ANALYTICAL REPORT

Job Number: 240-103914-1

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

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

Attention: Rita Schmon-Stasik

Approved for release.
Donna R Rydberg
Senior Project Manager
11/23/2018 12:30 PM

Donna R Rydberg, Senior Project Manager
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0192
donna.rydberg@testamericainc.com
11/23/2018

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

The Lab Certification ID# is 4025.

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

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Qualifiers

HPLC/IC

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

Glossary

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

CASE NARRATIVE

Client: Leidos, Inc.

Project: Leidos RFP# 001088 - Ravenna AAP-66

Report Number: 240-103914-1

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 sample was received on 11/6/2018 at 11:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

NITROAROMATICS AND NITRAMINES (HPLC)

Sample LL7mw-006-181001-GW (240-103914-1) was analyzed for Nitroaromatics and Nitramines (HPLC) in accordance with 8330B. The samples were prepared on 11/09/2018 and analyzed on 11/13/2018.

The continuing calibration verification (CCV) associated with batch 280-437323 recovered above the upper control limit for Tetryl. The samples associated with this CCV were non-detects for the affected analytes; 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.

Detection Summary

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

TestAmerica Job ID: 240-103914-1

Client Sample ID: LL7mw-006-181001-GW

Lab Sample ID: 240-103914-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
HMX	0.33	J M	0.42	0.091	ug/L	1		8330B	Total/NA
RDX	0.72	M	0.21	0.055	ug/L	1		8330B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LL7mw-006-181001-GW **Lab Sample ID: 240-103914-1**
Date Collected: 11/06/18 09:20 **Matrix: Water**
Date Received: 11/06/18 11:15

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		11/09/18 12:02	11/13/18 13:34	1
1,3-Dinitrobenzene	0.21	U	0.42	0.092	ug/L		11/09/18 12:02	11/13/18 13:34	1
2,4,6-Trinitrotoluene	0.21	U	0.42	0.075	ug/L		11/09/18 12:02	11/13/18 13:34	1
2,4-Dinitrotoluene	0.21	U	0.42	0.087	ug/L		11/09/18 12:02	11/13/18 13:34	1
2,6-Dinitrotoluene	0.21	U M	0.21	0.067	ug/L		11/09/18 12:02	11/13/18 13:34	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.053	ug/L		11/09/18 12:02	11/13/18 13:34	1
2-Nitrotoluene	0.21	U	0.42	0.089	ug/L		11/09/18 12:02	11/13/18 13:34	1
3-Nitrotoluene	0.21	U	0.42	0.087	ug/L		11/09/18 12:02	11/13/18 13:34	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.060	ug/L		11/09/18 12:02	11/13/18 13:34	1
4-Nitrotoluene	0.42	U M	1.0	0.21	ug/L		11/09/18 12:02	11/13/18 13:34	1
HMX	**0.33**	**J M**	0.42	0.091	ug/L		11/09/18 12:02	11/13/18 13:34	1
Nitrobenzene	0.21	U	0.42	0.095	ug/L		11/09/18 12:02	11/13/18 13:34	1
Nitroglycerin	2.1	U	3.1	0.96	ug/L		11/09/18 12:02	11/13/18 13:34	1
PETN	1.3	U	2.1	0.43	ug/L		11/09/18 12:02	11/13/18 13:34	1
RDX	**0.72**	**M**	0.21	0.055	ug/L		11/09/18 12:02	11/13/18 13:34	1
Tetryl	0.21	U Q	0.25	0.083	ug/L		11/09/18 12:02	11/13/18 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*108*		*83 - 119*	*11/09/18 12:02*	*11/13/18 13:34*	*1*

Default Detection Limits

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

TestAmerica Job ID: 240-103914-1

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

Surrogate Summary

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

TestAmerica Job ID: 240-103914-1

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	12DNB1 (83-119)								
240-103914-1	LL7mw-006-181001-GW	108								
LCS 280-436978/2-A	Lab Control Sample	106								
LCSD 280-436978/3-A	Lab Control Sample Dup	102								
MB 280-436978/1-A	Method Blank	101								

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-436978/1-A
Matrix: Water
Analysis Batch: 437323

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436978

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		11/09/18 12:02	11/13/18 11:39	1
1,3-Dinitrobenzene	0.20	U	0.40	0.089	ug/L		11/09/18 12:02	11/13/18 11:39	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.072	ug/L		11/09/18 12:02	11/13/18 11:39	1
2,4-Dinitrotoluene	0.20	U	0.40	0.084	ug/L		11/09/18 12:02	11/13/18 11:39	1
2,6-Dinitrotoluene	0.20	U	0.20	0.065	ug/L		11/09/18 12:02	11/13/18 11:39	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.051	ug/L		11/09/18 12:02	11/13/18 11:39	1
2-Nitrotoluene	0.20	U M	0.40	0.086	ug/L		11/09/18 12:02	11/13/18 11:39	1
3-Nitrotoluene	0.20	U	0.40	0.083	ug/L		11/09/18 12:02	11/13/18 11:39	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.058	ug/L		11/09/18 12:02	11/13/18 11:39	1
4-Nitrotoluene	0.40	U M	1.0	0.20	ug/L		11/09/18 12:02	11/13/18 11:39	1
HMX	0.20	U	0.40	0.088	ug/L		11/09/18 12:02	11/13/18 11:39	1
Nitrobenzene	0.20	U	0.40	0.091	ug/L		11/09/18 12:02	11/13/18 11:39	1
Nitroglycerin	2.0	U	3.0	0.92	ug/L		11/09/18 12:02	11/13/18 11:39	1
PETN	1.2	U	2.0	0.42	ug/L		11/09/18 12:02	11/13/18 11:39	1
RDX	0.12	U	0.20	0.052	ug/L		11/09/18 12:02	11/13/18 11:39	1
Tetryl	0.20	U	0.24	0.079	ug/L		11/09/18 12:02	11/13/18 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*101*		*83 - 119*	*11/09/18 12:02*	*11/13/18 11:39*	*1*

Lab Sample ID: LCS 280-436978/2-A
Matrix: Water
Analysis Batch: 437323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436978

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			2.00	2.23		ug/L		112	73 - 125		
1,3-Dinitrobenzene			2.00	2.16		ug/L		108	78 - 120		
2,4,6-Trinitrotoluene			2.00	2.08		ug/L		104	71 - 123		
2,4-Dinitrotoluene			2.00	2.07		ug/L		103	78 - 120		
2,6-Dinitrotoluene			2.00	2.06		ug/L		103	77 - 127		
2-Amino-4,6-dinitrotoluene			2.00	2.03		ug/L		102	79 - 120		
2-Nitrotoluene			2.00	1.98		ug/L		99	70 - 127		
3-Nitrotoluene			2.00	1.89		ug/L		95	73 - 125		
4-Amino-2,6-dinitrotoluene			2.00	1.87		ug/L		93	76 - 125		
4-Nitrotoluene			2.00	2.13		ug/L		107	71 - 127		
HMX			2.00	2.20		ug/L		110	65 - 135		
Nitrobenzene			2.00	2.09		ug/L		104	65 - 134		
Nitroglycerin			20.0	22.1		ug/L		110	74 - 127		
PETN			20.0	21.2		ug/L		106	73 - 127		
RDX			2.00	2.15		ug/L		108	68 - 130		
Tetryl			2.00	2.33		ug/L		116	64 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*106*		*83 - 119*

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

Lab Sample ID: LCSD 280-436978/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 437323
Prep Batch: 436978

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			2.00	2.11		ug/L		106	73 - 125	5	20
1,3-Dinitrobenzene			2.00	2.04		ug/L		102	78 - 120	6	20
2,4,6-Trinitrotoluene			2.00	1.97		ug/L		98	71 - 123	5	20
2,4-Dinitrotoluene			2.00	1.94		ug/L		97	78 - 120	7	20
2,6-Dinitrotoluene			2.00	1.98		ug/L		99	77 - 127	4	20
2-Amino-4,6-dinitrotoluene			2.00	1.88		ug/L		94	79 - 120	8	20
2-Nitrotoluene			2.00	1.88		ug/L		94	70 - 127	6	20
3-Nitrotoluene			2.00	1.78		ug/L		89	73 - 125	6	20
4-Amino-2,6-dinitrotoluene			2.00	1.71		ug/L		86	76 - 125	9	20
4-Nitrotoluene			2.00	2.07		ug/L		103	71 - 127	3	20
HMX			2.00	2.09		ug/L		105	65 - 135	5	20
Nitrobenzene			2.00	1.94		ug/L		97	65 - 134	7	20
Nitroglycerin			20.0	20.8		ug/L		104	74 - 127	6	20
PETN			20.0	20.1		ug/L		101	73 - 127	5	20
RDX			2.00	2.06		ug/L		103	68 - 130	4	20
Tetryl			2.00	2.16		ug/L		108	64 - 128	8	20

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

QC Association Summary

Client: Leidos, Inc.
TestAmerica Job ID: 240-103914-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

HPLC/IC

Prep Batch: 436978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-103914-1	LL7mw-006-181001-GW	Total/NA	Water	3535	
MB 280-436978/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-436978/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-436978/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 437323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-103914-1	LL7mw-006-181001-GW	Total/NA	Water	8330B	436978
MB 280-436978/1-A	Method Blank	Total/NA	Water	8330B	436978
LCS 280-436978/2-A	Lab Control Sample	Total/NA	Water	8330B	436978
LCSD 280-436978/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	436978

Lab Chronicle

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

TestAmerica Job ID: 240-103914-1

Client Sample ID: LL7mw-006-181001-GW

Date Collected: 11/06/18 09:20
Date Received: 11/06/18 11:15

Lab Sample ID: 240-103914-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			436978	11/09/18 12:02	CBB	TAL DEN
Total/NA	Analysis	8330B		1	437323	11/13/18 13:34	HKF	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: Leidos, Inc. TestAmerica Job ID: 240-103914-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18 *
Minnesota	NELAP	5	039-999-348	12-31-18 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18 *

Laboratory: TestAmerica Denver

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

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

Analysis Method	Prep Method	Matrix	Analyte

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

Method Summary

Client: Leidos, Inc. TestAmerica Job ID: 240-103914-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Method	Method Description	Protocol	Laboratory
8330B	Nitroaromatics and Nitramines (HPLC)	EPA	TAL DEN
3535	Solid-Phase Extraction (SPE)	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: Leidos, Inc.
TestAmerica Job ID: 240-103914-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-103914-1	LL7mw-006-181001-GW	Water	11/06/18 09:20	11/06/18 11:15

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 433312

Lab Sample ID: IC 280-433312/10 Client Sample ID:

Date Analyzed: 10/13/18 18:08 Lab File ID: 10130010.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:52

Lab Sample ID: IC 280-433312/11 Client Sample ID:

Date Analyzed: 10/13/18 18:43 Lab File ID: 10130011.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:51

Lab Sample ID: IC 280-433312/13 Client Sample ID:

Date Analyzed: 10/13/18 19:53 Lab File ID: 10130013.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:58
2,4,6-Trinitrotoluene	24.74	Baseline Smoothing	fiedlerh	10/14/18 13:58

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 433312

Lab Sample ID: IC 280-433312/14 Client Sample ID:

Date Analyzed: 10/13/18 20:28 Lab File ID: 10130014.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.14	Baseline Smoothing	fiedlerh	10/14/18 13:55
RDX	9.22	Baseline Smoothing	fiedlerh	10/14/18 13:56
Nitrobenzene	12.16	Baseline Smoothing	fiedlerh	10/14/18 13:56
1,2-Dinitrobenzene	13.16	Baseline Smoothing	fiedlerh	10/14/18 13:58
3,5-Dinitroaniline	15.12	Baseline Smoothing	fiedlerh	10/14/18 13:56
1,3-Dinitrobenzene	15.72	Baseline Smoothing	fiedlerh	10/14/18 13:53
2-Nitrotoluene	16.50	Baseline Smoothing	fiedlerh	10/14/18 13:57
4-Nitrotoluene	16.82	Baseline Smoothing	fiedlerh	10/14/18 13:57
4-Amino-2,6-dinitrotoluene	17.22	Baseline Smoothing	fiedlerh	10/14/18 13:57
3-Nitrotoluene	17.74	Baseline Smoothing	fiedlerh	10/14/18 13:56
2-Amino-4,6-dinitrotoluene	18.26	Baseline Smoothing	fiedlerh	10/14/18 13:56
2,6-Dinitrotoluene	19.84	Baseline Smoothing	fiedlerh	10/14/18 13:57
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:57
2,4,6-Trinitrotoluene	24.75	Baseline Smoothing	fiedlerh	10/14/18 13:57
PETN	25.15	Baseline Smoothing	fiedlerh	10/14/18 13:57

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 437787

Lab Sample ID: CCV 280-437787/51 Client Sample ID:

Date Analyzed: 11/15/18 16:16 Lab File ID: 11140051.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.56	Peak assignment corrected	fiedlerh	11/16/18 09:15

Lab Sample ID: 240-103914-1 Client Sample ID: LL7mw-006-181001-GW

Date Analyzed: 11/15/18 16:51 Lab File ID: 052-4901.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3-Nitrotoluene	17.68	Baseline Smoothing	fiedlerh	11/16/18 09:19

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 437323

Lab Sample ID: MB 280-436978/1-A Client Sample ID:

Date Analyzed: 11/13/18 11:39 Lab File ID: 11130009.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene		Invalid Compound ID	fiedlerh	11/13/18 13:36
4-Nitrotoluene		Invalid Compound ID	fiedlerh	11/13/18 13:36

Lab Sample ID: 240-103914-1 Client Sample ID: LL7mw-006-181001-GW

Date Analyzed: 11/13/18 13:34 Lab File ID: 11130014.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.65	Baseline Smoothing	fiedlerh	11/13/18 13:36
RDX	7.77	Baseline Smoothing	fiedlerh	11/13/18 13:36
2,6-Dinitrotoluene		Invalid Compound ID	fiedlerh	11/13/18 13:36
4-Nitrotoluene		Invalid Compound ID	fiedlerh	11/13/18 13:36

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330 LCS_00078	04/30/18	02/08/18	Acetonitrile, Lot ACN_00209	100 mL	8330 LCSMix2_00102	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00061	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00062	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00069	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00070	1 mL	PETN	100 ug/mL
					8330LCSMix1_00097	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
.8330 LCSMix2_00102	02/08/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00061	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00062	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00069	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00070	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00097	02/08/19		Restek, Lot A0122924		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
8330 LCS_00081	06/28/19	06/13/18	Acetonitrile, Lot ACN_00204	100 mL	8330 LCSMix2_00103	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00057	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00063	1 mL	Nitroglycerin	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330_PETN_Stk_00049	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00066	1 mL	PETN	100 ug/mL
					8330LCSMix1_00102	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
.8330 LCSMix2_00103	11/30/21		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00057	07/31/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00063	07/31/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00049	06/30/19		Restek, Lot A0120082		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00066	05/31/20		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00102	06/20/22		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
8330 LCS_00082	09/07/19	09/07/18	Acetonitrile, Lot ACN_00215	100 mL	8330 LCSMix2_00104	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00067	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00068	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00067	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00068	1 mL	PETN	100 ug/mL
					8330LCSMix1_00105	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					PicricARestek_00080	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00104	09/07/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00067	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00068	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00067	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00068	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00105	09/07/19		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00080	09/07/19		Restek, Lot A0105913		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330_ADDs_00017	03/01/19	07/23/18	Acetonitrile, Lot 184115	5 mL	3,5-DNA Stock_00029	0.1 mL	3,5-Dinitroaniline	20 ug/mL
.3,5-DNA Stock_00029	02/28/22		Restek, Lot A0129440		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
8330IntermStk_00055	07/14/18	05/02/18	Acetonitrile, Lot 184115	10 mL	8330ICALStock_00026	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10.01 ug/mL
							2,4,6-Trinitrotoluene	10.04 ug/mL
							2,4-Dinitrotoluene	10.02 ug/mL
							2,6-Dinitrotoluene	10.03 ug/mL
							2-Amino-4,6-dinitrotoluene	10.03 ug/mL
							2-Nitrotoluene	10.03 ug/mL
							3-Nitrotoluene	10.04 ug/mL
							4-Amino-2,6-dinitrotoluene	10.03 ug/mL
							4-Nitrotoluene	10.04 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10.02 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00054	1 mL	2,4,6-Trinitrophenol	10 ug/mL
					NG__00002	1 mL	Nitroglycerin	100 ug/mL
					PETN_00002	1 mL	PETN	100 ug/mL
.8330ICALStock_00026	07/14/18	07/14/17	Acetonitrile, Lot ACN_00178	10 mL	8330 Stock_TS_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330PAStkPS_00056	1 mL	2,4,6-Trinitrophenol	20 ug/mL
.8330_NG_Stk_00051	01/01/20		Restek, Lot A0124122		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00053	01/01/20		Restek, Lot A0124124		(Purchased Reagent)		PETN	5000 ug/mL
.8330ICALStock_00028	07/16/19	07/16/18	Acetonitrile, Lot ACN_194301	10 mL	8330 Stock_TS_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00162	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00011	04/30/20		Ultra Scientific, Lot CR-1002		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00162	08/15/24		AccuStandard, Lot 214081391		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00056	04/12/20		AccuStandard, Lot 218031154		(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
8330Surrogate_00098	03/01/19	03/01/18	Acetonitrile, Lot ACN_00210	500 mL	8330SurrStkSS_00123	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00124	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00125	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00126	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00127	1 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00123	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00124	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00125	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00126	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00127	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00100	03/07/19	09/07/18	Acetonitrile, Lot ACN_00215	500 mL	8330SurrStkSS_00130	1 mL	1,2-Dinitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00131	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00132	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00133	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00141	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00130	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00131	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00132	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00133	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00141	09/07/19		Restek, Lot A0131413		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL

Reagent

3,5-DNA Stock_00029

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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. : 31661 **Lot No.:** A0129440

Description : 3,5-Dinitroaniline Standard

3, 5-Dinitroaniline Std 1000µg/mL, Acetonitrile, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

X2

500 & 50 / 57

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	3,5-Dinitroaniline (Lot 10311HS)	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 618-87-1		+/- 30.3937	µg/mL	Unstressed
	Purity 99%		+/- 30.3937	µg/mL	Stressed

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

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

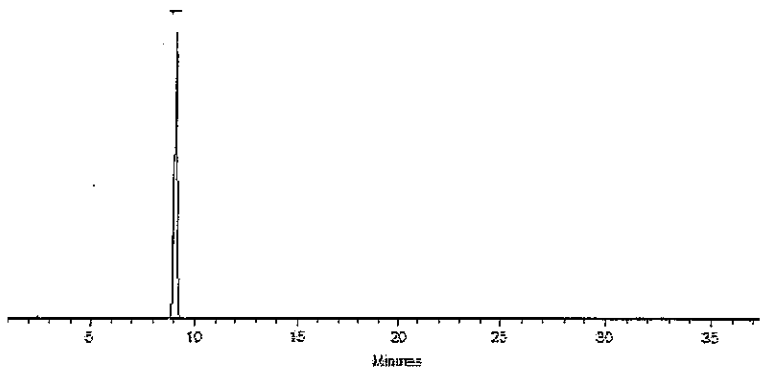
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 26-Jul-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Jul-2017

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

Reagent

8330 LCS_00078

*Standard is in the Explosives Room fridge *

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00078

Reagent ID: 8330 LCS_00078

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

OK HKF 2 15 18

Reagent Analyte Information

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00078

Reagent ID: 8330 LCS_00078

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

Reagent Analyte Information

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

Source Reagents

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

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

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

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

Worklist ID: 280-0067233-022 Instrument: CHHPLC_X3

Method: 8330_X3

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

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

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

550-97324-A-12-A

Reagent

8330 LCS_00081

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180614-71018.b\06140009.D

Lims ID: 8330 LCS%O00081 Inj. Date: 14-Jun-2018 18:11:46

Worklist ID: 280-0071018-009 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	
2 HMX	0.2000	0.1930	96.5	66-115
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	
4 MNX	0	*ND	0.0	50-150
5 RDX	0.2000	0.1983	99.1	69-122
6 2,4,6-Trinitrophenol	0	0.1765	0.0	* 63-135
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	78-119
8 1,3,5-Trinitrobenzene	0.2000	0.2075	103.7	62-127
9 1,3-Dinitrobenzene	0.2000	0.1986	99.3	59-131
11 Nitrobenzene	0.2000	0.1962	98.1	46-144
10 3,5-Dinitroaniline	0	*ND	0.0	86-118
12 Tetryl	0.2000	0.2027	101.3	56-131
13 Nitroglycerin	2.00	2.03	101.3	70-125
14 2,4,6-Trinitrotoluene	0.2000	0.1803	90.1	46-139
15 4-Amino-2,6-dinitrotolu	0.2000	0.1881	94.1	43-120
16 2-Amino-4,6-dinitrotolu	0.2000	0.1906	95.3	46-124
17 2,6-Dinitrotoluene	0.2000	0.1825	91.2	51-130
18 2,4-Dinitrotoluene	0.2000	0.1910	95.5	53-127
19 o-Nitrotoluene	0.2000	0.1874	93.7	37-138
20 p-Nitrotoluene	0.2000	0.1955	97.7	41-137
21 m-Nitrotoluene	0.2000	0.1858	92.9	31-140
22 PETN	2.00	1.91	95.4	67-127

OK (LH) 6/15/18

Samples for Limit Group: 1, Lims Prep Method: 8330B_Sonc_10g

280-110156-A-1-A 280-110156-A-2-A 280-110156-A-3-A

280-110156-A-5-A 280-110156-A-4-A

Reagent

8330 LCS_00082

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00082

OK HKF 9/12/18

Reagent ID: 8330 LCS_00082

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

Reagent Analyte Information

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

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

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

Lims ID: 8330 LCS%O00082 Inj. Date: 11-Sep-2018 20:36:26

Worklist ID: 280-0073899-010 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	80-150	
25 TNX	0	*ND	0.0	50-150	
2 HMX	0.4000	0.3899	97.5	66-115	65-135
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	70-150	
24 DNX	0	*ND	0.0	50-150	
4 MNX	0	*ND	0.0	68-123	50-150
5 RDX	0.4000	0.3916	97.9	69-122	68-130
6 2,4,6-Trinitrophenol	0.4000	0.3998	100.0	63-135	80-120
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	63-127	83-119
8 1,3,5-Trinitrobenzene	0.4000	0.4096	102.4	62-127	73-125
9 1,3-Dinitrobenzene	0.4000	0.4033	100.8	59-131	78-120
11 Nitrobenzene	0.4000	0.4045	101.1	46-144	65-134
10 3,5-Dinitroaniline	0	*ND	0.0	55-119	71-117
12 Tetryl	0.4000	0.4274	106.9	56-131	64-128
13 Nitroglycerin	4.00	3.97	99.4	70-125	74-127
14 2,4,6-Trinitrotoluene	0.4000	0.3842	96.1	46-139	71-123
15 4-Amino-2,6-dinitrotolu	0.4000	0.3737	93.4	43-120	76-125
16 2-Amino-4,6-dinitrotolu	0.4000	0.3998	100.0	46-124	79-120
17 2,6-Dinitrotoluene	0.4000	0.3828	95.7	51-130	77-127
18 2,4-Dinitrotoluene	0.4000	0.3881	97.0	53-127	78-120
19 o-Nitrotoluene	0.4000	0.3903	97.6	37-138	70-127
20 p-Nitrotoluene	0.4000	0.4065	101.6	41-137	71-127
21 m-Nitrotoluene	0.4000	0.3886	97.1	31-140	73-125
22 PETN	4.00	3.95	98.7	67-127	73-127

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

680-157496-D-1-B	680-157496-D-2-B	680-157496-D-3-B
680-157496-D-4-B	680-157496-D-5-B	680-157496-D-6-B
680-157496-D-7-B	680-157496-D-8-B	680-157496-D-9-B
490-158536-D-1-B	490-158590-A-1-B	490-158590-A-2-B
600-171866-C-1-B	280-113921-A-1-B	

Samples for Limit Group: 2, Lims Prep Method: 3535

160-30545-A-1-B	160-30545-A-6-B	160-30545-A-7-B

Reagent

8330 LCSMix2_00102

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. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

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

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

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl		1,000.0	µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 479-45-8	(Lot 091120JLM)			+/- 54.7830	µg/mL	Unstressed
	Purity 99%				+/- 63.8824	µg/mL	Stressed
2	4-Amino-2,6-dinitrotoluene		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 54.8926	µg/mL	Unstressed
	Purity 99%				+/- 64.0101	µg/mL	Stressed
3	2-Amino-4,6-dinitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot 29550-55)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
4	2,6-Dinitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
5	2-Nitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot GA01)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
6	4-Nitrotoluene		1,001.0	µg/mL	+/- 5.9459	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot FAU01)			+/- 54.8400	µg/mL	Unstressed
	Purity 97%				+/- 63.9488	µg/mL	Stressed
7	3-Nitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed

Reagent

8330 LCSMix2_00103

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

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

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

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl **CAS #** 479-45-8 **Purity** 99%	(Lot 091120JLM)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL		Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot 29550-55)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot GA01)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 97%	(Lot FAU01)	1,001.0 µg/mL	+/- 5.9459 µg/mL +/- 54.8400 µg/mL +/- 63.9488 µg/mL		Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed

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

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

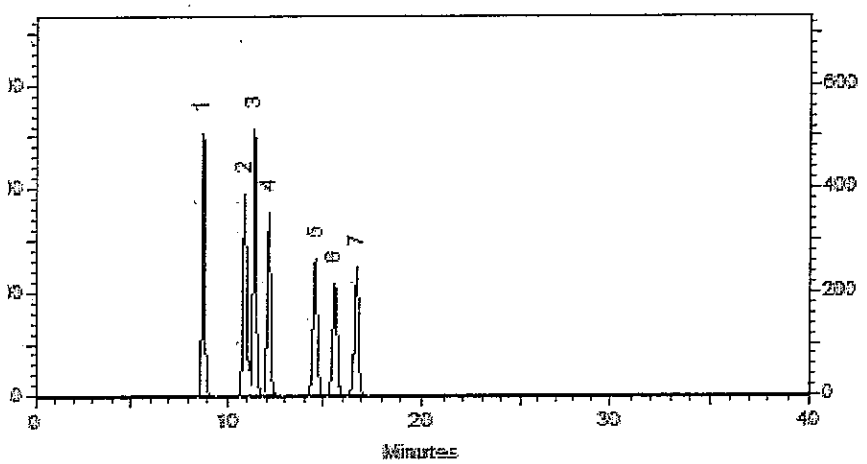
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 06-Nov-2016 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Nov-2016

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

Reagent

8330 LCSMix2_00104

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

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

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

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Tetryl **CAS #** 479-45-8 (Lot 091120JLM) **Purity** 99%	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 (Lot ER070908-01) **Purity** 99%	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 (Lot 29550-55) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 (Lot 1437483V) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 (Lot GA01) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 (Lot FAU01) **Purity** 97%	1,001.0 µg/mL	+/- 5.9459 µg/mL +/- 54.8400 µg/mL +/- 63.9488 µg/mL	Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 (Lot 07329LG) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed

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

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

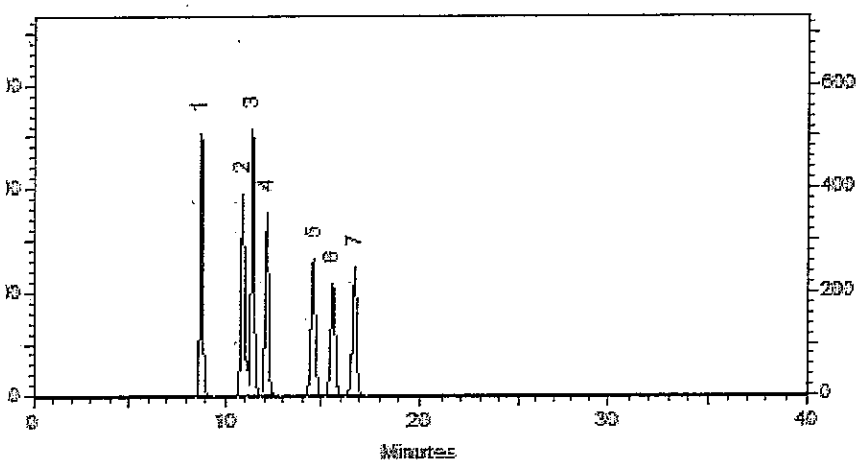
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 06-Nov-2016 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Nov-2016

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

Reagent

8330 Stock_TS_00009

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

Combined Stock Solution

Product Number: NAIM-833E **Page:** 1 of 1

Lot Number: CR-1002 **Lot Issue Date:** 10-Mar-2017 **Expiration Date:** 30-Apr-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
HMX	002691-41-0	RM06237	1000 ± 5 µg/mL
RDX	000121-82-4	RM10915	1000 ± 5 µg/mL
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 ± 5 µg/mL
m-dinitrobenzene	000099-65-0	RM04448	1001 ± 5 µg/mL
nitrobenzene	000098-95-3	RM11472	1002 ± 5 µg/mL
2,4,6-trinitrotoluene (TNT)	000118-96-7	RM11972	1004 ± 5 µg/mL
2,4-dinitrotoluene	000121-14-2	RM01209	1002 ± 5 µg/mL
tetryl	000479-45-8	RM12295	1000 ± 5 µg/mL
2,6-dinitrotoluene	000606-20-2	RM10763	1003 ± 5 µg/mL
2-nitrotoluene	000088-72-2	NT01996	1003 ± 5 µg/mL
3-nitrotoluene	000099-08-1	NT02212	1004 ± 5 µg/mL
4-nitrotoluene	000099-99-0	NT02096	1004 ± 5 µg/mL
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1003 ± 5 µg/mL
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 ± 5 µg/mL

Matrix: acetonitrile

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

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

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ISO 9001
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TUV USA, Inc.

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Reagent

8330_NG_Stk_00057

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

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

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

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

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

Reagent

8330_NG_Stk_00061

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

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

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

Reagent

8330_NG_Stk_00062

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

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

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

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

Reagent

8330_NG_Stk_00063

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Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

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

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

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

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

Reagent

8330_NG_Stk_00067

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

Catalog No. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

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

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

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

Reagent

8330_NG_Stk_00068

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Catalog No. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

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

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

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

Reagent

8330_PETN_Stk_00049

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

Catalog No. : 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_00066

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Certificate of Composition

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	PETN	5,028.0 µg/mL	+/- 46.7577 µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886 µg/mL	Unstressed
	Purity 99%		+/- 323.2092 µg/mL	Stressed

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

Reagent

8330_PETN_Stk_00067

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	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

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

Reagent

8330_PETN_Stk_00068

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

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

CERTIFIED VALUES

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1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

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

Reagent

8330_PETN_Stk_00069

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

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1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

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

Reagent

8330_PETN_Stk_00070

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Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

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

Reagent

8330LCSMix1_00097

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31450 **Lot No.:** A0122924

Description : 8330 Calibration Mix #1

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

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

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

5

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	HMX **CAS #** 2691-41-0 **Purity** 98%	(Lot 111005JLM)	999.6 µg/mL	+/- 5.9373 +/- 54.7611 +/- 63.8568	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 **Purity** 99%	(Lot 080220JLM)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 **Purity** 99%	(Lot UNVVB)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBB1436V)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot 2554100)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

8330LCSMix1_00102

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

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CERTIFIED REFERENCE MATERIAL

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31450 **Lot No.:** A0128688

Description : 8330 Calibration Mix #1

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

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

Expiration Date : June 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX		1,002.5 µg/mL	+/- 5.9548 µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 111005JLM)		+/- 54.9222 µg/mL	Unstressed
	Purity 98%			+/- 64.0446 µg/mL	Stressed
2	RDX		1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080220JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%			+/- 64.3934 µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,004.9 µg/mL	+/- 5.9689 µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)		+/- 55.0525 µg/mL	Unstressed
	Purity 97%			+/- 64.1967 µg/mL	Stressed
4	1,3-Dinitrobenzene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed
5	Nitrobenzene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 2554100)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%			+/- 64.1379 µg/mL	Stressed
7	2,4-Dinitrotoluene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed

Reagent

8330LCSMix1_00105

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31450 **Lot No.:** A0128688

Description : 8330 Calibration Mix #1

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

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

Expiration Date : June 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	HMX		1,002.5	µg/mL	+/- 5.9548	µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 111005JLM)			+/- 54.9222	µg/mL	Unstressed
	Purity 98%				+/- 64.0446	µg/mL	Stressed
2	RDX		1,008.0	µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080220JLM)			+/- 55.2213	µg/mL	Unstressed
	Purity 99%				+/- 64.3934	µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,004.9	µg/mL	+/- 5.9689	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)			+/- 55.0525	µg/mL	Unstressed
	Purity 97%				+/- 64.1967	µg/mL	Stressed
4	1,3-Dinitrobenzene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed
5	Nitrobenzene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 2554100)			+/- 55.0021	µg/mL	Unstressed
	Purity 99%				+/- 64.1379	µg/mL	Stressed
7	2,4-Dinitrotoluene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed

Reagent

8330PAStkPS_00054

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 216061376-01
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 19, 2017
Expiration: Jul 19, 2019
Sample Size: 1 mL
Components: 1

Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

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.

Reagent

8330PAStkPS_00056

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 218031154
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 12, 2018
Expiration: Apr 12, 2020
Sample Size: 1 mL
Components: 1

Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Gulde 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

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

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

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

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

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8330Surrogate_00098

IN Explosives (Prep) Fridge ☺ Thx

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00098

Reagent ID: 8330Surrogate_00098

Description:	10ug/mL 1,2-Dinitrobenzene	Expiration Date:	03/01/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Cokley, Cheyana D
Reagent Volume:	500.000 mL	Solvent:	Acetonitrile
Creation Date:	03/01/2018	Solvent Lot:	ACN_00210
Open Date:			
Container(s):	4983902, 4983903, 4983904, 4983905		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 100 mL in ACN. Mulitply recipe as needed.		

HKF 0IC 3/7/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_00123	1453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00124	1453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00125	1453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00126	1453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00127	1453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

Preliminary Report

TestAmerica Denver
ICV, ICal Verification Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 06-Mar-2018 13:40:54 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0067760-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Mar-2018 14:58:37 Calib Date: 06-Mar-2018 13:17:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

Start Cal Date: 06-Mar-2018 10:37:17
End Cal Date: 06-Mar-2018 13:17:57

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits	
2 HMX	0.4000	0.3593	-10.2	20.0	89.8		
4 MNX	0.4000	4.09	*923.6	20.0	1023.6		
5 RDX	0.4000	0.3939	-1.5	20.0	98.5		
6 2,4,6-Trinitrophen	0.4000	0.3960	-1.0	20.0	99.0		
$ 7 1,2-Dinitrobenzene	0.4000	0.3986	-0.4	20.0	99.6	———	8330 Surr_0094 used
8 1,3,5-Trinitrobenz	0.4000	0.4025	0.6	20.0	100.6		
9 1,3-Dinitrobenzene	0.4000	0.4001	0.0	20.0	100.0		
11 Nitrobenzene	0.4000	0.3982	-0.5	20.0	99.5		
12 Tetryl	0.4000	0.3934	-1.7	20.0	98.3		
14 2,4,6-Trinitrotolu	0.4000	0.3669	-8.3	20.0	91.7		
15 4-Amino-2,6-dinitr	0.4000	0.3788	-5.3	20.0	94.7		
16 2-Amino-4,6-dinitr	0.4000	0.3896	-2.6	20.0	97.4		
17 2,6-Dinitrotoluene	0.4000	0.3828	-4.3	20.0	95.7		
18 2,4-Dinitrotoluene	0.4000	0.3932	-1.7	20.0	98.3		
19 o-Nitrotoluene	0.4000	0.3947	-1.3	20.0	98.7		
20 p-Nitrotoluene	0.4000	0.4066	1.6	20.0	101.6		
21 m-Nitrotoluene	0.4000	0.3880	-3.0	20.0	97.0		

Reagent

8330Surrogate_00100

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00100

Reagent ID: 8330Surrogate_00100

		Expiration Date:	03/01/2019
Description:	10ug/mL 1,2-Dinitrobenzene	Laboratory:	TestAmerica Denver
No. of Bottles:	4	Prepared By:	Carroll, Randall P
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	500.000 mL	Solvent Lot:	ACN_00210
Creation Date:	09/07/2018		
Open Date:			
Container(s):	5297535, 5297536, 5297537, 5297538		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 10(mL in ACN. Mulitply recipe as needed.		

OL HKF 9/12/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_00123	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00124	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00125	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00126	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00127	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

In EXP freezer

in O prep

Preliminary Report

TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110009.D				
Lims ID:	8330S+U+R+R+O+G+A+T+E%O00100				
Client ID:					
Sample Type:	Client				
Inject. Date:	11-Sep-2018 20:13:27	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	8330S+U+R+R+O+G+				
Misc. Info.:	280-0073899-009				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	12-Sep-2018 10:03:24	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK011				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.4000	0.4053	101.33

Reagent

8330SurrStkSS_00123

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00124

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00125

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00126

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00127

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00130

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00131

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00132

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00133

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

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00141

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31453 **Lot No.:** A0131413

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

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

Expiration Date : October 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1,2-Dinitrobenzene	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1943	µg/mL	Unstressed
	Purity 99%		+/- 57.5086	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStock_00161

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

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

Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

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

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

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

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

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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

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

Reagent

8330SurrStock_00162

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

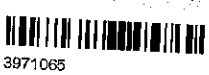
Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*

Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS



3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

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

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

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

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

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1 - Rev. 1

For use in routine laboratory analysis.

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

Reagent

PicricARestek_00080

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

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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. : 31499 **Lot No.:** A0114009

Description : Picric Acid Standard

1000µg/mL, Methanol, 1mL/ampul *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

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

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid **CAS #** 88-89-1 **Purity** 99% (Lot 06130CU)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 53.9873 µg/mL +/- 58.7028 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
This is a derivatized analysis.

