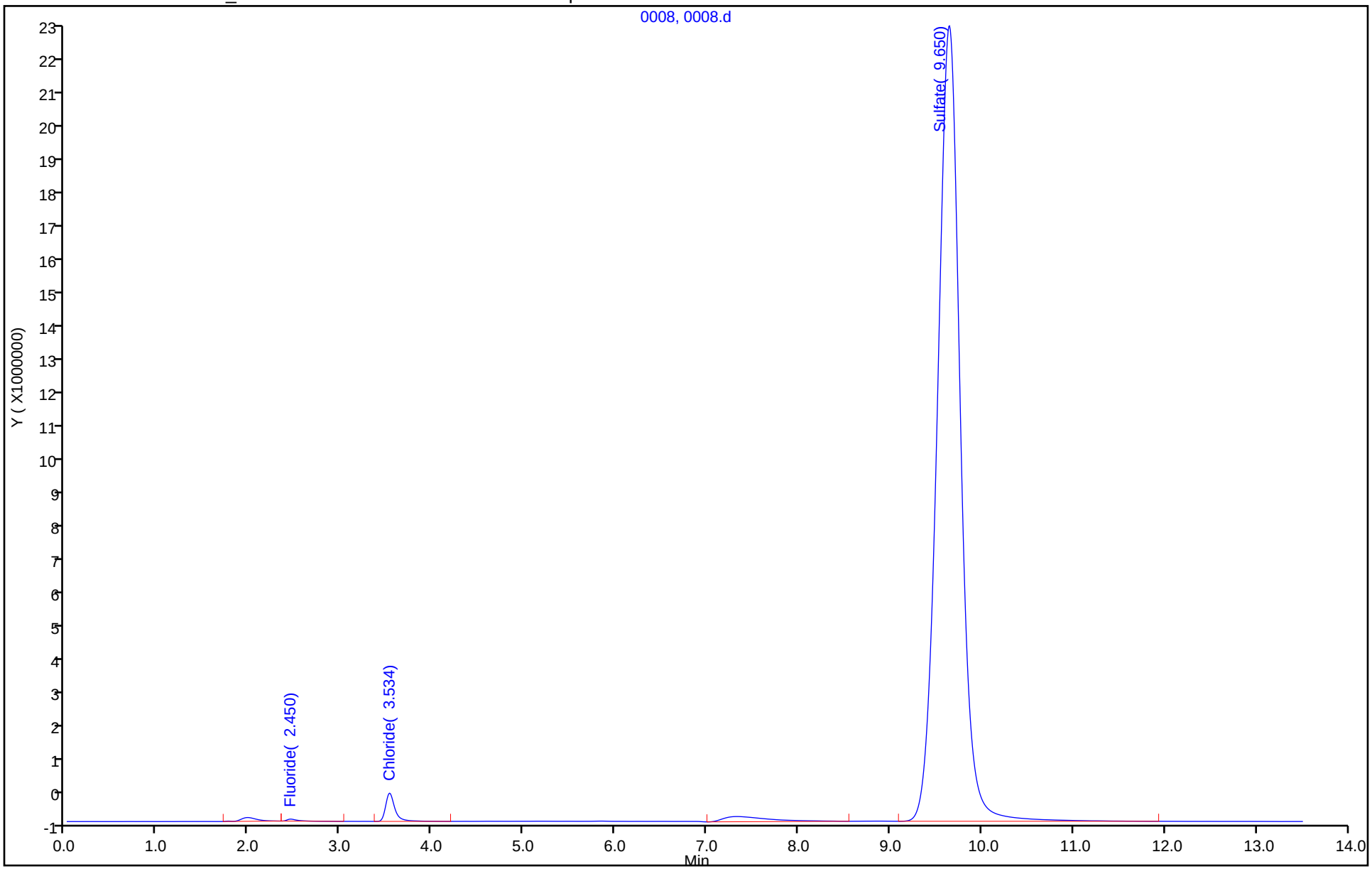
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	455088		0.0981	
2 Chloride	3.534	3.600	-0.066	5778447		1.49	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P		8.884				ND	
6 Sulfate	9.650	9.734	-0.084	396900721		98.6	

Report Date: 21-Oct-2018 13:35:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0008.d

Injection Date:	19-Oct-2018 17:40:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-C-1 DU			Worklist Smp#:	8
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0009.d
Lims ID: 280-115789-C-1 MS
Client ID: RQLMW-011-181001-GW
Sample Type: MS
Inject. Date: 19-Oct-2018 17:58:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-009
Misc. Info.: 24827 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.467	-0.008	33344531	5.00	5.05	
2 Chloride	3.542	3.600	-0.058	133277333	25.0	21.3	
3 Nitrite as N	4.284	4.325	-0.041	48666383	5.00	4.12	
4 Bromide	5.142	5.200	-0.058	9078644	5.00	4.75	
5 Nitrate as N	5.809	5.875	-0.066	57474854	5.00	4.74	
7 Orthophosphate as P	8.826	8.884	-0.058	11642656	5.00	2.79	
6 Sulfate	9.651	9.734	-0.083	447147427	25.0	111.0	

Reagents:

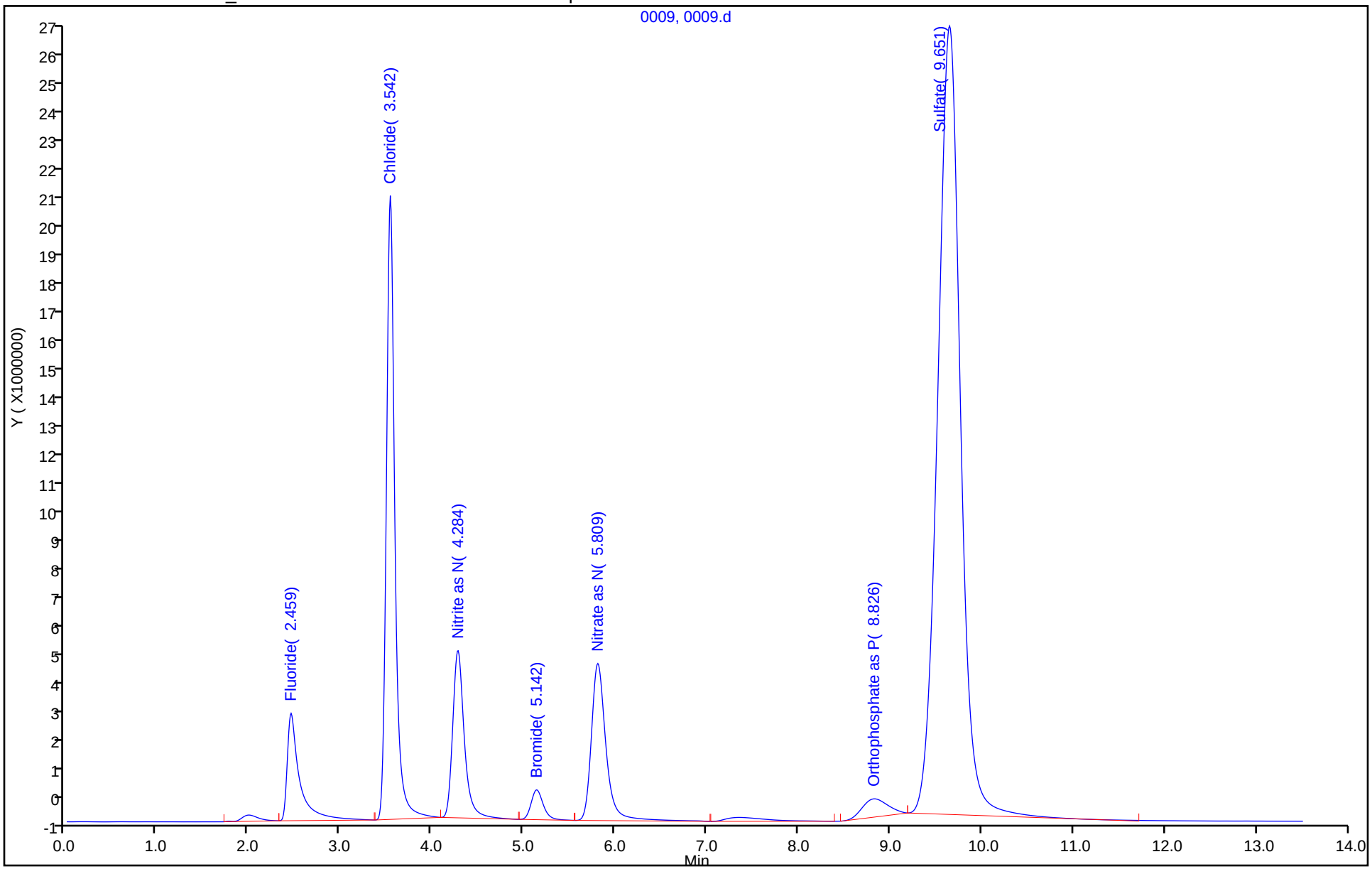
ICMS/MSD WEEK_00559 Amount Added: 0.05 Units: mL

Report Date: 21-Oct-2018 13:35:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0009.d

Injection Date:	19-Oct-2018 17:58:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-C-1 MS			Worklist Smp#:	9
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0010.d
Lims ID: 280-115789-C-1 MSD
Client ID: RQLMW-011-181001-GW
Sample Type: MSD
Inject. Date: 19-Oct-2018 18:18:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-010
Misc. Info.: 30241 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.467	-0.008	38009387	5.00	5.75	
2 Chloride	3.542	3.600	-0.058	155240739	25.0	24.7	
3 Nitrite as N	4.284	4.325	-0.041	56243748	5.00	4.76	
4 Bromide	5.142	5.200	-0.058	10504160	5.00	5.50	
5 Nitrate as N	5.809	5.875	-0.066	66336951	5.00	5.47	
7 Orthophosphate as P	8.834	8.884	-0.050	13213466	5.00	3.17	
6 Sulfate	9.667	9.734	-0.067	506179623	25.0	125.6	

Reagents:

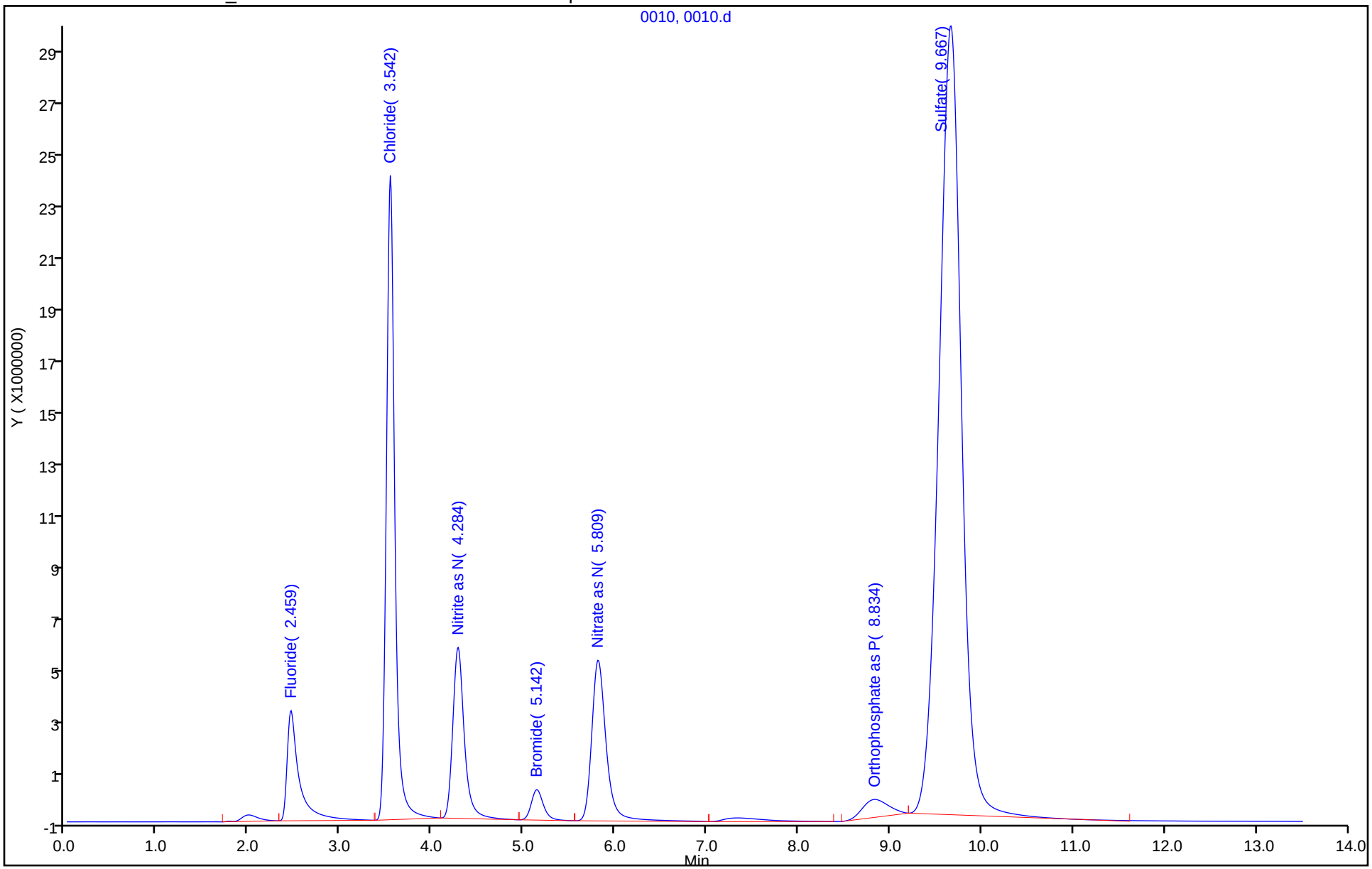
ICMS/MSD WEEK_00559 Amount Added: 0.05 Units: mL

Report Date: 21-Oct-2018 13:35:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0010.d

Injection Date:	19-Oct-2018 18:18:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-C-1 MSD			Worklist Smp#:	10
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0011.d
Lims ID: 280-115789-C-2
Client ID: RQLMW-011-181002-GW
Sample Type: Client
Inject. Date: 19-Oct-2018 18:37:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-011
Misc. Info.: 7234 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

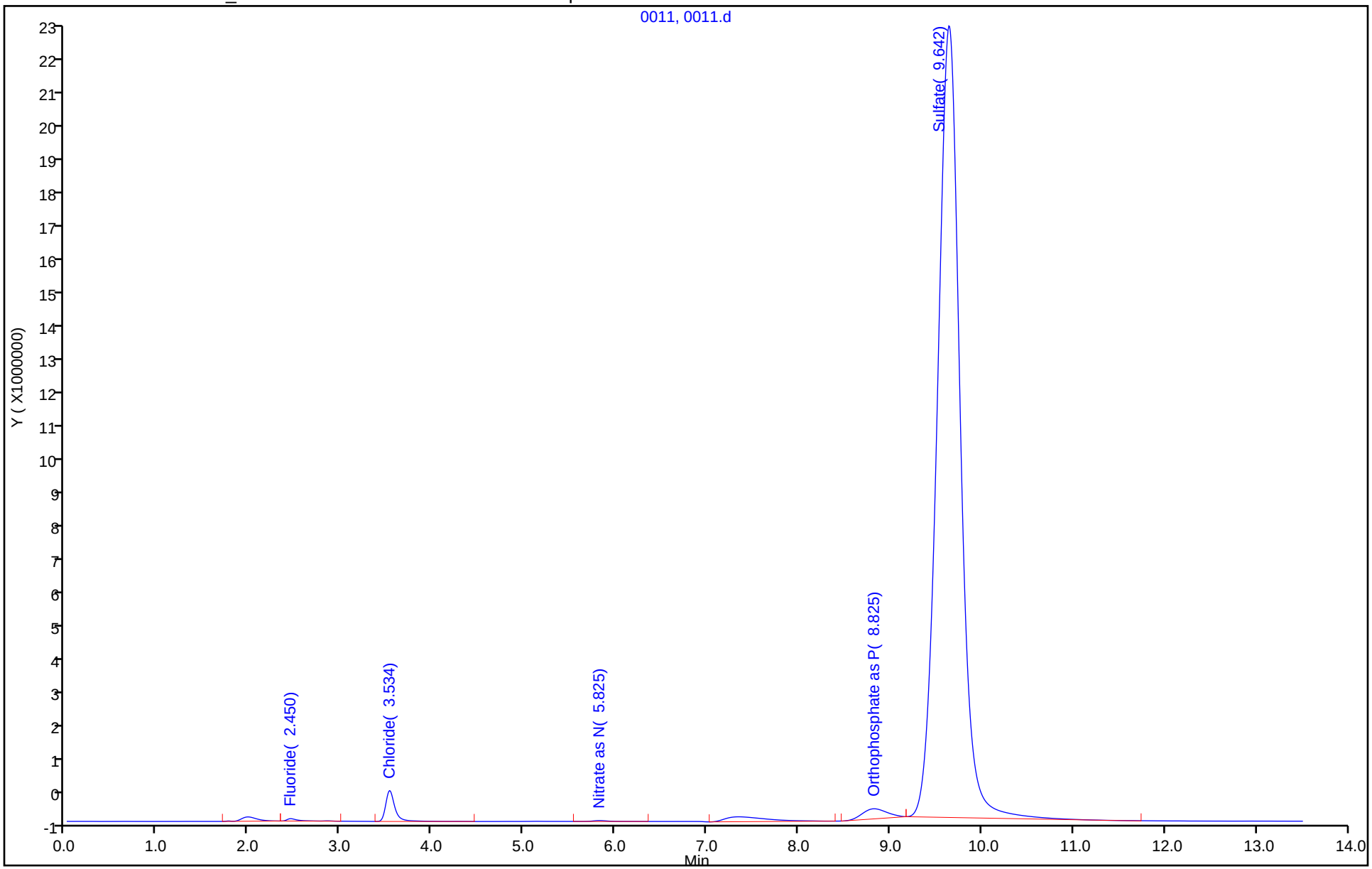
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	614237	0.1221	
2 Chloride	3.534	3.600	-0.066	6195539	1.56	
3 Nitrite as N		4.325			ND	
4 Bromide		5.200			ND	
5 Nitrate as N	5.825	5.875	-0.050	290954	0.0493	
7 Orthophosphate as P	8.825	8.884	-0.059	5340898	1.26	
6 Sulfate	9.642	9.734	-0.092	387817284	96.3	

Report Date: 21-Oct-2018 13:35:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0011.d

Injection Date:	19-Oct-2018 18:37:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-C-2	Lab Sample ID:	280-115789-2	Worklist Smp#:	11
Client ID:	RQLMW-011-181002-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0012.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 19-Oct-2018 19:24:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-012
Misc. Info.: 30741
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 21-Oct-2018 13:35:56 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	33015993	5.00	5.00	
2 Chloride	3.567	3.600	-0.033	650654747	100.0	101.6	
3 Nitrite as N	4.275	4.325	-0.050	56778497	5.00	4.81	
4 Bromide	5.125	5.200	-0.075	9495430	5.00	4.97	
5 Nitrate as N	5.792	5.875	-0.083	60109959	5.00	4.96	
7 Orthophosphate as P	8.750	8.884	-0.134	22144587	5.00	5.33	
6 Sulfate	9.600	9.734	-0.134	412914347	100.0	102.5	

Reagents:

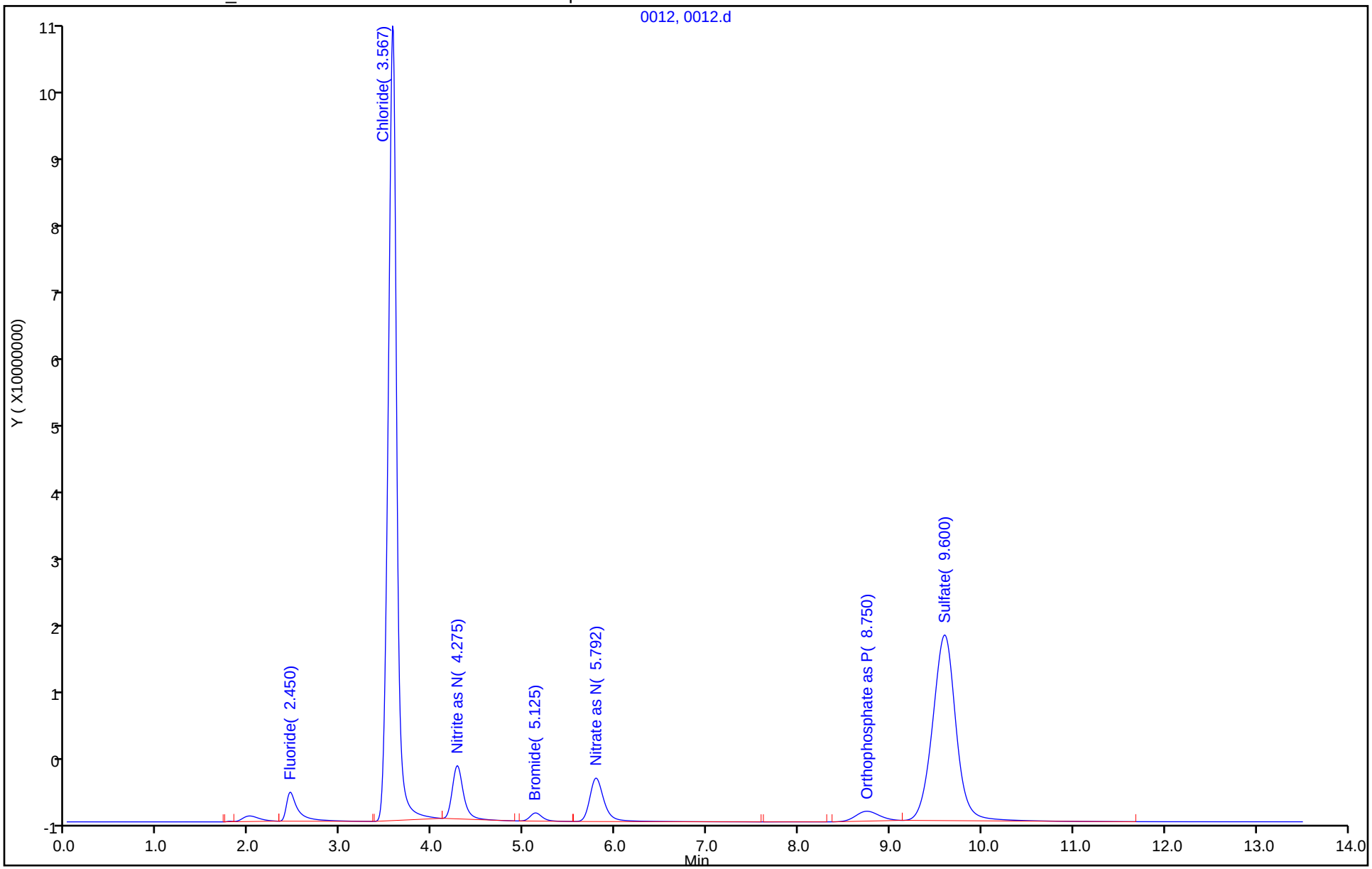
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0012.d

Injection Date:	19-Oct-2018 19:24:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	12
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0013.d				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	19-Oct-2018 19:42:00	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075273-013				
Misc. Info.:	15654				
Operator ID:		Instrument ID:	WC_IonChrom11		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m				
Limit Group:	Wet - Anions				
Last Update:	21-Oct-2018 13:35:56	Calib Date:	14-Oct-2018 13:28:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d				
Column 1 :			Det: 0005		
Process Host:	CTX0319				

