TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-96291-1

Job Description: Camp Ravenna, OH

For:
Cardno TEC, Inc
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Golden, CO 80401

Attention: Ms. Heather Miner

Approved for release.
Patrick J McEntee
Manager of Project Management
5/22/2017 5:54 AM

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05/22/2017

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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.
Q	One or more quality control criteria failed.
M	Manual integrated compound.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
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.
M	Manual integrated compound.

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: Cardno TEC, Inc

Project: Camp Ravenna, OH

Report Number: 280-96291-1

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 4/25/2017 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.3º C and 0.4º C.

The non-DOD method SM20 4500_CN_I are reported under job 280-96291-2 with standard data qualifiers applied. All DOD methods/analytes are reported under job 280-96291-1.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)
Sample LL4mw-200-042417-GW (280-96291-5) was analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 04/26/2017 and analyzed on 05/04/2017.

Chrysene failed the recovery criteria high for LCS 280-370964/2-A. Chrysene failed the recovery criteria high for LCSD 280-370964/3-A. Refer to the QC report for details. Associated results are qualified Q. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

NITROAROMATICS AND NITRAMINES (HPLC)
Samples LL3mw-237-042417-GW (280-96291-4) and LL4mw-193-042417-GW (280-96291-6) were analyzed for Nitroaromatics and Nitramines (HPLC) in accordance with 8330B. The samples were prepared on 05/01/2017 and analyzed on 05/05/2017, 05/11/2017 and 05/18/2017.

2-Nitrotoluene exceeded the RPD limit for the MSD of sample LL4mw-193-042417-GWMSD (280-96291-6) in batch 280-372382. Refer to the QC report for details. Associated results are qualified J.

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

HEXAVALENT CHROMIUM
Samples LL3mw-244-042417-GW (280-96291-1) and BKGmw-006-042417-GW (280-96291-2) were analyzed for hexavalent chromium in accordance with 7196A. The samples were analyzed on 04/25/2017.

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

CYANIDE, TOTAL
Samples LL3mw-234-042417-GW (280-96291-3), LL4mw-200-042417-GW (280-96291-5) and LL4mw-193-042417-GW (280-96291-6) were analyzed for Cyanide, Total in accordance with 9012B. The samples were prepared and analyzed on 05/05/2017.

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

ANIONS (28 DAYS)
Sample BKGmw-006-042417-GW (280-96291-2) was analyzed for anions (28 days) in accordance with 9056A. The samples were analyzed on 04/25/2017.

Chloride and Sulfate were detected in method blank MB 280-370782/6 at levels that were above the detection limit but below the LOQ. The values should be considered estimates, and have been flagged.

Chloride and Sulfate failed the recovery criteria low for the MS of sample BKGmw-006-042417-GWMS (280-96291-2) in batch 280-370782. Refer to the QC report for details. Associated results are qualified J.

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

ANIONS (48 HOURS)

Sample BKGmw-006-042417-GW (280-96291-2) was analyzed for anions (48 hours) in accordance with 9056A. The samples were analyzed on 04/25/2017.

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

Detection Summary

Client: Cardno TEC, Inc
Project/Site: Camp Ravenna, OH

TestAmerica Job ID: 280-96291-1

Client Sample ID: LL3mw-244-042417-GW — Lab Sample ID: 280-96291-1

No Detections.

Client Sample ID: BKGmw-006-042417-GW — Lab Sample ID: 280-96291-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	110000	J	3000	250	ug/L	1		9056A	Total/NA
Nitrate as N	120	J	500	42	ug/L	1		9056A	Total/NA
Sulfate	55000	J	5000	230	ug/L	1		9056A	Total/NA

Client Sample ID: LL3mw-234-042417-GW — Lab Sample ID: 280-96291-3

No Detections.

Client Sample ID: LL3mw-237-042417-GW — Lab Sample ID: 280-96291-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trinitrotoluene	1.0		0.41	0.075	ug/L	1		8330B	Total/NA
2-Amino-4,6-dinitrotoluene	3.6		0.21	0.052	ug/L	1		8330B	Total/NA
4-Amino-2,6-dinitrotoluene	6.5		0.21	0.059	ug/L	1		8330B	Total/NA

Client Sample ID: LL4mw-200-042417-GW — Lab Sample ID: 280-96291-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	4.1	J	10	2.0	ug/L	1		9012B	Total/NA

Client Sample ID: LL4mw-193-042417-GW — Lab Sample ID: 280-96291-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Tetryl	0.10	J	0.25	0.083	ug/L	1		8330B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LL3mw-244-042417-GW

Lab Sample ID: 280-96291-1

Date Collected: 04/24/17 14:55

Matrix: Water

Date Received: 04/25/17 09:00

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	4.0	U	20	4.0	ug/L			04/25/17 11:29	1

Client Sample ID: BKGmw-006-042417-GW

Lab Sample ID: 280-96291-2

Date Collected: 04/24/17 16:30

Matrix: Water

Date Received: 04/25/17 09:00

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	4.0	U	20	4.0	ug/L			04/25/17 11:29	1
Chloride	**110000**	**J**	3000	250	ug/L			04/25/17 14:02	1
Nitrate as N	**120**	**J**	500	42	ug/L			04/25/17 14:02	1
Nitrite as N	100	U	500	49	ug/L			04/25/17 14:02	1
Sulfate	**55000**	**J**	5000	230	ug/L			04/25/17 14:02	1

Client Sample ID: LL3mw-234-042417-GW

Lab Sample ID: 280-96291-3

Date Collected: 04/24/17 11:40

Matrix: Water

Date Received: 04/25/17 09:00

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	5.0	U	10	2.0	ug/L		05/05/17 05:36	05/05/17 11:33	1

Client Sample ID: LL3mw-237-042417-GW

Lab Sample ID: 280-96291-4

Date Collected: 04/24/17 13:19

Matrix: Water

Date Received: 04/25/17 09:00

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.41	U	1.0	0.21	ug/L		05/01/17 10:00	05/11/17 16:23	1
1,3-Dinitrobenzene	0.21	U	0.41	0.091	ug/L		05/01/17 10:00	05/11/17 16:23	1
2,4,6-Trinitrotoluene	**1.0**		0.41	0.075	ug/L		05/01/17 10:00	05/18/17 12:21	1
2,4-Dinitrotoluene	0.21	U	0.41	0.086	ug/L		05/01/17 10:00	05/11/17 16:23	1
2,6-Dinitrotoluene	0.21	U	0.21	0.067	ug/L		05/01/17 10:00	05/11/17 16:23	1
2-Amino-4,6-dinitrotoluene	**3.6**		0.21	0.052	ug/L		05/01/17 10:00	05/11/17 16:23	1
2-Nitrotoluene	0.21	U	0.41	0.088	ug/L		05/01/17 10:00	05/11/17 16:23	1
3-Nitrotoluene	0.21	U	0.41	0.086	ug/L		05/01/17 10:00	05/11/17 16:23	1
4-Amino-2,6-dinitrotoluene	**6.5**		0.21	0.059	ug/L		05/01/17 10:00	05/11/17 16:23	1
4-Nitrotoluene	0.41	U	1.0	0.21	ug/L		05/01/17 10:00	05/11/17 16:23	1
HMX	0.21	U	0.41	0.090	ug/L		05/01/17 10:00	05/11/17 16:23	1
Nitrobenzene	0.21	U	0.41	0.094	ug/L		05/01/17 10:00	05/18/17 12:21	1
Nitroglycerin	2.1	U	3.1	0.95	ug/L		05/01/17 10:00	05/11/17 16:23	1
PETN	1.2	U	2.1	0.43	ug/L		05/01/17 10:00	05/11/17 16:23	1
RDX	0.12	U	0.21	0.054	ug/L		05/01/17 10:00	05/18/17 12:21	1
Tetryl	0.21	U	0.25	0.082	ug/L		05/01/17 10:00	05/11/17 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*94*		*83 - 119*	*05/01/17 10:00*	*05/11/17 16:23*	*1*
1,2-Dinitrobenzene	*113*		*83 - 119*	*05/01/17 10:00*	*05/18/17 12:21*	*1*

Client Sample ID: LL4mw-200-042417-GW

Lab Sample ID: 280-96291-5

Date Collected: 04/24/17 10:07

Matrix: Water

Date Received: 04/25/17 09:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.040	U	0.10	0.0042	ug/L		04/26/17 09:30	05/04/17 22:56	1
Acenaphthylene	0.040	U	0.10	0.0051	ug/L		04/26/17 09:30	05/04/17 22:56	1
Anthracene	0.040	U	0.10	0.0056	ug/L		04/26/17 09:30	05/04/17 22:56	1
Benzo[a]anthracene	0.012	U	0.10	0.0042	ug/L		04/26/17 09:30	05/04/17 22:56	1
Benzo[b]fluoranthene	0.012	U	0.10	0.0031	ug/L		04/26/17 09:30	05/04/17 22:56	1
Benzo[k]fluoranthene	0.012	U	0.10	0.0063	ug/L		04/26/17 09:30	05/04/17 22:56	1
Benzo[g,h,i]perylene	0.012	U	0.10	0.0062	ug/L		04/26/17 09:30	05/04/17 22:56	1
Benzo[a]pyrene	0.012	U	0.10	0.0069	ug/L		04/26/17 09:30	05/04/17 22:56	1
Chrysene	0.012	U Q	0.10	0.0033	ug/L		04/26/17 09:30	05/04/17 22:56	1
Dibenz(a,h)anthracene	0.012	U	0.10	0.0041	ug/L		04/26/17 09:30	05/04/17 22:56	1
Fluoranthene	0.012	U	0.10	0.0048	ug/L		04/26/17 09:30	05/04/17 22:56	1
Fluorene	0.040	U	0.10	0.0055	ug/L		04/26/17 09:30	05/04/17 22:56	1
Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.0045	ug/L		04/26/17 09:30	05/04/17 22:56	1
Naphthalene	0.012	U	0.10	0.0080	ug/L		04/26/17 09:30	05/04/17 22:56	1
Phenanthrene	0.020	U	0.10	0.0093	ug/L		04/26/17 09:30	05/04/17 22:56	1
Pyrene	0.020	U	0.10	0.0061	ug/L		04/26/17 09:30	05/04/17 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*72*		*53 - 106*	*04/26/17 09:30*	*05/04/17 22:56*	*1*
Terphenyl-d14 (Surr)	*72*		*58 - 132*	*04/26/17 09:30*	*05/04/17 22:56*	*1*
Nitrobenzene-d5 (Surr)	*80*		*55 - 111*	*04/26/17 09:30*	*05/04/17 22:56*	*1*

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**4.1**	**J**	10	2.0	ug/L		05/05/17 05:36	05/05/17 11:35	1

Client Sample ID: LL4mw-193-042417-GW

Lab Sample ID: 280-96291-6

Date Collected: 04/24/17 11:40

Matrix: Water

Date Received: 04/25/17 09:00

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.42	U	1.0	0.21	ug/L		05/01/17 10:00	05/11/17 16:46	1
1,3-Dinitrobenzene	0.21	U	0.42	0.093	ug/L		05/01/17 10:00	05/11/17 16:46	1
2,4,6-Trinitrotoluene	0.21	U	0.42	0.076	ug/L		05/01/17 10:00	05/11/17 16:46	1
2,4-Dinitrotoluene	0.21	U	0.42	0.087	ug/L		05/01/17 10:00	05/11/17 16:46	1
2,6-Dinitrotoluene	0.21	U	0.21	0.067	ug/L		05/01/17 10:00	05/11/17 16:46	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.053	ug/L		05/01/17 10:00	05/11/17 16:46	1
2-Nitrotoluene	0.21	U	0.42	0.089	ug/L		05/01/17 10:00	05/05/17 00:37	1
3-Nitrotoluene	0.21	U	0.42	0.087	ug/L		05/01/17 10:00	05/11/17 16:46	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.060	ug/L		05/01/17 10:00	05/11/17 16:46	1
4-Nitrotoluene	0.42	U	1.0	0.21	ug/L		05/01/17 10:00	05/11/17 16:46	1
HMX	0.21	U	0.42	0.091	ug/L		05/01/17 10:00	05/11/17 16:46	1
Nitrobenzene	0.21	U	0.42	0.095	ug/L		05/01/17 10:00	05/11/17 16:46	1
Nitroglycerin	2.1	U	3.1	0.96	ug/L		05/01/17 10:00	05/11/17 16:46	1
PETN	1.3	U	2.1	0.43	ug/L		05/01/17 10:00	05/11/17 16:46	1
RDX	0.13	U	0.21	0.055	ug/L		05/01/17 10:00	05/11/17 16:46	1
Tetryl	**0.10**	**J**	0.25	0.083	ug/L		05/01/17 10:00	05/11/17 16:46	1

Client Sample ID: LL4mw-193-042417-GW

Date Collected: 04/24/17 11:40
Date Received: 04/25/17 09:00

Lab Sample ID: 280-96291-6

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*104*		*83 - 119*	*05/01/17 10:00*	*05/05/17 00:37*	*1*
1,2-Dinitrobenzene	*99*		*83 - 119*	*05/01/17 10:00*	*05/11/17 16:46*	*1*

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	5.0	U	10	2.0	ug/L		05/05/17 05:36	05/05/17 11:41	1

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

Prep: 3510C

Analyte	LOQ	DL	Units	Method
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: 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	20	4.0	ug/L	7196A
Chloride	3000	250	ug/L	9056A
Nitrate as N	500	42	ug/L	9056A
Nitrite as N	500	49	ug/L	9056A
Sulfate	5000	230	ug/L	9056A

General Chemistry

Prep: 9012B

Analyte	LOQ	DL	Units	Method
Cyanide, Total	10	2.0	ug/L	9012B

Surrogate Summary

Client: Cardno TEC, Inc
Project/Site: Camp Ravenna, OH

TestAmerica Job ID: 280-96291-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	TPH	NBZ
Lab Sample ID	Client Sample ID	(53-106)	(58-132)	(55-111)
280-96291-5	LL4mw-200-042417-GW	72	72	80
LCS 280-370964/2-A	Lab Control Sample	84	84	100
LCSD 280-370964/3-A	Lab Control Sample Dup	86	86	107
MB 280-370964/1-A	Method Blank	74	79	89

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
TPH = Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

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)
280-96291-4	LL3mw-237-042417-GW	94
280-96291-4	LL3mw-237-042417-GW	113
280-96291-6	LL4mw-193-042417-GW	104
280-96291-6	LL4mw-193-042417-GW	99
280-96291-6 MS	LL4mw-193-042417-GW	101
280-96291-6 MSD	LL4mw-193-042417-GW	100
LCS 280-371611/2-A	Lab Control Sample	115
LCS 280-371611/2-A	Lab Control Sample	103
MB 280-371611/1-A	Method Blank	106
MB 280-371611/1-A	Method Blank	105

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

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

Lab Sample ID: MB 280-370964/1-A
Matrix: Water
Analysis Batch: 372218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 370964

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.040	U	0.10	0.0042	ug/L		04/26/17 09:30	05/04/17 16:06	1
Acenaphthylene	0.040	U	0.10	0.0051	ug/L		04/26/17 09:30	05/04/17 16:06	1
Anthracene	0.040	U	0.10	0.0056	ug/L		04/26/17 09:30	05/04/17 16:06	1
Benzo[a]anthracene	0.012	U	0.10	0.0042	ug/L		04/26/17 09:30	05/04/17 16:06	1
Benzo[b]fluoranthene	0.012	U	0.10	0.0031	ug/L		04/26/17 09:30	05/04/17 16:06	1
Benzo[k]fluoranthene	0.012	U	0.10	0.0063	ug/L		04/26/17 09:30	05/04/17 16:06	1
Benzo[g,h,i]perylene	0.012	U	0.10	0.0062	ug/L		04/26/17 09:30	05/04/17 16:06	1
Benzo[a]pyrene	0.012	U	0.10	0.0069	ug/L		04/26/17 09:30	05/04/17 16:06	1
Chrysene	0.012	U	0.10	0.0033	ug/L		04/26/17 09:30	05/04/17 16:06	1
Dibenz(a,h)anthracene	0.012	U	0.10	0.0041	ug/L		04/26/17 09:30	05/04/17 16:06	1
Fluoranthene	0.012	U	0.10	0.0048	ug/L		04/26/17 09:30	05/04/17 16:06	1
Fluorene	0.040	U	0.10	0.0055	ug/L		04/26/17 09:30	05/04/17 16:06	1
Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.0045	ug/L		04/26/17 09:30	05/04/17 16:06	1
Naphthalene	0.012	U	0.10	0.0080	ug/L		04/26/17 09:30	05/04/17 16:06	1
Phenanthrene	0.020	U	0.10	0.0093	ug/L		04/26/17 09:30	05/04/17 16:06	1
Pyrene	0.020	U	0.10	0.0061	ug/L		04/26/17 09:30	05/04/17 16:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*74*		*53 - 106*	*04/26/17 09:30*	*05/04/17 16:06*	*1*
Terphenyl-d14 (Surr)	*79*		*58 - 132*	*04/26/17 09:30*	*05/04/17 16:06*	*1*
Nitrobenzene-d5 (Surr)	*89*		*55 - 111*	*04/26/17 09:30*	*05/04/17 16:06*	*1*

Lab Sample ID: LCS 280-370964/2-A
Matrix: Water
Analysis Batch: 372218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370964

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.900	0.976		ug/L		108	48 - 114
Acenaphthylene	0.900	0.861		ug/L		96	35 - 121
Anthracene	0.900	0.978		ug/L		109	53 - 119
Benzo[a]anthracene	0.900	0.960		ug/L		107	59 - 120
Benzo[b]fluoranthene	0.900	0.990		ug/L		110	53 - 126
Benzo[k]fluoranthene	0.900	0.962		ug/L		107	54 - 125
Benzo[g,h,i]perylene	0.900	1.01		ug/L		112	44 - 128
Benzo[a]pyrene	0.900	0.908		ug/L		101	53 - 120
Chrysene	0.900	1.09	Q	ug/L		121	57 - 120
Dibenz(a,h)anthracene	0.900	0.956		ug/L		106	44 - 131
Fluoranthene	0.900	1.04		ug/L		116	58 - 120
Fluorene	0.900	0.968		ug/L		108	50 - 118
Indeno[1,2,3-cd]pyrene	0.900	0.961	M	ug/L		107	48 - 130
Naphthalene	0.900	0.930		ug/L		103	43 - 114
Phenanthrene	0.900	1.02		ug/L		113	53 - 115
Pyrene	0.900	1.03		ug/L		115	53 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*84*		*53 - 106*
Terphenyl-d14 (Surr)	*84*		*58 - 132*

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

Lab Sample ID: LCS 280-370964/2-A
Matrix: Water
Analysis Batch: 372218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 370964

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	100		55 - 111

Lab Sample ID: LCSD 280-370964/3-A
Matrix: Water
Analysis Batch: 372218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 370964

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			0.900	0.974		ug/L		108	48 - 114	0	20
Acenaphthylene			0.900	0.900		ug/L		100	35 - 121	5	20
Anthracene			0.900	1.01		ug/L		112	53 - 119	3	20
Benzo[a]anthracene			0.900	0.987		ug/L		110	59 - 120	3	20
Benzo[b]fluoranthene			0.900	1.04		ug/L		115	53 - 126	5	20
Benzo[k]fluoranthene			0.900	1.02		ug/L		113	54 - 125	5	20
Benzo[g,h,i]perylene			0.900	1.04		ug/L		116	44 - 128	3	20
Benzo[a]pyrene			0.900	0.954		ug/L		106	53 - 120	5	20
Chrysene			0.900	1.09	Q	ug/L		121	57 - 120	0	20
Dibenz(a,h)anthracene			0.900	0.995		ug/L		111	44 - 131	4	20
Fluoranthene			0.900	1.06		ug/L		118	58 - 120	2	20
Fluorene			0.900	1.01		ug/L		112	50 - 118	4	20
Indeno[1,2,3-cd]pyrene			0.900	1.04	M	ug/L		116	48 - 130	8	20
Naphthalene			0.900	0.941		ug/L		105	43 - 114	1	20
Phenanthrene			0.900	1.04		ug/L		115	53 - 115	2	20
Pyrene			0.900	1.05		ug/L		116	53 - 121	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	86		53 - 106
Terphenyl-d14 (Surr)	86		58 - 132
Nitrobenzene-d5 (Surr)	107		55 - 111

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-371611/1-A
Matrix: Water
Analysis Batch: 372244

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371611

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.20	ug/L		05/01/17 10:00	05/04/17 23:27	1
1,3-Dinitrobenzene	0.20	U	0.40	0.089	ug/L		05/01/17 10:00	05/04/17 23:27	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.072	ug/L		05/01/17 10:00	05/04/17 23:27	1
2,4-Dinitrotoluene	0.20	U	0.40	0.084	ug/L		05/01/17 10:00	05/04/17 23:27	1
2,6-Dinitrotoluene	0.20	U	0.20	0.065	ug/L		05/01/17 10:00	05/04/17 23:27	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.051	ug/L		05/01/17 10:00	05/04/17 23:27	1
2-Nitrotoluene	0.20	U	0.40	0.086	ug/L		05/01/17 10:00	05/04/17 23:27	1
3-Nitrotoluene	0.20	U	0.40	0.083	ug/L		05/01/17 10:00	05/04/17 23:27	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.058	ug/L		05/01/17 10:00	05/04/17 23:27	1
4-Nitrotoluene	0.40	U	1.0	0.20	ug/L		05/01/17 10:00	05/04/17 23:27	1
HMX	0.20	U	0.40	0.088	ug/L		05/01/17 10:00	05/04/17 23:27	1

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

Lab Sample ID: MB 280-371611/1-A
Matrix: Water
Analysis Batch: 372244

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371611

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.20	U	0.40	0.091	ug/L		05/01/17 10:00	05/04/17 23:27	1
Nitroglycerin	2.0	U	3.0	0.92	ug/L		05/01/17 10:00	05/04/17 23:27	1
PETN	1.2	U	2.0	0.42	ug/L		05/01/17 10:00	05/04/17 23:27	1
RDX	0.12	U	0.20	0.052	ug/L		05/01/17 10:00	05/04/17 23:27	1
Tetryl	0.20	U	0.24	0.079	ug/L		05/01/17 10:00	05/04/17 23:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*106*		*83 - 119*	*05/01/17 10:00*	*05/04/17 23:27*	*1*

Lab Sample ID: MB 280-371611/1-A
Matrix: Water
Analysis Batch: 372382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371611

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.20	ug/L		05/01/17 10:00	05/11/17 15:37	1
1,3-Dinitrobenzene	0.20	U	0.40	0.089	ug/L		05/01/17 10:00	05/11/17 15:37	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.072	ug/L		05/01/17 10:00	05/11/17 15:37	1
2,4-Dinitrotoluene	0.20	U	0.40	0.084	ug/L		05/01/17 10:00	05/11/17 15:37	1
2,6-Dinitrotoluene	0.20	U	0.20	0.065	ug/L		05/01/17 10:00	05/11/17 15:37	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.051	ug/L		05/01/17 10:00	05/11/17 15:37	1
2-Nitrotoluene	0.20	U	0.40	0.086	ug/L		05/01/17 10:00	05/11/17 15:37	1
3-Nitrotoluene	0.20	U	0.40	0.083	ug/L		05/01/17 10:00	05/11/17 15:37	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.058	ug/L		05/01/17 10:00	05/11/17 15:37	1
4-Nitrotoluene	0.40	U	1.0	0.20	ug/L		05/01/17 10:00	05/11/17 15:37	1
HMX	0.20	U	0.40	0.088	ug/L		05/01/17 10:00	05/11/17 15:37	1
Nitrobenzene	0.20	U	0.40	0.091	ug/L		05/01/17 10:00	05/11/17 15:37	1
Nitroglycerin	2.0	U	3.0	0.92	ug/L		05/01/17 10:00	05/11/17 15:37	1
PETN	1.2	U	2.0	0.42	ug/L		05/01/17 10:00	05/11/17 15:37	1
RDX	0.12	U	0.20	0.052	ug/L		05/01/17 10:00	05/11/17 15:37	1
Tetryl	0.20	U	0.24	0.079	ug/L		05/01/17 10:00	05/11/17 15:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*105*		*83 - 119*	*05/01/17 10:00*	*05/11/17 15:37*	*1*

Lab Sample ID: LCS 280-371611/2-A
Matrix: Water
Analysis Batch: 372244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	2.00	2.18		ug/L		109	73 - 125
1,3-Dinitrobenzene	2.00	2.30		ug/L		115	78 - 120
2,4,6-Trinitrotoluene	2.00	2.14		ug/L		107	71 - 123
2,4-Dinitrotoluene	2.00	2.20		ug/L		110	78 - 120
2,6-Dinitrotoluene	2.00	2.15		ug/L		108	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.96		ug/L		98	79 - 120
2-Nitrotoluene	2.00	2.26		ug/L		113	70 - 127
3-Nitrotoluene	2.00	2.13		ug/L		106	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.86		ug/L		93	76 - 125

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

Lab Sample ID: LCS 280-371611/2-A
Matrix: Water
Analysis Batch: 372244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Nitrotoluene	2.00	2.10		ug/L		105	71 - 127
HMX	2.00	1.91		ug/L		96	65 - 135
Nitrobenzene	2.00	2.21		ug/L		110	65 - 134
Nitroglycerin	20.0	22.4		ug/L		112	74 - 127
PETN	20.0	23.0		ug/L		115	73 - 127
RDX	2.00	2.20		ug/L		110	68 - 130
Tetryl	2.00	2.21		ug/L		110	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*115*		*83 - 119*

Lab Sample ID: LCS 280-371611/2-A
Matrix: Water
Analysis Batch: 372382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	2.00	1.96		ug/L		98	73 - 125
1,3-Dinitrobenzene	2.00	2.15		ug/L		107	78 - 120
2,4,6-Trinitrotoluene	2.00	2.36		ug/L		118	71 - 123
2,4-Dinitrotoluene	2.00	1.98		ug/L		99	78 - 120
2,6-Dinitrotoluene	2.00	1.98		ug/L		99	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.88		ug/L		94	79 - 120
2-Nitrotoluene	2.00	2.22		ug/L		111	70 - 127
3-Nitrotoluene	2.00	2.35		ug/L		117	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.65		ug/L		82	76 - 125
4-Nitrotoluene	2.00	2.29		ug/L		114	71 - 127
HMX	2.00	1.99		ug/L		100	65 - 135
Nitrobenzene	2.00	2.33		ug/L		117	65 - 134
Nitroglycerin	20.0	20.6		ug/L		103	74 - 127
PETN	20.0	20.2		ug/L		101	73 - 127
RDX	2.00	2.04		ug/L		102	68 - 130
Tetryl	2.00	2.03	M	ug/L		102	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*103*		*83 - 119*

Lab Sample ID: 280-96291-6 MS
Matrix: Water
Analysis Batch: 373499

Client Sample ID: LL4mw-193-042417-GW
Prep Type: Total/NA
Prep Batch: 371611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	0.42	U	2.07	1.90		ug/L		92	73 - 125
1,3-Dinitrobenzene	0.21	U	2.07	2.11		ug/L		102	78 - 120
2,4,6-Trinitrotoluene	0.21	U	2.07	2.31		ug/L		111	71 - 123
2,4-Dinitrotoluene	0.21	U	2.07	1.90		ug/L		92	78 - 120
2,6-Dinitrotoluene	0.21	U	2.07	1.92		ug/L		92	77 - 127
2-Amino-4,6-dinitrotoluene	0.13	U	2.07	1.81		ug/L		87	79 - 120
2-Nitrotoluene	0.21	U J	2.07	1.94		ug/L		93	70 - 127

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

Lab Sample ID: 280-96291-6 MS — **Client Sample ID: LL4mw-193-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 373499 — **Prep Batch: 371611**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3-Nitrotoluene	0.21	U	2.07	2.09		ug/L		101	73 - 125
4-Amino-2,6-dinitrotoluene	0.13	U	2.07	1.60		ug/L		77	76 - 125
4-Nitrotoluene	0.42	U	2.07	2.08		ug/L		101	71 - 127
HMX	0.21	U	2.07	1.96	M	ug/L		95	65 - 135
Nitrobenzene	0.21	U	2.07	2.23		ug/L		108	65 - 134
Nitroglycerin	2.1	U	20.7	20.3		ug/L		98	74 - 127
PETN	1.3	U	20.7	19.9		ug/L		96	73 - 127
RDX	0.13	U	2.07	2.23		ug/L		108	68 - 130
Tetryl	0.10	J	2.07	2.29		ug/L		105	64 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dinitrobenzene	*101*		*83 - 119*

Lab Sample ID: 280-96291-6 MSD — **Client Sample ID: LL4mw-193-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 372382 — **Prep Batch: 371611**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	0.42	U	2.05	1.91		ug/L		93	73 - 125	0	20
1,3-Dinitrobenzene	0.21	U	2.05	2.15		ug/L		105	78 - 120	2	20
2,4,6-Trinitrotoluene	0.21	U	2.05	2.30		ug/L		112	71 - 123	0	20
2,4-Dinitrotoluene	0.21	U	2.05	1.94		ug/L		95	78 - 120	2	20
2,6-Dinitrotoluene	0.21	U	2.05	1.94		ug/L		95	77 - 127	1	20
2-Amino-4,6-dinitrotoluene	0.13	U	2.05	1.85		ug/L		90	79 - 120	2	20
2-Nitrotoluene	0.21	U J	2.05	2.41	J	ug/L		117	70 - 127	22	20
3-Nitrotoluene	0.21	U	2.05	2.32		ug/L		113	73 - 125	10	20
4-Amino-2,6-dinitrotoluene	0.13	U	2.05	1.65		ug/L		80	76 - 125	3	20
4-Nitrotoluene	0.42	U	2.05	2.27		ug/L		111	71 - 127	8	20
HMX	0.21	U	2.05	1.95	M	ug/L		95	65 - 135	0	20
Nitrobenzene	0.21	U	2.05	2.42		ug/L		118	65 - 134	8	20
Nitroglycerin	2.1	U	20.5	20.2		ug/L		99	74 - 127	0	20
PETN	1.3	U	20.5	20.0		ug/L		97	73 - 127	0	20
RDX	0.13	U	2.05	2.22		ug/L		108	68 - 130	1	20
Tetryl	0.10	J	2.05	2.29		ug/L		107	64 - 128	0	20

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

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 280-370824/10 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370824

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	4.0	U	20	4.0	ug/L			04/25/17 11:29	1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 280-370824/8
Matrix: Water
Analysis Batch: 370824

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	100	99.3		ug/L		99	90 - 111

Lab Sample ID: LCSD 280-370824/9
Matrix: Water
Analysis Batch: 370824

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	100	98.5		ug/L		98	90 - 111	1	20

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

Lab Sample ID: MB 280-372333/5-A
Matrix: Water
Analysis Batch: 372408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372333

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	5.0	U	10	2.0	ug/L		05/05/17 05:36	05/05/17 11:14	1

Lab Sample ID: HLCS 280-372333/1-A
Matrix: Water
Analysis Batch: 372408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372333

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	406		ug/L		102	90 - 110

Lab Sample ID: LCS 280-372333/3-A
Matrix: Water
Analysis Batch: 372408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	100	96.4		ug/L		96	83 - 116

Lab Sample ID: LCSD 280-372333/4-A
Matrix: Water
Analysis Batch: 372408

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 372333

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	100	96.1		ug/L		96	83 - 116	0	20

Lab Sample ID: LLCS 280-372333/2-A
Matrix: Water
Analysis Batch: 372408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372333

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	100	96.8		ug/L		97	44 - 167

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

Lab Sample ID: 280-96291-6 MS — **Client Sample ID: LL4mw-193-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 372408 — **Prep Batch: 372333**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	5.0	U	100	92.2		ug/L		92	83 - 116

Lab Sample ID: 280-96291-6 MSD — **Client Sample ID: LL4mw-193-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 372408 — **Prep Batch: 372333**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	5.0	U	100	93.2		ug/L		93	83 - 116	1	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-370781/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	100	U	500	42	ug/L			04/25/17 11:15	1
Nitrite as N	100	U	500	49	ug/L			04/25/17 11:15	1

Lab Sample ID: LCS 280-370781/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5000	5040		ug/L		101	88 - 111
Nitrite as N	5000	5040		ug/L		101	87 - 111

Lab Sample ID: LCSD 280-370781/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	5000	4970		ug/L		99	88 - 111	2	10
Nitrite as N	5000	5030		ug/L		101	87 - 111	0	10

Lab Sample ID: MRL 280-370781/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.200	0.214	J	mg/L		107	50 - 150
Nitrite as N	0.200	0.222	J	mg/L		111	50 - 150

Lab Sample ID: 280-96291-2 MS — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	120	J	5000	4780		ug/L		93	88 - 111

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

Lab Sample ID: 280-96291-2 MS — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	100	U	5000	4610		ug/L		92	87 - 111

Lab Sample ID: 280-96291-2 MSD — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	120	J	5000	5050		ug/L		99	88 - 111	5	10
Nitrite as N	100	U	5000	4880		ug/L		98	87 - 111	6	10

Lab Sample ID: 280-96291-2 DU — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370781

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	120	J	123	J	ug/L		4	10
Nitrite as N	100	U	100	U	ug/L		NC	10

Lab Sample ID: MB 280-370782/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	656	J	3000	250	ug/L			04/25/17 11:15	1
Sulfate	373	J	5000	230	ug/L			04/25/17 11:15	1

Lab Sample ID: LCS 280-370782/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100000	104000		ug/L		104	87 - 111
Sulfate	100000	103000		ug/L		103	87 - 112

Lab Sample ID: LCSD 280-370782/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100000	103000		ug/L		103	87 - 111	1	10
Sulfate	100000	102000	M	ug/L		102	87 - 112	0	10

Lab Sample ID: MRL 280-370782/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.50	2.40	J	mg/L		96	50 - 150
Sulfate	2.50	2.46	J	mg/L		99	50 - 150

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

Lab Sample ID: 280-96291-2 MS — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	110000	J	25000	133000	4	ug/L		79	87 - 111		
Sulfate	55000	J	25000	77000	J	ug/L		86	87 - 112		

Lab Sample ID: 280-96291-2 MSD — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	110000	J	25000	140000	4	ug/L		108	87 - 111	5	10
Sulfate	55000	J	25000	81100		ug/L		103	87 - 112	5	10

Lab Sample ID: 280-96291-2 DU — **Client Sample ID: BKGmw-006-042417-GW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 370782

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	110000	J		114000		ug/L				0.3	10
Sulfate	55000	J		55400		ug/L				0.06	10

GC/MS Semi VOA

Prep Batch: 370964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-5	LL4mw-200-042417-GW	Total/NA	Water	3510C	
MB 280-370964/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-370964/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-370964/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 372218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-5	LL4mw-200-042417-GW	Total/NA	Water	8270D SIM	370964
MB 280-370964/1-A	Method Blank	Total/NA	Water	8270D SIM	370964
LCS 280-370964/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	370964
LCSD 280-370964/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	370964

HPLC/IC

Prep Batch: 371611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-4	LL3mw-237-042417-GW	Total/NA	Water	3535	
280-96291-6	LL4mw-193-042417-GW	Total/NA	Water	3535	
MB 280-371611/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-371611/2-A	Lab Control Sample	Total/NA	Water	3535	
280-96291-6 MS	LL4mw-193-042417-GW	Total/NA	Water	3535	
280-96291-6 MSD	LL4mw-193-042417-GW	Total/NA	Water	3535	

Analysis Batch: 372244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-6	LL4mw-193-042417-GW	Total/NA	Water	8330B	371611
MB 280-371611/1-A	Method Blank	Total/NA	Water	8330B	371611
LCS 280-371611/2-A	Lab Control Sample	Total/NA	Water	8330B	371611

Analysis Batch: 372382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-4	LL3mw-237-042417-GW	Total/NA	Water	8330B	371611
280-96291-6	LL4mw-193-042417-GW	Total/NA	Water	8330B	371611
MB 280-371611/1-A	Method Blank	Total/NA	Water	8330B	371611
LCS 280-371611/2-A	Lab Control Sample	Total/NA	Water	8330B	371611
280-96291-6 MSD	LL4mw-193-042417-GW	Total/NA	Water	8330B	371611

Analysis Batch: 373499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-6 MS	LL4mw-193-042417-GW	Total/NA	Water	8330B	371611

Analysis Batch: 373971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-4	LL3mw-237-042417-GW	Total/NA	Water	8330B	371611

General Chemistry

Analysis Batch: 370781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-2	BKGmw-006-042417-GW	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 370781 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-370781/6	Method Blank	Total/NA	Water	9056A	
LCS 280-370781/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-370781/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-370781/3	Lab Control Sample	Total/NA	Water	9056A	
280-96291-2 MS	BKGmw-006-042417-GW	Total/NA	Water	9056A	
280-96291-2 MSD	BKGmw-006-042417-GW	Total/NA	Water	9056A	
280-96291-2 DU	BKGmw-006-042417-GW	Total/NA	Water	9056A	

Analysis Batch: 370782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-2	BKGmw-006-042417-GW	Total/NA	Water	9056A	
MB 280-370782/6	Method Blank	Total/NA	Water	9056A	
LCS 280-370782/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-370782/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-370782/3	Lab Control Sample	Total/NA	Water	9056A	
280-96291-2 MS	BKGmw-006-042417-GW	Total/NA	Water	9056A	
280-96291-2 MSD	BKGmw-006-042417-GW	Total/NA	Water	9056A	
280-96291-2 DU	BKGmw-006-042417-GW	Total/NA	Water	9056A	

Analysis Batch: 370824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-1	LL3mw-244-042417-GW	Total/NA	Water	7196A	
280-96291-2	BKGmw-006-042417-GW	Total/NA	Water	7196A	
MB 280-370824/10	Method Blank	Total/NA	Water	7196A	
LCS 280-370824/8	Lab Control Sample	Total/NA	Water	7196A	
LCSD 280-370824/9	Lab Control Sample Dup	Total/NA	Water	7196A	

Prep Batch: 372333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-3	LL3mw-234-042417-GW	Total/NA	Water	9012B	
280-96291-5	LL4mw-200-042417-GW	Total/NA	Water	9012B	
280-96291-6	LL4mw-193-042417-GW	Total/NA	Water	9012B	
MB 280-372333/5-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-372333/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-372333/3-A	Lab Control Sample	Total/NA	Water	9012B	
LCSD 280-372333/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	
LLCS 280-372333/2-A	Lab Control Sample	Total/NA	Water	9012B	
280-96291-6 MS	LL4mw-193-042417-GW	Total/NA	Water	9012B	
280-96291-6 MSD	LL4mw-193-042417-GW	Total/NA	Water	9012B	

Analysis Batch: 372408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-3	LL3mw-234-042417-GW	Total/NA	Water	9012B	372333
280-96291-5	LL4mw-200-042417-GW	Total/NA	Water	9012B	372333
280-96291-6	LL4mw-193-042417-GW	Total/NA	Water	9012B	372333
MB 280-372333/5-A	Method Blank	Total/NA	Water	9012B	372333
HLCS 280-372333/1-A	Lab Control Sample	Total/NA	Water	9012B	372333
LCS 280-372333/3-A	Lab Control Sample	Total/NA	Water	9012B	372333
LCSD 280-372333/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	372333
LLCS 280-372333/2-A	Lab Control Sample	Total/NA	Water	9012B	372333
280-96291-6 MS	LL4mw-193-042417-GW	Total/NA	Water	9012B	372333

General Chemistry (Continued)

Analysis Batch: 372408 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96291-6 MSD	LL4mw-193-042417-GW	Total/NA	Water	9012B	372333

Client Sample ID: LL3mw-244-042417-GW
Lab Sample ID: 280-96291-1
Date Collected: 04/24/17 14:55
Matrix: Water
Date Received: 04/25/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1	10 mL	10 mL	370824	04/25/17 11:29	JML	TAL DEN

Client Sample ID: BKGmw-006-042417-GW
Lab Sample ID: 280-96291-2
Date Collected: 04/24/17 16:30
Matrix: Water
Date Received: 04/25/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1	10 mL	10 mL	370824	04/25/17 11:29	JML	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	370781	04/25/17 14:02	AFB	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	370782	04/25/17 14:02	AFB	TAL DEN

Client Sample ID: LL3mw-234-042417-GW
Lab Sample ID: 280-96291-3
Date Collected: 04/24/17 11:40
Matrix: Water
Date Received: 04/25/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	372333	05/05/17 05:36	JML	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	372408	05/05/17 11:33	JML	TAL DEN

Client Sample ID: LL3mw-237-042417-GW
Lab Sample ID: 280-96291-4
Date Collected: 04/24/17 13:19
Matrix: Water
Date Received: 04/25/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			484.9 mL	5 mL	371611	05/01/17 10:00	MAV	TAL DEN
Total/NA	Analysis	8330B		1			373971	05/18/17 12:21	ASC	TAL DEN
Total/NA	Prep	3535			484.9 mL	5 mL	371611	05/01/17 10:00	MAV	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	372382	05/11/17 16:23	ASC	TAL DEN

Client Sample ID: LL4mw-200-042417-GW
Lab Sample ID: 280-96291-5
Date Collected: 04/24/17 10:07
Matrix: Water
Date Received: 04/25/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			249.4 mL	1 mL	370964	04/26/17 09:30	KI	TAL DEN
Total/NA	Analysis	8270D SIM		1			372218	05/04/17 22:56	KGV	TAL DEN
Total/NA	Prep	9012B			50 mL	50 mL	372333	05/05/17 05:36	JML	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	372408	05/05/17 11:35	JML	TAL DEN

Client Sample ID: LL4mw-193-042417-GW

Date Collected: 04/24/17 11:40
Date Received: 04/25/17 09:00

Lab Sample ID: 280-96291-6

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			479.1 mL	5 mL	371611	05/01/17 10:00	MAV	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	372244	05/05/17 00:37	ASC	TAL DEN
Total/NA	Prep	3535			479.1 mL	5 mL	371611	05/01/17 10:00	MAV	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	372382	05/11/17 16:46	ASC	TAL DEN
Total/NA	Prep	9012B			50 mL	50 mL	372333	05/05/17 05:36	JML	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	372408	05/05/17 11:41	JML	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: Cardno TEC, Inc
Project/Site: Camp Ravenna, OH

TestAmerica Job ID: 280-96291-1

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	10-31-17

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: Cardno TEC, Inc
Project/Site: Camp Ravenna, OH

TestAmerica Job ID: 280-96291-1

Method	Method Description	Protocol	Laboratory
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
9012B	Cyanide, Total and/or Amenable	EPA	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Cardno TEC, Inc
Project/Site: Camp Ravenna, OH

TestAmerica Job ID: 280-96291-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-96291-1	LL3mw-244-042417-GW	Water	04/24/17 14:55	04/25/17 09:00
280-96291-2	BKGmw-006-042417-GW	Water	04/24/17 16:30	04/25/17 09:00
280-96291-3	LL3mw-234-042417-GW	Water	04/24/17 11:40	04/25/17 09:00
280-96291-4	LL3mw-237-042417-GW	Water	04/24/17 13:19	04/25/17 09:00
280-96291-5	LL4mw-200-042417-GW	Water	04/24/17 10:07	04/25/17 09:00
280-96291-6	LL4mw-193-042417-GW	Water	04/24/17 11:40	04/25/17 09:00

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 369226

Lab Sample ID: STD0020 280-369226/3 IC Client Sample ID:

Date Analyzed: 04/17/17 15:29 Lab File ID: F6242.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	18.66	Split Peak	vasquezk	04/18/17 09:31

Lab Sample ID: STD0300 280-369226/5 IC Client Sample ID:

Date Analyzed: 04/17/17 16:21 Lab File ID: F6244.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	18.65	Split Peak	vasquezk	04/18/17 09:29

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 372218

Lab Sample ID: CCV 280-372218/2 Client Sample ID:

Date Analyzed: 05/04/17 15:40 Lab File ID: F6418.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	18.65	Split Peak	vasquezk	05/04/17 16:02

Lab Sample ID: LCS 280-370964/2-A Client Sample ID:

Date Analyzed: 05/04/17 16:31 Lab File ID: F6420.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	18.64	Split Peak	vasquezk	05/07/17 17:44

Lab Sample ID: LCSD 280-370964/3-A Client Sample ID:

Date Analyzed: 05/04/17 16:57 Lab File ID: F6421.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	18.65	Split Peak	vasquezk	05/05/17 11:17

Lab Sample ID: CCVC 280-372218/20 Client Sample ID:

Date Analyzed: 05/04/17 23:21 Lab File ID: F6436.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	18.64	Split Peak	vasquezk	05/05/17 12:03

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 372244

Lab Sample ID: IC 280-372244/14 Client Sample ID:

Date Analyzed: 05/04/17 22:17 Lab File ID: 50417C14.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	24.62	Incomplete Integration	colleea	05/05/17 06:23
PETN	25.27	Incomplete Integration	colleea	05/05/17 06:23

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 372382

Lab Sample ID: LCS 280-371611/2-A Client Sample ID:

Date Analyzed: 05/11/17 16:00 Lab File ID: 05101774.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	10.35	Incomplete Integration	colleea	05/12/17 07:21

Lab Sample ID: 280-96291-4 Client Sample ID: LL3mw-237-042417-GW

Date Analyzed: 05/11/17 16:23 Lab File ID: 05101775.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	7.80	Incomplete Integration	colleea	05/12/17 07:22

Lab Sample ID: 280-96291-6 MSD Client Sample ID: LL4mw-193-042417-GW MSD

Date Analyzed: 05/11/17 17:32 Lab File ID: 05101778.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.66	Incomplete Integration	colleea	05/12/17 07:26

Lab Sample ID: CCV 280-372382/79 Client Sample ID:

Date Analyzed: 05/11/17 17:55 Lab File ID: 05101779.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.80	Baseline Smoothing	colleea	05/12/17 07:30
1,3,5-Trinitrobenzene	8.96	Baseline Smoothing	colleea	05/12/17 07:30
4-Nitrotoluene	13.45	Incomplete Integration	colleea	05/12/17 07:30

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 372816

Lab Sample ID: IC 280-372816/14 Client Sample ID:

Date Analyzed: 05/09/17 16:28 Lab File ID: 05091714.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	8.06	Baseline Smoothing	colleea	05/10/17 08:19
4-Amino-2,6-dinitrotoluene	11.42	Baseline Smoothing	colleea	05/09/17 16:53
2-Amino-4,6-dinitrotoluene	11.71	Baseline Smoothing	colleea	05/09/17 16:53
2,6-Dinitrotoluene	11.87	Baseline Smoothing	colleea	05/09/17 16:53
2,4-Dinitrotoluene	12.06	Baseline Smoothing	colleea	05/09/17 16:53

Lab Sample ID: ICV 280-372816/15 Client Sample ID:

Date Analyzed: 05/09/17 16:51 Lab File ID: 05091715.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	7.77	Baseline Smoothing	colleea	05/10/17 08:19
Picric acid	8.04	Baseline Smoothing	colleea	05/10/17 08:19

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 373499

Lab Sample ID: 280-96291-6 MS Client Sample ID: LL4mw-193-042417-GW MS

Date Analyzed: 05/15/17 15:56 Lab File ID: 51517015.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.65	Incomplete Integration	colleea	05/16/17 09:22

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Batch Number: 370782

Lab Sample ID: LCSD 280-370782/5 Client Sample ID:

Date Analyzed: 04/25/17 10:55 Lab File ID: 0005.d GC Column: Ion PAC AS 14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Sulfate	14.30	Split Peak	bensona	04/25/17 12:15

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8270 SIM Surr_00068	01/06/18	01/06/17	ACETONE, Lot Acetone_00163/4	1000 mL	8270SurStkHL_00205	100 uL	2,4,6 - Tribromophenol	0.5 ug/mL
							2,4,6-Tribromophenol	0.5 ug/mL
							2-Fluorobiphenyl (Surr)	0.5 ug/mL
							2-Fluorophenol	0.5 ug/mL
							Nitrobenzene-d5 (Surr)	0.5 ug/mL
							Phenol-d5	0.5 ug/mL
							Phenol-d6	0.5 ug/mL
							Terphenyl-d14 (Surr)	0.5 ug/mL
.8270SurStkHL_00205	01/06/18	Restek, Lot A0120521			(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
8270BO-SIMLCS_00020	04/30/17	10/21/16	P&T Methanol, Lot MethanolP&T_00155	250 mL	570666_00011	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
							2,2'-oxybis[1-chloropropane]	0.9 ug/mL
							2,3,4,6-Tetrachlorophenol	0.9 ug/mL
							2,4,5-Trichlorophenol	0.9 ug/mL
							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

Lab Name: TestAmerica Denver Job No.: 280-96291-1

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	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-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
							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

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	0.9 ug/mL
.570666_00011	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-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

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							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	1000 ug/mL
8330 LCS_00075	03/05/18	03/05/17	Acetonitrile, Lot ACN_00202	100 mL	8330 LCSMix2_00092	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

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	10 ug/mL
					8330_NG_Stk_00042	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00043	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00044	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00045	1 mL	PETN	100 ug/mL
					8330LCSMix1_00094	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
					PicricARestek_00058	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00092	08/31/20		Restek, Lot A0113065		(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_00042	07/31/19		Restek, Lot A0120172		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00043	07/31/19		Restek, Lot A0120172		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00044	06/30/19		Restek, Lot A0120082		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00045	06/30/19		Restek, Lot A0120082		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00094	11/30/21		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
.PicricARestek_00058	06/30/18		Restek, Lot A096192		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330_ADDs_00010	12/23/17	12/23/16	Acetonitrile, Lot ACN 00178	5 mL	833035DNAStk_00027	1 mL	3,5-Dinitroaniline	20 ug/mL
.833035DNAStk_00027	03/01/19		Accustandard, Lot 216011300-01		(Purchased Reagent)		3,5-Dinitroaniline	100 ug/mL
8330IntermStk_00050	05/11/17	02/01/17	Acetonitrile, Lot 0000130057	5 mL	8330ICALStock_00023	1 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							2,4,6-Trinitrotoluene	20 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Amino-4,6-dinitrotoluene	20 ug/mL
							2-Nitrotoluene	20 ug/mL
							3-Nitrotoluene	20 ug/mL
							4-Amino-2,6-dinitrotoluene	20 ug/mL
							4-Nitrotoluene	20 ug/mL
							HMX	20 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	20 ug/mL
							RDX	20 ug/mL
							Tetryl	20 ug/mL
							1,2-Dinitrobenzene	20 ug/mL
					8330NG_PS_00016	1 mL	Nitroglycerin	200 ug/mL
					8330PAStkPS_00046	1 mL	2,4,6-Trinitrophenol	20 ug/mL
					8330PETN_PS_00016	1 mL	PETN	200 ug/mL
.8330ICALStock_00023	05/11/17	05/11/16	Acetonitrile, Lot ACN_00178	10 mL	8330 Stock_TS_00005	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							2,4,6-Trinitrotoluene	100 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Amino-4,6-dinitrotoluene	100 ug/mL
							2-Nitrotoluene	100 ug/mL
							3-Nitrotoluene	100 ug/mL
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							4-Nitrotoluene	100 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00159	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00005	04/30/18	Ultra Scientific, Lot CM-1321			(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
							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
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00159	08/15/24	AccuStandard, Lot 214081391			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330NG_PS_00016	01/04/19	Accustandard, Lot 215121015			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.8330PAStkPS_00046	06/24/18	AccuStandard, Lot 216061376			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
.8330PETN_PS_00016	12/08/18	Accustandard, Lot 215061294-01			(Purchased Reagent)		PETN	1000 ug/mL
8330IntermStk_00051	04/30/18	04/06/17	Acetonitrile, Lot 0000130057	5 mL	8330ICALStock_00024	1 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							2,4,6-Trinitrotoluene	20 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Amino-4,6-dinitrotoluene	20 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	20 ug/mL
							3-Nitrotoluene	20 ug/mL
							4-Amino-2,6-dinitrotoluene	20 ug/mL
							4-Nitrotoluene	20 ug/mL
							HMX	20 ug/mL
							Nitrobenzene	20 ug/mL
							RDX	20 ug/mL
							Tetryl	20 ug/mL
							1,2-Dinitrobenzene	20 ug/mL
					8330NG_PS_00017	1 mL	Nitroglycerin	200 ug/mL
					8330PAStkPS_00047	1 mL	2,4,6-Trinitrophenol	20 ug/mL
					8330PETN_PS_00017	1 mL	PETN	200 ug/mL
.8330ICALStock_00024	04/30/18	04/05/17	Acetonitrile, Lot ACN_00178	10 mL	8330 Stock_TS_00006	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							2,4,6-Trinitrotoluene	100 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Amino-4,6-dinitrotoluene	100 ug/mL
							2-Nitrotoluene	100 ug/mL
							3-Nitrotoluene	100 ug/mL
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							4-Nitrotoluene	100 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00160	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00006	04/30/18	Ultra Scientific, Lot CM-1321			(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
							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
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00160	08/15/24	AccuStandard, Lot 214081391			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330NG_PS_00017	01/04/19	Accustandard, Lot 215121015			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.8330PAStkPS_00047	06/24/18	AccuStandard, Lot 216061376			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
.8330PETN_PS_00017	12/08/18	Accustandard, Lot 215061294-01			(Purchased Reagent)		PETN	1000 ug/mL
8330Surrogate_00091	08/09/17	02/09/17	Acetonitrile, Lot ACN_00193	500 mL	8330SurrStkSS_00105	1 mL	1,2-Dinitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330SurrStkSS_00106	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00107	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00108	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00110	1 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00105	08/31/20		Restek, Lot A0109837		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00106	08/31/20		Restek, Lot A0109837		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00107	08/31/20		Restek, Lot A0109837		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00108	08/31/20		Restek, Lot A0109837		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00110	08/31/20		Restek, Lot A0109837		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
CN 10ppm_00252	05/09/17	05/02/17	2% NaOH, Lot 1% NaOH_00256	100 mg/L	CN CAL Std_00053	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN CAL Std_00053	07/31/17		Ricca, Lot 4701B68		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN CAL 1 ppm_01246	05/05/17	05/04/17	1% NaOH, Lot N/A	100 mL	CN 10ppm_00252	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00252	05/09/17	05/02/17	2% NaOH, Lot 1% NaOH_00256	100 mg/L	CN CAL Std_00053	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00053	07/31/17		Ricca, Lot 4701B68		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_01011	05/05/17	05/04/17	1% HNO3, Lot N/A	100 mL	CN ICV Int_00434	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00434	05/09/17	05/02/17	1% NaOH, Lot 1% NaOH_00256	100 mL	CN ICV Std_00041	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00041	04/16/18		CPI, Lot 1104086		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Int_00434	05/09/17	05/02/17	1% NaOH, Lot 1% NaOH_00256	100 mL	CN ICV Std_00041	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00041	04/16/18		CPI, Lot 1104086		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CR6 ICV int_01230	04/26/17	04/25/17	Di Water, Lot na	100 mL	Cr6 ICV Std_00017	0.1 mL	Chromium, hexavalent	1 mg/L
.Cr6 ICV Std_00017	04/30/21		Hach, Lot A6103		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
CR6 Int cal_00798	04/26/17	04/25/17	Di Water, Lot na	100 mL	CR6 Cal std_00008	0.1 mL	Chromium, hexavalent	1 mg/L
.CR6 Cal std_00008	04/30/19		ERA, Lot 040416		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
CR6 spike sou_00837	04/26/17	04/25/17	Di Water, Lot na	100 mL	CR6 Cal std_00008	1 mL	Chromium, hexavalent	10 mg/L
.CR6 Cal std_00008	04/30/19		ERA, Lot 040416		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
IC CAL cl/so4_00145	04/17/17	04/10/17	Di Water, Lot na	100 mL	IC CL cal_00048	25 mL	Chloride	250 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					IC sulfatecal_00045	25 mL	Sulfate	250 mg/L
.IC CL cal_00048	01/30/18	SPEX CertiPrep, Lot 3-170CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00045	01/30/18	SPEX CertiPrep, Lot 3-177SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00147	05/01/17	04/24/17	Di Water, Lot na	100 mL	IC CL cal_00049	25 mL	Chloride	250 mg/L
					IC sulfatecal_00046	25 mL	Sulfate	250 mg/L
.IC CL cal_00049	03/30/18	SPEX CertiPrep, Lot 3-170CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00046	03/30/18	SPEX CertiPrep, Lot 3-177SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00282	04/18/17	04/11/17	Di Water, Lot NA	100 mL	IC Br cal_00013	5 mL	Bromide	50 mg/L
					IC FL cal_00010	5 mL	Fluoride	50 mg/L
					IC N02 CAL_00038	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00015	5 mL	Nitrate as N	50 mg/L
					IC P04 cal_00016	5 mL	Orthophosphate as P	50 mg/L
.IC Br cal_00013	05/31/18	Ricca, Lot 1611D81			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00010	09/30/17	Ricca, Lot 4604574			(Purchased Reagent)		Fluoride	1000 mg/L
.IC N02 CAL_00038	04/30/17	RICCA, Lot 1610E23			(Purchased Reagent)		Nitrite as N	1000 ppm
.IC N03 cal_00015	08/31/17	Ricca, Lot 4603653			(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC P04 cal_00016	03/31/18	RICCA, Lot 4604847			(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC Cal low_00287	04/30/17	04/25/17	Di Water, Lot NA	100 mL	IC N02 CAL_00038	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00015	5 mL	Nitrate as N	50 mg/L
.IC N02 CAL_00038	04/30/17	RICCA, Lot 1610E23			(Purchased Reagent)		Nitrite as N	1000 ppm
.IC N03 cal_00015	08/31/17	Ricca, Lot 4603653			(Purchased Reagent)		Nitrate as N	1000 mg/L
IC CL ICV_00013	07/31/17	ERA, Lot 280615			(Purchased Reagent)		Chloride	1000 mg/L
IC ICV 5_00170	04/19/17	04/12/17	Di Water, Lot na	10 mL	IC NO2 ICV_00015	0.5 mL	Nitrite as N	50 mg/L
					IC NO3 ICV_00010	0.5 mL	Nitrate as N	50 mg/L
.IC NO2 ICV_00015	06/30/18	ERA, Lot 320616			(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC NO3 ICV_00010	11/30/17	ERA, Lot 031115			(Purchased Reagent)		Nitrate as N	1000 mg/L
IC LCS_00889	04/26/17	04/25/17	Di Water, Lot 27	200 mL	IC Cal low_00287	20 mL	Nitrite as N	5 mg/L
							Nitrate as N	5 mg/L
					IC CL cal_00049	20 mL	Chloride	100 mg/L
					IC sulfatecal_00046	20 mL	Sulfate	100 mg/L
.IC Cal low_00287	04/30/17	04/25/17	Di Water, Lot NA	100 mL	IC N02 CAL_00038	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00015	5 mL	Nitrate as N	50 mg/L
..IC N02 CAL_00038	04/30/17	RICCA, Lot 1610E23			(Purchased Reagent)		Nitrite as N	1000 ppm
..IC N03 cal_00015	08/31/17	Ricca, Lot 4603653			(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC CL cal_00049	03/30/18	SPEX CertiPrep, Lot 3-170CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00046	03/30/18	SPEX CertiPrep, Lot 3-177SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC SO4 ICV_00016	10/31/17	ERA, Lot 211015			(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00465	05/02/17	04/25/17	Di Water, Lot NA	10 mL	IC SPK 6 ANIO_00018	5 mL	Chloride	2499.92 mg/L
							Nitrate as N	500.003 mg/L
							Sulfate	2500.26 mg/L
					IC SPK N02SOL_00010	5 mL	Nitrite as N	499.973 mg/L
.IC SPK 6 ANIO_00018	09/13/17	09/13/16	Di Water, Lot NA	1000 mL	IC MS/MSD CL_00002	8.2424 g	Chloride	4999.84 mg/L
					IC MS/MSD N03_00004	6.068 g	Nitrate as N	1000.01 mg/L
					IC MS/MSD S04_00005	9.0704 g	Sulfate	5000.51 mg/L
..IC MS/MSD CL_00002	01/13/21	FISHER, Lot 091363			(Purchased Reagent)		Chloride	0.6066 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..IC MS/MSD N03_00004	10/02/18		FISHER, Lot 035600		(Purchased Reagent)		Nitrate as N	0.1648 g/g
..IC MS/MSD S04_00005	09/29/20		FISHER, Lot 147276		(Purchased Reagent)		Sulfate	0.5513 g/g
.IC SPK N02SOL_00010	06/09/17	12/22/16	Di Water, Lot na	500 mL	IC MS/MSD N02_00001	2.4628 g	Nitrite as N	999.946 mg/L
..IC MS/MSD N02_00001	06/09/17		fisher, Lot 041304		(Purchased Reagent)		Nitrite as N	0.20301 g/g
MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
.MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIM SSV_00116	06/30/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIM SSV_00116	06/30/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM SSV_00113	30 uL	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-SIM SSV_00113	06/30/17	09/13/16	Methylene Chloride, Lot 131181	10 mL	MS-HSLB1_STK_00008	1 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_00008	06/30/17	06/30/16	Methylene Chloride, Lot 123631	10 mL	MS-570666.SEC_00001	2 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-570666.SEC_00001	06/30/17		Restek, Lot A0115803		(Purchased Reagent)		Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
MS-SIMSL 0.02_00067	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00020	5 uL	2-Fluorobiphenyl (Surr)	0.02 ug/mL
							Nitrobenzene-d5 (Surr)	0.02002 ug/mL
							Terphenyl-d14 (Surr)	0.02002 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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL Int._00020	08/31/17	03/29/17	Methylene Chloride, Lot 138764	10 mL	MS-SIMSL_00020	1 mL	2-Fluorobiphenyl (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2.002 ug/mL
							Terphenyl-d14 (Surr)	2.002 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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
..MS-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
...MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00004	10/31/18		Restek, Lot A092153		(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-SIMSL 0.1_00063	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00020	25 uL	2-Fluorobiphenyl (Surr)	0.1 ug/mL
							Nitrobenzene-d5 (Surr)	0.1001 ug/mL
							Terphenyl-d14 (Surr)	0.1001 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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL Int._00020	08/31/17	03/29/17	Methylene Chloride, Lot 138764	10 mL	MS-SIMSL_00020	1 mL	2-Fluorobiphenyl (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2.002 ug/mL
							Terphenyl-d14 (Surr)	2.002 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
..MS-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
...MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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_00004	10/31/18		Restek, Lot A092153		(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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-SIMSL 0.3_00061	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00020	75 uL	2-Fluorobiphenyl (Surr)	0.3 ug/mL
							Nitrobenzene-d5 (Surr)	0.3003 ug/mL
							Terphenyl-d14 (Surr)	0.3003 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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL Int._00020	08/31/17	03/29/17	Methylene Chloride, Lot 138764	10 mL	MS-SIMSL_00020	1 mL	2-Fluorobiphenyl (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2.002 ug/mL
							Terphenyl-d14 (Surr)	2.002 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
..MS-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
...MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00004	10/31/18		Restek, Lot A092153		(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-SIMSL 0.6_00122	08/31/17	03/24/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00020	15 uL	2-Fluorobiphenyl (Surr)	0.6 ug/mL
							Nitrobenzene-d5 (Surr)	0.6006 ug/mL
							Terphenyl-d14 (Surr)	0.6006 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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
..MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	0.5 mL	1-Methylnaphthalene	200 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00004	10/31/18		Restek, Lot A092153		(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-SIMSL 1.2_00063	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00020	30 uL	2-Fluorobiphenyl (Surr)	1.2 ug/mL
							Nitrobenzene-d5 (Surr)	1.2012 ug/mL
							Terphenyl-d14 (Surr)	1.2012 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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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-48925_00014	08/31/17	Supelco, Lot LC08783V			(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14 (Surr)	1001 ug/mL
..MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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_00004	10/31/18	Restek, Lot A092153			(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-SIMSL 2.5_00062	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00020	62.5 uL	2-Fluorobiphenyl (Surr)	2.5 ug/mL
							Nitrobenzene-d5 (Surr)	2.5025 ug/mL
							Terphenyl-d14 (Surr)	2.5025 ug/mL
							2-Methylnaphthalene	5 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	2.5 ug/mL
							Acenaphthene	2.5 ug/mL
							Acenaphthylene	2.5 ug/mL
							Anthracene	2.5 ug/mL
							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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
..MS-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
..MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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_00004	10/31/18		Restek, Lot A092153		(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-SIMSL 5_00063	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-SIMSL_00020	125 uL	2-Fluorobiphenyl (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5.005 ug/mL
							Terphenyl-d14 (Surr)	5.005 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
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
..MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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_00004	10/31/18		Restek, Lot A092153		(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.: 280-96291-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-SIMX 10_00055	08/31/17	03/29/17	Methylene Chloride, Lot 138764	500 uL	MS-SIM IS_00029	50 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00020	250 uL	2-Fluorobiphenyl (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10.01 ug/mL
							Terphenyl-d14 (Surr)	10.01 ug/mL
							2-Methylnaphthalene	20 ug/mL
							1-Methylnaphthalene	10 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Anthracene	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
							Chrysene	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Naphthalene	10 ug/mL
							Phenanthrene	10 ug/mL
							Pyrene	10 ug/mL
.MS-SIM IS_00029	11/11/17	01/18/17	Methylene Chloride, Lot 138764	100 mL	MS-IS_00012	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00012	11/11/17	11/11/16	Methylene Chloride, Lot 138764	250 mL	MS-567684_00019	50 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-SIMSL_00020	08/31/17	03/24/17	Methylene Chloride, Lot 138764	10 mL	MS-48925_00014	0.2 mL	2-Fluorobiphenyl (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20.02 ug/mL
							Terphenyl-d14 (Surr)	20.02 ug/mL
					MS-SIM SL_Stk_00017	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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-48925_00014	08/31/17		Supelco, Lot LC08783V		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	1000 ug/mL
							Nitrobenzene-d5 (Surr)	1001 ug/mL
							Terphenyl-d14 (Surr)	1001 ug/mL
..MS-SIM SL_Stk_00017	11/15/17	11/15/16	Methylene Chloride, Lot 138764	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00004	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_00004	10/31/18		Restek, Lot A092153		(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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

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	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL

Reagent

570666_00011

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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. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : April 30, 2017 **Storage:** 10°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		1,000.9 µg/mL		+/- 5.8193	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648	µg/mL	Unstressed
	Purity 99%				+/- 19.0418	µg/mL	Stressed
2	Pyridine		1,004.7 µg/mL		+/- 5.8416	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106	µg/mL	Unstressed
	Purity 99%				+/- 19.1148	µg/mL	Stressed
3	N-Nitrosodimethylamine		1,002.6 µg/mL		+/- 5.8294	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855	µg/mL	Unstressed
	Purity 99%				+/- 19.0748	µg/mL	Stressed
4	Aniline		1,001.8 µg/mL		+/- 5.8246	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756	µg/mL	Unstressed
	Purity 99%				+/- 19.0590	µg/mL	Stressed
5	Bis(2-chloroethyl)ether		1,000.2 µg/mL		+/- 5.8152	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565	µg/mL	Unstressed
	Purity 99%				+/- 19.0285	µg/mL	Stressed
6	2-Chlorophenol		1,001.6 µg/mL		+/- 5.8236	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736	µg/mL	Unstressed
	Purity 99%				+/- 19.0558	µg/mL	Stressed
7	Phenol		1,000.6 µg/mL		+/- 5.8176	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612	µg/mL	Unstressed
	Purity 99%				+/- 19.0361	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 3299900)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.1	µg/mL	+/-	5.8144	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	11.9547	µg/mL	Unstressed
	Purity 98%				+/-	19.0258	µg/mL	Stressed
27	Naphthalene		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBN2776V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
29	4-Chloroaniline		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.9624	µg/mL	Unstressed
	Purity 99%				+/-	19.0380	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9626	µg/mL	Unstressed
	Purity 98%				+/-	19.0382	µg/mL	Stressed
31	2-Methylnaphthalene		1,001.3	µg/mL	+/-	5.8216	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0494	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
33	1-Methylnaphthalene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
35	Hexachlorocyclopentadiene		999.7	µg/mL	+/-	5.8126	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 150909)			+/-	11.9510	µg/mL	Unstressed
	Purity 97%				+/-	19.0199	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBH7393V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot 150806JLM)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI-TE)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed
39	Biphenyl		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed

56	Azobenzene		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%				+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

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

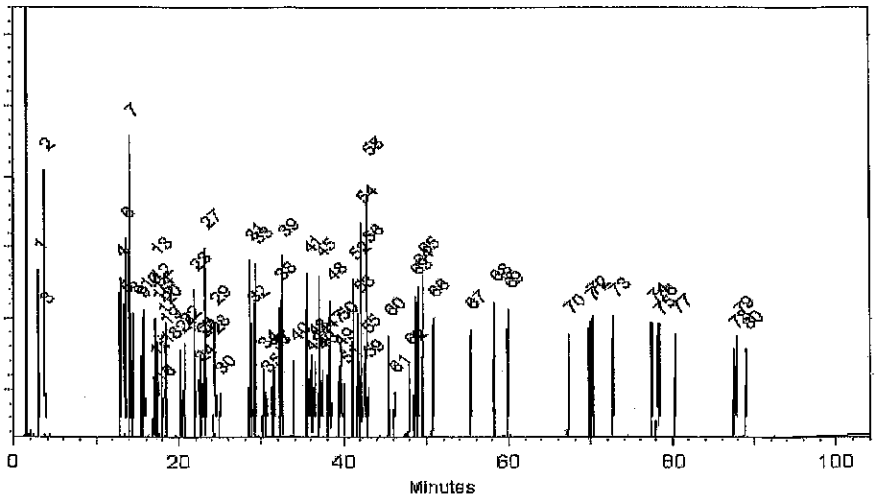
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°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.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

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

Reagent

8270 SIM Surr_00068

Preliminary Report

TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_X4\20170127-55298.b\X4_9343.D
Lims ID: 8270 SIM Surr_00068
Client ID:
Sample Type: Client
Inject. Date: 27-Jan-2017 14:58:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 8270 SIM Surr_00068
Operator ID: VASQUEZK Instrument ID: SMS_X4

Method: \\ChromNA\Denver\ChromData\SMS_X4\20170127-55298.b\SMSX4_SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 27-Jan-2017 15:51:00 Calib Date: 26-Jan-2017 17:29:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_X4\20170123-55149.b\X4_9339.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	490.1	98.03
$ 5 2-Fluorobiphenyl	500.0	455.8	91.17
$ 6 Terphenyl-d14	500.0	451.3	90.26

Reagent

8270BO-SIMLCS_00020

TestAmerica Laboratories
LCS, Lab Control Sample Report

Data Path: \\ChromNA\Denver\ChromData\SMS_G5\20170113-54930.b\G5_0831.D
Worklist Name: 011317 Worklist Num: 54930
Instrument: SMS_G5 Method: SMSG5_SIMX
Limit Group: MSSV - 8270C-SIM
Analysis Type: SemiVOA
Inj Volume: 1.00 Inj Vol Units: ul

Detector 1: MS SCAN

Compound	Amount Added	Amount Recovered	%Rec
15 Naphthalene	900.0	927.2	103.02
16 2-Methylnaphthalene	900.0	1044.6	116.07
17 1-Methylnaphthalene	900.0	941.0	104.56
18 Dimethyl phthalate	900.0	996.7	110.74
20 Acenaphthylene	900.0	884.4	98.27
21 Acenaphthene	900.0	930.4	103.38
19 Dibenzofuran	900.0	1049.3	116.59
22 Diethyl phthalate	900.0	988.2	109.80
23 Fluorene	900.0	954.5	106.06
24 N-Nitrosodiphenylamine	900.0	1015.8	112.87
25 Phenanthrene	900.0	893.8	99.31
26 Anthracene	900.0	890.9	98.99
27 Di-n-butyl phthalate	900.0	848.2	94.24
28 Fluoranthene	900.0	917.4	101.93
29 Pyrene	900.0	942.0	104.67
30 Butyl benzyl phthalate	900.0	728.5	80.94
31 Bis(2-ethylhexyl) phthalate	900.0	620.0	68.89
32 Benzo[a]anthracene	900.0	890.5	98.94
33 Chrysene	900.0	982.4	109.16
34 Di-n-octyl phthalate	900.0	644.2	71.58
35 Benzo[b]fluoranthene	900.0	838.5	93.17
36 Benzo[k]fluoranthene	900.0	853.7	94.86
37 Benzo[a]pyrene	900.0	800.9	88.99
39 Indeno[1,2,3-cd]pyrene	900.0	807.5	89.72
38 Dibenz(a,h)anthracene	900.0	755.8	83.98
40 Benzo[g,h,i]perylene	900.0	859.5	95.50

Reagent

8270SurStkHL_00205

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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.:** A0120521

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : July 31, 2021 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBC5591V)	5,024.7 µg/mL	+/- 29.2140 µg/mL +/- 146.6376 µg/mL +/- 177.9391 µg/mL		Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X479P8)	5,000.1 µg/mL	+/- 29.0710 µg/mL +/- 145.9197 µg/mL +/- 177.0679 µg/mL		Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-24042)	5,035.3 µg/mL	+/- 29.2757 µg/mL +/- 146.9469 µg/mL +/- 178.3144 µg/mL		Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot S26B003)	5,034.1 µg/mL	+/- 29.2687 µg/mL +/- 146.9119 µg/mL +/- 178.2719 µg/mL		Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,034.1 µg/mL	+/- 29.2687 µg/mL +/- 146.9119 µg/mL +/- 178.2719 µg/mL		Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-21037)	5,025.9 µg/mL	+/- 29.2210 µg/mL +/- 146.6726 µg/mL +/- 177.9816 µg/mL		Gravimetric Unstressed Stressed

Reagent

8330 LCSMix2_00092

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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. : 31451 **Lot No.:** A0113065

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl **CAS #** 479-45-8 **Purity** 99% (Lot 091120JLM)	1,002.0 µg/mL	+/- 5.9516 +/- 53.8797 +/- 58.5858	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99% (Lot ER070908-01)	1,004.0 µg/mL	+/- 5.9635 +/- 53.9873 +/- 58.7028	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99% (Lot 29550-55)	1,002.0 µg/mL	+/- 5.9516 +/- 53.8797 +/- 58.5858	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99% (Lot 1437483V)	1,001.0 µg/mL	+/- 5.9456 +/- 53.8260 +/- 58.5274	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99% (Lot GA01)	1,000.0 µg/mL	+/- 5.9397 +/- 53.7722 +/- 58.4689	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99% (Lot 15417TR)	1,006.0 µg/mL	+/- 5.9753 +/- 54.0948 +/- 58.8197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99% (Lot 07329LG)	1,000.0 µg/mL	+/- 5.9397 +/- 53.7722 +/- 58.4689	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

8330 Stock_TS_00005

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION — ULTRA — ISO 17025 • ISO GUIDE 34 • ISO 9001

ISO Guide 34 Reference Material

Product Number: NAIM-833E
Lot Number: CM-1321

Lot Issue Date: 18-Mar 2015
Expiration Date: 30-Apr 2018

Product Name: Combined Stock Solution

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	CAS#	Analyte Lot	Calculated Value	True Value	Traceability & Method
HMX	002691-41-0	RM06237	999.9 µg/mL	1006 ± 4.1 µg/mL	CJ-4135A; LC/DAD
RDX	000121-82-4	RM05682	1000 µg/mL	998.9 ± 4.4 µg/mL	CJ-4135A; LC/DAD
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 µg/mL	969.3 ± 4.2 µg/mL	CJ-4135A; LC/DAD
m-dinitrobenzene	000099-65-0	RM04448	1001 µg/mL	932.5 ± 3.6 µg/mL	CJ-4135A; LC/DAD
nitrobenzene	000098-95-3	RM01293	1003 µg/mL	1001 ± 4.2 µg/mL	CJ-4135A; LC/DAD
2,4,6-trinitrotoluene	000118-96-7	RM06889	1003 µg/mL	1007 ± 3.4 µg/mL	CJ-4135A; LC/DAD
2,4-dinitrotoluene	000121-14-2	RM01209	1003 µg/mL	1001 ± 3.2 µg/mL	CJ-4135A; LC/DAD
tetryl	000479-45-8	RM06942	1000 µg/mL	998.3 ± 3.9 µg/mL	CK-2749; LC/DAD
2,6-dinitrotoluene	000606-20-2	NT00450	1003 µg/mL	999.0 ± 3.8 µg/mL	CK-2749; LC/DAD
2-nitrotoluene	000088-72-2	NT01996	1004 µg/mL	1003 ± 4.0 µg/mL	CK-2749; LC/DAD
3-nitrotoluene	000099-08-1	NT02212	1004 µg/mL	1003 ± 3.4 µg/mL	CK-2749; LC/DAD
4-nitrotoluene	000099-99-0	NT02096	1001 µg/mL	997.3 ± 4.0 µg/mL	CK-2749; LC/DAD
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1002 µg/mL	982.9 ± 4.0 µg/mL	CK-2749; LC/DAD
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 µg/mL	982.9 ± 4.0 µg/mL	CK-2749; LC/DAD

Solvent: acetonitrile

Storage: Store at Room Temperature (15° - 30°C)

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

3843528
ID: 8330 Stock_TS_00005
Exp: 04/30/18 Prpd: ACF
NAIM-833E Combined Stock

3843529
ID: 8330 Stock_TS_00006
Exp: 04/30/18 Prpd: ACF
NAIM-833E Combined Stock

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ISO 9001 Registered Quality System – TUV USA

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION — ULTRA — ISO 17025 • ISO GUIDE 34 • ISO 9001

ISO Guide 34 Reference Material

Product Number: NAIM-833E
Lot Number: CM-1321

Lot Issue Date: 18-Mar 2015
Expiration Date: 30-Apr 2018

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Each unit contains slightly more than the stated labeled volume to facilitate transfer of the material for testing.

Should crystallization occur after refrigeration, gentle warming (<40°C) and shaking of the container is usually sufficient to re-dissolve the material. If this is unsuccessful, an ultrasonic bath may be used. Solutions containing volatile components (such as gases) should be chilled prior to opening to minimize headspace problems.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

Peter A. King, Ph.D.
VP, Technical Operations

Daniel J. Lamendola
Director of QA/RA

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Reagent

8330 Stock_TS_00006

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Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: NAIM-833E
Lot Number: CM-1321

Lot Issue Date: 18-Mar 2015
Expiration Date: 30-Apr 2018

Product Name: Combined Stock Solution

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	CAS#	Analyte Lot	Calculated Value	True Value	Traceability & Method
HMX	002691-41-0	RM06237	999.9 µg/mL	1006 ± 4.1 µg/mL	CJ-4135A; LC/DAD
RDX	000121-82-4	RM05682	1000 µg/mL	998.9 ± 4.4 µg/mL	CJ-4135A; LC/DAD
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 µg/mL	969.3 ± 4.2 µg/mL	CJ-4135A; LC/DAD
m-dinitrobenzene	000099-65-0	RM04448	1001 µg/mL	932.5 ± 3.6 µg/mL	CJ-4135A; LC/DAD
nitrobenzene	000098-95-3	RM01293	1003 µg/mL	1001 ± 4.2 µg/mL	CJ-4135A; LC/DAD
2,4,6-trinitrotoluene	000118-96-7	RM06889	1003 µg/mL	1007 ± 3.4 µg/mL	CJ-4135A; LC/DAD
2,4-dinitrotoluene	000121-14-2	RM01209	1003 µg/mL	1001 ± 3.2 µg/mL	CJ-4135A; LC/DAD
tetryl	000479-45-8	RM06942	1000 µg/mL	998.3 ± 3.9 µg/mL	CK-2749; LC/DAD
2,6-dinitrotoluene	000606-20-2	NT00450	1003 µg/mL	999.0 ± 3.8 µg/mL	CK-2749; LC/DAD
2-nitrotoluene	000088-72-2	NT01996	1004 µg/mL	1003 ± 4.0 µg/mL	CK-2749; LC/DAD
3-nitrotoluene	000099-08-1	NT02212	1004 µg/mL	1003 ± 3.4 µg/mL	CK-2749; LC/DAD
4-nitrotoluene	000099-99-0	NT02096	1001 µg/mL	997.3 ± 4.0 µg/mL	CK-2749; LC/DAD
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1002 µg/mL	982.9 ± 4.0 µg/mL	CK-2749; LC/DAD
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 µg/mL	982.9 ± 4.0 µg/mL	CK-2749; LC/DAD

Solvent: acetonitrile

Storage: Store at Room Temperature (15° - 30°C)

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

3843528
ID: 8330 Stock_TS_00005
Exp: 04/30/18 Prpd: ACF
NAIM-833E Combined Stock

3843529
ID: 8330 Stock_TS_00006
Exp: 04/30/18 Prpd: ACF
NAIM-833E Combined Stock

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Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: NAIM-833E
Lot Number: CM-1321

Lot Issue Date: 18-Mar 2015
Expiration Date: 30-Apr 2018

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Each unit contains slightly more than the stated labeled volume to facilitate transfer of the material for testing.

Should crystallization occur after refrigeration, gentle warming (<40°C) and shaking of the container is usually sufficient to re-dissolve the material. If this is unsuccessful, an ultrasonic bath may be used. Solutions containing volatile components (such as gases) should be chilled prior to opening to minimize headspace problems.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

Peter A. King, Ph.D.
VP, Technical Operations

Daniel J. Lamendola
Director of QA/RA

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

Certificate of Composition

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.:** A0120172

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, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,016.0 µg/mL	+/- 46.6461	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 150612JLM)		+/- 277.1256	µg/mL	Unstressed
	Purity 99%		+/- 322.4378	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

7-15-16
YJC

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

8330_NG_Stk_00043

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Certificate of Composition

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.:** A0120172

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, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,016.0 µg/mL	+/- 46.6461	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 150612JLM)		+/- 277.1256	µg/mL	Unstressed
	Purity 99%		+/- 322.4378	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

7-15-16
YJC

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

8330_PETN_Stk_00044

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Certificate of Composition

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.:** A0120082

Description : Custom PETN Standard

Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	PETN		5,044.0	µg/mL	+/- 46.9065	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 278.6726	µg/mL	Unstressed
	Purity 99%				+/- 324.2377	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

7-6-16
YJC

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

8330_PETN_Stk_00045

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CERTIFIED REFERENCE MATERIAL

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Certificate of Composition

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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. : 568872 **Lot No.:** A0120082

Description : Custom PETN Standard

Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,044.0 µg/mL	+/- 46.9065	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 278.6726	µg/mL	Unstressed
	Purity 99%		+/- 324.2377	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

7-6-16
YJC

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

833035DNAStk_00027

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-4
Description: 3,5-Dinitroaniline
Lot: 216011300-01
Solvent: Methanol (50%)
Acetonitrile (50%)
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*

Danger 2

Date Certified: Feb 29, 2016
Expiration: Mar 1, 2019
Sample Size: 1 mL
Components: 1

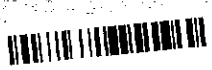
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
3,5-Dinitroaniline	618-87-1	100.0	100.0	100.0

3971052
ID: 833035DNAStk_00028
Exp: 03/01/19 Prpd: ACF
M-8330-ADD-4 100ug/mL 3,



3971050
ID: 833035DNAStk_00027
Exp: 03/01/19 Prpd: ACF
M-8330-ADD-4 100ug/mL 3,

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST; Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

Reagent

8330LCSMix1_00094

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Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
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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. : 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 µg/mL +/- 54.7611 µg/mL +/- 63.8568 µg/mL		Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 **Purity** 99%	(Lot 080220JLM)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 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 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBB1436V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 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 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
7	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed

Reagent

8330NG_PS_00016

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USA

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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-1-10X
Description: Nitroglycerin
Lot: 215121015-01
Solvent: Ethanol (97%)
Methanol (3%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jan 4, 2017
Expiration: Jan 4, 2019
Sample Size: 1 mL
Components: 1

Storage Condition: Refrig (0-5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Nitroglycerin	55-63-0	99.4	1003	997

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

Reagent

8330PAStkPS_00046

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USA

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 216061376
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*

Danger 2

Date Certified: Jun 24, 2016
Expiration: Jun 24, 2018
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.	99.2

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.

Reagent

8330PETN_PS_00016

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New Haven, CT 06513
USA

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Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-2-10X
Description: PETN
Lot: 215061294-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 8, 2016
Expiration: Dec 8, 2018
Sample Size: 1 mL
Components: 1
Storage Condition: Refrig (0-5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
PETN	78-11-5	99.4	1001	995

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

Page 1 of 1

For use in routine laboratory analysis.

Reagent

8330Surrogate_00091

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00091

Reagent ID: 8330Surrogate_00091

		Expiration Date:	08/09/2017
Description:	10ug/mL 1,2-Dinitrobenzene	Laboratory:	TestAmerica Denver
No. of Bottles:	50	Prepared By:	Knaub, Gentry L
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	500.000 mL	Solvent Lot:	ACN_00193
Creation Date:	02/09/2017		
Open Date:			
Container(s):	4368875, 4368876, 4368877, 4368878, 4368879, 4368880, 4368881, 4368882, 4368883, 436888		
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.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00105	08/31/2020	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00106	08/31/2020	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00107	08/31/2020	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00108	08/31/2020	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00110	08/31/2020	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_00105	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD				31453	1.00000	mL
8330SurrStkSS_00106	31453, 1000ug/mL Restek 1,2-DNB SS					31453	1.00000	mL
8330SurrStkSS_00107	31453, 1000ug/mL Restek 1,2-DNB SS					31453	1.00000	mL
8330SurrStkSS_00108	31453, 1000ug/mL Restek 1,2-DNB SS					31453	1.00000	mL
8330SurrStkSS_00110	31453, 1000ug/mL Restek 1,2-DNB SS					31453	1.00000	mL

•50ul (0.19234) = 9.617/10 = 96.17% Recovery

•50ul (1.9277) = 9.6385/10 = 96.385% Recovery

(sample was not logged into TALS. Therefor could not be uploaded. Had to calculate by hand)

Preliminary Report

TestAmerica Denver

MB, Method Blank Report

Sample Path: \\ChromNA\Denver\ChromData\G2_LUNA\20170210-55676.b\02101709.D

Lims ID: 8330Surrogate_00091 Inj. Date: 10-Feb-2017 20:32:41

Worklist ID: 280-0055676-009 Instrument: CHHPLC_G2_LUNA

Method: G2_8330_Luna

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535
$ 9 1,2-Dinitrobenzene	2.00	1.93	96.4	78-119

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

280-93337-B-11-C	280-93337-A-12-E	280-93337-A-13-E
280-93337-A-14-E	280-93337-B-15-C	280-93337-A-16-E
280-93337-B-17-C	280-93337-B-18-C	280-93337-A-19-E
280-93337-A-20-E	280-93337-A-21-D	280-93337-A-22-F

Reagent

8330SurrStkSS_00105

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

Certificate of Analysis

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. : 31453 **Lot No.:** A0113066

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 : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene **CAS #** 528-29-0 **Purity** 99% (Lot MKBK2313V)	1,002.0 µg/mL	+/- 5.9516 +/- 11.3644 +/- 13.0587	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
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

8330SurrStkSS_00106

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0113066

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 : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene **CAS #** 528-29-0 **Purity** 99% (Lot MKBK2313V)	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
			+/- 11.3644	µg/mL	Unstressed
			+/- 13.0587	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
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

8330SurrStkSS_00107

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Certificate #3222.01

Certificate of Analysis

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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.:** A0113066

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 : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene **CAS #** 528-29-0 **Purity** 99% (Lot MKBK2313V)	1,002.0 µg/mL	+/- 5.9516 +/- 11.3644 +/- 13.0587	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
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

8330SurrStkSS_00108

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. : 31453 **Lot No.:** A0113066

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 : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene **CAS #** 528-29-0 **Purity** 99% (Lot MKBK2313V)	1,002.0 µg/mL	+/- 5.9516 +/- 11.3644 +/- 13.0587	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
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

8330SurrStkSS_00110

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. : 31453 **Lot No.:** A0113066

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 : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene **CAS #** 528-29-0 **Purity** 99% (Lot MKBK2313V)	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
			+/- 11.3644	µg/mL	Unstressed
			+/- 13.0587	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
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

8330SurrStock_00159

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

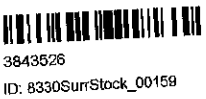
Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*

Danger 2

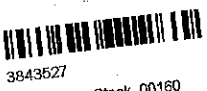
Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

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



3843526
ID: 8330SurrStock_00159
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS



3843527
ID: 8330SurrStock_00160
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_00160

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

3843526
ID: 8330SurrStock_00159
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3843527
ID: 8330SurrStock_00160
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

Page 1 of 1 - Rev. 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

Reagent

CN CAL Std_00053

RICCA CHEMICAL COMPANY®

Arlington, TX 76012
Pocomoke City, MD 21851
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 4701B68 **Product Number:** 2543

Manufacture Date: JAN 10, 2017
Expiration Date: JUL 2017

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

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)
2543-4	120 mL amber poly	6 months
2543-16	500 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Reagent

CN ICV Std_00041

USA

5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment:

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400-IC9M	1104086	2-Sep-2018	0.179% NaOH	ISO Guide 34 - Cyanide, 100 mL 1,000 mg/L in H_2O

Additional Information:

Date Received: _____

Container: 4 oz (125 mL) Narrow Mouth, HDPE

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internally developed method against an independent source which is directly traceable to the NIST SRM's listed below.
The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Element	Symbol	CAS No	SRM No	NIST Lot No	Source Lot No	Purity %	Concentration mg/L	Uncertainty ± mg/L
Cyanide	CN	151-50-8	N/A	N/A	363.25.1P	98.1	1000	4.5

USA

5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment:

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400-IC9M	1104086	2-Sep-2018	0.179% NaOH	ISO Guide 34 - Cyanide, 100 mL 1,000 mg/L in H_2O

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty:
$U=ku_c$ U=Expanded Uncertainty, k= the coverage factor at the 95% confidence level, k=2, u_c = the combined uncertainty
$u_c=\sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for raw material, transportation, homogeneity, and shelf life.

Expiration Information:

The Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until the expiration date listed above.

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:

Carrie Bibbins
Chemist
Manufacture Date: 3/1/2017

Certified By:

Cristy Lane
Chemist
Certified Date:3/1/2017

Released By:

Mark Filla
Chemist
Original Issue Date: 3/1/2017

Reagent

CR6 Cal std_00008

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_00017

Certificate of Analysis List

For request number 806710

Catalog Number Entered	Lot Number Entered	Related Catalog Number	Related Lot Code	Description
1466442 1000	6103	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 1000**
COMMODITY NUMBER: **14664-42** MANUFACTURE DATE: **4/12/2016** DATE OF ANALYSIS: **4/12/2016**
LOT NUMBER: **A6103**

TEST	*SPECIFICATIONS*	*RESULTS*
Hexavalent Chromium Concentration	995 to 1005 ppm	1000.0 ppm
pH of the solution	12 to 14	12.4

The expiration date is Apr 2021

The item 1466442 is traceable to NIST standards SRM 136f Potassium Dichromate LOT N/A.

Certified by Scott Als

Scott Als
Analytical Services Chemist

Reagent

IC Br cal_00013

RICCA CHEMICAL COMPANY®

Arlington, TX 76012
Pocomoke City, MD 21851
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 1611D81 **Product Number:** 1180

Manufacture Date: NOV 10, 2016
Expiration Date: MAY 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.

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

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Katie Schnur
Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC CL cal_00048

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 3-170CL-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: 1003 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: 1002 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 1003 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: JAN 2017 Certifying Officer:

Reagent

IC CL cal_00049

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 3-170CL-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: 1003 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: 1002 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 1003 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: MAR - - 2017 Certifying Officer:

Reagent

IC CL ICV_00013

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Chloride
CATALOG NUMBER:	047 -125 mL; 988 - 500 mL
LOT NUMBER:	280615
ISSUE DATE:	July 28, 2015
REVISION DATE:	Original
STARTING MATERIAL:	Sodium Chloride (NaCl)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	0.9988 ± 0.0008 g/mL at 19.4°C and 745 mm Hg
TRACEABILITY[3]:	99.2%
NIST/SRM:	3182 Chloride
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 7/2017**. 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: Tom Widera

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 FL cal_00010

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Batesville, IN 47006
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customerservice@riccachemical.com

Certificate of Analysis

Fluoride Standard, 1000 ppm F^-

Lot Number: 4604574 **Product Number:** 3173

Manufacture Date: APR 04, 2016
Expiration Date: SEP 2017

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)
3173-4	120 mL natural poly	18 months
3173-32	1 L natural poly	18 months
3173-8	250 mL natural poly	18 months
3173-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Katie Schnur
Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC MS/MSD N02_00001

Fisher Scientific

1 Reagent Lane
Fairlawn, 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 ISO9001:2000 standard by DNV Certificate number CERT-08052-2006-AQ-HOU-ANAB

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. 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**	**Mfg. Date**	4/13/2004 0:0:0
Lot Number	**041304**	**Sample Id**	S347..041304.100
Product Description	SODIUM NITRITE, A.C.S.		

Result Name	Units	Specifications	Test Value
INSOLUBLE MATTER	%	0.01 Maximum	0.0010
IDENTIFICATION	PASS/FAIL	Pass test	PASS
HEAVY METALS(AS Pb)	%	0.001 Maximum	0.0004
CHLORIDE	%	0.005 Maximum	0.0040
SULFATE (SO4)	%	0.01 Maximum	0.0060
POTASSIUM	%	0.005 Maximum	0.00040
ASSAY	%	97 Minimum	99.7000
APPEARANCE	REPORT	Yellow-white crystals	YELLOWISH WHITE FINE CRYSTALS
IRON	%	0.001 Maximum	0.00020
CALCIUM IN %	%	0.01 Maximum	0.0002

CERTIFIED BY

Lab Manager Fair Lawn

Lab Manager BPF

Note: The data listed is valid for all package sizes of this lot of product, expressed as an extension of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at [illegible]

Reagent

IC MS/MSD S04_00005

Fisher Scientific

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

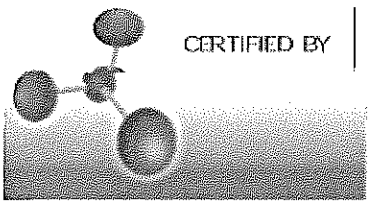
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 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_00038

RICCA CHEMICAL COMPANY®

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Pocomoke City, MD 21851
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 1610E23 **Product Number:** R5444900

Manufacture Date: OCT 11, 2016
Expiration Date: APR 2017

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	1002 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)
R5444900-500C	500 mL amber glass	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Katie Schnur
Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC N03 cal_00015

RICCA CHEMICAL COMPANY®

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Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3^-)

Lot Number: 4603653 **Product Number:** 5459

Manufacture Date: MAR 02, 2016
Expiration Date: AUG 2017

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)
5459-4	120 mL natural poly	18 months
5459-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Katie Schnur
Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC NO2 ICV_00015

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:	320616
ISSUE DATE:	July 7, 2016
REVISION DATE:	Original
STARTING MATERIAL:	Sodium Nitrite ($NaNO_2$)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.9%
MATRIX:	18 megohm deionized water
DENSITY:	1.0001 ± 0.0016 g/mL at 20.0°C and 761 mm Hg
TRACEABILITY[3]:	NA
NIST/SRM:	SRM not available
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 6/2018**. 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

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

IC NO3 ICV_00010

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Nitrate as N (NO_3-N)
CATALOG NUMBER:	052 -125 mL; 991 - 500 mL
LOT NUMBER:	031115
ISSUE DATE:	November 18, 2015
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Nitrate (KNO_3)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0006 ± 0.0008 g/mL at 23.0°C and 757 mm Hg
TRACEABILITY[3]:	97.4%
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 11/2017**. 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

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Reagent

IC P04 cal_00016

RICCA CHEMICAL COMPANY®

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4604847 **Product Number:** AP1KW

Manufacture Date: APR 12, 2016
Expiration Date: MAR 2018

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certified 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-100	100 mL natural LDPE	24 months
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Katie Schnur
Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC SO4 ICV_00016

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Sulfate (SO_4)
CATALOG NUMBER:	062 -125 mL; 995 - 500 mL
LOT NUMBER:	211015
ISSUE DATE:	November 2, 2015
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Sulfate (K_2SO_4)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	0.9983 ± 0.0008 g/mL at 21.5°C and 758 mm Hg
TRACEABILITY[3]:	100%
NIST/SRM:	3181 Sulfate
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 10/2017**. 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

IC sulfatecal_00045

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 3-177SO4-2X

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: 999 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: 997 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 1000 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 unopened and stored under ambient laboratory conditions.

Date of Certification: JAN 2017 Certifying Officer:

Reagent

IC sulfatecal_00046

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 3-177SO4-2X

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: 999 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: 997 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 1000 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 unopened and stored under ambient laboratory conditions.

Date of Certification: MAR - - 2017 Certifying Officer:

Reagent

MS-31010_00011

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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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)

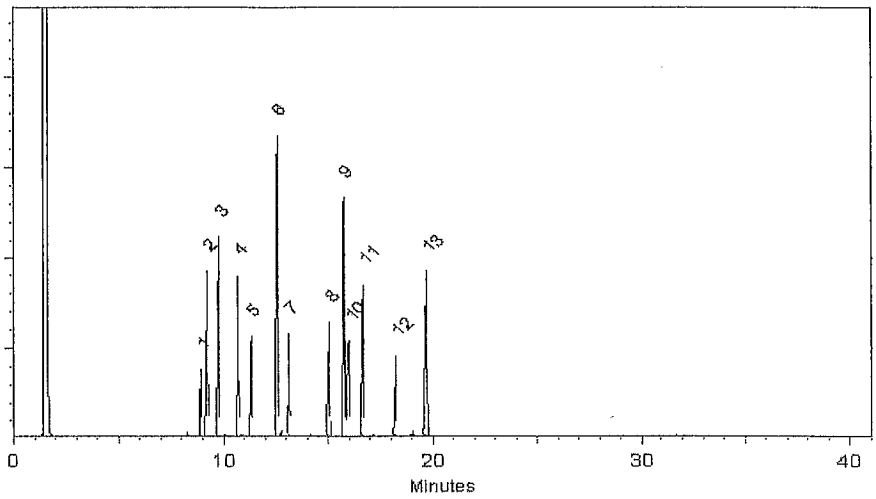
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

MS-31995_00004

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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. : 31995 **Lot No.:** A092153

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 : October 31, 2018 **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 **CAS #** 91-20-3 (Lot MKBF8633V) **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 µg/mL +/- 92.7295 µg/mL +/- 101.3892 µg/mL	Gravimetric Unstressed Stressed
2	2-Methylnaphthalene **CAS #** 91-57-6 (Lot 19399MJV) **Purity** 96%	1,999.7 µg/mL	+/- 11.7352 µg/mL +/- 92.7147 µg/mL +/- 101.3729 µg/mL	Gravimetric Unstressed Stressed
3	1-Methylnaphthalene **CAS #** 90-12-0 (Lot 5250.00-10) **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 µg/mL +/- 92.7295 µg/mL +/- 101.3892 µg/mL	Gravimetric Unstressed Stressed
4	Acenaphthylene **CAS #** 208-96-8 (Lot ER030707-01) **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 µg/mL +/- 92.7295 µg/mL +/- 101.3892 µg/mL	Gravimetric Unstressed Stressed
5	Acenaphthene **CAS #** 83-32-9 (Lot MKBH3748V) **Purity** 99%	2,000.5 µg/mL	+/- 11.7401 µg/mL +/- 92.7527 µg/mL +/- 101.4145 µg/mL	Gravimetric Unstressed Stressed
6	Fluorene **CAS #** 86-73-7 (Lot 1326187) **Purity** 99%	2,000.0 µg/mL	+/- 11.7371 µg/mL +/- 92.7295 µg/mL +/- 101.3892 µg/mL	Gravimetric Unstressed Stressed
7	Phenanthrene **CAS #** 85-01-8 (Lot MKBJ4205V) **Purity** 99%	2,001.0 µg/mL	+/- 11.7430 µg/mL +/- 92.7759 µg/mL +/- 101.4398 µg/mL	Gravimetric Unstressed Stressed
8	Anthracene **CAS #** 120-12-7 (Lot MKBK5208V) **Purity** 99%	2,000.5 µg/mL	+/- 11.7401 µg/mL +/- 92.7527 µg/mL +/- 101.4145 µg/mL	Gravimetric Unstressed Stressed

9	Fluoranthene		2,000.2	µg/mL	+/-	11.7382	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot 00828AJ)			+/-	92.7378	µg/mL	Unstressed
	Purity 98%				+/-	101.3983	µg/mL	Stressed
10	Pyrene		2,001.5	µg/mL	+/-	11.7459	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot S22012V)			+/-	92.7990	µg/mL	Unstressed
	Purity 99%				+/-	101.4652	µg/mL	Stressed
11	Benz(a)anthracene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER121707-01)			+/-	92.7295	µg/mL	Unstressed
	Purity 99%				+/-	101.3892	µg/mL	Stressed
12	Chrysene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot ER120810-02)			+/-	92.7295	µg/mL	Unstressed
	Purity 99%				+/-	101.3892	µg/mL	Stressed
13	Benzo(b)fluoranthene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER022008-02)			+/-	92.7527	µg/mL	Unstressed
	Purity 99%				+/-	101.4145	µg/mL	Stressed
14	Benzo(k)fluoranthene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot ER061608-02)			+/-	92.7295	µg/mL	Unstressed
	Purity 99%				+/-	101.3892	µg/mL	Stressed
15	Benzo(a)pyrene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	92.7295	µg/mL	Unstressed
	Purity 99%				+/-	101.3892	µg/mL	Stressed
16	Indeno(1,2,3-cd)pyrene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	92.7527	µg/mL	Unstressed
	Purity 99%				+/-	101.4145	µg/mL	Stressed
17	Dibenz(a,h)anthracene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	92.7527	µg/mL	Unstressed
	Purity 99%				+/-	101.4145	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)			+/-	92.7295	µg/mL	Unstressed
	Purity 99%				+/-	101.3892	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

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

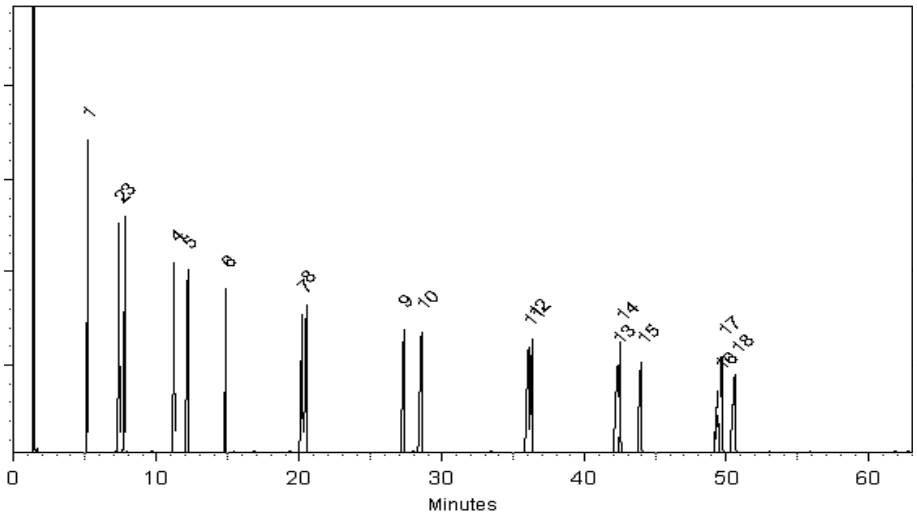
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 to guarantee product quality. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sauver

Date Mixed: 28-Nov-2012 **Balance:** 1128360905

Jodi E. Breon

Jodi E. Breon - QA Analyst

Date Passed: 03-Dec-2012

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 31840, 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-48925_00014

Certificate of Analysis

DESCRIPTION: Base-Neutral Surrogate Spike Mix

CATALOG NO.: 48925_00014 MFG DATE: Aug-2014

LOT NO.: LC08783V EXPIRATION DATE: Aug-2017

SOLVENT: METHYLENE CHLORIDE

3308099
ID: MS-48925_00014
Exp: 08/31/17 Prpd: NRC
SUP Base-Neutral Surrogat

ANALYTE (1)	CAS NUMBER	PERCENT PURITY(2)	WEIGHT(3) CONCENTRATION	ANALYTICAL(4) CONCENTRATION		STD DEV	SUPELCO LOT NO
NITROBENZENE-D5	4165-60-0	99.9	1000	1014	+/-	45.1	LB83753
P-TERPHENYL-D14	1718-51-0	99.9	1000	1001	+/-	23.2	LC01817
2-FLUOROBIPHENYL	321-60-8	99.9	1001	1001	+/-	7.2	LB99948

(1) Listed in alphabetical order.
(2) Determined by capillary GC-FID, unless otherwise noted.
(3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, based upon balance and Class A volumetric glassware tolerances. Weights are corrected for analytes less than 98% pure.
(4) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.

Duane Funk

Duane Funk
Quality Manager

SUPELCO
Solutions within.™
595 North Harrison Road
Bellefonte, PA 16823-0048 USA
Phone (814) 359-3441

Certificate of Analysis

DESCRIPTION: Base-Neutral Surrogate Spike Mix

CATALOG NO.: 48925_00014 MFG DATE: Aug-2014

LOT NO.: LC08783V EXPIRATION DATE: Aug-2017

SOLVENT: METHYLENE CHLORIDE

3308100
ID: MS-48925_00014
Exp: 08/31/17 Prpd: NRC
SUP Base-Neutral Surrogat

ANALYTE (1)	CAS NUMBER	PERCENT PURITY(2)	WEIGHT(3) CONCENTRATION	ANALYTICAL(4) CONCENTRATION		STD DEV	SUPELCO LOT NO
NITROBENZENE-D5	4165-60-0	99.9	1000	1014	+/-	45.1	LB83753
P-TERPHENYL-D14	1718-51-0	99.9	1000	1001	+/-	23.2	LC01817
2-FLUOROBIPHENYL	321-60-8	99.9	1001	1001	+/-	7.2	LB99948

(1) Listed in alphabetical order.

(2) Determined by capillary GC-FID, unless otherwise noted.

(3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, based upon balance and Class A volumetric glassware tolerances. Weights are corrected for analytes less than 98% pure.

(4) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.

Duane Funk

Duane Funk
Quality Manager

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Reagent

MS-567684_00019

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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.

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-570666.SEC_00001

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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666.sec **Lot No.:** A0115803

3708708
ID: MS-570666.SEC_00001
Exp: 06/30/17 Prpd: DCK
RES HSLB Mega Mix (2016)

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

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

Expiration Date : June 30, 2017 **Storage:** 10°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 CHA4A) **Purity** 99%	1,001.0 µg/mL	+/- 5.8333 µg/mL +/- 11.9726 µg/mL +/- 19.0478 µg/mL	Gravimetric Unstressed Stressed
2	Pyridine **CAS #** 110-86-1.SEC (Lot QN8DK) **Purity** 99%	1,000.3 µg/mL	+/- 5.8290 µg/mL +/- 11.9636 µg/mL +/- 19.0336 µg/mL	Gravimetric Unstressed Stressed
3	N-Nitrosodimethylamine **CAS #** 62-75-9.SEC (Lot 41B67) **Purity** 98%	1,001.4 µg/mL	+/- 5.8359 µg/mL +/- 11.9778 µg/mL +/- 19.0562 µg/mL	Gravimetric Unstressed Stressed
4	Aniline **CAS #** 62-53-3.SEC (Lot ZCD3N) **Purity** 99%	1,000.3 µg/mL	+/- 5.8290 µg/mL +/- 11.9636 µg/mL +/- 19.0336 µg/mL	Gravimetric Unstressed Stressed
5	Bis(2-chloroethyl)ether **CAS #** 111-44-4.SEC (Lot FA010143) **Purity** 99%	1,000.3 µg/mL	+/- 5.8290 µg/mL +/- 11.9636 µg/mL +/- 19.0336 µg/mL	Gravimetric Unstressed Stressed
6	2-Chlorophenol **CAS #** 95-57-8.SEC (Lot GJ01) **Purity** 99%	1,000.6 µg/mL	+/- 5.8312 µg/mL +/- 11.9681 µg/mL +/- 19.0407 µg/mL	Gravimetric Unstressed Stressed
7	Phenol **CAS #** 108-95-2.SEC (Lot EDPYN) **Purity** 99%	1,000.1 µg/mL	+/- 5.8282 µg/mL +/- 11.9621 µg/mL +/- 19.0312 µg/mL	Gravimetric Unstressed Stressed

8	n-Decane (C10) **CAS #** 124-18-5.SEC **Purity** 99%	(Lot UCVNN)	1,000.1	µg/mL	+/- 5.8282 +/- 11.9621 +/- 19.0312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene **CAS #** 106-46-7.SEC **Purity** 99%	(Lot YWKDC-MK)	1,000.3	µg/mL	+/- 5.8290 +/- 11.9636 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3-Dichlorobenzene **CAS #** 541-73-1.SEC **Purity** 99%	(Lot FMDFD-KA)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichlorobenzene **CAS #** 95-50-1.SEC **Purity** 99%	(Lot 4NRGF-OT)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzyl alcohol **CAS #** 100-51-6.SEC **Purity** 99%	(Lot QZBUO)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 * **Purity** 99%	(Lot 2-KMW-57-8)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Methylphenol (o-cresol) **CAS #** 95-48-7.SEC **Purity** 98%	(Lot NC7HL)	1,000.3	µg/mL	+/- 5.8295 +/- 11.9646 +/- 19.0352	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Hexachloroethane **CAS #** 67-72-1.SEC **Purity** 98%	(Lot 10173016)	1,000.6	µg/mL	+/- 5.8309 +/- 11.9675 +/- 19.0399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Acetophenone **CAS #** 98-86-2.SEC **Purity** 99%	(Lot NSGTI)	1,000.3	µg/mL	+/- 5.8290 +/- 11.9636 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	N-Nitroso-di-n-propylamine **CAS #** 621-64-7.SEC **Purity** 99%	(Lot 1528900)	1,000.6	µg/mL	+/- 5.8312 +/- 11.9681 +/- 19.0407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	4-Methylphenol (p-cresol) **CAS #** 106-44-5.SEC **Purity** 99%	(Lot 65S2E)	500.1	µg/mL	+/- 2.9145 +/- 5.9818 +/- 9.5168	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	3-Methylphenol (m-cresol) **CAS #** 108-39-4.SEC **Purity** 99%	(Lot 6LHTM)	500.1	µg/mL	+/- 2.9145 +/- 5.9818 +/- 9.5168	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3.SEC **Purity** 99%	(Lot FLYIG)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1.SEC **Purity** 99%	(Lot XHGJI)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5.SEC **Purity** 99%	(Lot GXJ7J)	1,000.3	µg/mL	+/- 5.8290 +/- 11.9636 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9.SEC **Purity** 99%	(Lot MKBL3650V)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,000.6	µg/mL	+/- 5.8312	µg/mL	Gravimetric
	CAS # 111-91-1 *	(Lot 3299900)			+/- 11.9681	µg/mL	Unstressed
	Purity 99%				+/- 19.0407	µg/mL	Stressed
25	2,4-Dichlorophenol		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 120-83-2.SEC	(Lot FHM01)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.0	µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/- 11.9606	µg/mL	Unstressed
	Purity 99%				+/- 19.0288	µg/mL	Stressed
27	Naphthalene		1,001.1	µg/mL	+/- 5.8341	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot 4KW3H-OO)			+/- 11.9741	µg/mL	Unstressed
	Purity 99%				+/- 19.0502	µg/mL	Stressed
28	2,6-Dichlorophenol		1,000.6	µg/mL	+/- 5.8312	µg/mL	Gravimetric
	CAS # 87-65-0.SEC	(Lot SIDBB)			+/- 11.9681	µg/mL	Unstressed
	Purity 99%				+/- 19.0407	µg/mL	Stressed
29	4-Chloroaniline		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 106-47-8.SEC	(Lot 10171860)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.8	µg/mL	+/- 5.8323	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 3265500)			+/- 11.9705	µg/mL	Unstressed
	Purity 98%				+/- 19.0445	µg/mL	Stressed
31	2-Methylnaphthalene		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.1	µg/mL	+/- 5.8282	µg/mL	Gravimetric
	CAS # 59-50-7.SEC	(Lot FDO02)			+/- 11.9621	µg/mL	Unstressed
	Purity 99%				+/- 19.0312	µg/mL	Stressed
33	1-Methylnaphthalene		1,000.9	µg/mL	+/- 5.8326	µg/mL	Gravimetric
	CAS # 90-12-0.SEC	(Lot UATSA)			+/- 11.9711	µg/mL	Unstressed
	Purity 99%				+/- 19.0455	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 95-94-3.SEC	(Lot AF02)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,001.1	µg/mL	+/- 5.8341	µg/mL	Gravimetric
	CAS # 77-47-4.SEC	(Lot 0012013)			+/- 11.9741	µg/mL	Unstressed
	Purity 99%				+/- 19.0502	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,000.9	µg/mL	+/- 5.8330	µg/mL	Gravimetric
	CAS # 88-06-2.SEC	(Lot UUMYM)			+/- 11.9719	µg/mL	Unstressed
	Purity 98%				+/- 19.0469	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.9	µg/mL	+/- 5.8329	µg/mL	Gravimetric
	CAS # 95-95-4.SEC	(Lot MKBQ9937V)			+/- 11.9716	µg/mL	Unstressed
	Purity 97%				+/- 19.0463	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.3	µg/mL	+/- 5.8290	µg/mL	Gravimetric
	CAS # 91-58-7.SEC	(Lot LC03928V)			+/- 11.9636	µg/mL	Unstressed
	Purity 99%				+/- 19.0336	µg/mL	Stressed
39	Biphenyl		1,000.1	µg/mL	+/- 5.8282	µg/mL	Gravimetric
	CAS # 92-52-4.SEC	(Lot 330QE)			+/- 11.9621	µg/mL	Unstressed
	Purity 99%				+/- 19.0312	µg/mL	Stressed

40	4-Nitroaniline **CAS #** 100-01-6.SEC **Purity** 99%	(Lot 5ITRC)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8.SEC **Purity** 98%	(Lot 062013)	1,000.1	µg/mL	+/- 5.8280 +/- 11.9617 +/- 19.0305	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0.SEC **Purity** 99%	(Lot 3XXLB)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3.SEC **Purity** 99%	(Lot 483WC)	1,000.3	µg/mL	+/- 5.8290 +/- 11.9636 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2.SEC **Purity** 99%	(Lot GE01)	1,000.1	µg/mL	+/- 5.8282 +/- 11.9621 +/- 19.0312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Acenaphthene **CAS #** 83-32-9.SEC **Purity** 99%	(Lot BWZJE)	1,000.6	µg/mL	+/- 5.8312 +/- 11.9681 +/- 19.0407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	2,4-Dinitrophenol **CAS #** 51-28-5.SEC **Purity** 99%	(Lot 2TXXH)	2,000.4	µg/mL	+/- 11.6304 +/- 23.9126 +/- 38.0566	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	Dibenzofuran **CAS #** 132-64-9.SEC **Purity** 99%	(Lot 27ZGC)	1,000.5	µg/mL	+/- 5.8304 +/- 11.9666 +/- 19.0383	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	3-Nitroaniline **CAS #** 99-09-2.SEC **Purity** 99%	(Lot FGN03)	1,000.1	µg/mL	+/- 5.8282 +/- 11.9621 +/- 19.0312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	2,4-Dinitrotoluene **CAS #** 121-14-2.SEC **Purity** 99%	(Lot SHRSA)	1,000.5	µg/mL	+/- 5.8304 +/- 11.9666 +/- 19.0383	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	4-Nitrophenol **CAS #** 100-02-7.SEC **Purity** 99%	(Lot 2J5LB)	2,000.3	µg/mL	+/- 11.6296 +/- 23.9111 +/- 38.0542	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2.SEC **Purity** 98%	(Lot LC10202V)	1,001.1	µg/mL	+/- 5.8338 +/- 11.9734 +/- 19.0492	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7.SEC **Purity** 99%	(Lot 1561600)	1,000.4	µg/mL	+/- 5.8297 +/- 11.9651 +/- 19.0360	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3.SEC **Purity** 99%	(Lot P31G)	1,000.6	µg/mL	+/- 5.8312 +/- 11.9681 +/- 19.0407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	n-Hexadecane (C16) **CAS #** 544-76-3.SEC **Purity** 99%	(Lot A0328141)	1,000.8	µg/mL	+/- 5.8319 +/- 11.9696 +/- 19.0431	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	Diethylphthalate **CAS #** 84-66-2.SEC **Purity** 99%	(Lot UMBJC)	1,001.0	µg/mL	+/- 5.8333 +/- 11.9726 +/- 19.0478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Azobenzene		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
57	Diphenylamine		850.5	µg/mL	+/- 4.9563	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/- 10.1725	µg/mL	Unstressed
	Purity 99%				+/- 16.1840	µg/mL	Stressed
58	2-Nitroaniline		1,000.5	µg/mL	+/- 5.8304	µg/mL	Gravimetric
	CAS # 88-74-4.SEC	(Lot T6E7B)			+/- 11.9666	µg/mL	Unstressed
	Purity 99%				+/- 19.0383	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.8	µg/mL	+/- 11.6325	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 3256700)			+/- 23.9171	µg/mL	Unstressed
	Purity 99%				+/- 38.0637	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.9	µg/mL	+/- 5.8326	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/- 11.9711	µg/mL	Unstressed
	Purity 99%				+/- 19.0455	µg/mL	Stressed
61	Hexachlorobenzene		1,000.4	µg/mL	+/- 5.8297	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot 20622)			+/- 11.9651	µg/mL	Unstressed
	Purity 99%				+/- 19.0360	µg/mL	Stressed
62	Pentachlorophenol		2,001.1	µg/mL	+/- 11.6347	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 2357600)			+/- 23.9216	µg/mL	Unstressed
	Purity 99%				+/- 38.0708	µg/mL	Stressed
63	Phenanthrene		1,000.2	µg/mL	+/- 5.8288	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 1777100)			+/- 11.9631	µg/mL	Unstressed
	Purity 98%				+/- 19.0329	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.9	µg/mL	+/- 5.8326	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/- 11.9711	µg/mL	Unstressed
	Purity 99%				+/- 19.0455	µg/mL	Stressed
65	Anthracene		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/- 5.8297	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/- 11.9651	µg/mL	Unstressed
	Purity 99%				+/- 19.0360	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.1	µg/mL	+/- 5.8282	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/- 11.9621	µg/mL	Unstressed
	Purity 99%				+/- 19.0312	µg/mL	Stressed
68	Fluoranthene		1,000.6	µg/mL	+/- 5.8312	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/- 11.9681	µg/mL	Unstressed
	Purity 99%				+/- 19.0407	µg/mL	Stressed
69	Pyrene		1,000.9	µg/mL	+/- 5.8326	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/- 11.9711	µg/mL	Unstressed
	Purity 99%				+/- 19.0455	µg/mL	Stressed
70	Benzyl butyl phthalate		1,001.6	µg/mL	+/- 5.8366	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/- 11.9793	µg/mL	Unstressed
	Purity 98%				+/- 19.0585	µg/mL	Stressed
71	Benz(a)anthracene		1,000.2	µg/mL	+/- 5.8286	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/- 11.9629	µg/mL	Unstressed
	Purity 97%				+/- 19.0325	µg/mL	Stressed

72	chrysene		1,000.4	µg/mL	+/- 5.8297	µg/mL	Gravimetric
	CAS # 218-01-9.SEC	(Lot KQ4SE)			+/- 11.9651	µg/mL	Unstressed
	Purity 99%				+/- 19.0360	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 117-81-7.SEC	(Lot MT8AG)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
74	Di-n-octyl phthalate		1,000.9	µg/mL	+/- 5.8330	µg/mL	Gravimetric
	CAS # 117-84-0.SEC	(Lot O8DLD)			+/- 11.9719	µg/mL	Unstressed
	Purity 98%				+/- 19.0469	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,000.4	µg/mL	+/- 5.8297	µg/mL	Gravimetric
	CAS # 205-99-2.SEC	(Lot 022011)			+/- 11.9651	µg/mL	Unstressed
	Purity 99%				+/- 19.0360	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.9	µg/mL	+/- 5.8326	µg/mL	Gravimetric
	CAS # 207-08-9.SEC	(Lot ER061608-02)			+/- 11.9711	µg/mL	Unstressed
	Purity 99%				+/- 19.0455	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.0	µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 50-32-8.SEC	(Lot NPEZF)			+/- 11.9606	µg/mL	Unstressed
	Purity 99%				+/- 19.0288	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.1	µg/mL	+/- 5.8282	µg/mL	Gravimetric
	CAS # 193-39-5.SEC	(Lot 022013)			+/- 11.9621	µg/mL	Unstressed
	Purity 99%				+/- 19.0312	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,000.8	µg/mL	+/- 5.8319	µg/mL	Gravimetric
	CAS # 53-70-3.SEC	(Lot 0012012)			+/- 11.9696	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.6	µg/mL	+/- 5.8308	µg/mL	Gravimetric
	CAS # 191-24-2.SEC	(Lot 0022012)			+/- 11.9673	µg/mL	Unstressed
	Purity 96%				+/- 19.0395	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.**

Reagent

PicricARestek_00058

RESTEK CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31499 **Lot No.:** A096192

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 : June 30, 2018 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 88-89-1 (Lot 06130CU)		+/- 32.2681	µg/mL	Unstressed
	Purity 99%		+/- 44.8588	µg/mL	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 31840, 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.