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

8330B_DOD5

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): UltraCarb5u ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	12DNB1 #
LL7mw-006-181001-GW	240-103914-1	108
	MB 280-436978/1-A	101
	LCS 280-436978/2-A	106
	LCSD 280-436978/3-A	102

	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.: 240-103914-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11130010.D

Lab ID: LCS 280-436978/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.23	112	73-125	
1,3-Dinitrobenzene	2.00	2.16	108	78-120	
2,4,6-Trinitrotoluene	2.00	2.08	104	71-123	
2,4-Dinitrotoluene	2.00	2.07	103	78-120	
2,6-Dinitrotoluene	2.00	2.06	103	77-127	
2-Amino-4,6-dinitrotoluene	2.00	2.03	102	79-120	
2-Nitrotoluene	2.00	1.98	99	70-127	
3-Nitrotoluene	2.00	1.89	95	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.87	93	76-125	
4-Nitrotoluene	2.00	2.13	107	71-127	
HMX	2.00	2.20	110	65-135	
Nitrobenzene	2.00	2.09	104	65-134	
Nitroglycerin	20.0	22.1	110	74-127	
PETN	20.0	21.2	106	73-127	
RDX	2.00	2.15	108	68-130	
Tetryl	2.00	2.33	116	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11130011.D

Lab ID: LCSD 280-436978/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.11	106	5	20	73-125	
1,3-Dinitrobenzene	2.00	2.04	102	6	20	78-120	
2,4,6-Trinitrotoluene	2.00	1.97	98	5	20	71-123	
2,4-Dinitrotoluene	2.00	1.94	97	7	20	78-120	
2,6-Dinitrotoluene	2.00	1.98	99	4	20	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.88	94	8	20	79-120	
2-Nitrotoluene	2.00	1.88	94	6	20	70-127	
3-Nitrotoluene	2.00	1.78	89	6	20	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.71	86	9	20	76-125	
4-Nitrotoluene	2.00	2.07	103	3	20	71-127	
HMX	2.00	2.09	105	5	20	65-135	
Nitrobenzene	2.00	1.94	97	7	20	65-134	
Nitroglycerin	20.0	20.8	104	6	20	74-127	
PETN	20.0	20.1	101	5	20	73-127	
RDX	2.00	2.06	103	4	20	68-130	
Tetryl	2.00	2.16	108	8	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.: 240-103914-1

SDG No.:

Lab Sample ID: MB 280-436978/1-A

Matrix: Water Date Extracted: 11/09/2018 12:02

Lab File ID:(1) 11130009.D Lab File ID:(2)

Date Analyzed:(1) 11/13/2018 11:39 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 280-436978/2-A	11/13/2018 12:02	
	LCSD 280-436978/3-A	11/13/2018 12:25	
LL7mw-006-181001-GW	240-103914-1	11/13/2018 13:34	11/15/2018 16:51

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Client Sample ID: LL7mw-006-181001-GW Lab Sample ID: 240-103914-1

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 11/13/2018 13:34 Date Analyzed (2): 11/15/2018 16:51

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	6.50	6.80	0.33		7.8
	2		7.19	7.02	7.32	0.31		
RDX	1		7.77	7.60	7.90	0.72		21.6
	2		9.26	9.10	9.40	0.58		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 240-103914-1

SDG No.:

Client Sample ID: LL7mw-006-181001-GW | Lab Sample ID: 240-103914-1

Matrix: Water | Lab File ID: 11130014.D

Analysis Method: 8330B | Date Collected: 11/06/2018 09:20

Extraction Method: 3535 | Date Extracted: 11/09/2018 12:02

Sample wt/vol: 479.7(mL) | Date Analyzed: 11/13/2018 13:34

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.: 437323 | 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	0.092
118-96-7	2,4,6-Trinitrotoluene	0.21	U	0.42	0.21	0.075
121-14-2	2,4-Dinitrotoluene	0.21	U	0.42	0.21	0.087
606-20-2	2,6-Dinitrotoluene	0.21	U M	0.21	0.21	0.067
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.053
88-72-2	2-Nitrotoluene	0.21	U	0.42	0.21	0.089
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 M	1.0	0.42	0.21
2691-41-0	HMX	0.33	J M	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	0.72	M	0.21	0.13	0.055
479-45-8	Tetryl	0.21	U Q	0.25	0.21	0.083

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	108		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D
Lims ID: 240-103914-A-1-A
Client ID: LL7mw-006-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 13:34:27 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 240-103914-A-1-A
Misc. Info.: 280-0076126-014
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

First Level Reviewer: fiedlerh Date: 13-Nov-2018 13:36:37

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1	6.645	6.646	-0.001	2722	0.0320	M
	5 RDX	1	7.765	7.752	0.013	7255	0.0694	M
$	7 1,2-Dinitrobenzene	1	8.745	8.746	-0.001	27865	0.2165	
	8 1,3,5-Trinitrobenzene	1		8.906			ND	
	9 1,3-Dinitrobenzene	1		9.566			ND	
	11 Nitrobenzene	1	9.965	9.959	0.006	1424	0.007164	
	12 Tetryl	1		10.286			ND	
	13 Nitroglycerin	2		10.799			ND	
	14 2,4,6-Trinitrotoluene	1		11.252			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.426			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.712			ND	
	17 2,6-Dinitrotoluene	1		11.866			ND	U
	18 2,4-Dinitrotoluene	1		12.059			ND	
	19 o-Nitrotoluene	1		12.912			ND	
	20 p-Nitrotoluene	1		13.346			ND	U
	21 m-Nitrotoluene	1		13.952			ND	
	22 PETN	2		15.079			ND	

QC Flag Legend

Review Flags
M - Manually Integrated
U - Marked Undetected

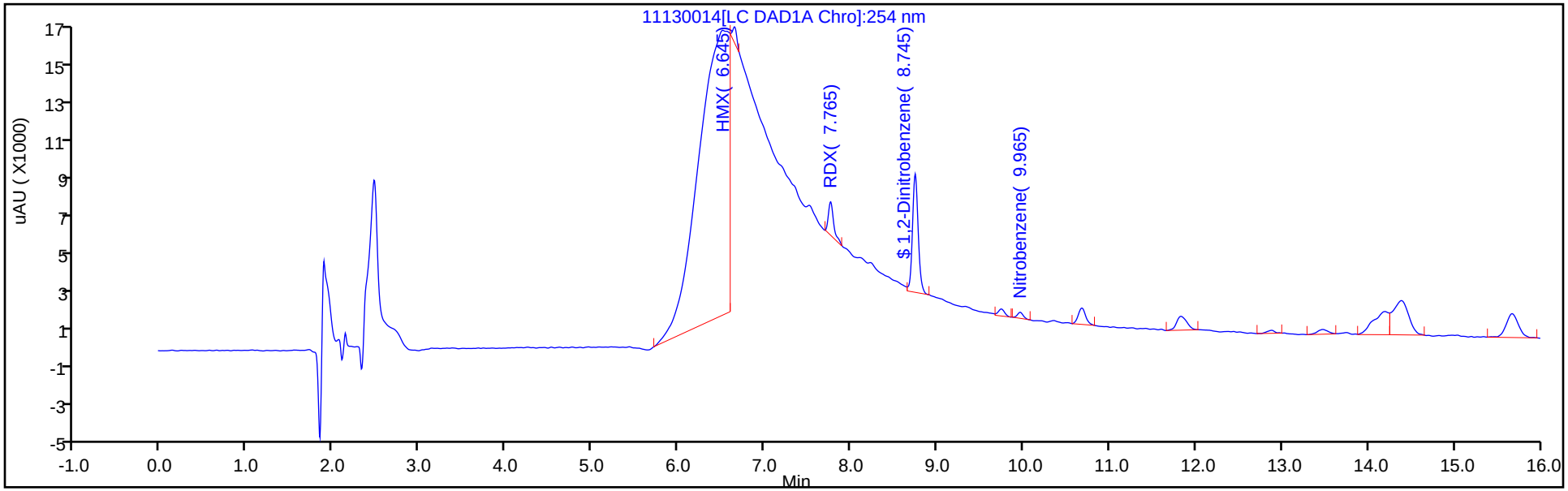
Report Date: 14-Nov-2018 08:04:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

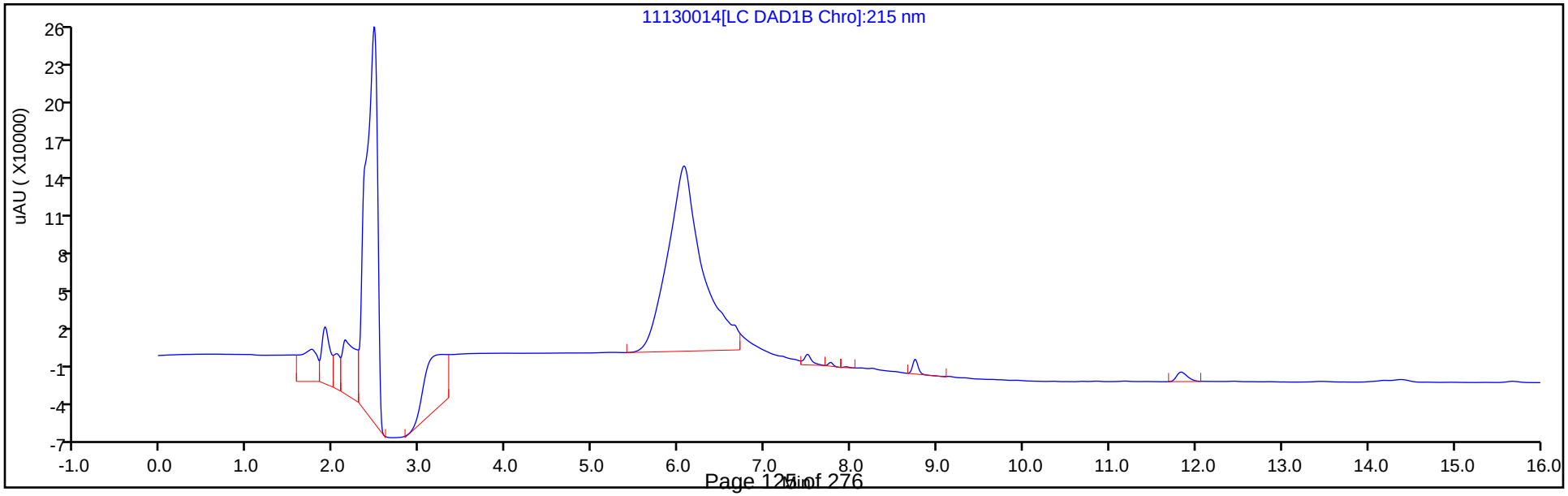
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D

Injection Date:	13-Nov-2018 13:34:27	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	240-103914-A-1-A	Lab Sample ID:	280-103914-1	Worklist Smp#:	14
Client ID:	LL7mw-006-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D
Lims ID: 240-103914-A-1-A
Client ID: LL7mw-006-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 13:34:27 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 240-103914-A-1-A
Misc. Info.: 280-0076126-014
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

First Level Reviewer: fiedlerh Date: 13-Nov-2018 13:36:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2165	108.23

User Disabled Compound Report

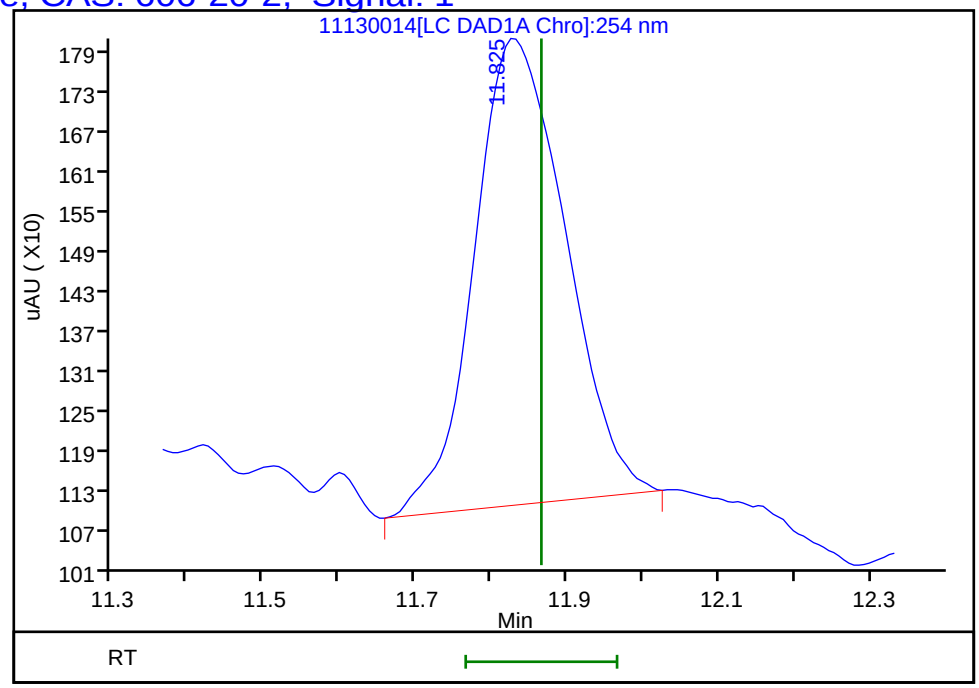
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D

Injection Date:	13-Nov-2018 13:34:27	Instrument ID:	CHHPLC_X3		
Lims ID:	240-103914-A-1-A	Lab Sample ID:	280-103914-1		
Client ID:	LL7mw-006-181001-GW				
Operator ID:	hkf	ALS Bottle#:	14	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

RT: 11.83
Response: 5911
Amount: 0.038618



Reviewer: fiedlerh, 13-Nov-2018 13:36:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

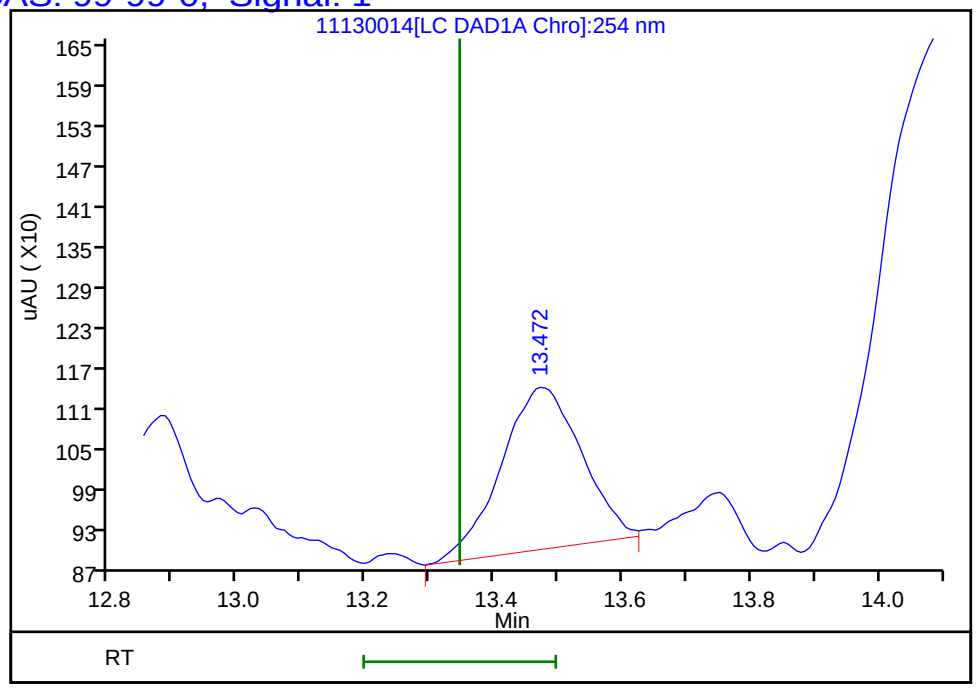
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D

Injection Date:	13-Nov-2018 13:34:27	Instrument ID:	CHHPLC_X3		
Lims ID:	240-103914-A-1-A	Lab Sample ID:	280-103914-1		
Client ID:	LL7mw-006-181001-GW				
Operator ID:	hkf	ALS Bottle#:	14	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		

20 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 13.47
Response: 2100
Amount: 0.018477



Reviewer: fiedlerh, 13-Nov-2018 13:36:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

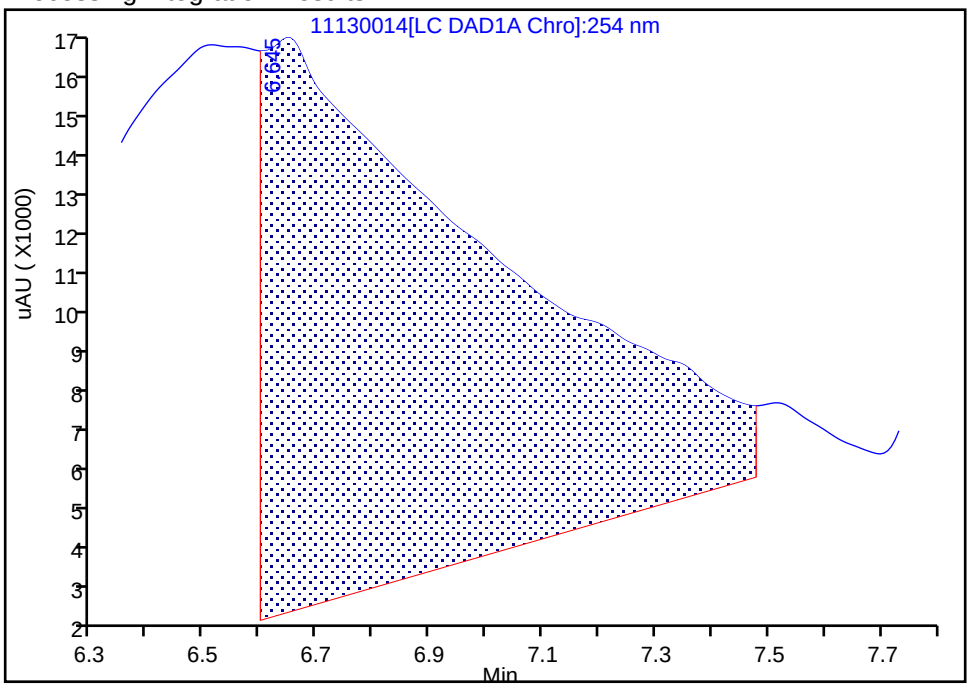
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D				
Injection Date:	13-Nov-2018 13:34:27	Instrument ID:	CHHPLC_X3		
Lims ID:	240-103914-A-1-A	Lab Sample ID:	280-103914-1		
Client ID:	LL7mw-006-181001-GW				
Operator ID:	hkf	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0

Signal: 1

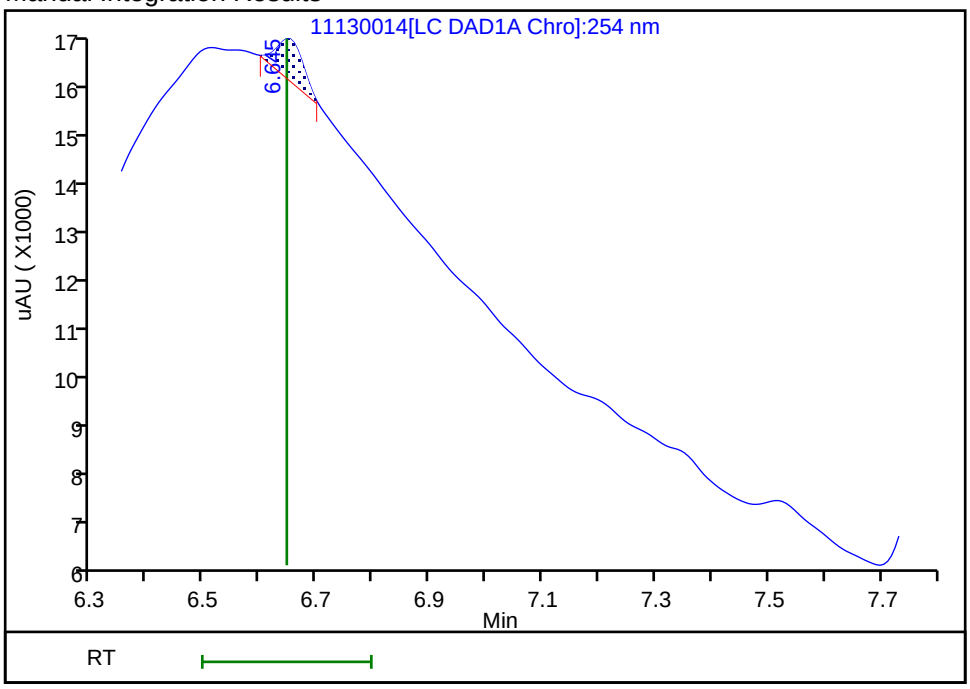
Processing Integration Results

RT: 6.65
Area: 395726
Amount: 4.658583
Amount Units: ug/mL



Manual Integration Results

RT: 6.65
Area: 2722
Amount: 0.032044
Amount Units: ug/mL



Reviewer: fiedlerh, 13-Nov-2018 13:36:23

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

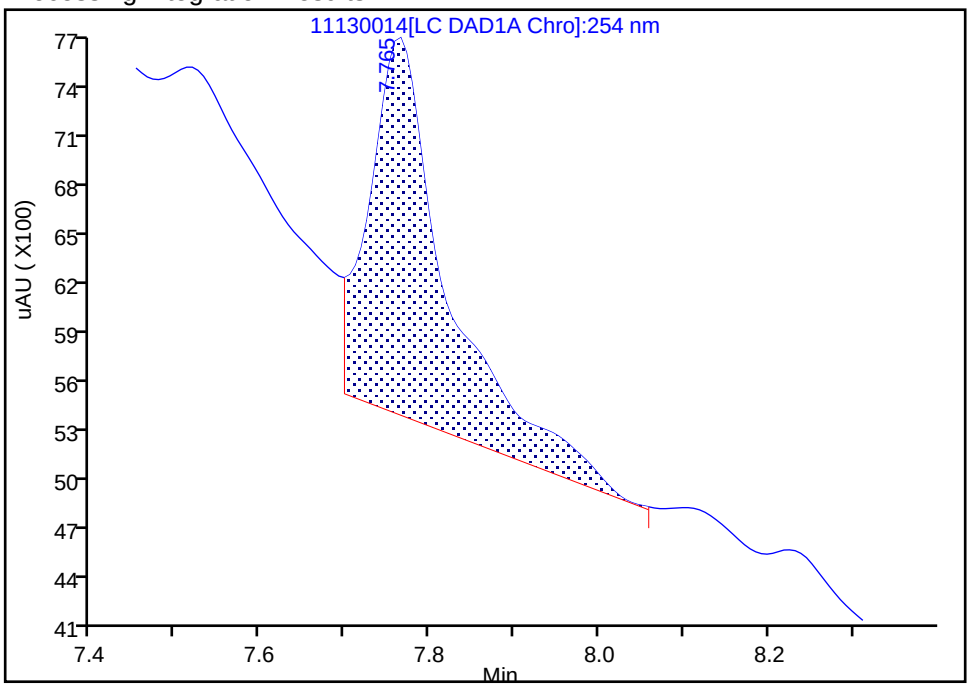
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130014.D				
Injection Date:	13-Nov-2018 13:34:27	Instrument ID:	CHHPLC_X3		
Lims ID:	240-103914-A-1-A	Lab Sample ID:	280-103914-1		
Client ID:	LL7mw-006-181001-GW				
Operator ID:	hkf	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 RDX, CAS: 121-82-4

Signal: 1

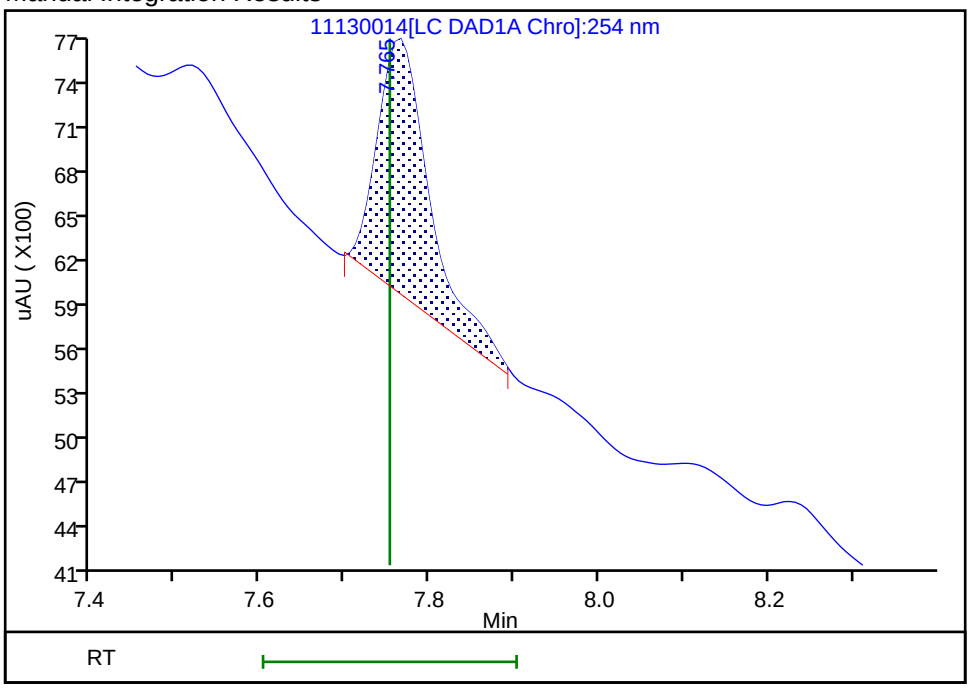
Processing Integration Results

RT: 7.77
Area: 14638
Amount: 0.139973
Amount Units: ug/mL



Manual Integration Results

RT: 7.77
Area: 7255
Amount: 0.069375
Amount Units: ug/mL



Reviewer: fiedlerh, 13-Nov-2018 13:36:28

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-433312/14	10130014.D
Level 2	IC 280-433312/13	10130013.D
Level 3	IC 280-433312/12	10130012.D
Level 4	IC 280-433312/11	10130011.D
Level 5	IC 280-433312/10	10130010.D
Level 6	IC 280-433312/9	10130009.D
Level 7	IC 280-433312/8	10130008.D
Level 8	IC 280-433312/7	10130007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Picric acid	6.216	6.184	6.146	6.109	6.081	6.046	6.016	5.925			5.931 - 6.231	6.090
HMX	7.143	7.151	7.146	7.149	7.148	7.146	7.142	7.112			6.998 - 7.298	7.142
RDX	9.223	9.224	9.219	9.222	9.221	9.219	9.209	9.165			9.071 - 9.371	9.213
Nitrobenzene	12.156	12.164	12.152	12.155	12.161	12.159	12.156	12.105			12.011 - 12.311	12.151
3,5-Dinitroaniline	15.123	15.124	15.106	15.115	15.114	15.119	15.102	15.065			14.964 - 15.264	15.109
Nitroglycerin	15.676	15.671	15.652	15.662	15.667	15.672	15.662	15.639			15.517 - 15.817	15.663
1,3-Dinitrobenzene	15.723	15.717	15.699	15.708	15.707	15.712	15.702	15.672			15.557 - 15.857	15.705
2-Nitrotoluene	16.496	16.477	16.472	16.475	16.474	16.486	16.469	16.445			16.324 - 16.624	16.474
4-Nitrotoluene	16.816	16.817	16.799	16.808	16.814	16.819	16.802	16.779			16.664 - 16.964	16.807
4-Amino-2,6-dinitrotoluene	17.223	17.224	17.212	17.215	17.221	17.232	17.209	17.185			17.071 - 17.371	17.215
3-Nitrotoluene	17.736	17.717	17.712	17.715	17.721	17.732	17.709	17.692			17.571 - 17.871	17.717
2-Amino-4,6-dinitrotoluene	18.263	18.257	18.246	18.255	18.254	18.266	18.242	18.219			18.104 - 18.404	18.250
1,3,5-Trinitrobenzene	19.029	19.004	19.006	19.015	19.021	19.026	19.009	18.999			18.871 - 19.171	19.014
2,6-Dinitrotoluene	19.843	19.831	19.826	19.828	19.834	19.839	19.816	19.805			19.684 - 19.984	19.828
2,4-Dinitrotoluene	20.403	20.391	20.386	20.388	20.394	20.406	20.382	20.372			20.244 - 20.544	20.390
Tetryl	23.723	23.717	23.712	23.722	23.721	23.733	23.716	23.705			23.571 - 23.871	23.719
2,4,6-Trinitrotoluene	24.749	24.737	24.726	24.735	24.734	24.746	24.729	24.719			24.584 - 24.884	24.734
PETN	25.149	25.137	25.132	25.142	25.141	25.153	25.142	25.145			24.991 - 25.291	25.143
1,2-Dinitrobenzene	13.163	13.171	13.152	13.162	13.161	13.166	13.162	13.119			13.011 - 13.311	13.157

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-433312/14	10130014.D
Level 2	IC 280-433312/13	10130013.D
Level 3	IC 280-433312/12	10130012.D
Level 4	IC 280-433312/11	10130011.D
Level 5	IC 280-433312/10	10130010.D
Level 6	IC 280-433312/9	10130009.D
Level 7	IC 280-433312/8	10130008.D
Level 8	IC 280-433312/7	10130007.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								
Picric acid	171900 183938	166760 179361	172570 177638	172416 179654	Ave		175529.616				3.2		20.0			
HMX	199500 189950	198220 188601	192540 186821	182328 189027	Ave		190873.454				3.0		20.0			
RDX	251100 237575	260020 230794	253530 228937	229536 233050	Ave		240567.786				5.2		20.0			
Nitrobenzene	470010 422997	477285 422314	440908 419976	409361 429277	Ave		436516.002				5.6		20.0			
3,5-Dinitroaniline	477750 504128	602240 488930	510910 487326	497264 503471	Lin2	103.308102	507848.792							0.9920		0.9900
Nitroglycerin	200635 199362	190858 195888	192800 194216	189582 198979	Ave		195289.833				2.1		20.0			
1,3-Dinitrobenzene	704895 694755	785275 682920	685225 676187	665459 686642	Ave		697669.613				5.3		20.0			
2-Nitrotoluene	274526 272378	304786 269873	264068 267766	268439 275564	Ave		274674.932				4.6		20.0			
4-Nitrotoluene	251594 237627	241474 235252	221205 233701	227833 237861	Ave		235818.321				3.8		20.0			
4-Amino-2,6-dinitrotoluene	306331 332395	357707 326268	319641 322613	320431 329183	Ave		326821.167				4.5		20.0			
3-Nitrotoluene	340139 306315	347390 302886	304044 299820	296247 305753	Ave		312824.221				6.2		20.0			
2-Amino-4,6-dinitrotoluene	501645 481209	534158 470825	468325 464267	464726 473093	Ave		482280.863				5.0		20.0			
1,3,5-Trinitrobenzene	501150 508803	577980 497797	504350 487319	495332 496662	Ave		508674.030				5.6		20.0			
2,6-Dinitrotoluene	316152 323447	395135 317916	337358 309942	314357 317060	Ave		328920.875				8.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

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	639870 631008	681557 619394	624820 608339	610575 621414	Ave		629622.213				3.7		20.0			
Tetryl	410800 393685	375200 385803	396050 399636	373136 386502	Ave		390101.482				3.2		20.0			
2,4,6-Trinitrotoluene	412849 471564	418426 465556	437380 461238	446526 471262	Ave		448100.146				5.2		20.0			
PETN	126430 148941	134988 146351	138138 145351	140480 145491	Ave		140771.306				5.3		20.0			
1,2-Dinitrobenzene	324000 308248	313640 300927	311970 299781	306840 305599	Ave		308875.605				2.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-433312/14	10130014.D
Level 2	IC 280-433312/13	10130013.D
Level 3	IC 280-433312/12	10130012.D
Level 4	IC 280-433312/11	10130011.D
Level 5	IC 280-433312/10	10130010.D
Level 6	IC 280-433312/9	10130009.D
Level 7	IC 280-433312/8	10130008.D
Level 8	IC 280-433312/7	10130007.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
Picric acid	Ave	3438 125553	8338 177638	17257 449135	43104	73575	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
HMX	Ave	3990 132021	9911 186821	19254 472568	45582	75980	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	5022 161556	13001 228937	25353 582625	57384	95030	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	9419 296211	23912 420816	44179 1075338	102545	169537	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
3,5-Dinitroaniline	Lin2	9555 342251	30112 487326	51091 1258678	124316	201651	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	40127 1371216	95429 1942160	192800 4974464	473954	797446	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,3-Dinitrobenzene	Ave	14112 478522	39303 676863	68591 1718321	166531	278180	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
2-Nitrotoluene	Ave	5507 189478	15285 268569	26486 690977	67311	109278	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	5052 165335	12122 234636	22209 597031	57186	95431	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	6145 229073	17939 323581	32060 825426	80348	133357	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
3-Nitrotoluene	Ave	6830 212868	17439 301019	30526 767440	74358	123016	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
2-Amino-4,6-dinitrotoluene	Ave	10063 330566	26788 465660	46973 1186280	116530	193061	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
1,3,5-Trinitrobenzene	Ave	10023 348458	28899 487319	50435 1241654	123833	203521	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,6-Dinitrotoluene	Ave	6342 223209	19816 310872	33837 795029	78825	129767	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	12823 434443	34146 609556	62607 1556642	152949	252908	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

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	Ave	8216 270062	18760 399636	39605 966255	93284	157474	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,4,6-Trinitrotoluene	Ave	8290 327193	21005 463083	43913 1182867	112078	189380	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	25286 1024457	67494 1453506	138138 3637280	351201	595765	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	6480 210649	15682 299781	31197 763998	76710	123299	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130007.D
Lims ID: IC FULL LV 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 13-Oct-2018 16:23:32 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 8
Misc. Info.: 280-0075057-007
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:54 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 13-Oct-2018 17:35:45

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	4.412	4.401	0.011	1237396	2.50	2.83	
3 2,4-diamino-6-nitrotoluene	1	4.992	4.954	0.038	537898	2.50	1.94	
4 2,4,6-Trinitrophenol	1	5.925	6.081	-0.156	449135	2.50	2.56	
5 HMX	1	7.112	7.148	-0.036	472568	2.50	2.48	
7 RDX	1	9.165	9.221	-0.056	582625	2.50	2.42	
8 Nitrobenzene	1	12.105	12.161	-0.056	1075338	2.51	2.46	
$ 9 1,2-Dinitrobenzene	1	13.119	13.161	-0.042	763998	2.50	2.47	
10 3,5-Dinitroaniline	1	15.065	15.114	-0.049	1258678	2.50	2.48	
12 Nitroglycerin	2	15.639	15.667	-0.028	4974464	25.0	25.5	
11 1,3-Dinitrobenzene	1	15.672	15.707	-0.035	1718321	2.50	2.46	
13 o-Nitrotoluene	1	16.445	16.474	-0.029	690977	2.51	2.52	
14 p-Nitrotoluene	1	16.779	16.814	-0.035	597031	2.51	2.53	
15 4-Amino-2,6-dinitrotoluene	1	17.185	17.221	-0.036	825426	2.51	2.53	
16 m-Nitrotoluene	1	17.692	17.721	-0.029	767440	2.51	2.45	
17 2-Amino-4,6-dinitrotoluene	1	18.219	18.254	-0.035	1186280	2.51	2.46	
18 1,3,5-Trinitrobenzene	1	18.999	19.021	-0.022	1241654	2.50	2.44	
19 2,6-Dinitrotoluene	1	19.805	19.834	-0.029	795029	2.51	2.42	
20 2,4-Dinitrotoluene	1	20.372	20.394	-0.022	1556642	2.51	2.47	
21 Tetryl	1	23.705	23.721	-0.016	966255	2.50	2.48	
22 2,4,6-Trinitrotoluene	1	24.719	24.734	-0.015	1182867	2.51	2.64	
23 PETN	2	25.145	25.141	0.004	3637280	25.0	25.8	

Reagents:

8330IntermStk_00056 Amount Added: 125.00 Units: uL
8330_ADDs_00017 Amount Added: 125.00 Units: uL

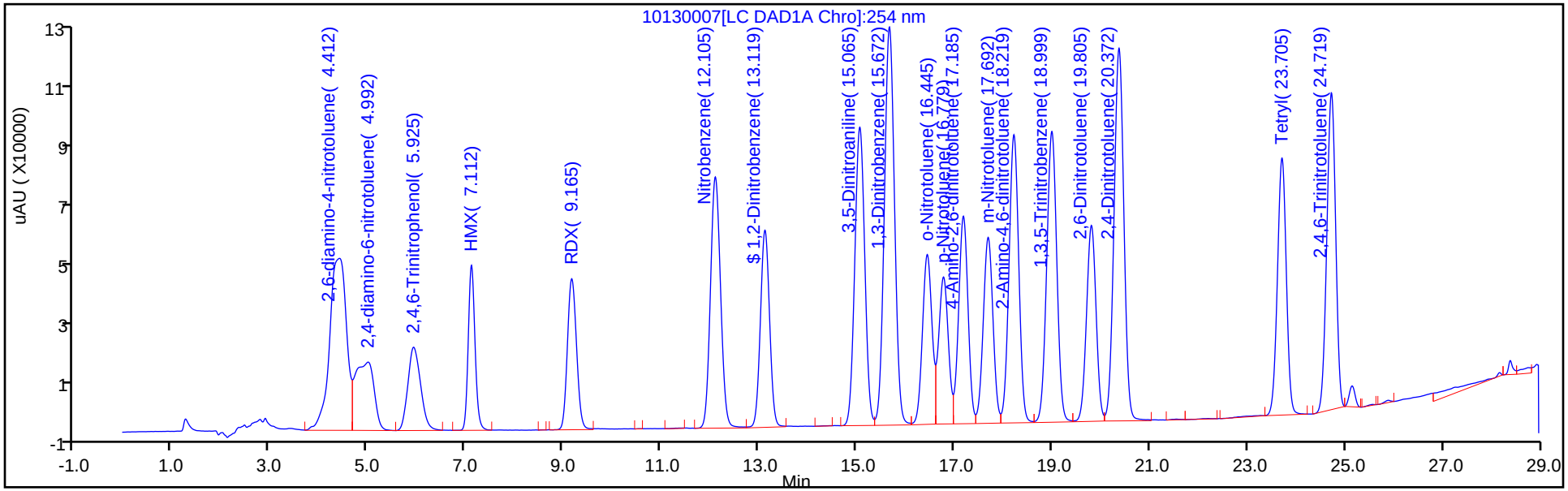
Report Date: 14-Oct-2018 14:02:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

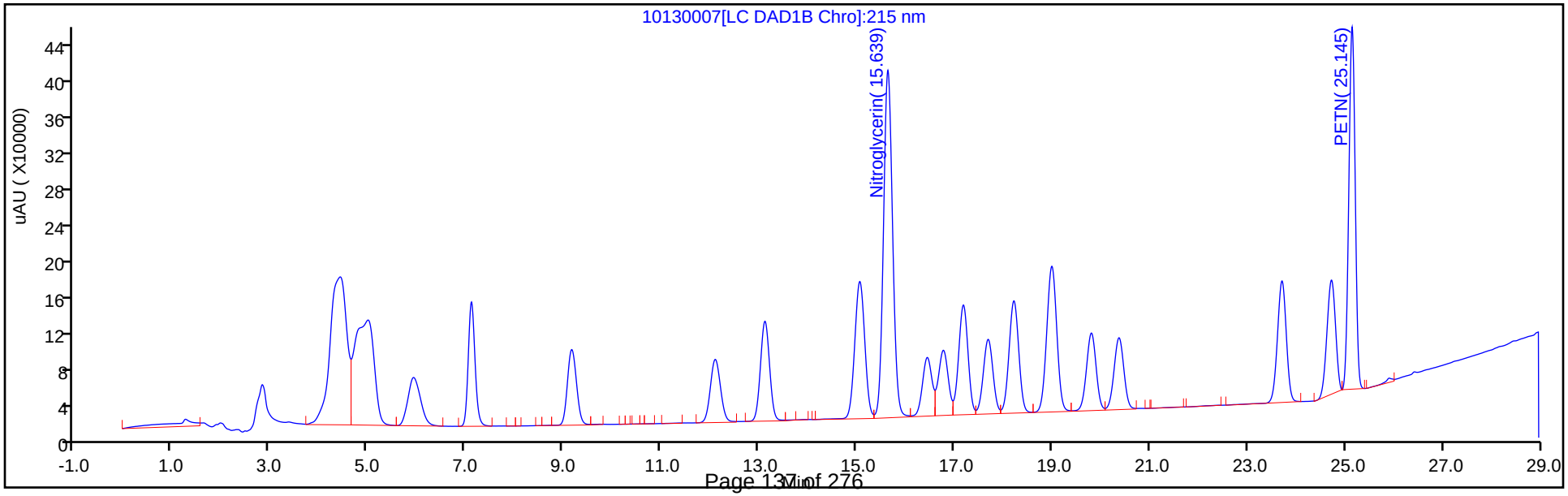
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130007.D

Injection Date:	13-Oct-2018 16:23:32	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 8			Worklist Smp#:	7
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\20181013-75057.b\10130008.D
Lims ID: IC FULL LV 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 13-Oct-2018 16:58:36 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 7
Misc. Info.: 280-0075057-008
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:56 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 13-Oct-2018 17:35:58

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	4.382	4.401	-0.019	425871	1.00	0.9729	
3 2,4-diamino-6-nitrotoluene	1	4.989	4.954	0.035	257257	1.00	0.9265	M
4 2,4,6-Trinitrophenol	1	6.016	6.081	-0.065	177638	1.00	1.01	
5 HMX	1	7.142	7.148	-0.006	186821	1.00	0.9788	
7 RDX	1	9.209	9.221	-0.012	228937	1.00	0.9517	
8 Nitrobenzene	1	12.156	12.161	-0.005	420816	1.00	0.9640	
$ 9 1,2-Dinitrobenzene	1	13.162	13.161	0.001	299781	1.00	0.9706	
10 3,5-Dinitroaniline	1	15.102	15.114	-0.012	487326	1.00	0.9594	
12 Nitroglycerin	2	15.662	15.667	-0.005	1942160	10.0	9.95	
11 1,3-Dinitrobenzene	1	15.702	15.707	-0.005	676863	1.00	0.9702	
13 o-Nitrotoluene	1	16.469	16.474	-0.005	268569	1.00	0.9778	
14 p-Nitrotoluene	1	16.802	16.814	-0.012	234636	1.00	0.99	
15 4-Amino-2,6-dinitrotoluene	1	17.209	17.221	-0.012	323581	1.00	0.99	
16 m-Nitrotoluene	1	17.709	17.721	-0.012	301019	1.00	0.9623	
17 2-Amino-4,6-dinitrotoluene	1	18.242	18.254	-0.012	465660	1.00	0.9655	
18 1,3,5-Trinitrobenzene	1	19.009	19.021	-0.012	487319	1.00	0.9580	
19 2,6-Dinitrotoluene	1	19.816	19.834	-0.018	310872	1.00	0.9451	
20 2,4-Dinitrotoluene	1	20.382	20.394	-0.012	609556	1.00	0.9681	
21 Tetryl	1	23.716	23.721	-0.005	399636	1.00	1.02	
22 2,4,6-Trinitrotoluene	1	24.729	24.734	-0.005	463083	1.00	1.03	
23 PETN	2	25.142	25.141	0.001	1453506	10.0	10.3	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	50.00	Units: uL
8330_ADDs_00017	Amount Added:	50.00	Units: uL