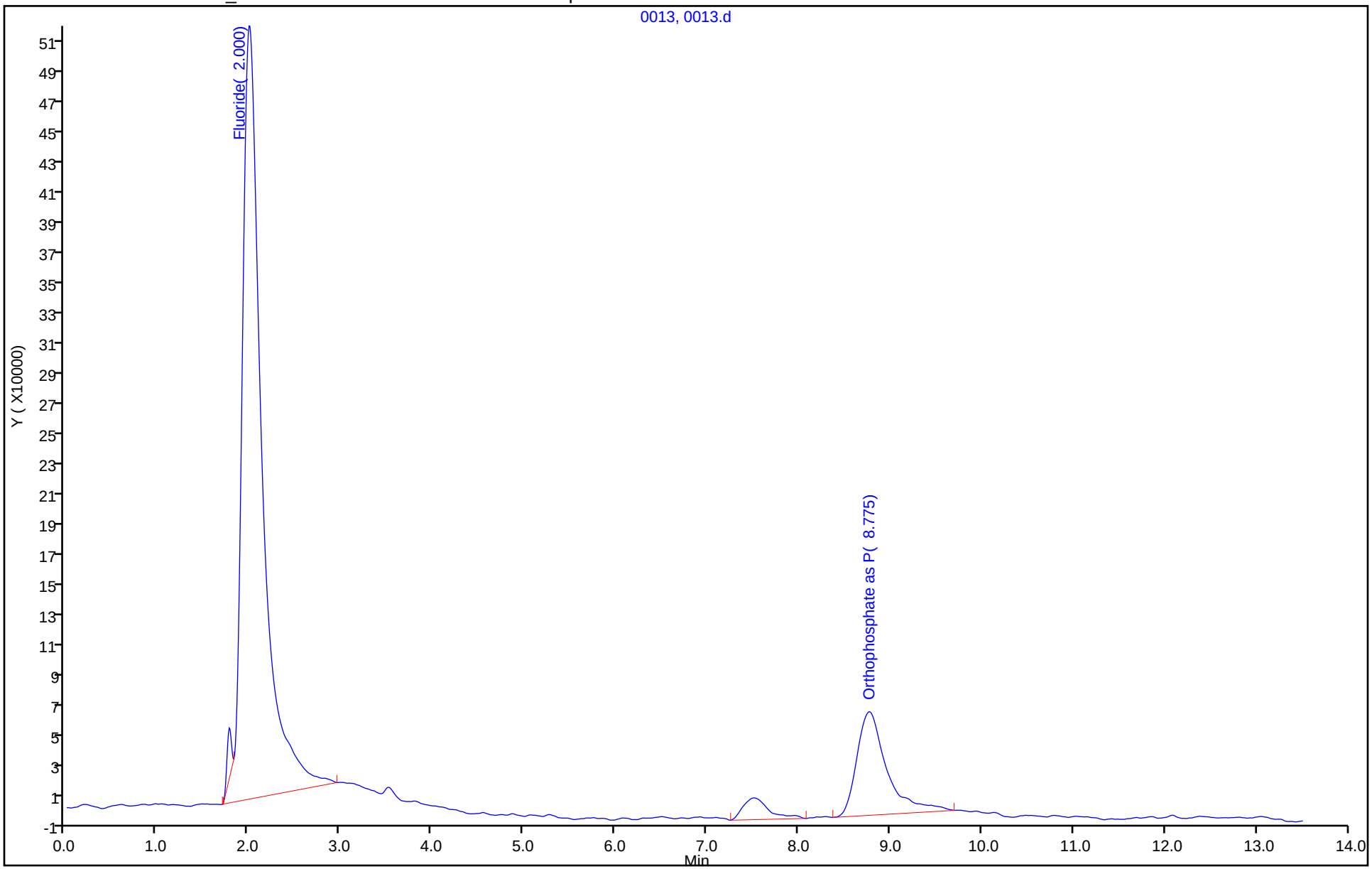
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.000	2.467	-0.467	7844566		1.21	
2 Chloride		3.600				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P	8.775	8.884	-0.109	1552713		0.3485	
6 Sulfate		9.734				ND	

Report Date: 21-Oct-2018 13:35:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0013.d

Injection Date:	19-Oct-2018 19:42:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	13
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions		



IC Instrument Information

WL: 75074 Inst ID: 11 Analysis Date: 10/4/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	115218	AM 10/4/18 3	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D -8	client
☐	115229	2	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	115357	8	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D 3	client
☐			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	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
115218	7	F Cl NO2 Br NO3 PO4 SO4	10x	conductivity
115229	5,6,2,4	F Cl NO2 Br NO3 PO4 SO4	5x, 10x	conductivity
		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		

TestAmerica Denver

TestAmerica

433354/55

IC Instrument Information

WL: 75074 Inst ID: 11 Analysis Date: 10/4/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	115218	~~AM~~ 3	F (Cl) NO2 Br NO3 PO4 (SO4)	(MS/D) -8	client
☐	115229	2	F (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	
☐	115357	8	F (Cl) NO2 Br NO3 PO4 (SO4)	(MS/D) 3	client
☐			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	
☐			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
115218	7	F Cl NO2 Br NO3 PO4 SO4	10x	conductivity
115229	5,6,2,4	F Cl NO2 Br NO3 PO4 SO4	5x, 10x	conductivity
		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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10/17/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0002.d
Lims ID: std L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 14-Oct-2018 12:06:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-002
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 16-Oct-2018 20:06:52 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	1240658	0.2000	0.2163	
2 Chloride	3.567	3.609	-0.042	4533296	1.00	1.30	
3 Nitrite as N	4.317	4.326	-0.009	2236057	0.2000	0.2190	
4 Bromide	5.201	5.201	0.000	402829	0.2000	0.2075	
5 Nitrate as N	5.884	5.876	0.008	2467199	0.2000	0.2279	
7 Orthophosphate as P	8.917	8.892	0.025	1041930	0.2000	0.2250	
6 Sulfate	9.701	9.751	-0.050	3543575	1.00	1.22	

Reagents:

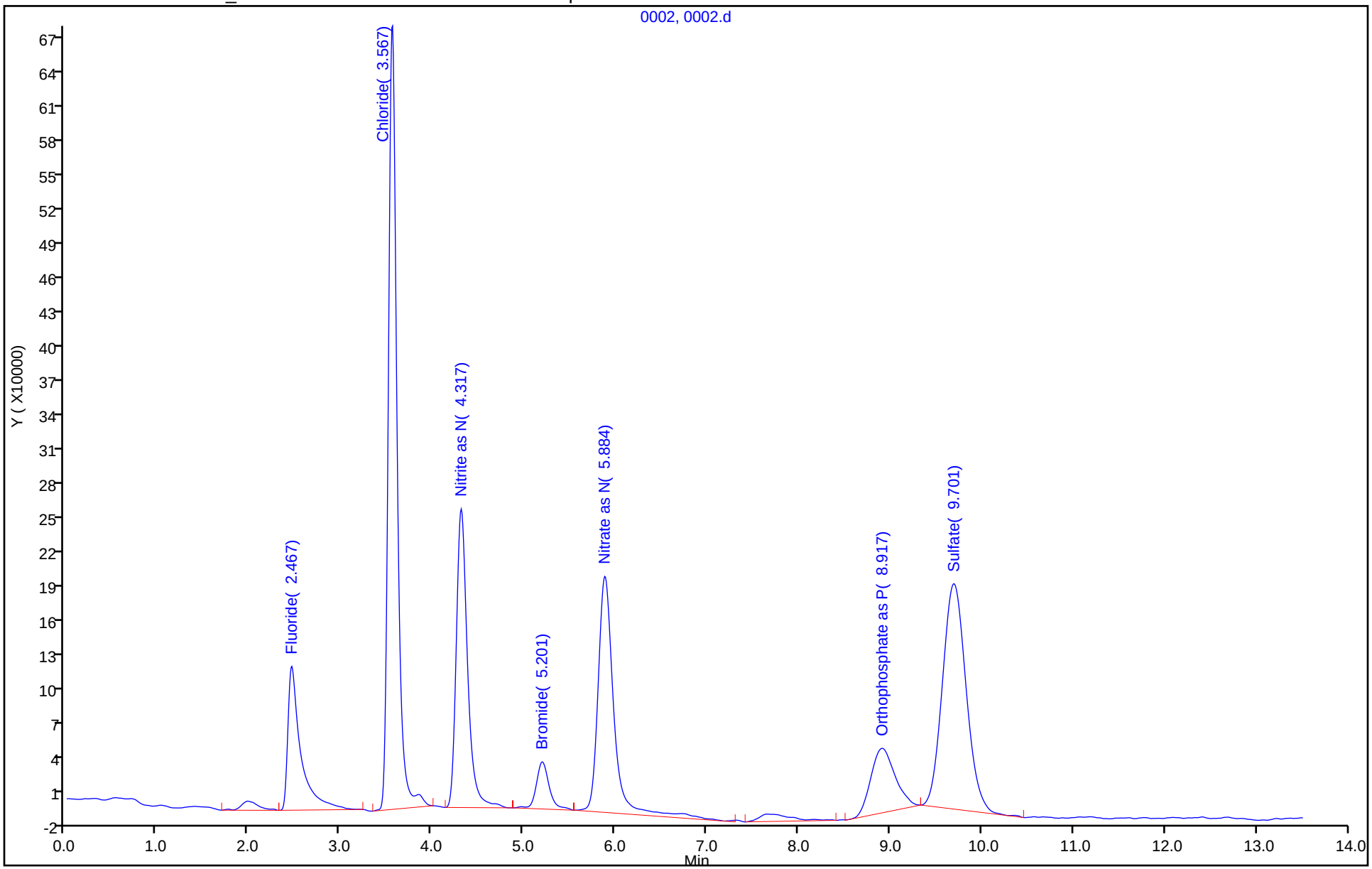
IC CAL cl/so4_00225 Amount Added: 0.02 Units: mL
IC Cal low_00406 Amount Added: 0.02 Units: mL

Report Date: 16-Oct-2018 20:06:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0002.d

Injection Date:	14-Oct-2018 12:06:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L1			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0003.d
Lims ID: std L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Oct-2018 12:23:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-003
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 16-Oct-2018 20:06:54 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

First Level Reviewer: newcomer Date: 15-Oct-2018 20:14:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	3046545	0.5000	0.4880	
2 Chloride	3.567	3.609	-0.042	11202757	2.50	2.34	
3 Nitrite as N	4.317	4.326	-0.009	5409758	0.5000	0.4859	
4 Bromide	5.200	5.201	-0.001	951306	0.5000	0.4948	
5 Nitrate as N	5.884	5.876	0.008	5471686	0.5000	0.4745	
7 Orthophosphate as P	8.909	8.892	0.017	2072741	0.5000	0.4742	
6 Sulfate	9.700	9.751	-0.051	8346719	2.50	2.41	

Reagents:

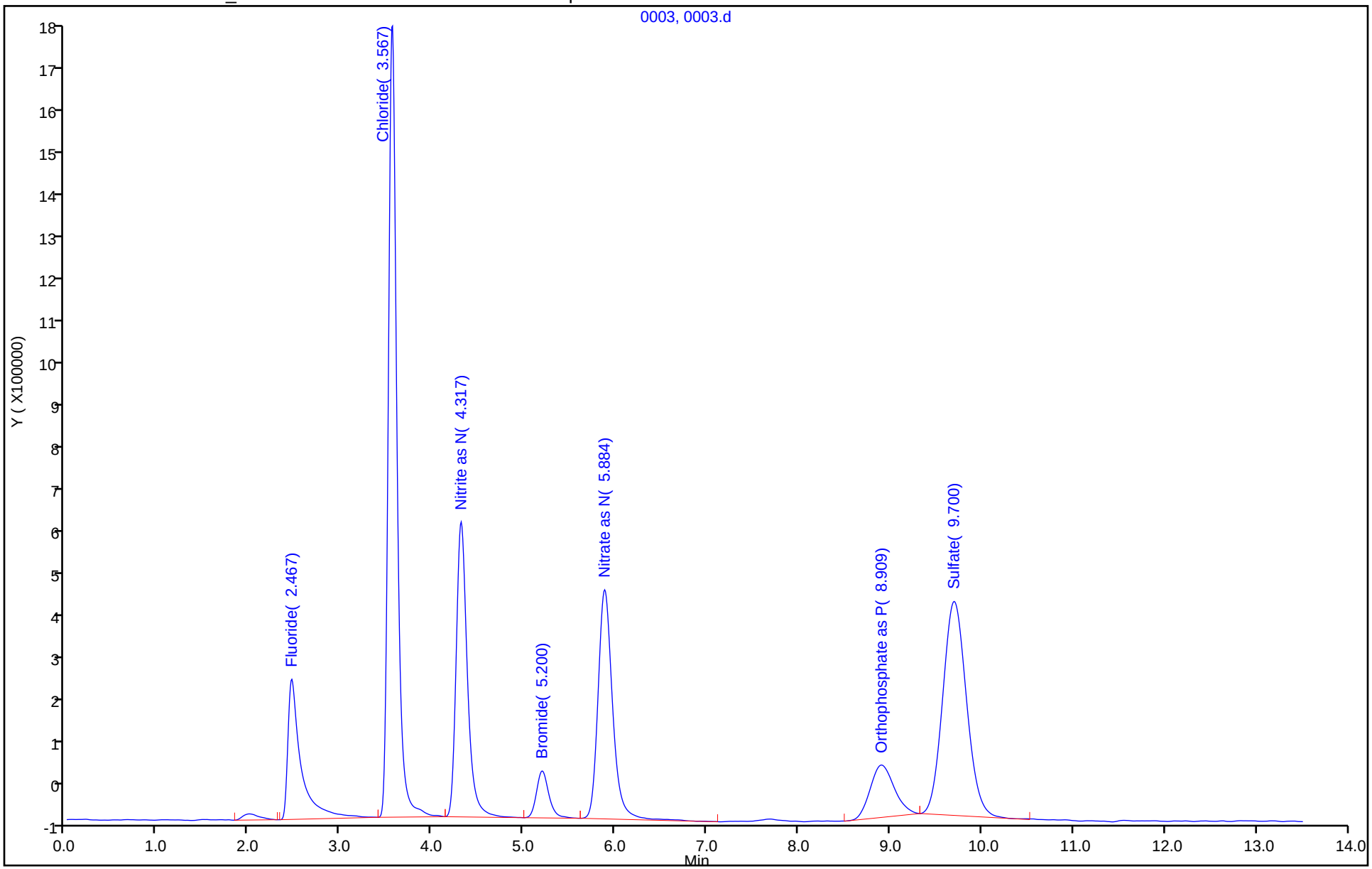
IC CAL cl/so4_00225 Amount Added: 0.05 Units: mL
IC Cal low_00406 Amount Added: 0.05 Units: mL

Report Date: 16-Oct-2018 20:06:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0003.d

Injection Date:	14-Oct-2018 12:23:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L2			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0004.d
Lims ID: std L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Oct-2018 12:39:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-004
Misc. Info.: 4 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 16-Oct-2018 20:18:16 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

First Level Reviewer: newcomer Date: 16-Oct-2018 20:18:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	6183258	1.00	0.9600	
2 Chloride	3.567	3.600	-0.033	22509409	5.00	4.09	
3 Nitrite as N	4.317	4.325	-0.008	10952198	1.00	0.9519	
4 Bromide	5.201	5.200	0.001	1874188	1.00	0.9782	
5 Nitrate as N	5.884	5.875	0.009	11091584	1.00	0.9356	
7 Orthophosphate as P	8.901	8.884	0.017	4004461	1.00	0.9411	
6 Sulfate	9.701	9.734	-0.033	16608239	5.00	4.45	

Reagents:

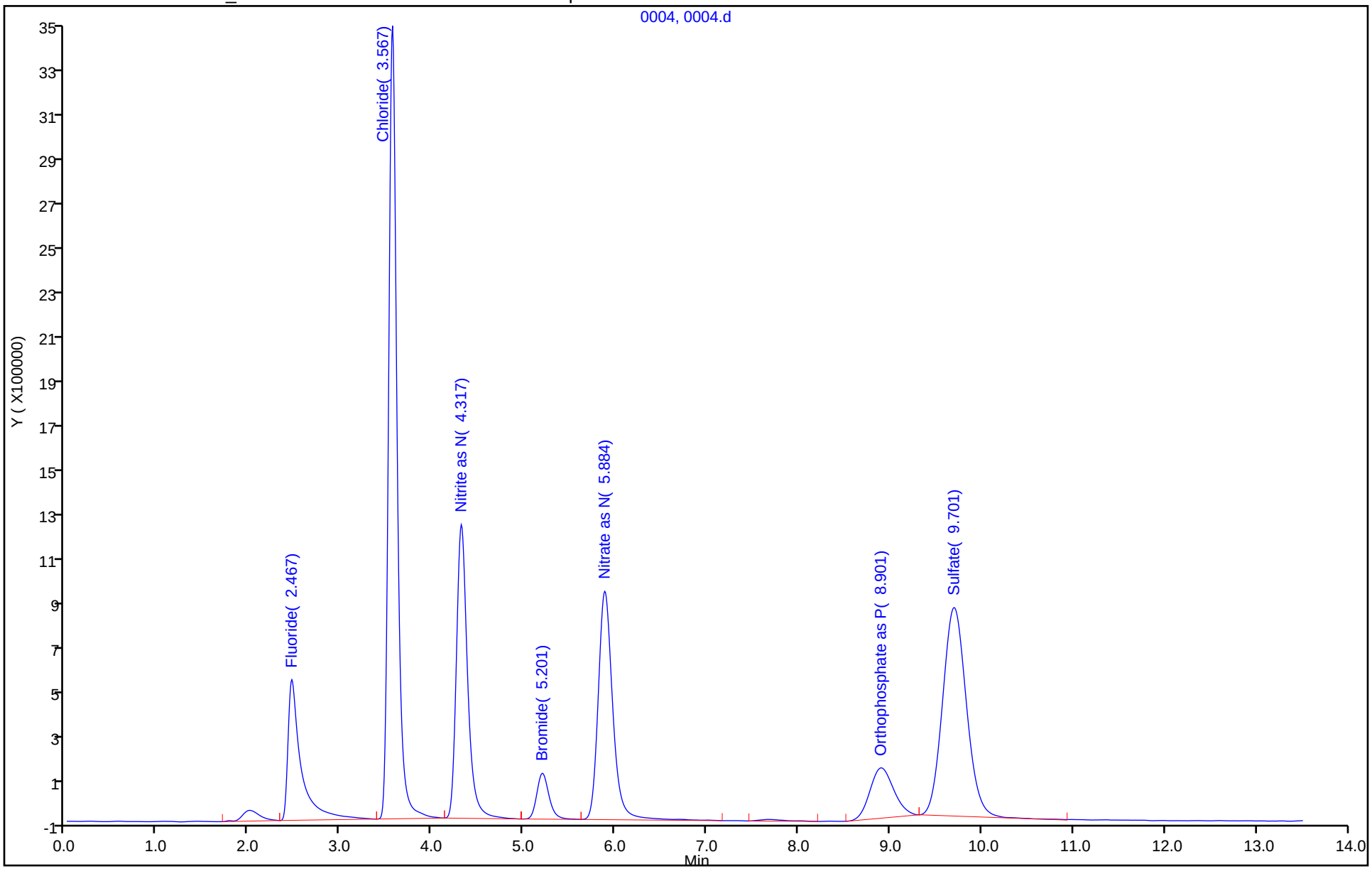
IC CAL cl/so4_00225 Amount Added: 0.10 Units: mL
IC Cal low_00406 Amount Added: 0.10 Units: mL

Report Date: 16-Oct-2018 20:18:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0004.d

Injection Date:	14-Oct-2018 12:39:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L3			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0005.d
Lims ID: std L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Oct-2018 12:55:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-005
Misc. Info.: 5 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 16-Oct-2018 20:06:56 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

First Level Reviewer: phantl Date: 16-Oct-2018 15:07:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	25486951	4.00	3.86	
2 Chloride	3.592	3.592	0.000	354949252	60.0	55.7	
3 Nitrite as N	4.325	4.325	0.000	45428845	4.00	3.85	
4 Bromide	5.200	5.200	0.000	7559221	4.00	3.96	
5 Nitrate as N	5.884	5.884	0.000	46034088	4.00	3.80	
7 Orthophosphate as P	8.892	8.892	0.000	16112007	4.00	3.87	
6 Sulfate	9.734	9.734	0.000	218889537	60.0	54.5	

Reagents:

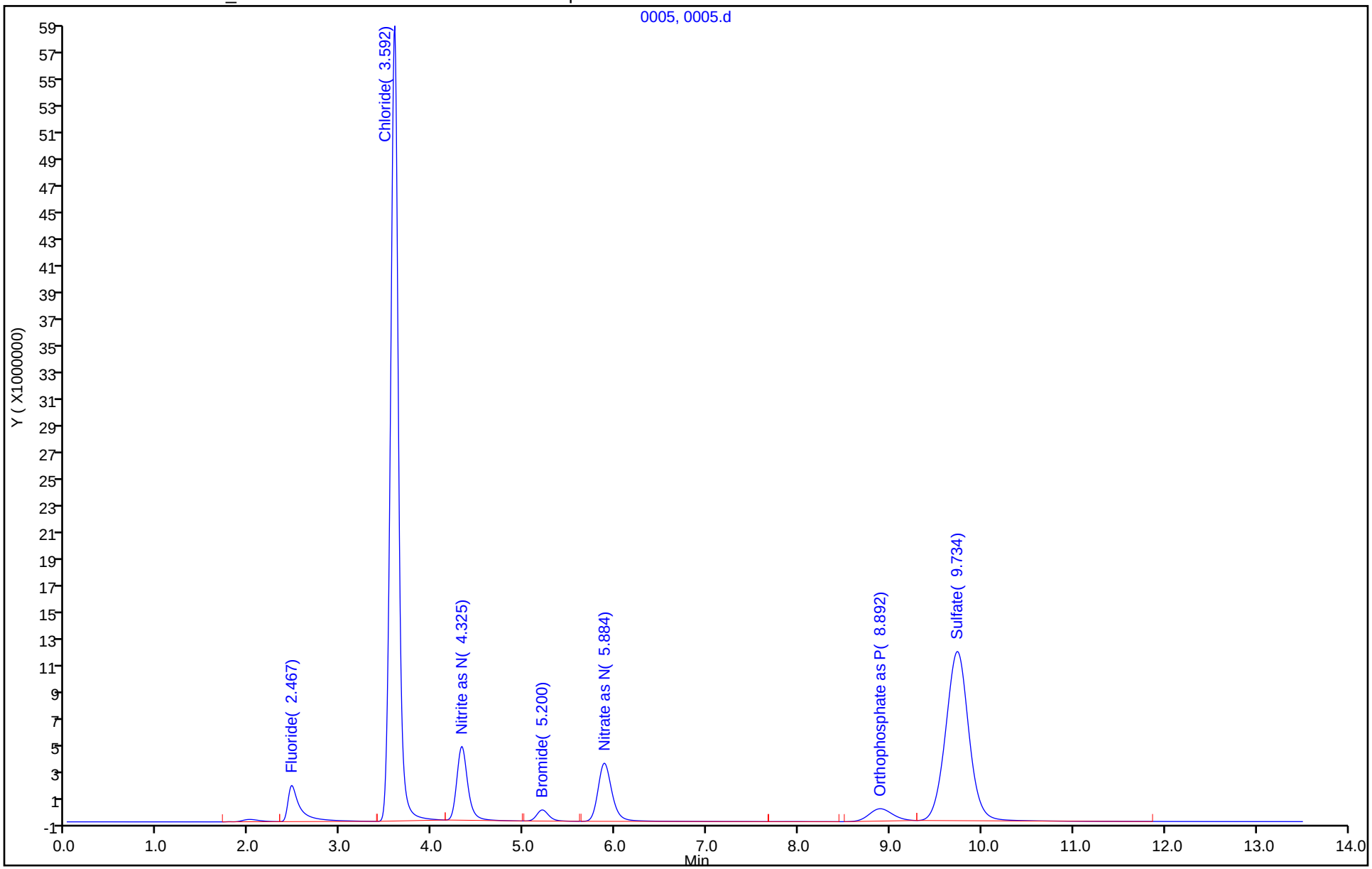
IC CAL cl/so4_00225 Amount Added: 1.20 Units: mL
IC Cal low_00406 Amount Added: 0.40 Units: mL

Report Date: 16-Oct-2018 20:06:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0005.d

Injection Date:	14-Oct-2018 12:55:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L4			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0006.d
Lims ID: std L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Oct-2018 13:12:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-006
Misc. Info.: 6 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 16-Oct-2018 20:06:57 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	52761942	8.00	7.97	
2 Chloride	3.617	3.592	0.025	754510664	120.0	117.8	
3 Nitrite as N	4.334	4.325	0.009	94489104	8.00	7.98	
4 Bromide	5.200	5.200	0.000	15236658	8.00	7.98	
5 Nitrate as N	5.875	5.884	-0.009	96777197	8.00	7.97	
7 Orthophosphate as P	8.884	8.892	-0.008	33108518	8.00	7.98	
6 Sulfate	9.767	9.734	0.033	466051198	120.0	115.7	

Reagents:

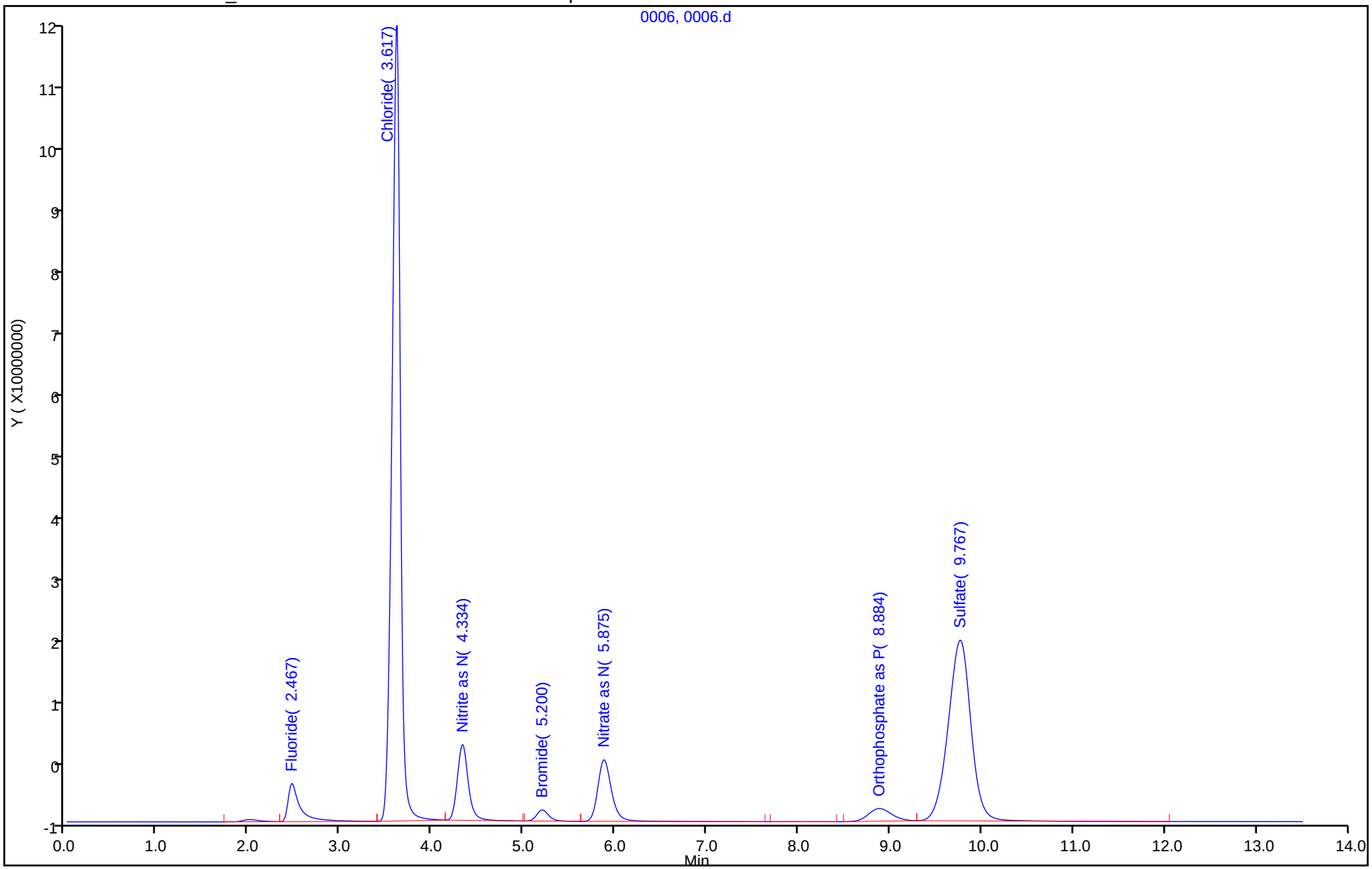
IC CAL cl/so4_00225 Amount Added: 2.40 Units: mL
IC Cal low_00406 Amount Added: 0.80 Units: mL

Report Date: 16-Oct-2018 20:06:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0006.d

Injection Date:	14-Oct-2018 13:12:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L5			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d
Lims ID: std L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Oct-2018 13:28:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075074-007
Misc. Info.: 2438 F
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 16-Oct-2018 20:06:58 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.467	0.000	67621065	10.0	10.2	
2 Chloride	3.642	3.592	0.050	1331004347	200.0	207.3	
3 Nitrite as N	4.342	4.325	0.017	121128137	10.0	10.2	
4 Bromide	5.201	5.200	0.001	19264476	10.0	10.1	
5 Nitrate as N	5.876	5.884	-0.008	125104355	10.0	10.3	
7 Orthophosphate as P	8.876	8.892	-0.016	42371320	10.0	10.2	
6 Sulfate	9.801	9.734	0.067	847847466	200.0	210.2	

Reagents:

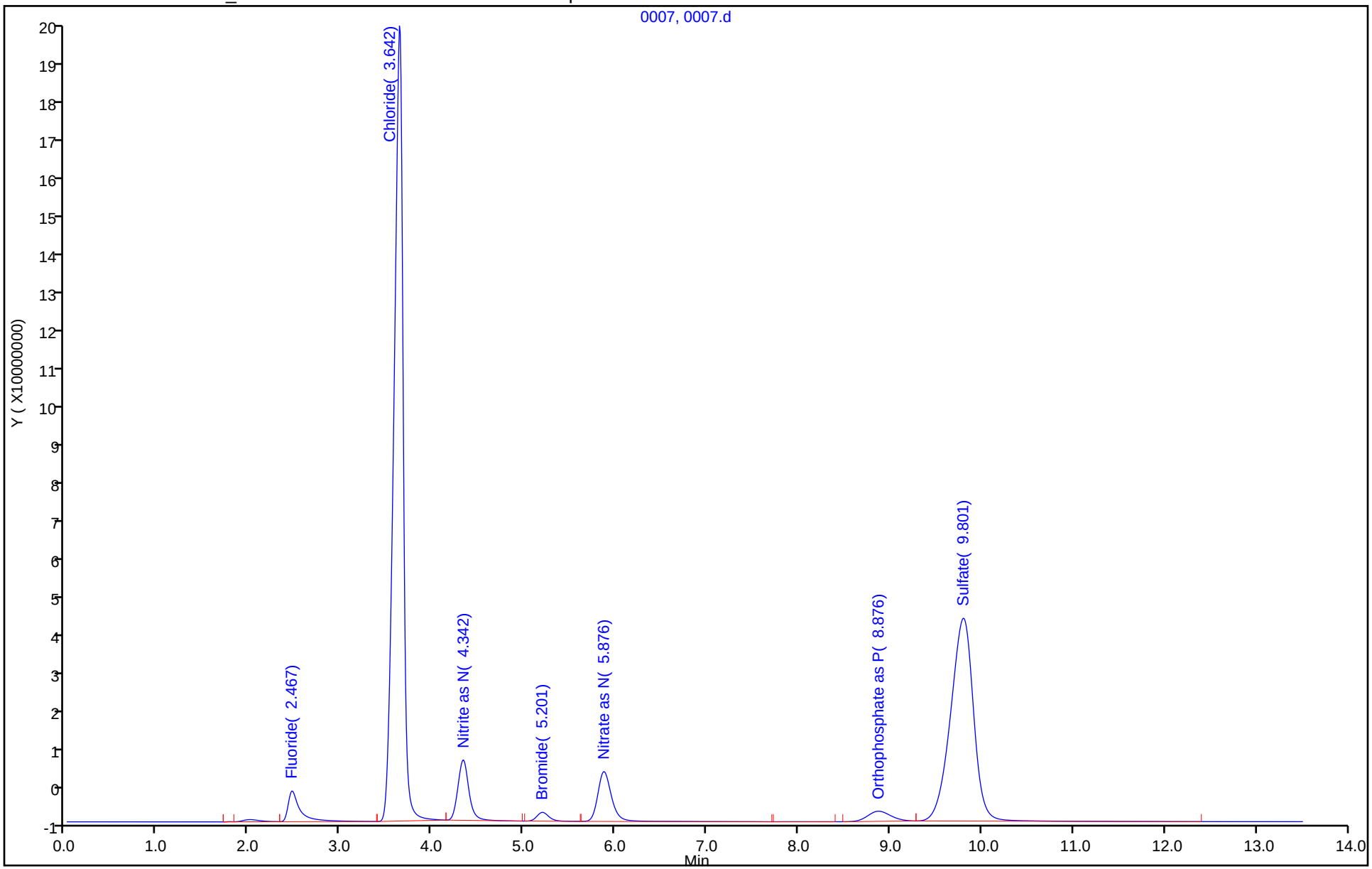
IC CAL cl/so4_00225 Amount Added: 4.00 Units: mL
IC Cal low_00406 Amount Added: 1.00 Units: mL

Report Date: 16-Oct-2018 20:06:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Injection Date:	14-Oct-2018 13:28:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	std L6			Worklist Smp#:	7
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



Batch 434136
434137
cal 433354

TestAmerica Denver

TestAmerica

IC Instrument Information

WL: 75273 Inst ID: 11 Analysis Date: 10/19/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	115789	2	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	client
=	~~115796~~	~~2~~	~~F Cl NO2 Br NO3 PO4 SO4~~	~~MS/D~~	
=	~~115809~~	~~4~~	~~F Cl NO2 Br NO3 PO4 SO4~~	~~MS/D~~ AM 10/21/18	
=			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	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
115809	4,5,13	F Cl NO2 Br NO3 PO4 SO4	10x	high
115809	15	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	conductivity
115809	5,4,13	F Cl NO2 Br NO3 PO4 SO4	20x	high
115809	15	F Cl NO2 Br NO3 PO4 SO4	50x	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		

Batch 434136
434137
cal 433354

TestAmerica Denver

TestAmerica

IC Instrument Information

WL: 75273 Inst ID: 11 Analysis Date: 10/19/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	115789	2	F Cl (NO2) Br (NO3) (PO4) (SO4)	(MS/D) 1	client
=	~~115796~~	~~2~~	~~F Cl NO2 Br NO3 PO4 SO4~~	~~MS/D~~	
=	~~115809~~	~~4~~	~~F Cl (NO2) Br (NO3) PO4 (SO4)~~	~~MS/D~~	10/21/18
=			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
115809	4,5,13	F (Cl) NO2 Br NO3 PO4 (SO4)	10x	high
115809	15	F (Cl) (NO2) Br (NO3) PO4 (SO4)	2x 20x	conductivity
115809	5,4,13	F Cl NO2 Br NO3 PO4 (SO4)	20x	high
115809	15	F Cl NO2 Br NO3 PO4 (SO4)	50x	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		

Panida R
10/30/18

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	21-Oct-2018 13:35:56

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b
Inj Date : 14-Oct-2018 12:06:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-197114	6646544		0.999	-197114	6646544		0.999
2 Chloride	-384204	6439542		0.998	-384204	6439542		0.998
3 Nitrite as N	-368431	1189260		0.999	-368431	1189260		0.999
4 Bromide	6655	1909230		1.000	6655	1909230		1.000
5 Nitrate as N	-310167	1218595		0.999	-310167	1218595		0.999
7 Orthophosphate as P	111151	4136881		0.999	111151	4136881		0.999
6 Sulfate	-139037	4040229		0.997	-139037	4040229		0.997

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Instrument: WC_IonChrom11 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 21-Oct-2018 13:35:56
No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b
Inj Date : 14-Oct-2018 12:06:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-197114	6646544		0.999	-197114	6646544		0.999
2 Chloride	-384204	6439542		0.998	-384204	6439542		0.998
3 Nitrite as N	-368431	118926C		0.999	-368431	118926C		0.999
4 Bromide	6655	190923C		1.000	6655	190923C		1.000
5 Nitrate as N	-310167	121859E		0.999	-310167	121859E		0.999
7 Orthophosphate as P	111151	4136881		0.999	111151	4136881		0.999
6 Sulfate	-139037	404022E		0.997	-139037	404022E		0.997

Panida R.
10/30/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Oct-2018 11:32:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-001
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.451	2.467	-0.016	36759520	5.00	5.56	
2 Chloride	3.576	3.600	-0.024	700530577	100.0	109.4	
3 Nitrite as N	4.276	4.325	-0.049	62157143	5.00	5.26	
4 Bromide	5.117	5.200	-0.083	10513771	5.00	5.50	
5 Nitrate as N	5.784	5.875	-0.091	65983383	5.00	5.44	
7 Orthophosphate as P	8.751	8.884	-0.133	22446792	5.00	5.40	
6 Sulfate	9.617	9.734	-0.117	442581633	100.0	109.9	

Reagents:

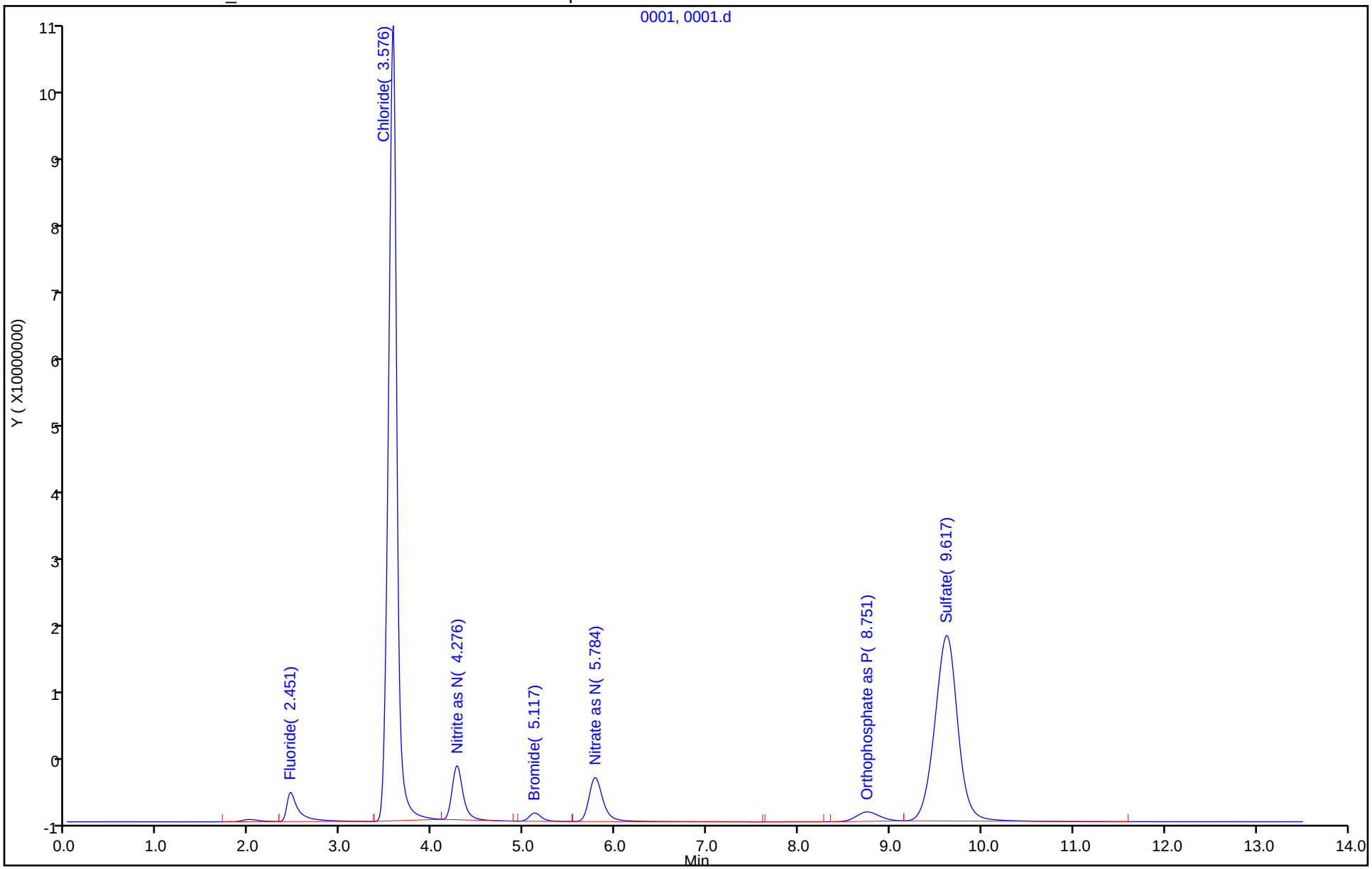
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0001.d

Injection Date:	19-Oct-2018 11:32:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0002.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Oct-2018 11:48:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-002
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

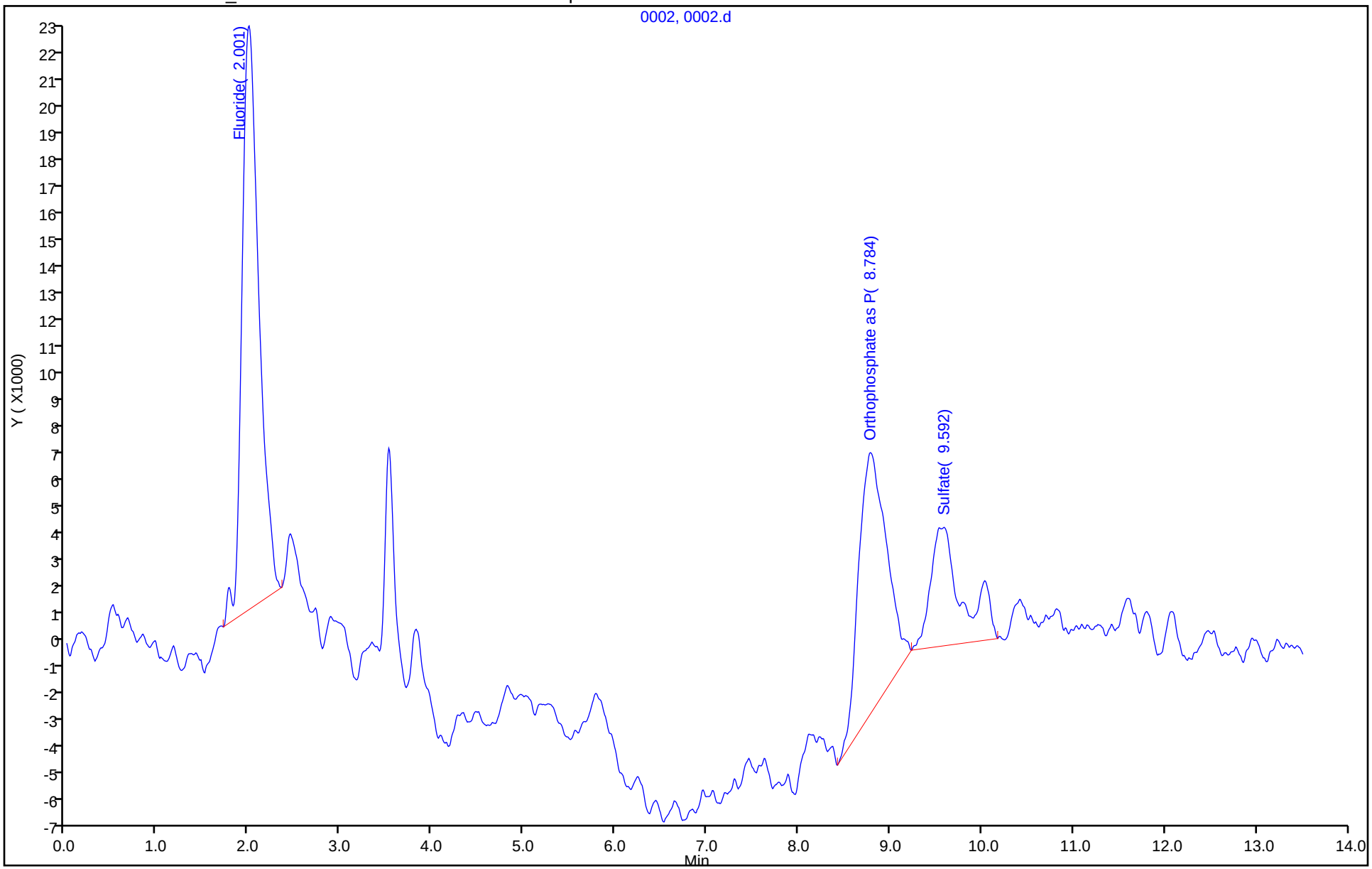
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.001	2.467	-0.466	278284		0.0715	
2 Chloride		3.600				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P	8.784	8.884	-0.100	202297		0.0220	
6 Sulfate	9.592	9.734	-0.142	103028		0.3696	

Report Date: 21-Oct-2018 13:35:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0002.d

Injection Date:	19-Oct-2018 11:48:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0003.d
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 19-Oct-2018 12:04:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-003
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	1405500	0.2000	0.2411	
2 Chloride	3.525	3.600	-0.075	12512398	2.50	2.54	
3 Nitrite as N	4.259	4.325	-0.066	2355787	0.2000	0.2291	
4 Bromide	5.117	5.200	-0.083	417322	0.2000	0.2151	
5 Nitrate as N	5.784	5.875	-0.091	2370947	0.2000	0.2200	
7 Orthophosphate as P	8.775	8.884	-0.109	952842	0.2000	0.2035	
6 Sulfate	9.567	9.734	-0.167	9307765	2.50	2.65	

Reagents:

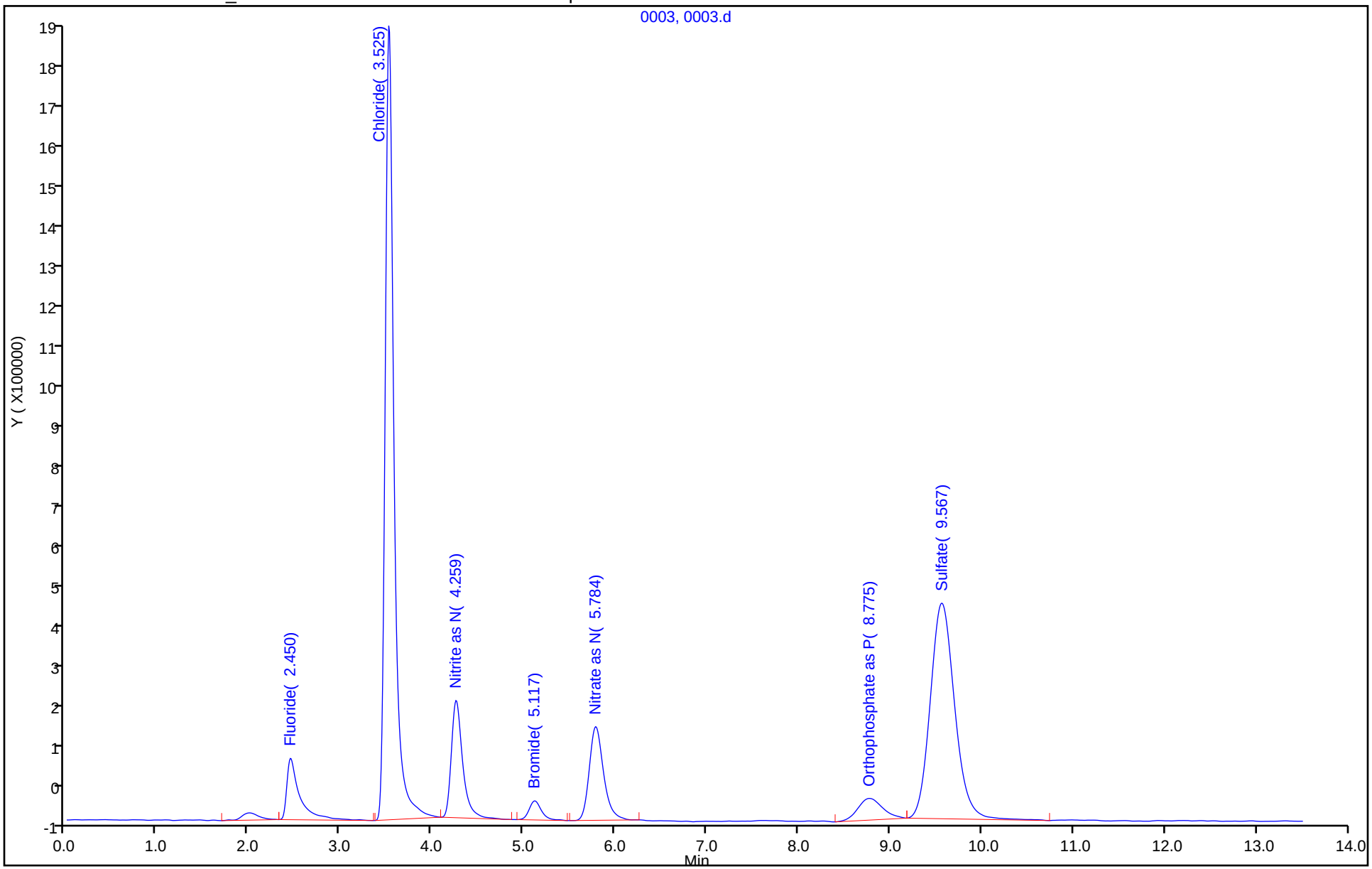
IC CAL cl/so4_00226 Amount Added: 0.05 Units: mL
IC Cal low_00407 Amount Added: 0.02 Units: mL