8270D_SIM_DOD5

Semivolatile Organic Compounds (GC/MS SIM)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

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 #
LL4mw-200-042417-GW	280-96291-5	80	72	72
	MB 280-370964/1-A	89	74	79
	LCS 280-370964/2-A	100	84	84
	LCSD 280-370964/3-A	107	86	86

	QC LIMITS
NBZ = Nitrobenzene-d5 (Surr)	55-111
FBP = 2-Fluorobiphenyl (Surr)	53-106
TPHL = Terphenyl-d14 (Surr)	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.: 280-96291-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F6420.D

Lab ID: LCS 280-370964/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acenaphthene	0.900	0.976	108	48-114	
Acenaphthylene	0.900	0.861	96	35-121	
Anthracene	0.900	0.978	109	53-119	
Benzo[a]anthracene	0.900	0.960	107	59-120	
Benzo[b]fluoranthene	0.900	0.990	110	53-126	
Benzo[k]fluoranthene	0.900	0.962	107	54-125	
Benzo[g,h,i]perylene	0.900	1.01	112	44-128	
Benzo[a]pyrene	0.900	0.908	101	53-120	
Chrysene	0.900	1.09	121	57-120	Q
Dibenz(a,h)anthracene	0.900	0.956	106	44-131	
Fluoranthene	0.900	1.04	116	58-120	
Fluorene	0.900	0.968	108	50-118	
Indeno[1,2,3-cd]pyrene	0.900	0.961	107	48-130	M
Naphthalene	0.900	0.930	103	43-114	
Phenanthrene	0.900	1.02	113	53-115	
Pyrene	0.900	1.03	115	53-121	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F6421.D

Lab ID: LCSD 280-370964/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acenaphthene	0.900	0.974	108	0	20	48-114	
Acenaphthylene	0.900	0.900	100	5	20	35-121	
Anthracene	0.900	1.01	112	3	20	53-119	
Benzo[a]anthracene	0.900	0.987	110	3	20	59-120	
Benzo[b]fluoranthene	0.900	1.04	115	5	20	53-126	
Benzo[k]fluoranthene	0.900	1.02	113	5	20	54-125	
Benzo[g,h,i]perylene	0.900	1.04	116	3	20	44-128	
Benzo[a]pyrene	0.900	0.954	106	5	20	53-120	
Chrysene	0.900	1.09	121	0	20	57-120	Q
Dibenz(a,h)anthracene	0.900	0.995	111	4	20	44-131	
Fluoranthene	0.900	1.06	118	2	20	58-120	
Fluorene	0.900	1.01	112	4	20	50-118	
Indeno[1,2,3-cd]pyrene	0.900	1.04	116	8	20	48-130	M
Naphthalene	0.900	0.941	105	1	20	43-114	
Phenanthrene	0.900	1.04	115	2	20	53-115	
Pyrene	0.900	1.05	116	1	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.: 280-96291-1

SDG No.:

Lab File ID: F6419.D Lab Sample ID: MB 280-370964/1-A

Matrix: Water Date Extracted: 04/26/2017 09:30

Instrument ID: SMS_F Date Analyzed: 05/04/2017 16:06

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-370964/2-A	F6420.D	05/04/2017 16:31
	LCSD 280-370964/3-A	F6421.D	05/04/2017 16:57
LL4mw-200-042417-GW	280-96291-5	F6435.D	05/04/2017 22:56

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab File ID: F6240.D DFTPP Injection Date: 04/17/2017

Instrument ID: SMS_F DFTPP Injection Time: 14:16

Analysis Batch No.: 369226

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	50.5	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	59.4	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	53.2	
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	24.4	
365	Greater than 1.0 % of mass 198	3.1	
441	Present but less than mass 443	11.7	(85.0) 3
442	Greater than 40.0 % of mass 198	75.7	
443	17.0 - 23.0 % of mass 442	13.7	(18.1) 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 280-369226/2	F6241.D	04/17/2017	14:53
	STD0020 280-369226/3	F6242.D	04/17/2017	15:29
	STD0100 280-369226/4	F6243.D	04/17/2017	15:55
	STD0300 280-369226/5	F6244.D	04/17/2017	16:21
	STD1200 280-369226/6	F6245.D	04/17/2017	16:47
	STD2500 280-369226/7	F6246.D	04/17/2017	17:13
	STD5000 280-369226/8	F6247.D	04/17/2017	17:39
	STD10000 280-369226/9	F6248.D	04/17/2017	18:05
	ICV 280-369226/10	F6249.D	04/17/2017	18:31

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab File ID: F6417.D DFTPP Injection Date: 05/04/2017

Instrument ID: SMS_F DFTPP Injection Time: 13:52

Analysis Batch No.: 372218

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	51.5	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	62.0	
70	Less than 2.0 % of mass 69	0.3	(0.5) 1
127	40.0 - 60.0 % of mass 198	53.3	
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	6.6	
275	10.0 - 30.0 % of mass 198	26.2	
365	Greater than 1.0 % of mass 198	4.0	
441	Present but less than mass 443	13.5	(91.8) 3
442	Greater than 40.0 % of mass 198	83.9	
443	17.0 - 23.0 % of mass 442	14.7	(17.6) 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 280-372218/2	F6418.D	05/04/2017	15:40
	MB 280-370964/1-A	F6419.D	05/04/2017	16:06
	LCS 280-370964/2-A	F6420.D	05/04/2017	16:31
	LCSD 280-370964/3-A	F6421.D	05/04/2017	16:57
LL4mw-200-042417-GW	280-96291-5	F6435.D	05/04/2017	22:56
	CCVC 280-372218/20	F6436.D	05/04/2017	23:21

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Sample No.: ICIS 280-369226/2 Date Analyzed: 04/17/2017 14:53

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): F6241.D Heated Purge: (Y/N) N

Calibration ID: 28806

		ANT		PHN		CRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		22748	6.05	43448	7.31	36623	11.40
UPPER LIMIT		45496	6.55	86896	7.81	73246	11.90
LOWER LIMIT		11374	5.55	21724	6.81	18312	10.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-369226/10		18635	6.04	34795	7.31	30814	11.38
CCV 280-372218/2		22929	6.05	44358	7.31	39880	11.39
MB 280-370964/1-A		18257	6.04	36243	7.31	33092	11.38
LCS 280-370964/2-A		19249	6.04	36925	7.31	32719	11.38
LCSD 280-370964/3-A		18152	6.04	35631	7.31	32419	11.38
280-96291-5	LL4mw-200-042417-GW	20210	6.04	39148	7.31	34593	11.37
CCVC 280-372218/20		22962	6.04	44275	7.31	40095	11.37

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.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-200-042417-GW | Lab Sample ID: 280-96291-5

Matrix: Water | Lab File ID: F6435.D

Analysis Method: 8270D SIM | Date Collected: 04/24/2017 10:07

Extract. Method: 3510C | Date Extracted: 04/26/2017 09:30

Sample wt/vol: 249.4(mL) | Date Analyzed: 05/04/2017 22:56

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.: 372218 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
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
205-99-2	Benzo[b]fluoranthene	0.012	U	0.10	0.012	0.0031
207-08-9	Benzo[k]fluoranthene	0.012	U	0.10	0.012	0.0063
191-24-2	Benzo[g,h,i]perylene	0.012	U	0.10	0.012	0.0062
50-32-8	Benzo[a]pyrene	0.012	U	0.10	0.012	0.0069
218-01-9	Chrysene	0.012	U Q	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 (Surr)	72		53-106
1718-51-0	Terphenyl-d14 (Surr)	72		58-132
4165-60-0	Nitrobenzene-d5 (Surr)	80		55-111

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6435.D
Lims ID: 280-96291-B-5-A
Client ID: LL4mw-200-042417-GW
Sample Type: Client
Inject. Date: 04-May-2017 22:56:30 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-b-5-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:46 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 05-May-2017 12:02:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	6.038	6.047	-0.009	93	20210	600.0	
* 2 Phenanthrene-d10	188	7.307	7.313	-0.006	99	39148	600.0	
* 3 Chrysene-d12	240	11.368	11.386	-0.018	92	34593	600.0	
$ 4 Nitrobenzene-d5	82	4.015	4.015	0.000	100	2681	100.4	
$ 5 2-Fluorobiphenyl	172	5.444	5.444	0.000	100	4482	89.4	
$ 6 Terphenyl-d14	244	9.136	9.149	-0.013	96	3751	89.6	
14 Naphthalene	128		4.603				ND	
22 Acenaphthylene	152		5.926				ND	
23 Acenaphthene	153		6.064				ND	
25 Fluorene	166		6.502				ND	
27 Phenanthrene	178		7.333				ND	
28 Anthracene	178		7.378				ND	
30 Fluoranthene	202		8.641				ND	
31 Pyrene	202		8.980				ND	
35 Benzo[a]anthracene	228		11.359				ND	
36 Chrysene	228		11.458				ND	
38 Benzo[b]fluoranthene	252		14.499				ND	
39 Benzo[k]fluoranthene	252		14.587				ND	
40 Benzo[a]pyrene	252		15.580				ND	
41 Indeno[1,2,3-cd]pyrene	276		18.650				ND	
42 Dibenz(a,h)anthracene	278		18.690				ND	
43 Benzo[g,h,i]perylene	276		19.079				ND	

Reagents:

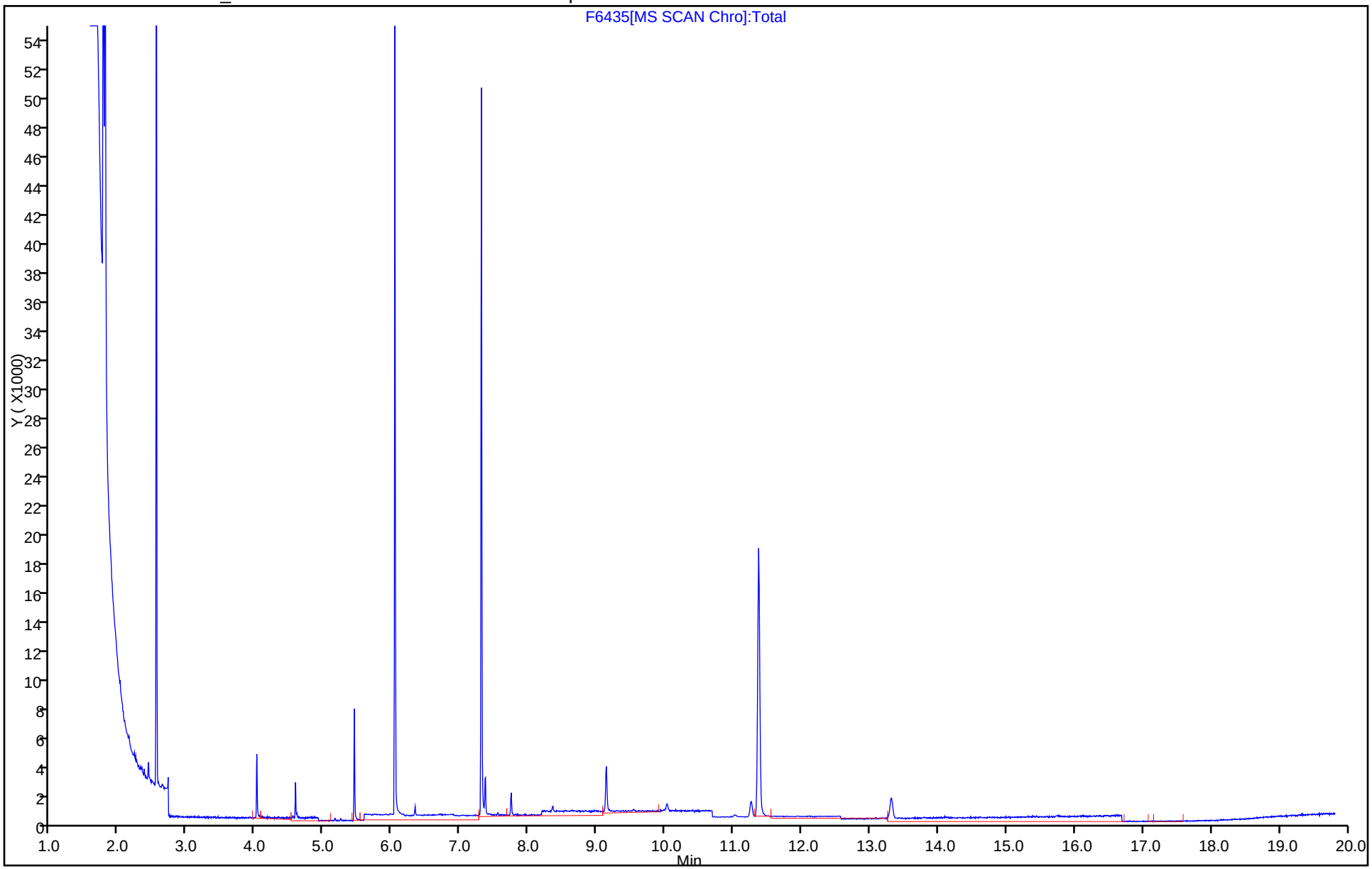
MS-SIM IS_00029 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 05-May-2017 12:05:04 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6435.D

Injection Date:	04-May-2017 22:56:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	280-96291-B-5-A	Lab Sample ID:	280-96291-5	Worklist Smp#:	19
Client ID:	LL4mw-200-042417-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6435.D
Lims ID: 280-96291-B-5-A
Client ID: LL4mw-200-042417-GW
Sample Type: Client
Inject. Date: 04-May-2017 22:56:30 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-b-5-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:46 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 05-May-2017 12:02:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	125.0	100.4	80.31
$ 5 2-Fluorobiphenyl	125.0	89.4	71.51
$ 6 Terphenyl-d14	125.0	89.6	71.64

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 369226

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2017 14:53 Calibration End Date: 04/17/2017 18:05 Calibration ID: 28806

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD10000 280-369226/9	F6248.D
Level 2	STD0020 280-369226/3	F6242.D
Level 3	STD0100 280-369226/4	F6243.D
Level 4	STD0300 280-369226/5	F6244.D
Level 5	ICIS 280-369226/2	F6241.D
Level 6	STD1200 280-369226/6	F6245.D
Level 7	STD2500 280-369226/7	F6246.D
Level 8	STD5000 280-369226/8	F6247.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								
Naphthalene	+++++ 1.7272	1.9758 1.7360	1.8545 1.7331	1.8328	1.9389	Ave		1.8283			0.7000	5.6		15.0			
2-Methylnaphthalene	+++++ 1.1540	1.2571 1.1390	1.1760 1.1317	1.1759	1.2428	Ave		1.1824			0.4000	4.2		15.0			
1-Methylnaphthalene	+++++ 1.1473	1.2349 1.1341	1.1723 1.1259	1.1677	1.2286	Ave		1.1730			0.0500	3.7		15.0			
Acenaphthylene	+++++ 1.9908	1.9959 1.9033	1.9157 1.8750	1.8853	1.9453	Ave		1.9302			0.9000	2.5		15.0			
Acenaphthene	+++++ 1.2253	1.3411 1.1597	1.2036 1.1355	1.1758	1.2506	Ave		1.2131			0.9000	5.7		15.0			
Fluorene	+++++ 1.5614	1.6570 1.4692	1.4623 1.4276	1.4663	1.5207	Ave		1.5092			0.9000	5.2		15.0			
Phenanthrene	+++++ 1.2018	1.3506 1.1408	1.1762 1.1083	1.1670	1.1755	Ave		1.1886			0.7000	6.5		15.0			
Anthracene	+++++ 1.1322	1.3020 1.1783	1.1617 1.1380	1.1629	1.1856	Ave		1.1801			0.7000	4.8		15.0			
Fluoranthene	+++++ 1.3229	1.5693 1.2951	1.3053 1.2580	1.2686	1.2909	Ave		1.3300			0.6000	8.1		15.0			
Pyrene	+++++ 1.3468	1.5640 1.3284	1.3218 1.2976	1.3415	1.3185	Ave		1.3598			0.6000	6.7		15.0			
Benzo[a]anthracene	+++++ 1.4843	1.7354 1.3569	1.3910 1.2955	1.3481	1.3990	Ave		1.4300			0.8000	10.2		15.0			
Chrysene	+++++ 1.3141	1.5867 1.2878	1.3371 1.2166	1.2741	1.3148	Ave		1.3330			0.7000	8.9		15.0			
Benzo[b]fluoranthene	+++++ 1.4063	1.4997 1.2214	1.2345 1.1742	1.2442	1.2484	Ave		1.2898			0.7000	9.1		15.0			
Benzo[k]fluoranthene	+++++ 1.3167	1.5302 1.2806	1.2678 1.2221	1.2715	1.2768	Ave		1.3094			0.7000	7.7		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.: 280-96291-1 Analy Batch No.: 369226

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2017 14:53 Calibration End Date: 04/17/2017 18:05 Calibration ID: 28806

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]pyrene	+++++ 1.3225	1.4954 1.1989	1.2648 1.1091	1.2252	1.2308	Ave		1.2638			0.7000	9.6		15.0			
Indeno[1,2,3-cd]pyrene	+++++ 1.3888	1.4710 1.2393	1.2788 1.1688	1.2374	1.2460	Ave		1.2900			0.5000	8.0		15.0			
Dibenz(a,h)anthracene	+++++ 1.2530	1.5319 1.2493	1.3501 1.2015	1.3019	1.2598	Ave		1.3068			0.4000	8.4		15.0			
Benzo[g,h,i]perylene	+++++ 1.3635	1.7041 1.3177	1.3777 1.2630	1.3738	1.3202	Ave		1.3886			0.5000	10.4		15.0			
Nitrobenzene-d5 (Surr)	0.8243 0.7700	0.7502 0.7899	0.7659 0.8019	0.7909	0.8502	Ave		0.7929				4.1		15.0			
2-Fluorobiphenyl (Surr)	1.4777 1.4696	1.6541 1.4411	1.4527 1.4212	1.4530	1.5399	Ave		1.4887				5.1		15.0			
Terphenyl-d14 (Surr)	0.6599 0.5741	0.7531 0.6390	0.6275 0.6229	0.6440	0.6150	Ave		0.6420				8.0		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
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 369226

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2017 14:53 Calibration End Date: 04/17/2017 18:05 Calibration ID: 28806

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD10000 280-369226/9	F6248.D
Level 2	STD0020 280-369226/3	F6242.D
Level 3	STD0100 280-369226/4	F6243.D
Level 4	STD0300 280-369226/5	F6244.D
Level 5	ICIS 280-369226/2	F6241.D
Level 6	STD1200 280-369226/6	F6245.D
Level 7	STD2500 280-369226/7	F6246.D
Level 8	STD5000 280-369226/8	F6247.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 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Naphthalene	ANT	Ave	+++++ 71291	1376 144148	6217 278384	16753	44107	+++++ 1200	20.0 2500	100 5000	300	600
2-Methylnaphthalene	ANT	Ave	+++++ 95267	1751 189157	7885 363568	21496	56544	+++++ 2400	40.0 5000	200 10000	600	1200
1-Methylnaphthalene	ANT	Ave	+++++ 47357	860 94166	3930 180848	10673	27949	+++++ 1200	20.0 2500	100 5000	300	600
Acenaphthylene	ANT	Ave	+++++ 82171	1390 158039	6422 301173	17233	44251	+++++ 1200	20.0 2500	100 5000	300	600
Acenaphthene	ANT	Ave	+++++ 50575	934 96295	4035 182385	10747	28448	+++++ 1200	20.0 2500	100 5000	300	600
Fluorene	ANT	Ave	+++++ 64447	1154 121992	4902 229315	13403	34593	+++++ 1200	20.0 2500	100 5000	300	600
Phenanthrene	PHN	Ave	+++++ 98955	1779 175049	7473 333341	20284	51075	+++++ 1200	20.0 2500	100 5000	300	600
Anthracene	PHN	Ave	+++++ 93222	1715 180811	7381 342264	20213	51510	+++++ 1200	20.0 2500	100 5000	300	600
Fluoranthene	PHN	Ave	+++++ 108927	2067 198732	8293 378377	22050	56085	+++++ 1200	20.0 2500	100 5000	300	600
Pyrene	PHN	Ave	+++++ 110890	2060 203840	8398 390283	23318	57288	+++++ 1200	20.0 2500	100 5000	300	600
Benzo[a]anthracene	CRY	Ave	+++++ 99627	1996 189210	7484 361871	21230	51234	+++++ 1200	20.0 2500	100 5000	300	600
Chrysene	CRY	Ave	+++++ 88208	1825 179573	7194 339831	20065	48151	+++++ 1200	20.0 2500	100 5000	300	600
Benzo[b]fluoranthene	CRY	Ave	+++++ 94391	1725 170313	6642 327987	19594	45719	+++++ 1200	20.0 2500	100 5000	300	600
Benzo[k]fluoranthene	CRY	Ave	+++++ 88378	1760 178570	6821 341365	20023	46759	+++++ 1200	20.0 2500	100 5000	300	600
Benzo[a]pyrene	CRY	Ave	+++++ 88770	1720 167180	6805 309796	19294	45074	+++++ 1200	20.0 2500	100 5000	300	600

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 369226

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2017 14:53 Calibration End Date: 04/17/2017 18:05 Calibration ID: 28806

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/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
Indeno[1,2,3-cd]pyrene	CRY	Ave	+++++ 93216	1692 172819	6880 326477	19486	45632	+++++ 1200	20.0 2500	100 5000	300	600
Dibenz(a,h)anthracene	CRY	Ave	+++++ 84102	1762 174205	7264 335620	20502	46136	+++++ 1200	20.0 2500	100 5000	300	600
Benzo[g,h,i]perylene	CRY	Ave	+++++ 91524	1960 183748	7412 352779	21634	48350	+++++ 1200	20.0 2500	100 5000	300	600
Nitrobenzene-d5 (Surr)	ANT	Ave	261305 31815	523 65650	2570 128936	7236	19360	10010 1201	20.0 2503	100 5005	300	601
2-Fluorobiphenyl (Surr)	ANT	Ave	467924 60661	1152 119663	4870 228288	13281	35030	10000 1200	20.0 2500	100 5000	300	600
Terphenyl-d14 (Surr)	PHN	Ave	382490 47315	993 98159	3991 187531	11205	26748	10010 1201	20.0 2503	100 5005	300	601

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6241.D
Lims ID: ICIS STD0600
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 17-Apr-2017 14:53:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:37:56 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:27:24

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	6.047	6.047	0.000	97	22748	600.0	600.0	
* 2 Phenanthrene-d10	188	7.314	7.314	0.000	100	43448	600.0	600.0	
* 3 Chrysene-d12	240	11.398	11.398	0.000	97	36623	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.018	4.018	0.000	98	19360	600.6	644.0	
$ 5 2-Fluorobiphenyl	172	5.449	5.449	0.000	100	35030	600.0	620.6	
$ 6 Terphenyl-d14	244	9.157	9.157	0.000	100	26748	600.6	575.4	
9 1,4-Dioxane	88		1.929				ND	ND	M
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	84	11992	600.0	640.7	
14 Naphthalene	128	4.606	4.606	0.000	100	44107	600.0	636.3	
16 2-Methylnaphthalene	142	5.165	5.165	0.000	95	56544	1200.0	1261.4	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	97	27949	600.0	628.5	
20 Dimethyl phthalate	163	5.762	5.762	0.000	100	73927	1201.2	1224.9	
22 Acenaphthylene	152	5.926	5.926	0.000	99	44251	600.0	604.7	
23 Acenaphthene	153	6.073	6.073	0.000	98	28448	600.0	618.5	
32 Dibenzofuran	168	6.214	6.214	0.000	92	43918	600.6	610.7	
24 Diethyl phthalate	149	6.343	6.343	0.000	100	73370	1204.8	1230.0	
25 Fluorene	166	6.502	6.502	0.000	95	34593	600.0	604.6	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	99	21797	599.2	606.9	
27 Phenanthrene	178	7.334	7.334	0.000	100	51075	600.0	593.4	
28 Anthracene	178	7.380	7.380	0.000	100	51510	600.0	602.8	
29 Di-n-butyl phthalate	149	7.757	7.757	0.000	100	116349	1201.5	1186.0	
30 Fluoranthene	202	8.642	8.642	0.000	100	56085	600.0	582.3	
31 Pyrene	202	8.987	8.987	0.000	100	57288	600.0	581.8	
33 Butyl benzyl phthalate	149	9.996	9.996	0.000	90	47282	1201.5	1149.5	
34 Bis(2-ethylhexyl) phthalat	149	11.290	11.290	0.000	100	64274	1201.8	1121.6	
35 Benzo[a]anthracene	228	11.362	11.362	0.000	99	51234	600.0	587.0	
36 Chrysene	228	11.461	11.461	0.000	100	48151	600.0	591.8	
37 Di-n-octyl phthalate	149	13.230	13.230	0.000	100	104198	1203.3	1181.8	
38 Benzo[b]fluoranthene	252	14.507	14.507	0.000	100	45719	600.0	580.7	
39 Benzo[k]fluoranthene	252	14.595	14.595	0.000	100	46759	600.0	585.1	
40 Benzo[a]pyrene	252	15.583	15.583	0.000	100	45074	600.0	584.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.654	18.654	0.000	79	45632	600.0	579.5	
42 Dibenz(a,h)anthracene	278	18.693	18.693	0.000	81	46136	600.0	578.4	
43 Benzo[g,h,i]perylene	276	19.087	19.087	0.000	99	48350	600.0	570.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

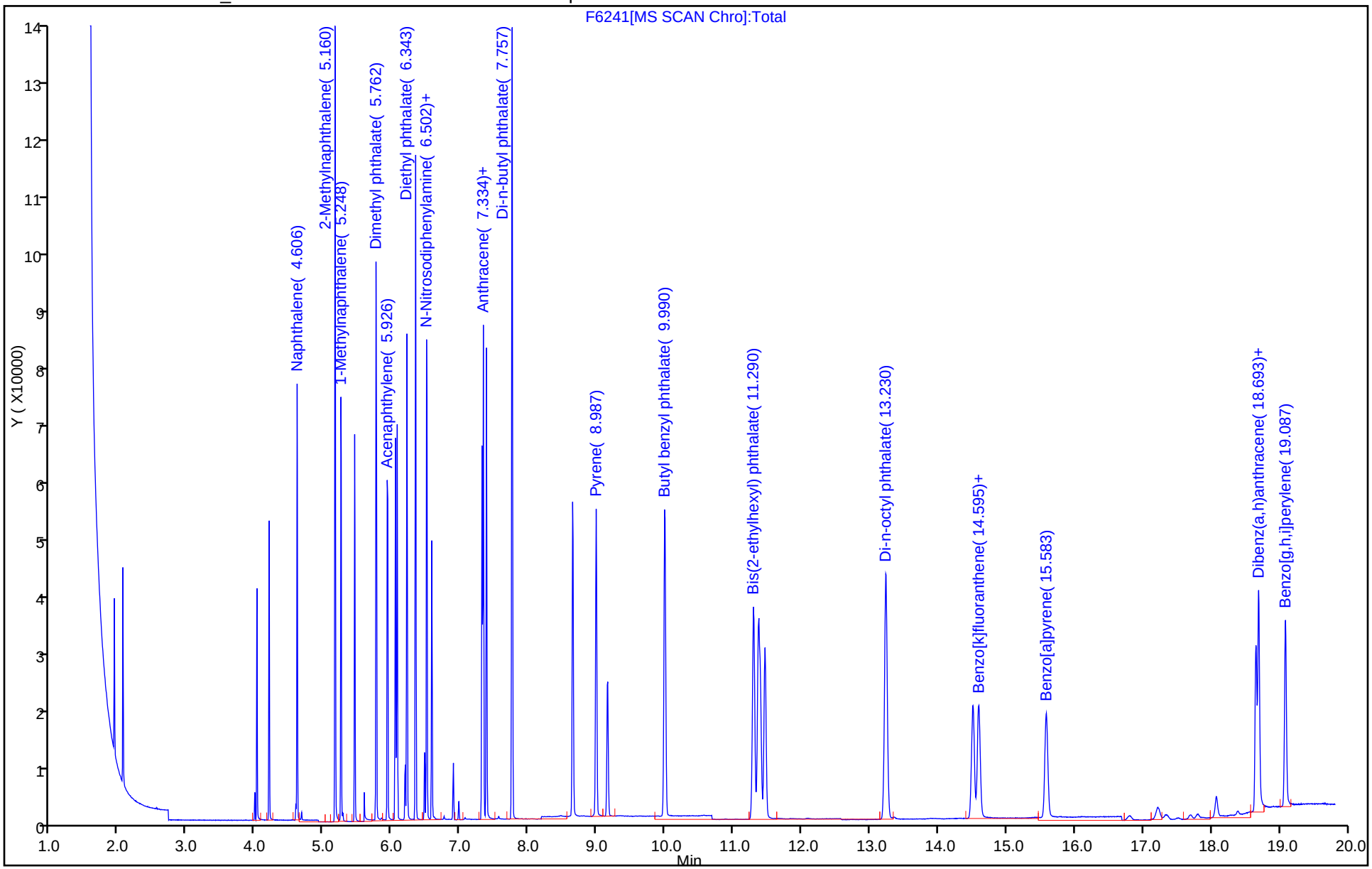
MS-SIMSL 0.6_00122 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:37:56 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6241.D

Injection Date:	17-Apr-2017 14:53:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	ICIS STD0600			Worklist Smp#:	2
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\20170413-57515.b\F6242.D
Lims ID: STD0020
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 17-Apr-2017 15:29:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD0020
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:37:57 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:27:56

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	6.047	6.047	0.000	99	20893	600.0	600.0	
* 2 Phenanthrene-d10	188	7.314	7.314	0.000	100	39515	600.0	600.0	
* 3 Chrysene-d12	240	11.389	11.398	-0.009	93	34506	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.018	4.018	0.000	96	523	20.0	18.9	
$ 5 2-Fluorobiphenyl	172	5.449	5.449	0.000	99	1152	20.0	22.2	
$ 6 Terphenyl-d14	244	9.156	9.157	-0.001	83	993	20.0	23.5	
9 1,4-Dioxane	88		1.929				ND	ND	
10 N-Nitrosodimethylamine	74	2.059	2.052	0.007	54	348	20.0	20.2	
14 Naphthalene	128	4.606	4.606	0.000	99	1376	20.0	21.6	
16 2-Methylnaphthalene	142	5.165	5.165	0.000	99	1751	40.0	42.5	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	93	860	20.0	21.1	
20 Dimethyl phthalate	163		5.762				ND	ND	
22 Acenaphthylene	152	5.926	5.926	0.000	96	1390	20.0	20.7	
23 Acenaphthene	153	6.072	6.073	-0.001	98	934	20.0	22.1	
32 Dibenzofuran	168	6.214	6.214	0.000	88	1457	20.0	22.1	
24 Diethyl phthalate	149		6.343				ND	ND	
25 Fluorene	166	6.509	6.502	0.007	95	1154	20.0	22.0	
26 N-Nitrosodiphenylamine	169	6.585	6.578	0.007	96	733	20.0	22.4	
27 Phenanthrene	178	7.334	7.334	0.000	95	1779	20.0	22.7	
28 Anthracene	178	7.379	7.380	-0.001	98	1715	20.0	22.1	
29 Di-n-butyl phthalate	149		7.757				ND	ND	
30 Fluoranthene	202	8.642	8.642	0.000	96	2067	20.0	23.6	
31 Pyrene	202	8.987	8.987	0.000	96	2060	20.0	23.0	
33 Butyl benzyl phthalate	149		9.996				ND	ND	
34 Bis(2-ethylhexyl) phthalat	149		11.290				ND	ND	
35 Benzo[a]anthracene	228	11.362	11.362	0.000	42	1996	20.0	24.3	
36 Chrysene	228	11.461	11.461	0.000	95	1825	20.0	23.8	
37 Di-n-octyl phthalate	149		13.230				ND	ND	
38 Benzo[b]fluoranthene	252	14.507	14.507	0.000	91	1725	20.0	23.3	
39 Benzo[k]fluoranthene	252	14.590	14.595	-0.005	90	1760	20.0	23.4	
40 Benzo[a]pyrene	252	15.574	15.583	-0.009	83	1720	20.0	23.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.658	18.654	0.004	67	1692	20.0	22.8	M
42 Dibenz(a,h)anthracene	278	18.697	18.693	0.004	66	1762	20.0	23.4	
43 Benzo[g,h,i]perylene	276	19.087	19.087	0.000	67	1960	20.0	24.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

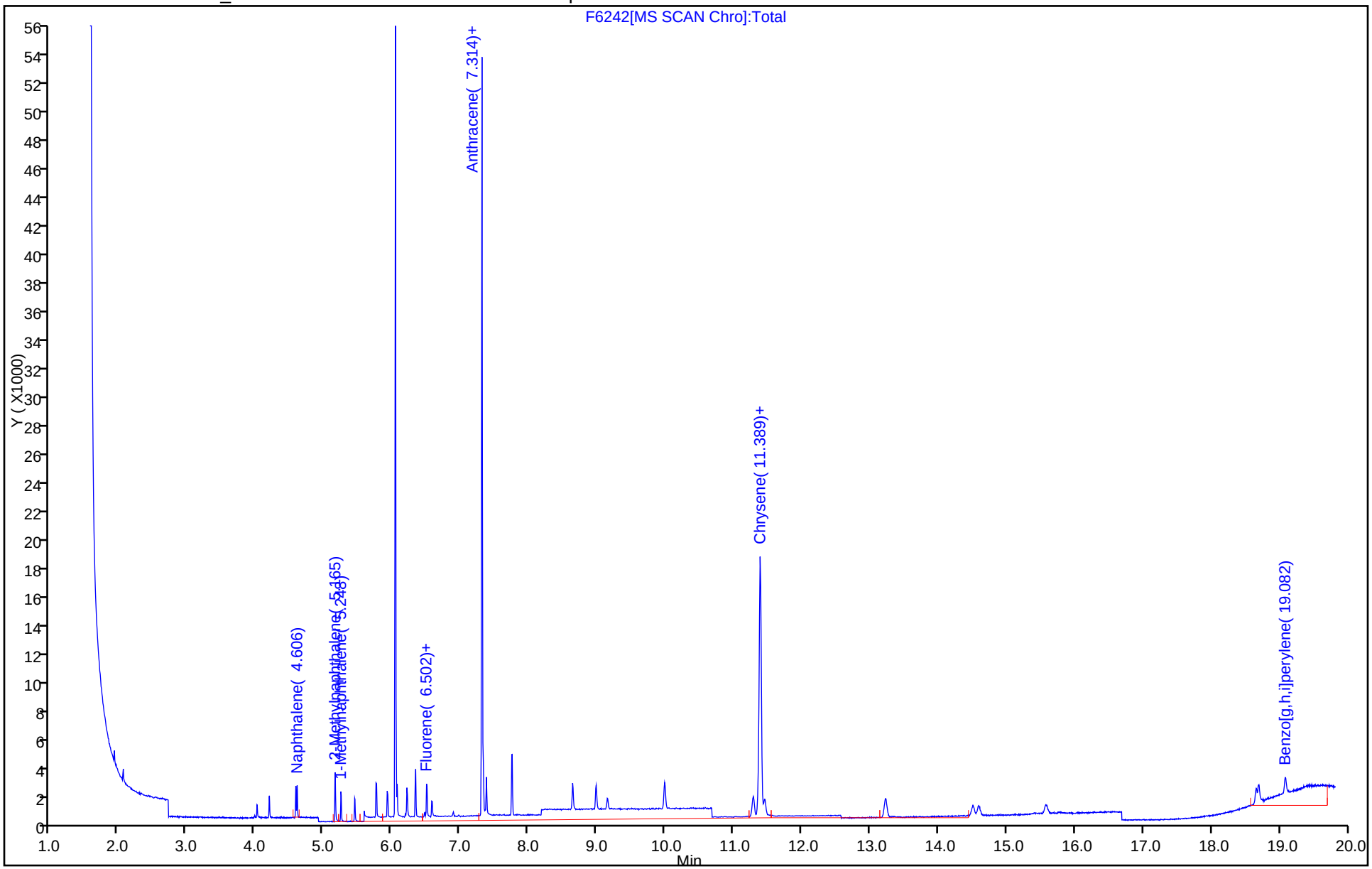
MS-SIMSL 0.02_00067 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:37:57 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6242.D

Injection Date:	17-Apr-2017 15:29:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD0020			Worklist Smp#:	3
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

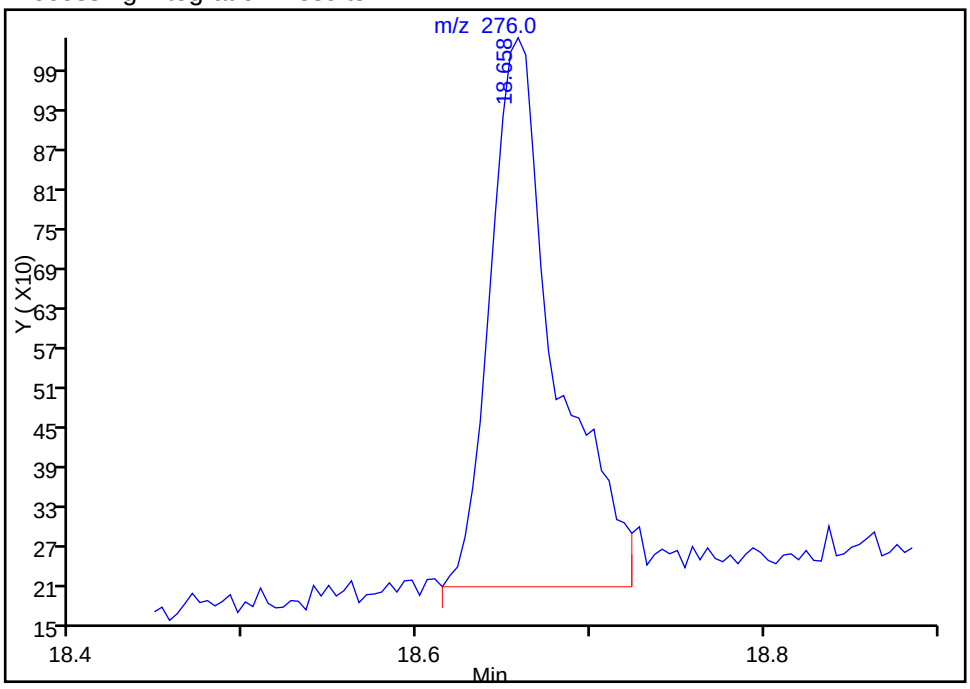
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6242.D
Injection Date: 17-Apr-2017 15:29:30 Instrument ID: SMS_F
Lims ID: STD0020
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

41 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

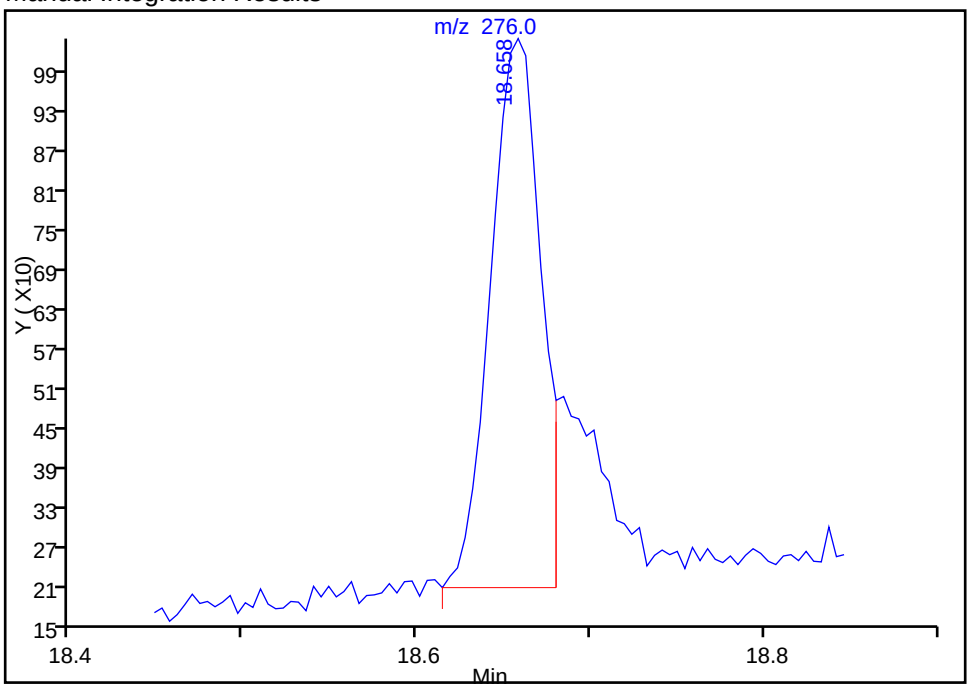
Processing Integration Results

RT: 18.66
Area: 2188
Amount: 20.258396
Amount Units: ng/ml



Manual Integration Results

RT: 18.66
Area: 1692
Amount: 22.806791
Amount Units: ng/ml



Reviewer: vasquezk, 18-Apr-2017 09:31:46
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6243.D
Lims ID: STD0100
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 17-Apr-2017 15:55:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD0100
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:37:58 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:28:26

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	6.047	6.047	0.000	94	20114	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	38121	600.0	600.0	
* 3 Chrysene-d12	240	11.380	11.398	-0.018	94	32281	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.018	4.018	0.000	98	2570	100.1	96.7	
$ 5 2-Fluorobiphenyl	172	5.449	5.449	0.000	99	4870	100.0	97.6	
$ 6 Terphenyl-d14	244	9.144	9.157	-0.013	96	3991	100.1	97.9	
9 1,4-Dioxane	88		1.929				ND	ND	M
10 N-Nitrosodimethylamine	74	2.059	2.052	0.007	86	1666	100.0	100.7	
14 Naphthalene	128	4.606	4.606	0.000	100	6217	100.0	101.4	
16 2-Methylnaphthalene	142	5.160	5.165	-0.005	100	7885	200.0	198.9	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	99	3930	100.0	99.9	
20 Dimethyl phthalate	163	5.762	5.762	0.000	100	10936	200.2	204.9	
22 Acenaphthylene	152	5.926	5.926	0.000	100	6422	100.0	99.2	
23 Acenaphthene	153	6.073	6.073	0.000	95	4035	100.0	99.2	
32 Dibenzofuran	168	6.214	6.214	0.000	94	6273	100.1	98.7	
24 Diethyl phthalate	149	6.335	6.343	-0.008	96	10571	200.8	200.4	
25 Fluorene	166	6.502	6.502	0.000	100	4902	100.0	96.9	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	99	3330	99.9	105.7	
27 Phenanthrene	178	7.327	7.334	-0.007	99	7473	100.0	99.0	
28 Anthracene	178	7.380	7.380	0.000	100	7381	100.0	98.4	
29 Di-n-butyl phthalate	149	7.751	7.757	-0.006	100	16828	200.3	195.5	
30 Fluoranthene	202	8.636	8.642	-0.006	99	8293	100.0	98.1	
31 Pyrene	202	8.981	8.987	-0.006	100	8398	100.0	97.2	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	98	6581	200.3	182.4	
34 Bis(2-ethylhexyl) phthalat	149	11.281	11.290	-0.009	100	10407	200.3	207.0	
35 Benzo[a]anthracene	228	11.353	11.362	-0.009	89	7484	100.0	97.3	
36 Chrysene	228	11.452	11.461	-0.009	100	7194	100.0	100.3	
37 Di-n-octyl phthalate	149	13.213	13.230	-0.017	100	14194	200.6	182.6	
38 Benzo[b]fluoranthene	252	14.490	14.507	-0.017	98	6642	100.0	95.7	
39 Benzo[k]fluoranthene	252	14.577	14.595	-0.018	98	6821	100.0	96.8	
40 Benzo[a]pyrene	252	15.570	15.583	-0.013	96	6805	100.0	100.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.645	18.654	-0.009	79	6880	100.0	99.1	
42 Dibenz(a,h)anthracene	278	18.689	18.693	-0.004	80	7264	100.0	103.3	
43 Benzo[g,h,i]perylene	276	19.078	19.087	-0.009	93	7412	100.0	99.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

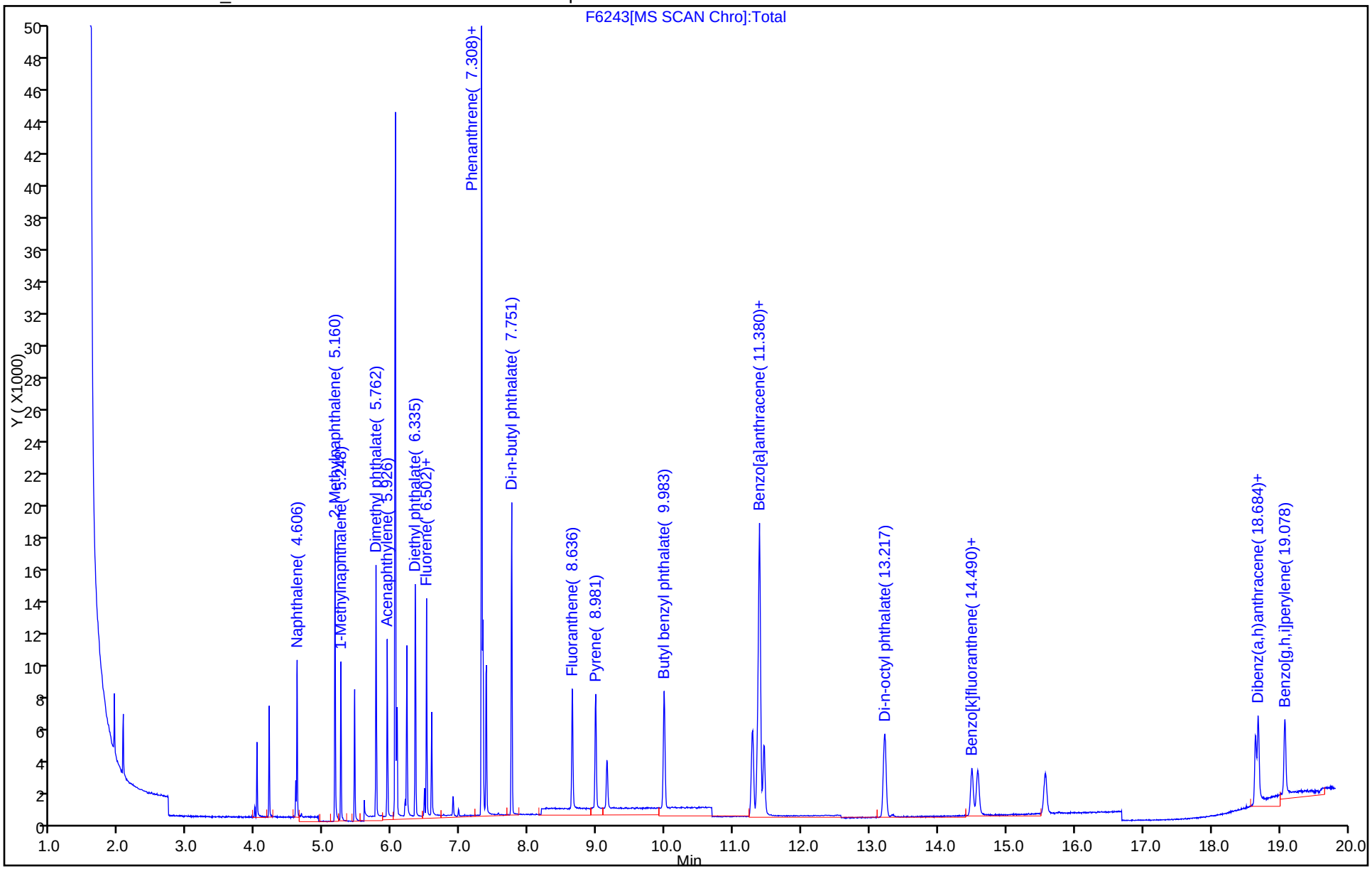
MS-SIMSL 0.1_00063 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:37:58 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6243.D

Injection Date:	17-Apr-2017 15:55:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD0100			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6244.D
Lims ID: STD0300
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 17-Apr-2017 16:21:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD0300
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:37:59 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:28:54

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	6.047	6.047	0.000	92	18281	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	34763	600.0	600.0	
* 3 Chrysene-d12	240	11.380	11.398	-0.018	96	31496	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.014	4.018	-0.004	100	7236	300.3	299.5	
$ 5 2-Fluorobiphenyl	172	5.444	5.449	-0.005	100	13281	300.0	292.8	
$ 6 Terphenyl-d14	244	9.144	9.157	-0.013	99	11205	300.3	301.3	
9 1,4-Dioxane	88		1.929				ND	ND	M
10 N-Nitrosodimethylamine	74	2.059	2.052	0.007	23	4856	300.0	322.8	
14 Naphthalene	128	4.603	4.606	-0.003	100	16753	300.0	300.7	
16 2-Methylnaphthalene	142	5.160	5.165	-0.005	97	21496	600.0	596.7	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	97	10673	300.0	298.6	
20 Dimethyl phthalate	163	5.761	5.762	-0.001	100	29140	600.6	600.8	
22 Acenaphthylene	152	5.926	5.926	0.000	100	17233	300.0	293.0	
23 Acenaphthene	153	6.064	6.073	-0.009	96	10747	300.0	290.8	
32 Dibenzofuran	168	6.214	6.214	0.000	96	16608	300.3	287.4	
24 Diethyl phthalate	149	6.335	6.343	-0.008	97	28599	602.4	596.6	
25 Fluorene	166	6.502	6.502	0.000	97	13403	300.0	291.5	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	97	8888	299.6	309.3	
27 Phenanthrene	178	7.327	7.334	-0.007	100	20284	300.0	294.5	
28 Anthracene	178	7.373	7.380	-0.007	100	20213	300.0	295.6	
29 Di-n-butyl phthalate	149	7.750	7.757	-0.007	100	46606	600.8	593.8	
30 Fluoranthene	202	8.636	8.642	-0.006	100	22050	300.0	286.1	
31 Pyrene	202	8.981	8.987	-0.006	100	23318	300.0	296.0	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	94	19289	600.8	586.1	
34 Bis(2-ethylhexyl) phthalat	149	11.281	11.290	-0.009	100	26218	600.9	571.8	
35 Benzo[a]anthracene	228	11.353	11.362	-0.009	97	21230	300.0	282.8	
36 Chrysene	228	11.443	11.461	-0.018	100	20065	300.0	286.7	
37 Di-n-octyl phthalate	149	13.213	13.230	-0.018	100	41652	601.7	549.3	
38 Benzo[b]fluoranthene	252	14.494	14.507	-0.013	100	19594	300.0	289.4	
39 Benzo[k]fluoranthene	252	14.581	14.595	-0.014	100	20023	300.0	291.3	
40 Benzo[a]pyrene	252	15.561	15.583	-0.022	100	19294	300.0	290.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.645	18.654	-0.009	79	19486	300.0	287.8	M
42 Dibenz(a,h)anthracene	278	18.684	18.693	-0.009	81	20502	300.0	298.9	
43 Benzo[g,h,i]perylene	276	19.074	19.087	-0.013	99	21634	300.0	296.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

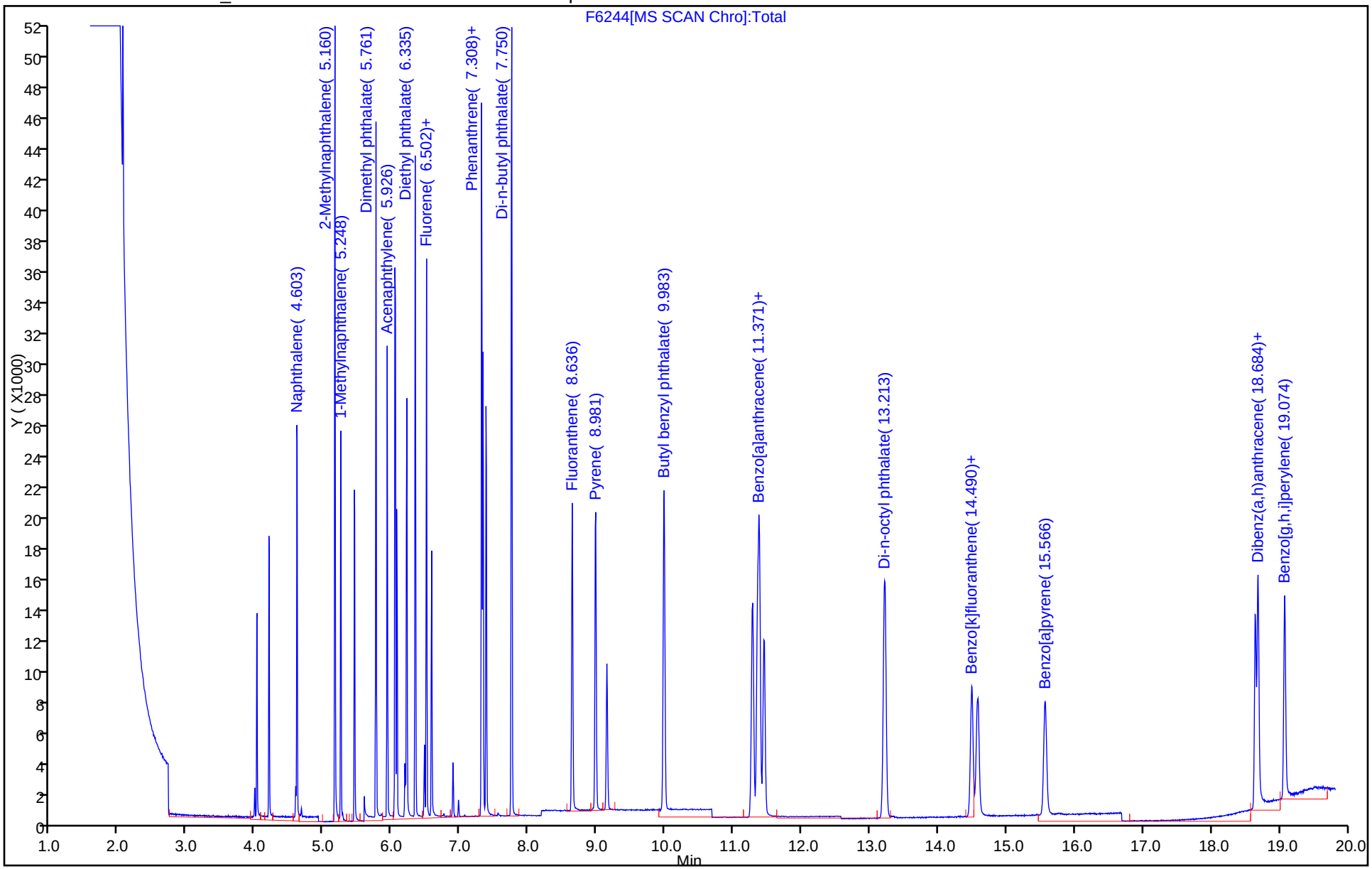
MS-SIMSL 0.3_00061 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:37:59 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6244.D

Injection Date:	17-Apr-2017 16:21:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD0300			Worklist Smp#:	5
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

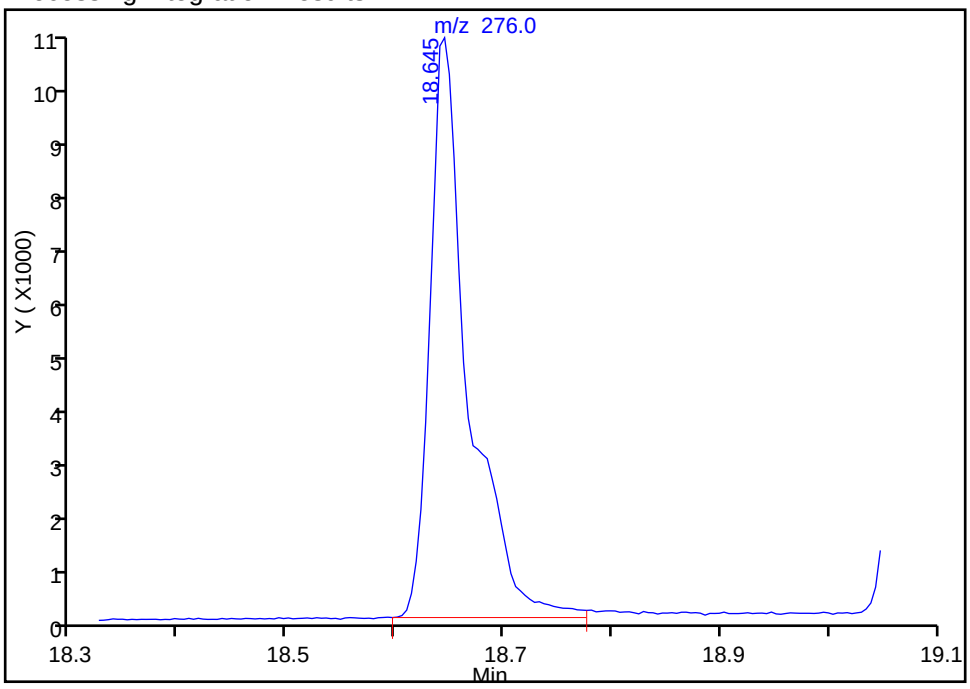
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6244.D
Injection Date: 17-Apr-2017 16:21:30 Instrument ID: SMS_F
Lims ID: STD0300
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

41 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

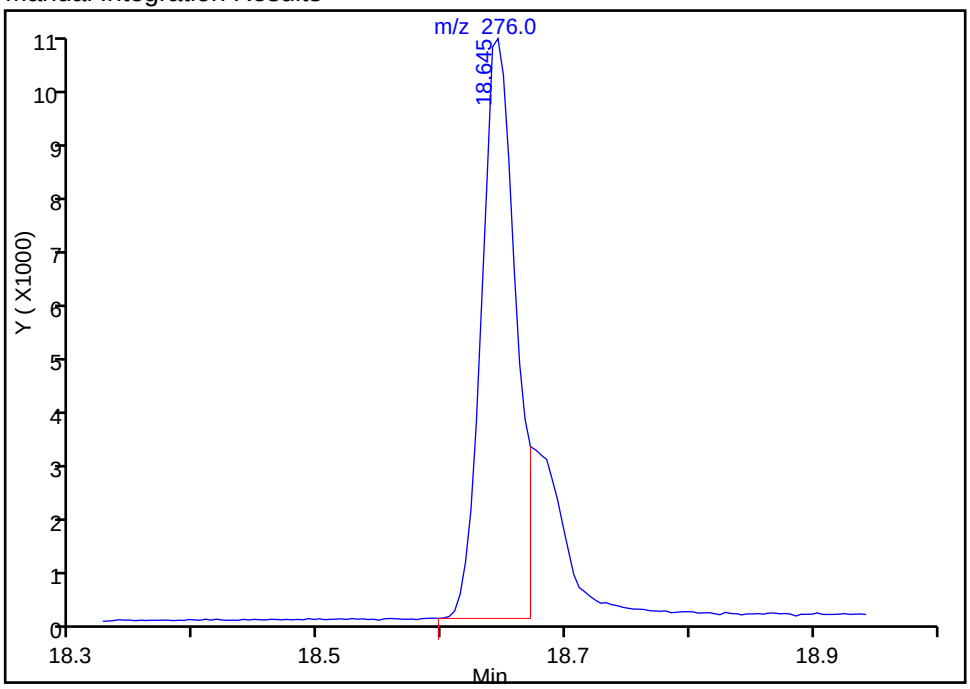
Processing Integration Results

RT: 18.65
Area: 24858
Amount: 358.1983
Amount Units: ng/ml



Manual Integration Results

RT: 18.65
Area: 19486
Amount: 287.7569
Amount Units: ng/ml



Reviewer: vasquezk, 18-Apr-2017 09:29:22
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6245.D
Lims ID: STD1200
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 17-Apr-2017 16:47:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1200
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:38:00 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:29:41

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	6.047	6.047	0.000	92	20638	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	41169	600.0	600.0	
* 3 Chrysene-d12	240	11.380	11.398	-0.018	97	33561	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.014	4.018	-0.004	99	31815	1201.2	1166.5	
$ 5 2-Fluorobiphenyl	172	5.444	5.449	-0.005	100	60661	1200.0	1184.7	
$ 6 Terphenyl-d14	244	9.143	9.157	-0.014	99	47315	1201.2	1074.2	
9 1,4-Dioxane	88		1.929				ND	ND	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	88	18694	1200.0	1100.8	
14 Naphthalene	128	4.603	4.606	-0.003	100	71291	1200.0	1133.6	
16 2-Methylnaphthalene	142	5.160	5.165	-0.005	97	95267	2400.0	2342.4	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	97	47357	1200.0	1173.8	
20 Dimethyl phthalate	163	5.761	5.762	-0.001	100	140405	2402.4	2564.3	
22 Acenaphthylene	152	5.926	5.926	0.000	100	82171	1200.0	1237.7	
23 Acenaphthene	153	6.064	6.073	-0.009	96	50575	1200.0	1212.1	
32 Dibenzofuran	168	6.214	6.214	0.000	97	80247	1201.2	1230.0	
24 Diethyl phthalate	149	6.335	6.343	-0.008	97	140618	2409.6	2598.3	
25 Fluorene	166	6.502	6.502	0.000	95	64447	1200.0	1241.5	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	97	41051	1198.3	1206.2	
27 Phenanthrene	178	7.327	7.334	-0.007	100	98955	1200.0	1213.3	
28 Anthracene	178	7.373	7.380	-0.007	100	93222	1200.0	1151.3	
29 Di-n-butyl phthalate	149	7.750	7.757	-0.007	100	230685	2403.0	2481.7	
30 Fluoranthene	202	8.636	8.642	-0.006	100	108927	1200.0	1193.6	
31 Pyrene	202	8.974	8.987	-0.013	100	110890	1200.0	1188.5	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	91	96688	2403.0	2480.9	
34 Bis(2-ethylhexyl) phthalat	149	11.281	11.290	-0.009	100	129681	2403.6	2388.2	
35 Benzo[a]anthracene	228	11.344	11.362	-0.018	97	99627	1200.0	1245.5	
36 Chrysene	228	11.443	11.461	-0.018	100	88208	1200.0	1183.0	
37 Di-n-octyl phthalate	149	13.212	13.230	-0.018	100	213216	2406.6	2639.0	
38 Benzo[b]fluoranthene	252	14.490	14.507	-0.017	100	94391	1200.0	1308.3	
39 Benzo[k]fluoranthene	252	14.577	14.595	-0.018	100	88378	1200.0	1206.7	
40 Benzo[a]pyrene	252	15.561	15.583	-0.022	99	88770	1200.0	1255.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.645	18.654	-0.009	77	93216	1200.0	1291.9	
42 Dibenz(a,h)anthracene	278	18.684	18.693	-0.009	80	84102	1200.0	1150.6	
43 Benzo[g,h,i]perylene	276	19.074	19.087	-0.013	100	91524	1200.0	1178.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

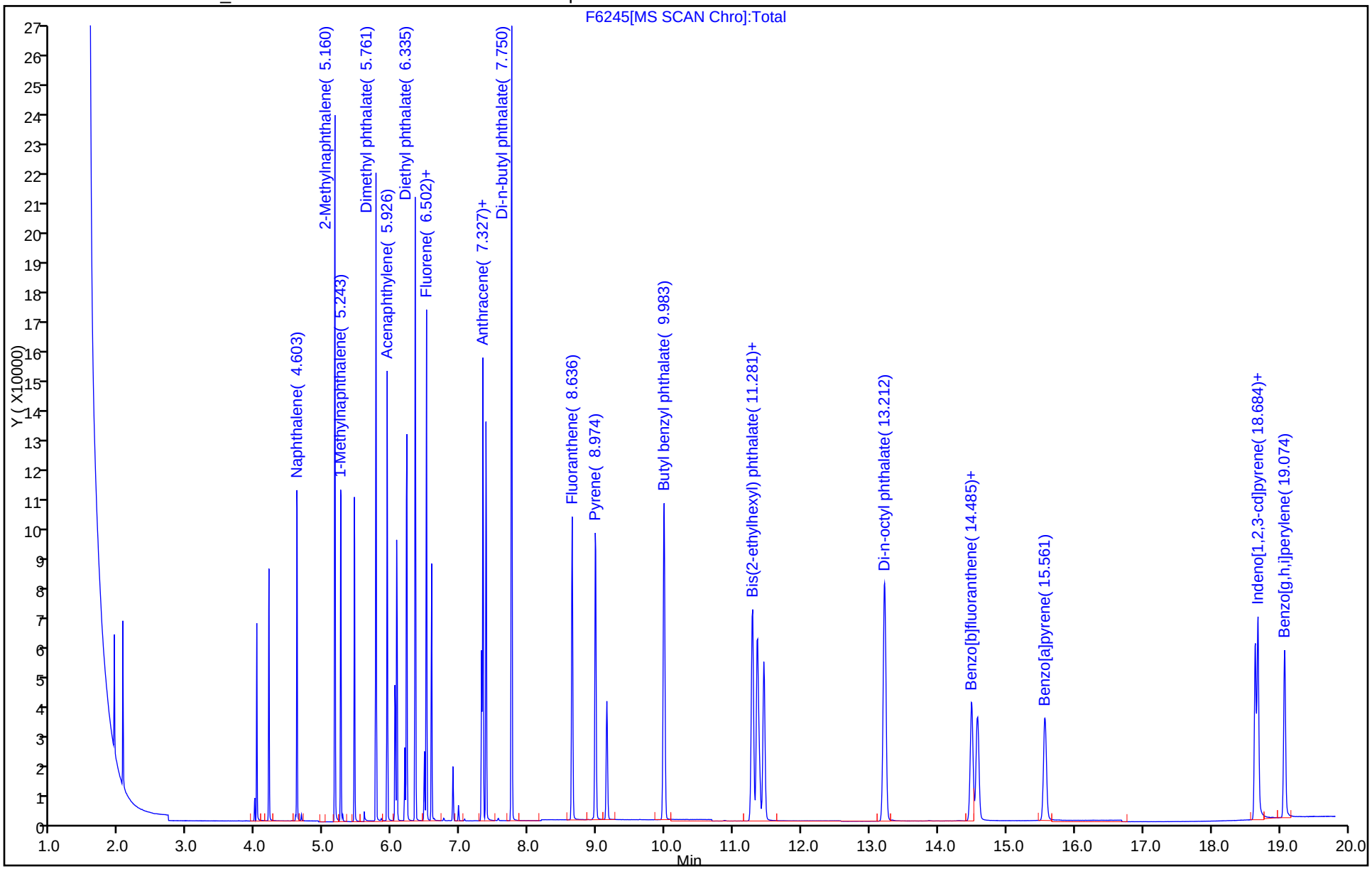
MS-SIMSL 1.2_00063 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:38:00 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6245.D

Injection Date:	17-Apr-2017 16:47:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD1200			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6246.D
Lims ID: STD2500
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 17-Apr-2017 17:13:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2500
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:38:00 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:29:58

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	6.046	6.047	-0.001	92	19928	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	36828	600.0	600.0	
* 3 Chrysene-d12	240	11.378	11.398	-0.020	81	33467	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.014	4.018	-0.004	98	65650	2502.5	2492.9	
$ 5 2-Fluorobiphenyl	172	5.444	5.449	-0.005	100	119663	2500.0	2420.2	
$ 6 Terphenyl-d14	244	9.143	9.157	-0.014	99	98159	2502.5	2491.2	
9 1,4-Dioxane	88		1.929				ND	ND	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	92	39021	2500.0	2379.7	
14 Naphthalene	128	4.603	4.606	-0.003	100	144148	2500.0	2373.8	
16 2-Methylnaphthalene	142	5.160	5.165	-0.005	97	189157	5000.0	4816.7	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	95	94166	2500.0	2417.1	
20 Dimethyl phthalate	163	5.761	5.762	-0.001	100	259829	5005.0	4914.5	
22 Acenaphthylene	152	5.926	5.926	0.000	100	158039	2500.0	2465.2	
23 Acenaphthene	153	6.064	6.073	-0.009	96	96295	2500.0	2390.0	
32 Dibenzofuran	168	6.214	6.214	0.000	97	151865	2502.5	2410.7	
24 Diethyl phthalate	149	6.335	6.343	-0.008	97	256162	5020.0	4902.0	
25 Fluorene	166	6.502	6.502	0.000	95	121992	2500.0	2433.7	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	96	70097	2496.5	2302.4	
27 Phenanthrene	178	7.327	7.334	-0.007	100	175049	2500.0	2399.4	
28 Anthracene	178	7.373	7.380	-0.007	100	180811	2500.0	2496.2	
29 Di-n-butyl phthalate	149	7.750	7.757	-0.007	100	417927	5006.3	5025.9	
30 Fluoranthene	202	8.636	8.642	-0.006	100	198732	2500.0	2434.4	
31 Pyrene	202	8.981	8.987	-0.006	100	203840	2500.0	2442.2	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	93	175865	5006.3	5044.3	
34 Bis(2-ethylhexyl) phthalat	149	11.278	11.290	-0.012	100	243187	5007.5	5006.4	
35 Benzo[a]anthracene	228	11.350	11.362	-0.012	98	189210	2500.0	2372.1	
36 Chrysene	228	11.450	11.461	-0.011	100	179573	2500.0	2415.1	
37 Di-n-octyl phthalate	149	13.210	13.230	-0.020	100	406695	5013.8	5047.8	
38 Benzo[b]fluoranthene	252	14.487	14.507	-0.020	100	170313	2500.0	2367.3	
39 Benzo[k]fluoranthene	252	14.574	14.595	-0.021	100	178570	2500.0	2445.0	
40 Benzo[a]pyrene	252	15.563	15.583	-0.020	99	167180	2500.0	2371.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.642	18.654	-0.012	77	172819	2500.0	2401.8	
42 Dibenz(a,h)anthracene	278	18.682	18.693	-0.011	81	174205	2500.0	2390.0	
43 Benzo[g,h,i]perylene	276	19.071	19.087	-0.016	100	183748	2500.0	2372.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

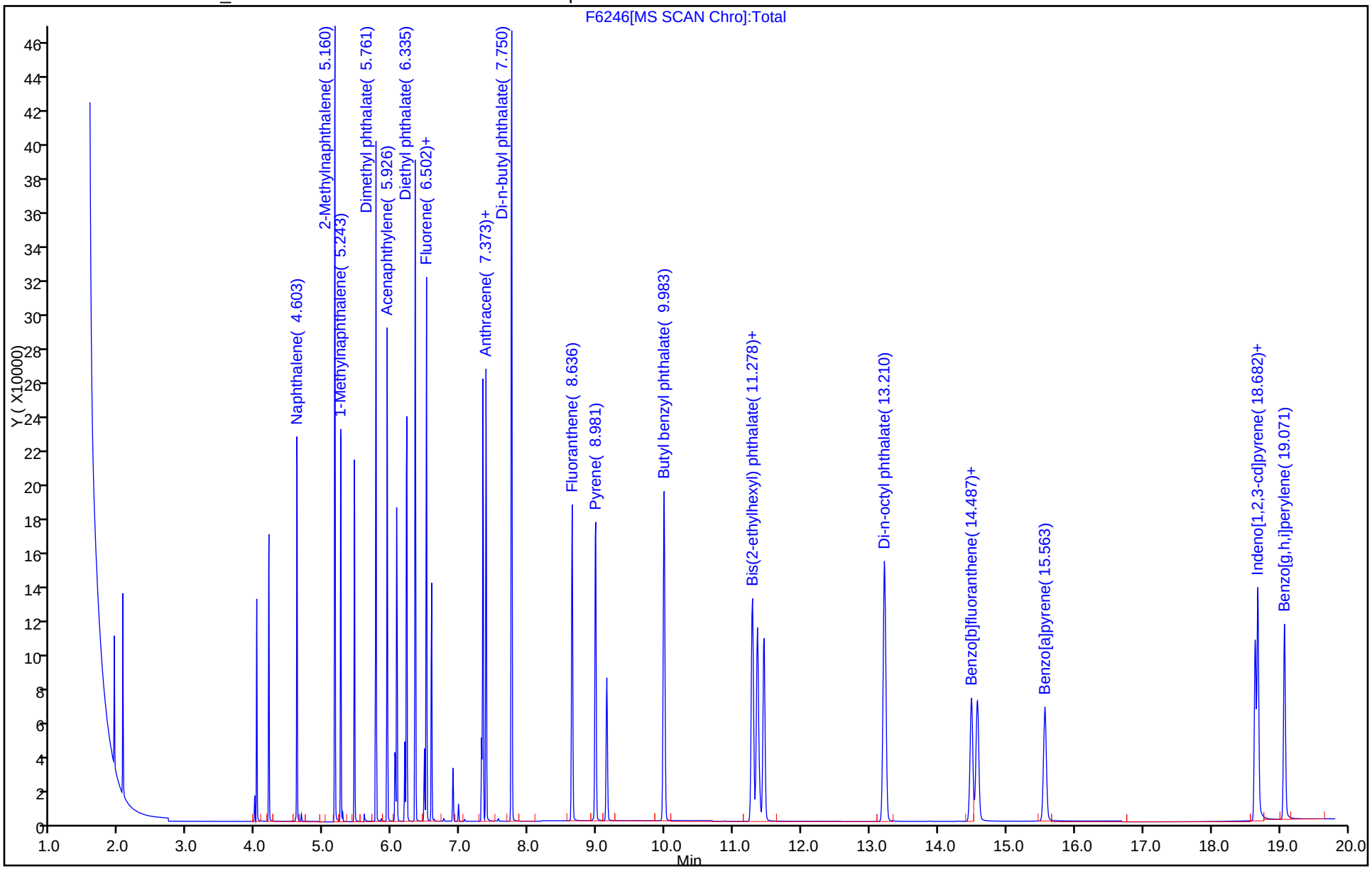
MS-SIMSL 2.5_00062 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:38:01 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6246.D

Injection Date:	17-Apr-2017 17:13:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD2500			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6247.D
Lims ID: STD5000
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 17-Apr-2017 17:39:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5000
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:38:01 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:30:15

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	6.038	6.047	-0.009	81	19275	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	36092	600.0	600.0	
* 3 Chrysene-d12	240	11.380	11.398	-0.018	78	33519	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.015	4.018	-0.003	98	128936	5005.0	5061.8	
$ 5 2-Fluorobiphenyl	172	5.444	5.449	-0.005	100	228288	5000.0	4773.5	
$ 6 Terphenyl-d14	244	9.144	9.157	-0.013	99	187531	5005.0	4856.4	
9 1,4-Dioxane	88		1.929				ND	ND	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	92	76779	5000.0	4841.0	
14 Naphthalene	128	4.603	4.606	-0.003	100	278384	5000.0	4739.6	
16 2-Methylnaphthalene	142	5.160	5.165	-0.005	95	363568	10000	9571.6	
17 1-Methylnaphthalene	142	5.243	5.248	-0.005	98	180848	5000.0	4799.4	
20 Dimethyl phthalate	163	5.762	5.762	0.000	100	479652	10010	9379.6	
22 Acenaphthylene	152	5.926	5.926	0.000	100	301173	5000.0	4857.1	
23 Acenaphthene	153	6.064	6.073	-0.009	98	182385	5000.0	4680.1	
32 Dibenzofuran	168	6.214	6.214	0.000	97	290161	5005.0	4762.0	
24 Diethyl phthalate	149	6.335	6.343	-0.008	98	485340	10040	9602.3	
25 Fluorene	166	6.502	6.502	0.000	94	229315	5000.0	4729.7	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	94	125787	4993.0	4215.8	
27 Phenanthrene	178	7.327	7.334	-0.007	100	333341	5000.0	4662.2	
28 Anthracene	178	7.373	7.380	-0.007	100	342264	5000.0	4821.5	
29 Di-n-butyl phthalate	149	7.751	7.757	-0.006	100	795738	10013	9764.6	
30 Fluoranthene	202	8.636	8.642	-0.006	100	378377	5000.0	4729.5	
31 Pyrene	202	8.974	8.987	-0.013	100	390283	5000.0	4771.4	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	91	346359	10013	10137	
34 Bis(2-ethylhexyl) phthalat	149	11.272	11.290	-0.018	100	470332	10015	9880.0	
35 Benzo[a]anthracene	228	11.344	11.362	-0.018	97	361871	5000.0	4529.7	
36 Chrysene	228	11.443	11.461	-0.018	100	339831	5000.0	4563.3	
37 Di-n-octyl phthalate	149	13.208	13.230	-0.022	100	799385	10028	9906.3	
38 Benzo[b]fluoranthene	252	14.485	14.507	-0.022	100	327987	5000.0	4551.9	
39 Benzo[k]fluoranthene	252	14.573	14.595	-0.022	100	341365	5000.0	4666.8	
40 Benzo[a]pyrene	252	15.561	15.583	-0.022	99	309796	5000.0	4387.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.645	18.654	-0.009	77	326477	5000.0	4530.2	
42 Dibenz(a,h)anthracene	278	18.680	18.693	-0.013	81	335620	5000.0	4597.3	
43 Benzo[g,h,i]perylene	276	19.074	19.087	-0.013	100	352779	5000.0	4547.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

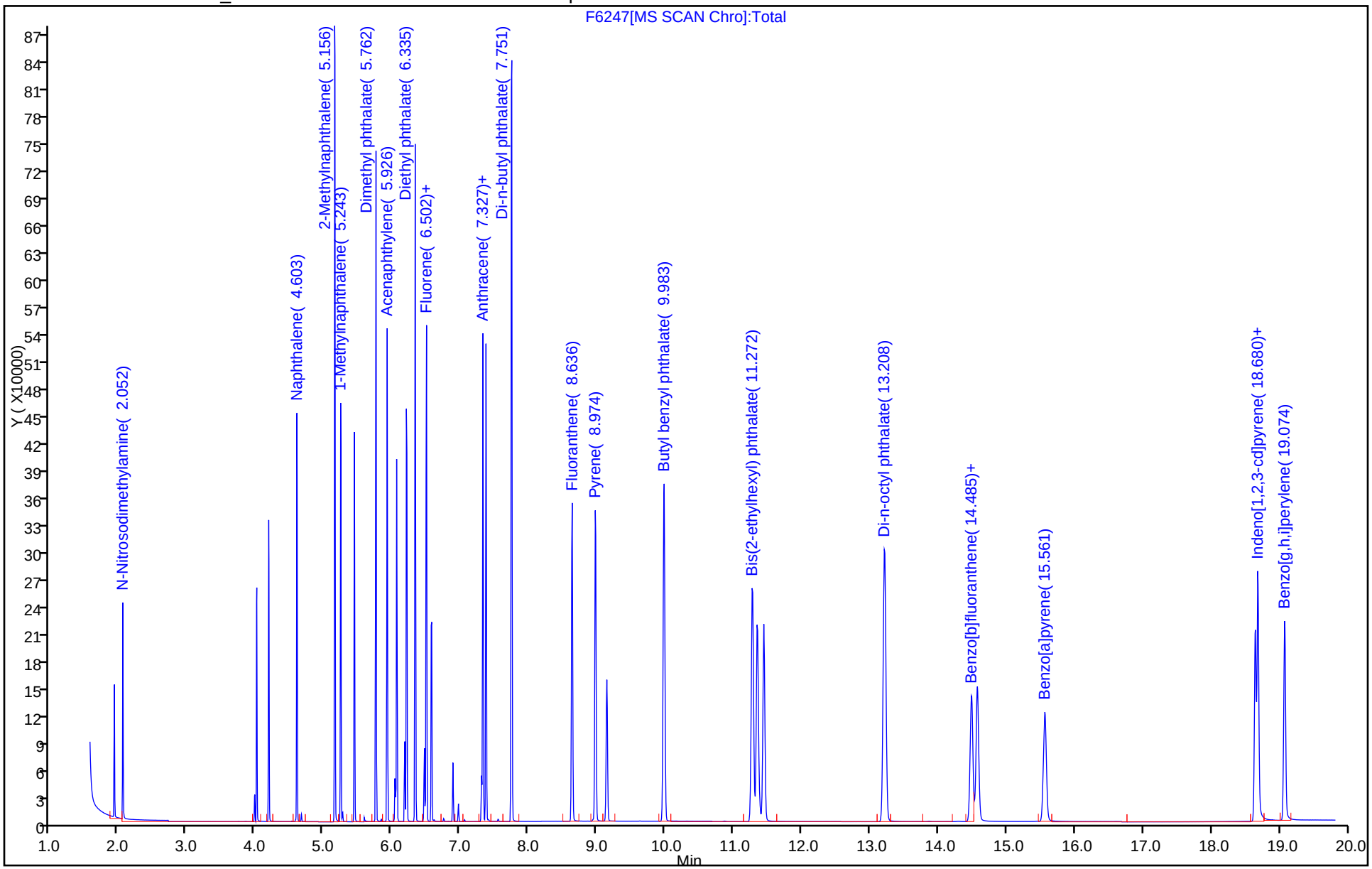
MS-SIMSL 5_00063 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:38:01 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6247.D

Injection Date:	17-Apr-2017 17:39:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD5000			Worklist Smp#:	8
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\20170413-57515.b\F6248.D
Lims ID: STD10000
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 17-Apr-2017 18:05:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD10000
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:38:02 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:30:33

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	6.038	6.047	-0.009	84	19000	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	34741	600.0	600.0	
* 3 Chrysene-d12	240	11.380	11.398	-0.018	36	32714	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.011	4.018	-0.007	100	261305	10010	10407	
$ 5 2-Fluorobiphenyl	172	5.444	5.449	-0.005	100	467924	10000	9925.9	
$ 6 Terphenyl-d14	244	9.144	9.157	-0.013	99	382490	10010	10290	
9 1,4-Dioxane	88		1.929				ND	ND	
10 N-Nitrosodimethylamine	74		2.052				ND	ND	
14 Naphthalene	128		4.606				ND	ND	
16 2-Methylnaphthalene	142		5.165				ND	ND	
17 1-Methylnaphthalene	142		5.248				ND	ND	
20 Dimethyl phthalate	163	5.761	5.762	-0.001	100	978810	20020	19418	
22 Acenaphthylene	152		5.926				ND	ND	
23 Acenaphthene	153		6.073				ND	ND	
32 Dibenzofuran	168		6.214				ND	ND	
24 Diethyl phthalate	149	6.335	6.343	-0.008	98	979845	20080	19667	
25 Fluorene	166		6.502				ND	ND	
26 N-Nitrosodiphenylamine	169		6.578				ND	ND	
27 Phenanthrene	178		7.334				ND	ND	
28 Anthracene	178		7.380				ND	ND	
29 Di-n-butyl phthalate	149	7.744	7.757	-0.013	100	1627823	20025	20752	
30 Fluoranthene	202		8.642				ND	ND	
31 Pyrene	202		8.987				ND	ND	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	90	727388	20025	22117	
34 Bis(2-ethylhexyl) phthalat	149	11.272	11.290	-0.018	100	1011410	20030	22072	
35 Benzo[a]anthracene	228		11.362				ND	ND	
36 Chrysene	228		11.461				ND	ND	
37 Di-n-octyl phthalate	149	13.213	13.230	-0.018	100	1741908	20055	22118	
38 Benzo[b]fluoranthene	252		14.507				ND	ND	
39 Benzo[k]fluoranthene	252		14.595				ND	ND	
40 Benzo[a]pyrene	252		15.583				ND	ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276		18.654				ND	ND	
42 Dibenz(a,h)anthracene	278		18.693				ND	ND	
43 Benzo[g,h,i]perylene	276		19.087				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

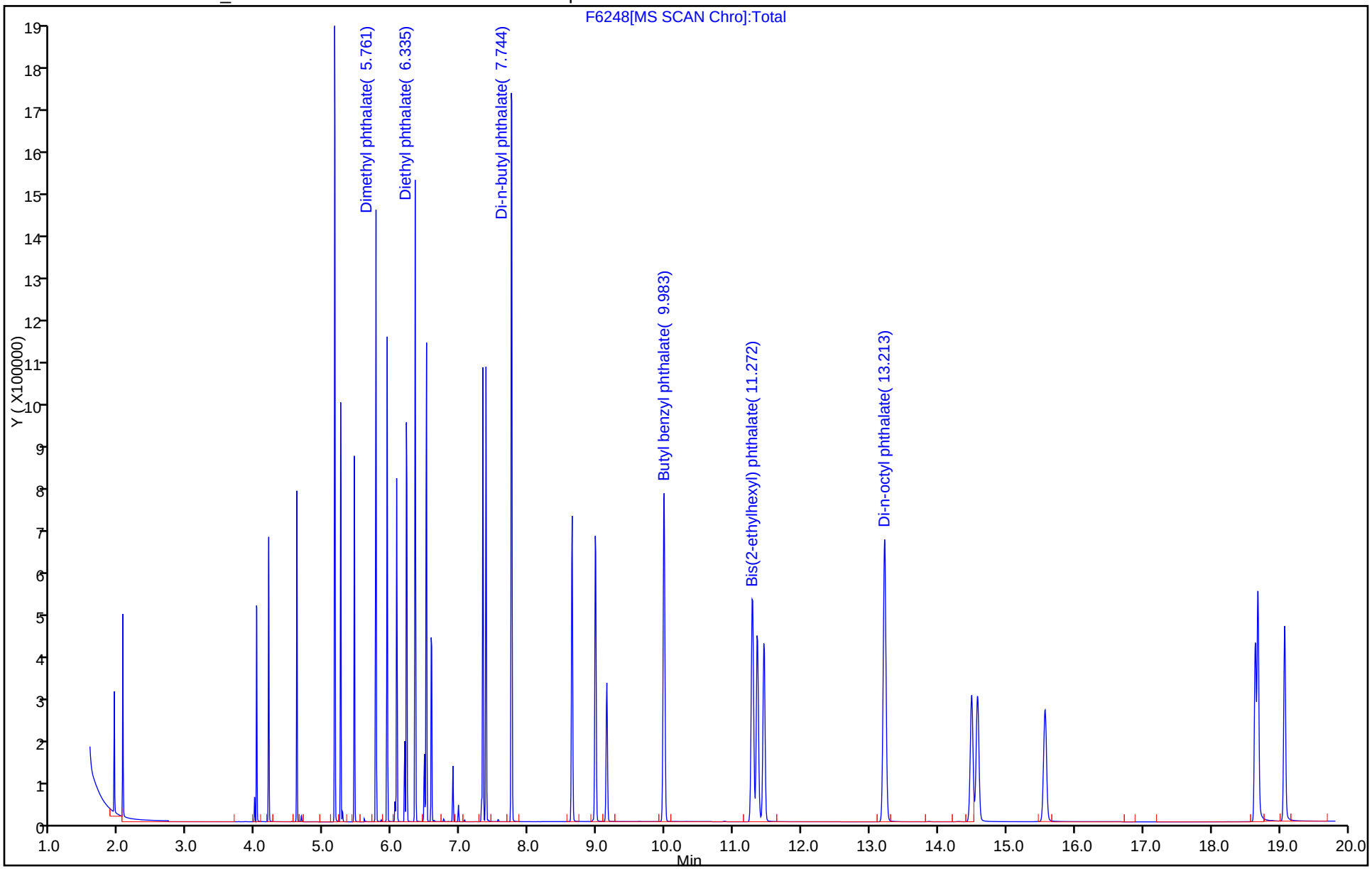
MS-SIMX 10_00055 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:38:02 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Injection Date:	17-Apr-2017 18:05:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	STD10000			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: ICV 280-369226/10 Calibration Date: 04/17/2017 18:31

Instrument ID: SMS_F Calib Start Date: 04/17/2017 14:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/17/2017 18:05

Lab File ID: F6249.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.828	1.910	0.7000	1250000	1200000	4.5	20.0
2-Methylnaphthalene	Ave	1.182	1.247	0.4000	1270000	1200000	5.5	20.0
1-Methylnaphthalene	Ave	1.173	1.174	0.0500	1200000	1200000	0.1	20.0
Acenaphthylene	Ave	1.930	2.043	0.9000	1270000	1200000	5.9	20.0
Acenaphthene	Ave	1.213	1.284	0.9000	1270000	1200000	5.8	20.0
Fluorene	Ave	1.509	1.547	0.9000	1230000	1200000	2.5	20.0
Phenanthrene	Ave	1.189	1.230	0.7000	1240000	1200000	3.5	20.0
Anthracene	Ave	1.180	1.245	0.7000	1270000	1200000	5.5	20.0
Fluoranthene	Ave	1.330	1.340	0.6000	1210000	1200000	0.8	20.0
Pyrene	Ave	1.360	1.395	0.6000	1230000	1200000	2.6	20.0
Benzo[a]anthracene	Ave	1.430	1.456	0.8000	1220000	1200000	1.8	20.0
Chrysene	Ave	1.333	1.432	0.7000	1290000	1200000	7.4	20.0
Benzo[b]fluoranthene	Ave	1.290	1.275	0.7000	1190000	1200000	-1.1	20.0
Benzo[k]fluoranthene	Ave	1.309	1.325	0.7000	1210000	1200000	1.2	20.0
Benzo[a]pyrene	Ave	1.264	1.219	0.7000	1160000	1200000	-3.5	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.290	1.253	0.5000	1170000	1200000	-2.8	20.0
Dibenz(a,h)anthracene	Ave	1.307	1.328	0.4000	1220000	1200000	1.6	20.0
Benzo[g,h,i]perylene	Ave	1.389	1.453	0.5000	1260000	1200000	4.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6249.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 17-Apr-2017 18:31:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:38:02 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 18-Apr-2017 09:37:01

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	6.038	6.047	-0.009	84	18635	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.314	-0.006	100	34795	600.0	600.0	
* 3 Chrysene-d12	240	11.380	11.398	-0.018	100	30814	600.0	600.0	
9 1,4-Dioxane	88	1.929	1.929	0.000	0	11881	NC	NC	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	92	16430	1200.0	1071.5	
14 Naphthalene	128	4.603	4.606	-0.003	100	71183	1200.0	1253.5	
16 2-Methylnaphthalene	142	5.160	5.165	-0.005	96	46490	1200.0	1266.0	
17 1-Methylnaphthalene	142	5.243	5.248	-0.005	98	43764	1200.0	1201.3	
20 Dimethyl phthalate	163	5.762	5.762	0.000	100	61435	1200.0	1242.6	
22 Acenaphthylene	152	5.926	5.926	0.000	100	76161	1200.0	1270.4	
23 Acenaphthene	153	6.064	6.073	-0.009	98	47840	1200.0	1269.8	
32 Dibenzofuran	168	6.214	6.214	0.000	97	73520	1200.0	1248.0	
24 Diethyl phthalate	149	6.335	6.343	-0.008	98	61367	1200.0	1255.8	
25 Fluorene	166	6.502	6.502	0.000	92	57654	1200.0	1230.0	
26 N-Nitrosodiphenylamine	169	6.570	6.578	-0.008	97	41007	1200.0	1425.6	
27 Phenanthrene	178	7.328	7.334	-0.006	100	85625	1200.0	1242.2	
28 Anthracene	178	7.373	7.380	-0.007	100	86667	1200.0	1266.4	
29 Di-n-butyl phthalate	149	7.751	7.757	-0.006	100	93964	1200.0	1196.0	
30 Fluoranthene	202	8.636	8.642	-0.006	100	93251	1200.0	1209.0	
31 Pyrene	202	8.974	8.987	-0.013	100	97062	1200.0	1230.9	
33 Butyl benzyl phthalate	149	9.983	9.996	-0.013	90	39433	1200.0	1197.1	
34 Bis(2-ethylhexyl) phthalat	149	11.272	11.290	-0.018	100	50751	1200.0	1105.8	
35 Benzo[a]anthracene	228	11.344	11.362	-0.018	97	89739	1200.0	1221.9	
36 Chrysene	228	11.443	11.461	-0.018	100	88241	1200.0	1288.9	
37 Di-n-octyl phthalate	149	13.213	13.230	-0.017	100	82217	1200.0	1108.3	
38 Benzo[b]fluoranthene	252	14.485	14.507	-0.022	100	78586	1200.0	1186.4	
39 Benzo[k]fluoranthene	252	14.573	14.595	-0.022	100	81640	1200.0	1214.1	
40 Benzo[a]pyrene	252	15.561	15.583	-0.022	99	75144	1200.0	1157.8	
41 Indeno[1,2,3-cd]pyrene	276	18.641	18.654	-0.013	78	77250	1200.0	1166.0	
42 Dibenz(a,h)anthracene	278	18.680	18.693	-0.013	81	81844	1200.0	1219.5	
43 Benzo[g,h,i]perylene	276	19.069	19.087	-0.018	100	89559	1200.0	1255.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
7 Pentachlorophenol	266		0.000				ND	ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

Reagents:

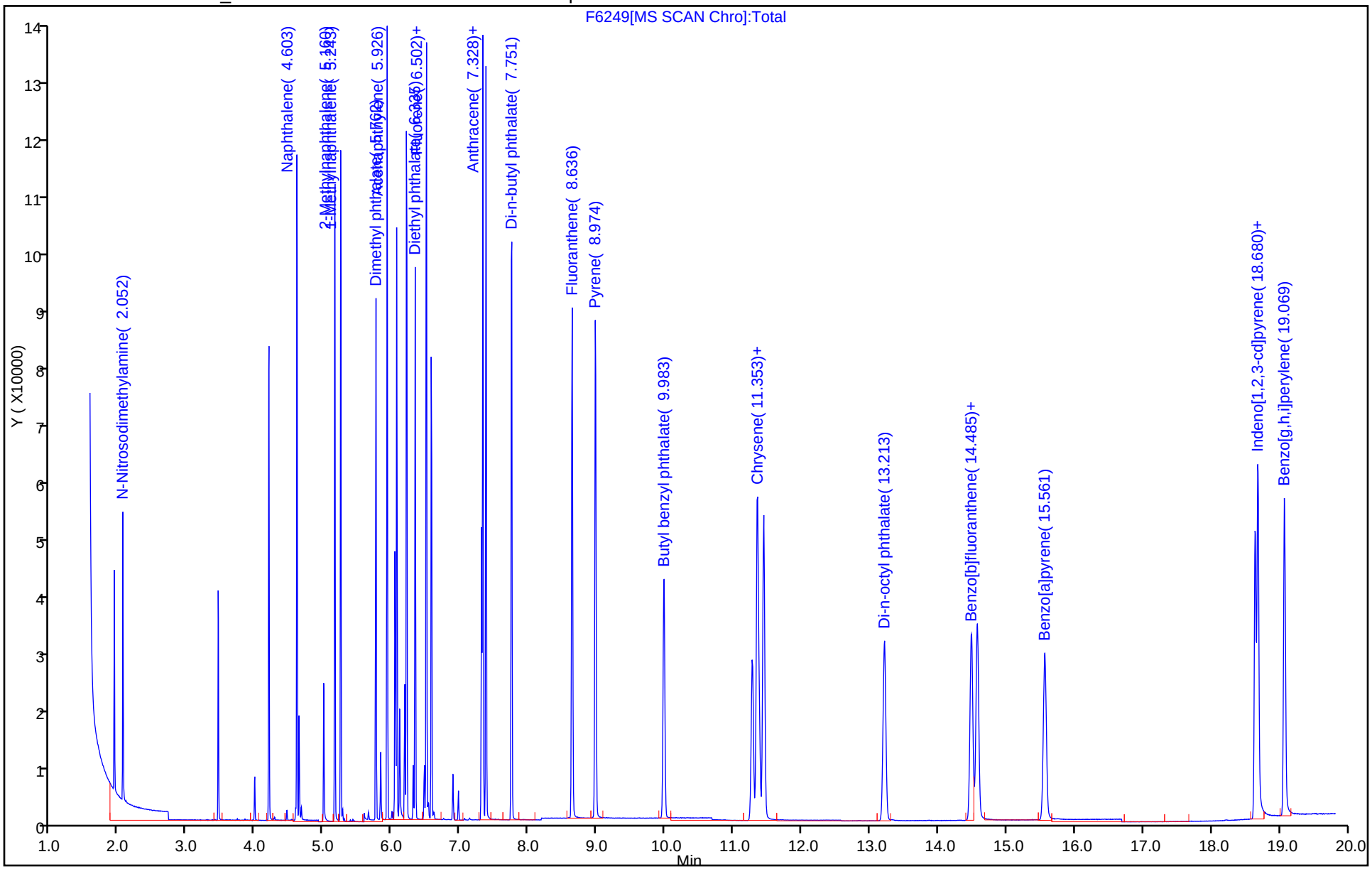
MS-SIM SSV_00116 Amount Added: 1.00 Units: uL

Report Date: 18-Apr-2017 09:38:04 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6249.D

Injection Date:	17-Apr-2017 18:31:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	ICV			Worklist Smp#:	10
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.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372218/2 Calibration Date: 05/04/2017 15:40

Instrument ID: SMS_F Calib Start Date: 04/17/2017 14:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/17/2017 18:05

Lab File ID: F6418.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.828	2.044	0.7000	671000	600000	11.8	20.0
2-Methylnaphthalene	Ave	1.182	1.297	0.4000	1320000	1200000	9.7	20.0
1-Methylnaphthalene	Ave	1.173	1.285	0.0500	657000	600000	9.5	20.0
Acenaphthylene	Ave	1.930	1.988	0.9000	618000	600000	3.0	20.0
Acenaphthene	Ave	1.213	1.291	0.9000	639000	600000	6.5	20.0
Fluorene	Ave	1.509	1.609	0.9000	640000	600000	6.6	20.0
Phenanthrene	Ave	1.189	1.224	0.7000	618000	600000	2.9	20.0
Anthracene	Ave	1.180	1.169	0.7000	595000	600000	-0.9	20.0
Fluoranthene	Ave	1.330	1.368	0.6000	617000	600000	2.9	20.0
Pyrene	Ave	1.360	1.413	0.6000	623000	600000	3.9	20.0
Benzo[a]anthracene	Ave	1.430	1.418	0.8000	595000	600000	-0.9	20.0
Chrysene	Ave	1.333	1.420	0.7000	639000	600000	6.5	20.0
Benzo[b]fluoranthene	Ave	1.290	1.310	0.7000	610000	600000	1.6	20.0
Benzo[k]fluoranthene	Ave	1.309	1.309	0.7000	600000	600000	-0.0	20.0
Benzo[a]pyrene	Ave	1.264	1.184	0.7000	562000	600000	-6.3	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.290	1.263	0.5000	588000	600000	-2.1	20.0
Dibenz(a,h)anthracene	Ave	1.307	1.297	0.4000	596000	600000	-0.7	20.0
Benzo[g,h,i]perylene	Ave	1.389	1.414	0.5000	611000	600000	1.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.7929	0.9133		692000	601000	15.2	20.0
2-Fluorobiphenyl (Surr)	Ave	1.489	1.649		665000	600000	10.8	20.0
Terphenyl-d14 (Surr)	Ave	0.6420	0.6127		573000	601000	-4.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6418.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 04-May-2017 15:40:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:46 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 04-May-2017 16:02:20

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	6.047	6.047	0.000	93	22929	600.0	600.0	
* 2 Phenanthrene-d10	188	7.313	7.313	0.000	99	44358	600.0	600.0	
* 3 Chrysene-d12	240	11.386	11.386	0.000	99	39880	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.015	4.015	0.000	99	20962	600.6	691.8	
$ 5 2-Fluorobiphenyl	172	5.444	5.444	0.000	100	37813	600.0	664.7	
$ 6 Terphenyl-d14	244	9.149	9.149	0.000	99	27204	600.6	573.2	
9 1,4-Dioxane	88	1.929	1.929	0.000	0	8561	NC	NC	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	82	14215	600.0	753.4	
14 Naphthalene	128	4.603	4.603	0.000	100	46862	600.0	670.7	
16 2-Methylnaphthalene	142	5.160	5.160	0.000	96	59462	1200.0	1316.0	
17 1-Methylnaphthalene	142	5.248	5.248	0.000	96	29462	600.0	657.3	
20 Dimethyl phthalate	163	5.762	5.762	0.000	100	81101	1201.2	1333.2	
22 Acenaphthylene	152	5.926	5.926	0.000	100	45585	600.0	618.0	
23 Acenaphthene	153	6.064	6.064	0.000	95	29609	600.0	638.7	
32 Dibenzofuran	168	6.214	6.214	0.000	96	47540	600.6	655.9	
24 Diethyl phthalate	149	6.335	6.335	0.000	97	81675	1204.8	1358.4	
25 Fluorene	166	6.502	6.502	0.000	98	36893	600.0	639.7	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	96	23360	599.2	637.0	
27 Phenanthrene	178	7.333	7.333	0.000	100	54272	600.0	617.6	
28 Anthracene	178	7.378	7.378	0.000	100	51873	600.0	594.6	
29 Di-n-butyl phthalate	149	7.749	7.749	0.000	100	126600	1201.5	1264.0	
30 Fluoranthene	202	8.641	8.641	0.000	100	60695	600.0	617.3	
31 Pyrene	202	8.980	8.980	0.000	100	62669	600.0	623.4	
33 Butyl benzyl phthalate	149	9.989	9.989	0.000	91	50781	1201.5	1209.3	
34 Bis(2-ethylhexyl) phthalat	149	11.278	11.278	0.000	99	70058	1201.8	1197.4	
35 Benzo[a]anthracene	228	11.359	11.359	0.000	100	56534	600.0	594.8	
36 Chrysene	228	11.458	11.458	0.000	100	56616	600.0	639.0	
37 Di-n-octyl phthalate	149	13.218	13.218	0.000	100	102433	1203.3	1066.9	
38 Benzo[b]fluoranthene	252	14.499	14.499	0.000	100	52257	600.0	609.6	
39 Benzo[k]fluoranthene	252	14.587	14.587	0.000	100	52197	600.0	599.8	
40 Benzo[a]pyrene	252	15.580	15.580	0.000	100	47215	600.0	562.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.650	18.650	0.000	78	50382	600.0	587.6	M
42 Dibenz(a,h)anthracene	278	18.690	18.690	0.000	81	51727	600.0	595.5	
43 Benzo[g,h,i]perylene	276	19.079	19.079	0.000	100	56395	600.0	611.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

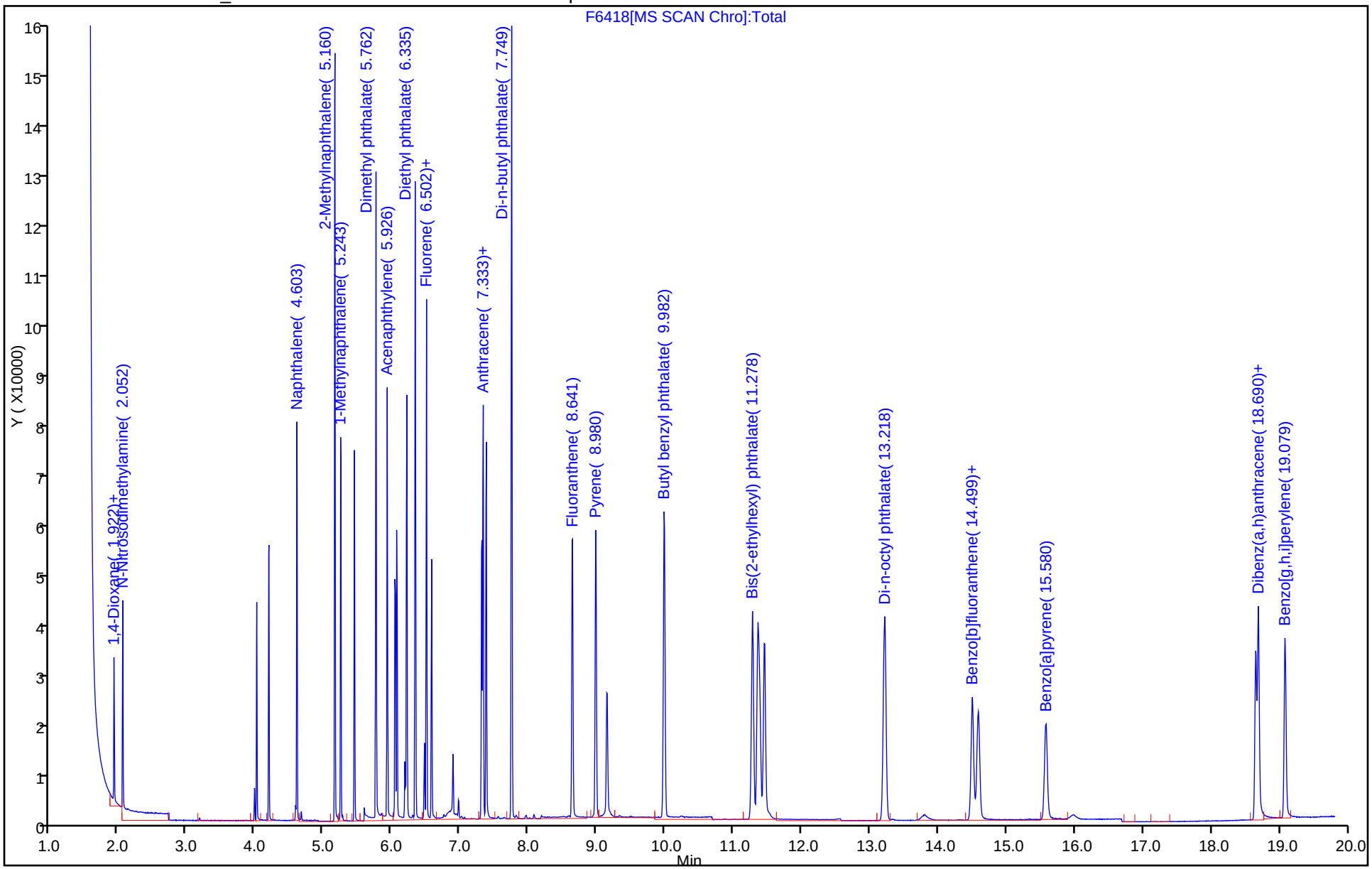
MS-SIMSL 0.6_00122 Amount Added: 1.00 Units: uL

Report Date: 05-May-2017 12:04:46 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6418.D

Injection Date:	04-May-2017 15:40:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

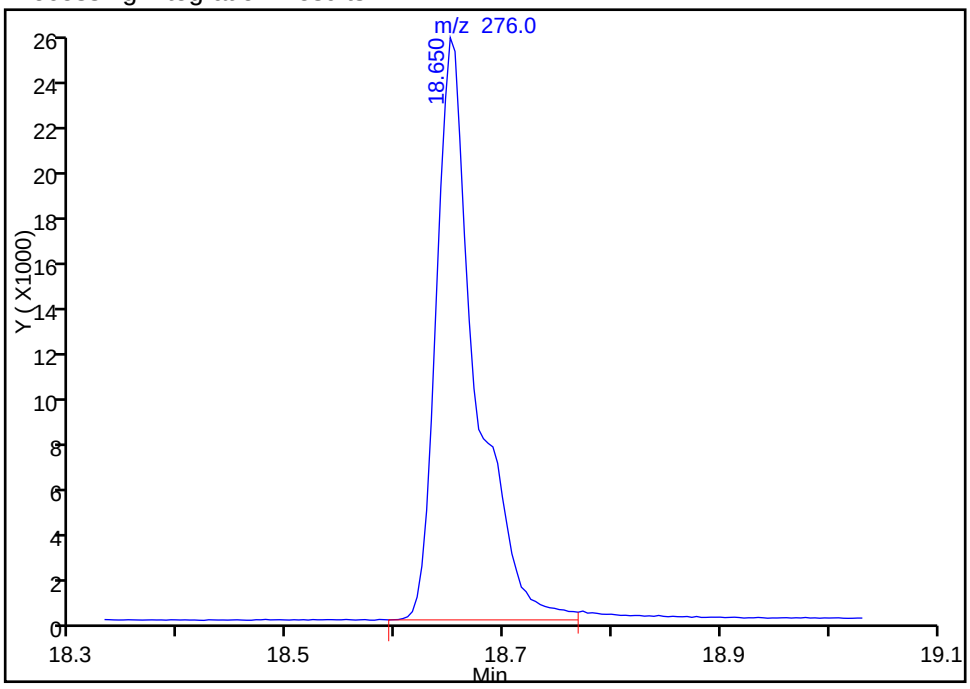
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6418.D				
Injection Date:	04-May-2017 15:40:30	Instrument ID:	SMS_F		
Lims ID:	CCV				
Client ID:					
Operator ID:	VASQUEZK	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

41 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

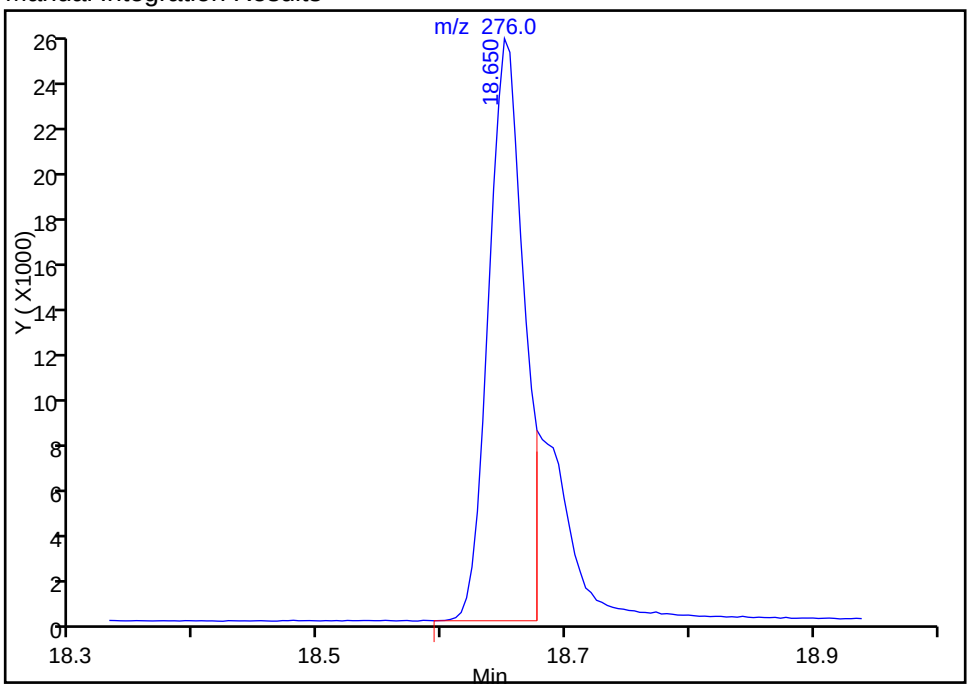
Processing Integration Results

RT: 18.65
Area: 64297
Amount: 749.8838
Amount Units: ng/ml



Manual Integration Results

RT: 18.65
Area: 50382
Amount: 587.5958
Amount Units: ng/ml



Reviewer: vasquezk, 04-May-2017 16:02:18

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.: 280-96291-1

SDG No.:

Lab Sample ID: CCVC 280-372218/20 Calibration Date: 05/04/2017 23:21

Instrument ID: SMS_F Calib Start Date: 04/17/2017 14:53

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 04/17/2017 18:05

Lab File ID: F6436.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.828	1.950	0.7000	640000	600000	6.6	50.0
2-Methylnaphthalene	Ave	1.182	1.265	0.4000	1280000	1200000	6.9	50.0
1-Methylnaphthalene	Ave	1.173	1.274	0.0500	652000	600000	8.6	50.0
Acenaphthylene	Ave	1.930	2.003	0.9000	623000	600000	3.8	50.0
Acenaphthene	Ave	1.213	1.282	0.9000	634000	600000	5.7	50.0
Fluorene	Ave	1.509	1.586	0.9000	630000	600000	5.1	50.0
Phenanthrene	Ave	1.189	1.275	0.7000	644000	600000	7.3	50.0
Anthracene	Ave	1.180	1.235	0.7000	628000	600000	4.6	50.0
Fluoranthene	Ave	1.330	1.422	0.6000	641000	600000	6.9	50.0
Pyrene	Ave	1.360	1.457	0.6000	643000	600000	7.2	50.0
Benzo[a]anthracene	Ave	1.430	1.434	0.8000	601000	600000	0.2	50.0
Chrysene	Ave	1.333	1.415	0.7000	637000	600000	6.1	50.0
Benzo[b]fluoranthene	Ave	1.290	1.273	0.7000	592000	600000	-1.3	50.0
Benzo[k]fluoranthene	Ave	1.309	1.346	0.7000	617000	600000	2.8	50.0
Benzo[a]pyrene	Ave	1.264	1.187	0.7000	563000	600000	-6.1	50.0
Indeno[1,2,3-cd]pyrene	Ave	1.290	1.200	0.5000	558000	600000	-7.0	50.0
Dibenz(a,h)anthracene	Ave	1.307	1.254	0.4000	576000	600000	-4.0	50.0
Benzo[g,h,i]perylene	Ave	1.389	1.404	0.5000	607000	600000	1.1	50.0
Nitrobenzene-d5 (Surr)	Ave	0.7929	0.8538		647000	601000	7.7	50.0
2-Fluorobiphenyl (Surr)	Ave	1.489	1.608		648000	600000	8.0	50.0
Terphenyl-d14 (Surr)	Ave	0.6420	0.6162		577000	601000	-4.0	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6436.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 04-May-2017 23:21:30 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: VASQUEZK Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub4

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:05:05 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 05-May-2017 12:03:07

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	6.038	6.038	0.000	93	22962	600.0	600.0	
* 2 Phenanthrene-d10	188	7.308	7.308	0.000	99	44275	600.0	600.0	
* 3 Chrysene-d12	240	11.371	11.371	0.000	98	40095	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.011	4.011	0.000	100	19625	600.6	646.7	
$ 5 2-Fluorobiphenyl	172	5.444	5.444	0.000	99	36916	600.0	648.0	
$ 6 Terphenyl-d14	244	9.137	9.137	0.000	99	27310	600.6	576.5	
9 1,4-Dioxane	88		1.929				ND	ND	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	50	13281	600.0	702.9	
14 Naphthalene	128	4.603	4.603	0.000	100	44773	600.0	639.9	
16 2-Methylnaphthalene	142	5.156	5.156	0.000	99	58071	1200.0	1283.3	
17 1-Methylnaphthalene	142	5.243	5.243	0.000	99	29246	600.0	651.5	
20 Dimethyl phthalate	163	5.753	5.753	0.000	100	79369	1201.2	1302.8	
22 Acenaphthylene	152	5.926	5.926	0.000	99	45995	600.0	622.7	
23 Acenaphthene	153	6.064	6.064	0.000	100	29438	600.0	634.1	
32 Dibenzofuran	168	6.206	6.206	0.000	90	47059	600.6	648.3	
24 Diethyl phthalate	149	6.335	6.335	0.000	99	83488	1204.8	1386.6	
25 Fluorene	166	6.494	6.494	0.000	95	36416	600.0	630.5	
26 N-Nitrosodiphenylamine	169	6.570	6.570	0.000	100	24656	599.2	673.6	
27 Phenanthrene	178	7.327	7.327	0.000	99	56458	600.0	643.7	
28 Anthracene	178	7.373	7.373	0.000	100	54675	600.0	627.9	
29 Di-n-butyl phthalate	149	7.744	7.744	0.000	100	134184	1201.5	1342.3	
30 Fluoranthene	202	8.629	8.629	0.000	100	62955	600.0	641.5	
31 Pyrene	202	8.974	8.974	0.000	100	64521	600.0	643.0	
33 Butyl benzyl phthalate	149	9.970	9.970	0.000	95	52494	1201.5	1252.4	
34 Bis(2-ethylhexyl) phthalat	149	11.254	11.254	0.000	99	69619	1201.8	1192.2	
35 Benzo[a]anthracene	228	11.344	11.344	0.000	99	57477	600.0	601.5	
36 Chrysene	228	11.434	11.434	0.000	100	56734	600.0	636.9	
37 Di-n-octyl phthalate	149	13.195	13.195	0.000	100	104659	1203.3	1084.3	
38 Benzo[b]fluoranthene	252	14.472	14.472	0.000	100	51044	600.0	592.2	
39 Benzo[k]fluoranthene	252	14.564	14.564	0.000	100	53986	600.0	617.0	
40 Benzo[a]pyrene	252	15.552	15.552	0.000	100	47578	600.0	563.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	18.641	18.641	0.000	78	48107	600.0	558.1	M
42 Dibenz(a,h)anthracene	278	18.676	18.676	0.000	82	50285	600.0	575.8	
43 Benzo[g,h,i]perylene	276	19.069	19.069	0.000	100	56290	600.0	606.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

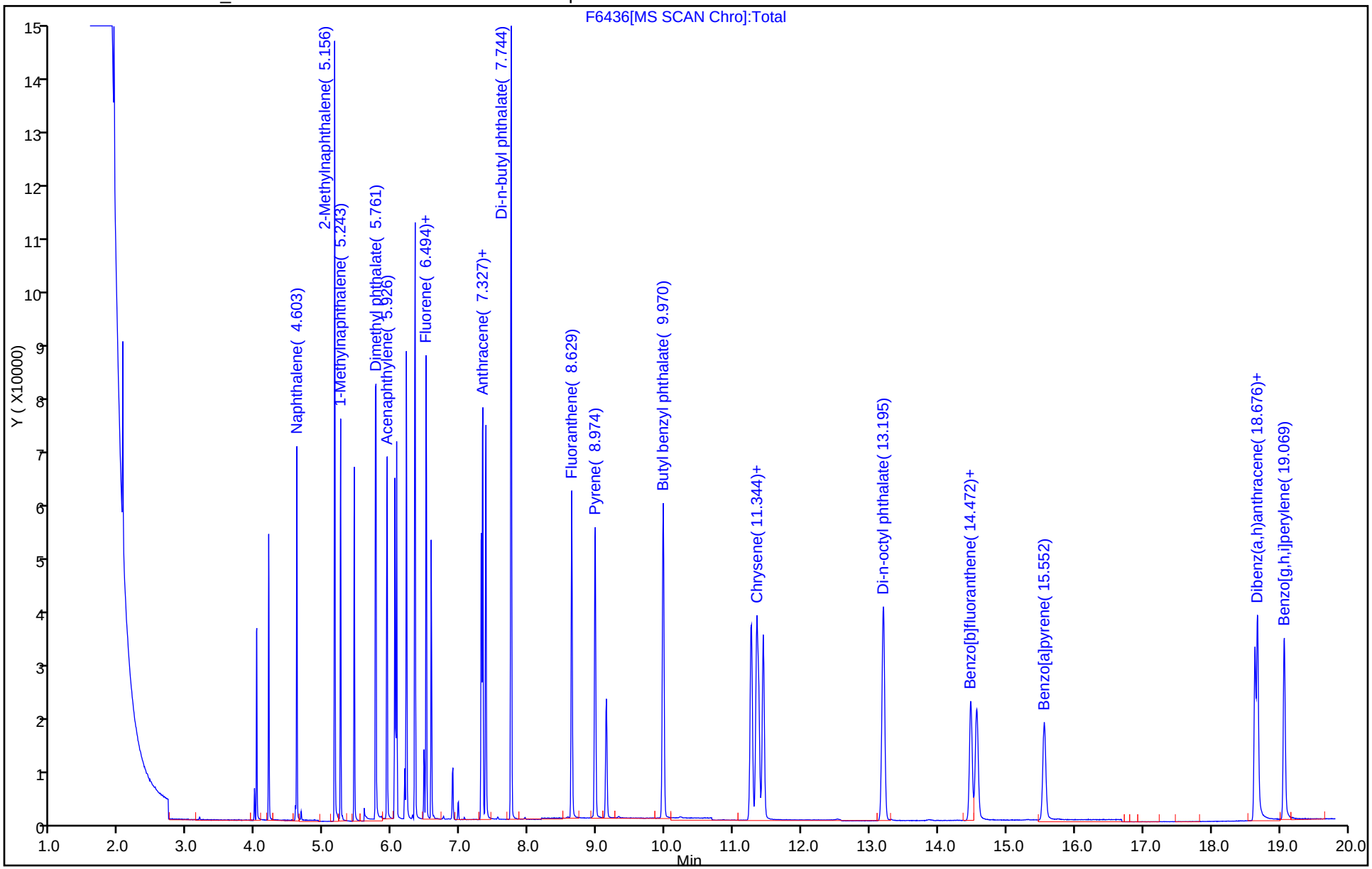
MS-SIMSL 0.6_00122 Amount Added: 1.00 Units: uL

Report Date: 05-May-2017 12:05:05 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6436.D

Injection Date:	04-May-2017 23:21:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	CCVC			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

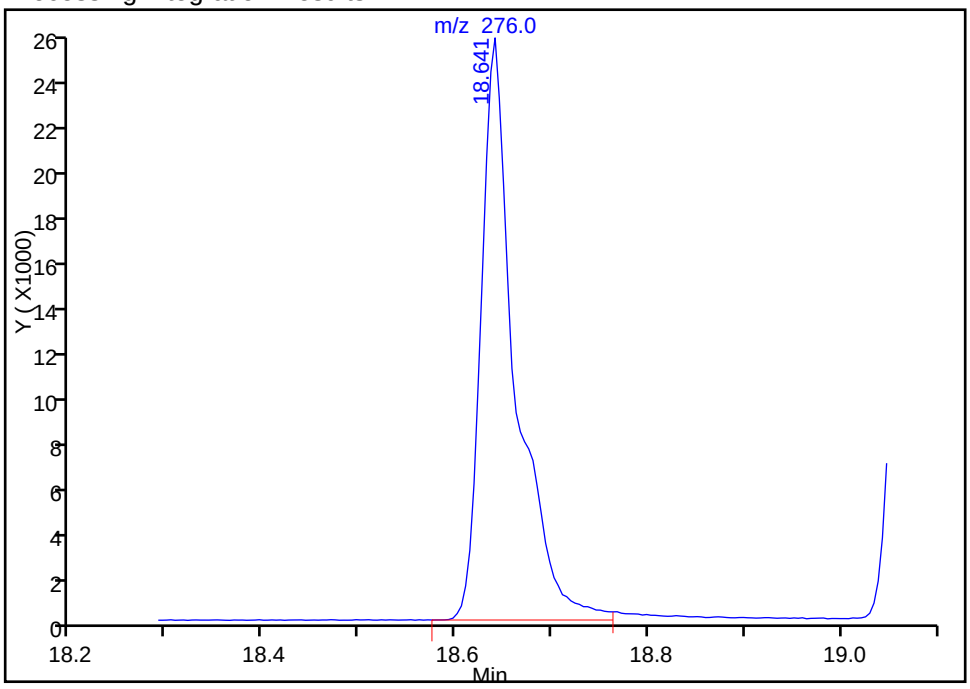
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6436.D				
Injection Date:	04-May-2017 23:21:30	Instrument ID:	SMS_F		
Lims ID:	CCVC				
Client ID:					
Operator ID:	VASQUEZK	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

41 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

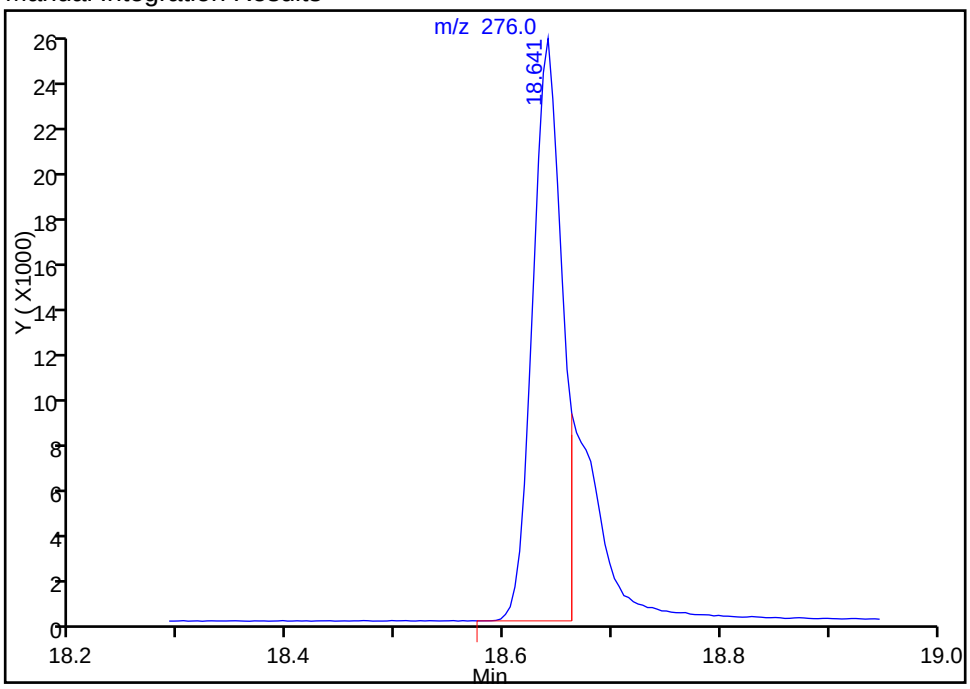
Processing Integration Results

RT: 18.64
Area: 63360
Amount: 734.9933
Amount Units: ng/ml



Manual Integration Results

RT: 18.64
Area: 48107
Amount: 558.0543
Amount Units: ng/ml



Reviewer: vasquezk, 05-May-2017 12:03:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 17-Apr-2017 14:16:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 18-Apr-2017 09:37:55 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: vasquezk Date: 17-Apr-2017 14:52:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 Pentachlorophenol_T	266	4.260	4.260	0.000	77	321323	NR	NR	
13 DFTPP									
15 Benzidine_T	184	5.393	5.393	0.000	95	2264815	NR	NR	
18 4,4'-DDD	235	5.873	5.873	0.000	85	13713	NR	NR	
19 4,4'-DDE	246	5.876	5.876	0.000	51	840	NR	NR	
21 4,4'-DDT	235	6.160	6.160	0.000	94	1037885	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

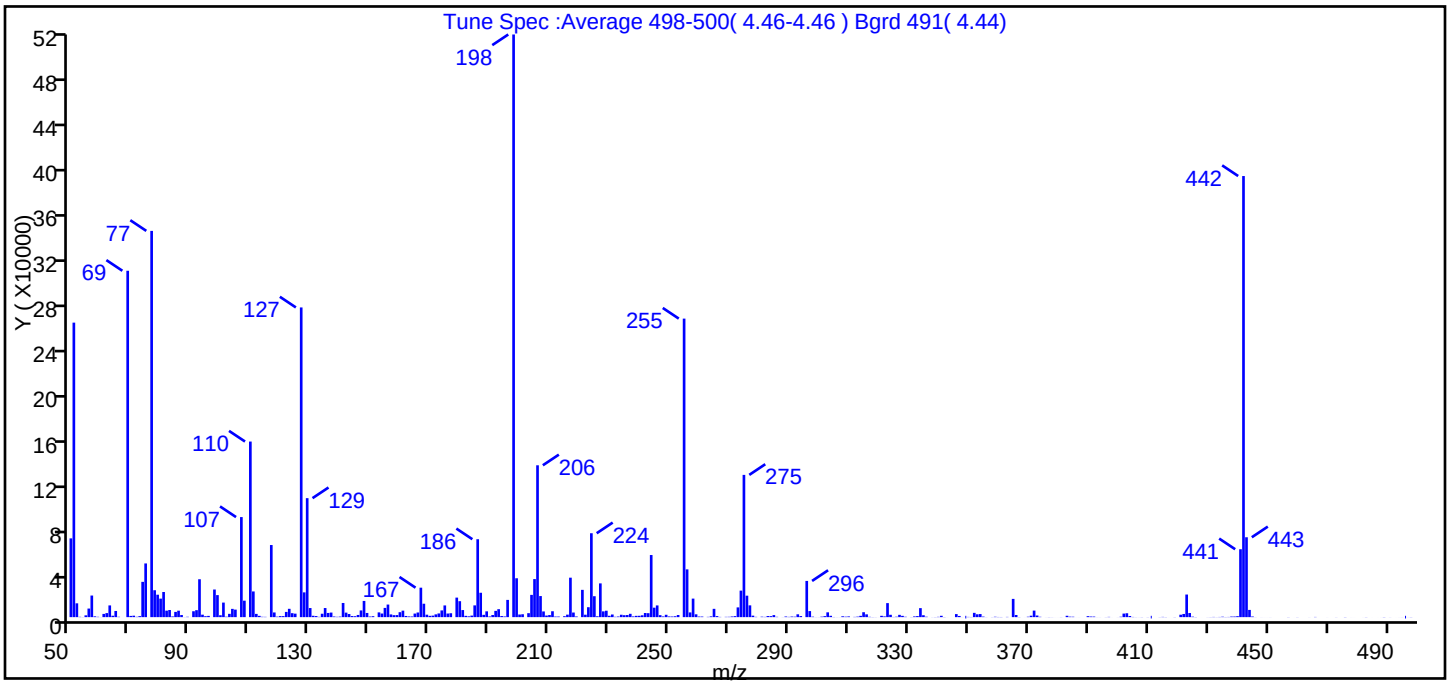
MS-DFTPP_00044 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D
Injection Date: 17-Apr-2017 14:16:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

13 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	50.5
68	<2% of mass 69	0.0 (0.0)
69	Present	59.4
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	53.2
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-30% of mass 198	24.4
365	>1% of mass 198	3.1
441	Present but less than mass 443	11.7 (85.0)
442	>40% of mass 198	75.7
443	17-23% of mass 442	13.7 (18.1)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 17-Apr-2017 14:16:30
Spectrum: Tune Spec :Average 498-500(4.46-4.46) Bgrd 491(4.44)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 387

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	69016	157.00	2376	259.00	2484	369.00	20
51.00	258048	158.00	1741	260.00	536	370.00	358
52.00	12108	159.00	1809	261.00	508	371.00	1262
53.00	271	160.00	4335	263.00	244	372.00	5736
54.00	91	161.00	5683	264.00	671	373.00	1420
55.00	1573	162.00	1029	265.00	7284	374.00	299
56.00	7523	163.00	620	266.00	916	376.00	34
57.00	18928	164.00	571	267.00	196	377.00	93
58.00	699	165.00	3129	269.00	252	378.00	57
59.00	295	166.00	4065	270.00	290	379.00	17
60.00	63	167.00	25816	271.00	592	380.00	16
61.00	2833	168.00	11751	272.00	886	381.00	65
62.00	3547	169.00	2151	273.00	8547	383.00	1189
63.00	10277	170.00	1145	274.00	23240	384.00	412
64.00	1237	171.00	1338	275.00	124648	385.00	365
65.00	5405	172.00	2430	276.00	18808	386.00	14
66.00	306	173.00	3236	277.00	10325	387.00	26
69.00	303488	174.00	5888	278.00	1296	390.00	847
70.00	1093	175.00	10263	279.00	250	391.00	523
71.00	1276	176.00	3159	280.00	5	392.00	484
72.00	294	177.00	3418	281.00	402	393.00	43
73.00	880	179.00	17112	282.00	220	394.00	35
74.00	30920	180.00	13978	283.00	971	396.00	71
75.00	47056	181.00	6202	284.00	868	397.00	223
77.00	338432	182.00	1137	285.00	1787	398.00	15
78.00	23584	183.00	705	286.00	286	400.00	36
79.00	19656	184.00	1351	288.00	50	401.00	351
80.00	16230	185.00	10303	289.00	560	402.00	3118
81.00	22024	186.00	68272	290.00	237	403.00	3404
82.00	5677	187.00	21360	291.00	521	404.00	989
83.00	6246	188.00	2016	292.00	410	405.00	175
84.00	610	189.00	5092	293.00	2474	406.00	67
85.00	4588	190.00	590	294.00	940	407.00	35

Report Date: 18-Apr-2017 09:37:55 Chrom Revision: 2.2 10-Apr-2017 06:51:18
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 17-Apr-2017 14:16:30
Spectrum: Tune Spec :Average 498-500(4.46-4.46) Bgrd 491(4.44)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 387

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	5652	191.00	1850	296.00	31728	408.00	93
87.00	1836	192.00	5493	297.00	5308	410.00	84
88.00	75	193.00	6979	298.00	422	411.00	1
89.00	307	194.00	956	299.00	60	414.00	81
91.00	5168	195.00	591	300.00	60	415.00	215
92.00	6104	196.00	15106	301.00	428	416.00	107
93.00	33208	198.00	510528	302.00	871	417.00	12
94.00	2161	199.00	34064	303.00	4214	419.00	96
95.00	811	200.00	2312	304.00	1180	421.00	2123
96.00	1100	201.00	2544	305.00	140	422.00	2780
98.00	24208	203.00	3479	306.00	52	423.00	19808
99.00	19304	204.00	19504	307.00	49	424.00	3608
100.00	1657	205.00	33344	308.00	739	425.00	429
101.00	12754	206.00	133056	309.00	413	426.00	122
102.00	387	207.00	18472	310.00	631	428.00	7
103.00	2898	208.00	5004	312.00	223	430.00	50
104.00	7246	209.00	1397	313.00	437	431.00	94
105.00	6595	210.00	1840	314.00	1143	432.00	186
107.00	87672	211.00	5166	315.00	4314	433.00	78
108.00	14425	212.00	493	316.00	2445	434.00	168
110.00	153856	213.00	519	317.00	277	435.00	365
111.00	22520	214.00	4	318.00	109	436.00	134
112.00	2847	215.00	829	319.00	71	437.00	178
113.00	1135	216.00	2193	320.00	24	438.00	516
114.00	304	217.00	34576	321.00	1167	439.00	538
115.00	244	218.00	4040	322.00	642	440.00	831
117.00	63184	219.00	572	323.00	12293	441.00	59496
118.00	4106	221.00	23912	324.00	2060	442.00	386496
119.00	435	222.00	2132	325.00	161	443.00	69992
120.00	890	223.00	8701	326.00	374	444.00	6331
121.00	879	224.00	73520	327.00	2018	445.00	552
122.00	4572	225.00	18336	328.00	1136	446.00	54
123.00	7297	226.00	761	329.00	332	448.00	28
124.00	3468	227.00	29576	331.00	98	449.00	16

Report Date: 18-Apr-2017 09:37:55 Chrom Revision: 2.2 10-Apr-2017 06:51:18
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 17-Apr-2017 14:16:30
Spectrum: Tune Spec :Average 498-500(4.46-4.46) Bgrd 491(4.44)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 387

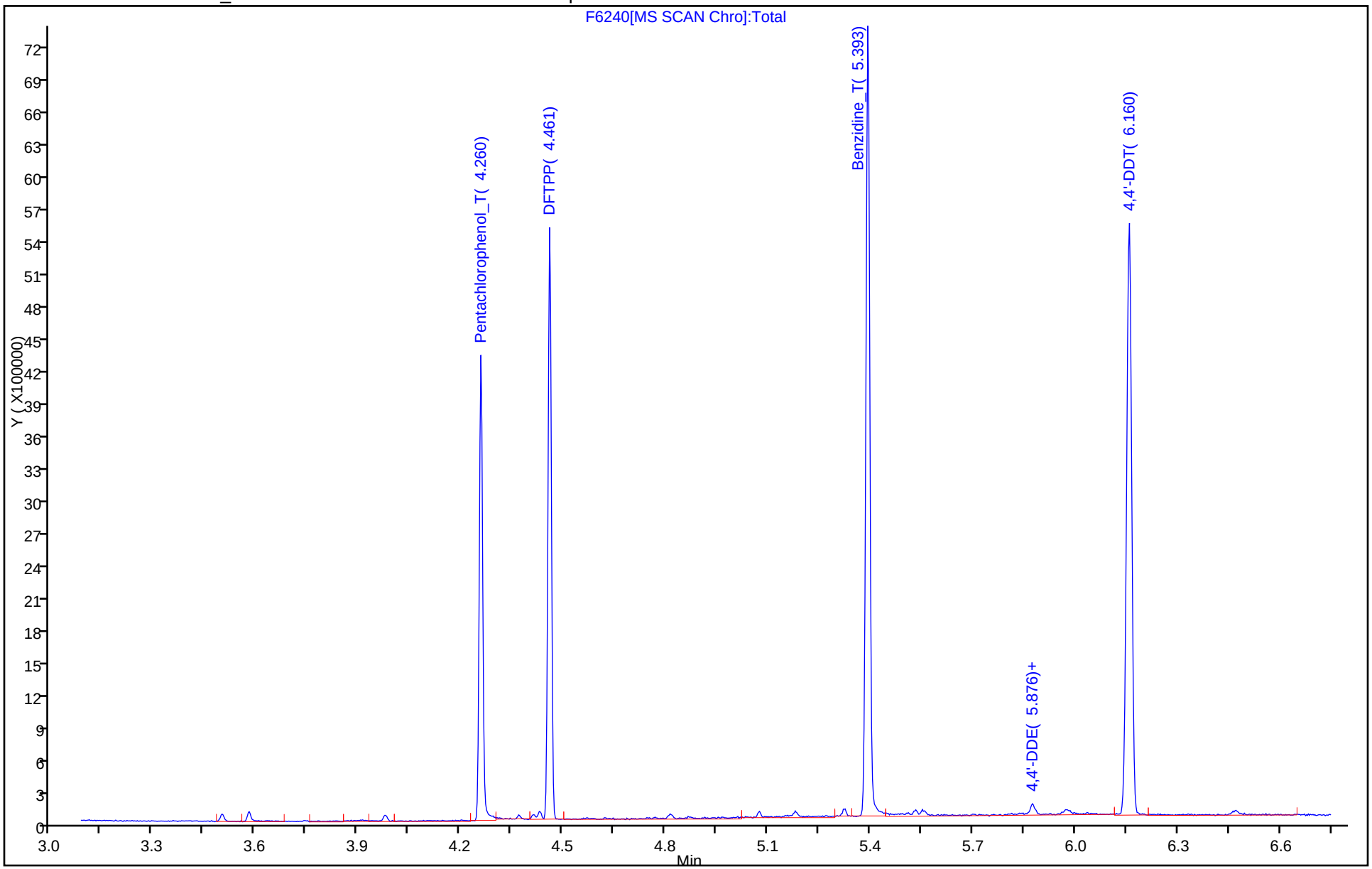
m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	3055	228.00	5060	332.00	642	450.00	15
127.00	271360	229.00	5626	333.00	922	451.00	35
128.00	21704	230.00	1200	334.00	7895	457.00	91
129.00	104256	231.00	2321	335.00	1664	458.00	2
130.00	7973	232.00	296	336.00	373	459.00	7
131.00	1193	233.00	539	338.00	54	460.00	75
132.00	945	234.00	2096	339.00	112	464.00	36
133.00	243	235.00	1714	340.00	258	466.00	179
134.00	2987	236.00	1846	341.00	1187	470.00	22
135.00	7980	237.00	2915	342.00	130	473.00	61
136.00	3676	238.00	636	343.00	19	474.00	2
137.00	4010	239.00	1142	346.00	2671	476.00	122
138.00	553	240.00	1183	347.00	1029	478.00	16
139.00	290	241.00	1610	348.00	37	479.00	11
140.00	470	242.00	3629	349.00	1	482.00	15
141.00	12406	243.00	3468	350.00	196	483.00	90
142.00	3956	244.00	54424	351.00	145	485.00	7
143.00	2725	245.00	8294	352.00	3755	486.00	3
144.00	963	246.00	10263	353.00	2490	487.00	10
145.00	817	247.00	1737	354.00	2700	488.00	18
146.00	1914	248.00	611	355.00	470	489.00	124
147.00	5879	249.00	2075	356.00	62	491.00	44
148.00	14201	250.00	616	358.00	81	492.00	3
149.00	3671	251.00	552	359.00	325	493.00	10
150.00	542	252.00	779	360.00	154	494.00	21
151.00	825	253.00	1875	361.00	133	495.00	38
153.00	4155	255.00	261568	363.00	208	496.00	1
154.00	3165	256.00	41856	365.00	15992	497.00	29
155.00	8101	257.00	4133	366.00	1884	498.00	101
156.00	11031	258.00	16241	367.00	116		

Report Date: 18-Apr-2017 09:37:55 Chrom Revision: 2.2 10-Apr-2017 06:51:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D

Injection Date:	17-Apr-2017 14:16:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	DFTPP			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

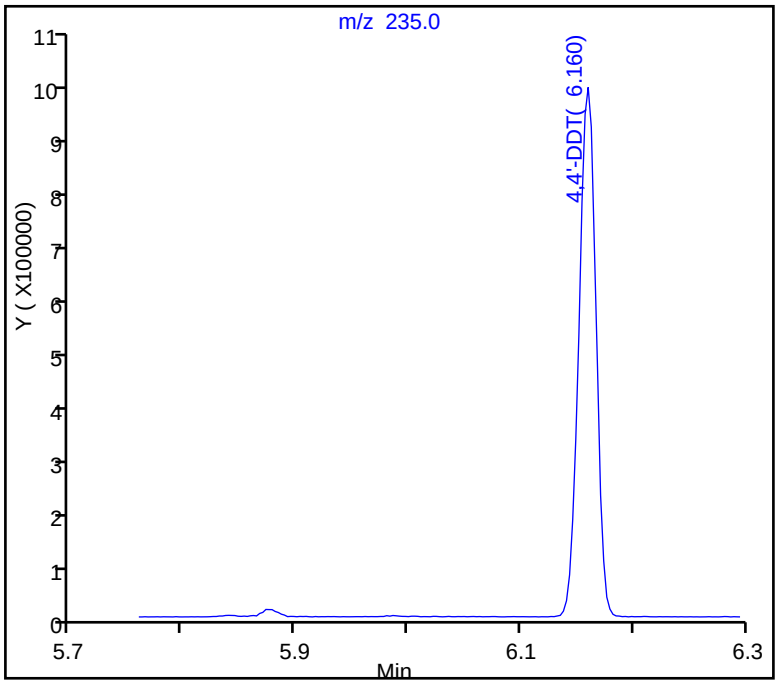


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D
Injection Date: 17-Apr-2017 14:16:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

21 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

21 4,4'-DDT, Area = 1037885
19 4,4'-DDE, Area = 840
18 4,4'-DDD, Area = 13713

%Breakdown: 1.38%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

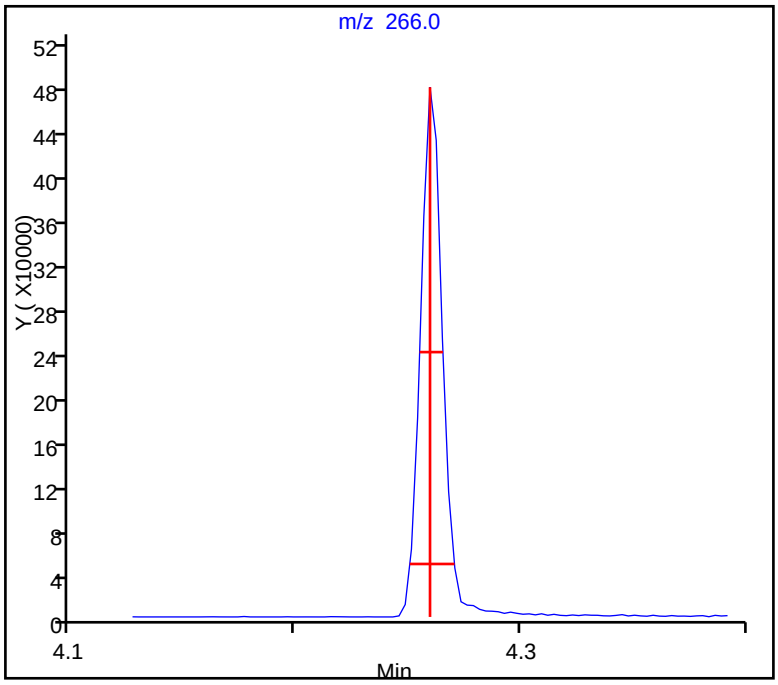
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D
Injection Date: 17-Apr-2017 14:16:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

12 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.009 (min.)