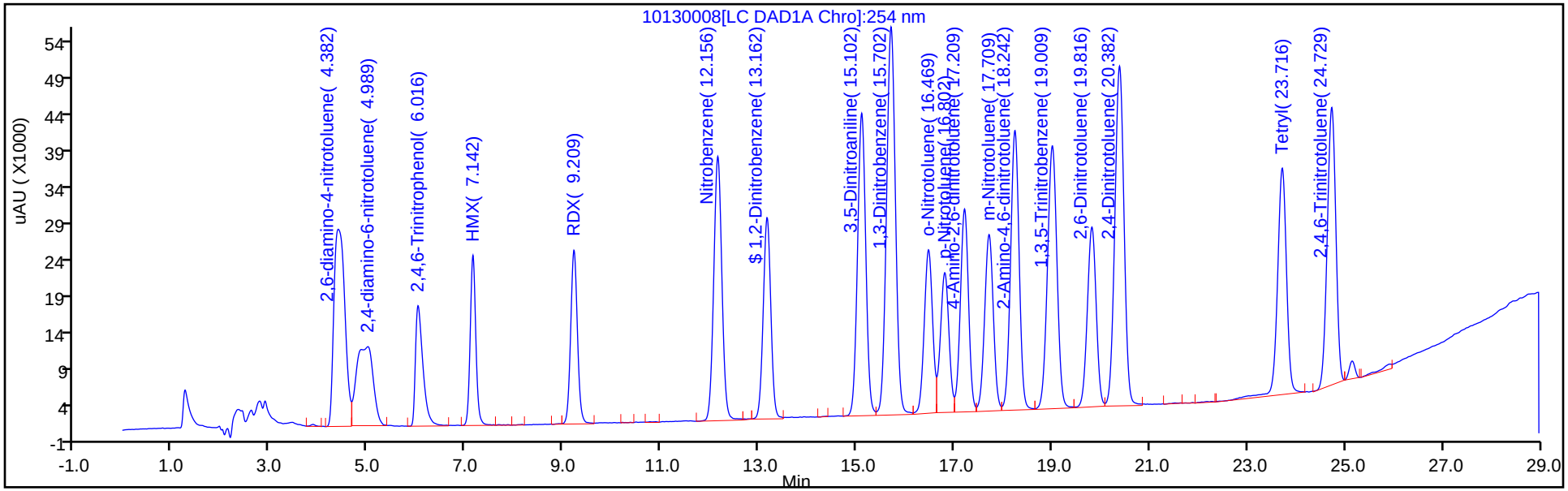
Report Date: 14-Oct-2018 14:02:56 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

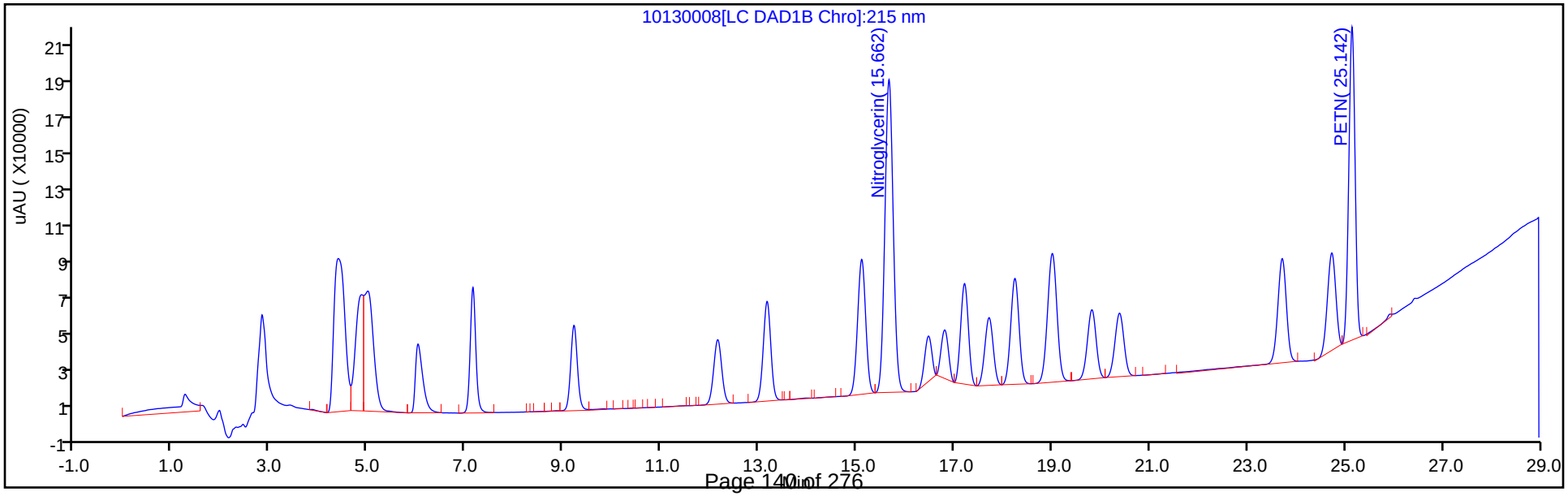
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130008.D

Injection Date:	13-Oct-2018 16:58:36	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 7			Worklist Smp#:	8
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\20181013-75057.b\10130009.D
Lims ID: IC FULL LV 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 17:33:35 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 6
Misc. Info.: 280-0075057-009
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:58 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:54:06

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	4.393	4.401	-0.008	298705	0.7000	0.6824	
3 2,4-diamino-6-nitrotoluene	1	4.986	4.954	0.032	184732	0.7000	0.6653	M
4 2,4,6-Trinitrophenol	1	6.046	6.081	-0.035	125553	0.7000	0.7153	
5 HMX	1	7.146	7.148	-0.002	132021	0.7000	0.6917	
7 RDX	1	9.219	9.221	-0.002	161556	0.7000	0.6716	
8 Nitrobenzene	1	12.159	12.161	-0.002	296211	0.7014	0.6786	
$ 9 1,2-Dinitrobenzene	1	13.166	13.161	0.005	210649	0.7000	0.6820	
10 3,5-Dinitroaniline	1	15.119	15.114	0.005	342251	0.7000	0.6737	
12 Nitroglycerin	2	15.672	15.667	0.005	1371216	7.00	7.02	
11 1,3-Dinitrobenzene	1	15.712	15.707	0.005	478522	0.7007	0.6859	
13 o-Nitrotoluene	1	16.486	16.474	0.012	189478	0.7021	0.6898	
14 p-Nitrotoluene	1	16.819	16.814	0.005	165335	0.7028	0.7011	
15 4-Amino-2,6-dinitrotoluene	1	17.232	17.221	0.011	229073	0.7021	0.7009	
16 m-Nitrotoluene	1	17.732	17.721	0.011	212868	0.7028	0.6805	
17 2-Amino-4,6-dinitrotoluene	1	18.266	18.254	0.012	330566	0.7021	0.6854	
18 1,3,5-Trinitrobenzene	1	19.026	19.021	0.005	348458	0.7000	0.6850	
19 2,6-Dinitrotoluene	1	19.839	19.834	0.005	223209	0.7021	0.6786	
20 2,4-Dinitrotoluene	1	20.406	20.394	0.012	434443	0.7014	0.6900	
21 Tetryl	1	23.733	23.721	0.012	270062	0.7000	0.6923	
22 2,4,6-Trinitrotoluene	1	24.746	24.734	0.012	327193	0.7028	0.7302	
23 PETN	2	25.153	25.141	0.012	1024457	7.00	7.28	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	35.00	Units: uL
8330_ADDs_00017	Amount Added:	35.00	Units: uL

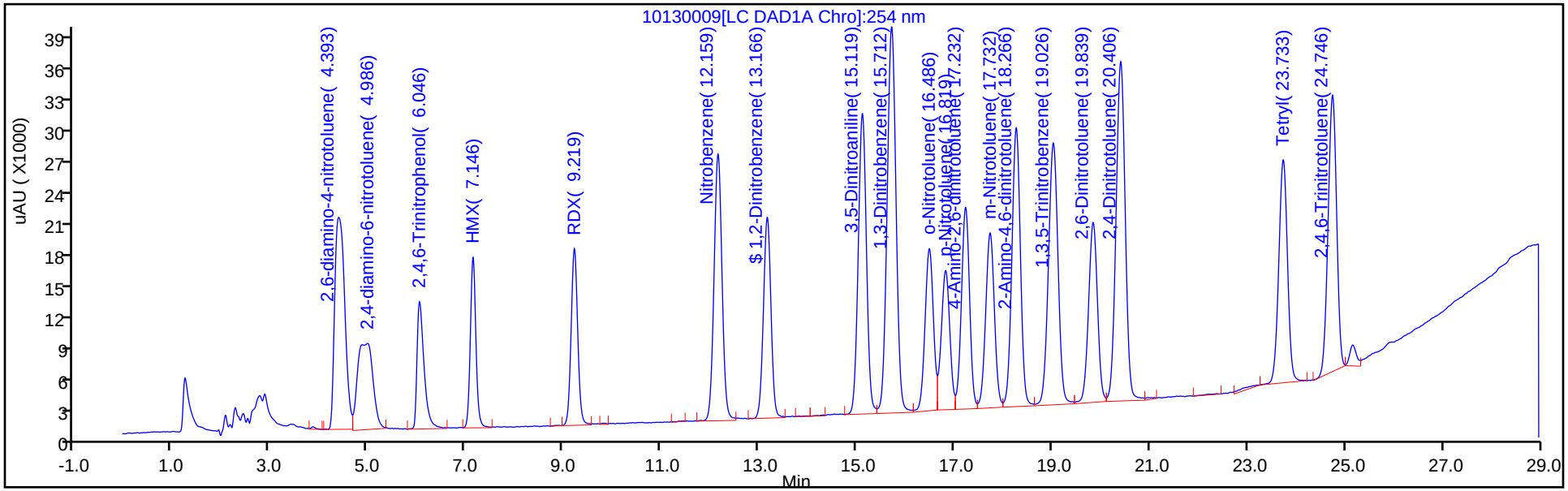
Report Date: 14-Oct-2018 14:02:58 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

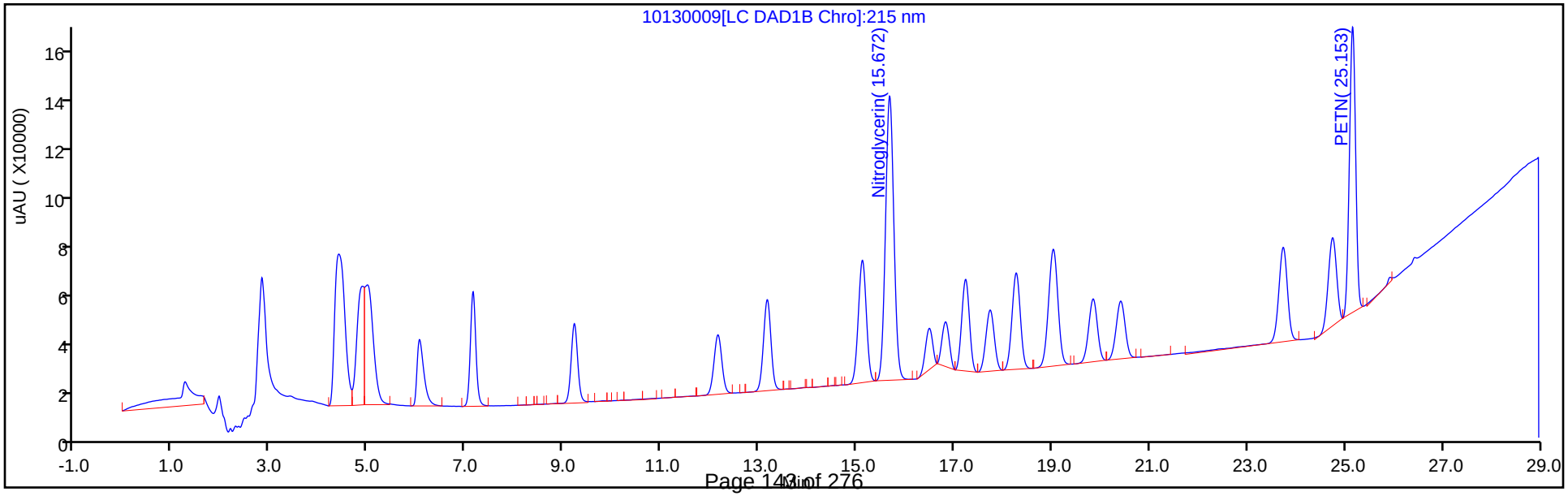
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130009.D

Injection Date:	13-Oct-2018 17:33:35	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 6			Worklist Smp#:	9
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



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130010.D
Lims ID: IC FULL LV 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 18:08:37 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 5
Misc. Info.: 280-0075057-010
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:59 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:52:11

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	4.401	4.401	0.000	175386	0.4000	0.4007	
3 2,4-diamino-6-nitrotoluene	1	4.954	4.954	0.000	108740	0.4000	0.3916	
4 2,4,6-Trinitrophenol	1	6.081	6.081	0.000	73575	0.4000	0.4192	
5 HMX	1	7.148	7.148	0.000	75980	0.4000	0.3981	
7 RDX	1	9.221	9.221	0.000	95030	0.4000	0.3950	
8 Nitrobenzene	1	12.161	12.161	0.000	169537	0.4008	0.3884	
$ 9 1,2-Dinitrobenzene	1	13.161	13.161	0.000	123299	0.4000	0.3992	
10 3,5-Dinitroaniline	1	15.114	15.114	0.000	201651	0.4000	0.3969	
12 Nitroglycerin	2	15.667	15.667	0.000	797446	4.00	4.08	
11 1,3-Dinitrobenzene	1	15.707	15.707	0.000	278180	0.4004	0.3987	
13 o-Nitrotoluene	1	16.474	16.474	0.000	109278	0.4012	0.3978	
14 p-Nitrotoluene	1	16.814	16.814	0.000	95431	0.4016	0.4047	
15 4-Amino-2,6-dinitrotoluene	1	17.221	17.221	0.000	133357	0.4012	0.4080	
16 m-Nitrotoluene	1	17.721	17.721	0.000	123016	0.4016	0.3932	
17 2-Amino-4,6-dinitrotoluene	1	18.254	18.254	0.000	193061	0.4012	0.4003	
18 1,3,5-Trinitrobenzene	1	19.021	19.021	0.000	203521	0.4000	0.4001	
19 2,6-Dinitrotoluene	1	19.834	19.834	0.000	129767	0.4012	0.3945	
20 2,4-Dinitrotoluene	1	20.394	20.394	0.000	252908	0.4008	0.4017	
21 Tetryl	1	23.721	23.721	0.000	157474	0.4000	0.4037	M
22 2,4,6-Trinitrotoluene	1	24.734	24.734	0.000	189380	0.4016	0.4226	
23 PETN	2	25.141	25.141	0.000	595765	4.00	4.23	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	20.00	Units: uL
8330_ADDs_00017	Amount Added:	20.00	Units: uL

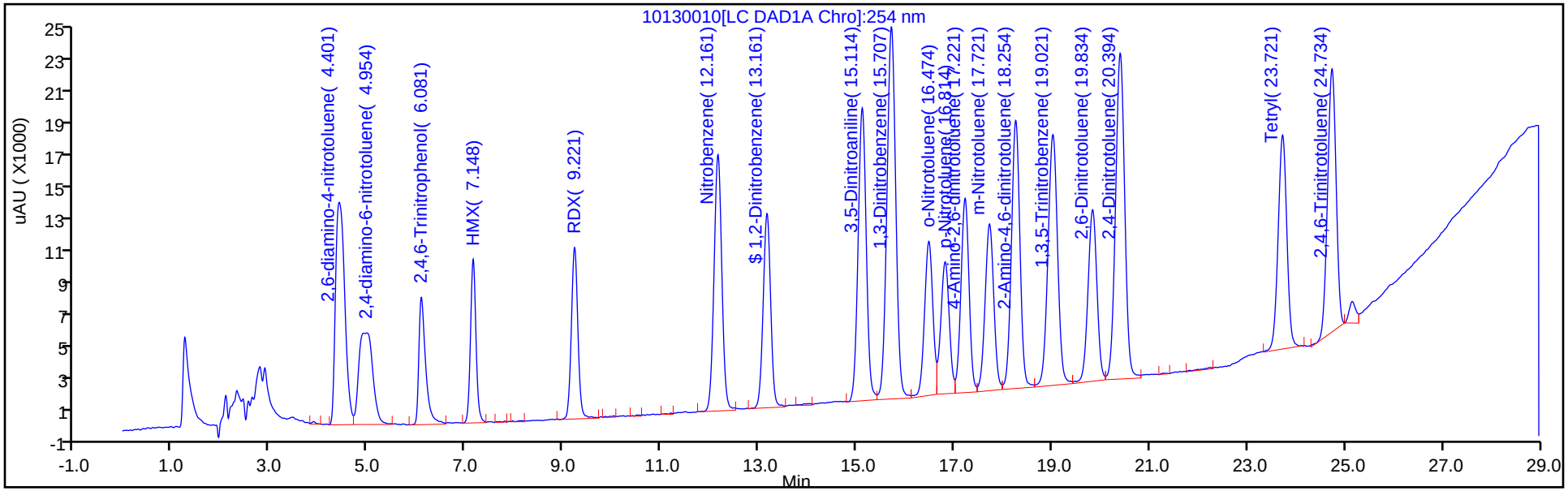
Report Date: 14-Oct-2018 14:02:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

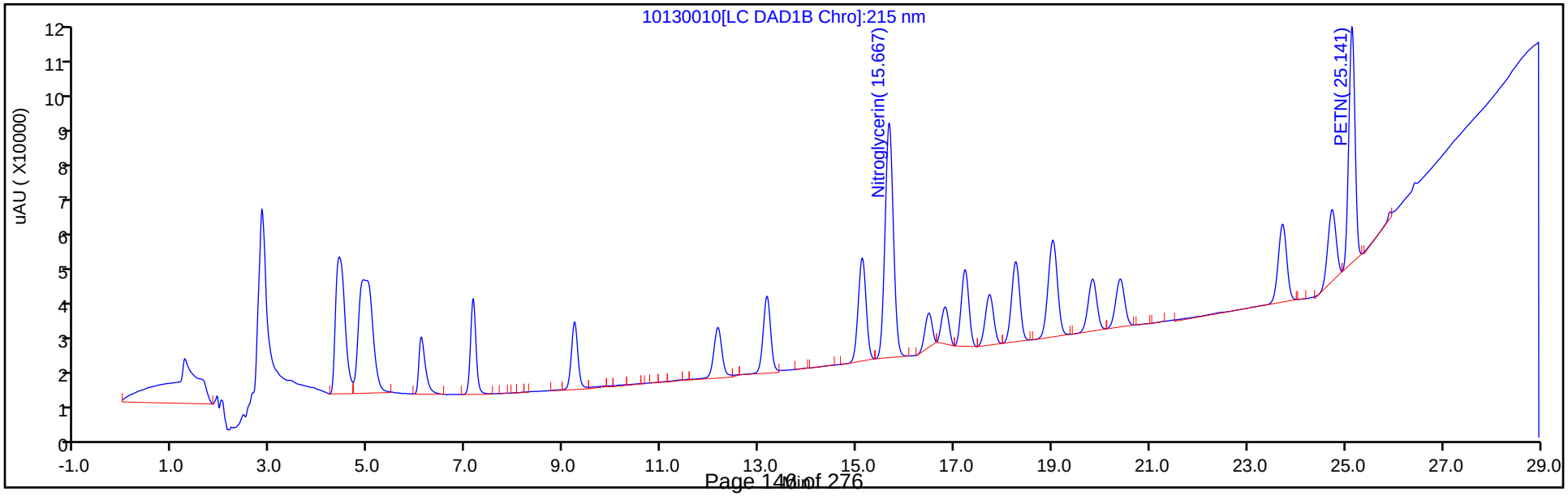
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130010.D

Injection Date:	13-Oct-2018 18:08:37	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 5			Worklist Smp#:	10
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

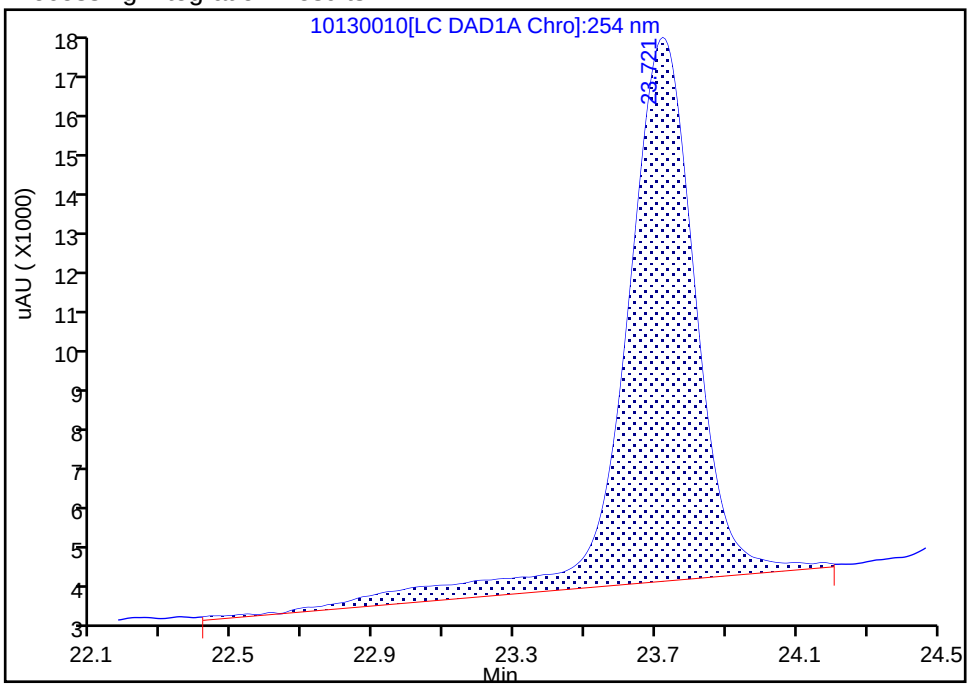
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130010.D
Injection Date: 13-Oct-2018 18:08:37 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 5
Client ID:
Operator ID: HKF ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 Tetryl, CAS: 479-45-8

Signal: 1

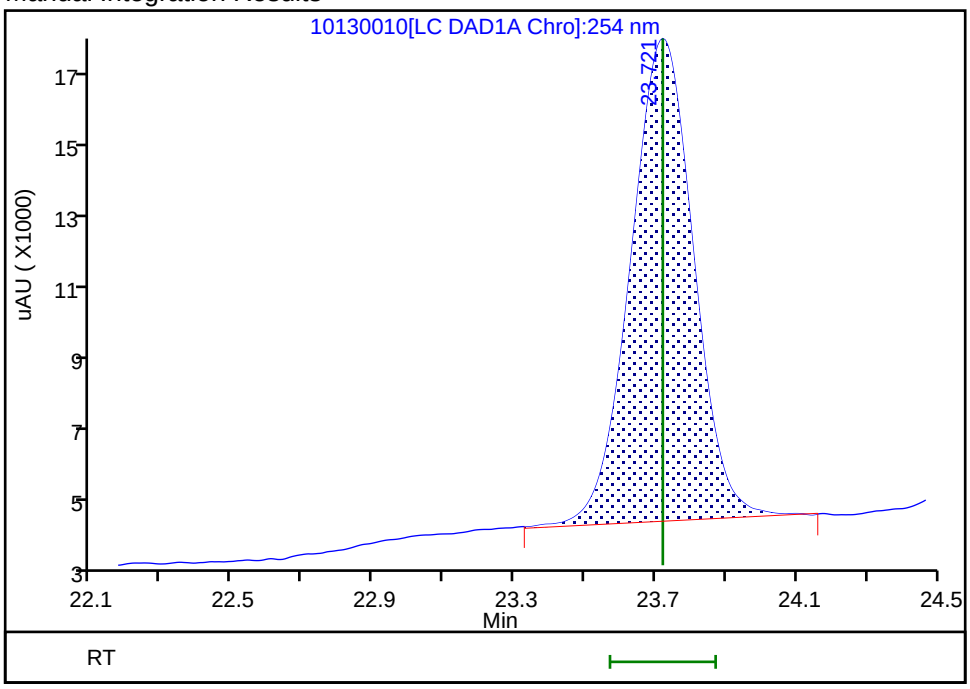
Processing Integration Results

RT: 23.72
Area: 180826
Amount: 0.437266
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 157474
Amount: 0.403674
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:52:09
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130011.D
Lims ID: IC FULL LV 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 18:43:36 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 4
Misc. Info.: 280-0075057-011
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:00 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:51:39

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	4.409	4.401	0.008	106496	0.2500	0.2433	
3 2,4-diamino-6-nitrotoluene	1	4.955	4.954	0.001	67339	0.2500	0.2425	
4 2,4,6-Trinitrophenol	1	6.109	6.081	0.028	43104	0.2500	0.2456	
5 HMX	1	7.149	7.148	0.001	45582	0.2500	0.2388	
7 RDX	1	9.222	9.221	0.001	57384	0.2500	0.2385	
8 Nitrobenzene	1	12.155	12.161	-0.006	102545	0.2505	0.2349	
$ 9 1,2-Dinitrobenzene	1	13.162	13.161	0.001	76710	0.2500	0.2484	
10 3,5-Dinitroaniline	1	15.115	15.114	0.001	124316	0.2500	0.2446	
12 Nitroglycerin	2	15.662	15.667	-0.005	473954	2.50	2.43	
11 1,3-Dinitrobenzene	1	15.708	15.707	0.001	166531	0.2503	0.2387	
13 o-Nitrotoluene	1	16.475	16.474	0.001	67311	0.2508	0.2451	
14 p-Nitrotoluene	1	16.808	16.814	-0.006	57186	0.2510	0.2425	
15 4-Amino-2,6-dinitrotoluene	1	17.215	17.221	-0.006	80348	0.2508	0.2458	
16 m-Nitrotoluene	1	17.715	17.721	-0.006	74358	0.2510	0.2377	
17 2-Amino-4,6-dinitrotoluene	1	18.255	18.254	0.001	116530	0.2508	0.2416	
18 1,3,5-Trinitrobenzene	1	19.015	19.021	-0.006	123833	0.2500	0.2434	
19 2,6-Dinitrotoluene	1	19.828	19.834	-0.006	78825	0.2508	0.2396	
20 2,4-Dinitrotoluene	1	20.388	20.394	-0.006	152949	0.2505	0.2429	
21 Tetryl	1	23.722	23.721	0.001	93284	0.2500	0.2391	M
22 2,4,6-Trinitrotoluene	1	24.735	24.734	0.001	112078	0.2510	0.2501	
23 PETN	2	25.142	25.141	0.001	351201	2.50	2.49	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	12.50	Units: uL
8330_ADDs_00017	Amount Added:	12.50	Units: uL

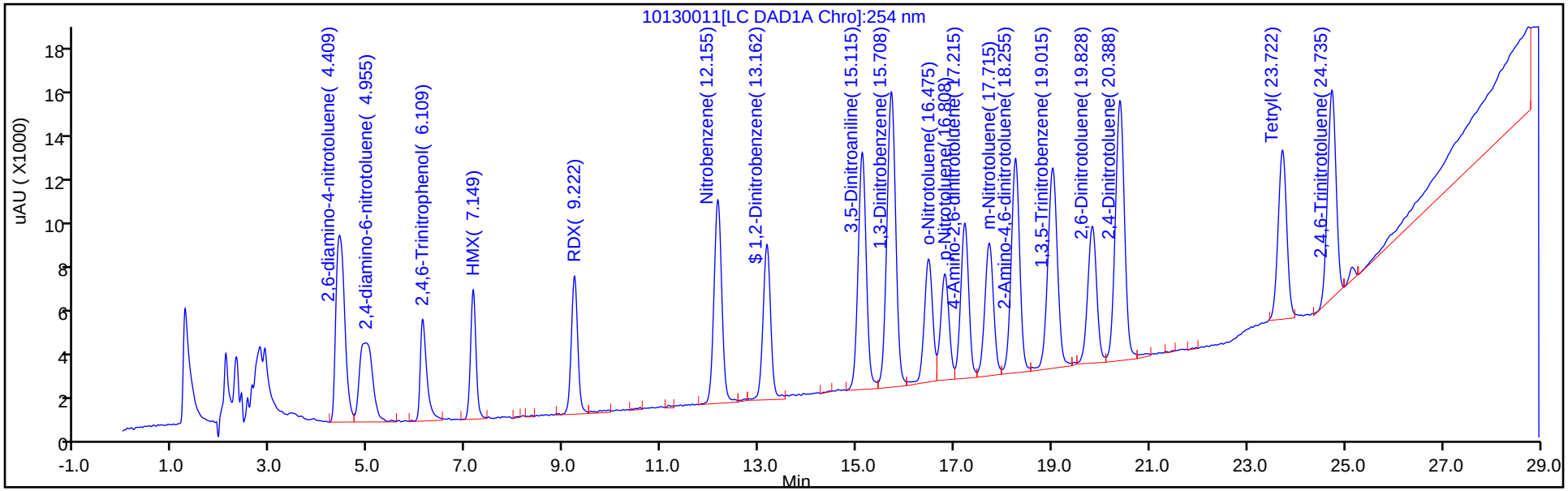
Report Date: 14-Oct-2018 14:03:01 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

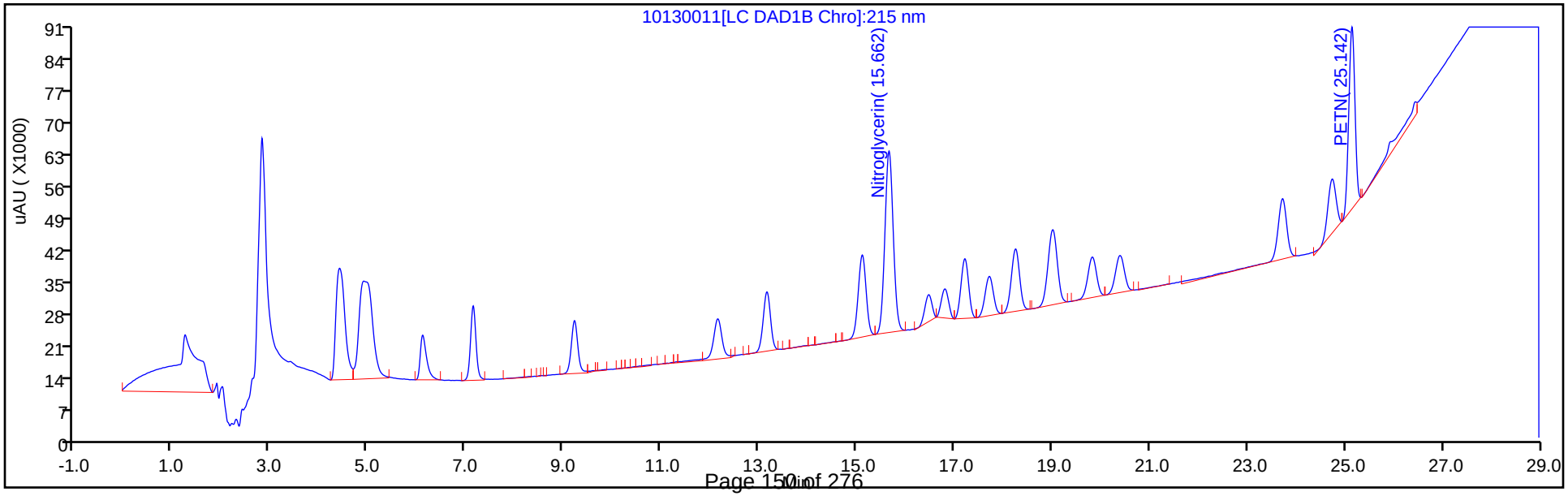
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130011.D

Injection Date:	13-Oct-2018 18:43:36	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 4			Worklist Smp#:	11
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

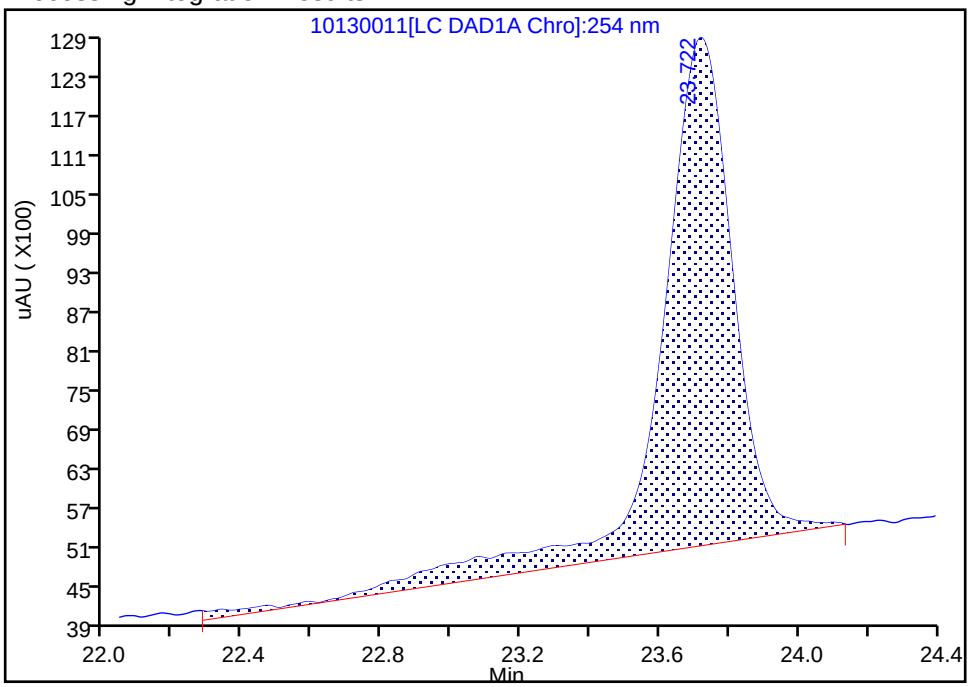
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130011.D				
Injection Date:	13-Oct-2018 18:43:36	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 4				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 Tetryl, CAS: 479-45-8

Signal: 1

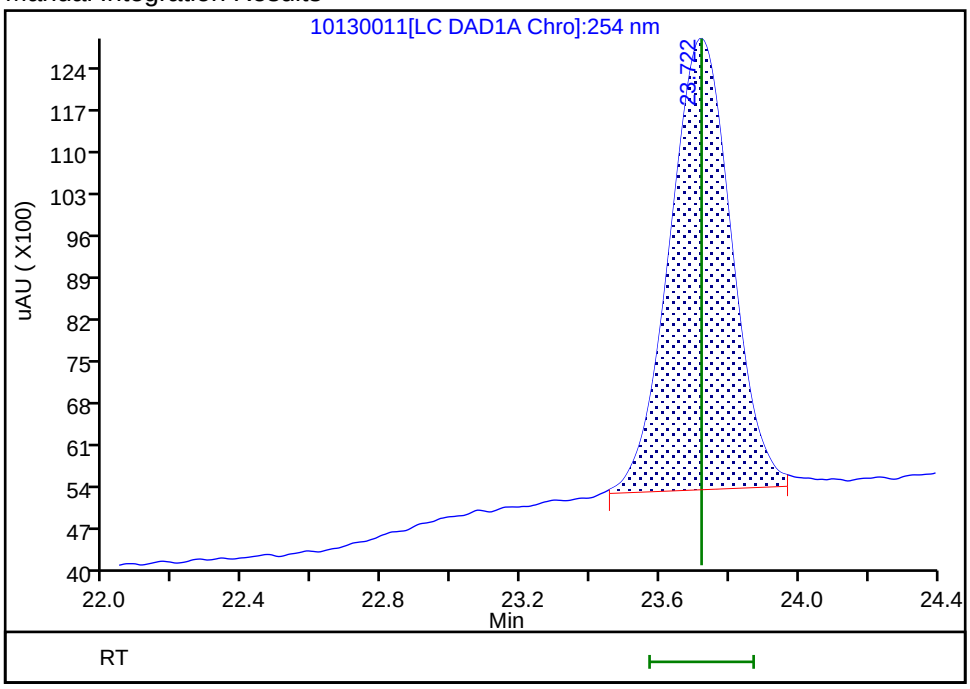
Processing Integration Results

RT: 23.72
Area: 112926
Amount: 0.252081
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 93284
Amount: 0.239128
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:51:56

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130012.D
Lims ID: IC FULL LV 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 19:18:34 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 3
Misc. Info.: 280-0075057-012
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:02 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:58:31

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	4.412	4.401	0.011	42512	0.1000	0.0971	
3 2,4-diamino-6-nitrotoluene	1	4.952	4.954	-0.002	27847	0.1000	0.1003	
4 2,4,6-Trinitrophenol	1	6.146	6.081	0.065	17257	0.1000	0.0983	
5 HMX	1	7.146	7.148	-0.002	19254	0.1000	0.1009	
7 RDX	1	9.219	9.221	-0.002	25353	0.1000	0.1054	
8 Nitrobenzene	1	12.152	12.161	-0.009	44179	0.1002	0.1012	
$ 9 1,2-Dinitrobenzene	1	13.152	13.161	-0.009	31197	0.1000	0.1010	
10 3,5-Dinitroaniline	1	15.106	15.114	-0.008	51091	0.1000	0.1004	
12 Nitroglycerin	2	15.652	15.667	-0.015	192800	1.00	0.9873	
11 1,3-Dinitrobenzene	1	15.699	15.707	-0.008	68591	0.1001	0.0983	
13 o-Nitrotoluene	1	16.472	16.474	-0.002	26486	0.1003	0.0964	
14 p-Nitrotoluene	1	16.799	16.814	-0.015	22209	0.1004	0.0942	
15 4-Amino-2,6-dinitrotoluene	1	17.212	17.221	-0.009	32060	0.1003	0.0981	
16 m-Nitrotoluene	1	17.712	17.721	-0.009	30526	0.1004	0.0976	
17 2-Amino-4,6-dinitrotoluene	1	18.246	18.254	-0.008	46973	0.1003	0.0974	
18 1,3,5-Trinitrobenzene	1	19.006	19.021	-0.015	50435	0.1000	0.0991	
19 2,6-Dinitrotoluene	1	19.826	19.834	-0.008	33837	0.1003	0.1029	
20 2,4-Dinitrotoluene	1	20.386	20.394	-0.008	62607	0.1002	0.0994	
21 Tetryl	1	23.712	23.721	-0.009	39605	0.1000	0.1015	
22 2,4,6-Trinitrotoluene	1	24.726	24.734	-0.008	43913	0.1004	0.0980	
23 PETN	2	25.132	25.141	-0.009	138138	1.00	0.9813	

Reagents:

8330IntermStk_00056 Amount Added: 5.00 Units: uL
8330_ADDs_00017 Amount Added: 5.00 Units: uL

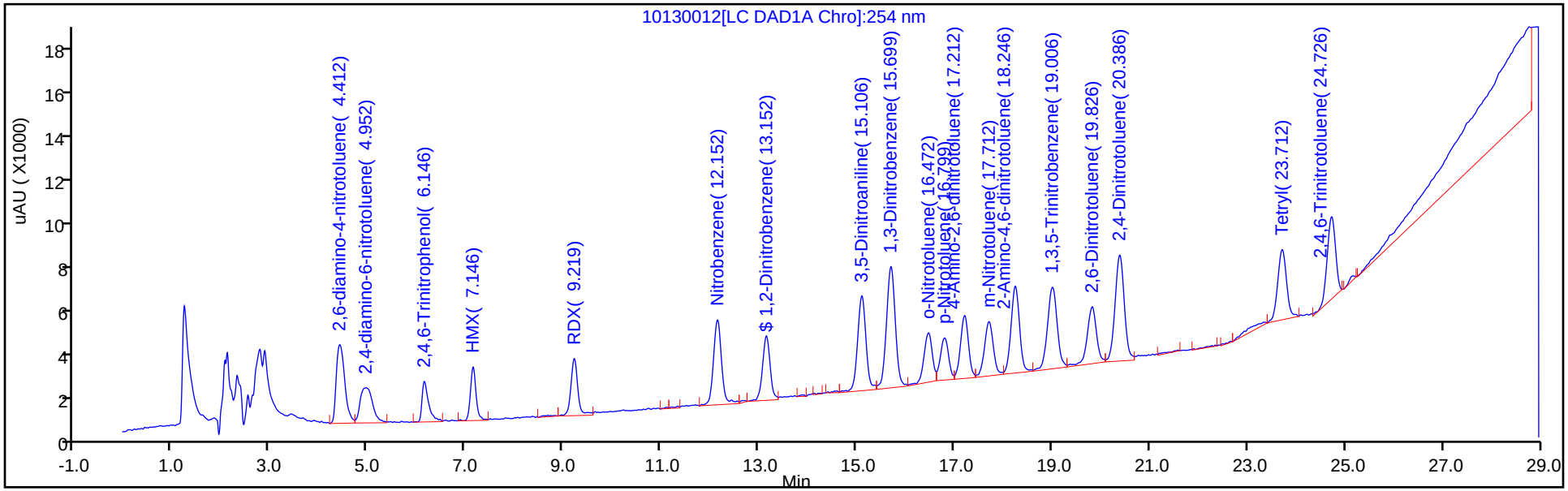
Report Date: 14-Oct-2018 14:03:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