Report Date: 21-Oct-2018 13:35:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0003.d

Injection Date:	19-Oct-2018 12:04:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0004.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Oct-2018 12:21:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-004
Misc. Info.: 13024
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.467	-0.008	36758554	5.00	5.56	
2 Chloride	3.575	3.600	-0.025	701383203	100.0	109.5	
3 Nitrite as N	4.267	4.325	-0.058	62186142	5.00	5.26	
4 Bromide	5.109	5.200	-0.091	10539880	5.00	5.52	
5 Nitrate as N	5.775	5.875	-0.100	65850614	5.00	5.43	
7 Orthophosphate as P	8.750	8.884	-0.134	22174907	5.00	5.33	
6 Sulfate	9.625	9.734	-0.109	442318313	100.0	109.8	

Reagents:

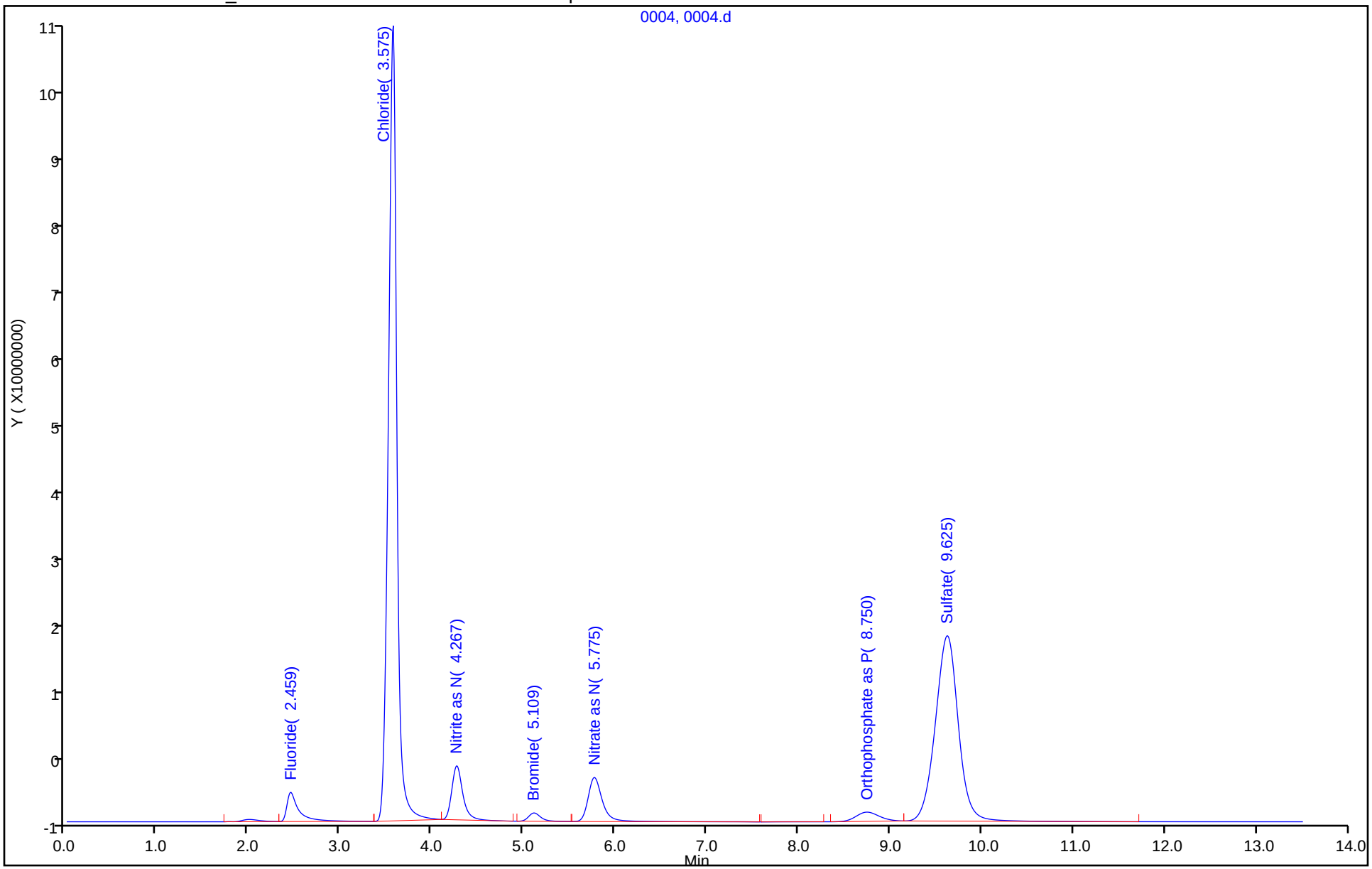
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0004.d

Injection Date:	19-Oct-2018 12:21:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0005.d
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 19-Oct-2018 12:37:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-005
Misc. Info.: 19748
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.451	2.467	-0.016	36990507	5.00	5.60	
2 Chloride	3.567	3.600	-0.033	701150059	100.0	109.5	
3 Nitrite as N	4.267	4.325	-0.058	62478680	5.00	5.28	
4 Bromide	5.109	5.200	-0.091	10595395	5.00	5.55	
5 Nitrate as N	5.767	5.875	-0.108	65276279	5.00	5.38	
7 Orthophosphate as P	8.742	8.884	-0.142	22465209	5.00	5.40	
6 Sulfate	9.626	9.734	-0.108	443859555	100.0	110.2	

Reagents:

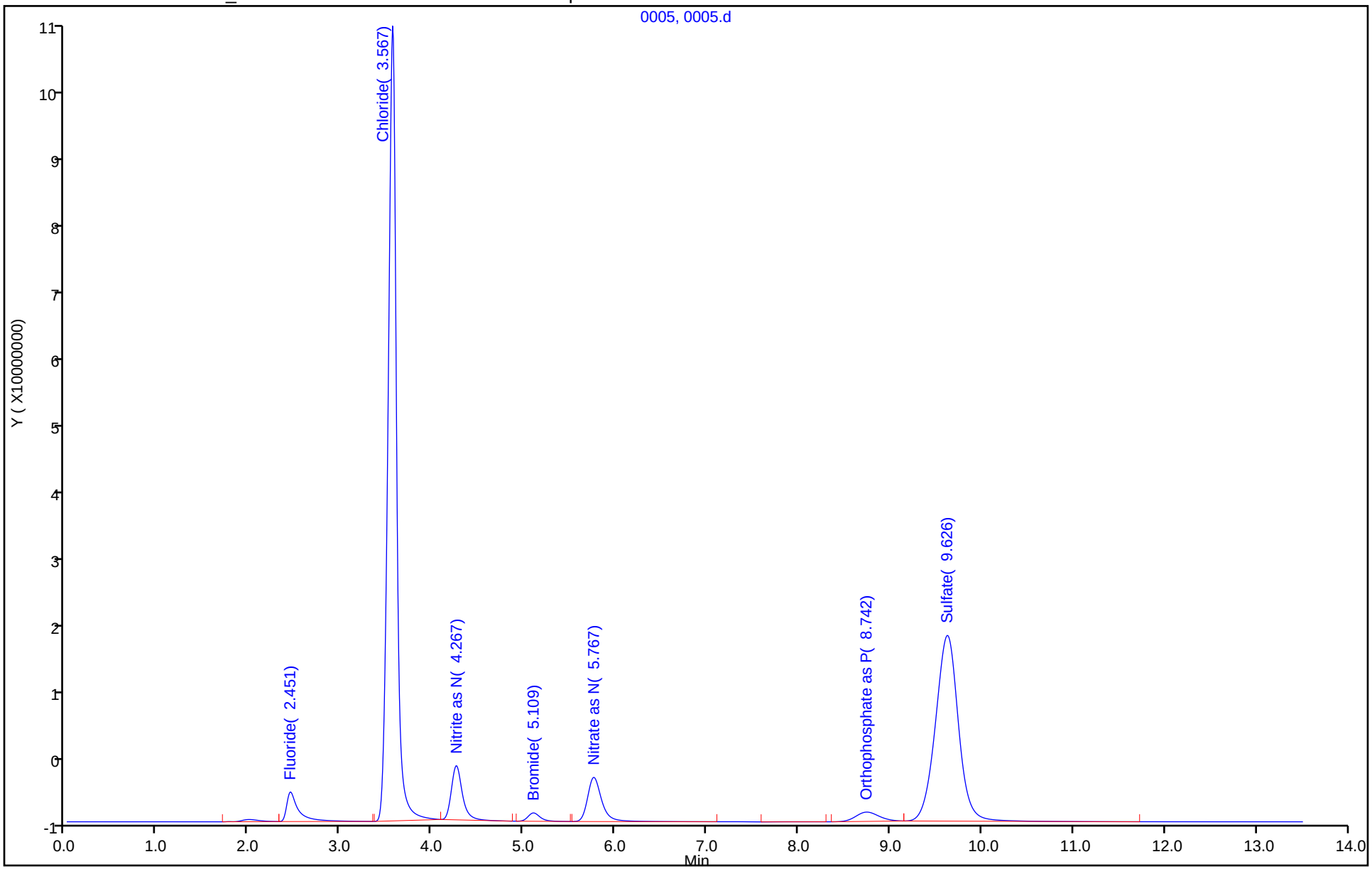
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0005.d

Injection Date:	19-Oct-2018 12:37:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0006.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Oct-2018 12:54:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-006
Misc. Info.: 25652
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

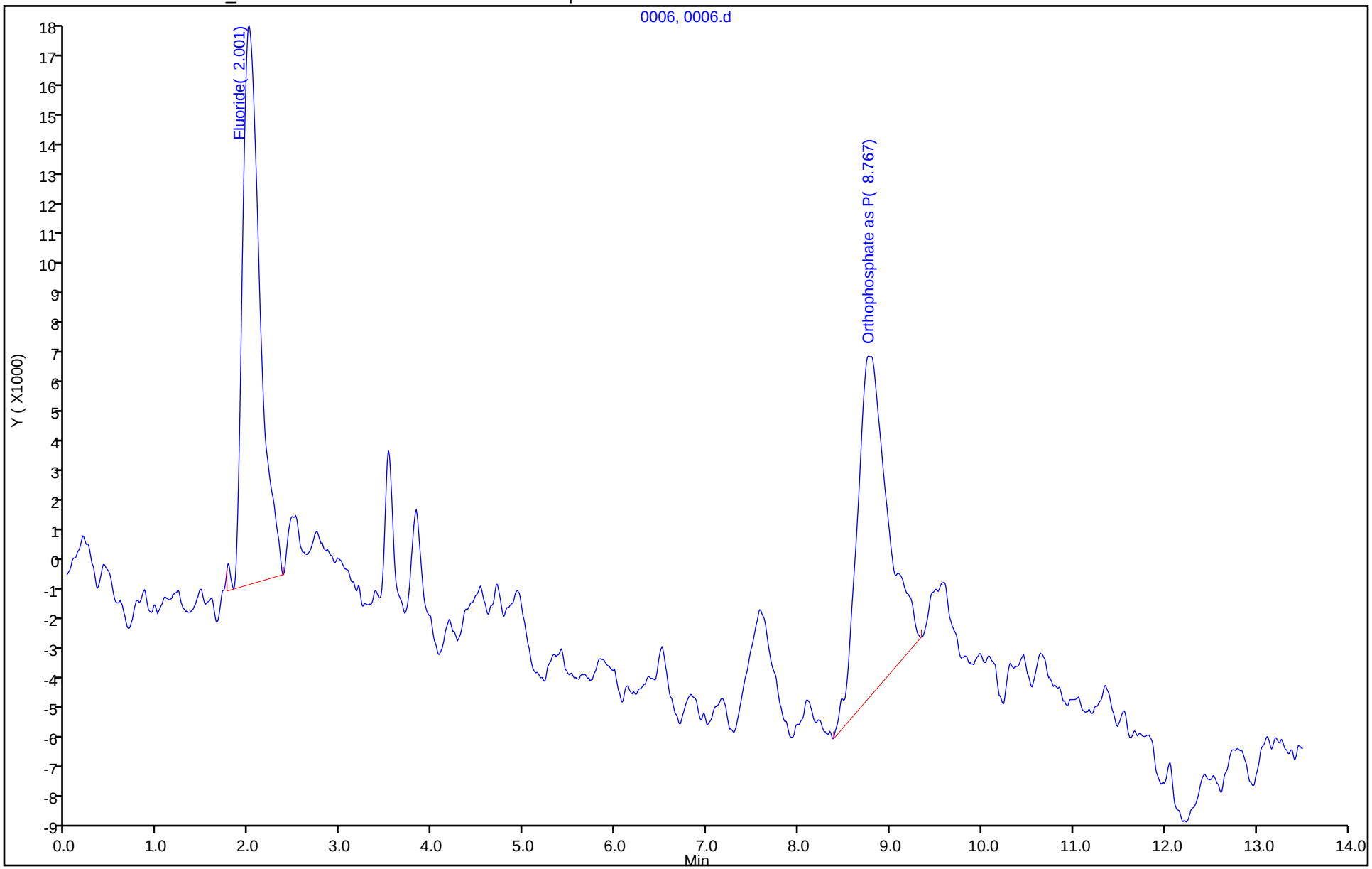
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.001	2.467	-0.466	245433		0.0666	
2 Chloride		3.600				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P	8.767	8.884	-0.117	258053		0.0355	
6 Sulfate		9.734				ND	

Report Date: 21-Oct-2018 13:35:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0006.d

Injection Date:	19-Oct-2018 12:54:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0011.d
Lims ID: 280-115789-C-2
Client ID: RQLMW-011-181002-GW
Sample Type: Client
Inject. Date: 19-Oct-2018 18:37:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-011
Misc. Info.: 7234 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:43 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

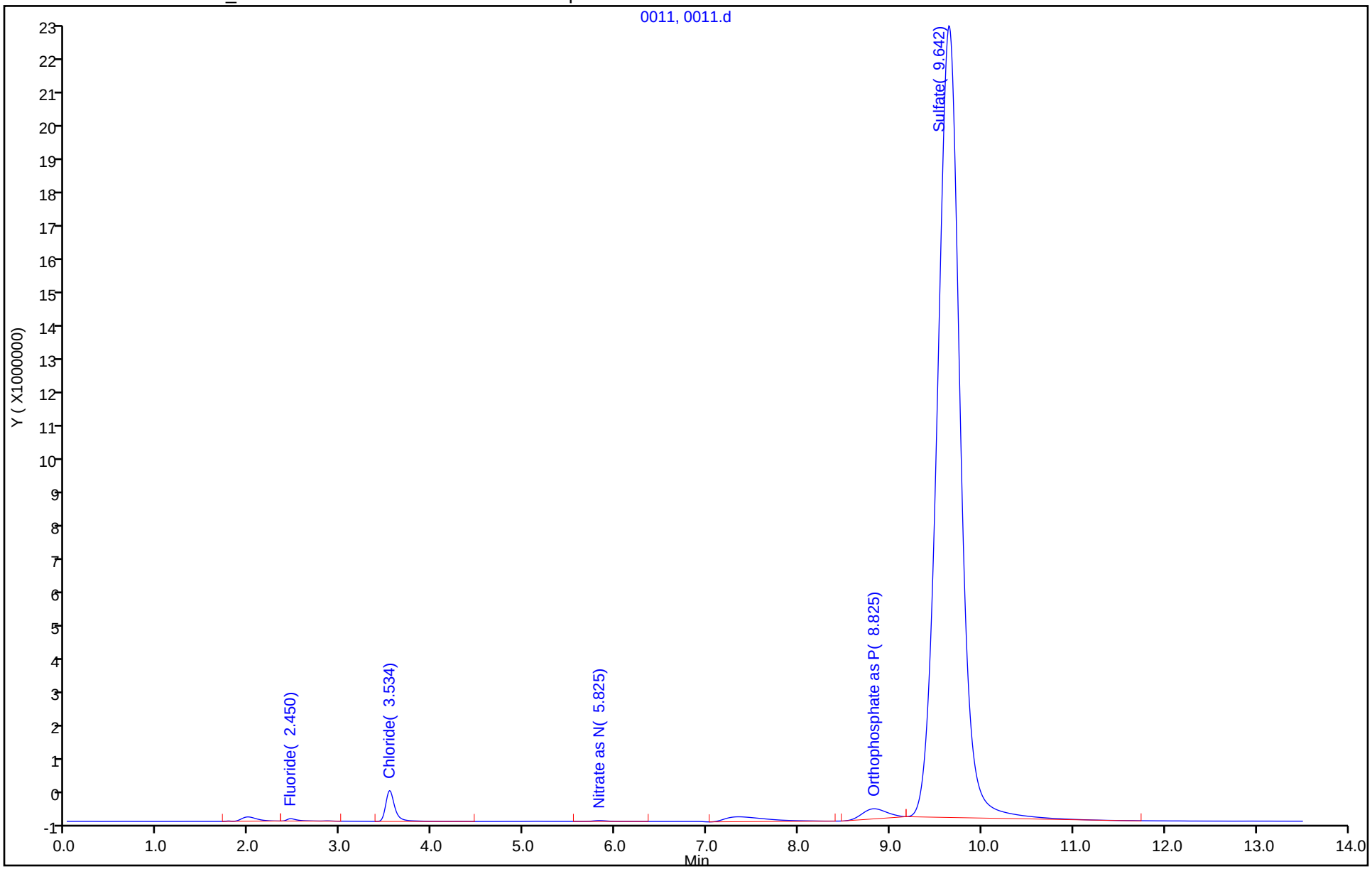
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	614237	0.1221	
2 Chloride	3.534	3.600	-0.066	6195539	1.56	
3 Nitrite as N		4.325			ND	
4 Bromide		5.200			ND	
5 Nitrate as N	5.825	5.875	-0.050	290954	0.0493	
7 Orthophosphate as P	8.825	8.884	-0.059	5340898	1.26	
6 Sulfate	9.642	9.734	-0.092	387817284	96.3	

Report Date: 21-Oct-2018 13:35:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0011.d

Injection Date:	19-Oct-2018 18:37:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-C-2	Lab Sample ID:	280-115789-2	Worklist Smp#:	11
Client ID:	RQLMW-011-181002-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0012.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 19-Oct-2018 19:24:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075273-012
Misc. Info.: 30741
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 21-Oct-2018 13:35:56 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0319

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.467	-0.017	33015993	5.00	5.00	
2 Chloride	3.567	3.600	-0.033	650654747	100.0	101.6	
3 Nitrite as N	4.275	4.325	-0.050	56778497	5.00	4.81	
4 Bromide	5.125	5.200	-0.075	9495430	5.00	4.97	
5 Nitrate as N	5.792	5.875	-0.083	60109959	5.00	4.96	
7 Orthophosphate as P	8.750	8.884	-0.134	22144587	5.00	5.33	
6 Sulfate	9.600	9.734	-0.134	412914347	100.0	102.5	

Reagents:

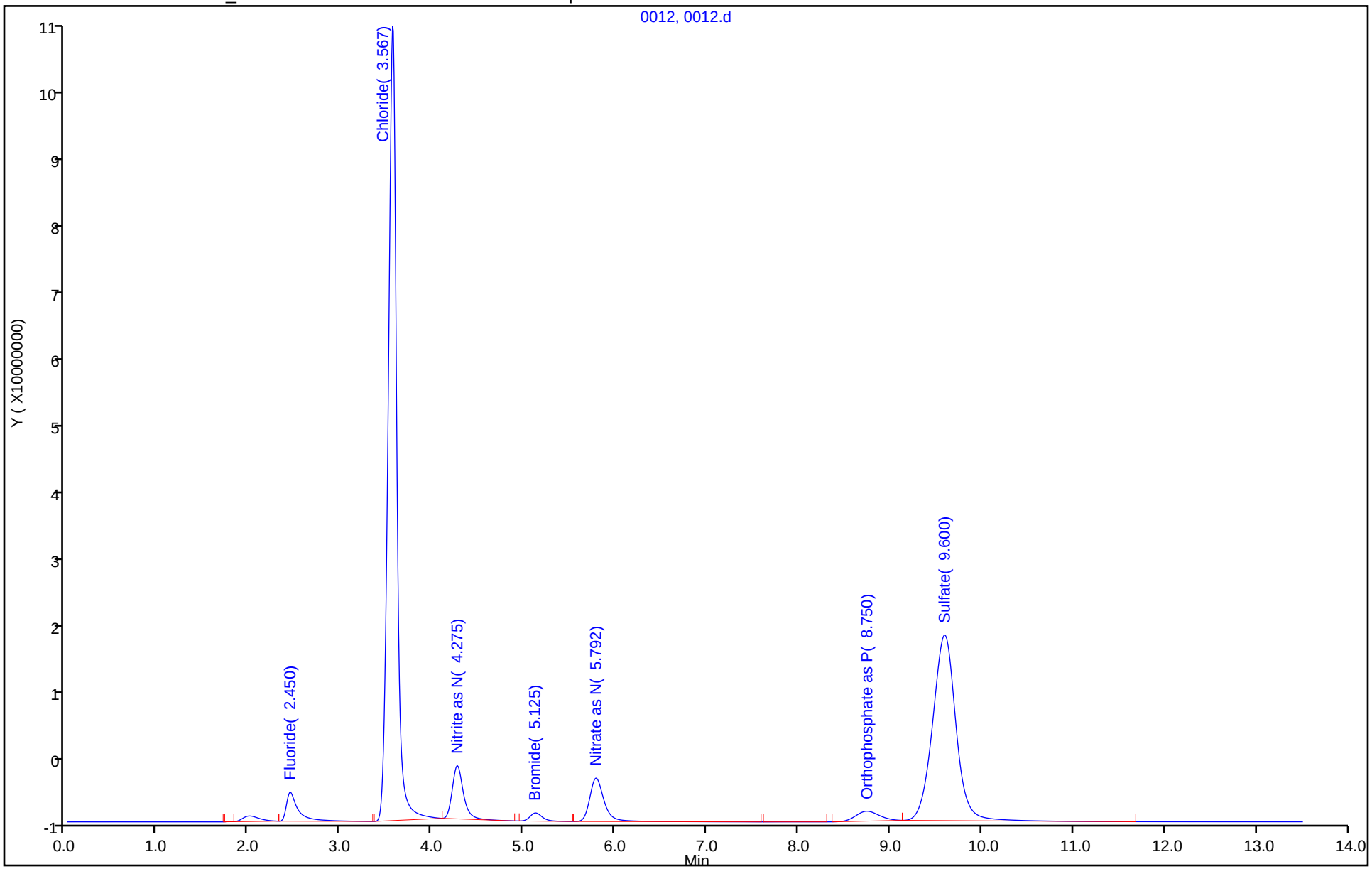
IC LCS_01376 Amount Added: 5.00 Units: mL

Report Date: 21-Oct-2018 13:35:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0012.d

Injection Date:	19-Oct-2018 19:24:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	12
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0013.d				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	19-Oct-2018 19:42:00	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075273-013				
Misc. Info.:	15654				
Operator ID:		Instrument ID:	WC_IonChrom11		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\Anions_IC11.m				
Limit Group:	Wet - Anions 28D				
Last Update:	21-Oct-2018 13:35:56	Calib Date:	14-Oct-2018 13:28:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d				
Column 1 :			Det: 0005		
Process Host:	CTX0319				