Tailing Factor = 1.2, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

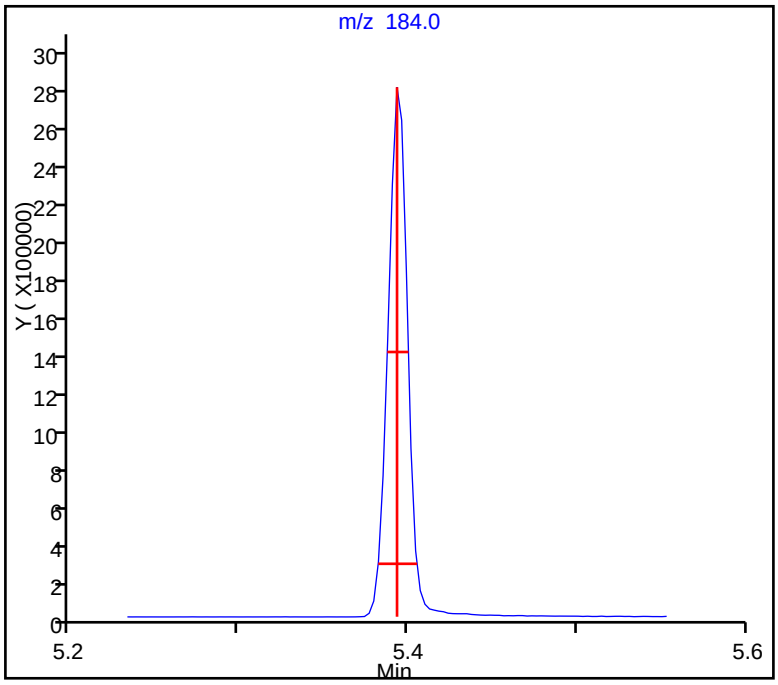
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6240.D
Injection Date: 17-Apr-2017 14:16:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

15 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 04-May-2017 13:52:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:44 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 04-May-2017 15:44:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 Pentachlorophenol_T	266	4.249	4.249	0.000	73	228167	NR	NR	
13 DFTPP									
15 Benzidine_T	184	5.366	5.366	0.000	95	1714107	NR	NR	
18 4,4'-DDD	235	5.840	5.840	0.000	76	11719	NR	NR	
19 4,4'-DDE	246		6.121				ND	ND	
21 4,4'-DDT	235	6.121	6.121	0.000	95	832800	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
ND - Not Detected or Marked ND

Reagents:

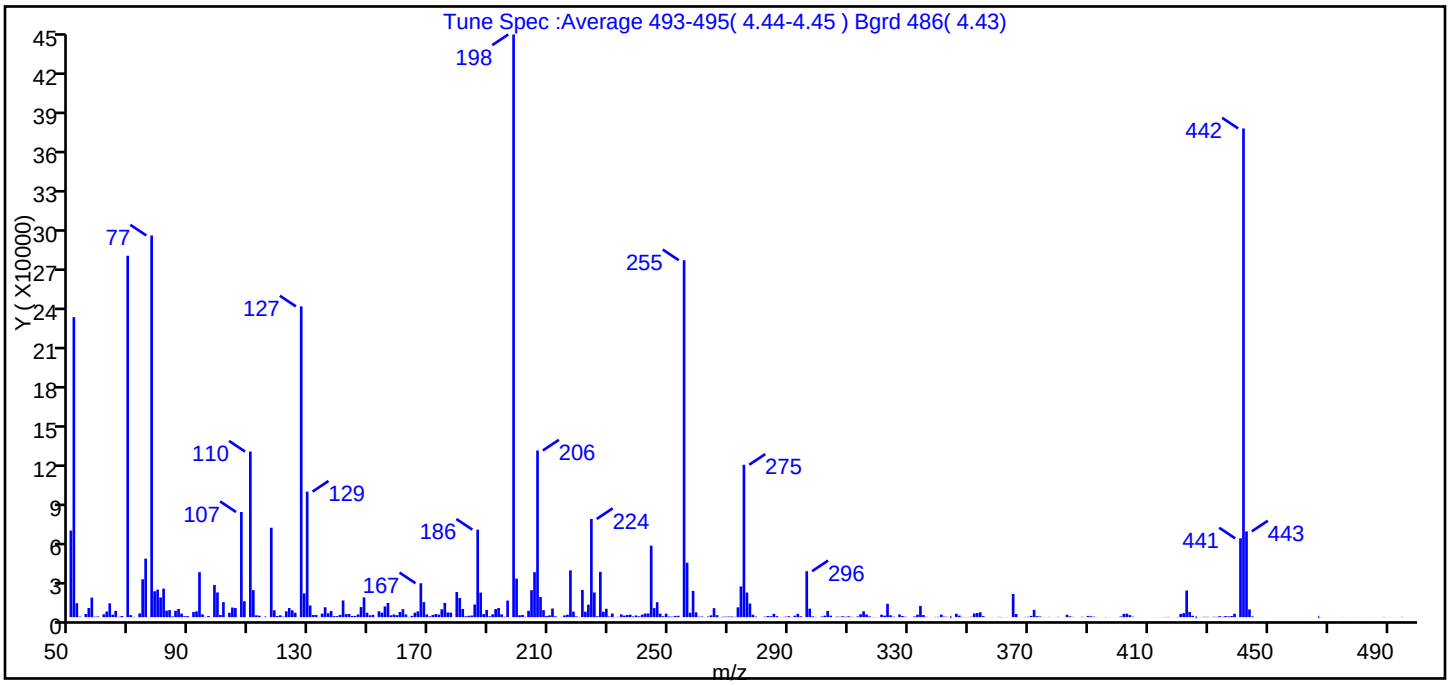
MS-DFTPP_00044 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D
Injection Date: 04-May-2017 13:52:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

13 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	51.5
68	<2% of mass 69	0.0 (0.0)
69	Present	62.0
70	<2% of mass 69	0.3 (0.5)
127	40-60% of mass 198	53.3
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.6
275	10-30% of mass 198	26.2
365	>1% of mass 198	4.0
441	Present but less than mass 443	13.5 (91.8)
442	>40% of mass 198	83.9
443	17-23% of mass 442	14.7 (17.6)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 04-May-2017 13:52:30
Spectrum: Tune Spec :Average 493-495(4.44-4.45) Bgrd 486(4.43)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 394

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	65392	162.00	2026	265.00	6769	377.00	161
51.00	226560	163.00	181	266.00	1509	378.00	12
52.00	10534	164.00	990	267.00	141	379.00	67
53.00	397	165.00	3354	268.00	310	380.00	212
55.00	2352	166.00	4374	269.00	388	381.00	8
56.00	6874	167.00	25600	270.00	457	383.00	1851
57.00	14743	168.00	11355	271.00	466	384.00	594
58.00	339	169.00	2039	272.00	203	385.00	188
59.00	537	170.00	667	273.00	7423	386.00	10
61.00	2148	171.00	1676	274.00	23224	387.00	11
62.00	4202	172.00	2318	275.00	115104	388.00	261
63.00	10435	173.00	1948	276.00	18584	389.00	38
64.00	1868	174.00	5928	277.00	10268	390.00	937
65.00	4775	175.00	10758	278.00	1827	391.00	629
66.00	255	176.00	3492	279.00	412	392.00	318
67.00	874	177.00	3415	282.00	365	393.00	66
69.00	272960	179.00	19008	283.00	857	395.00	10
70.00	1462	180.00	14409	284.00	693	396.00	149
71.00	244	181.00	6216	285.00	2509	397.00	84
73.00	2825	182.00	651	286.00	776	398.00	7
74.00	28576	183.00	1014	287.00	96	400.00	28
75.00	44232	184.00	1245	288.00	117	401.00	492
77.00	288256	185.00	9558	289.00	339	402.00	2456
78.00	19536	186.00	66072	290.00	663	403.00	2637
79.00	20808	187.00	18528	291.00	136	404.00	1536
80.00	14849	188.00	2332	292.00	1059	405.00	324
81.00	21528	189.00	5453	293.00	2484	408.00	41
82.00	4896	190.00	634	294.00	635	409.00	22
83.00	5311	191.00	2115	296.00	34680	411.00	3
84.00	523	192.00	6129	297.00	6389	412.00	35
85.00	4847	193.00	6937	298.00	629	413.00	72
86.00	6200	194.00	2119	299.00	158	414.00	67
87.00	2668	195.00	266	301.00	428	415.00	120

Report Date: 05-May-2017 12:04:45 Chrom Revision: 2.2 18-Apr-2017 07:43:58
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 04-May-2017 13:52:30
Spectrum: Tune Spec :Average 493-495(4.44-4.45) Bgrd 486(4.43)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 394

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	690	196.00	12508	302.00	1103	416.00	143
89.00	812	198.00	440064	303.00	4674	417.00	177
91.00	3929	199.00	29080	304.00	1085	420.00	140
92.00	4343	200.00	1412	306.00	382	421.00	2428
93.00	33960	201.00	1655	307.00	298	422.00	3035
94.00	2087	202.00	247	308.00	648	423.00	20080
95.00	244	203.00	4832	309.00	304	424.00	3854
96.00	811	204.00	20336	310.00	650	425.00	1041
98.00	24312	205.00	33944	311.00	260	426.00	1
99.00	18648	206.00	125848	312.00	48	427.00	60
100.00	1624	207.00	15260	313.00	493	428.00	138
101.00	11312	208.00	5279	314.00	2178	429.00	257
103.00	3292	209.00	931	315.00	4392	430.00	251
104.00	7265	210.00	1327	316.00	1972	431.00	66
105.00	6863	211.00	6522	317.00	604	432.00	268
107.00	79392	212.00	620	318.00	137	433.00	213
108.00	12002	214.00	184	319.00	131	434.00	752
110.00	125056	215.00	1323	320.00	71	435.00	308
111.00	20384	216.00	1849	321.00	1825	436.00	837
112.00	1378	217.00	35328	322.00	1146	437.00	562
113.00	1065	218.00	4187	323.00	10121	438.00	885
114.00	12	219.00	563	324.00	1420	439.00	2551
115.00	414	220.00	141	325.00	347	441.00	59496
117.00	67528	221.00	20528	326.00	96	442.00	369088
118.00	5190	222.00	4159	327.00	2053	443.00	64776
119.00	838	223.00	9401	328.00	835	444.00	5825
120.00	1419	224.00	74136	329.00	337	445.00	557
121.00	373	225.00	18632	331.00	12	447.00	67
122.00	4421	226.00	660	332.00	537	448.00	39
123.00	6871	227.00	34200	333.00	1875	450.00	8
124.00	5166	228.00	4079	334.00	8495	451.00	6
125.00	3351	229.00	6286	335.00	1566	454.00	12
127.00	234688	230.00	525	336.00	264	456.00	9
128.00	17960	231.00	2746	339.00	178	457.00	21

Report Date: 05-May-2017 12:04:45 Chrom Revision: 2.2 18-Apr-2017 07:43:58
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 04-May-2017 13:52:30
Spectrum: Tune Spec :Average 493-495(4.44-4.45) Bgrd 486(4.43)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 394

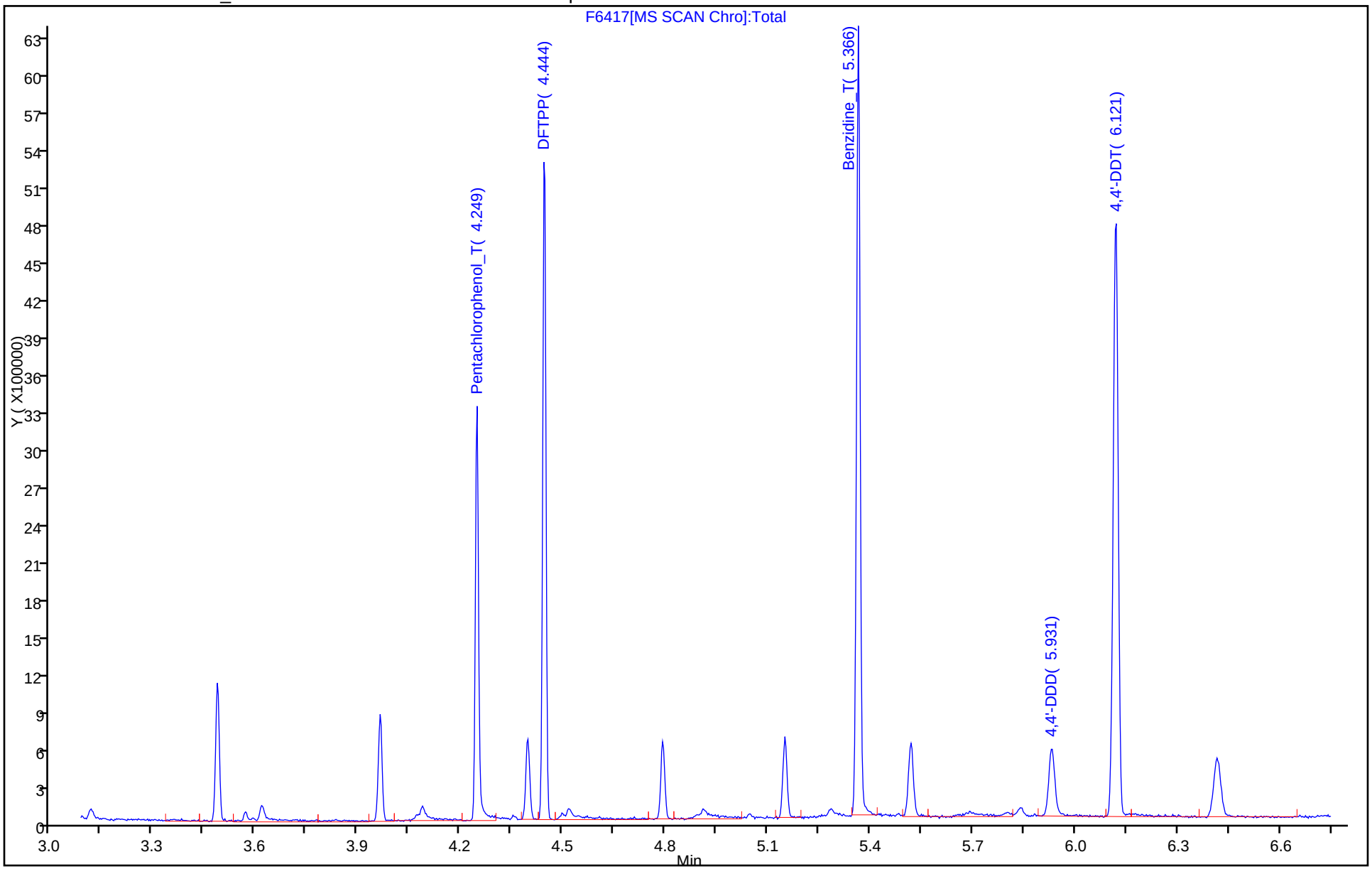
m/z	Y	m/z	Y	m/z	Y	m/z	Y
129.00	94792	232.00	105	340.00	224	458.00	49
130.00	8788	233.00	236	341.00	1891	459.00	2
131.00	1587	234.00	2106	342.00	367	462.00	2
132.00	1608	235.00	1136	343.00	257	463.00	49
133.00	144	236.00	1596	344.00	1	464.00	9
134.00	2682	237.00	1865	346.00	2581	465.00	3
135.00	7500	238.00	529	347.00	1157	466.00	9
136.00	2932	239.00	1276	348.00	184	467.00	1
137.00	4662	240.00	595	349.00	97	468.00	78
138.00	777	241.00	1887	350.00	64	471.00	38
139.00	783	242.00	2752	351.00	319	472.00	28
140.00	1724	243.00	2743	352.00	2769	475.00	76
141.00	12611	244.00	54008	353.00	3053	476.00	41
142.00	2290	245.00	6810	354.00	3695	477.00	25
143.00	2371	246.00	11287	355.00	740	479.00	5
144.00	846	247.00	2647	357.00	39	480.00	56
145.00	941	248.00	684	358.00	129	481.00	31
146.00	2029	249.00	2637	360.00	181	482.00	4
147.00	7611	250.00	531	361.00	157	484.00	15
148.00	14933	251.00	381	362.00	44	485.00	89
149.00	3298	252.00	886	363.00	104	486.00	5
150.00	1387	253.00	1023	365.00	17536	487.00	3
151.00	1756	255.00	269568	366.00	2389	489.00	174
153.00	4445	256.00	41104	367.00	71	490.00	24
154.00	3418	257.00	3380	369.00	191	491.00	49
155.00	8088	258.00	19840	370.00	252	493.00	62
156.00	10700	259.00	3604	371.00	944	495.00	176
157.00	1413	260.00	389	372.00	5527	497.00	75
158.00	2012	261.00	459	373.00	767	498.00	24
159.00	1503	262.00	64	374.00	505	500.00	44
160.00	3930	263.00	419	375.00	59		
161.00	6035	264.00	1355	376.00	51		

Report Date: 05-May-2017 12:04:45 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D

Injection Date:	04-May-2017 13:52:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	DFTPP			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

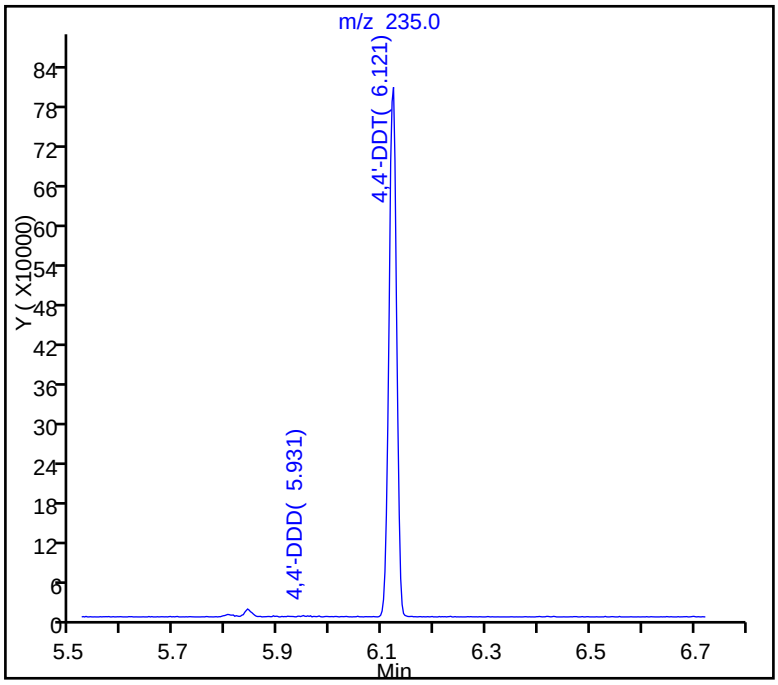


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D
Injection Date: 04-May-2017 13:52:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

21 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

21 4,4'-DDT, Area = 832800
19 4,4'-DDE, Area = 0
18 4,4'-DDD, Area = 11719

%Breakdown: 1.39%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

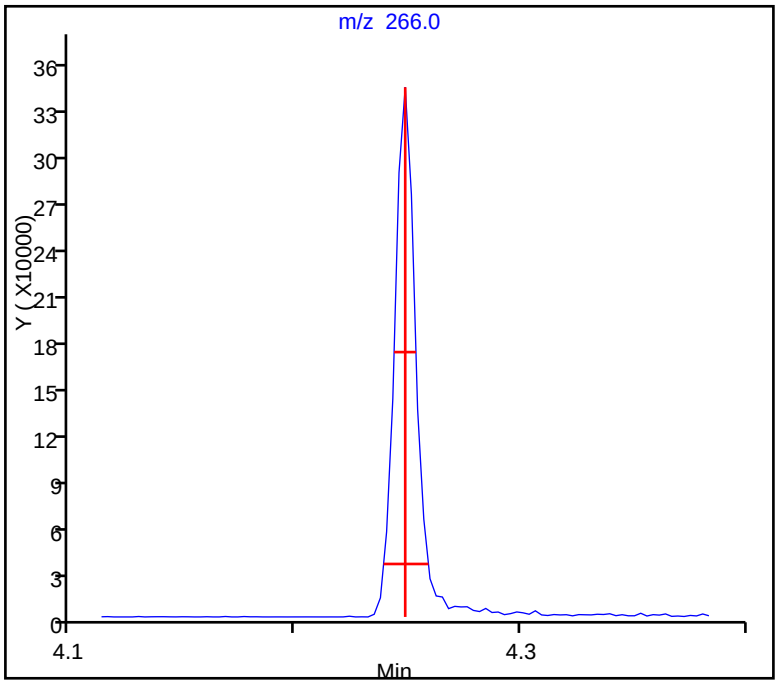
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D
Injection Date: 04-May-2017 13:52:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

12 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

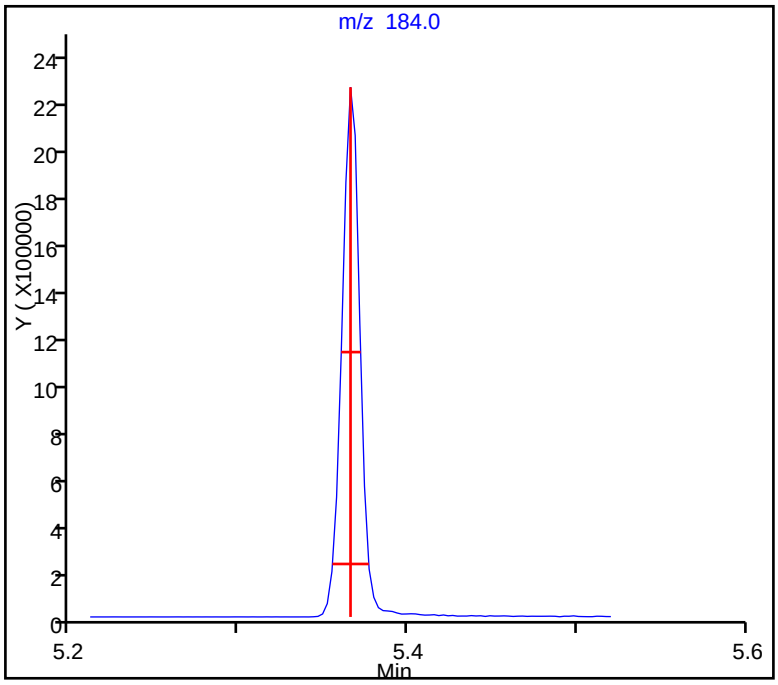
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6417.D
Injection Date: 04-May-2017 13:52:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

15 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 = 1.0, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-370964/1-A

Matrix: Water | Lab File ID: F6419.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/26/2017 09:30

Sample wt/vol: 250(mL) | Date Analyzed: 05/04/2017 16:06

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.: 372218 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
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
205-99-2	Benzo[b]fluoranthene	0.012	U	0.10	0.012	0.0031
207-08-9	Benzo[k]fluoranthene	0.012	U	0.10	0.012	0.0063
191-24-2	Benzo[g,h,i]perylene	0.012	U	0.10	0.012	0.0062
50-32-8	Benzo[a]pyrene	0.012	U	0.10	0.012	0.0069
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 (Surr)	74		53-106
1718-51-0	Terphenyl-d14 (Surr)	79		58-132
4165-60-0	Nitrobenzene-d5 (Surr)	89		55-111

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6419.D
Lims ID: MB 280-370964/1-A
Client ID:
Sample Type: MB
Inject. Date: 04-May-2017 16:06:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-370964_1-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:46 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 05-May-2017 10:58:05

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	6.038	6.047	-0.009	86	18257	600.0	600.0	
* 2 Phenanthrene-d10	188	7.307	7.313	-0.006	100	36243	600.0	600.0	
* 3 Chrysene-d12	240	11.377	11.386	-0.009	93	33092	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.014	4.015	-0.001	99	2692	125.0	111.6	
$ 5 2-Fluorobiphenyl	172	5.444	5.444	0.000	100	4186	125.0	92.4	
$ 6 Terphenyl-d14	244	9.142	9.149	-0.007	96	3824	125.0	98.6	
11 Morpholine	87	2.013	1.916	0.097	1	36		NC	
9 1,4-Dioxane	88		1.929					ND	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	35	54		3.59	
14 Naphthalene	128		4.603					ND	
16 2-Methylnaphthalene	142		5.160					ND	
17 1-Methylnaphthalene	142		5.248					ND	
20 Dimethyl phthalate	163		5.762					ND	
22 Acenaphthylene	152		5.926					ND	
23 Acenaphthene	153		6.064					ND	
32 Dibenzofuran	168		6.214					ND	
24 Diethyl phthalate	149	6.335	6.335	0.000	99	603		12.6	
25 Fluorene	166		6.502					ND	
26 N-Nitrosodiphenylamine	169		6.578					ND	
27 Phenanthrene	178		7.333					ND	
28 Anthracene	178		7.378					ND	
29 Di-n-butyl phthalate	149	7.743	7.749	-0.006	99	1474		18.0	
30 Fluoranthene	202		8.641					ND	
31 Pyrene	202		8.980					ND	
33 Butyl benzyl phthalate	149		9.989					ND	
34 Bis(2-ethylhexyl) phthalat	149	11.268	11.278	-0.010	99	2081		43.5	
35 Benzo[a]anthracene	228		11.359					ND	
36 Chrysene	228		11.458					ND	
37 Di-n-octyl phthalate	149		13.218					ND	
38 Benzo[b]fluoranthene	252		14.499					ND	
39 Benzo[k]fluoranthene	252		14.587					ND	
40 Benzo[a]pyrene	252		15.580					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276		18.650					ND	
42 Dibenz(a,h)anthracene	278		18.690					ND	
43 Benzo[g,h,i]perylene	276		19.079					ND	
7 Pentachlorophenol	266		0.000					ND	
8 Benzidine	184		0.000					ND	
12 Pentachlorophenol_T	266		4.249					ND	
15 Benzidine_T	184		5.366					ND	
18 4,4'-DDD	235		5.840					ND	
19 4,4'-DDE	246		6.121					ND	
21 4,4'-DDT	235		6.121					ND	
S 52 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

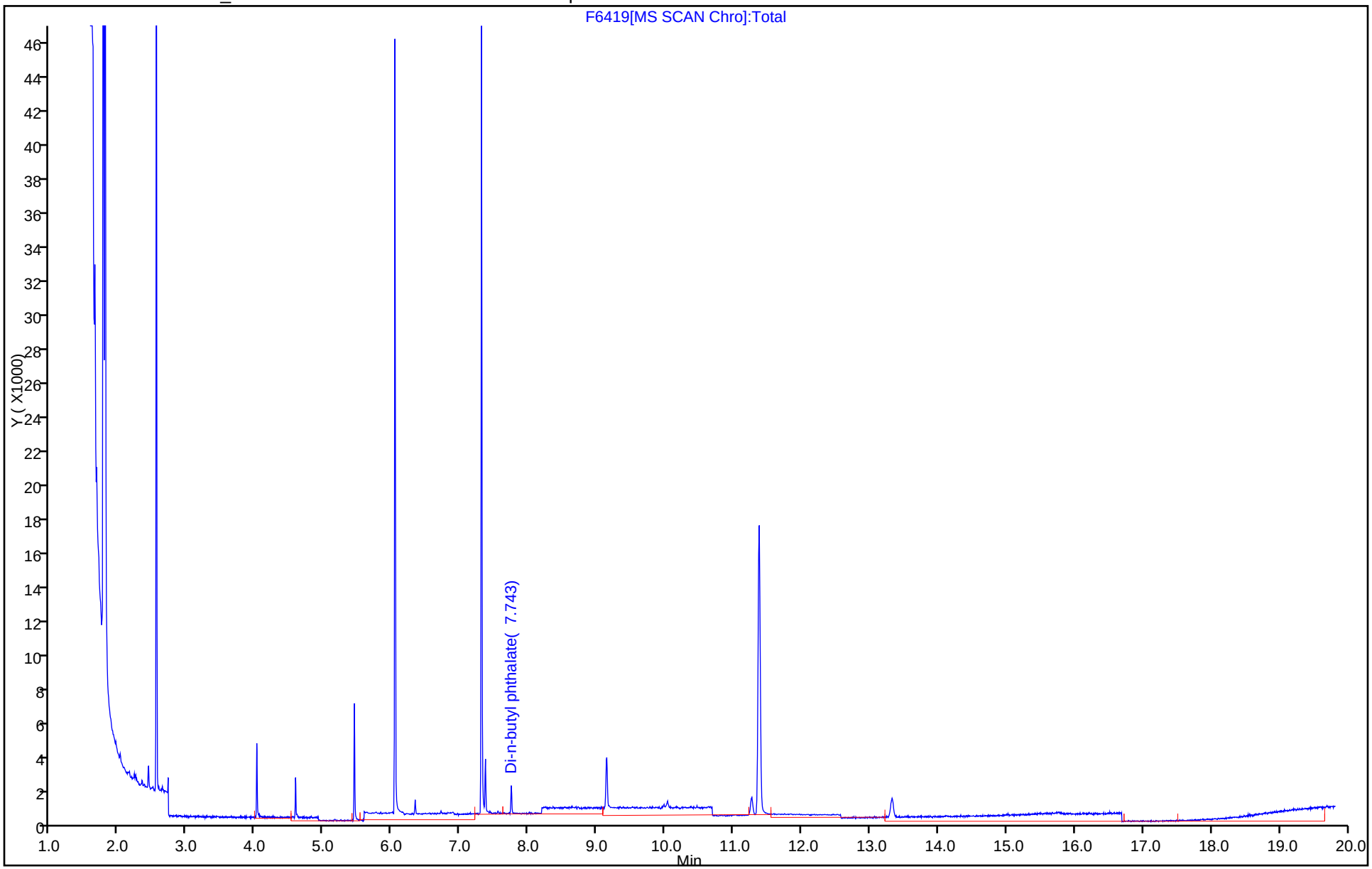
MS-SIM IS_00029 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 05-May-2017 12:04:48 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6419.D

Injection Date:	04-May-2017 16:06:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	MB 280-370964/1-A			Worklist Smp#:	3
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\20170504-58309.b\F6419.D				
Lims ID:	MB 280-370964/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-May-2017 16:06:30	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	mb280-370964_1-a				
Operator ID:	VASQUEZK	Instrument ID:	SMS_F		
Method:	\\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m				
Limit Group:	MSSV - 8270C-SIM				
Last Update:	05-May-2017 12:04:46	Calib Date:	17-Apr-2017 18:05:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D				
Column 1 :			Det: MS SCAN		
Process Host:	XAWRK020				

First Level Reviewer: vasquezk Date: 05-May-2017 10:58:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	125.0	111.6	89.26
$ 5 2-Fluorobiphenyl	125.0	92.4	73.93
$ 6 Terphenyl-d14	125.0	98.6	78.89

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-370964/2-A

Matrix: Water | Lab File ID: F6420.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/26/2017 09:30

Sample wt/vol: 250(mL) | Date Analyzed: 05/04/2017 16:31

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.: 372218 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
83-32-9	Acenaphthene	0.976		0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.861		0.10	0.040	0.0051
120-12-7	Anthracene	0.978		0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.960		0.10	0.012	0.0042
205-99-2	Benzo[b]fluoranthene	0.990		0.10	0.012	0.0031
207-08-9	Benzo[k]fluoranthene	0.962		0.10	0.012	0.0063
191-24-2	Benzo[g,h,i]perylene	1.01		0.10	0.012	0.0062
50-32-8	Benzo[a]pyrene	0.908		0.10	0.012	0.0069
218-01-9	Chrysene	1.09	Q	0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.956		0.10	0.012	0.0041
206-44-0	Fluoranthene	1.04		0.10	0.012	0.0048
86-73-7	Fluorene	0.968		0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.961	M	0.10	0.040	0.0045
91-20-3	Naphthalene	0.930		0.10	0.012	0.0080
85-01-8	Phenanthrene	1.02		0.10	0.020	0.0093
129-00-0	Pyrene	1.03		0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	84		53-106
1718-51-0	Terphenyl-d14 (Surr)	84		58-132
4165-60-0	Nitrobenzene-d5 (Surr)	100		55-111

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6420.D
Lims ID: LCS 280-370964/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2017 16:31:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-370964_2-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 07-May-2017 17:44:19 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: vasquezk Date: 07-May-2017 17:44:19

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	6.038	6.038	0.000	87	19249	600.0	600.0	
* 2 Phenanthrene-d10	188	7.307	7.308	-0.001	100	36925	600.0	600.0	
* 3 Chrysene-d12	240	11.376	11.371	0.005	95	32719	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.014	4.011	0.003	99	3193	125.0	125.5	
$ 5 2-Fluorobiphenyl	172	5.444	5.444	0.000	100	5044	125.0	105.6	
$ 6 Terphenyl-d14	244	9.142	9.137	0.005	96	4142	125.0	104.8	
9 1,4-Dioxane	88	1.929	1.929	0.000	0	12902	NC	NC	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	83	2744	225.0	173.2	
14 Naphthalene	128	4.602	4.603	-0.001	100	13642	225.0	232.6	
16 2-Methylnaphthalene	142	5.156	5.156	0.000	98	8546	225.0	225.3	
17 1-Methylnaphthalene	142	5.243	5.243	0.000	98	8416	225.0	223.6	
20 Dimethyl phthalate	163	5.761	5.753	0.008	100	13685	225.0	268.0	
22 Acenaphthylene	152	5.925	5.926	-0.001	100	13324	225.0	215.2	
23 Acenaphthene	153	6.064	6.064	0.000	100	9497	225.0	244.0	
32 Dibenzofuran	168	6.206	6.206	0.000	86	15238	225.0	250.4	
24 Diethyl phthalate	149	6.335	6.335	0.000	100	14487	225.0	287.0	
25 Fluorene	166	6.502	6.494	0.008	93	11720	225.0	242.1	
26 N-Nitrosodiphenylamine	169	6.570	6.570	0.000	96	8161	225.0	267.3	
27 Phenanthrene	178	7.326	7.327	-0.001	100	18649	225.0	254.9	
28 Anthracene	178	7.372	7.373	-0.001	100	17762	225.0	244.6	
29 Di-n-butyl phthalate	149	7.743	7.744	-0.001	100	22428	225.0	269.0	
30 Fluoranthene	202	8.634	8.629	0.005	100	21326	225.0	260.5	
31 Pyrene	202	8.973	8.974	-0.001	100	21622	225.0	258.4	
33 Butyl benzyl phthalate	149	9.976	9.970	0.006	94	8085	225.0	231.3	
34 Bis(2-ethylhexyl) phthalat	149	11.259	11.254	0.005	99	13047	225.0	267.9	
35 Benzo[a]anthracene	228	11.340	11.344	-0.004	100	18723	225.0	240.1	
36 Chrysene	228	11.439	11.434	0.005	100	19794	225.0	272.3	
37 Di-n-octyl phthalate	149	13.196	13.195	0.001	100	14660	225.0	186.1	
38 Benzo[b]fluoranthene	252	14.486	14.472	0.014	100	17411	225.0	247.5	
39 Benzo[k]fluoranthene	252	14.569	14.564	0.005	100	17180	225.0	240.6	
40 Benzo[a]pyrene	252	15.557	15.552	0.005	100	15647	225.0	227.0	
41 Indeno[1,2,3-cd]pyrene	276	18.641	18.641	0.000	79	16902	225.0	240.3	M

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
42 Dibenz(a,h)anthracene	278	18.681	18.676	0.005	82	17029	225.0	239.0	
43 Benzo[g,h,i]perylene	276	19.070	19.069	0.001	100	19031	225.0	251.3	
7 Pentachlorophenol	266		0.000				ND	ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated

Reagents:

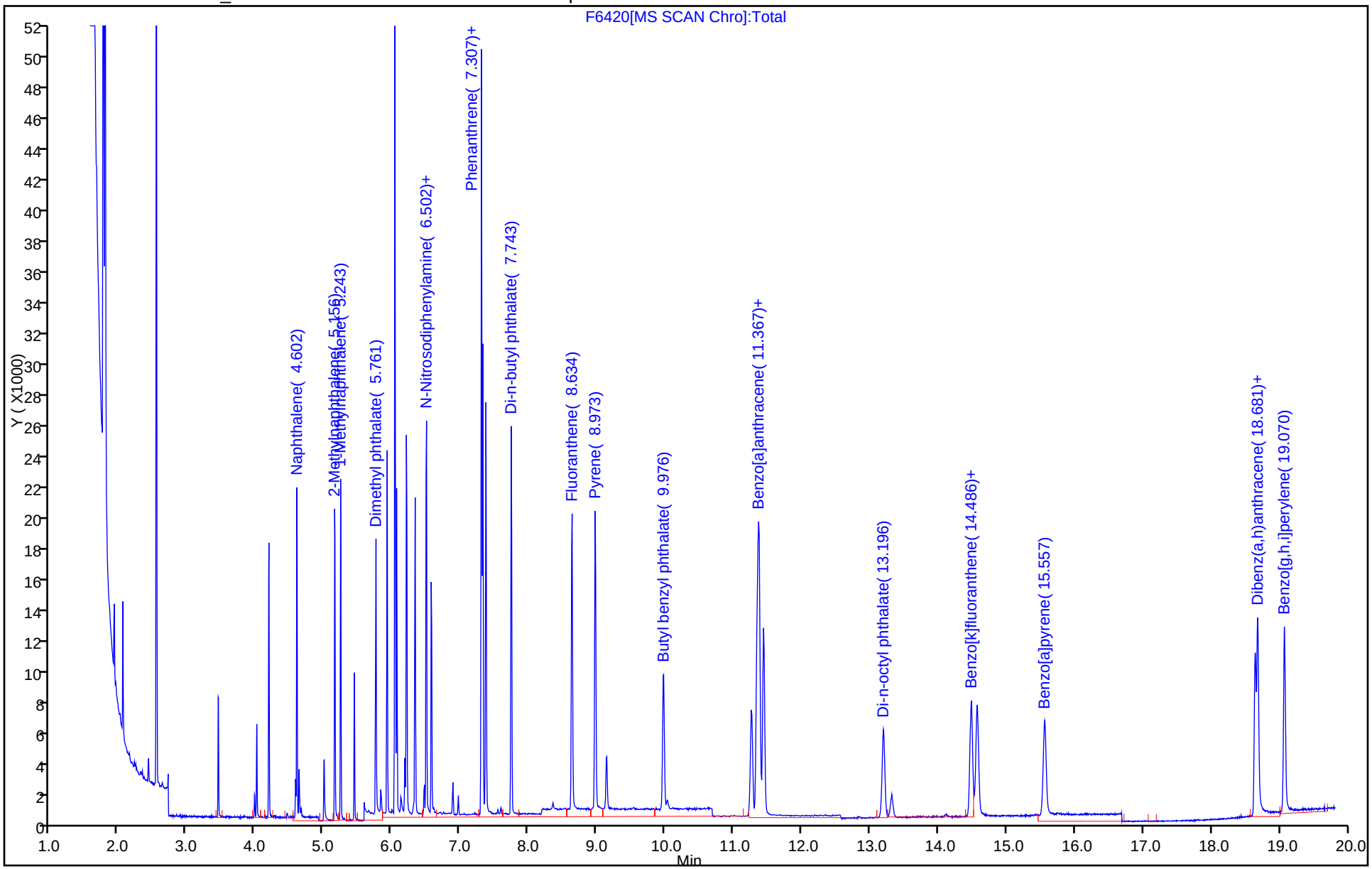
MS-SIM IS_00029 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 07-May-2017 17:44:19 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6420.D

Injection Date:	04-May-2017 16:31:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	LCS 280-370964/2-A			Worklist Smp#:	4
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\20170504-58309.b\F6420.D
Lims ID: LCS 280-370964/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2017 16:31:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-370964_2-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 07-May-2017 17:44:19 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: vasquezk Date: 07-May-2017 17:44:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	125.0	125.5	100.42
$ 5 2-Fluorobiphenyl	125.0	105.6	84.49
$ 6 Terphenyl-d14	125.0	104.8	83.87

Manual Integration/User Assign Peak Report

TestAmerica Denver

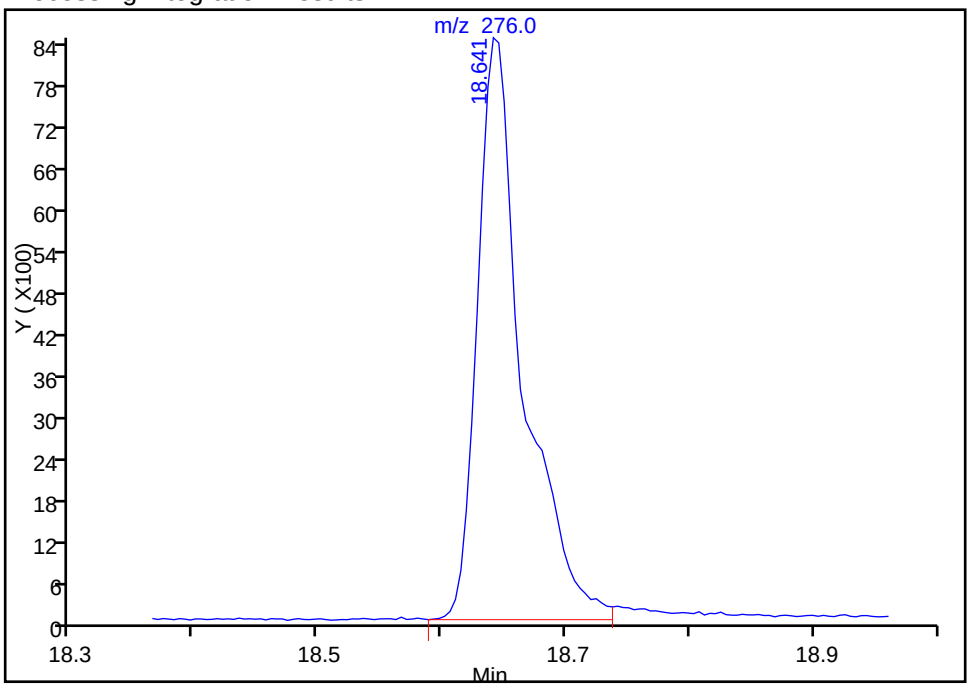
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6420.D				
Injection Date:	04-May-2017 16:31:30	Instrument ID:	SMS_F		
Lims ID:	LCS 280-370964/2-A				
Client ID:					
Operator ID:	VASQUEZK	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

41 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

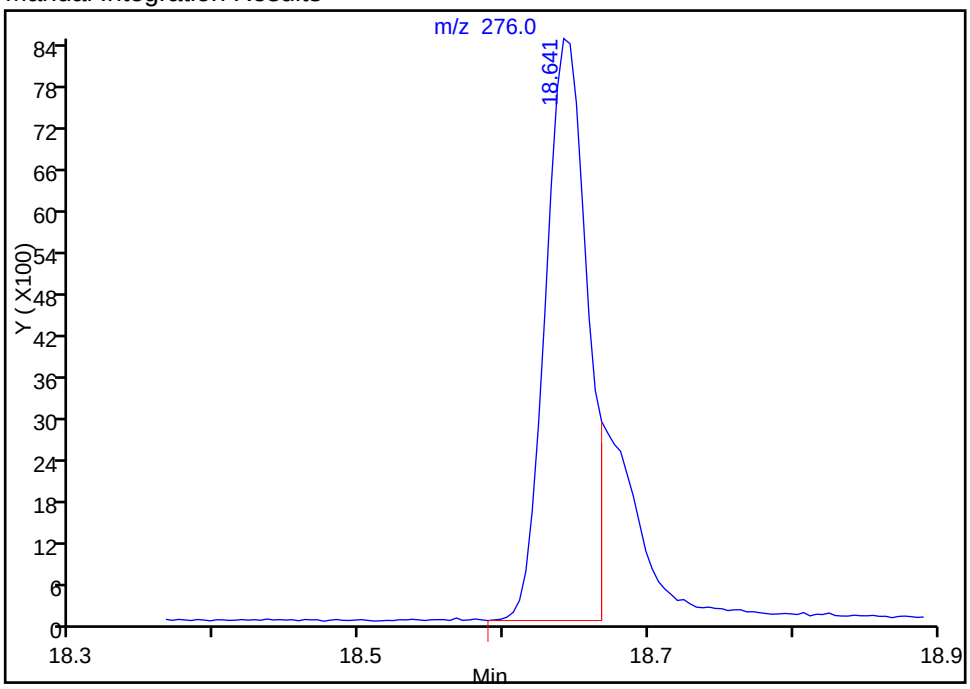
Processing Integration Results

RT: 18.64
Area: 21441
Amount: 304.7919
Amount Units: ng/ml



Manual Integration Results

RT: 18.64
Area: 16902
Amount: 240.2683
Amount Units: ng/ml



Reviewer: vasquezk, 07-May-2017 17:44:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-370964/3-A

Matrix: Water | Lab File ID: F6421.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/26/2017 09:30

Sample wt/vol: 250(mL) | Date Analyzed: 05/04/2017 16:57

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.: 372218 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
83-32-9	Acenaphthene	0.974		0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.900		0.10	0.040	0.0051
120-12-7	Anthracene	1.01		0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.987		0.10	0.012	0.0042
205-99-2	Benzo[b]fluoranthene	1.04		0.10	0.012	0.0031
207-08-9	Benzo[k]fluoranthene	1.02		0.10	0.012	0.0063
191-24-2	Benzo[g,h,i]perylene	1.04		0.10	0.012	0.0062
50-32-8	Benzo[a]pyrene	0.954		0.10	0.012	0.0069
218-01-9	Chrysene	1.09	Q	0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.995		0.10	0.012	0.0041
206-44-0	Fluoranthene	1.06		0.10	0.012	0.0048
86-73-7	Fluorene	1.01		0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	1.04	M	0.10	0.040	0.0045
91-20-3	Naphthalene	0.941		0.10	0.012	0.0080
85-01-8	Phenanthrene	1.04		0.10	0.020	0.0093
129-00-0	Pyrene	1.05		0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	86		53-106
1718-51-0	Terphenyl-d14 (Surr)	86		58-132
4165-60-0	Nitrobenzene-d5 (Surr)	107		55-111

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6421.D
Lims ID: LCSD 280-370964/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 04-May-2017 16:57:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcsd280-370964_3-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:46 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 05-May-2017 11:17:12

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	6.038	6.047	-0.009	85	18152	600.0	600.0	
* 2 Phenanthrene-d10	188	7.307	7.313	-0.006	100	35631	600.0	600.0	
* 3 Chrysene-d12	240	11.377	11.386	-0.010	95	32419	600.0	600.0	
$ 4 Nitrobenzene-d5	82	4.014	4.015	-0.001	99	3218	125.0	134.1	
$ 5 2-Fluorobiphenyl	172	5.444	5.444	0.000	100	4815	125.0	106.9	
$ 6 Terphenyl-d14	244	9.142	9.149	-0.007	97	4085	125.0	107.2	
9 1,4-Dioxane	88	1.929	1.929	0.000	0	60789	NC	NC	
10 N-Nitrosodimethylamine	74	2.052	2.052	0.000	70	2853	225.0	191.0	
14 Naphthalene	128	4.603	4.603	0.000	100	13008	225.0	235.2	
16 2-Methylnaphthalene	142	5.156	5.160	-0.004	98	8369	225.0	234.0	
17 1-Methylnaphthalene	142	5.243	5.248	-0.005	98	8004	225.0	225.6	
20 Dimethyl phthalate	163	5.761	5.762	-0.001	100	13151	225.0	273.1	
22 Acenaphthylene	152	5.926	5.926	0.000	100	13146	225.0	225.1	
23 Acenaphthene	153	6.064	6.064	0.000	99	8937	225.0	243.5	
32 Dibenzofuran	168	6.206	6.214	-0.008	86	14678	225.0	255.8	
24 Diethyl phthalate	149	6.335	6.335	0.000	100	13984	225.0	293.8	
25 Fluorene	166	6.502	6.502	0.000	93	11492	225.0	251.7	
26 N-Nitrosodiphenylamine	169	6.578	6.578	0.000	95	8231	225.0	279.4	
27 Phenanthrene	178	7.326	7.333	-0.007	100	18282	225.0	259.0	
28 Anthracene	178	7.372	7.378	-0.006	100	17631	225.0	251.6	
29 Di-n-butyl phthalate	149	7.743	7.749	-0.006	100	22334	225.0	277.6	
30 Fluoranthene	202	8.635	8.641	-0.006	100	20950	225.0	265.2	
31 Pyrene	202	8.973	8.980	-0.007	100	21147	225.0	261.9	
33 Butyl benzyl phthalate	149	9.976	9.989	-0.013	95	8270	225.0	245.2	
34 Bis(2-ethylhexyl) phthalat	149	11.268	11.278	-0.010	100	12070	225.0	256.8	
35 Benzo[a]anthracene	228	11.349	11.359	-0.010	95	19060	225.0	246.7	
36 Chrysene	228	11.440	11.458	-0.018	100	19612	225.0	272.3	
37 Di-n-octyl phthalate	149	13.200	13.218	-0.018	100	15924	225.0	204.0	
38 Benzo[b]fluoranthene	252	14.486	14.499	-0.013	100	18072	225.0	259.3	
39 Benzo[k]fluoranthene	252	14.569	14.587	-0.018	100	17973	225.0	254.0	
40 Benzo[a]pyrene	252	15.558	15.580	-0.022	100	16278	225.0	238.4	
41 Indeno[1,2,3-cd]pyrene	276	18.646	18.650	-0.004	79	18135	225.0	260.2	M

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
42 Dibenz(a,h)anthracene	278	18.681	18.690	-0.009	82	17565	225.0	248.8	
43 Benzo[g,h,i]perylene	276	19.070	19.079	-0.009	99	19498	225.0	259.9	
7 Pentachlorophenol	266		0.000				ND	ND	

QC Flag Legend

Processing Flags
- NC - Not Calibrated
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated

Reagents:

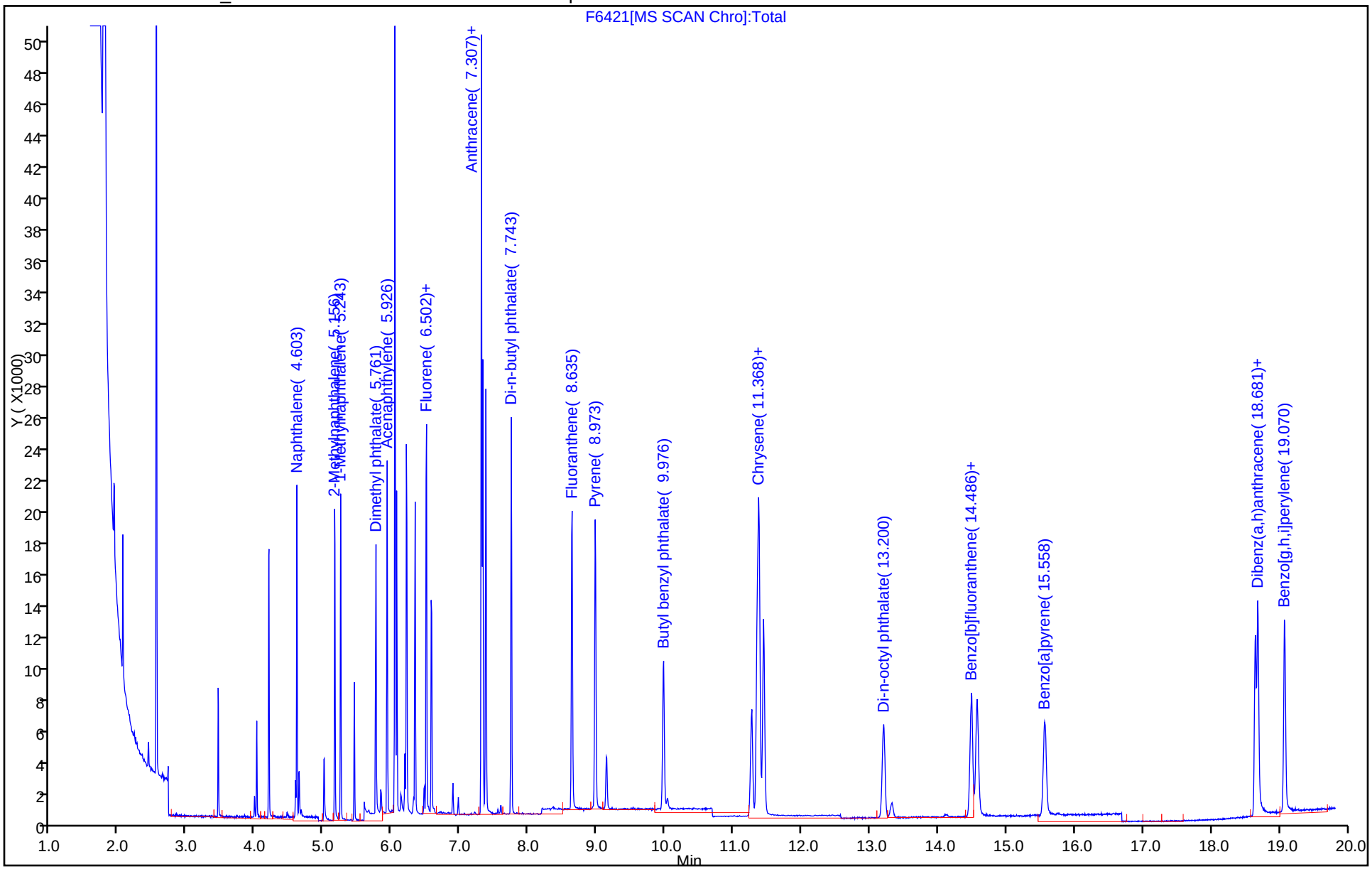
MS-SIM IS_00029 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 05-May-2017 12:04:50 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6421.D

Injection Date:	04-May-2017 16:57:30	Instrument ID:	SMS_F	Operator ID:	VASQUEZK
Lims ID:	LCSD 280-370964/3-A			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6421.D
Lims ID: LCSD 280-370964/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 04-May-2017 16:57:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcsd280-370964_3-a
Operator ID: VASQUEZK Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 05-May-2017 12:04:46 Calib Date: 17-Apr-2017 18:05:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20170413-57515.b\F6248.D

Column 1 : Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: vasquezk Date: 05-May-2017 11:17:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	125.0	134.1	107.32
$ 5 2-Fluorobiphenyl	125.0	106.9	85.53
$ 6 Terphenyl-d14	125.0	107.2	85.72

Manual Integration/User Assign Peak Report

TestAmerica Denver

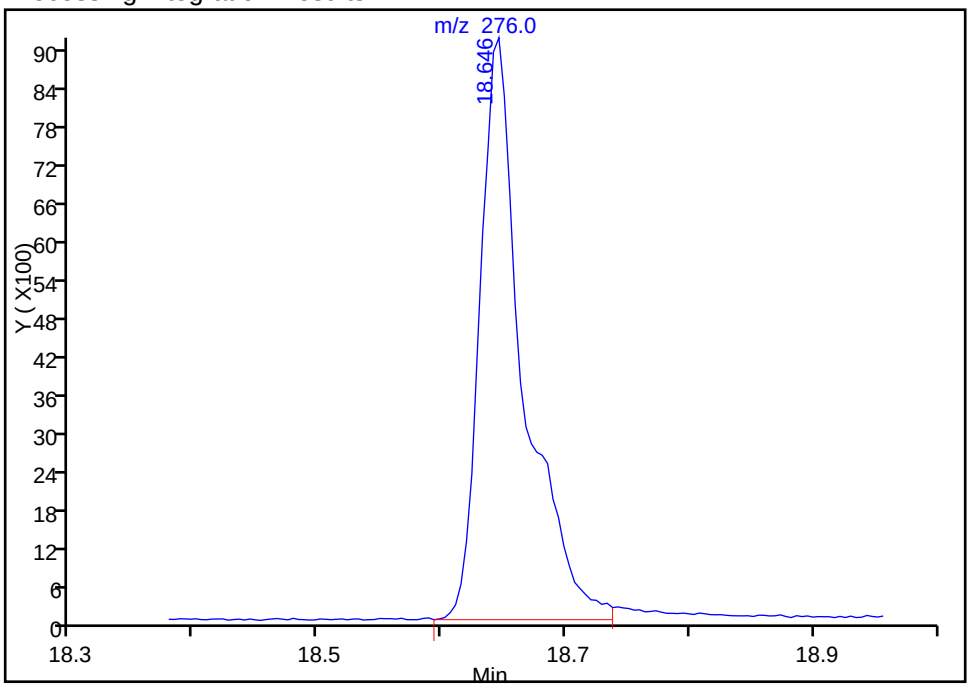
Data File: \\ChromNA\Denver\ChromData\SMS_F\20170504-58309.b\F6421.D
Injection Date: 04-May-2017 16:57:30 Instrument ID: SMS_F
Lims ID: LCSD 280-370964/3-A
Client ID:
Operator ID: VASQUEZK ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

41 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

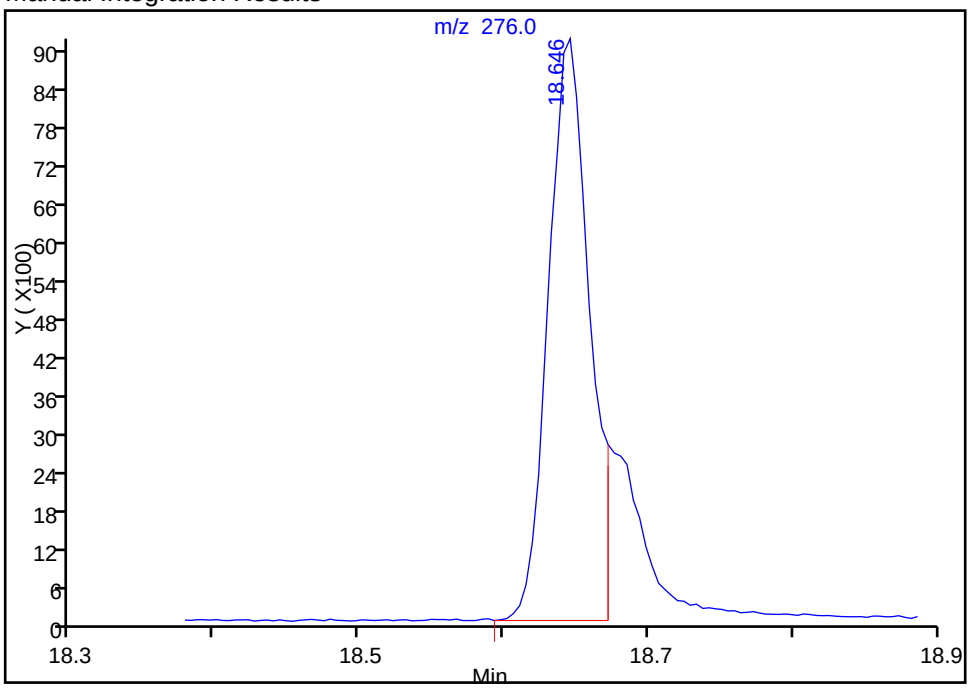
Processing Integration Results

RT: 18.65
Area: 22295
Amount: 319.8647
Amount Units: ng/ml



Manual Integration Results

RT: 18.65
Area: 18135
Amount: 260.1815
Amount Units: ng/ml



Reviewer: vasquezk, 05-May-2017 11:17:08
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: SMS_F Start Date: 04/17/2017 14:16

Analysis Batch Number: 369226 End Date: 04/17/2017 18:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-369226/1		04/17/2017 14:16	1	F6240.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-369226/2		04/17/2017 14:53	1	F6241.D	Rxi-5Sil MS 0.25(mm)
STD0020 280-369226/3 IC		04/17/2017 15:29	1	F6242.D	Rxi-5Sil MS 0.25(mm)
STD0100 280-369226/4 IC		04/17/2017 15:55	1	F6243.D	Rxi-5Sil MS 0.25(mm)
STD0300 280-369226/5 IC		04/17/2017 16:21	1	F6244.D	Rxi-5Sil MS 0.25(mm)
STD1200 280-369226/6 IC		04/17/2017 16:47	1	F6245.D	Rxi-5Sil MS 0.25(mm)
STD2500 280-369226/7 IC		04/17/2017 17:13	1	F6246.D	Rxi-5Sil MS 0.25(mm)
STD5000 280-369226/8 IC		04/17/2017 17:39	1	F6247.D	Rxi-5Sil MS 0.25(mm)
STD10000 280-369226/9 IC		04/17/2017 18:05	1	F6248.D	Rxi-5Sil MS 0.25(mm)
ICV 280-369226/10		04/17/2017 18:31	1	F6249.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: SMS_F Start Date: 05/04/2017 13:52

Analysis Batch Number: 372218 End Date: 05/04/2017 23:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-372218/1		05/04/2017 13:52	1	F6417.D	Rxi-5Sil MS 0.25(mm)
CCV 280-372218/2		05/04/2017 15:40	1	F6418.D	Rxi-5Sil MS 0.25(mm)
MB 280-370964/1-A		05/04/2017 16:06	1	F6419.D	Rxi-5Sil MS 0.25(mm)
LCS 280-370964/2-A		05/04/2017 16:31	1	F6420.D	Rxi-5Sil MS 0.25(mm)
LCSD 280-370964/3-A		05/04/2017 16:57	1	F6421.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 17:23	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 17:48	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 18:14	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 18:40	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 19:05	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 19:31	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 19:57	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 20:22	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 20:48	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 21:14	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 21:39	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 22:05	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		05/04/2017 22:30	1		Rxi-5Sil MS 0.25(mm)
280-96291-5		05/04/2017 22:56	1	F6435.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-372218/20		05/04/2017 23:21	1	F6436.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 370964 Batch Start Date: 04/26/17 09:30 Batch Analyst: Isberg, Kyle

Batch Method: 3510C Batch End Date: 05/01/17 20:48

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	GrossWeight	TareWeight	InitialAmount	FinalAmount	8270 SIM Surr 00068
MB 280-370964/1		3510C, 8270D SIM		7 SU			250 mL	1 mL	0.25 mL
LCS 280-370964/2		3510C, 8270D SIM		7 SU			250 mL	1 mL	0.25 mL
LCSD 280-370964/3		3510C, 8270D SIM		7 SU			250 mL	1 mL	0.25 mL
280-96291-B-5	LL4mw-200-042417 -GW	3510C, 8270D SIM	T	7 SU	414.6 g	165.2 g	249.4 mL	1 mL	0.25 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	8270BO-SIMLCS 00020					
MB 280-370964/1		3510C, 8270D SIM							
LCS 280-370964/2		3510C, 8270D SIM		0.25 mL					
LCSD 280-370964/3		3510C, 8270D SIM		0.25 mL					
280-96291-B-5	LL4mw-200-042417 -GW	3510C, 8270D SIM	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 370964 Batch Start Date: 04/26/17 09:30 Batch Analyst: Isberg, Kyle

Batch Method: 3510C Batch End Date: 05/01/17 20:48

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007 H2O: S.Elga
Analyst ID - Concentration	BA(trainee)/CDC(supervisor)
Final Concentrator Volume	1 mL
Na2SO4 ID	0000155446_00011
NaCl ID	167532/167535
Oven, Bath or Block Temperature 1	A@84C
Pipette ID	O
Prep Solvent ID	MeCl2_Cycl_00333
Prep Solvent Name	MeCl2
Prep Solvent Volume Used	90 mL
Person's name who did the prep	KI(trainer)/RC(Trainee)
Analyst ID - Reagent Drop Witness	Reviewer:JDW
Analyst ID - Spike Analyst	KI
Analyst ID - Spike Witness Analyst	SEE BELOW
Sufficient volume for MS/MSD?	No
Uncorrected Temperature	84C Celsius

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.: 280-96291-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): UltraCarb5u ID: 4.6 (mm) GC Column (2): Luna-phenyl 4.6 (mm)

Client Sample ID	Lab Sample ID	12DNB1 #	12DNB2 #
LL3mw-237-042417-GW	280-96291-4		113
LL3mw-237-042417-GW	280-96291-4	94	
LL4mw-193-042417-GW	280-96291-6		104
LL4mw-193-042417-GW	280-96291-6	99	
	MB 280-371611/1-A		106
	MB 280-371611/1-A	105	
	LCS 280-371611/2-A		115
	LCS 280-371611/2-A	103	
LL4mw-193-042417-GW MS	280-96291-6 MS	101	
LL4mw-193-042417-GW MSD	280-96291-6 MSD	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.: 280-96291-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50417C17.D

Lab ID: LCS 280-371611/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.18	109	73-125	
1,3-Dinitrobenzene	2.00	2.30	115	78-120	
2,4,6-Trinitrotoluene	2.00	2.14	107	71-123	
2,4-Dinitrotoluene	2.00	2.20	110	78-120	
2,6-Dinitrotoluene	2.00	2.15	108	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.96	98	79-120	
2-Nitrotoluene	2.00	2.26	113	70-127	
3-Nitrotoluene	2.00	2.13	106	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.86	93	76-125	
4-Nitrotoluene	2.00	2.10	105	71-127	
HMX	2.00	1.91	96	65-135	
Nitrobenzene	2.00	2.21	110	65-134	
Nitroglycerin	20.0	22.4	112	74-127	
PETN	20.0	23.0	115	73-127	
RDX	2.00	2.20	110	68-130	
Tetryl	2.00	2.21	110	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05101774.D

Lab ID: LCS 280-371611/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	1.96	98	73-125	
1,3-Dinitrobenzene	2.00	2.15	107	78-120	
2,4,6-Trinitrotoluene	2.00	2.36	118	71-123	
2,4-Dinitrotoluene	2.00	1.98	99	78-120	
2,6-Dinitrotoluene	2.00	1.98	99	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.88	94	79-120	
2-Nitrotoluene	2.00	2.22	111	70-127	
3-Nitrotoluene	2.00	2.35	117	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.65	82	76-125	
4-Nitrotoluene	2.00	2.29	114	71-127	
HMX	2.00	1.99	100	65-135	
Nitrobenzene	2.00	2.33	117	65-134	
Nitroglycerin	20.0	20.6	103	74-127	
PETN	20.0	20.2	101	73-127	
RDX	2.00	2.04	102	68-130	
Tetryl	2.00	2.03	102	64-128	M

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 51517015.D

Lab ID: 280-96291-6 MS Client ID: LL4mw-193-042417-GW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.07	0.42 U	1.90	92	73-125	
1,3-Dinitrobenzene	2.07	0.21 U	2.11	102	78-120	
2,4,6-Trinitrotoluene	2.07	0.21 U	2.31	111	71-123	
2,4-Dinitrotoluene	2.07	0.21 U	1.90	92	78-120	
2,6-Dinitrotoluene	2.07	0.21 U	1.92	92	77-127	
2-Amino-4,6-dinitrotoluene	2.07	0.13 U	1.81	87	79-120	
2-Nitrotoluene	2.07	0.21 U	1.94	93	70-127	
3-Nitrotoluene	2.07	0.21 U	2.09	101	73-125	
4-Amino-2,6-dinitrotoluene	2.07	0.13 U	1.60	77	76-125	
4-Nitrotoluene	2.07	0.42 U	2.08	101	71-127	
HMX	2.07	0.21 U	1.96	95	65-135	M
Nitrobenzene	2.07	0.21 U	2.23	108	65-134	
Nitroglycerin	20.7	2.1 U	20.3	98	74-127	
PETN	20.7	1.3 U	19.9	96	73-127	
RDX	2.07	0.13 U	2.23	108	68-130	
Tetryl	2.07	0.10 J	2.29	105	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05101778.D

Lab ID: 280-96291-6 MSD Client ID: LL4mw-193-042417-GW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.05	1.91	93	0	20	73-125	
1,3-Dinitrobenzene	2.05	2.15	105	2	20	78-120	
2,4,6-Trinitrotoluene	2.05	2.30	112	0	20	71-123	
2,4-Dinitrotoluene	2.05	1.94	95	2	20	78-120	
2,6-Dinitrotoluene	2.05	1.94	95	1	20	77-127	
2-Amino-4,6-dinitrotoluene	2.05	1.85	90	2	20	79-120	
2-Nitrotoluene	2.05	2.41	117	22	20	70-127	J
3-Nitrotoluene	2.05	2.32	113	10	20	73-125	
4-Amino-2,6-dinitrotoluene	2.05	1.65	80	3	20	76-125	
4-Nitrotoluene	2.05	2.27	111	8	20	71-127	
HMX	2.05	1.95	95	0	20	65-135	M
Nitrobenzene	2.05	2.42	118	8	20	65-134	
Nitroglycerin	20.5	20.2	99	0	20	74-127	
PETN	20.5	20.0	97	0	20	73-127	
RDX	2.05	2.22	108	1	20	68-130	
Tetryl	2.05	2.29	107	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.: 280-96291-1

SDG No.:

Lab Sample ID: MB 280-371611/1-A

Matrix: Water Date Extracted: 05/01/2017 10:00

Lab File ID:(1) Lab File ID:(2) 50417C16.D

Date Analyzed:(1) Date Analyzed:(2) 05/04/2017 23:27

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2) CHHPLC_G2_LUNA

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) Luna-phenylh ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-371611/2-A		05/05/2017 00:02

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: MB 280-371611/1-A

Matrix: Water Date Extracted: 05/01/2017 10:00

Lab File ID:(1) 05101773.D Lab File ID:(2)

Date Analyzed:(1) 05/11/2017 15:37 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2) CHHPLC_G2_LUNA

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) Luna-phenylh ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-371611/2-A	05/11/2017 16:00	
LL3mw-237-042417-GW	280-96291-4	05/11/2017 16:23	05/18/2017 12:21
LL4mw-193-042417-GW	280-96291-6	05/11/2017 16:46	05/05/2017 00:37
LL4mw-193-042417-GW MSD	280-96291-6 MSD	05/11/2017 17:32	05/05/2017 01:47
LL4mw-193-042417-GW MS	280-96291-6 MS	05/15/2017 15:56	05/05/2017 01:12

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL3mw-237-042417-GW Lab Sample ID: 280-96291-4

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/11/2017 16:23 Date Analyzed (2): 05/18/2017 12:21

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
2,4,6-Trinitrotoluene	1		11.32	11.21	11.41	1.2		14.1
	2		24.11	23.95	24.25	1.0		
4-Amino-2,6-dinitrotoluene	1		11.51	11.40	11.60	6.5		21.1
	2		16.97	16.82	17.12	8.1		
2-Amino-4,6-dinitrotoluene	1		11.80	11.68	11.88	3.6		1.8
	2		17.97	17.82	18.12	3.7		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-193-042417-GW MS Lab Sample ID: 280-96291-6 MS

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/15/2017 15:56 Date Analyzed (2): 05/05/2017 01:12

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		6.65	6.54	6.84	1.96		19.9
	2		7.11	6.93	7.23	1.60		
RDX	1		7.79	7.69	7.99	2.23		16.6
	2		9.27	9.10	9.40	1.89		
1,3,5-Trinitrobenzene	1		8.97	8.87	9.17	1.90		5.9
	2		18.80	18.59	18.89	2.02		
1,3-Dinitrobenzene	1		9.63	9.55	9.85	2.11		3.4
	2		15.65	15.46	15.76	2.18		
Nitrobenzene	1		10.03	9.96	10.26	2.23		3.9
	2		12.20	12.04	12.34	2.32		
Tetryl	1		10.39	10.32	10.62	2.29		9.1
	2		23.56	23.30	23.60	2.09		
Nitroglycerin	1		10.92	10.85	11.15	20.3		11.8
	2		15.63	15.46	15.76	22.8		
2,4,6-Trinitrotoluene	1		11.37	11.35	11.55	2.31		12.2
	2		24.49	24.23	24.53	2.04		
4-Amino-2,6-dinitrotoluene	1		11.56	11.54	11.74	1.60		3.1
	2		17.36	17.14	17.44	1.65		
2-Amino-4,6-dinitrotoluene	1		11.85	11.84	12.04	1.81		2.8
	2		18.39	18.16	18.46	1.76		
2,6-Dinitrotoluene	1		12.01	12.00	12.20	1.92		5.7
	2		19.79	19.58	19.88	2.03		
2,4-Dinitrotoluene	1		12.21	12.19	12.39	1.90		5.4
	2		20.35	20.13	20.43	2.01		
2-Nitrotoluene	1		13.07	13.02	13.32	1.94		0.9
	2		16.56	16.38	16.68	1.95		
4-Nitrotoluene	1		13.51	13.47	13.77	2.08		9.0
	2		16.88	16.70	17.00	1.90		
3-Nitrotoluene	1		14.12	14.10	14.40	2.09		9.6
	2		17.80	17.60	17.90	1.90		
PETN	1		15.27	15.27	15.57	19.9		11.8
	2		24.96	24.76	25.06	22.4		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-193-042417-GW MSD Lab Sample ID: 280-96291-6 MSD

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/11/2017 17:32 Date Analyzed (2): 05/05/2017 01:47

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		6.66	6.51	6.81	1.95		10.7
	2		7.12	6.93	7.23	1.75		
RDX	1		7.78	7.63	7.93	2.22		13.6
	2		9.30	9.10	9.40	1.94		
1,3,5-Trinitrobenzene	1		8.96	8.80	9.10	1.91		7.7
	2		18.79	18.59	18.89	2.06		
1,3-Dinitrobenzene	1		9.62	9.47	9.77	2.15		4.7
	2		15.66	15.46	15.76	2.25		
Nitrobenzene	1		10.01	9.85	10.15	2.42		2.6
	2		12.23	12.04	12.34	2.35		
Tetryl	1		10.35	10.19	10.49	2.29		8.3
	2		23.60	23.30	23.60	2.11		
Nitroglycerin	1		10.86	10.71	11.01	20.2		12.1
	2		15.63	15.46	15.76	22.8		
2,4,6-Trinitrotoluene	1		11.32	11.21	11.41	2.30		11.8
	2		24.52	24.23	24.53	2.04		
4-Amino-2,6-dinitrotoluene	1		11.50	11.40	11.60	1.65		8.1
	2		17.36	17.14	17.44	1.79		
2-Amino-4,6-dinitrotoluene	1		11.78	11.68	11.88	1.85		1.0
	2		18.39	18.16	18.46	1.87		
2,6-Dinitrotoluene	1		11.94	11.83	12.03	1.94		9.0
	2		19.79	19.58	19.88	2.13		
2,4-Dinitrotoluene	1		12.13	12.02	12.22	1.94		6.7
	2		20.35	20.13	20.43	2.07		
2-Nitrotoluene	1		12.98	12.82	13.12	2.41		12.5
	2		16.56	16.38	16.68	2.12		
4-Nitrotoluene	1		13.42	13.27	13.57	2.27		10.7
	2		16.88	16.70	17.00	2.04		
3-Nitrotoluene	1		14.04	13.87	14.17	2.32		12.7
	2		17.79	17.60	17.90	2.05		
PETN	1		15.16	14.98	15.28	20.0		13.3
	2		24.99	24.76	25.06	22.8		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL3mw-237-042417-GW | Lab Sample ID: 280-96291-4

Matrix: Water | Lab File ID: 05101775.D

Analysis Method: 8330B | Date Collected: 04/24/2017 13:19

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 484.9(mL) | Date Analyzed: 05/11/2017 16:23

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.: 372382 | 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	0.21
99-65-0	1,3-Dinitrobenzene	0.21	U	0.41	0.21	0.091
121-14-2	2,4-Dinitrotoluene	0.21	U	0.41	0.21	0.086
606-20-2	2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.067
35572-78-2	2-Amino-4,6-dinitrotoluene	3.6		0.21	0.12	0.052
88-72-2	2-Nitrotoluene	0.21	U	0.41	0.21	0.088
99-08-1	3-Nitrotoluene	0.21	U	0.41	0.21	0.086
19406-51-0	4-Amino-2,6-dinitrotoluene	6.5		0.21	0.12	0.059
99-99-0	4-Nitrotoluene	0.41	U	1.0	0.41	0.21
2691-41-0	HMX	0.21	U	0.41	0.21	0.090
55-63-0	Nitroglycerin	2.1	U	3.1	2.1	0.95
78-11-5	PETN	1.2	U	2.1	1.2	0.43
479-45-8	Tetryl	0.21	U	0.25	0.21	0.082

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	94		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101775.D
Lims ID: 280-96291-A-4-A
Client ID: LL3mw-237-042417-GW
Sample Type: Client
Inject. Date: 11-May-2017 16:23:38 ALS Bottle#: 61 Worklist Smp#: 75
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-A-4-A
Misc. Info.: 280-0058342-075
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 17-May-2017 09:56:54 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

First Level Reviewer: colleea Date: 12-May-2017 07:24:00

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.663			ND	
	5 RDX	1	7.803	7.783	0.020	6919	0.0654	M
$	7 1,2-Dinitrobenzene	1	8.790	8.790	0.000	25889	0.1878	
	8 1,3,5-Trinitrobenzene	1		8.950			ND	
	9 1,3-Dinitrobenzene	1		9.617			ND	
	11 Nitrobenzene	1	10.030	10.003	0.027	786	0.008458	
	12 Tetryl	1		10.343			ND	
	13 Nitroglycerin	2		10.857			ND	
	14 2,4,6-Trinitrotoluene	1	11.323	11.310	0.013	20809	0.1127	
	15 4-Amino-2,6-dinitrotoluene	1	11.510	11.497	0.013	106529	0.6331	
	16 2-Amino-4,6-dinitrotoluene	1	11.797	11.783	0.014	73665	0.3530	
	17 2,6-Dinitrotoluene	1		11.930			ND	
	18 2,4-Dinitrotoluene	1		12.123			ND	
	19 o-Nitrotoluene	1		12.970			ND	
	20 p-Nitrotoluene	1		13.417			ND	
	21 m-Nitrotoluene	1		14.017			ND	
	22 PETN	2		15.130			ND	

QC Flag Legend

Review Flags
M - Manually Integrated

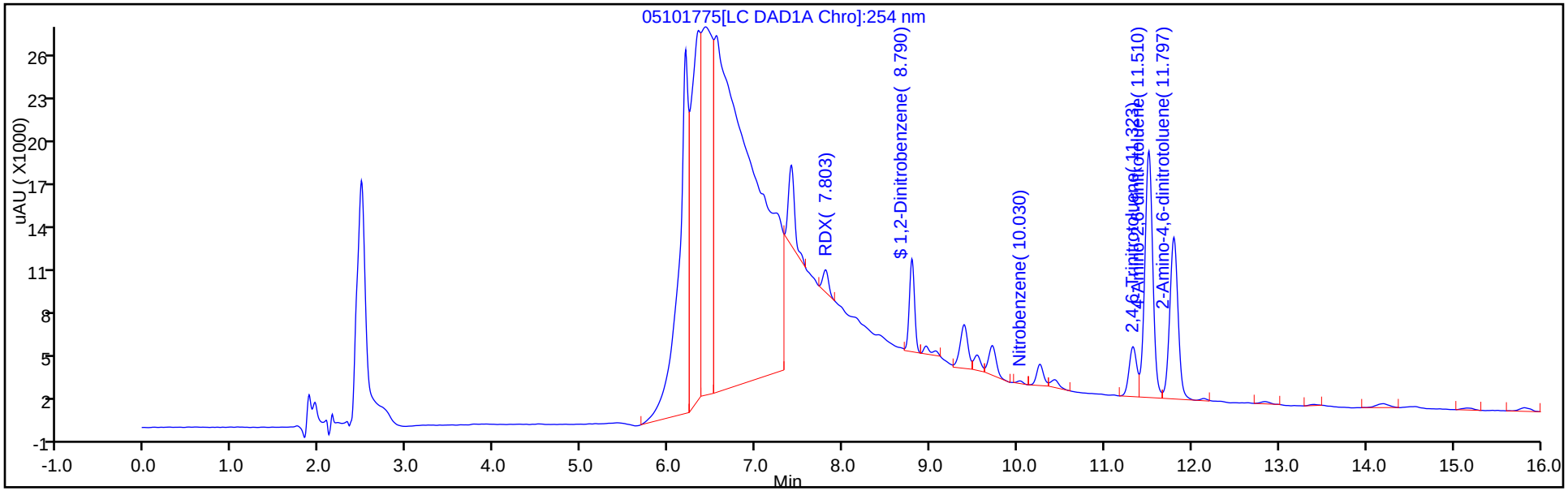
Report Date: 17-May-2017 10:27:13 Chrom Revision: 2.2 17-May-2017 06:27:28

TestAmerica Denver

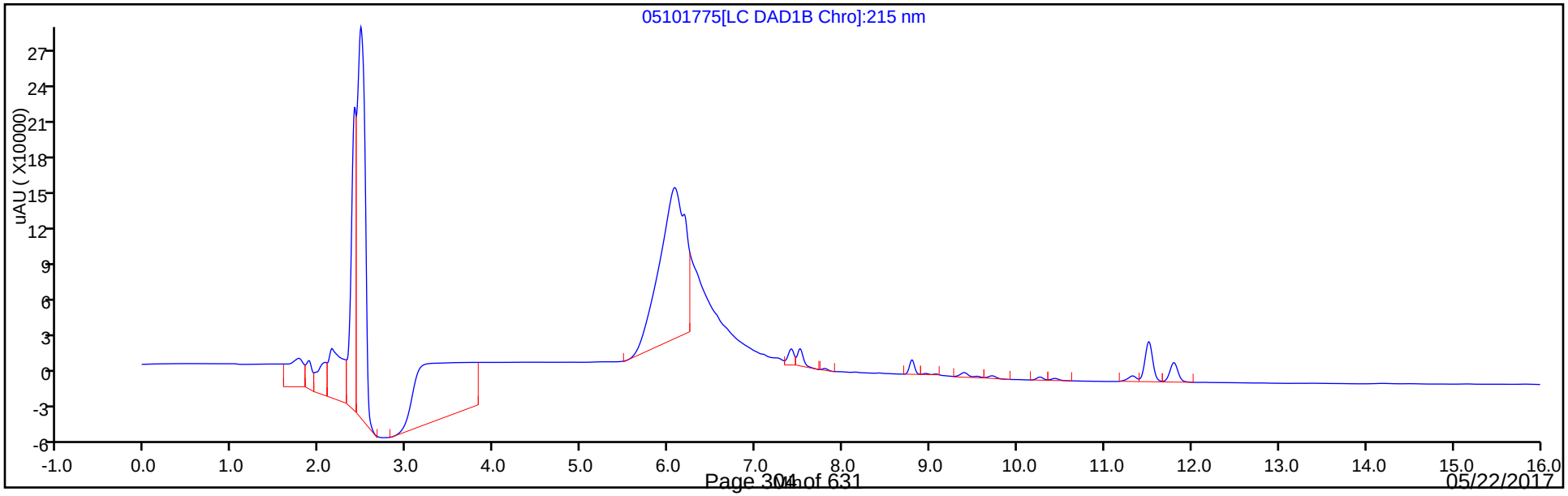
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101775.D

Injection Date:	11-May-2017 16:23:38	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	280-96291-A-4-A	Lab Sample ID:	280-96291-4	Worklist Smp#:	75
Client ID:	LL3mw-237-042417-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	61
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\20170505-58342.b\05101775.D
Lims ID: 280-96291-A-4-A
Client ID: LL3mw-237-042417-GW
Sample Type: Client
Inject. Date: 11-May-2017 16:23:38 ALS Bottle#: 61 Worklist Smp#: 75
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-A-4-A
Misc. Info.: 280-0058342-075
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 17-May-2017 09:56:54 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

First Level Reviewer: colleea Date: 12-May-2017 07:24:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1878	93.89

Manual Integration/User Assign Peak Report

TestAmerica Denver

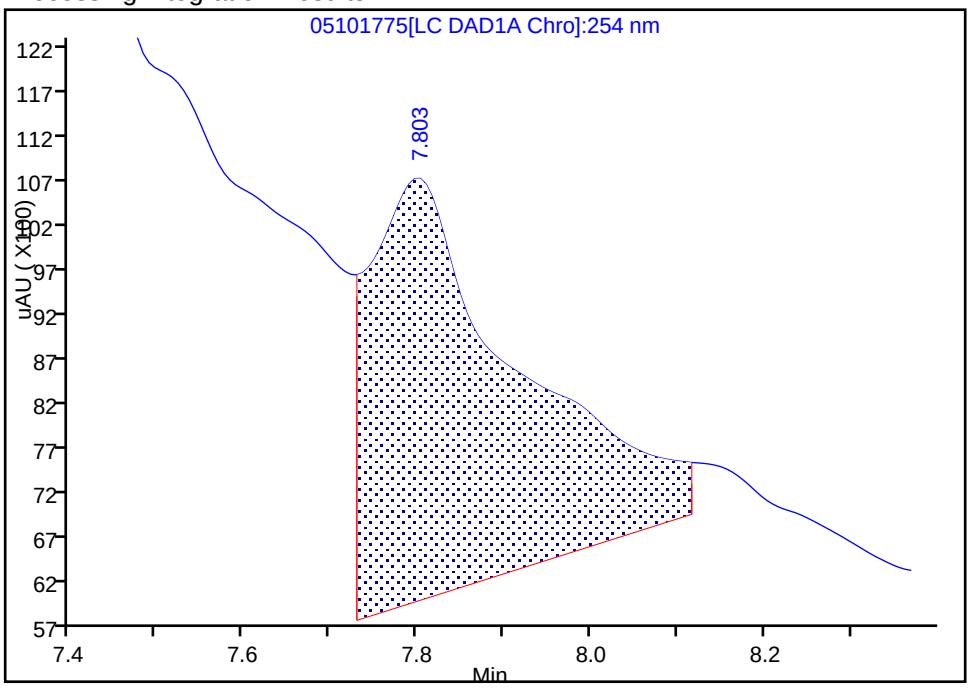
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101775.D				
Injection Date:	11-May-2017 16:23:38	Instrument ID:	CHHPLC_X3		
Lims ID:	280-96291-A-4-A	Lab Sample ID:	280-96291-4		
Client ID:	LL3mw-237-042417-GW				
Operator ID:	asc	ALS Bottle#:	61	Worklist Smp#:	75
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 RDX, CAS: 121-82-4

Signal: 1

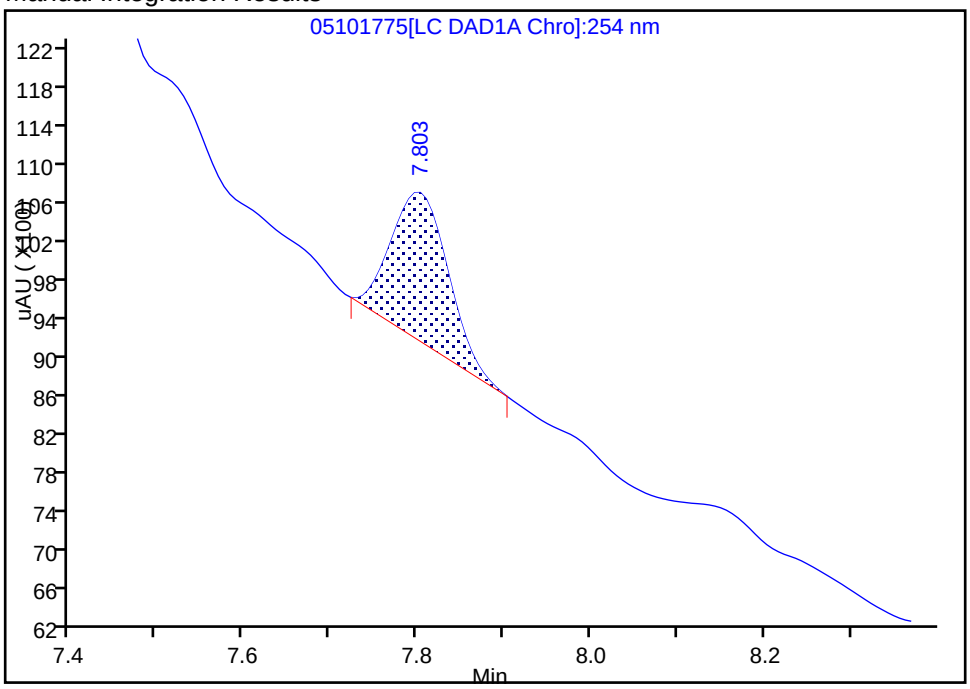
Processing Integration Results

RT: 7.80
Area: 56428
Amount: 0.532984
Amount Units: ug/mL



Manual Integration Results

RT: 7.80
Area: 6919
Amount: 0.065353
Amount Units: ug/mL



Reviewer: colleea, 12-May-2017 07:22:50

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL3mw-237-042417-GW | Lab Sample ID: 280-96291-4

Matrix: Water | Lab File ID: 51817003.D

Analysis Method: 8330B | Date Collected: 04/24/2017 13:19

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 484.9(mL) | Date Analyzed: 05/18/2017 12:21

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 373971 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
118-96-7	2,4,6-Trinitrotoluene	1.0		0.41	0.21	0.075
98-95-3	Nitrobenzene	0.21	U	0.41	0.21	0.094
121-82-4	RDX	0.12	U	0.21	0.12	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	113		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817003.D
Lims ID: 280-96291-A-4-A
Client ID: LL3mw-237-042417-GW
Sample Type: Client
Inject. Date: 18-May-2017 12:21:41 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-A-4-A
Misc. Info.: 280-0058825-003
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 19-May-2017 08:09:54 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK002

First Level Reviewer: colleea Date: 19-May-2017 07:57:52

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	5 HMX	1		6.934			ND	
	7 RDX	1		9.061			ND	
	8 Nitrobenzene	1		11.981			ND	
$	9 1,2-Dinitrobenzene	1	12.901	12.907	-0.006	60025	0.2257	
	11 1,3-Dinitrobenzene	1		15.327			ND	
	12 Nitroglycerin	2		15.367			ND	
	13 o-Nitrotoluene	1		16.261			ND	
	14 p-Nitrotoluene	1		16.574			ND	
	15 4-Amino-2,6-dinitrotoluene	1	16.968	16.967	0.001	225734	0.7825	
	16 m-Nitrotoluene	1		17.481			ND	
	17 2-Amino-4,6-dinitrotoluene	1	17.968	17.974	-0.006	148667	0.3595	
	18 1,3,5-Trinitrobenzene	1		18.421			ND	
	19 2,6-Dinitrotoluene	1	19.461	19.407	0.054	30166	0.1013	
	20 2,4-Dinitrotoluene	1		19.961			ND	
	21 Tetryl	1		23.148			ND	
	22 2,4,6-Trinitrotoluene	1	24.108	24.101	0.007	33779	0.0978	
	23 PETN	2		24.728			ND	

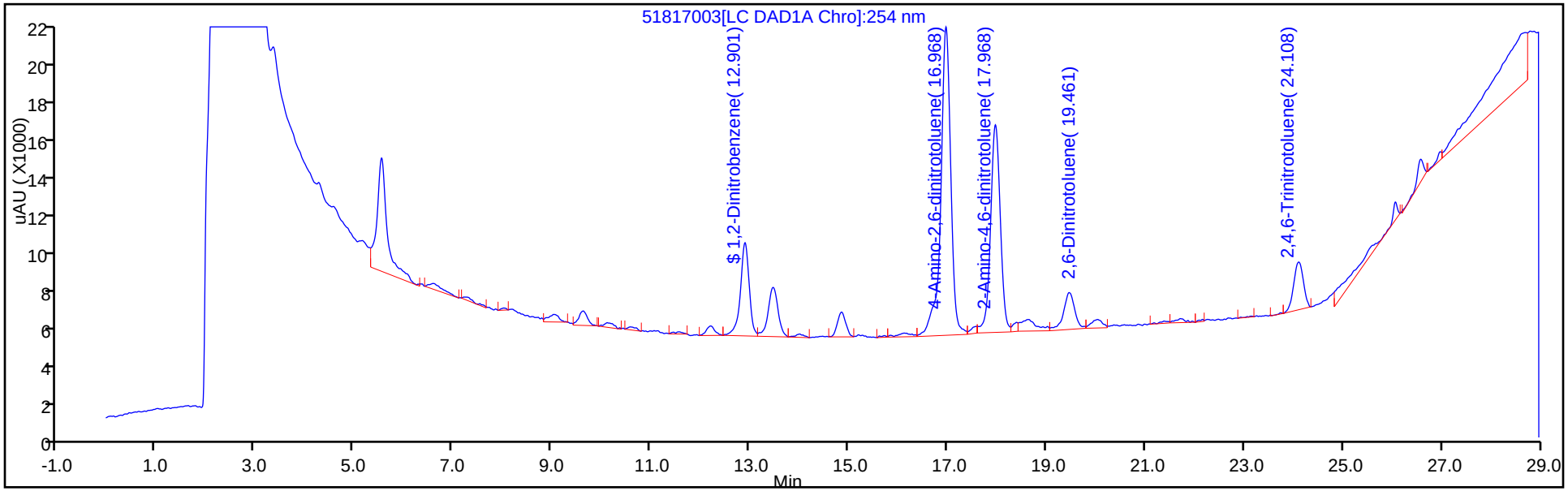
Report Date: 19-May-2017 08:09:55 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Denver

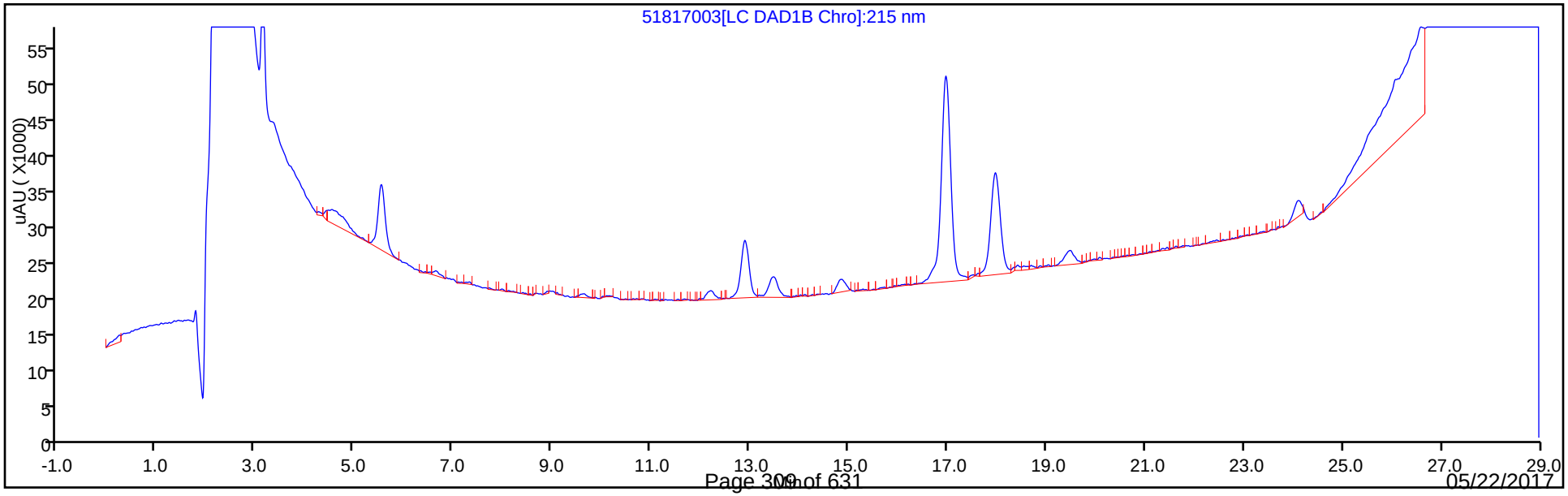
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817003.D

Injection Date:	18-May-2017 12:21:41	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	280-96291-A-4-A	Lab Sample ID:	280-96291-4	Worklist Smp#:	3
Client ID:	LL3mw-237-042417-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817003.D				
Lims ID:	280-96291-A-4-A				
Client ID:	LL3mw-237-042417-GW				
Sample Type:	Client				
Inject. Date:	18-May-2017 12:21:41	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-96291-A-4-A				
Misc. Info.:	280-0058825-003				
Operator ID:	asc	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2017 08:09:54	Calib Date:	04-May-2017 22:17:40		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	XAWRK002				

First Level Reviewer: colleea Date: 19-May-2017 07:57:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.2257	112.83

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-193-042417-GW | Lab Sample ID: 280-96291-6

Matrix: Water | Lab File ID: 50417C18.D

Analysis Method: 8330B | Date Collected: 04/24/2017 11:40

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 479.1(mL) | Date Analyzed: 05/05/2017 00:37

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 372244 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
88-72-2	2-Nitrotoluene	0.21	U	0.42	0.21	0.089

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	104		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C18.D
Lims ID: 280-96291-C-6-A
Client ID: LL4mw-193-042417-GW
Sample Type: Client
Inject. Date: 05-May-2017 00:37:33 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-C-6-A
Misc. Info.: 280-0058316-018
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 19-May-2017 15:49:28 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK039

First Level Reviewer: colleea Date: 08-May-2017 09:00:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1		4.413			ND	
3 2,4-diamino-6-nitrotoluene	1		4.960			ND	
5 HMX	1		7.080			ND	
6 MNX	1		7.880			ND	
4 2,4,6-Trinitrophenol	1		8.593			ND	
7 RDX	1		9.253			ND	
8 Nitrobenzene	1		12.193			ND	
$ 9 1,2-Dinitrobenzene	1	13.170	13.153	0.017	55113	0.2076	
10 3,5-Dinitroaniline	1		15.173			ND	
12 Nitroglycerin	2		15.613			ND	
11 1,3-Dinitrobenzene	1		15.613			ND	
13 o-Nitrotoluene	1		16.526			ND	
14 p-Nitrotoluene	1		16.846			ND	
15 4-Amino-2,6-dinitrotoluene	1		17.293			ND	
16 m-Nitrotoluene	1		17.753			ND	
17 2-Amino-4,6-dinitrotoluene	1		18.313			ND	
18 1,3,5-Trinitrobenzene	1		18.740			ND	
19 2,6-Dinitrotoluene	1		19.726			ND	
20 2,4-Dinitrotoluene	1		20.280			ND	
21 Tetryl	1		23.447			ND	
22 2,4,6-Trinitrotoluene	1		24.380			ND	
23 PETN	2		24.907			ND	
1 Ammonium Picrate	1		0.000			ND	

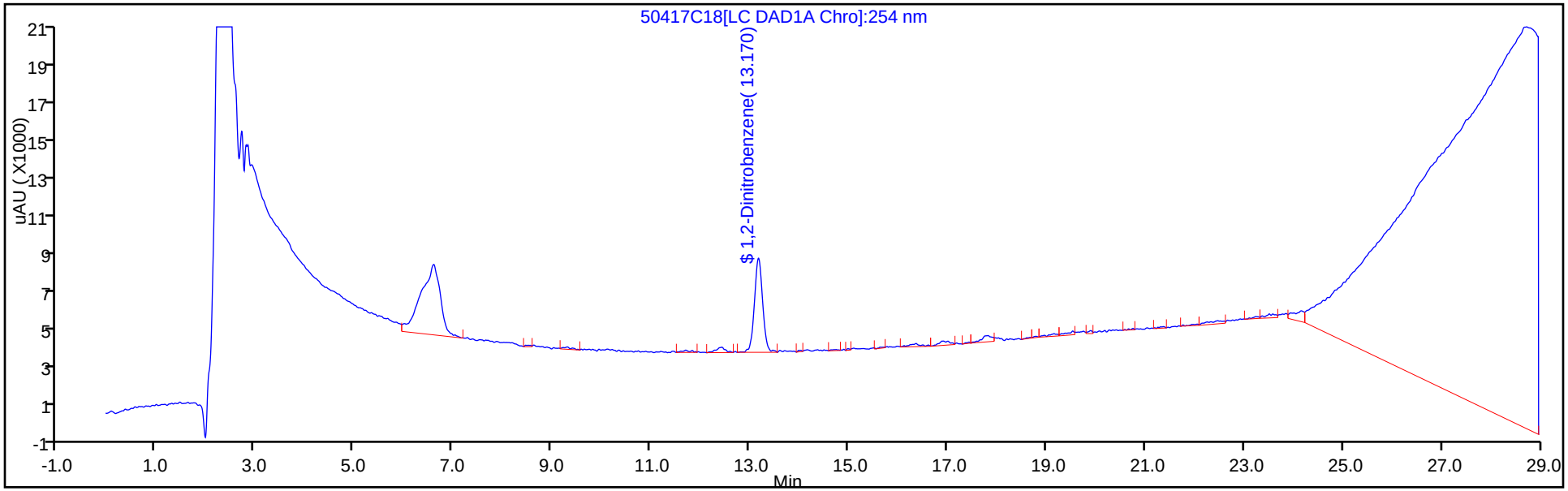
Report Date: 19-May-2017 15:49:48 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Denver

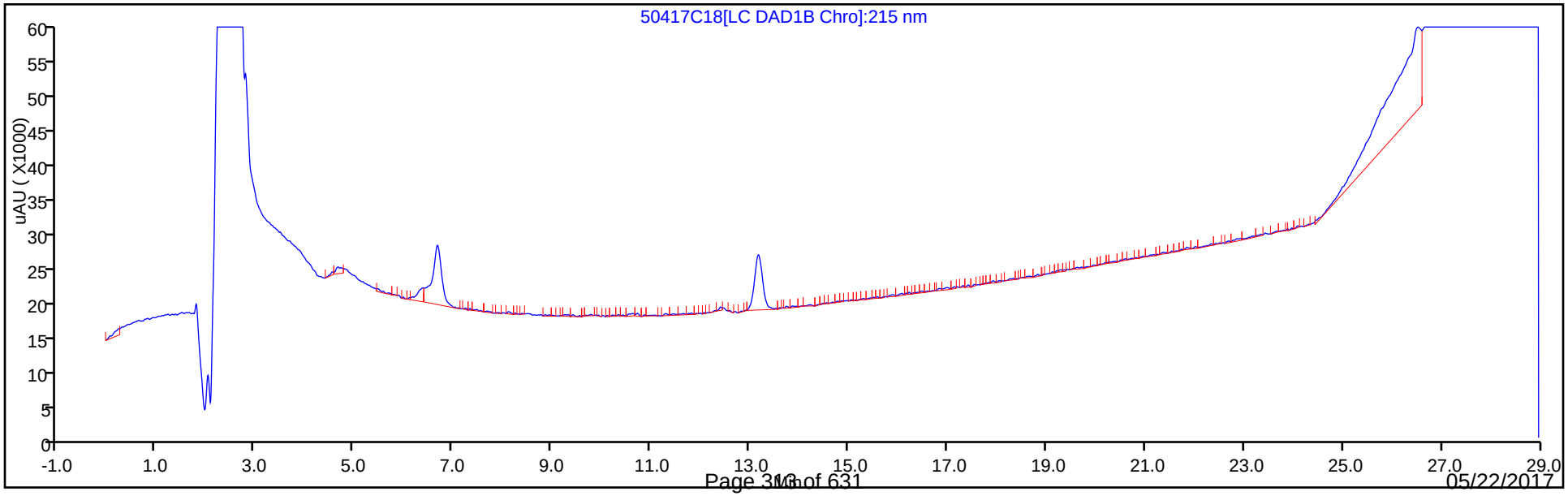
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C18.D

Injection Date:	05-May-2017 00:37:33	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	280-96291-C-6-A	Lab Sample ID:	280-96291-6	Worklist Smp#:	18
Client ID:	LL4mw-193-042417-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C18.D				
Lims ID:	280-96291-C-6-A				
Client ID:	LL4mw-193-042417-GW				
Sample Type:	Client				
Inject. Date:	05-May-2017 00:37:33	ALS Bottle#:	13	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-96291-C-6-A				
Misc. Info.:	280-0058316-018				
Operator ID:	asc	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2017 15:49:28	Calib Date:	04-May-2017 22:17:40		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	XAWRK039				
First Level Reviewer: colleea		Date:	08-May-2017 09:00:09		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.2076	103.79

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-193-042417-GW | Lab Sample ID: 280-96291-6

Matrix: Water | Lab File ID: 05101776.D

Analysis Method: 8330B | Date Collected: 04/24/2017 11:40

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 479.1(mL) | Date Analyzed: 05/11/2017 16:46

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.: 372382 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.42	U	1.0	0.42	0.21
99-65-0	1,3-Dinitrobenzene	0.21	U	0.42	0.21	0.093
118-96-7	2,4,6-Trinitrotoluene	0.21	U	0.42	0.21	0.076
121-14-2	2,4-Dinitrotoluene	0.21	U	0.42	0.21	0.087
606-20-2	2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.067
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.053
99-08-1	3-Nitrotoluene	0.21	U	0.42	0.21	0.087
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.060
99-99-0	4-Nitrotoluene	0.42	U	1.0	0.42	0.21
2691-41-0	HMX	0.21	U	0.42	0.21	0.091
98-95-3	Nitrobenzene	0.21	U	0.42	0.21	0.095
55-63-0	Nitroglycerin	2.1	U	3.1	2.1	0.96
78-11-5	PETN	1.3	U	2.1	1.3	0.43
121-82-4	RDX	0.13	U	0.21	0.13	0.055
479-45-8	Tetryl	0.10	J	0.25	0.21	0.083

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	99		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101776.D
Lims ID: 280-96291-C-6-A
Client ID: LL4mw-193-042417-GW
Sample Type: Client
Inject. Date: 11-May-2017 16:46:37 ALS Bottle#: 62 Worklist Smp#: 76
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-C-6-A
Misc. Info.: 280-0058342-076
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 17-May-2017 09:56:54 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

First Level Reviewer: colleea Date: 12-May-2017 07:25:05

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
1	2,6-diamino-4-nitrotoluene	1		6.522			ND	
2	HMX	1		6.663			ND	
3	2,4-diamino-6-nitrotoluene	1		6.702			ND	
4	MNX	1		7.363			ND	
5	RDX	1		7.783			ND	
6	2,4,6-Trinitrophenol	1	8.172	8.077	0.095	44917	0.5038	M
$ 7	1,2-Dinitrobenzene	1	8.792	8.790	0.002	27199	0.1974	
8	1,3,5-Trinitrobenzene	1		8.950			ND	
9	1,3-Dinitrobenzene	1		9.617			ND	
11	Nitrobenzene	1		10.003			ND	
10	3,5-Dinitroaniline	1		10.256			ND	
12	Tetryl	1	10.432	10.343	0.089	1829	0.009728	
13	Nitroglycerin	2		10.857			ND	
14	2,4,6-Trinitrotoluene	1		11.310			ND	
15	4-Amino-2,6-dinitrotoluene	1		11.497			ND	
16	2-Amino-4,6-dinitrotoluene	1		11.783			ND	
17	2,6-Dinitrotoluene	1		11.930			ND	
18	2,4-Dinitrotoluene	1		12.123			ND	
19	o-Nitrotoluene	1		12.970			ND	
20	p-Nitrotoluene	1		13.417			ND	
21	m-Nitrotoluene	1		14.017			ND	
22	PETN	2		15.130			ND	

QC Flag Legend

Review Flags
M - Manually Integrated

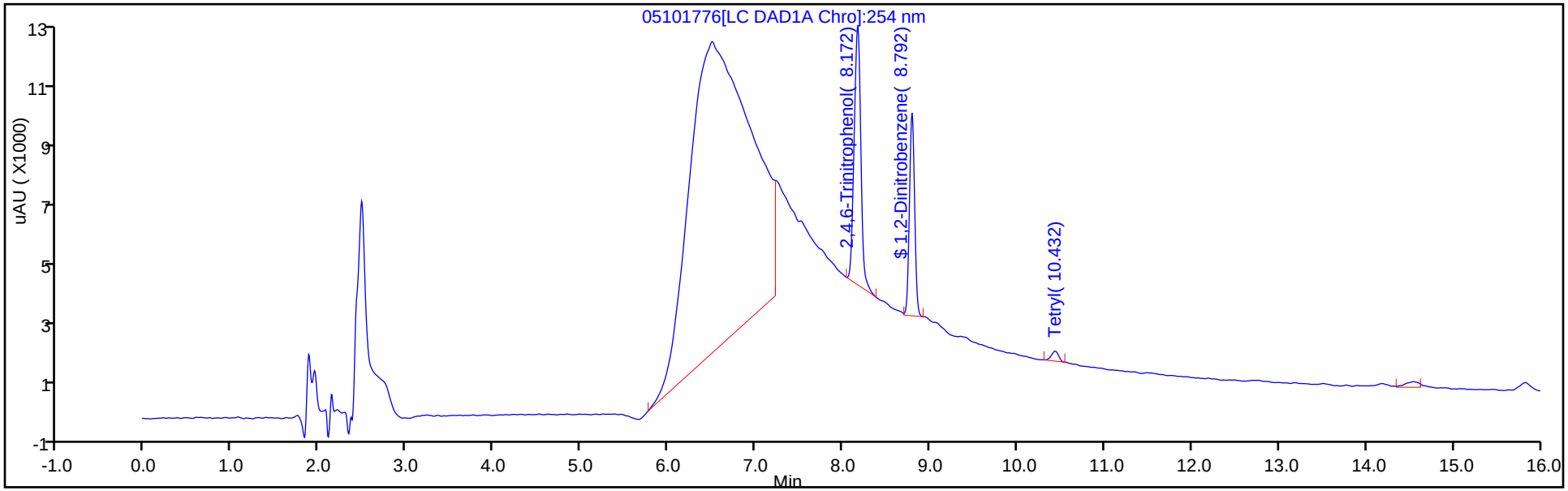
Report Date: 17-May-2017 10:27:41 Chrom Revision: 2.2 17-May-2017 06:27:28

TestAmerica Denver

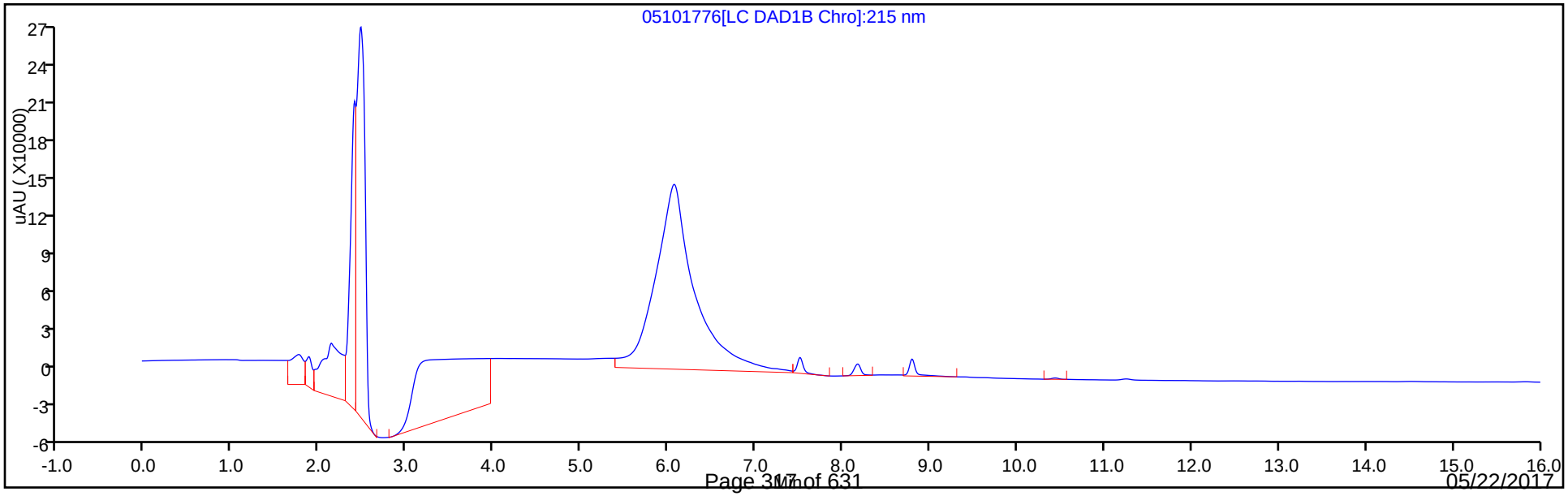
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101776.D

Injection Date:	11-May-2017 16:46:37	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	280-96291-C-6-A	Lab Sample ID:	280-96291-6	Worklist Smp#:	76
Client ID:	LL4mw-193-042417-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	62
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\20170505-58342.b\05101776.D				
Lims ID:	280-96291-C-6-A				
Client ID:	LL4mw-193-042417-GW				
Sample Type:	Client				
Inject. Date:	11-May-2017 16:46:37	ALS Bottle#:	62	Worklist Smp#:	76
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-96291-C-6-A				
Misc. Info.:	280-0058342-076				
Operator ID:	asc	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	17-May-2017 09:56:54	Calib Date:	09-May-2017 19:55:27		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK013				
First Level Reviewer: colleea		Date:	12-May-2017 07:25:05		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1974	98.72

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 372244

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2017 18:12 Calibration End Date: 05/04/2017 22:17 Calibration ID: 29045

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-372244/14	50417C14.D
Level 2	IC 280-372244/13	50417C13.D
Level 3	IC 280-372244/12	50417C12.D
Level 4	IC 280-372244/11	50417C11.D
Level 5	IC 280-372244/10	50417C10.D
Level 6	IC 280-372244/9	50417C09.D
Level 7	IC 280-372244/8	50417C08.D
Level 8	IC 280-372244/7	50417C07.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	7.060	7.114	7.079	7.078	7.080	7.075	7.054	7.037			6.930 - 7.230	7.072
Picric acid	8.687	8.727	8.639	8.618	8.593	8.528	8.494	8.357			8.443 - 8.743	8.580
RDX	9.234	9.300	9.232	9.252	9.253	9.221	9.227	9.164			9.103 - 9.403	9.235
Nitrobenzene	12.200	12.214	12.186	12.192	12.193	12.161	12.174	12.097			12.043 - 12.343	12.177
3,5-Dinitroaniline	15.220	15.160	15.199	15.132	15.173	15.161	15.114	15.070			15.023 - 15.323	15.154
1,3-Dinitrobenzene	15.607	15.594	15.632	15.572	15.613	15.601	15.554	15.524			15.463 - 15.763	15.587
Nitroglycerin	15.620	15.587	15.619	15.572	15.613	15.601	15.560	15.530			15.463 - 15.763	15.588
2-Nitrotoluene	16.560	16.507	16.539	16.485	16.526	16.521	16.460	16.450			16.376 - 16.676	16.506
4-Nitrotoluene	16.774	16.840	16.866	16.798	16.846	16.835	16.774	16.764			16.696 - 16.996	16.812
4-Amino-2,6-dinitrotoluene	17.320	17.274	17.306	17.238	17.293	17.281	17.207	17.210			17.143 - 17.443	17.266
3-Nitrotoluene	17.767	17.740	17.766	17.705	17.753	17.741	17.680	17.677			17.603 - 17.903	17.729
2-Amino-4,6-dinitrotoluene	18.314	18.287	18.326	18.258	18.313	18.295	18.220	18.224			18.163 - 18.463	18.280
1,3,5-Trinitrobenzene	18.727	18.740	18.752	18.692	18.740	18.721	18.654	18.664			18.590 - 18.890	18.711
2,6-Dinitrotoluene	19.774	19.734	19.726	19.692	19.726	19.708	19.647	19.657			19.576 - 19.876	19.708
2,4-Dinitrotoluene	20.320	20.294	20.272	20.252	20.280	20.261	20.207	20.217			20.130 - 20.430	20.263
Tetryl	23.467	23.540	23.459	23.492	23.447	23.441	23.447	23.417			23.297 - 23.597	23.464
2,4,6-Trinitrotoluene	24.620	24.500	24.399	24.432	24.380	24.375	24.387	24.344			24.230 - 24.530	24.430
PETN	25.274	24.987	24.926	24.945	24.907	24.901	24.921	24.884			24.757 - 25.057	24.968
1,2-Dinitrobenzene	13.180	13.160	13.159	13.145	13.153	13.128	13.127	13.057			13.003 - 13.303	13.139

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 372244

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2017 18:12 Calibration End Date: 05/04/2017 22:17 Calibration ID: 29045

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-372244/14	50417C14.D
Level 2	IC 280-372244/13	50417C13.D
Level 3	IC 280-372244/12	50417C12.D
Level 4	IC 280-372244/11	50417C11.D
Level 5	IC 280-372244/10	50417C10.D
Level 6	IC 280-372244/9	50417C09.D
Level 7	IC 280-372244/8	50417C08.D
Level 8	IC 280-372244/7	50417C07.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	228300 160225	190960 175199	184540 172994	167192 173477	Lin1	559.868274	171860.091							0.9990		0.9900
Picric acid	235900 150763	188800 159424	162850 158871	152016 158291	Lin1	800.487606	156922.974							0.9990		0.9900
RDX	314300 190675	258380 207947	230560 202501	199284 204524	Lin1	1359.98465	202335.753							0.9990		0.9900
Nitrobenzene	560000 329373	350400 371767	320840 371637	350648 397417	Lin2	2018.65261	346353.182							0.9900		0.9900
3,5-Dinitroaniline	722100 409723	855380 415050	422180 407560	382736 410604	Lin	4161.85115	407802.433							0.9990		0.9900
1,3-Dinitrobenzene	757700 517110	640740 574521	588940 573363	547180 582862	Lin1	1516.09703	571397.649							0.9990		0.9900
Nitroglycerin	150810 141823	180490 157273	162519 153932	148864 152273	Lin1	2033.19490	152456.895							0.9990		0.9900
2-Nitrotoluene	243700 202953	218100 235339	190150 241662	208568 255827	Ave		224537.234				10.2		20.0			
4-Nitrotoluene	342000 178980	207220 204906	169390 207795	183672 219412	Lin1	315.580310	208675.720							0.9940		0.9900
4-Amino-2,6-dinitrotoluene	471800 262273	364980 290909	288110 289570	271996 292078	Lin1	1733.64015	286271.233							0.9980		0.9900
3-Nitrotoluene	378900 227028	268380 262646	215590 268237	236800 285091	Lin1	-148.21902	270415.320							0.9940		0.9900
2-Amino-4,6-dinitrotoluene	510200 380123	489760 417183	409850 416137	388836 422991	Lin2	1083.49049	410514.747							0.9950		0.9900
1,3,5-Trinitrobenzene	546900 399260	531880 432369	440720 429805	414824 429958	Lin1	1560.80222	426031.454							0.9990		0.9900
2,6-Dinitrotoluene	412900 262958	407100 280513	298110 282089	274296 281876	Lin1	1947.33253	278565.337							0.9980		0.9900

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.: 280-96291-1 Analy Batch No.: 372244

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2017 18:12 Calibration End Date: 05/04/2017 22:17 Calibration ID: 29045

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								
2,4-Dinitrotoluene	707000 497630	736840 544424	581750 545348	514660 550936	Qua	1775.60719	529163.040	8561.43623						1.0000		0.9900
Tetryl	418100 283690	344440 310767	314350 304882	287948 310627	Lin1	948.639538	305328.919							0.9990		0.9900
2,4,6-Trinitrotoluene	294700 321520	336620 359901	334140 356120	320196 366594	Lin1	-1285.7705	358616.999							0.9980		0.9900
PETN	79090 105388	110634 116507	108557 113980	117527 113125	Lin	-1303.1203	113394.051							1.0000		0.9900
1,2-Dinitrobenzene	402800 244890	350800 271841	284900 270420	251304 271420	Lin	-1231.7565	271447.515							1.0000		0.9900

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.: 280-96291-1 Analy Batch No.: 372244

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2017 18:12 Calibration End Date: 05/04/2017 22:17 Calibration ID: 29045

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-372244/14	50417C14.D
Level 2	IC 280-372244/13	50417C13.D
Level 3	IC 280-372244/12	50417C12.D
Level 4	IC 280-372244/11	50417C11.D
Level 5	IC 280-372244/10	50417C10.D
Level 6	IC 280-372244/9	50417C09.D
Level 7	IC 280-372244/8	50417C08.D
Level 8	IC 280-372244/7	50417C07.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	Lin1	2283 122639	9548 172994	18454 433692	41798	64090	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Lin1	2359 111597	9440 158871	16285 395727	38004	60305	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Lin1	3143 145563	12919 202501	23056 511309	49821	76270	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Lin2	5600 260237	17520 371637	32084 993542	87662	131749	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
3,5-Dinitroaniline	Lin	7221 290535	42769 407560	42218 1026509	95684	163889	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Lin1	7577 402165	32037 573363	58894 1457156	136795	206844	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Lin1	15081 1100909	90245 1539317	162519 3806834	372159	567292	0.100 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2-Nitrotoluene	Ave	2437 164737	10905 241662	19015 639567	52142	81181	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
4-Nitrotoluene	Lin1	3420 143434	10361 207795	16939 548531	45918	71592	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
4-Amino-2,6-dinitrotoluene	Lin1	4718 203636	18249 289570	28811 730196	67999	104909	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
3-Nitrotoluene	Lin1	3789 183852	13419 268237	21559 712728	59200	90811	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2-Amino-4,6-dinitrotoluene	Lin2	5102 292028	24488 416137	40985 1057477	97209	152049	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Lin1	5469 302658	26594 429805	44072 1074896	103706	159704	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,6-Dinitrotoluene	Lin1	4129 196359	20355 282089	29811 704691	68574	105183	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,4-Dinitrotoluene	Qua	7070 381097	36842 545348	58175 1377341	128665	199052	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 372244

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2017 18:12 Calibration End Date: 05/04/2017 22:17 Calibration ID: 29045

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
Tetryl	Lin1	4181 217537	17222 304882	31435 776567	71987	113476	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,4,6-Trinitrotoluene	Lin1	2947 251931	16831 356120	33414 916485	80049	128608	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
PETN	Lin	7909 815546	55317 1139798	108557 2828122	293818	421550	0.100 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Lin	4028 190289	17540 270420	28490 678549	62826	97956	0.0100 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:

Ave = Average
Lin = Linear
Lin1 = Linear 1/conc
Lin2 = Linear 1/conc^2
Qua = Quadratic

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C07.D
Lims ID: IC FULL LV 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 04-May-2017 18:12:59 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 8
Misc. Info.: 280-0058316-007
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:18 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 08:09:15

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.404	4.413	-0.009	1178207	2.50	2.55	
3 2,4-diamino-6-nitrotoluene	1	4.970	4.960	0.010	514595	2.50	2.50	
5 HMX	1	7.037	7.080	-0.043	433692	2.50	2.52	
4 2,4,6-Trinitrophenol	1	8.357	8.593	-0.236	395727	2.50	2.52	
7 RDX	1	9.164	9.253	-0.089	511309	2.50	2.52	
8 Nitrobenzene	1	12.097	12.193	-0.096	993542	2.50	2.86	
$ 9 1,2-Dinitrobenzene	1	13.057	13.153	-0.096	678549	2.50	2.50	
10 3,5-Dinitroaniline	1	15.070	15.173	-0.103	1026509	2.50	2.51	
12 Nitroglycerin	2	15.530	15.613	-0.083	3806834	25.0	25.0	
11 1,3-Dinitrobenzene	1	15.524	15.613	-0.089	1457156	2.50	2.55	
13 o-Nitrotoluene	1	16.450	16.526	-0.076	639567	2.50	2.85	
14 p-Nitrotoluene	1	16.764	16.846	-0.082	548531	2.50	2.63	
15 4-Amino-2,6-dinitrotoluene	1	17.210	17.293	-0.083	730196	2.50	2.54	
16 m-Nitrotoluene	1	17.677	17.753	-0.076	712728	2.50	2.64	
17 2-Amino-4,6-dinitrotoluene	1	18.224	18.313	-0.089	1057477	2.50	2.57	
18 1,3,5-Trinitrobenzene	1	18.664	18.740	-0.076	1074896	2.50	2.52	
19 2,6-Dinitrotoluene	1	19.657	19.726	-0.069	704691	2.50	2.52	
20 2,4-Dinitrotoluene	1	20.217	20.280	-0.063	1377341	2.50	2.50	
21 Tetryl	1	23.417	23.447	-0.030	776567	2.50	2.54	
22 2,4,6-Trinitrotoluene	1	24.344	24.380	-0.036	916485	2.50	2.56	
23 PETN	2	24.884	24.907	-0.023	2828122	25.0	25.0	

Reagents:

8330_ADDs_00010 Amount Added: 0.13 Units: mL
8330IntermStk_00050 Amount Added: 0.13 Units: mL

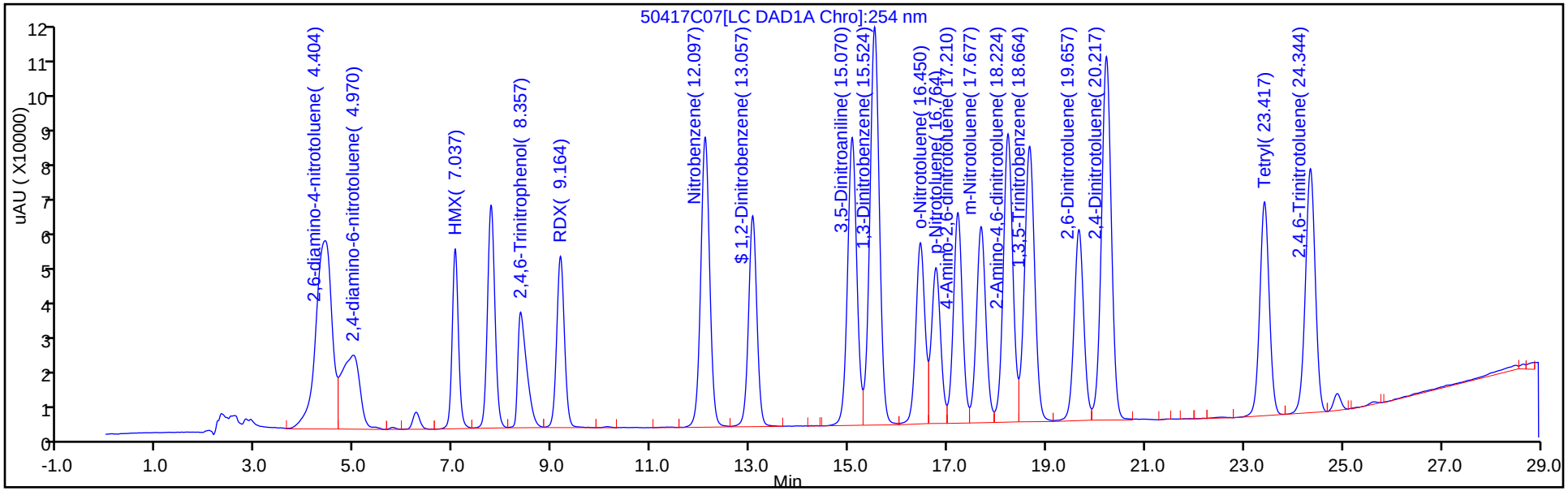
Report Date: 05-May-2017 08:41:18 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