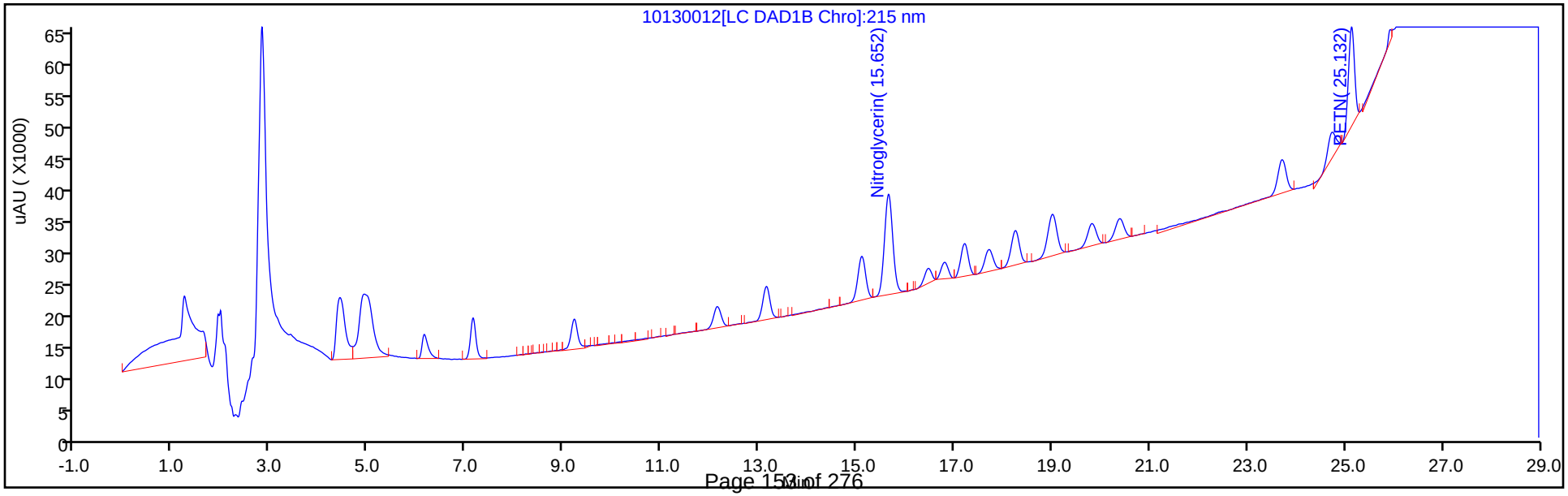
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130012.D

Injection Date:	13-Oct-2018 19:18:34	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 3			Worklist Smp#:	12
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
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D
Lims ID: IC FULL LV 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 19:53:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 2
Misc. Info.: 280-0075057-013
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:03 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:52:44

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	4.411	4.401	0.010	20884	0.0500	0.0477	
3 2,4-diamino-6-nitrotoluene	1	4.924	4.954	-0.030	15317	0.0500	0.0552	
4 2,4,6-Trinitrophenol	1	6.184	6.081	0.103	8338	0.0500	0.0475	
5 HMX	1	7.151	7.148	0.003	9911	0.0500	0.0519	
7 RDX	1	9.224	9.221	0.003	13001	0.0500	0.0540	
8 Nitrobenzene	1	12.164	12.161	0.003	23912	0.0501	0.0548	
$ 9 1,2-Dinitrobenzene	1	13.171	13.161	0.010	15682	0.0500	0.0508	
10 3,5-Dinitroaniline	1	15.124	15.114	0.010	30112	0.0500	0.0591	
12 Nitroglycerin	2	15.671	15.667	0.004	95429	0.5000	0.4887	
11 1,3-Dinitrobenzene	1	15.717	15.707	0.010	39303	0.0501	0.0563	
13 o-Nitrotoluene	1	16.477	16.474	0.003	15285	0.0502	0.0556	
14 p-Nitrotoluene	1	16.817	16.814	0.003	12122	0.0502	0.0514	
15 4-Amino-2,6-dinitrotoluene	1	17.224	17.221	0.003	17939	0.0502	0.0549	
16 m-Nitrotoluene	1	17.717	17.721	-0.004	17439	0.0502	0.0557	
17 2-Amino-4,6-dinitrotoluene	1	18.257	18.254	0.003	26788	0.0502	0.0555	
18 1,3,5-Trinitrobenzene	1	19.004	19.021	-0.017	28899	0.0500	0.0568	
19 2,6-Dinitrotoluene	1	19.831	19.834	-0.003	19816	0.0502	0.0602	
20 2,4-Dinitrotoluene	1	20.391	20.394	-0.003	34146	0.0501	0.0542	
21 Tetryl	1	23.717	23.721	-0.004	18760	0.0500	0.0481	M
22 2,4,6-Trinitrotoluene	1	24.737	24.734	0.003	21005	0.0502	0.0469	M
23 PETN	2	25.137	25.141	-0.004	67494	0.5000	0.4795	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	2.50	Units: uL
8330_ADDs_00017	Amount Added:	2.50	Units: uL

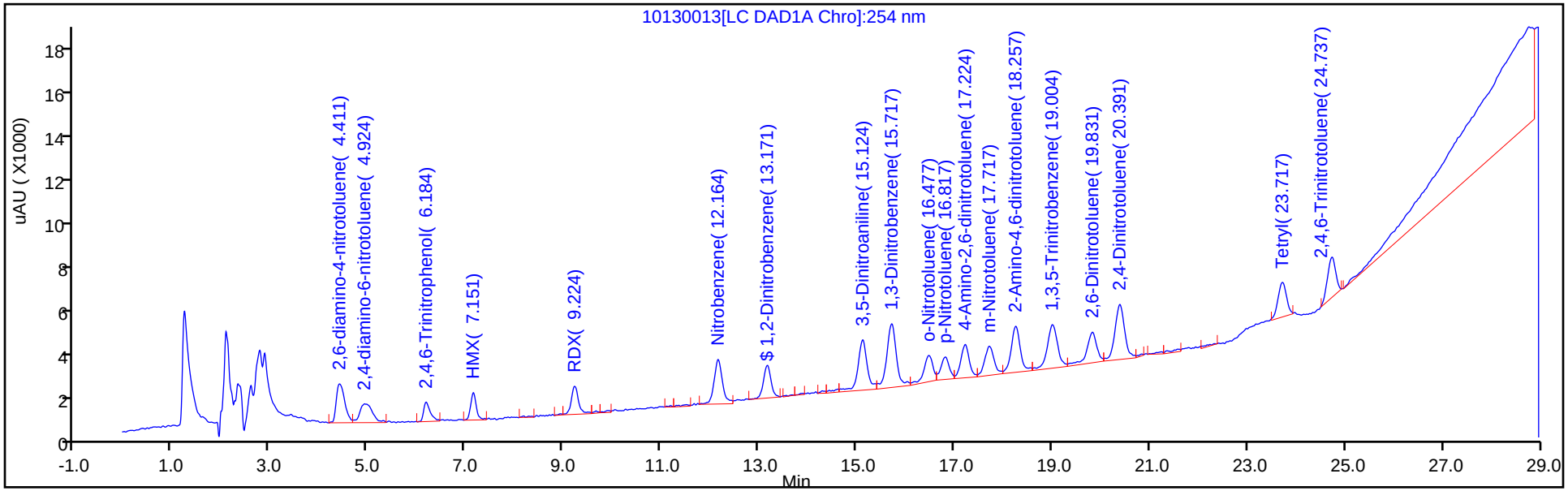
Report Date: 14-Oct-2018 14:03:04 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

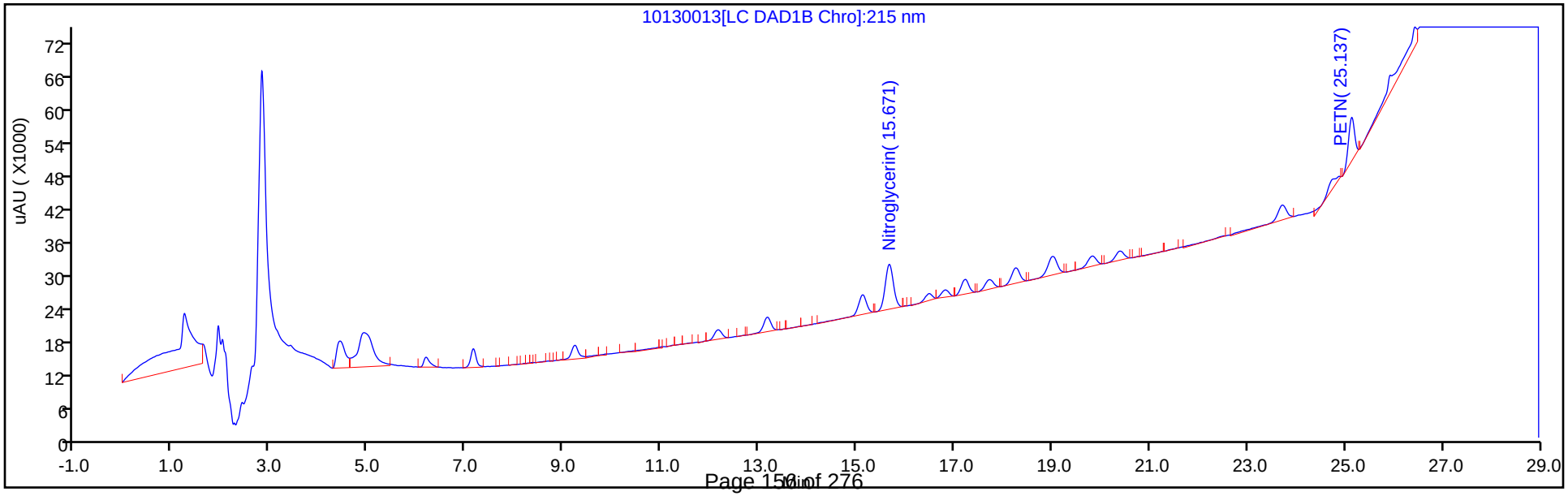
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D

Injection Date:	13-Oct-2018 19:53:30	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 2			Worklist Smp#:	13
Client ID:					
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

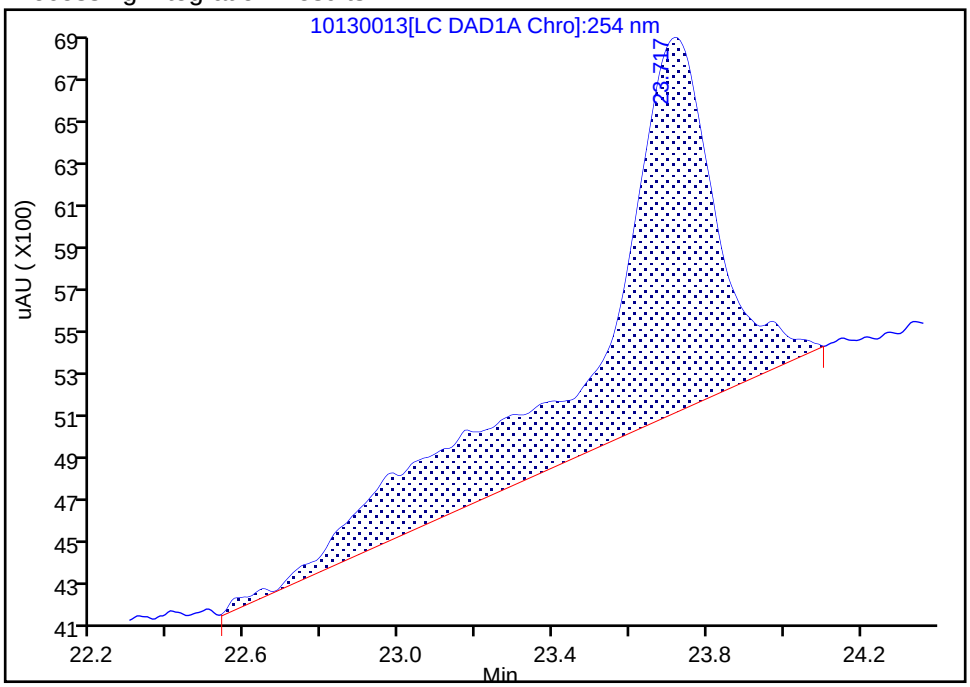
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D
Injection Date: 13-Oct-2018 19:53:30 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 2
Client ID:
Operator ID: HKF ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 Tetryl, CAS: 479-45-8

Signal: 1

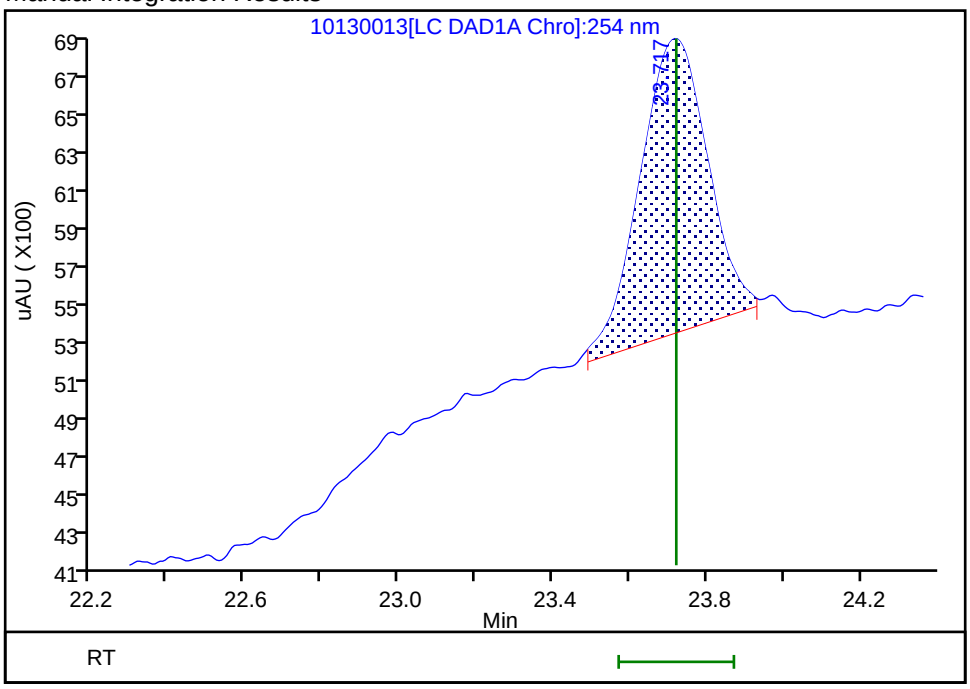
Processing Integration Results

RT: 23.72
Area: 38693
Amount: 0.058611
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 18760
Amount: 0.048090
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:58:23
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver

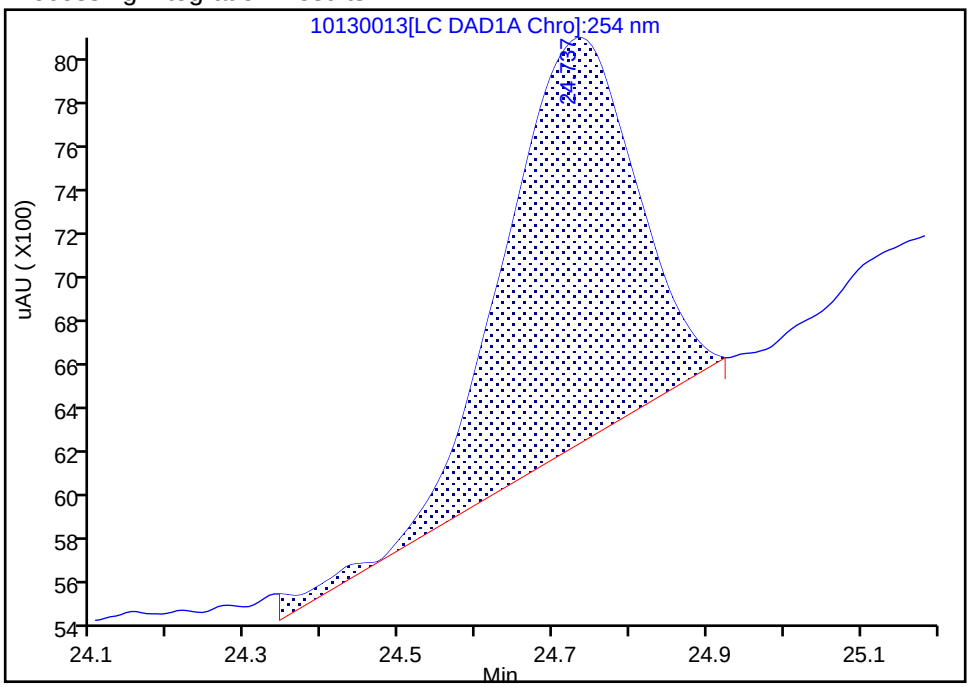
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D				
Injection Date:	13-Oct-2018 19:53:30	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 2				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

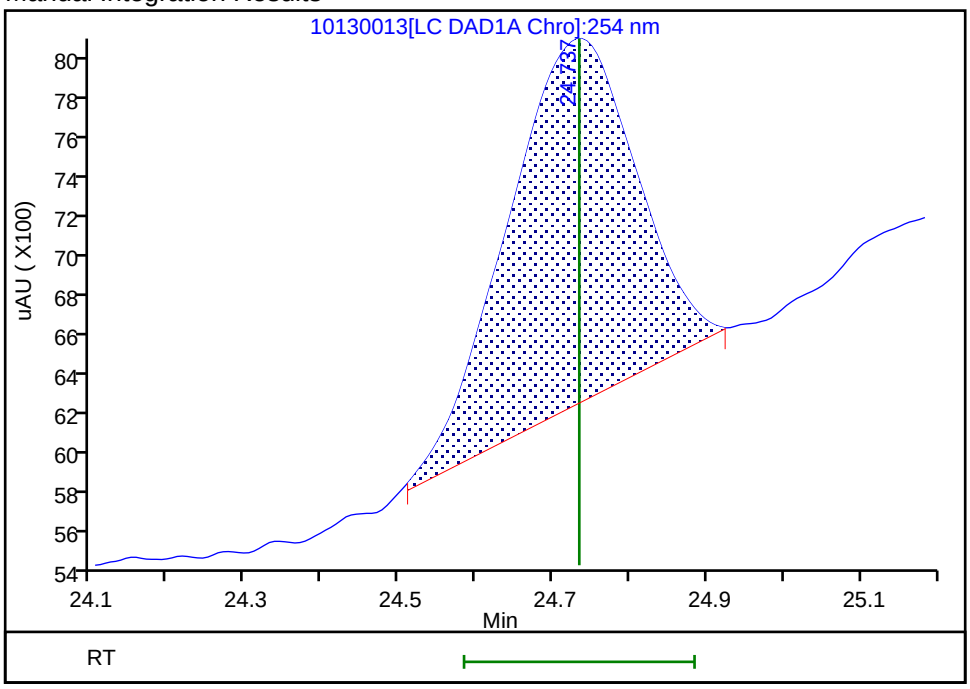
Processing Integration Results

RT: 24.74
Area: 21827
Amount: 0.048489
Amount Units: ug/ml



Manual Integration Results

RT: 24.74
Area: 21005
Amount: 0.046876
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:58:16
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Lims ID: IC FULL LV 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:28:27 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 1
Misc. Info.: 280-0075057-014
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:04 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:53:15

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	4.409	4.401	0.008	8941	0.0200	0.0204	
3 2,4-diamino-6-nitrotoluene	1	4.923	4.954	-0.031	7182	0.0200	0.0259	
4 2,4,6-Trinitrophenol	1	6.216	6.081	0.135	3438	0.0200	0.0196	
5 HMX	1	7.143	7.148	-0.005	3990	0.0200	0.0209	M
7 RDX	1	9.223	9.221	0.002	5022	0.0200	0.0209	M
8 Nitrobenzene	1	12.156	12.161	-0.005	9419	0.0200	0.0216	M
$ 9 1,2-Dinitrobenzene	1	13.163	13.161	0.002	6480	0.0200	0.0210	M
10 3,5-Dinitroaniline	1	15.123	15.114	0.009	9555	0.0200	0.0186	M
12 Nitroglycerin	2	15.676	15.667	0.009	40127	0.2000	0.2055	
11 1,3-Dinitrobenzene	1	15.723	15.707	0.016	14112	0.0200	0.0202	M
13 o-Nitrotoluene	1	16.496	16.474	0.022	5507	0.0201	0.0200	M
14 p-Nitrotoluene	1	16.816	16.814	0.002	5052	0.0201	0.0214	M
15 4-Amino-2,6-dinitrotoluene	1	17.223	17.221	0.002	6145	0.0201	0.0188	M
16 m-Nitrotoluene	1	17.736	17.721	0.015	6830	0.0201	0.0218	M
17 2-Amino-4,6-dinitrotoluene	1	18.263	18.254	0.009	10063	0.0201	0.0209	M
18 1,3,5-Trinitrobenzene	1	19.029	19.021	0.008	10023	0.0200	0.0197	
19 2,6-Dinitrotoluene	1	19.843	19.834	0.009	6342	0.0201	0.0193	M
20 2,4-Dinitrotoluene	1	20.403	20.394	0.009	12823	0.0200	0.0204	
21 Tetryl	1	23.723	23.721	0.002	8216	0.0200	0.0211	M
22 2,4,6-Trinitrotoluene	1	24.749	24.734	0.015	8290	0.0201	0.0185	M
23 PETN	2	25.149	25.141	0.008	25286	0.2000	0.1796	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	1.00	Units: uL
8330_ADDs_00017	Amount Added:	1.00	Units: uL

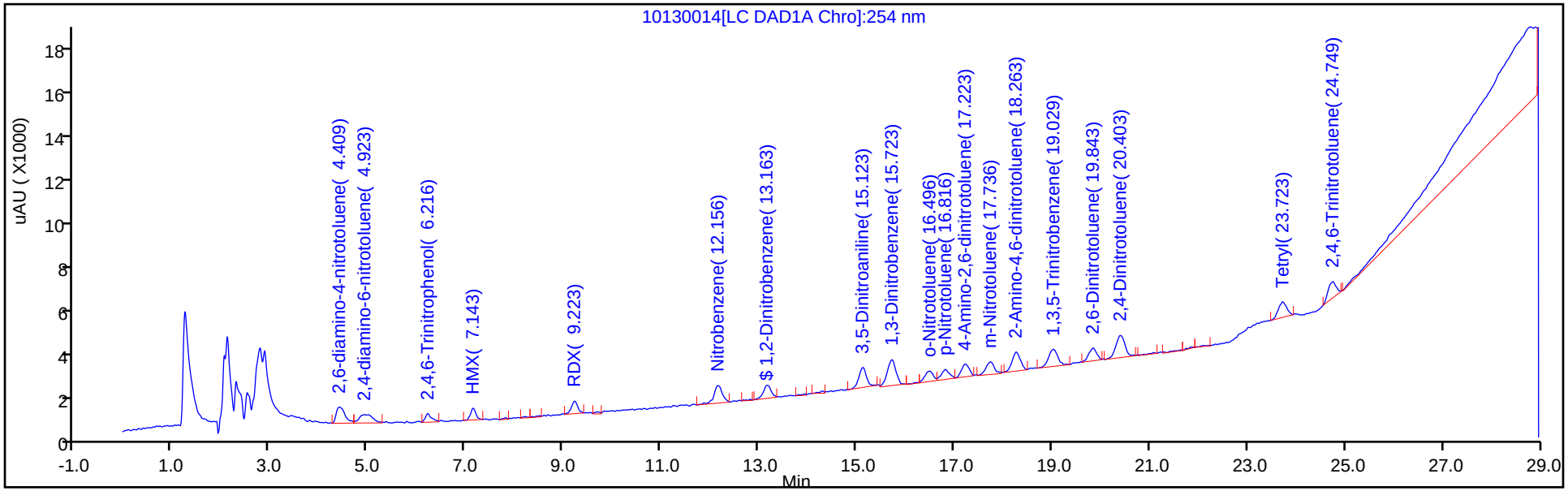
Report Date: 14-Oct-2018 14:03:05 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

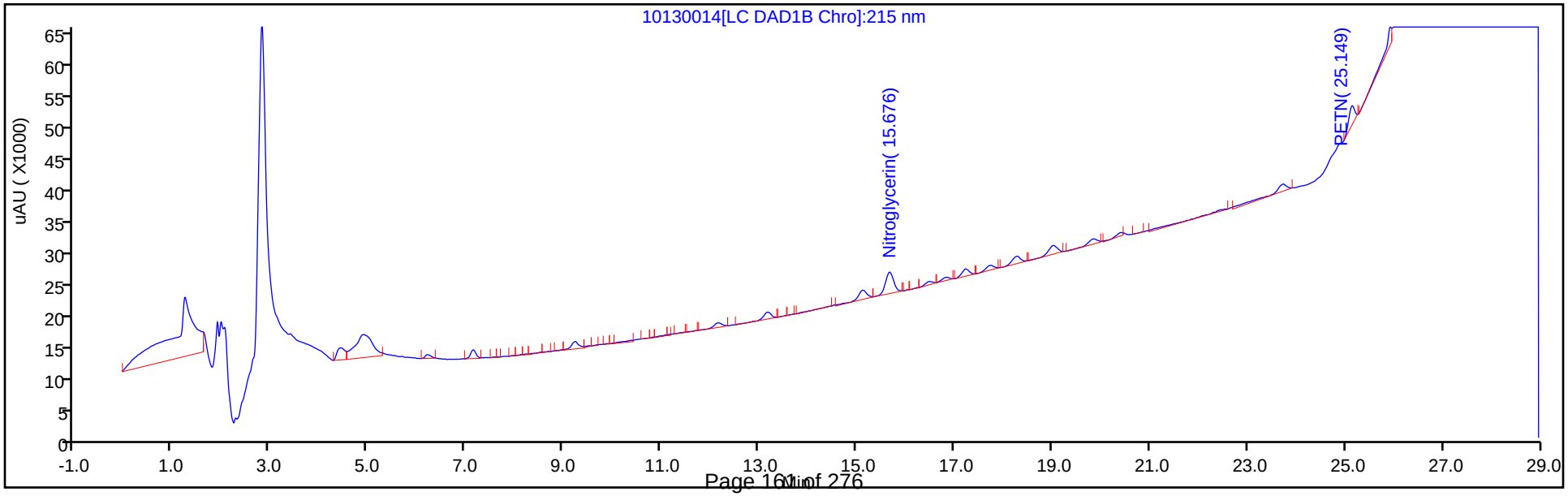
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D

Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
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

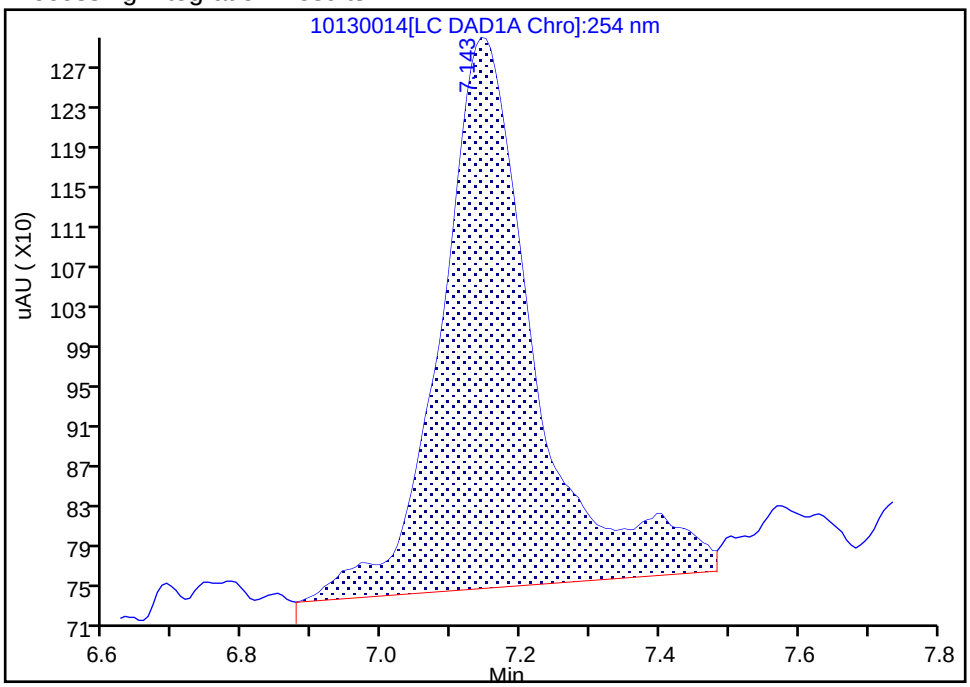
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

5 HMX, CAS: 2691-41-0

Signal: 1

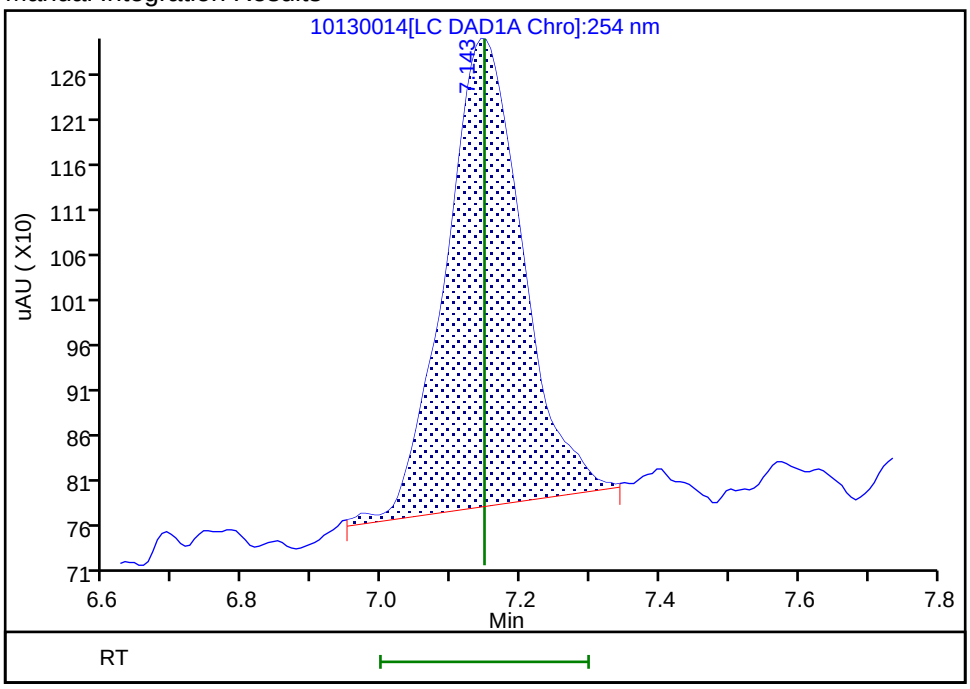
Processing Integration Results

RT: 7.14
Area: 5193
Amount: 0.026175
Amount Units: ug/ml



Manual Integration Results

RT: 7.14
Area: 3990
Amount: 0.020904
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:55:04
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

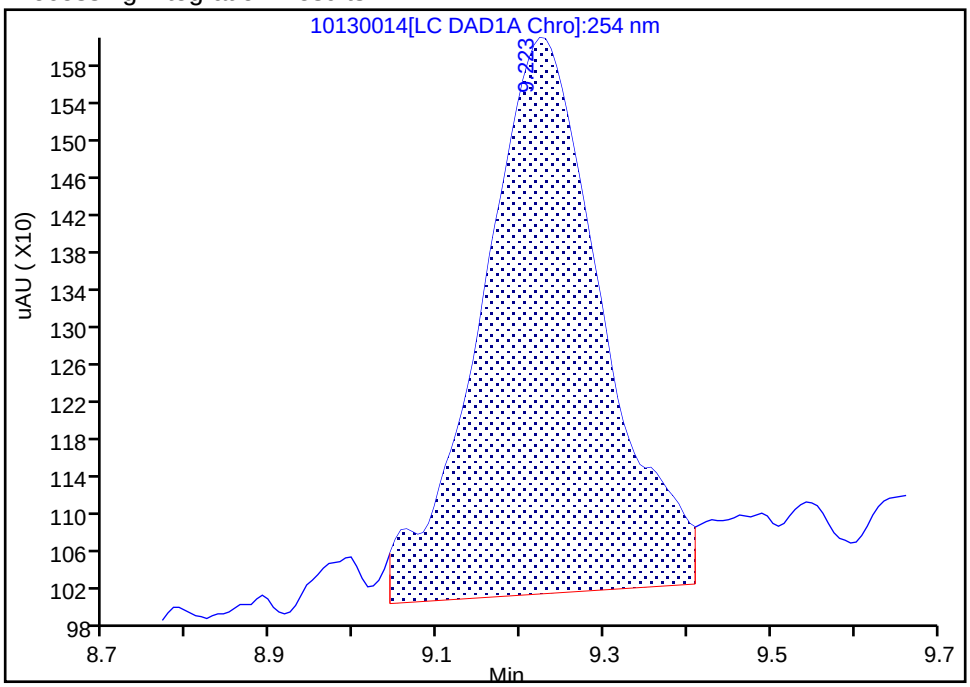
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

7 RDX, CAS: 121-82-4

Signal: 1

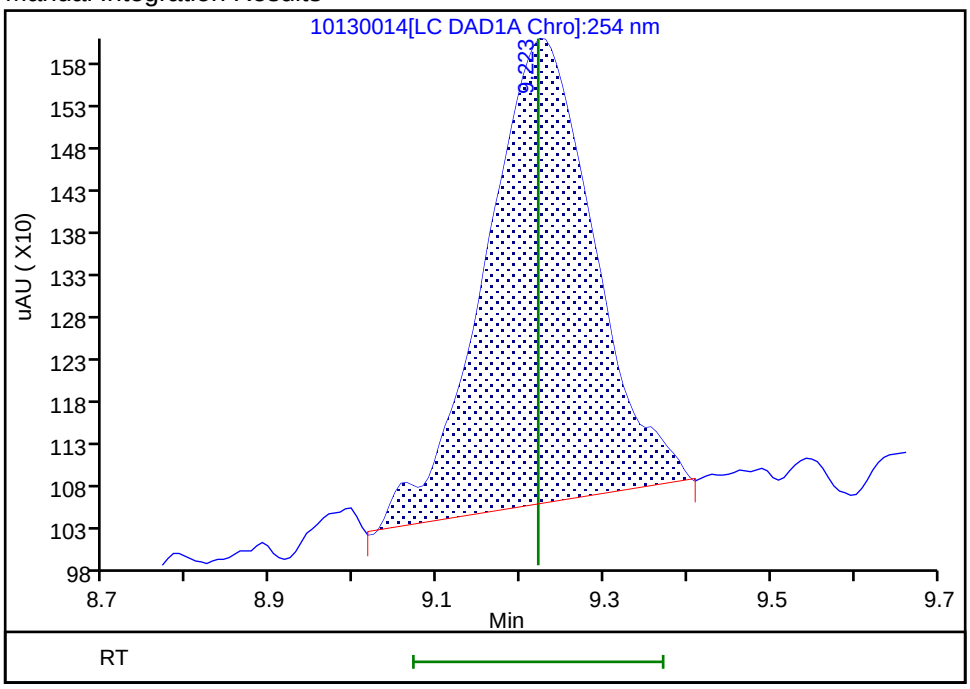
Processing Integration Results

RT: 9.22
Area: 6007
Amount: 0.024347
Amount Units: ug/ml



Manual Integration Results

RT: 9.22
Area: 5022
Amount: 0.020876
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:29
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

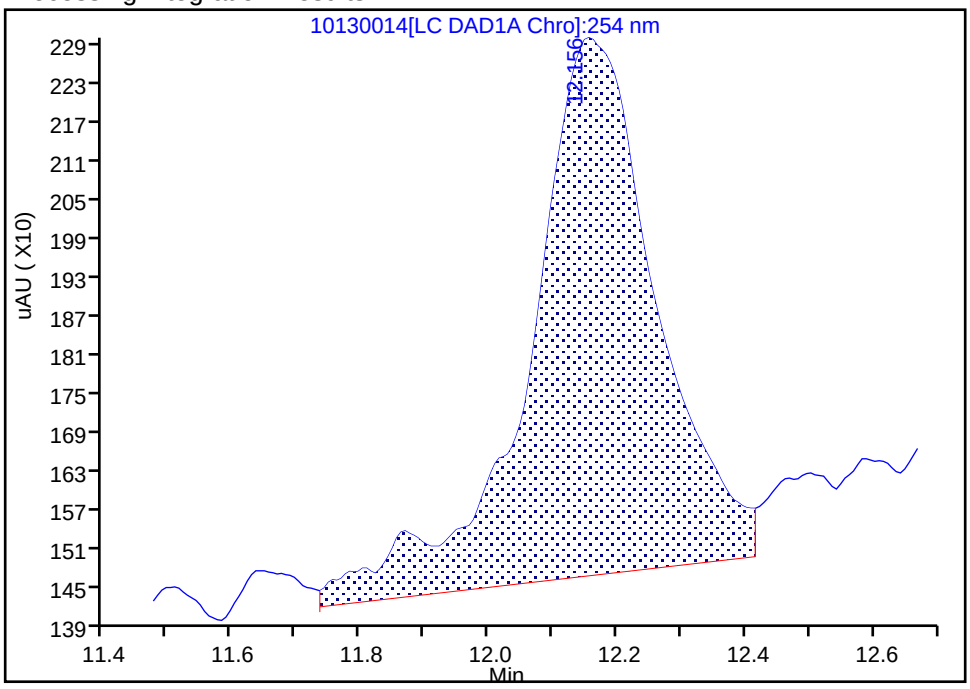
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

8 Nitrobenzene, CAS: 98-95-3

Signal: 1

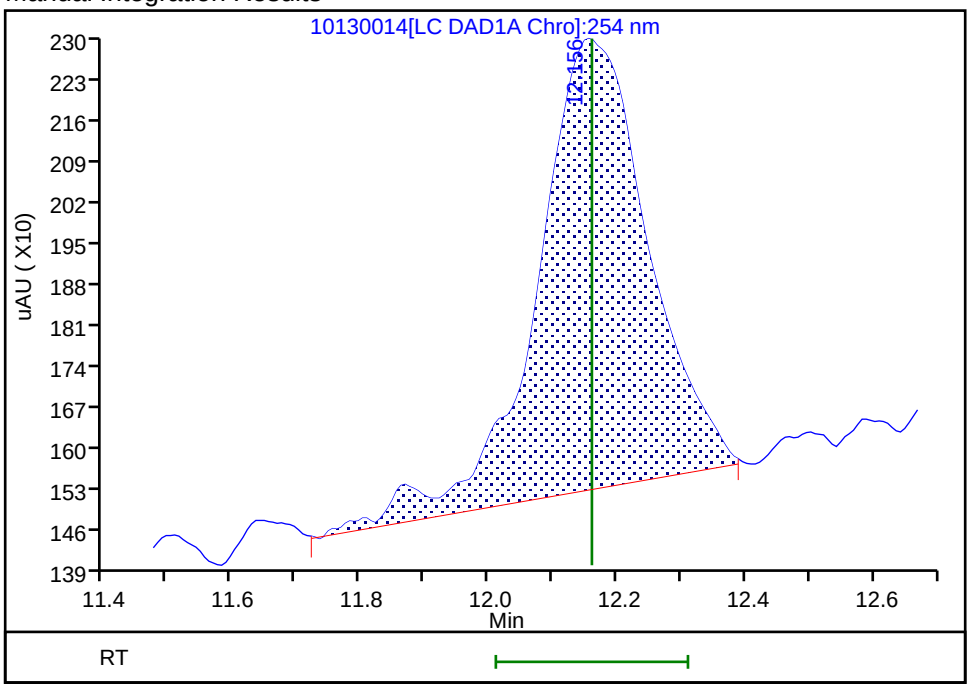
Processing Integration Results

RT: 12.16
Area: 11615
Amount: 0.025799
Amount Units: ug/ml



Manual Integration Results

RT: 12.16
Area: 9419
Amount: 0.021578
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:37

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

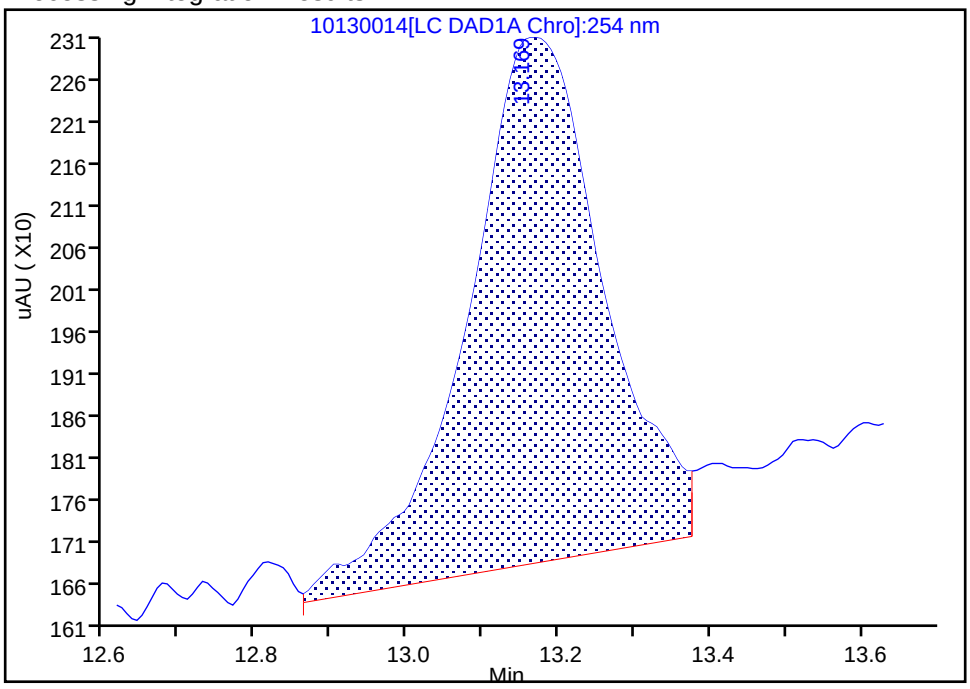
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