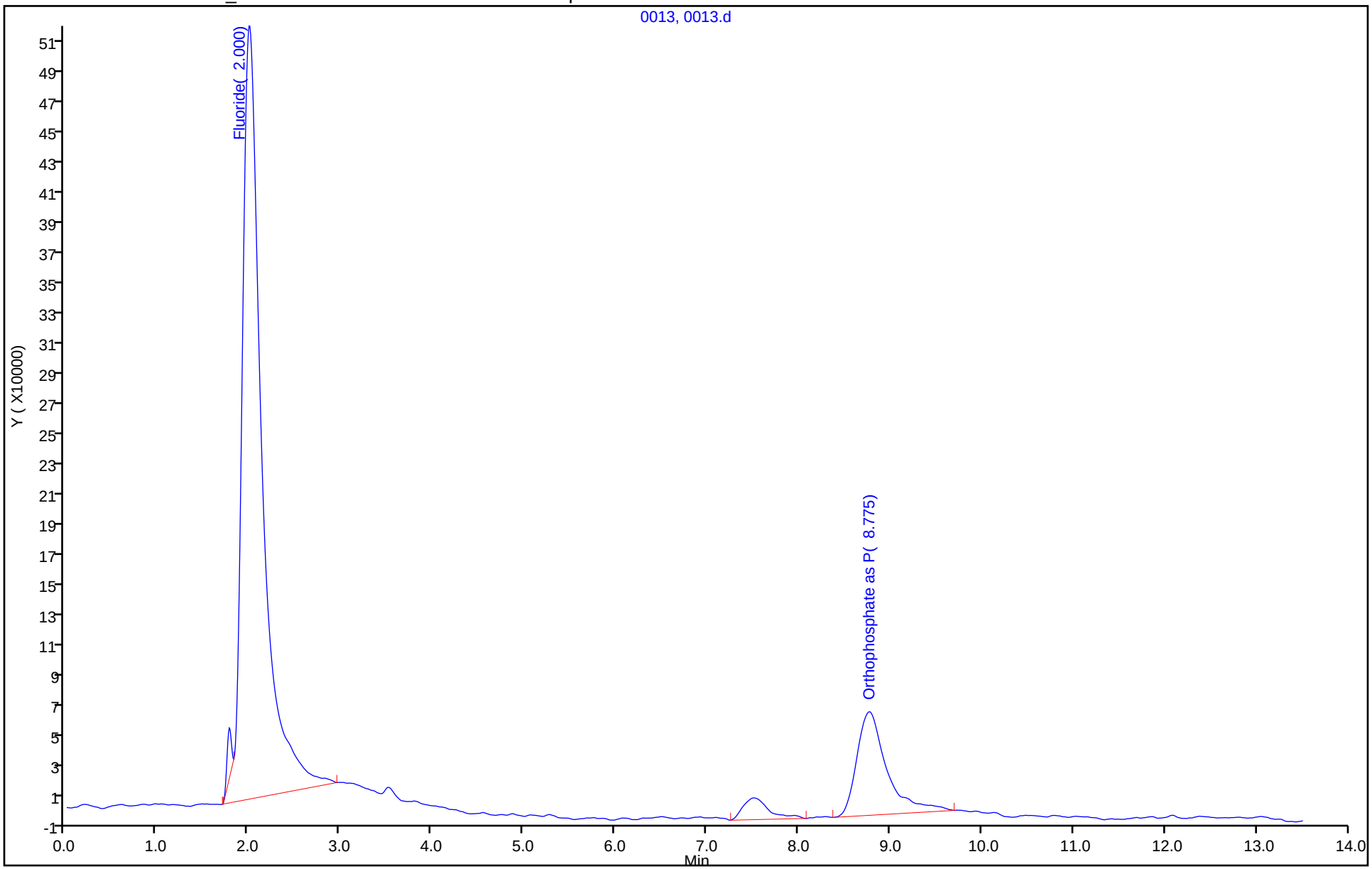
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.000	2.467	-0.467	7844566		1.21	
2 Chloride		3.600				ND	
3 Nitrite as N		4.325				ND	
4 Bromide		5.200				ND	
5 Nitrate as N		5.875				ND	
7 Orthophosphate as P	8.775	8.884	-0.109	1552713		0.3485	
6 Sulfate		9.734				ND	

Report Date: 21-Oct-2018 13:35:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181019-75273.b\0013.d

Injection Date:	19-Oct-2018 19:42:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	13
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver

batch 434307
434308
cal 433354

TestAmerica

IC Instrument Information

WL: 75323 Inst ID: 11 Analysis Date: 10/21/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	115789	1	F Cl (NO2) Br (NO3) (PO4) (SO4)	(MS/D)-1	client
=	115885	1	F Cl NO2 Br NO3 (PO4) SO4	MS/D	
=	115356	8	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	
=			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
115885	1	F Cl NO2 Br NO3 (PO4) SO4	10x	dark brown
115356	2,3,4,5,6,7	F (Cl) NO2 Br NO3 PO4 (SO4)	5x 10x	historical
		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		

TestAmerica Denver

batch 434307
434308
cal 433354

TestAmerica

IC Instrument Information

WL: 75323 Inst ID: 11 Analysis Date: 10/21/18 Analyst: AM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	115789	1	F Cl ~~NO2~~ Br ~~NO3~~ ~~PO4~~ ~~SO4~~	~~MS/D~~ -1	client
=	115885	1	F Cl NO2 Br NO3 (PO4) SO4	MS/D	
=	115356	8	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	
=			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
115885	1	F Cl NO2 Br NO3 (PO4) SO4	10x	dark brown
115356	2,3,4,5,6,7	F (Cl) NO2 Br NO3 PO4 (SO4)	5x 10x	historical
		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		
		F Cl NO2 Br NO3 PO4 SO4		

Panida R
10/23/18

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	22-Oct-2018 17:09:10

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b
Inj Date : 14-Oct-2018 12:06:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-197114	6646544		0.999	-197114	6646544		0.999
2 Chloride	-384204	6439542		0.998	-384204	6439542		0.998
3 Nitrite as N	-368431	1189260		0.999	-368431	1189260		0.999
4 Bromide	6655	1909230		1.000	6655	1909230		1.000
5 Nitrate as N	-310167	1218595		0.999	-310167	1218595		0.999
7 Orthophosphate as P	111151	4136881		0.999	111151	4136881		0.999
6 Sulfate	-139037	4040229		0.997	-139037	4040229		0.997

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	22-Oct-2018 17:09:10

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b
Inj Date : 14-Oct-2018 12:06:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-197114	6646544		0.999	-197114	6646544		0.999
2 Chloride	-384204	6439542		0.998	-384204	6439542		0.998
3 Nitrite as N	-368431	118926C		0.999	-368431	118926C		0.999
4 Bromide	6655	190923C		1.000	6655	190923C		1.000
5 Nitrate as N	-310167	121859E		0.999	-310167	121859E		0.999
7 Orthophosphate as P	111151	4136881		0.999	111151	4136881		0.999
6 Sulfate	-139037	404022E		0.997	-139037	404022E		0.997

Panida R
10/28/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 22-Oct-2018 00:15:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-001
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.450	2.459	-0.009	39921621	5.00	6.04	
2 Chloride	3.584	3.575	0.009	697708540	100.0	108.9	
3 Nitrite as N	4.284	4.275	0.009	62667459	5.00	5.30	
4 Bromide	5.134	5.125	0.009	10458737	5.00	5.47	
5 Nitrate as N	5.792	5.784	0.008	66619249	5.00	5.49	
7 Orthophosphate as P	8.725	8.717	0.008	22022925	5.00	5.30	
6 Sulfate	9.584	9.575	0.009	441002390	100.0	109.5	

Reagents:

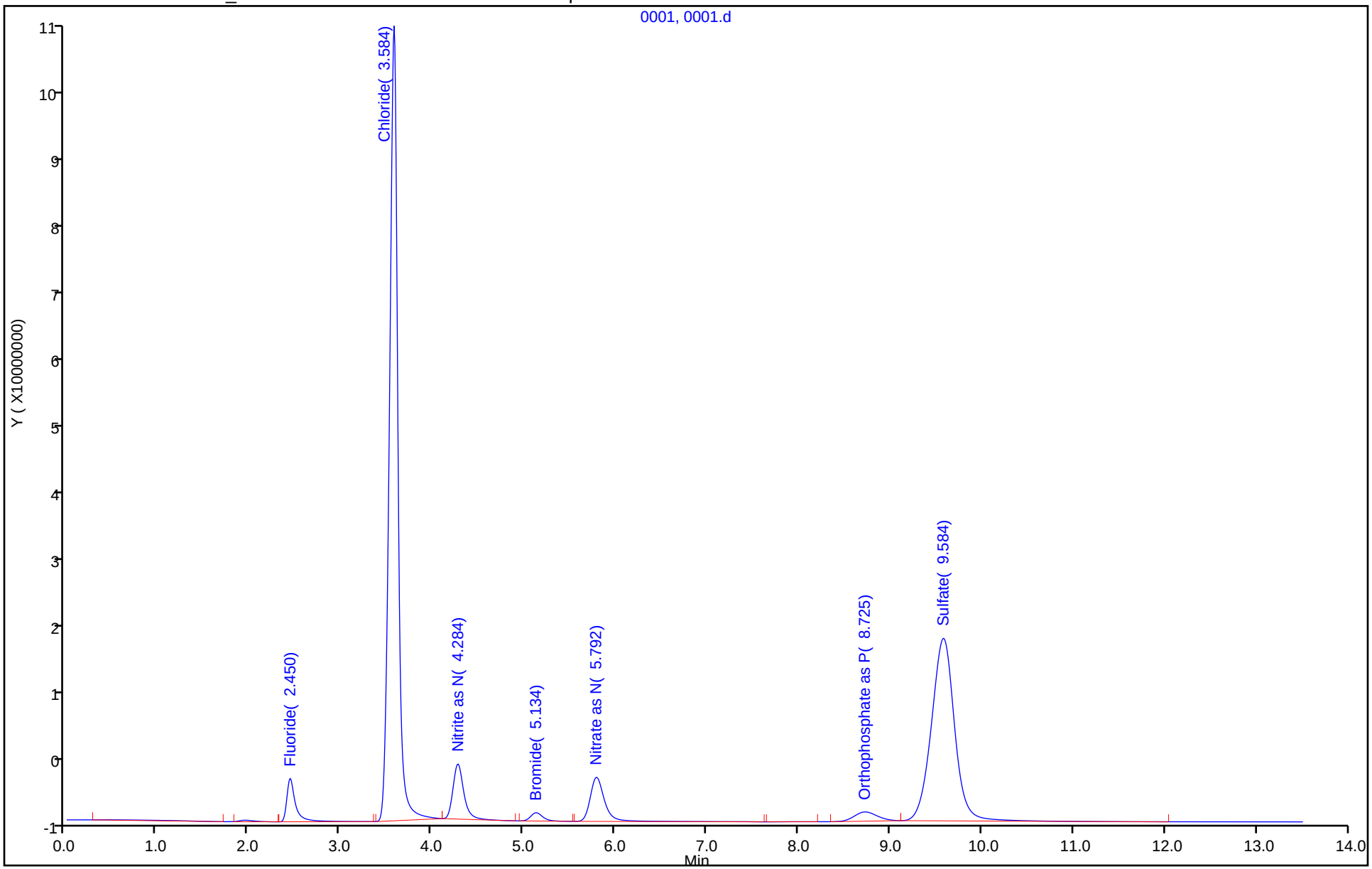
IC LCS_01378 Amount Added: 5.00 Units: mL

Report Date: 22-Oct-2018 16:50:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0001.d

Injection Date:	22-Oct-2018 00:15:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0002.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 22-Oct-2018 00:31:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-002
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

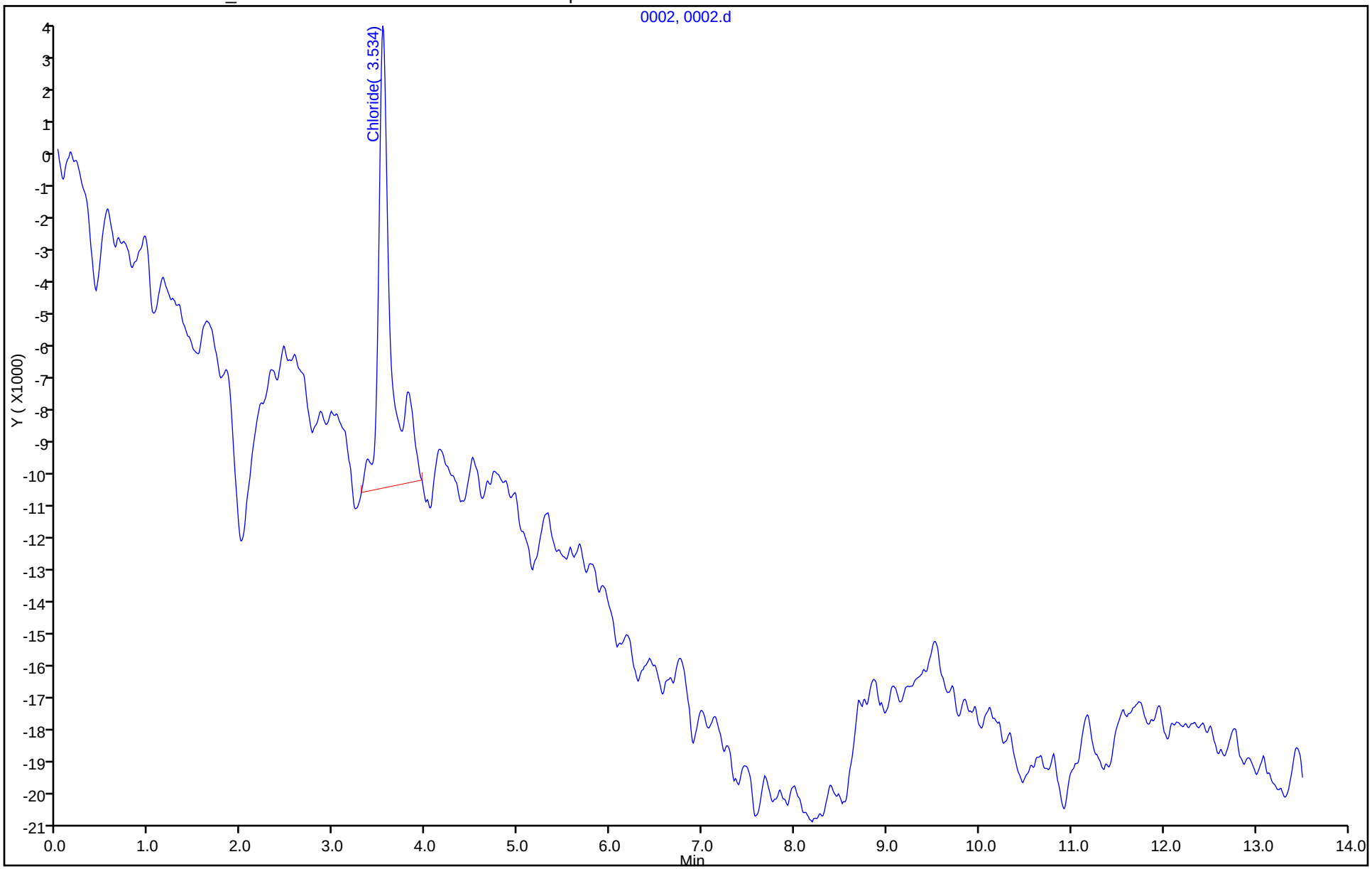
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.459				ND	
2 Chloride	3.534	3.575	-0.041	128338		0.6166	
3 Nitrite as N		4.275				ND	
4 Bromide		5.125				ND	
5 Nitrate as N		5.784				ND	
7 Orthophosphate as P		8.717				ND	
6 Sulfate		9.575				ND	

Report Date: 22-Oct-2018 16:50:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0002.d

Injection Date:	22-Oct-2018 00:31:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0003.d
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 22-Oct-2018 00:47:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-003
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.459	0.008	1120288	0.2000	0.1982	
2 Chloride	3.534	3.575	-0.041	12097347	2.50	2.48	
3 Nitrite as N	4.267	4.275	-0.008	2362151	0.2000	0.2296	
4 Bromide	5.134	5.125	0.009	439507	0.2000	0.2267	
5 Nitrate as N	5.801	5.784	0.017	2476264	0.2000	0.2287	
7 Orthophosphate as P	8.784	8.717	0.067	520451	0.2000	0.0989	
6 Sulfate	9.509	9.575	-0.066	8908560	2.50	2.55	

Reagents:

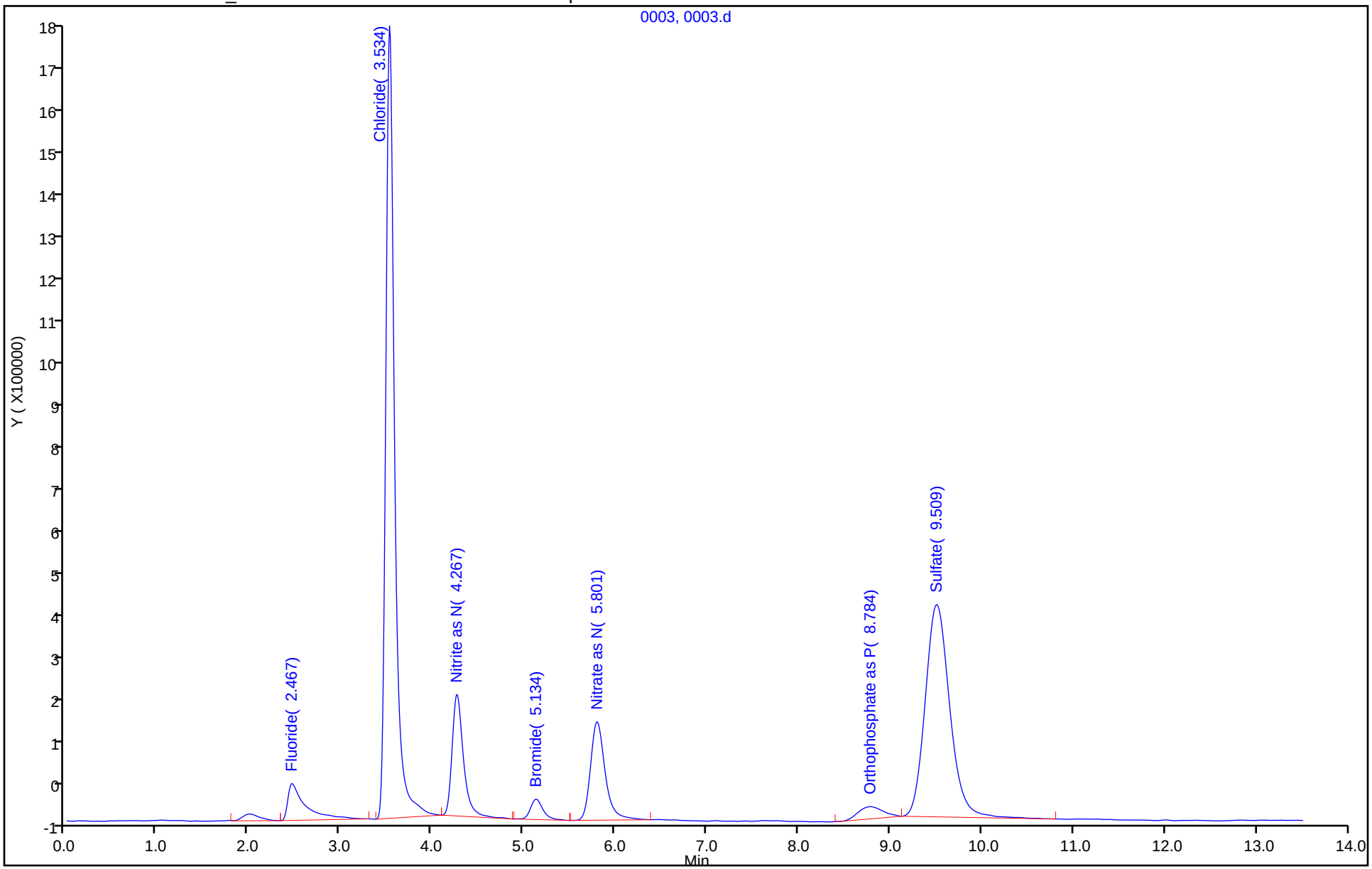
IC CAL cl/so4_00226 Amount Added: 0.05 Units: mL
IC Cal low_00408 Amount Added: 0.02 Units: mL

Report Date: 22-Oct-2018 16:50:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0003.d

Injection Date:	22-Oct-2018 00:47:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0004.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 22-Oct-2018 01:04:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-004
Misc. Info.: 4 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.459	0.008	31014194	5.00	4.70	
2 Chloride	3.576	3.575	0.001	697252595	100.0	108.9	
3 Nitrite as N	4.276	4.275	0.001	62159442	5.00	5.26	
4 Bromide	5.134	5.125	0.009	10414186	5.00	5.45	
5 Nitrate as N	5.792	5.784	0.008	66268893	5.00	5.46	
7 Orthophosphate as P	8.726	8.717	0.009	18144950	5.00	4.36	
6 Sulfate	9.567	9.575	-0.008	438712874	100.0	108.9	

Reagents:

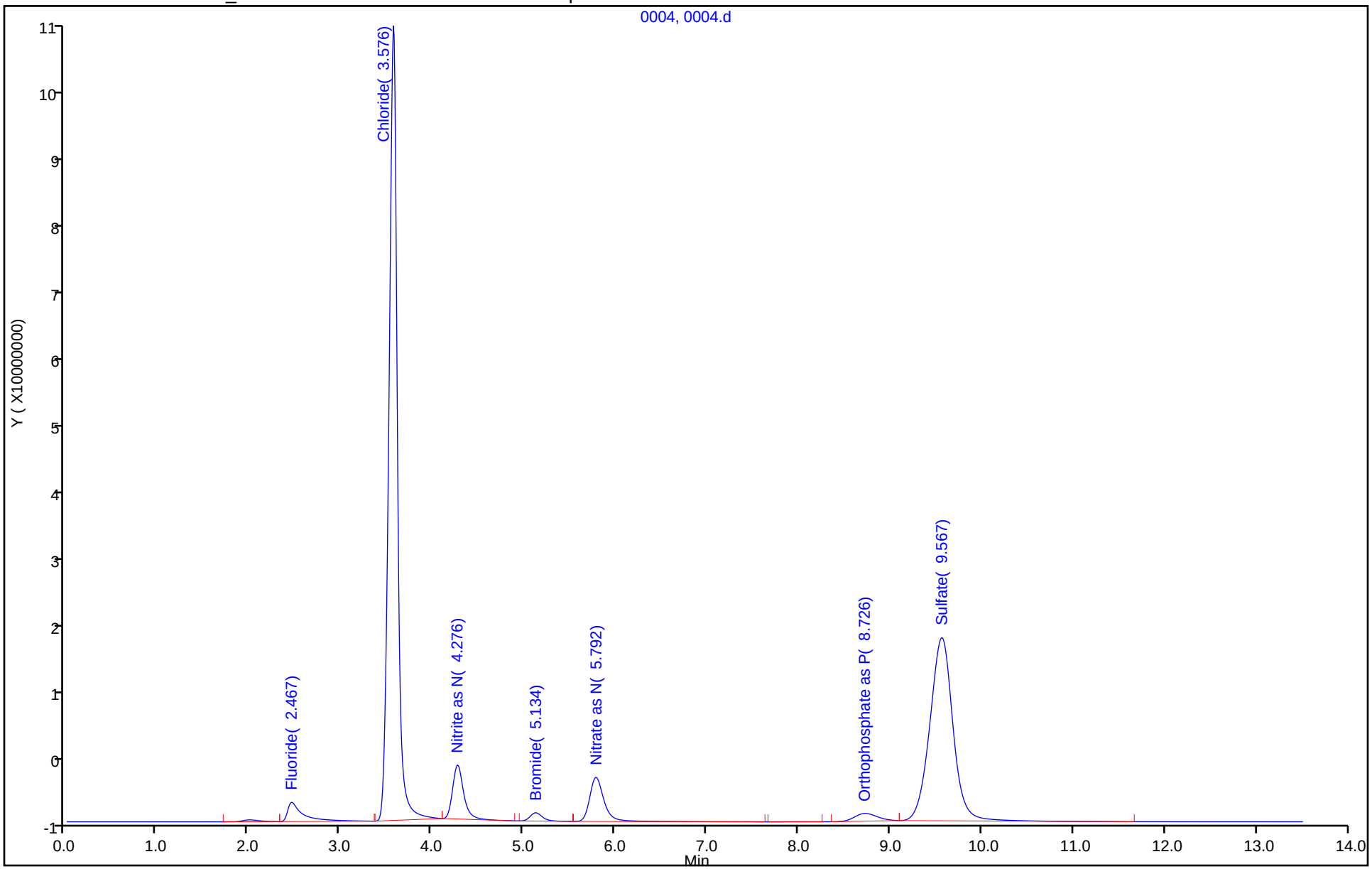
IC LCS_01378 Amount Added: 5.00 Units: mL

Report Date: 22-Oct-2018 16:50:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0004.d

Injection Date:	22-Oct-2018 01:04:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0005.d
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 22-Oct-2018 01:20:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-005
Misc. Info.: 5 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.459	0.008	32014297	5.00	4.85	
2 Chloride	3.576	3.575	0.001	698461350	100.0	109.1	
3 Nitrite as N	4.276	4.275	0.001	62238766	5.00	5.26	
4 Bromide	5.134	5.125	0.009	10431837	5.00	5.46	
5 Nitrate as N	5.792	5.784	0.008	66332970	5.00	5.47	
7 Orthophosphate as P	8.726	8.717	0.009	19023052	5.00	4.57	
6 Sulfate	9.567	9.575	-0.008	441031729	100.0	109.5	