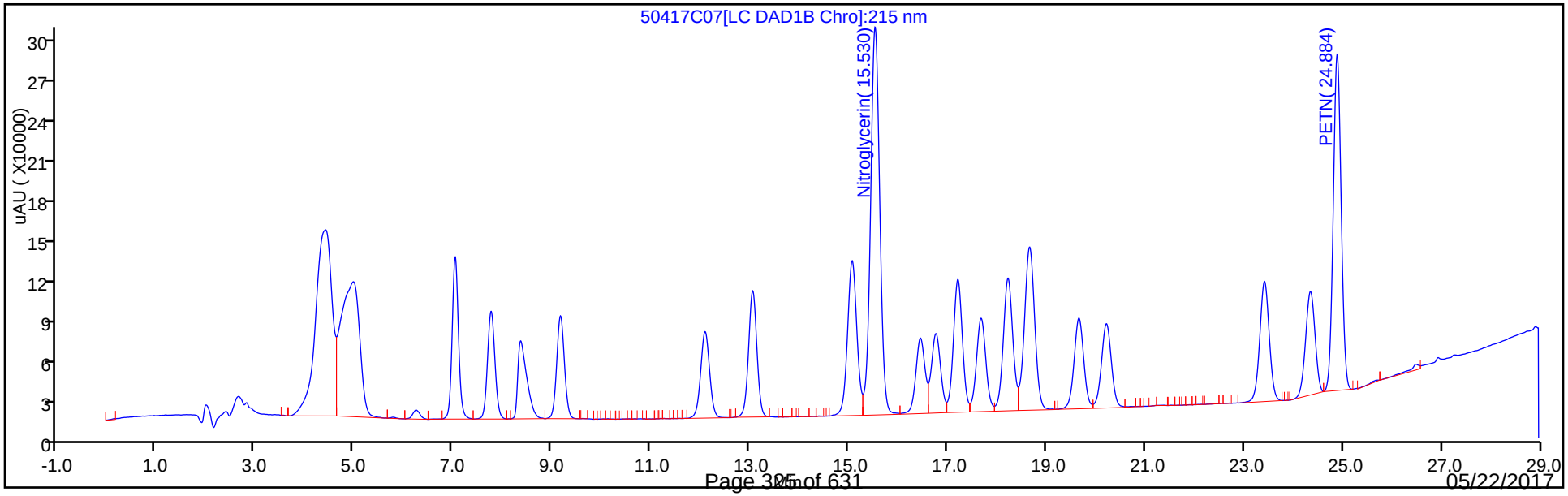
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C07.D

Injection Date:	04-May-2017 18:12:59	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C08.D
Lims ID: IC FULL LV 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 04-May-2017 18:47:57 ALS Bottle#: 3 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 7
Misc. Info.: 280-0058316-008
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:19 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:15:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.401	4.413	-0.012	411017	1.00	0.9086	
3 2,4-diamino-6-nitrotoluene	1	4.967	4.960	0.007	252967	1.00	1.01	
5 HMX	1	7.054	7.080	-0.026	172994	1.00	1.00	
4 2,4,6-Trinitrophenol	1	8.494	8.593	-0.099	158871	1.00	1.01	
7 RDX	1	9.227	9.253	-0.026	202501	1.00	0.99	
8 Nitrobenzene	1	12.174	12.193	-0.019	371637	1.00	1.07	
$ 9 1,2-Dinitrobenzene	1	13.127	13.153	-0.026	270420	1.00	1.00	
10 3,5-Dinitroaniline	1	15.114	15.173	-0.059	407560	1.00	0.9892	
11 1,3-Dinitrobenzene	1	15.554	15.613	-0.059	573363	1.00	1.00	
12 Nitroglycerin	2	15.560	15.613	-0.053	1539317	10.0	10.1	
13 o-Nitrotoluene	1	16.460	16.526	-0.066	241662	1.00	1.08	
14 p-Nitrotoluene	1	16.774	16.846	-0.072	207795	1.00	0.99	
15 4-Amino-2,6-dinitrotoluene	1	17.207	17.293	-0.086	289570	1.00	1.01	
16 m-Nitrotoluene	1	17.680	17.753	-0.073	268237	1.00	0.99	
17 2-Amino-4,6-dinitrotoluene	1	18.220	18.313	-0.093	416137	1.00	1.01	
18 1,3,5-Trinitrobenzene	1	18.654	18.740	-0.086	429805	1.00	1.01	
19 2,6-Dinitrotoluene	1	19.647	19.726	-0.079	282089	1.00	1.01	
20 2,4-Dinitrotoluene	1	20.207	20.280	-0.073	545348	1.00	1.01	
21 Tetryl	1	23.447	23.447	0.000	304882	1.00	1.00	
22 2,4,6-Trinitrotoluene	1	24.387	24.380	0.007	356120	1.00	1.00	
23 PETN	2	24.921	24.907	0.014	1139798	10.0	10.1	

Reagents:

8330_ADDs_00010 Amount Added: 0.05 Units: mL
8330IntermStk_00050 Amount Added: 0.05 Units: mL

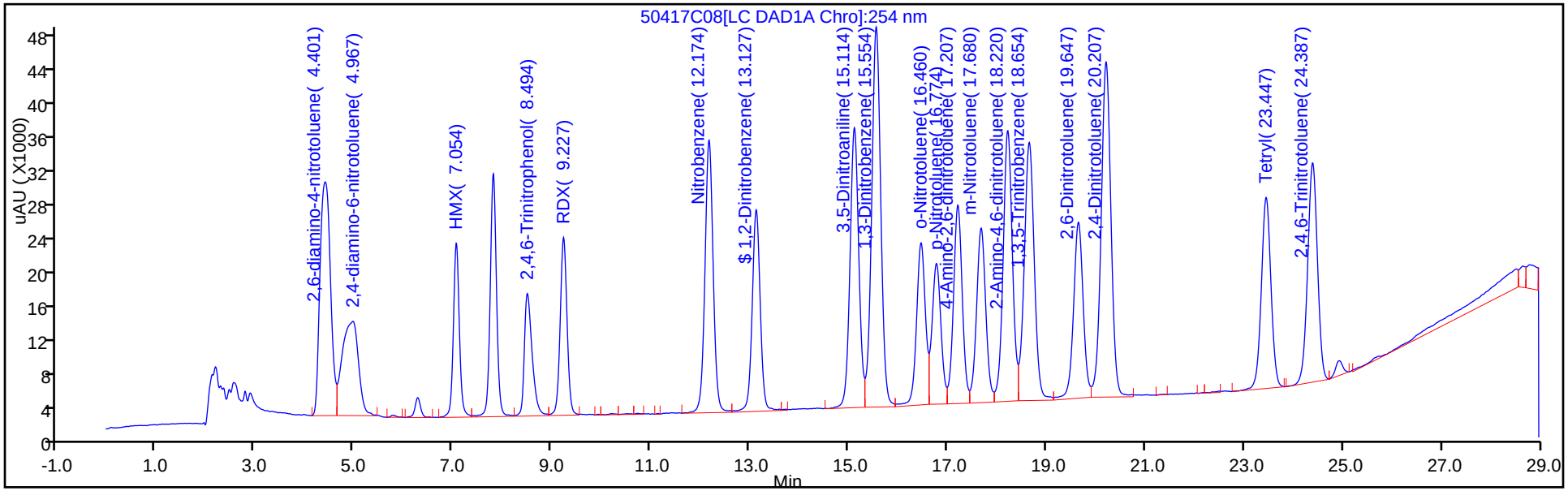
Report Date: 05-May-2017 08:41:20 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

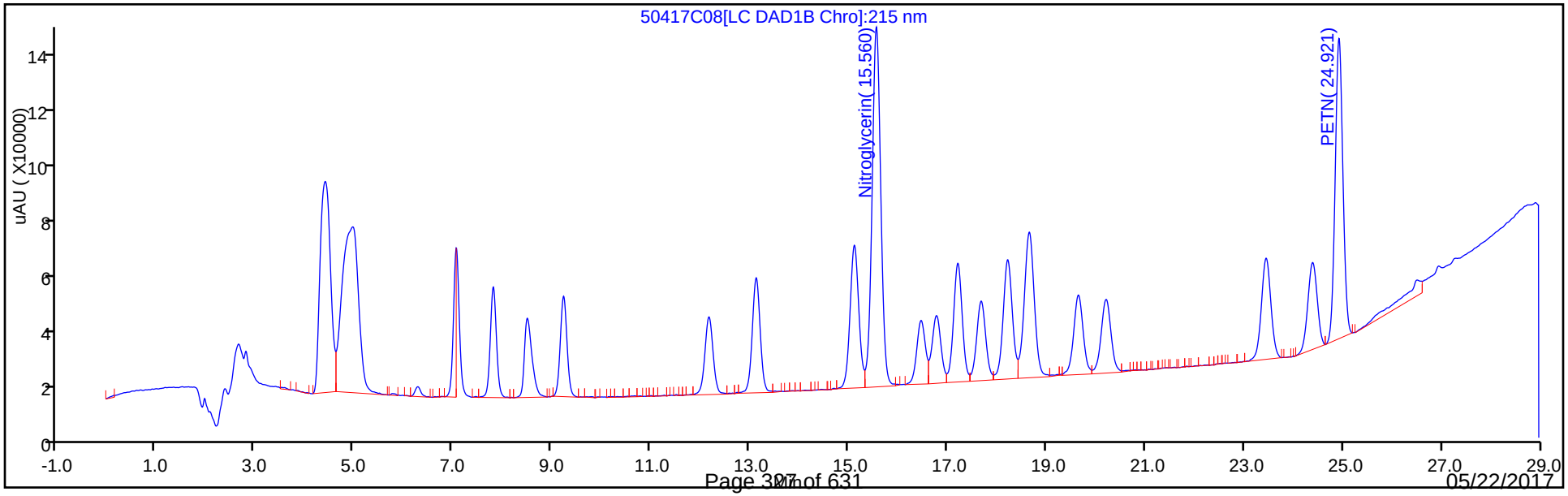
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C08.D

Injection Date:	04-May-2017 18:47:57	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C09.D
Lims ID: IC FULL LV 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 04-May-2017 19:22:52 ALS Bottle#: 4 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 6
Misc. Info.: 280-0058316-009
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:20 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:16:52

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.421	4.413	0.008	293301	0.7000	0.6566	
3 2,4-diamino-6-nitrotoluene	1	4.975	4.960	0.015	185327	0.7000	0.7176	
5 HMX	1	7.075	7.080	-0.005	122639	0.7000	0.7103	
4 2,4,6-Trinitrophenol	1	8.528	8.593	-0.065	111597	0.7000	0.7061	
7 RDX	1	9.221	9.253	-0.032	145563	0.7000	0.7127	
8 Nitrobenzene	1	12.161	12.193	-0.032	260237	0.7000	0.7455	
$ 9 1,2-Dinitrobenzene	1	13.128	13.153	-0.025	190289	0.7000	0.7056	
10 3,5-Dinitroaniline	1	15.161	15.173	-0.012	290535	0.7000	0.7022	
12 Nitroglycerin	2	15.601	15.613	-0.012	1100909	7.00	7.21	
11 1,3-Dinitrobenzene	1	15.601	15.613	-0.012	402165	0.7000	0.7012	
13 o-Nitrotoluene	1	16.521	16.526	-0.005	164737	0.7000	0.7337	
14 p-Nitrotoluene	1	16.835	16.846	-0.011	143434	0.7000	0.6858	
15 4-Amino-2,6-dinitrotoluene	1	17.281	17.293	-0.012	203636	0.7000	0.7053	
16 m-Nitrotoluene	1	17.741	17.753	-0.012	183852	0.7000	0.6804	
17 2-Amino-4,6-dinitrotoluene	1	18.295	18.313	-0.018	292028	0.7000	0.7087	
18 1,3,5-Trinitrobenzene	1	18.721	18.740	-0.019	302658	0.7000	0.7067	
19 2,6-Dinitrotoluene	1	19.708	19.726	-0.018	196359	0.7000	0.6979	
20 2,4-Dinitrotoluene	1	20.261	20.280	-0.019	381097	0.7000	0.7087	
21 Tetryl	1	23.441	23.447	-0.006	217537	0.7000	0.7094	
22 2,4,6-Trinitrotoluene	1	24.375	24.380	-0.005	251931	0.7000	0.7061	
23 PETN	2	24.901	24.907	-0.006	815546	7.00	7.20	

Reagents:

8330_ADDs_00010 Amount Added: 0.04 Units: mL
8330IntermStk_00050 Amount Added: 0.04 Units: mL

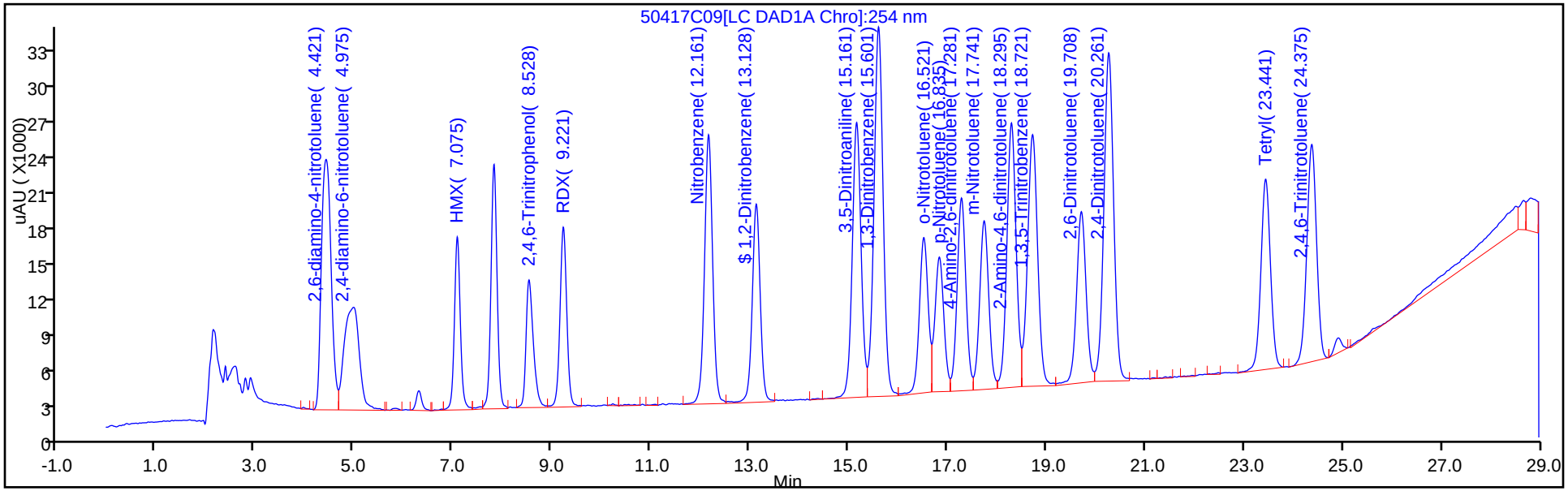
Report Date: 05-May-2017 08:41:21 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

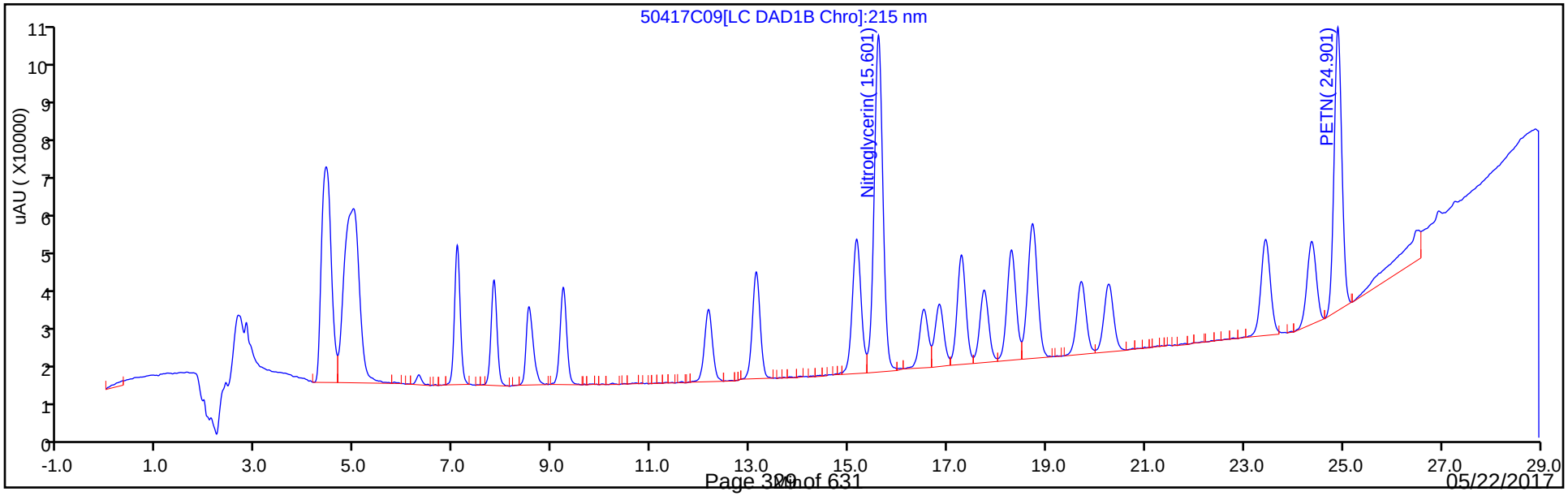
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C09.D

Injection Date:	04-May-2017 19:22:52	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C10.D
Lims ID: IC FULL LV 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 04-May-2017 19:57:51 ALS Bottle#: 5 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 5
Misc. Info.: 280-0058316-010
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:22 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:18:00

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.413	4.413	0.000	164905	0.4000	0.3817	
3 2,4-diamino-6-nitrotoluene	1	4.960	4.960	0.000	100403	0.4000	0.3725	
5 HMX	1	7.080	7.080	0.000	64090	0.4000	0.3697	
4 2,4,6-Trinitrophenol	1	8.593	8.593	0.000	60305	0.4000	0.3792	
7 RDX	1	9.253	9.253	0.000	76270	0.4000	0.3702	
8 Nitrobenzene	1	12.193	12.193	0.000	131749	0.4000	0.3746	
$ 9 1,2-Dinitrobenzene	1	13.153	13.153	0.000	97956	0.4000	0.3654	
10 3,5-Dinitroaniline	1	15.173	15.173	0.000	163889	0.4000	0.3917	
11 1,3-Dinitrobenzene	1	15.613	15.613	0.000	206844	0.4000	0.3593	
12 Nitroglycerin	2	15.613	15.613	0.000	567292	4.00	3.71	
13 o-Nitrotoluene	1	16.526	16.526	0.000	81181	0.4000	0.3615	
14 p-Nitrotoluene	1	16.846	16.846	0.000	71592	0.4000	0.3416	
15 4-Amino-2,6-dinitrotoluene	1	17.293	17.293	0.000	104909	0.4000	0.3604	
16 m-Nitrotoluene	1	17.753	17.753	0.000	90811	0.4000	0.3364	
17 2-Amino-4,6-dinitrotoluene	1	18.313	18.313	0.000	152049	0.4000	0.3677	
18 1,3,5-Trinitrobenzene	1	18.740	18.740	0.000	159704	0.4000	0.3712	
19 2,6-Dinitrotoluene	1	19.726	19.726	0.000	105183	0.4000	0.3706	
20 2,4-Dinitrotoluene	1	20.280	20.280	0.000	199052	0.4000	0.3706	
21 Tetryl	1	23.447	23.447	0.000	113476	0.4000	0.3685	
22 2,4,6-Trinitrotoluene	1	24.380	24.380	0.000	128608	0.4000	0.3622	
23 PETN	2	24.907	24.907	0.000	421550	4.00	3.73	

Reagents:

8330_ADDs_00010 Amount Added: 0.02 Units: mL
8330IntermStk_00050 Amount Added: 0.02 Units: mL

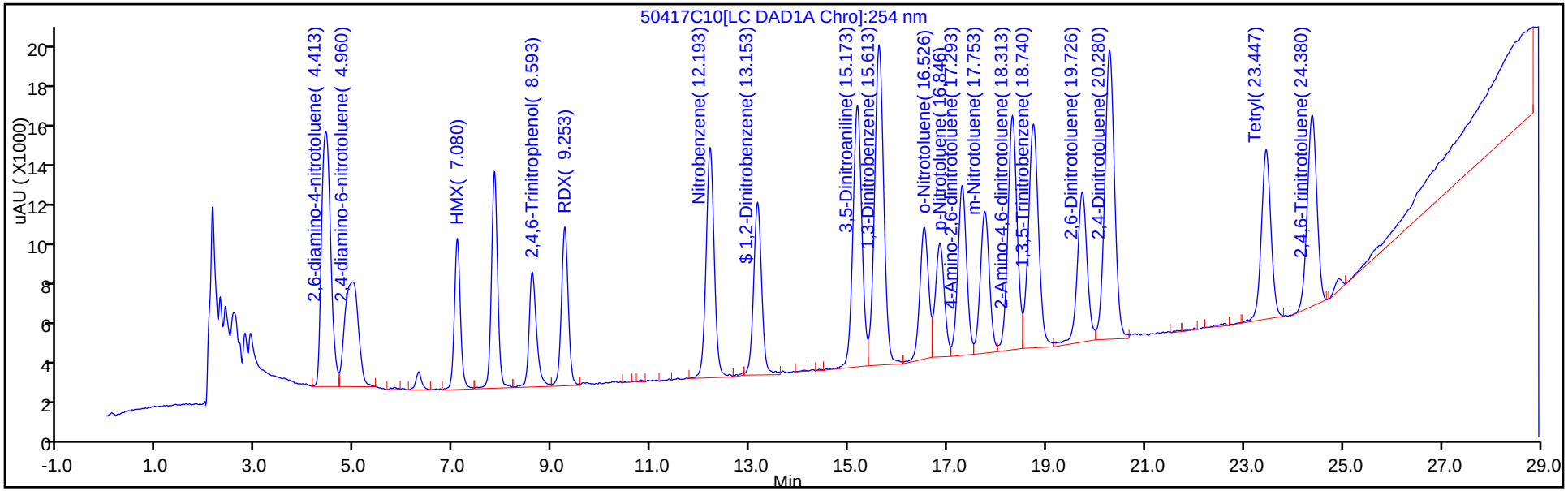
Report Date: 05-May-2017 08:41:23 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

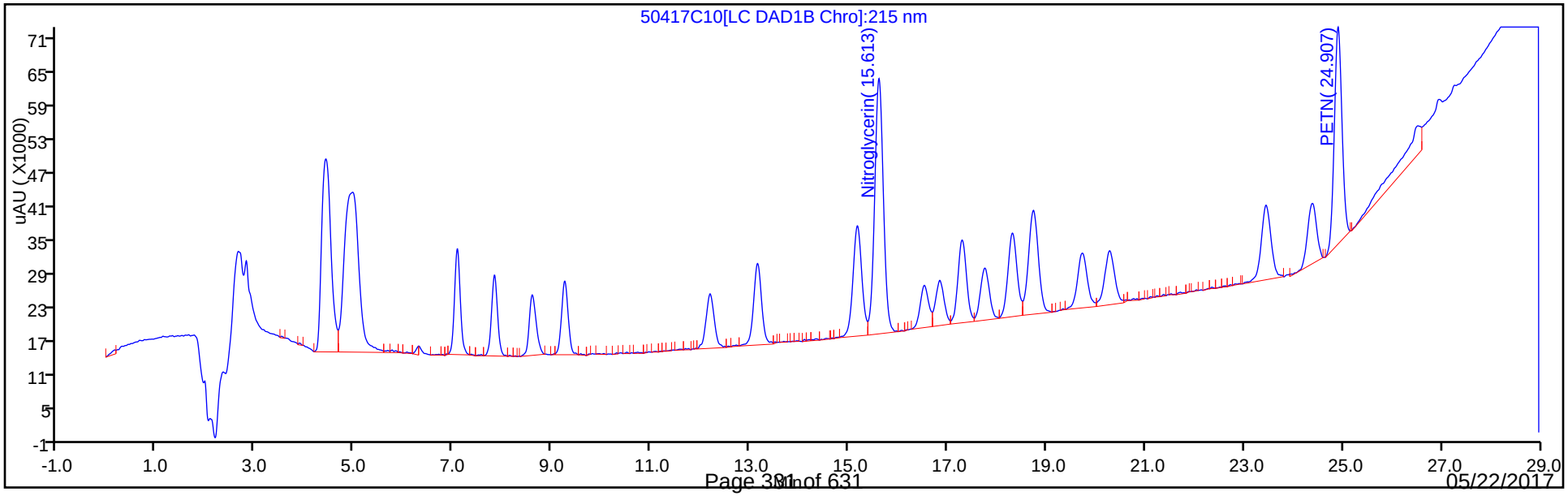
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C10.D

Injection Date:	04-May-2017 19:57:51	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C11.D
Lims ID: IC FULL LV 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 04-May-2017 20:32:44 ALS Bottle#: 6 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 4
Misc. Info.: 280-0058316-011
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:23 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:19:11

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.418	4.413	0.005	95271	0.2500	0.2326	
3 2,4-diamino-6-nitrotoluene	1	4.952	4.960	-0.008	58826	0.2500	0.2130	
5 HMX	1	7.078	7.080	-0.002	41798	0.2500	0.2400	
4 2,4,6-Trinitrophenol	1	8.618	8.593	0.025	38004	0.2500	0.2371	
7 RDX	1	9.252	9.253	-0.001	49821	0.2500	0.2395	
8 Nitrobenzene	1	12.192	12.193	-0.001	87662	0.2500	0.2473	
$ 9 1,2-Dinitrobenzene	1	13.145	13.153	-0.008	62826	0.2500	0.2360	
10 3,5-Dinitroaniline	1	15.132	15.173	-0.041	95684	0.2500	0.2244	
12 Nitroglycerin	2	15.572	15.613	-0.041	372159	2.50	2.43	
11 1,3-Dinitrobenzene	1	15.572	15.613	-0.041	136795	0.2500	0.2368	
13 o-Nitrotoluene	1	16.485	16.526	-0.041	52142	0.2500	0.2322	
14 p-Nitrotoluene	1	16.798	16.846	-0.048	45918	0.2500	0.2185	
15 4-Amino-2,6-dinitrotoluene	1	17.238	17.293	-0.055	67999	0.2500	0.2315	
16 m-Nitrotoluene	1	17.705	17.753	-0.048	59200	0.2500	0.2195	
17 2-Amino-4,6-dinitrotoluene	1	18.258	18.313	-0.055	97209	0.2500	0.2342	
18 1,3,5-Trinitrobenzene	1	18.692	18.740	-0.048	103706	0.2500	0.2398	
19 2,6-Dinitrotoluene	1	19.692	19.726	-0.034	68574	0.2500	0.2392	
20 2,4-Dinitrotoluene	1	20.252	20.280	-0.028	128665	0.2500	0.2389	
21 Tetryl	1	23.492	23.447	0.045	71987	0.2500	0.2327	
22 2,4,6-Trinitrotoluene	1	24.432	24.380	0.052	80049	0.2500	0.2268	
23 PETN	2	24.945	24.907	0.038	293818	2.50	2.60	

Reagents:

8330_ADDs_00010 Amount Added: 0.01 Units: mL
8330IntermStk_00050 Amount Added: 0.01 Units: mL

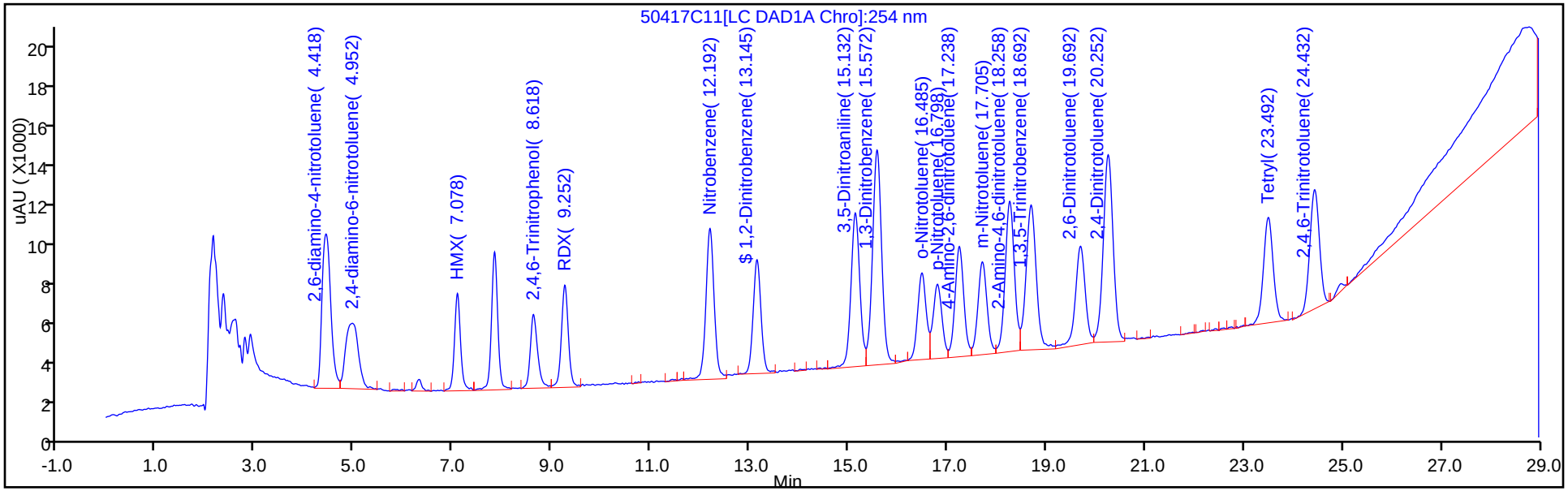
Report Date: 05-May-2017 08:41:24 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

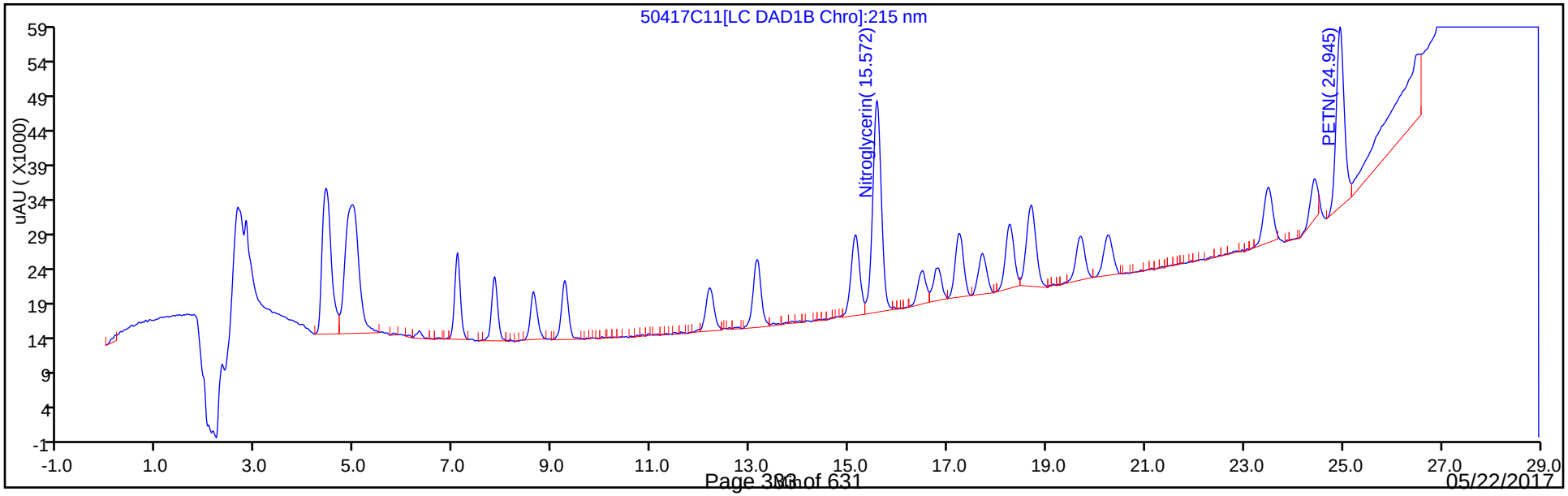
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C11.D

Injection Date:	04-May-2017 20:32:44	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C12.D
Lims ID: IC FULL LV 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 04-May-2017 21:07:44 ALS Bottle#: 7 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 3
Misc. Info.: 280-0058316-012
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:25 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:20:18

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.433	4.413	0.020	41609	0.1000	0.1177	
3 2,4-diamino-6-nitrotoluene	1	4.959	4.960	-0.001	27712	0.1000	0.0971	
5 HMX	1	7.079	7.080	-0.001	18454	0.1000	0.1041	
4 2,4,6-Trinitrophenol	1	8.639	8.593	0.046	16285	0.1000	0.0987	
7 RDX	1	9.232	9.253	-0.021	23056	0.1000	0.1072	
8 Nitrobenzene	1	12.186	12.193	-0.007	32084	0.1000	0.0868	
$ 9 1,2-Dinitrobenzene	1	13.159	13.153	0.006	28490	0.1000	0.1095	
10 3,5-Dinitroaniline	1	15.199	15.173	0.026	42218	0.1000	0.0933	
11 1,3-Dinitrobenzene	1	15.632	15.613	0.019	58894	0.1000	0.1004	
12 Nitroglycerin	2	15.619	15.613	0.006	162519	1.00	1.05	
13 o-Nitrotoluene	1	16.539	16.526	0.013	19015	0.1000	0.0847	
14 p-Nitrotoluene	1	16.866	16.846	0.020	16939	0.1000	0.0797	
15 4-Amino-2,6-dinitrotoluene	1	17.306	17.293	0.013	28811	0.1000	0.0946	
16 m-Nitrotoluene	1	17.766	17.753	0.013	21559	0.1000	0.0803	
17 2-Amino-4,6-dinitrotoluene	1	18.326	18.313	0.013	40985	0.1000	0.0972	
18 1,3,5-Trinitrobenzene	1	18.752	18.740	0.012	44072	0.1000	0.0998	
19 2,6-Dinitrotoluene	1	19.726	19.726	0.000	29811	0.1000	0.1000	
20 2,4-Dinitrotoluene	1	20.272	20.280	-0.008	58175	0.1000	0.1064	
21 Tetryl	1	23.459	23.447	0.012	31435	0.1000	0.0998	
22 2,4,6-Trinitrotoluene	1	24.399	24.380	0.019	33414	0.1000	0.0968	
23 PETN	2	24.926	24.907	0.019	108557	1.00	0.9688	

Reagents:

8330_ADDs_00010 Amount Added: 0.01 Units: mL
8330IntermStk_00050 Amount Added: 0.01 Units: mL

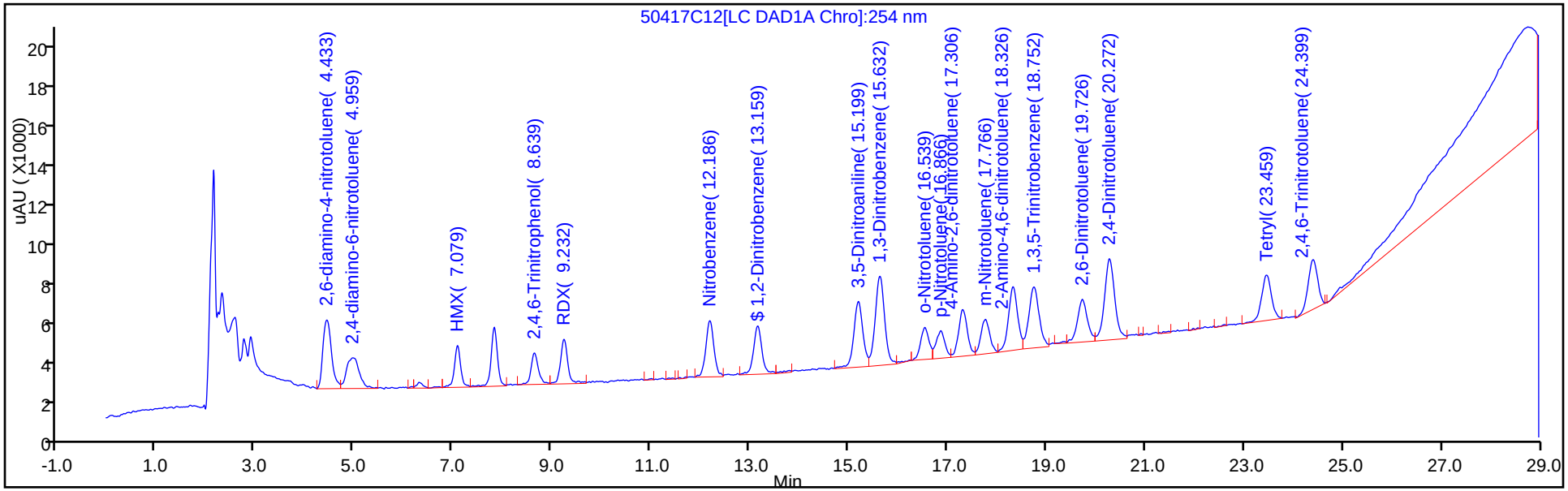
Report Date: 05-May-2017 08:41:25 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

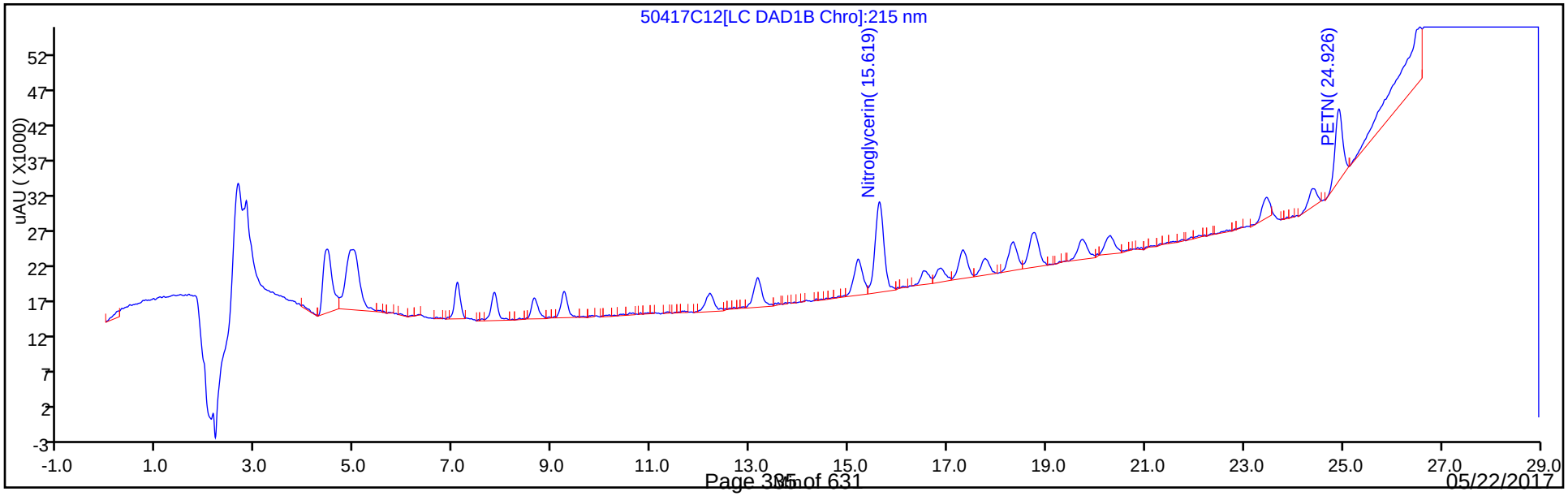
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C12.D

Injection Date:	04-May-2017 21:07:44	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C13.D
Lims ID: IC FULL LV 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 04-May-2017 21:42:42 ALS Bottle#: 8 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 2
Misc. Info.: 280-0058316-013
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:26 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:21:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.434	4.413	0.021	44087	0.0500	0.1230	
3 2,4-diamino-6-nitrotoluene	1	4.980	4.960	0.020	27324	0.0500	0.0957	
5 HMX	1	7.114	7.080	0.034	9548	0.0500	0.0523	
4 2,4,6-Trinitrophenol	1	8.727	8.593	0.134	9440	0.0500	0.0551	
7 RDX	1	9.300	9.253	0.047	12919	0.0500	0.0571	
8 Nitrobenzene	1	12.214	12.193	0.021	17520	0.0500	0.0448	
$ 9 1,2-Dinitrobenzene	1	13.160	13.153	0.007	17540	0.0500	0.0692	
10 3,5-Dinitroaniline	1	15.160	15.173	-0.013	42769	0.0500	0.0947	
12 Nitroglycerin	2	15.587	15.613	-0.026	90245	0.5000	0.5786	
11 1,3-Dinitrobenzene	1	15.594	15.613	-0.019	32037	0.0500	0.0534	
13 o-Nitrotoluene	1	16.507	16.526	-0.019	10905	0.0500	0.0486	
14 p-Nitrotoluene	1	16.840	16.846	-0.006	10361	0.0500	0.0481	
15 4-Amino-2,6-dinitrotoluene	1	17.274	17.293	-0.019	18249	0.0500	0.0577	
16 m-Nitrotoluene	1	17.740	17.753	-0.013	13419	0.0500	0.0502	
17 2-Amino-4,6-dinitrotoluene	1	18.287	18.313	-0.026	24488	0.0500	0.0570	
18 1,3,5-Trinitrobenzene	1	18.740	18.740	0.000	26594	0.0500	0.0588	
19 2,6-Dinitrotoluene	1	19.734	19.726	0.008	20355	0.0500	0.0661	
20 2,4-Dinitrotoluene	1	20.294	20.280	0.014	36842	0.0500	0.0662	
21 Tetryl	1	23.540	23.447	0.093	17222	0.0500	0.0533	
22 2,4,6-Trinitrotoluene	1	24.500	24.380	0.120	16831	0.0500	0.0505	
23 PETN	2	24.987	24.907	0.080	55317	0.5000	0.4993	

Reagents:

8330_ADDs_00010 Amount Added: 0.00 Units: mL
8330IntermStk_00050 Amount Added: 0.00 Units: mL

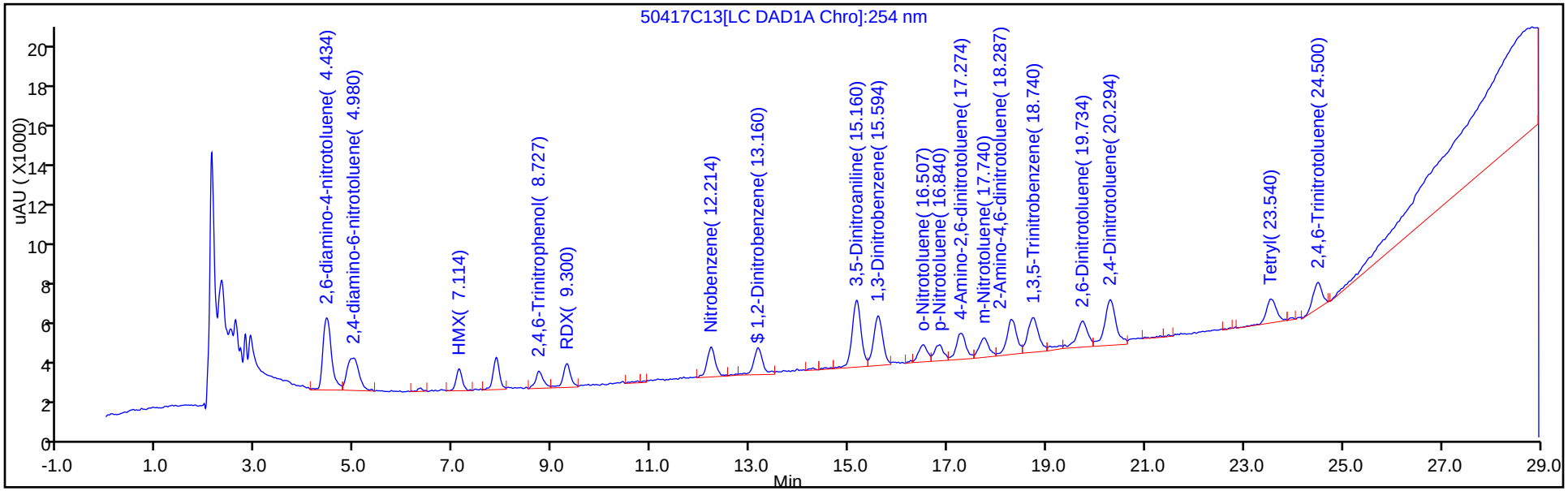
Report Date: 05-May-2017 08:41:27 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

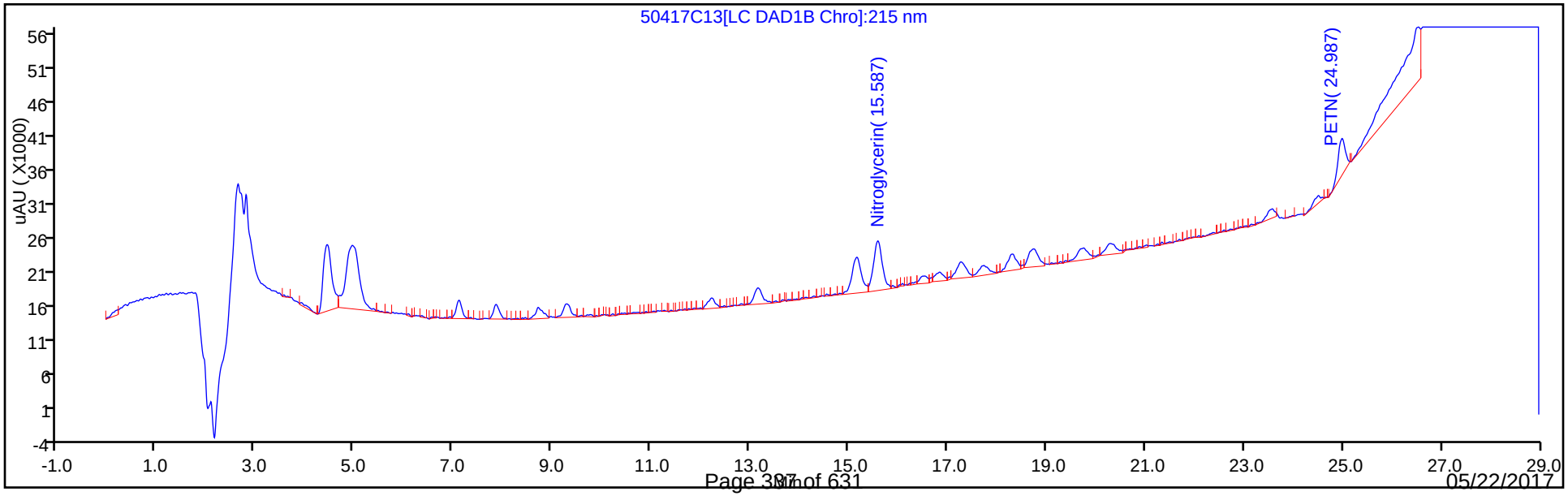
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C13.D

Injection Date:	04-May-2017 21:42:42	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D
Lims ID: IC FULL LV 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 04-May-2017 22:17:40 ALS Bottle#: 9 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 1
Misc. Info.: 280-0058316-014
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 08:41:28 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK017

First Level Reviewer: colleea Date: 05-May-2017 06:23:39

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.427	4.413	0.014	4712	0.0100	0.0387	
3 2,4-diamino-6-nitrotoluene	1	4.940	4.960	-0.020	2105	0.0100	0.003794	
5 HMX	1	7.060	7.080	-0.020	2283	0.0100	0.0100	
4 2,4,6-Trinitrophenol	1	8.687	8.593	0.094	2359	0.0100	0.0099	
7 RDX	1	9.234	9.253	-0.019	3143	0.0100	0.008812	
8 Nitrobenzene	1	12.200	12.193	0.007	5600	0.0100	0.0103	
$ 9 1,2-Dinitrobenzene	1	13.180	13.153	0.027	4028	0.0100	0.0194	
10 3,5-Dinitroaniline	1	15.220	15.173	0.047	7221	0.0100	0.007502	
11 1,3-Dinitrobenzene	1	15.607	15.613	-0.006	7577	0.0100	0.0106	
12 Nitroglycerin	2	15.620	15.613	0.007	15081	0.1000	0.0856	
13 o-Nitrotoluene	1	16.560	16.526	0.034	2437	0.0100	0.0109	
14 p-Nitrotoluene	1	16.774	16.846	-0.072	3420	0.0100	0.0149	
15 4-Amino-2,6-dinitrotoluene	1	17.320	17.293	0.027	4718	0.0100	0.0104	
16 m-Nitrotoluene	1	17.767	17.753	0.014	3789	0.0100	0.0146	
17 2-Amino-4,6-dinitrotoluene	1	18.314	18.313	0.001	5102	0.0100	0.009789	
18 1,3,5-Trinitrobenzene	1	18.727	18.740	-0.013	5469	0.0100	0.009173	
19 2,6-Dinitrotoluene	1	19.774	19.726	0.048	4129	0.0100	0.007832	
20 2,4-Dinitrotoluene	1	20.320	20.280	0.040	7070	0.0100	0.0100	
21 Tetryl	1	23.467	23.447	0.020	4181	0.0100	0.0106	
22 2,4,6-Trinitrotoluene	1	24.620	24.380	0.240	2947	0.0100	0.0118	M
23 PETN	2	25.274	24.907	0.367	7909	0.1000	0.0812	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330_ADDs_00010	Amount Added:	0.00	Units: mL
8330IntermStk_00050	Amount Added:	0.00	Units: mL

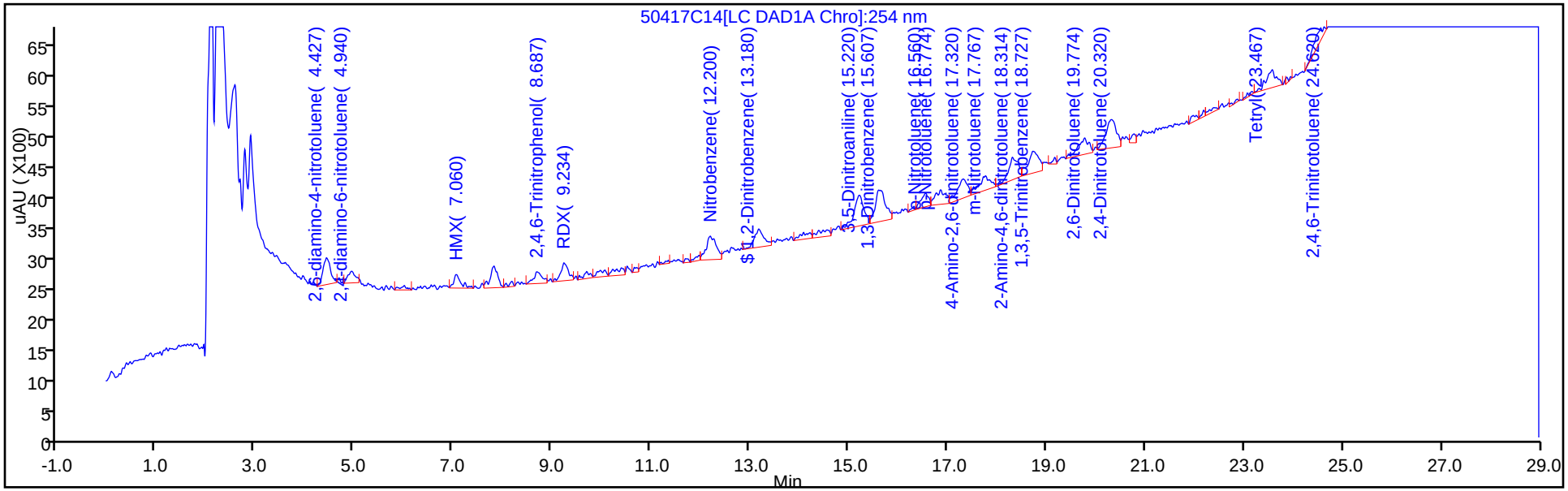
Report Date: 05-May-2017 08:41:29 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

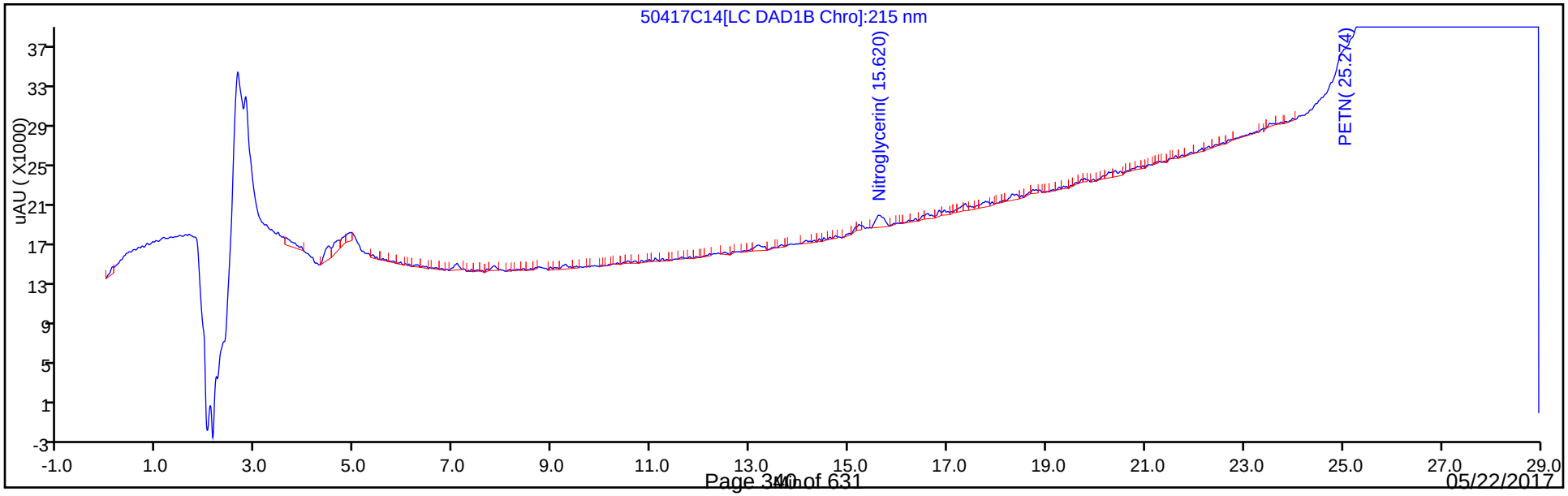
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Injection Date:	04-May-2017 22:17:40	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	IC FULL LV 1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

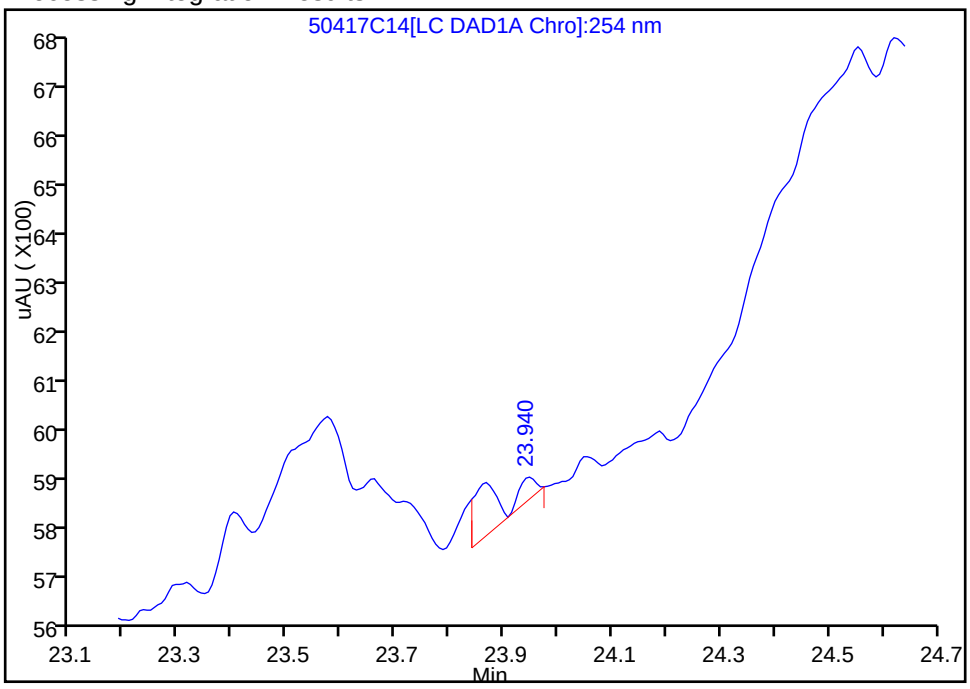
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D				
Injection Date:	04-May-2017 22:17:40	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

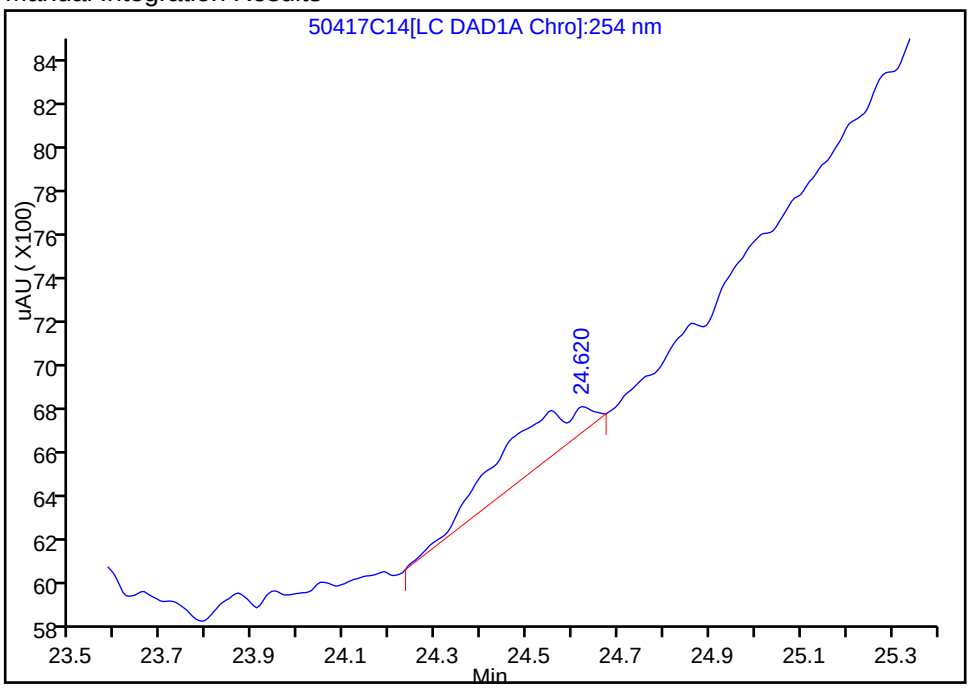
Processing Integration Results

RT: 23.94
Area: 373
Amount: 0.009800
Amount Units: ug/ml



Manual Integration Results

RT: 24.62
Area: 2947
Amount: 0.011803
Amount Units: ug/ml



Reviewer: colleea, 05-May-2017 06:23:05

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

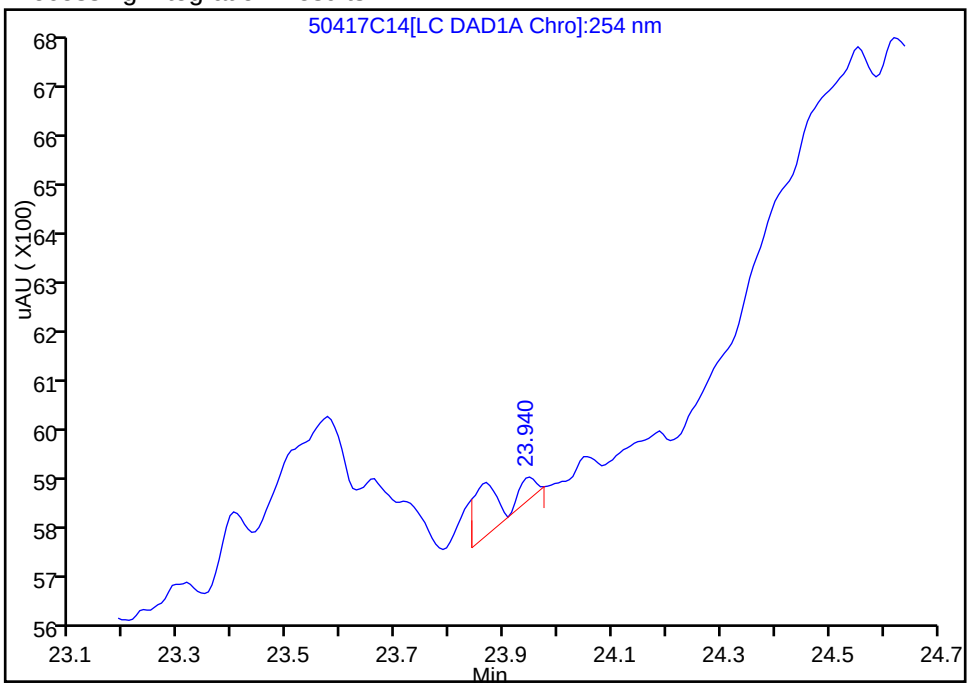
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D				
Injection Date:	04-May-2017 22:17:40	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

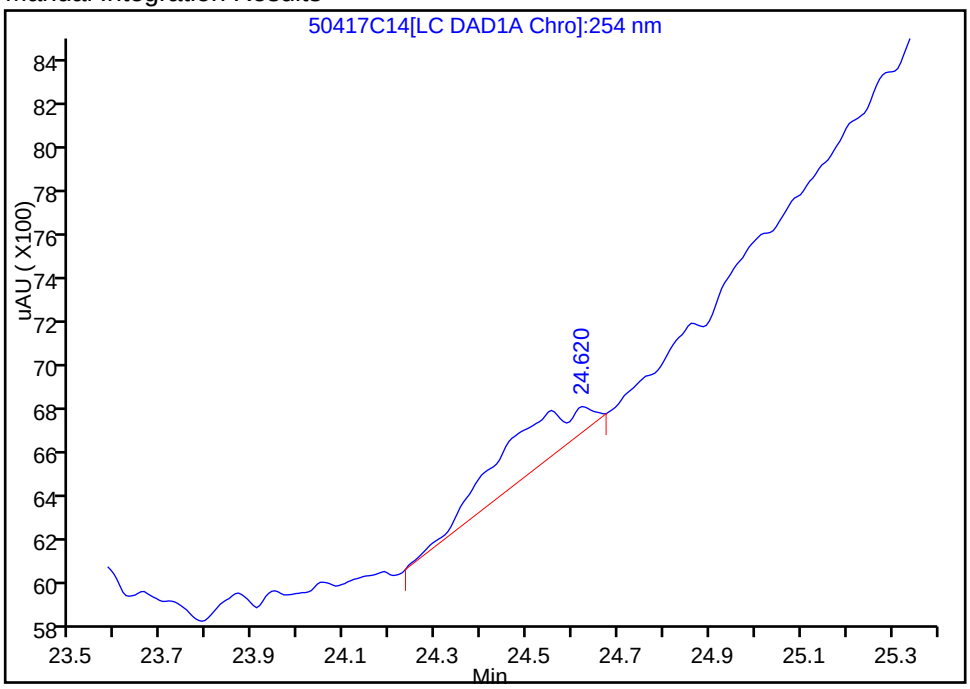
Processing Integration Results

RT: 23.94
Area: 373
Amount: 0.009800
Amount Units: ug/ml



Manual Integration Results

RT: 24.62
Area: 2947
Amount: 0.011803
Amount Units: ug/ml



Reviewer: colleea, 05-May-2017 06:23:19

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

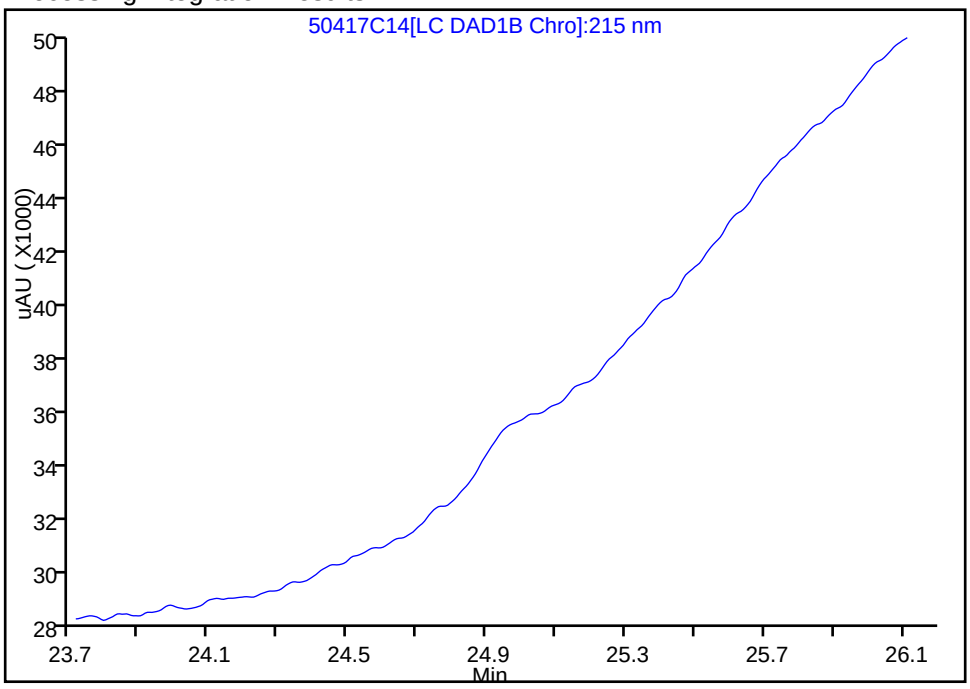
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D
Injection Date: 04-May-2017 22:17:40 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: asc ALS Bottle#: 9 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Detector LC DAD1B, 215 nm

23 PETN, CAS: 78-11-5

Signal: 1

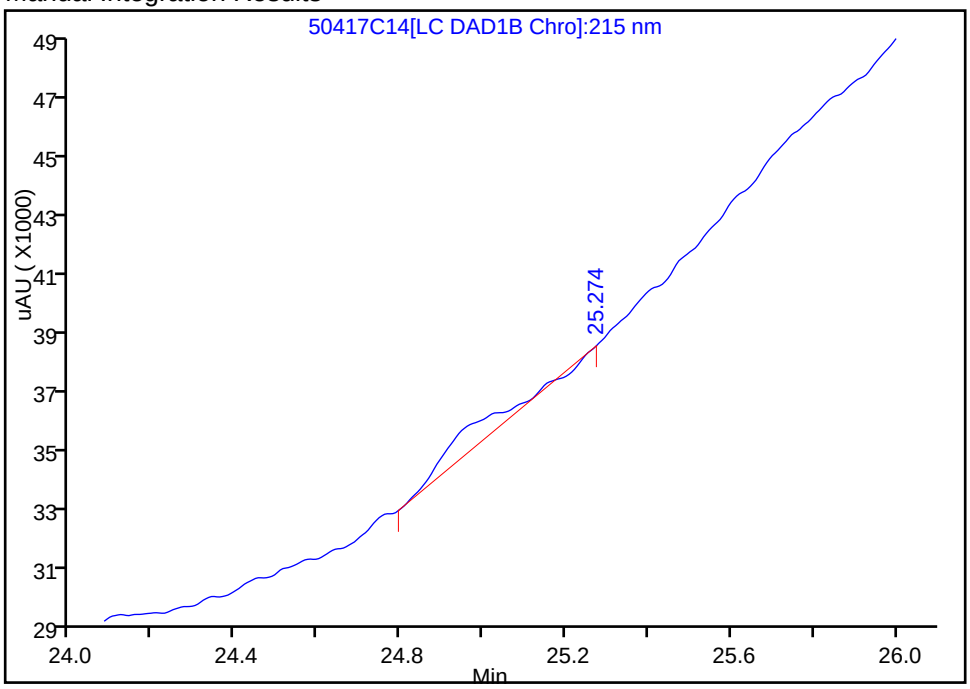
Not Detected
Expected RT: 24.91

Processing Integration Results



Manual Integration Results

RT: 25.27
Area: 7909
Amount: 0.081240
Amount Units: ug/ml



Reviewer: colleea, 05-May-2017 06:23:27
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Denver

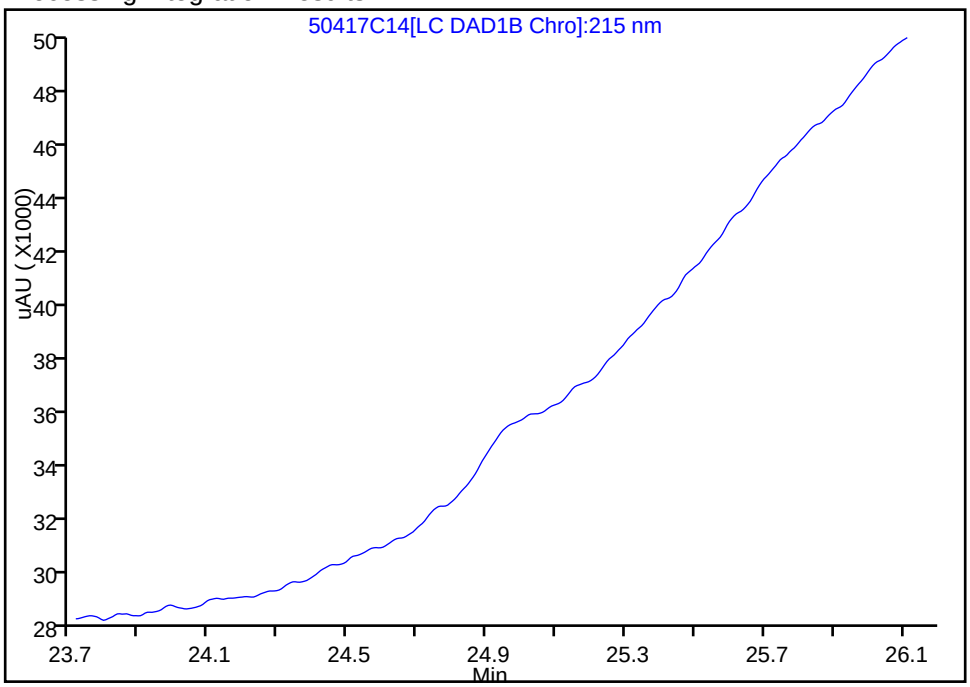
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D
Injection Date: 04-May-2017 22:17:40 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: asc ALS Bottle#: 9 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Detector LC DAD1B, 215 nm

23 PETN, CAS: 78-11-5

Signal: 1

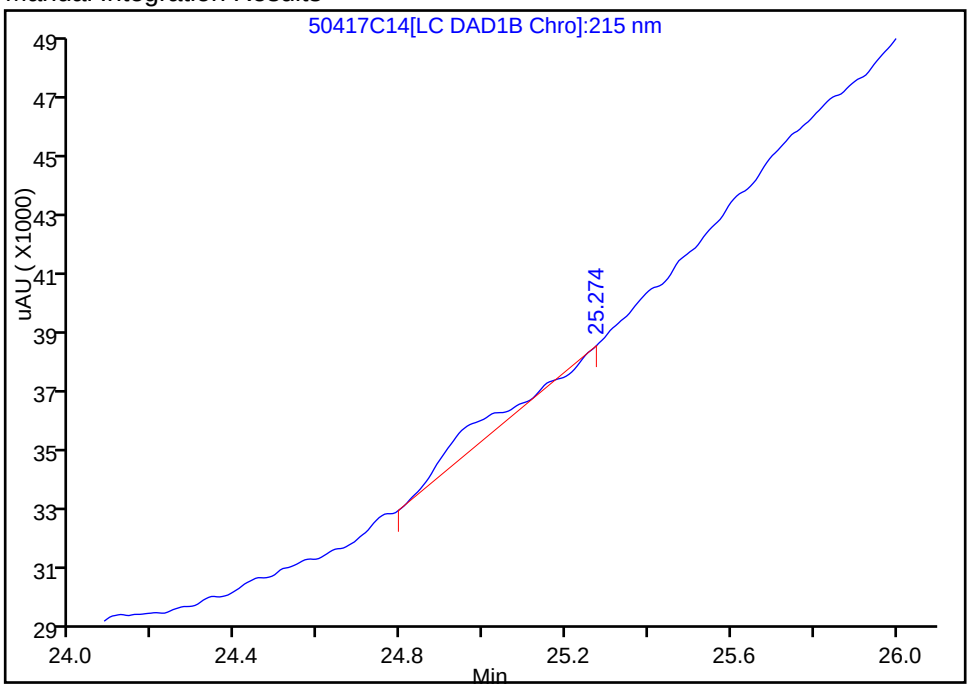
Not Detected
Expected RT: 24.91

Processing Integration Results



Manual Integration Results

RT: 25.27
Area: 7909
Amount: 0.081240
Amount Units: ug/ml



Reviewer: colleea, 05-May-2017 06:23:34
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 372816

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2017 13:48 Calibration End Date: 05/09/2017 16:28 Calibration ID: 29103

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-372816/14	05091714.D
Level 2	IC 280-372816/13	05091713.D
Level 3	IC 280-372816/12	05091712.D
Level 4	IC 280-372816/11	05091711.D
Level 5	IC 280-372816/10	05091710.D
Level 6	IC 280-372816/9	05091709.D
Level 7	IC 280-372816/8	05091708.D
Level 8	IC 280-372816/7	05091707.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	6.650	6.651	6.652	6.653	6.648	6.648	6.652	6.646			6.505 - 6.805	6.650
RDX	7.770	7.771	7.766	7.766	7.761	7.762	7.766	7.759			7.619 - 7.919	7.765
Picric acid	8.057	8.058	8.046	8.039	8.021	8.008	7.999	7.952			7.885 - 8.185	8.023
1,3,5-Trinitrobenzene	8.944	8.945	8.932	8.933	8.928	8.928	8.926	8.926			8.792 - 9.092	8.933
1,3-Dinitrobenzene	9.584	9.591	9.579	9.579	9.574	9.568	9.565	9.572			9.438 - 9.738	9.577
Nitrobenzene	9.970	9.978	9.959	9.959	9.954	9.955	9.945	9.952			9.818 - 10.118	9.959
Tetryl	10.297	10.305	10.279	10.286	10.274	10.275	10.259	10.272			10.145 - 10.445	10.281
Nitroglycerin	10.810	10.818	10.792	10.793	10.781	10.781	10.772	10.772			10.652 - 10.952	10.790
2,4,6-Trinitrotoluene	11.277	11.278	11.259	11.259	11.241	11.241	11.232	11.239			11.168 - 11.368	11.253
4-Amino-2,6-dinitrotoluene	11.417	11.425	11.399	11.413	11.388	11.388	11.379	11.385			11.315 - 11.515	11.399
2-Amino-4,6-dinitrotoluene	11.710	11.718	11.692	11.699	11.681	11.675	11.665	11.672			11.602 - 11.802	11.689
2,6-Dinitrotoluene	11.870	11.871	11.846	11.859	11.834	11.835	11.825	11.832			11.762 - 11.962	11.847
2,4-Dinitrotoluene	12.064	12.071	12.046	12.053	12.028	12.028	12.019	12.025			11.955 - 12.155	12.042
2-Nitrotoluene	12.897	12.911	12.879	12.886	12.861	12.861	12.852	12.859			12.738 - 13.038	12.876
4-Nitrotoluene	13.337	13.351	13.312	13.319	13.294	13.295	13.285	13.292			13.178 - 13.478	13.311
3-Nitrotoluene	13.937	13.938	13.899	13.913	13.888	13.888	13.879	13.885			13.778 - 14.078	13.903
PETN	15.030	15.038	14.992	15.006	14.981	14.968	14.965	14.972			14.885 - 15.185	14.994
1,2-Dinitrobenzene	8.764	8.771	8.759	8.759	8.754	8.755	8.752	8.752			8.619 - 8.919	8.758

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 372816

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2017 13:48 Calibration End Date: 05/09/2017 16:28 Calibration ID: 29103

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-372816/14	05091714.D
Level 2	IC 280-372816/13	05091713.D
Level 3	IC 280-372816/12	05091712.D
Level 4	IC 280-372816/11	05091711.D
Level 5	IC 280-372816/10	05091710.D
Level 6	IC 280-372816/9	05091709.D
Level 7	IC 280-372816/8	05091708.D
Level 8	IC 280-372816/7	05091707.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	92850 88660	89820 87274	85760 86568	82652 87588	Lin1	42.2228972	87267.7711							1.0000		0.9900
RDX	114150 106040	111820 106223	99820 104630	96292 106758	Ave		105871.780				5.9		20.0			
Picric acid	111350 89728	107960 85323	88660 87036	79508 90431	Lin1	387.010220	88396.4996							0.9980		0.9900
1,3,5-Trinitrobenzene	455300 246608	332860 239219	265130 237447	231888 241344	Lin1	4024.43938	236696.499							0.9990		0.9900
1,3-Dinitrobenzene	308150 296118	298640 292143	277060 292172	272656 299404	Ave		292024.394				4.4		20.0			
Nitrobenzene	195550 160435	159440 164019	147550 158504	139376 178500	Lin1	-668.62048	171989.638							0.9950		0.9900
Tetryl	194600 166080	180400 170554	161580 169899	154124 170520	Lin1	187.329313	168758.879							0.9990		0.9900
Nitroglycerin	81845 71997	75704 70498	68308 70256	65564 71054	Lin2	2559.86274	68908.3128							0.9980		0.9900
2,4,6-Trinitrotoluene	192950 188183	190600 183617	171470 189244	170944 195275	Ave		184719.835				5.4		20.0			
4-Amino-2,6-dinitrotoluene	210900 169890	193760 171440	172810 165042	158520 167228	Lin	724.537392	167109.014							1.0000		0.9900
2-Amino-4,6-dinitrotoluene	219950 209883	213180 209870	197980 209562	193452 216305	Ave		208659.900				4.6		20.0			
2,6-Dinitrotoluene	155750 153110	155640 150694	142200 149657	138296 153377	Ave		149866.784				4.6		20.0			
2,4-Dinitrotoluene	313700 300460	298800 296739	277010 294945	271480 301415	Ave		294229.053				5.0		20.0			
2-Nitrotoluene	208750 103488	139380 102869	116910 98695	98360 113080	Lin2	2145.98710	99040.5852							0.9930		0.9900

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.: 280-96291-1 Analy Batch No.: 372816

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2017 13:48 Calibration End Date: 05/09/2017 16:28 Calibration ID: 29103

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	131900 90460	106040 91489	92100 90118	84316 100593	Lin2	825.934122	89134.8272							0.9940		0.9900
3-Nitrotoluene	141000 107963	110240 110406	100750 108155	97624 125165	Lin1	-473.42720	119280.595							0.9930		0.9900
PETN	61410 77440	73356 77178	70825 77160	70375 78700	Lin2	-2951.0992	76478.6287							0.9980		0.9900
1,2-Dinitrobenzene	155500 139573	150320 137531	135760 136820	127732 140109	Lin2	420.464309	135626.588							0.9980		0.9900

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.: 280-96291-1 Analy Batch No.: 372816

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2017 13:48 Calibration End Date: 05/09/2017 16:28 Calibration ID: 29103

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-372816/14	05091714.D
Level 2	IC 280-372816/13	05091713.D
Level 3	IC 280-372816/12	05091712.D
Level 4	IC 280-372816/11	05091711.D
Level 5	IC 280-372816/10	05091710.D
Level 6	IC 280-372816/9	05091709.D
Level 7	IC 280-372816/8	05091708.D
Level 8	IC 280-372816/7	05091707.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	Lin1	1857 61092	4491 86568	8576 218969	20663	35464	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	2283 74356	5591 104630	9982 266894	24073	42416	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Lin1	2227 59726	5398 87036	8866 226078	19877	35891	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Lin1	9106 167453	16643 237447	26513 603361	57972	98643	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Ave	6163 204500	14932 292172	27706 748511	68164	118447	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Lin1	3911 114813	7972 158504	14755 446249	34844	64174	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Tetryl	Lin1	3892 119388	9020 169899	16158 426301	38531	66432	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Lin2	16369 493483	37852 702557	68308 1776338	163910	287988	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2,4,6-Trinitrotoluene	Ave	3859 128532	9530 189244	17147 488188	42736	75273	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
4-Amino-2,6-dinitrotoluene	Lin	4218 120008	9688 165042	17281 418069	39630	67956	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2-Amino-4,6-dinitrotoluene	Ave	4399 146909	10659 209562	19798 540762	48363	83953	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,6-Dinitrotoluene	Ave	3115 105486	7782 149657	14220 383443	34574	61244	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,4-Dinitrotoluene	Ave	6274 207717	14940 294945	27701 753537	67870	120184	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2-Nitrotoluene	Lin2	4175 72008	6969 98695	11691 282700	24590	41395	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
4-Nitrotoluene	Lin2	2638 64042	5302 90118	9210 251482	21079	36184	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-96291-1 Analy Batch No.: 372816

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2017 13:48 Calibration End Date: 05/09/2017 16:28 Calibration ID: 29103

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	Lin1	2820 77284	5512 108155	10075 312912	24406	43185	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
PETN	Lin2	12282 540247	36678 771604	70825 1967508	175937	309758	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Lin2	3110 96272	7516 136820	13576 350273	31933	55829	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:

Ave = Average
Lin = Linear
Lin1 = Linear 1/conc
Lin2 = Linear 1/conc^2

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091707.D
Lims ID: IC MAIN L8
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 09-May-2017 13:48:25 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L8
Misc. Info.: 280-0058475-007
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:29 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 14:28:08

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.646	6.655	-0.009	218969	2.50	2.51	
4 MNX	1	7.346	7.358	-0.012	328966	2472.5	2672.8	
5 RDX	1	7.759	7.769	-0.010	266894	2.50	2.52	
6 2,4,6-Trinitrophenol	1	7.952	8.035	-0.083	226078	2.50	2.55	
$ 7 1,2-Dinitrobenzene	1	8.752	8.769	-0.017	350273	2.50	2.58	
8 1,3,5-Trinitrobenzene	1	8.926	8.942	-0.016	603361	2.50	2.53	
9 1,3-Dinitrobenzene	1	9.572	9.588	-0.016	748511	2.50	2.56	
11 Nitrobenzene	1	9.952	9.968	-0.016	446249	2.50	2.60	
12 Tetryl	1	10.272	10.295	-0.023	426301	2.50	2.52	
13 Nitroglycerin	2	10.772	10.802	-0.030	1776338	25.0	25.7	
14 2,4,6-Trinitrotoluene	1	11.239	11.268	-0.029	488188	2.50	2.64	
15 4-Amino-2,6-dinitrotoluene	1	11.385	11.415	-0.030	418069	2.50	2.50	
16 2-Amino-4,6-dinitrotoluene	1	11.672	11.702	-0.030	540762	2.50	2.59	
17 2,6-Dinitrotoluene	1	11.832	11.862	-0.030	383443	2.50	2.56	
18 2,4-Dinitrotoluene	1	12.025	12.055	-0.030	753537	2.50	2.56	
19 o-Nitrotoluene	1	12.859	12.888	-0.029	282700	2.50	2.83	
20 p-Nitrotoluene	1	13.292	13.328	-0.036	251482	2.50	2.81	
21 m-Nitrotoluene	1	13.885	13.928	-0.043	312912	2.50	2.63	
22 PETN	2	14.972	15.035	-0.063	1967508	25.0	25.8	

Reagents:

8330IntermStk_00051 Amount Added: 0.13 Units: mL

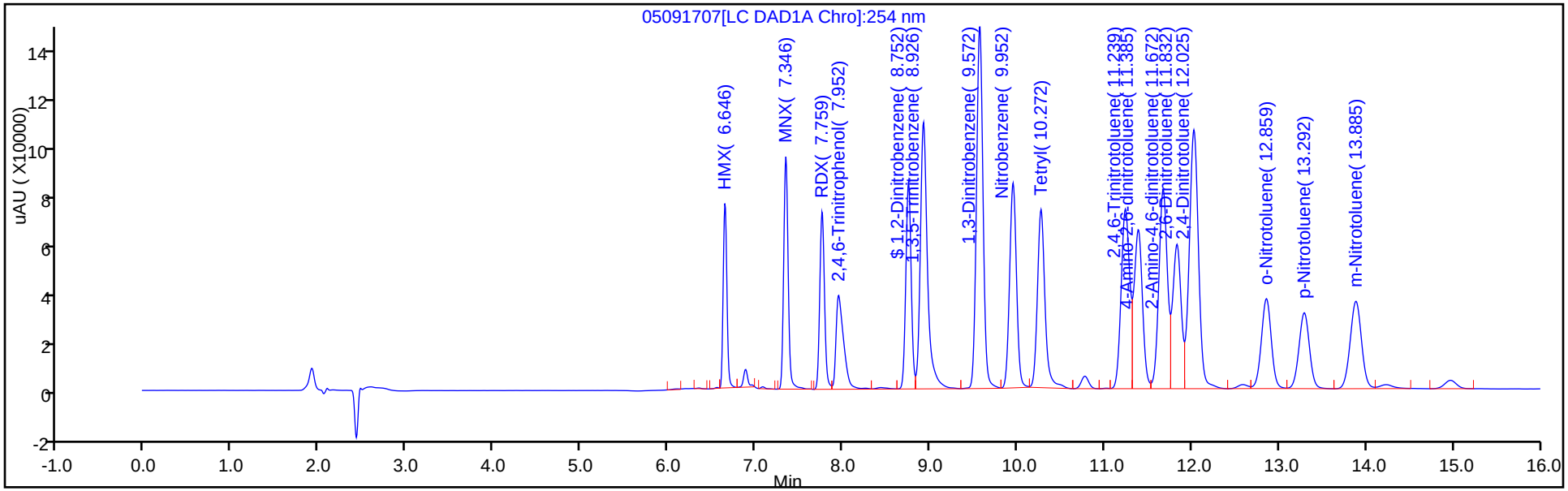
Report Date: 10-May-2017 09:49:29 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

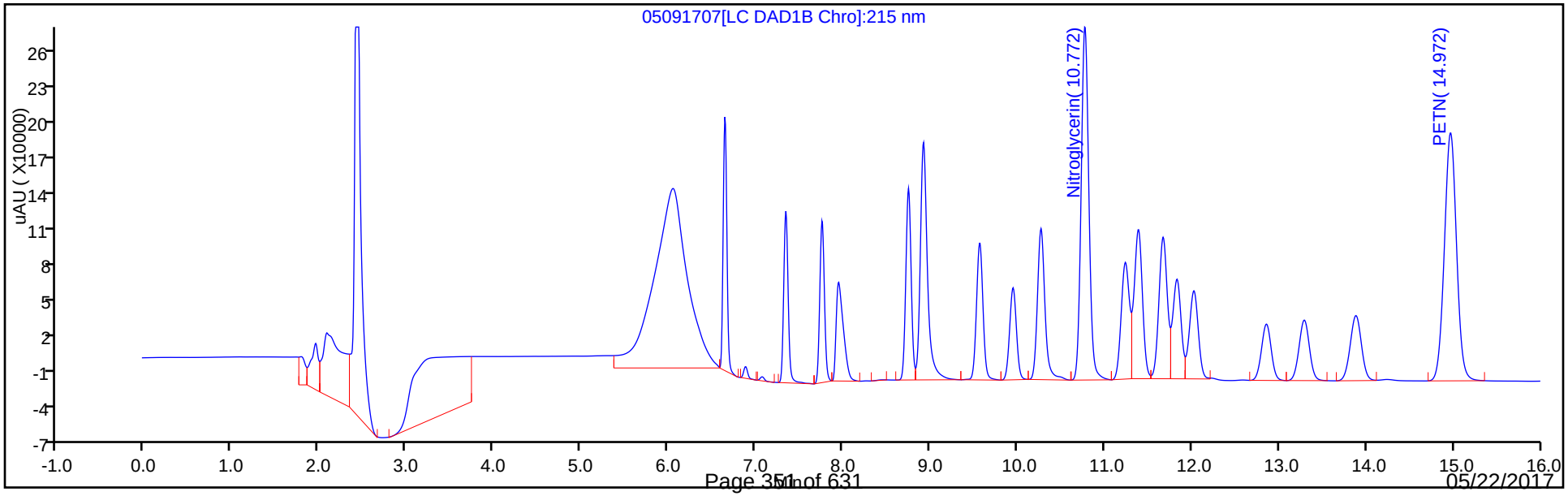
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091707.D

Injection Date:	09-May-2017 13:48:25	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
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\20170509-58475.b\05091708.D
Lims ID: IC MAIN L7
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 09-May-2017 14:11:20 ALS Bottle#: 3 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L7
Misc. Info.: 280-0058475-008
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:30 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 15:07:02

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.652	6.655	-0.003	86568	1.00	0.99	
	4 MNX	1	7.346	7.358	-0.012	122750	989.0	999.7	M
	5 RDX	1	7.766	7.769	-0.003	104630	1.00	0.99	
	6 2,4,6-Trinitrophenol	1	7.999	8.035	-0.036	87036	1.00	0.9783	
$	7 1,2-Dinitrobenzene	1	8.752	8.769	-0.017	136820	1.00	1.01	
	8 1,3,5-Trinitrobenzene	1	8.926	8.942	-0.016	237447	1.00	0.9872	
	9 1,3-Dinitrobenzene	1	9.565	9.588	-0.023	292172	1.00	1.00	
	11 Nitrobenzene	1	9.945	9.968	-0.023	158504	1.00	0.9357	
	12 Tetryl	1	10.259	10.295	-0.036	169899	1.00	1.01	
	13 Nitroglycerin	2	10.772	10.802	-0.030	702557	10.0	10.2	
	14 2,4,6-Trinitrotoluene	1	11.232	11.268	-0.036	189244	1.00	1.02	
	15 4-Amino-2,6-dinitrotoluene	1	11.379	11.415	-0.036	165042	1.00	0.9882	
	16 2-Amino-4,6-dinitrotoluene	1	11.665	11.702	-0.037	209562	1.00	1.00	
	17 2,6-Dinitrotoluene	1	11.825	11.862	-0.037	149657	1.00	1.00	
	18 2,4-Dinitrotoluene	1	12.019	12.055	-0.036	294945	1.00	1.00	
	19 o-Nitrotoluene	1	12.852	12.888	-0.036	98695	1.00	0.9817	
	20 p-Nitrotoluene	1	13.285	13.328	-0.043	90118	1.00	1.00	
	21 m-Nitrotoluene	1	13.879	13.928	-0.049	108155	1.00	0.9198	
	22 PETN	2	14.965	15.035	-0.070	771604	10.0	10.1	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00051 Amount Added: 0.05 Units: mL

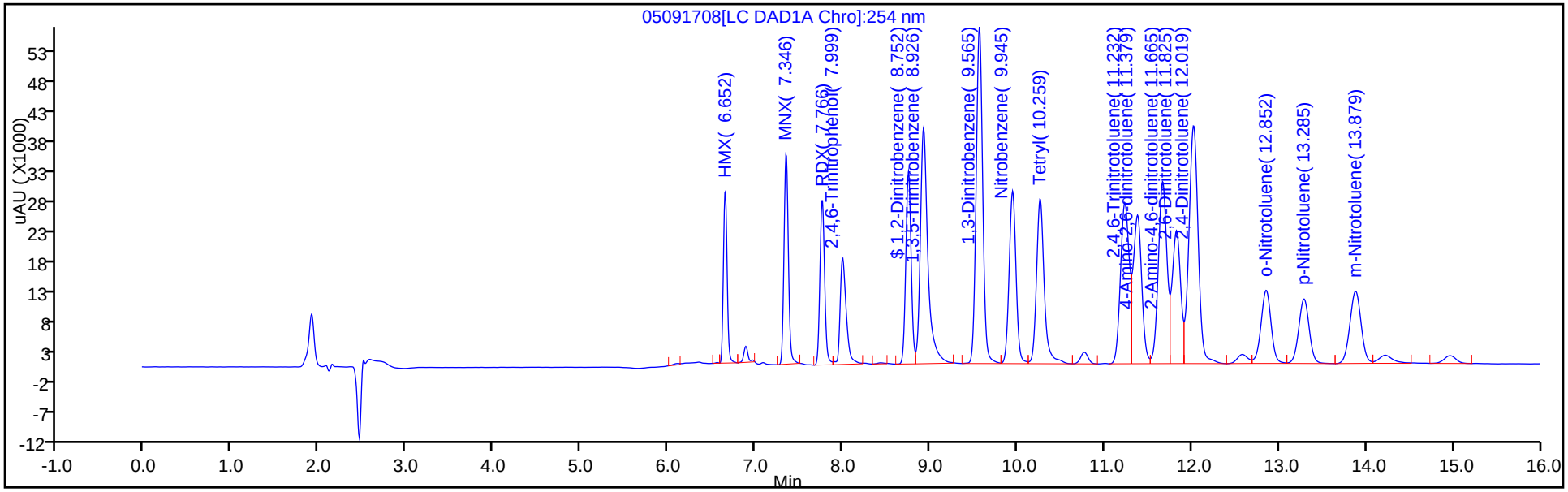
Report Date: 10-May-2017 09:49:30 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

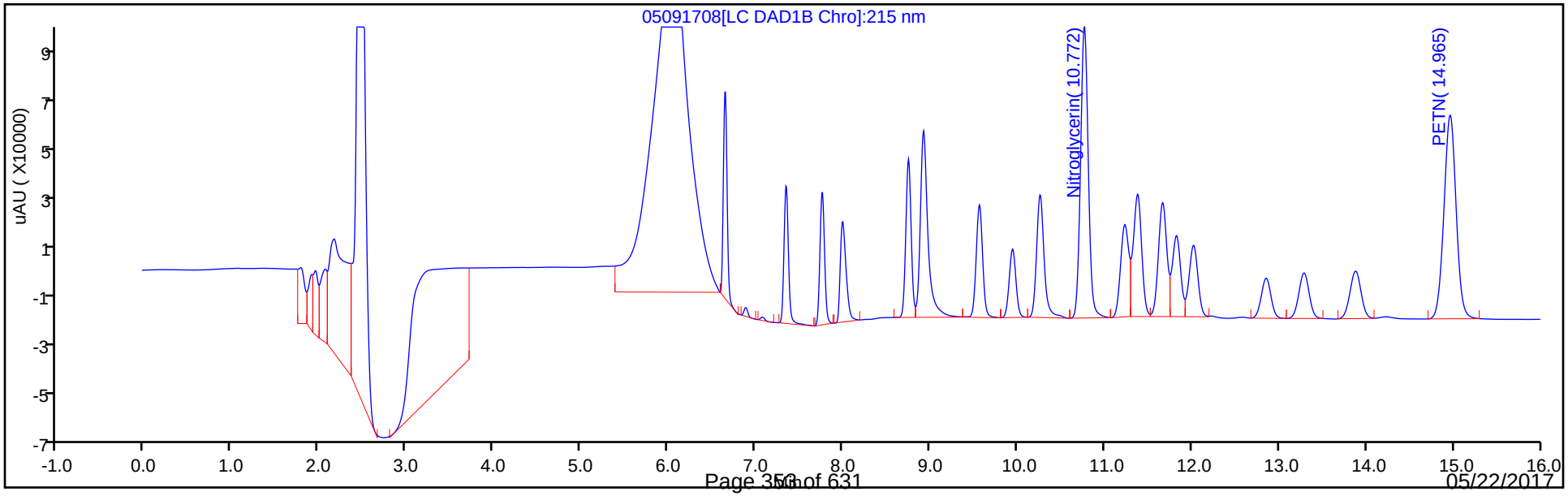
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091708.D

Injection Date:	09-May-2017 14:11:20	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
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\20170509-58475.b\05091709.D
Lims ID: IC MAIN L6
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 09-May-2017 14:34:16 ALS Bottle#: 4 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L6
Misc. Info.: 280-0058475-009
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:31 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 15:07:17

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.648	6.655	-0.007	61092	0.7000	0.6996	
4 MNX	1	7.348	7.358	-0.010	87654	692.3	710.3	
5 RDX	1	7.762	7.769	-0.007	74356	0.7000	0.7023	
6 2,4,6-Trinitrophenol	1	8.008	8.035	-0.027	59726	0.7000	0.6713	
$ 7 1,2-Dinitrobenzene	1	8.755	8.769	-0.014	96272	0.7000	0.7067	
8 1,3,5-Trinitrobenzene	1	8.928	8.942	-0.014	167453	0.7000	0.6905	
9 1,3-Dinitrobenzene	1	9.568	9.588	-0.020	204500	0.7000	0.7003	
11 Nitrobenzene	1	9.955	9.968	-0.013	114813	0.7000	0.6714	
12 Tetryl	1	10.275	10.295	-0.020	119388	0.7000	0.7063	
13 Nitroglycerin	2	10.781	10.802	-0.021	493483	7.00	7.12	
14 2,4,6-Trinitrotoluene	1	11.241	11.268	-0.027	128532	0.7000	0.6958	
15 4-Amino-2,6-dinitrotoluene	1	11.388	11.415	-0.027	120008	0.7000	0.7138	
16 2-Amino-4,6-dinitrotoluene	1	11.675	11.702	-0.027	146909	0.7000	0.7041	
17 2,6-Dinitrotoluene	1	11.835	11.862	-0.027	105486	0.7000	0.7039	
18 2,4-Dinitrotoluene	1	12.028	12.055	-0.027	207717	0.7000	0.7060	
19 o-Nitrotoluene	1	12.861	12.888	-0.027	72008	0.7000	0.7054	
20 p-Nitrotoluene	1	13.295	13.328	-0.033	64042	0.7000	0.7092	
21 m-Nitrotoluene	1	13.888	13.928	-0.040	77284	0.7000	0.6519	
22 PETN	2	14.968	15.035	-0.067	540247	7.00	7.10	

Reagents:

8330IntermStk_00051 Amount Added: 0.04 Units: mL

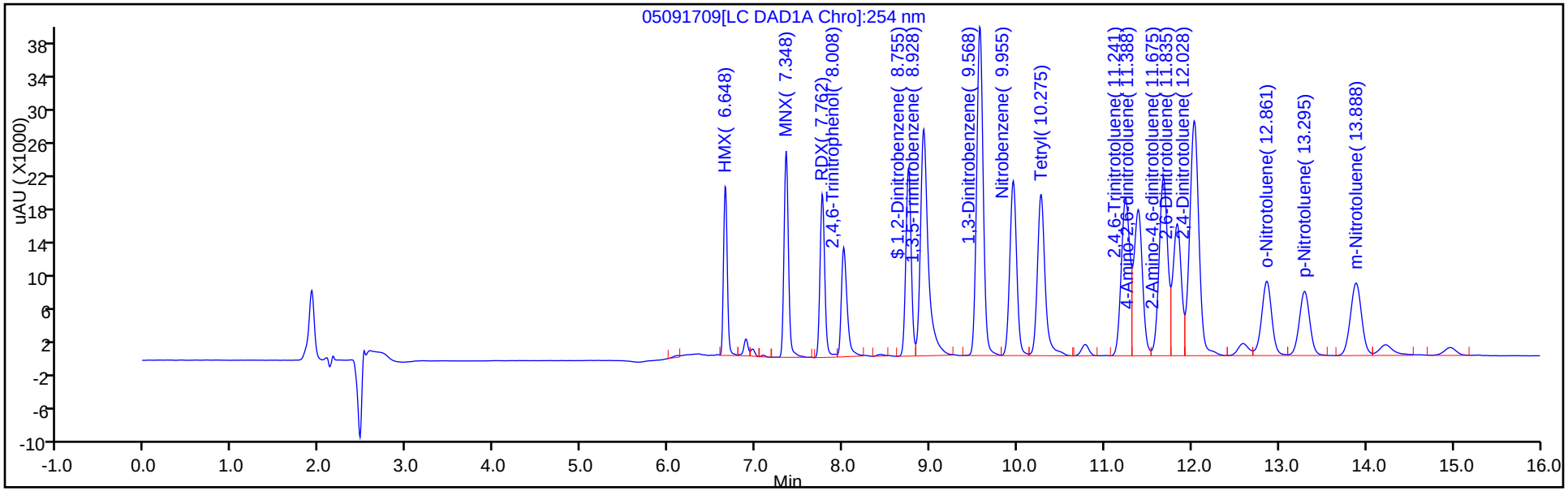
Report Date: 10-May-2017 09:49:32 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

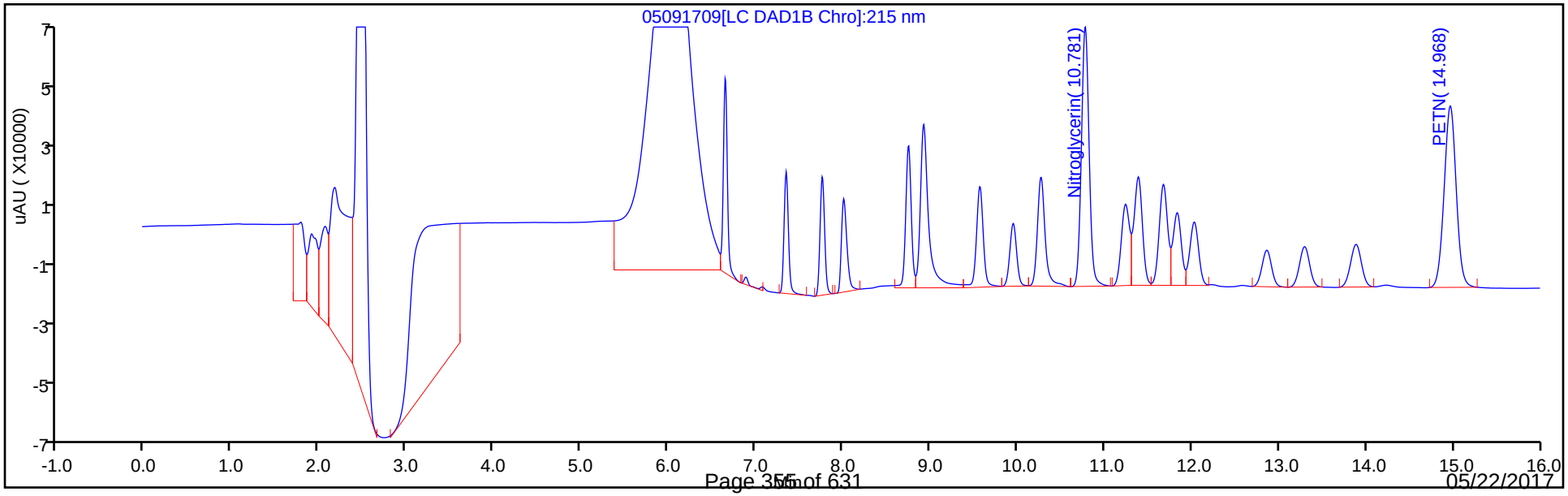
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091709.D

Injection Date:	09-May-2017 14:34:16	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
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\20170509-58475.b\05091710.D
Lims ID: IC MAIN L5
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-May-2017 14:57:11 ALS Bottle#: 5 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L5
Misc. Info.: 280-0058475-010
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:32 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 15:42:54

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.648	6.655	-0.007	35464	0.4000	0.4059	
4 MNX	1	7.348	7.358	-0.010	49796	395.6	402.4	
5 RDX	1	7.761	7.769	-0.008	42416	0.4000	0.4006	
6 2,4,6-Trinitrophenol	1	8.021	8.035	-0.014	35891	0.4000	0.4016	
$ 7 1,2-Dinitrobenzene	1	8.754	8.769	-0.015	55829	0.4000	0.4085	
8 1,3,5-Trinitrobenzene	1	8.928	8.942	-0.014	98643	0.4000	0.3997	
9 1,3-Dinitrobenzene	1	9.574	9.588	-0.014	118447	0.4000	0.4056	
11 Nitrobenzene	1	9.954	9.968	-0.014	64174	0.4000	0.3770	
12 Tetryl	1	10.274	10.295	-0.021	66432	0.4000	0.3925	
13 Nitroglycerin	2	10.781	10.802	-0.021	287988	4.00	4.14	
14 2,4,6-Trinitrotoluene	1	11.241	11.268	-0.027	75273	0.4000	0.4075	
15 4-Amino-2,6-dinitrotoluene	1	11.388	11.415	-0.027	67956	0.4000	0.4023	
16 2-Amino-4,6-dinitrotoluene	1	11.681	11.702	-0.021	83953	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.834	11.862	-0.028	61244	0.4000	0.4087	
18 2,4-Dinitrotoluene	1	12.028	12.055	-0.027	120184	0.4000	0.4085	
19 o-Nitrotoluene	1	12.861	12.888	-0.027	41395	0.4000	0.3963	
20 p-Nitrotoluene	1	13.294	13.328	-0.034	36184	0.4000	0.3967	
21 m-Nitrotoluene	1	13.888	13.928	-0.040	43185	0.4000	0.3660	
22 PETN	2	14.981	15.035	-0.054	309758	4.00	4.09	

Reagents:

8330IntermStk_00051 Amount Added: 0.02 Units: mL

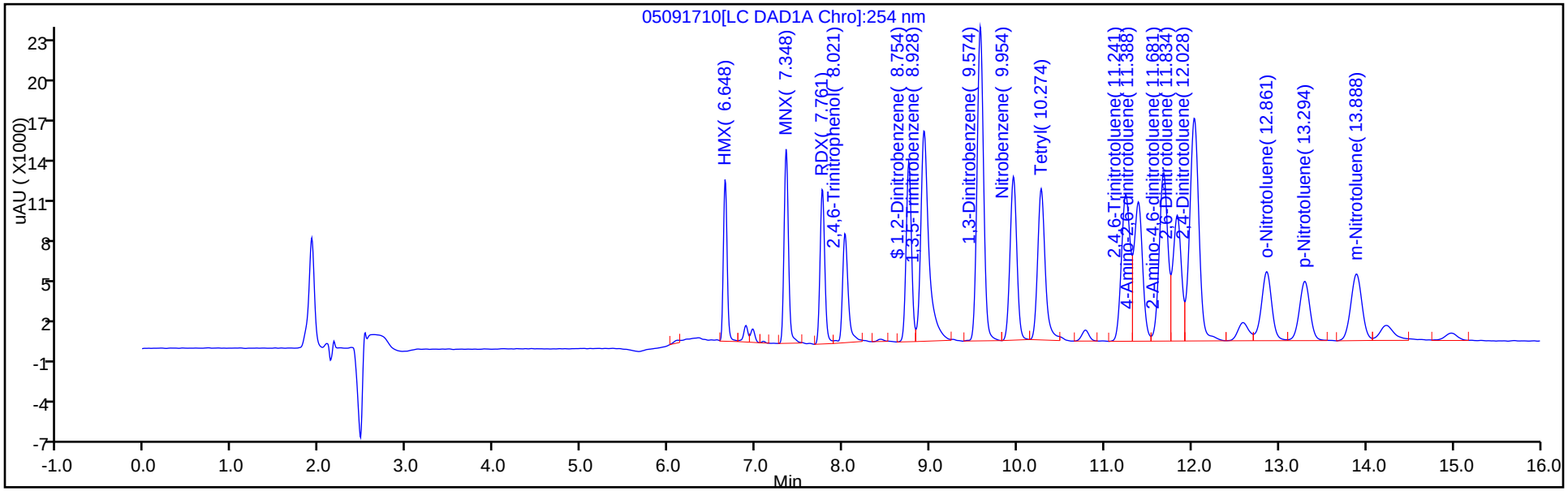
Report Date: 10-May-2017 09:49:33 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

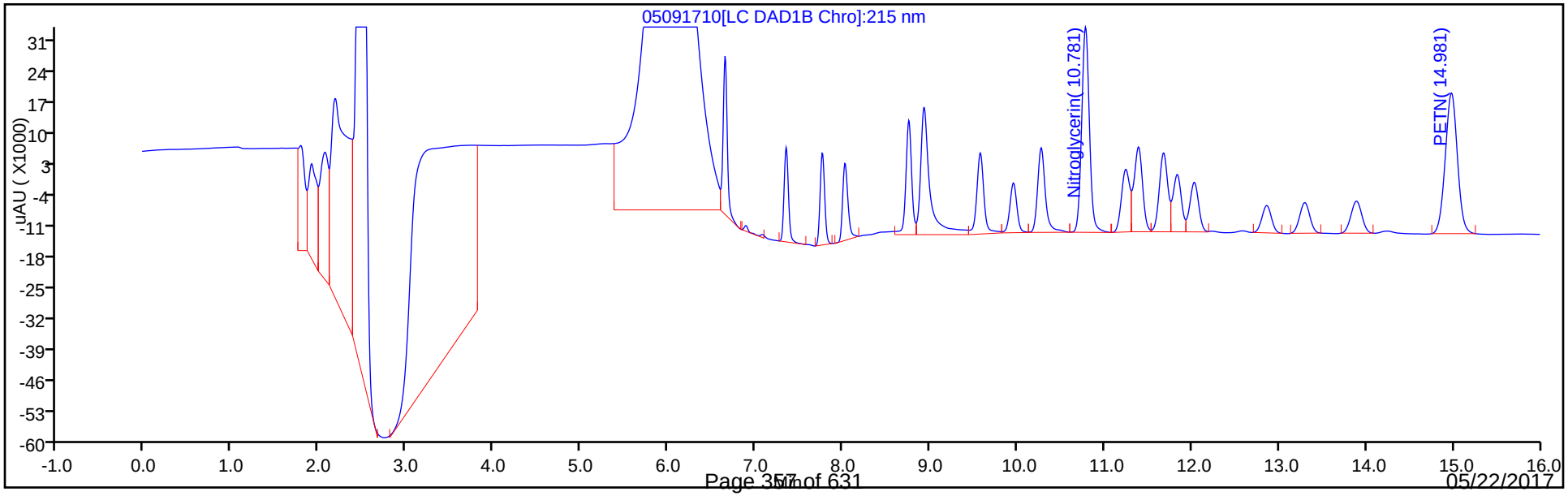
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091710.D

Injection Date:	09-May-2017 14:57:11	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
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\20170509-58475.b\05091711.D
Lims ID: IC MAIN L4
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 09-May-2017 15:20:08 ALS Bottle#: 6 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L4
Misc. Info.: 280-0058475-011
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:34 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 16:19:50

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.653	6.655	-0.002	20663	0.2500	0.2363	
4 MNX	1	7.353	7.358	-0.005	28473	247.3	229.0	
5 RDX	1	7.766	7.769	-0.003	24073	0.2500	0.2274	
6 2,4,6-Trinitrophenol	1	8.039	8.035	0.004	19877	0.2500	0.2205	
$ 7 1,2-Dinitrobenzene	1	8.759	8.769	-0.010	31933	0.2500	0.2323	
8 1,3,5-Trinitrobenzene	1	8.933	8.942	-0.009	57972	0.2500	0.2279	
9 1,3-Dinitrobenzene	1	9.579	9.588	-0.009	68164	0.2500	0.2334	
11 Nitrobenzene	1	9.959	9.968	-0.009	34844	0.2500	0.2065	
12 Tetryl	1	10.286	10.295	-0.009	38531	0.2500	0.2272	
13 Nitroglycerin	2	10.793	10.802	-0.009	163910	2.50	2.34	
14 2,4,6-Trinitrotoluene	1	11.259	11.268	-0.009	42736	0.2500	0.2314	
15 4-Amino-2,6-dinitrotoluene	1	11.413	11.415	-0.002	39630	0.2500	0.2328	
16 2-Amino-4,6-dinitrotoluene	1	11.699	11.702	-0.003	48363	0.2500	0.2318	
17 2,6-Dinitrotoluene	1	11.859	11.862	-0.003	34574	0.2500	0.2307	
18 2,4-Dinitrotoluene	1	12.053	12.055	-0.002	67870	0.2500	0.2307	
19 o-Nitrotoluene	1	12.886	12.888	-0.002	24590	0.2500	0.2266	
20 p-Nitrotoluene	1	13.319	13.328	-0.009	21079	0.2500	0.2272	
21 m-Nitrotoluene	1	13.913	13.928	-0.015	24406	0.2500	0.2086	
22 PETN	2	15.006	15.035	-0.029	175937	2.50	2.34	

Reagents:

8330IntermStk_00051 Amount Added: 0.01 Units: mL

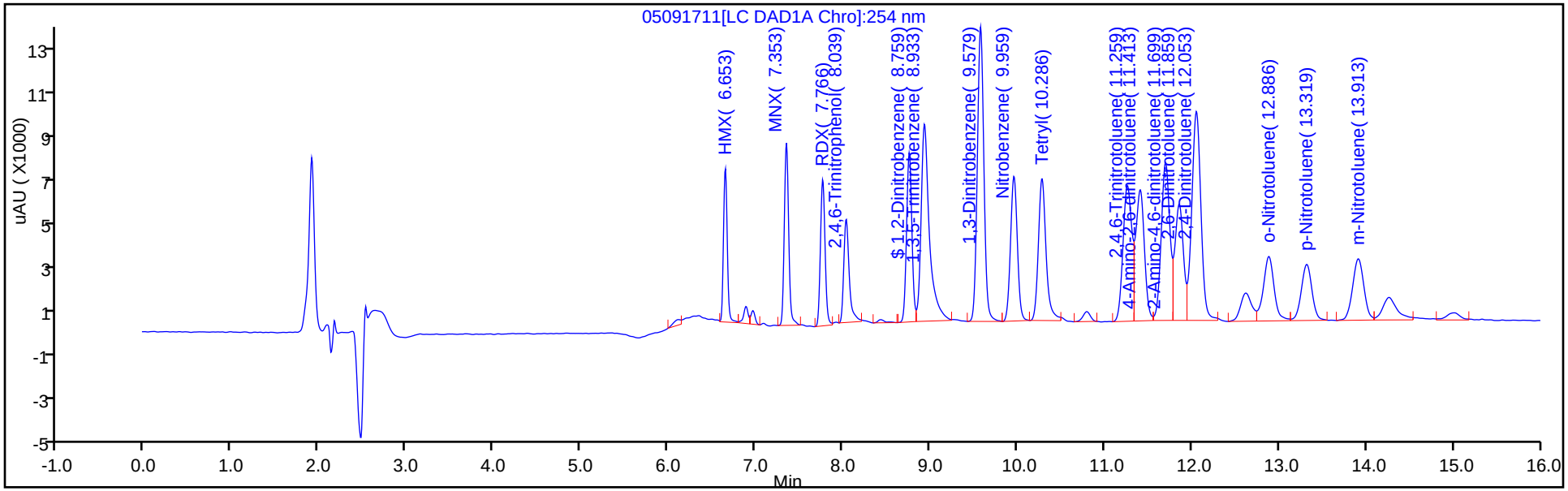
Report Date: 10-May-2017 09:49:34 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

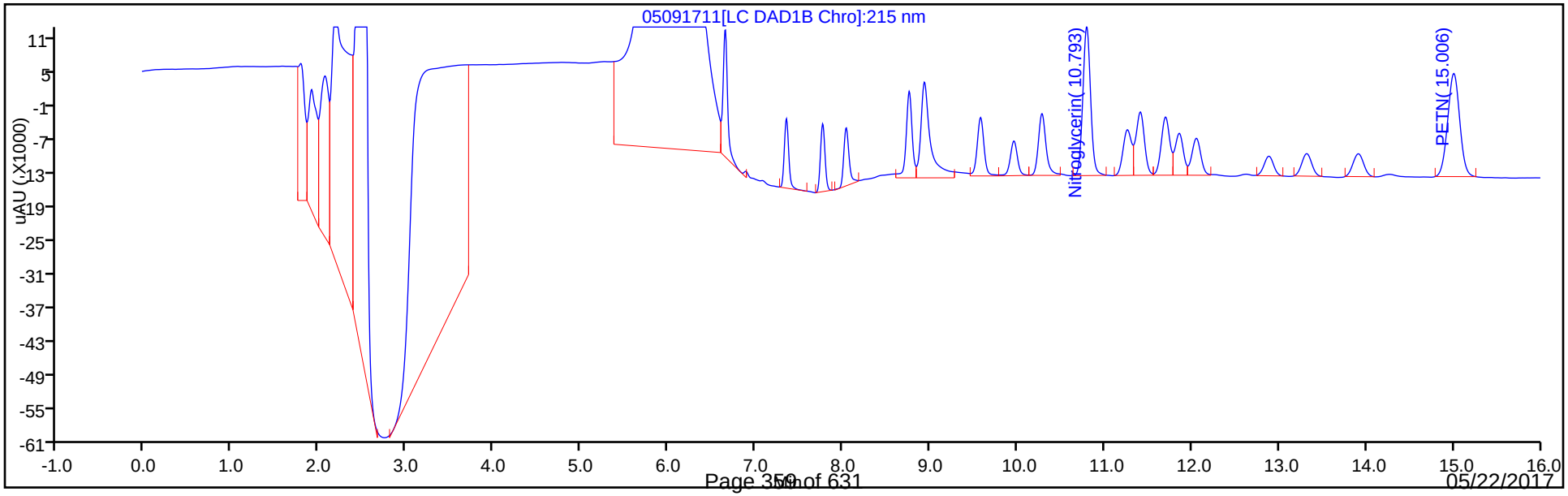
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091711.D

Injection Date:	09-May-2017 15:20:08	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
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\20170509-58475.b\05091712.D
Lims ID: IC MAIN L3
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 09-May-2017 15:43:04 ALS Bottle#: 7 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L3
Misc. Info.: 280-0058475-012
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:34 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 16:29:08

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.652	6.655	-0.003	8576	0.1000	0.0978	
4 MNX	1	7.352	7.358	-0.006	11706	98.9	92.6	
5 RDX	1	7.766	7.769	-0.003	9982	0.1000	0.0943	
6 2,4,6-Trinitrophenol	1	8.046	8.035	0.011	8866	0.1000	0.0959	
$ 7 1,2-Dinitrobenzene	1	8.759	8.769	-0.010	13576	0.1000	0.0970	
8 1,3,5-Trinitrobenzene	1	8.932	8.942	-0.010	26513	0.1000	0.0950	
9 1,3-Dinitrobenzene	1	9.579	9.588	-0.009	27706	0.1000	0.0949	
11 Nitrobenzene	1	9.959	9.968	-0.009	14755	0.1000	0.0897	
12 Tetryl	1	10.279	10.295	-0.016	16158	0.1000	0.0946	
13 Nitroglycerin	2	10.792	10.802	-0.010	68308	1.00	0.9541	
14 2,4,6-Trinitrotoluene	1	11.259	11.268	-0.009	17147	0.1000	0.0928	
15 4-Amino-2,6-dinitrotoluene	1	11.399	11.415	-0.016	17281	0.1000	0.0991	
16 2-Amino-4,6-dinitrotoluene	1	11.692	11.702	-0.010	19798	0.1000	0.0949	
17 2,6-Dinitrotoluene	1	11.846	11.862	-0.016	14220	0.1000	0.0949	
18 2,4-Dinitrotoluene	1	12.046	12.055	-0.009	27701	0.1000	0.0941	
19 o-Nitrotoluene	1	12.879	12.888	-0.009	11691	0.1000	0.0964	
20 p-Nitrotoluene	1	13.312	13.328	-0.016	9210	0.1000	0.0941	
21 m-Nitrotoluene	1	13.899	13.928	-0.029	10075	0.1000	0.0884	
22 PETN	2	14.992	15.035	-0.043	70825	1.00	0.9647	

Reagents:

8330IntermStk_00051 Amount Added: 0.01 Units: mL

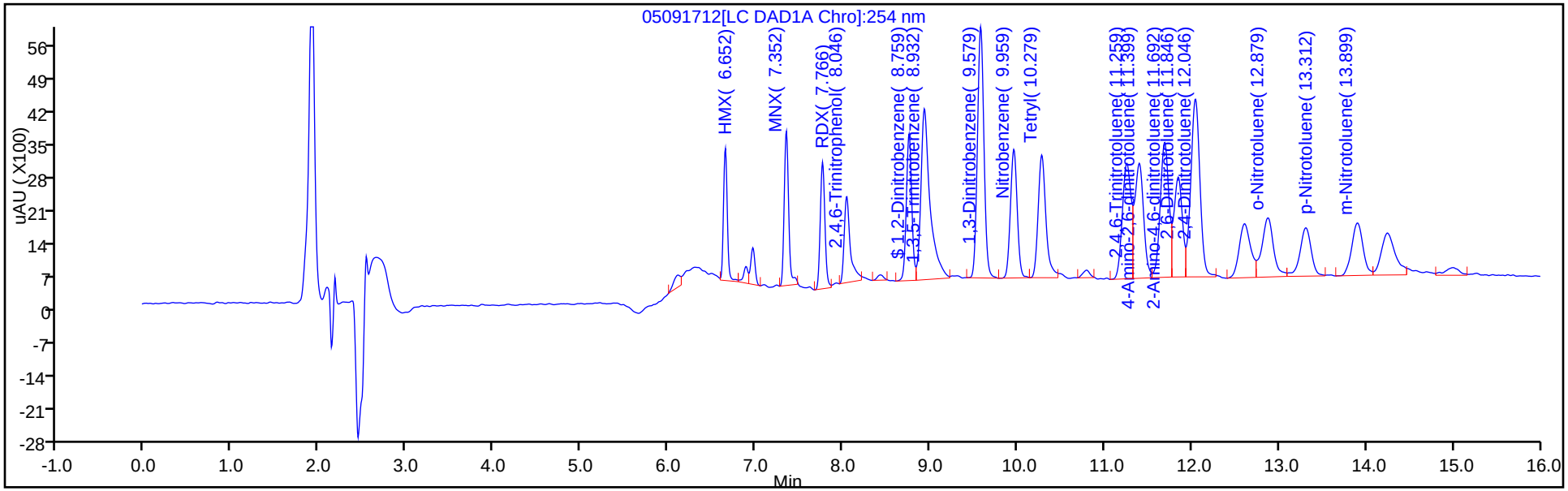
Report Date: 10-May-2017 09:49:35 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

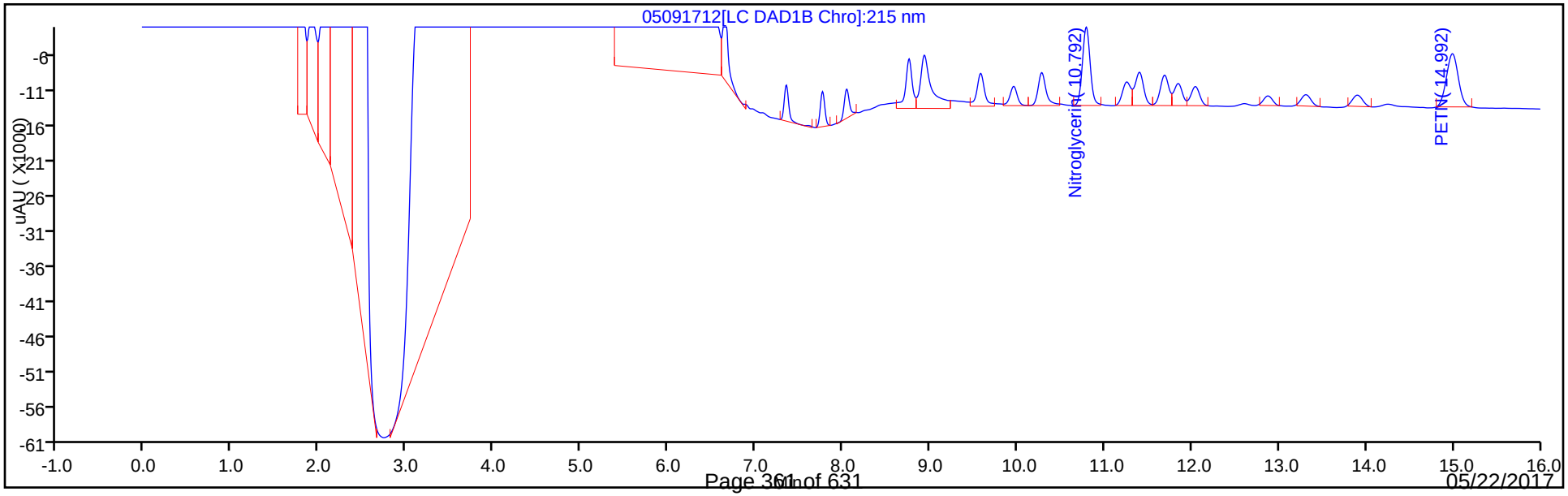
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091712.D

Injection Date:	09-May-2017 15:43:04	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L3			Worklist Smp#:	12
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\20170509-58475.b\05091713.D
Lims ID: IC MAIN L2
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 09-May-2017 16:06:01 ALS Bottle#: 8 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2
Misc. Info.: 280-0058475-013
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:35 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 16:52:58

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.651	6.655	-0.004	4491	0.0500	0.0510	
4 MNX	1	7.358	7.358	0.000	6363	49.5	49.2	
5 RDX	1	7.771	7.769	0.002	5591	0.0500	0.0528	
6 2,4,6-Trinitrophenol	1	8.058	8.035	0.023	5398	0.0500	0.0567	
$ 7 1,2-Dinitrobenzene	1	8.771	8.769	0.002	7516	0.0500	0.0523	
8 1,3,5-Trinitrobenzene	1	8.945	8.942	0.003	16643	0.0500	0.0533	
9 1,3-Dinitrobenzene	1	9.591	9.588	0.003	14932	0.0500	0.0511	
11 Nitrobenzene	1	9.978	9.968	0.010	7972	0.0500	0.0502	
12 Tetryl	1	10.305	10.295	0.010	9020	0.0500	0.0523	
13 Nitroglycerin	2	10.818	10.802	0.016	37852	0.5000	0.5122	
14 2,4,6-Trinitrotoluene	1	11.278	11.268	0.010	9530	0.0500	0.0516	
15 4-Amino-2,6-dinitrotoluene	1	11.425	11.415	0.010	9688	0.0500	0.0536	
16 2-Amino-4,6-dinitrotoluene	1	11.718	11.702	0.016	10659	0.0500	0.0511	
17 2,6-Dinitrotoluene	1	11.871	11.862	0.009	7782	0.0500	0.0519	
18 2,4-Dinitrotoluene	1	12.071	12.055	0.016	14940	0.0500	0.0508	
19 o-Nitrotoluene	1	12.911	12.888	0.023	6969	0.0500	0.0487	
20 p-Nitrotoluene	1	13.351	13.328	0.023	5302	0.0500	0.0502	
21 m-Nitrotoluene	1	13.938	13.928	0.010	5512	0.0500	0.0502	
22 PETN	2	15.038	15.035	0.003	36678	0.5000	0.5182	

Reagents:

8330IntermStk_00051 Amount Added: 0.00 Units: mL

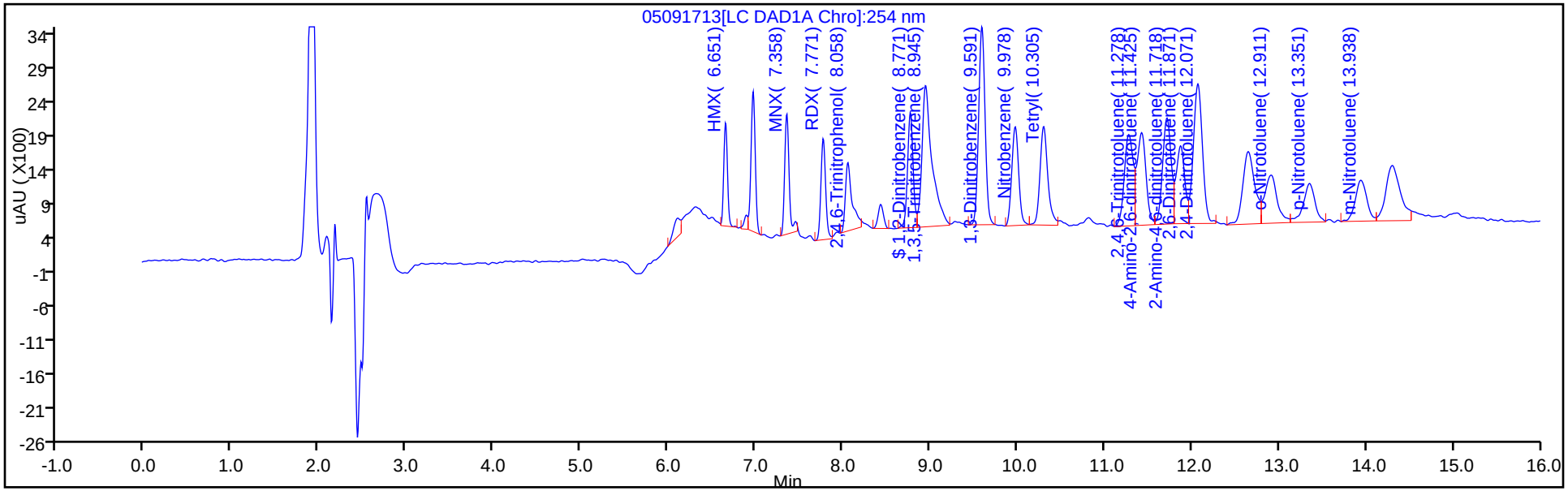
Report Date: 10-May-2017 09:49:36 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

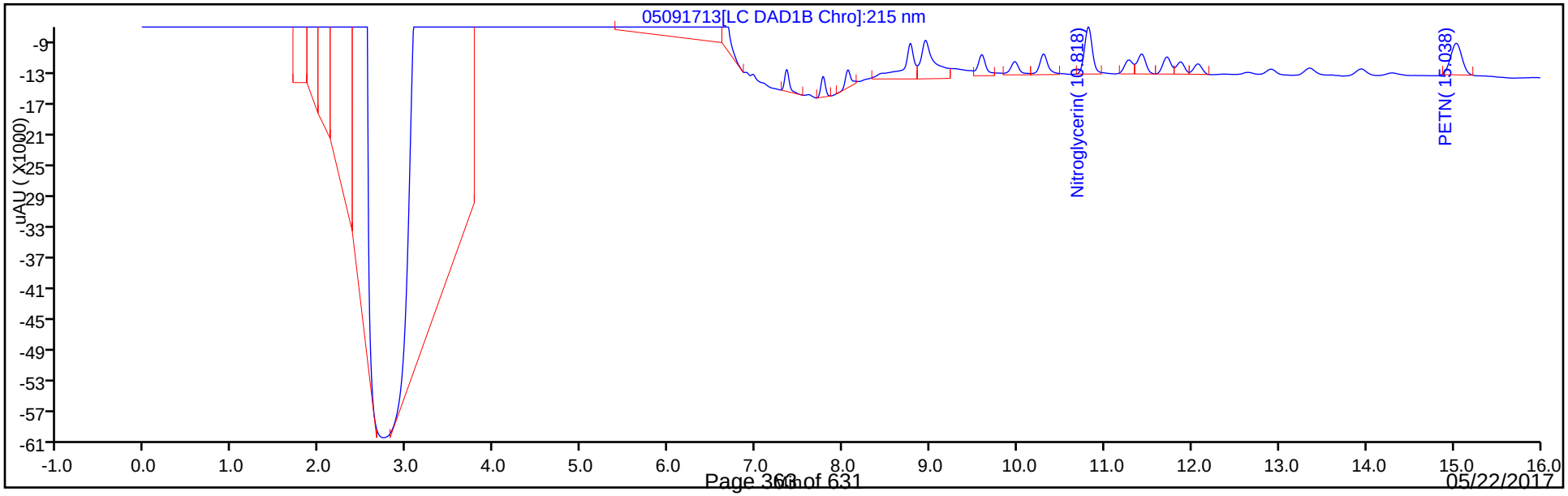
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091713.D