$ 9 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

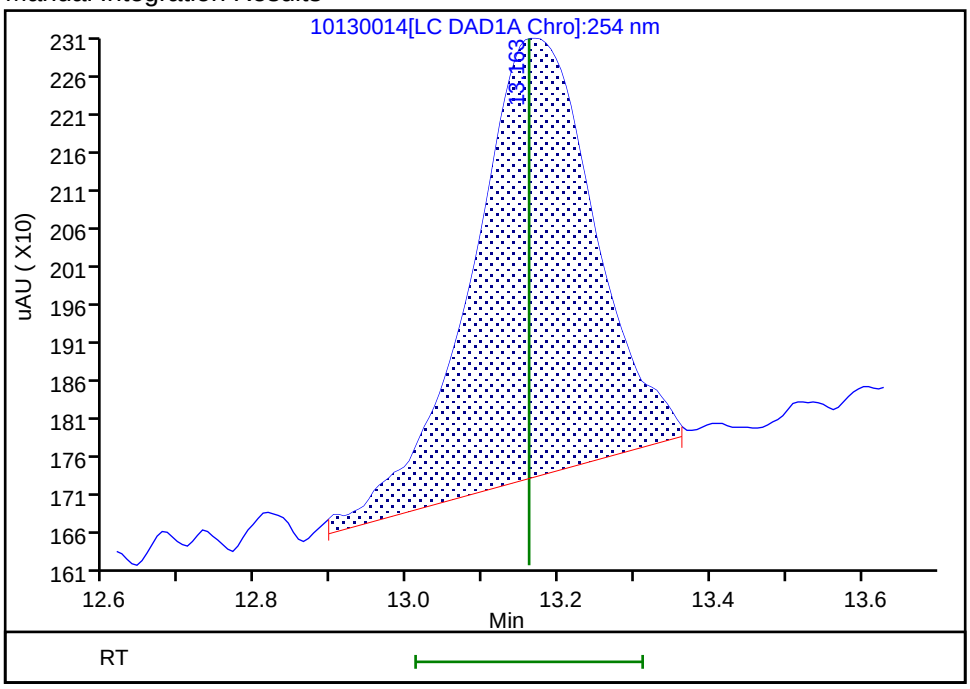
Processing Integration Results

RT: 13.17
Area: 7789
Amount: 0.024567
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 6480
Amount: 0.020979
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:58:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

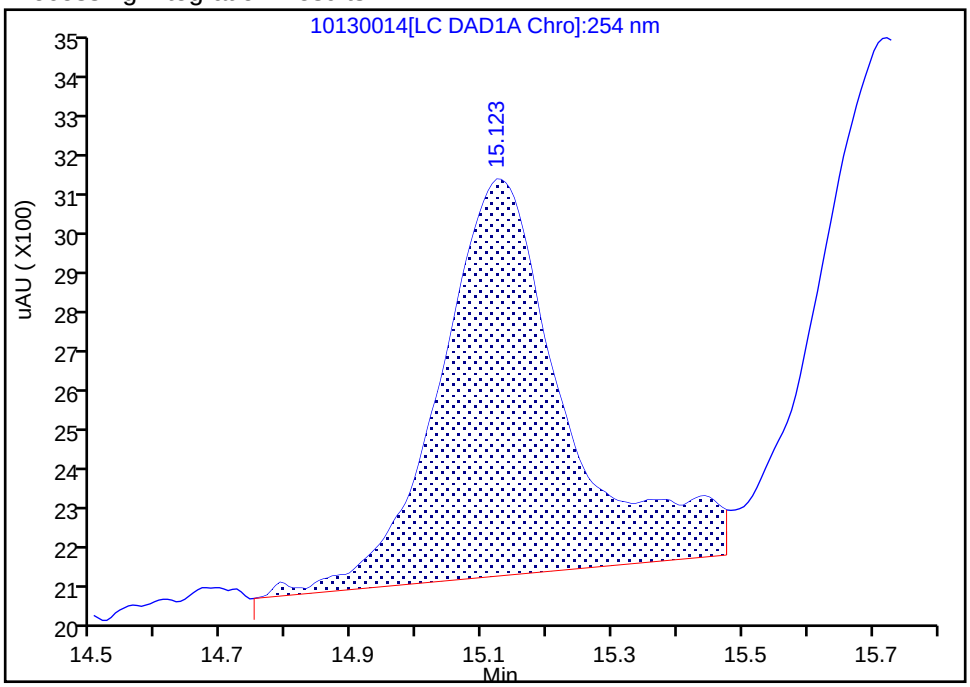
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

10 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

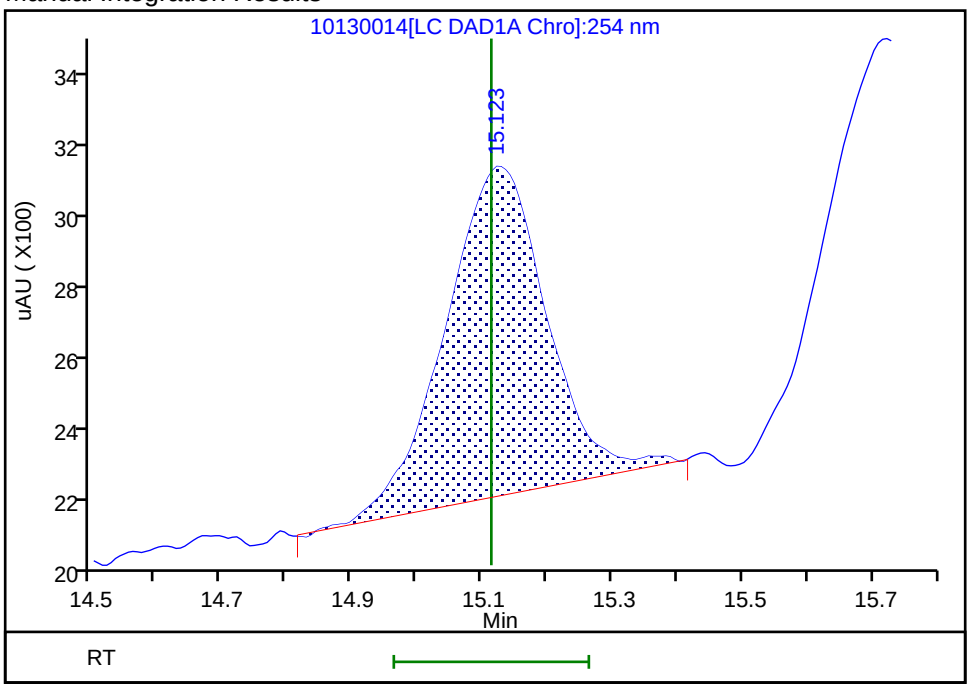
Processing Integration Results

RT: 15.12
Area: 12844
Amount: 0.019446
Amount Units: ug/ml



Manual Integration Results

RT: 15.12
Area: 9555
Amount: 0.018611
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:41
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

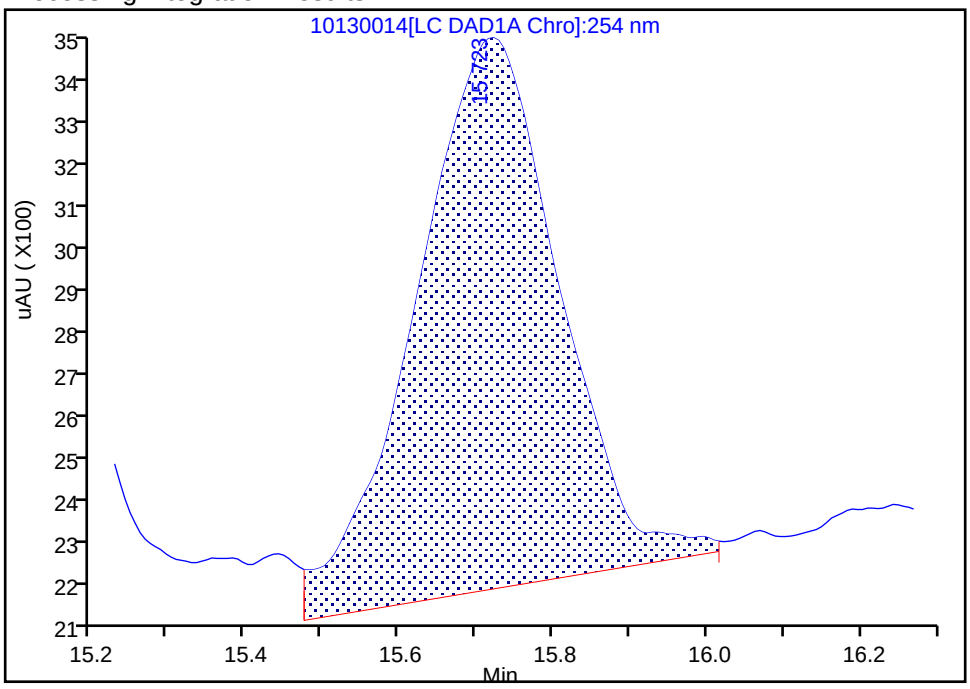
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

11 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

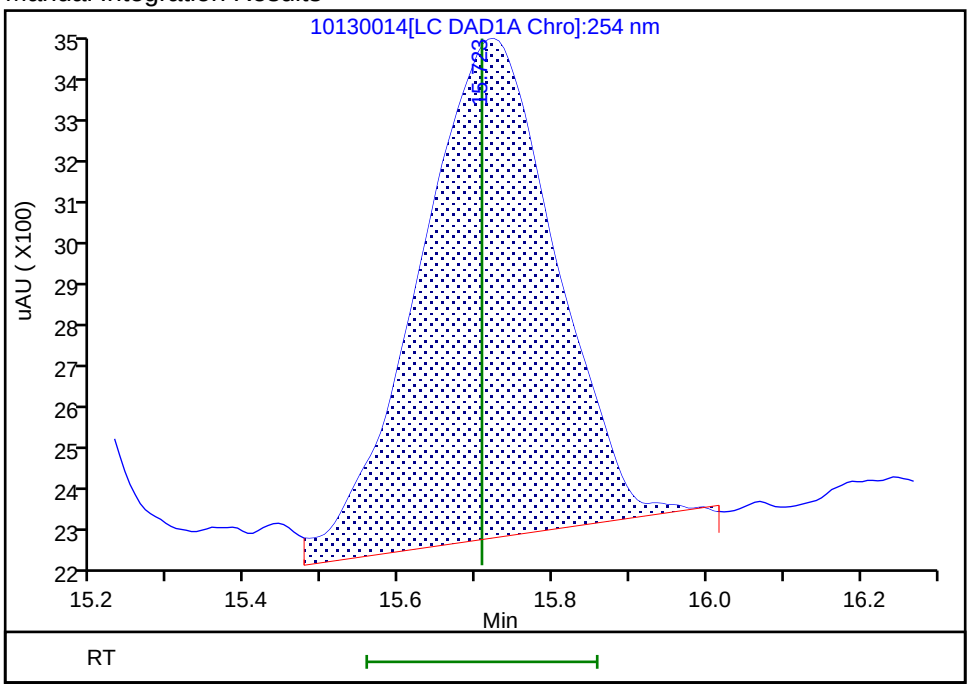
Processing Integration Results

RT: 15.72
Area: 15457
Amount: 0.021892
Amount Units: ug/ml



Manual Integration Results

RT: 15.72
Area: 14112
Amount: 0.020227
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:53:10
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

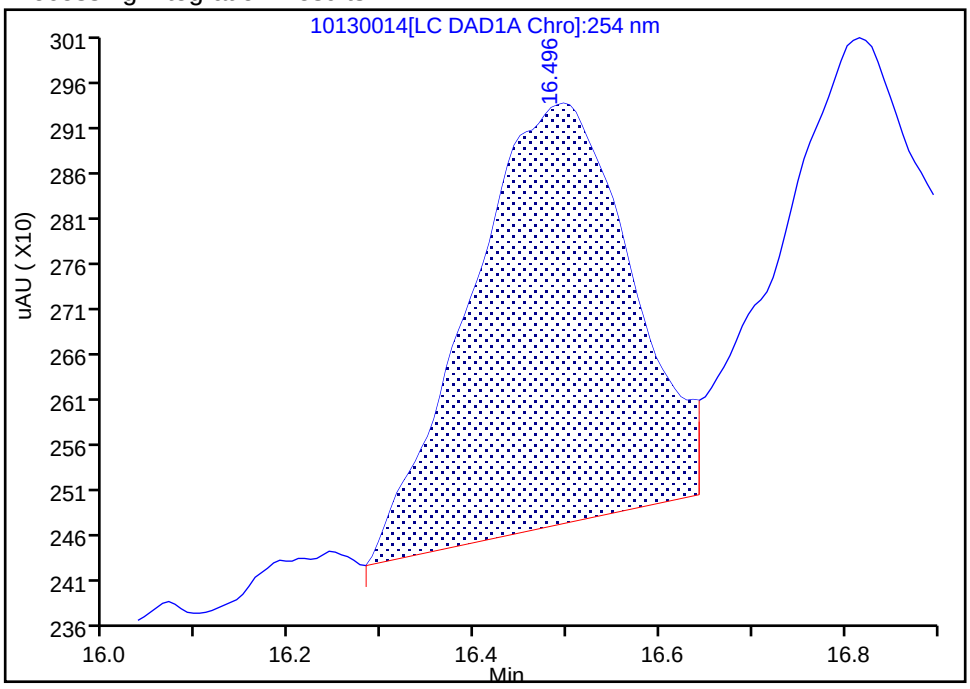
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

13 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

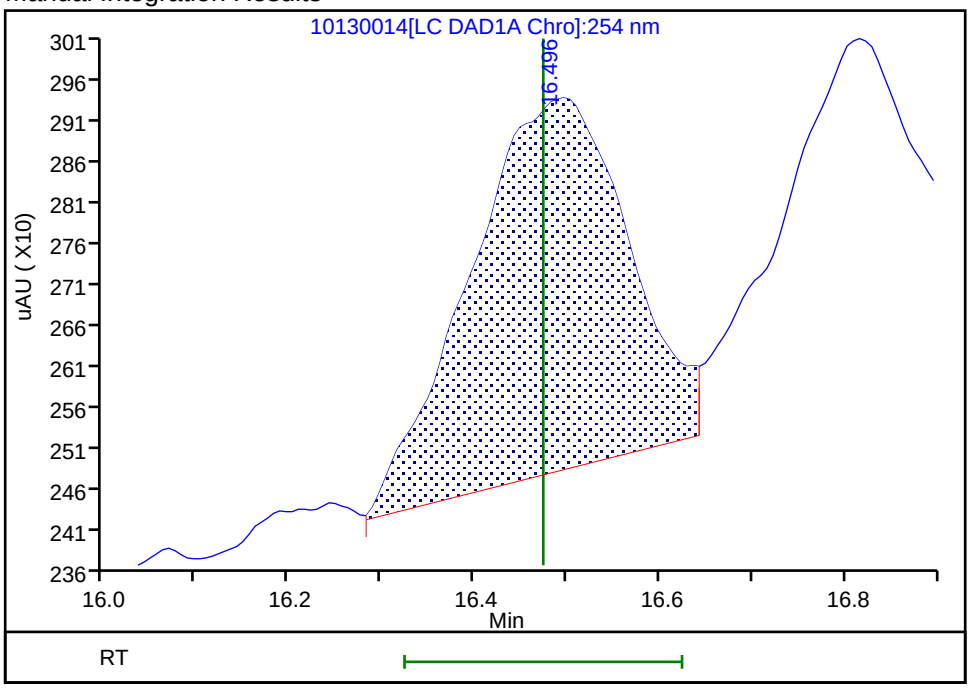
Processing Integration Results

RT: 16.50
Area: 5669
Amount: 0.020563
Amount Units: ug/ml



Manual Integration Results

RT: 16.50
Area: 5507
Amount: 0.020049
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

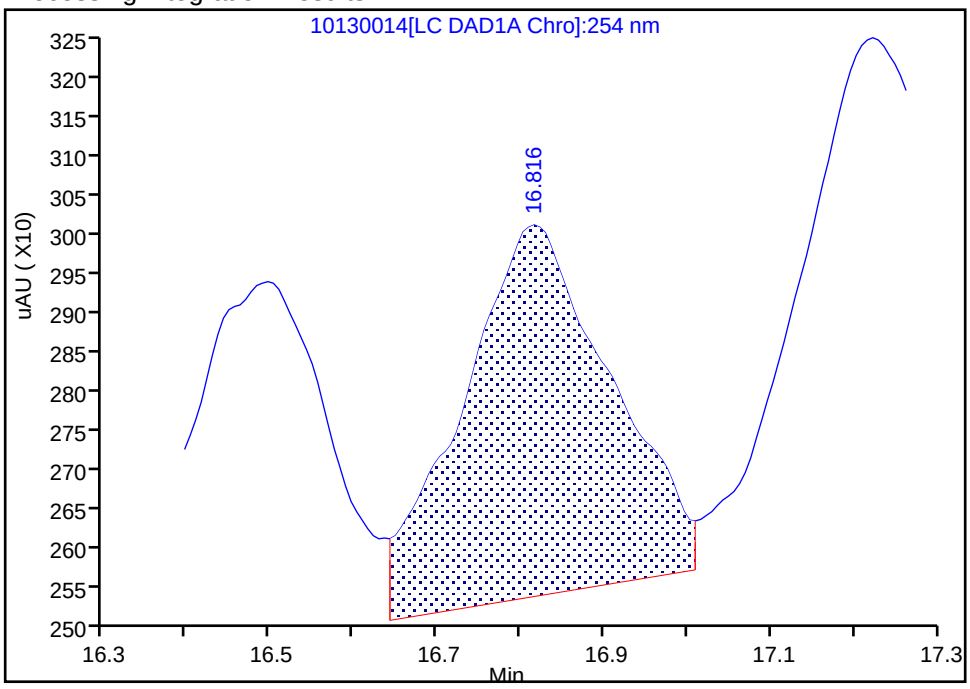
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

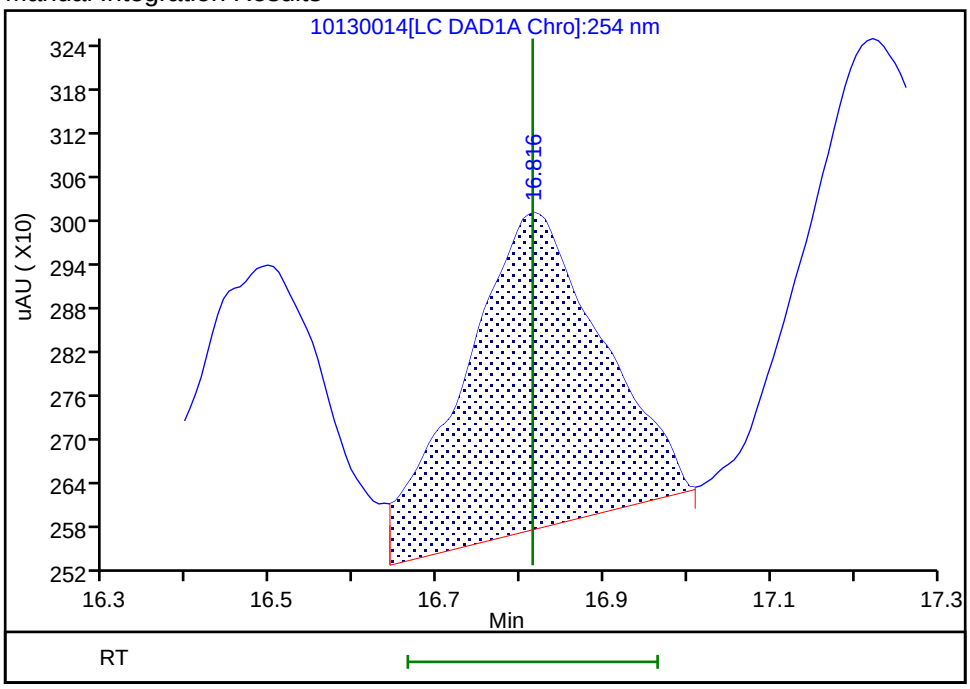
Processing Integration Results

RT: 16.82
Area: 5932
Amount: 0.024584
Amount Units: ug/ml



Manual Integration Results

RT: 16.82
Area: 5052
Amount: 0.021423
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

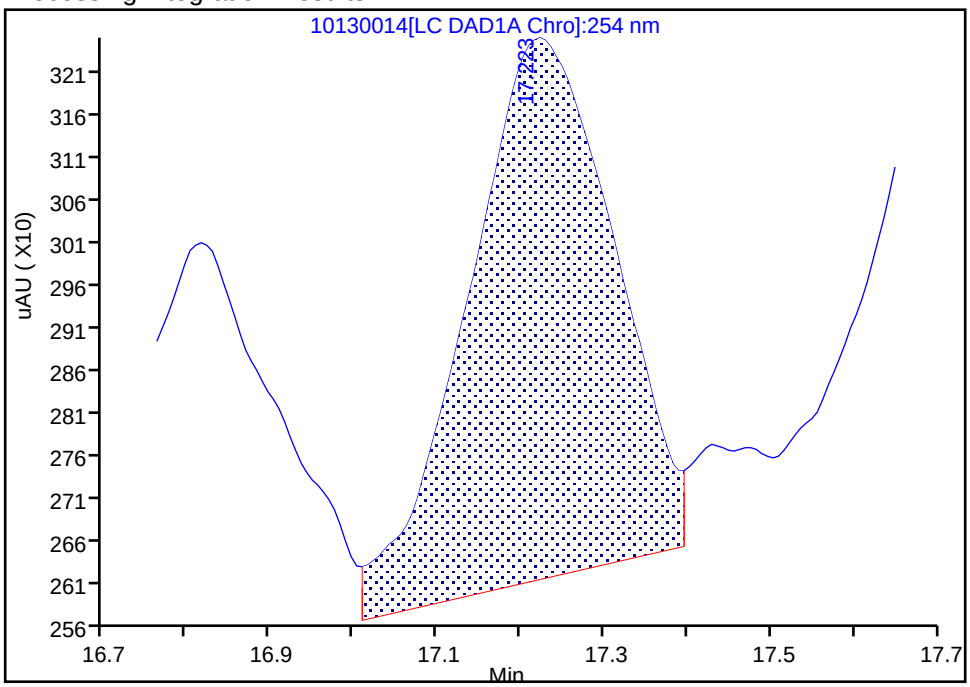
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

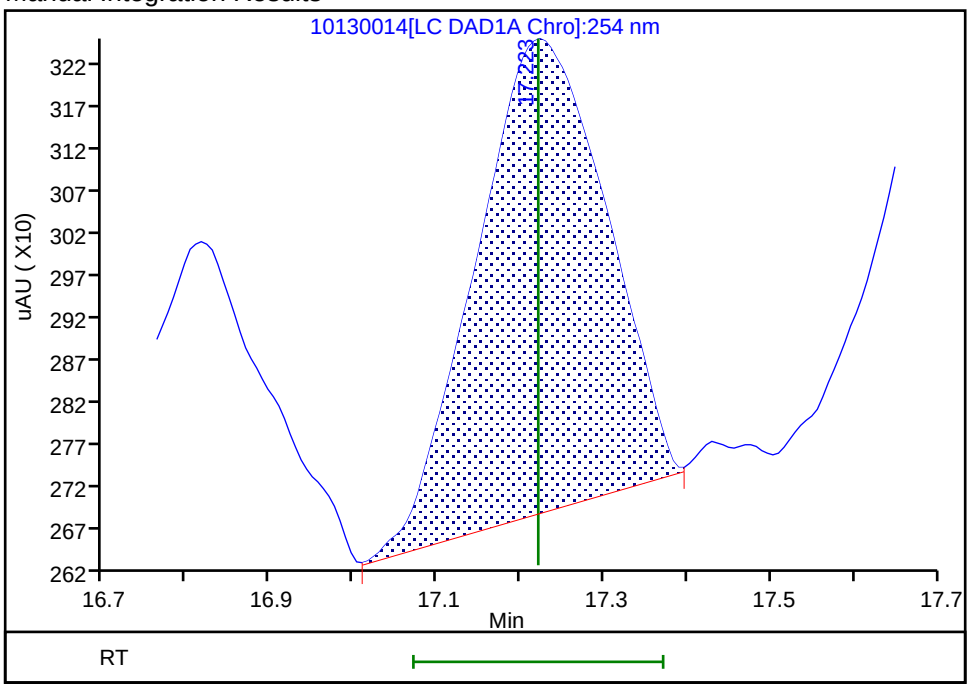
Processing Integration Results

RT: 17.22
Area: 7815
Amount: 0.023174
Amount Units: ug/ml



Manual Integration Results

RT: 17.22
Area: 6145
Amount: 0.018802
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

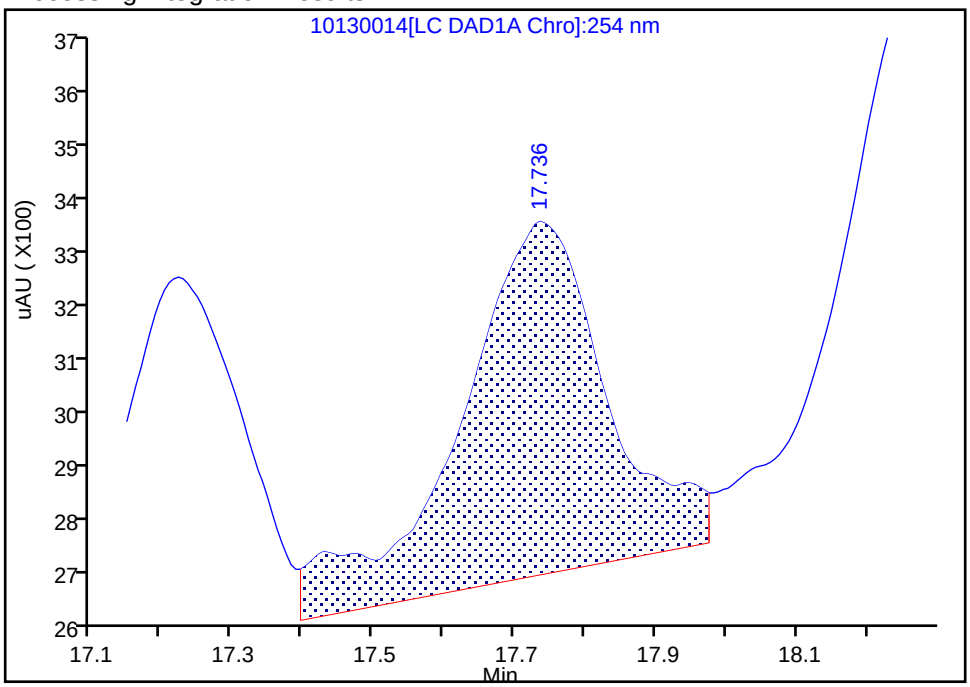
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

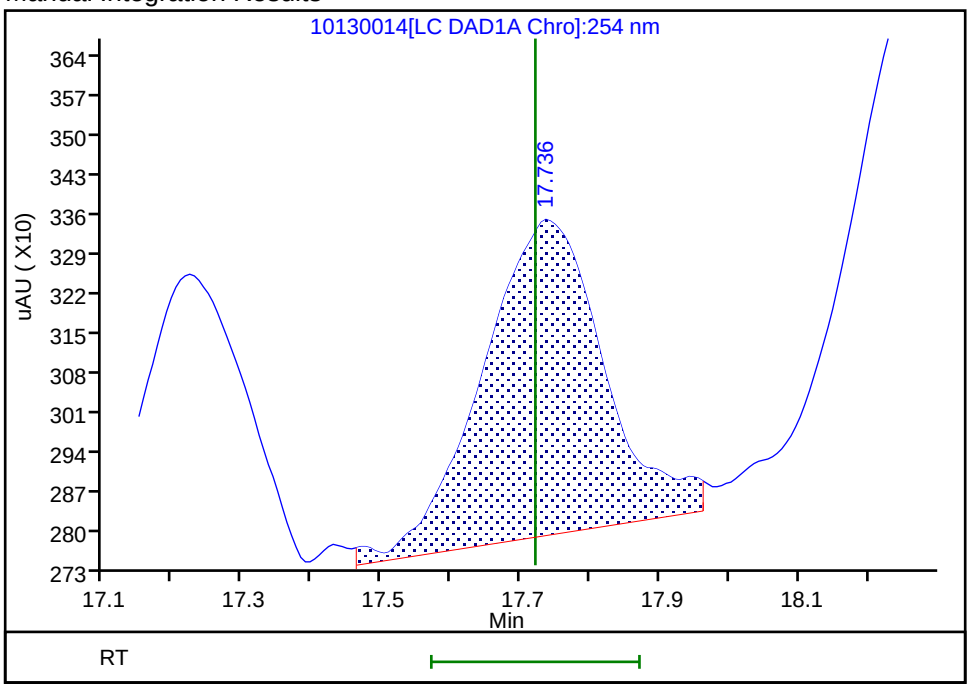
Processing Integration Results

RT: 17.74
Area: 9033
Amount: 0.027663
Amount Units: ug/ml



Manual Integration Results

RT: 17.74
Area: 6830
Amount: 0.021833
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:53

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

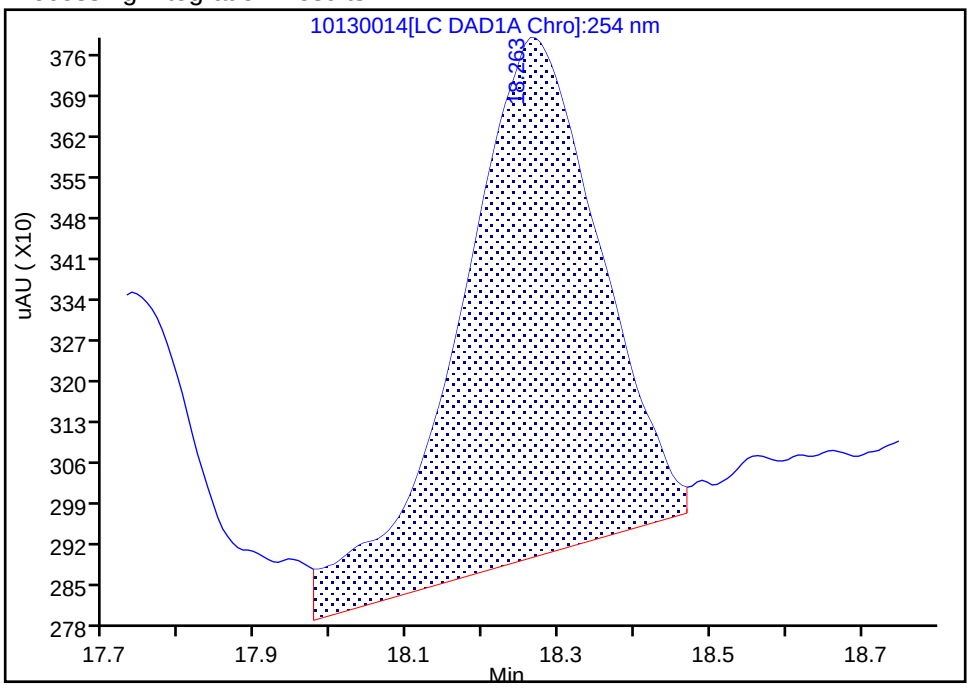
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

17 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

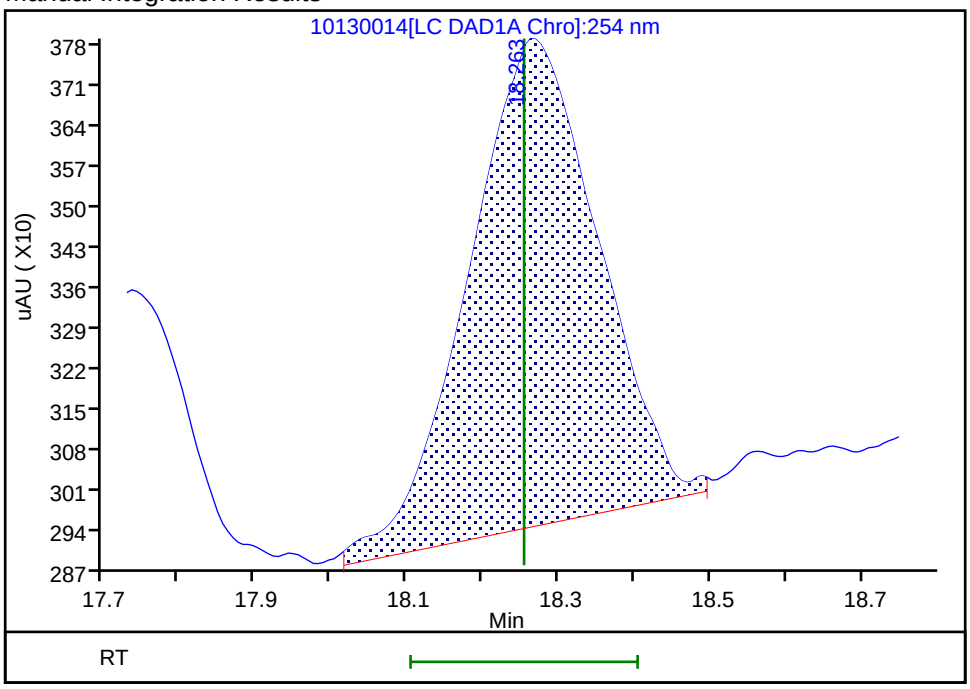
Processing Integration Results

RT: 18.26
Area: 11468
Amount: 0.023355
Amount Units: ug/ml



Manual Integration Results

RT: 18.26
Area: 10063
Amount: 0.020865
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

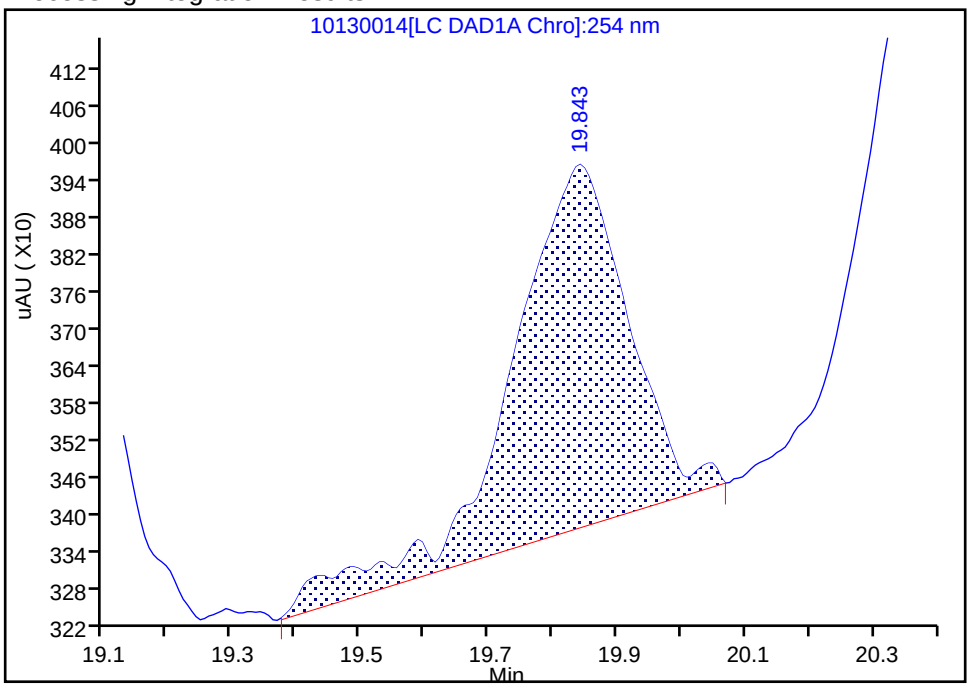
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

19 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

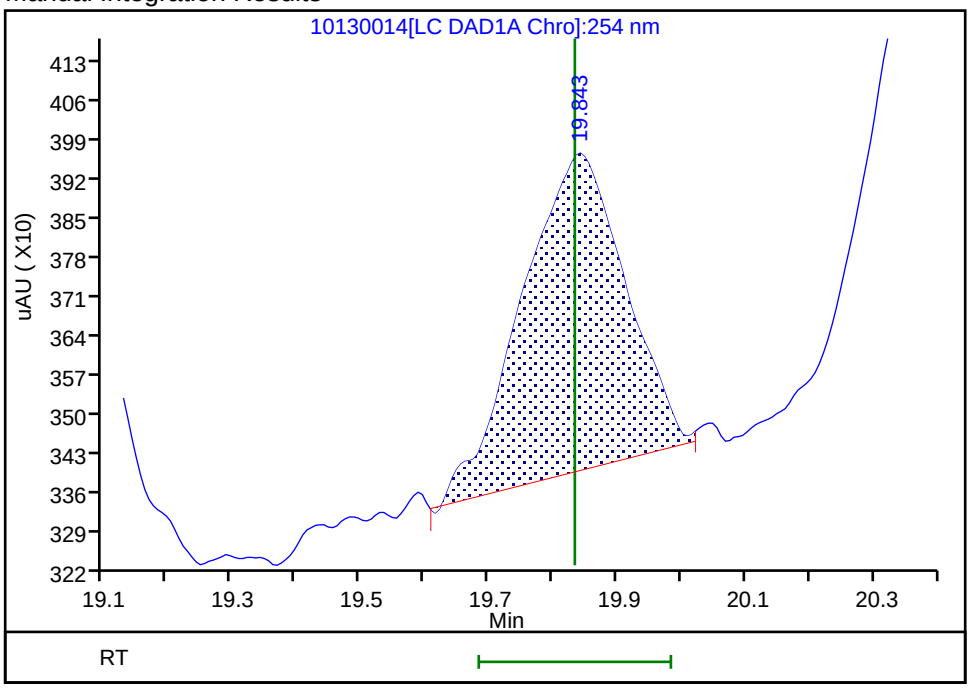
Processing Integration Results

RT: 19.84
Area: 7496
Amount: 0.022302
Amount Units: ug/ml



Manual Integration Results

RT: 19.84
Area: 6342
Amount: 0.019281
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:12
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

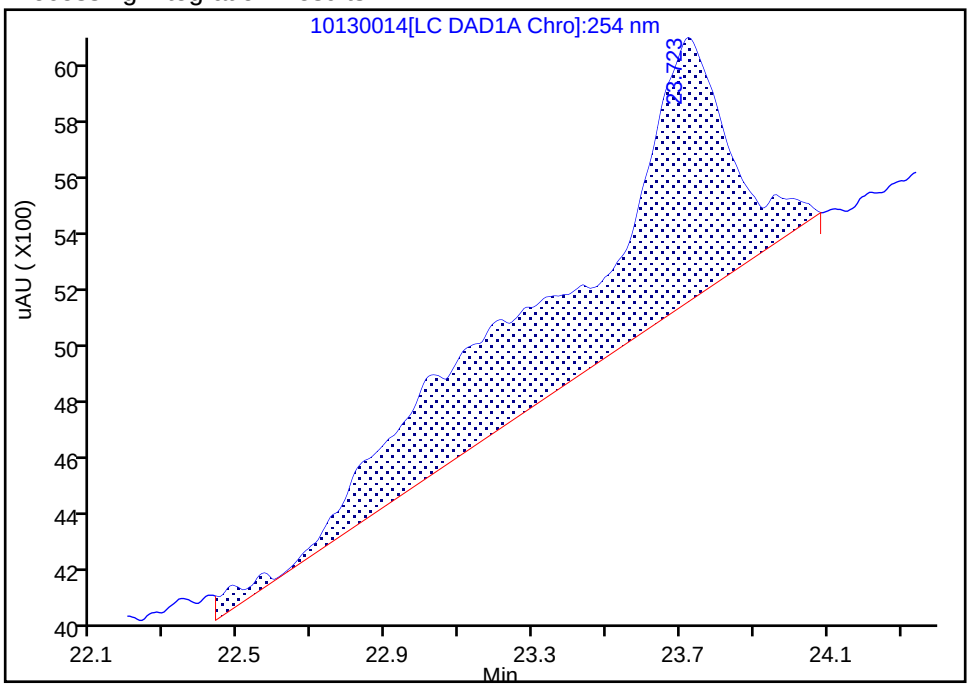
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 Tetryl, CAS: 479-45-8

Signal: 1

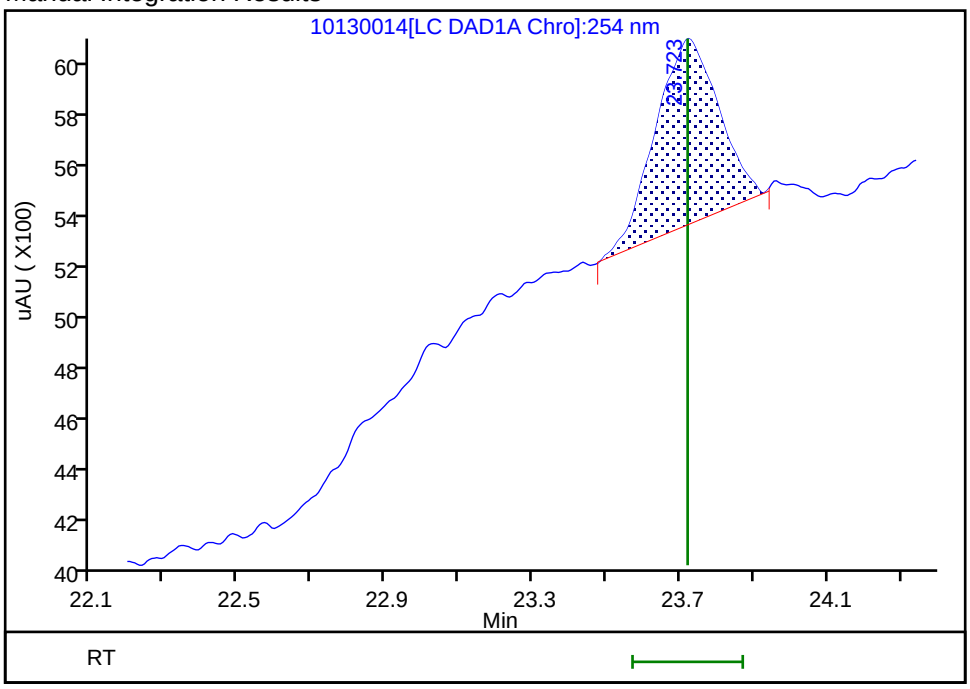
Processing Integration Results

RT: 23.72
Area: 27398
Amount: 0.052908
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 8216
Amount: 0.021061
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:18