Reagents:

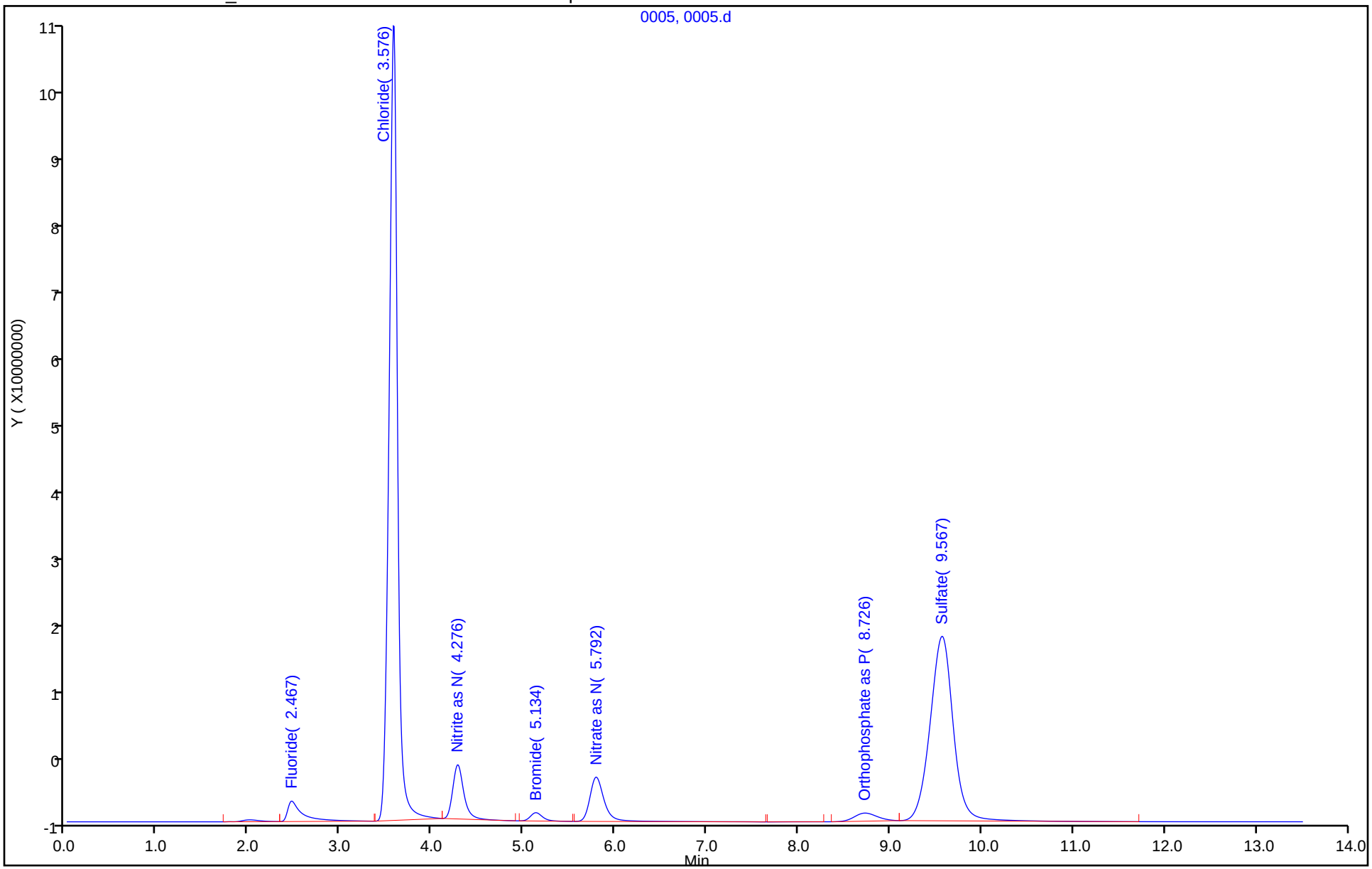
IC LCS_01378 Amount Added: 5.00 Units: mL

Report Date: 22-Oct-2018 16:51:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0005.d

Injection Date:	22-Oct-2018 01:20:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0006.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 22-Oct-2018 01:37:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-006
Misc. Info.: 6 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

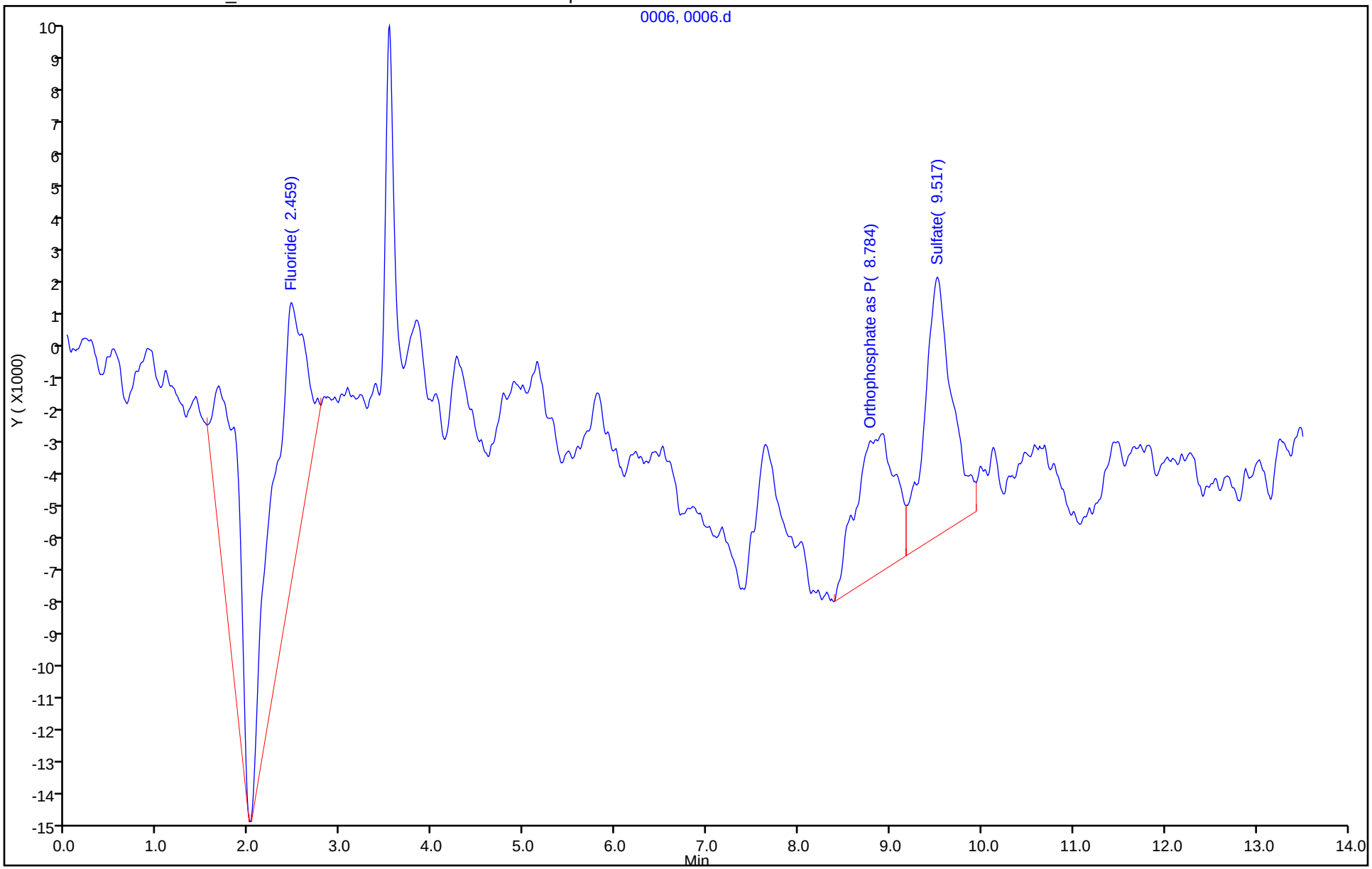
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.459	0.000	211338		0.0615	
2 Chloride		3.575				ND	
3 Nitrite as N		4.275				ND	
4 Bromide		5.125				ND	
5 Nitrate as N		5.784				ND	
7 Orthophosphate as P	8.784	8.717	0.067	122503		0.002744	
6 Sulfate	9.517	9.575	-0.058	160574		0.3839	

Report Date: 22-Oct-2018 16:51:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0006.d

Injection Date:	22-Oct-2018 01:37:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0008.d
Lims ID: 280-115789-G-1 DU
Client ID:
Sample Type: DU
Inject. Date: 22-Oct-2018 01:54:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-008
Misc. Info.: 2308
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

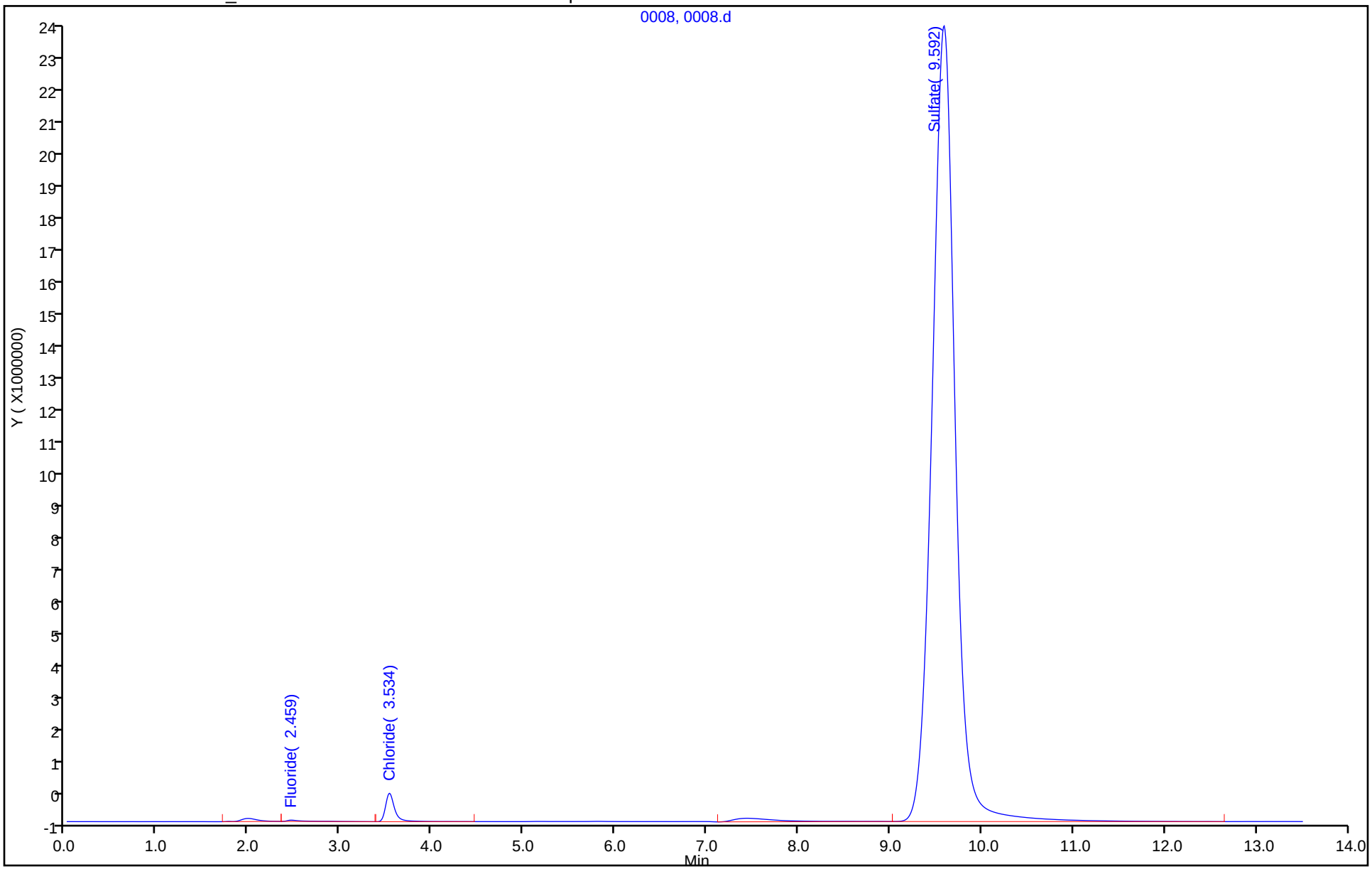
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.459	0.000	487347		0.1030	
2 Chloride	3.534	3.575	-0.041	5972975		1.52	
3 Nitrite as N		4.275				ND	
4 Bromide		5.125				ND	
5 Nitrate as N		5.784				ND	
7 Orthophosphate as P		8.717				ND	
6 Sulfate	9.592	9.575	0.017	417639982		103.7	

Report Date: 22-Oct-2018 16:51:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0008.d

Injection Date:	22-Oct-2018 01:54:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-G-1 DU			Worklist Smp#:	8
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0010.d
Lims ID: 280-115789-G-1 MSD
Client ID: RQLMW-011-181001-GW
Sample Type: MSD
Inject. Date: 22-Oct-2018 02:10:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-010
Misc. Info.: 10195
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.459	0.008	33183846	5.00	5.02	
2 Chloride	3.542	3.575	-0.033	157338584	25.0	25.0	
3 Nitrite as N	4.284	4.275	0.009	58373385	5.00	4.94	
4 Bromide	5.142	5.125	0.017	10578492	5.00	5.54	
5 Nitrate as N	5.809	5.784	0.025	66795794	5.00	5.51	
7 Orthophosphate as P	8.825	8.717	0.108	8425322	5.00	2.01	
6 Sulfate	9.609	9.575	0.034	533883417	25.0	132.5	

Reagents:

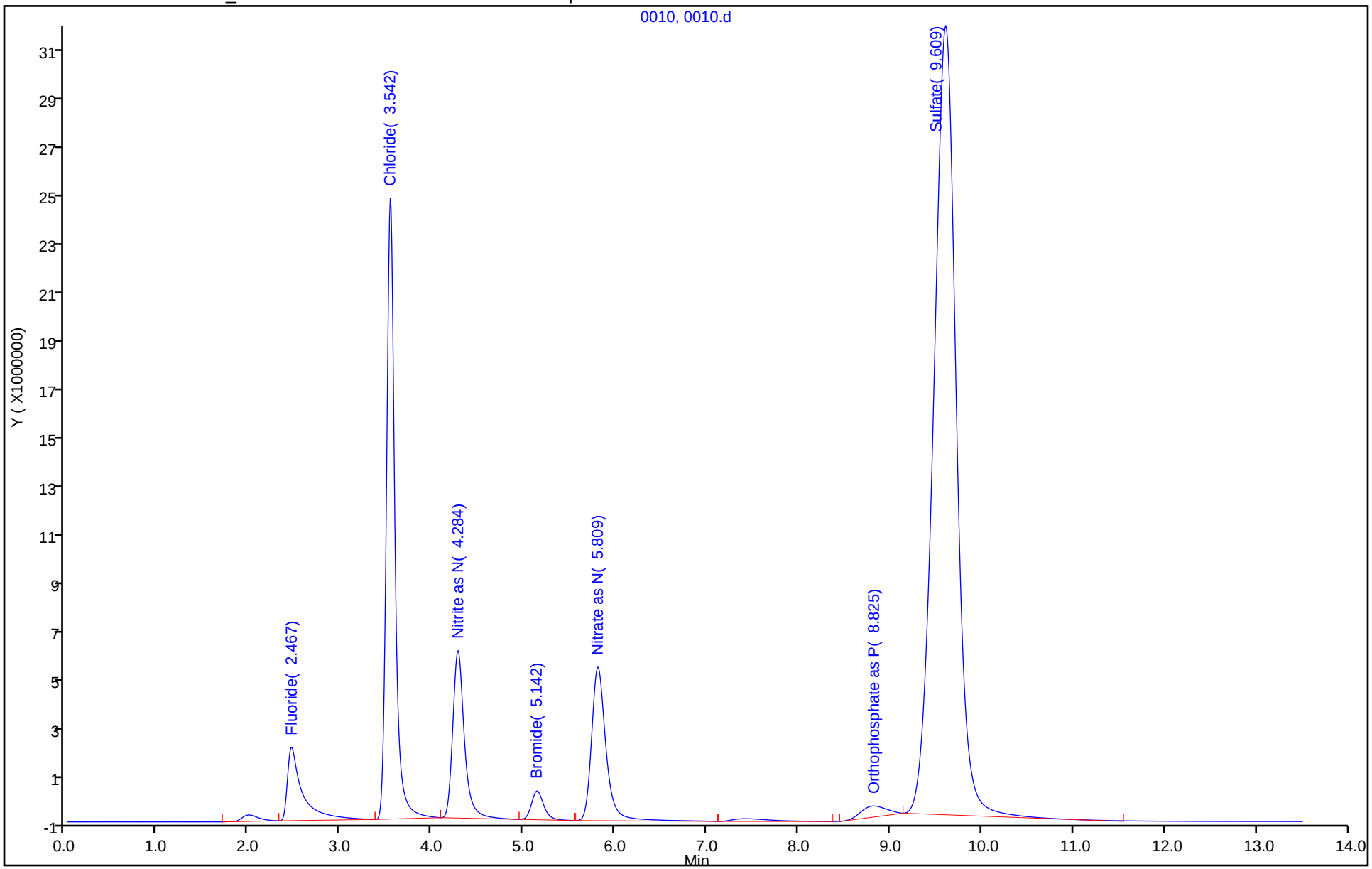
ICMS/MSD WEEK_00560 Amount Added: 0.05 Units: mL

Report Date: 22-Oct-2018 16:51:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0010.d

Injection Date:	22-Oct-2018 02:10:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-G-1 MSD			Worklist Smp#:	10
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0017.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 22-Oct-2018 04:04:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-017
Misc. Info.: 24645
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:51:52 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.459	0.000	34401040	5.00	5.21	
2 Chloride	3.576	3.575	0.001	695837058	100.0	108.7	
3 Nitrite as N	4.276	4.275	0.001	62037382	5.00	5.25	
4 Bromide	5.126	5.125	0.001	10399665	5.00	5.44	
5 Nitrate as N	5.784	5.784	0.000	65662161	5.00	5.41	
7 Orthophosphate as P	8.717	8.717	0.000	21353758	5.00	5.13	
6 Sulfate	9.576	9.575	0.001	442525802	100.0	109.9	

Reagents:

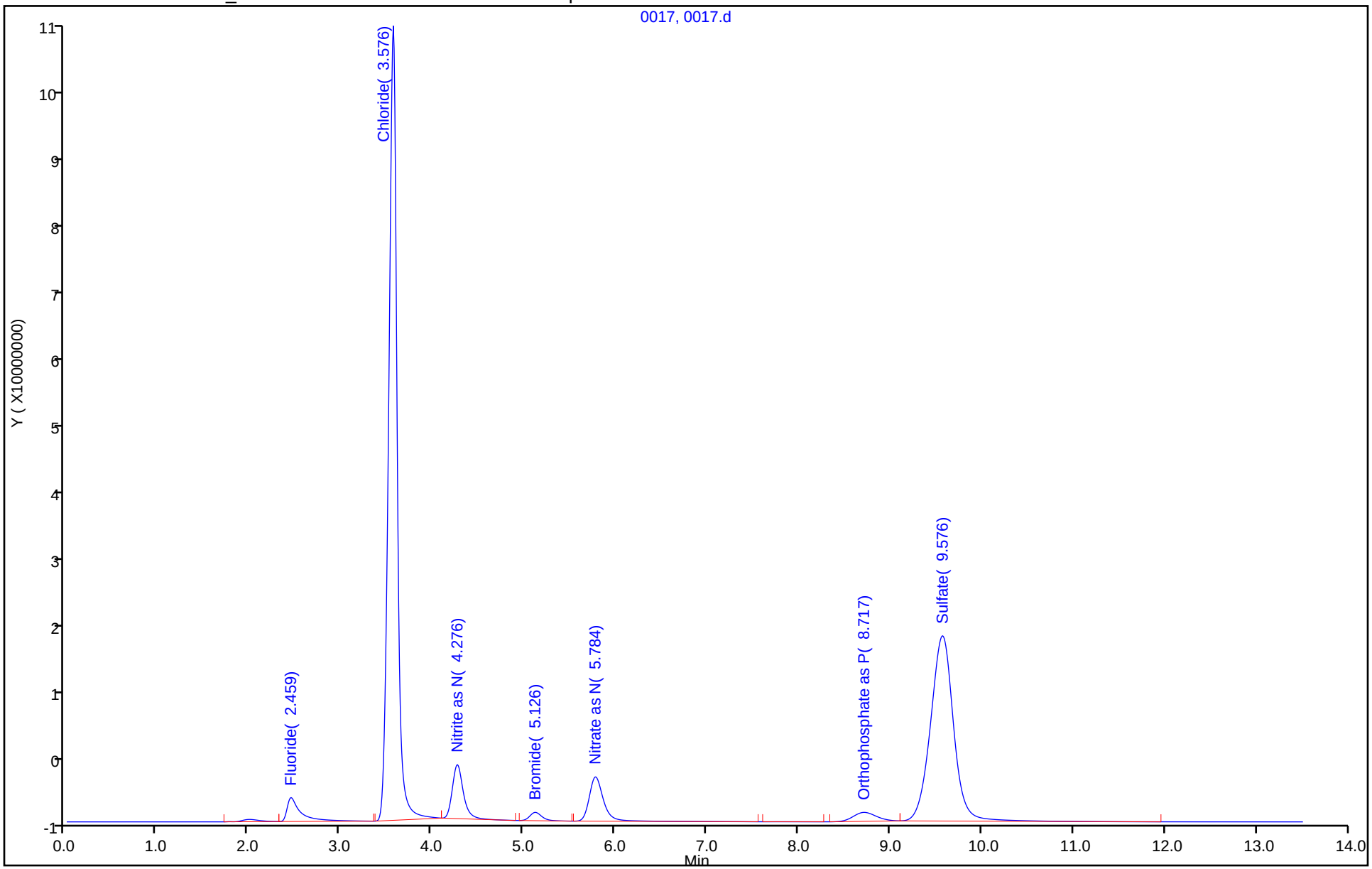
IC LCS_01378 Amount Added: 5.00 Units: mL

Report Date: 22-Oct-2018 16:51:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0017.d

Injection Date:	22-Oct-2018 04:04:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0018.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 22-Oct-2018 04:21:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-018
Misc. Info.: 31897
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:51:52 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