Injection Date:	09-May-2017 16:06:01	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L2			Worklist Smp#:	13
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\20170509-58475.b\05091714.D
Lims ID: IC MAIN L2.2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 09-May-2017 16:28:58 ALS Bottle#: 9 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2.2
Misc. Info.: 280-0058475-014
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:36 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 09-May-2017 17:03:23

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.650	6.655	-0.005	1857	0.0200	0.0208	
4 MNX	1	7.350	7.358	-0.008	2793	19.8	20.1	
5 RDX	1	7.770	7.769	0.001	2283	0.0200	0.0216	
6 2,4,6-Trinitrophenol	1	8.057	8.035	0.022	2227	0.0200	0.0208	M
$ 7 1,2-Dinitrobenzene	1	8.764	8.769	-0.005	3110	0.0200	0.0198	
8 1,3,5-Trinitrobenzene	1	8.944	8.942	0.002	9106	0.0200	0.0215	
9 1,3-Dinitrobenzene	1	9.584	9.588	-0.004	6163	0.0200	0.0211	
11 Nitrobenzene	1	9.970	9.968	0.002	3911	0.0200	0.0266	
12 Tetryl	1	10.297	10.295	0.002	3892	0.0200	0.0220	
13 Nitroglycerin	2	10.810	10.802	0.008	16369	0.2000	0.2004	
14 2,4,6-Trinitrotoluene	1	11.277	11.268	0.009	3859	0.0200	0.0209	
15 4-Amino-2,6-dinitrotoluene	1	11.417	11.415	0.002	4218	0.0200	0.0209	M
16 2-Amino-4,6-dinitrotoluene	1	11.710	11.702	0.008	4399	0.0200	0.0211	M
17 2,6-Dinitrotoluene	1	11.870	11.862	0.008	3115	0.0200	0.0208	M
18 2,4-Dinitrotoluene	1	12.064	12.055	0.009	6274	0.0200	0.0213	M
19 o-Nitrotoluene	1	12.897	12.888	0.009	4175	0.0200	0.0205	
20 p-Nitrotoluene	1	13.337	13.328	0.009	2638	0.0200	0.0203	
21 m-Nitrotoluene	1	13.937	13.928	0.009	2820	0.0200	0.0276	
22 PETN	2	15.030	15.035	-0.005	12282	0.2000	0.1992	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00051 Amount Added: 0.00 Units: mL

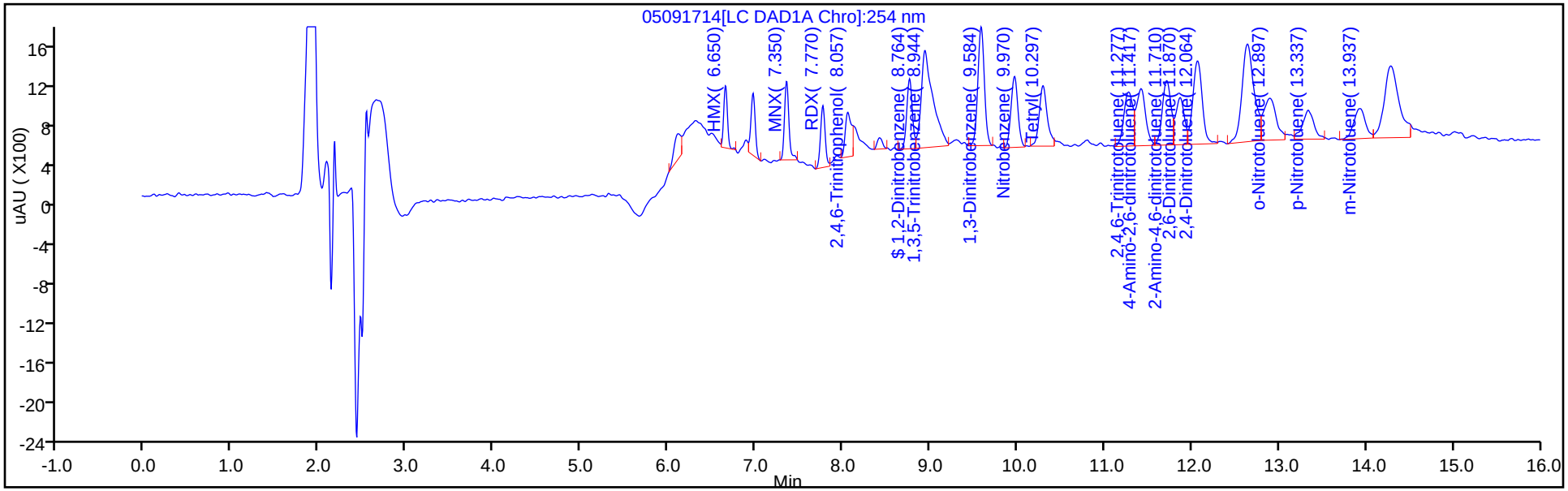
Report Date: 10-May-2017 09:49:37 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

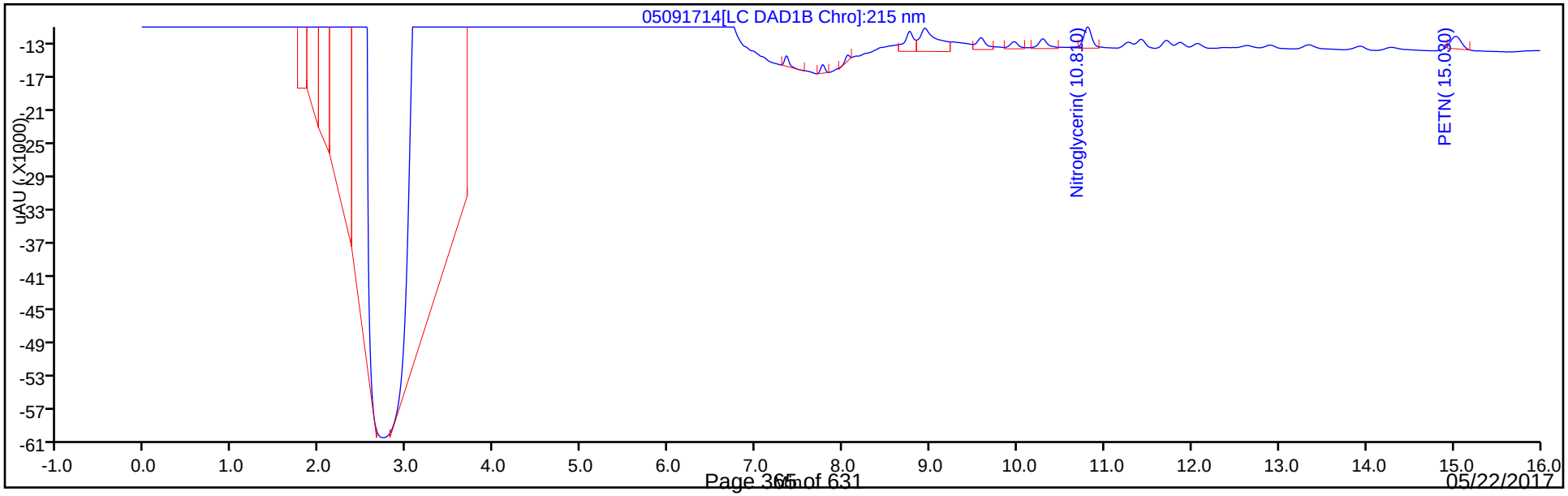
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D

Injection Date:	09-May-2017 16:28:58	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	IC MAIN L2.2			Worklist Smp#:	14
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

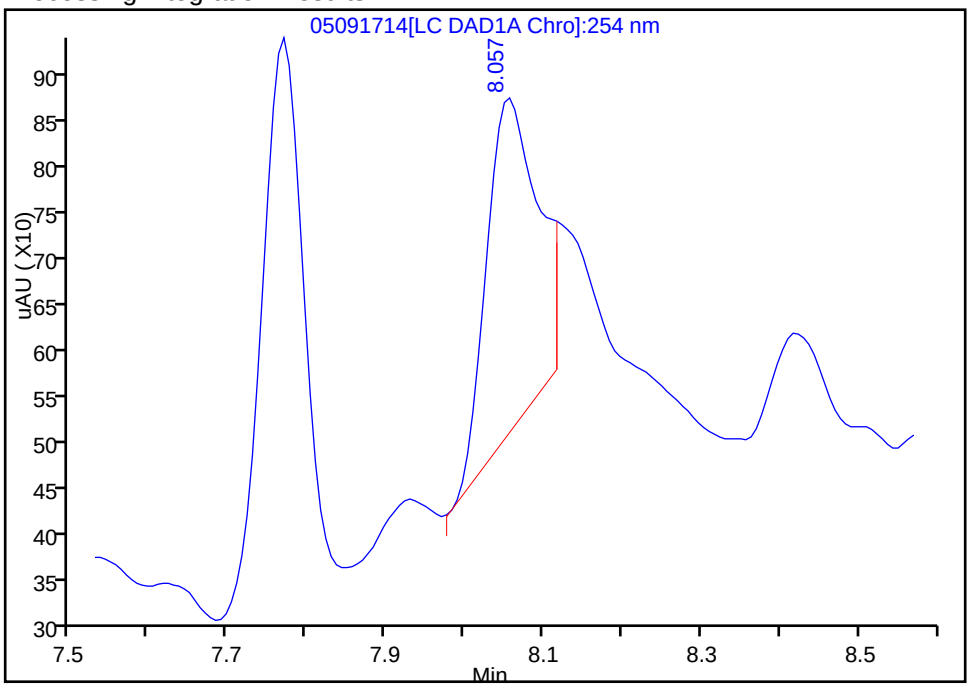
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D				
Injection Date:	09-May-2017 16:28:58	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L2.2				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

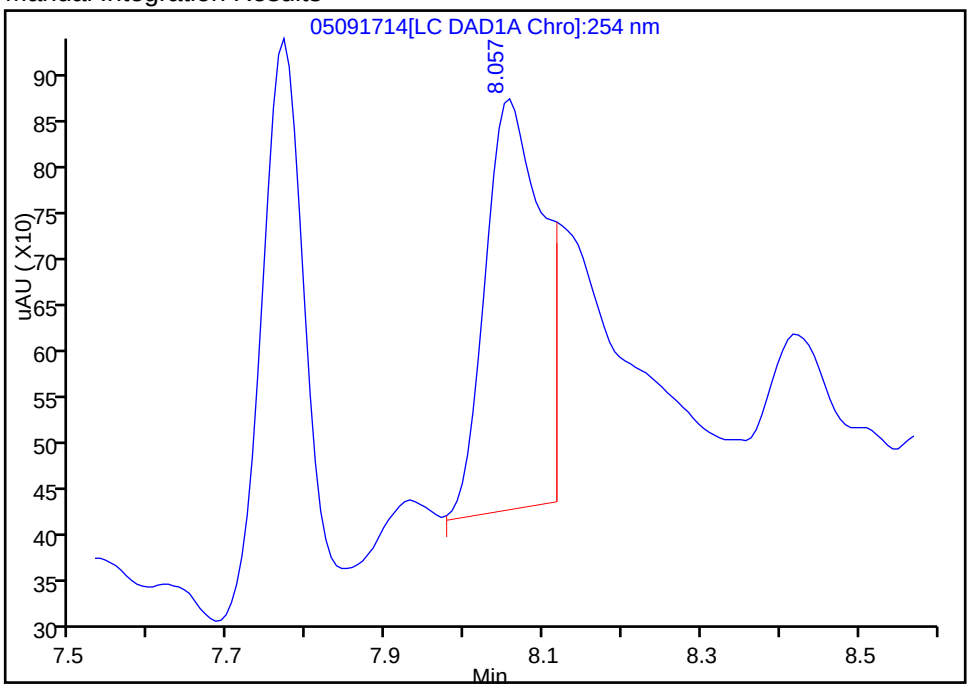
Processing Integration Results

RT: 8.06
Area: 1618
Amount: 0.018194
Amount Units: ug/mL



Manual Integration Results

RT: 8.06
Area: 2227
Amount: 0.020815
Amount Units: ug/mL



Reviewer: colleea, 10-May-2017 08:19:16
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

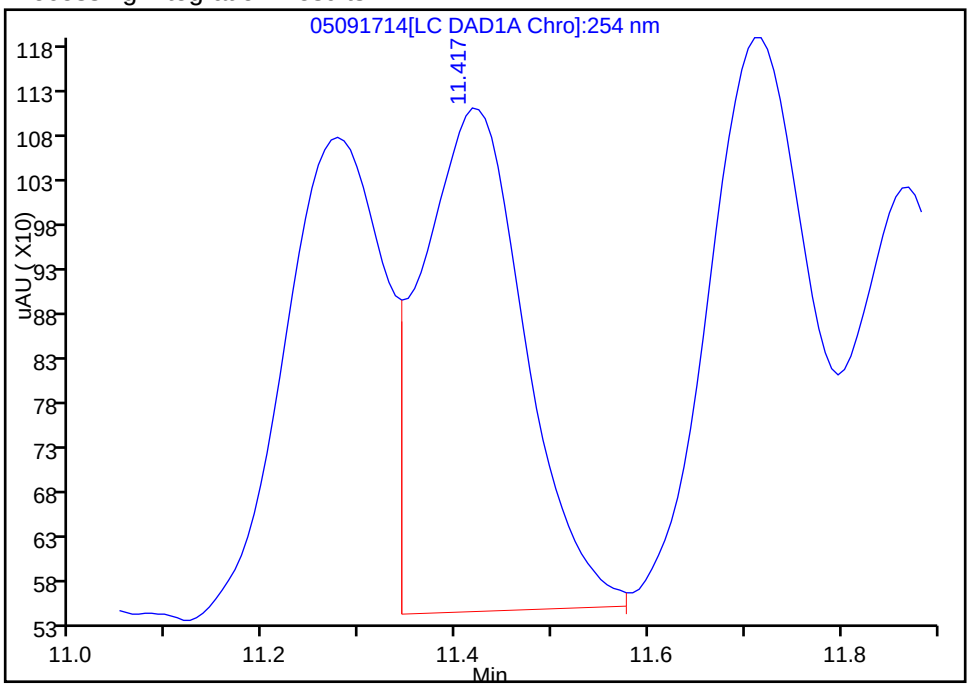
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D				
Injection Date:	09-May-2017 16:28:58	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L2.2				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

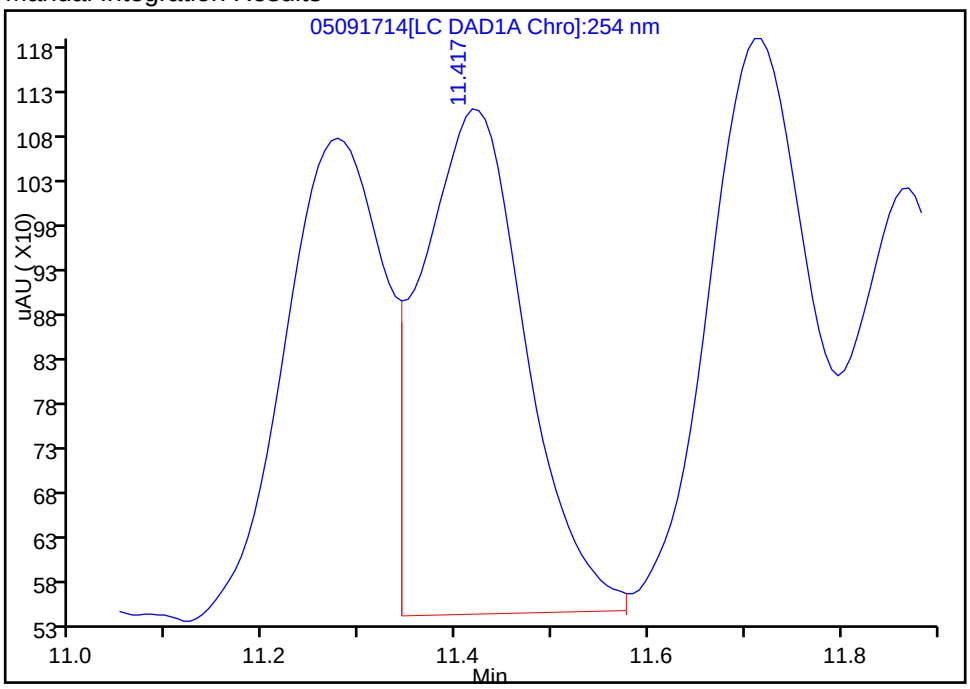
Processing Integration Results

RT: 11.42
Area: 4183
Amount: 0.019683
Amount Units: ug/mL



Manual Integration Results

RT: 11.42
Area: 4218
Amount: 0.020905
Amount Units: ug/mL



Reviewer: colleea, 09-May-2017 16:53:42

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

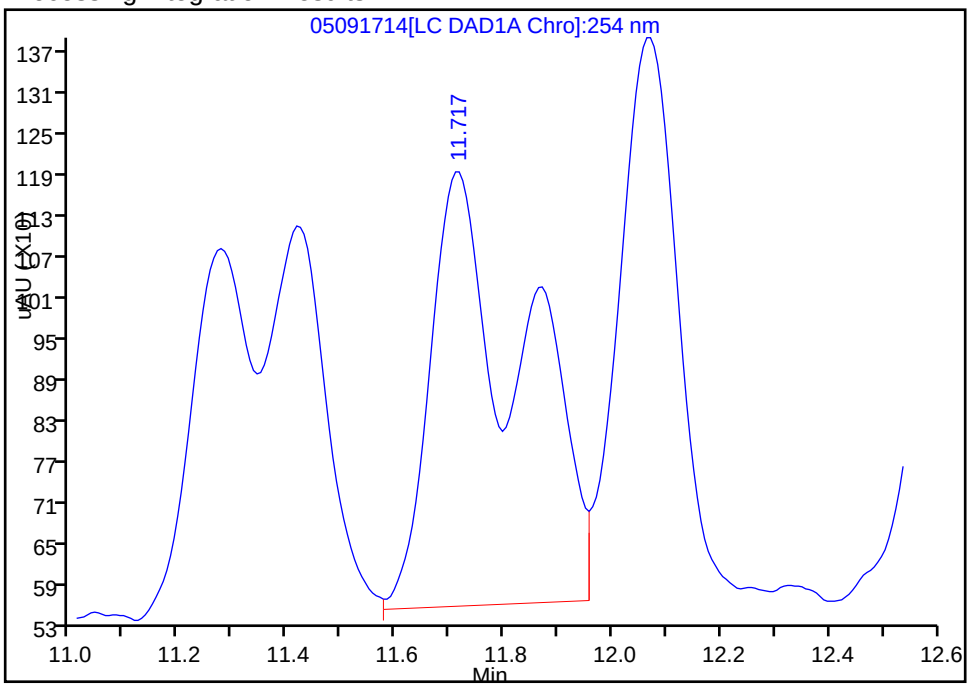
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D				
Injection Date:	09-May-2017 16:28:58	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L2.2				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

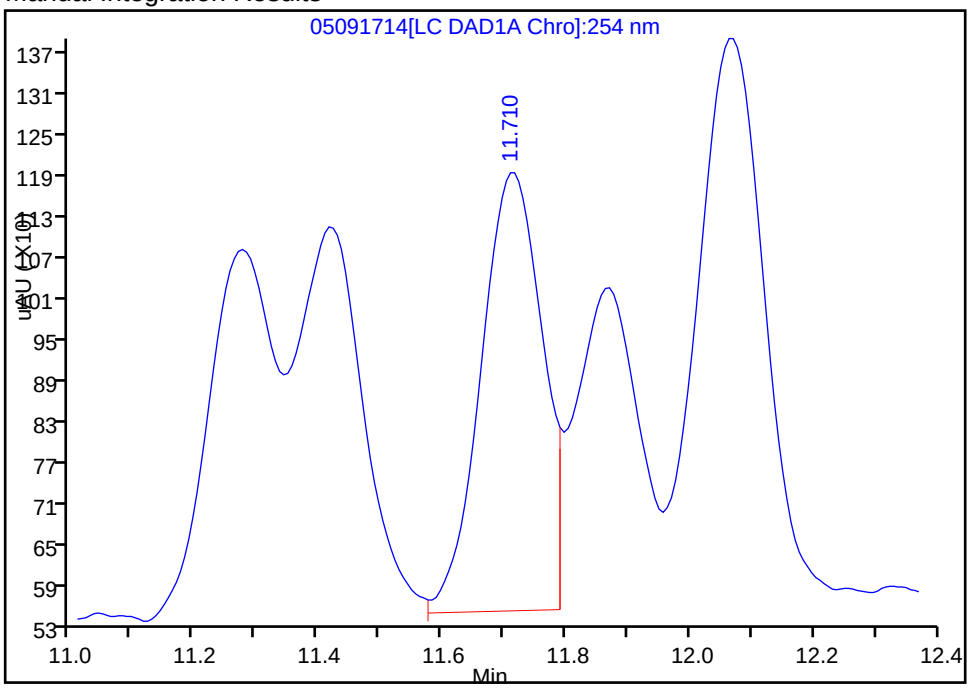
Processing Integration Results

RT: 11.72
Area: 7538
Amount: 0.032621
Amount Units: ug/mL



Manual Integration Results

RT: 11.71
Area: 4399
Amount: 0.021082
Amount Units: ug/mL



Reviewer: colleea, 09-May-2017 16:53:42

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

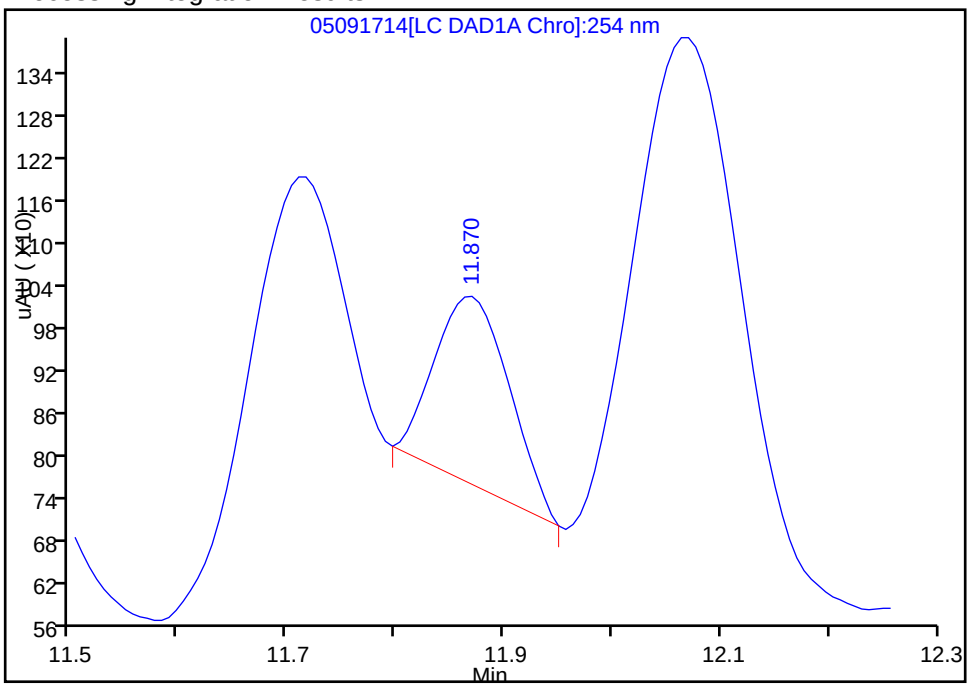
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D				
Injection Date:	09-May-2017 16:28:58	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L2.2				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

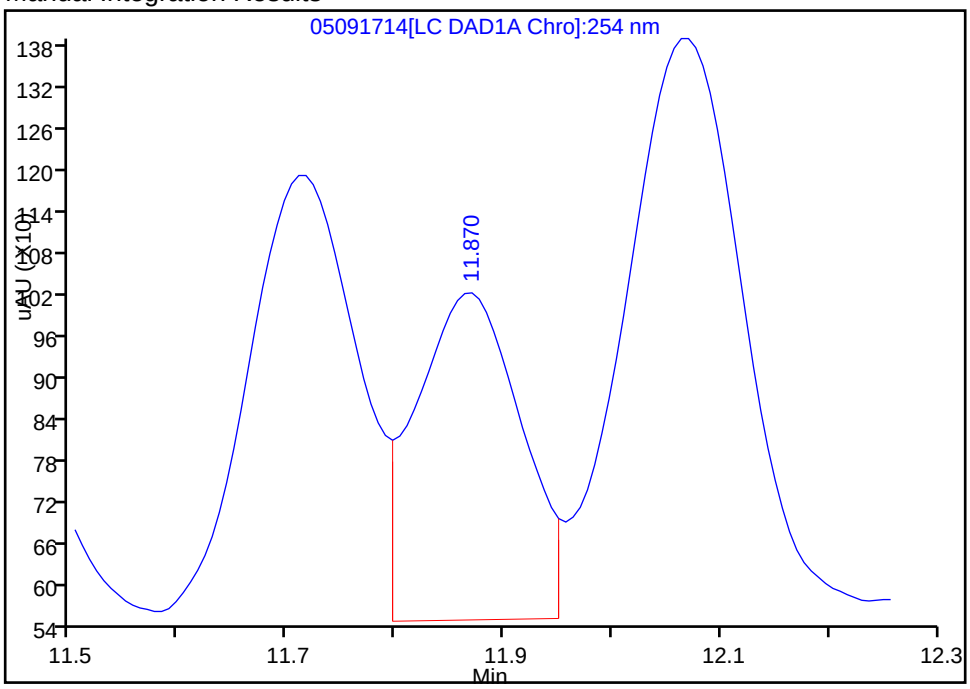
Processing Integration Results

RT: 11.87
Area: 1265
Amount: 0.016973
Amount Units: ug/mL



Manual Integration Results

RT: 11.87
Area: 3115
Amount: 0.020785
Amount Units: ug/mL



Reviewer: colleea, 09-May-2017 16:53:42
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

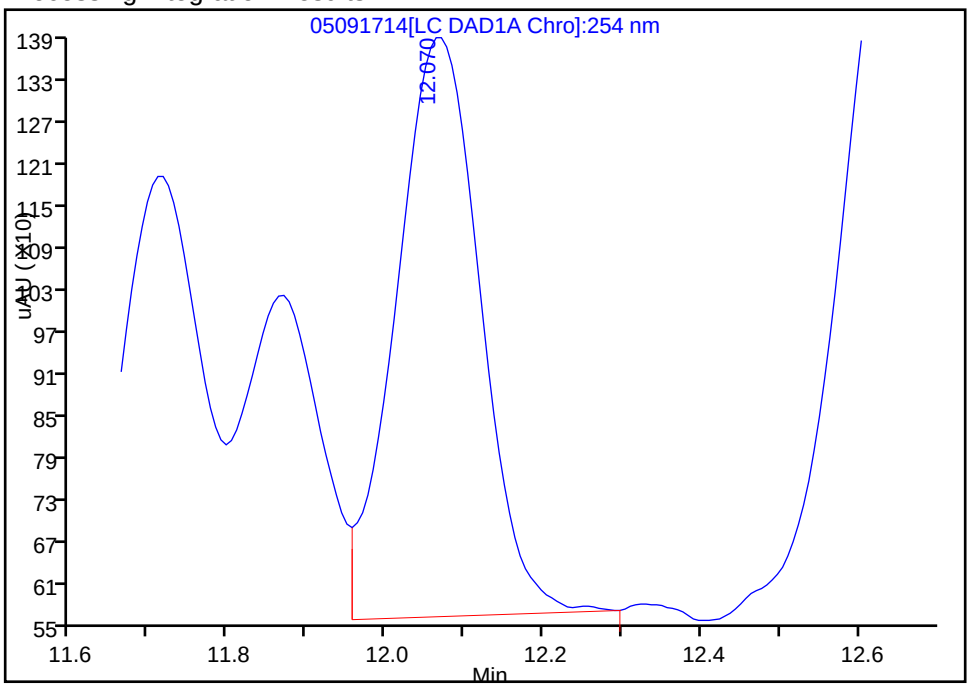
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D				
Injection Date:	09-May-2017 16:28:58	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L2.2				
Client ID:					
Operator ID:	asc	ALS Bottle#:	9	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

18 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

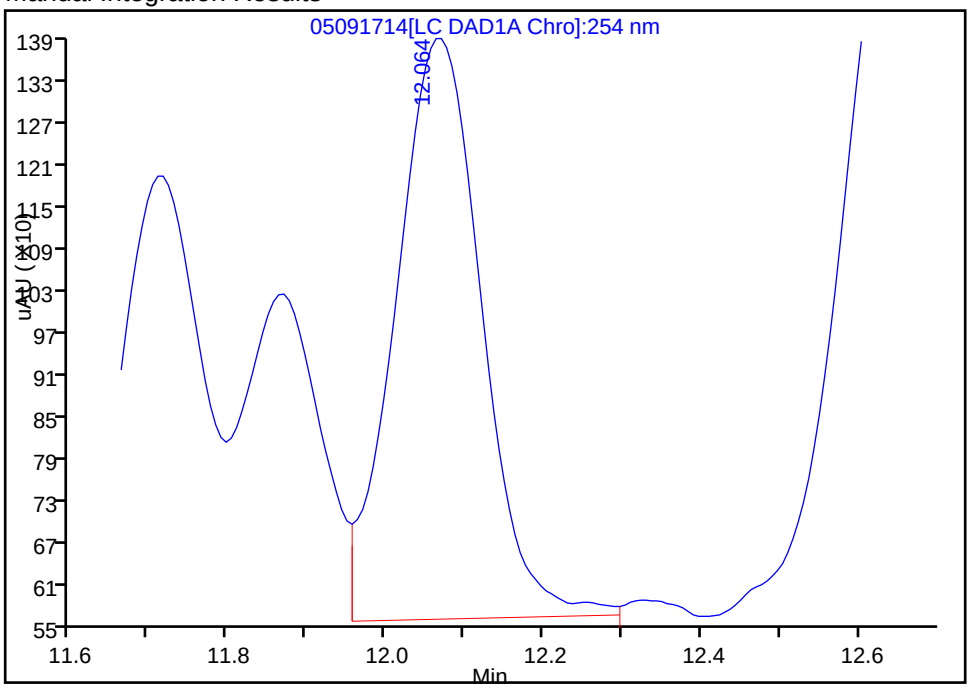
Processing Integration Results

RT: 12.07
Area: 6070
Amount: 0.020733
Amount Units: ug/mL



Manual Integration Results

RT: 12.06
Area: 6274
Amount: 0.021324
Amount Units: ug/mL



Reviewer: colleea, 09-May-2017 16:53:42
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: ICV 280-372244/15 Calibration Date: 05/04/2017 22:52

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 50417C15.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		156173		360	400	-9.9	20.0
Picric acid	Lin1		155810		392	400	-2.0	20.0
RDX	Lin1		196290		381	400	-4.7	20.0
Nitrobenzene	Lin2		376990		430	400	7.4	20.0
3,5-Dinitroaniline	Lin		447225		428	400	7.1	20.0
Nitroglycerin	Lin1		156751		4100	4000	2.5	20.0
1,3-Dinitrobenzene	Lin1		593433		413	400	3.2	20.0
2-Nitrotoluene	Ave	224537	241155		430	400	7.4	20.0
4-Nitrotoluene	Lin1		216250		413	400	3.3	20.0
4-Amino-2,6-dinitrotoluene	Lin1		279290		384	400	-4.0	20.0
3-Nitrotoluene	Lin1		264860		392	400	-1.9	20.0
2-Amino-4,6-dinitrotoluene	Lin2		399278		386	400	-3.4	20.0
1,3,5-Trinitrobenzene	Lin1		429210		399	400	-0.2	20.0
2,6-Dinitrotoluene	Lin1		284903		402	400	0.5	20.0
2,4-Dinitrotoluene	Qua		538808		386	400	-3.5	20.0
Tetryl	Lin1		313885		408	400	2.0	20.0
2,4,6-Trinitrotoluene	Lin1		356693		401	400	0.4	20.0
PETN	Lin		108811		3850	4000	-3.8	20.0
1,2-Dinitrobenzene	Lin		260698		389	400	-2.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: ICV 280-372244/15 Calibration Date: 05/04/2017 22:52

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 50417C15.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	7.10	6.93	7.23
Picric acid	8.64	8.44	8.74
RDX	9.27	9.10	9.40
Nitrobenzene	12.17	12.04	12.34
3,5-Dinitroaniline	15.15	15.02	15.32
Nitroglycerin	15.58	15.46	15.76
1,3-Dinitrobenzene	15.58	15.46	15.76
2-Nitrotoluene	16.50	16.38	16.68
4-Nitrotoluene	16.81	16.70	17.00
4-Amino-2,6-dinitrotoluene	17.28	17.14	17.44
3-Nitrotoluene	17.73	17.60	17.90
2-Amino-4,6-dinitrotoluene	18.31	18.16	18.46
1,3,5-Trinitrobenzene	18.73	18.59	18.89
2,6-Dinitrotoluene	19.73	19.58	19.88
2,4-Dinitrotoluene	20.29	20.13	20.43
Tetryl	23.55	23.30	23.60
2,4,6-Trinitrotoluene	24.48	24.23	24.53
PETN	24.96	24.76	25.06
1,2-Dinitrobenzene	13.14	13.00	13.30

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C15.D
Lims ID: ICV FULL 8330
Client ID:
Sample Type: ICV
Inject. Date: 04-May-2017 22:52:39 ALS Bottle#: 10 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV FULL 8330
Misc. Info.: 280-0058316-015
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist:

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 07:03:03 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK030

First Level Reviewer: colleea Date: 05-May-2017 06:24:56

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.430	4.413	0.017	179171	0.4000	0.4122	
3 2,4-diamino-6-nitrotoluene	1	4.996	4.960	0.036	79775	0.4000	0.3359	
5 HMX	1	7.103	7.080	0.023	62469	0.4000	0.3602	
4 2,4,6-Trinitrophenol	1	8.643	8.593	0.050	62324	0.4000	0.3921	
7 RDX	1	9.270	9.253	0.017	78516	0.4000	0.3813	
8 Nitrobenzene	1	12.170	12.193	-0.023	150796	0.4000	0.4296	
$ 9 1,2-Dinitrobenzene	1	13.136	13.153	-0.017	104279	0.4000	0.3887	
10 3,5-Dinitroaniline	1	15.150	15.173	-0.023	178890	0.4000	0.4285	
11 1,3-Dinitrobenzene	1	15.583	15.613	-0.030	237373	0.4000	0.4128	
12 Nitroglycerin	2	15.576	15.613	-0.037	627002	4.00	4.10	
13 o-Nitrotoluene	1	16.496	16.526	-0.030	96462	0.4000	0.4296	
14 p-Nitrotoluene	1	16.810	16.846	-0.036	86500	0.4000	0.4130	
15 4-Amino-2,6-dinitrotoluene	1	17.276	17.293	-0.017	111716	0.4000	0.3842	
16 m-Nitrotoluene	1	17.730	17.753	-0.023	105944	0.4000	0.3923	
17 2-Amino-4,6-dinitrotoluene	1	18.310	18.313	-0.003	159711	0.4000	0.3864	
18 1,3,5-Trinitrobenzene	1	18.730	18.740	-0.010	171684	0.4000	0.3993	
19 2,6-Dinitrotoluene	1	19.730	19.726	0.004	113961	0.4000	0.4021	
20 2,4-Dinitrotoluene	1	20.290	20.280	0.010	215523	0.4000	0.3862	
21 Tetryl	1	23.550	23.447	0.103	125554	0.4000	0.4081	
22 2,4,6-Trinitrotoluene	1	24.476	24.380	0.096	142677	0.4000	0.4014	
23 PETN	2	24.956	24.907	0.049	435242	4.00	3.85	

Reagents:

3,5-DNA LCS_00028	Amount Added:	0.04	Units: mL
8330Surrogate_00091	Amount Added:	0.04	Units: mL
8330 LCS_00075	Amount Added:	0.04	Units: mL
8330DiaminLCS_00025	Amount Added:	0.04	Units: mL

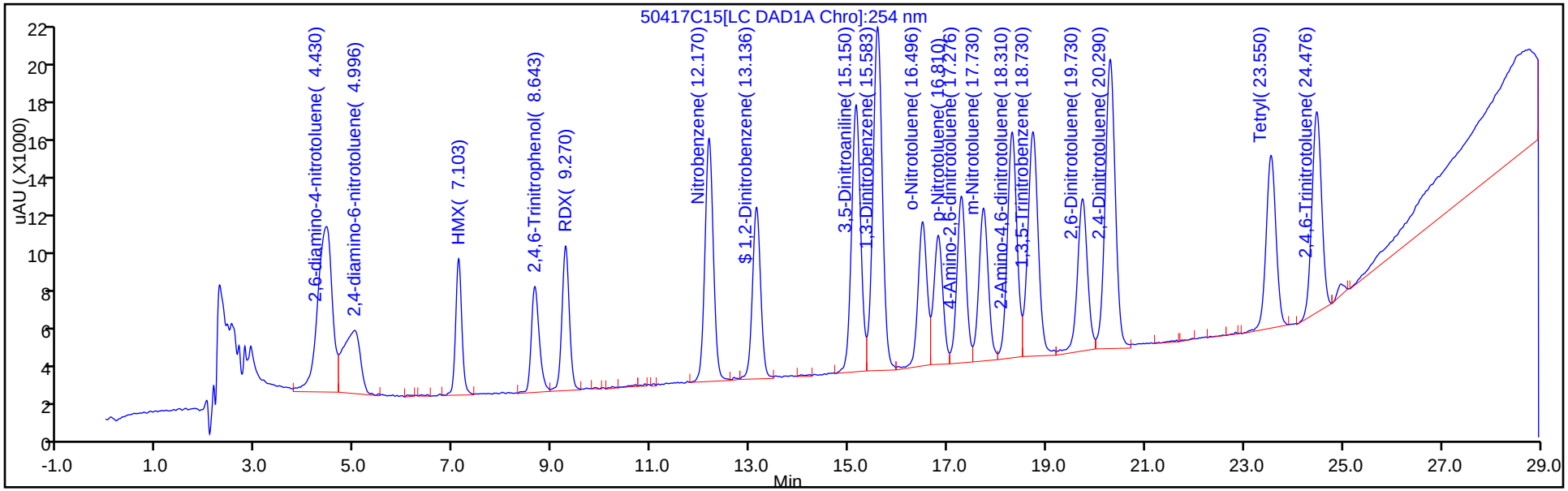
Report Date: 05-May-2017 07:03:05 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

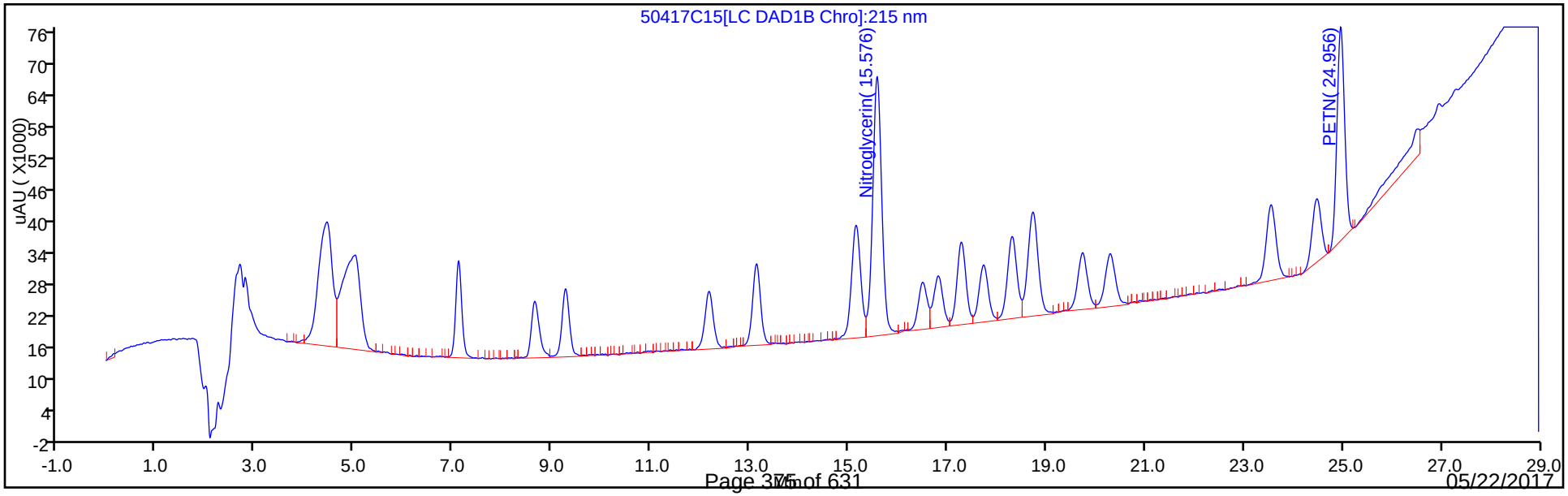
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C15.D

Injection Date:	04-May-2017 22:52:39	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	ICV FULL 8330			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372244/22 Calibration Date: 05/05/2017 02:57

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 50417C22.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		160076		230	250	-8.2	20.0
Picric acid	Lin1		143392		223	250	-10.7	20.0
RDX	Lin1		190500		229	250	-8.5	20.0
Nitrobenzene	Lin2		348436		246	250	-1.7	20.0
3,5-Dinitroaniline	Lin		376512		221	250	-11.8	20.0
Nitroglycerin	Lin1		147996		2410	2500	-3.5	20.0
1,3-Dinitrobenzene	Lin1		547160		237	250	-5.3	20.0
2-Nitrotoluene	Ave	224537	226376		252	250	0.8	20.0
4-Nitrotoluene	Lin1		190772		227	250	-9.2	20.0
4-Amino-2,6-dinitrotoluene	Lin1		271740		231	250	-7.5	20.0
3-Nitrotoluene	Lin1		250068		232	250	-7.3	20.0
2-Amino-4,6-dinitrotoluene	Lin2		391352		236	250	-5.7	20.0
1,3,5-Trinitrobenzene	Lin1		410676		237	250	-5.1	20.0
2,6-Dinitrotoluene	Lin1		277544		242	250	-3.2	20.0
2,4-Dinitrotoluene	Qua		529416		236	250	-5.6	20.0
Tetryl	Lin1		287724		232	250	-7.0	20.0
2,4,6-Trinitrotoluene	Lin1		314408		223	250	-10.9	20.0
PETN	Lin		103916		2300	2500	-7.9	20.0
1,2-Dinitrobenzene	Lin		248984		234	250	-6.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372244/22 Calibration Date: 05/05/2017 02:57

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 50417C22.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	7.08	6.93	7.23
Picric acid	8.62	8.44	8.74
RDX	9.24	9.10	9.40
Nitrobenzene	12.17	12.04	12.34
3,5-Dinitroaniline	15.14	15.02	15.32
Nitroglycerin	15.57	15.46	15.76
1,3-Dinitrobenzene	15.58	15.46	15.76
2-Nitrotoluene	16.48	16.38	16.68
4-Nitrotoluene	16.80	16.70	17.00
4-Amino-2,6-dinitrotoluene	17.26	17.14	17.44
3-Nitrotoluene	17.72	17.60	17.90
2-Amino-4,6-dinitrotoluene	18.28	18.16	18.46
1,3,5-Trinitrobenzene	18.70	18.59	18.89
2,6-Dinitrotoluene	19.71	19.58	19.88
2,4-Dinitrotoluene	20.26	20.13	20.43
Tetryl	23.50	23.30	23.60
2,4,6-Trinitrotoluene	24.43	24.23	24.53
PETN	24.94	24.76	25.06
1,2-Dinitrobenzene	13.12	13.00	13.30

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C22.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 05-May-2017 02:57:26 ALS Bottle#: 17 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058316-022
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-May-2017 07:10:30 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK030

First Level Reviewer: colleea Date: 05-May-2017 06:02:48

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.410	4.413	-0.003	93068	0.2500	0.2279	
3 2,4-diamino-6-nitrotoluene	1	4.950	4.960	-0.010	56804	0.2500	0.2354	
5 HMX	1	7.077	7.080	-0.003	40019	0.2500	0.2296	
4 2,4,6-Trinitrophenol	1	8.617	8.593	0.024	35848	0.2500	0.2233	
7 RDX	1	9.243	9.253	-0.010	47625	0.2500	0.2287	
8 Nitrobenzene	1	12.170	12.193	-0.023	87109	0.2500	0.2457	
$ 9 1,2-Dinitrobenzene	1	13.123	13.153	-0.030	62246	0.2500	0.2338	
10 3,5-Dinitroaniline	1	15.136	15.173	-0.037	94128	0.2500	0.2206	
11 1,3-Dinitrobenzene	1	15.576	15.613	-0.037	136790	0.2500	0.2367	
12 Nitroglycerin	2	15.570	15.613	-0.043	369989	2.50	2.41	
13 o-Nitrotoluene	1	16.483	16.526	-0.043	56594	0.2500	0.2520	
14 p-Nitrotoluene	1	16.803	16.846	-0.043	47693	0.2500	0.2270	
15 4-Amino-2,6-dinitrotoluene	1	17.263	17.293	-0.030	67935	0.2500	0.2313	
16 m-Nitrotoluene	1	17.716	17.753	-0.037	62517	0.2500	0.2317	
17 2-Amino-4,6-dinitrotoluene	1	18.283	18.313	-0.030	97838	0.2500	0.2357	
18 1,3,5-Trinitrobenzene	1	18.703	18.740	-0.037	102669	0.2500	0.2373	
19 2,6-Dinitrotoluene	1	19.710	19.726	-0.016	69386	0.2500	0.2421	
20 2,4-Dinitrotoluene	1	20.263	20.280	-0.017	132354	0.2500	0.2359	
21 Tetryl	1	23.503	23.447	0.056	71931	0.2500	0.2325	
22 2,4,6-Trinitrotoluene	1	24.430	24.380	0.050	78602	0.2500	0.2228	
23 PETN	2	24.937	24.907	0.030	259791	2.50	2.30	

Reagents:

8330_ADDs_00010 Amount Added: 12.50 Units: uL
8330IntermStk_00050 Amount Added: 12.50 Units: uL

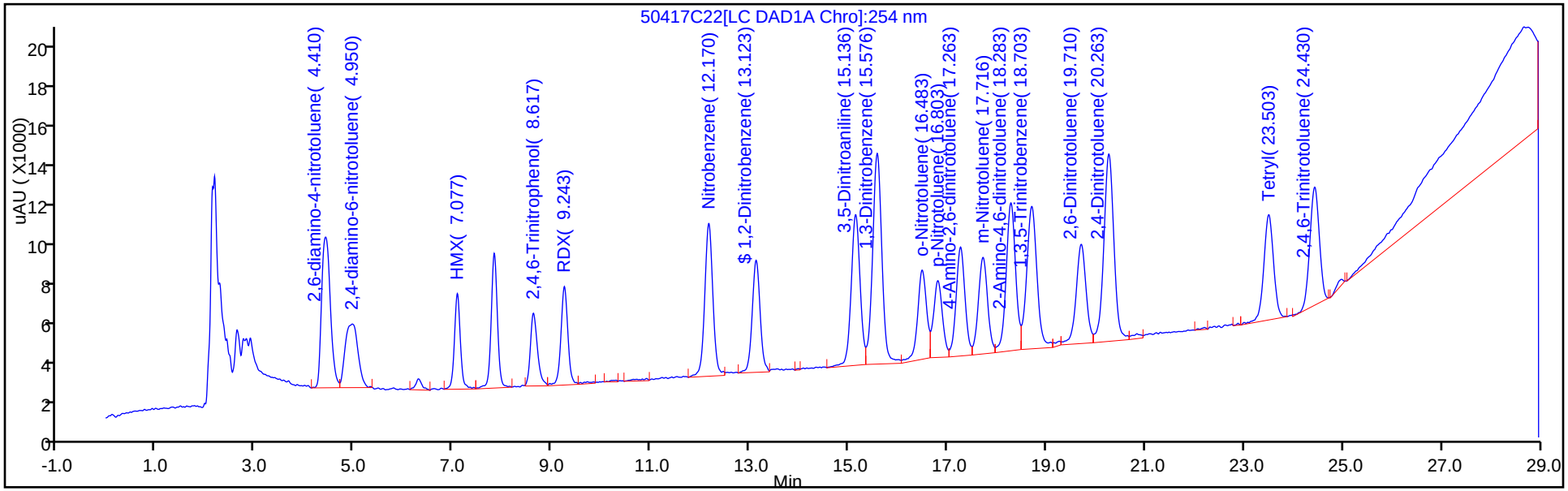
Report Date: 05-May-2017 07:10:31 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

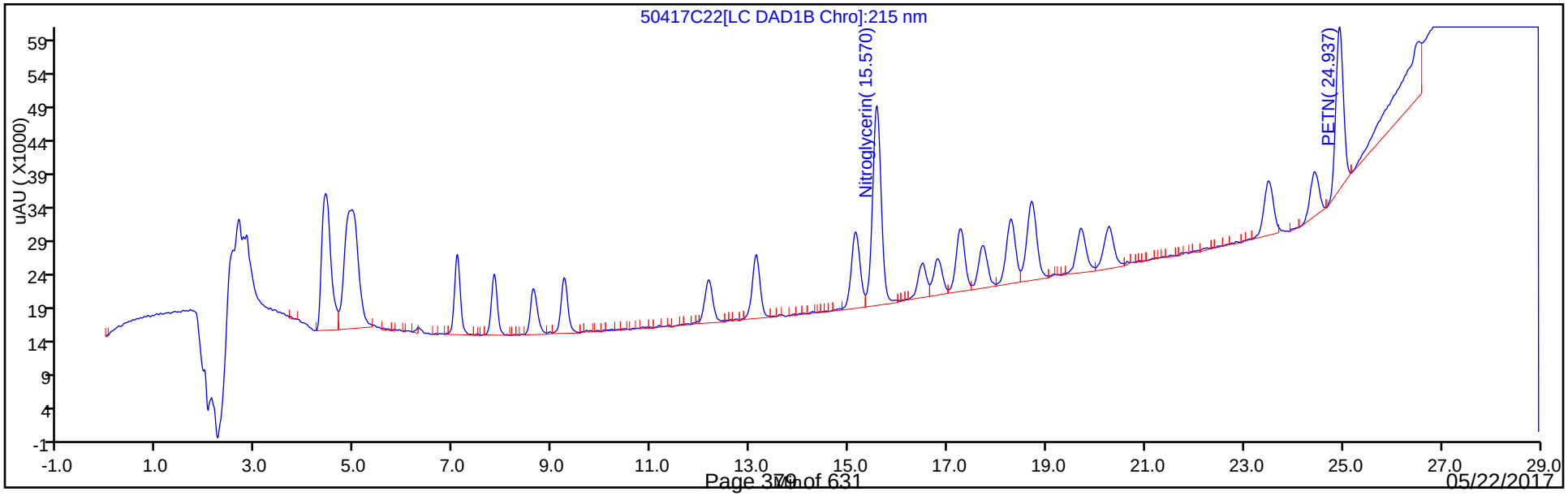
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C22.D

Injection Date:	05-May-2017 02:57:26	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	22
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373971/2 Calibration Date: 05/18/2017 11:46

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 51817002.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		184768		266	250	6.2	20.0
Picric acid	Lin1		167528		262	250	4.7	20.0
RDX	Lin1		218088		263	250	5.1	20.0
Nitrobenzene	Lin2		404956		286	250	14.6	20.0
3,5-Dinitroaniline	Lin		421788		248	250	-0.7	20.0
1,3-Dinitrobenzene	Lin1		599524		260	250	3.9	20.0
Nitroglycerin	Lin1		155003		2530	2500	1.1	20.0
2-Nitrotoluene	Ave	224537	249000		277	250	10.9	20.0
4-Nitrotoluene	Lin1		215292		256	250	2.6	20.0
4-Amino-2,6-dinitrotoluene	Lin1		296800		253	250	1.3	20.0
3-Nitrotoluene	Lin1		281180		261	250	4.2	20.0
2-Amino-4,6-dinitrotoluene	Lin2		431308		260	250	4.0	20.0
1,3,5-Trinitrobenzene	Lin1		449544		260	250	4.1	20.0
2,6-Dinitrotoluene	Lin1		303212		265	250	6.1	20.0
2,4-Dinitrotoluene	Qua		573204		266	250	6.5	20.0
Tetryl	Lin1		322112		261	250	4.3	20.0
2,4,6-Trinitrotoluene	Lin1		367076		259	250	3.8	20.0
PETN	Lin		119703		2650	2500	6.0	20.0
1,2-Dinitrobenzene	Lin		294144		275	250	10.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373971/2 Calibration Date: 05/18/2017 11:46

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 51817002.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.93	6.78	7.08
Picric acid	8.30	8.15	8.45
RDX	9.06	8.91	9.21
Nitrobenzene	11.98	11.83	12.13
3,5-Dinitroaniline	14.86	14.71	15.01
1,3-Dinitrobenzene	15.33	15.18	15.48
Nitroglycerin	15.37	15.22	15.52
2-Nitrotoluene	16.26	16.11	16.41
4-Nitrotoluene	16.57	16.42	16.72
4-Amino-2,6-dinitrotoluene	16.97	16.82	17.12
3-Nitrotoluene	17.48	17.33	17.63
2-Amino-4,6-dinitrotoluene	17.97	17.82	18.12
1,3,5-Trinitrobenzene	18.42	18.27	18.57
2,6-Dinitrotoluene	19.41	19.26	19.56
2,4-Dinitrotoluene	19.96	19.81	20.11
Tetryl	23.15	23.00	23.30
2,4,6-Trinitrotoluene	24.10	23.95	24.25
PETN	24.73	24.58	24.88
1,2-Dinitrobenzene	12.91	12.76	13.06

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817002.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 18-May-2017 11:46:43 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058825-002
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub1

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 19-May-2017 08:09:54 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK002

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	2 2,6-diamino-4-nitrotoluene	1	4.368	4.368	0.000	108466	0.2500	0.2608	
	3 2,4-diamino-6-nitrotoluene	1	4.894	4.894	0.000	67649	0.2500	0.2464	
	5 HMX	1	6.934	6.934	0.000	46192	0.2500	0.2655	
	6 MNX	1	7.674	7.674	0.000	67103	NC	NC	
	4 2,4,6-Trinitrophenol	1	8.301	8.301	0.000	41882	0.2500	0.2618	
	7 RDX	1	9.061	9.061	0.000	54522	0.2500	0.2627	
	8 Nitrobenzene	1	11.981	11.981	0.000	101239	0.2500	0.2865	
$	9 1,2-Dinitrobenzene	1	12.907	12.907	0.000	73536	0.2500	0.2754	
	10 3,5-Dinitroaniline	1	14.861	14.861	0.000	105447	0.2500	0.2484	
	11 1,3-Dinitrobenzene	1	15.327	15.327	0.000	149881	0.2500	0.2597	
	12 Nitroglycerin	2	15.367	15.367	0.000	387507	2.50	2.53	
	13 o-Nitrotoluene	1	16.261	16.261	0.000	62250	0.2500	0.2772	
	14 p-Nitrotoluene	1	16.574	16.574	0.000	53823	0.2500	0.2564	
	15 4-Amino-2,6-dinitrotoluene	1	16.967	16.967	0.000	74200	0.2500	0.2531	
	16 m-Nitrotoluene	1	17.481	17.481	0.000	70295	0.2500	0.2605	
	17 2-Amino-4,6-dinitrotoluene	1	17.974	17.974	0.000	107827	0.2500	0.2600	
	18 1,3,5-Trinitrobenzene	1	18.421	18.421	0.000	112386	0.2500	0.2601	
	19 2,6-Dinitrotoluene	1	19.407	19.407	0.000	75803	0.2500	0.2651	
	20 2,4-Dinitrotoluene	1	19.961	19.961	0.000	143301	0.2500	0.2663	
	21 Tetryl	1	23.148	23.148	0.000	80528	0.2500	0.2606	
	22 2,4,6-Trinitrotoluene	1	24.101	24.101	0.000	91769	0.2500	0.2595	
	23 PETN	2	24.728	24.728	0.000	299258	2.50	2.65	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330_ADDs_00012	Amount Added:	0.01	Units: mL
8330IntermStk_00051	Amount Added:	0.01	Units: mL

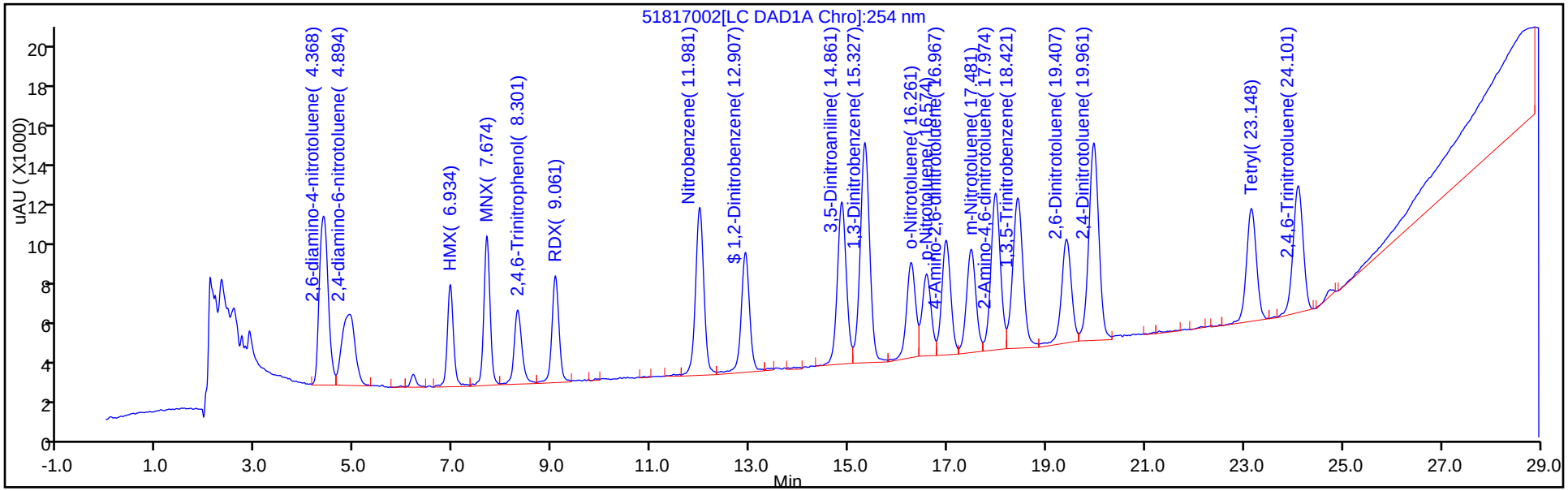
Report Date: 19-May-2017 08:09:54 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Denver

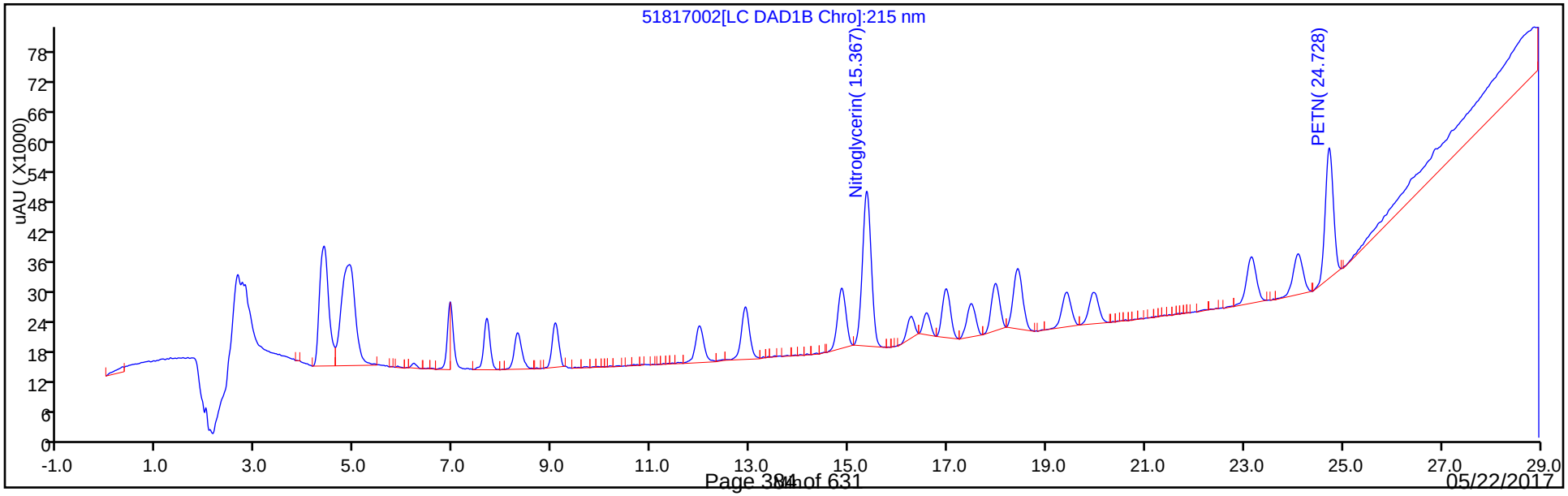
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817002.D

Injection Date:	18-May-2017 11:46:43	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	2
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373971/13 Calibration Date: 05/18/2017 18:11

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 51817013.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		181844		261	250	4.5	20.0
Picric acid	Lin1		166696		260	250	4.2	20.0
RDX	Lin1		218352		263	250	5.2	20.0
Nitrobenzene	Lin2		393772		278	250	11.4	20.0
3,5-Dinitroaniline	Lin		428532		253	250	1.0	20.0
1,3-Dinitrobenzene	Lin1		609224		264	250	5.6	20.0
Nitroglycerin	Lin1		165567		2700	2500	8.1	20.0
2-Nitrotoluene	Ave	224537	245612		273	250	9.4	20.0
4-Nitrotoluene	Lin1		215840		257	250	2.8	20.0
4-Amino-2,6-dinitrotoluene	Lin1		303020		259	250	3.4	20.0
3-Nitrotoluene	Lin1		280316		260	250	3.9	20.0
2-Amino-4,6-dinitrotoluene	Lin2		436168		263	250	5.2	20.0
1,3,5-Trinitrobenzene	Lin1		451728		261	250	4.6	20.0
2,6-Dinitrotoluene	Lin1		288396		252	250	0.7	20.0
2,4-Dinitrotoluene	Qua		567180		263	250	5.4	20.0
Tetryl	Lin1		321708		260	250	4.1	20.0
2,4,6-Trinitrotoluene	Lin1		367704		260	250	4.0	20.0
PETN	Lin		119499		2650	2500	5.8	20.0
1,2-Dinitrobenzene	Lin		292540		274	250	9.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373971/13 Calibration Date: 05/18/2017 18:11

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 05/04/2017 18:12

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 05/04/2017 22:17

Lab File ID: 51817013.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.93	6.78	7.08
Picric acid	8.23	8.08	8.38
RDX	9.05	8.90	9.20
Nitrobenzene	11.97	11.82	12.12
3,5-Dinitroaniline	14.85	14.70	15.00
1,3-Dinitrobenzene	15.31	15.16	15.46
Nitroglycerin	15.35	15.20	15.50
2-Nitrotoluene	16.25	16.10	16.40
4-Nitrotoluene	16.57	16.42	16.72
4-Amino-2,6-dinitrotoluene	16.96	16.81	17.11
3-Nitrotoluene	17.47	17.32	17.62
2-Amino-4,6-dinitrotoluene	17.96	17.81	18.11
1,3,5-Trinitrobenzene	18.41	18.26	18.56
2,6-Dinitrotoluene	19.39	19.24	19.54
2,4-Dinitrotoluene	19.95	19.80	20.10
Tetryl	23.14	22.99	23.29
2,4,6-Trinitrotoluene	24.09	23.94	24.24
PETN	24.71	24.56	24.86
1,2-Dinitrobenzene	12.89	12.74	13.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817013.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 18-May-2017 18:11:29 ALS Bottle#: 2 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058825-013
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub1

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 19-May-2017 08:10:05 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK002

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	2 2,6-diamino-4-nitrotoluene	1	4.365	4.365	0.000	108025	0.2500	0.2599	
	3 2,4-diamino-6-nitrotoluene	1	4.899	4.899	0.000	68531	0.2500	0.2497	
	5 HMX	1	6.925	6.925	0.000	45461	0.2500	0.2613	
	6 MNX	1	7.665	7.665	0.000	66106	NC	NC	
	4 2,4,6-Trinitrophenol	1	8.232	8.232	0.000	41674	0.2500	0.2605	
	7 RDX	1	9.045	9.045	0.000	54588	0.2500	0.2631	
	8 Nitrobenzene	1	11.972	11.972	0.000	98443	0.2500	0.2784	
$	9 1,2-Dinitrobenzene	1	12.892	12.892	0.000	73135	0.2500	0.2740	
	10 3,5-Dinitroaniline	1	14.845	14.845	0.000	107133	0.2500	0.2525	
	11 1,3-Dinitrobenzene	1	15.312	15.312	0.000	152306	0.2500	0.2639	
	12 Nitroglycerin	2	15.352	15.352	0.000	413918	2.50	2.70	
	13 o-Nitrotoluene	1	16.252	16.252	0.000	61403	0.2500	0.2735	
	14 p-Nitrotoluene	1	16.565	16.565	0.000	53960	0.2500	0.2571	
	15 4-Amino-2,6-dinitrotoluene	1	16.959	16.959	0.000	75755	0.2500	0.2586	
	16 m-Nitrotoluene	1	17.465	17.465	0.000	70079	0.2500	0.2597	
	17 2-Amino-4,6-dinitrotoluene	1	17.959	17.959	0.000	109042	0.2500	0.2630	
	18 1,3,5-Trinitrobenzene	1	18.405	18.405	0.000	112932	0.2500	0.2614	
	19 2,6-Dinitrotoluene	1	19.392	19.392	0.000	72099	0.2500	0.2518	
	20 2,4-Dinitrotoluene	1	19.945	19.945	0.000	141795	0.2500	0.2635	
	21 Tetryl	1	23.139	23.139	0.000	80427	0.2500	0.2603	
	22 2,4,6-Trinitrotoluene	1	24.085	24.085	0.000	91926	0.2500	0.2599	
	23 PETN	2	24.712	24.712	0.000	298748	2.50	2.65	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330_ADDs_00012	Amount Added:	0.01	Units: mL
8330IntermStk_00051	Amount Added:	0.01	Units: mL

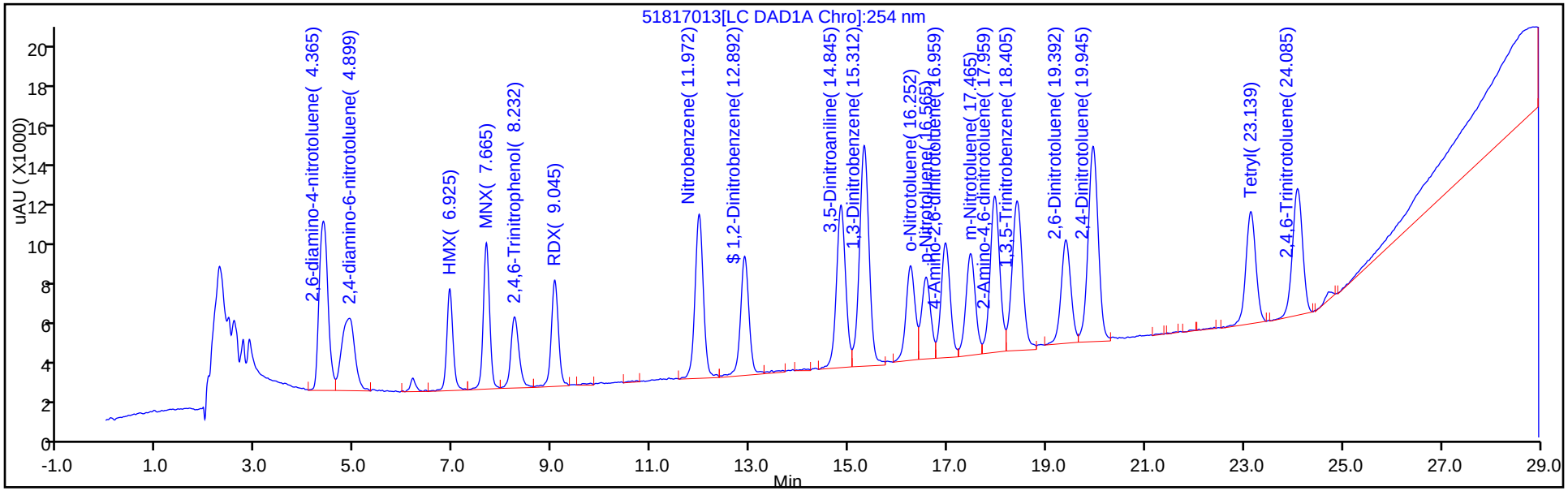
Report Date: 19-May-2017 08:10:06 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Denver

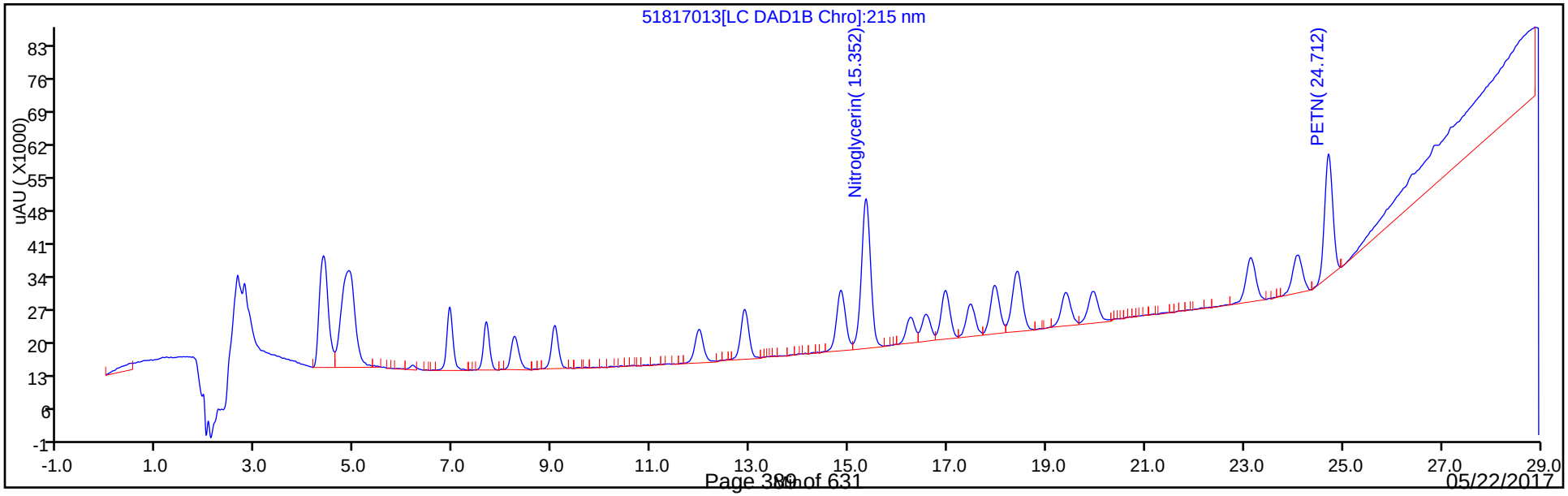
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170517-58825.b\51817013.D

Injection Date:	18-May-2017 18:11:29	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: ICV 280-372816/15 Calibration Date: 05/09/2017 16:51

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 05091715.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		81965		375	400	-6.2	20.0
RDX	Ave	105872	106360		402	400	0.5	20.0
Picric acid	Lin1		93343		418	400	4.5	20.0
1,3,5-Trinitrobenzene	Lin1		250528		406	400	1.6	20.0
1,3-Dinitrobenzene	Ave	292024	317193		434	400	8.6	20.0
Nitrobenzene	Lin1		175908		413	400	3.2	20.0
Tetryl	Lin1		182943		433	400	8.1	20.0
Nitroglycerin	Lin2		72194		4150	4000	3.8	20.0
2,4,6-Trinitrotoluene	Ave	184720	199348		432	400	7.9	20.0
4-Amino-2,6-dinitrotoluene	Lin		180990		429	400	7.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	208660	216083		414	400	3.6	20.0
2,6-Dinitrotoluene	Ave	149867	152418		407	400	1.7	20.0
2,4-Dinitrotoluene	Ave	294229	299900		408	400	1.9	20.0
2-Nitrotoluene	Lin2		114235		440	400	9.9	20.0
4-Nitrotoluene	Lin2		103853		457	400	14.2	20.0
3-Nitrotoluene	Lin1		121943		413	400	3.2	20.0
PETN	Lin2		78102		4120	4000	3.1	20.0
1,2-Dinitrobenzene	Lin2		143760		421	400	5.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: ICV 280-372816/15 Calibration Date: 05/09/2017 16:51

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 05091715.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.51	6.81
RDX	7.77	7.62	7.92
Picric acid	8.04	7.89	8.19
1,3,5-Trinitrobenzene	8.94	8.79	9.09
1,3-Dinitrobenzene	9.59	9.44	9.74
Nitrobenzene	9.97	9.82	10.12
Tetryl	10.30	10.15	10.45
Nitroglycerin	10.80	10.65	10.95
2,4,6-Trinitrotoluene	11.27	11.17	11.37
4-Amino-2,6-dinitrotoluene	11.42	11.32	11.52
2-Amino-4,6-dinitrotoluene	11.70	11.60	11.80
2,6-Dinitrotoluene	11.86	11.76	11.96
2,4-Dinitrotoluene	12.06	11.96	12.16
2-Nitrotoluene	12.89	12.74	13.04
4-Nitrotoluene	13.33	13.18	13.48
3-Nitrotoluene	13.93	13.78	14.08
PETN	15.04	14.89	15.19
1,2-Dinitrobenzene	8.77	8.62	8.92

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091715.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 09-May-2017 16:51:57 ALS Bottle#: 10 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0058475-015
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 10-May-2017 09:49:37 Calib Date: 09-May-2017 16:28:58
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091714.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: waldorfj Date: 09-May-2017 17:31:41

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.655	6.655	0.000	32786	0.4000	0.3752	
5 RDX	1	7.769	7.769	0.000	42544	0.4000	0.4018	M
6 2,4,6-Trinitrophenol	1	8.035	8.035	0.000	37337	0.4000	0.4180	M
$ 7 1,2-Dinitrobenzene	1	8.769	8.769	0.000	57504	0.4000	0.4209	
8 1,3,5-Trinitrobenzene	1	8.942	8.942	0.000	100211	0.4000	0.4064	
9 1,3-Dinitrobenzene	1	9.588	9.588	0.000	126877	0.4000	0.4345	
11 Nitrobenzene	1	9.968	9.968	0.000	70363	0.4000	0.4130	
12 Tetryl	1	10.295	10.295	0.000	73177	0.4000	0.4325	
13 Nitroglycerin	2	10.802	10.802	0.000	288777	4.00	4.15	
14 2,4,6-Trinitrotoluene	1	11.268	11.268	0.000	79739	0.4000	0.4317	
15 4-Amino-2,6-dinitrotoluene	1	11.415	11.415	0.000	72396	0.4000	0.4289	
16 2-Amino-4,6-dinitrotoluene	1	11.702	11.702	0.000	86433	0.4000	0.4142	
17 2,6-Dinitrotoluene	1	11.862	11.862	0.000	60967	0.4000	0.4068	
18 2,4-Dinitrotoluene	1	12.055	12.055	0.000	119960	0.4000	0.4077	
19 o-Nitrotoluene	1	12.888	12.888	0.000	45694	0.4000	0.4397	
20 p-Nitrotoluene	1	13.328	13.328	0.000	41541	0.4000	0.4568	
21 m-Nitrotoluene	1	13.928	13.928	0.000	48777	0.4000	0.4129	
22 PETN	2	15.035	15.035	0.000	312409	4.00	4.12	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 LCS_00075 Amount Added: 0.04 Units: mL
8330Surrogate_00091 Amount Added: 0.04 Units: mL

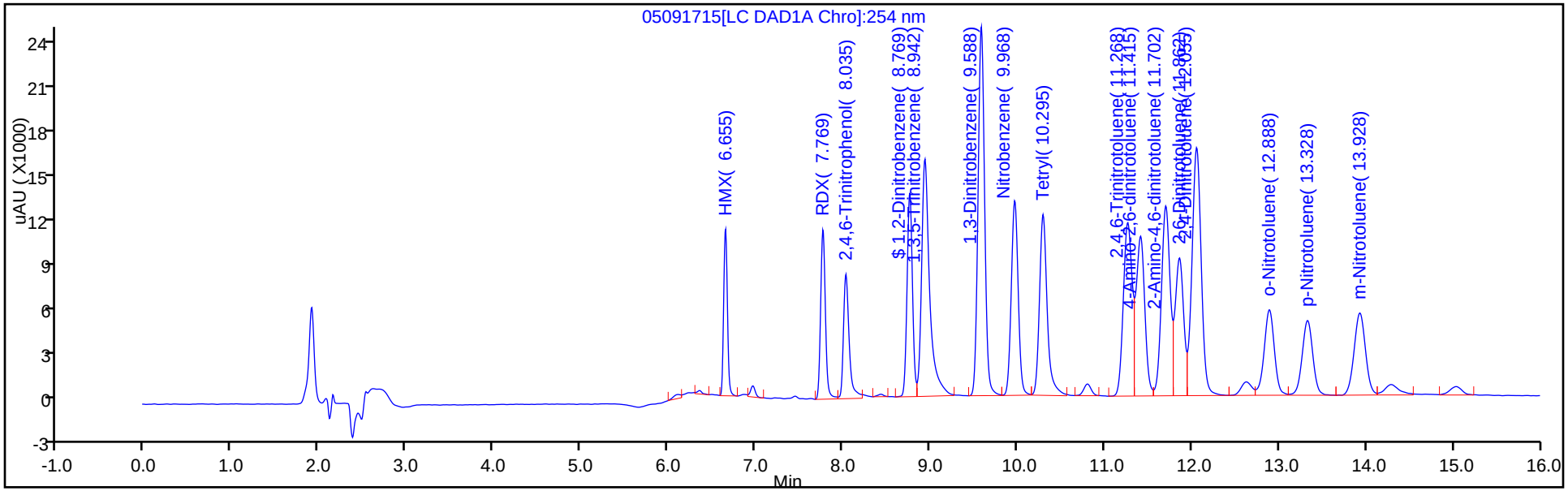
Report Date: 10-May-2017 09:49:38 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

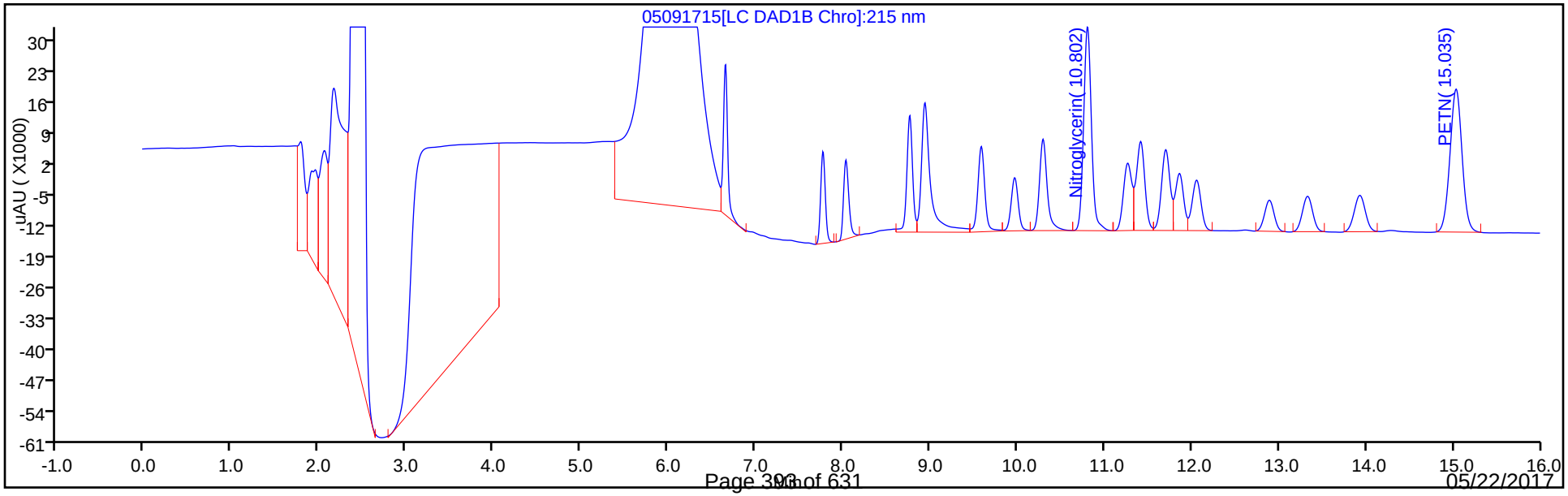
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091715.D

Injection Date:	09-May-2017 16:51:57	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	ICV MAIN			Worklist Smp#:	15
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

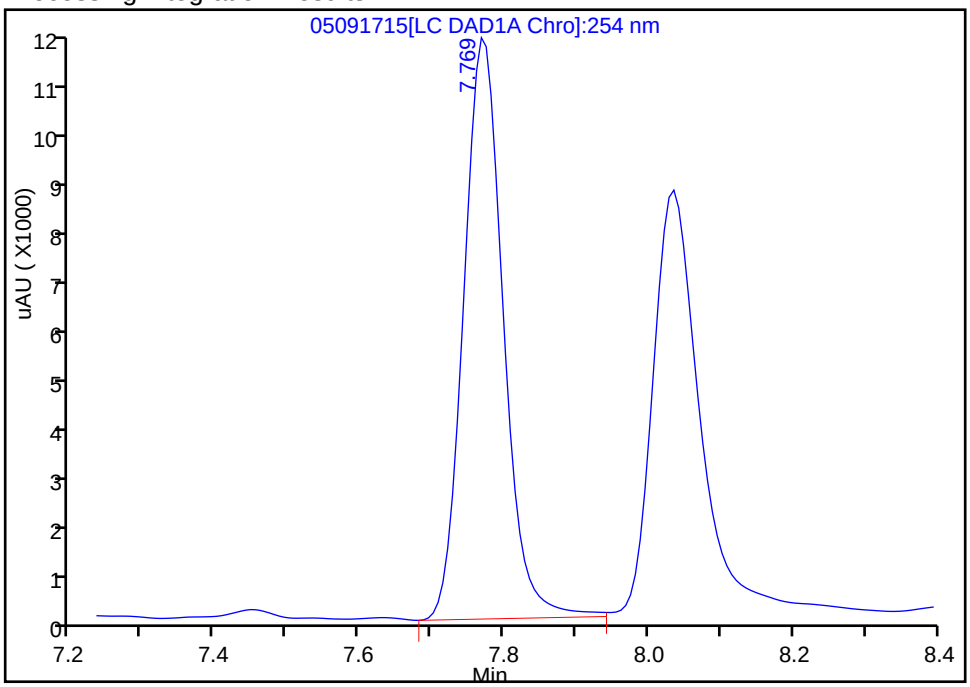
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091715.D				
Injection Date:	09-May-2017 16:51:57	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV MAIN				
Client ID:					
Operator ID:	asc	ALS Bottle#:	10	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 RDX, CAS: 121-82-4

Signal: 1

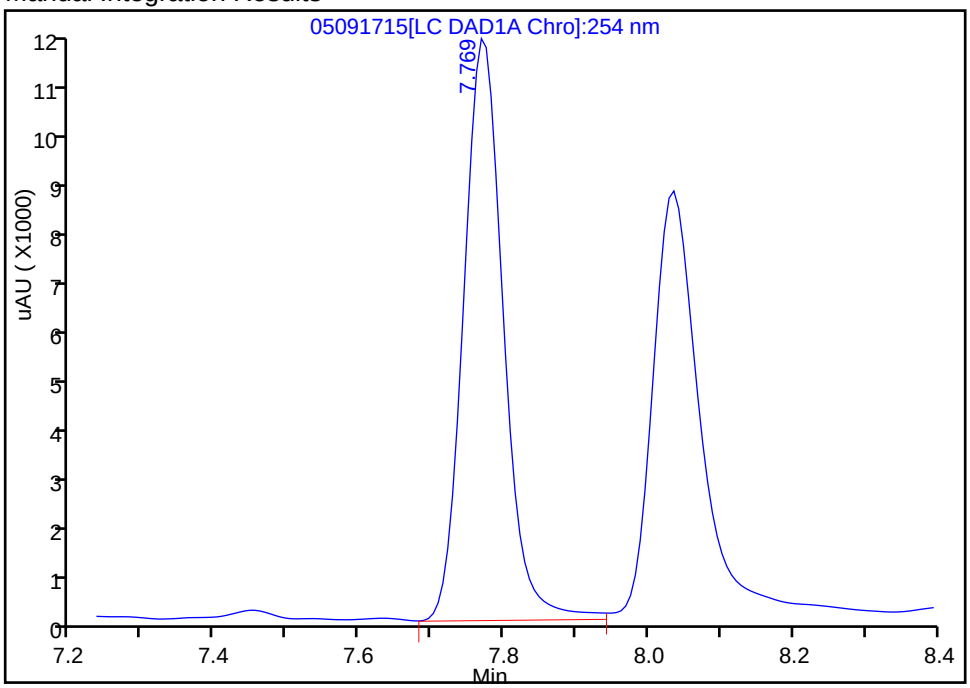
Processing Integration Results

RT: 7.77
Area: 42170
Amount: 0.398312
Amount Units: ug/mL



Manual Integration Results

RT: 7.77
Area: 42544
Amount: 0.401845
Amount Units: ug/mL



Reviewer: colleea, 10-May-2017 08:19:54
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

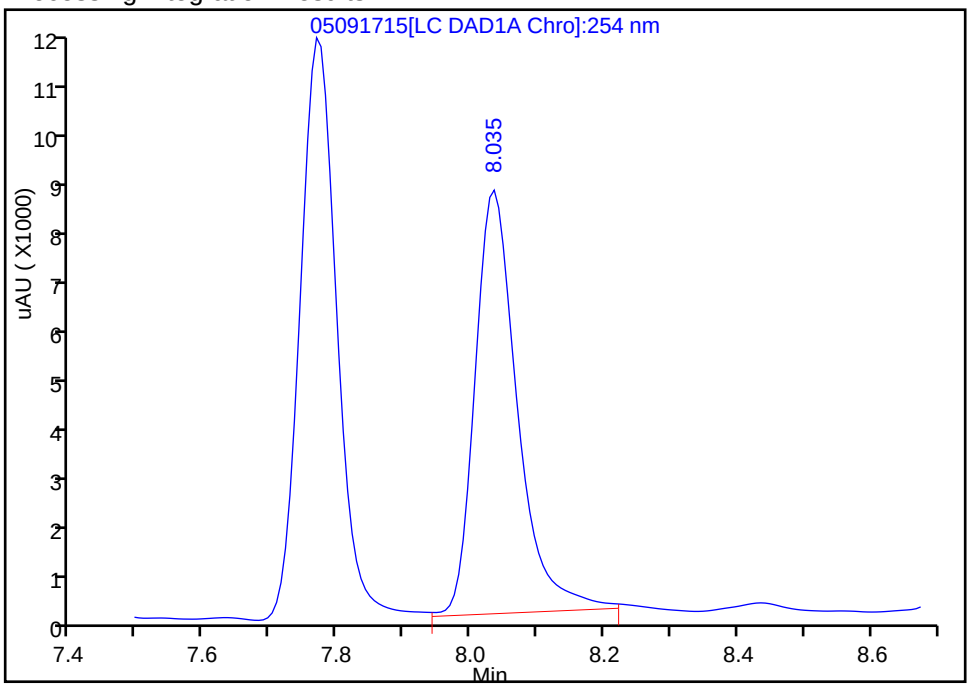
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091715.D				
Injection Date:	09-May-2017 16:51:57	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV MAIN				
Client ID:					
Operator ID:	asc	ALS Bottle#:	10	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

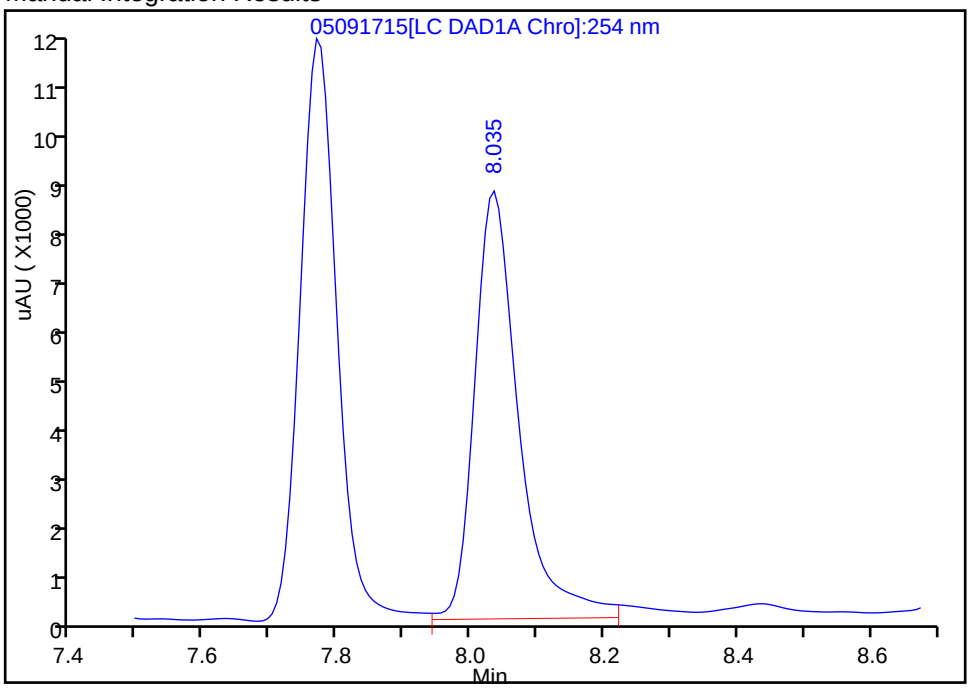
Processing Integration Results

RT: 8.04
Area: 35632
Amount: 0.406926
Amount Units: ug/mL



Manual Integration Results

RT: 8.04
Area: 37337
Amount: 0.418003
Amount Units: ug/mL



Reviewer: colleea, 10-May-2017 08:19:54
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372382/67 Calibration Date: 05/11/2017 13:19

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 05101767.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		92720		265	250	6.1	20.0
RDX	Ave	105872	104056		246	250	-1.7	20.0
Picric acid	Lin1		86204		239	250	-4.2	20.0
1,3,5-Trinitrobenzene	Lin1		227408		223	250	-10.7	20.0
1,3-Dinitrobenzene	Ave	292024	292276		250	250	0.0	20.0
Nitrobenzene	Lin1		186124		274	250	9.8	20.0
Tetryl	Lin1		165260		244	250	-2.5	20.0
Nitroglycerin	Lin2		70642		2530	2500	1.0	20.0
2,4,6-Trinitrotoluene	Ave	184720	200288		271	250	8.4	20.0
4-Amino-2,6-dinitrotoluene	Lin		156032		229	250	-8.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	208660	210368		252	250	0.8	20.0
2,6-Dinitrotoluene	Ave	149867	147860		247	250	-1.3	20.0
2,4-Dinitrotoluene	Ave	294229	294628		250	250	0.1	20.0
2-Nitrotoluene	Lin2		120644		283	250	13.1	20.0
4-Nitrotoluene	Lin2		104248		283	250	13.2	20.0
3-Nitrotoluene	Lin1		135188		287	250	14.9	20.0
PETN	Lin2		74676		2480	2500	-0.8	20.0
1,2-Dinitrobenzene	Lin2		134952		246	250	-1.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372382/67 Calibration Date: 05/11/2017 13:19

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 05101767.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.51	6.81
RDX	7.78	7.63	7.93
Picric acid	8.08	7.93	8.23
1,3,5-Trinitrobenzene	8.95	8.80	9.10
1,3-Dinitrobenzene	9.62	9.47	9.77
Nitrobenzene	10.00	9.85	10.15
Tetryl	10.34	10.19	10.49
Nitroglycerin	10.86	10.71	11.01
2,4,6-Trinitrotoluene	11.31	11.21	11.41
4-Amino-2,6-dinitrotoluene	11.50	11.40	11.60
2-Amino-4,6-dinitrotoluene	11.78	11.68	11.88
2,6-Dinitrotoluene	11.93	11.83	12.03
2,4-Dinitrotoluene	12.12	12.02	12.22
2-Nitrotoluene	12.97	12.82	13.12
4-Nitrotoluene	13.42	13.27	13.57
3-Nitrotoluene	14.02	13.87	14.17
PETN	15.13	14.98	15.28
1,2-Dinitrobenzene	8.79	8.64	8.94

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101767.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 11-May-2017 13:19:52 ALS Bottle#: 33 Worklist Smp#: 67
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058342-067
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:21 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.663	6.663	0.000	23180	0.2500	0.2651	
4 MNX	1	7.363	7.363	0.000	33044	247.3	266.2	
5 RDX	1	7.783	7.783	0.000	26014	0.2500	0.2457	
6 2,4,6-Trinitrophenol	1	8.077	8.077	0.000	21551	0.2500	0.2394	
$ 7 1,2-Dinitrobenzene	1	8.790	8.790	0.000	33738	0.2500	0.2457	
8 1,3,5-Trinitrobenzene	1	8.950	8.950	0.000	56852	0.2500	0.2232	
9 1,3-Dinitrobenzene	1	9.617	9.617	0.000	73069	0.2500	0.2502	
11 Nitrobenzene	1	10.003	10.003	0.000	46531	0.2500	0.2744	
12 Tetryl	1	10.343	10.343	0.000	41315	0.2500	0.2437	
13 Nitroglycerin	2	10.857	10.857	0.000	176606	2.50	2.53	
14 2,4,6-Trinitrotoluene	1	11.310	11.310	0.000	50072	0.2500	0.2711	
15 4-Amino-2,6-dinitrotoluene	1	11.497	11.497	0.000	39008	0.2500	0.2291	
16 2-Amino-4,6-dinitrotoluene	1	11.783	11.783	0.000	52592	0.2500	0.2520	
17 2,6-Dinitrotoluene	1	11.930	11.930	0.000	36965	0.2500	0.2467	
18 2,4-Dinitrotoluene	1	12.123	12.123	0.000	73657	0.2500	0.2503	
19 o-Nitrotoluene	1	12.970	12.970	0.000	30161	0.2500	0.2829	
20 p-Nitrotoluene	1	13.417	13.417	0.000	26062	0.2500	0.2831	
21 m-Nitrotoluene	1	14.017	14.017	0.000	33797	0.2500	0.2873	
22 PETN	2	15.130	15.130	0.000	186689	2.50	2.48	

Reagents:

8330IntermStk_00051 Amount Added: 12.50 Units: uL

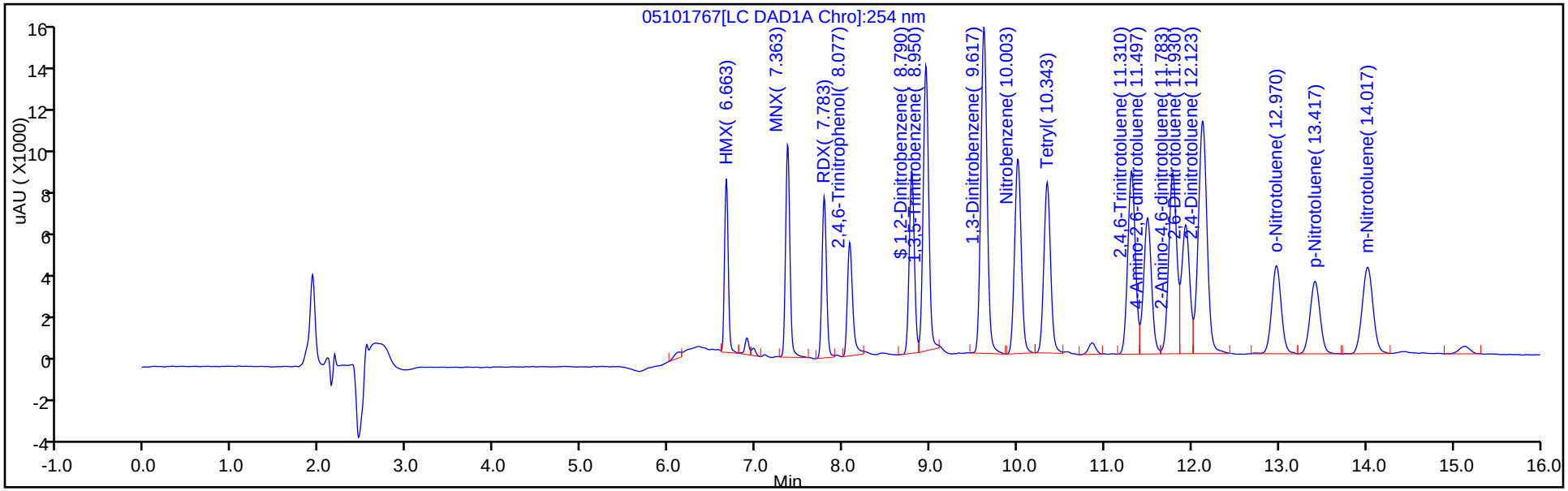
Report Date: 15-May-2017 07:47:21 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

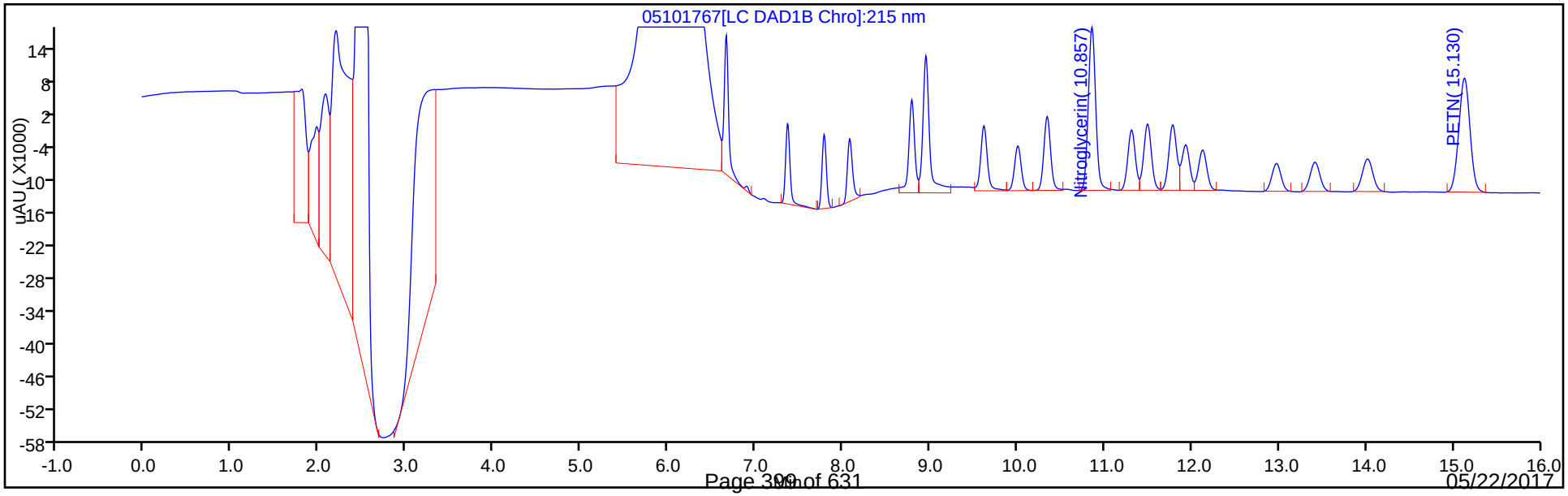
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101767.D

Injection Date:	11-May-2017 13:19:52	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	67
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
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.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372382/79 Calibration Date: 05/11/2017 17:55

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 05101779.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		88020		252	250	0.7	20.0
RDX	Ave	105872	97960		231	250	-7.5	20.0
Picric acid	Lin1		82628		229	250	-8.3	20.0
1,3,5-Trinitrobenzene	Lin1		226132		222	250	-11.3	20.0
1,3-Dinitrobenzene	Ave	292024	269012		230	250	-7.9	20.0
Nitrobenzene	Lin1		174740		258	250	3.2	20.0
Tetryl	Lin1		157288		232	250	-7.2	20.0
Nitroglycerin	Lin2		66694		2380	2500	-4.7	20.0
2,4,6-Trinitrotoluene	Ave	184720	190320		258	250	3.0	20.0
4-Amino-2,6-dinitrotoluene	Lin		143984		211	250	-15.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	208660	195764		235	250	-6.2	20.0
2,6-Dinitrotoluene	Ave	149867	139600		233	250	-6.9	20.0
2,4-Dinitrotoluene	Ave	294229	273076		232	250	-7.2	20.0
2-Nitrotoluene	Lin2		111808		261	250	4.2	20.0
4-Nitrotoluene	Lin2		95464		258	250	3.4	20.0
3-Nitrotoluene	Lin1		126952		270	250	8.0	20.0
PETN	Lin2		70328		2340	2500	-6.5	20.0
1,2-Dinitrobenzene	Lin2		127968		233	250	-6.9	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-372382/79 Calibration Date: 05/11/2017 17:55

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 05101779.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.51	6.81
RDX	7.79	7.64	7.94
Picric acid	8.09	7.94	8.24
1,3,5-Trinitrobenzene	8.96	8.81	9.11
1,3-Dinitrobenzene	9.63	9.48	9.78
Nitrobenzene	10.02	9.87	10.17
Tetryl	10.36	10.21	10.51
Nitroglycerin	10.87	10.72	11.02
2,4,6-Trinitrotoluene	11.33	11.23	11.43
4-Amino-2,6-dinitrotoluene	11.51	11.41	11.61
2-Amino-4,6-dinitrotoluene	11.80	11.70	11.90
2,6-Dinitrotoluene	11.95	11.85	12.05
2,4-Dinitrotoluene	12.15	12.05	12.25
2-Nitrotoluene	13.00	12.85	13.15
4-Nitrotoluene	13.45	13.30	13.60
3-Nitrotoluene	14.05	13.90	14.20
PETN	15.19	15.04	15.34
1,2-Dinitrobenzene	8.80	8.65	8.95

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101779.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 11-May-2017 17:55:36 ALS Bottle#: 65 Worklist Smp#: 79
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058342-079
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:04 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

First Level Reviewer: colleea Date: 12-May-2017 07:31:06

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.660	6.660	0.000	22005	0.2500	0.2517	
4 MNX	1	7.367	7.367	0.000	30646	247.3	246.7	
5 RDX	1	7.787	7.787	0.000	24490	0.2500	0.2313	
6 2,4,6-Trinitrophenol	1	8.087	8.087	0.000	20657	0.2500	0.2293	
$ 7 1,2-Dinitrobenzene	1	8.800	8.800	0.000	31992	0.2500	0.2328	M
8 1,3,5-Trinitrobenzene	1	8.960	8.960	0.000	56533	0.2500	0.2218	M
9 1,3-Dinitrobenzene	1	9.627	9.627	0.000	67253	0.2500	0.2303	
11 Nitrobenzene	1	10.020	10.020	0.000	43685	0.2500	0.2579	
12 Tetryl	1	10.360	10.360	0.000	39322	0.2500	0.2319	
13 Nitroglycerin	2	10.873	10.873	0.000	166735	2.50	2.38	
14 2,4,6-Trinitrotoluene	1	11.327	11.327	0.000	47580	0.2500	0.2576	
15 4-Amino-2,6-dinitrotoluene	1	11.513	11.513	0.000	35996	0.2500	0.2111	
16 2-Amino-4,6-dinitrotoluene	1	11.800	11.800	0.000	48941	0.2500	0.2345	
17 2,6-Dinitrotoluene	1	11.953	11.953	0.000	34900	0.2500	0.2329	
18 2,4-Dinitrotoluene	1	12.147	12.147	0.000	68269	0.2500	0.2320	
19 o-Nitrotoluene	1	13.000	13.000	0.000	27952	0.2500	0.2606	
20 p-Nitrotoluene	1	13.447	13.447	0.000	23866	0.2500	0.2585	M
21 m-Nitrotoluene	1	14.053	14.053	0.000	31738	0.2500	0.2700	
22 PETN	2	15.187	15.187	0.000	175819	2.50	2.34	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00051 Amount Added: 12.50 Units: uL

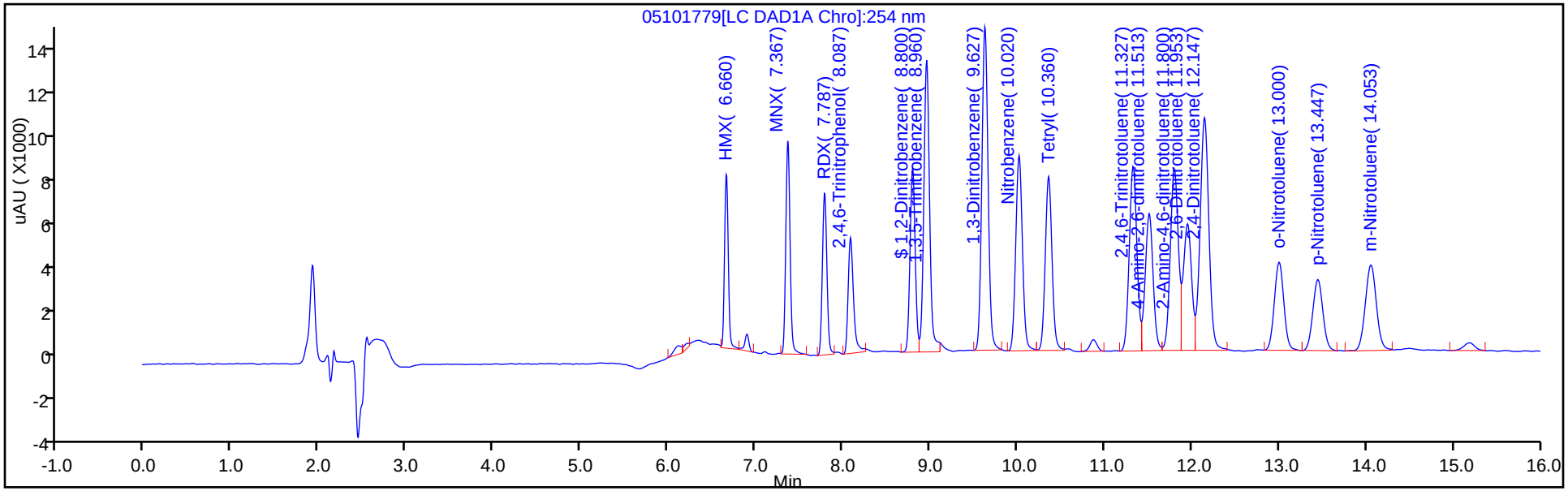
Report Date: 15-May-2017 07:47:05 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

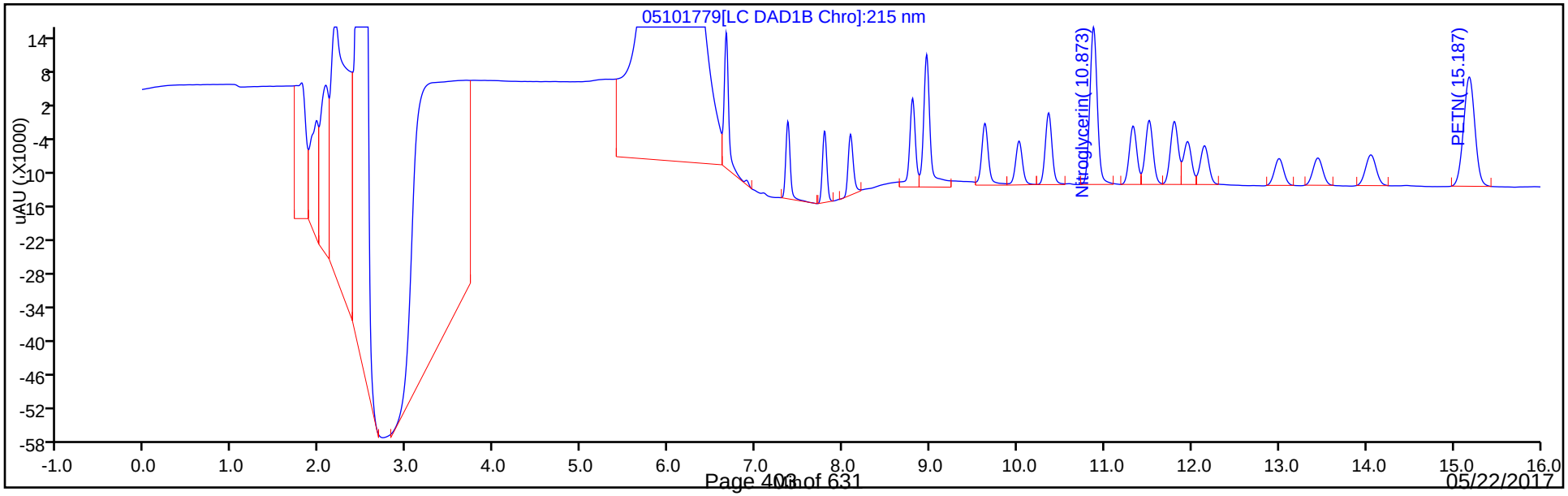
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101779.D

Injection Date:	11-May-2017 17:55:36	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	79
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	65
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

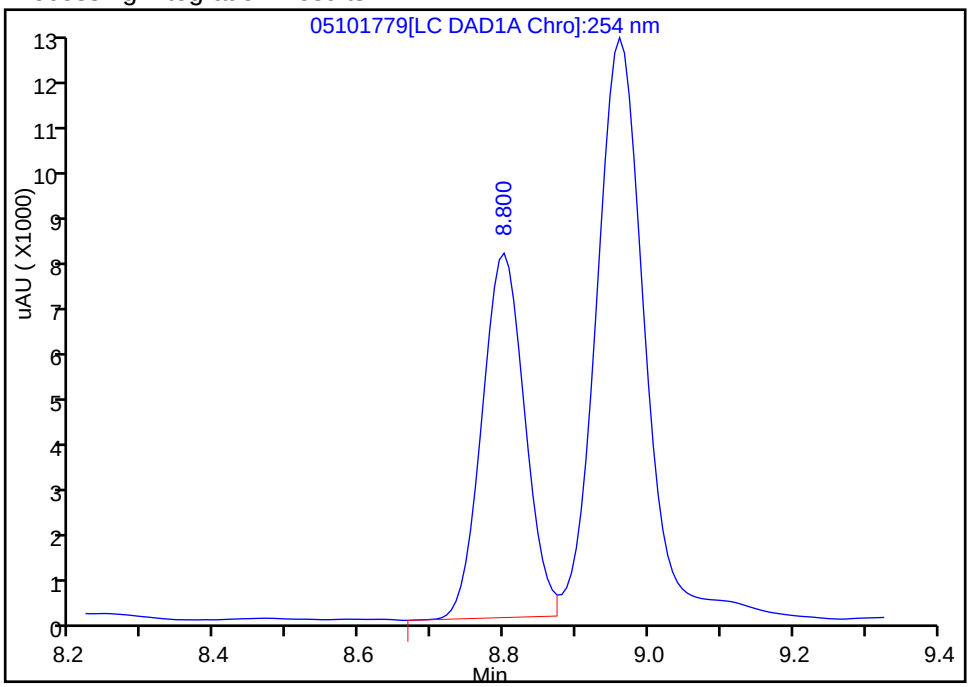
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101779.D				
Injection Date:	11-May-2017 17:55:36	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV MAIN L4				
Client ID:					
Operator ID:	asc	ALS Bottle#:	65	Worklist Smp#:	79
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

$ 7 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

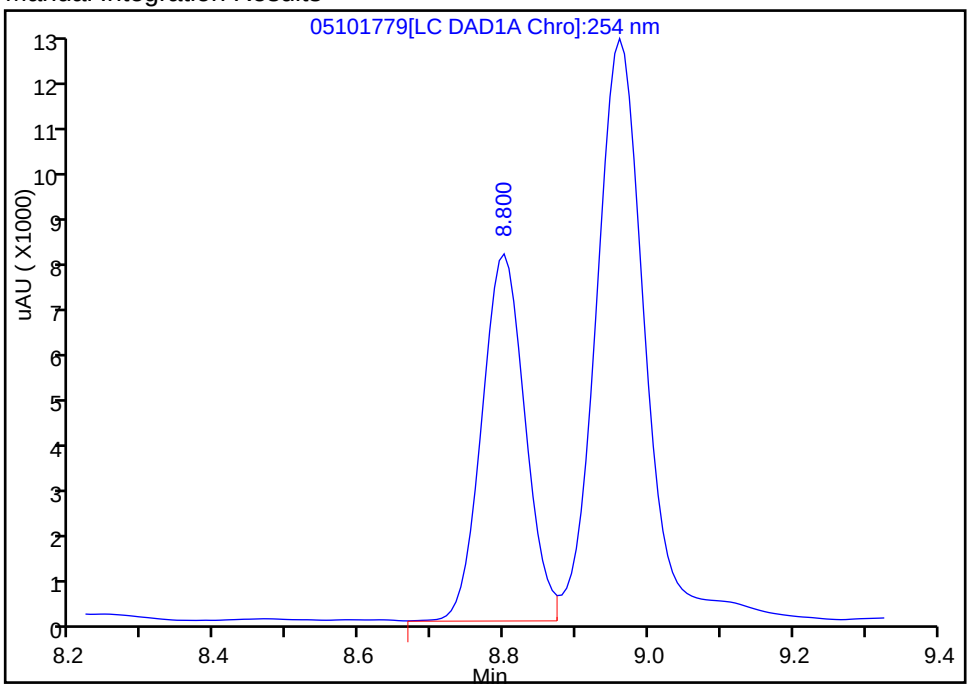
Processing Integration Results

RT: 8.80
Area: 31391
Amount: 0.228352
Amount Units: ug/mL



Manual Integration Results

RT: 8.80
Area: 31992
Amount: 0.232783
Amount Units: ug/mL



Reviewer: colleea, 12-May-2017 07:30:42
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

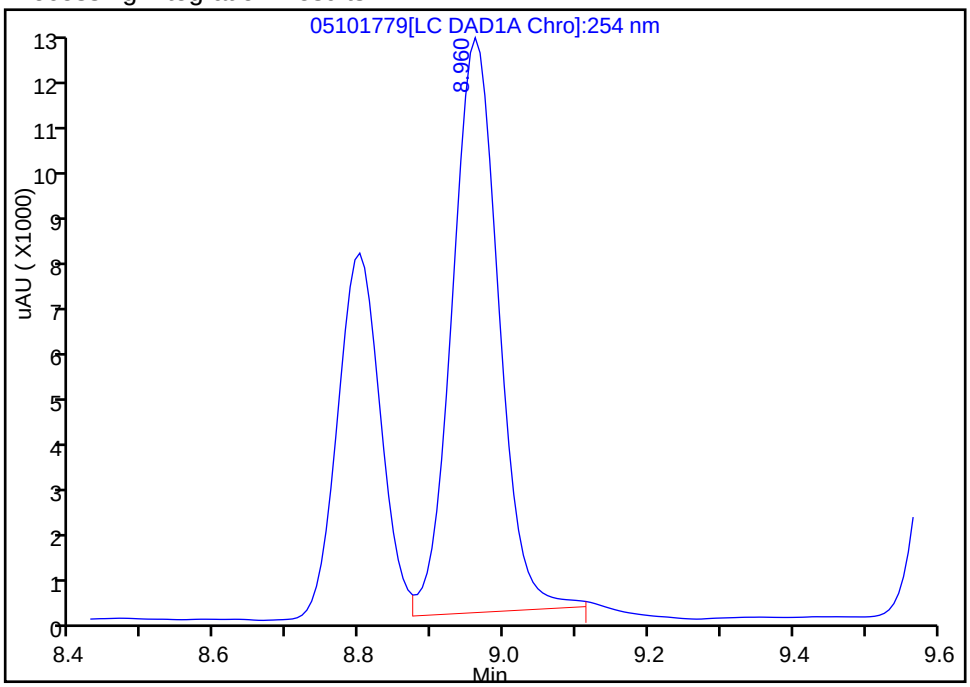
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101779.D				
Injection Date:	11-May-2017 17:55:36	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV MAIN L4				
Client ID:					
Operator ID:	asc	ALS Bottle#:	65	Worklist Smp#:	79
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

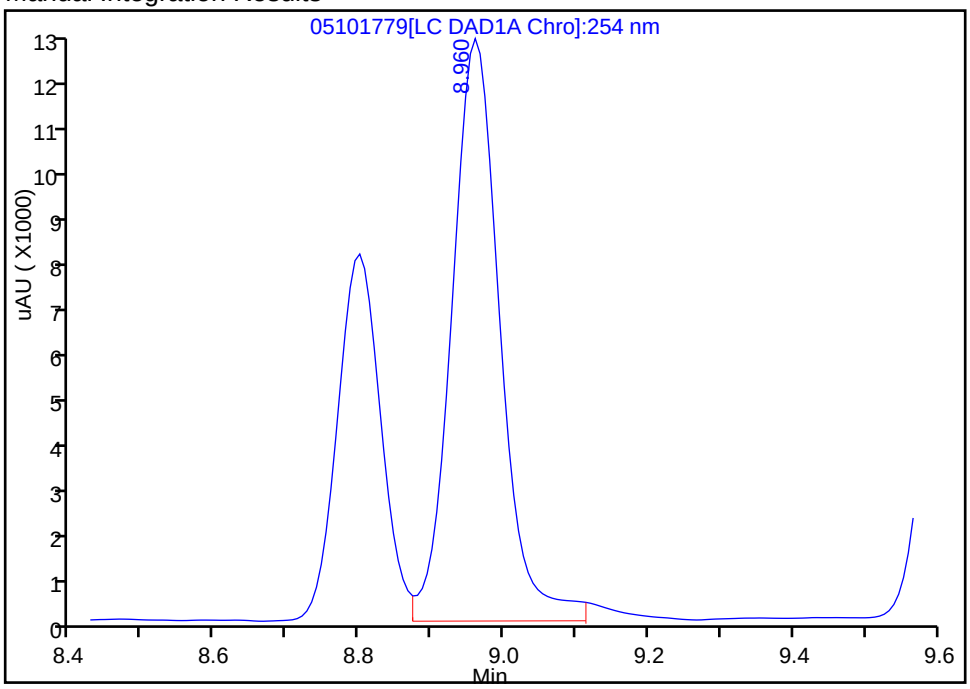
Processing Integration Results

RT: 8.96
Area: 53883
Amount: 0.210643
Amount Units: ug/mL



Manual Integration Results

RT: 8.96
Area: 56533
Amount: 0.221839
Amount Units: ug/mL



Reviewer: colleea, 12-May-2017 07:30:42

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

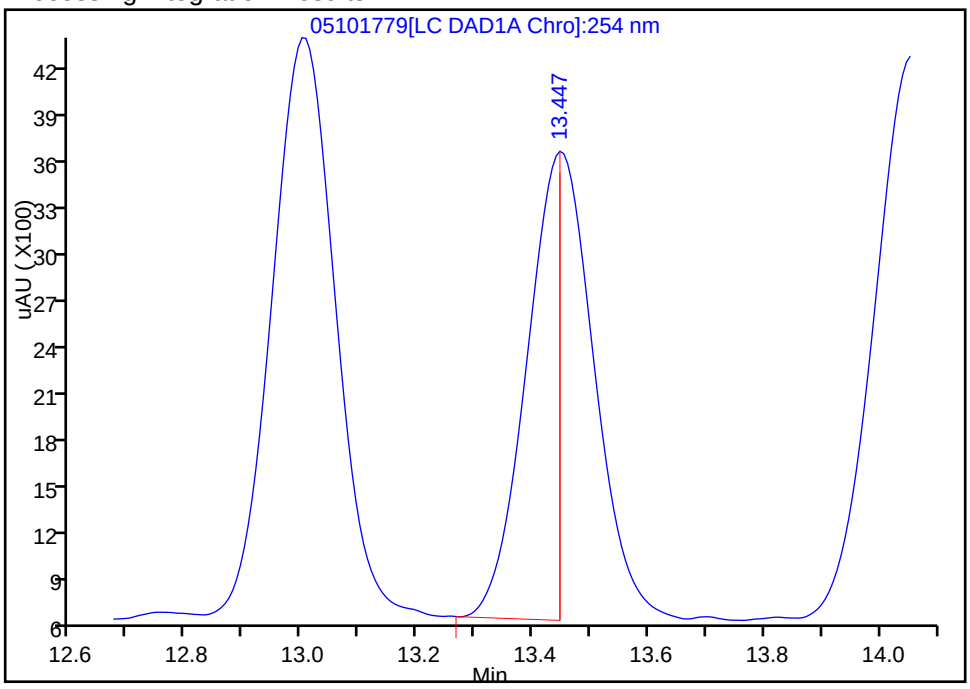
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101779.D				
Injection Date:	11-May-2017 17:55:36	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV MAIN L4				
Client ID:					
Operator ID:	asc	ALS Bottle#:	65	Worklist Smp#:	79
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

20 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

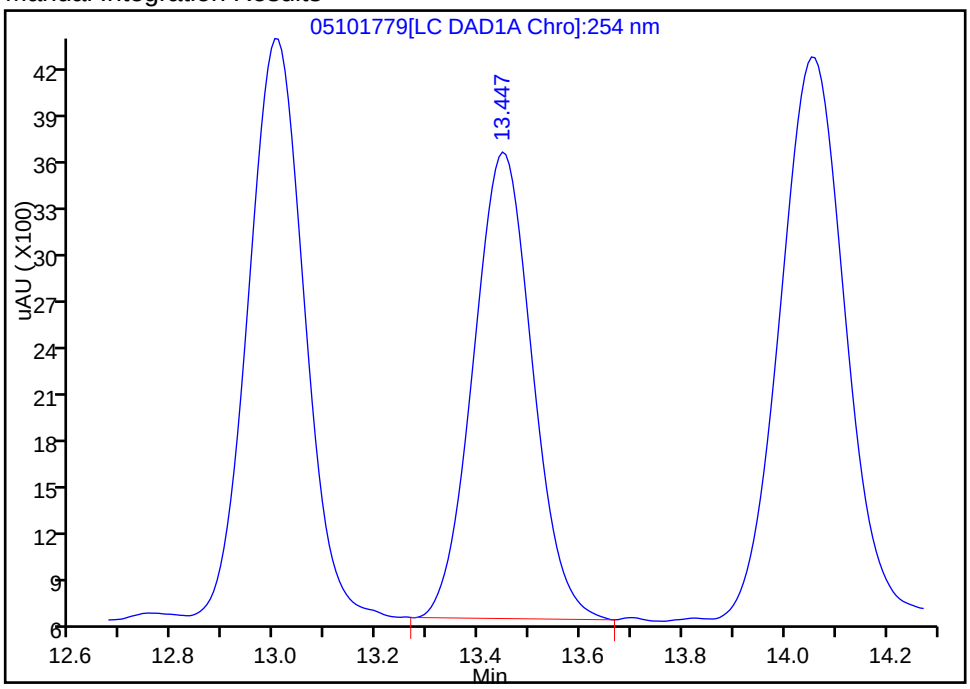
Processing Integration Results

RT: 13.45
Area: 11682
Amount: 0.121794
Amount Units: ug/mL



Manual Integration Results

RT: 13.45
Area: 23866
Amount: 0.258486
Amount Units: ug/mL



Reviewer: colleea, 12-May-2017 07:30:52

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373499/7 Calibration Date: 05/15/2017 12:52

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 51517007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		92728		265	250	6.1	20.0
RDX	Ave	105872	105948		250	250	0.0	20.0
Picric acid	Lin1		86348		240	250	-4.1	20.0
1,3,5-Trinitrobenzene	Lin1		231512		228	250	-9.0	20.0
1,3-Dinitrobenzene	Ave	292024	295228		253	250	1.1	20.0
Nitrobenzene	Lin1		183448		271	250	8.2	20.0
Tetryl	Lin1		167848		248	250	-1.0	20.0
Nitroglycerin	Lin2		71998		2570	2500	3.0	20.0
2,4,6-Trinitrotoluene	Ave	184720	203268		275	250	10.0	20.0
4-Amino-2,6-dinitrotoluene	Lin		150508		221	250	-11.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	208660	205484		246	250	-1.5	20.0
2,6-Dinitrotoluene	Ave	149867	154036		257	250	2.8	20.0
2,4-Dinitrotoluene	Ave	294229	295264		251	250	0.4	20.0
2-Nitrotoluene	Lin2		117052		274	250	9.5	20.0
4-Nitrotoluene	Lin2		103940		282	250	12.9	20.0
3-Nitrotoluene	Lin1		133152		283	250	13.2	20.0
PETN	Lin2		75188		2500	2500	-0.1	20.0
1,2-Dinitrobenzene	Lin2		136932		249	250	-0.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373499/7 Calibration Date: 05/15/2017 12:52

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 51517007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.69	6.54	6.84
RDX	7.84	7.69	7.99
Picric acid	8.14	7.99	8.29
1,3,5-Trinitrobenzene	9.02	8.87	9.17
1,3-Dinitrobenzene	9.70	9.55	9.85
Nitrobenzene	10.11	9.96	10.26
Tetryl	10.47	10.32	10.62
Nitroglycerin	11.00	10.85	11.15
2,4,6-Trinitrotoluene	11.45	11.35	11.55
4-Amino-2,6-dinitrotoluene	11.64	11.54	11.74
2-Amino-4,6-dinitrotoluene	11.94	11.84	12.04
2,6-Dinitrotoluene	12.10	12.00	12.20
2,4-Dinitrotoluene	12.29	12.19	12.39
2-Nitrotoluene	13.17	13.02	13.32
4-Nitrotoluene	13.62	13.47	13.77
3-Nitrotoluene	14.25	14.10	14.40
PETN	15.42	15.27	15.57
1,2-Dinitrobenzene	8.86	8.71	9.01

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517007.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 15-May-2017 12:52:44 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058689-007
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2017 09:47:05 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 15-May-2017 15:18:08

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.688	6.688	0.000	23182	0.2500	0.2652	
4 MNX	1	7.402	7.402	0.000	32322	247.3	260.3	
5 RDX	1	7.835	7.835	0.000	26487	0.2500	0.2502	
6 2,4,6-Trinitrophenol	1	8.135	8.135	0.000	21587	0.2500	0.2398	
$ 7 1,2-Dinitrobenzene	1	8.862	8.862	0.000	34233	0.2500	0.2493	
8 1,3,5-Trinitrobenzene	1	9.022	9.022	0.000	57878	0.2500	0.2275	
9 1,3-Dinitrobenzene	1	9.701	9.701	0.000	73807	0.2500	0.2527	
11 Nitrobenzene	1	10.108	10.108	0.000	45862	0.2500	0.2705	
12 Tetryl	1	10.468	10.468	0.000	41962	0.2500	0.2475	
13 Nitroglycerin	2	10.995	10.995	0.000	179995	2.50	2.57	
14 2,4,6-Trinitrotoluene	1	11.448	11.448	0.000	50817	0.2500	0.2751	
15 4-Amino-2,6-dinitrotoluene	1	11.641	11.641	0.000	37627	0.2500	0.2208	
16 2-Amino-4,6-dinitrotoluene	1	11.935	11.935	0.000	51371	0.2500	0.2462	
18 2,4-Dinitrotoluene	1	12.288	12.288	0.000	73816	0.2500	0.2509	
17 2,6-Dinitrotoluene	1	12.095	12.095	0.000	38509	0.2500	0.2570	
19 o-Nitrotoluene	1	13.168	13.168	0.000	29263	0.2500	0.2738	
20 p-Nitrotoluene	1	13.621	13.621	0.000	25985	0.2500	0.2823	
21 m-Nitrotoluene	1	14.248	14.248	0.000	33288	0.2500	0.2830	
22 PETN	2	15.421	15.421	0.000	187969	2.50	2.50	

Reagents:

8330IntermStk_00051 Amount Added: 12.50 Units: uL

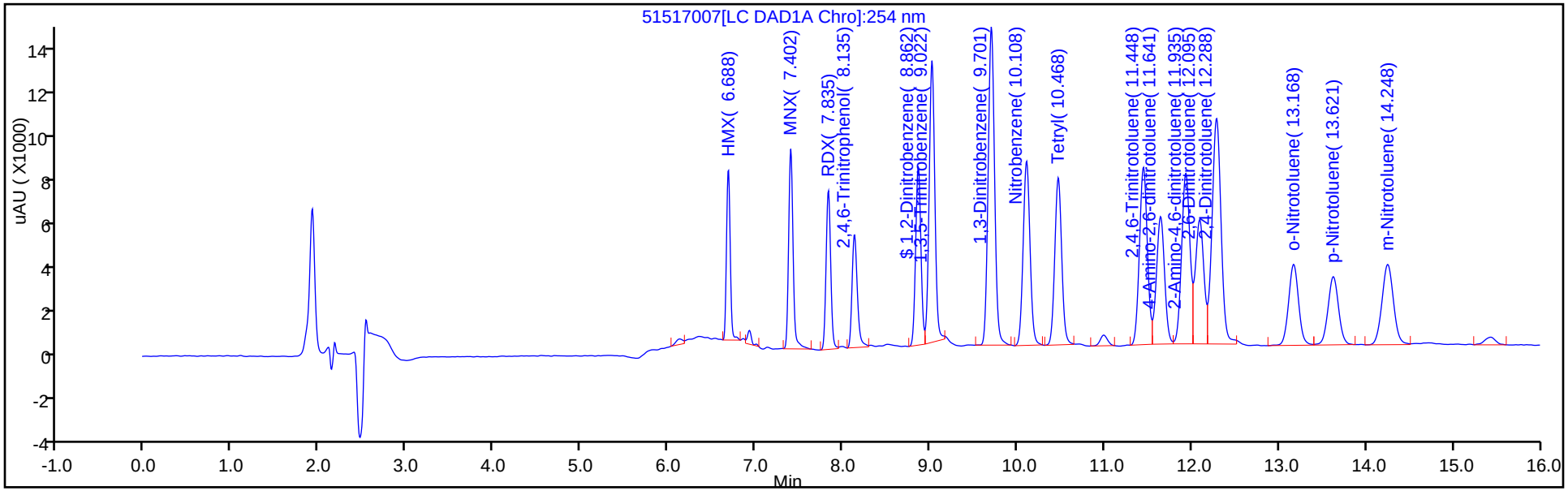
Report Date: 16-May-2017 09:47:06 Chrom Revision: 2.2 11-May-2017 11:43:00

TestAmerica Denver

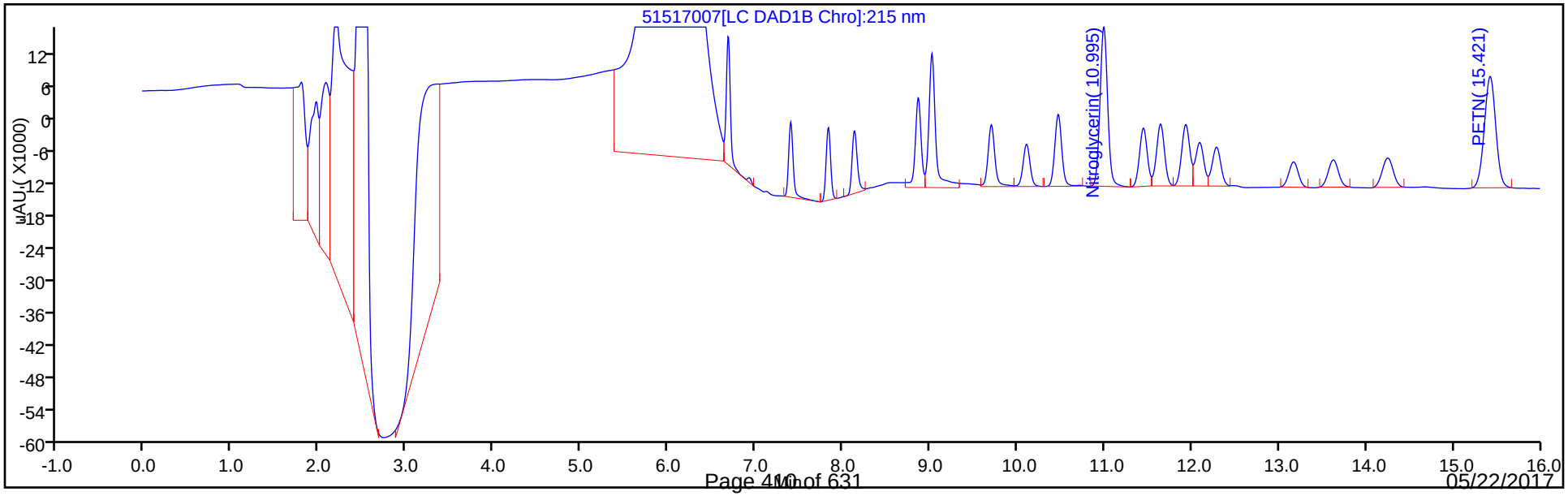
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517007.D

Injection Date:	15-May-2017 12:52:44	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
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.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373499/19 Calibration Date: 05/15/2017 17:28

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 51517019.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Lin1		93704		268	250	7.2	20.0
RDX	Ave	105872	106832		252	250	0.9	20.0
Picric acid	Lin1		85980		239	250	-4.5	20.0
1,3,5-Trinitrobenzene	Lin1		249324		246	250	-1.5	20.0
1,3-Dinitrobenzene	Ave	292024	299140		256	250	2.4	20.0
Nitrobenzene	Lin1		183216		270	250	8.1	20.0
Tetryl	Lin1		169124		249	250	-0.2	20.0
Nitroglycerin	Lin2		71064		2540	2500	1.6	20.0
2,4,6-Trinitrotoluene	Ave	184720	205728		278	250	11.4	20.0
4-Amino-2,6-dinitrotoluene	Lin		156008		229	250	-8.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	208660	210140		252	250	0.7	20.0
2,6-Dinitrotoluene	Ave	149867	156316		261	250	4.3	20.0
2,4-Dinitrotoluene	Ave	294229	304136		258	250	3.4	20.0
2-Nitrotoluene	Lin2		116420		272	250	8.9	20.0
4-Nitrotoluene	Lin2		102784		279	250	11.6	20.0
3-Nitrotoluene	Lin1		131024		279	250	11.4	20.0
PETN	Lin2		76228		2530	2500	1.2	20.0
1,2-Dinitrobenzene	Lin2		140404		256	250	2.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Lab Sample ID: CCV 280-373499/19 Calibration Date: 05/15/2017 17:28

Instrument ID: CHHPLC_X3 Calib Start Date: 05/09/2017 13:48

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/09/2017 16:28

Lab File ID: 51517019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.78	7.63	7.93
Picric acid	8.06	7.91	8.21
1,3,5-Trinitrobenzene	8.96	8.81	9.11
1,3-Dinitrobenzene	9.62	9.47	9.77
Nitrobenzene	10.01	9.86	10.16
Tetryl	10.33	10.18	10.48
Nitroglycerin	10.84	10.69	10.99
2,4,6-Trinitrotoluene	11.29	11.19	11.39
4-Amino-2,6-dinitrotoluene	11.46	11.36	11.56
2-Amino-4,6-dinitrotoluene	11.74	11.64	11.84
2,6-Dinitrotoluene	11.90	11.80	12.00
2,4-Dinitrotoluene	12.10	12.00	12.20
2-Nitrotoluene	12.94	12.79	13.09
4-Nitrotoluene	13.38	13.23	13.53
3-Nitrotoluene	13.98	13.83	14.13
PETN	15.09	14.94	15.24
1,2-Dinitrobenzene	8.79	8.64	8.94

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517019.D
Lims ID: CCV MAIN L4
Client ID:
Sample Type: CCV
Inject. Date: 15-May-2017 17:28:21 ALS Bottle#: 2 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV MAIN L4
Misc. Info.: 280-0058689-019
Operator ID: asc Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub11

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2017 09:47:24 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 16-May-2017 09:13:54

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.650	6.650	0.000	23426	0.2500	0.2680	
4 MNX	1	7.357	7.357	0.000	31519	247.3	253.8	
5 RDX	1	7.777	7.777	0.000	26708	0.2500	0.2523	
6 2,4,6-Trinitrophenol	1	8.063	8.063	0.000	21495	0.2500	0.2388	
$ 7 1,2-Dinitrobenzene	1	8.790	8.790	0.000	35101	0.2500	0.2557	
8 1,3,5-Trinitrobenzene	1	8.957	8.957	0.000	62331	0.2500	0.2463	
9 1,3-Dinitrobenzene	1	9.617	9.617	0.000	74785	0.2500	0.2561	
11 Nitrobenzene	1	10.010	10.010	0.000	45804	0.2500	0.2702	
12 Tetryl	1	10.330	10.330	0.000	42281	0.2500	0.2494	
13 Nitroglycerin	2	10.843	10.843	0.000	177661	2.50	2.54	
14 2,4,6-Trinitrotoluene	1	11.290	11.290	0.000	51432	0.2500	0.2784	
15 4-Amino-2,6-dinitrotoluene	1	11.457	11.457	0.000	39002	0.2500	0.2291	
16 2-Amino-4,6-dinitrotoluene	1	11.737	11.737	0.000	52535	0.2500	0.2518	
17 2,6-Dinitrotoluene	1	11.903	11.903	0.000	39079	0.2500	0.2608	
18 2,4-Dinitrotoluene	1	12.097	12.097	0.000	76034	0.2500	0.2584	
19 o-Nitrotoluene	1	12.943	12.943	0.000	29105	0.2500	0.2722	
20 p-Nitrotoluene	1	13.377	13.377	0.000	25696	0.2500	0.2790	
21 m-Nitrotoluene	1	13.977	13.977	0.000	32756	0.2500	0.2786	
22 PETN	2	15.090	15.090	0.000	190569	2.50	2.53	

Reagents:

8330IntermStk_00051 Amount Added: 12.50 Units: uL

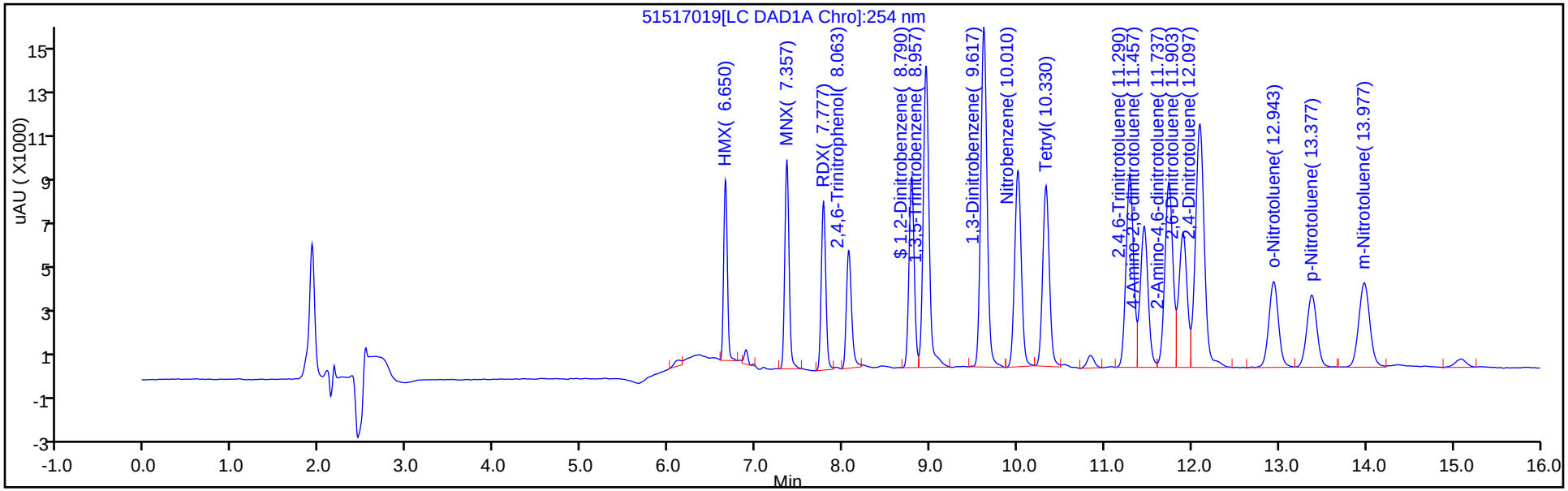
Report Date: 16-May-2017 09:47:25 Chrom Revision: 2.2 11-May-2017 11:43:00

TestAmerica Denver

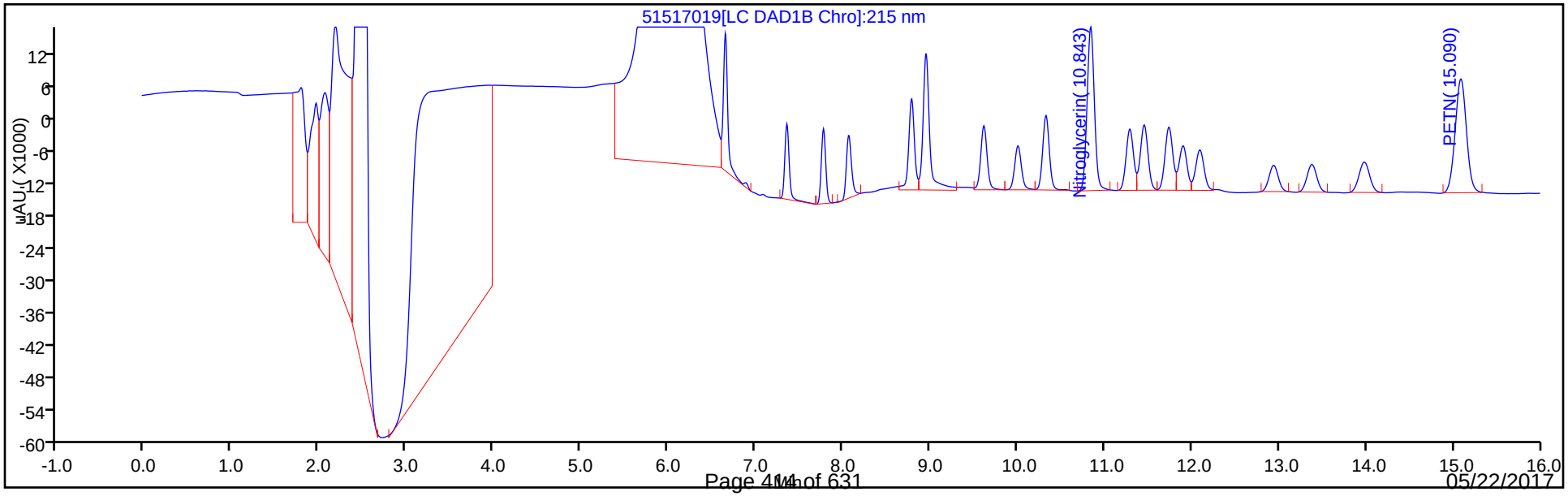
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517019.D

Injection Date:	15-May-2017 17:28:21	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	CCV MAIN L4			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
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.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-371611/1-A

Matrix: Water | Lab File ID: 50417C16.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/04/2017 23:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 372244 | 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	106		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C16.D
Lims ID: MB 280-371611/1-A
Client ID:
Sample Type: MB
Inject. Date: 04-May-2017 23:27:35 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-371611/1-
Misc. Info.: 280-0058316-016
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 19-May-2017 15:49:28 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK039

First Level Reviewer: waldorfj Date: 19-May-2017 15:49:12

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	2 2,6-diamino-4-nitrotoluene	1		4.413				ND	
	3 2,4-diamino-6-nitrotoluene	1		4.960				ND	
	5 HMX	1		7.080				ND	
	6 MNX	1		7.880				ND	
	4 2,4,6-Trinitrophenol	1		8.593				ND	
	7 RDX	1		9.253				ND	
	8 Nitrobenzene	1		12.193				ND	
$	9 1,2-Dinitrobenzene	1	13.154	13.153	0.001	56396	0.2000	0.2123	
	10 3,5-Dinitroaniline	1		15.173				ND	
	12 Nitroglycerin	2		15.613				ND	
	11 1,3-Dinitrobenzene	1		15.613				ND	
	13 o-Nitrotoluene	1		16.526				ND	
	14 p-Nitrotoluene	1		16.846				ND	
	15 4-Amino-2,6-dinitrotoluene	1		17.293				ND	
	16 m-Nitrotoluene	1		17.753				ND	
	17 2-Amino-4,6-dinitrotoluene	1		18.313				ND	
	18 1,3,5-Trinitrobenzene	1		18.740				ND	
	19 2,6-Dinitrotoluene	1		19.726				ND	
	20 2,4-Dinitrotoluene	1		20.280				ND	
	21 Tetryl	1		23.447				ND	
	22 2,4,6-Trinitrotoluene	1		24.380				ND	
	23 PETN	2		24.907				ND	
	1 Ammonium Picrate	1		0.000				ND	

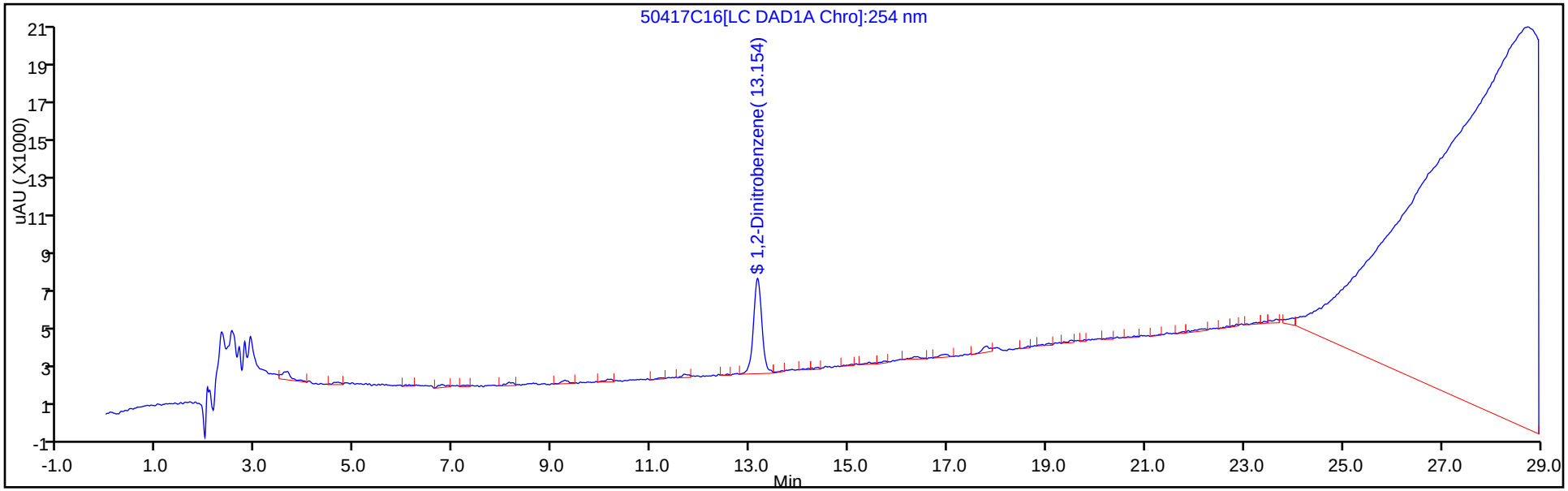
Report Date: 19-May-2017 15:49:47 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Denver

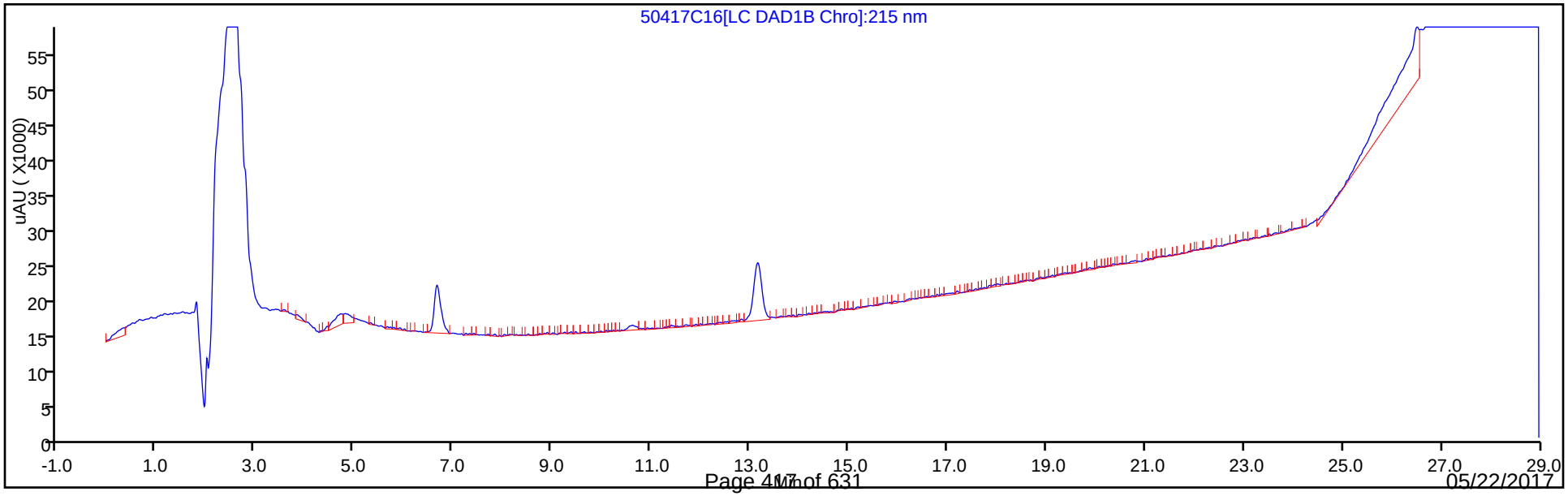
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C16.D

Injection Date:	04-May-2017 23:27:35	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	MB 280-371611/1-A			Worklist Smp#:	16
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C16.D				
Lims ID:	MB 280-371611/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-May-2017 23:27:35	ALS Bottle#:	11	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-371611/1-				
Misc. Info.:	280-0058316-016				
Operator ID:	asc	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2017 15:49:28	Calib Date:	04-May-2017 22:17:40		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	XAWRK039				
First Level Reviewer: waldorfj		Date:	19-May-2017 15:49:12		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.2123	106.15

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-371611/1-A

Matrix: Water | Lab File ID: 05101773.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/11/2017 15:37

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.: 372382 | 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	105		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101773.D
Lims ID: MB 280-371611/1-A
Client ID:
Sample Type: MB
Inject. Date: 11-May-2017 15:37:42 ALS Bottle#: 59 Worklist Smp#: 73
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-371611/1-
Misc. Info.: 280-0058342-073
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:04 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

First Level Reviewer: colleea Date: 12-May-2017 07:21:03

	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		6.522				ND	
	2 HMX	1		6.663				ND	
	3 2,4-diamino-6-nitrotoluene	1		6.702				ND	
	4 MNX	1		7.363				ND	
	5 RDX	1		7.783				ND	
	6 2,4,6-Trinitrophenol	1		8.077				ND	M
$	7 1,2-Dinitrobenzene	1	8.791	8.790	0.001	28873	0.2000	0.2098	
	8 1,3,5-Trinitrobenzene	1		8.950				ND	
	9 1,3-Dinitrobenzene	1		9.617				ND	
	11 Nitrobenzene	1		10.003				ND	
	10 3,5-Dinitroaniline	1		10.256				ND	
	12 Tetryl	1		10.343				ND	
	13 Nitroglycerin	2		10.857				ND	
	14 2,4,6-Trinitrotoluene	1		11.310				ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.497				ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.783				ND	
	17 2,6-Dinitrotoluene	1		11.930				ND	
	18 2,4-Dinitrotoluene	1		12.123				ND	
	19 o-Nitrotoluene	1		12.970				ND	
	20 p-Nitrotoluene	1		13.417				ND	
	21 m-Nitrotoluene	1		14.017				ND	
	22 PETN	2		15.130				ND	

QC Flag Legend

Review Flags
M - Manually Integrated

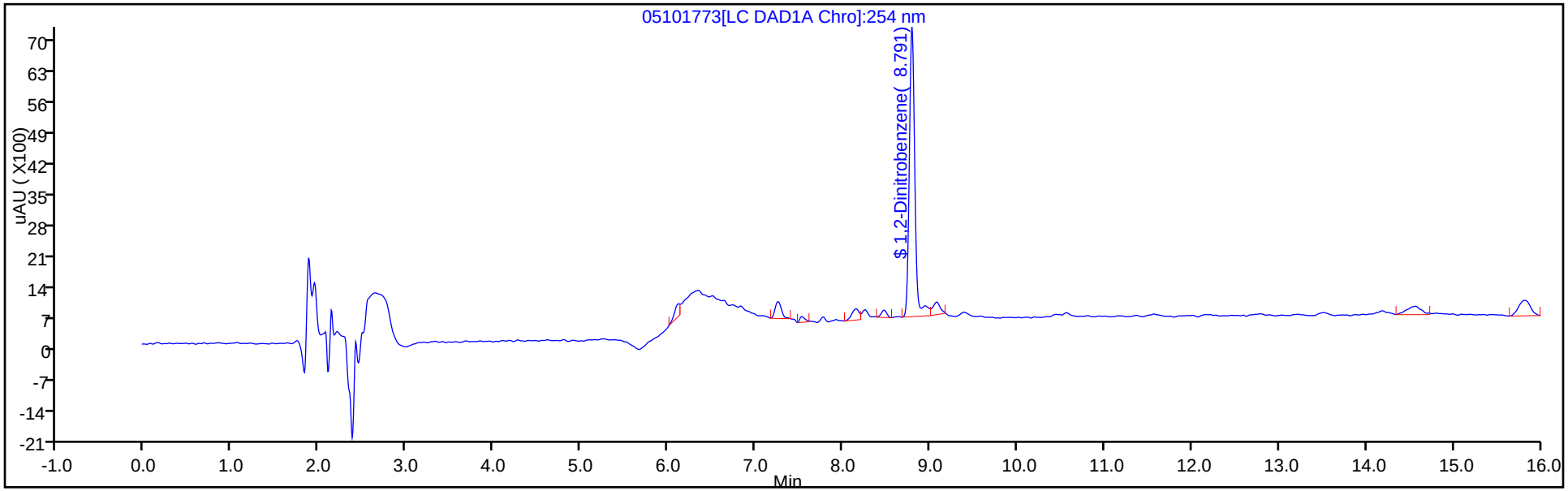
Report Date: 15-May-2017 07:47:14 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

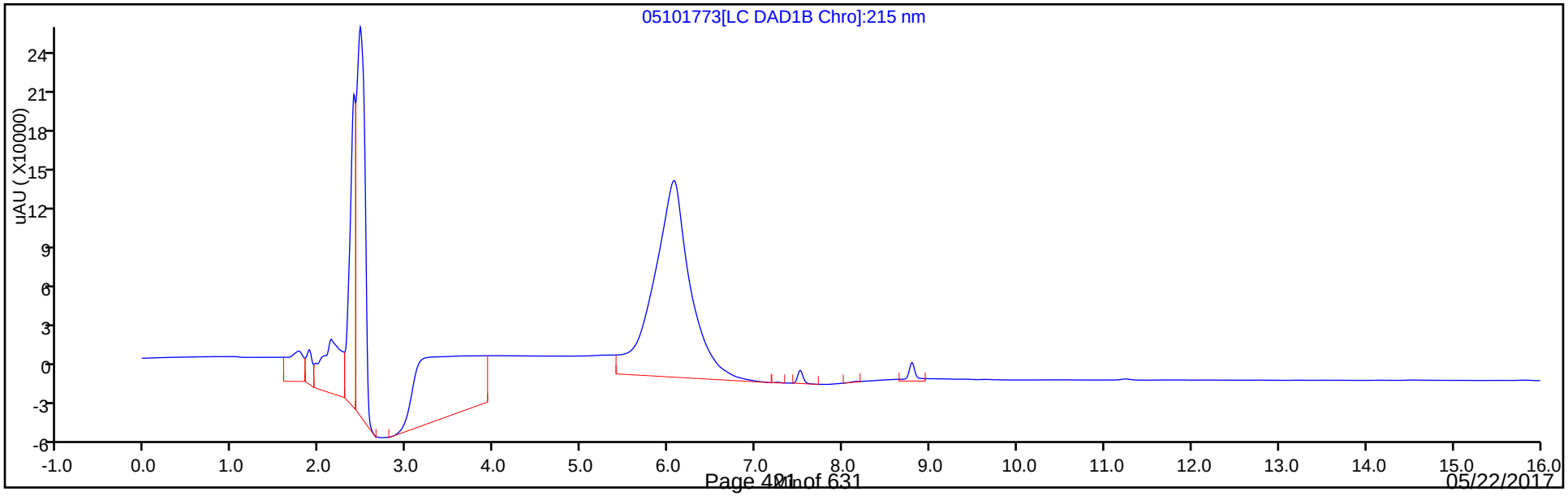
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101773.D

Injection Date:	11-May-2017 15:37:42	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	MB 280-371611/1-A			Worklist Smp#:	73
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	59
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\20170505-58342.b\05101773.D
Lims ID: MB 280-371611/1-A
Client ID:
Sample Type: MB
Inject. Date: 11-May-2017 15:37:42 ALS Bottle#: 59 Worklist Smp#: 73
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-371611/1-
Misc. Info.: 280-0058342-073
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:04 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

First Level Reviewer: colleea Date: 12-May-2017 07:21:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2098	104.89

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-371611/2-A

Matrix: Water | Lab File ID: 50417C17.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/05/2017 00:02

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 372244 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.18		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.30		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	2.14		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	2.20		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	2.15		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.96		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	2.26		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	2.13		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.86		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	2.10		1.0	0.40	0.20
2691-41-0	HMX	1.91		0.40	0.20	0.088
98-95-3	Nitrobenzene	2.21		0.40	0.20	0.091
55-63-0	Nitroglycerin	22.4		3.0	2.0	0.92
78-11-5	PETN	23.0		2.0	1.2	0.42
121-82-4	RDX	2.20		0.20	0.12	0.052
479-45-8	Tetryl	2.21		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	115		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C17.D
Lims ID: LCS 280-371611/2-A
Client ID:
Sample Type: LCS
Inject. Date: 05-May-2017 00:02:32 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-371611/2
Misc. Info.: 280-0058316-017
Operator ID: asc Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 19-May-2017 15:49:28 Calib Date: 04-May-2017 22:17:40
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: XAWRK039

First Level Reviewer: colleea Date: 05-May-2017 06:26:20

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	7.086	7.080	0.006	33396	0.2000	0.1911	
4 2,4,6-Trinitrophenol	1	8.606	8.593	0.013	35028	0.2000	0.2181	
7 RDX	1	9.259	9.253	0.006	45787	0.2000	0.2196	
8 Nitrobenzene	1	12.159	12.193	-0.034	78520	0.2000	0.2209	
$ 9 1,2-Dinitrobenzene	1	13.119	13.153	-0.034	61051	0.2000	0.2294	
12 Nitroglycerin	2	15.572	15.613	-0.041	344095	2.00	2.24	
11 1,3-Dinitrobenzene	1	15.579	15.613	-0.034	132894	0.2000	0.2299	
13 o-Nitrotoluene	1	16.499	16.526	-0.027	50655	0.2000	0.2256	
14 p-Nitrotoluene	1	16.819	16.846	-0.027	44168	0.2000	0.2101	
15 4-Amino-2,6-dinitrotoluene	1	17.286	17.293	-0.007	54933	0.2000	0.1858	
16 m-Nitrotoluene	1	17.746	17.753	-0.007	57449	0.2000	0.2130	
17 2-Amino-4,6-dinitrotoluene	1	18.312	18.313	-0.001	81695	0.2000	0.1964	
18 1,3,5-Trinitrobenzene	1	18.732	18.740	-0.008	94259	0.2000	0.2176	
19 2,6-Dinitrotoluene	1	19.739	19.726	0.013	61885	0.2000	0.2152	
20 2,4-Dinitrotoluene	1	20.292	20.280	0.012	118845	0.2000	0.2204	
21 Tetryl	1	23.526	23.447	0.079	68391	0.2000	0.2209	
22 2,4,6-Trinitrotoluene	1	24.446	24.380	0.066	75579	0.2000	0.2143	
23 PETN	2	24.939	24.907	0.032	259234	2.00	2.30	

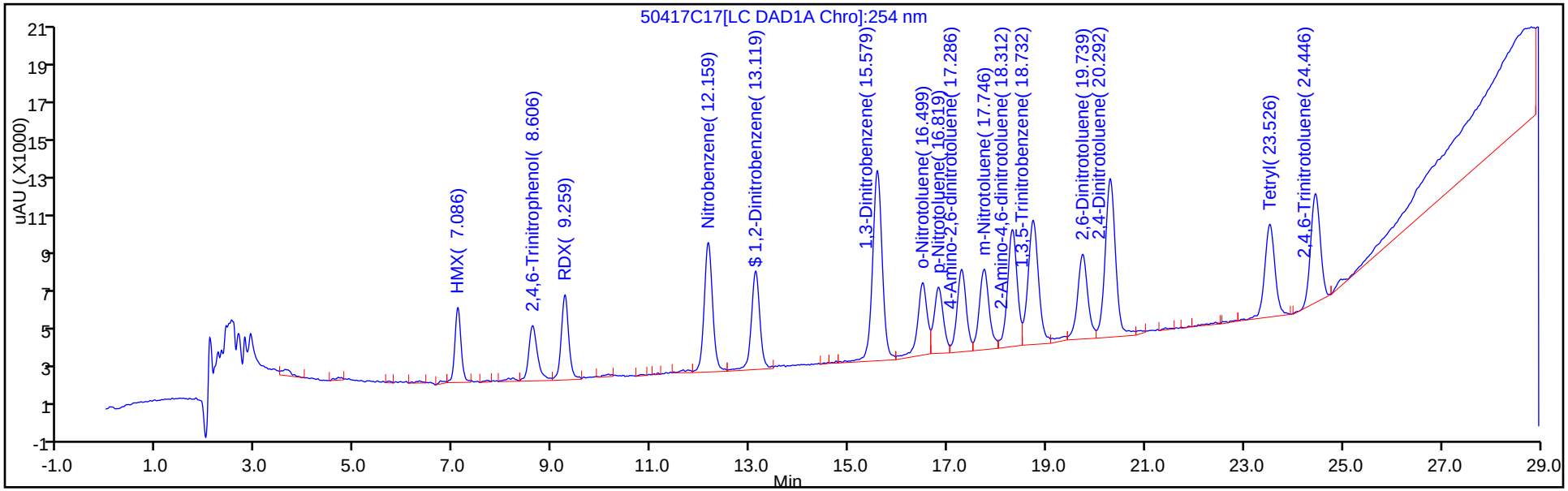
Report Date: 19-May-2017 15:49:48 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Denver

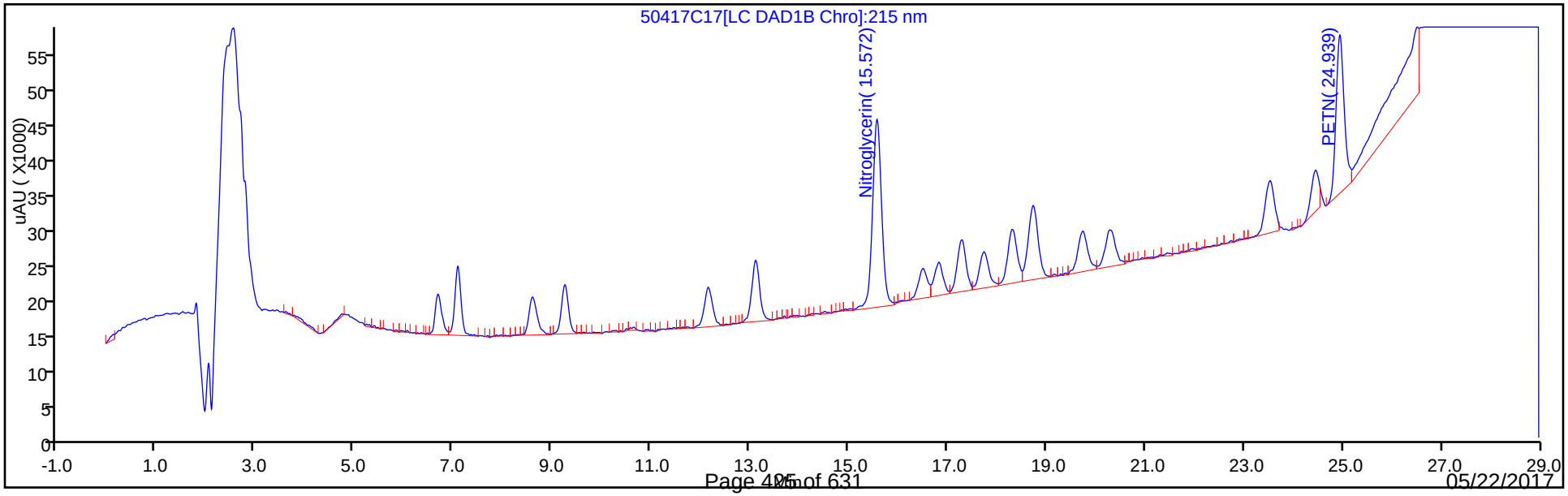
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C17.D

Injection Date:	05-May-2017 00:02:32	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	asc
Lims ID:	LCS 280-371611/2-A			Worklist Smp#:	17
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C17.D				
Lims ID:	LCS 280-371611/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	05-May-2017 00:02:32	ALS Bottle#:	12	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-371611/2				
Misc. Info.:	280-0058316-017				
Operator ID:	asc	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2017 15:49:28	Calib Date:	04-May-2017 22:17:40		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\G2_LUNA\20170504-58316.b\50417C14.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	XAWRK039				
First Level Reviewer: colleea		Date:	05-May-2017 06:26:20		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.2294	114.72

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-371611/2-A

Matrix: Water | Lab File ID: 05101774.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 500(mL) | Date Analyzed: 05/11/2017 16:00

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.: 372382 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.96		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.15		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	2.36		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	1.98		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.98		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.88		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	2.22		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	2.35		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	2.29		1.0	0.40	0.20
2691-41-0	HMX	1.99		0.40	0.20	0.088
98-95-3	Nitrobenzene	2.33		0.40	0.20	0.091
55-63-0	Nitroglycerin	20.6		3.0	2.0	0.92
78-11-5	PETN	20.2		2.0	1.2	0.42
121-82-4	RDX	2.04		0.20	0.12	0.052
479-45-8	Tetryl	2.03	M	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	103		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101774.D
Lims ID: LCS 280-371611/2-A
Client ID:
Sample Type: LCS
Inject. Date: 11-May-2017 16:00:40 ALS Bottle#: 60 Worklist Smp#: 74
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-371611/2
Misc. Info.: 280-0058342-074
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:04 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

First Level Reviewer: colleea Date: 12-May-2017 07:21:49

	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	6.663	-0.005	17412	0.2000	0.1990	
	5 RDX	1	7.785	7.783	0.002	21642	0.2000	0.2044	
	6 2,4,6-Trinitrophenol	1	8.072	8.077	-0.005	18828	0.2000	0.2086	
$	7 1,2-Dinitrobenzene	1	8.792	8.790	0.002	28363	0.2000	0.2060	
	8 1,3,5-Trinitrobenzene	1	8.952	8.950	0.002	50438	0.2000	0.1961	
	9 1,3-Dinitrobenzene	1	9.618	9.617	0.001	62666	0.2000	0.2146	
	11 Nitrobenzene	1	10.012	10.003	0.009	39425	0.2000	0.2331	
	12 Tetryl	1	10.345	10.343	0.002	34513	0.2000	0.2034	M
	13 Nitroglycerin	2	10.865	10.857	0.008	144702	2.00	2.06	
	14 2,4,6-Trinitrotoluene	1	11.318	11.310	0.008	43536	0.2000	0.2357	
	15 4-Amino-2,6-dinitrotoluene	1	11.498	11.497	0.001	28271	0.2000	0.1648	
	16 2-Amino-4,6-dinitrotoluene	1	11.785	11.783	0.002	39153	0.2000	0.1876	
	17 2,6-Dinitrotoluene	1	11.938	11.930	0.008	29671	0.2000	0.1980	
	18 2,4-Dinitrotoluene	1	12.132	12.123	0.009	58323	0.2000	0.1982	
	19 o-Nitrotoluene	1	12.978	12.970	0.008	24133	0.2000	0.2220	
	20 p-Nitrotoluene	1	13.425	13.417	0.008	21219	0.2000	0.2288	
	21 m-Nitrotoluene	1	14.025	14.017	0.008	27534	0.2000	0.2348	
	22 PETN	2	15.152	15.130	0.022	151231	2.00	2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

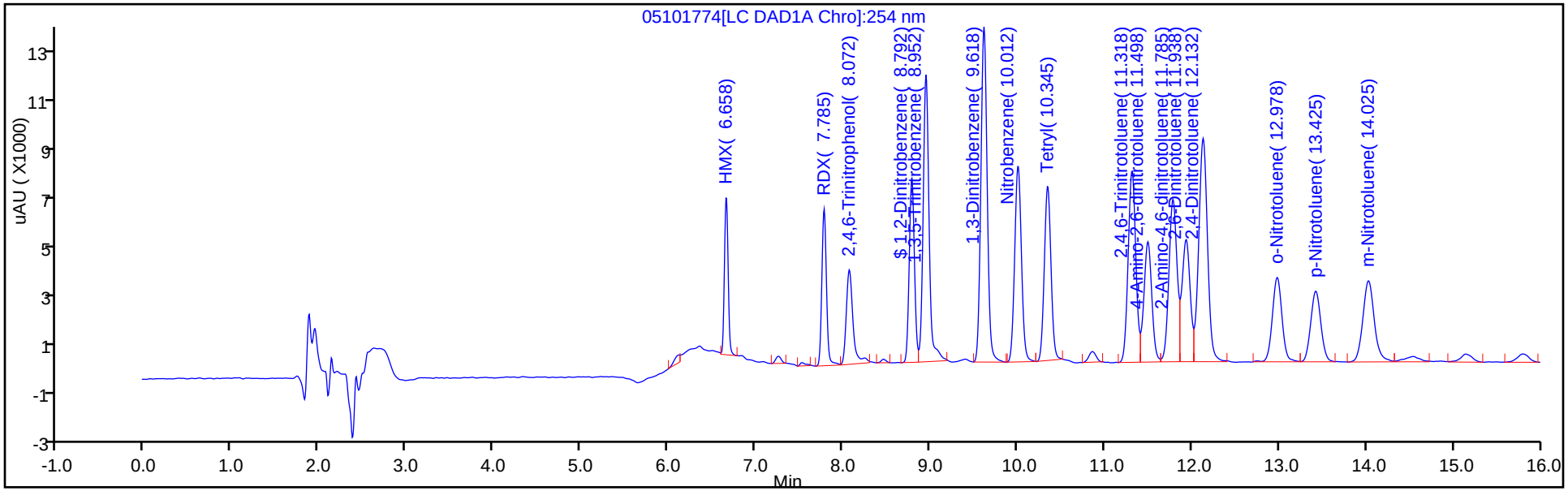
Report Date: 15-May-2017 07:47:13 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

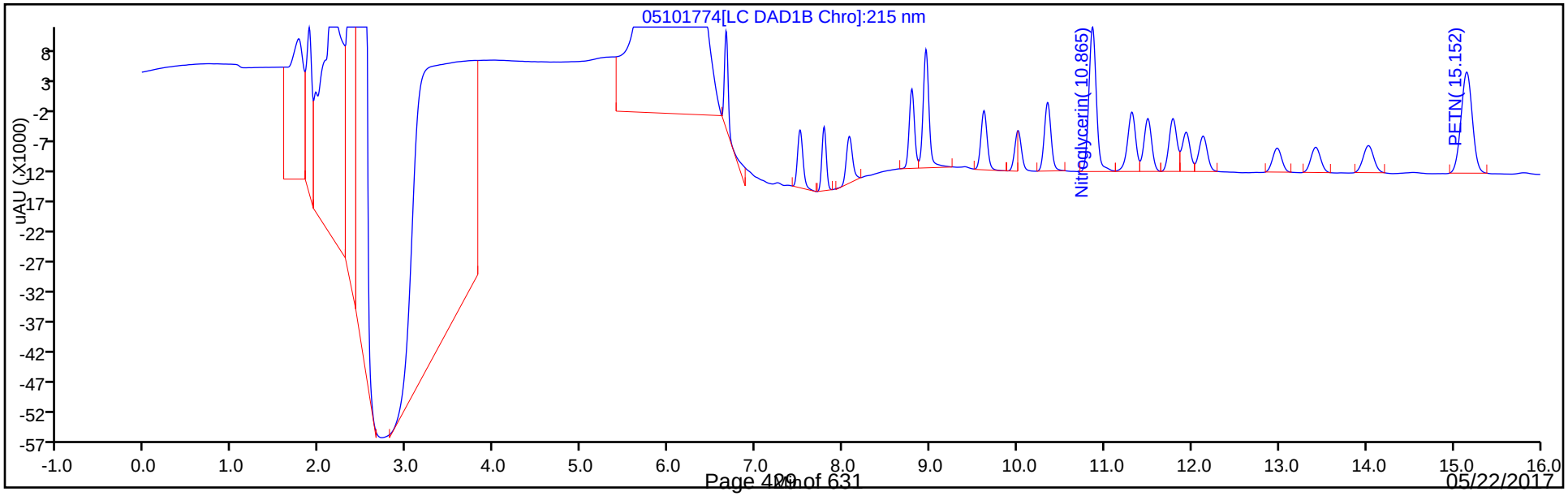
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101774.D

Injection Date:	11-May-2017 16:00:40	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	LCS 280-371611/2-A			Worklist Smp#:	74
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	60
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\20170505-58342.b\05101774.D
Lims ID: LCS 280-371611/2-A
Client ID:
Sample Type: LCS
Inject. Date: 11-May-2017 16:00:40 ALS Bottle#: 60 Worklist Smp#: 74
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-371611/2
Misc. Info.: 280-0058342-074
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:04 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

First Level Reviewer: colleea Date: 12-May-2017 07:21:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2060	103.01

Manual Integration/User Assign Peak Report

TestAmerica Denver

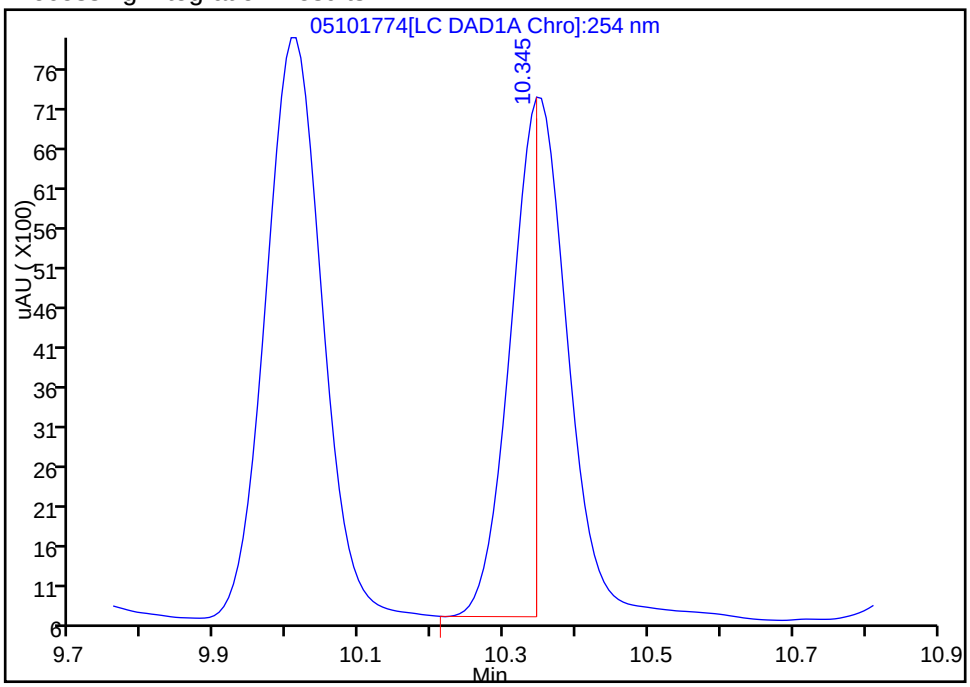
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101774.D				
Injection Date:	11-May-2017 16:00:40	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-371611/2-A				
Client ID:					
Operator ID:	asc	ALS Bottle#:	60	Worklist Smp#:	74
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

12 Tetryl, CAS: 479-45-8

Signal: 1

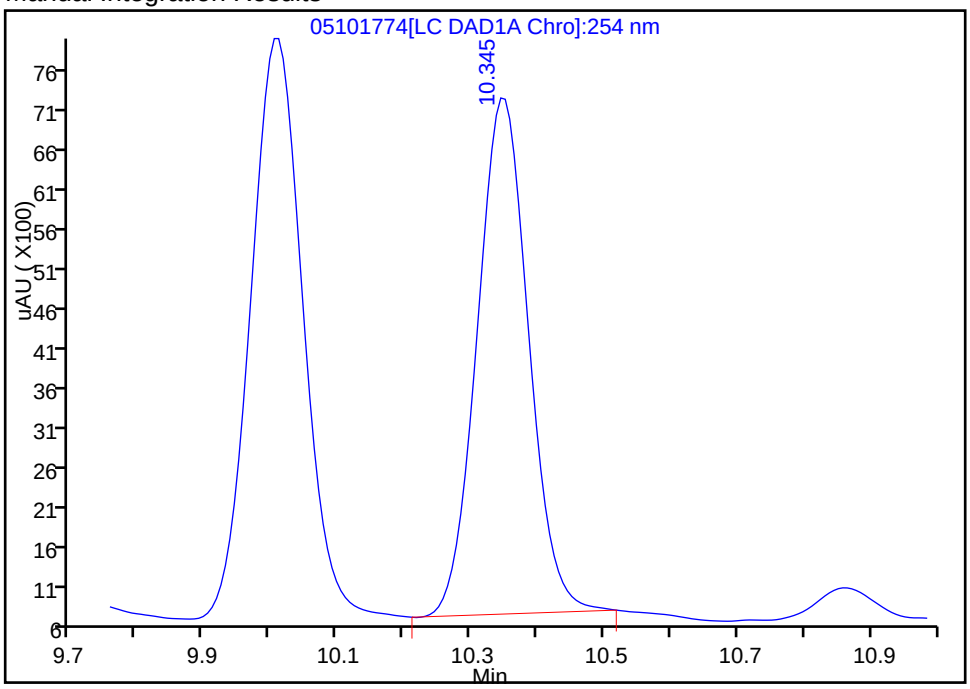
Processing Integration Results

RT: 10.34
Area: 15953
Amount: 0.093421
Amount Units: ug/mL



Manual Integration Results

RT: 10.34
Area: 34513
Amount: 0.203401
Amount Units: ug/mL



Reviewer: colleea, 12-May-2017 07:21:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-193-042417-GW MS | Lab Sample ID: 280-96291-6 MS

Matrix: Water | Lab File ID: 51517015.D

Analysis Method: 8330B | Date Collected: 04/24/2017 11:40

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 482.7(mL) | Date Analyzed: 05/15/2017 15:56

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.: 373499 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.90		1.0	0.41	0.21
99-65-0	1,3-Dinitrobenzene	2.11		0.41	0.21	0.092
118-96-7	2,4,6-Trinitrotoluene	2.31		0.41	0.21	0.075
121-14-2	2,4-Dinitrotoluene	1.90		0.41	0.21	0.087
606-20-2	2,6-Dinitrotoluene	1.92		0.21	0.21	0.067
35572-78-2	2-Amino-4,6-dinitrotoluene	1.81		0.21	0.12	0.053
88-72-2	2-Nitrotoluene	1.94		0.41	0.21	0.089
99-08-1	3-Nitrotoluene	2.09		0.41	0.21	0.086
19406-51-0	4-Amino-2,6-dinitrotoluene	1.60		0.21	0.12	0.060
99-99-0	4-Nitrotoluene	2.08		1.0	0.41	0.21
2691-41-0	HMX	1.96	M	0.41	0.21	0.091
98-95-3	Nitrobenzene	2.23		0.41	0.21	0.094
55-63-0	Nitroglycerin	20.3		3.1	2.1	0.95
78-11-5	PETN	19.9		2.1	1.2	0.43
121-82-4	RDX	2.23		0.21	0.12	0.054
479-45-8	Tetryl	2.29		0.25	0.21	0.082

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	101		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517015.D
Lims ID: 280-96291-B-6-A MS
Client ID: LL4mw-193-042417-GW
Sample Type: MS
Inject. Date: 15-May-2017 15:56:29 ALS Bottle#: 10 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-B-6-A
Misc. Info.: 280-0058689-015
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2017 09:47:07 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK021

First Level Reviewer: colleea Date: 16-May-2017 09:05:49

	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	6.499	6.538	-0.039	202462		0.9052	
	2 HMX	1	6.653	6.688	-0.035	16546	0.2000	0.1891	M
	3 2,4-diamino-6-nitrotoluene	1		6.725				ND	
	4 MNX	1		7.402				ND	
	5 RDX	1	7.786	7.835	-0.049	22807	0.2000	0.2154	
	6 2,4,6-Trinitrophenol	1	8.173	8.135	0.038	43659	0.2000	0.4895	
$	7 1,2-Dinitrobenzene	1	8.806	8.862	-0.056	27773	0.2000	0.2017	
	8 1,3,5-Trinitrobenzene	1	8.966	9.022	-0.056	47497	0.2000	0.1837	
	9 1,3-Dinitrobenzene	1	9.632	9.701	-0.069	59442	0.2000	0.2036	
	11 Nitrobenzene	1	10.032	10.108	-0.076	36333	0.2000	0.2151	
	10 3,5-Dinitroaniline	1		10.331				ND	
	12 Tetryl	1	10.386	10.468	-0.082	37424	0.2000	0.2207	
	13 Nitroglycerin	2	10.919	10.995	-0.076	137333	2.00	1.96	
	14 2,4,6-Trinitrotoluene	1	11.372	11.448	-0.076	41116	0.2000	0.2226	
	15 4-Amino-2,6-dinitrotoluene	1	11.559	11.641	-0.082	26509	0.2000	0.1543	
	16 2-Amino-4,6-dinitrotoluene	1	11.846	11.935	-0.089	36511	0.2000	0.1750	
	17 2,6-Dinitrotoluene	1	12.012	12.095	-0.083	27713	0.2000	0.1849	
	18 2,4-Dinitrotoluene	1	12.206	12.288	-0.082	54105	0.2000	0.1839	
	19 o-Nitrotoluene	1	13.066	13.168	-0.102	20661	0.2000	0.1869	
	20 p-Nitrotoluene	1	13.512	13.621	-0.109	18757	0.2000	0.2012	
	21 m-Nitrotoluene	1	14.119	14.248	-0.129	23628	0.2000	0.2021	
	22 PETN	2	15.266	15.421	-0.155	143794	2.00	1.92	

QC Flag Legend

Review Flags
M - Manually Integrated

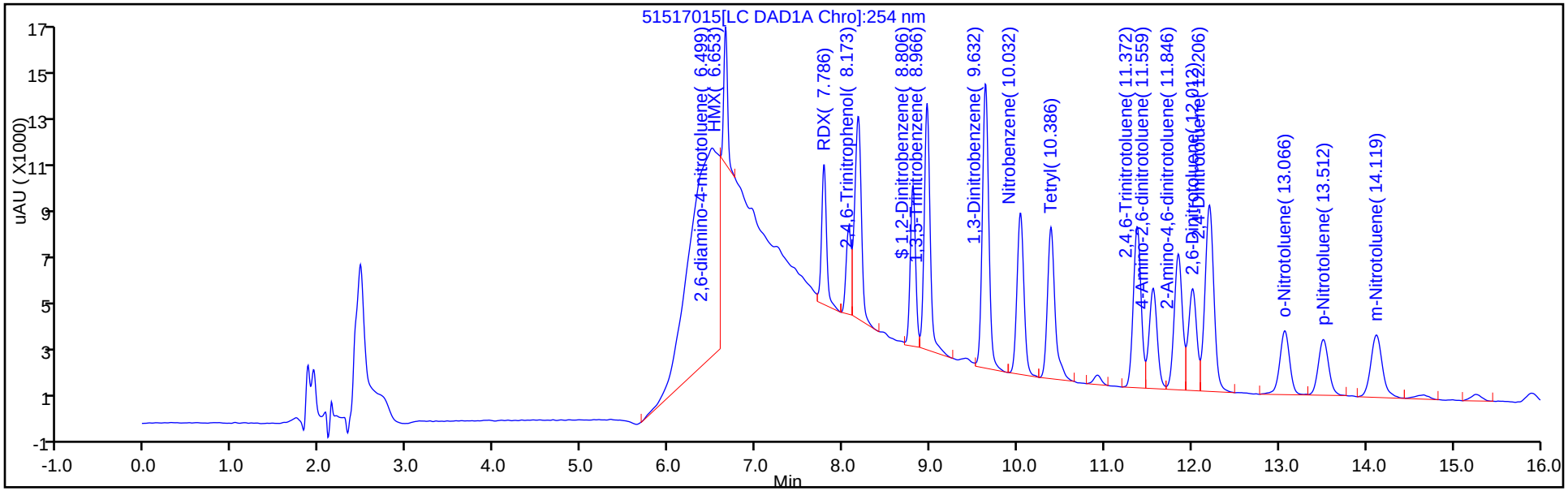
Report Date: 16-May-2017 09:47:18 Chrom Revision: 2.2 11-May-2017 11:43:00

TestAmerica Denver

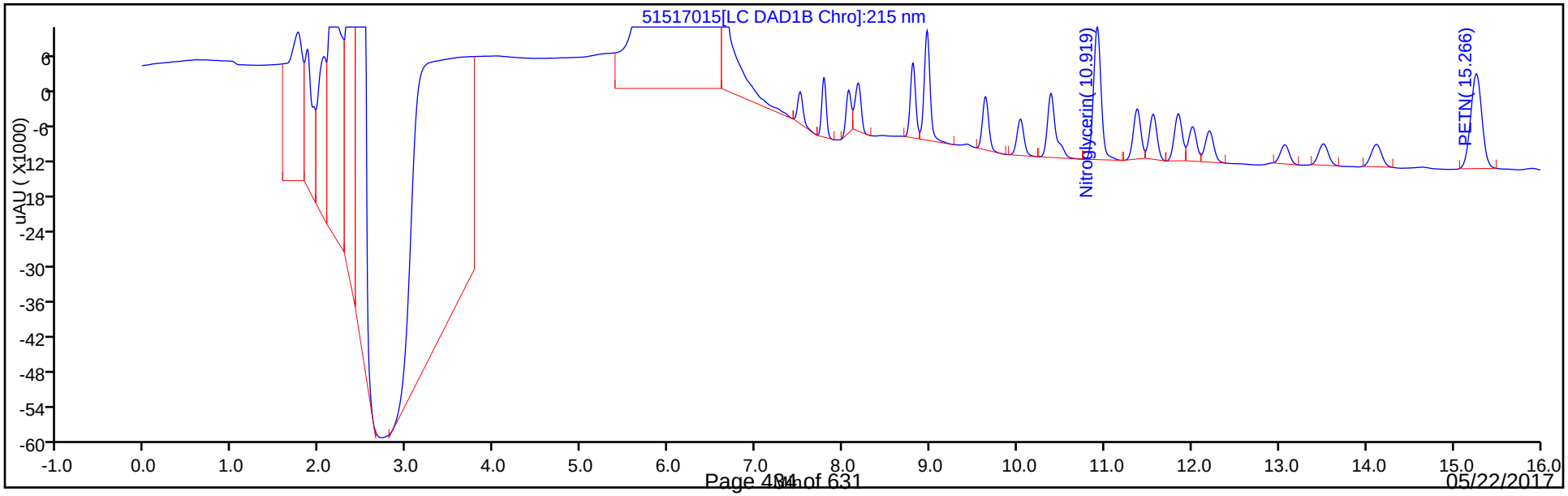
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517015.D

Injection Date:	15-May-2017 15:56:29	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	280-96291-B-6-A MS			Worklist Smp#:	15
Client ID:	LL4mw-193-042417-GW				
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:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517015.D				
Lims ID:	280-96291-B-6-A MS				
Client ID:	LL4mw-193-042417-GW				
Sample Type:	MS				
Inject. Date:	15-May-2017 15:56:29	ALS Bottle#:	10	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-96291-B-6-A				
Misc. Info.:	280-0058689-015				
Operator ID:	asc	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2017 09:47:07	Calib Date:	09-May-2017 19:55:27		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK021				
First Level Reviewer: colleea		Date:	16-May-2017 09:05:49		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2017	100.84

Manual Integration/User Assign Peak Report

TestAmerica Denver

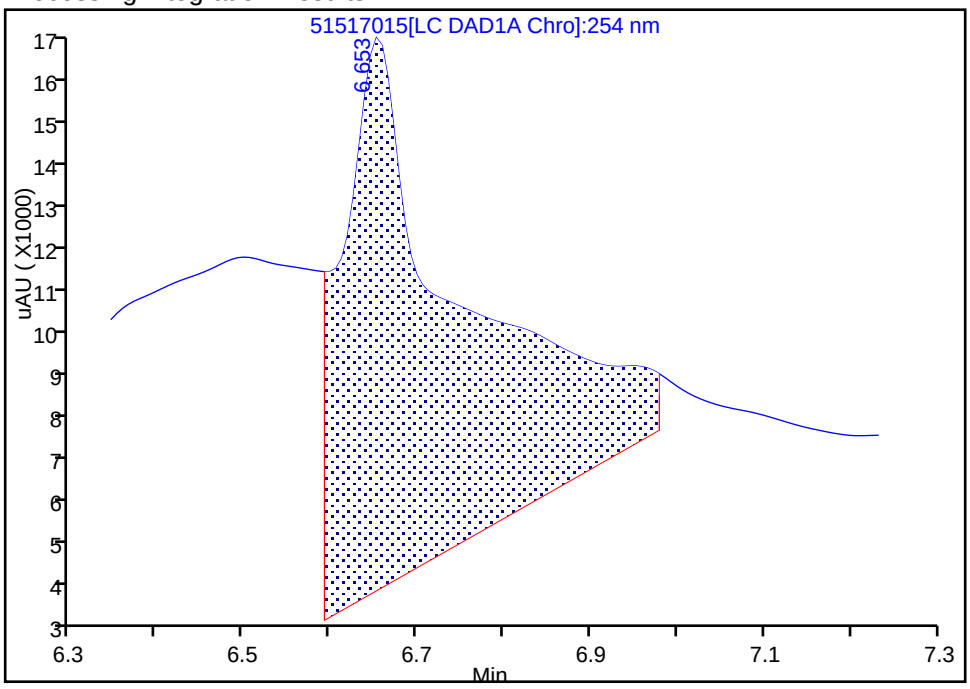
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170515-58689.b\51517015.D				
Injection Date:	15-May-2017 15:56:29	Instrument ID:	CHHPLC_X3		
Lims ID:	280-96291-B-6-A MS				
Client ID:	LL4mw-193-042417-GW				
Operator ID:	asc	ALS Bottle#:	10	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0

Signal: 1

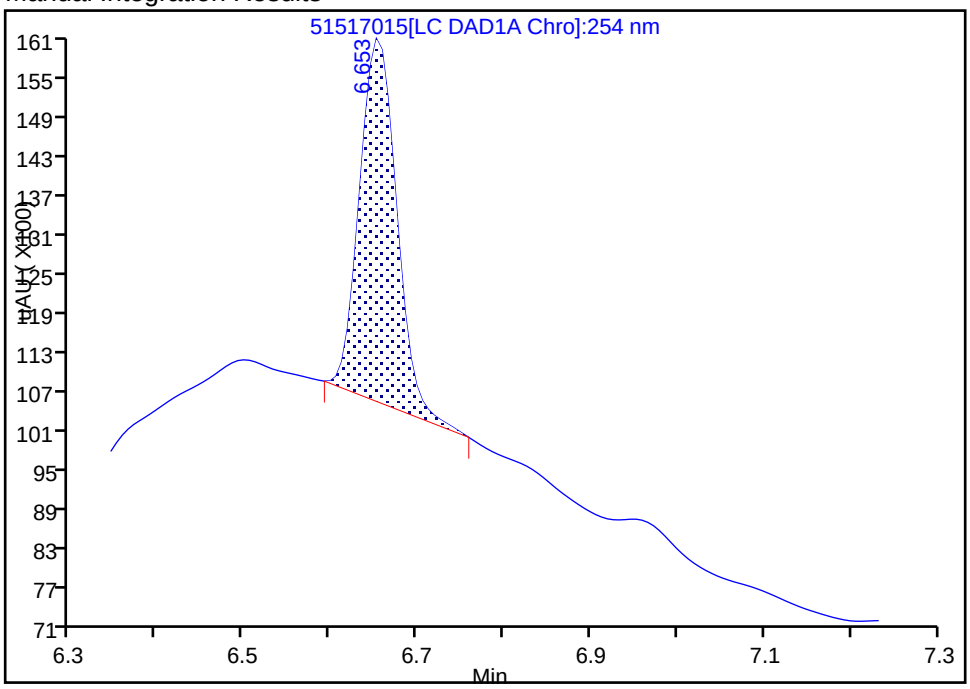
Processing Integration Results

RT: 6.65
Area: 122167
Amount: 1.399426
Amount Units: ug/mL



Manual Integration Results

RT: 6.65
Area: 16546
Amount: 0.189117
Amount Units: ug/mL



Reviewer: colleea, 16-May-2017 09:22:59

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-96291-1

SDG No.:

Client Sample ID: LL4mw-193-042417-GW MSD | Lab Sample ID: 280-96291-6 MSD

Matrix: Water | Lab File ID: 05101778.D

Analysis Method: 8330B | Date Collected: 04/24/2017 11:40

Extraction Method: 3535 | Date Extracted: 05/01/2017 10:00

Sample wt/vol: 487.7(mL) | Date Analyzed: 05/11/2017 17:32

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.: 372382 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.91		1.0	0.41	0.21
99-65-0	1,3-Dinitrobenzene	2.15		0.41	0.21	0.091
118-96-7	2,4,6-Trinitrotoluene	2.30		0.41	0.21	0.074
121-14-2	2,4-Dinitrotoluene	1.94		0.41	0.21	0.086
606-20-2	2,6-Dinitrotoluene	1.94		0.21	0.21	0.066
35572-78-2	2-Amino-4,6-dinitrotoluene	1.85		0.21	0.12	0.052
88-72-2	2-Nitrotoluene	2.41	J	0.41	0.21	0.088
99-08-1	3-Nitrotoluene	2.32		0.41	0.21	0.086
19406-51-0	4-Amino-2,6-dinitrotoluene	1.65		0.21	0.12	0.059
99-99-0	4-Nitrotoluene	2.27		1.0	0.41	0.21
2691-41-0	HMX	1.95	M	0.41	0.21	0.090
98-95-3	Nitrobenzene	2.42		0.41	0.21	0.093
55-63-0	Nitroglycerin	20.2		3.1	2.1	0.94
78-11-5	PETN	20.0		2.1	1.2	0.43
121-82-4	RDX	2.22		0.21	0.12	0.054
479-45-8	Tetryl	2.29		0.25	0.21	0.081

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	100		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101778.D
Lims ID: 280-96291-D-6-A MSD
Client ID: LL4mw-193-042417-GW
Sample Type: MSD
Inject. Date: 11-May-2017 17:32:37 ALS Bottle#: 64 Worklist Smp#: 78
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-96291-D-6-A
Misc. Info.: 280-0058342-078
Operator ID: asc Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 15-May-2017 07:47:04 Calib Date: 09-May-2017 19:55:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK029

First Level Reviewer: colleea Date: 12-May-2017 07:26:58

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		6.522				ND	
2 HMX	1	6.663	6.663	0.000	16647	0.2000	0.1903	M
3 2,4-diamino-6-nitrotoluene	1		6.702				ND	
4 MNX	1		7.363				ND	M
5 RDX	1	7.783	7.783	0.000	22927	0.2000	0.2166	
6 2,4,6-Trinitrophenol	1	8.070	8.077	-0.007	14268	0.2000	0.1570	
$ 7 1,2-Dinitrobenzene	1	8.790	8.790	0.000	27636	0.2000	0.2007	
8 1,3,5-Trinitrobenzene	1	8.956	8.950	0.006	48141	0.2000	0.1864	
9 1,3-Dinitrobenzene	1	9.623	9.617	0.006	61121	0.2000	0.2093	
11 Nitrobenzene	1	10.010	10.003	0.007	39855	0.2000	0.2356	
10 3,5-Dinitroaniline	1		10.256				ND	
12 Tetryl	1	10.350	10.343	0.007	37890	0.2000	0.2234	
13 Nitroglycerin	2	10.863	10.857	0.006	138497	2.00	1.97	
14 2,4,6-Trinitrotoluene	1	11.316	11.310	0.006	41478	0.2000	0.2245	
15 4-Amino-2,6-dinitrotoluene	1	11.496	11.497	-0.001	27577	0.2000	0.1607	
16 2-Amino-4,6-dinitrotoluene	1	11.783	11.783	0.000	37622	0.2000	0.1803	
17 2,6-Dinitrotoluene	1	11.936	11.930	0.006	28413	0.2000	0.1896	
18 2,4-Dinitrotoluene	1	12.130	12.123	0.007	55688	0.2000	0.1893	
19 o-Nitrotoluene	1	12.983	12.970	0.013	25399	0.2000	0.2348	
20 p-Nitrotoluene	1	13.423	13.417	0.006	20545	0.2000	0.2212	
21 m-Nitrotoluene	1	14.036	14.017	0.019	26560	0.2000	0.2266	
22 PETN	2	15.163	15.130	0.033	145944	2.00	1.95	

QC Flag Legend

Review Flags
M - Manually Integrated

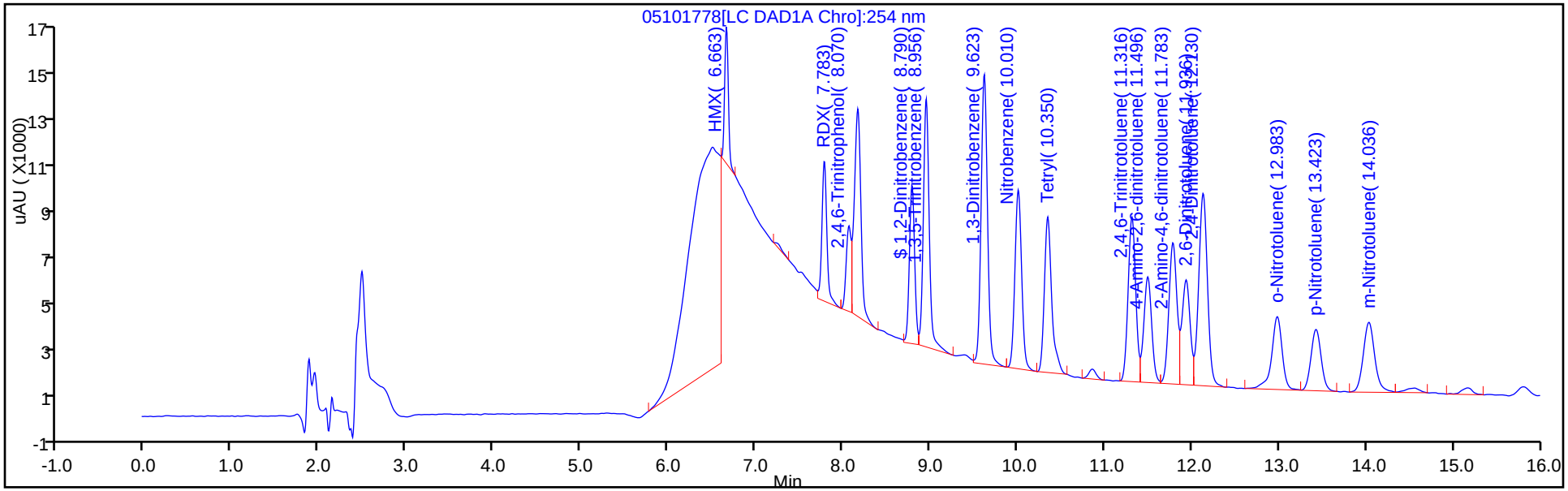
Report Date: 15-May-2017 07:47:06 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

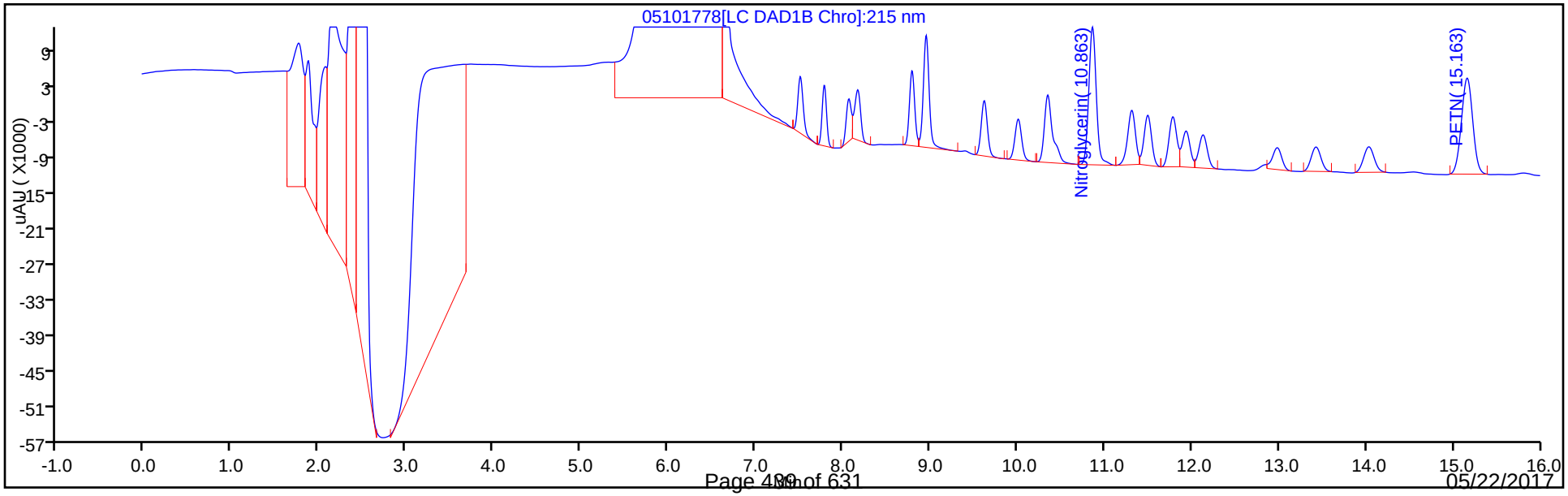
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101778.D

Injection Date:	11-May-2017 17:32:37	Instrument ID:	CHHPLC_X3	Operator ID:	asc
Lims ID:	280-96291-D-6-A MSD			Worklist Smp#:	78
Client ID:	LL4mw-193-042417-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	64
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\20170505-58342.b\05101778.D				
Lims ID:	280-96291-D-6-A MSD				
Client ID:	LL4mw-193-042417-GW				
Sample Type:	MSD				
Inject. Date:	11-May-2017 17:32:37	ALS Bottle#:	64	Worklist Smp#:	78
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-96291-D-6-A				
Misc. Info.:	280-0058342-078				
Operator ID:	asc	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	15-May-2017 07:47:04	Calib Date:	09-May-2017 19:55:27		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170509-58475.b\05091723.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK029				
First Level Reviewer: colleea		Date:	12-May-2017 07:26:58		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2007	100.33

Manual Integration/User Assign Peak Report

TestAmerica Denver

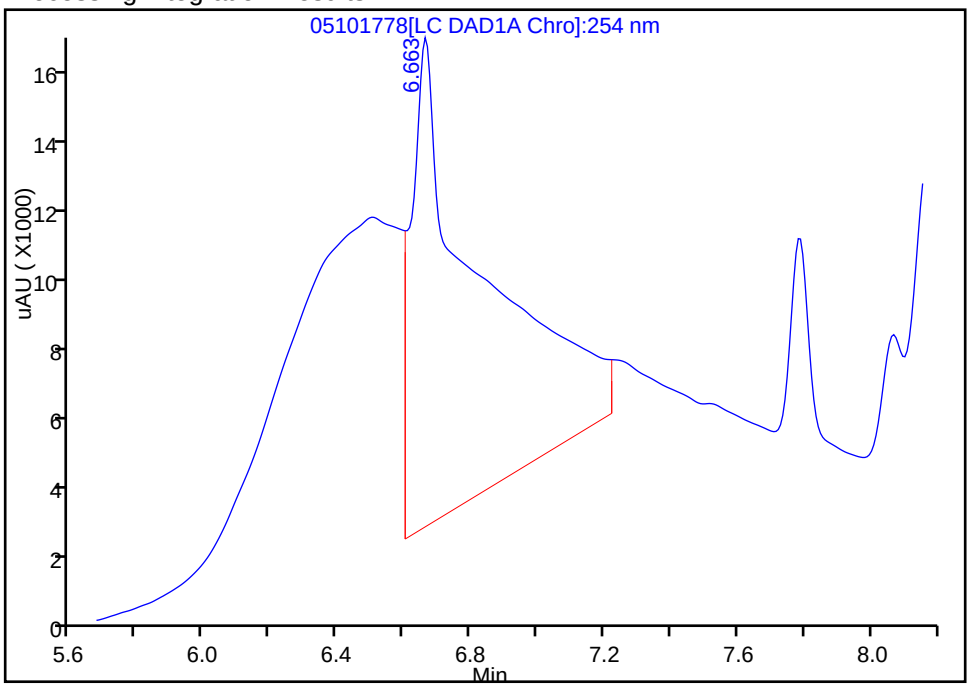
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20170505-58342.b\05101778.D				
Injection Date:	11-May-2017 17:32:37	Instrument ID:	CHHPLC_X3		
Lims ID:	280-96291-D-6-A MSD				
Client ID:	LL4mw-193-042417-GW				
Operator ID:	asc	ALS Bottle#:	64	Worklist Smp#:	78
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0

Signal: 1

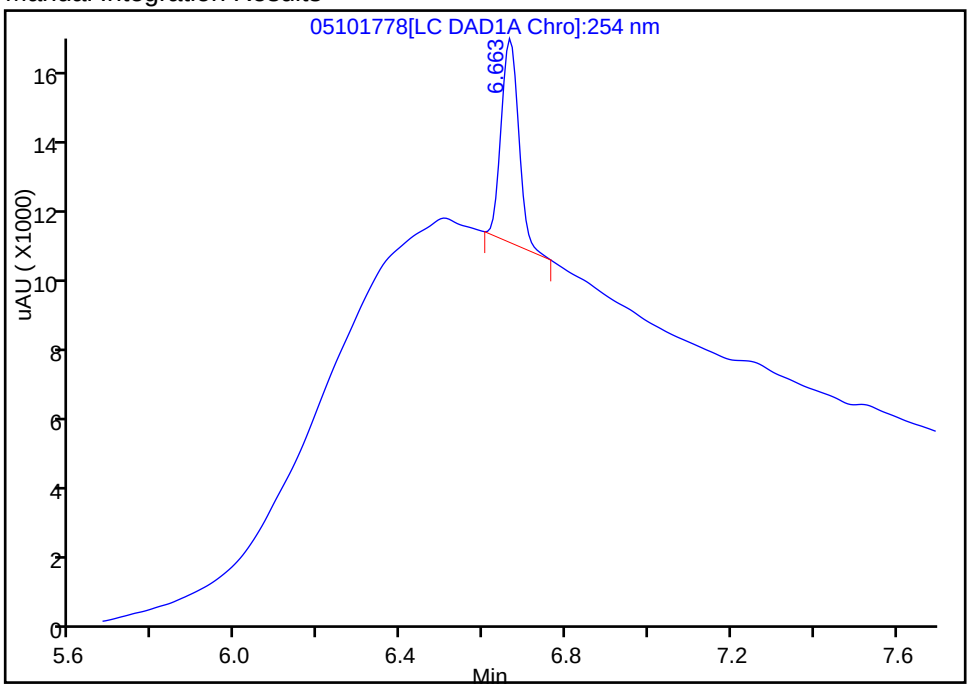
Processing Integration Results

RT: 6.66
Area: 200103
Amount: 2.292493
Amount Units: ug/mL



Manual Integration Results

RT: 6.66
Area: 16647
Amount: 0.190274
Amount Units: ug/mL



Reviewer: colleea, 12-May-2017 07:26:08

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 05/04/2017 18:12

Analysis Batch Number: 372244 End Date: 05/05/2017 07:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-372244/7		05/04/2017 18:12	1	50417C07.D	Luna-phenylhex 4.6(mm)
IC 280-372244/8		05/04/2017 18:47	1	50417C08.D	Luna-phenylhex 4.6(mm)
IC 280-372244/9		05/04/2017 19:22	1	50417C09.D	Luna-phenylhex 4.6(mm)
IC 280-372244/10		05/04/2017 19:57	1	50417C10.D	Luna-phenylhex 4.6(mm)
IC 280-372244/11		05/04/2017 20:32	1	50417C11.D	Luna-phenylhex 4.6(mm)
IC 280-372244/12		05/04/2017 21:07	1	50417C12.D	Luna-phenylhex 4.6(mm)
IC 280-372244/13		05/04/2017 21:42	1	50417C13.D	Luna-phenylhex 4.6(mm)
IC 280-372244/14		05/04/2017 22:17	1	50417C14.D	Luna-phenylhex 4.6(mm)
ICV 280-372244/15		05/04/2017 22:52	1	50417C15.D	Luna-phenylhex 4.6(mm)
MB 280-371611/1-A		05/04/2017 23:27	1	50417C16.D	Luna-phenylhex 4.6(mm)
LCS 280-371611/2-A		05/05/2017 00:02	1	50417C17.D	Luna-phenylhex 4.6(mm)
280-96291-6		05/05/2017 00:37	1	50417C18.D	Luna-phenylhex 4.6(mm)
280-96291-6 MS		05/05/2017 01:12	1	50417C19.D	Luna-phenylhex 4.6(mm)
280-96291-6 MSD		05/05/2017 01:47	1	50417C20.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 02:22	1000		Luna-phenylhex 4.6(mm)
CCV 280-372244/22		05/05/2017 02:57	1	50417C22.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 03:32	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 04:07	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 04:42	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 05:17	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 05:52	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/05/2017 06:27	1		Luna-phenylhex 4.6(mm)
CCV 280-372244/29		05/05/2017 07:02	1		Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/10/2017 14:22

Analysis Batch Number: 372382 End Date: 05/11/2017 22:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-372382/7		05/10/2017 14:22	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/8		05/10/2017 14:45	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 15:08	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 15:31	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 15:54	1000		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 16:17	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 16:40	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 17:03	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 17:26	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 17:49	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 18:12	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 18:35	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/19		05/10/2017 18:57	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/20		05/10/2017 19:20	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 19:43	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 20:06	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 20:29	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 20:52	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 21:15	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 21:38	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 22:01	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 22:24	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 22:47	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 23:10	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/31		05/10/2017 23:33	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/32		05/10/2017 23:56	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 00:19	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 00:42	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 01:05	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 01:28	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 01:51	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 02:13	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 02:36	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 02:59	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 03:22	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 03:45	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/43		05/11/2017 04:08	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/44		05/11/2017 04:31	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 04:54	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 05:17	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 05:40	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 06:03	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 06:26	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 06:49	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 07:12	1		UltraCarb5uODS 4.6(mm)

8330B

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/10/2017 14:22

Analysis Batch Number: 372382 End Date: 05/11/2017 22:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/11/2017 07:35	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 07:58	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 08:21	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/55		05/11/2017 08:44	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/56		05/11/2017 09:07	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 09:30	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 09:53	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 10:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 10:39	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 11:02	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 11:25	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 11:48	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 12:10	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 12:33	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 12:56	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/67		05/11/2017 13:19	1	05101767.D	UltraCarb5uODS 4.6(mm)
CCV 280-372382/68		05/11/2017 13:42	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 14:05	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 14:28	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 14:51	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 15:14	1		UltraCarb5uODS 4.6(mm)
MB 280-371611/1-A		05/11/2017 15:37	1	05101773.D	UltraCarb5uODS 4.6(mm)
LCS 280-371611/2-A		05/11/2017 16:00	1	05101774.D	UltraCarb5uODS 4.6(mm)
280-96291-4		05/11/2017 16:23	1	05101775.D	UltraCarb5uODS 4.6(mm)
280-96291-6		05/11/2017 16:46	1	05101776.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 17:09	1		UltraCarb5uODS 4.6(mm)
280-96291-6 MSD		05/11/2017 17:32	1	05101778.D	UltraCarb5uODS 4.6(mm)
CCV 280-372382/79		05/11/2017 17:55	1	05101779.D	UltraCarb5uODS 4.6(mm)
CCV 280-372382/80		05/11/2017 18:18	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 18:41	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 19:04	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 19:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 19:50	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 20:13	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 20:36	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 20:59	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 21:22	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 21:45	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/11/2017 22:08	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/91		05/11/2017 22:31	1		UltraCarb5uODS 4.6(mm)
CCV 280-372382/92		05/11/2017 22:54	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/09/2017 13:48

Analysis Batch Number: 372816 End Date: 05/10/2017 05:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-372816/7		05/09/2017 13:48	1	05091707.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/8		05/09/2017 14:11	1	05091708.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/9		05/09/2017 14:34	1	05091709.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/10		05/09/2017 14:57	1	05091710.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/11		05/09/2017 15:20	1	05091711.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/12		05/09/2017 15:43	1	05091712.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/13		05/09/2017 16:06	1	05091713.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/14		05/09/2017 16:28	1	05091714.D	UltraCarb5uODS 4.6(mm)
ICV 280-372816/15		05/09/2017 16:51	1	05091715.D	UltraCarb5uODS 4.6(mm)
IC 280-372816/16		05/09/2017 17:14	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/17		05/09/2017 17:37	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/18		05/09/2017 18:00	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/19		05/09/2017 18:23	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/20		05/09/2017 18:46	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/21		05/09/2017 19:09	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/22		05/09/2017 19:32	1		UltraCarb5uODS 4.6(mm)
IC 280-372816/23		05/09/2017 19:55	1		UltraCarb5uODS 4.6(mm)
ICV 280-372816/24		05/09/2017 20:18	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 20:41	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 21:04	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 21:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 21:50	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 22:13	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 22:36	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 22:59	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 23:21	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/09/2017 23:44	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 00:07	1		UltraCarb5uODS 4.6(mm)
CCV 280-372816/35		05/10/2017 00:30	1		UltraCarb5uODS 4.6(mm)
CCV 280-372816/36		05/10/2017 00:53	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 01:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 01:39	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 02:02	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 02:25	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 02:48	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 03:11	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 03:34	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 03:57	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 04:20	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/10/2017 04:43	1		UltraCarb5uODS 4.6(mm)
CCV 280-372816/47		05/10/2017 05:06	1		UltraCarb5uODS 4.6(mm)
CCV 280-372816/48		05/10/2017 05:29	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/15/2017 12:52

Analysis Batch Number: 373499 End Date: 05/16/2017 06:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-373499/7		05/15/2017 12:52	1	51517007.D	UltraCarb5uODS 4.6(mm)
CCV 280-373499/8		05/15/2017 13:15	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 13:38	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 14:01	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 14:24	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 14:47	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 15:10	10		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 15:33	100		UltraCarb5uODS 4.6(mm)
280-96291-6 MS		05/15/2017 15:56	1	51517015.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 16:19	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 16:42	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 17:05	1		UltraCarb5uODS 4.6(mm)
CCV 280-373499/19		05/15/2017 17:28	1	51517019.D	UltraCarb5uODS 4.6(mm)
CCV 280-373499/20		05/15/2017 17:51	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 18:14	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 18:37	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 19:00	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 19:23	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 19:46	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 20:09	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 20:32	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 20:55	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 21:17	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 21:40	1		UltraCarb5uODS 4.6(mm)
CCV 280-373499/31		05/15/2017 22:03	1		UltraCarb5uODS 4.6(mm)
CCV 280-373499/32		05/15/2017 22:26	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 22:49	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 23:12	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 23:35	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2017 23:58	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/16/2017 00:21	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/16/2017 00:44	1		UltraCarb5uODS 4.6(mm)
CCV 280-373499/39		05/16/2017 01:07	1		UltraCarb5uODS 4.6(mm)
CCV 280-373499/40		05/16/2017 01:30	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/16/2017 01:53	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/16/2017 02:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/16/2017 04:57	10		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/16/2017 05:20	50		UltraCarb5uODS 4.6(mm)
CCV 280-373499/51		05/16/2017 05:43	1		UltraCarb5uODS 4.6(mm)
CCV 280-373499/52		05/16/2017 06:06	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 05/18/2017 11:46

Analysis Batch Number: 373971 End Date: 05/19/2017 13:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-373971/2		05/18/2017 11:46	1	51817002.D	Luna-phenylhex 4.6(mm)
280-96291-4		05/18/2017 12:21	1	51817003.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 12:56	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 13:31	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 14:06	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 14:41	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 15:16	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 15:51	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 16:26	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 17:01	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 17:36	1		Luna-phenylhex 4.6(mm)
CCV 280-373971/13		05/18/2017 18:11	1	51817013.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 18:46	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 19:21	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 19:56	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 20:31	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 21:06	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 21:41	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 22:16	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 22:51	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/18/2017 23:26	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 00:01	1		Luna-phenylhex 4.6(mm)
CCV 280-373971/24		05/19/2017 00:36	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 01:11	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 01:46	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 02:21	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 02:55	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 03:30	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 04:05	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 04:40	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 05:15	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 05:51	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 06:25	10		Luna-phenylhex 4.6(mm)
CCV 280-373971/35		05/19/2017 07:00	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 07:35	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 08:10	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 08:45	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 09:20	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 09:55	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 10:30	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 11:05	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 11:40	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 12:15	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2017 12:50	1		Luna-phenylhex 4.6(mm)
CCV 280-373971/46		05/19/2017 13:25	1		Luna-phenylhex 4.6(mm)

8330B

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 371611 Batch Start Date: 05/01/17 10:00 Batch Analyst: Vehonsky, Michael A

Batch Method: 3535 Batch End Date: 05/01/17 14:44

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00075	8330Surrogate 00091
MB 280-371611/1		3535, 8330B				500 mL	5 mL		0.1 mL
LCS 280-371611/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-96291-A-4	LL3mw-237-042417-GW	3535, 8330B	T	748.1 g	263.2 g	484.9 mL	5 mL		0.1 mL
280-96291-C-6	LL4mw-193-042417-GW	3535, 8330B	T	742.5 g	263.4 g	479.1 mL	5 mL		0.1 mL
280-96291-B-6 MS	LL4mw-193-042417-GW	3535, 8330B	T	746.9 g	264.2 g	482.7 mL	5 mL	0.1 mL	0.1 mL
280-96291-D-6 MSD	LL4mw-193-042417-GW	3535, 8330B	T	750.7 g	263.0 g	487.7 mL	5 mL	0.1 mL	0.1 mL

Batch Notes	
Acid ID	0.1% AAinACN_00104
Acid Name	0.1% Acetic Acid in ACN
Balance ID	24950441
Batch Comment	Reviewer: KI NaCl: 167535
First End time	1232
H2O ID	S.Elga
Pipette ID	1n2s, EXP-1
Reagent ID	CaCl2
Reagent Lot Number	CaCl2_Sol_00053/54
Solvent Lot #	ACN_00200; MeCL2_Cycl_00333
Solvent Name	ACN; MeCl2
SOP Number	DV-OP-0017
SPE Cartridge Type	Sep PaK Vac 6cc RdX
Solid Phase Extraction Disk ID	004536216A
First Start time	1158

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: 280-96291-1

SDG No.:

Project: Camp Ravenna, OH

Client Sample ID	Lab Sample ID
LL3mw-244-042417-GW	280-96291-1
BKGmw-006-042417-GW	280-96291-2
LL3mw-234-042417-GW	280-96291-3
LL4mw-200-042417-GW	280-96291-5
LL4mw-193-042417-GW	280-96291-6

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL3mw-244-042417-GW
Lab Sample ID: 280-96291-1
Lab Name: TestAmerica Denver
Job No.: 280-96291-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2017 14:55
Reporting Basis: WET
Date Received: 04/25/2017 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Chromium, hexavalent	4.0	20	4.0	4.0	ug/L	U		1	7196A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: BKGmw-006-042417-GW
Lab Sample ID: 280-96291-2
Lab Name: TestAmerica Denver
Job No.: 280-96291-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2017 16:30
Reporting Basis: WET
Date Received: 04/25/2017 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Chromium, hexavalent	4.0	20	4.0	4.0	ug/L	U		1	7196A
Chloride	110000	3000	500	250	ug/L		J	1	9056A
Nitrate as N	120	500	100	42	ug/L	J		1	9056A
Nitrite as N	100	500	100	49	ug/L	U		1	9056A
Sulfate	55000	5000	500	230	ug/L		J	1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL3mw-234-042417-GW
Lab Sample ID: 280-96291-3
Lab Name: TestAmerica Denver
Job No.: 280-96291-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2017 11:40
Reporting Basis: WET
Date Received: 04/25/2017 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	5.0	10	5.0	2.0	ug/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL4mw-200-042417-GW
Lab Sample ID: 280-96291-5
Lab Name: TestAmerica Denver
Job No.: 280-96291-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2017 10:07
Reporting Basis: WET
Date Received: 04/25/2017 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	4.1	10	5.0	2.0	ug/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL4mw-193-042417-GW
Lab Sample ID: 280-96291-6
Lab Name: TestAmerica Denver
Job No.: 280-96291-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2017 11:40
Reporting Basis: WET
Date Received: 04/25/2017 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	5.0	10	5.0	2.0	ug/L	U		1	9012B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Analyst: JML Batch Start Date: 05/05/2017

Reporting Units: mg/L Analytical Batch No.: 372408

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	11:03	Cyanide, Total	0.0990	0.100	99	90-110		CN ICV Daily_01011
15	ICB	11:05	Cyanide, Total	0.0050				U	
29	CCV	11:26	Cyanide, Total	0.204	0.200	102	90-110		CN CAL 1 ppm_01246
30	CCB	11:27	Cyanide, Total	0.0050				U	
44	CCV	11:48	Cyanide, Total	0.208	0.200	104	90-110		CN CAL 1 ppm_01246
45	CCB	11:50	Cyanide, Total	0.0050				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Analyst: JML Batch Start Date: 04/25/2017

Reporting Units: mg/L Analytical Batch No.: 370824

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
6	ICV	11:29	Chromium, hexavalent	0.0507	0.0500	101	90-110		CR6 ICV int_01230
7	ICB	11:29	Chromium, hexavalent	0.0040				U	
18	CCV	11:29	Chromium, hexavalent	0.103	0.100	103	90-110		CR6 ICV int_01230
19	CCB	11:29	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.: 280-96291-1

SDG No.:

Analyst: TLP Batch Start Date: 04/12/2017

Reporting Units: mg/L Analytical Batch No.: 369033

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	12:56	Nitrate as N	3.87	4.00	97	90-110		IC ICV 5_00170
			Nitrite as N	3.77	4.00	94	90-110		IC ICV 5_00170
9	ICB	13:15	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.: 280-96291-1

SDG No.:

Analyst: TLP Batch Start Date: 04/12/2017

Reporting Units: mg/L Analytical Batch No.: 369034

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	12:56	Chloride	81.7	80.0	102	90-110		IC CL ICV_00013
			Sulfate	80.5	80.0	101	90-110		IC SO4 ICV_00016
9	ICB	13:15	Chloride	0.597				J	
			Sulfate	0.312				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.: 280-96291-1

SDG No.:

Analyst: AFB Batch Start Date: 04/25/2017

Reporting Units: mg/L Analytical Batch No.: 370781

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	09:36	Nitrate as N	4.98	5.00	100	90-110		IC LCS_00889
			Nitrite as N	5.01	5.00	100	90-110		IC LCS_00889
2	CCB	09:55	Nitrate as N	0.10				U	
			Nitrite as N	0.10				U	
17	CCV	18:25	Nitrate as N	5.04	5.00	101	90-110		IC LCS_00889
			Nitrite as N	5.03	5.00	101	90-110		IC LCS_00889
18	CCB	18:45	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.: 280-96291-1

SDG No.:

Analyst: AFB Batch Start Date: 04/25/2017

Reporting Units: mg/L Analytical Batch No.: 370782

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	09:36	Chloride	103	100	103	90-110		IC LCS_00889
			Sulfate	102	100	102	90-110		IC LCS_00889
2	CCB	09:55	Chloride	0.626				J	
			Sulfate	0.357				J	
17	CCV	18:25	Chloride	103	100	103	90-110		IC LCS_00889
			Sulfate	103	100	103	90-110		IC LCS_00889
18	CCB	18:45	Chloride	0.624				J	
			Sulfate	0.360				J	

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.: 280-96291-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 370824	Date: 04/25/2017 11:29						
7196A	MB 280-370824/10	Chromium, hexavalent	4.0	U	ug/L	20	1
Batch ID: 372408	Date: 05/05/2017 11:14	Prep Batch: 372333	Date: 05/05/2017 05:36				
9012B	MB 280-372333/5-A	Cyanide, Total	5.0	U	ug/L	10	1
Batch ID: 370781	Date: 04/25/2017 11:15						
9056A	MB 280-370781/6	Nitrate as N	100	U	ug/L	500	1
9056A	MB 280-370781/6	Nitrite as N	100	U	ug/L	500	1
Batch ID: 370782	Date: 04/25/2017 11:15						
9056A	MB 280-370782/6	Chloride	656	J	ug/L	3000	1
9056A	MB 280-370782/6	Sulfate	373	J	ug/L	5000	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372408	Date: 05/05/2017 11:42		Prep Batch: 372333		Date: 05/05/2017 05:36						
9012B	280-96291-6	Cyanide, Total	5.0	U	ug/L						
9012B	280-96291-6 MS	Cyanide, Total	92.2		ug/L	100	92	83-116			
Batch ID: 370781	Date: 04/25/2017 16:46										
9056A	280-96291-2	Nitrate as N	120	J	ug/L						
9056A	280-96291-2 MS	Nitrate as N	4780		ug/L	5000	93	88-111			
9056A	280-96291-2	Nitrite as N	100	U	ug/L						
9056A	280-96291-2 MS	Nitrite as N	4610		ug/L	5000	92	87-111			
Batch ID: 370782	Date: 04/25/2017 16:46										
9056A	280-96291-2	Chloride	110000		ug/L						J
9056A	280-96291-2 MS	Chloride	133000		ug/L	25000	79	87-111			4
9056A	280-96291-2	Sulfate	55000		ug/L						J
9056A	280-96291-2 MS	Sulfate	77000		ug/L	25000	86	87-112			J

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.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372408	Date: 05/05/2017 11:44		Prep Batch: 372333		Date: 05/05/2017 05:36						
9012B	280-96291-6 MSD	Cyanide, Total	93.2		ug/L	100	93	83-116	1	20	
Batch ID: 370781	Date: 04/25/2017 17:06										
9056A	280-96291-2 MSD	Nitrate as N	5050		ug/L	5000	99	88-111	5	10	
9056A	280-96291-2 MSD	Nitrite as N	4880		ug/L	5000	98	87-111	6	10	
Batch ID: 370782	Date: 04/25/2017 17:06										
9056A	280-96291-2 MSD	Chloride	140000		ug/L	25000	108	87-111	5	10	4
9056A	280-96291-2 MSD	Sulfate	81100		ug/L	25000	103	87-112	5	10	

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.: 280-96291-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 370781 Date: 04/25/2017 16:26								
9056A	BKGmw-006-042417-GW	280-96291-2	Nitrate as N	120	ug/L			J
9056A	BKGmw-006-042417-GW	280-96291-2 DU	Nitrate as N	123	ug/L	4	10	J
9056A	BKGmw-006-042417-GW	280-96291-2	Nitrite as N	100	ug/L			U
9056A	BKGmw-006-042417-GW	280-96291-2 DU	Nitrite as N	100	ug/L	NC	10	U
Batch ID: 370782 Date: 04/25/2017 16:26								
9056A	BKGmw-006-042417-GW	280-96291-2	Chloride	110000	ug/L			
9056A	BKGmw-006-042417-GW	280-96291-2 DU	Chloride	114000	ug/L	0.3	10	
9056A	BKGmw-006-042417-GW	280-96291-2	Sulfate	55000	ug/L			
9056A	BKGmw-006-042417-GW	280-96291-2 DU	Sulfate	55400	ug/L	0.06	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.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 370824	Date: 04/25/2017 11:29										
						LCS Source: CR6 spike sou_00837					
7196A	LCS 280-370824/8	Chromium, hexavalent	99.3		ug/L	100	99	90-111	1	20	
Batch ID: 372408	Date: 05/05/2017 11:11	Prep Batch: 372333	Date: 05/05/2017 05:36								
						LCS Source: CN ICV Int_00434					
9012B	LCS 280-372333/3-A	Cyanide, Total	96.4		ug/L	100	96	83-116	0	20	
Batch ID: 370781	Date: 04/25/2017 10:35										
						LCS Source: IC LCS_00889					
9056A	LCS 280-370781/4	Nitrate as N	5040		ug/L	5000	101	88-111	2	10	
9056A	LCS 280-370781/4	Nitrite as N	5040		ug/L	5000	101	87-111	0	10	
Batch ID: 370782	Date: 04/25/2017 10:35										
						LCS Source: IC LCS_00889					
9056A	LCS 280-370782/4	Chloride	104000		ug/L	100000	104	87-111	1	10	
9056A	LCS 280-370782/4	Sulfate	103000		ug/L	100000	103	87-112	0	10	

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

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 370824	Date: 04/25/2017 11:29										
						LCSD Source: CR6 spike sou_00837					
7196A	LCSD 280-370824/9	Chromium, hexavalent	98.5		ug/L	100	98	90-111	1	20	
Batch ID: 372408	Date: 05/05/2017 11:12	Prep Batch: 372333	Date: 05/05/2017 05:36								
						LCSD Source: CN ICV Int_00434					
9012B	LCSD 280-372333/4-A	Cyanide, Total	96.1		ug/L	100	96	83-116	0	20	
Batch ID: 370781	Date: 04/25/2017 10:55										
						LCSD Source: IC LCS_00889					
9056A	LCSD 280-370781/5	Nitrate as N	4970		ug/L	5000	99	88-111	2	10	
9056A	LCSD 280-370781/5	Nitrite as N	5030		ug/L	5000	101	87-111	0	10	
Batch ID: 370782	Date: 04/25/2017 10:55										
						LCSD Source: IC LCS_00889					
9056A	LCSD 280-370782/5	Chloride	103000		ug/L	100000	103	87-111	1	10	
9056A	LCSD 280-370782/5	Sulfate	102000		ug/L	100000	102	87-112	0	10	M

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

FORM VIIA-IN

7A-IN
LOW LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372408	Date: 05/05/2017 11:09		Prep Batch: 372333			Date: 05/05/2017 05:36					
						LCS Source: CN 10ppm_00252					
9012B	LLCS 280-372333/2-A	Cyanide, Total	96.8		ug/L	100	97	44-167			

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

FORM VIIA-IN

7A-IN
HIGH LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372408	Date: 05/05/2017 11:08		Prep Batch: 372333		Date: 05/05/2017 05:36						
					LCS Source: CN 10ppm_00252						
9012B	HLCS 280-372333/1-A	Cyanide, Total	406		ug/L	400	102	90-110			

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

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 370781	Date: 04/25/2017 10:15										
						LCS Source: IC Cal low_00287					
9056A	MRL 280-370781/3	Nitrate as N	0.214	J	mg/L	0.200	107	50-150			
9056A	MRL 280-370781/3	Nitrite as N	0.222	J	mg/L	0.200	111	50-150			
Batch ID: 370782	Date: 04/25/2017 10:15										
						LCS Source: IC CAL cl/so4_00147					
9056A	MRL 280-370782/3	Chloride	2.40	J	mg/L	2.50	96	50-150			
9056A	MRL 280-370782/3	Sulfate	2.46	J	mg/L	2.50	99	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: 280-96291-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B DL Date: 02/16/2014 00:00

Prep Method: 9012B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-96291-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B XMDL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-96291-1

SDG Number:

Matrix: Water Instrument ID: WC_HSPEC_7196

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: 280-96291-1

SDG Number:

Matrix: Water Instrument ID: WC_HSPEC_7196

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: 280-96291-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom11

Method: 9056A DL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Chloride		3	0.254
Nitrate as N		0.5	0.042
Nitrite as N		0.5	0.049
Sulfate		5	0.232

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-96291-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom11

Method: 9056A XMDL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		3	0.254
Nitrate as N		0.5	0.042
Nitrite as N		0.5	0.049
Sulfate		5	0.232

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-372333/1-A	05/05/2017 05:36	372333		50	50
LLCS 280-372333/2-A	05/05/2017 05:36	372333		50	50
LCS 280-372333/3-A	05/05/2017 05:36	372333		50	50
LCSD 280-372333/4-A	05/05/2017 05:36	372333		50	50
MB 280-372333/5-A	05/05/2017 05:36	372333		50	50
280-96291-3	05/05/2017 05:36	372333		50	50
280-96291-5	05/05/2017 05:36	372333		50	50
280-96291-6	05/05/2017 05:36	372333		50	50
280-96291-6 MS	05/05/2017 05:36	372333		50	50
280-96291-6 MSD	05/05/2017 05:36	372333		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 05/05/2017 10:44 End Date: 05/05/2017 12:29

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			10:44	
ZZZZZZ			10:45	
ZZZZZZ			10:47	
ZZZZZZ			10:48	
IC 280-372408/5			10:50	X
IC 280-372408/6			10:51	X
IC 280-372408/7			10:53	X
IC 280-372408/8			10:54	X
IC 280-372408/9			10:56	X
IC 280-372408/10			10:57	X
IC 280-372408/11			10:59	X
ZZZZZZ			11:00	
ZZZZZZ			11:02	
ICV 280-372408/14	1		11:03	X
ICB 280-372408/15	1		11:05	X
ZZZZZZ			11:06	
HLCS 280-372333/1-A	2	T	11:08	X
LLCS 280-372333/2-A	1	T	11:09	X
LCS 280-372333/3-A	1	T	11:11	X
LCSD 280-372333/4-A	1	T	11:12	X
MB 280-372333/5-A	1	T	11:14	X
ZZZZZZ			11:15	
ZZZZZZ			11:17	
ZZZZZZ			11:18	
ZZZZZZ			11:20	
ZZZZZZ			11:21	
ZZZZZZ			11:23	
ZZZZZZ			11:24	
CCV 280-372408/29	1		11:26	X
CCB 280-372408/30	1		11:27	X
ZZZZZZ			11:29	
ZZZZZZ			11:30	
ZZZZZZ			11:32	
280-96291-3	1	T	11:33	X
280-96291-5	1	T	11:35	X
ZZZZZZ			11:36	
ZZZZZZ			11:38	
ZZZZZZ			11:39	
280-96291-6	1	T	11:41	X
280-96291-6 MS	1	T	11:42	X
280-96291-6 MSD	1	T	11:44	X
ZZZZZZ			11:45	

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 05/05/2017 10:44 End Date: 05/05/2017 12:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			11:47																									
CCV 280-372408/44	1		11:48	X																								
CCB 280-372408/45	1		11:50	X																								
ZZZZZZ			11:51																									
ZZZZZZ			11:53																									
ZZZZZZ			11:54																									
ZZZZZZ			11:56																									
ZZZZZZ			11:57																									
ZZZZZZ			11:59																									
ZZZZZZ			12:00																									
ZZZZZZ			12:02																									
ZZZZZZ			12:03																									
ZZZZZZ			12:05																									
ZZZZZZ			12:06																									
ZZZZZZ			12:08																									
ZZZZZZ			12:09																									
CCV 280-372408/59			12:11																									
CCB 280-372408/60			12:12																									
ZZZZZZ			12:14																									
ZZZZZZ			12:15																									
ZZZZZZ			12:17																									
ZZZZZZ			12:18																									
ZZZZZZ			12:20																									
ZZZZZZ			12:21																									
ZZZZZZ			12:23																									
ZZZZZZ			12:24																									
CCV 280-372408/69			12:26																									
CCB 280-372408/70			12:27																									
ZZZZZZ			12:29																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_HSPEC_7196 Analysis Method: 7196A

Start Date: 04/25/2017 11:29 End Date: 04/25/2017 11:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cr6																								
IC 280-370824/1	1		11:29	X																								
IC 280-370824/2	1		11:29	X																								
IC 280-370824/3	1		11:29	X																								
IC 280-370824/4	1		11:29	X																								
IC 280-370824/5	1		11:29	X																								
ICV 280-370824/6	1		11:29	X																								
ICB 280-370824/7	1		11:29	X																								
LCS 280-370824/8	1	T	11:29	X																								
LCSD 280-370824/9	1	T	11:29	X																								
MB 280-370824/10	1	T	11:29	X																								
ZZZZZZ			11:29																									
ZZZZZZ			11:29																									
ZZZZZZ			11:29																									
ZZZZZZ			11:29																									
ZZZZZZ			11:29																									
280-96291-1	1	T	11:29	X																								
280-96291-2	1	T	11:29	X																								
CCV 280-370824/18	1		11:29	X																								
CCB 280-370824/19	1		11:29	X																								
ZZZZZZ			11:29																									
ZZZZZZ			11:29																									
ZZZZZZ			11:29																									

Prep Types:
T = Total/NA

FORM XIII-IN

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/12/2017 10:02 End Date: 04/13/2017 09:54

Lab Sample Id	D/F	Type	Time	Analytes																										
				N-No2	NO3																									
RTC 280-369033/1			10:02																											
STD 280-369033/2 IC	1		10:22	X	X																									
STD 280-369033/3 IC	1		10:41	X	X																									
STD 280-369033/4 IC	1		11:01	X	X																									
STD 280-369033/5 IC	1		11:21	X	X																									
STD 280-369033/6 IC	1		11:41	X	X																									
STD 280-369033/7 IC	1		12:01	X	X																									
ICV 280-369033/8	1		12:56	X	X																									
ICB 280-369033/9	1		13:15	X	X																									
ZZZZZZ			13:35																											
ZZZZZZ			13:55																											
ZZZZZZ			14:15																											
ZZZZZZ			14:35																											
ZZZZZZ			19:39																											
ZZZZZZ			21:18																											
ZZZZZZ			21:38																											
ZZZZZZ			21:58																											
ZZZZZZ			22:17																											
ZZZZZZ			22:37																											
ZZZZZZ			22:57																											
ZZZZZZ			23:17																											
ZZZZZZ			23:37																											
ZZZZZZ			23:57																											
CCV 280-369033/24			00:17																											
CCB 280-369033/25			00:37																											
ZZZZZZ			00:57																											
ZZZZZZ			01:17																											
ZZZZZZ			01:37																											
ZZZZZZ			01:57																											
ZZZZZZ			02:16																											
ZZZZZZ			02:36																											
ZZZZZZ			02:56																											
ZZZZZZ			03:16																											
ZZZZZZ			03:36																											
ZZZZZZ			03:56																											
CCV 280-369033/36			04:16																											
CCB 280-369033/37			04:36																											
ZZZZZZ			04:56																											
ZZZZZZ			05:16																											

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/12/2017 10:02 End Date: 04/13/2017 09:54

Lab Sample Id	D/F	Type	Time	Analytes																									
				N-No2	NO3																								
ZZZZZZ			05:36																										
ZZZZZZ			05:56																										
ZZZZZZ			06:15																										
ZZZZZZ			06:35																										
ZZZZZZ			06:55																										
ZZZZZZ			07:15																										
ZZZZZZ			07:35																										
ZZZZZZ			07:55																										
CCV 280-369033/48			08:15																										
CCB 280-369033/49			08:35																										
ZZZZZZ			08:55																										
ZZZZZZ			09:15																										
CCV 280-369033/52			09:35																										
CCB 280-369033/53			09:54																										

Prep Types:
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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/12/2017 10:02 End Date: 04/13/2017 04:36

Lab Sample Id	D/F	Type	Time	Analytes																										
				CL-	SO4																									
RTC 280-369034/1			10:02																											
STD 280-369034/2 IC	1		10:22	X	X																									
STD 280-369034/3 IC	1		10:41	X	X																									
STD 280-369034/4 IC	1		11:01	X	X																									
STD 280-369034/5 IC	1		11:21	X	X																									
STD 280-369034/6 IC	1		11:41	X	X																									
STD 280-369034/7 IC	1		12:01	X	X																									
ICV 280-369034/8	1		12:56	X	X																									
ICB 280-369034/9	1		13:15	X	X																									
ZZZZZZ			13:35																											
ZZZZZZ			13:55																											
ZZZZZZ			14:15																											
ZZZZZZ			14:35																											
ZZZZZZ			19:39																											
ZZZZZZ			21:18																											
ZZZZZZ			21:38																											
ZZZZZZ			21:58																											
ZZZZZZ			22:17																											
ZZZZZZ			22:37																											
ZZZZZZ			22:57																											
CCV 280-369034/24			00:17																											
CCB 280-369034/25			00:37																											
CCV 280-369034/36			04:16																											
CCB 280-369034/37			04:36																											

Prep Types:
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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/25/2017 09:36 End Date: 04/26/2017 07:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				N-No2	NO3																								
CCV 280-370781/1	1		09:36	X	X																								
CCB 280-370781/2	1		09:55	X	X																								
MRL 280-370781/3	1	T	10:15	X	X																								
LCS 280-370781/4	1	T	10:35	X	X																								
LCSD 280-370781/5	1	T	10:55	X	X																								
MB 280-370781/6	1	T	11:15	X	X																								
280-96291-2	1	T	14:02	X	X																								
ZZZZZZ			14:22																										
ZZZZZZ			14:42																										
ZZZZZZ			15:01																										
280-96291-2 DU	1	T	16:26	X	X																								
280-96291-2 MS	1	T	16:46	X	X																								
280-96291-2 MSD	1	T	17:06	X	X																								
ZZZZZZ			17:26																										
ZZZZZZ			17:46																										
ZZZZZZ			18:06																										
CCV 280-370781/17	1		18:25	X	X																								
CCB 280-370781/18	1		18:45	X	X																								
ZZZZZZ			19:05																										
ZZZZZZ			19:25																										
ZZZZZZ			19:45																										
ZZZZZZ			20:05																										
ZZZZZZ			20:25																										
ZZZZZZ			20:45																										
ZZZZZZ			21:05																										
ZZZZZZ			21:25																										
ZZZZZZ			21:45																										
ZZZZZZ			22:05																										
CCV 280-370781/29			22:24																										
CCB 280-370781/30			22:44																										
ZZZZZZ			23:04																										
ZZZZZZ			23:24																										
ZZZZZZ			23:44																										
ZZZZZZ			00:04																										
ZZZZZZ			00:24																										
ZZZZZZ			00:44																										
ZZZZZZ			01:04																										
ZZZZZZ			01:24																										
CCV 280-370781/39			01:44																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/25/2017 09:36 End Date: 04/26/2017 07:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				N-No2	NO3																								
CCB 280-370781/40			02:04																										
ZZZZZZ			02:23																										
ZZZZZZ			02:43																										
ZZZZZZ			03:03																										
ZZZZZZ			03:23																										
ZZZZZZ			03:43																										
ZZZZZZ			04:03																										
ZZZZZZ			04:23																										
ZZZZZZ			04:43																										
ZZZZZZ			05:03																										
ZZZZZZ			05:23																										
CCV 280-370781/51			05:43																										
CCB 280-370781/52			06:02																										
ZZZZZZ			06:22																										
CCV 280-370781/54			06:42																										
CCB 280-370781/55			07:02																										

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/25/2017 09:36 End Date: 04/26/2017 07:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				CL-	SO4																								
CCV 280-370782/1	1		09:36	X	X																								
CCB 280-370782/2	1		09:55	X	X																								
MRL 280-370782/3	1	T	10:15	X	X																								
LCS 280-370782/4	1	T	10:35	X	X																								
LCSD 280-370782/5	1	T	10:55	X	X																								
MB 280-370782/6	1	T	11:15	X	X																								
280-96291-2	1	T	14:02	X	X																								
ZZZZZZ			14:22																										
ZZZZZZ			14:42																										
ZZZZZZ			15:01																										
280-96291-2 DU	1	T	16:26	X	X																								
280-96291-2 MS	1	T	16:46	X	X																								
280-96291-2 MSD	1	T	17:06	X	X																								
ZZZZZZ			17:26																										
ZZZZZZ			17:46																										
ZZZZZZ			18:06																										
CCV 280-370782/17	1		18:25	X	X																								
CCB 280-370782/18	1		18:45	X	X																								
ZZZZZZ			19:05																										
ZZZZZZ			19:25																										
ZZZZZZ			19:45																										
ZZZZZZ			20:05																										
ZZZZZZ			20:25																										
ZZZZZZ			20:45																										
ZZZZZZ			21:05																										
ZZZZZZ			21:25																										
ZZZZZZ			21:45																										
ZZZZZZ			22:05																										
CCV 280-370782/29			22:24																										
CCB 280-370782/30			22:44																										
ZZZZZZ			23:04																										
ZZZZZZ			23:24																										
ZZZZZZ			23:44																										
ZZZZZZ			00:04																										
ZZZZZZ			00:24																										
ZZZZZZ			00:44																										
ZZZZZZ			01:04																										
ZZZZZZ			01:24																										
CCV 280-370782/39			01:44																										
CCB 280-370782/40			02:04																										
ZZZZZZ			02:23																										

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Instrument ID: WC_IonChrom11 Analysis Method: 9056A

Start Date: 04/25/2017 09:36 End Date: 04/26/2017 07:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Cl-	SO4																								
ZZZZZZ			02:43																										
ZZZZZZ			03:03																										
ZZZZZZ			03:23																										
ZZZZZZ			03:43																										
ZZZZZZ			04:03																										
ZZZZZZ			04:23																										
ZZZZZZ			04:43																										
ZZZZZZ			05:03																										
ZZZZZZ			05:23																										
CCV 280-370782/51			05:43																										
CCB 280-370782/52			06:02																										
ZZZZZZ			06:22																										
CCV 280-370782/54			06:42																										
CCB 280-370782/55			07:02																										

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 372333 Batch Start Date: 05/05/17 05:36 Batch Analyst: Lehman, Jeffrey M

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillpHCheck	SulfideCheck	ChlorineCheck	CN 10ppm 00252
HLCS 280-372333/1		9012B, 9012B		50 mL	50 mL	>12	N	N	2 mL
LLCS 280-372333/2		9012B, 9012B		50 mL	50 mL	>12	N	N	0.5 mL
LCS 280-372333/3		9012B, 9012B		50 mL	50 mL	>12	N	N	
LCSD 280-372333/4		9012B, 9012B		50 mL	50 mL	>12	N	N	
MB 280-372333/5		9012B, 9012B		50 mL	50 mL	>12	N	N	
280-96291-A-3	LL3mw-234-042417-GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	
280-96291-C-5	LL4mw-200-042417-GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	
280-96291-H-6	LL4mw-193-042417-GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	
280-96291-H-6 MS	LL4mw-193-042417-GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	
280-96291-G-6 MSD	LL4mw-193-042417-GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00434					
HLCS 280-372333/1		9012B, 9012B							
LLCS 280-372333/2		9012B, 9012B							
LCS 280-372333/3		9012B, 9012B		0.5 mL					
LCSD 280-372333/4		9012B, 9012B		0.5 mL					
MB 280-372333/5		9012B, 9012B							
280-96291-A-3	LL3mw-234-042417-GW	9012B, 9012B	T						
280-96291-C-5	LL4mw-200-042417-GW	9012B, 9012B	T						
280-96291-H-6	LL4mw-193-042417-GW	9012B, 9012B	T						
280-96291-H-6 MS	LL4mw-193-042417-GW	9012B, 9012B	T	0.5 mL					
280-96291-G-6 MSD	LL4mw-193-042417-GW	9012B, 9012B	T	0.5 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.: 280-96291-1

SDG No.:

Batch Number: 372333 Batch Start Date: 05/05/17 05:36 Batch Analyst: Lehman, Jeffrey M

Batch Method: 9012B Batch End Date:

Batch Notes	
Balance ID	M19170
Bismuth Nitrate ID	Bismuth Nitrate_00023
Magnesium Chloride Reagent ID Number	CN Mag Chl_00067
Sodium Hydroxide ID	2% NaOH_00276
Pipette ID	T1000
Sulfamic Acid ID	CN Sulf_00076
Sulfuric Acid Reagent ID Number	H2SO4_00168

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.: 280-96291-1

SDG No.:

Batch Number: 372408 Batch Start Date: 05/05/17 10:44 Batch Analyst: Lehman, Jeffrey M

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01246	CN ICV Daily 01011		
ICV 280-372408/14		9012B		50 mL	50 mL		50 mL		
ICB 280-372408/15		9012B		50 mL	50 mL				
HLCS 280-372333/1-A		9012B		50 mL	50 mL				
LLCS 280-372333/2-A		9012B		50 mL	50 mL				
LCS 280-372333/3-A		9012B		50 mL	50 mL				
LCSD 280-372333/4-A		9012B		50 mL	50 mL				
MB 280-372333/5-A		9012B		50 mL	50 mL				
CCV 280-372408/29		9012B		50 mL	50 mL	10 mL			
CCB 280-372408/30		9012B		50 mL	50 mL				
280-96291-A-3-A	LL3mw-234-042417-GW	9012B	T	50 mL	50 mL				
280-96291-C-5-A	LL4mw-200-042417-GW	9012B	T	50 mL	50 mL				
280-96291-H-6-A	LL4mw-193-042417-GW	9012B	T	50 mL	50 mL				
280-96291-H-6-B MS	LL4mw-193-042417-GW	9012B	T	50 mL	50 mL				
280-96291-G-6-A MSD	LL4mw-193-042417-GW	9012B	T	50 mL	50 mL				
CCV 280-372408/44		9012B		50 mL	50 mL	10 mL			
CCB 280-372408/45		9012B		50 mL	50 mL				

Batch Notes	
Buffer Reagent ID Number	CN Buffer_00094
Chloramine-T ID	CN Chloro-T_00779
Pipette ID	WC 5000ELJ WC T1000
Pyridine-Barbituric Acid ID	CN Pyr/Barb_00163

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.: 280-96291-1

SDG No.:

Batch Number: 372408 Batch Start Date: 05/05/17 10:44 Batch Analyst: Lehman, Jeffrey M

Batch Method: 9012B 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.: 280-96291-1

SDG No.:

Batch Number: 370824 Batch Start Date: 04/25/17 11:29 Batch Analyst: Lehman, Jeffrey M

Batch Method: 7196A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ColorBlk	UnCorResp	Initial pH	Final pH
IC 280-370824/1		7196A		10 mL	10 mL				
IC 280-370824/2		7196A		10 mL	10 mL				
IC 280-370824/3		7196A		10 mL	10 mL				
IC 280-370824/4		7196A		10 mL	10 mL				
IC 280-370824/5		7196A		10 mL	10 mL				
ICV 280-370824/6		7196A		10 mL	10 mL				
ICB 280-370824/7		7196A		10 mL	10 mL				
LCS 280-370824/8		7196A		10 mL	10 mL				
LCSD 280-370824/9		7196A		10 mL	10 mL				
MB 280-370824/10		7196A		10 mL	10 mL				
280-96291-A-1	LL3mw-244-042417-GW	7196A	T	10 mL	10 mL	0.002 Absorbance	0.004 Absorbance	6.0 SU	1.6 SU
280-96291-B-2	BKGmw-006-042417-GW	7196A	T	10 mL	10 mL	0.011 Absorbance	0.012 Absorbance	6.0 SU	1.6 SU
CCV 280-370824/18		7196A		10 mL	10 mL				
CCB 280-370824/19		7196A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	CR6 ICV int 01230	CR6 Int cal 00798	CR6 spike sou 00837			
IC 280-370824/1		7196A			0.1 mL				
IC 280-370824/2		7196A			0.2 mL				
IC 280-370824/3		7196A			0.5 mL				
IC 280-370824/4		7196A			1 mL				
IC 280-370824/5		7196A			2 mL				
ICV 280-370824/6		7196A		0.5 mL					
ICB 280-370824/7		7196A							
LCS 280-370824/8		7196A				0.1 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 370824 Batch Start Date: 04/25/17 11:29 Batch Analyst: Lehman, Jeffrey M

Batch Method: 7196A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CR6 ICV int 01230	CR6 Int cal 00798	CR6 spike sou 00837			
LCSD 280-370824/9		7196A				0.1 mL			
MB 280-370824/10		7196A							
280-96291-A-1	LL3mw-244-042417-GW	7196A	T						
280-96291-B-2	BKGmw-006-042417-GW	7196A	T						
CCV 280-370824/18		7196A		1 mL					
CCB 280-370824/19		7196A							

Batch Notes	
Acid Used for pH Adjustment ID	50%H2SO4_00029
Color Reagent ID	CR^6ColorR_00289
pH Paper ID	hc412308, hc601355
Pipette ID	WC 5000ELJ WC T1000 WC 100BB

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.: 280-96291-1

SDG No.:

Batch Number: 369033 Batch Start Date: 04/12/17 10:02 Batch Analyst: Phan, Thu L

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	IC CAL cl/so4 00145	IC Cal low 00282	IC CL ICV 00013
STD 280-369033/2 IC		9056A		5 mL	5 mL	OK	0.02 mL	0.02 mL	
STD 280-369033/3 IC		9056A		5 mL	5 mL	OK	0.05 mL	0.05 mL	
STD 280-369033/4 IC		9056A		5 mL	5 mL	OK	0.1 mL	0.1 mL	
STD 280-369033/5 IC		9056A		5 mL	5 mL	OK	1.2 mL	0.4 mL	
STD 280-369033/6 IC		9056A		5 mL	5 mL	OK	2.4 mL	0.8 mL	
STD 280-369033/7 IC		9056A		5 mL	5 mL	OK	4 mL	1 mL	
ICV 280-369033/8		9056A		5 mL	5 mL	OK			0.4 mL
ICB 280-369033/9		9056A		5 mL	5 mL	OK			

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC ICV 5 00170	IC SO4 ICV 00016				
STD 280-369033/2 IC		9056A							
STD 280-369033/3 IC		9056A							
STD 280-369033/4 IC		9056A							
STD 280-369033/5 IC		9056A							
STD 280-369033/6 IC		9056A							
STD 280-369033/7 IC		9056A							
ICV 280-369033/8		9056A		0.4 mL	0.4 mL				
ICB 280-369033/9		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 369033 Batch Start Date: 04/12/17 10:02 Batch Analyst: Phan, Thu L

Batch Method: 9056A Batch End Date:

Batch Notes	
Batch Comment	pipets: 5000ics, 1000d, 100c
Eluent 1 ID	ic11 eluent_00311
Perform Calculation (0=No, 1=Yes)	1

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.: 280-96291-1

SDG No.:

Batch Number: 369034 Batch Start Date: 04/12/17 10:02 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 00145	IC Cal low 00282	IC CL ICV 00013	IC ICV 5 00170
STD 280-369034/2 IC		9056A		5 mL	5 mL	0.02 mL	0.02 mL		
STD 280-369034/3 IC		9056A		5 mL	5 mL	0.05 mL	0.05 mL		
STD 280-369034/4 IC		9056A		5 mL	5 mL	0.1 mL	0.1 mL		
STD 280-369034/5 IC		9056A		5 mL	5 mL	1.2 mL	0.4 mL		
STD 280-369034/6 IC		9056A		5 mL	5 mL	2.4 mL	0.8 mL		
STD 280-369034/7 IC		9056A		5 mL	5 mL	4 mL	1 mL		
ICV 280-369034/8		9056A		5 mL	5 mL			0.4 mL	0.4 mL
ICB 280-369034/9		9056A		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00016					
STD 280-369034/2 IC		9056A							
STD 280-369034/3 IC		9056A							
STD 280-369034/4 IC		9056A							
STD 280-369034/5 IC		9056A							
STD 280-369034/6 IC		9056A							
STD 280-369034/7 IC		9056A							
ICV 280-369034/8		9056A		0.4 mL					
ICB 280-369034/9		9056A							

Batch Notes	
Eluent 1 ID	ic11 eluent_00311
Pipette ID	5000ics, 1000d, 100c

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.: 280-96291-1

SDG No.:

Batch Number: 369034 Batch Start Date: 04/12/17 10:02 Batch Analyst: Phan, Thu L

Batch Method: 9056A Batch End Date:

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.: 280-96291-1

SDG No.:

Batch Number: 370781 Batch Start Date: 04/25/17 09:36 Batch Analyst: Benson, Alex F

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	IC CAL cl/so4 00147	IC Cal low 00287	IC LCS 00889
CCV 280-370781/1		9056A		5 mL	5 mL	OK			5 mL
CCB 280-370781/2		9056A		5 mL	5 mL	OK			
MRL 280-370781/3		9056A		5 mL	5 mL	OK	0.05 mL	0.02 mL	
LCS 280-370781/4		9056A		5 mL	5 mL	OK			5 mL
LCSD 280-370781/5		9056A		5 mL	5 mL	OK			5 mL
MB 280-370781/6		9056A		5 mL	5 mL	OK			
280-96291-B-2	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL	OK			
280-96291-B-2 DU	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL	OK			
280-96291-B-2 MS	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL	OK			
280-96291-B-2 MSD	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL	OK			
CCV 280-370781/17		9056A		5 mL	5 mL	OK			5 mL
CCB 280-370781/18		9056A		5 mL	5 mL	OK			

Lab Sample ID	Client Sample ID	Method Chain	Basis	ICMS/MSD WEEK 00465					
CCV 280-370781/1		9056A							
CCB 280-370781/2		9056A							
MRL 280-370781/3		9056A							
LCS 280-370781/4		9056A							
LCSD 280-370781/5		9056A							
MB 280-370781/6		9056A							
280-96291-B-2	BKGmw-006-042417-GW	9056A	T						
280-96291-B-2 DU	BKGmw-006-042417-GW	9056A	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96291-1

SDG No.:

Batch Number: 370781 Batch Start Date: 04/25/17 09:36 Batch Analyst: Benson, Alex F

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	ICMS/MSD WEEK 00465					
280-96291-B-2 MS	BKGmw-006-042417-GW	9056A	T	0.05 mL					
280-96291-B-2 MSD	BKGmw-006-042417-GW	9056A	T	0.05 mL					
CCV 280-370781/17		9056A							
CCB 280-370781/18		9056A							

Batch Notes	
Batch Comment	pipettes: 100-C, 1000-D, 5000ICS
Eluent 1 ID	IC11 Eluent_00319
Perform Calculation (0=No, 1=Yes)	1

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.: 280-96291-1

SDG No.:

Batch Number: 370782 Batch Start Date: 04/25/17 09:36 Batch Analyst: Benson, Alex F

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00147	IC Cal low 00287	IC LCS 00889	ICMS/MSD WEEK 00465
CCV 280-370782/1		9056A		5 mL	5 mL			5 mL	
CCB 280-370782/2		9056A		5 mL	5 mL				
MRL 280-370782/3		9056A		5 mL	5 mL	0.05 mL	0.02 mL		
LCS 280-370782/4		9056A		5 mL	5 mL			5 mL	
LCSD 280-370782/5		9056A		5 mL	5 mL			5 mL	
MB 280-370782/6		9056A		5 mL	5 mL				
280-96291-B-2	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL				
280-96291-B-2 DU	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL				
280-96291-B-2 MS	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL				0.05 mL
280-96291-B-2 MSD	BKGmw-006-042417-GW	9056A	T	5 mL	5 mL				0.05 mL
CCV 280-370782/17		9056A		5 mL	5 mL			5 mL	
CCB 280-370782/18		9056A		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	IC11 ELuent_00319
Pipette ID	100-C, 1000-D, 5000ICS

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.