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver

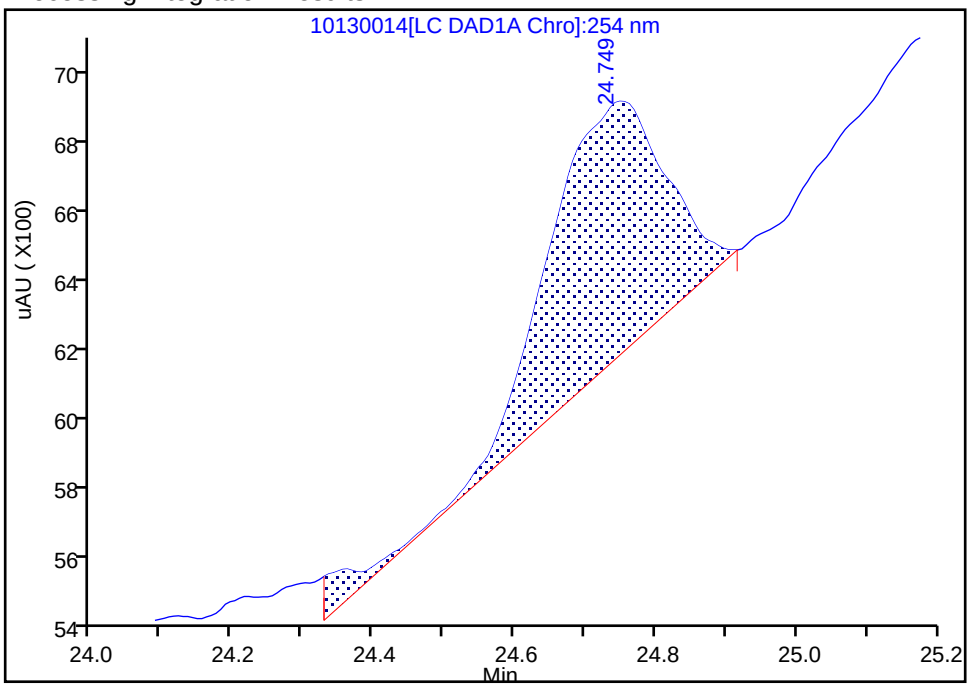
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: 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

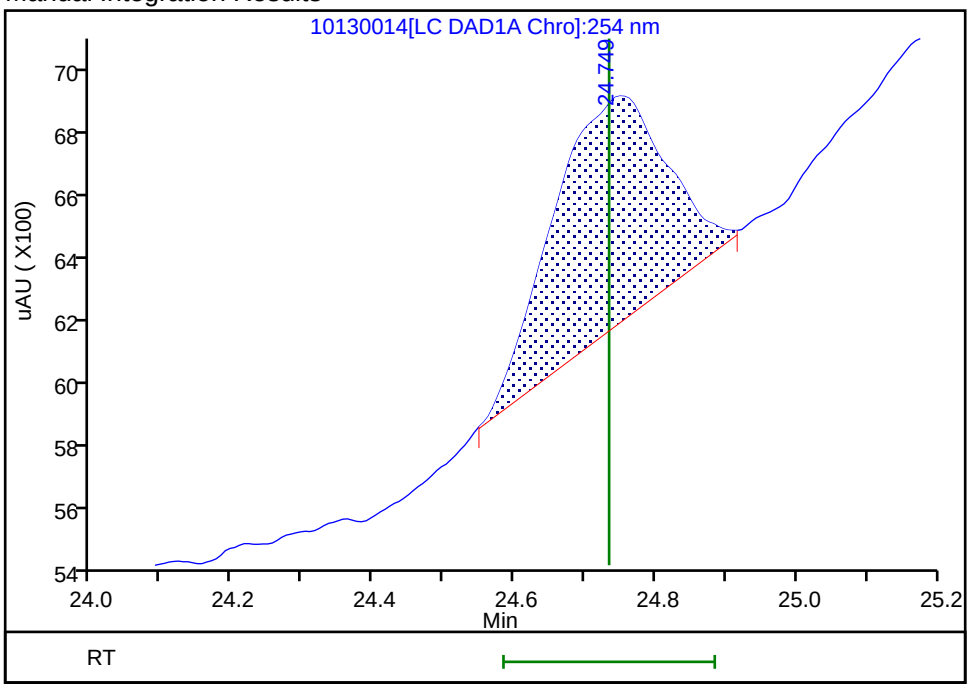
Processing Integration Results

RT: 24.75
Area: 8971
Amount: 0.019743
Amount Units: ug/ml



Manual Integration Results

RT: 24.75
Area: 8290
Amount: 0.018500
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:24
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

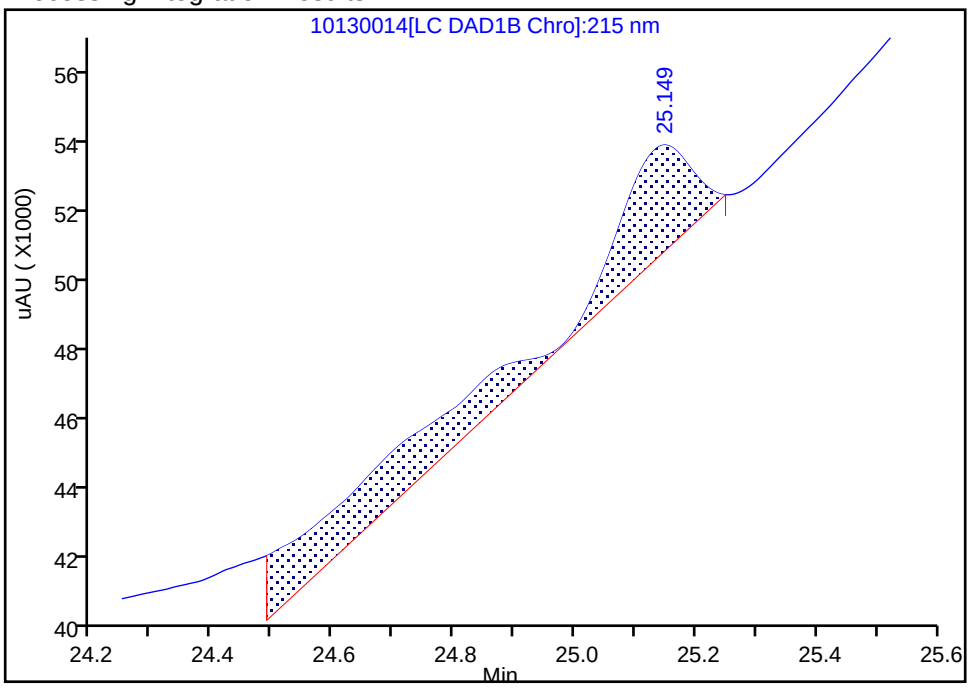
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Detector LC DAD1B, 215 nm

23 PETN, CAS: 78-11-5

Signal: 1

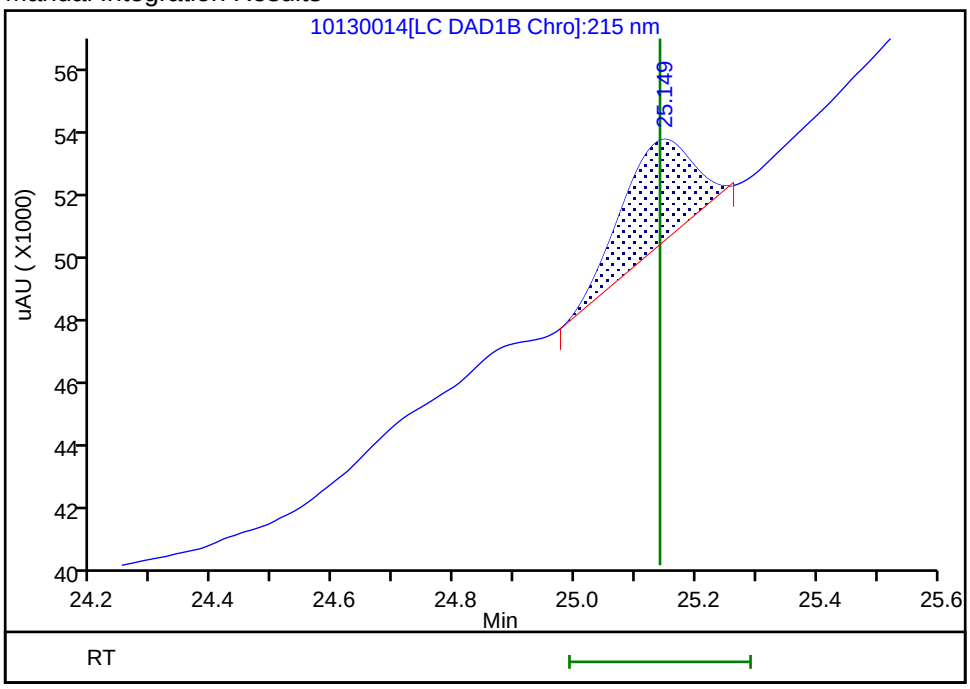
Processing Integration Results

RT: 25.15
Area: 58094
Amount: 0.293396
Amount Units: ug/ml



Manual Integration Results

RT: 25.15
Area: 25286
Amount: 0.179625
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:29
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	6.625	6.622	6.623	6.622	6.624	6.625	6.624	6.622			6.472 - 6.772	6.623
RDX	7.718	7.722	7.723	7.722	7.717	7.719	7.724	7.715			7.572 - 7.872	7.720
Picric acid	8.065	8.062	8.056	8.049	8.037	8.025	8.018	7.968			7.899 - 8.199	8.035
1,3,5-Trinitrobenzene	8.865	8.869	8.869	8.862	8.857	8.859	8.864	8.855			8.712 - 9.012	8.863
1,3-Dinitrobenzene	9.512	9.516	9.516	9.509	9.503	9.512	9.511	9.502			9.359 - 9.659	9.510
Nitrobenzene	9.898	9.902	9.902	9.895	9.890	9.892	9.898	9.888			9.745 - 10.045	9.896
Tetryl	10.218	10.216	10.216	10.209	10.210	10.212	10.211	10.208			10.059 - 10.359	10.213
Nitroglycerin	10.725	10.722	10.722	10.715	10.710	10.712	10.711	10.708			10.565 - 10.865	10.716
2,4,6-Trinitrotoluene	11.165	11.162	11.162	11.155	11.157	11.159	11.158	11.155			11.055 - 11.255	11.159
4-Amino-2,6-dinitrotoluene	11.318	11.316	11.322	11.315	11.310	11.312	11.311	11.308			11.215 - 11.415	11.314
2-Amino-4,6-dinitrotoluene	11.598	11.596	11.602	11.595	11.590	11.592	11.591	11.588			11.495 - 11.695	11.594
2,6-Dinitrotoluene	11.765	11.756	11.762	11.755	11.750	11.752	11.751	11.748			11.655 - 11.855	11.755
2,4-Dinitrotoluene	11.952	11.949	11.956	11.942	11.943	11.945	11.944	11.942			11.842 - 12.042	11.947
2-Nitrotoluene	12.785	12.789	12.789	12.782	12.777	12.785	12.778	12.775			12.632 - 12.932	12.783
4-Nitrotoluene	13.218	13.216	13.216	13.209	13.210	13.212	13.211	13.208			13.059 - 13.359	13.213
3-Nitrotoluene	13.812	13.809	13.809	13.802	13.797	13.799	13.798	13.795			13.652 - 13.952	13.803
PETN		14.916	14.916	14.909	14.910	14.905	14.904	14.895			14.759 - 15.059	14.908
1,2-Dinitrobenzene	8.705	8.702	8.703	8.702	8.697	8.699	8.704	8.695			8.552 - 8.852	8.701

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
HMX	80950 85940	83640 87649	81370 87246	83844 88926	Ave		84945.5714				3.5		20.0			
RDX	102150 107003	101000 105186	105630 105400	103860 106390	Ave		104577.327				2.0		20.0			
Picric acid	93950 80905	89880 82509	80500 84211	76192 86576	Ave		84340.3214				6.7		20.0			
1,3,5-Trinitrobenzene	202100 234028	227660 235761	222530 236230	227420 241536	Ave		228408.166				5.4		20.0			
1,3-Dinitrobenzene	277572 307465	303437 304447	303027 304477	298725 309038	Ave		301023.443				3.3		20.0			
Nitrobenzene	191717 200245	201876 200781	198214 198631	193980 204804	Ave		198780.920				2.1		20.0			
Tetryl	139850 166665	164520 170279	162800 170312	160332 172830	Ave		163448.446				6.4		20.0			
Nitroglycerin	59530 70785	65386 70242	68459 70136	68518 70507	Ave		67945.3646				5.6		20.0			
2,4,6-Trinitrotoluene	206026 213254	224442 215804	210707 214814	209992 220784	Ave		214477.993				2.8		20.0			
4-Amino-2,6-dinitrotoluene	173779 167448	169831 161815	164606 161970	161779 162780	Ave		165500.847				2.7		20.0			
2-Amino-4,6-dinitrotoluene	191376 201012	204327 198084	197906 202480	197823 202720	Ave		199465.924				2.1		20.0			
2,6-Dinitrotoluene	155783 152159	159342 155008	150588 150226	148247 153167	Ave		153065.012				2.3		20.0			
2,4-Dinitrotoluene	286926 302290	305649 297850	299481 296720	293297 303937	Ave		298268.777				2.0		20.0			
2-Nitrotoluene	137637 130803	137886 130219	132742 128507	127864 132138	Ave		132224.576				2.9		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
4-Nitrotoluene	117281 112786	117211 112420	114412 111061	110291 113768	Ave		113653.797				2.3		20.0			
3-Nitrotoluene	161604 145301	155100 144859	146165 142855	142582 146418	Ave		148110.392				4.5		20.0			
PETN	 76935	68194 76788	73842 76779	74512 77633	Ave		74954.8292				4.4		20.0			
1,2-Dinitrobenzene	113900 131463	133300 131203	126380 133312	125372 134889	Ave		128727.320				5.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
HMX	Ave	1619 61354	4182 87246	8137 222315	20961	34376	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	2043 73630	5050 105400	10563 265976	25965	42801	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Ave	1879 57756	4494 84211	8050 216440	19048	32362	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Ave	4042 165033	11383 236230	22253 603841	56855	93611	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Ave	5557 213326	15187 304781	30333 773367	74756	123109	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	3842 140828	10114 199028	19861 513035	48592	80258	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
Tetryl	Ave	2797 119195	8226 170312	16280 432075	40083	66666	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	11906 491693	32693 701363	68459 1762679	171294	283140	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2,4,6-Trinitrotoluene	Ave	4137 151667	11267 215673	21155 554169	52708	85643	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	3486 113610	8517 162456	16510 408172	40566	67180	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2-Amino-4,6-dinitrotoluene	Ave	3839 139075	10247 203087	19850 508320	49604	80646	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,6-Dinitrotoluene	Ave	3125 108831	7991 150677	15104 384067	37173	61046	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	5750 208912	15313 297313	30008 761362	73471	121158	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
2-Nitrotoluene	Ave	2761 91427	6915 128893	13314 331335	32062	52478	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	2355 79009	5884 111505	11487 285557	27683	45295	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 240-103914-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3-Nitrotoluene	Ave	3245 101807	7786 143426	14675 367509	35788	58353	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	 537514	34097 767790	73842 1940836	186281	307741	 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	2278 91842	6665 133312	12638 337223	31343	52585	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:
Ave = Average

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D
Lims ID: IC MAIN L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-May-2018 10:34:02 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L8
Misc. Info.: 280-0070054-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:16 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:54:21

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	222315	2.50	2.62	
5 RDX	1	7.715	7.722	-0.007	265976	2.50	2.54	
6 2,4,6-Trinitrophenol	1	7.968	8.049	-0.081	216440	2.50	2.57	
$ 7 1,2-Dinitrobenzene	1	8.695	8.702	-0.007	337223	2.50	2.62	
8 1,3,5-Trinitrobenzene	1	8.855	8.862	-0.007	603841	2.50	2.64	
9 1,3-Dinitrobenzene	1	9.502	9.509	-0.007	773367	2.50	2.57	
11 Nitrobenzene	1	9.888	9.895	-0.007	513035	2.51	2.58	
12 Tetryl	1	10.208	10.209	-0.001	432075	2.50	2.64	
13 Nitroglycerin	2	10.708	10.715	-0.007	1762679	25.0	25.9	
14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	554169	2.51	2.58	
15 4-Amino-2,6-dinitrotoluene	1	11.308	11.315	-0.007	408172	2.51	2.47	
16 2-Amino-4,6-dinitrotoluene	1	11.588	11.595	-0.007	508320	2.51	2.55	
17 2,6-Dinitrotoluene	1	11.748	11.755	-0.007	384067	2.51	2.51	
18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	761362	2.51	2.55	
19 o-Nitrotoluene	1	12.775	12.782	-0.007	331335	2.51	2.51	
20 p-Nitrotoluene	1	13.208	13.209	-0.001	285557	2.51	2.51	
21 m-Nitrotoluene	1	13.795	13.802	-0.007	367509	2.51	2.48	
22 PETN	2	14.895	14.909	-0.014	1940836	25.0	25.9	

Reagents:

8330IntermStk_00055 Amount Added: 250.00 Units: uL

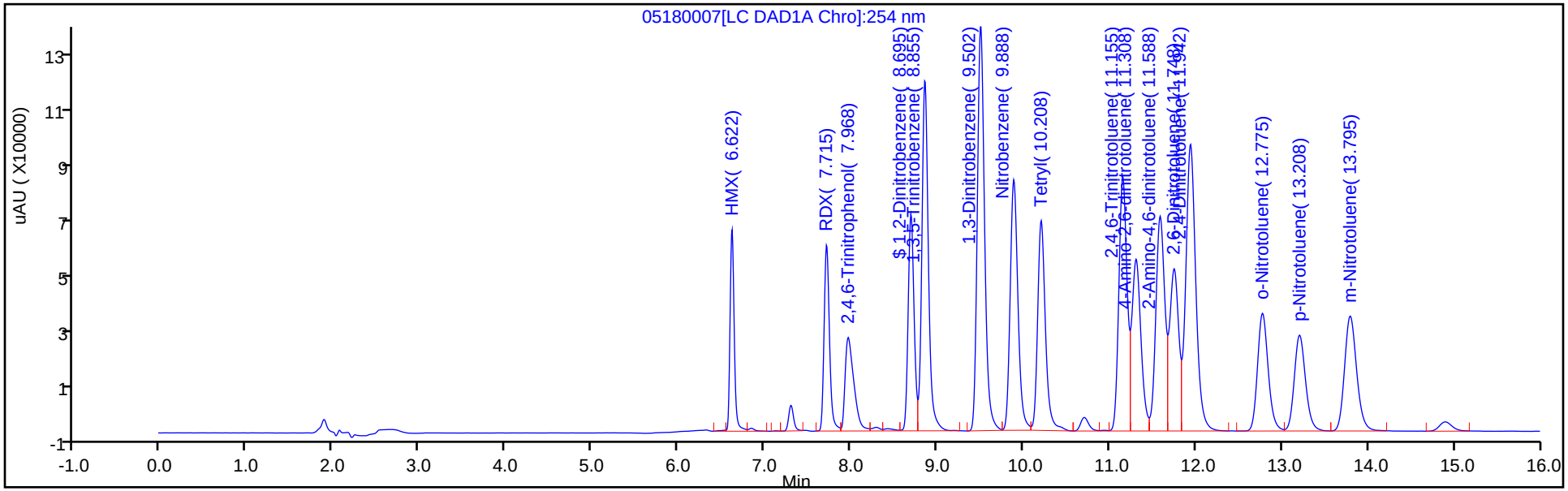
Report Date: 22-May-2018 12:01:17 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

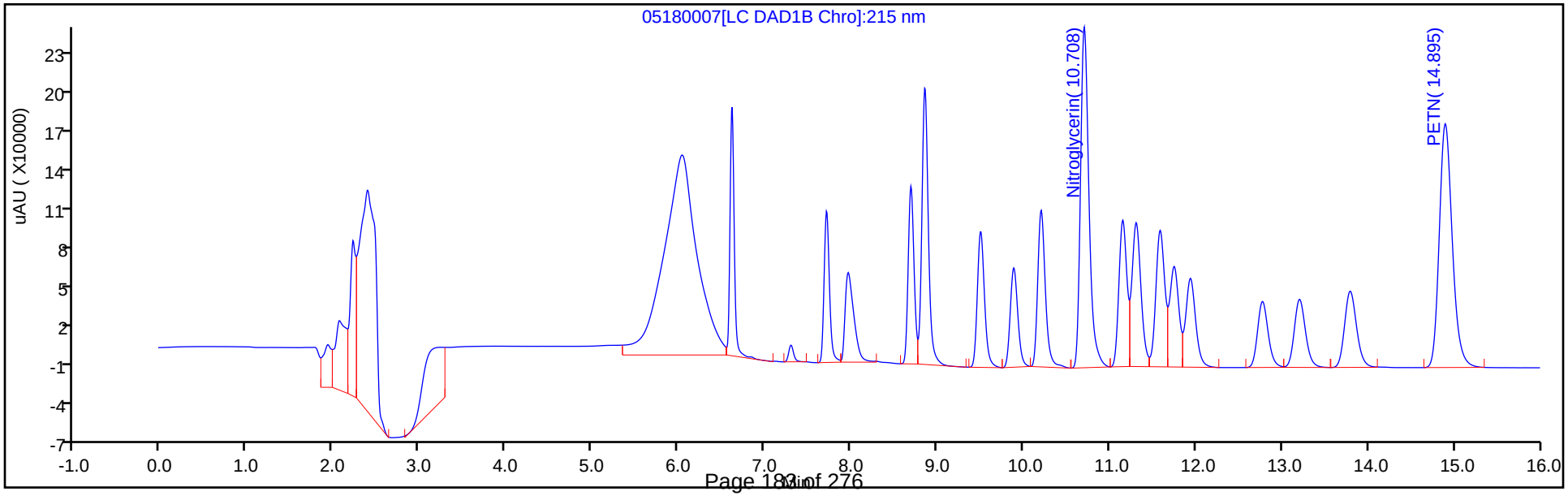
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D

Injection Date:	18-May-2018 10:34:02	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D
Lims ID: IC MAIN L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-May-2018 10:57:00 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L7
Misc. Info.: 280-0070054-008
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:17 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:06:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	87246	1.00	1.03	
5 RDX	1	7.724	7.722	0.002	105400	1.00	1.01	
6 2,4,6-Trinitrophenol	1	8.018	8.049	-0.031	84211	1.00	1.00	
$ 7 1,2-Dinitrobenzene	1	8.704	8.702	0.002	133312	1.00	1.04	
8 1,3,5-Trinitrobenzene	1	8.864	8.862	0.002	236230	1.00	1.03	
9 1,3-Dinitrobenzene	1	9.511	9.509	0.002	304781	1.00	1.01	
11 Nitrobenzene	1	9.898	9.895	0.003	199028	1.00	1.00	
12 Tetryl	1	10.211	10.209	0.002	170312	1.00	1.04	
13 Nitroglycerin	2	10.711	10.715	-0.004	701363	10.0	10.3	
14 2,4,6-Trinitrotoluene	1	11.158	11.155	0.003	215673	1.00	1.01	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.315	-0.004	162456	1.00	0.9816	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.595	-0.004	203087	1.00	1.02	
17 2,6-Dinitrotoluene	1	11.751	11.755	-0.004	150677	1.00	0.9844	
18 2,4-Dinitrotoluene	1	11.944	11.942	0.002	297313	1.00	1.00	
19 o-Nitrotoluene	1	12.778	12.782	-0.004	128893	1.00	0.9748	
20 p-Nitrotoluene	1	13.211	13.209	0.002	111505	1.00	0.9811	
21 m-Nitrotoluene	1	13.798	13.802	-0.004	143426	1.00	0.9684	
22 PETN	2	14.904	14.909	-0.005	767790	10.0	10.2	

Reagents:

8330IntermStk_00055 Amount Added: 100.00 Units: uL

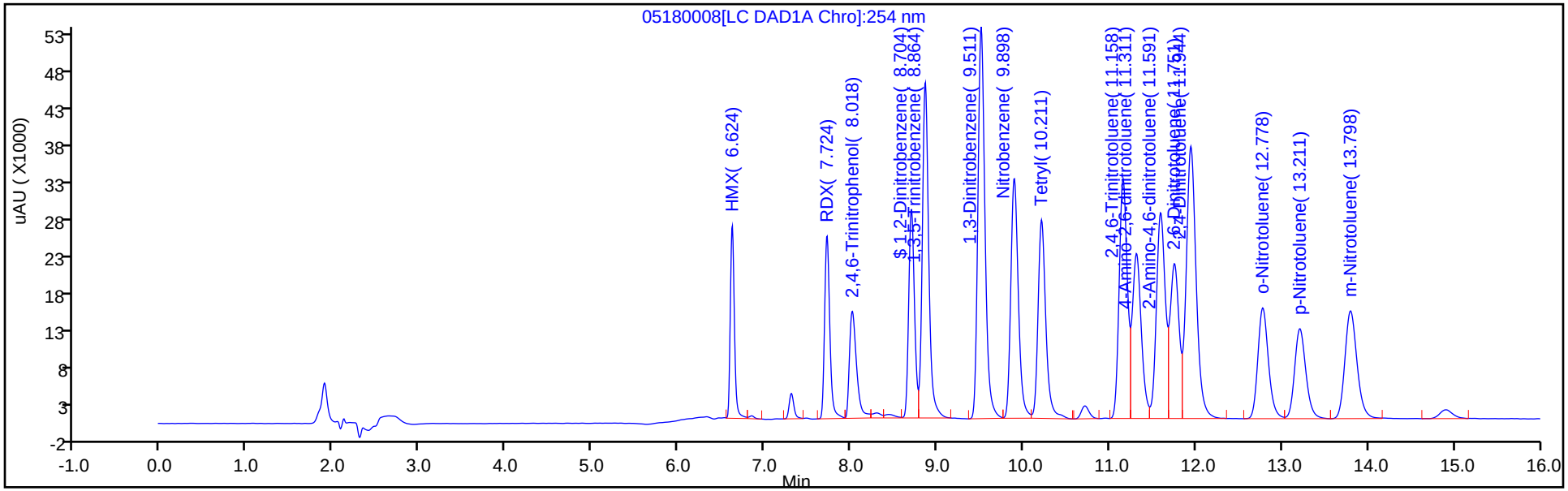
Report Date: 22-May-2018 12:01:18 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

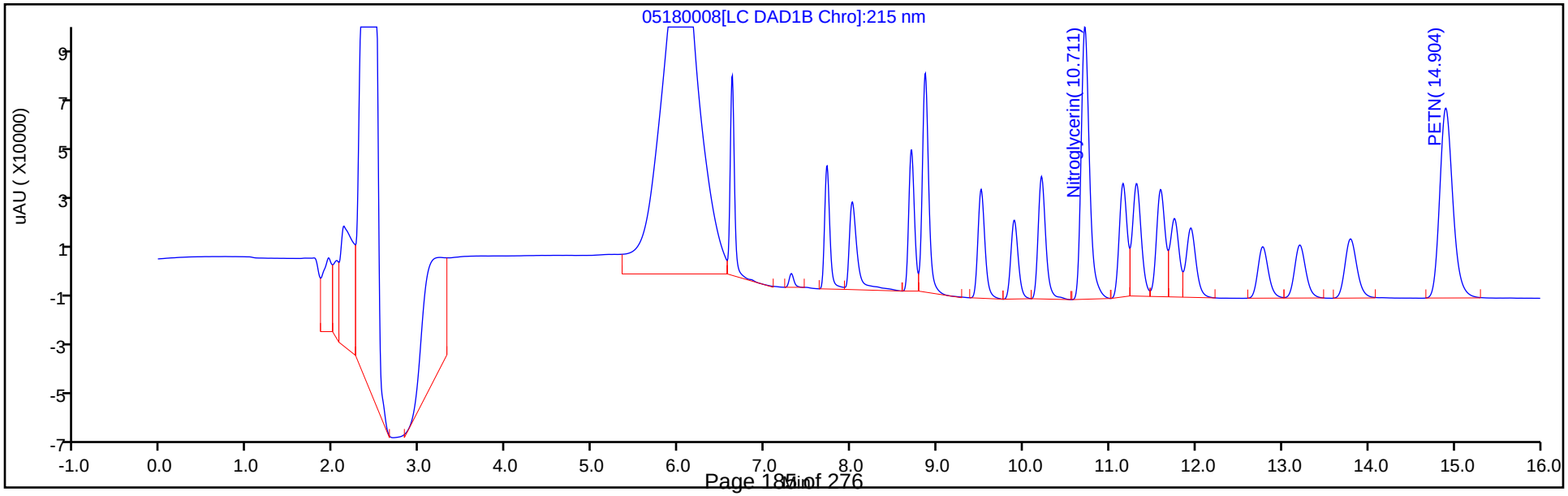
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D

Injection Date:	18-May-2018 10:57:00	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D
Lims ID: IC MAIN L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-May-2018 11:19:59 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L6
Misc. Info.: 280-0070054-009
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:19 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:09:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.625	6.622	0.003	61354	0.7000	0.7223	
5 RDX	1	7.719	7.722	-0.003	73630	0.7000	0.7041	
6 2,4,6-Trinitrophenol	1	8.025	8.049	-0.024	57756	0.7000	0.6848	
$ 7 1,2-Dinitrobenzene	1	8.699	8.702	-0.003	91842	0.7000	0.7135	
8 1,3,5-Trinitrobenzene	1	8.859	8.862	-0.003	165033	0.7000	0.7225	
9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	213326	0.7007	0.7087	
11 Nitrobenzene	1	9.892	9.895	-0.003	140828	0.7014	0.7085	
12 Tetryl	1	10.212	10.209	0.003	119195	0.7000	0.7293	
13 Nitroglycerin	2	10.712	10.715	-0.003	491693	7.00	7.24	
14 2,4,6-Trinitrotoluene	1	11.159	11.155	0.004	151667	0.7028	0.7071	
15 4-Amino-2,6-dinitrotoluene	1	11.312	11.315	-0.003	113610	0.7021	0.6865	
16 2-Amino-4,6-dinitrotoluene	1	11.592	11.595	-0.003	139075	0.7021	0.6972	
17 2,6-Dinitrotoluene	1	11.752	11.755	-0.003	108831	0.7021	0.7110	
18 2,4-Dinitrotoluene	1	11.945	11.942	0.003	208912	0.7014	0.7004	
19 o-Nitrotoluene	1	12.785	12.782	0.003	91427	0.7021	0.6915	
20 p-Nitrotoluene	1	13.212	13.209	0.003	79009	0.7028	0.6952	
21 m-Nitrotoluene	1	13.799	13.802	-0.003	101807	0.7028	0.6874	
22 PETN	2	14.905	14.909	-0.004	537514	7.00	7.17	

Reagents:

8330IntermStk_00055 Amount Added: 70.00 Units: uL

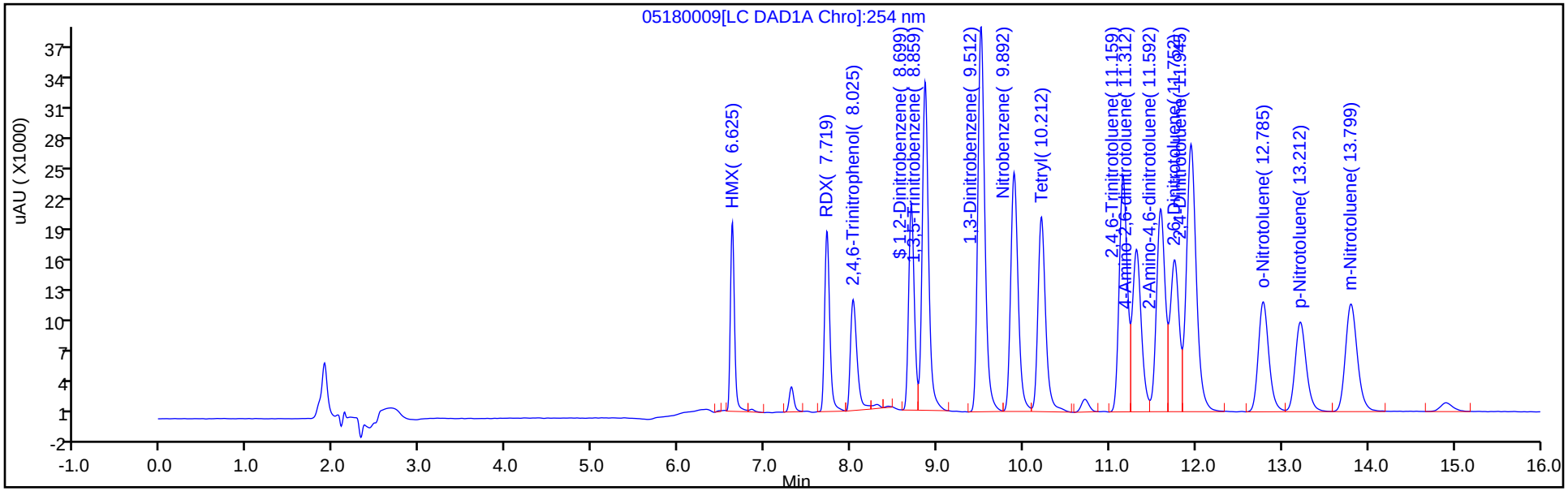
Report Date: 22-May-2018 12:01:20 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

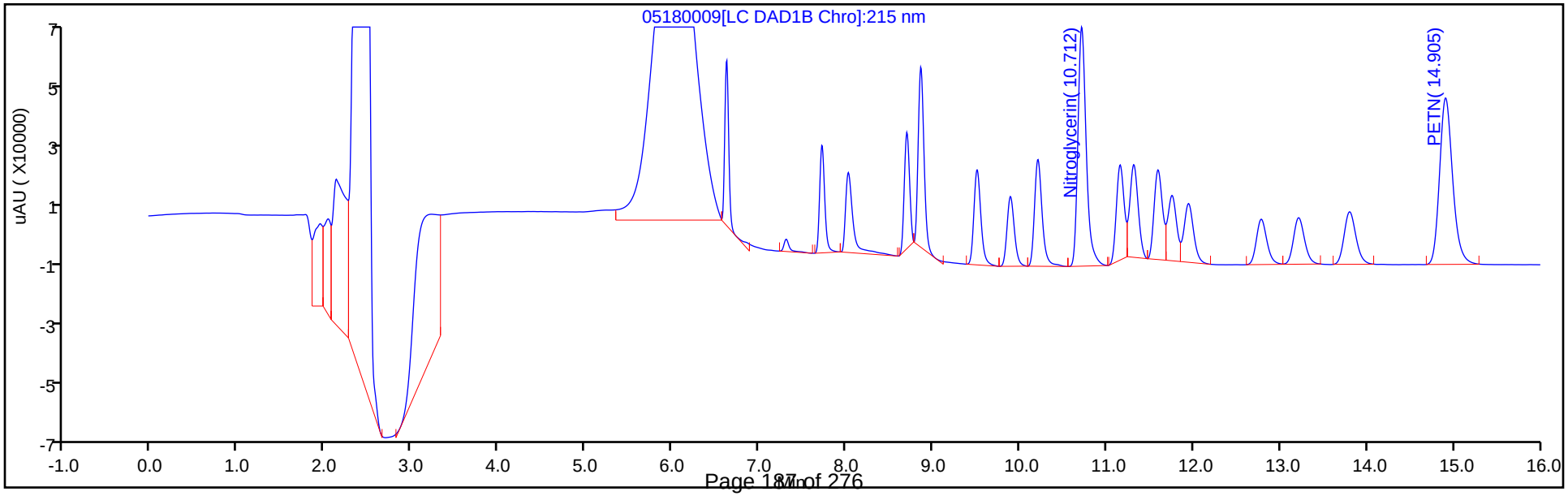
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D

Injection Date:	18-May-2018 11:19:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D
Lims ID: IC MAIN L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-May-2018 11:42:59 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L5
Misc. Info.: 280-0070054-010
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:21 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:13:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	34376	0.4000	0.4047	
5 RDX	1	7.717	7.722	-0.005	42801	0.4000	0.4093	
6 2,4,6-Trinitrophenol	1	8.037	8.049	-0.012	32362	0.4000	0.3837	
$ 7 1,2-Dinitrobenzene	1	8.697	8.702	-0.005	52585	0.4000	0.4085	
8 1,3,5-Trinitrobenzene	1	8.857	8.862	-0.005	93611	0.4000	0.4098	
9 1,3-Dinitrobenzene	1	9.503	9.509	-0.006	123109	0.4004	0.4090	
11 Nitrobenzene	1	9.890	9.895	-0.005	80258	0.4008	0.4038	
12 Tetryl	1	10.210	10.209	0.001	66666	0.4000	0.4079	
13 Nitroglycerin	2	10.710	10.715	-0.005	283140	4.00	4.17	
14 2,4,6-Trinitrotoluene	1	11.157	11.155	0.002	85643	0.4016	0.3993	
15 4-Amino-2,6-dinitrotoluene	1	11.310	11.315	-0.005	67180	0.4012	0.4059	
16 2-Amino-4,6-dinitrotoluene	1	11.590	11.595	-0.005	80646	0.4012	0.4043	
17 2,6-Dinitrotoluene	1	11.750	11.755	-0.005	61046	0.4012	0.3988	
18 2,4-Dinitrotoluene	1	11.943	11.942	0.001	121158	0.4008	0.4062	
19 o-Nitrotoluene	1	12.777	12.782	-0.005	52478	0.4012	0.3969	
20 p-Nitrotoluene	1	13.210	13.209	0.001	45295	0.4016	0.3985	
21 m-Nitrotoluene	1	13.797	13.802	-0.005	58353	0.4016	0.3940	
22 PETN	2	14.910	14.909	0.001	307741	4.00	4.11	

Reagents:

8330IntermStk_00055 Amount Added: 40.00 Units: uL

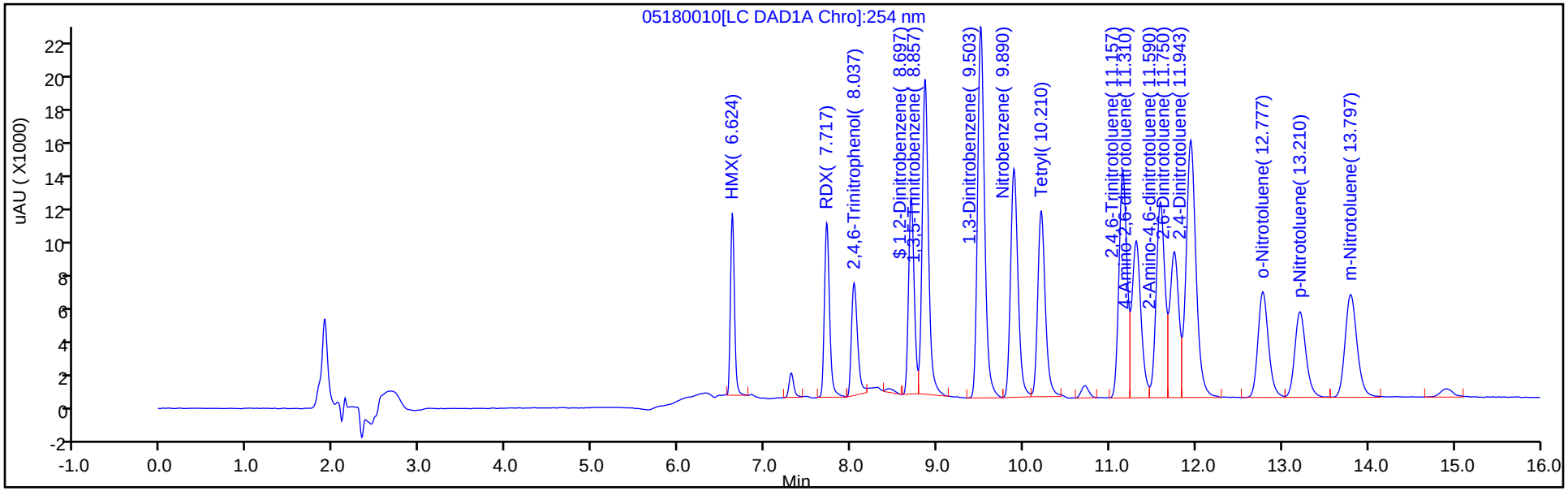
Report Date: 22-May-2018 12:01:22 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