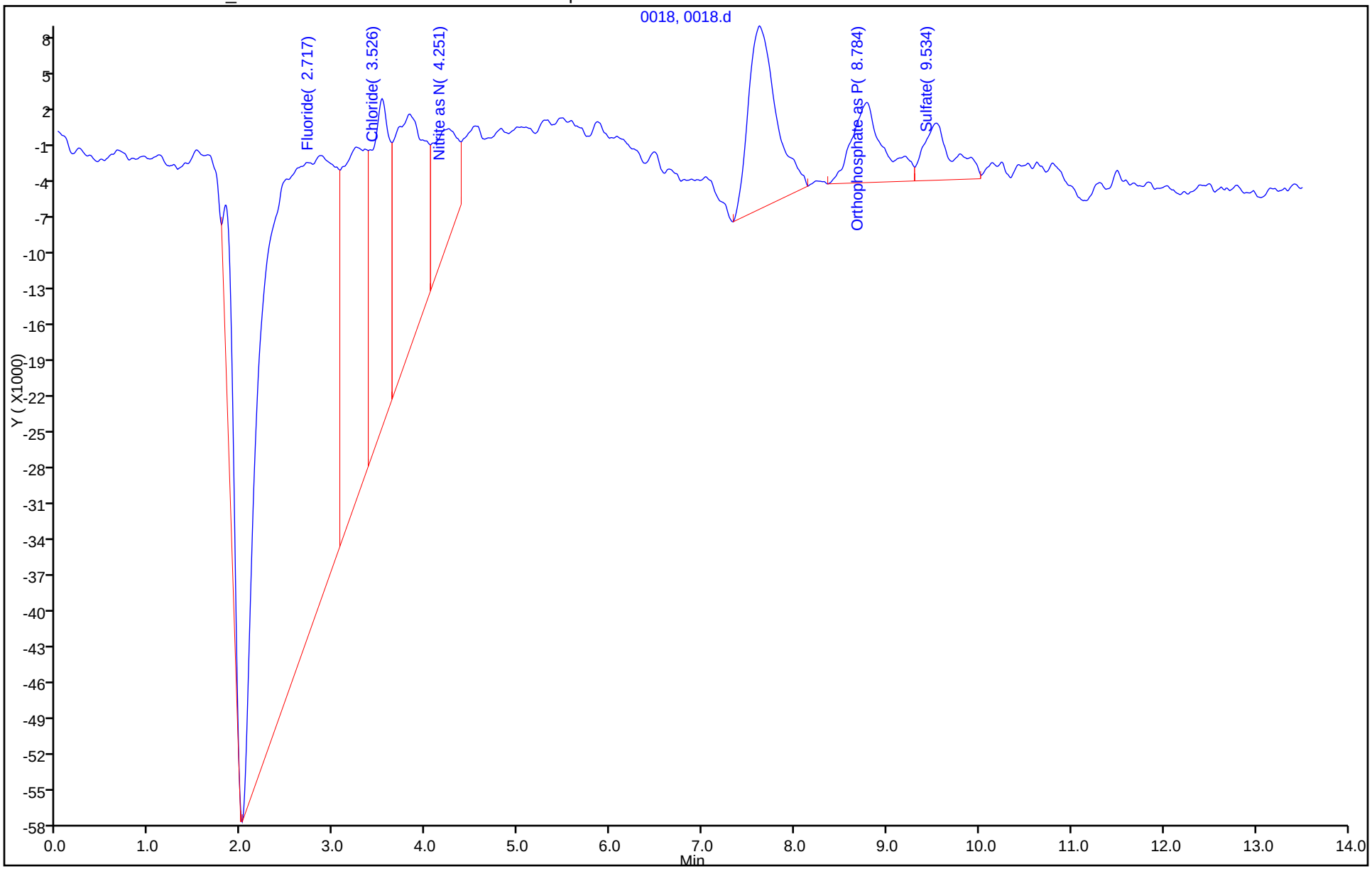
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.717	2.459	0.258	2250290		0.3682	
2 Chloride	3.526	3.575	-0.049	393583		0.6578	
3 Nitrite as N	4.251	4.275	-0.024	186728		0.0467	
4 Bromide		5.125				ND	
5 Nitrate as N		5.784				ND	
7 Orthophosphate as P	8.784	8.717	0.067	162031		0.0123	
6 Sulfate	9.534	9.575	-0.041	105806		0.3703	

Report Date: 22-Oct-2018 16:52:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0018.d

Injection Date:	22-Oct-2018 04:21:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0022.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 22-Oct-2018 05:26:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-022
Misc. Info.: 1553
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:52:11 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

First Level Reviewer: allena Date: 22-Oct-2018 09:18:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.459	0.000	35128184	5.00	5.31	
2 Chloride	3.575	3.575	0.000	695926785	100.0	108.7	
3 Nitrite as N	4.275	4.275	0.000	62125011	5.00	5.25	
4 Bromide	5.125	5.125	0.000	10394816	5.00	5.44	
5 Nitrate as N	5.784	5.784	0.000	65642514	5.00	5.41	
7 Orthophosphate as P	8.717	8.717	0.000	21296597	5.00	5.12	
6 Sulfate	9.575	9.575	0.000	441452895	100.0	109.6	

Reagents:

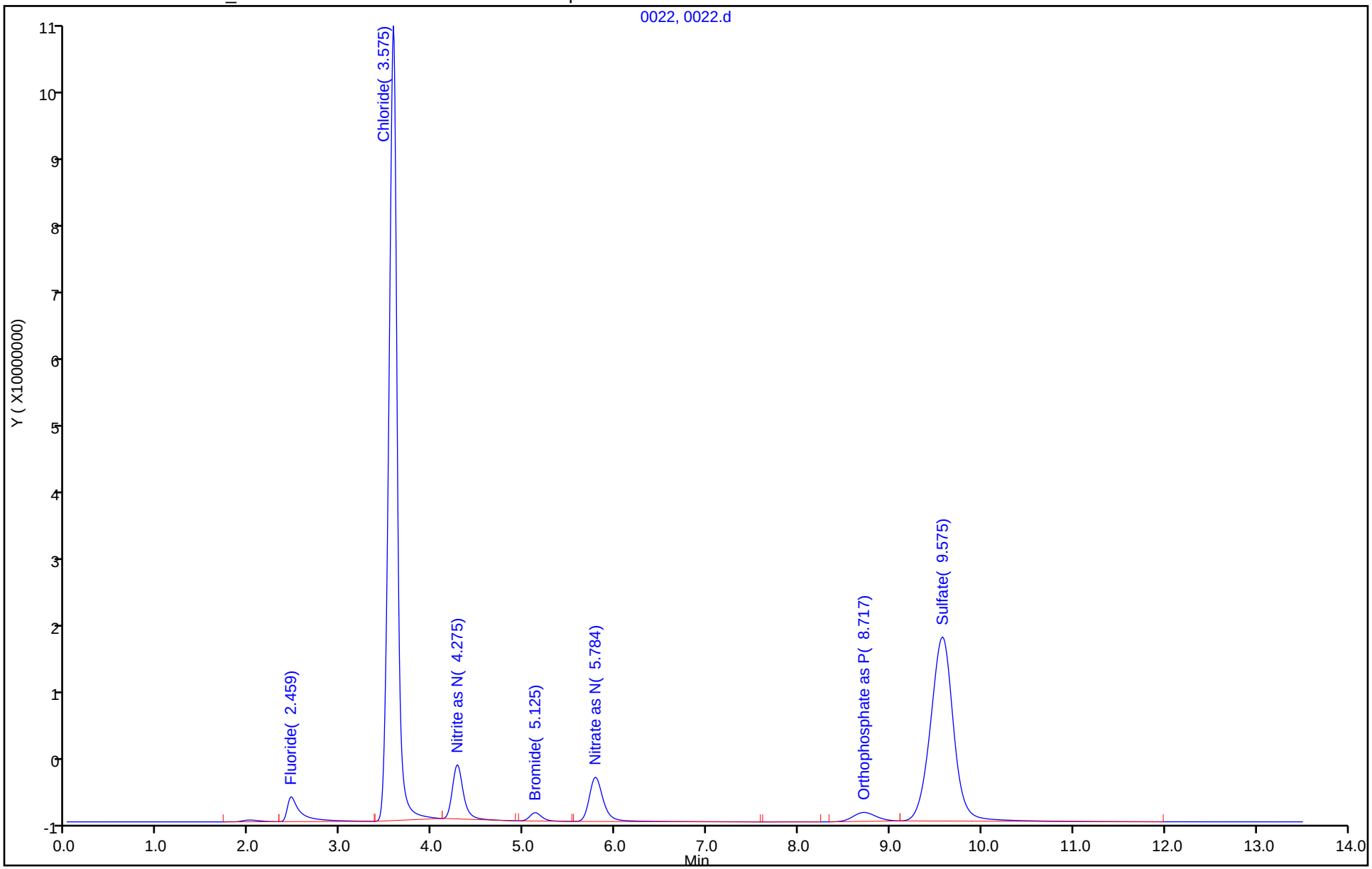
IC LCS_01378 Amount Added: 5.00 Units: mL

Report Date: 22-Oct-2018 16:52:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0022.d

Injection Date:	22-Oct-2018 05:26:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	22
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0023.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 22-Oct-2018 05:43:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-023
Misc. Info.: 1339
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:52:11 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

First Level Reviewer: allena Date: 22-Oct-2018 09:19:11

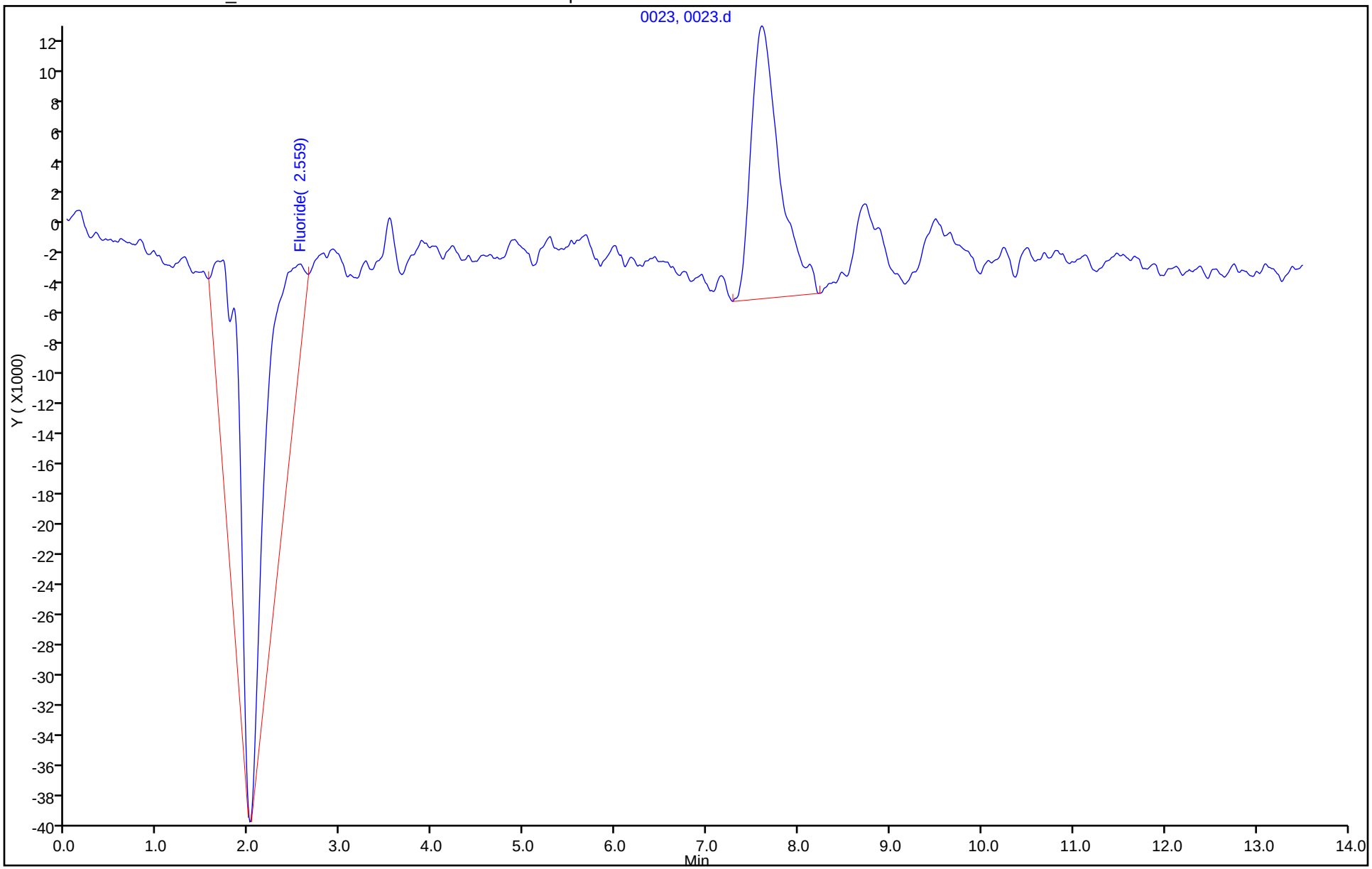
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.559	2.459	0.100	409763		0.0913	
2 Chloride		3.575				ND	
3 Nitrite as N		4.275				ND	
4 Bromide		5.125				ND	
5 Nitrate as N		5.784				ND	
7 Orthophosphate as P		8.717				ND	
6 Sulfate		9.575				ND	

Report Date: 22-Oct-2018 16:52:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0023.d

Injection Date:	22-Oct-2018 05:43:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	23
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0007.d
Lims ID: 280-115789-G-1
Client ID: RQLMW-011-181001-GW
Sample Type: Client
Inject. Date: 22-Oct-2018 09:20:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-007
Misc. Info.: 17769
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

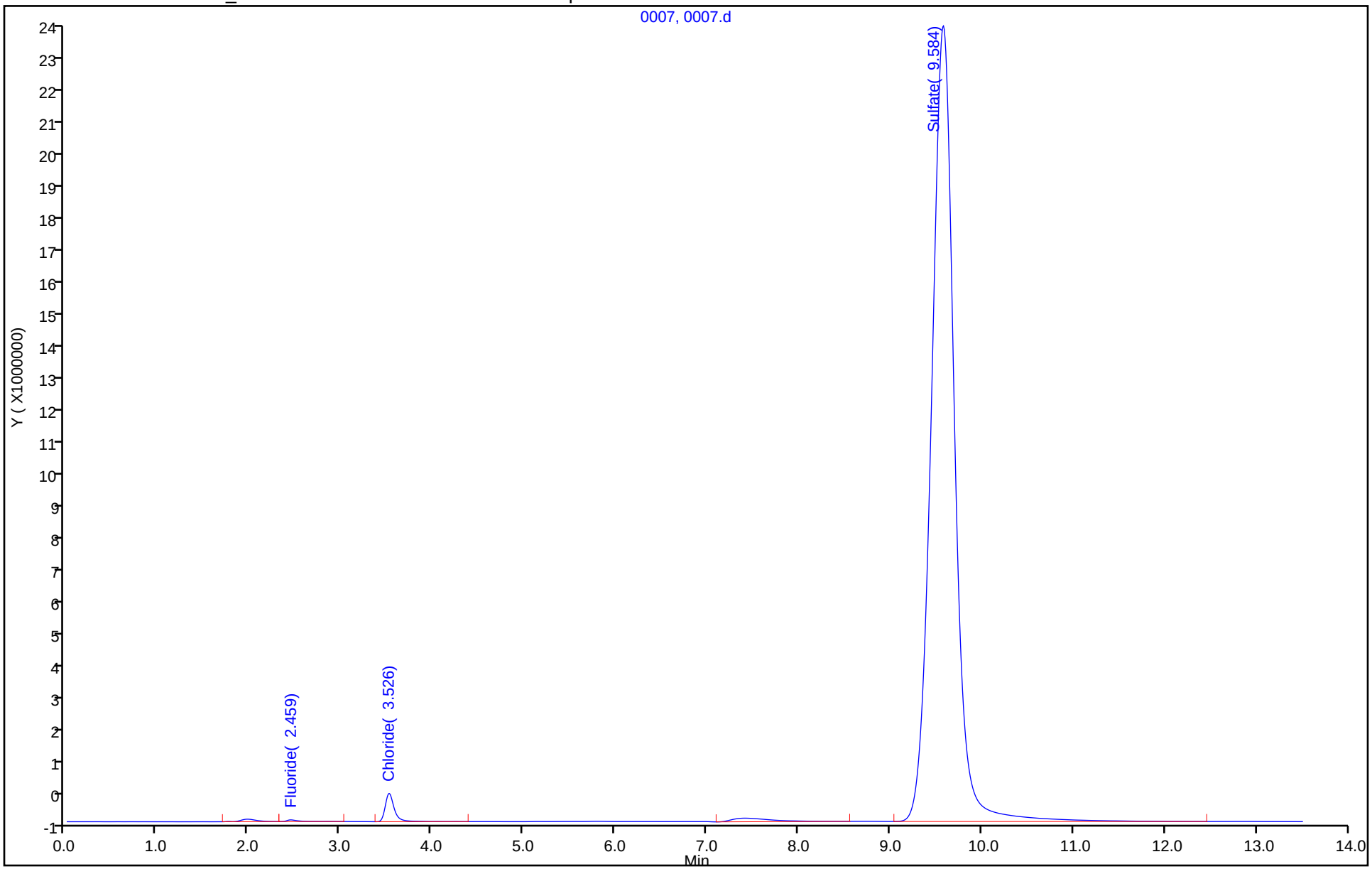
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.459	0.000	455452	0.0982	
2 Chloride	3.526	3.575	-0.049	5905500	1.51	
3 Nitrite as N		4.275			ND	
4 Bromide		5.125			ND	
5 Nitrate as N		5.784			ND	
7 Orthophosphate as P		8.717			ND	
6 Sulfate	9.584	9.575	0.009	416889448	103.5	

Report Date: 22-Oct-2018 16:51:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0007.d

Injection Date:	22-Oct-2018 09:20:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-G-1	Lab Sample ID:	280-115789-1	Worklist Smp#:	7
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0009.d
Lims ID: 280-115789-G-1 MS
Client ID: RQLMW-011-181001-GW
Sample Type: MS
Inject. Date: 22-Oct-2018 09:36:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-009
Misc. Info.: 5262
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 16:50:35 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.459	2.459	0.000	35403518	5.00	5.36	
2 Chloride	3.542	3.575	-0.033	156281537	25.0	24.9	
3 Nitrite as N	4.275	4.275	0.000	57908738	5.00	4.90	
4 Bromide	5.134	5.125	0.009	10515979	5.00	5.50	
5 Nitrate as N	5.800	5.784	0.016	66350482	5.00	5.47	
7 Orthophosphate as P	8.784	8.717	0.067	7763581	5.00	1.85	
6 Sulfate	9.600	9.575	0.025	537745347	25.0	133.4	

Reagents:

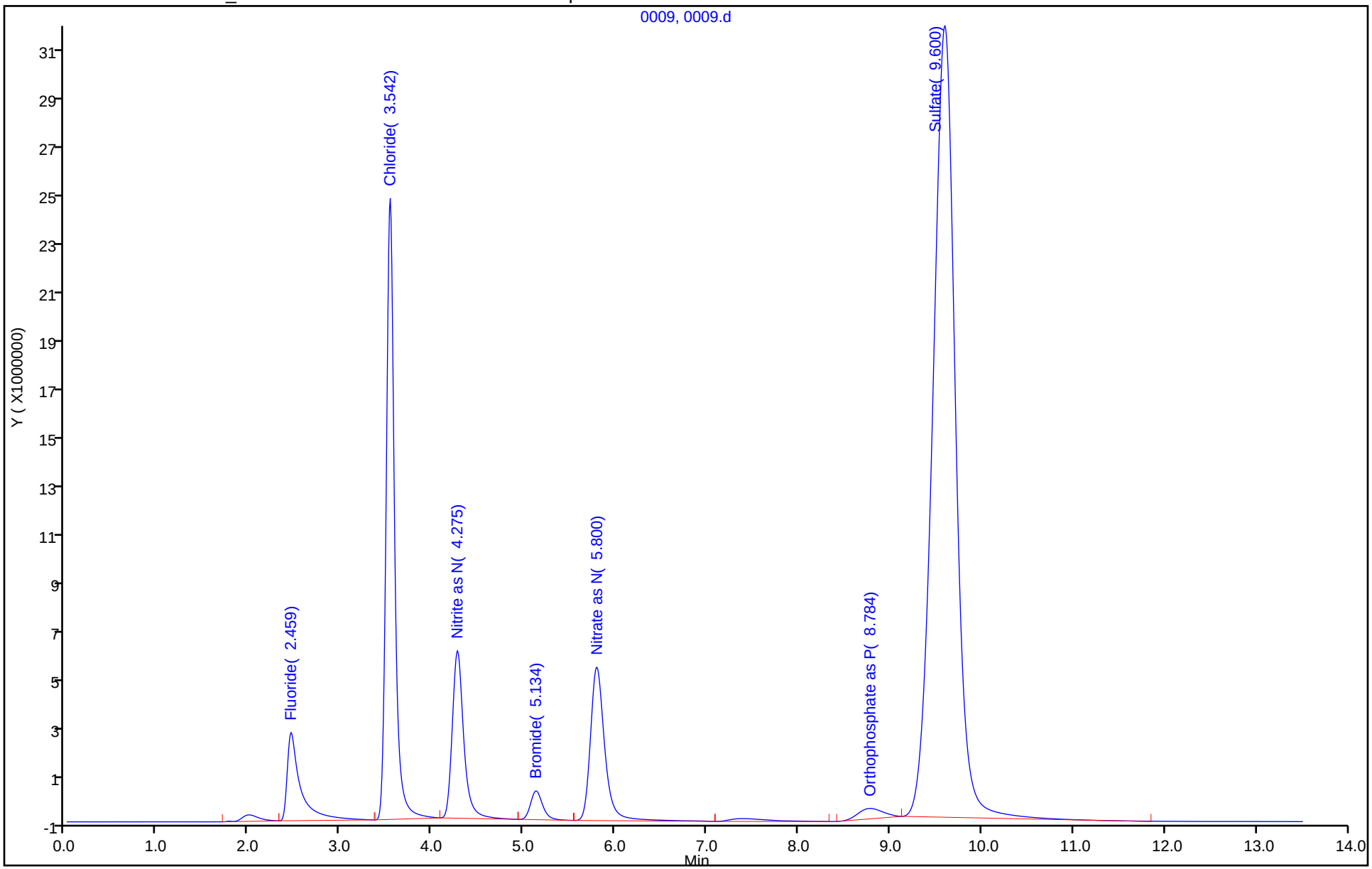
ICMS/MSD WEEK_00560 Amount Added: 0.05 Units: mL

Report Date: 22-Oct-2018 16:51:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0009.d

Injection Date:	22-Oct-2018 09:36:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-115789-G-1 MS			Worklist Smp#:	9
Client ID:	RQLMW-011-181001-GW				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0024.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 22-Oct-2018 15:13:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-024
Misc. Info.: 13733
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 17:09:10 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.467	2.459	0.008	33752834	5.00	5.11	
2 Chloride	3.575	3.575	0.000	675455562	100.0	105.5	
3 Nitrite as N	4.275	4.275	0.000	60466170	5.00	5.12	
4 Bromide	5.134	5.125	0.009	10080760	5.00	5.28	
5 Nitrate as N	5.784	5.784	0.000	64081190	5.00	5.28	
7 Orthophosphate as P	8.709	8.717	-0.008	19313254	5.00	4.64	
6 Sulfate	9.550	9.575	-0.025	432138335	100.0	107.3	

Reagents:

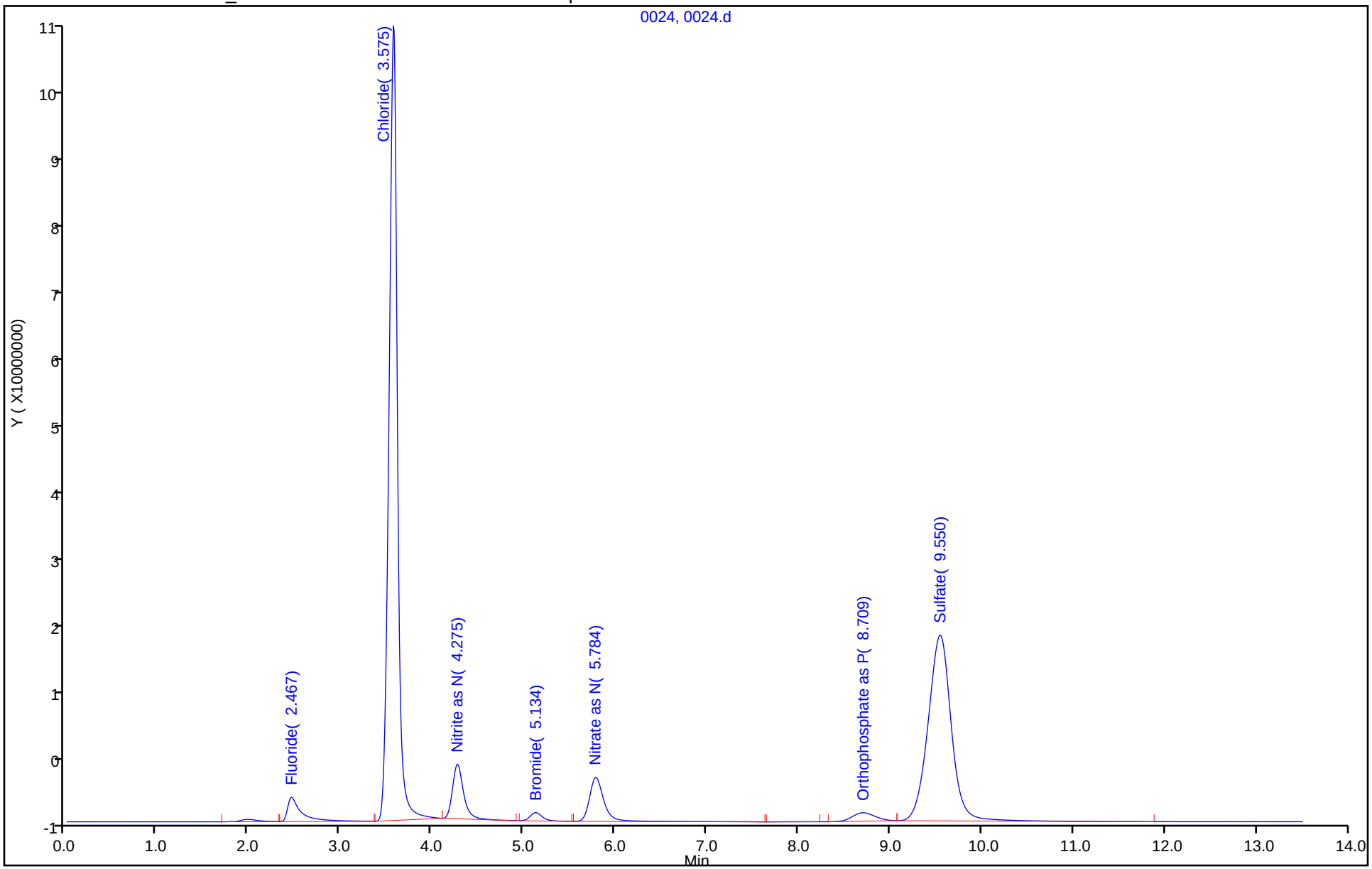
IC LCS_01378 Amount Added: 5.00 Units: mL