Colorimetric Cyanide Data Review Checklist

LIMS Prep Batch #: 372333/372354 LIMS Analytical Batch #: 372408	SOP No.: WC-0081	Instrument ID: Alp1
Analyst/1st Reviewer/Date: JWL 5/4/17	QC Type (circle): Standard DOD Q4 (DoD Q5) QAPP_____ Other_____	
Method:(circle): 335.1 (335.4) (9012A) (9012B) 4500 CN-E 4500CN-G 4500CN-I 9012A/B-nonamenable		
Matrix (circle): (Water) Solid Waste Leachate	Circle: (Total) Amenable WAD Free CN	

Review Items	Yes	No	NA	2nd Rev	If No, why is data reportable?
A. Calibration/Instrument Run QC					
1. Verify intermediate standards for correct concentration stated in SOP (ICAL pts at correct concentration)	✓			✓	
2. Frequency: Daily	✓			✓	
3. Number of Points: 1st order: 5 standards; 2nd order: 6 standards	✓			✓	
4. Linearity and intercept: r ≥ 0.995 and |x-intercept| < ½ RL	✓			✓	
5. ICV, second source: run before samples (90-110% recovery)	✓			✓	
6. CCV: 10% frequency & closing, (90-110% recovery)	✓			✓	
7. Distilled check standard, high and low concentration: HLCS - 90-110% recovery LLCS: 90-110% recovery (335.4, DoD) Note: LLCSREC value in TALS is for LOQV assessment.	✓			✓	
8. ICB/CCB: run before samples, 10% frequency, & closing Result < ½ RL; DoD < LOD	✓			✓	
B. Client Sample and QC Sample Results					
9. Samples with results > linear range diluted and reanalyzed?	✓			✓	Comments:
10. On-instrument response of diluted sample is >10X MB on-instrument response	✓			✓	Comments:
C. Preparation/Matrix QC					
11. Method Blank: one per preparation batch Result < ½ RL *If no, list blank ID & explain:*	✓			✓	□ No analyte > RL in associated samples □ Sample results >10x blank □ Insufficient sample for reanalysis
12. LCS: one per preparation batch 90-110% recovery (Total) / Lab limits (Amenable/WAD) DoD5: 83-116%(water); 76-120% (solid) *If no, list LCS ID & explain:*	✓			✓	□ Insufficient sample for reanalysis □ LCS %R > QC limits & samples < RL
13. MS/MSD or Dup (amenable only) frequency: A pair per 10 samples *If no, list QC ID & explain:*	✓			✓	□ Insufficient sample

Review Items	Yes	No	NA	2nd Rev	If No, why is data reportable?
14. MS/MSD recovery & RPD: 90-110% recovery (Total and Non-Amenable) Lab limits (Amenable, Free and WAD) DoD5: 83-116%(water); 76-120% (solid); RPD 20% 20% RPD *If no, list MS or MSD ID & explain:*	✓			✓	□ LCS acceptable – matrix effects □ Native analyte > 4x spike level □ Matrix effect and native analyte > 4x spike
D. Raw Data & TALS Data Entry					
15. Raw Data/Run Log					
a. Unused data is clearly identified	✓			✓	
b. All cross outs are 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. Analyst initials/signature provided	✓			✓	
16. 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 (MS/MSD/DU) designated (where applicable)	✓			✓	
17. TALS Worksheet Tab is complete and correct	✓			✓	
18. Sample pH, presence of chlorine/sulfide recorded in prep batch?	✓			✓	
19. NCM written for any samples needing preservation at the bench?	✓			✓	
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	✓			✓	
23. TALS Batch Information Screen documentation is complete	✓			✓	
24. TALS Status set to appropriate review level	✓			✓	
25. Historical Data Checker: Check historical data. Print charts for outliers. Take corrective action as is appropriate	✓			✓	
E. Final Report and NCMs (2nd level review only)					
26. Were all job/project requirements met?				✓	
27. Results for samples and QC correct on final report?				✓	
28. Are all necessary scanned documents in TALS?				✓	
29. NCMs reviewed for applicability, correct references to batches, grammar/typographical errors?				✓	
30. NCM written for any samples preserved at the bench?					

Comments: _____

2nd Reviewer: _____ **Review Date:** 5/8/17

Run Results Report

Facility Name
Facility Location
Department
Operator Name JML
Operator ID JML
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C050517A.RST
Sample table path C:\FLOW_4\c050517a.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 05-May-17
Time acquired 12:34

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
05-May-17	10:44	107	Sync	322589	394.435	
05-May-17	10:45	0	Carryover	386	-1.057	LO
05-May-17	10:47	0	Carryover	89	-1.422	LO
05-May-17	10:48	0	Baseline	0	-1.531	BL
05-May-17	10:50	101	CAL 0.00 ppb	106	-1.400	LO
05-May-17	10:51	102	CAL 10.0 ppb	8433	8.820	
05-May-17	10:53	103	CAL 20.0 ppb	16675	18.937	
05-May-17	10:54	104	CAL 50.0 ppb	42958	51.198	
05-May-17	10:56	105	CAL 100 ppb	84265	101.901	
05-May-17	10:57	106	Cal 200 ppb	165955	202.173	
05-May-17	10:59	107	Cal 400 ppb	325796	398.371	
05-May-17	11:00	0	BLK	-71	-1.618	LO
05-May-17	11:02	0	Baseline	0	-1.531	BL
05-May-17	11:03	108	ICV 100 ppb	81885	98.980	
05-May-17	11:05	0	ICB	54	-1.465	LO
05-May-17	11:06	0	Baseline	0	-1.531	BL
05-May-17	11:08	113	hlcs 280-372333/1-a	166646	406.041	
05-May-17	11:09	114	llcs 280-372333/2-a	80103	96.792	
05-May-17	11:11	115	lcs 280-372333/3-a	79755	96.365	
05-May-17	11:12	116	lcsd 280-372333/4-a	79538	96.098	
05-May-17	11:14	117	mb 280-372333/5-a	2079	1.021	
05-May-17	11:15	118	280-96286-p-3-a	3213	2.413	
05-May-17	11:17	119	280-96286-p-3-b ms	72242	87.143	
05-May-17	11:18	120	280-96286-p-3-c msd	73774	89.024	
05-May-17	11:20	121	280-96286-p-4-a	905	-0.420	LO
05-May-17	11:21	122	280-96286-p-5-a	2969	2.113	
05-May-17	11:23	0	BLK	48	-1.472	LO
05-May-17	11:24	0	baseline	0	-1.531	BL
05-May-17	11:26	109	CCV 200PPB	167561	204.143	
05-May-17	11:27	0	CCB	-56	-1.600	LO
05-May-17	11:29	0	Baseline	0	-1.531	BL
05-May-17	11:30	123	280-96286-p-6-a	2208	1.179	
05-May-17	11:32	124	280-96286-p-7-a	1230	-0.021	LO
05-May-17	11:33	125	280-96291-a-3-a	1554	0.377	
05-May-17	11:35	126	280-96291-c-5-a	4585	4.097	
05-May-17	11:36	127	280-96292-i-1-a	3307	2.529	
05-May-17	11:38	128	280-96292-i-2-a	2519	1.561	
05-May-17	11:39	129	280-96296-f-2-b	2384	1.395	
05-May-17	11:41	130	280-96291-h-6-a	2000	0.924	
05-May-17	11:42	131	280-96291-h-6-b ms	76338	92.171	
05-May-17	11:44	132	280-96291-g-6-a msd	77163	93.184	
05-May-17	11:45	0	BLK	-11	-1.544	LO
05-May-17	11:47	0	baseline	0	-1.531	BL
05-May-17	11:48	109	CCV 200PPB	171066	208.446	
05-May-17	11:50	0	CCB	-7	-1.539	LO
05-May-17	11:51	0	Baseline	0	-1.531	BL

Result path C:\FLOW_4\C050517A.RST
Sample table path C:\FLOW_4\c050517a.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 05-May-17
Time acquired 12:34

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
05-May-17	11:53	133	280-96296-f-1-b	3176	2.368	
05-May-17	11:54	134	280-96296-f-3-a	3155	2.341	
05-May-17	11:56	135	280-96296-f-4-a	5821	5.614	
05-May-17	11:57	136	280-96296-f-5-a	3653	2.953	
05-May-17	11:59	137	280-96296-f-6-a	3945	3.311	
05-May-17	12:00	138	280-96296-f-7-a	4919	4.507	
05-May-17	12:02	139	280-96296-f-8-a	4768	4.322	
05-May-17	12:03	140	280-96296-f-9-a	3609	2.898	
05-May-17	12:05	141	hlcs 280-372354/1-a	163555	398.453	
05-May-17	12:06	142	llcs 280-372354/2-a	80438	97.204	
05-May-17	12:08	0	BLK	19	-1.507	LO
05-May-17	12:09	0	baseline	0	-1.531	BL
05-May-17	12:11	109	CCV 200PPB	172853	210.639	
05-May-17	12:12	0	CCB	-2	-1.534	LO
05-May-17	12:14	0	Baseline	0	-1.531	BL
05-May-17	12:15	143	lcs 280-372354/3-a	79402	95.932	
05-May-17	12:17	144	mb 280-372354/4-a	981	-0.326	LO
05-May-17	12:18	145	280-96284-a-1-a	1187	-0.073	LO
05-May-17	12:20	146	280-96284-a-1-b ms	85130	102.963	
05-May-17	12:21	147	280-96284-a-1-c msd	84168	101.782	
05-May-17	12:23	0	BLK	-9	-1.542	LO
05-May-17	12:24	0	baseline	0	-1.531	BL
05-May-17	12:26	109	CCV 200PPB	173159	211.015	
05-May-17	12:27	0	CCB	-45	-1.586	LO
05-May-17	12:29	0	Baseline	0	-1.531	BL

Peak Table:Cyanide, Total

File name: C:\FLOW_4\C050517A.RST
Date: 05-May-17
Operator: JML

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	107	Sync	1	SYNC	1	1	322589	394.434784	
2	0	Carryover	1	CO	1	1	386	-1.056989	LO
3	0	Carryover	2	CO	1	1	89	-1.422161	LO
B	0	Baseline	1	RB	1	1	0	-1.530968	BL
5	101	CAL 0.00 ppb	1	C	1	1	106	-1.400289	LO
6	102	CAL 10.0 ppb	1	C	1	1	8433	8.820092	
7	103	CAL 20.0 ppb	1	C	1	1	16675	18.937481	
8	104	CAL 50.0 ppb	1	C	1	1	42958	51.197769	
9	105	CAL 100 ppb	1	C	1	1	84265	101.901001	
10	106	Cal 200 ppb	1	C	1	1	165955	202.172684	
11	107	Cal 400 ppb	1	C	1	1	325796	398.371307	
12	0	BLK	1	BLNK	1	1	-71	-1.618488	LO
B	0	Baseline	1	RB	1	1	0	-1.530968	BL
14	108	ICV 100 ppb	1	CCV	1	1	81885	98.980232	
15	0	ICB	1	U	1	1	54	-1.465282	LO
B	0	Baseline	1	RB	1	1	0	-1.530968	BL
17	113	hlcs 280-372333/1-a	1	U	2	1	166646	406.040527	
18	114	llcs 280-372333/2-a	1	U	1	1	80103	96.792458	
19	115	lcs 280-372333/3-a	1	U	1	1	79755	96.364853	
20	116	lcsd 280-372333/4-a	1	U	1	1	79538	96.098495	
21	117	mb 280-372333/5-a	1	U	1	1	2079	1.021338	
22	118	280-96286-p-3-a	1	U	1	1	3213	2.413177	
23	119	280-96286-p-3-b ms	1	U	1	1	72242	87.143219	
24	120	280-96286-p-3-c msd	1	U	1	1	73774	89.023933	
25	121	280-96286-p-4-a	1	U	1	1	905	-0.420291	LO
26	122	280-96286-p-5-a	1	U	1	1	2969	2.113049	
27	0	BLK	1	BLNK	1	1	48	-1.472463	LO
B	0	baseline	1	RB	1	1	0	-1.530968	BL
29	109	CCV 200PPB	1	CCV	1	1	167561	204.143356	
30	0	CCB	1	U	1	1	-56	-1.599613	LO
B	0	Baseline	1	RB	1	1	0	-1.530968	BL
32	123	280-96286-p-6-a	1	U	1	1	2208	1.179469	
33	124	280-96286-p-7-a	1	U	1	1	1230	-0.021346	LO
34	125	280-96291-a-3-a	1	U	1	1	1554	0.376863	
35	126	280-96291-c-5-a	1	U	1	1	4585	4.096910	
36	127	280-96292-i-1-a	1	U	1	1	3307	2.528625	
37	128	280-96292-i-2-a	1	U	1	1	2519	1.560730	
38	129	280-96296-f-2-b	1	U	1	1	2384	1.395248	
39	130	280-96291-h-6-a	1	U	1	1	2000	0.924454	
40	131	280-96291-h-6-b ms	1	U	1	1	76338	92.170700	
41	132	280-96291-g-6-a msd	1	U	1	1	77163	93.184090	
42	0	BLK	1	BLNK	1	1	-11	-1.544106	LO
B	0	baseline	1	RB	1	1	0	-1.530968	BL
44	109	CCV 200PPB	1	CCV	1	1	171066	208.445709	
45	0	CCB	1	U	1	1	-7	-1.539260	LO
B	0	Baseline	1	RB	1	1	0	-1.530968	BL
47	133	280-96296-f-1-b	1	U	1	1	3176	2.367504	
48	134	280-96296-f-3-a	1	U	1	1	3155	2.341363	
49	135	280-96296-f-4-a	1	U	1	1	5821	5.614497	
50	136	280-96296-f-5-a	1	U	1	1	3653	2.952752	
51	137	280-96296-f-6-a	1	U	1	1	3945	3.310863	
52	138	280-96296-f-7-a	1	U	1	1	4919	4.506872	
53	139	280-96296-f-8-a	1	U	1	1	4768	4.321788	
54	140	280-96296-f-9-a	1	U	1	1	3609	2.898335	
55	141	hlcs 280-372354/1-a	1	U	2	1	163555	398.452667	
56	142	llcs 280-372354/2-a	1	U	1	1	80438	97.203812	
57	0	BLK	1	BLNK	1	1	19	-1.507267	LO
B	0	baseline	1	RB	1	1	0	-1.530968	BL
59	109	CCV 200PPB	1	CCV	1	1	172853	210.639404	
60	0	CCB	1	U	1	1	-2	-1.533841	LO
B	0	Baseline	1	RB	1	1	0	-1.530968	BL
62	143	lcs 280-372354/3-a	1	U	1	1	79402	95.931610	
63	144	mb 280-372354/4-a	1	U	1	1	981	-0.326399	LO
64	145	280-96284-a-1-a	1	U	1	1	1187	-0.073423	LO
65	146	280-96284-a-1-b ms	1	U	1	1	85130	102.963303	
66	147	280-96284-a-1-c msd	1	U	1	1	84168	101.782051	
67	0	BLK	1	BLNK	1	1	-9	-1.542426	LO
B	0	baseline	1	RB	1	1	0	-1.530968	BL
69	109	CCV 200PPB	1	CCV	1	1	173159	211.014633	
70	0	CCB	1	U	1	1	-45	-1.585951	LO

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
B	0	Baseline	1	RB	1	1	0	-1.530968	BL

Cyanide, Total:Calibration 1: Peak 5-71

File name: C:\FLOW_4\C050517A.RST
Date: 05-May-17
Operator: JML

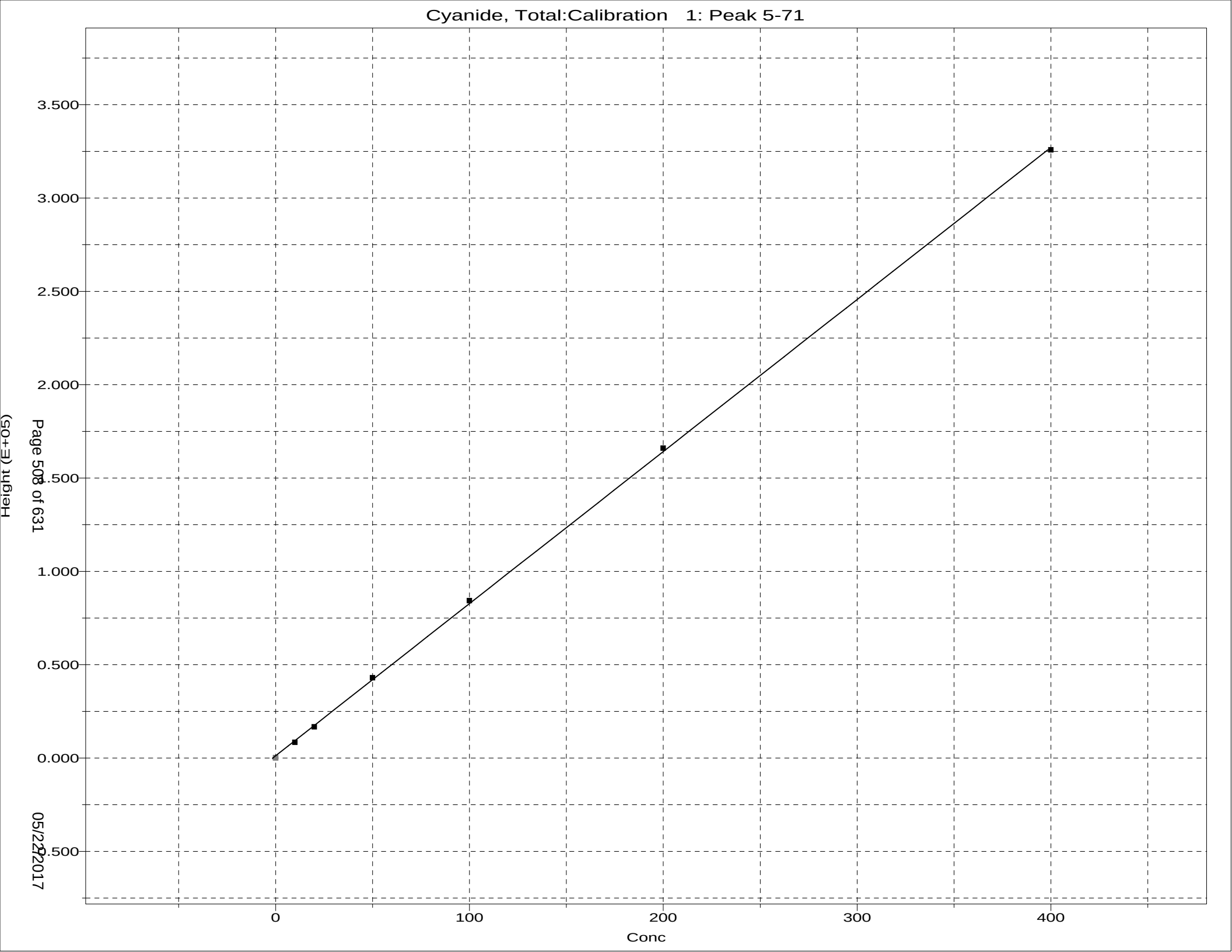
*	Name	Conc	Height
*	CAL 0.00 ppb	0.000000	106.462791
*	CAL 10.0 ppb	10.000000	8432.902344
*	CAL 20.0 ppb	20.000000	16675.435547
*	CAL 50.0 ppb	50.000000	42957.558594
*	CAL 100 ppb	100.000000	84264.960938
*	Cal 200 ppb	200.000000	165955.281250
*	Cal 400 ppb	400.000000	325796.281250

Calib Coef:
y=bx+a
a: (intercept) 1.2473e+03
b: 8.1469e+02

Corr Coef: 0.999933

Carryover: 0.12%

No Drift Peaks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Height (E+05)
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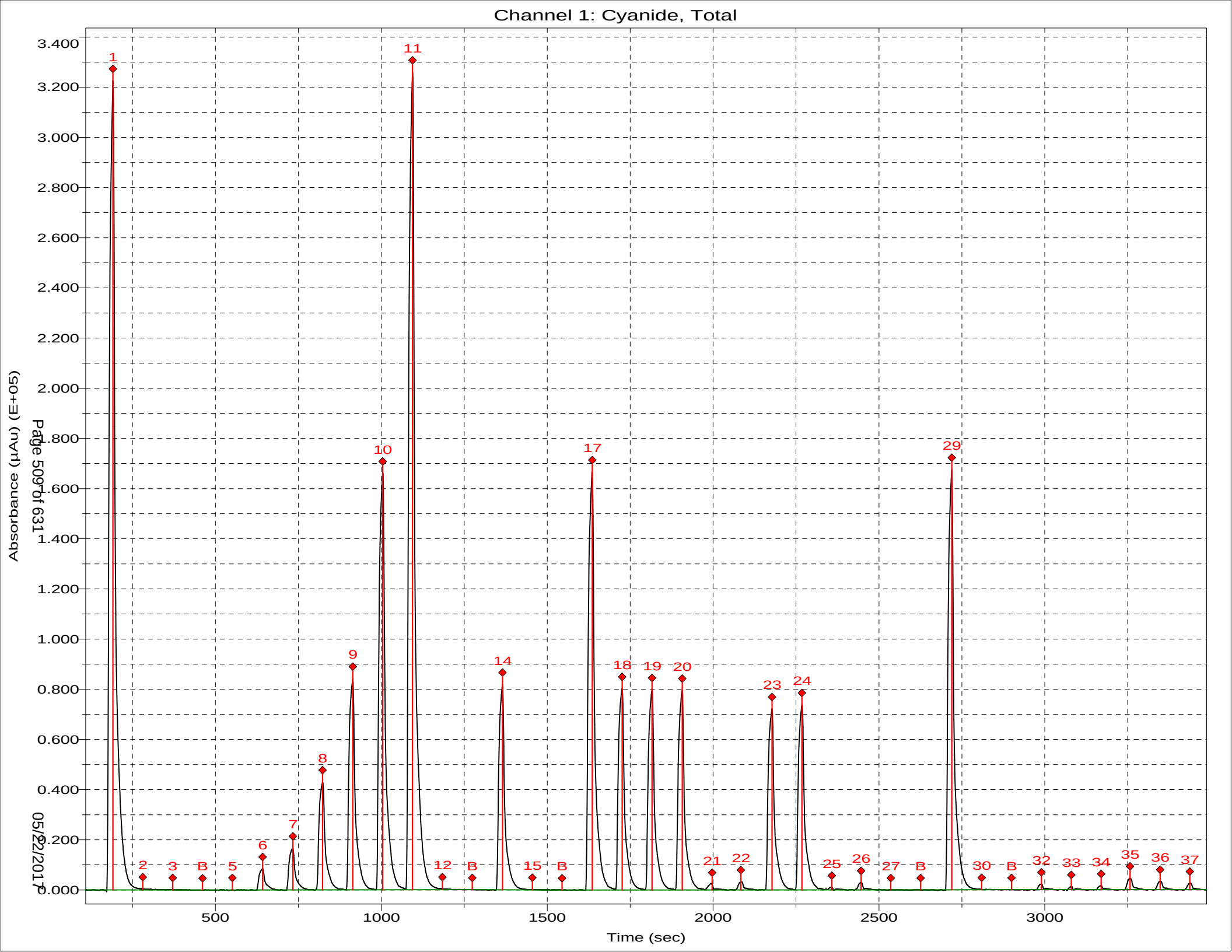
1.500
1.000
0.500
0.000
-0.500
0
100
200
300
400
Conc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Absorbance (µAu) (E+05)
Time (sec)
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2.600
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2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
500
1000
1500
2000
2500
3000
1
2
3
B
5
6
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8
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11
12
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14
15
B
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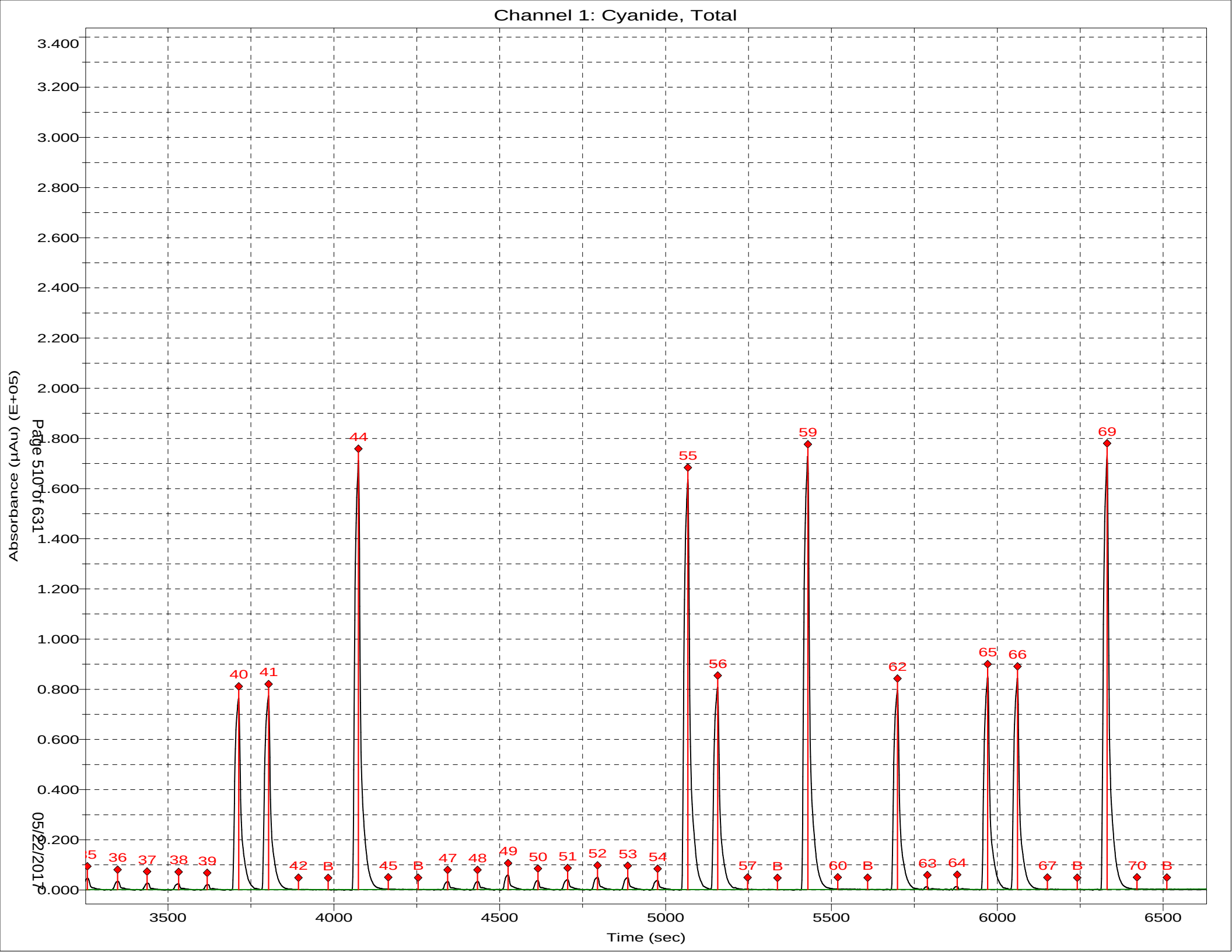
Page 509 of 631
05/22/2017


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec)
Page 510 of 631
05/22/2017
3.400
3.200
3.000
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2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
3500
4000
4500
5000
5500
6000
6500
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B
47
48
49
50
51
52
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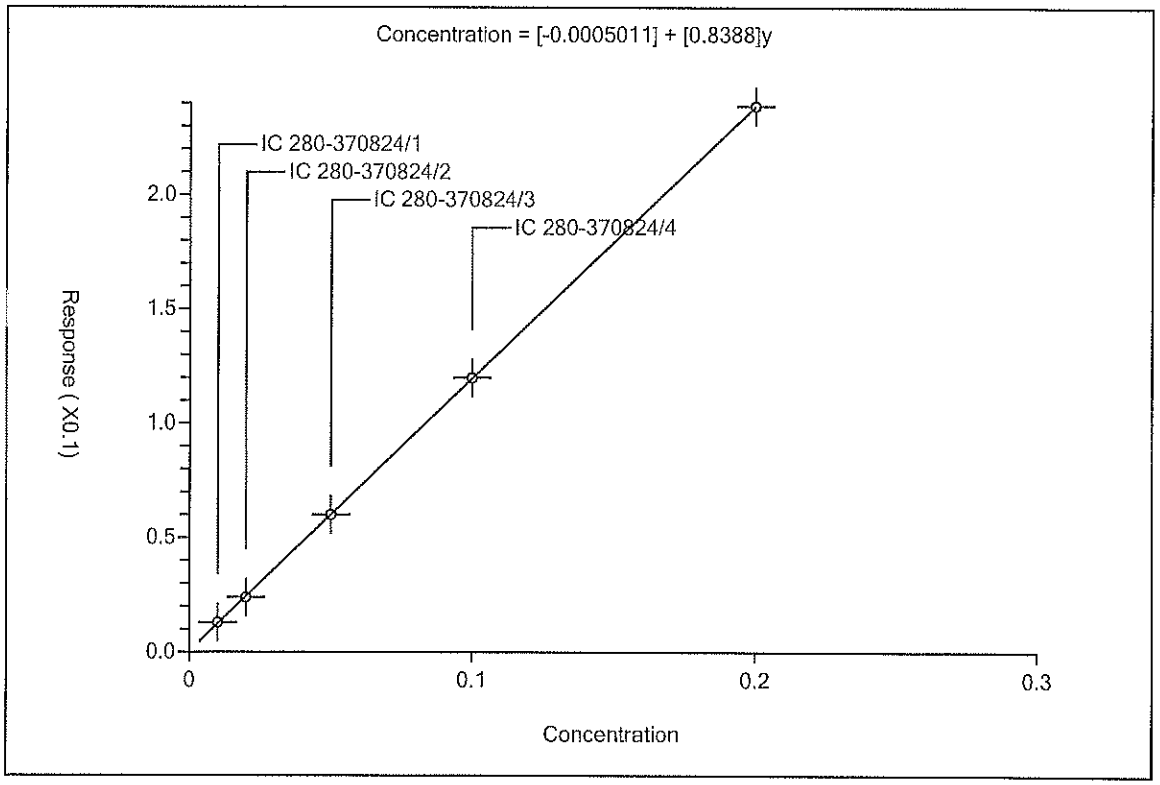
56
57
B
59
60
B
62
63
64
65
66
67
B
69
70
B

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Concentration
Calib Mode:	ESTD
RF Rounding:	0

Curve Coefficients	
Intercept:	-0.0005011
Slope:	0.8388

Error Coefficients	
Standard Error:	0.0003436
Relative Standard Error:	2.572
Correlation Coefficient:	1.0000
Coefficient of Determination (Adjusted):	1.0000 (1.0000)

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-370824/1	0.01	0.013			1.3	Y
2	IC 280-370824/2	0.02	0.024			1.2	Y
3	IC 280-370824/3	0.05	0.06			1.2	Y
4	IC 280-370824/4	0.1	0.12			1.2	Y
5	IC 280-370824/5	0.2	0.239			1.195	Y



TALS Raw Data Report

Job Number: 280-96290-1
LIMS Batch: 370824
Equipment: WC_HSPEC_7196

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-370824/6** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.061	.05066570 mg/L	mg/L	101	90 110		

RS# 7 Lab ID: **ICB 280-370824/7** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.000	.00501100 mg/L	.0040 U mg/L				

RS# 8 Lab ID: **LCS 280-370824/8** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.119	.09931610 mg/L	mg/L	99	85 115		

RS# 9 Lab ID: **LCSD 280-370824/9** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	.09847730 mg/L	mg/L	98	85 115	1	20

RS# 10 Lab ID: **MB 280-370824/10** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.000	.00501100 mg/L	.0040 U mg/L				

RS# 11 Lab ID: **280-96290-Y-5** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	.01339900 mg/L	.0040 U mg/L				

RS# 12 Lab ID: **280-96290-Y-5 DU** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0000	.00501100 mg/L	.0040 U mg/L			NC	20

RS# 13 Lab ID: **280-96290-AA-5 MS** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1170	.09763850 mg/L	mg/L	98	85 115		

RS# 14 Lab ID: **280-96290-Z-5 MSD** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1160	.09679970 mg/L	mg/L	97	85 115	1	20

RS# 15 Lab ID: **280-96290-I-6** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0060	.00453170 mg/L	.0045 J mg/L				

RS# 18 Lab ID: **CCV 280-370824/18** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.123	0.1026713 mg/L	mg/L	103	90 110		

RS# 19 Lab ID: **CCB 280-370824/19** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.001	.00033770 mg/L	.0040 U mg/L				

TALS Raw Data Report

Job Number: 280-96291-1
LIMS Batch: 370824
Equipment: WC_HSPEC_7196

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-370824/6** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.061	.05066570 mg/L	mg/L	101	90 110		

RS# 7 Lab ID: **ICB 280-370824/7** Inj Date: 4/25/2017 11:29:45AM 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	000501100 mg/L	.0040 U mg/L				

RS# 8 Lab ID: **LCS 280-370824/8** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.119	.09931610 mg/L	ug/L	99	90 111		

RS# 9 Lab ID: **LCSD 280-370824/9** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	.09847730 mg/L	ug/L	98	90 111	1	20

RS# 10 Lab ID: **MB 280-370824/10** Inj Date: 4/25/2017 11:29:45AM 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	000501100 mg/L	4.0 U ug/L				

RS# 11 Lab ID: **280-96290-Y-5** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001339900 mg/L	4.0 U ug/L				

RS# 12 Lab ID: **280-96290-Y-5 DU** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0000	000501100 mg/L	4.0 U ug/L			NC	20

RS# 13 Lab ID: **280-96290-AA-5 MS** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1170	097638500 mg/L	ug/L	98	90 111		

RS# 14 Lab ID: **280-96290-Z-5 MSD** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1160	096799700 mg/L	ug/L	97	90 111	1	20

RS# 16 Lab ID: **280-96291-A-1** Inj Date: 4/25/2017 11:29:45AM 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	001176500 mg/L	4.0 U ug/L				

RS# 17 Lab ID: **280-96291-B-2** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0010	000337700 mg/L	4.0 U ug/L				

RS# 18 Lab ID: **CCV 280-370824/18** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.123	0.1026713 mg/L	mg/L	103	90 110		

RS# 19 Lab ID: **CCB 280-370824/19** Inj Date: 4/25/2017 11:29:45AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0002.d
Lims ID: std L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Apr-2017 10:22:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-002
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:19:55 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

First Level Reviewer: bensona Date: 12-Apr-2017 12:42:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.526	-0.001	1303462	0.2000	0.2242	
2 Chloride	5.167	5.226	-0.059	4133608	1.00	1.31	
3 Nitrite as N	6.275	6.276	-0.001	1803144	0.2000	0.2136	
4 Bromide	8.109	8.092	0.017	367525	0.2000	0.1889	
5 Nitrate as N	9.600	9.476	0.124	1927006	0.2000	0.2106	
7 Orthophosphate as P	12.309	12.284	0.025	1643897	0.2000	0.2342	
6 Sulfate	14.850	14.792	0.058	3137652	1.00	1.20	

Reagents:

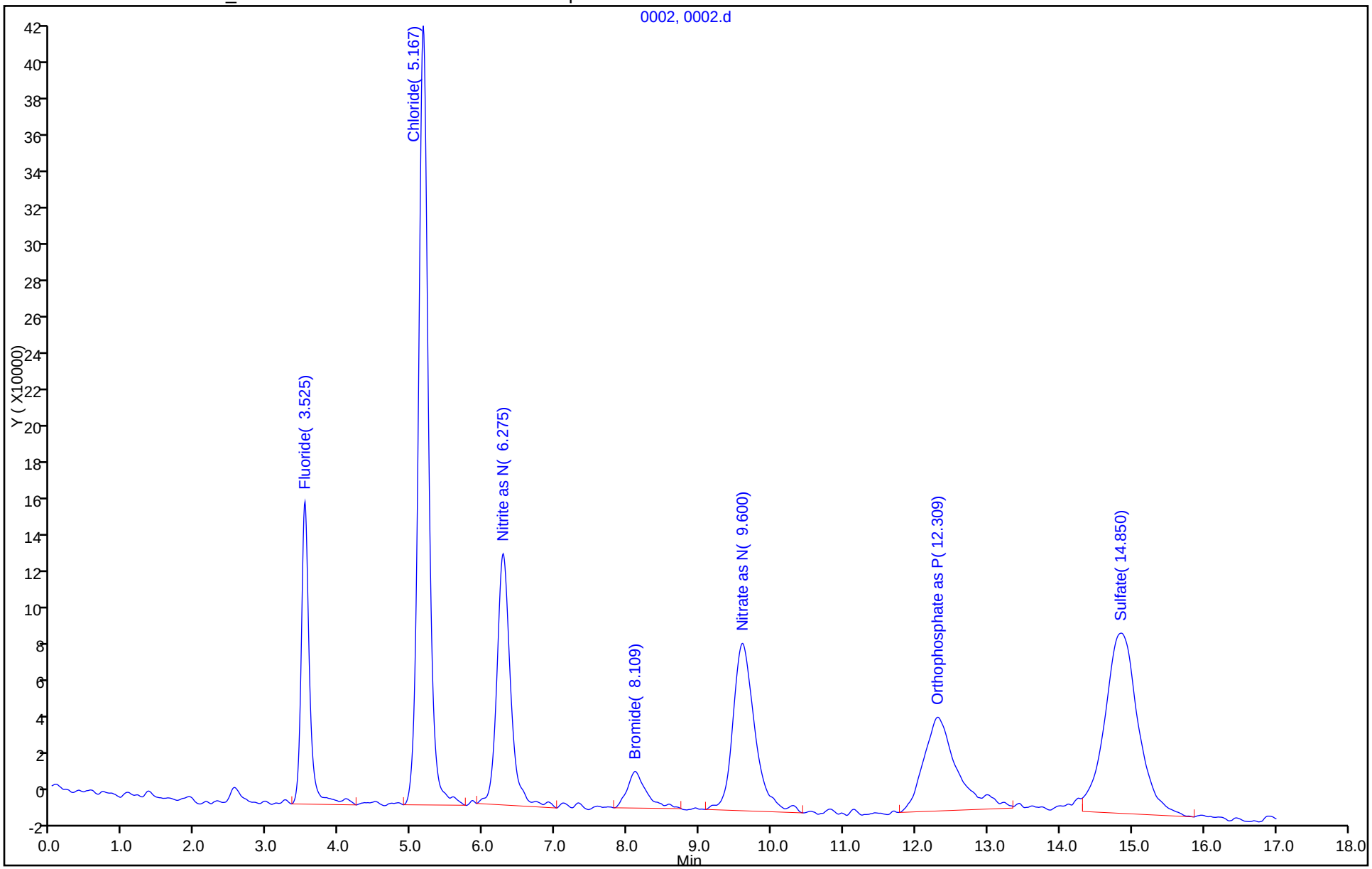
IC Cal low_00282 Amount Added: 0.02 Units: mL
IC CAL cl/so4_00145 Amount Added: 0.02 Units: mL

Report Date: 13-Apr-2017 11:19:56 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0002.d

Injection Date:	12-Apr-2017 10:22:00	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\20170412-57469.b\0002.d
Lims ID: std L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Apr-2017 10:22:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-002
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:19:55 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

First Level Reviewer: bensona Date: 12-Apr-2017 12:42:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.526	-0.001	1303462	0.2000	0.2242	
2 Chloride	5.167	5.226	-0.059	4133608	1.00	1.31	
3 Nitrite as N	6.275	6.276	-0.001	1803144	0.2000	0.2136	
4 Bromide	8.109	8.092	0.017	367525	0.2000	0.1889	
5 Nitrate as N	9.600	9.476	0.124	1927006	0.2000	0.2106	
7 Orthophosphate as P	12.309	12.284	0.025	1643897	0.2000	0.2342	
6 Sulfate	14.850	14.792	0.058	3137652	1.00	1.20	

Reagents:

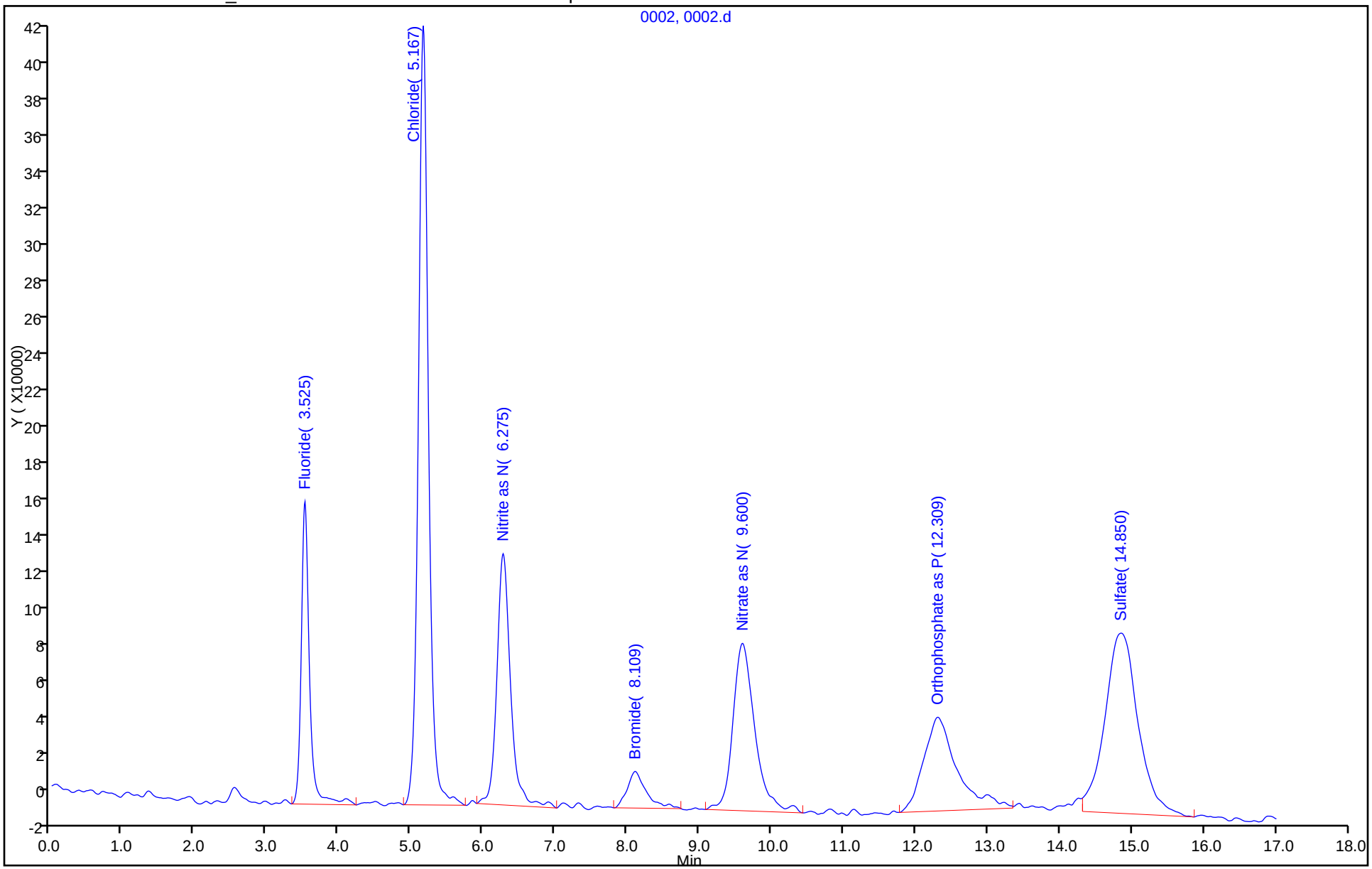
IC Cal low_00282 Amount Added: 0.02 Units: mL
IC CAL cl/so4_00145 Amount Added: 0.02 Units: mL

Report Date: 13-Apr-2017 11:19:56 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0002.d

Injection Date:	12-Apr-2017 10:22:00	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\20170412-57469.b\0003.d
Lims ID: std L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2017 10:41:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-003
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:19:56 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.526	3.526	0.000	3013588	0.5000	0.4706	
2 Chloride	5.167	5.226	-0.059	9693642	2.50	2.34	
3 Nitrite as N	6.267	6.276	-0.009	4367260	0.5000	0.4870	
4 Bromide	8.101	8.092	0.009	948074	0.5000	0.5243	
5 Nitrate as N	9.551	9.476	0.075	4921762	0.5000	0.4943	
7 Orthophosphate as P	12.309	12.284	0.025	2491680	0.5000	0.4442	
6 Sulfate	14.859	14.792	0.067	7147707	2.50	2.40	

Reagents:

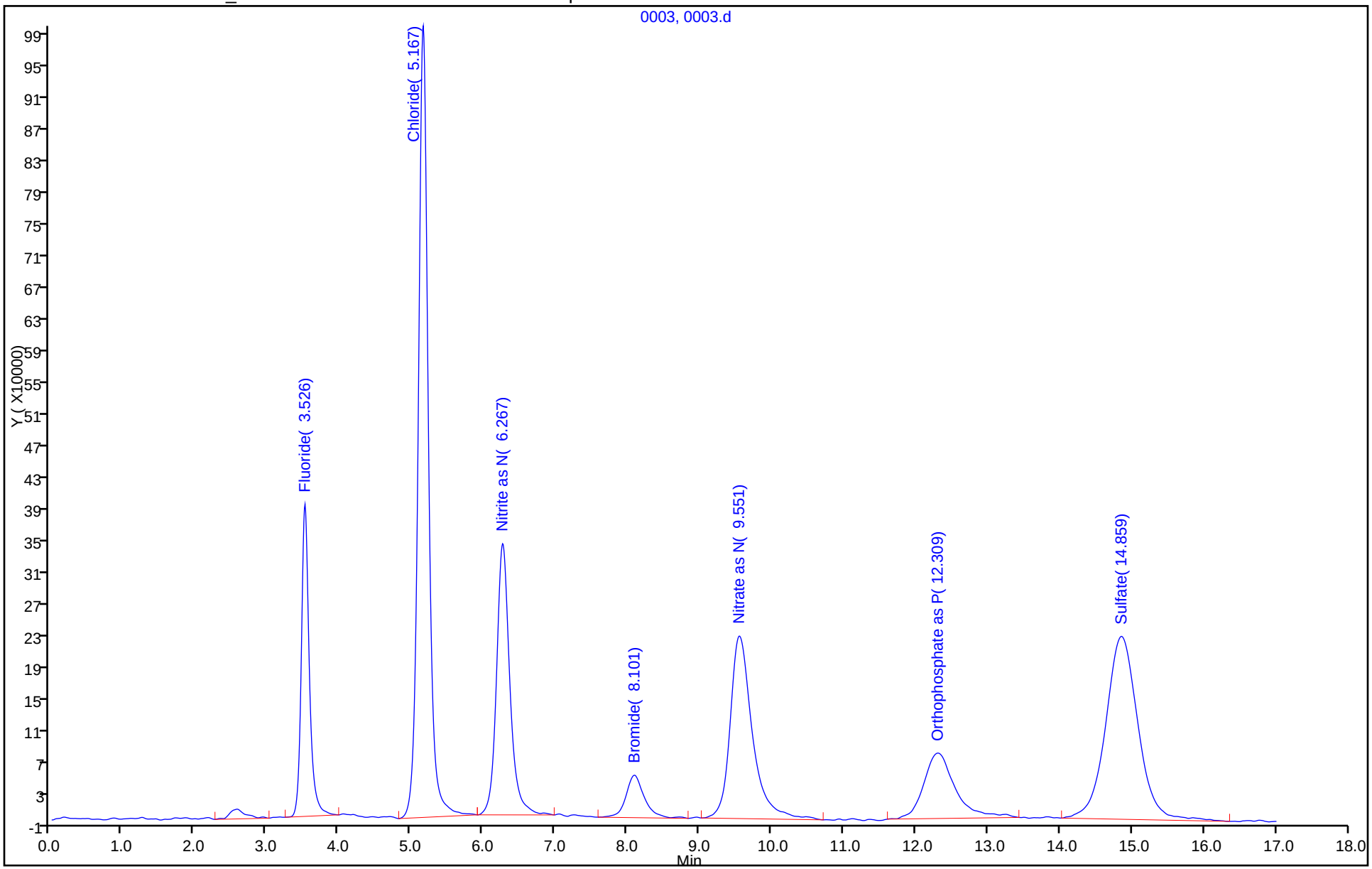
IC Cal low_00282 Amount Added: 0.05 Units: mL
IC CAL cl/so4_00145 Amount Added: 0.05 Units: mL

Report Date: 13-Apr-2017 11:19:57 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0003.d

Injection Date:	12-Apr-2017 10:41:00	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\20170412-57469.b\0003.d
Lims ID: std L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Apr-2017 10:41:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-003
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:19:56 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.526	3.526	0.000	3013588	0.5000	0.4706	
2 Chloride	5.167	5.226	-0.059	9693642	2.50	2.34	
3 Nitrite as N	6.267	6.276	-0.009	4367260	0.5000	0.4870	
4 Bromide	8.101	8.092	0.009	948074	0.5000	0.5243	
5 Nitrate as N	9.551	9.476	0.075	4921762	0.5000	0.4943	
7 Orthophosphate as P	12.309	12.284	0.025	2491680	0.5000	0.4442	
6 Sulfate	14.859	14.792	0.067	7147707	2.50	2.40	

Reagents:

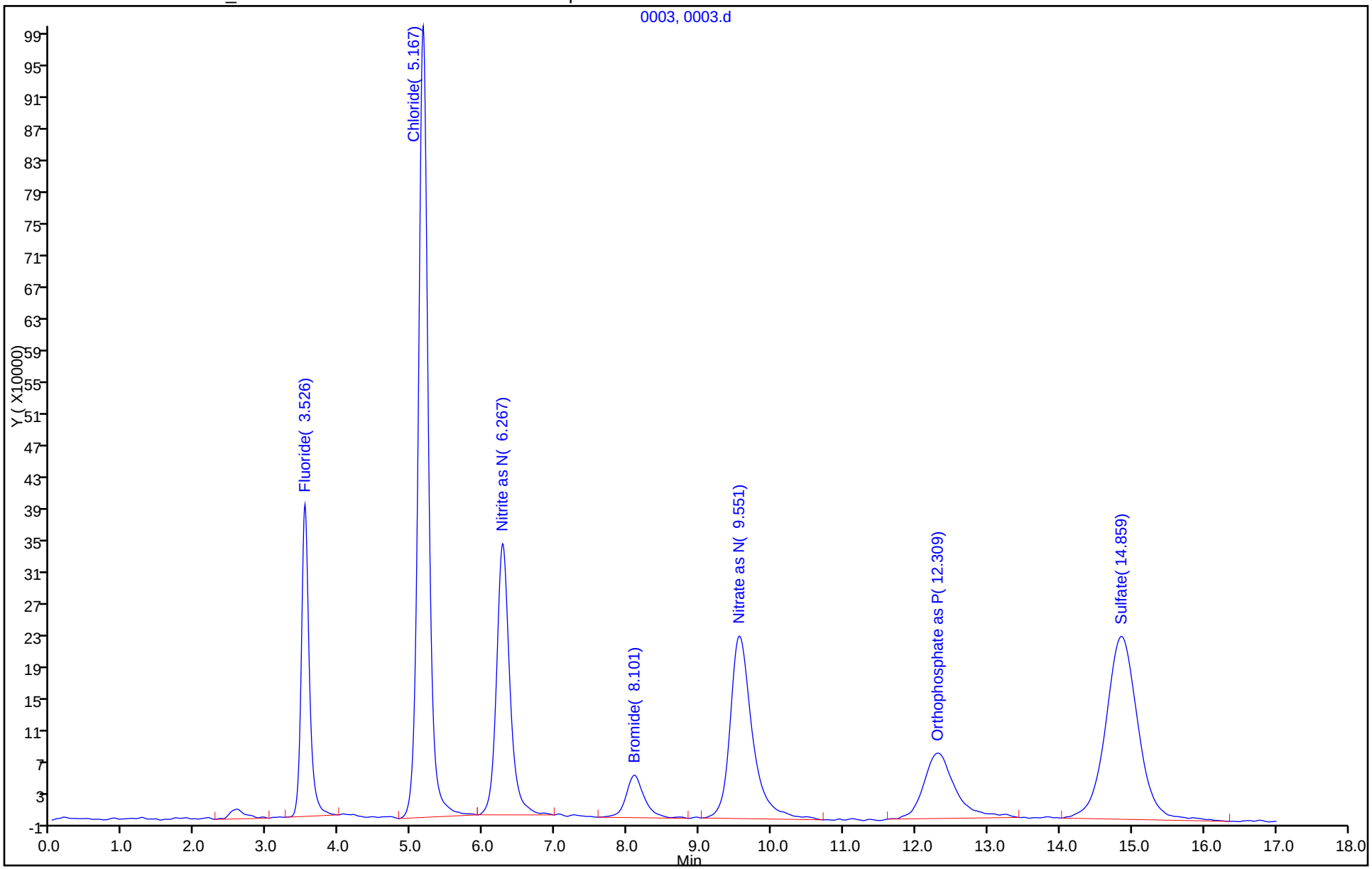
IC Cal low_00282 Amount Added: 0.05 Units: mL
IC CAL cl/so4_00145 Amount Added: 0.05 Units: mL

Report Date: 13-Apr-2017 11:19:58 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0003.d

Injection Date:	12-Apr-2017 10:41:00	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\20170412-57469.b\0004.d
Lims ID: std L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2017 11:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-004
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:19:58 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.526	3.526	0.000	6372226	1.00	0.9546	
2 Chloride	5.159	5.226	-0.067	19381551	5.00	4.14	
3 Nitrite as N	6.259	6.276	-0.017	8951404	1.00	0.9759	
4 Bromide	8.084	8.092	-0.008	1805661	1.00	1.02	
5 Nitrate as N	9.517	9.476	0.041	9997552	1.00	0.9751	
7 Orthophosphate as P	12.301	12.284	0.017	4517957	1.00	0.9459	
6 Sulfate	14.851	14.792	0.059	14126249	5.00	4.48	

Reagents:

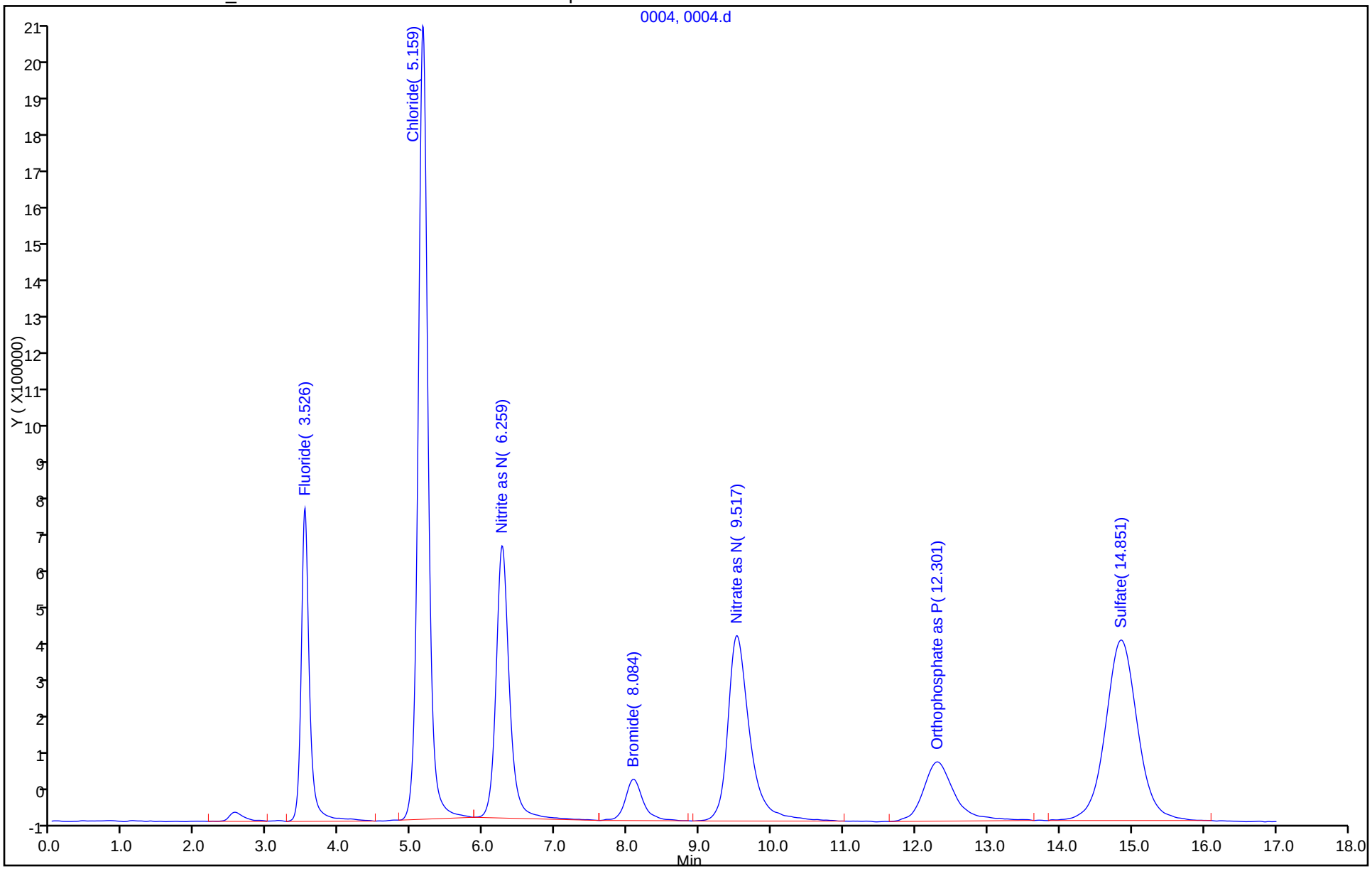
IC Cal low_00282 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00145 Amount Added: 0.10 Units: mL

Report Date: 13-Apr-2017 11:19:59 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0004.d

Injection Date:	12-Apr-2017 11:01:00	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\20170412-57469.b\0004.d
Lims ID: std L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Apr-2017 11:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-004
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:19:58 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.526	3.526	0.000	6372226	1.00	0.9546	
2 Chloride	5.159	5.226	-0.067	19381551	5.00	4.14	
3 Nitrite as N	6.259	6.276	-0.017	8951404	1.00	0.9759	
4 Bromide	8.084	8.092	-0.008	1805661	1.00	1.02	
5 Nitrate as N	9.517	9.476	0.041	9997552	1.00	0.9751	
7 Orthophosphate as P	12.301	12.284	0.017	4517957	1.00	0.9459	
6 Sulfate	14.851	14.792	0.059	14126249	5.00	4.48	

Reagents:

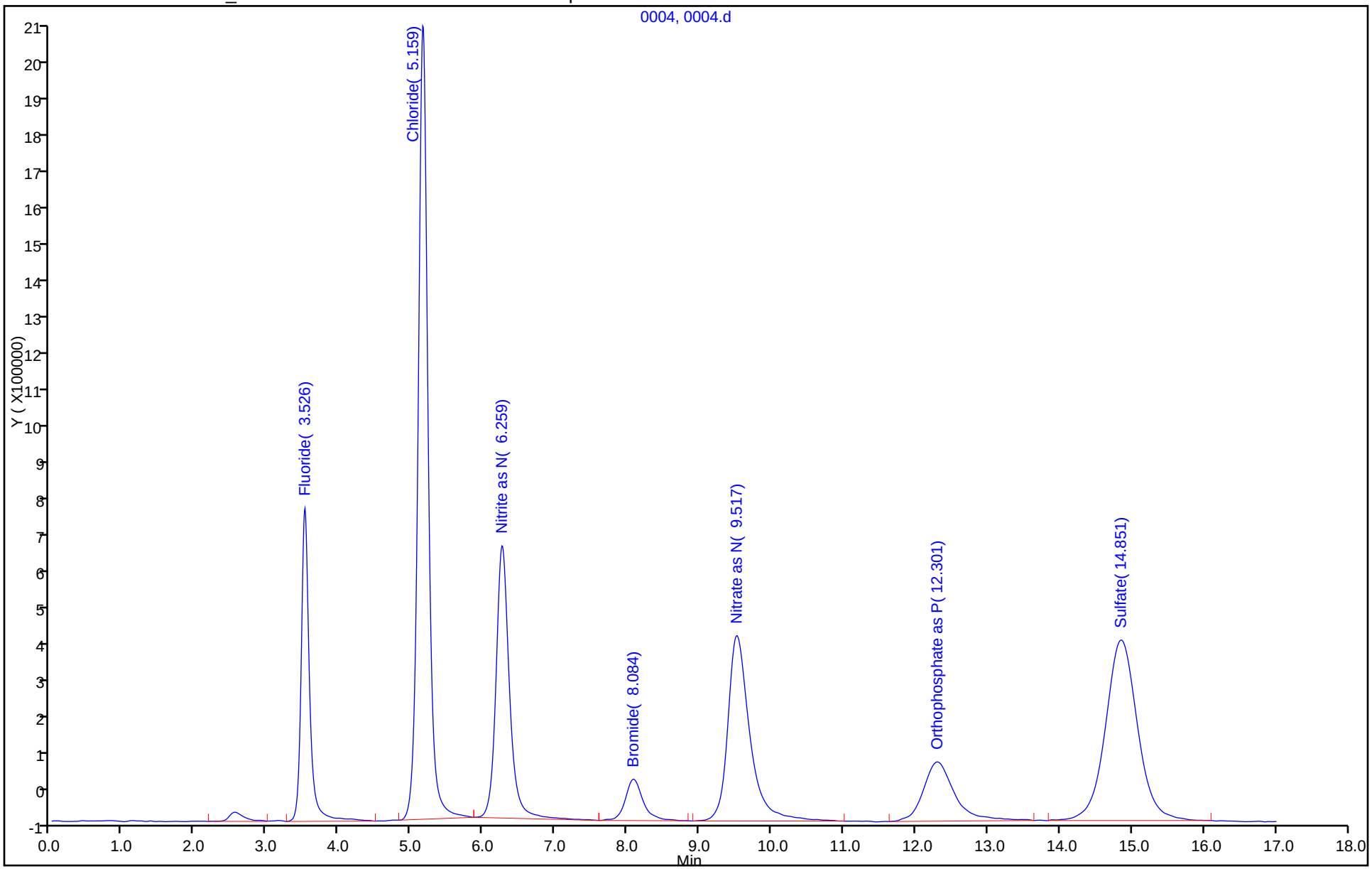
IC Cal low_00282 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00145 Amount Added: 0.10 Units: mL

Report Date: 13-Apr-2017 11:19:59 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0004.d

Injection Date:	12-Apr-2017 11:01:00	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\20170412-57469.b\0005.d
Lims ID: std L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2017 11:21:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-005
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:19:59 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.525	0.000	26492802	4.00	3.85	
2 Chloride	5.200	5.200	0.000	287764404	60.0	53.9	
3 Nitrite as N	6.267	6.267	0.000	35965236	4.00	3.86	
4 Bromide	8.092	8.092	0.000	6847689	4.00	3.93	
5 Nitrate as N	9.484	9.484	0.000	40579393	4.00	3.87	
7 Orthophosphate as P	12.284	12.284	0.000	16482473	4.00	3.91	
6 Sulfate	14.809	14.809	0.000	185894805	60.0	55.6	

Reagents:

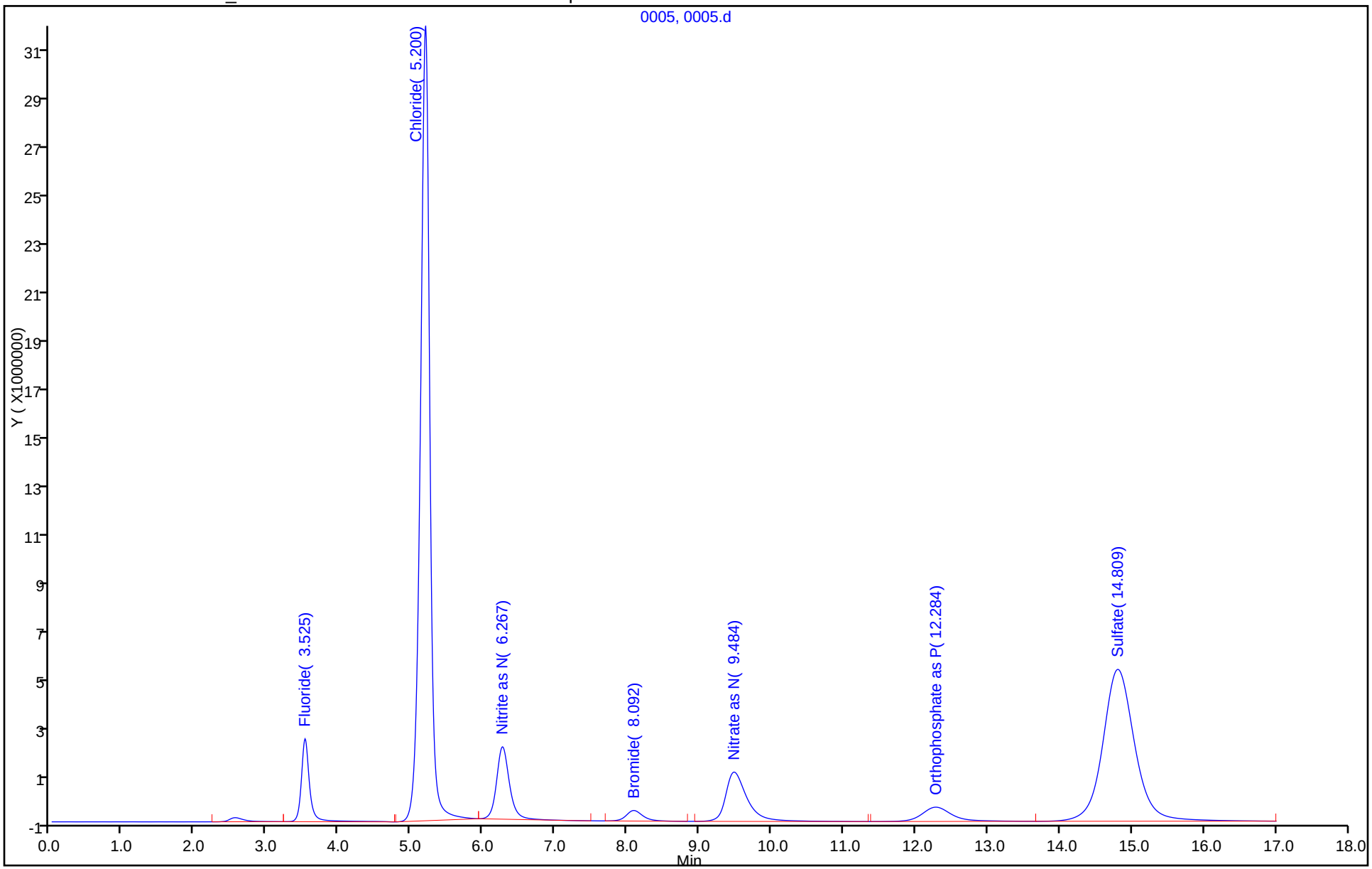
IC Cal low_00282 Amount Added: 0.40 Units: mL
IC CAL cl/so4_00145 Amount Added: 1.20 Units: mL

Report Date: 13-Apr-2017 11:20:00 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0005.d

Injection Date:	12-Apr-2017 11:21:00	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\20170412-57469.b\0005.d
Lims ID: std L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Apr-2017 11:21:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-005
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:19:59 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.525	0.000	26492802	4.00	3.85	
2 Chloride	5.200	5.200	0.000	287764404	60.0	53.9	
3 Nitrite as N	6.267	6.267	0.000	35965236	4.00	3.86	
4 Bromide	8.092	8.092	0.000	6847689	4.00	3.93	
5 Nitrate as N	9.484	9.484	0.000	40579393	4.00	3.87	
7 Orthophosphate as P	12.284	12.284	0.000	16482473	4.00	3.91	
6 Sulfate	14.809	14.809	0.000	185894805	60.0	55.6	

Reagents:

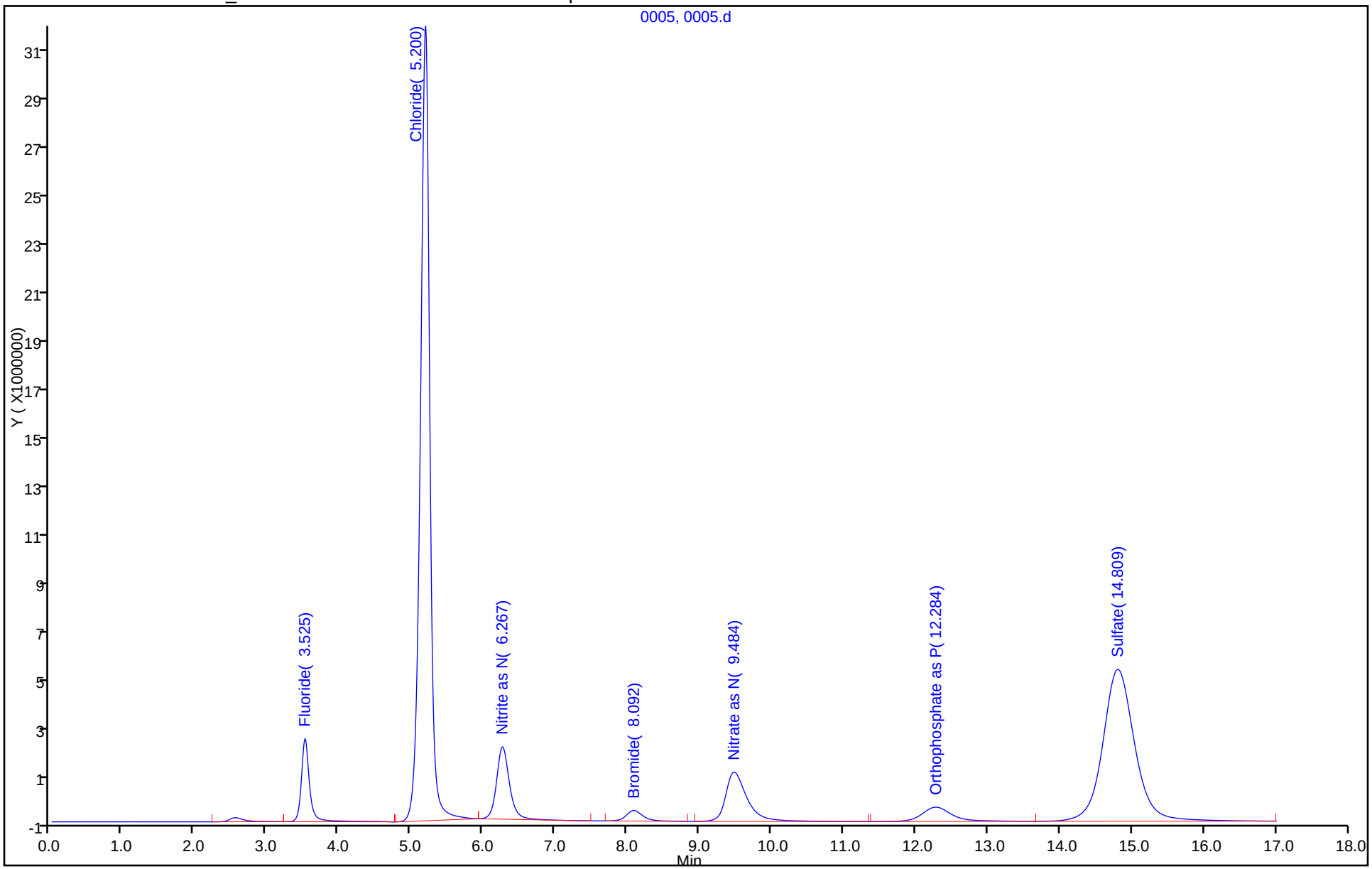
IC Cal low_00282 Amount Added: 0.40 Units: mL
IC CAL cl/so4_00145 Amount Added: 1.20 Units: mL

Report Date: 13-Apr-2017 11:20:00 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0005.d

Injection Date:	12-Apr-2017 11:21:00	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\20170412-57469.b\0006.d
Lims ID: std L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2017 11:41:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-006
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:20:00 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.525	0.000	55235366	8.00	7.99	
2 Chloride	5.234	5.200	0.034	633465679	120.0	118.0	
3 Nitrite as N	6.275	6.267	0.008	75247655	8.00	8.05	
4 Bromide	8.092	8.092	0.000	13920780	8.00	8.02	
5 Nitrate as N	9.450	9.484	-0.034	84396509	8.00	8.02	
7 Orthophosphate as P	12.259	12.284	-0.025	33138968	8.00	8.03	
6 Sulfate	14.767	14.809	-0.042	392395871	120.0	117.1	

Reagents:

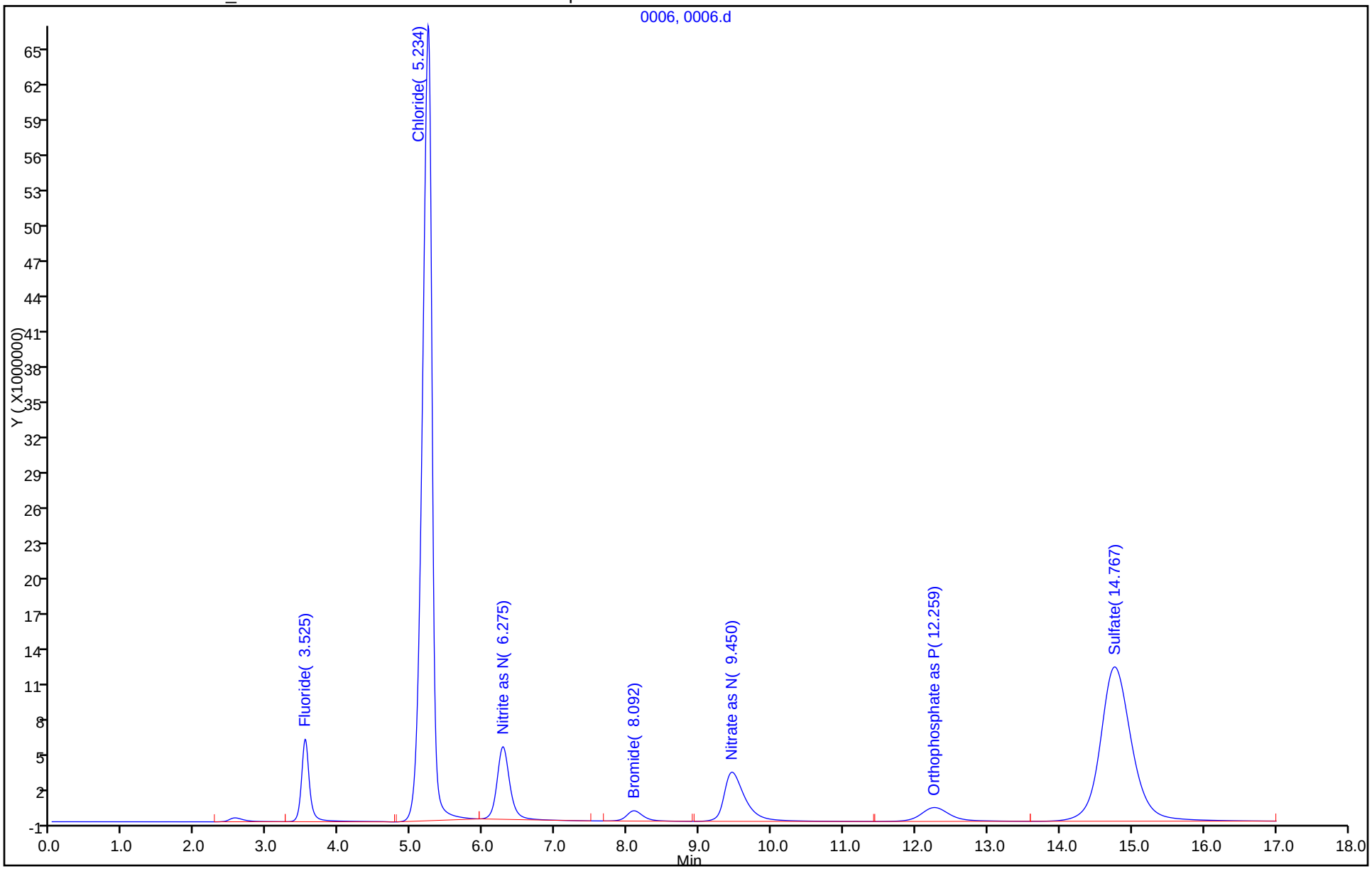
IC Cal low_00282 Amount Added: 0.80 Units: mL
IC CAL cl/so4_00145 Amount Added: 2.40 Units: mL

Report Date: 13-Apr-2017 11:20:01 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0006.d

Injection Date:	12-Apr-2017 11:41:00	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\20170412-57469.b\0006.d
Lims ID: std L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Apr-2017 11:41:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-006
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:20:00 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.525	0.000	55235366	8.00	7.99	
2 Chloride	5.234	5.200	0.034	633465679	120.0	118.0	
3 Nitrite as N	6.275	6.267	0.008	75247655	8.00	8.05	
4 Bromide	8.092	8.092	0.000	13920780	8.00	8.02	
5 Nitrate as N	9.450	9.484	-0.034	84396509	8.00	8.02	
7 Orthophosphate as P	12.259	12.284	-0.025	33138968	8.00	8.03	
6 Sulfate	14.767	14.809	-0.042	392395871	120.0	117.1	

Reagents:

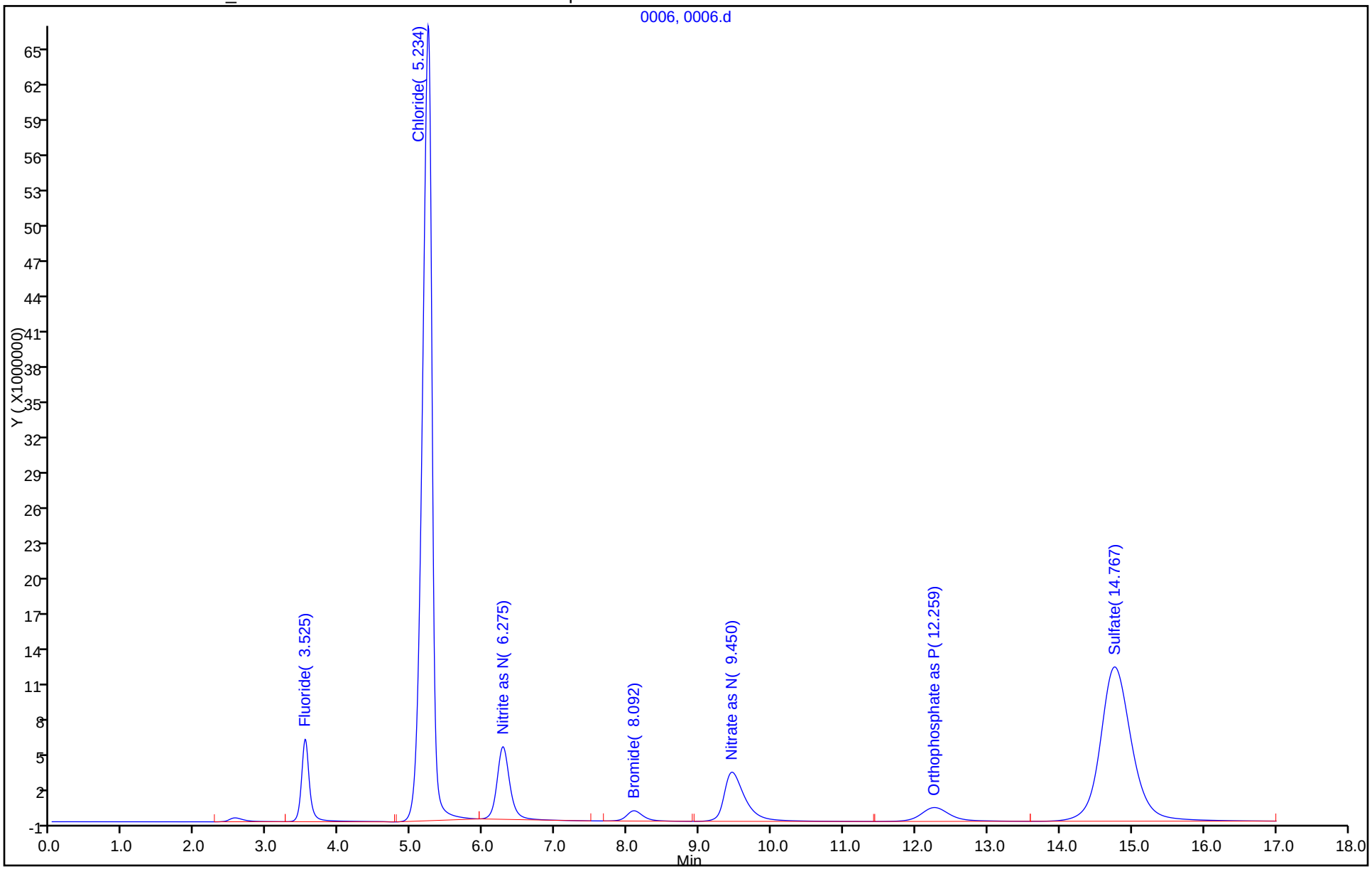
IC Cal low_00282 Amount Added: 0.80 Units: mL
IC CAL cl/so4_00145 Amount Added: 2.40 Units: mL

Report Date: 13-Apr-2017 11:20:01 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0006.d

Injection Date:	12-Apr-2017 11:41:00	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\20170412-57469.b\0007.d
Lims ID: std L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Apr-2017 12:01:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-007
Misc. Info.: 29657
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:20:02 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.525	0.000	70556491	10.0	10.2	
2 Chloride	5.275	5.200	0.075	1123495009	200.0	208.8	
3 Nitrite as N	6.275	6.267	0.008	94691956	10.0	10.1	
4 Bromide	8.092	8.092	0.000	17376770	10.0	10.0	
5 Nitrate as N	9.442	9.484	-0.042	106577185	10.0	10.1	
7 Orthophosphate as P	12.250	12.284	-0.034	41616859	10.0	10.1	
6 Sulfate	14.709	14.809	-0.100	697189450	200.0	207.8	

Reagents:

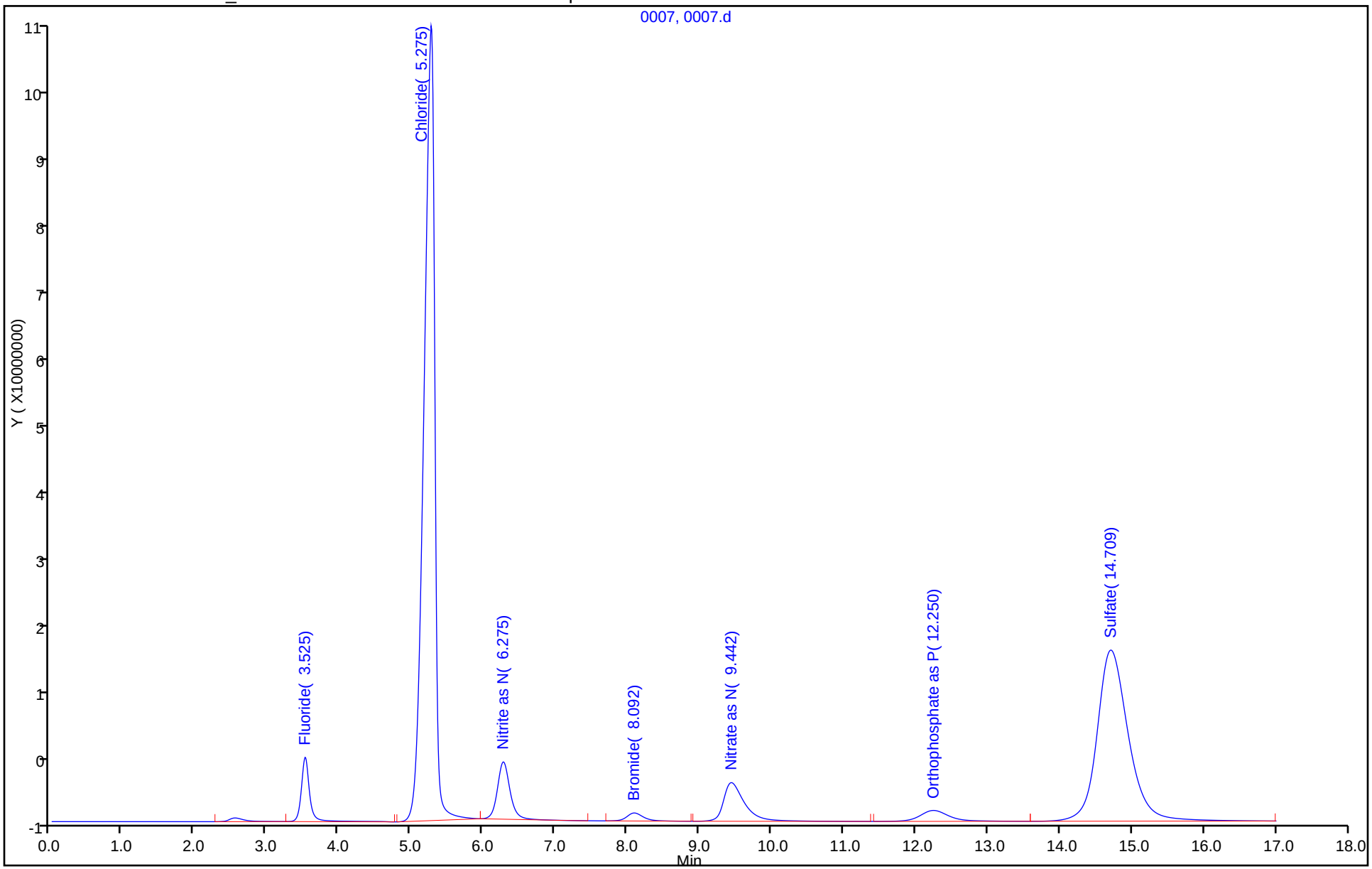
IC Cal low_00282 Amount Added: 1.00 Units: mL
IC CAL cl/so4_00145 Amount Added: 4.00 Units: mL

Report Date: 13-Apr-2017 11:20:02 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Injection Date:	12-Apr-2017 12:01:00	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		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d
Lims ID: std L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Apr-2017 12:01:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-007
Misc. Info.: 29657
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:20:02 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.525	3.525	0.000	70556491	10.0	10.2	
2 Chloride	5.275	5.200	0.075	1123495009	200.0	208.8	
3 Nitrite as N	6.275	6.267	0.008	94691956	10.0	10.1	
4 Bromide	8.092	8.092	0.000	17376770	10.0	10.0	
5 Nitrate as N	9.442	9.484	-0.042	106577185	10.0	10.1	
7 Orthophosphate as P	12.250	12.284	-0.034	41616859	10.0	10.1	
6 Sulfate	14.709	14.809	-0.100	697189450	200.0	207.8	

Reagents:

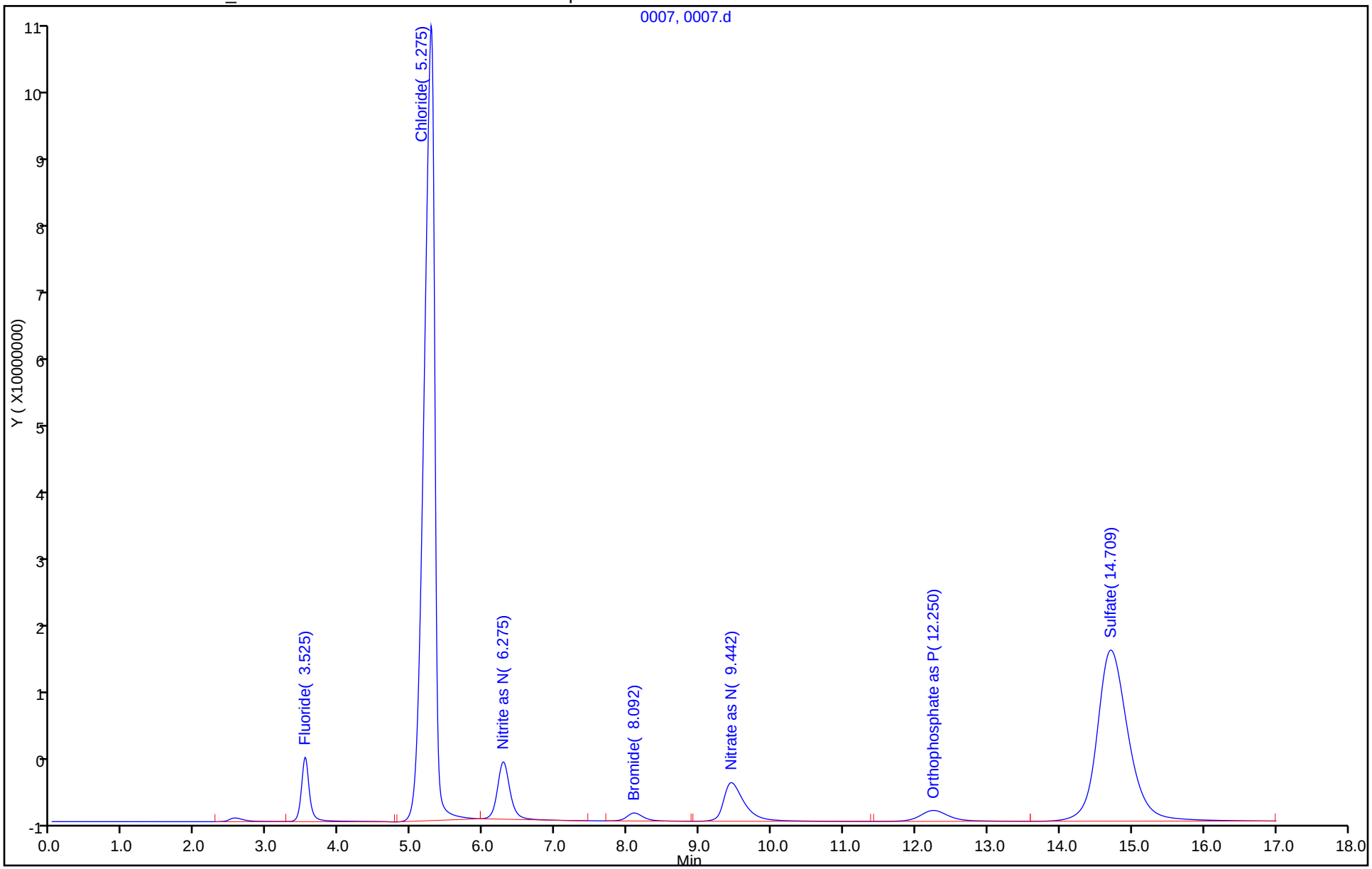
IC Cal low_00282 Amount Added: 1.00 Units: mL
IC CAL cl/so4_00145 Amount Added: 4.00 Units: mL

Report Date: 13-Apr-2017 11:20:02 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Injection Date:	12-Apr-2017 12:01:00	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		



TestAmerica Denver   New Cal   TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

IC Instrument Information

WL: 57469 **Inst ID:** 11 **Analysis Date:** 04/12/17 **Analyst:** TP

	Rush	Job No.	Samples	Anions	QC Req	HT Exp	
9056A	☐	95611	1 soil	(F Cl NO2 Br NO3 PO4 SO4)	(MS/D) 2		
9056A-DODS	☐	95375	19 "	F Cl NO2 Br (NO3) PO4 SO4	(MS/D) 23 & 31		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
		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		
		F Cl NO2 Br NO3 PO4 SO4		

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	13-Apr-2017 11:20:31

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b
Inj Date : 12-Apr-2017 10:22:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-252910	6940565		0.999	-252910	6940565		0.999
2 Chloride	-293484	5393933		0.996	-293484	5393933		0.996
3 Nitrite as N	-199541	9376536		1.000	-199541	9376536		1.000
4 Bromide	40528	1730942		1.000	40528	1730942		1.000
5 Nitrate as N	-295815	1055587		1.000	-295815	1055587		1.000
7 Orthophosphate as P	698159	4038096		0.999	698159	4038096		0.999
6 Sulfate	-910279	3359983		0.998	-910279	3359983		0.998

Ion Chromatography Data Review Checklist

LIMS Batch Number: 369033|34	Worklist #: 57469	Instrument ID:
Analyst/1st Reviewer/Date: TP|TP|04|13|17	Method (circle): 300.0 9056 (9056A) DV-WC-0077	QC Type (circle): (Standard) DOD Q4 (DoD Q5) QAPP_____ Other_____
Matrix (circle): Water (Solid) Leachate		

Review Items	Yes	No	NA	2nd Rev	If No, why is data reportable?
A. Calibration/Instrument Run QC					
1. Verify intermediate standards for correct concentration stated in SOP (ICAL pts at correct concentration)	✓				
2. Calibrated with at least 5 standards & a blank	✓				
3. Elution order of analytes in ICAL confirmed to be correct	✓				
4. Linearity and intercept: $r \geq 0.995$ (r2>0.99) & |x-intercept| < ½ RL (absolute value)	✓				
5. ICV, second source: run before samples 90-110% recovery / 80-120% recovery (Hydrazine)	✓				
6. CCV: 10% frequency & closing 90-110% recovery / 80-120% recovery (Hydrazine)	✓				
7. ICB/CCB: run before samples, 10% freq. & closing 8. Result < ½ RL	✓				
9. RL-level check standard (Anions) run before samples 50-150% Recovery	✓				
10. RT Window set based on midpoint of ICAL or initial CCV?	✓				
B. Client Sample and QC Sample Results					
11. Samples with results > linear range diluted and reanalyzed?			✓		Comments:
12. Manual integrations done & documented appropriately? (before & after chroms, date, initial, & reason)			✓		Comments:
C. Preparation/Matrix QC					
13. If samples are lab filtered are QC samples also filtered?	✓				
14. Method Blank: one per preparation batch Result < 1/2 RL *If no, list blank ID & explain:*	✓				□ No analyte > RL in associated samples □ Sample results >10x blank □ Insufficient sample for reanalysis
15. LCS: one per preparation batch 90-110% recovery (routine) / Lab limits (Hydrazine) *If no, list LCS ID & explain:*	✓				□ Insufficient sample for reanalysis □ LCS %R > QC limits & samples < RL
16. Matrix Retention Time Spike: one per sample (Hydrazine) MS/MSD freq.: a pair per 20 samples (Hydrazine) MS/MSD and Dup freq.: a pair per 10 samples (Anions) *If no, list QC ID & explain:*	✓				□ Insufficient sample

Review Items	Yes	No	NA	2nd Rev	If No, why is data reportable?
17. MS/MSD recovery & RPD: 80-120% recovery (Anions) Lab limits (Hydrazine) 20% RPD *If no, list MS or MSD ID & explain:*	✓				□ LCS acceptable – matrix effects □ Native analyte > 4x spike level □ Matrix effect and native analyte > 4x spike
D. Raw Data & TALS Data Entry					
18. Raw Data					
a. Unused data is clearly identified (with reason)	✓				
b. All cross outs are 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	✓				
19. Run Log					
a. Unused data is clearly identified	✓				
b. All cross outs are initialed and dated	✓				
c. Analyst initials/signature provided	✓				
20. 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)	✓				
21. TALS Worksheet Tab is complete and correct	✓				
22. TALS Reagent Tab is complete and correct	✓				
23. TALS QC Links Tab is correct	✓				
24. TALS Sample Results Tab					
a. All unused data are marked Rejected or Accepted	✓				
b. All reported analytes are marked Primary or Secondary	✓				
25. TALS Batch Information Screen documentation is complete	✓				
26. TALS Status set to appropriate review level	✓				
E. Final Report and NCMs (2nd level review only)					
27. Were all job/project requirements met?					
28. Results for samples and QC correct on final report?					
29. Are all necessary scanned documents in TALS?					
30. NCMs reviewed for applicability, correct references to batches, grammar/typographical errors?					

Comments: _____

_____

_____

2nd Reviewer: _____ **Review Date:** _____

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0008.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2017 12:56:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-008
Misc. Info.: 30159
Operator ID: Instrument ID: WC_IonChrom11
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:20:03 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.526	3.526	0.000	27237551	4.00	3.96	
2 Chloride	5.217	5.217	0.000	437497702	80.0	81.7	
3 Nitrite as N	6.276	6.276	0.000	35146546	4.00	3.77	
4 Bromide	8.101	8.101	0.000	6822101	4.00	3.92	
5 Nitrate as N	9.492	9.492	0.000	40503487	4.00	3.87	
7 Orthophosphate as P	12.267	12.267	0.000	17039534	4.00	4.05	
6 Sulfate	14.784	14.784	0.000	269566357	80.0	80.5	

Reagents:

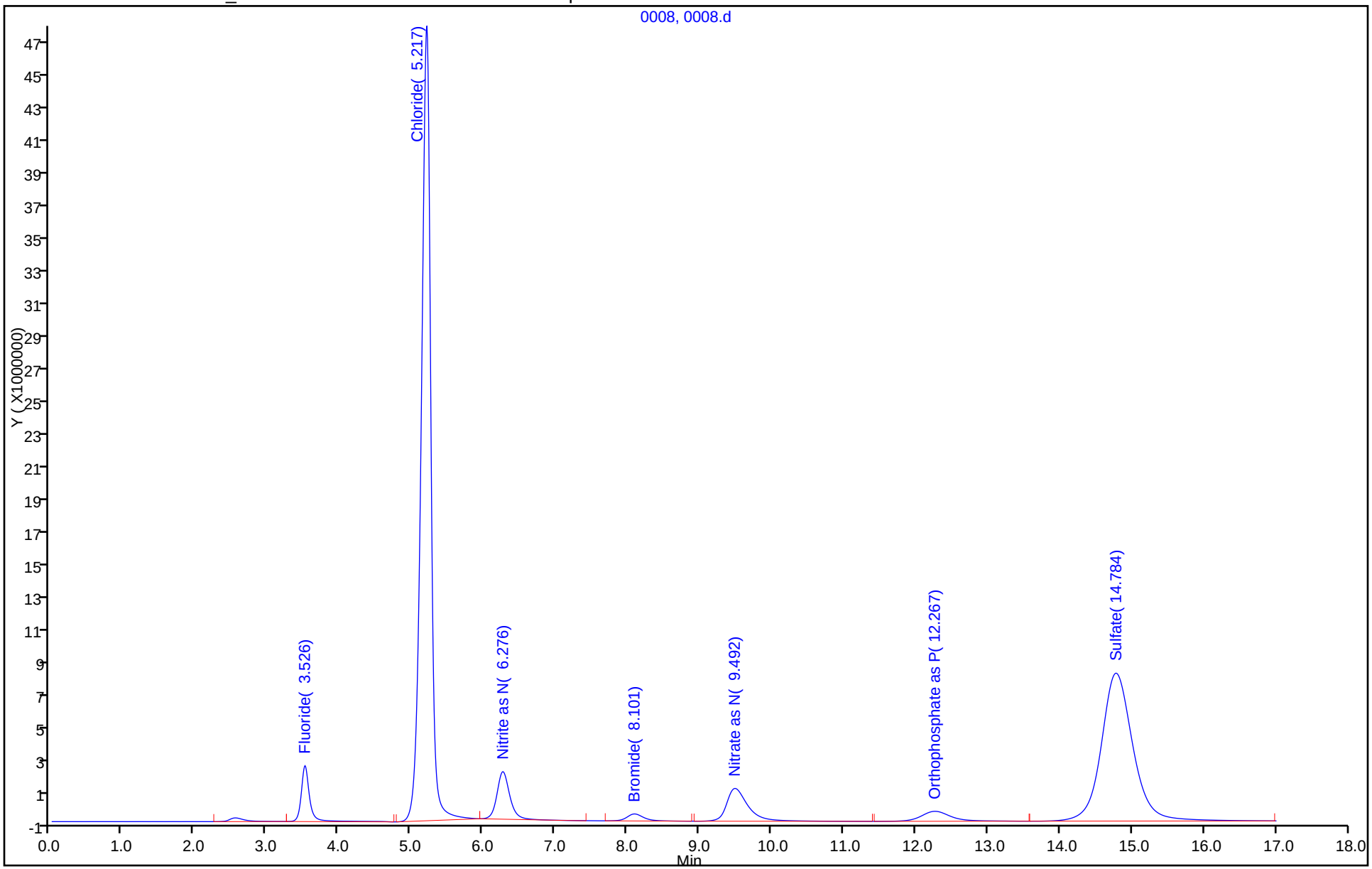
IC ICV 5_00170	Amount Added:	0.40	Units: mL
IC SO4 ICV_00016	Amount Added:	0.40	Units: mL
IC CL ICV_00013	Amount Added:	0.40	Units: mL

Report Date: 13-Apr-2017 11:20:03 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0008.d

Injection Date:	12-Apr-2017 12:56:00	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 New Cal TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

IC Instrument Information

WL: 57469 **Inst ID:** 11 **Analysis Date:** 04/12/17 **Analyst:** TP

	Rush	Job No.	Samples	Anions	QC Req		HT Exp
9056A	☐	95611	1 soil	(F Cl NO2 Br NO3 PO4 SO4)	(MS/D)	2	
9056A-DODS	☐	95375	19 "	F Cl NO2 Br (NO3) PO4 SO4	(MS/D)	23 & 31	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
		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		
		F Cl NO2 Br NO3 PO4 SO4		

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	13-Apr-2017 11:20:31

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b
Inj Date : 12-Apr-2017 10:22:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-252910	6940565		0.999	-252910	6940565		0.999
2 Chloride	-293484	5393933		0.996	-293484	5393933		0.996
3 Nitrite as N	-199541	9376536		1.000	-199541	9376536		1.000
4 Bromide	40528	1730942		1.000	40528	1730942		1.000
5 Nitrate as N	-295815	1055587		1.000	-295815	1055587		1.000
7 Orthophosphate as P	698159	4038096		0.999	698159	4038096		0.999
6 Sulfate	-910279	3359983		0.998	-910279	3359983		0.998

Ion Chromatography Data Review Checklist

LIMS Batch Number: 369033|34	Worklist #: 57469	Instrument ID:
Analyst/1st Reviewer/Date: TP|TP|04|13|17	Method (circle): 300.0 9056 (9056A) DV-WC-0077	QC Type (circle): (Standard) DOD Q4 (DoD Q5) QAPP_____ Other_____
Matrix (circle): Water (Solid) Leachate		

Review Items	Yes	No	NA	2nd Rev	If No, why is data reportable?
A. Calibration/Instrument Run QC					
1. Verify intermediate standards for correct concentration stated in SOP (ICAL pts at correct concentration)	✓				
2. Calibrated with at least 5 standards & a blank	✓				
3. Elution order of analytes in ICAL confirmed to be correct	✓				
4. Linearity and intercept: $r \geq 0.995$ ($r^2>0.99$) & |x-intercept| < ½ RL (absolute value)	✓				
5. ICV, second source: run before samples 90-110% recovery / 80-120% recovery (Hydrazine)	✓				
6. CCV: 10% frequency & closing 90-110% recovery / 80-120% recovery (Hydrazine)	✓				
7. ICB/CCB: run before samples, 10% freq. & closing 8. Result < ½ RL	✓				
9. RL-level check standard (Anions) run before samples 50-150% Recovery	✓				
10. RT Window set based on midpoint of ICAL or initial CCV?	✓				
B. Client Sample and QC Sample Results					
11. Samples with results > linear range diluted and reanalyzed?			✓		Comments:
12. Manual integrations done & documented appropriately? (before & after chroms, date, initial, & reason)			✓		Comments:
C. Preparation/Matrix QC					
13. If samples are lab filtered are QC samples also filtered?	✓				
14. Method Blank: one per preparation batch Result < 1/2 RL *If no, list blank ID & explain:*	✓				□ No analyte > RL in associated samples □ Sample results >10x blank □ Insufficient sample for reanalysis
15. LCS: one per preparation batch 90-110% recovery (routine) / Lab limits (Hydrazine) *If no, list LCS ID & explain:*	✓				□ Insufficient sample for reanalysis □ LCS %R > QC limits & samples < RL
16. Matrix Retention Time Spike: one per sample (Hydrazine) MS/MSD freq.: a pair per 20 samples (Hydrazine) MS/MSD and Dup freq.: a pair per 10 samples (Anions) *If no, list QC ID & explain:*	✓				□ Insufficient sample

Review Items	Yes	No	NA	2nd Rev	If No, why is data reportable?
17. MS/MSD recovery & RPD: 80-120% recovery (Anions) Lab limits (Hydrazine) 20% RPD *If no, list MS or MSD ID & explain:*	✓				□ LCS acceptable – matrix effects □ Native analyte > 4x spike level □ Matrix effect and native analyte > 4x spike
D. Raw Data & TALS Data Entry					
18. Raw Data					
a. Unused data is clearly identified (with reason)	✓				
b. All cross outs are 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	✓				
19. Run Log					
a. Unused data is clearly identified	✓				
b. All cross outs are initialed and dated	✓				
c. Analyst initials/signature provided	✓				
20. 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)	✓				
21. TALS Worksheet Tab is complete and correct	✓				
22. TALS Reagent Tab is complete and correct	✓				
23. TALS QC Links Tab is correct	✓				
24. TALS Sample Results Tab					
a. All unused data are marked Rejected or Accepted	✓				
b. All reported analytes are marked Primary or Secondary	✓				
25. TALS Batch Information Screen documentation is complete	✓				
26. TALS Status set to appropriate review level	✓				
E. Final Report and NCMs (2nd level review only)					
27. Were all job/project requirements met?					
28. Results for samples and QC correct on final report?					
29. Are all necessary scanned documents in TALS?					
30. NCMs reviewed for applicability, correct references to batches, grammar/typographical errors?					

Comments: _____

_____

_____

2nd Reviewer: _____ **Review Date:** _____

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0008.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Apr-2017 12:56:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-008
Misc. Info.: 30159
Operator ID: Instrument ID: WC_IonChrom11
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:20:03 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.526	3.526	0.000	27237551	4.00	3.96	
2 Chloride	5.217	5.217	0.000	437497702	80.0	81.7	
3 Nitrite as N	6.276	6.276	0.000	35146546	4.00	3.77	
4 Bromide	8.101	8.101	0.000	6822101	4.00	3.92	
5 Nitrate as N	9.492	9.492	0.000	40503487	4.00	3.87	
7 Orthophosphate as P	12.267	12.267	0.000	17039534	4.00	4.05	
6 Sulfate	14.784	14.784	0.000	269566357	80.0	80.5	

Reagents:

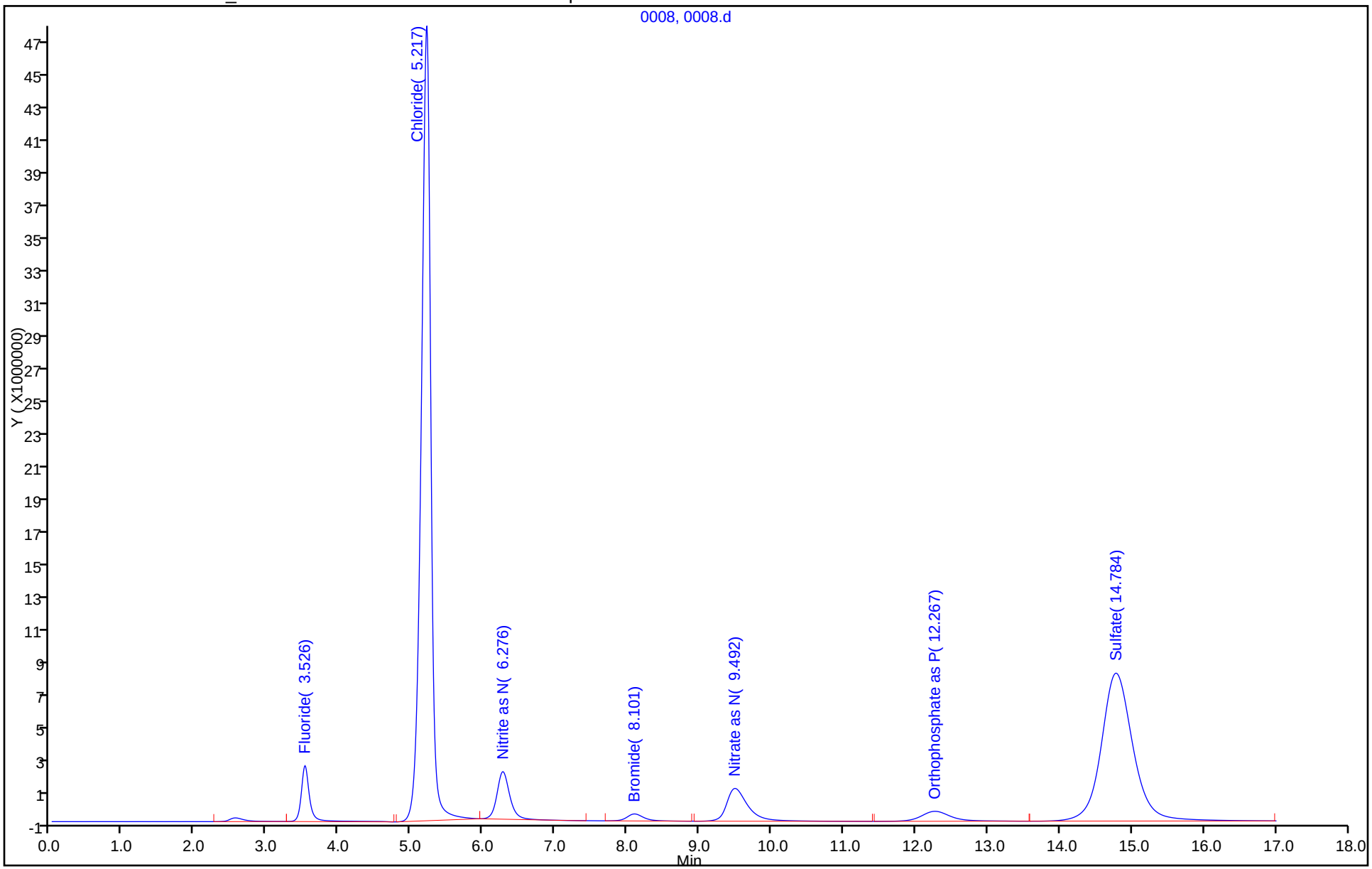
IC ICV 5_00170	Amount Added:	0.40	Units: mL
IC SO4 ICV_00016	Amount Added:	0.40	Units: mL
IC CL ICV_00013	Amount Added:	0.40	Units: mL

Report Date: 13-Apr-2017 11:20:03 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0008.d

Injection Date:	12-Apr-2017 12:56:00	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 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0009.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Apr-2017 13:15:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-009
Misc. Info.: 9711
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 13-Apr-2017 11:20:03 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

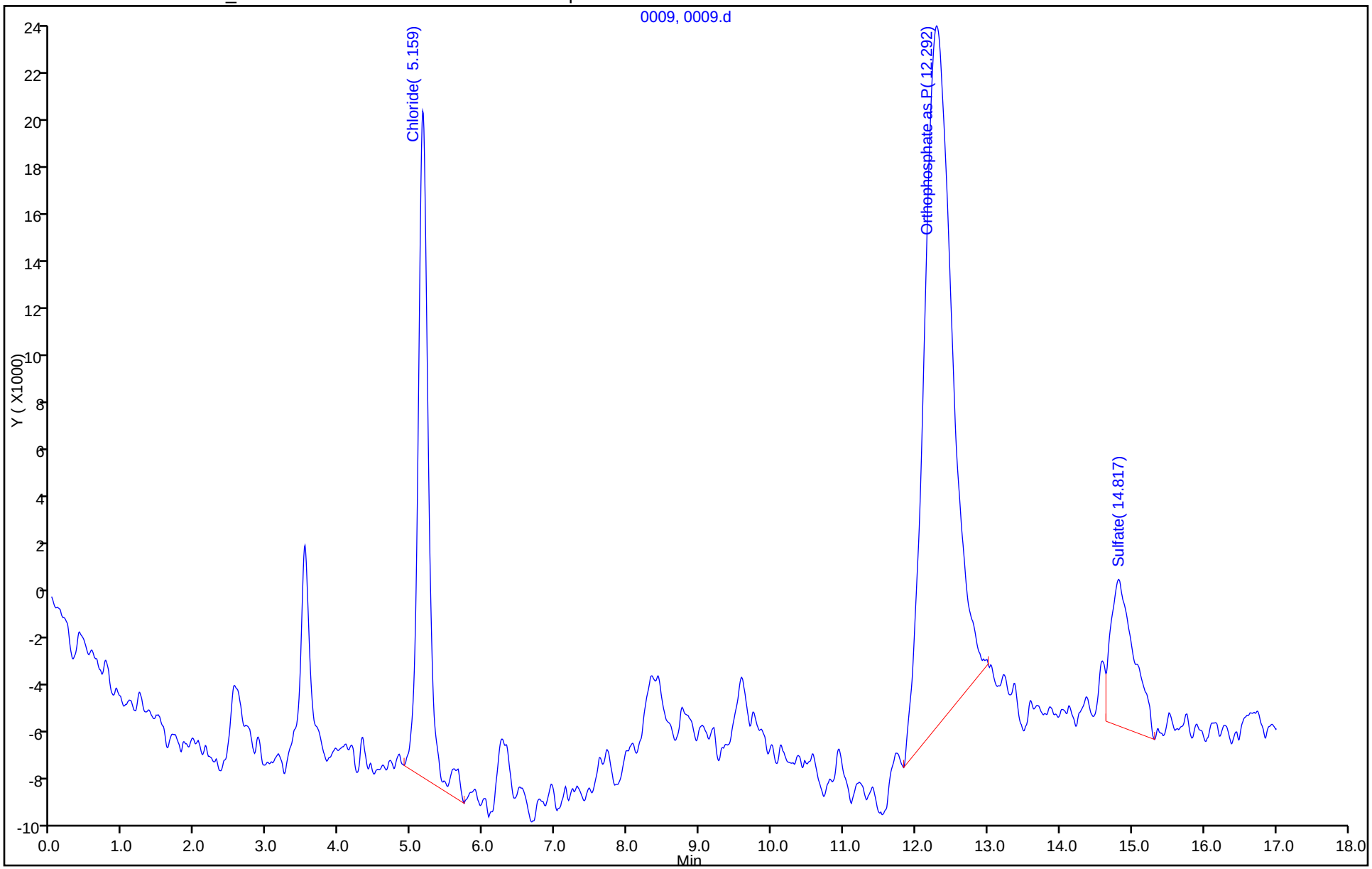
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.526				ND	
2 Chloride	5.159	5.217	-0.058	283752		0.5967	
3 Nitrite as N		6.276				ND	
4 Bromide		8.101				ND	
5 Nitrate as N		9.492				ND	
7 Orthophosphate as P	12.292	12.267	0.025	797356		0.0246	
6 Sulfate	14.817	14.784	0.033	137505		0.3118	

Report Date: 13-Apr-2017 11:20:04 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0009.d

Injection Date:	12-Apr-2017 13:15:00	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		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0009.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Apr-2017 13:15:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057469-009
Misc. Info.: 9711
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 13-Apr-2017 11:20:03 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK005

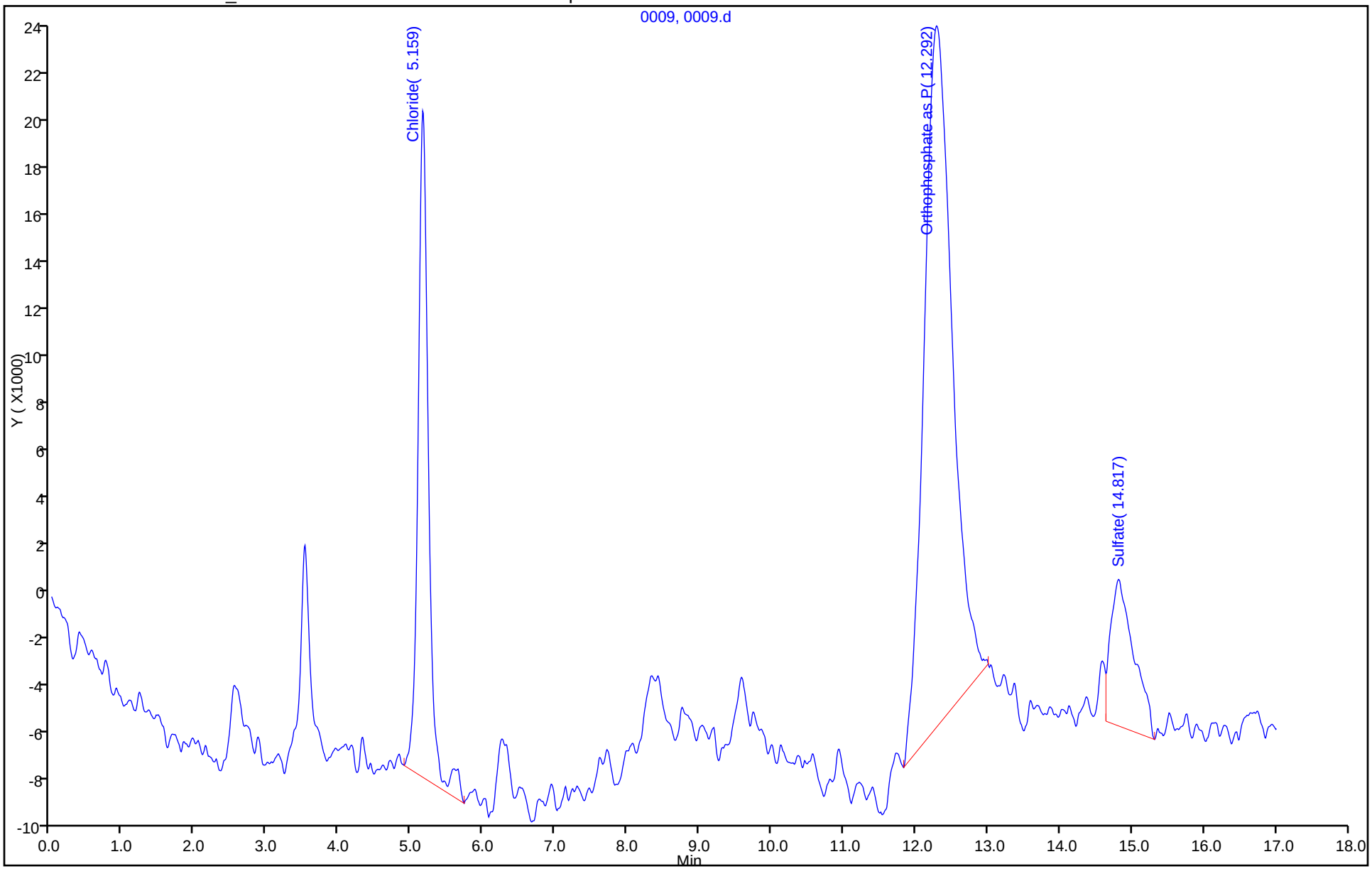
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.526				ND	
2 Chloride	5.159	5.217	-0.058	283752		0.5967	
3 Nitrite as N		6.276				ND	
4 Bromide		8.101				ND	
5 Nitrate as N		9.492				ND	
7 Orthophosphate as P	12.292	12.267	0.025	797356		0.0246	
6 Sulfate	14.817	14.784	0.033	137505		0.3118	

Report Date: 13-Apr-2017 11:20:04 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0009.d

Injection Date:	12-Apr-2017 13:15:00	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 28D		



IC Instrument Information

WL: 57903 **Inst ID:** 11 **Analysis Date:** 4-25-17 **Analyst:** DM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	96291	1	F Cl NO2 Br NO3 PO4 SO4	MS/D 2	4-26
☐	96292	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	4-26
☐	96293	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	4-26
☐	96302	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	4-20
☐	96295	10	F Cl NO2 Br NO3 PO4 SO4	MS/D 8 7	04/25/17 TP
☐	96303	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
96293	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
96302	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
96295	1, 2	F Cl NO2 Br NO3 PO4 SO4	5x	high
96295	6, 9, 10	F Cl NO2 Br NO3 PO4 SO4	5x	high
96295	7, 9, · 04/25/17 TP	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
		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		

26
19
11

1 137.9

2 503

TestAmerica Denver

Priority Form

Log-in Number: 96291

Project Manager: McEntee, Patrick

Client: Cauchuo TEC

	Initials:	Date/Time:
Receiving	RP	4-25-17 0900
Dept. Rep. / Analyst	CM	4-25-17 1125

Time Zone:

(EDT/EST) CDT/CST MDT/MST PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	(Chromium (VI)) (24 h) [Circle Method]	100	3500-Cr B/D or (7196A)	1,2	
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	(Nitrate by IC)	50	(300.0/9056)	1,2	
	(Nitrite by IC)	50	(300.0/9056)	↓	
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		
8260 Encores Terracores	☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.				
	☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation				

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: #2 only ☐

Composite: NO2, NO3 Cl, SO4 ☐

Crush: ☐

Sample	1	2																
Date	4-24	↓																
Time	1455	1630																

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

\ 95 \

TestAmerica Denver

Priority Form

Log-in Number: 96297

Client: AMEC

Project Manager: Michelle

	Initials:	Date/Time:
Receiving	JF	4/25/17 0900
Dept. Rep. / Analyst	M.M	4/25/17 13:30

Time Zone:

EDT/EST | CDT/CST | MDT/MST | PDT/PST

Other: AZ

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0/9056	1	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO3, SO4 ☐

Crush: ☐

Sample	1																	
Date	4/24																	
Time	0830																	

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 3190

TestAmerica Denver
Priority Form

Log-in Number: 96293 Project Manager: Sava, Betsy

Client: WM S. Chain of Rocks

	Initials:	Date/Time:
Receiving	RP	4-25-17 0900
Dept. Rep. / Analyst	OM	4-25-17 1330

Time Zone:

EDT/EST | (CDT/CST) | MDT/MST | PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	(Biological Oxygen Demand)	1000	(5210 B)	1	
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	(Cyanide Preservation)	100	335.4 / 4500-CN	1	
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	(Nitrate by IC)	50	(300.0/9056)	1	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO3, Cl F, SO4 ☐

Crush: ☐

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Sample	1																	
Date	4-24																	
Time	930																	

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 3540

TestAmerica Denver
Priority Form

Log-in Number: 96302 Project Manager: Denelle

Client: ECDC

	Initials:	Date/Time:
Receiving	SPV	9-25-17 0900
Dept. Rep. / Analyst	TP	9/25 1405

Time Zone:

EDT/EST CDT/CST (MDT/MST) PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B	1	
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*	1	
	Nitrate by IC	50	300.0/9056	1	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045	1	
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO3, Cl SO4 ☐

Crush: ☐

8260 Encores Terracores

☐**Check if required:** Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required:** A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Sample	1																	
Date	9-29																	
Time	1255																	

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 747 6 657
2 724 7 683
3 1.88 8 593
4 910 9 738
5 541 10 907

TestAmerica Denver
Priority Form

Log-in Number: 46295

Project Manager: D. Lea

Client: Tetra Tech GEO

	Initials:	Date/Time:
Receiving	JT	4/25/17 1035
Dept. Rep. / Analyst	DM	4/25/17 1330

Time Zone:

EDT/EST CDT/CST (MDT/MST) PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_3 B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0/9056	1-10	
	Nitrite by IC	50	300.0/9056	1-10	
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO_2 NO_3 F Cl SO_4 ☐

Crush: ☐

Sample	1	2	3	4	5	6	7	8	9	10	→
Date	4/24										
Time	0938	938	938	1118	1221	1333	1444	1715	1600	1640	

Sample																	
Date																	
Time																	

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 – 4150
2 – 1.19
3 – 2468
4 – 4010
GP 4/25

2 – 1.21

TestAmerica Denver

Priority Form

Log-in Number: 96300 96303

Project Manager: Danielle

Client: Republic Services

	Initials:	Date/Time:
Receiving	GP	4/25/17
Dept. Rep. / Analyst	TF	4/26 1645

Time Zone:

EDT/EST CDT/CST (MDT/MST) PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0/9056	1-5	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045	1-5	
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO_3 Cl SO_4 ☐

Crush: ☐

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Sample	1	2	3	4	5													
Date	4/24	→	→	→	→	→												
Time	1025	0940	1147	1045	0930													

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

TestAmerica Laboratories
Worklist Report

Worklist Name: 042517 Worklist Number: 57903
Instrument Name: WC_IonChrom11 Chrom Method: Anions_IC11
Injection Volume: 10.00 Units: ul
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b
Upload Directory: \\CORPTALSAPP16\280-DN-RawData\WetChem\IonChrom11\300.0_28D

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-001	# 1 ccv	IC LCS_00889	CCV	1.000	
280-0057903-002	# 2 ccb		CCB	1.000	
280-0057903-003	# 3 mrl	IC CAL cl/so4_00147 IC Cal low_00287	MRL	1.000	
280-0057903-004	# 4 lcs	IC LCS_00889	LCS	1.000	
280-0057903-005	# 5 lcsd	IC LCS_00889	LCSD	1.000	
280-0057903-006	# 6 mb		MB	1.000	
280-0057903-007	# 7 280-96291-B-2		Client	1.000	
280-0057903-008	# 8 280-96297-A-1		Client	1.000	
280-0057903-009	# 9 280-96293-L-1		Client	2.000	
280-0057903-010	#10 280-96302-H-1		Client	2.000	
280-0057903-011	#11 280-96291-B-2 DU		DU	1.000	
280-0057903-012	#12 280-96291-B-2 MS	ICMS/MSD WEEK_00465	MS	1.000	
280-0057903-013	#13 280-96291-B-2 MSD	ICMS/MSD WEEK_00465	MSD	1.000	
280-0057903-014	#14 280-96295-A-1		Client	1.000	

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-015	#15 280-96295-A-2		Client	1.000	
280-0057903-016	#16 280-96295-A-3		Client	1.000	
280-0057903-017	#17 ccv	IC LCS_00889	CCV	1.000	
280-0057903-018	#18 ccb		CCB	1.000	
280-0057903-019	#19 280-96295-A-4		Client	1.000	
280-0057903-020	#20 280-96295-A-5		Client	1.000	
280-0057903-021	#21 280-96295-A-6		Client	1.000	
280-0057903-022	#22 280-96295-A-7		Client	1.000	
280-0057903-023	#23 280-96295-A-7 DU		DU	1.000	
280-0057903-024	#24 280-96295-A-7 MS	ICMS/MSD WEEK_00465	MS	1.000	
280-0057903-025	#25 280-96295-A-7 MSD	ICMS/MSD WEEK_00465	MSD	1.000	
280-0057903-026	#26 280-96295-A-8		Client	1.000	
280-0057903-027	#27 280-96295-A-9		Client	1.000	
280-0057903-028	#28 280-96295-A-10		Client	1.000	
280-0057903-029	#29 ccv	IC LCS_00889	CCV	1.000	
280-0057903-030	#30 ccb		CCB	1.000	
280-0057903-031	#31 280-96303-A-1		Client	2.000	
280-0057903-032	#32 280-96303-A-1		Client	50.00	

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-033	#33 280-96303-A-2		Client	1.000	
280-0057903-034	#34 280-96303-A-3		Client	1.000	
280-0057903-035	#35 280-96303-A-3		Client	20.00	
280-0057903-036	#36 280-96303-A-4		Client	2.000	
280-0057903-037	#37 280-96303-A-4		Client	50.00	
280-0057903-038	#38 280-96303-A-5		Client	1.000	
280-0057903-039	#39 ccv	IC LCS_00889	CCV	1.000	
280-0057903-040	#40 ccb		CCB	1.000	
280-0057903-041	#41 280-96293-L-1		Client	10.00	
280-0057903-042	#42 280-96302-I-1		Client	10.00	
280-0057903-043	#43 280-96295-A-1		Client	5.000	
280-0057903-044	#44 280-96295-A-2		Client	5.000	
280-0057903-045	#45 280-96295-A-6		Client	5.000	
280-0057903-046	#46 280-96295-A-7		Client	5.000	
280-0057903-047	#47 280-96295-A-7 DU		DU	5.000	
280-0057903-048	#48 280-96295-A-7 MS	ICMS/MSD WEEK_00465	MS	5.000	
280-0057903-049	#49 280-96295-A-7 MSD	ICMS/MSD WEEK_00465	MSD	5.000	
280-0057903-050	#50 280-96295-A-9		Client	5.000	

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-051	#51 ccv	IC LCS_00889	CCV	1.000	
280-0057903-052	#52 ccb		CCB	1.000	
280-0057903-053	#53 280-96295-A-10		Client	5.000	
280-0057903-054	#54 ccv	IC LCS_00889	CCV	1.000	
280-0057903-055	#55 ccb		CCB	1.000	

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	12-Apr-2017 12:45:49

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b
Inj Date : 12-Apr-2017 10:22:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-252910	6940565		0.999	-252910	6940565		0.999
2 Chloride	-293484	5393933		0.996	-293484	5393933		0.996
3 Nitrite as N	-199541	9376536		1.000	-199541	9376536		1.000
4 Bromide	40528	1730942		1.000	40528	1730942		1.000
5 Nitrate as N	-295815	1055587		1.000	-295815	1055587		1.000
7 Orthophosphate as P	698159	4038096		0.999	698159	4038096		0.999
6 Sulfate	-910279	3359983		0.998	-910279	3359983		0.998

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0001.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2017 09:36:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-001
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	32474750	5.00	4.72	
2 Chloride	5.142	5.142	0.000	550161043	100.0	102.5	
3 Nitrite as N	6.134	6.134	0.000	46821318	5.00	5.01	
4 Bromide	7.867	7.867	0.000	8770187	5.00	5.04	
5 Nitrate as N	9.175	9.175	0.000	52279216	5.00	4.98	
7 Orthophosphate as P	11.934	11.934	0.000	20201243	5.00	4.83	
6 Sulfate	14.317	14.317	0.000	342010083	100.0	102.1	

Reagents:

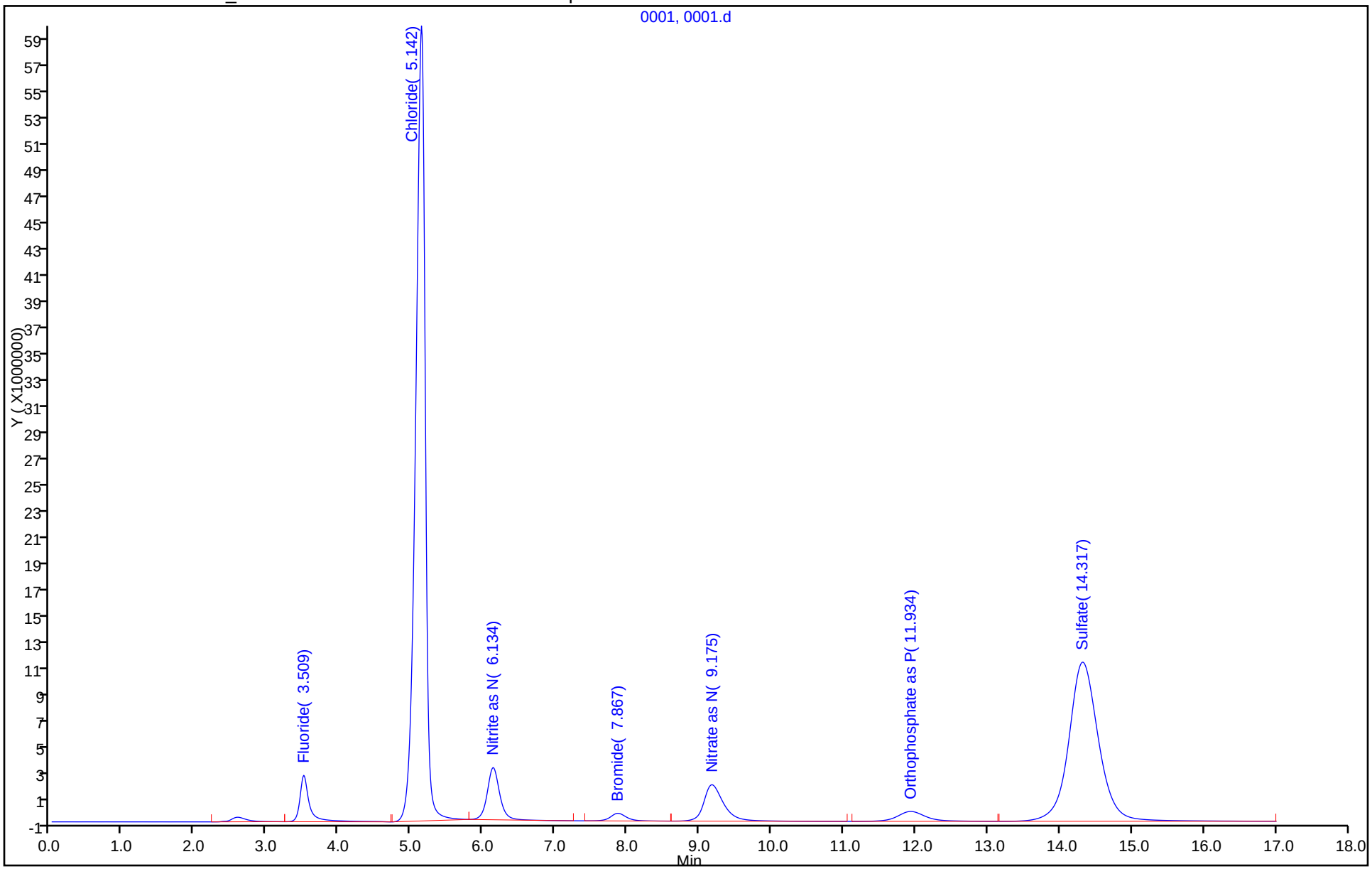
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:27:50 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0001.d

Injection Date:	25-Apr-2017 09:36:00	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		



IC Instrument Information

WL: 57903 **Inst ID:** 11 **Analysis Date:** 4-25-17 **Analyst:** DM

Rush	Job No.	Samples	Anions	QC Req	HT Exp
□	96291	1	F Cl NO2 Br NO3 PO4 SO4	MS/D 2	4-26
□	96297	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	4-26
□	96293	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	4-26
□	96302	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	4-26
□	96295	10	F Cl NO2 Br NO3 PO4 SO4	MS/D 8 7	04/25/17 TP
□	96303	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	
□			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
96293	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
96302	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
96295	1,2	F Cl NO2 Br NO3 PO4 SO4	5x	high
96295	6,9,10	F Cl NO2 Br NO3 PO4 SO4	5x	high
96295	7,8, 04/25/17 TP	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
		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		

26

1 137.9

2 503

TestAmerica Denver

Priority Form

Log-in Number: 96291

Project Manager: McEntee, Patrick

Client: Cauchno TEC

	Initials:	Date/Time:
Receiving	RP	4-25-17 0900
Dept. Rep. / Analyst	CM	4-25-17 1125

Time Zone:

(EDT/EST) CDT/CST MDT/MST PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	(Chromium (VI)) (24 h) [Circle Method]	100	3500-Cr B/D or (7196A)	1,2	
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	(Nitrate by IC)	50	(300.0/9056)	1,2	
	(Nitrite by IC)	50	(300.0/9056)	↓	
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

8260 Encores Terracores	☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.
	☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: #2 only ☐

Composite: NO2, NO3 Cl, SO4 ☐

Crush: ☐

Sample	1	2																
Date	4-24	→																
Time	1455	1630																

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

\ 95 \

TestAmerica Denver

Priority Form

Log-in Number: 96297 Project Manager: Michelle

Client: AMEC

	Initials:	Date/Time:
Receiving	JF	4/25/17 0900
Dept. Rep. / Analyst	MM	4/25/17 1330

Time Zone:

EDT/EST CDT/CST MDT/MST PDT/PST

Other: AZ

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0/9056	1	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO3, SO4 ☐

Crush: ☐

Sample	1																	
Date	4/24																	
Time	0830																	

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 3190

TestAmerica Denver
Priority Form

Log-in Number: 96293 Project Manager: Sava, Betsy

Client: WM S. Chain of Rocks

	Initials:	Date/Time:
Receiving	RP	4-25-17 0900
Dept. Rep. / Analyst	DM	4.25.17 1330

Time Zone:

EDT/EST | (CDT/CST) | MDT/MST | PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	(Biological Oxygen Demand)	1000	(5210 B)	1	
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	(Cyanide Preservation)	100	335.4 / 4500-CN	1	
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	(Nitrate by IC)	50	(300.0/9056)	1	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO3, Cl F, SO4 ☐

Crush: ☐

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Sample	1																	
Date	4-24																	
Time	930																	

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 3540

TestAmerica Denver
Priority Form

Log-in Number: 96302 Project Manager: Denelle

Client: ECDC

	Initials:	Date/Time:
Receiving	SPV	9-25-17 0900
Dept. Rep. / Analyst	TP	9/25 1405

Time Zone:

EDT/EST CDT/CST (MDT/MST) PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B	1	
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*	1	
	Nitrate by IC	50	300.0/9056	1	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045	1	
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO3, Cl SO4 ☐

Crush: ☐

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Sample	1																	
Date	9-29																	
Time	1255																	

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 747 6 657
2 724 7 683
3 1.88 8 593
4 910 9 738
5 541 10 907

TestAmerica Denver
Priority Form

Log-in Number: 46295

Project Manager: D. Lea

Client: Tetra Tech GEO

	Initials:	Date/Time:
Receiving	JT	4/25/17 1035
Dept. Rep. / Analyst	DM	4/25/17 1330

Time Zone:

EDT/EST CDT/CST (MDT/MST) PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_3 B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0/9056	1-10	
	Nitrite by IC	50	300.0/9056	1-10	
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045		
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		

8260 Encores Terracores

☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.

☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO_2 NO_3 F Cl SO_4 ☐

Crush: ☐

Sample	1	2	3	4	5	6	7	8	9	10	→
Date	4/24										
Time	0938	938	938	1118	1221	1333	1444	1715	1600	1640	

Sample																	
Date																	
Time																	

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

1 - 4150
2 - 1.19
3 - 2468
4 - 4010
GP 4/25

2 - 1.21

TestAmerica Denver

Priority Form

Log-in Number: 96300 96303

Project Manager: Danielle

Client: Republic Services

	Initials:	Date/Time:
Receiving	GP	4/25/17
Dept. Rep. / Analyst	TF	4/26 1645

Time Zone:

EDT/EST CDT/CST (MDT/MST) PDT/PST

Other:

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Priority I	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
	Hydrazine (Waters & Solids)	100	Denver		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
Priority II (48 h)	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2/4500-NO_2 B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0/9056	KEB 1-5	
	Nitrite by IC	50	300.0/9056		
	Orthophosphate by IC	50	300.0/9056*		
	Settleable Solids	1000	SM2540F		
	Turbidity	50	180.1		
Priority III	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO_2)	100	4500-CO_2		
	Sulfite (SO_3^{2-})	100	4500-SO_3 B		
	pH (water)	100	4500-H B/9040/9045	KEB 1-5	
	pH (soil Hanford)	5 g	9045C		
	Ferrous Iron	100	3500-FE D		
8260 Encores Terracores	☐**Check if required**: Coring device un-extruded which requires extrusion and freezing within 48 hours.				
	☐**Check if required**: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation				

Potentially Dissolved Metals (wait 8-96 hours to filter): ☐

Preserve: ☐

Filter: ☐

Split: ☐

Composite: NO_3 Cl SO_4 ☐

Crush: ☐

Sample	1	2	3	4	5													
Date	4/24	→	→	→	→	→												
Time	1025	0940	1147	1045	0930													

Sample																		
Date																		
Time																		

Tests	Samples		Rapidly Expiring	24 TAT	48 TAT	72 TAT	Other:

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

TestAmerica Laboratories
Worklist Report

Worklist Name: 042517 Worklist Number: 57903
Instrument Name: WC_IonChrom11 Chrom Method: Anions_IC11
Injection Volume: 10.00 Units: ul
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b
Upload Directory: \\CORPTALSAPP16\280-DN-RawData\WetChem\IonChrom11\300.0_28D

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-001	# 1 ccv	IC LCS_00889	CCV	1.000	
280-0057903-002	# 2 ccb		CCB	1.000	
280-0057903-003	# 3 mrl	IC CAL cl/so4_00147 IC Cal low_00287	MRL	1.000	
280-0057903-004	# 4 lcs	IC LCS_00889	LCS	1.000	
280-0057903-005	# 5 lcsd	IC LCS_00889	LCSD	1.000	
280-0057903-006	# 6 mb		MB	1.000	
280-0057903-007	# 7 280-96291-B-2		Client	1.000	
280-0057903-008	# 8 280-96297-A-1		Client	1.000	
280-0057903-009	# 9 280-96293-L-1		Client	2.000	
280-0057903-010	#10 280-96302-H-1		Client	2.000	
280-0057903-011	#11 280-96291-B-2 DU		DU	1.000	
280-0057903-012	#12 280-96291-B-2 MS	ICMS/MSD WEEK_00465	MS	1.000	
280-0057903-013	#13 280-96291-B-2 MSD	ICMS/MSD WEEK_00465	MSD	1.000	
280-0057903-014	#14 280-96295-A-1		Client	1.000	

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-015	#15 280-96295-A-2		Client	1.000	
280-0057903-016	#16 280-96295-A-3		Client	1.000	
280-0057903-017	#17 ccv	IC LCS_00889	CCV	1.000	
280-0057903-018	#18 ccb		CCB	1.000	
280-0057903-019	#19 280-96295-A-4		Client	1.000	
280-0057903-020	#20 280-96295-A-5		Client	1.000	
280-0057903-021	#21 280-96295-A-6		Client	1.000	
280-0057903-022	#22 280-96295-A-7		Client	1.000	
280-0057903-023	#23 280-96295-A-7 DU		DU	1.000	
280-0057903-024	#24 280-96295-A-7 MS	ICMS/MSD WEEK_00465	MS	1.000	
280-0057903-025	#25 280-96295-A-7 MSD	ICMS/MSD WEEK_00465	MSD	1.000	
280-0057903-026	#26 280-96295-A-8		Client	1.000	
280-0057903-027	#27 280-96295-A-9		Client	1.000	
280-0057903-028	#28 280-96295-A-10		Client	1.000	
280-0057903-029	#29 ccv	IC LCS_00889	CCV	1.000	
280-0057903-030	#30 ccb		CCB	1.000	
280-0057903-031	#31 280-96303-A-1		Client	2.000	
280-0057903-032	#32 280-96303-A-1		Client	50.00	

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-033	#33 280-96303-A-2		Client	1.000	
280-0057903-034	#34 280-96303-A-3		Client	1.000	
280-0057903-035	#35 280-96303-A-3		Client	20.00	
280-0057903-036	#36 280-96303-A-4		Client	2.000	
280-0057903-037	#37 280-96303-A-4		Client	50.00	
280-0057903-038	#38 280-96303-A-5		Client	1.000	
280-0057903-039	#39 ccv	IC LCS_00889	CCV	1.000	
280-0057903-040	#40 ccb		CCB	1.000	
280-0057903-041	#41 280-96293-L-1		Client	10.00	
280-0057903-042	#42 280-96302-I-1		Client	10.00	
280-0057903-043	#43 280-96295-A-1		Client	5.000	
280-0057903-044	#44 280-96295-A-2		Client	5.000	
280-0057903-045	#45 280-96295-A-6		Client	5.000	
280-0057903-046	#46 280-96295-A-7		Client	5.000	
280-0057903-047	#47 280-96295-A-7 DU		DU	5.000	
280-0057903-048	#48 280-96295-A-7 MS	ICMS/MSD WEEK_00465	MS	5.000	
280-0057903-049	#49 280-96295-A-7 MSD	ICMS/MSD WEEK_00465	MSD	5.000	
280-0057903-050	#50 280-96295-A-9		Client	5.000	

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Dil Fact
280-0057903-051	#51 ccv	IC LCS_00889	CCV	1.000	
280-0057903-052	#52 ccb		CCB	1.000	
280-0057903-053	#53 280-96295-A-10		Client	5.000	
280-0057903-054	#54 ccv	IC LCS_00889	CCV	1.000	
280-0057903-055	#55 ccb		CCB	1.000	

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\Anions_IC11.m

Instrument:	WC_IonChrom11	Lims Location:	280
Lock State:	Unlocked	Cpnd Order:	Retention Time
Integrator:	Falcon	Last Modified:	12-Apr-2017 12:45:49

No.Compounds:7

Initial Calibration Batches

Ical Batch: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b
Inj Date : 12-Apr-2017 10:22:00, Sublist: chrom-Anions_IC11*sub1

Detector 1: 0005

	Wet - Anions				Wet - Anions 28D			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-252910	6940565		0.999	-252910	6940565		0.999
2 Chloride	-293484	5393933		0.996	-293484	5393933		0.996
3 Nitrite as N	-199541	9376536		1.000	-199541	9376536		1.000
4 Bromide	40528	1730942		1.000	40528	1730942		1.000
5 Nitrate as N	-295815	1055587		1.000	-295815	1055587		1.000
7 Orthophosphate as P	698159	4038096		0.999	698159	4038096		0.999
6 Sulfate	-910279	3359983		0.998	-910279	3359983		0.998

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0001.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2017 09:36:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-001
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	32474750	5.00	4.72	
2 Chloride	5.142	5.142	0.000	550161043	100.0	102.5	
3 Nitrite as N	6.134	6.134	0.000	46821318	5.00	5.01	
4 Bromide	7.867	7.867	0.000	8770187	5.00	5.04	
5 Nitrate as N	9.175	9.175	0.000	52279216	5.00	4.98	
7 Orthophosphate as P	11.934	11.934	0.000	20201243	5.00	4.83	
6 Sulfate	14.317	14.317	0.000	342010083	100.0	102.1	

Reagents:

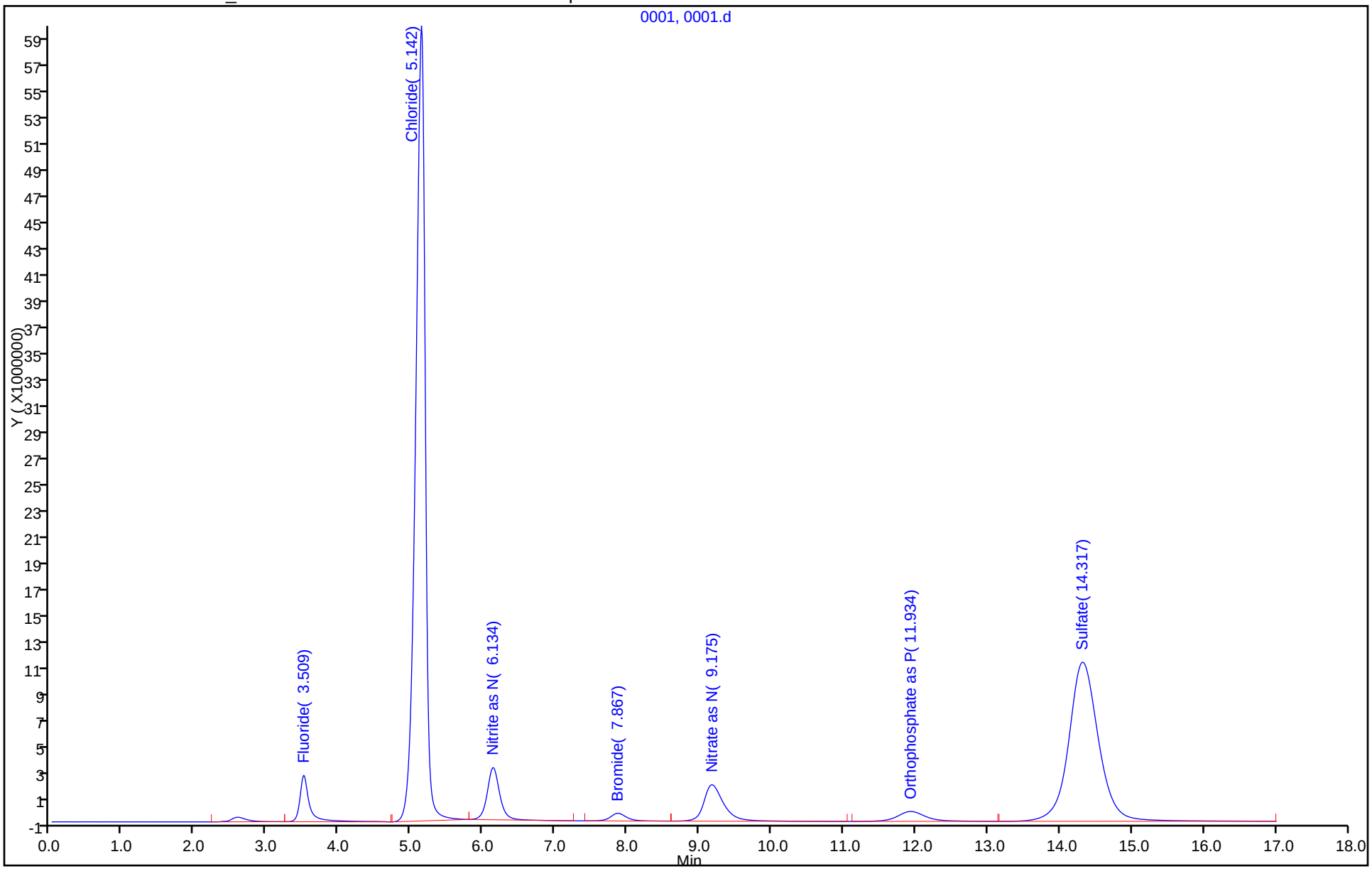
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:27:50 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0001.d

Injection Date:	25-Apr-2017 09:36:00	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\20170425-57903.b\0002.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 25-Apr-2017 09:55:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-002
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

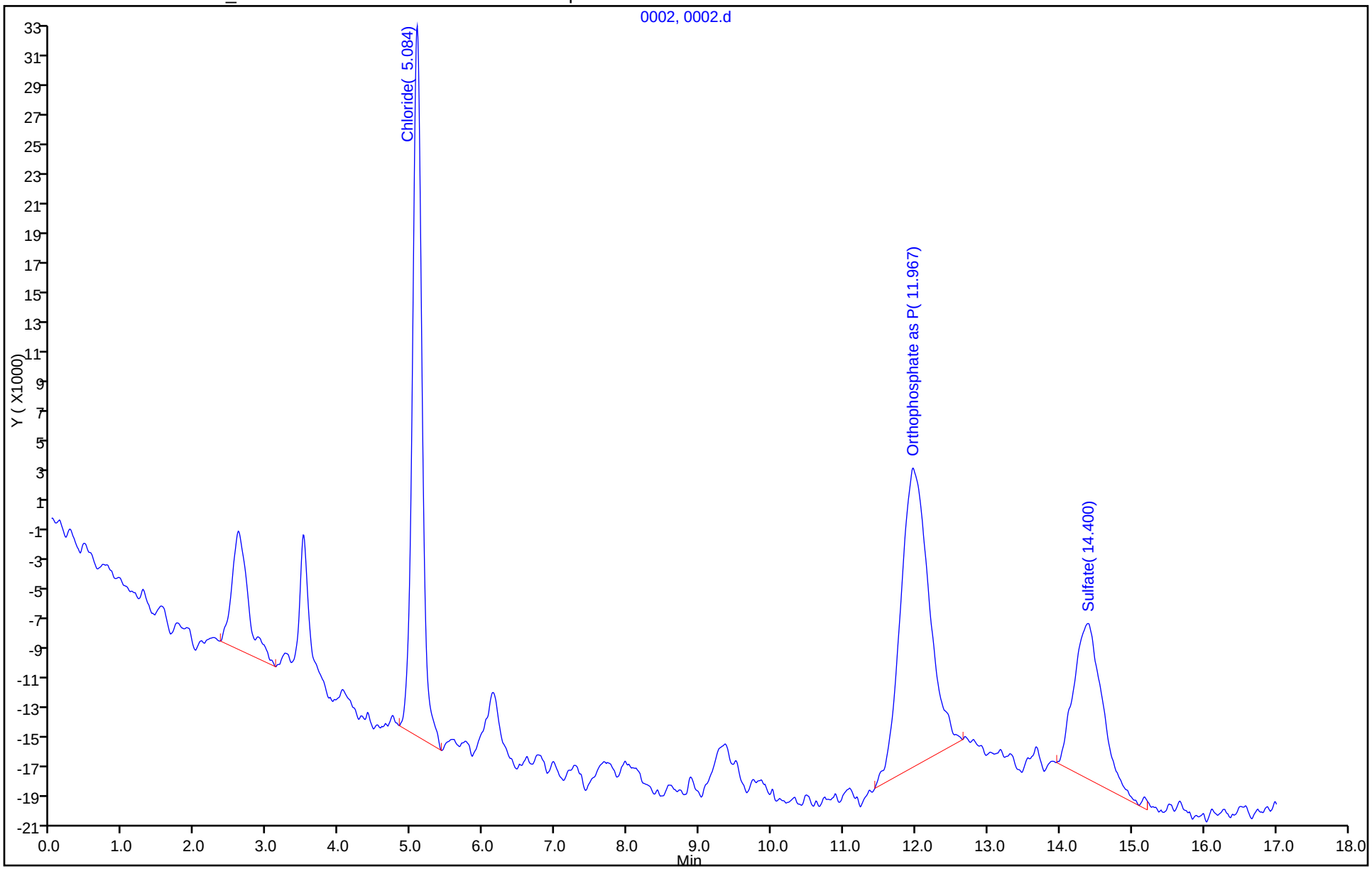
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.509				ND	
2 Chloride	5.084	5.142	-0.058	443980		0.6264	
3 Nitrite as N		6.134				ND	
4 Bromide		7.867				ND	
5 Nitrate as N		9.175				ND	
7 Orthophosphate as P	11.967	11.934	0.033	553445		-0.0358	
6 Sulfate	14.400	14.317	0.083	287847		0.3566	

Report Date: 26-Apr-2017 07:27:51 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0002.d

Injection Date:	25-Apr-2017 09:55:00	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\20170425-57903.b\0002.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 25-Apr-2017 09:55:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-002
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

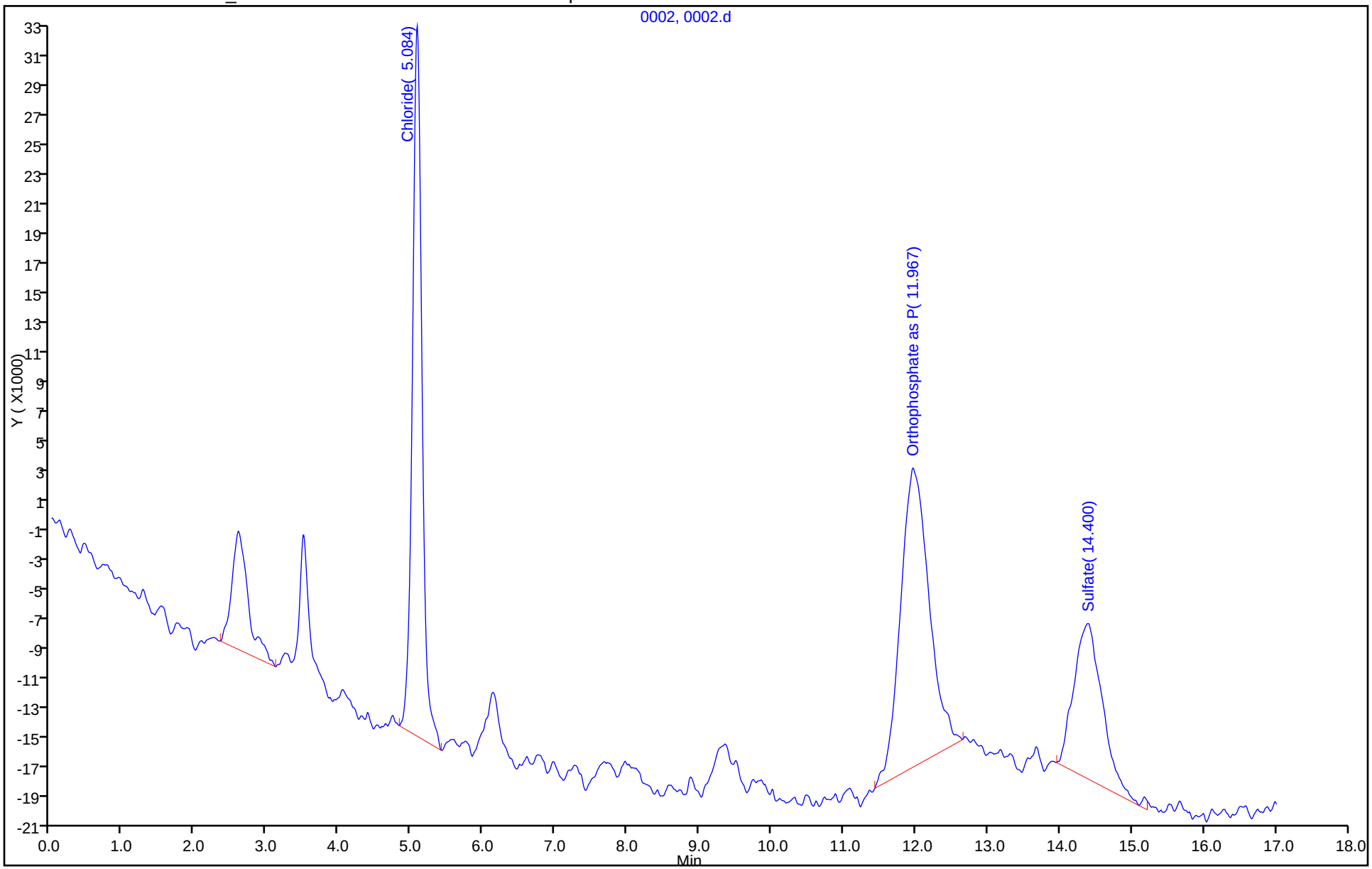
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.509				ND	
2 Chloride	5.084	5.142	-0.058	443980		0.6264	
3 Nitrite as N		6.134				ND	
4 Bromide		7.867				ND	
5 Nitrate as N		9.175				ND	
7 Orthophosphate as P	11.967	11.934	0.033	553445		-0.0358	
6 Sulfate	14.400	14.317	0.083	287847		0.3566	

Report Date: 26-Apr-2017 07:27:51 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0002.d

Injection Date:	25-Apr-2017 09:55:00	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\20170425-57903.b\0003.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 25-Apr-2017 10:15:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-003
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	1315201	0.2000	0.2259	
2 Chloride	5.084	5.142	-0.058	10013081	2.50	2.40	
3 Nitrite as N	6.142	6.134	0.008	1881055	0.2000	0.2219	
4 Bromide	7.900	7.867	0.033	340598	0.2000	0.1734	
5 Nitrate as N	9.284	9.175	0.109	1963856	0.2000	0.2141	
7 Orthophosphate as P	11.950	11.934	0.016	1207688	0.2000	0.1262	
6 Sulfate	14.375	14.317	0.058	7365046	2.50	2.46	

Reagents:

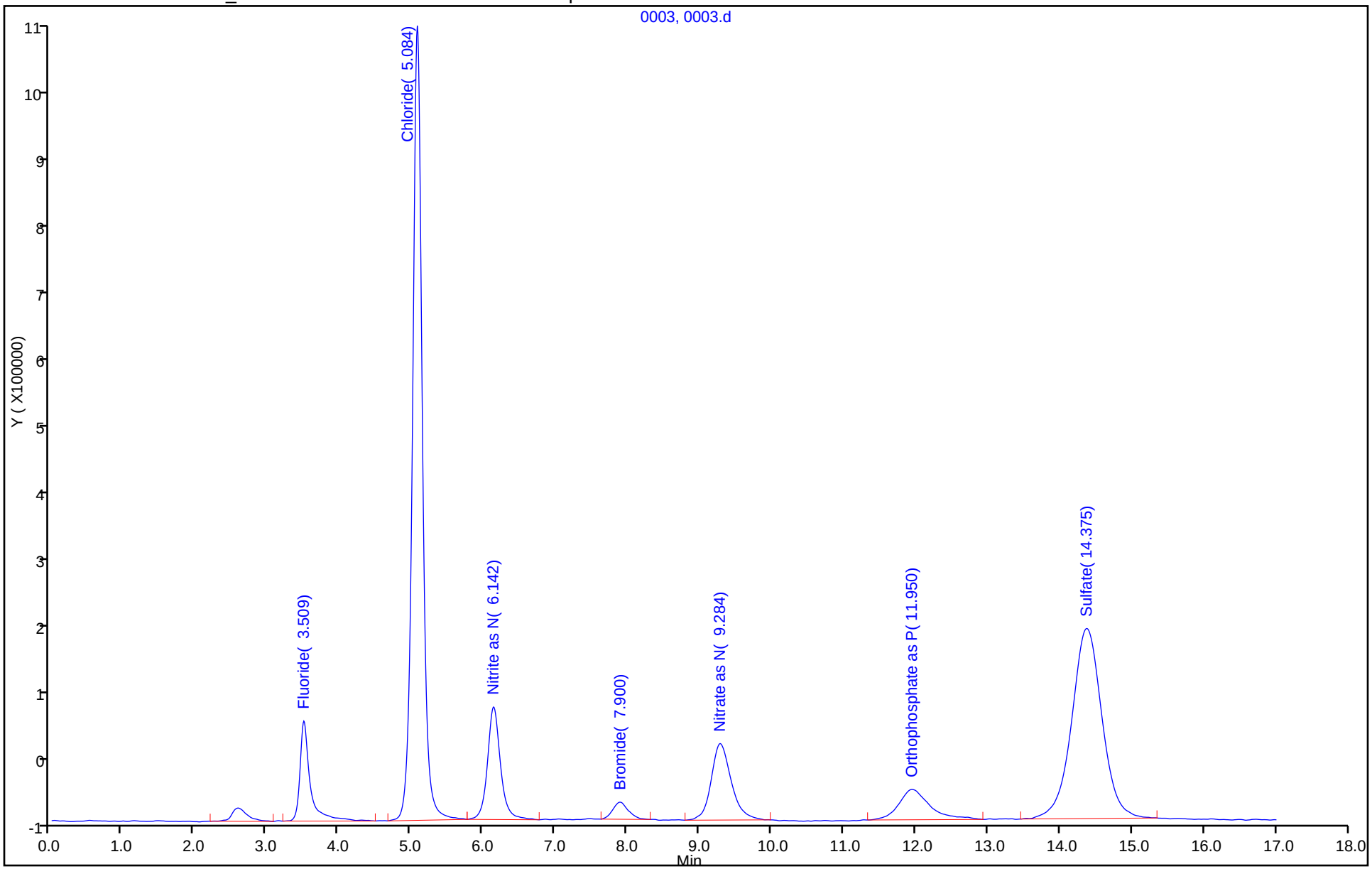
IC CAL cl/so4_00147 Amount Added: 0.05 Units: mL
IC Cal low_00287 Amount Added: 0.02 Units: mL

Report Date: 26-Apr-2017 07:27:52 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0003.d

Injection Date:	25-Apr-2017 10:15:00	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\20170425-57903.b\0003.d
Lims ID: mrl
Client ID:
Sample Type: MRL
Inject. Date: 25-Apr-2017 10:15:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-003
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	1315201	0.2000	0.2259	
2 Chloride	5.084	5.142	-0.058	10013081	2.50	2.40	
3 Nitrite as N	6.142	6.134	0.008	1881055	0.2000	0.2219	
4 Bromide	7.900	7.867	0.033	340598	0.2000	0.1734	
5 Nitrate as N	9.284	9.175	0.109	1963856	0.2000	0.2141	
7 Orthophosphate as P	11.950	11.934	0.016	1207688	0.2000	0.1262	
6 Sulfate	14.375	14.317	0.058	7365046	2.50	2.46	

Reagents:

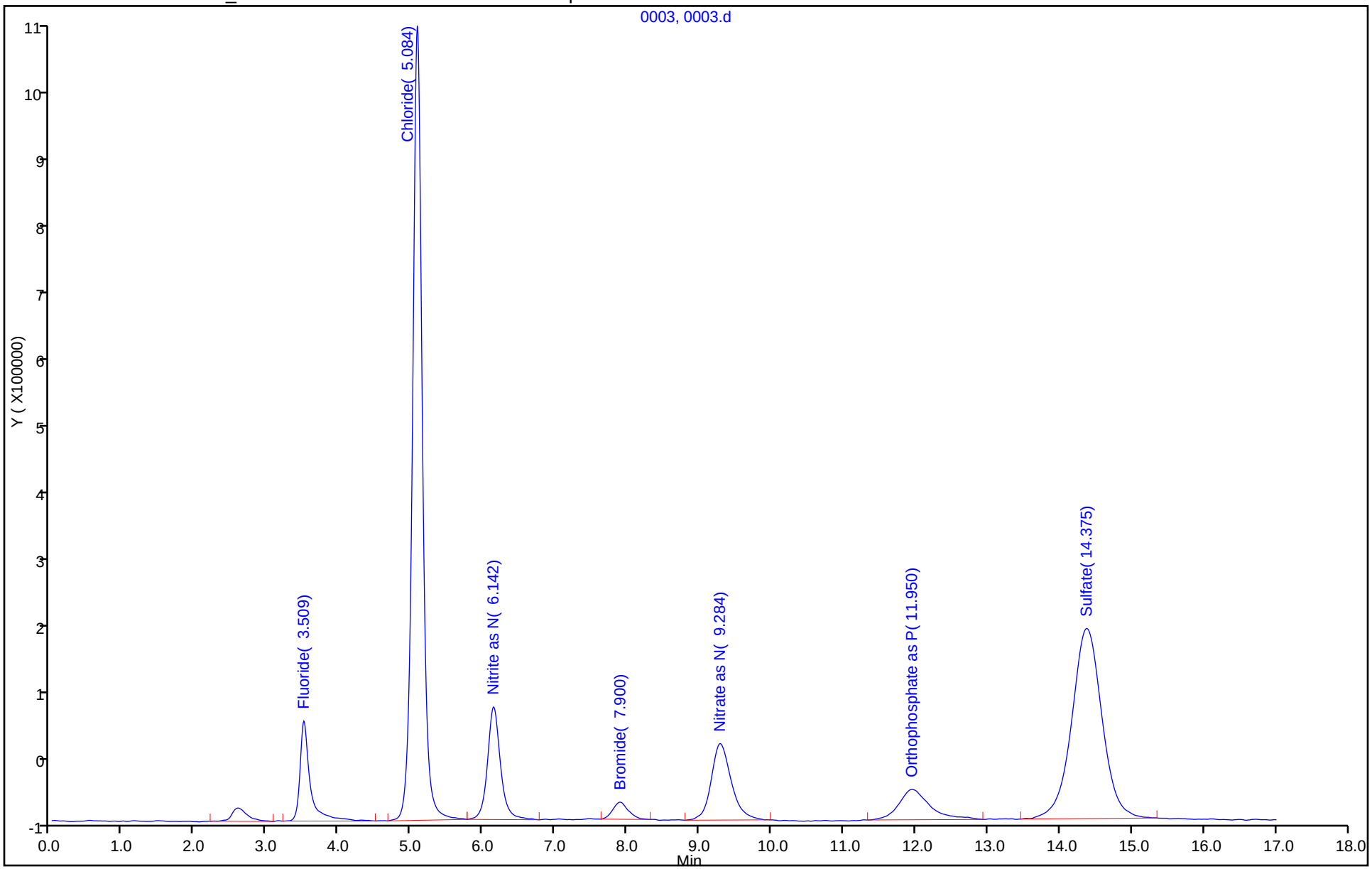
IC CAL cl/so4_00147 Amount Added: 0.05 Units: mL
IC Cal low_00287 Amount Added: 0.02 Units: mL

Report Date: 26-Apr-2017 07:27:52 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0003.d

Injection Date:	25-Apr-2017 10:15:00	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\20170425-57903.b\0004.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2017 10:35:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-004
Misc. Info.: 4 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	32860700	5.00	4.77	
2 Chloride	5.142	5.142	0.000	557779952	100.0	104.0	
3 Nitrite as N	6.142	6.134	0.008	47028578	5.00	5.04	
4 Bromide	7.875	7.867	0.008	8853325	5.00	5.09	
5 Nitrate as N	9.184	9.175	0.009	52955091	5.00	5.04	
7 Orthophosphate as P	11.925	11.934	-0.009	19973014	5.00	4.77	
6 Sulfate	14.309	14.317	-0.008	343626749	100.0	102.5	

Reagents:

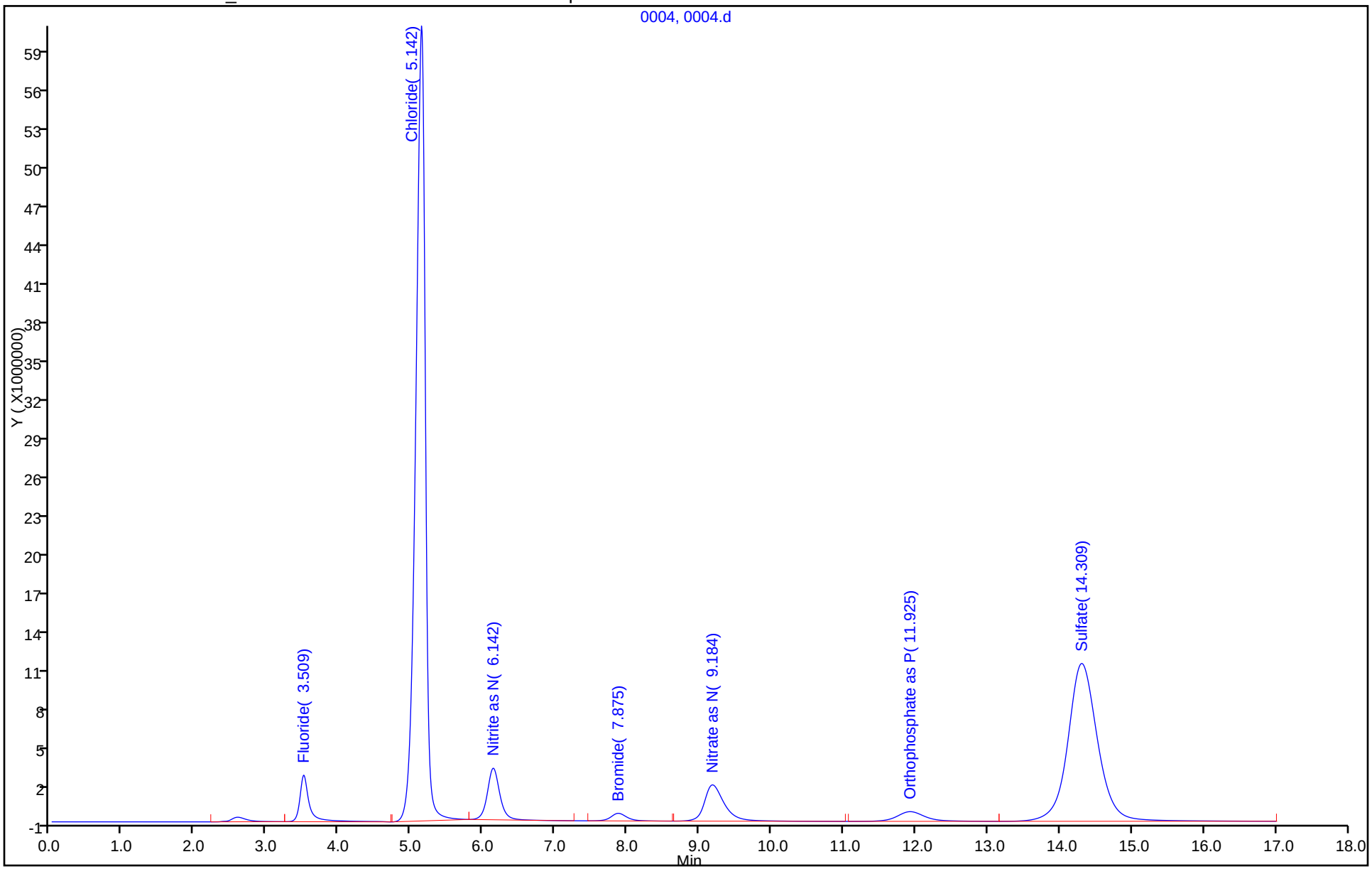
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:27:52 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0004.d

Injection Date:	25-Apr-2017 10:35:00	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\20170425-57903.b\0004.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2017 10:35:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-004
Misc. Info.: 4 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	32860700	5.00	4.77	
2 Chloride	5.142	5.142	0.000	557779952	100.0	104.0	
3 Nitrite as N	6.142	6.134	0.008	47028578	5.00	5.04	
4 Bromide	7.875	7.867	0.008	8853325	5.00	5.09	
5 Nitrate as N	9.184	9.175	0.009	52955091	5.00	5.04	
7 Orthophosphate as P	11.925	11.934	-0.009	19973014	5.00	4.77	
6 Sulfate	14.309	14.317	-0.008	343626749	100.0	102.5	

Reagents:

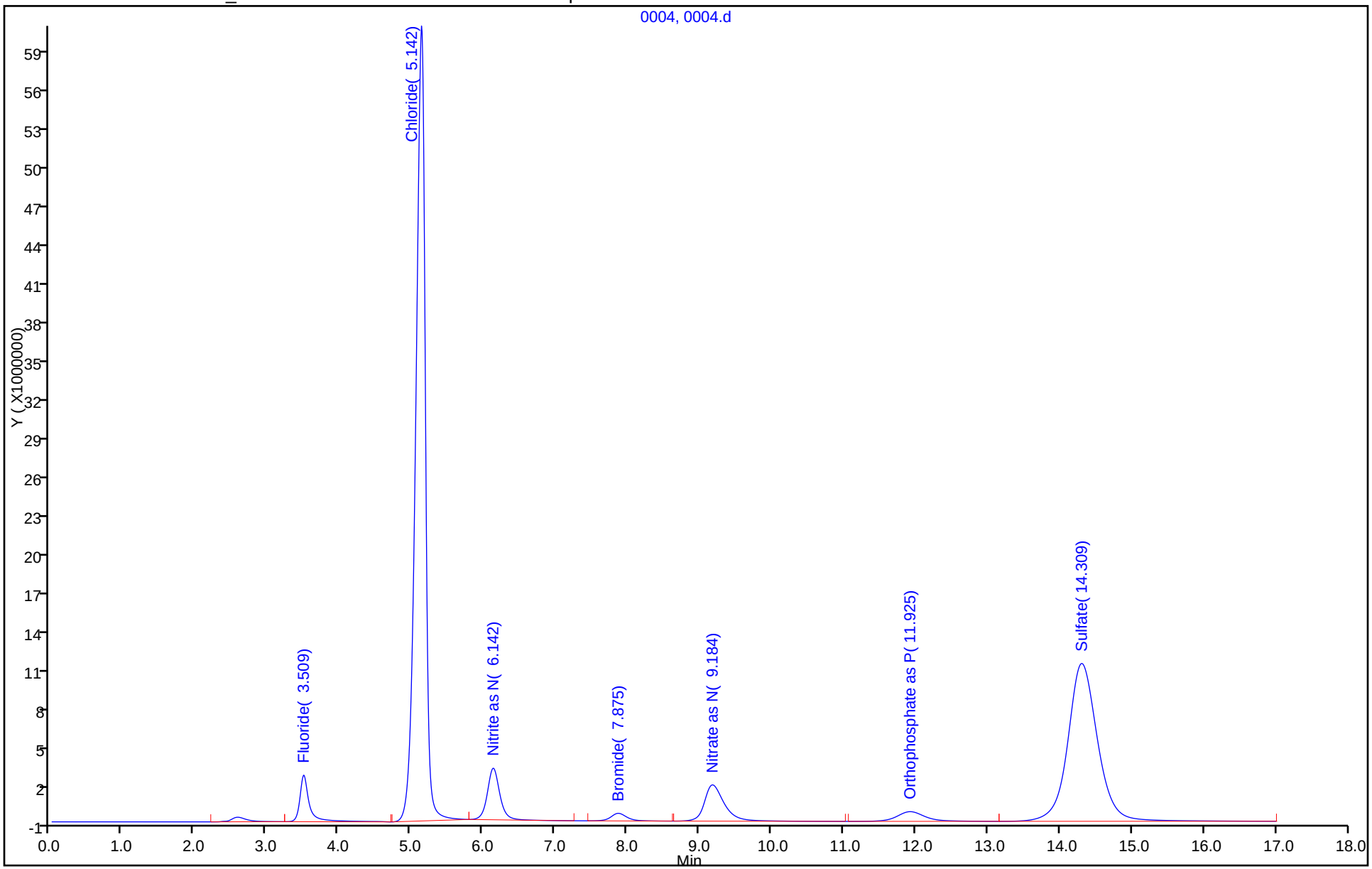
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:27:52 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0004.d

Injection Date:	25-Apr-2017 10:35:00	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\20170425-57903.b\0005.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 25-Apr-2017 10:55:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-005
Misc. Info.: 5 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 25-Apr-2017 12:15:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	32740687	5.00	4.75	
2 Chloride	5.142	5.142	0.000	550235374	100.0	102.6	
3 Nitrite as N	6.142	6.134	0.008	46973772	5.00	5.03	
4 Bromide	7.884	7.867	0.017	8739470	5.00	5.03	
5 Nitrate as N	9.201	9.175	0.026	52138974	5.00	4.97	
7 Orthophosphate as P	11.926	11.934	-0.008	20360636	5.00	4.87	
6 Sulfate	14.301	14.317	-0.016	342257640	100.0	102.1	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

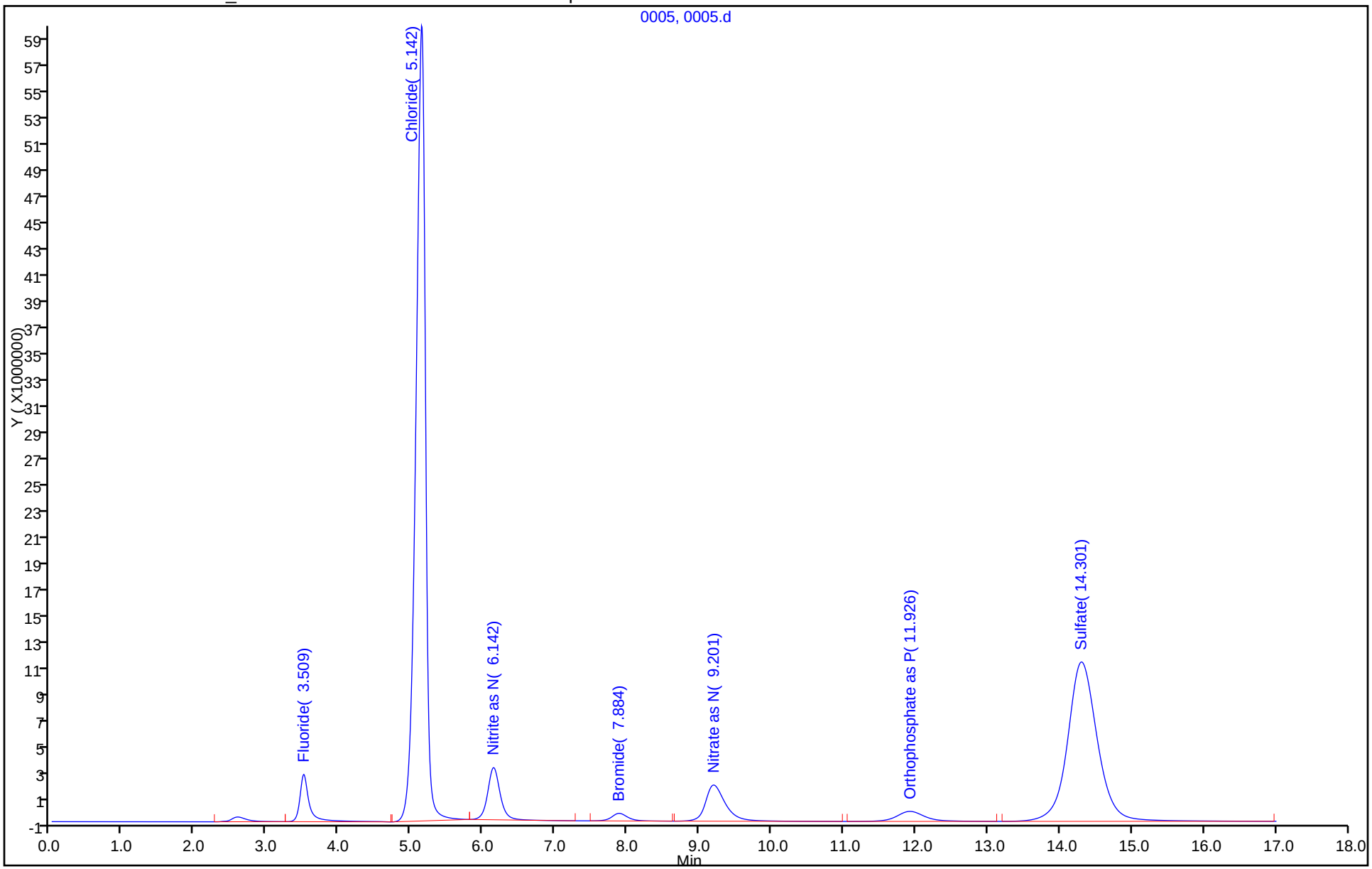
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:27:53 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0005.d

Injection Date:	25-Apr-2017 10:55:00	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\20170425-57903.b\0005.d
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 25-Apr-2017 10:55:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-005
Misc. Info.: 5 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 25-Apr-2017 12:15:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	32740687	5.00	4.75	
2 Chloride	5.142	5.142	0.000	550235374	100.0	102.6	
3 Nitrite as N	6.142	6.134	0.008	46973772	5.00	5.03	
4 Bromide	7.884	7.867	0.017	8739470	5.00	5.03	
5 Nitrate as N	9.201	9.175	0.026	52138974	5.00	4.97	
7 Orthophosphate as P	11.926	11.934	-0.008	20360636	5.00	4.87	
6 Sulfate	14.301	14.317	-0.016	342257640	100.0	102.1	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

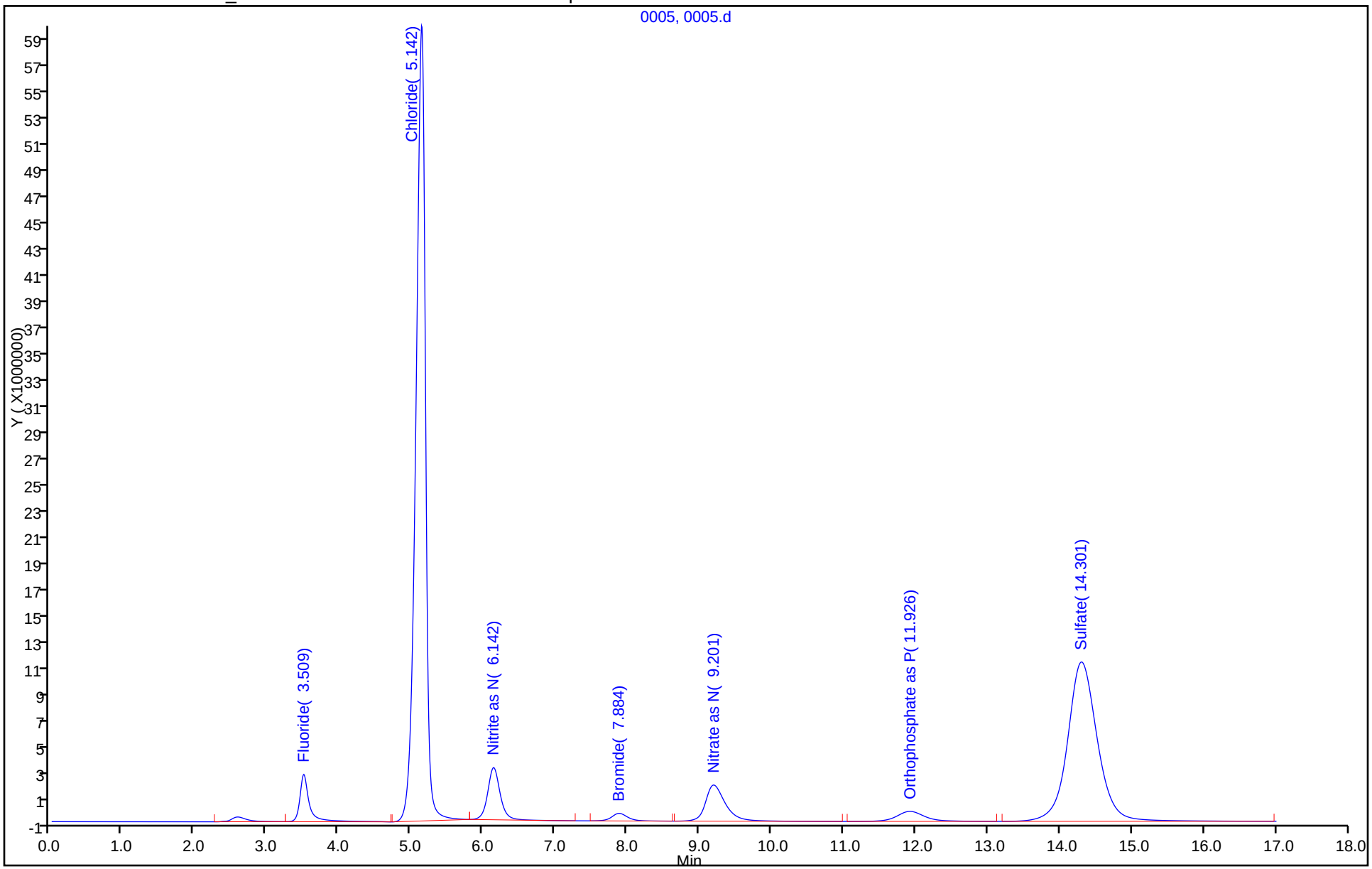
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:27:53 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0005.d

Injection Date:	25-Apr-2017 10:55:00	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		



Manual Integration/User Assign Peak Report

TestAmerica Denver

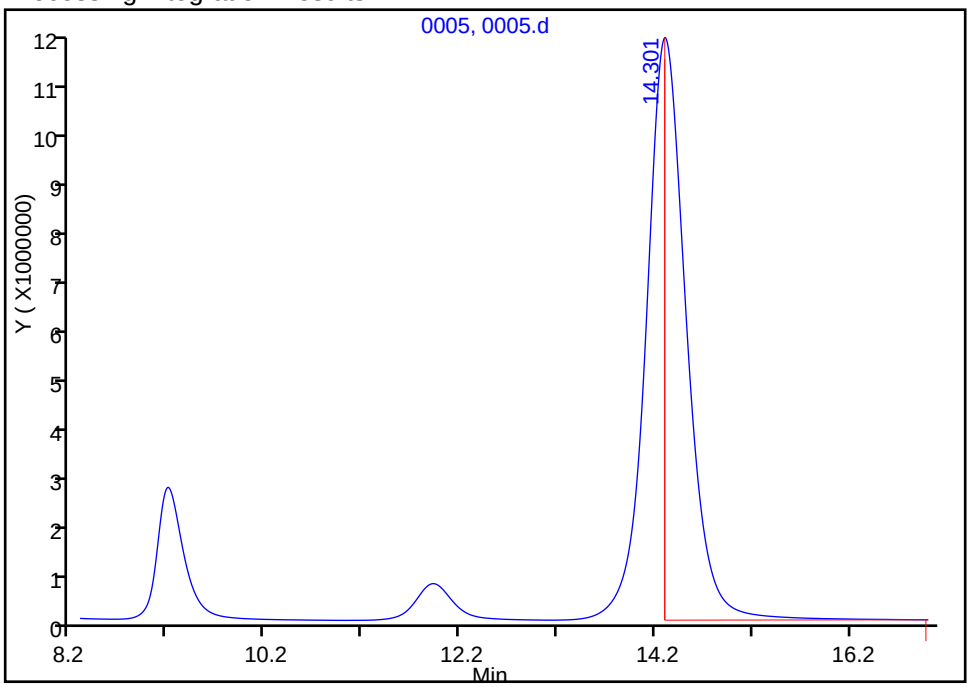
Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0005.d
Injection Date: 25-Apr-2017 10:55:00 Instrument ID: WC_IonChrom11
Lims ID: lcsd
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: Anions_IC11 Limit Group: Wet - Anions 28D
Column: Detector 0005

6 Sulfate, CAS: 14808-79-8

Signal: 1

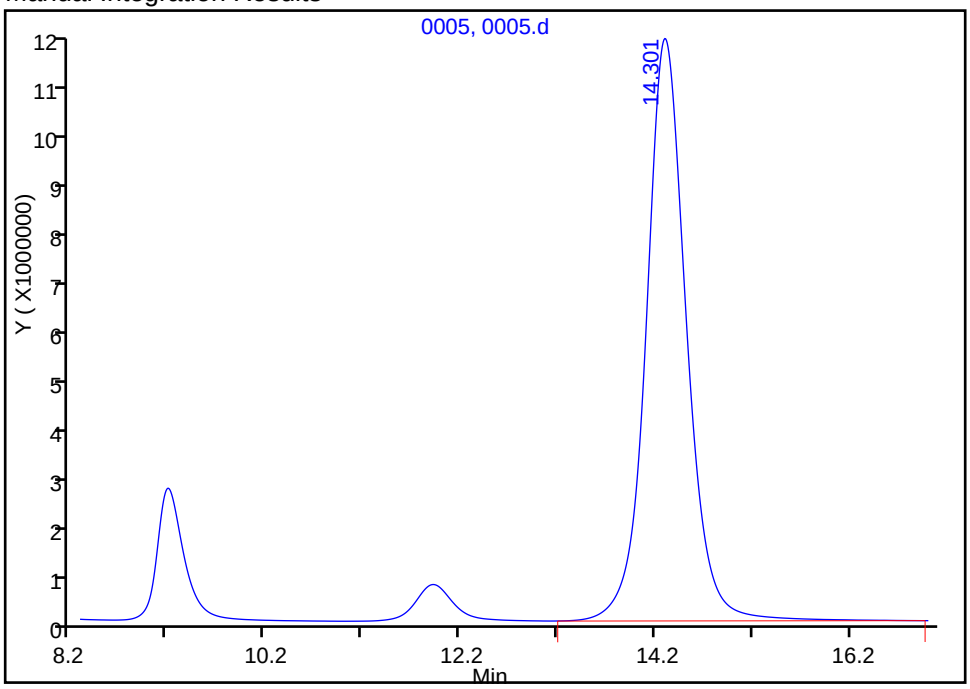
Processing Integration Results

RT: 14.30
Area: 186507652
Amount: 55.779428
Amount Units: ug/ml



Manual Integration Results

RT: 14.30
Area: 342257640
Amount: 102.1338
Amount Units: ug/ml



Reviewer: bensona, 25-Apr-2017 12:15:53
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0006.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 25-Apr-2017 11:15:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-006
Misc. Info.: 6 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

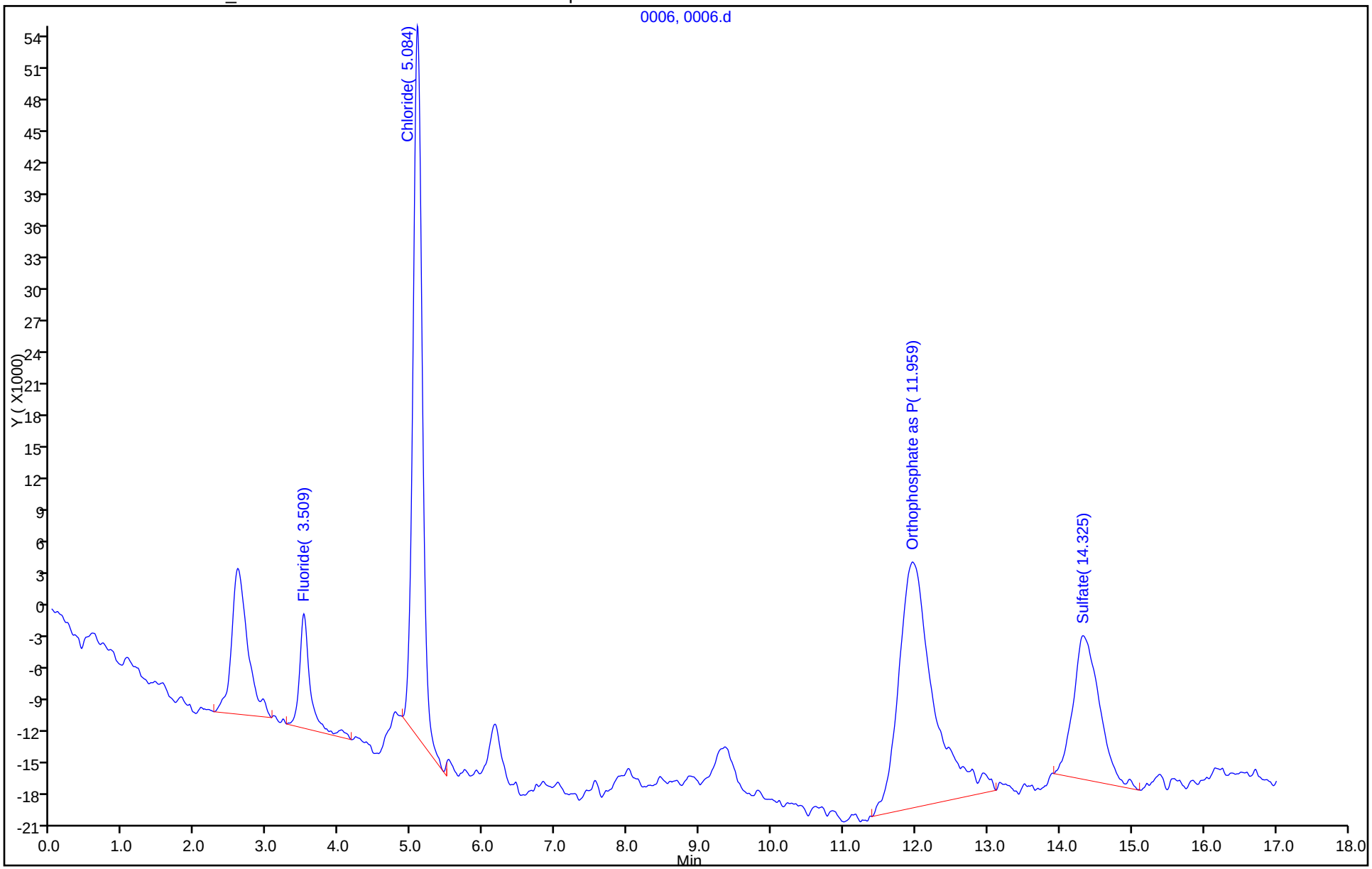
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	111528		0.0525	
2 Chloride	5.084	5.142	-0.058	603161		0.6559	
3 Nitrite as N		6.134				ND	
4 Bromide		7.867				ND	
5 Nitrate as N		9.175				ND	
7 Orthophosphate as P	11.959	11.934	0.025	776374		0.0194	
6 Sulfate	14.325	14.317	0.008	343846		0.3733	

Report Date: 26-Apr-2017 07:27:54 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0006.d

Injection Date:	25-Apr-2017 11:15:00	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\20170425-57903.b\0006.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 25-Apr-2017 11:15:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-006
Misc. Info.: 6 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

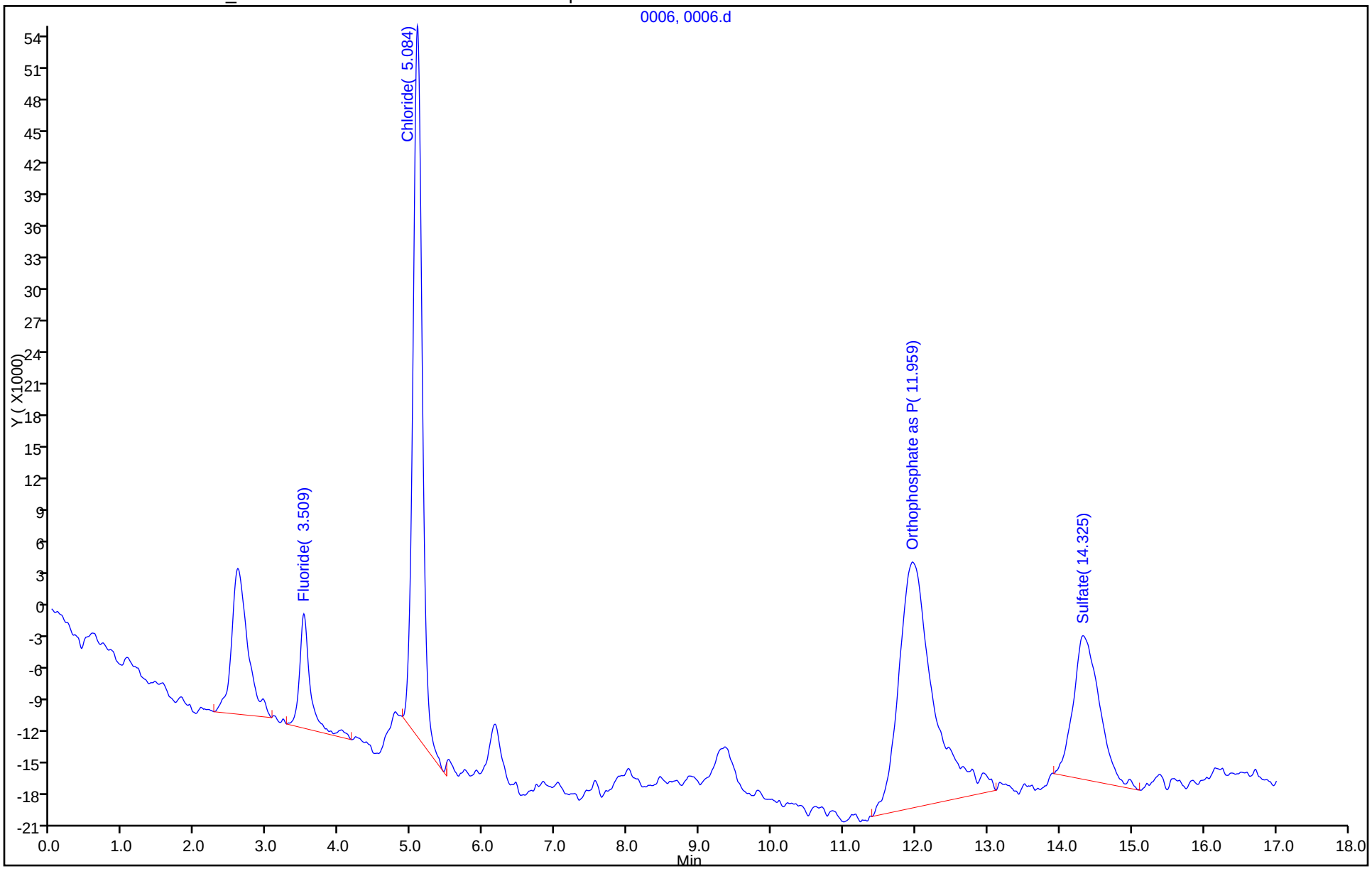
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	111528		0.0525	
2 Chloride	5.084	5.142	-0.058	603161		0.6559	
3 Nitrite as N		6.134				ND	
4 Bromide		7.867				ND	
5 Nitrate as N		9.175				ND	
7 Orthophosphate as P	11.959	11.934	0.025	776374		0.0194	
6 Sulfate	14.325	14.317	0.008	343846		0.3733	

Report Date: 26-Apr-2017 07:27:54 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0006.d

Injection Date:	25-Apr-2017 11:15:00	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\20170425-57903.b\0007.d
Lims ID: 280-96291-B-2
Client ID: BKGmw-006-042417-GW
Sample Type: Client
Inject. Date: 25-Apr-2017 14:02:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-007
Misc. Info.: 28934 503 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:13:56

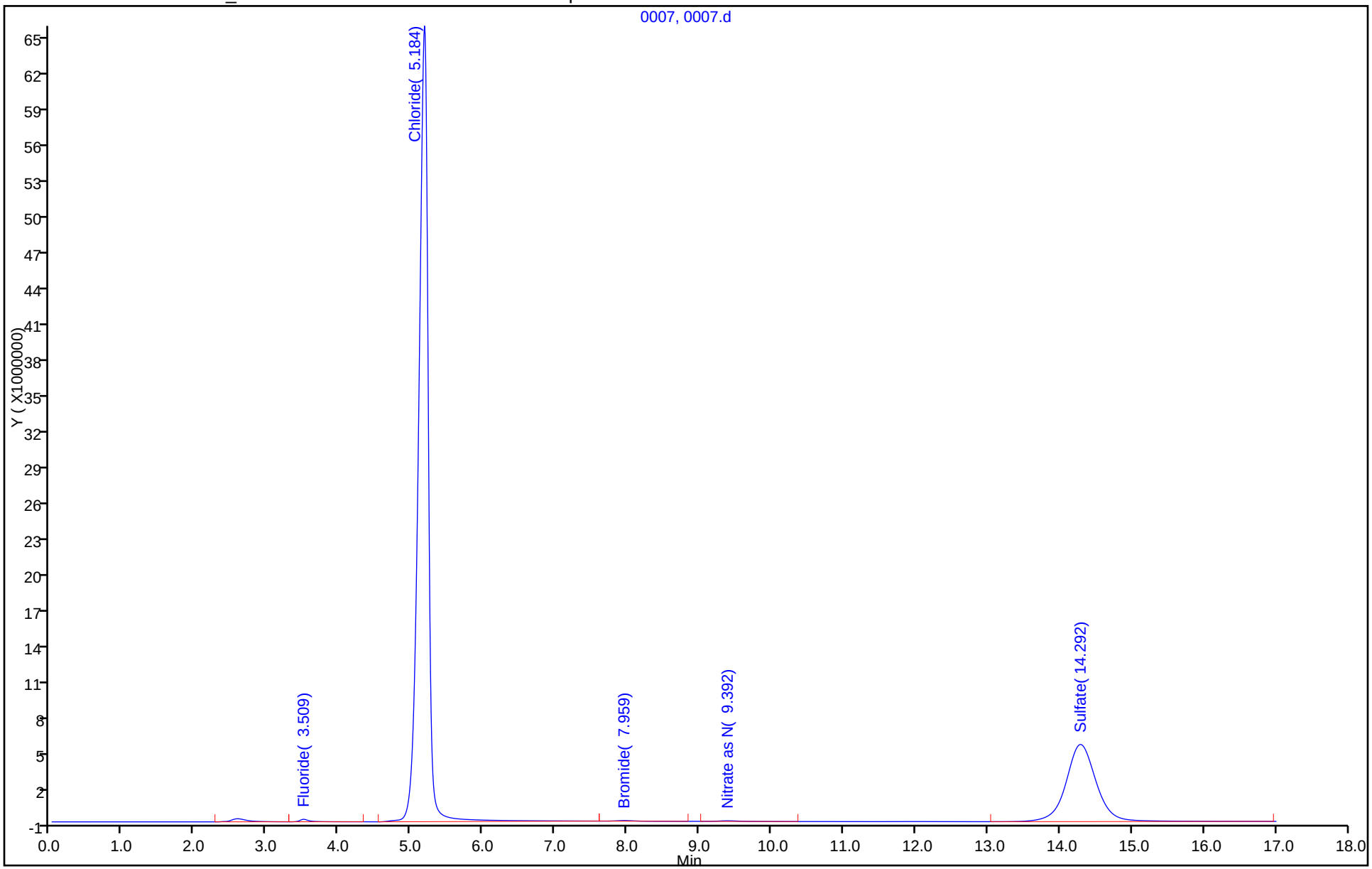
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	1914600	0.3123	
2 Chloride	5.184	5.142	0.042	609122422	113.5	
3 Nitrite as N		6.134			ND	
4 Bromide	7.959	7.867	0.092	783395	0.4292	
5 Nitrate as N	9.392	9.175	0.217	954337	0.1184	
7 Orthophosphate as P		11.934			ND	
6 Sulfate	14.292	14.317	-0.025	185345388	55.4	

Report Date: 26-Apr-2017 07:27:54 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0007.d

Injection Date:	25-Apr-2017 14:02:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2	Lab Sample ID:	280-96291-2	Worklist Smp#:	7
Client ID:	BKGmw-006-042417-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\20170425-57903.b\0007.d
Lims ID: 280-96291-B-2
Client ID: BKGmw-006-042417-GW
Sample Type: Client
Inject. Date: 25-Apr-2017 14:02:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-007
Misc. Info.: 28934 503 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:13:56

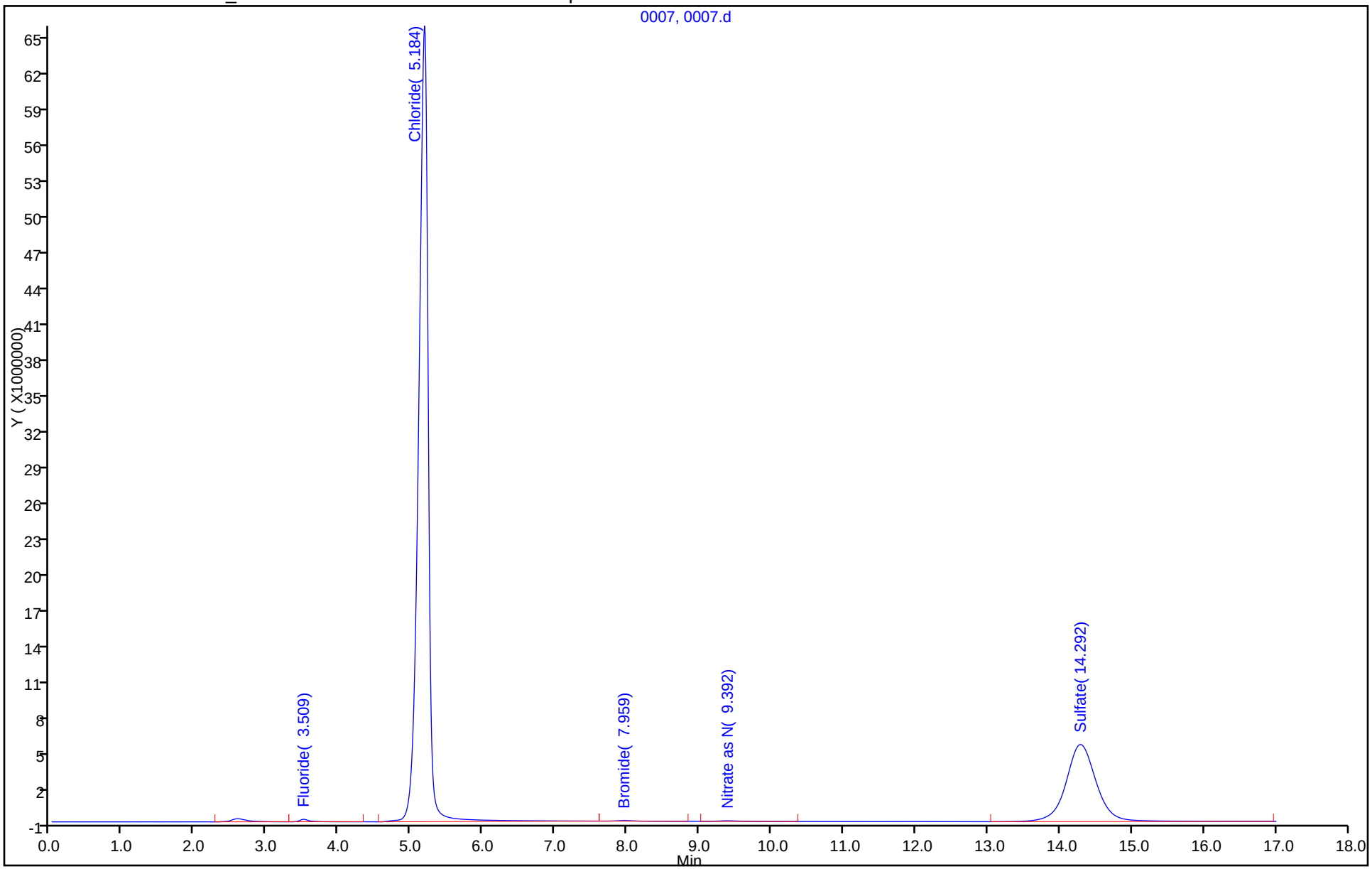
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	1914600	0.3123	
2 Chloride	5.184	5.142	0.042	609122422	113.5	
3 Nitrite as N		6.134			ND	
4 Bromide	7.959	7.867	0.092	783395	0.4292	
5 Nitrate as N	9.392	9.175	0.217	954337	0.1184	
7 Orthophosphate as P		11.934			ND	
6 Sulfate	14.292	14.317	-0.025	185345388	55.4	

Report Date: 26-Apr-2017 07:27:54 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0007.d

Injection Date:	25-Apr-2017 14:02:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2	Lab Sample ID:	280-96291-2	Worklist Smp#:	7
Client ID:	BKGmw-006-042417-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\20170425-57903.b\0011.d
Lims ID: 280-96291-B-2 DU
Client ID:
Sample Type: DU
Inject. Date: 25-Apr-2017 16:26:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-011
Misc. Info.: 27122 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:15:09

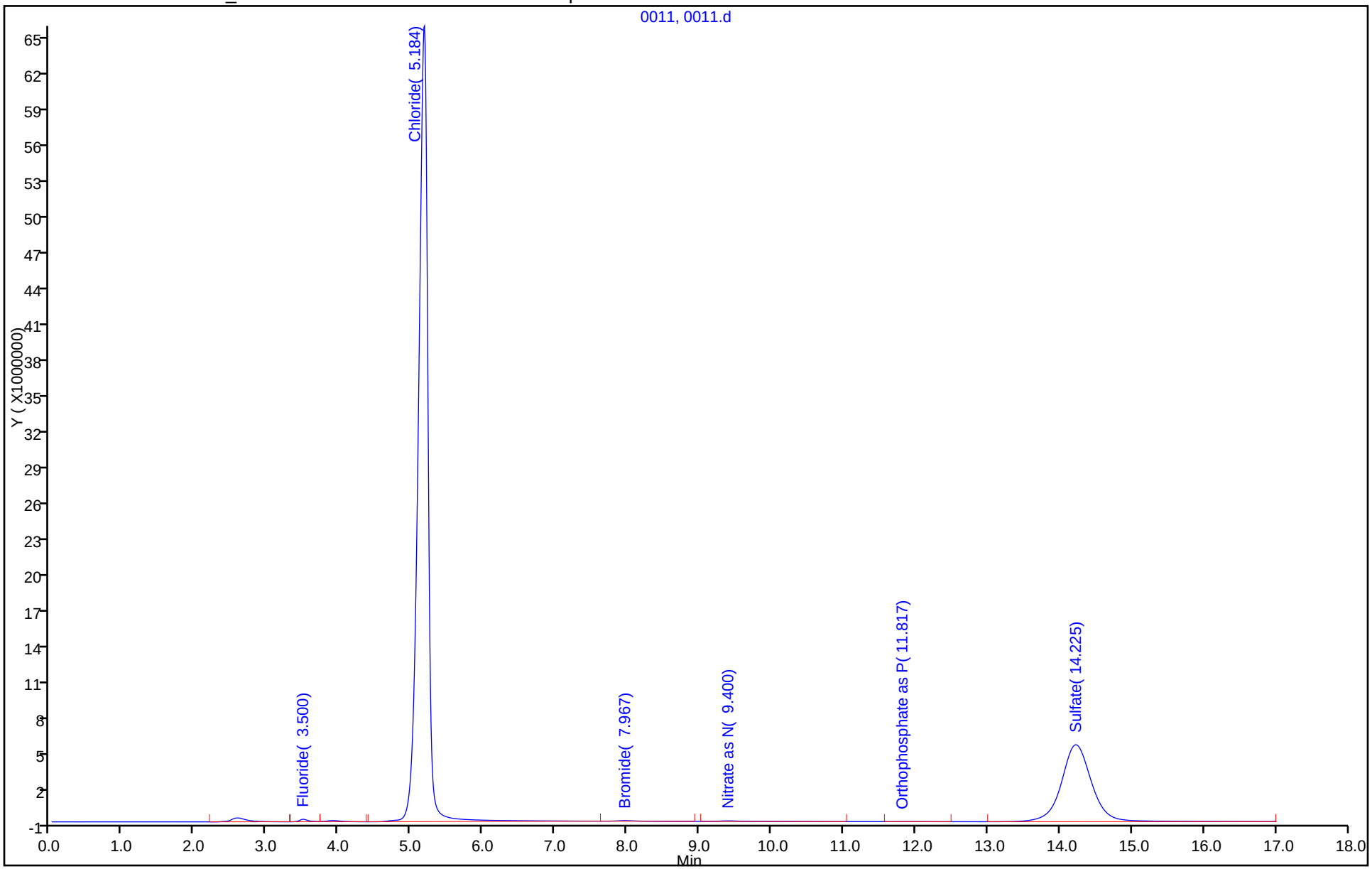
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.500	3.509	-0.009	1555440		0.2605	
2 Chloride	5.184	5.142	0.042	610951743		113.8	
3 Nitrite as N		6.134				ND	
4 Bromide	7.967	7.867	0.100	851077		0.4683	
5 Nitrate as N	9.400	9.175	0.225	1003007		0.1230	
7 Orthophosphate as P	11.817	11.934	-0.117	172521		-0.1302	
6 Sulfate	14.225	14.317	-0.092	185229077		55.4	

Report Date: 26-Apr-2017 07:27:57 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0011.d

Injection Date:	25-Apr-2017 16:26:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2 DU			Worklist Smp#:	11
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\20170425-57903.b\0011.d
Lims ID: 280-96291-B-2 DU
Client ID:
Sample Type: DU
Inject. Date: 25-Apr-2017 16:26:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-011
Misc. Info.: 27122 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:15:09

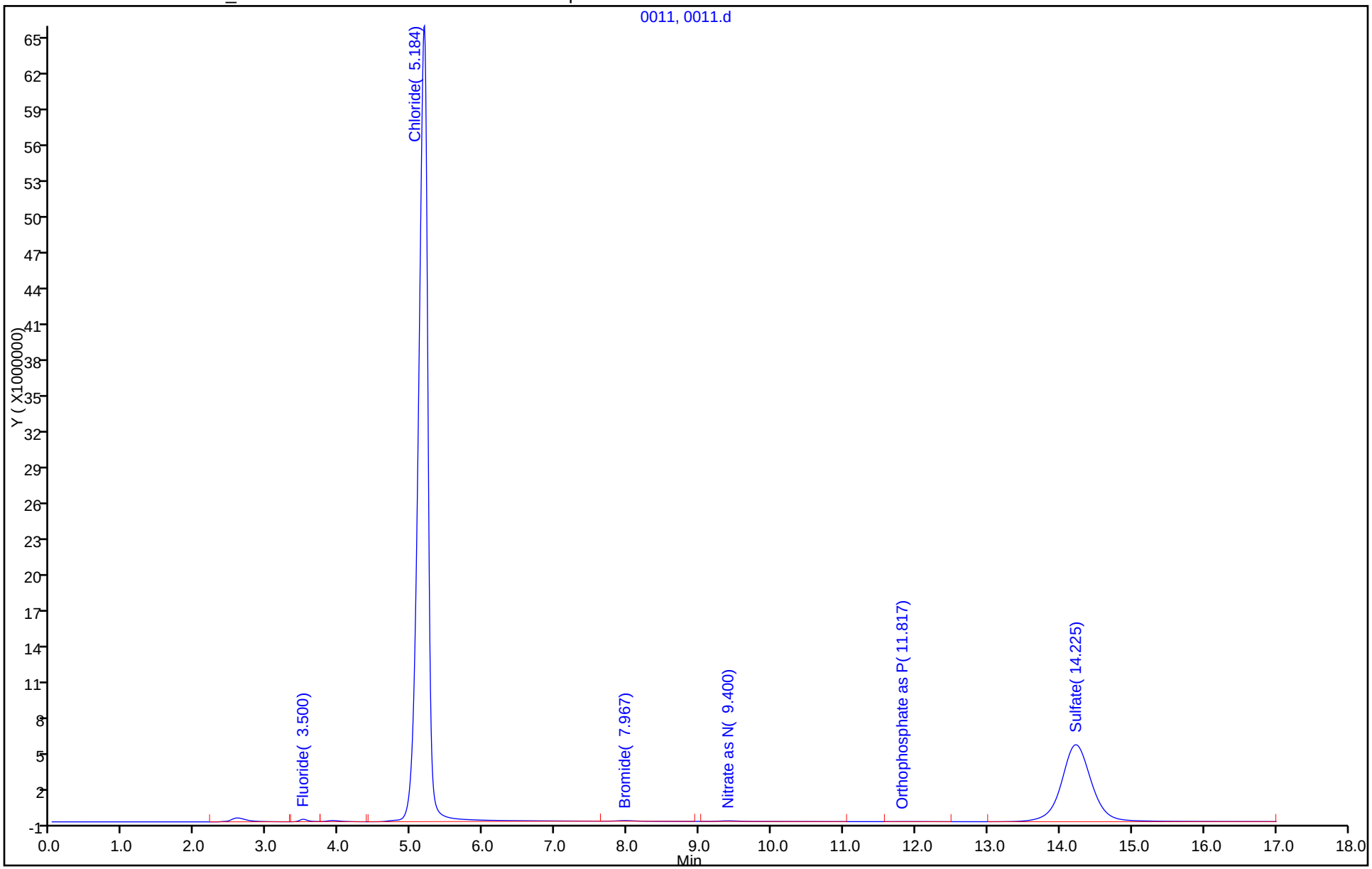
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.500	3.509	-0.009	1555440		0.2605	
2 Chloride	5.184	5.142	0.042	610951743		113.8	
3 Nitrite as N		6.134				ND	
4 Bromide	7.967	7.867	0.100	851077		0.4683	
5 Nitrate as N	9.400	9.175	0.225	1003007		0.1230	
7 Orthophosphate as P	11.817	11.934	-0.117	172521		-0.1302	
6 Sulfate	14.225	14.317	-0.092	185229077		55.4	

Report Date: 26-Apr-2017 07:27:57 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0011.d

Injection Date:	25-Apr-2017 16:26:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2 DU			Worklist Smp#:	11
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\20170425-57903.b\0012.d
Lims ID: 280-96291-B-2 MS
Client ID:
Sample Type: MS
Inject. Date: 25-Apr-2017 16:46:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-012
Misc. Info.: 18226 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:15:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	34292353	5.00	4.98	
2 Chloride	5.192	5.142	0.050	715075104	25.0	133.1	
3 Nitrite as N	6.176	6.134	0.042	43050031	5.00	4.61	
4 Bromide	7.959	7.867	0.092	9127533	5.00	5.25	
5 Nitrate as N	9.292	9.175	0.117	50207563	5.00	4.78	
7 Orthophosphate as P	11.934	11.934	0.000	54826257	5.00	13.4	E
6 Sulfate	14.209	14.317	-0.108	257682765	25.0	77.0	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

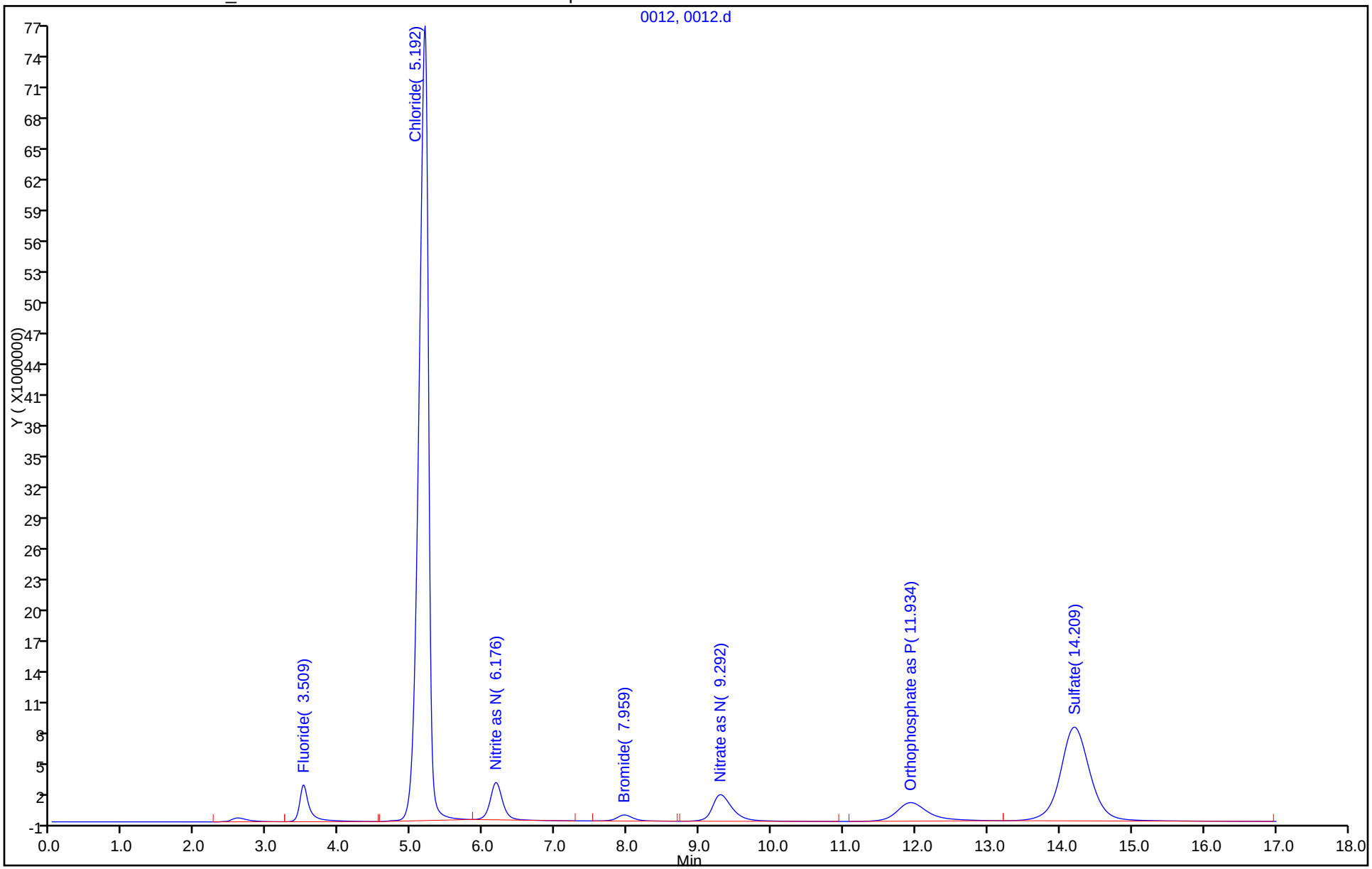
ICMS/MSD WEEK_00465 Amount Added: 0.05 Units: mL

Report Date: 26-Apr-2017 07:27:58 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0012.d

Injection Date:	25-Apr-2017 16:46:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2 MS			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\20170425-57903.b\0012.d
Lims ID: 280-96291-B-2 MS
Client ID:
Sample Type: MS
Inject. Date: 25-Apr-2017 16:46:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-012
Misc. Info.: 18226 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:15:20

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	34292353	5.00	4.98	
2 Chloride	5.192	5.142	0.050	715075104	25.0	133.1	
3 Nitrite as N	6.176	6.134	0.042	43050031	5.00	4.61	
4 Bromide	7.959	7.867	0.092	9127533	5.00	5.25	
5 Nitrate as N	9.292	9.175	0.117	50207563	5.00	4.78	
7 Orthophosphate as P	11.934	11.934	0.000	54826257	5.00	13.4	E
6 Sulfate	14.209	14.317	-0.108	257682765	25.0	77.0	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

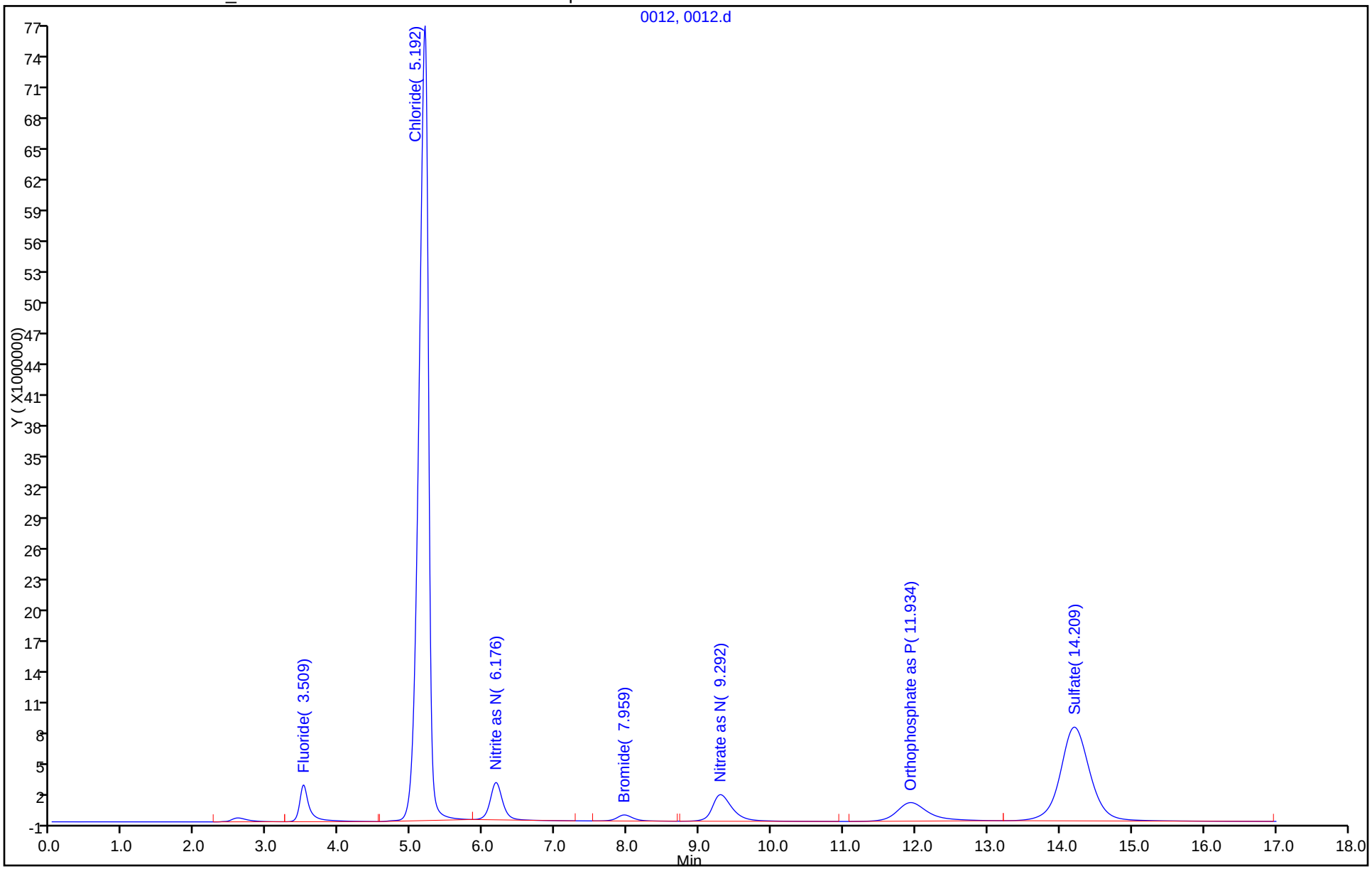
ICMS/MSD WEEK_00465 Amount Added: 0.05 Units: mL

Report Date: 26-Apr-2017 07:27:58 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0012.d

Injection Date:	25-Apr-2017 16:46:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2 MS			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\20170425-57903.b\0013.d
Lims ID: 280-96291-B-2 MSD
Client ID:
Sample Type: MSD
Inject. Date: 25-Apr-2017 17:06:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-013
Misc. Info.: 5654 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:15:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	34569704	5.00	5.02	
2 Chloride	5.192	5.142	0.050	754279585	25.0	140.4	
3 Nitrite as N	6.175	6.134	0.041	45563960	5.00	4.88	
4 Bromide	7.950	7.867	0.083	9596185	5.00	5.52	
5 Nitrate as N	9.284	9.175	0.109	53044915	5.00	5.05	
7 Orthophosphate as P	11.950	11.934	0.016	33144925	5.00	8.04	
6 Sulfate	14.209	14.317	-0.108	271715711	25.0	81.1	

Reagents:

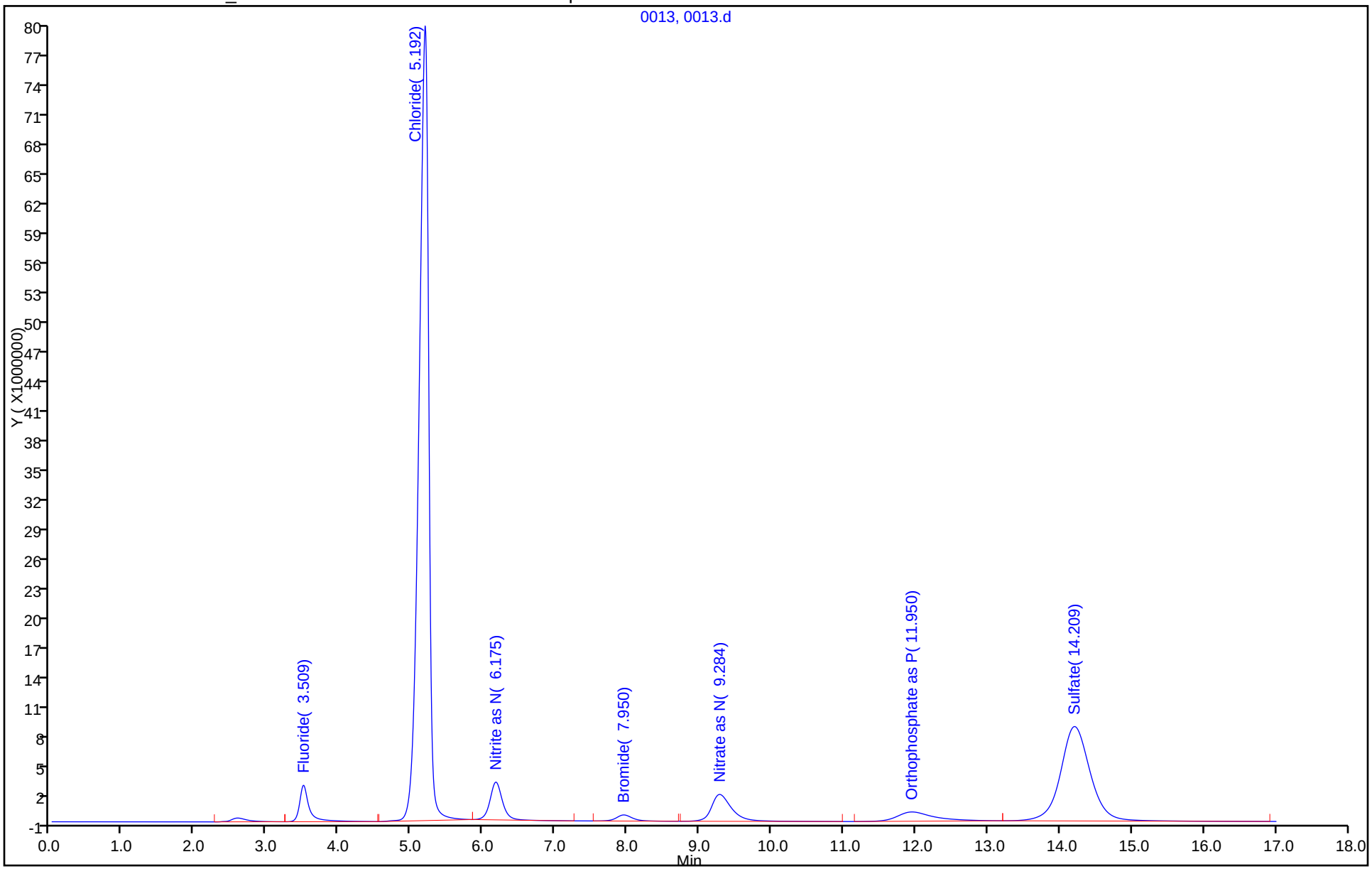
ICMS/MSD WEEK_00465 Amount Added: 0.05 Units: mL

Report Date: 26-Apr-2017 07:27:59 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0013.d

Injection Date:	25-Apr-2017 17:06:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2 MSD			Worklist Smp#:	13
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\20170425-57903.b\0013.d
Lims ID: 280-96291-B-2 MSD
Client ID:
Sample Type: MSD
Inject. Date: 25-Apr-2017 17:06:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-013
Misc. Info.: 5654 F
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:27:50 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:15:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.509	3.509	0.000	34569704	5.00	5.02	
2 Chloride	5.192	5.142	0.050	754279585	25.0	140.4	
3 Nitrite as N	6.175	6.134	0.041	45563960	5.00	4.88	
4 Bromide	7.950	7.867	0.083	9596185	5.00	5.52	
5 Nitrate as N	9.284	9.175	0.109	53044915	5.00	5.05	
7 Orthophosphate as P	11.950	11.934	0.016	33144925	5.00	8.04	
6 Sulfate	14.209	14.317	-0.108	271715711	25.0	81.1	

Reagents:

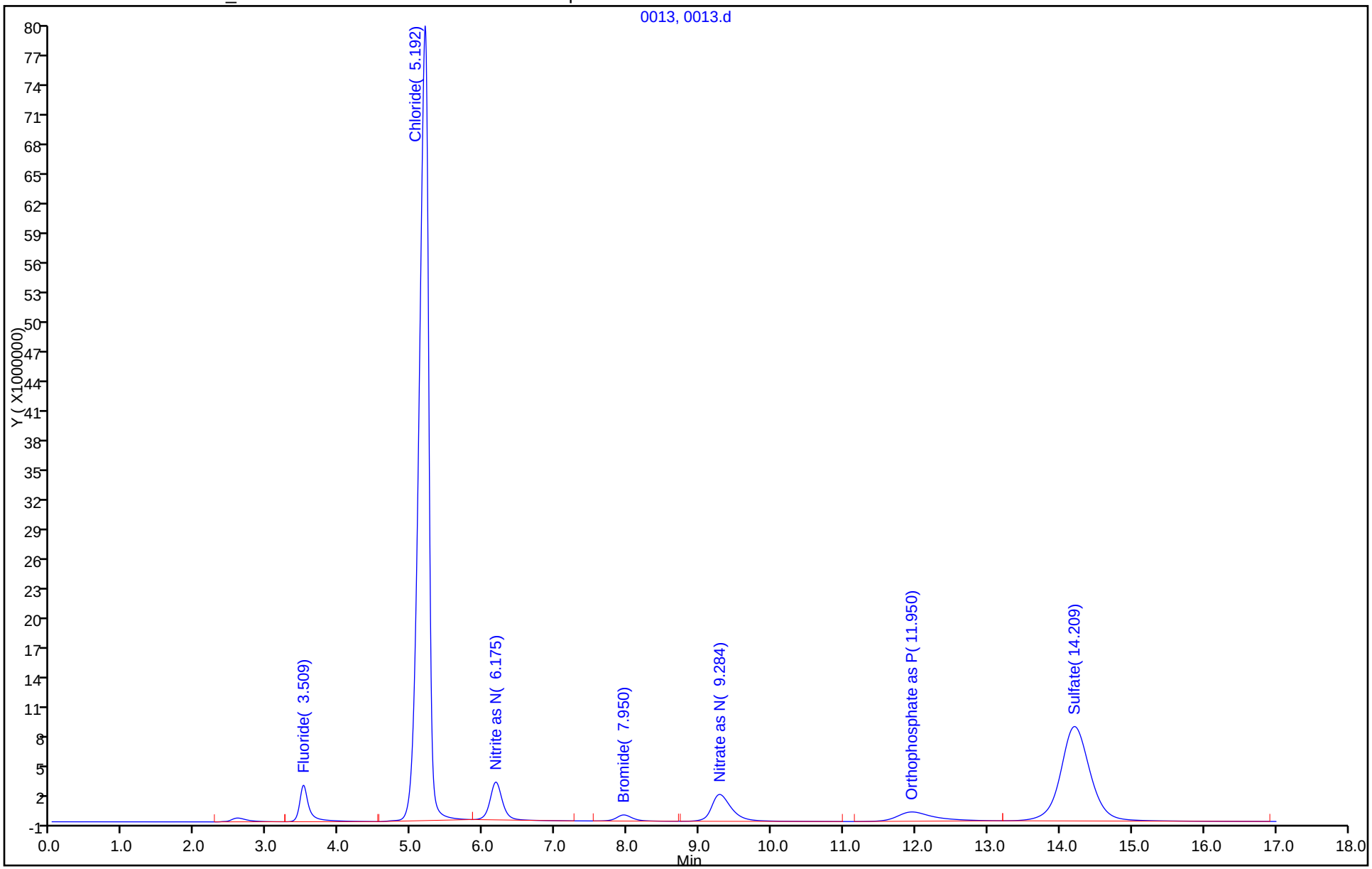
ICMS/MSD WEEK_00465 Amount Added: 0.05 Units: mL

Report Date: 26-Apr-2017 07:27:59 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0013.d

Injection Date:	25-Apr-2017 17:06:00	Instrument ID:	WC_IonChrom11	Operator ID:	
Lims ID:	280-96291-B-2 MSD			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
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0017.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2017 18:25:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-017
Misc. Info.: 31694
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:28:02 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:16:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.500	3.509	-0.009	33145893	5.00	4.81	
2 Chloride	5.142	5.142	0.000	555034844	100.0	103.4	
3 Nitrite as N	6.142	6.134	0.008	46993623	5.00	5.03	
4 Bromide	7.900	7.867	0.033	8832742	5.00	5.08	
5 Nitrate as N	9.209	9.175	0.034	52855983	5.00	5.04	
7 Orthophosphate as P	11.867	11.934	-0.067	21160830	5.00	5.07	
6 Sulfate	14.225	14.317	-0.092	345523283	100.0	103.1	

Reagents:

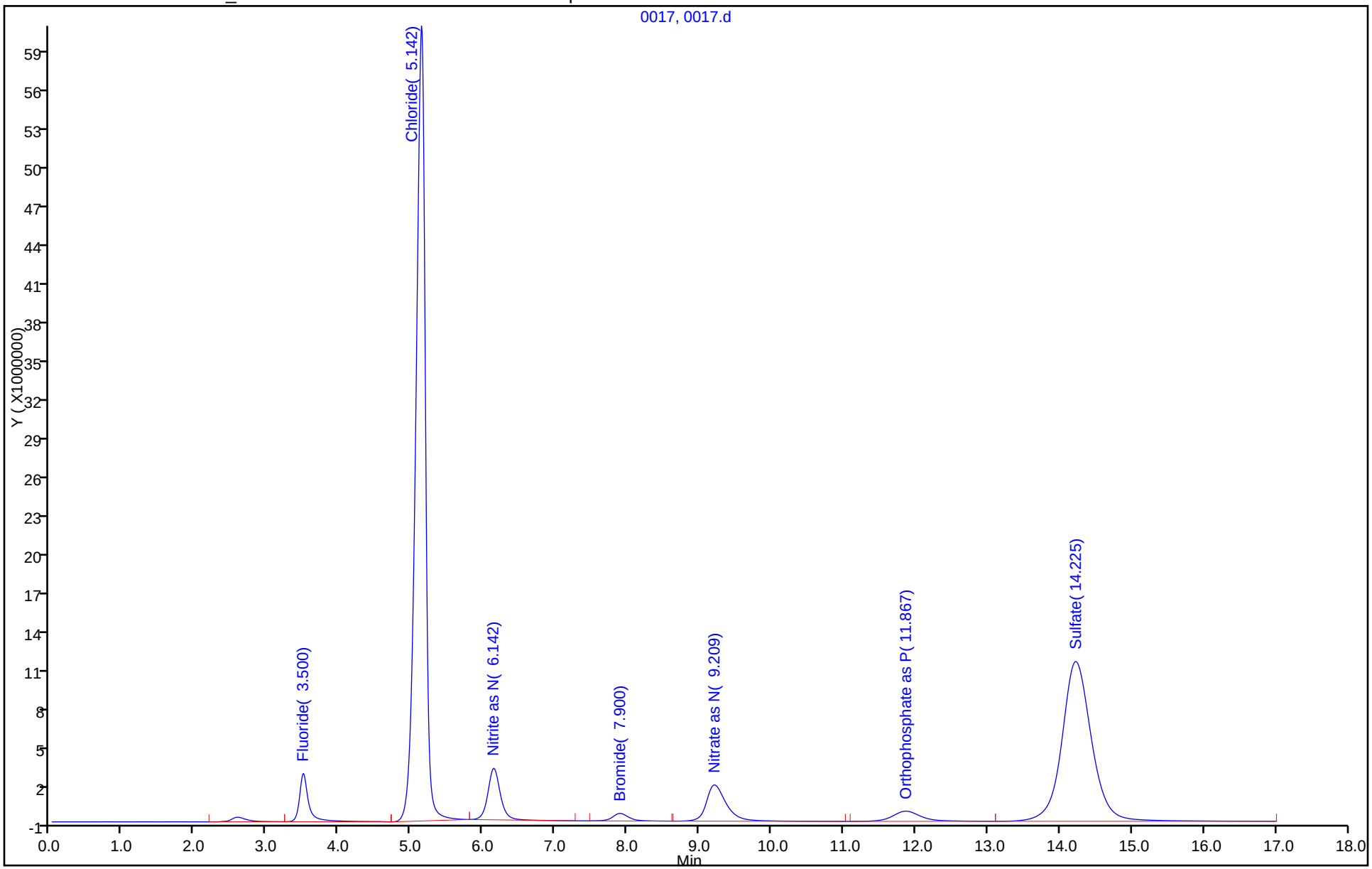
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:28:02 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0017.d

Injection Date:	25-Apr-2017 18:25:00	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		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0017.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2017 18:25:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-017
Misc. Info.: 31694
Operator ID: Instrument ID: WC_IonChrom11
Sublist: chrom-Anions_IC11*sub1

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:28:02 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

First Level Reviewer: bensona Date: 26-Apr-2017 07:16:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.500	3.509	-0.009	33145893	5.00	4.81	
2 Chloride	5.142	5.142	0.000	555034844	100.0	103.4	
3 Nitrite as N	6.142	6.134	0.008	46993623	5.00	5.03	
4 Bromide	7.900	7.867	0.033	8832742	5.00	5.08	
5 Nitrate as N	9.209	9.175	0.034	52855983	5.00	5.04	
7 Orthophosphate as P	11.867	11.934	-0.067	21160830	5.00	5.07	
6 Sulfate	14.225	14.317	-0.092	345523283	100.0	103.1	

Reagents:

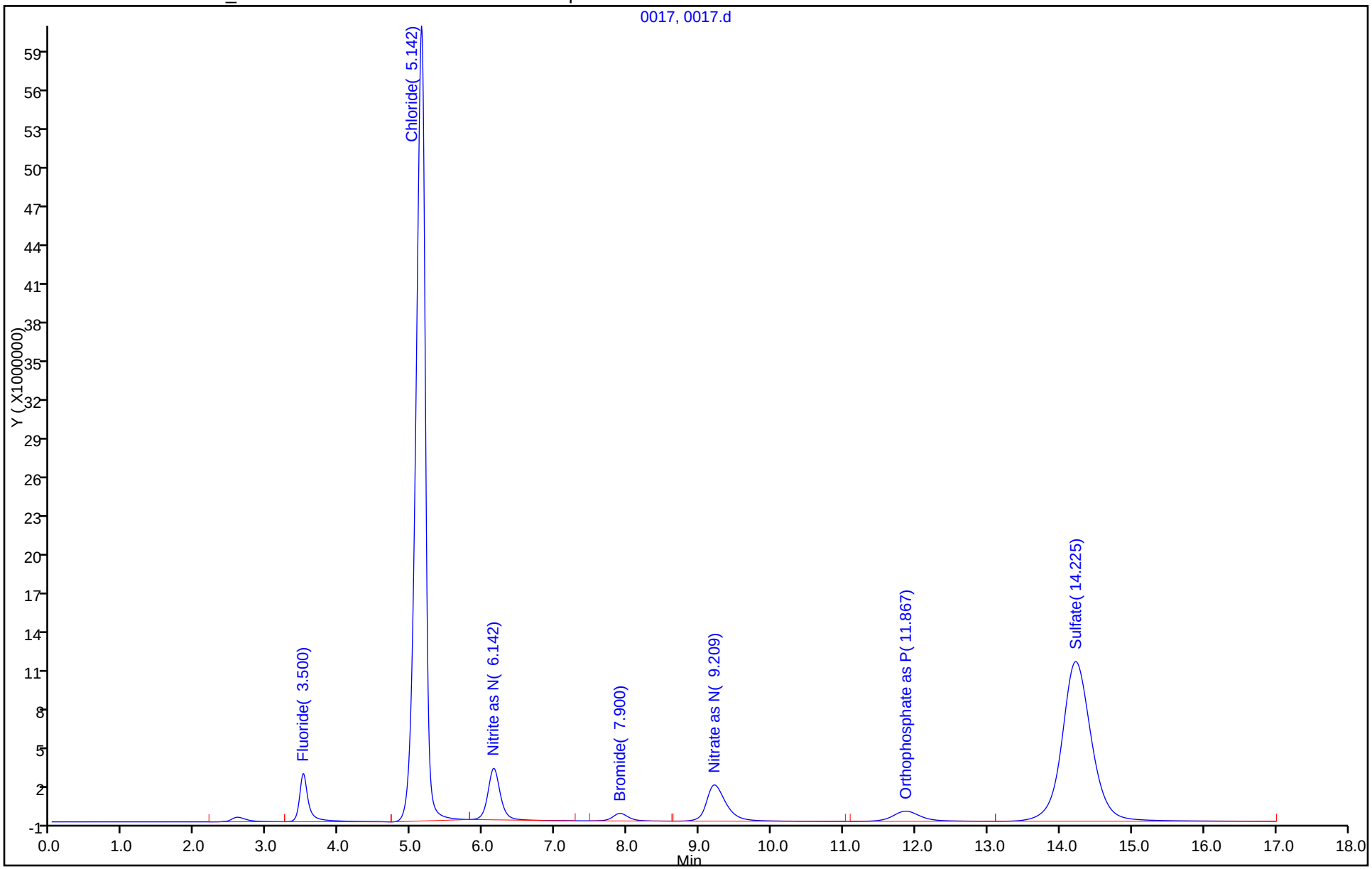
IC LCS_00889 Amount Added: 5.00 Units: mL

Report Date: 26-Apr-2017 07:28:02 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0017.d

Injection Date:	25-Apr-2017 18:25:00	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\20170425-57903.b\0018.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 25-Apr-2017 18:45:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-018
Misc. Info.: 6424
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions
Last Update: 26-Apr-2017 07:28:02 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

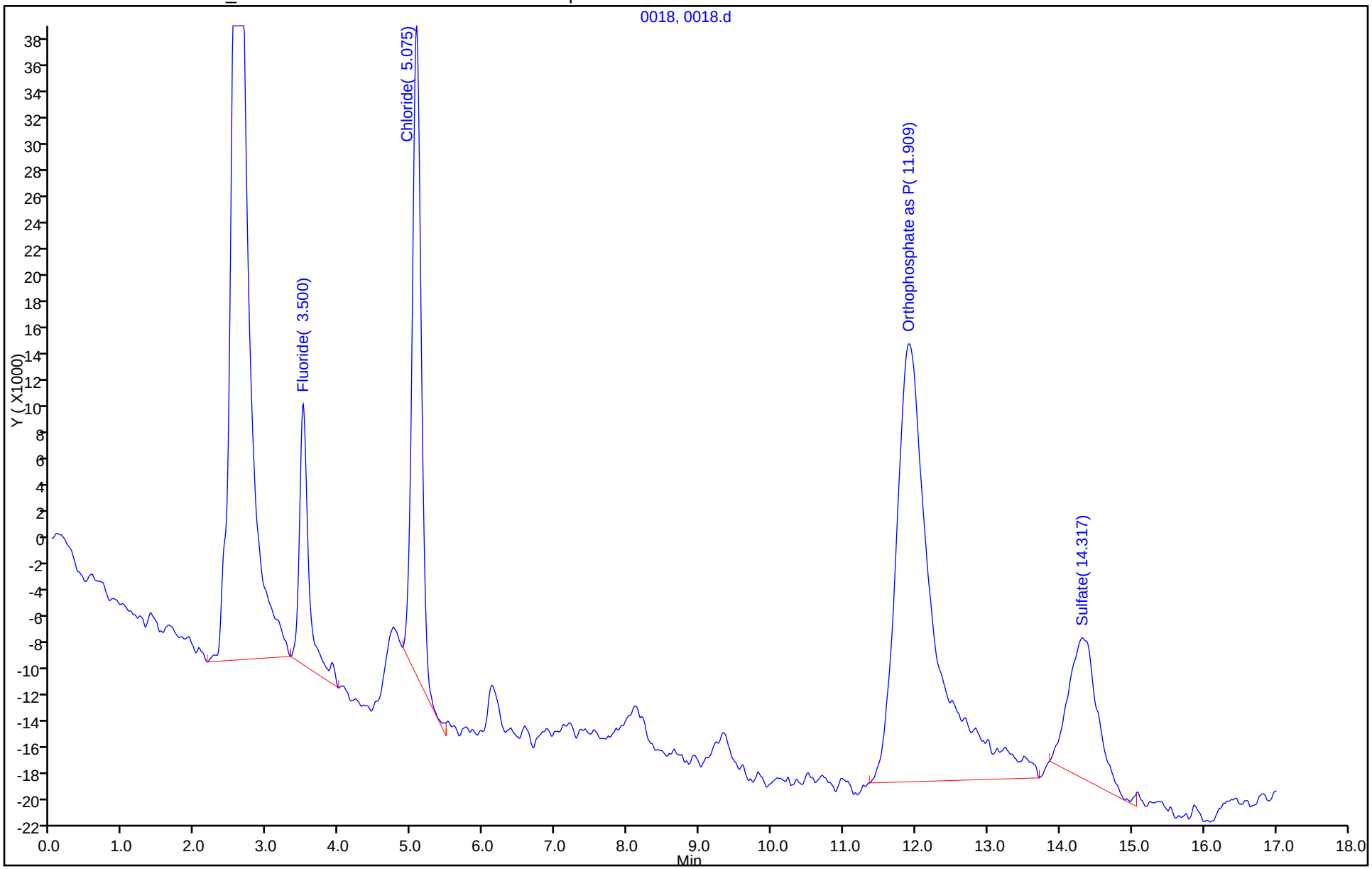
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.500	3.509	-0.009	178171		0.0621	
2 Chloride	5.075	5.142	-0.067	431516		0.6241	
3 Nitrite as N		6.134				ND	
4 Bromide		7.867				ND	
5 Nitrate as N		9.175				ND	
7 Orthophosphate as P	11.909	11.934	-0.025	1178156		0.1189	
6 Sulfate	14.317	14.317	0.000	299116		0.3599	

Report Date: 26-Apr-2017 07:28:03 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0018.d

Injection Date:	25-Apr-2017 18:45:00	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		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0018.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 25-Apr-2017 18:45:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 280-0057903-018
Misc. Info.: 6424
Operator ID: Instrument ID: WC_IonChrom11

Method: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\Anions_IC11.m
Limit Group: Wet - Anions 28D
Last Update: 26-Apr-2017 07:28:02 Calib Date: 12-Apr-2017 12:01:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170412-57469.b\0007.d

Column 1 : Det: 0005
Process Host: XAWRK031

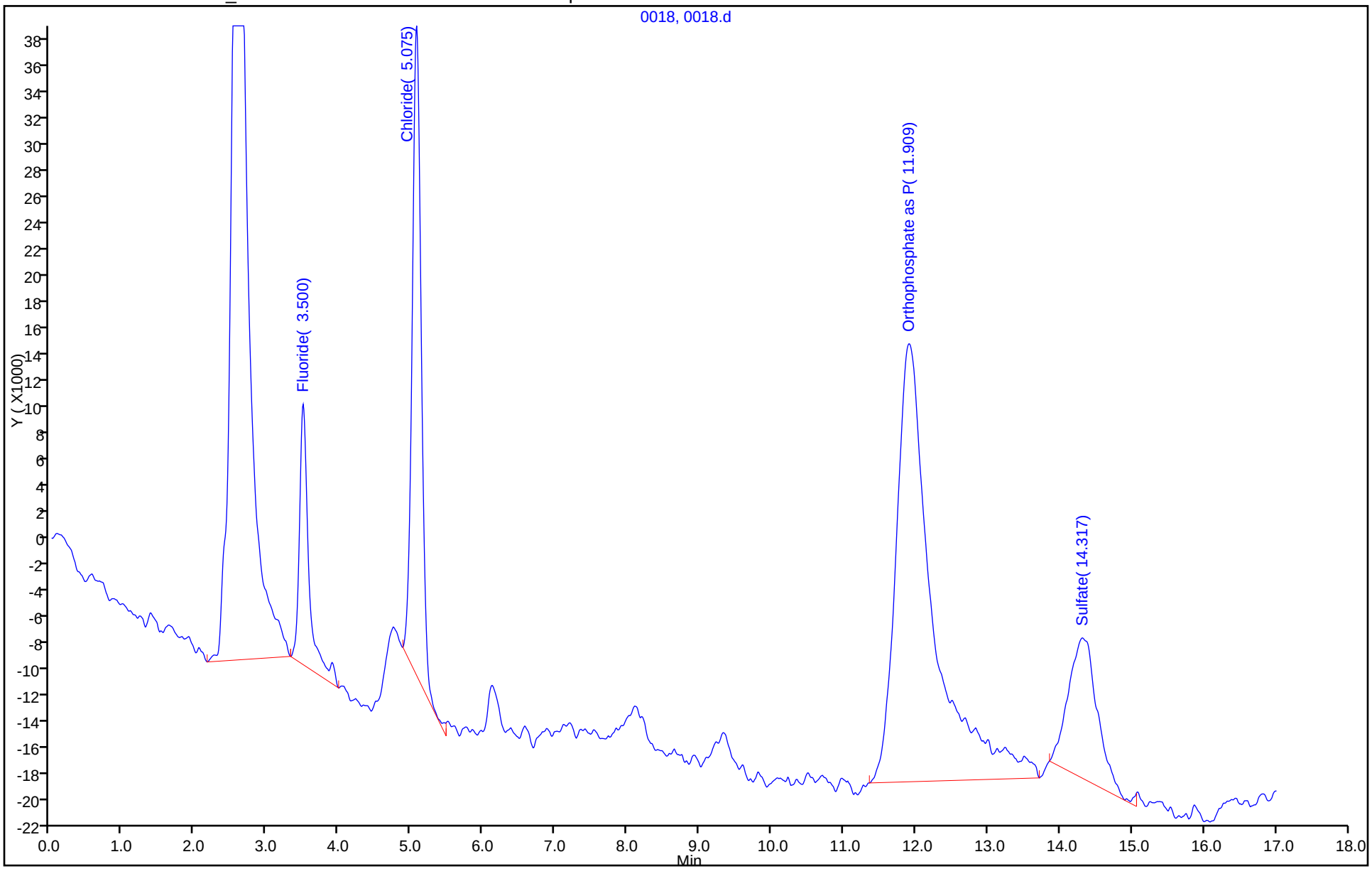
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.500	3.509	-0.009	178171		0.0621	
2 Chloride	5.075	5.142	-0.067	431516		0.6241	
3 Nitrite as N		6.134				ND	
4 Bromide		7.867				ND	
5 Nitrate as N		9.175				ND	
7 Orthophosphate as P	11.909	11.934	-0.025	1178156		0.1189	
6 Sulfate	14.317	14.317	0.000	299116		0.3599	

Report Date: 26-Apr-2017 07:28:03 Chrom Revision: 2.2 18-Apr-2017 07:43:58

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom11\20170425-57903.b\0018.d

Injection Date:	25-Apr-2017 18:45:00	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		



Shipping and Receiving Documents

estAmerica Denver
1955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Multiple - Mobile Lab	Lab PM: McEntee, Patrick J	Carrier Tracking No(s): 8104 8607 1815	COC No:
Client Contact: Ms. Heather Miner	Phone: 330 388 1598	E-Mail: patrick.mcentee@testamericainc.com		Page: Page:
Company: Cardno TEC, Inc				Job #:
Address: 1658 Cole Boulevard Suite 190	Due Date Requested:			
City: Golden	TAT Requested (days): Standard			
State, Zip: CO, 80401				
Phone:	PO #: 0091979			
Email: heather.miner@cardno-gs.com	WO #: 076003.009.007			
Project Name: Ravenna, OH	TestAmerica Project #: 28014271			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	7196A Hexavalent Cr	9056 Nitrate	Anions (Cl, SO4, NO2, NO3)	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	N		
~~LL1MW-083-042417-GW~~	4/24/17		G	W	1		X		KSK		
LL3MW-244-042417-GW	4/24/17	1455	G	W			X			1	
~~LL2MW-247-042417-GW~~	4/24/17		G	W			X	X	KSK		
BKGMW-006-042417-GW	4/24/17	1630	G	W			X	X		2	

280-96291 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	4/24/17 1830	ATC	FedEx	4/24/17 1880	~~FB~~ FedEx
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 4-25-17 0900	Company TAD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0.3, 0.4 IR#700 Transfer RP 4-25-17

05/22/2017

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: J. Rizza / T. Williams	Lab PM: McEntee, Patrick J	Carrier Tracking No(s): 810486072947	COC No:
Client Contact: Ms. Heather Miner	Phone: 412 760 1020	E-Mail: patrick.mcentee@testamericainc.com		Page: Page:
Company: Cardno TEC, Inc				Job #:
Address: 1658 Cole Boulevard Suite 190	Due Date Requested:	Analysis Requested		
City: Golden	TAT Requested (days): Standard			
State, Zip: CO, 80401	PO #: 0091979			
Phone:	WO #: 076003.009.007			
Email: heather.miner@cardno-gs.com	TestAmerica Project #: 28014271			
Project Name: Ravenna, OH - Load Line 3	SSOW#:			
Site:				

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SVOCs 8270D - phthalates	Explosives 8330B	Pesticides 8081B (LVI)	Total Metals 6010C/6020A/7470A	Hexavalent Chromium 7196A - 24 Hour HT	Perchlorate 6860	Total Cyanide 9012B	Free Cyanide 4500_CN_I	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	D	N	N	B	B		
LL3MW-234-042417-GW	4/24/17	1140	G	W	N	N							X	X	2	
LL3MW-236-042417-GW	4/24/17		G	W	N	N		X					X		3	KX
LL3MW-237-042417-GW	4/24/17	1319	G	W	N	N		X							2	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	K. Merkle				4/24/17 1455	TAL
2	Relinquished by:	Date/Time:	Company	Received by: Reed Pitt	4-25-17 0900	TAL
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: TWitmers	Lab PM: McEntee, Patrick J	Carrier Tracking No(s): 810486007947	COC No:
Client Contact: Ms. Heather Miner	Phone: 1612 741 1012	E-Mail: patrick.mcentee@testamericainc.com		Page: Page:
Company: Cardno TEC, Inc				Job #:
Address: 1658 Cole Boulevard Suite 190	Due Date Requested:			
City: Golden	TAT Requested (days): Standard			
State, Zip: CO, 80401	PO #: 0091979			
Phone:	WO #: 076003.009.007			
Email: heather.miner@cardno-gs.com	TestAmerica Project #: 28014271			
Project Name: Ravenna, OH - Load Line 4	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - Di Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PAHs 8270D_SIM (LVI)	Explosives 8330B	Total Cyanide 9012B	Free Cyanide 4500_CN_I	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	B	B		
LL4MW-200-042417-GW	4/24/17	1007	G	W	N		X		X		3	
LL4MW-193-042417-GW	4/24/17	1140	G	W	N			X	X	X	4	
~~MS MW-193-D~~ KSK												
MS LL4MW-193-042417-GW	4/24/17	1140	G	W	N	Y		X	X	X	4	
MSD LL4MW-193-042417-GW	4/24/17	1140	G	W	N	Y		X	X	X	4	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: J. Mcentee for TW	Date/Time: 4/24/17	Company: ATC	Received by:	Date/Time: 4/24/17 1455	Company: TAL		
Relinquished by:	Date/Time:	Company	Received by: Reed Pratt	Date/Time: 4-25-17 0900	Company: TAN		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Cardno TEC, Inc

Job Number: 280-96291-1

Login Number: 96291
List Number: 1
Creator: Pottruff, Reed W

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.	True	
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	