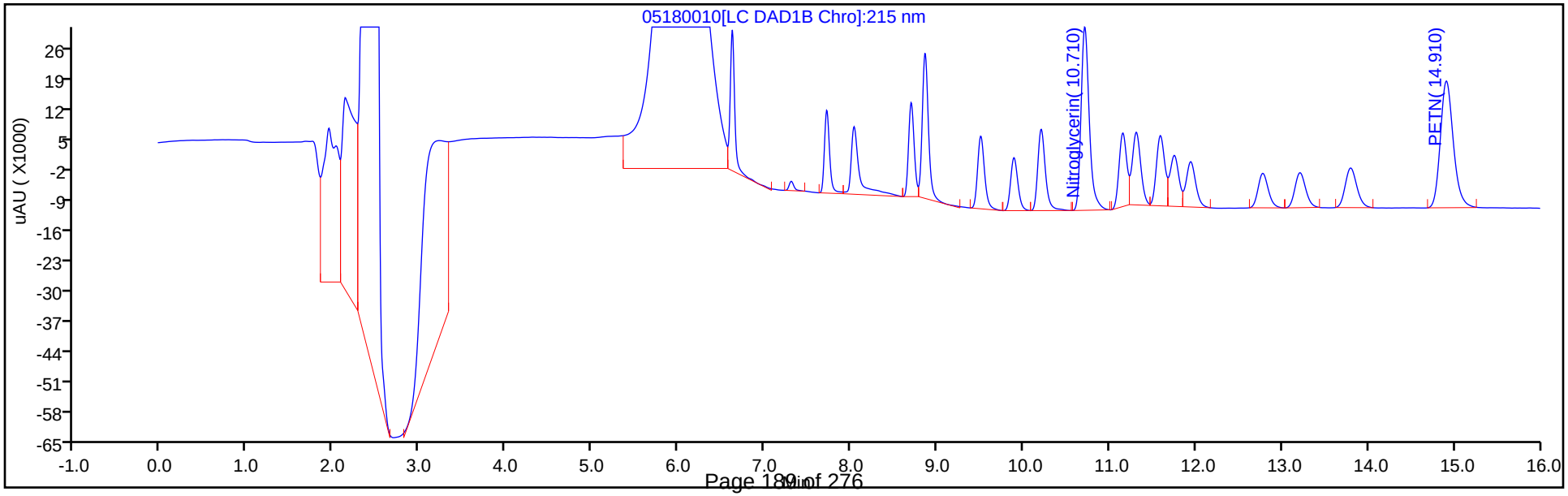
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D

Injection Date:	18-May-2018 11:42:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D
Lims ID: IC MAIN L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-May-2018 12:05:58 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L4
Misc. Info.: 280-0070054-011
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:23 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:16:46

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.622	6.622	0.000	20961	0.2500	0.2468	
	5 RDX	1	7.722	7.722	0.000	25965	0.2500	0.2483	
	6 2,4,6-Trinitrophenol	1	8.049	8.049	0.000	19048	0.2500	0.2258	
$	7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	31343	0.2500	0.2435	
	8 1,3,5-Trinitrobenzene	1	8.862	8.862	0.000	56855	0.2500	0.2489	
	9 1,3-Dinitrobenzene	1	9.509	9.509	0.000	74756	0.2503	0.2483	
	11 Nitrobenzene	1	9.895	9.895	0.000	48592	0.2505	0.2445	
	12 Tetryl	1	10.209	10.209	0.000	40083	0.2500	0.2452	
	13 Nitroglycerin	2	10.715	10.715	0.000	171294	2.50	2.52	
	14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	52708	0.2510	0.2458	
	15 4-Amino-2,6-dinitrotoluene	1	11.315	11.315	0.000	40566	0.2508	0.2451	
	16 2-Amino-4,6-dinitrotoluene	1	11.595	11.595	0.000	49604	0.2508	0.2487	
	17 2,6-Dinitrotoluene	1	11.755	11.755	0.000	37173	0.2508	0.2429	
	18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	73471	0.2505	0.2463	
	19 o-Nitrotoluene	1	12.782	12.782	0.000	32062	0.2508	0.2425	
	20 p-Nitrotoluene	1	13.209	13.209	0.000	27683	0.2510	0.2436	
	21 m-Nitrotoluene	1	13.802	13.802	0.000	35788	0.2510	0.2416	
	22 PETN	2	14.909	14.909	0.000	186281	2.50	2.49	

Reagents:

8330IntermStk_00055 Amount Added: 25.00 Units: uL

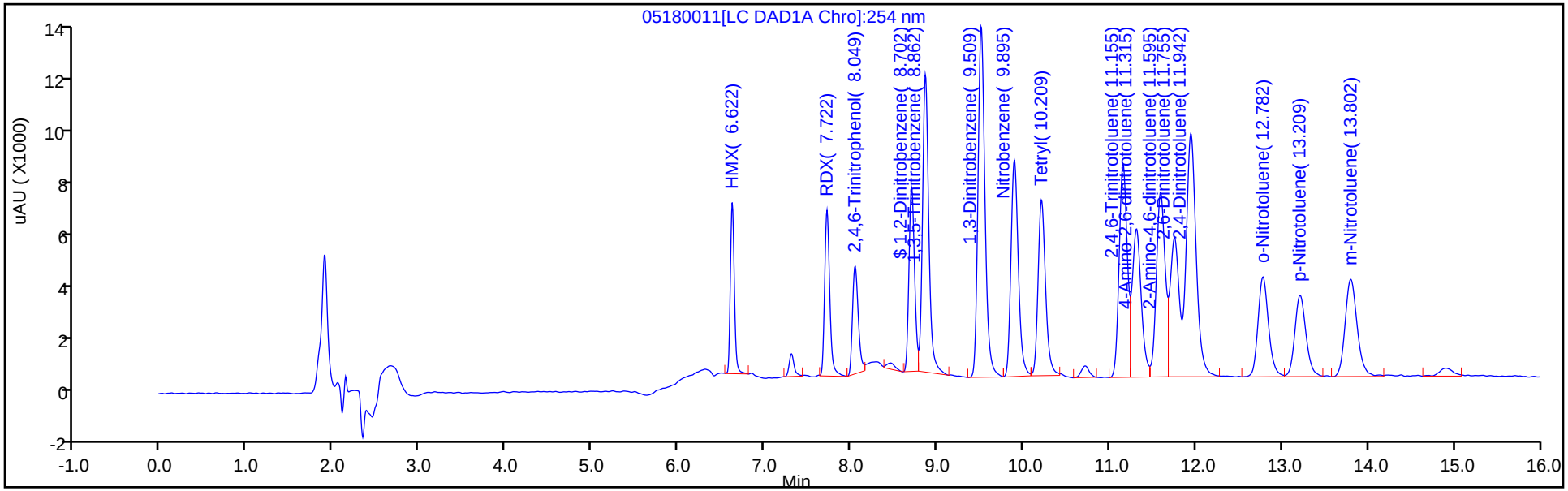
Report Date: 22-May-2018 12:01:24 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

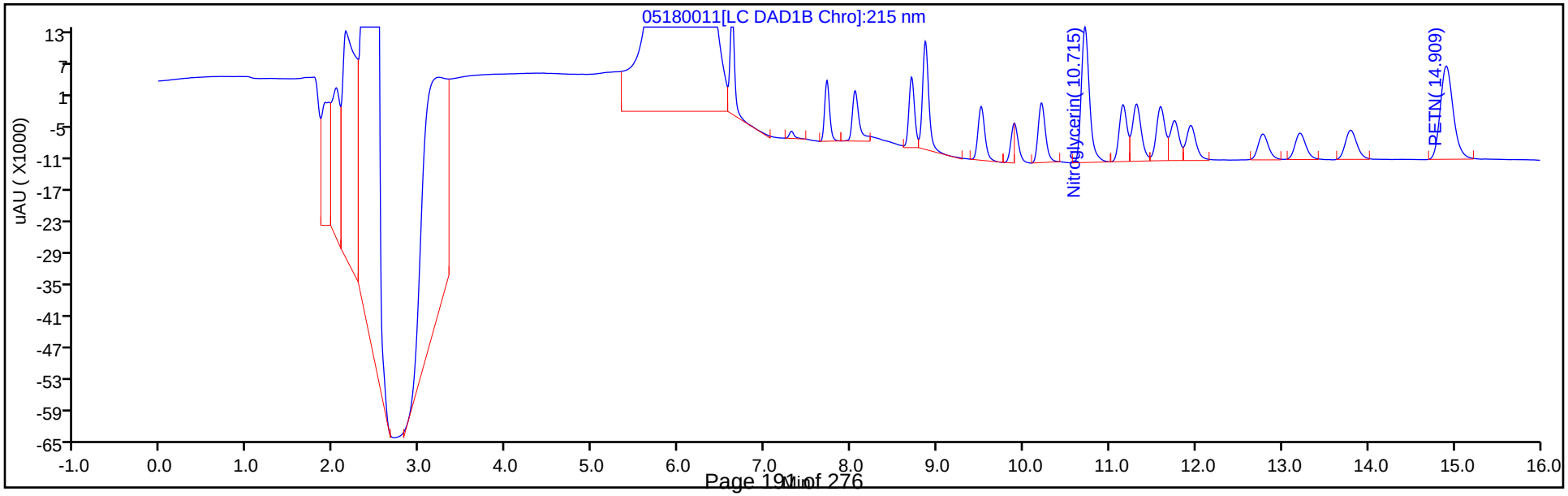
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D

Injection Date:	18-May-2018 12:05:58	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D
Lims ID: IC MAIN L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-May-2018 12:28:55 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L3
Misc. Info.: 280-0070054-012
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:24 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:17:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.623	6.622	0.001	8137	0.1000	0.0958	
5 RDX	1	7.723	7.722	0.001	10563	0.1000	0.1010	
6 2,4,6-Trinitrophenol	1	8.056	8.049	0.007	8050	0.1000	0.0954	
$ 7 1,2-Dinitrobenzene	1	8.703	8.702	0.001	12638	0.1000	0.0982	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	22253	0.1000	0.0974	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	30333	0.1001	0.1008	
11 Nitrobenzene	1	9.902	9.895	0.007	19861	0.1002	0.0999	
12 Tetryl	1	10.216	10.209	0.007	16280	0.1000	0.0996	
13 Nitroglycerin	2	10.722	10.715	0.007	68459	1.00	1.01	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	21155	0.1004	0.0986	
15 4-Amino-2,6-dinitrotoluene	1	11.322	11.315	0.007	16510	0.1003	0.0998	
16 2-Amino-4,6-dinitrotoluene	1	11.602	11.595	0.007	19850	0.1003	0.0995	
17 2,6-Dinitrotoluene	1	11.762	11.755	0.007	15104	0.1003	0.0987	
18 2,4-Dinitrotoluene	1	11.956	11.942	0.014	30008	0.1002	0.1006	
19 o-Nitrotoluene	1	12.789	12.782	0.007	13314	0.1003	0.1007	
20 p-Nitrotoluene	1	13.216	13.209	0.007	11487	0.1004	0.1011	
21 m-Nitrotoluene	1	13.809	13.802	0.007	14675	0.1004	0.0991	
22 PETN	2	14.916	14.909	0.007	73842	1.00	0.9852	

Reagents:

8330IntermStk_00055 Amount Added: 10.00 Units: uL

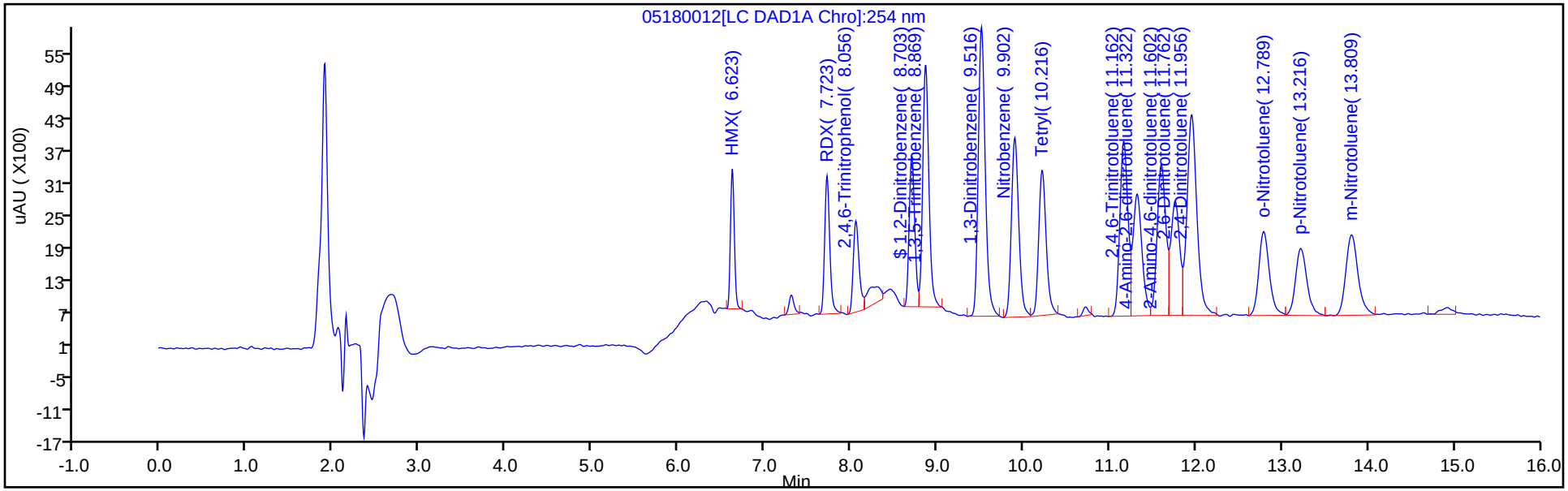
Report Date: 22-May-2018 12:01:25 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

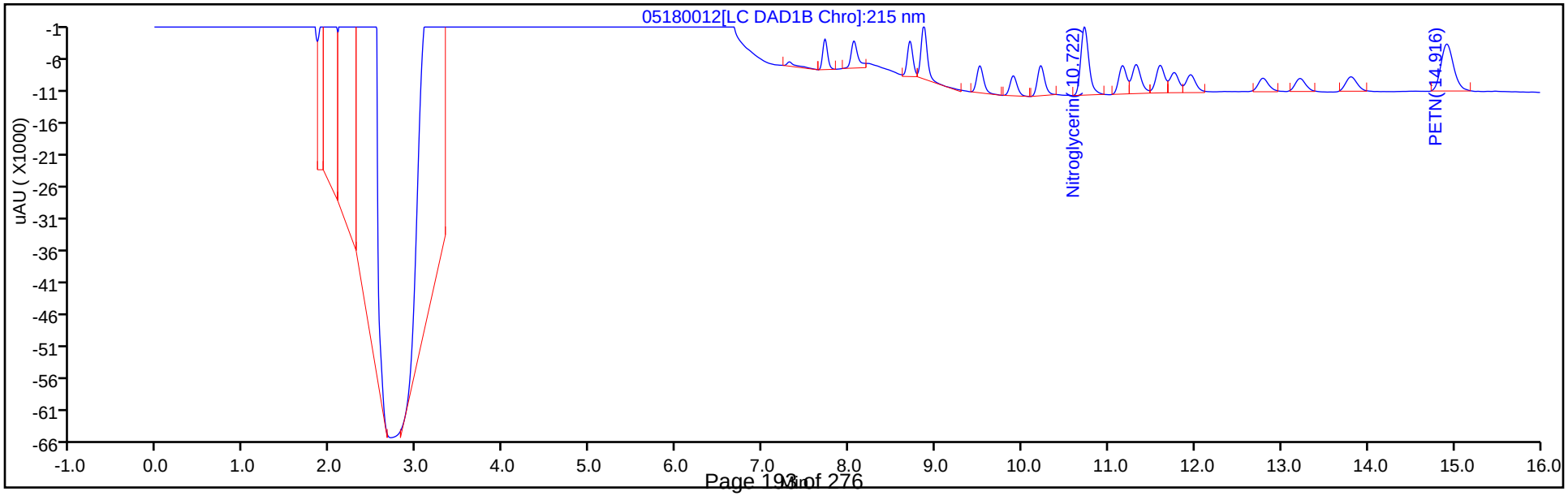
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D

Injection Date:	18-May-2018 12:28:55	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D
Lims ID: IC MAIN L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-May-2018 12:51:52 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2
Misc. Info.: 280-0070054-013
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:26 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:08:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	4182	0.0500	0.0492	
5 RDX	1	7.722	7.722	0.000	5050	0.0500	0.0483	
6 2,4,6-Trinitrophenol	1	8.062	8.049	0.013	4494	0.0500	0.0533	
$ 7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	6665	0.0500	0.0518	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	11383	0.0500	0.0498	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	15187	0.0501	0.0505	
11 Nitrobenzene	1	9.902	9.895	0.007	10114	0.0501	0.0509	
12 Tetryl	1	10.216	10.209	0.007	8226	0.0500	0.0503	
13 Nitroglycerin	2	10.722	10.715	0.007	32693	0.5000	0.4812	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	11267	0.0502	0.0525	
15 4-Amino-2,6-dinitrotoluene	1	11.316	11.315	0.001	8517	0.0502	0.0515	
16 2-Amino-4,6-dinitrotoluene	1	11.596	11.595	0.001	10247	0.0502	0.0514	
17 2,6-Dinitrotoluene	1	11.756	11.755	0.001	7991	0.0502	0.0522	
18 2,4-Dinitrotoluene	1	11.949	11.942	0.007	15313	0.0501	0.0513	
19 o-Nitrotoluene	1	12.789	12.782	0.007	6915	0.0502	0.0523	
20 p-Nitrotoluene	1	13.216	13.209	0.007	5884	0.0502	0.0518	
21 m-Nitrotoluene	1	13.809	13.802	0.007	7786	0.0502	0.0526	
22 PETN	2	14.916	14.909	0.007	34097	0.5000	0.4549	

Reagents:

8330IntermStk_00055 Amount Added: 5.00 Units: uL

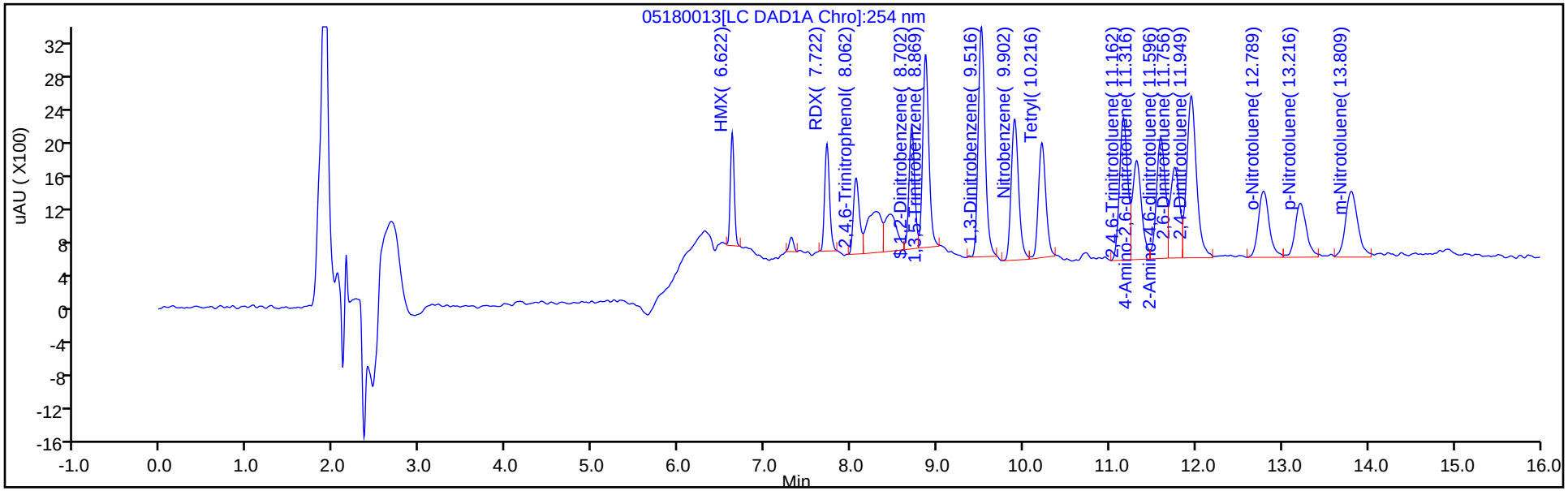
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

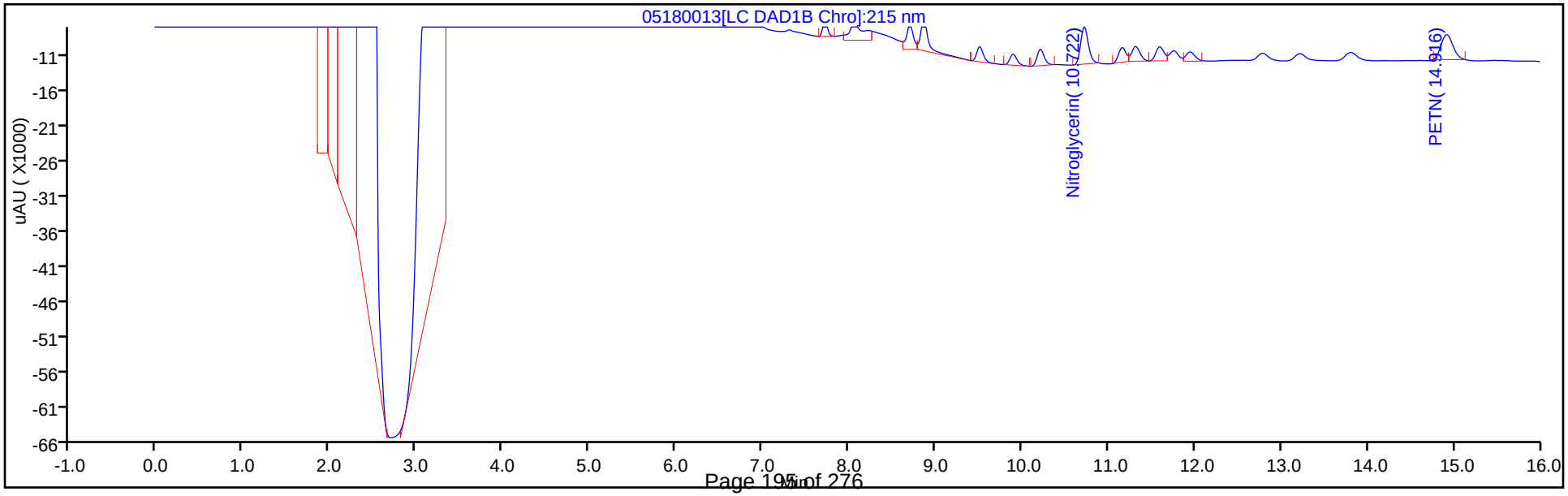
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D

Injection Date:	18-May-2018 12:51:52	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D
Lims ID: IC MAIN L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-May-2018 13:14:50 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L1
Misc. Info.: 280-0070054-014
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:27 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:19:59

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.625	6.622	0.003	1619	0.0200	0.0191	
	5 RDX	1	7.718	7.722	-0.004	2043	0.0200	0.0195	
	6 2,4,6-Trinitrophenol	1	8.065	8.049	0.016	1879	0.0200	0.0223	
$	7 1,2-Dinitrobenzene	1	8.705	8.702	0.003	2278	0.0200	0.0177	
	8 1,3,5-Trinitrobenzene	1	8.865	8.862	0.003	4042	0.0200	0.0177	
	9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	5557	0.0200	0.0185	
	11 Nitrobenzene	1	9.898	9.895	0.003	3842	0.0200	0.0193	
	12 Tetryl	1	10.218	10.209	0.009	2797	0.0200	0.0171	
	13 Nitroglycerin	2	10.725	10.715	0.010	11906	0.2000	0.1752	
	14 2,4,6-Trinitrotoluene	1	11.165	11.155	0.010	4137	0.0201	0.0193	
	15 4-Amino-2,6-dinitrotoluene	1	11.318	11.315	0.003	3486	0.0201	0.0211	
	16 2-Amino-4,6-dinitrotoluene	1	11.598	11.595	0.003	3839	0.0201	0.0192	
	17 2,6-Dinitrotoluene	1	11.765	11.755	0.010	3125	0.0201	0.0204	
	18 2,4-Dinitrotoluene	1	11.952	11.942	0.010	5750	0.0200	0.0193	
	19 o-Nitrotoluene	1	12.785	12.782	0.003	2761	0.0201	0.0209	
	20 p-Nitrotoluene	1	13.218	13.209	0.009	2355	0.0201	0.0207	
	21 m-Nitrotoluene	1	13.812	13.802	0.010	3245	0.0201	0.0219	
	22 PETN	2		14.909			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

8330IntermStk_00055 Amount Added: 2.00 Units: uL

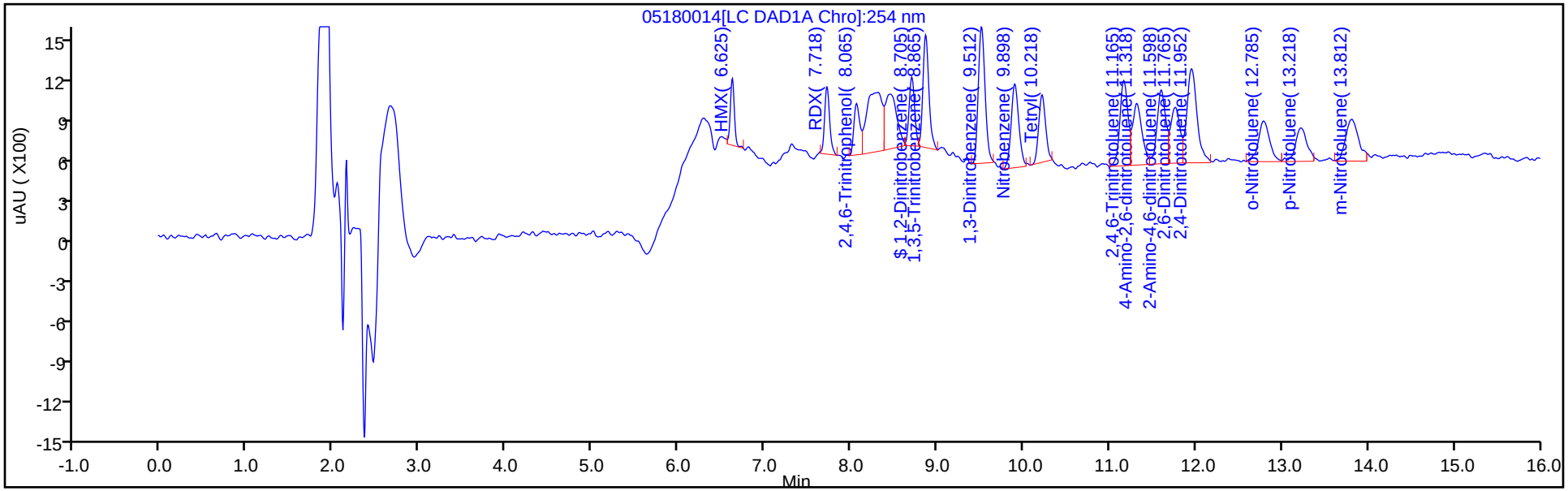
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

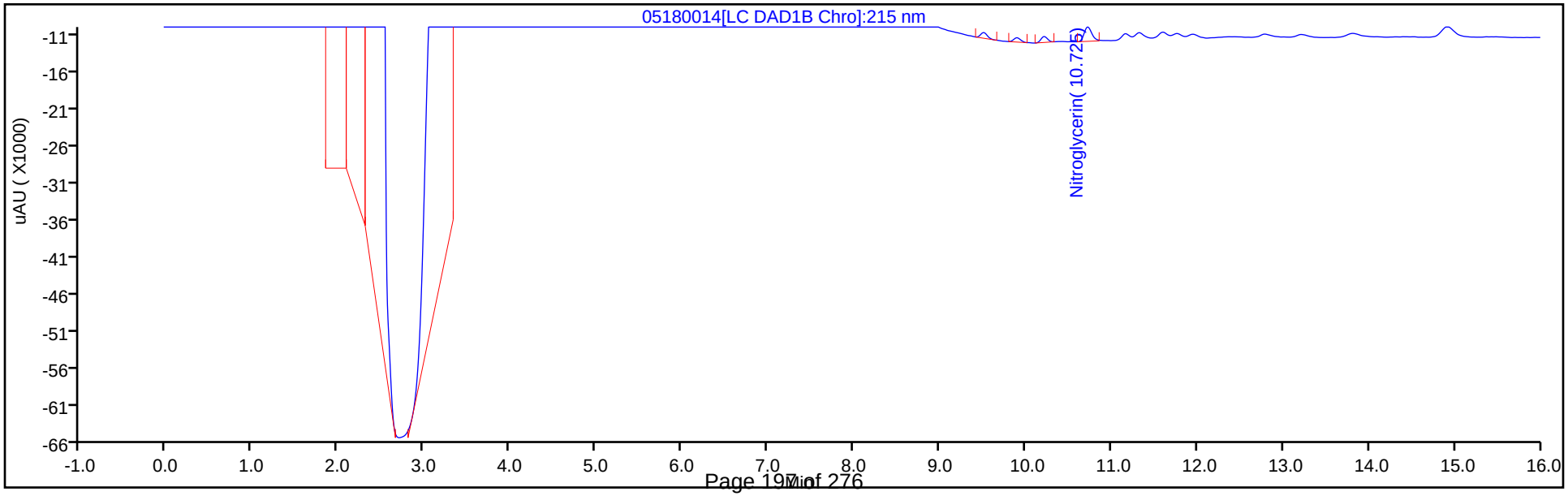
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Injection Date:	18-May-2018 13:14:50	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / HMX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

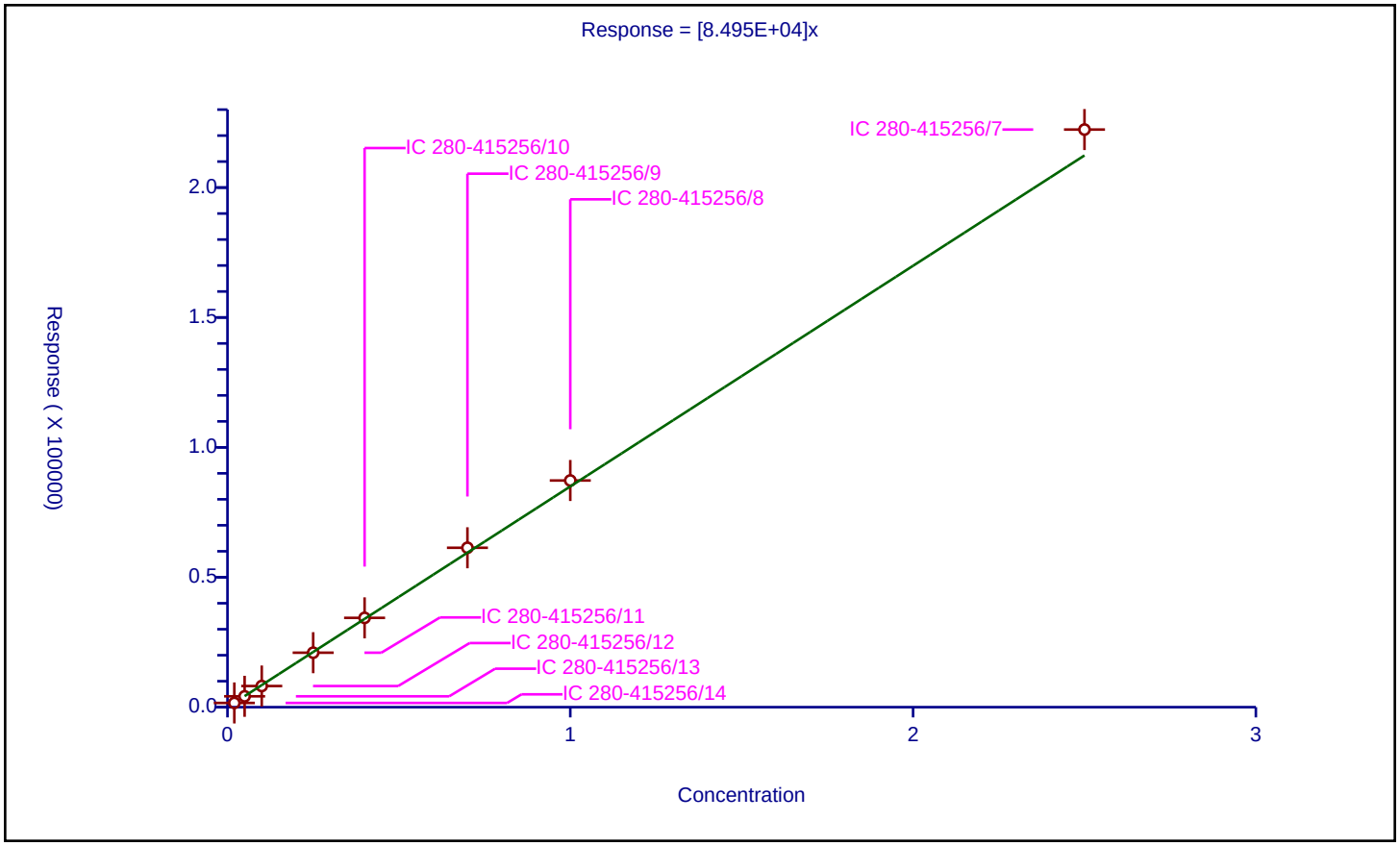
Curve Coefficients

Intercept:	0
Slope:	8.495E+04

Error Coefficients

Standard Error:	3930
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1619.0			80950.0	Y
2	IC 280-415256/13	0.05	4182.0			83640.0	Y
3	IC 280-415256/12	0.1	8137.0			81370.0	Y
4	IC 280-415256/11	0.25	20961.0			83844.0	Y
5	IC 280-415256/10	0.4	34376.0			85940.0	Y
6	IC 280-415256/9	0.7	61354.0			87648.571429	Y
7	IC 280-415256/8	1.0	87246.0			87246.0	Y
8	IC 280-415256/7	2.5	222315.0			88926.0	Y



Calibration / RDX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

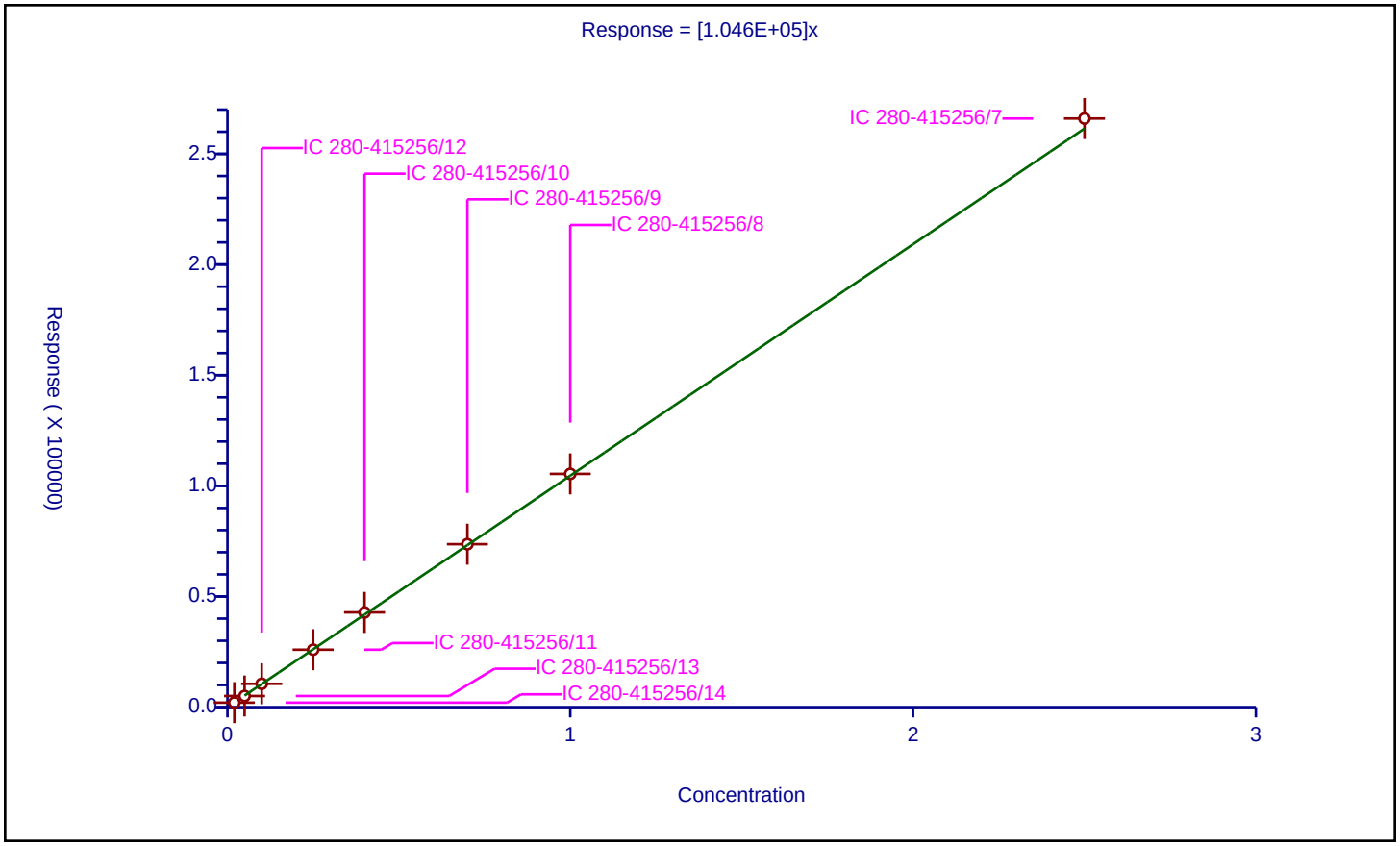
Curve Coefficients

Intercept:	0
Slope:	1.046E+05

Error Coefficients

Standard Error:	1790
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2043.0			102150.0	Y
2	IC 280-415256/13	0.05	5050.0			101000.0	Y
3	IC 280-415256/12	0.1	10563.0			105630.0	Y
4	IC 280-415256/11	0.25	25965.0			103860.0	Y
5	IC 280-415256/10	0.4	42801.0			107002.5	Y
6	IC 280-415256/9	0.7	73630.0			105185.714286	Y
7	IC 280-415256/8	1.0	105400.0			105400.0	Y
8	IC 280-415256/7	2.5	265976.0			106390.4	Y



Calibration / 2,4,6-Trinitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

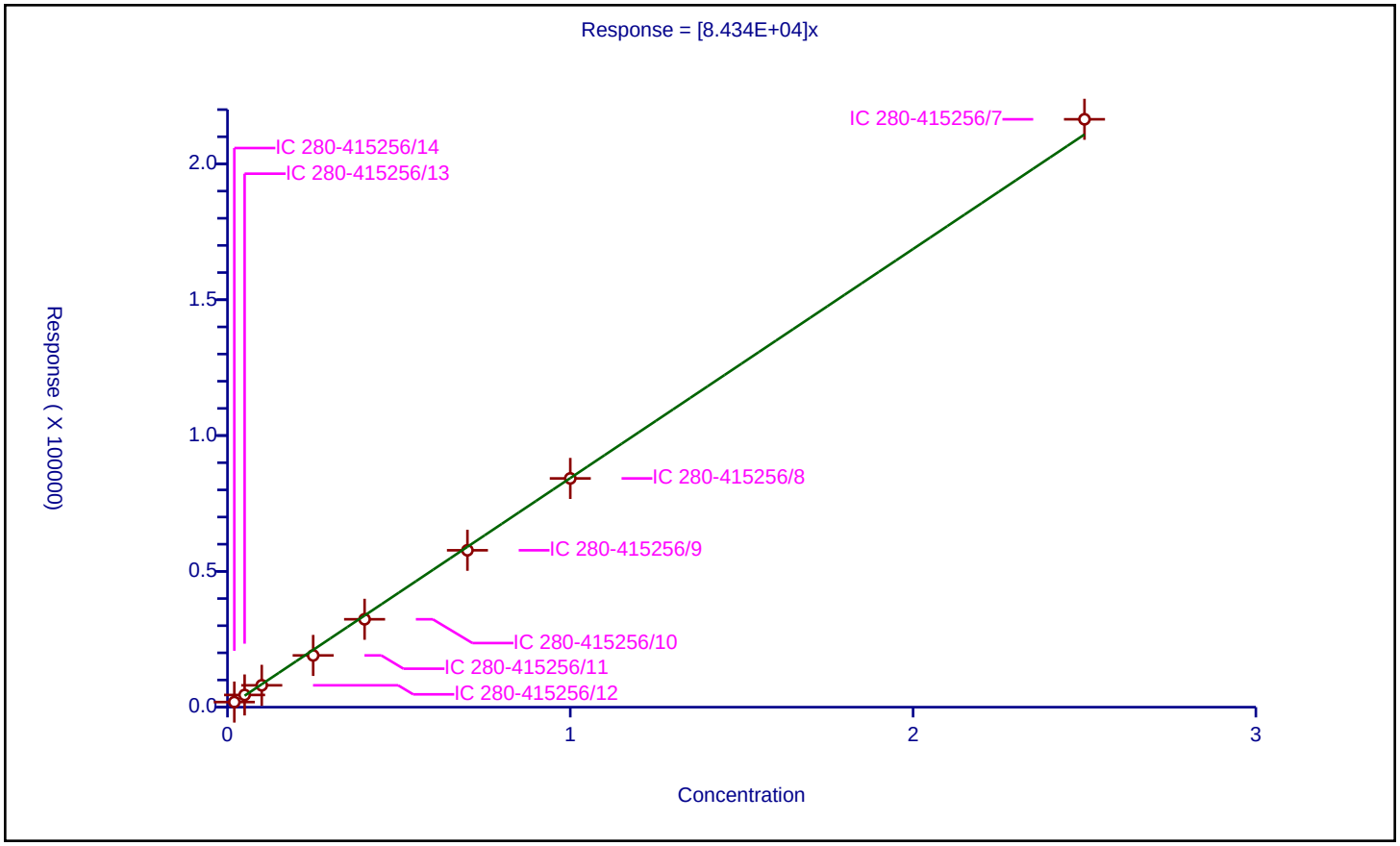
Curve Coefficients

Intercept:	0
Slope:	8.434E+04

Error Coefficients

Standard Error:	2370
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1879.0			93950.0	Y
2	IC 280-415256/13	0.05	4494.0			89880.0	Y
3	IC 280-415256/12	0.1	8050.0			80500.0	Y
4	IC 280-415256/11	0.25	19048.0			76192.0	Y
5	IC 280-415256/10	0.4	32362.0			80905.0	Y
6	IC 280-415256/9	0.7	57756.0			82508.571429	Y
7	IC 280-415256/8	1.0	84211.0			84211.0	Y
8	IC 280-415256/7	2.5	216440.0			86576.0	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