Report Date: 22-Oct-2018 17:09:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0024.d

Injection Date:	22-Oct-2018 15:13:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	24
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0025.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 22-Oct-2018 15:29:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075323-025
Misc. Info.: 10478
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 22-Oct-2018 17:09:10 Calib Date: 14-Oct-2018 13:28:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181014-75074.b\0007.d

Column 1 : Det: 0005
Process Host: CTX0322

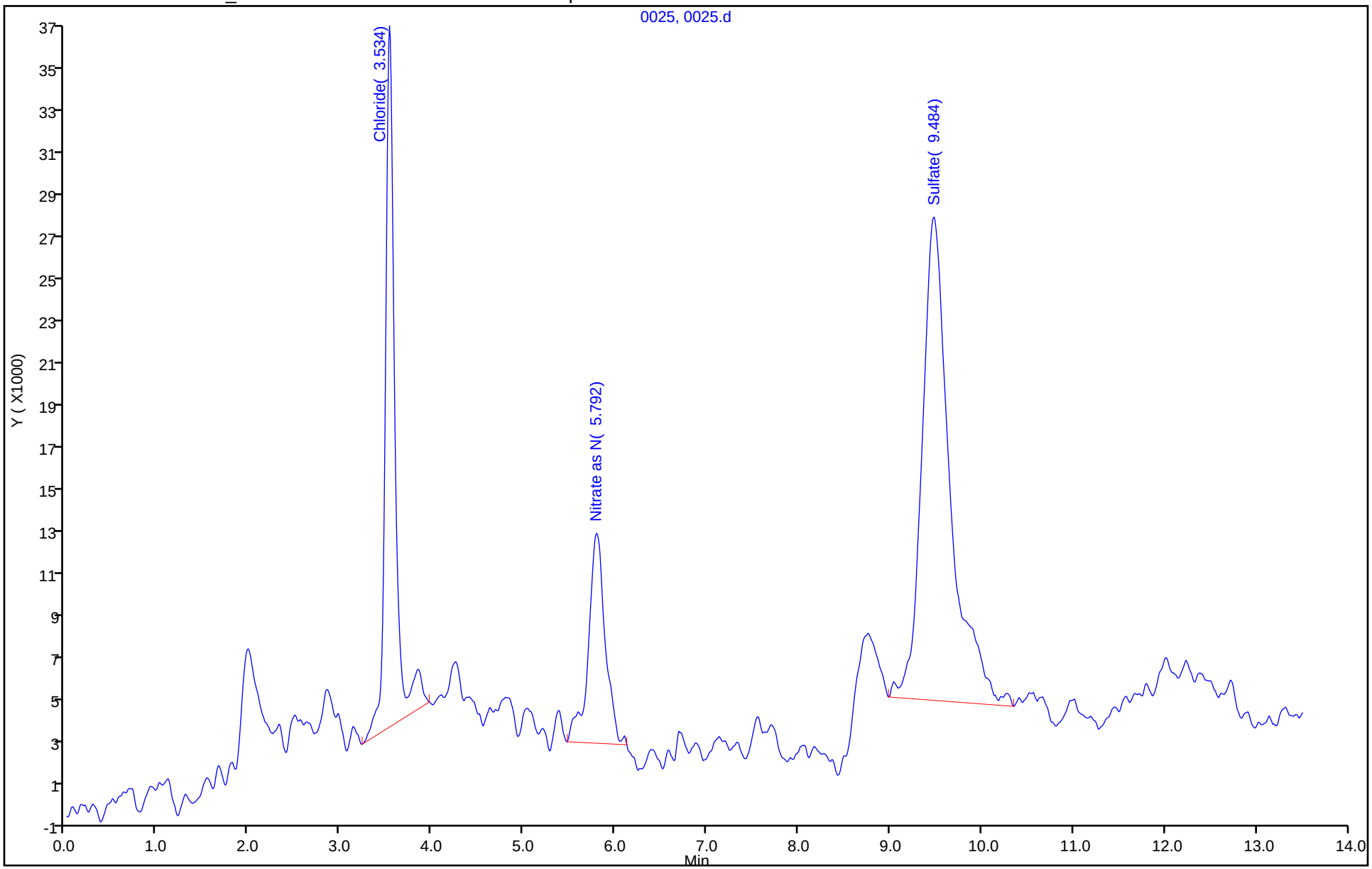
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.459				ND	
2 Chloride	3.534	3.575	-0.041	239261		0.6338	
3 Nitrite as N		4.275				ND	
4 Bromide		5.125				ND	
5 Nitrate as N	5.792	5.784	0.008	125619		0.0358	
7 Orthophosphate as P		8.717				ND	
6 Sulfate	9.484	9.575	-0.091	485224		0.4642	

Report Date: 22-Oct-2018 17:10:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20181021-75323.b\0025.d

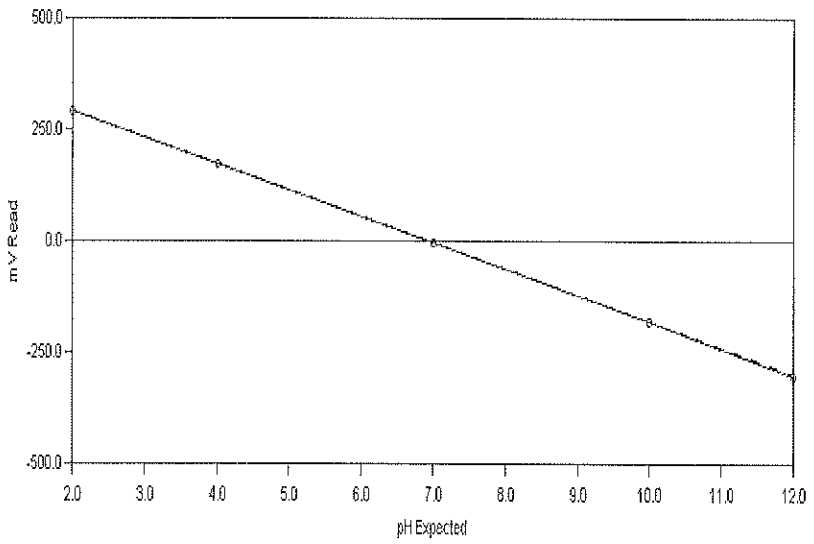
Injection Date:	22-Oct-2018 15:29:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	25
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC11	Limit Group:	Wet - Anions 28D		



PC-TitratION PLUS
Calibration Report

Analyst: RG-SGB
SGB
10/25/18

Calibration Record # 1300



Calibration Settings

Calibration ID	PH	Date	10/24/2018
Channel	1	Time	8:54 AM
Probe Type	pH	Temperature	296.64 K 23.49 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.260	CorrCoeff	1.0000
Intercept	-4.442	Equation: Y = (-59.260) X + (-4.442)	

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-59.260	-65.00	-53.00
Intercept	-4.442	-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	291.62
	4.00	172.97
	7.00	-4.39
	10.00	-179.68
	12.00	-302.73

PC-TitratION PLUS by Man-Tech Associates, Inc.
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Test America
Water Analysis Report

Analyst: SGB

Run Number 4380 **Order Number** 20181024-2

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)
tap	10/24/2018	3:48 PM	22.70	-1.00	7.68	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
check	10/24/2018	3:57 PM	22.26	-1.00	10.61	-1.00	-1.00	-1.00	102.73	198.07	.00	190.68	7.39	2.57	4.95	-1.00	.02
b7	10/24/2018	4:00 PM	22.17	-1.00	6.98	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	10/24/2018	4:10 PM	22.10	-1.00	10.60	-1.00	-1.00	-1.00	94.11	189.59	1.37	188.22	.00	2.35	4.74	-1.00	.02
mb	10/24/2018	4:17 PM	22.00	-1.00	6.46	-1.00	-1.00	-1.00	.00	.53	.53	.00	.00	.00	.06	.10	.02
280-115893-A-1	10/24/2018	4:23 PM	21.96	-1.00	7.00	-1.00	-1.00	-1.00	.00	102.01	102.01	.00	.00	.00	2.55	-1.00	.02
du 280-115893-A-1	10/24/2018	4:30 PM	21.63	-1.00	6.98	-1.00	-1.00	-1.00	.00	102.39	102.39	.00	.00	.00	2.56	-1.00	.02
280-115766-A-1	10/24/2018	4:48 PM	21.09	-1.00	7.90	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-115852-A-4	10/24/2018	5:06 PM	21.08	-1.00	7.89	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-115852-A-2	10/24/2018	5:23 PM	21.09	-1.00	6.89	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-115852-A-7	10/24/2018	5:31 PM	21.24	-1.00	6.73	-1.00	-1.00	-1.00	.00	2.30	2.30	.00	.00	.00	.12	.18	.02
280-115852-A-3	10/24/2018	5:49 PM	21.50	-1.00	7.02	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-115852-A-6	10/24/2018	6:06 PM	22.23	-1.00	8.80	-1.00	-1.00	-1.00	436.49	.00	-872.98	872.98	.00	10.91	.00	.00	.02
280-115852-A-5	10/24/2018	6:23 PM	22.51	-1.00	7.66	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-115852-A-1	10/24/2018	6:41 PM	21.96	-1.00	7.73	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
ccv	10/24/2018	6:50 PM	21.71	-1.00	10.53	-1.00	-1.00	-1.00	89.67	191.54	12.19	179.35	.00	2.24	4.79	-1.00	.02
ccb	10/24/2018	6:58 PM	21.41	-1.00	7.79	-1.00	-1.00	-1.00	.00	1.38	1.38	.00	.00	.00	.08	.13	.02
280-115883-A-2	10/24/2018	7:09 PM	21.28	-1.00	6.98	-1.00	-1.00	-1.00	.00	443.59	443.59	.00	.00	.00	11.09	-1.00	.02
280-115883-C-1	10/24/2018	7:20 PM	21.51	-1.00	7.01	-1.00	-1.00	-1.00	.00	445.91	445.91	.00	.00	.00	11.15	-1.00	.02
280-115883-A-3	10/24/2018	7:30 PM	21.95	-1.00	7.41	-1.00	-1.00	-1.00	.00	340.72	340.72	.00	.00	.00	8.52	-1.00	.02
280-115883-A-4	10/24/2018	7:44 PM	22.51	-1.00	7.10	-1.00	-1.00	-1.00	.00	690.99	690.99	.00	.00	.00	17.27	-1.00	.02
280-115883-A-5	10/24/2018	7:53 PM	22.10	-1.00	7.74	-1.00	-1.00	-1.00	.00	270.86	270.86	.00	.00	.00	6.77	-1.00	.02
280-115904-A-1	10/24/2018	8:01 PM	22.00	-1.00	7.96	-1.00	-1.00	-1.00	.00	170.59	170.59	.00	.00	.00	4.26	-1.00	.02
280-115904-A-2	10/24/2018	8:08 PM	21.95	-1.00	7.21	-1.00	-1.00	-1.00	.00	79.25	79.25	.00	.00	.00	1.98	-1.00	.02
280-115904-B-3	10/24/2018	8:15 PM	21.96	-1.00	7.04	-1.00	-1.00	-1.00	.00	80.42	80.42	.00	.00	.00	2.01	-1.00	.02
280-115789-C-1	10/24/2018	8:22 PM	22.19	-1.00	6.92	-1.00	-1.00	-1.00	.00	117.69	117.69	.00	.00	.00	2.94	-1.00	.02
280-115789-C-2	10/24/2018	8:28 PM	22.60	-1.00	7.00	-1.00	-1.00	-1.00	.00	115.86	115.86	.00	.00	.00	2.90	-1.00	.02

PC-TitratION PLUS by Man-Tech Associates, Inc.

GENERAL RESULTS REPORT.SRW
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Run Number 4380 **Order Number** 20181024-2

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	10/24/2018	8:38 PM	23.25	-1.00	10.46	-1.00	-1.00	-1.00	89.13	192.17	13.91	178.26	.00	2.23	4.80	-1.00	.02
ccb	10/24/2018	8:44 PM	22.81	-1.00	4.87	-1.00	-1.00	-1.00	.00	-.62	-.62	.00	.00	.00	.03	.07	.02
lcs	10/24/2018	8:54 PM	22.51	-1.00	10.48	-1.00	-1.00	-1.00	106.22	208.50	.00	204.57	3.93	2.66	5.21	-1.00	.02
mb	10/24/2018	9:01 PM	22.43	-1.00	6.12	-1.00	-1.00	-1.00	.00	.28	.28	.00	.00	.00	.05	.09	.02
280-115796-F-1	10/24/2018	9:09 PM	22.31	-1.00	7.97	-1.00	-1.00	-1.00	.00	200.98	200.98	.00	.00	.00	5.02	-1.00	.02
du 280-115796-F-1	10/24/2018	9:17 PM	22.46	-1.00	7.97	-1.00	-1.00	-1.00	.00	201.65	201.65	.00	.00	.00	5.04	-1.00	.02
280-115796-G-2	10/24/2018	9:26 PM	22.83	-1.00	7.96	-1.00	-1.00	-1.00	.00	199.95	199.95	.00	.00	.00	5.00	-1.00	.02
280-115797-F-1	10/24/2018	9:36 PM	23.47	-1.00	7.63	-1.00	-1.00	-1.00	.00	361.42	361.42	.00	.00	.00	9.04	-1.00	.02
280-115797-F-3	10/24/2018	9:45 PM	23.06	-1.00	8.13	-1.00	-1.00	-1.00	.00	216.94	216.94	.00	.00	.00	5.42	-1.00	.02
280-115797-F-4	10/24/2018	9:54 PM	22.74	-1.00	8.23	-1.00	-1.00	-1.00	.00	16.96	16.96	.00	.00	.00	.50	.57	.02
280-115841-A-4	10/24/2018	10:02 PM	22.61	-1.00	7.64	-1.00	-1.00	-1.00	.00	187.04	187.04	.00	.00	.00	4.68	-1.00	.02
280-115841-A-1	10/24/2018	10:10 PM	22.61	-1.00	7.60	-1.00	-1.00	-1.00	.00	238.17	238.17	.00	.00	.00	5.95	-1.00	.02
280-115841-A-2	10/24/2018	10:19 PM	22.74	-1.00	7.66	-1.00	-1.00	-1.00	.00	186.16	186.16	.00	.00	.00	4.65	-1.00	.02
280-115842-D-1	10/24/2018	10:27 PM	23.03	-1.00	7.28	-1.00	-1.00	-1.00	.00	264.85	264.85	.00	.00	.00	6.62	-1.00	.02
ccv	10/24/2018	10:37 PM	23.57	-1.00	10.41	-1.00	-1.00	-1.00	85.39	191.44	20.65	170.78	.00	2.13	4.79	-1.00	.02
ccb	10/24/2018	10:44 PM	23.25	-1.00	6.06	-1.00	-1.00	-1.00	.00	.33	.33	.00	.00	.00	.05	.10	.02
280-115842-D-2	10/24/2018	10:54 PM	22.99	-1.00	7.58	-1.00	-1.00	-1.00	.00	404.51	404.51	.00	.00	.00	10.11	-1.00	.02
280-115842-D-3	10/24/2018	11:05 PM	22.95	-1.00	7.32	-1.00	-1.00	-1.00	.00	430.21	430.21	.00	.00	.00	10.76	-1.00	.02
280-115842-D-4	10/24/2018	11:19 PM	22.95	-1.00	7.26	-1.00	-1.00	-1.00	.00	696.33	696.33	.00	.00	.00	17.41	-1.00	.02
280-115842-D-5	10/24/2018	11:28 PM	23.06	-1.00	7.50	-1.00	-1.00	-1.00	.00	289.91	289.91	.00	.00	.00	7.25	-1.00	.02
280-115842-D-6	10/24/2018	11:38 PM	23.17	-1.00	7.53	-1.00	-1.00	-1.00	.00	383.63	383.63	.00	.00	.00	9.59	-1.00	.02
280-115842-D-7	10/24/2018	11:48 PM	23.67	-1.00	7.64	-1.00	-1.00	-1.00	.00	395.61	395.61	.00	.00	.00	9.89	-1.00	.02
280-115842-D-8	10/24/2018	11:58 PM	23.46	-1.00	7.96	-1.00	-1.00	-1.00	.00	302.71	302.71	.00	.00	.00	7.57	-1.00	.02
280-115842-D-9	10/25/2018	12:07 AM	23.31	-1.00	7.64	-1.00	-1.00	-1.00	.00	313.43	313.43	.00	.00	.00	7.84	-1.00	.02
280-115842-D-10	10/25/2018	12:17 AM	23.30	-1.00	7.47	-1.00	-1.00	-1.00	.00	322.78	322.78	.00	.00	.00	8.07	-1.00	.02
ccv	10/25/2018	12:26 AM	23.28	-1.00	10.36	-1.00	-1.00	-1.00	83.76	191.31	23.80	167.51	.00	2.09	4.78	-1.00	.02
ccb	10/25/2018	12:33 AM	23.31	-1.00	6.04	-1.00	-1.00	-1.00	.00	.28	.28	.00	.00	.00	.05	.10	.02

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Subcontract Data

Shipping and Receiving Documents

Leidos Proprietary

Chain of Custody Record

leidos

COC No.: RVAAP-070-TA

Page 1 of 1 Date: 10/18/2018

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)
Ryan Laurich

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Requested Parameters

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	RQLmw-011-181001-GW			10/18/18	1110	W		2	2						1	1			1		7	
	RQLmw-011-181002-GW			↓	↓	W		2	2						1	1			1		7	
	RQLmw-011-181001-GWMSD					W		4	4						2	2					12	Extra Volume for MS/MSD, only parameters indicated

280-115789 Chain of Custody

Relinquished by	Date	Received by	Date
Signature: [signature]	10/18/2018	Signature: Test America 240	10/18/18
Printed Name: HEATHER ADAMS	Time: 1500	Printed Name: RC Robison	Time: 1500
Company: Leidos		Company: Rick Robison	
Relinquished by: Rick Robison	Date: 10/18/18	Received by: Alyssa Gomez	Date: 10 19 2018
Signature	Time: 1617	Signature: Alyssa Gomez	Time: 0940
Printed Name: Rick Robison		Printed Name	
Company: Test America		Company	

Notes: Total Number of Containers: 26

A. Cool, 4C
A1. Field filtered, 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 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

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

0.7, -0.2, 0.9 ±R9 +0.7. xfered Dej Alb 10-19-18

Chain of Custody Record

leidos

COC No.: RVAAP-083-TA

Page 1 of 1 Date: 10/15/2018

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)

HEATHER ADAMS

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A) NAPTHALENE ONLY	Explosives (6)(A)	Pesticides/PCB (5)(A)	Nitroguan (4)(A)	TAL Metals (7)(C) incl Phosphorus	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers
	FWGER-181001-ER	ER	NA	10/15/18	0730	W			2	2											4
	FWGFB-181001-FB	FB	NA	10/15/18	0720	W			2	2											4

Requested Parameters

Relinquished by	Date	Received by	Date	Notes: Total Number of Containers: 8	Shipment Method: Courier
Signature	10/15/18	Signature TA: 240 RICK ROBISON	10/15/18	A. Cool, 4C; A1. Field filtered, 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	
HEATHER ADAMS	Time 1500	Printed Name RICK ROBISON	Time 1500	1. SW 8260; 2. SW 8270; 3. SW 8270SIM; 4. SW 8330-MOD; 5. SW 8081/8082; 6. SW 8330; 7. SW 6010; 8. SW 9012; 9. SW 9034; 10. SW 9056/SM2320; 11. SW 6860; 12. EPA 353.2; 13. SW 7196	Notes:
Printed Name		Company			
Leidos					
Company					
Relinquished by TestAmerica	Date 14/8/18	Received by Alyssa Gomez	Date 10/15/2018		Temperature Blank
Signature RC	Time 1617	Signature Alyssa Gomez	Time 0920		Lab: Leidos 8866 Commons Drive Twinsburg, OH 44087 (330) 405-5802
Printed Name RICK ROBISON		Printed Name			
Company		Company			

Leidos

White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

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Stored on shelf 223 Call David

TestAmerica Denver

Sample Receiving Checklist
DV-QA-0003

Login #: 280-115789 Date/Time Received: 11/15/18 1350

Company Name & Sampling Site: Leidos

Time Zone: • EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER State: OH

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR)

Temp	IR#	Temp	IR#	Temp	IR#	Temp	IR#
10.1	5						
CF	Initials	CF	Initials	CF	Initials	CF	Initials
	AP						
Date 11/15/18		Date		Date		Date	

No seal

N/A	Yes	No		Initials JD
☑	☐	☐	1. Is radioactivity at or below background? BKG CPM:_____ CPM Reading: _____	
☐	☐	☑	2a. Is a custody seal present on the cooler?	
☑	☐	☐	2b. If yes, is the cooler's custody seal intact?	
☐	☑	☐	2c. Do cooler or samples appear to not have been compromised or tampered with?	
☐	☐	☑	3a. Were samples received on ice?	
☐	☐	☑	3b. Is cooler temperature acceptable?	
☐	☑	☐	3c. Has temperature been recorded?	
☐	☑	☐	4. Is COC present; filled out in ink and legible; and filled out with all pertinent information?	
☑	☐	☐	5. Is the Field Sampler's name present on the COC?	
☐	☑	☐	6a. Are there no discrepancies between the **sample IDs** and/or **collection date and time** on the containers and the COC?	
☐	☑	☐	6b. Are there no discrepancies between the container types and those listed on the COC?	
☐	☑	☐	7. Are samples received within Holding Time?	
☐	☑	☐	8. Do sample containers have legible labels?	
☐	☑	☐	9. Are all sample containers intact (not broken or leaking)?	
☐	☑	☐	10a. Are appropriate sample containers used?	
☐	☑	☐	10b. Are sample bottles completely filled? (Perchlorate bottles ≥ 1/3 head space)	
☐	☑	☐	10c. Is sufficient vol. for all requested analyses, incl. any requested MS/MSDs provided?	
☐	☑	☐	11. No splitting or compositing of samples required?	
☑	☐	☐	12. Do all VOA sample vials have no headspace or bubbles >6 mm (1/4") in diameter?	
☑	☐	☐	13. Were VOA vials labeled as preserved? ☐ HCl ☐ 0-6°C ☐ Sodium Thiosulfate ☐ Ascorbic Acid ☐ Other	
☐	☑	☐	14. Are all samples single phase? (i.e., no multiphasic samples are present.)	


280-115789 Login

PM: Rydberg, Donna R
Company: Leidos, Inc.


280-115789 Chain of Custody

Login Checks: *Initials* JAL

☑	☐	☐	15. Was a Priority Form completed for any short holds or quick TATs?
☑	☐	☐	16. Were any tests logged for subcontract?
☑	☐	☐	17. Were special archiving instructions and login instructions indicated in the Project Notes?

Note Archive Requirements: _____

☑	☐	☐	18. Were multiple Series logged for this job?

Labeling and Storage Checks: *Initials* _____

pH Checks Required? ☑ Yes ☐ No Residual chlorine check required: ☐ Yes ☑ No Quarantined: ☐ Yes ☑ No

☐	☐	☐	19. Was Sample Preservation verified and found to be correct? (excluding VOA, Oil & Grease, and TOC volumes)
☐	☐	☐	20. Was Residual Chlorine checked and noted on the CUR if present?
☐	☐	☐	21. If subcontract work was requested, was volume placed on sub shelf?
☐	☐	☐	22. Were Terracore/Encores delivered to VOA lab?
☐	☐	☐	23. Did the sample ID on TA label match the client's sample ID on container?
☐	☐	☐	24. Were stickers for special archiving instructions affixed to each box?

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-115789-1

Login Number: 115789
List Number: 1
Creator: Gomez, Alyssa I

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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	