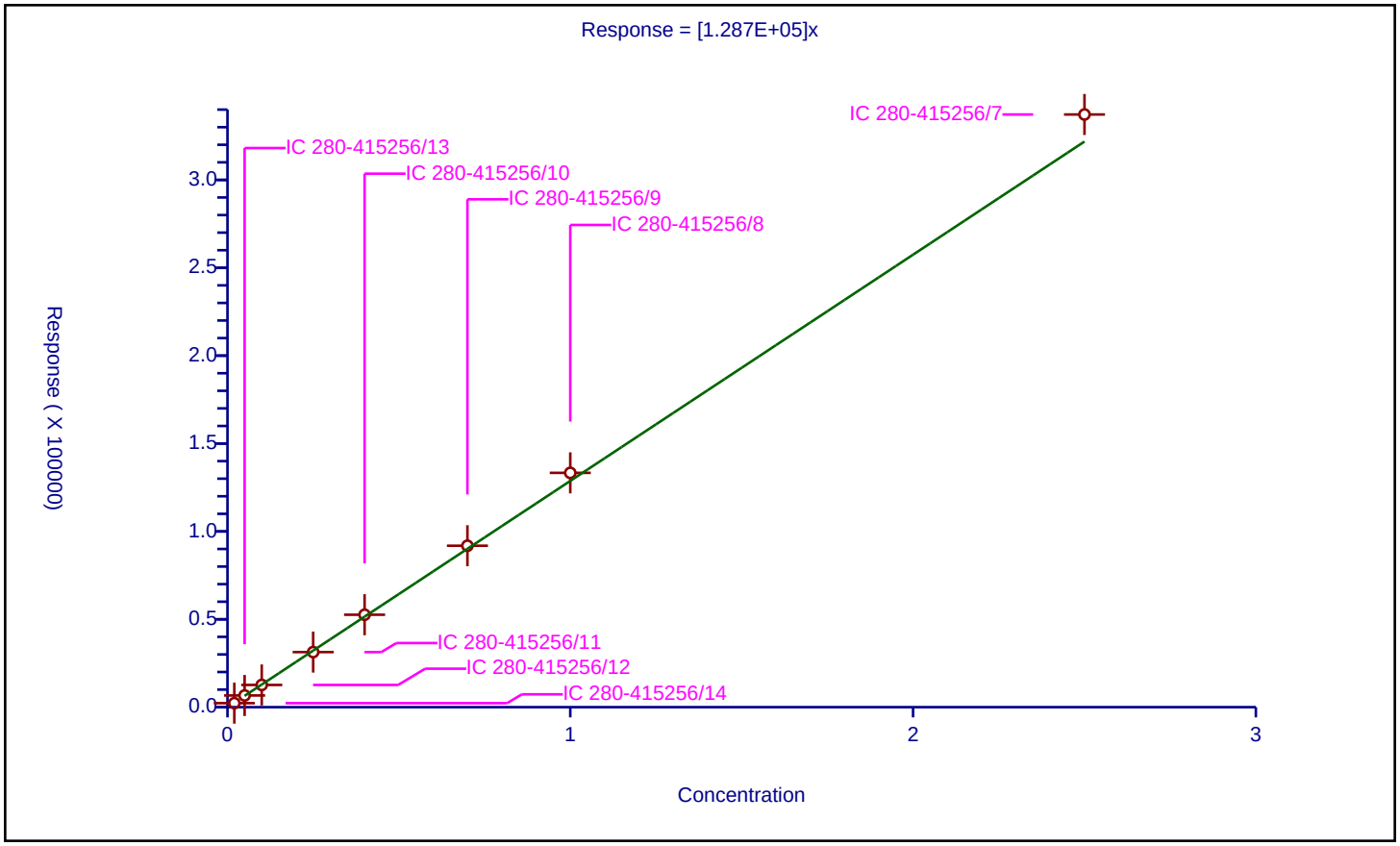
Curve Coefficients

Intercept:	0
Slope:	1.287E+05

Error Coefficients

Standard Error:	6130
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2278.0			113900.0	Y
2	IC 280-415256/13	0.05	6665.0			133300.0	Y
3	IC 280-415256/12	0.1	12638.0			126380.0	Y
4	IC 280-415256/11	0.25	31343.0			125372.0	Y
5	IC 280-415256/10	0.4	52585.0			131462.5	Y
6	IC 280-415256/9	0.7	91842.0			131202.857143	Y
7	IC 280-415256/8	1.0	133312.0			133312.0	Y
8	IC 280-415256/7	2.5	337223.0			134889.2	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

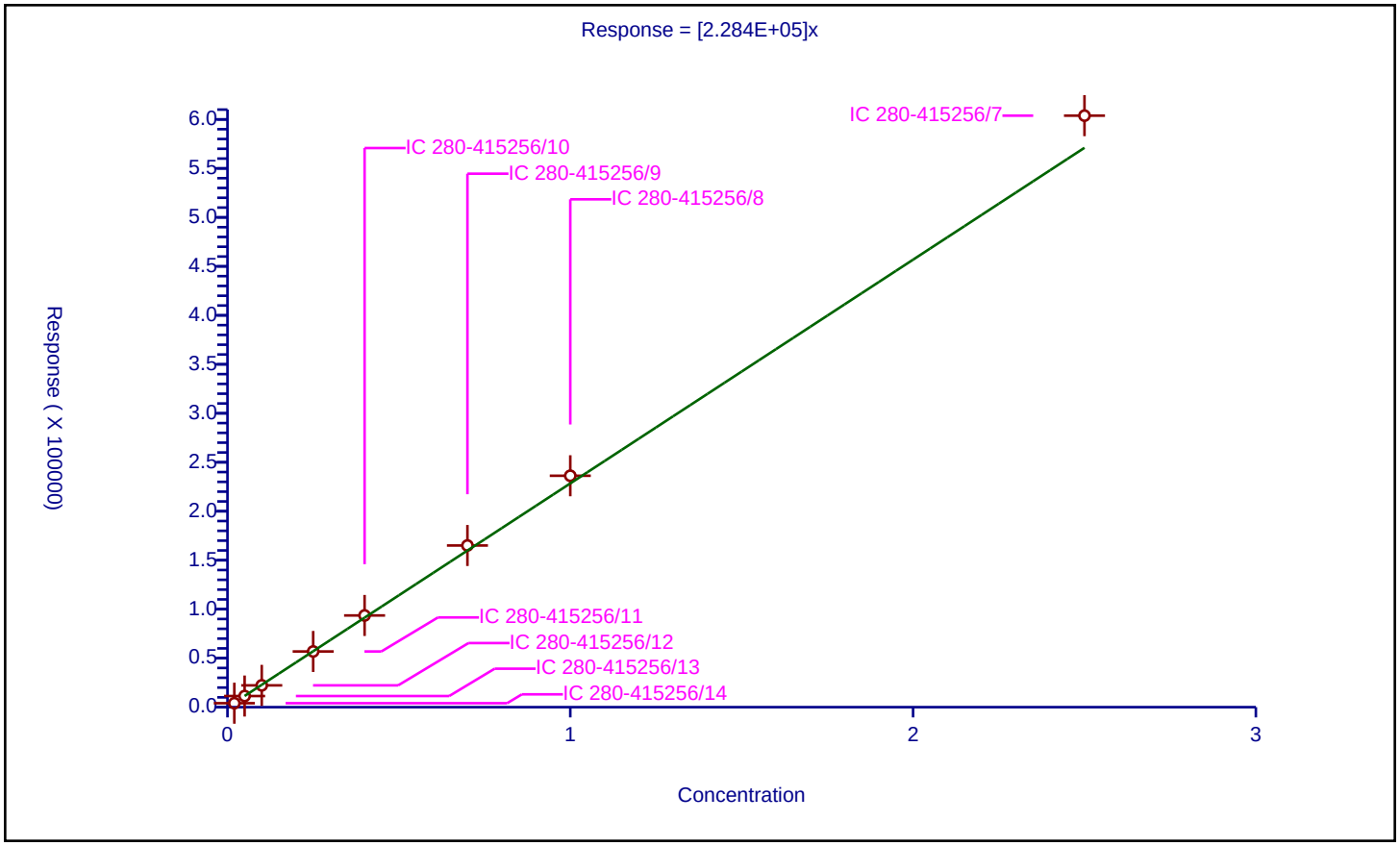
Curve Coefficients

Intercept:	0
Slope:	2.284E+05

Error Coefficients

Standard Error:	12900
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	4042.0			202100.0	Y
2	IC 280-415256/13	0.05	11383.0			227660.0	Y
3	IC 280-415256/12	0.1	22253.0			222530.0	Y
4	IC 280-415256/11	0.25	56855.0			227420.0	Y
5	IC 280-415256/10	0.4	93611.0			234027.5	Y
6	IC 280-415256/9	0.7	165033.0			235761.428571	Y
7	IC 280-415256/8	1.0	236230.0			236230.0	Y
8	IC 280-415256/7	2.5	603841.0			241536.4	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

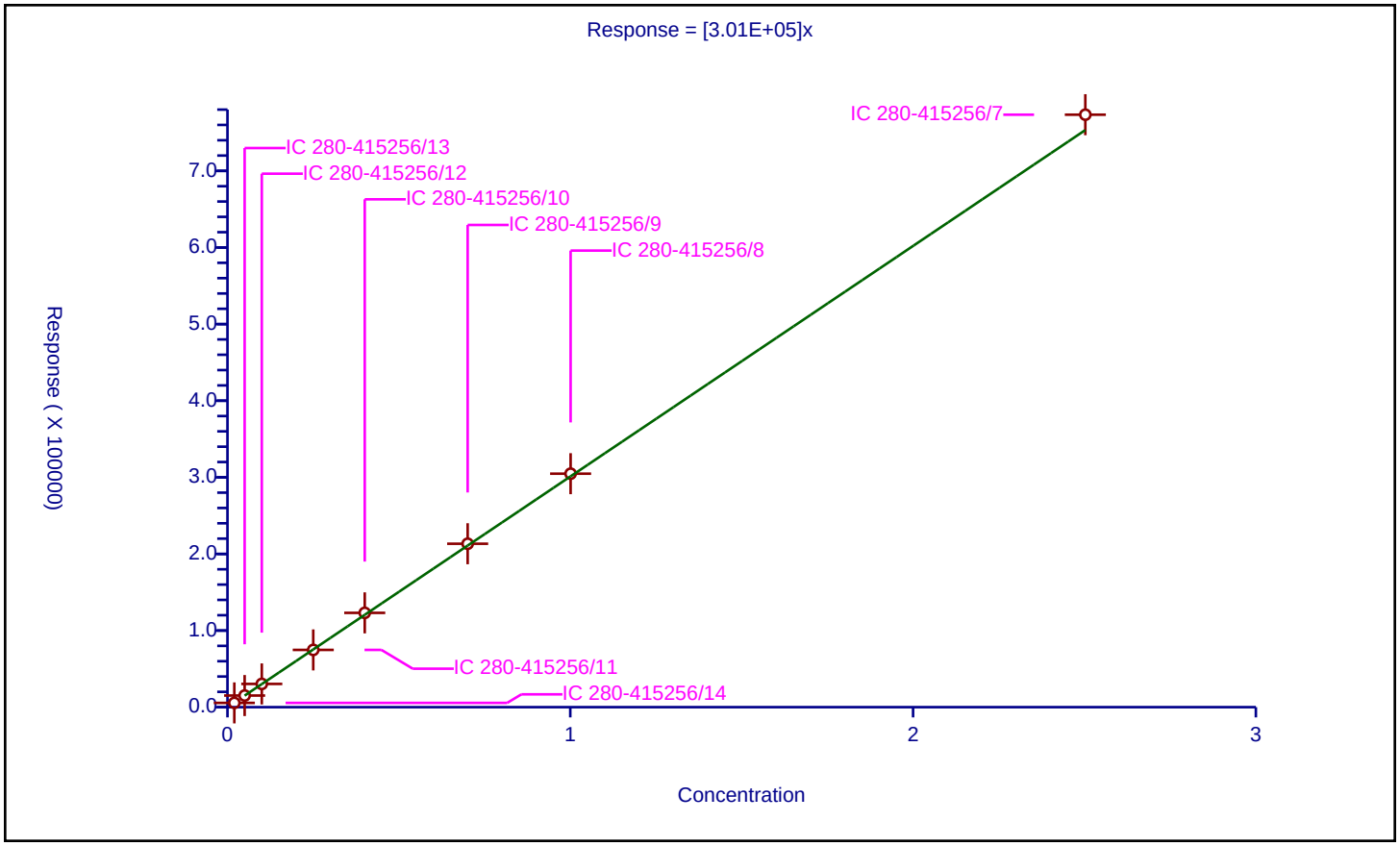
Curve Coefficients

Intercept:	0
Slope:	3.01E+05

Error Coefficients

Standard Error:	7810
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02002	5557.0			277572.427572	Y
2	IC 280-415256/13	0.05005	15187.0			303436.563437	Y
3	IC 280-415256/12	0.1001	30333.0			303026.973027	Y
4	IC 280-415256/11	0.25025	74756.0			298725.274725	Y
5	IC 280-415256/10	0.4004	123109.0			307465.034965	Y
6	IC 280-415256/9	0.7007	213326.0			304446.98159	Y
7	IC 280-415256/8	1.001	304781.0			304476.523477	Y
8	IC 280-415256/7	2.5025	773367.0			309037.762238	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

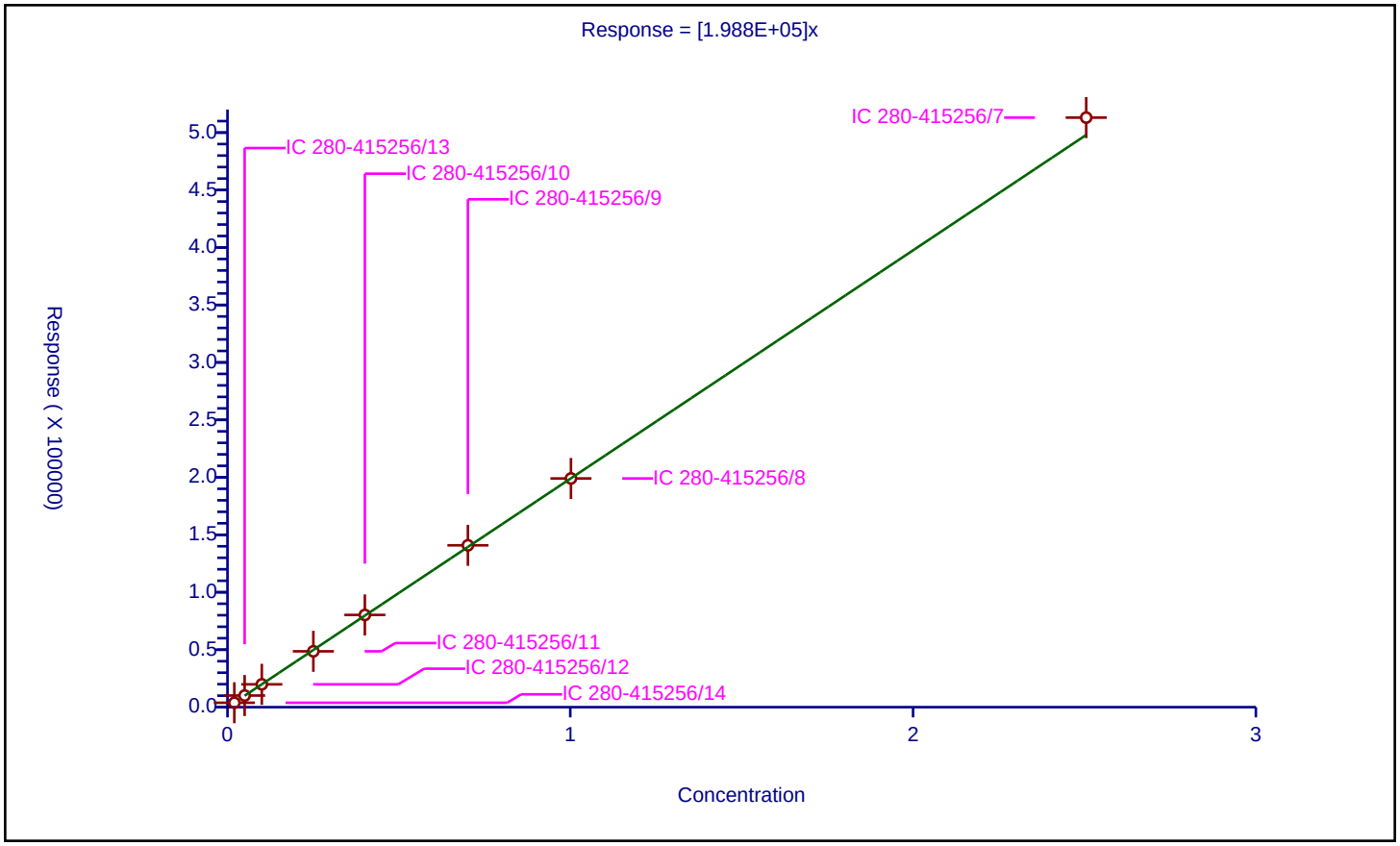
Curve Coefficients

Intercept:	0
Slope:	1.988E+05

Error Coefficients

Standard Error:	5750
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	3842.0			191716.566866	Y
2	IC 280-415256/13	0.0501	10114.0			201876.247505	Y
3	IC 280-415256/12	0.1002	19861.0			198213.572854	Y
4	IC 280-415256/11	0.2505	48592.0			193980.03992	Y
5	IC 280-415256/10	0.4008	80258.0			200244.510978	Y
6	IC 280-415256/9	0.7014	140828.0			200781.294554	Y
7	IC 280-415256/8	1.002	199028.0			198630.738523	Y
8	IC 280-415256/7	2.505	513035.0			204804.391218	Y



Calibration / Tetryl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

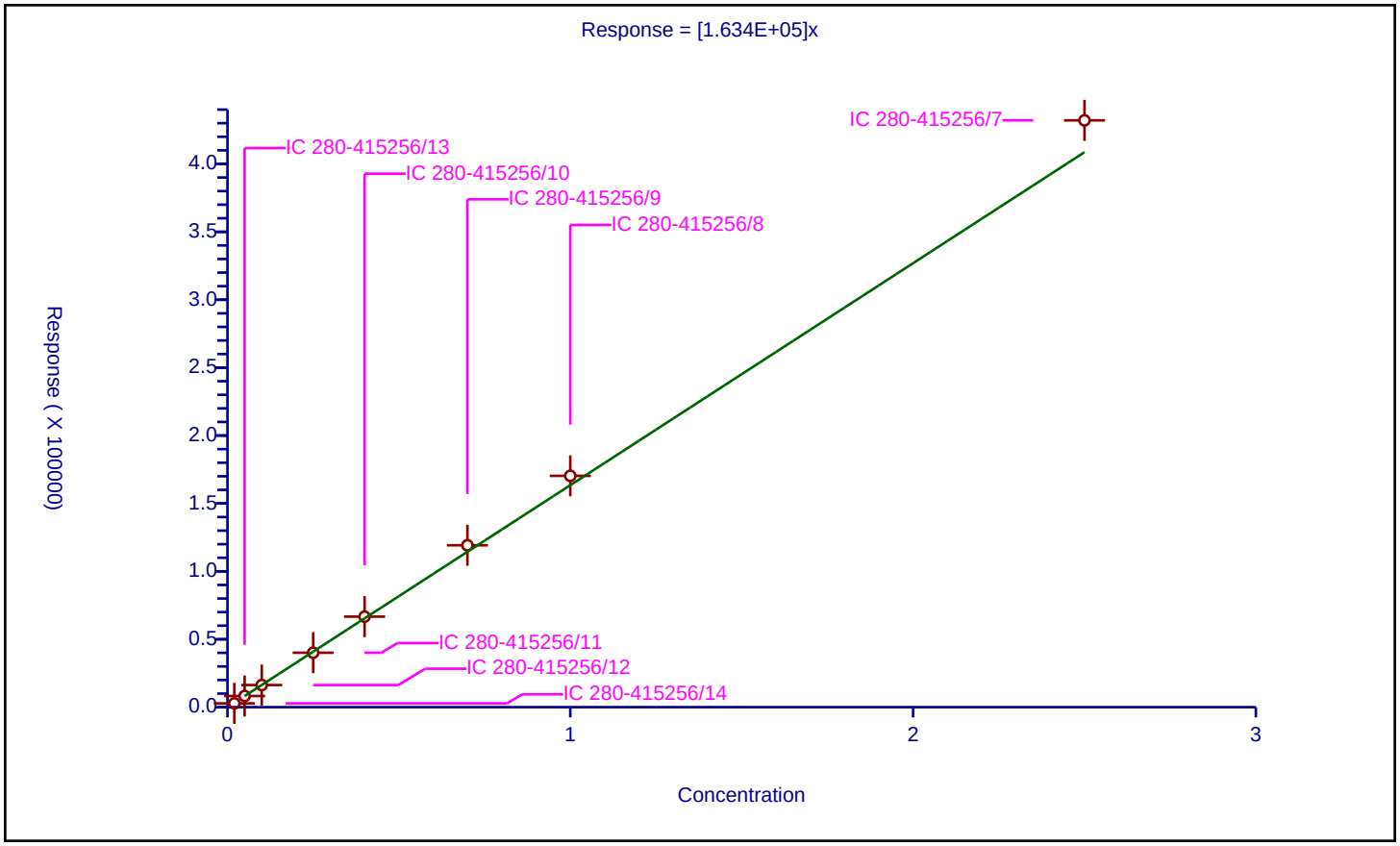
Curve Coefficients

Intercept:	0
Slope:	1.634E+05

Error Coefficients

Standard Error:	9430
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2797.0			139850.0	Y
2	IC 280-415256/13	0.05	8226.0			164520.0	Y
3	IC 280-415256/12	0.1	16280.0			162800.0	Y
4	IC 280-415256/11	0.25	40083.0			160332.0	Y
5	IC 280-415256/10	0.4	66666.0			166665.0	Y
6	IC 280-415256/9	0.7	119195.0			170278.571429	Y
7	IC 280-415256/8	1.0	170312.0			170312.0	Y
8	IC 280-415256/7	2.5	432075.0			172830.0	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

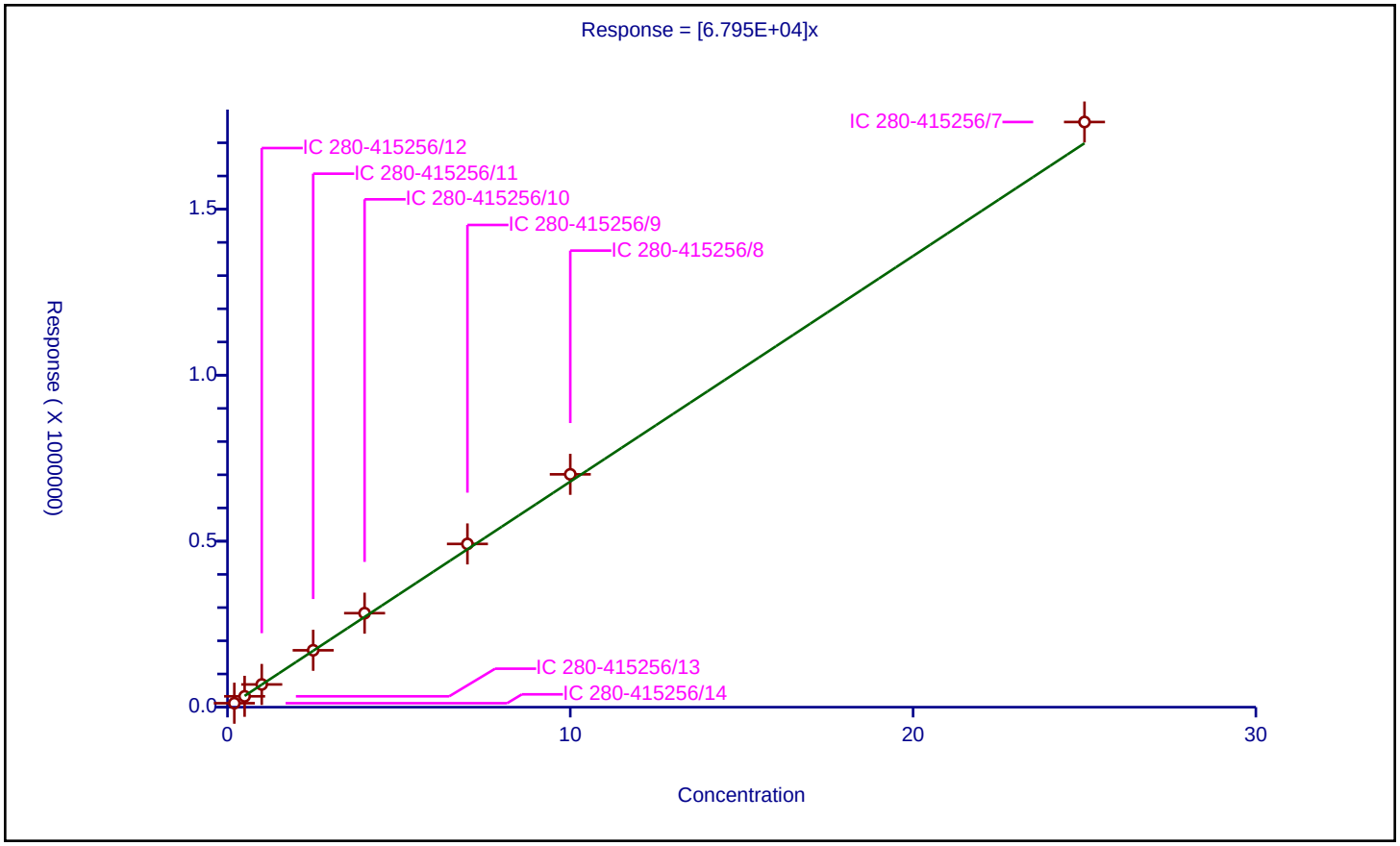
Curve Coefficients

Intercept:	0
Slope:	6.795E+04

Error Coefficients

Standard Error:	26700
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	11906.0			59530.0	Y
2	IC 280-415256/13	0.5	32693.0			65386.0	Y
3	IC 280-415256/12	1.0	68459.0			68459.0	Y
4	IC 280-415256/11	2.5	171294.0			68517.6	Y
5	IC 280-415256/10	4.0	283140.0			70785.0	Y
6	IC 280-415256/9	7.0	491693.0			70241.857143	Y
7	IC 280-415256/8	10.0	701363.0			70136.3	Y
8	IC 280-415256/7	25.0	1762679.0			70507.16	Y



Calibration / 2,4,6-Trinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

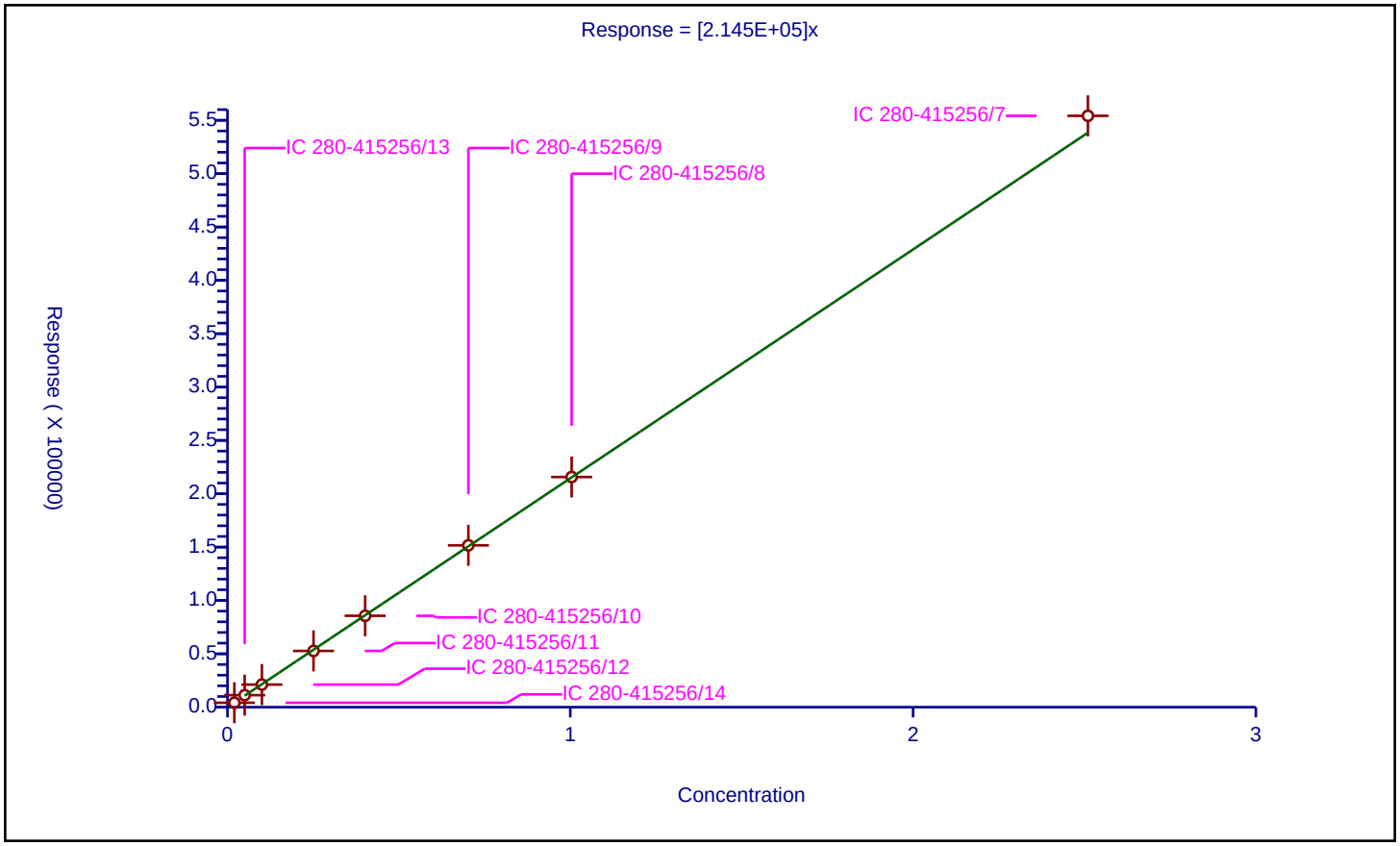
Curve Coefficients

Intercept:	0
Slope:	2.145E+05

Error Coefficients

Standard Error:	6020
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	4137.0			206025.896414	Y
2	IC 280-415256/13	0.0502	11267.0			224442.231076	Y
3	IC 280-415256/12	0.1004	21155.0			210707.171315	Y
4	IC 280-415256/11	0.251	52708.0			209992.031873	Y
5	IC 280-415256/10	0.4016	85643.0			213254.482072	Y
6	IC 280-415256/9	0.7028	151667.0			215803.927149	Y
7	IC 280-415256/8	1.004	215673.0			214813.74502	Y
8	IC 280-415256/7	2.51	554169.0			220784.462151	Y



Calibration / 4-Amino-2,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

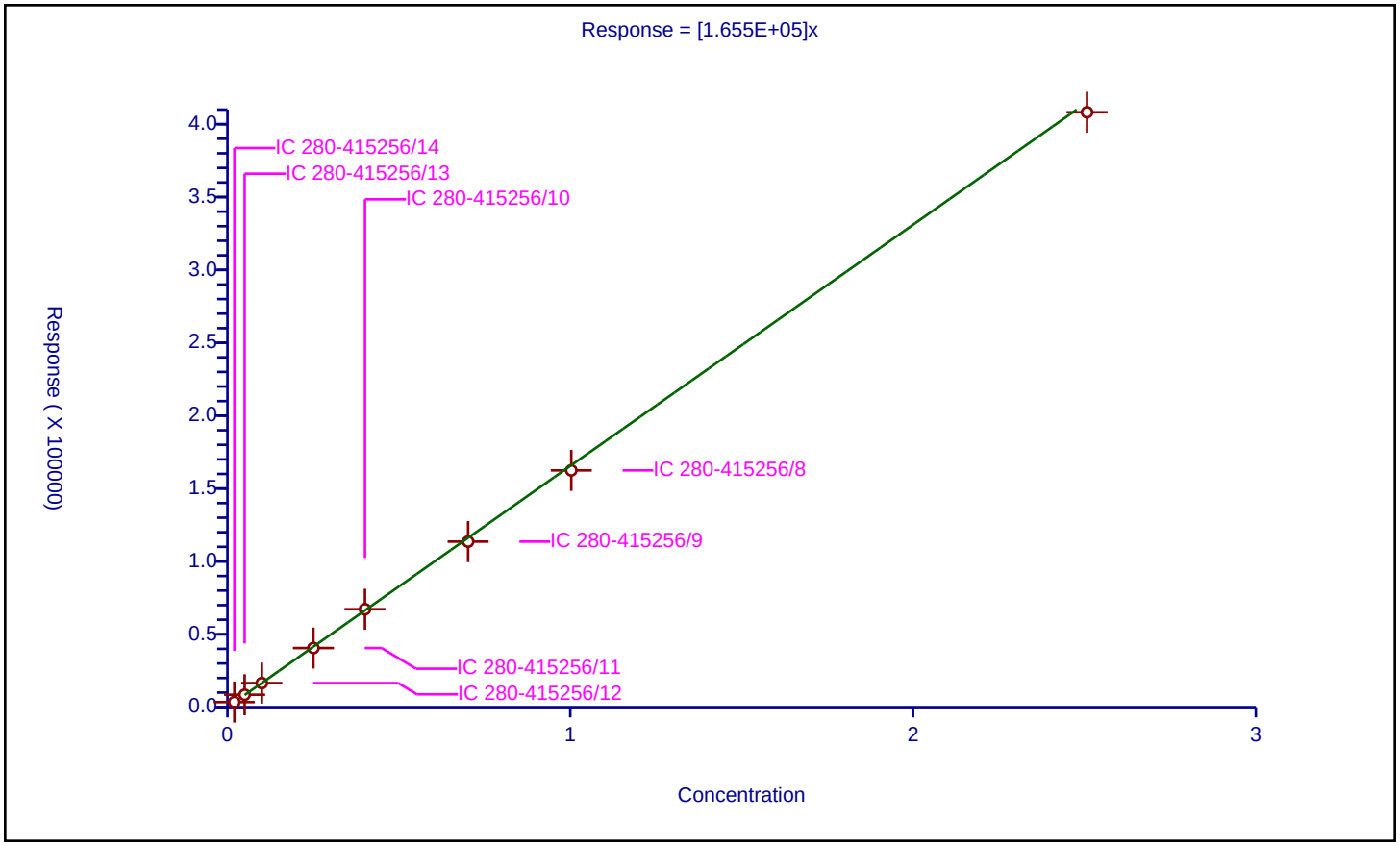
Curve Coefficients

Intercept:	0
Slope:	1.655E+05

Error Coefficients

Standard Error:	3100
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3486.0			173778.664008	Y
2	IC 280-415256/13	0.05015	8517.0			169830.508475	Y
3	IC 280-415256/12	0.1003	16510.0			164606.181456	Y
4	IC 280-415256/11	0.25075	40566.0			161778.664008	Y
5	IC 280-415256/10	0.4012	67180.0			167447.657029	Y
6	IC 280-415256/9	0.7021	113610.0			161814.556331	Y
7	IC 280-415256/8	1.003	162456.0			161970.089731	Y
8	IC 280-415256/7	2.5075	408172.0			162780.458624	Y



Calibration / 2-Amino-4,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

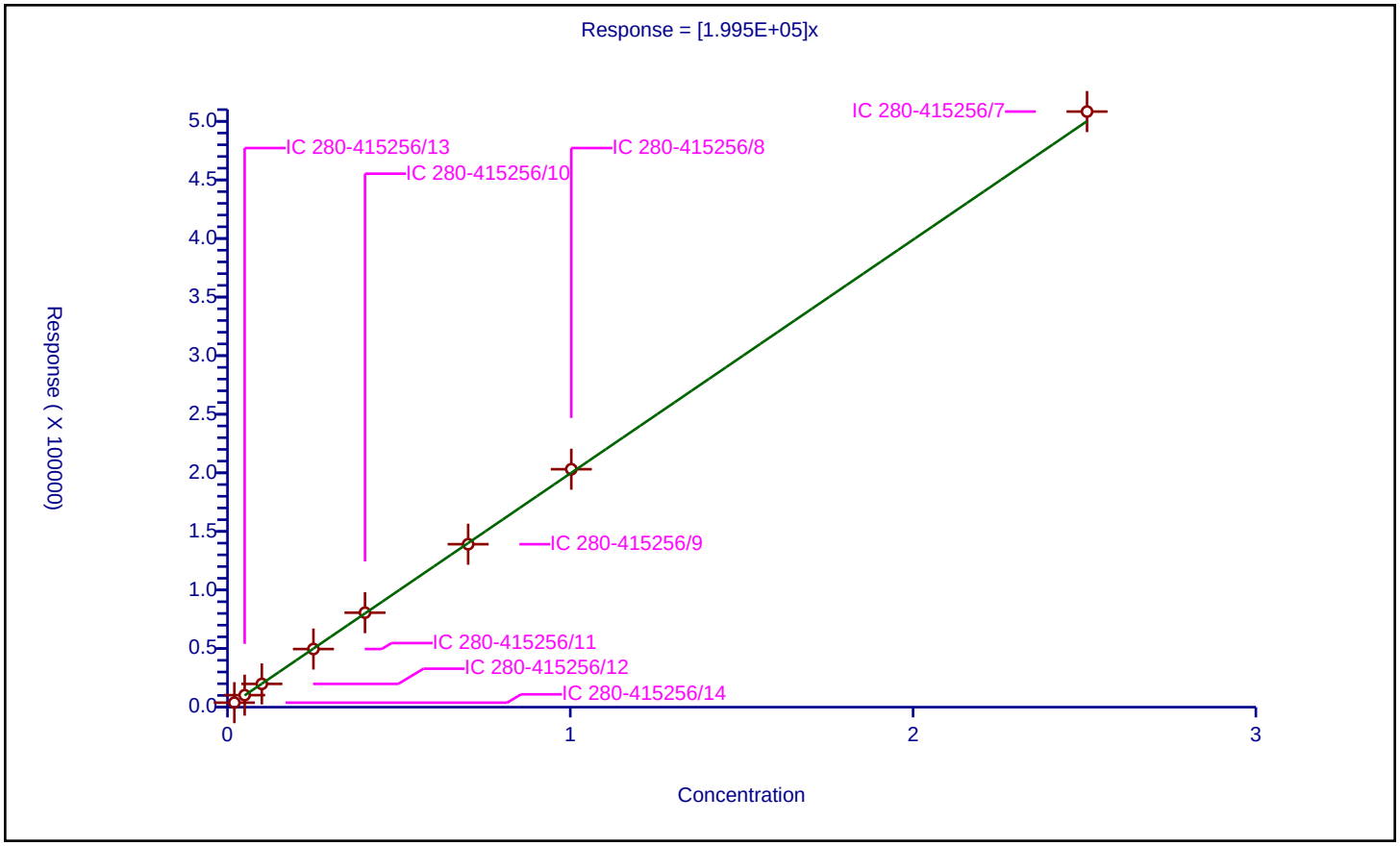
Curve Coefficients

Intercept:	0
Slope:	1.995E+05

Error Coefficients

Standard Error:	3320
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3839.0			191375.872383	Y
2	IC 280-415256/13	0.05015	10247.0			204327.018943	Y
3	IC 280-415256/12	0.1003	19850.0			197906.281157	Y
4	IC 280-415256/11	0.25075	49604.0			197822.532403	Y
5	IC 280-415256/10	0.4012	80646.0			201011.964108	Y
6	IC 280-415256/9	0.7021	139075.0			198084.318473	Y
7	IC 280-415256/8	1.003	203087.0			202479.561316	Y
8	IC 280-415256/7	2.5075	508320.0			202719.840479	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

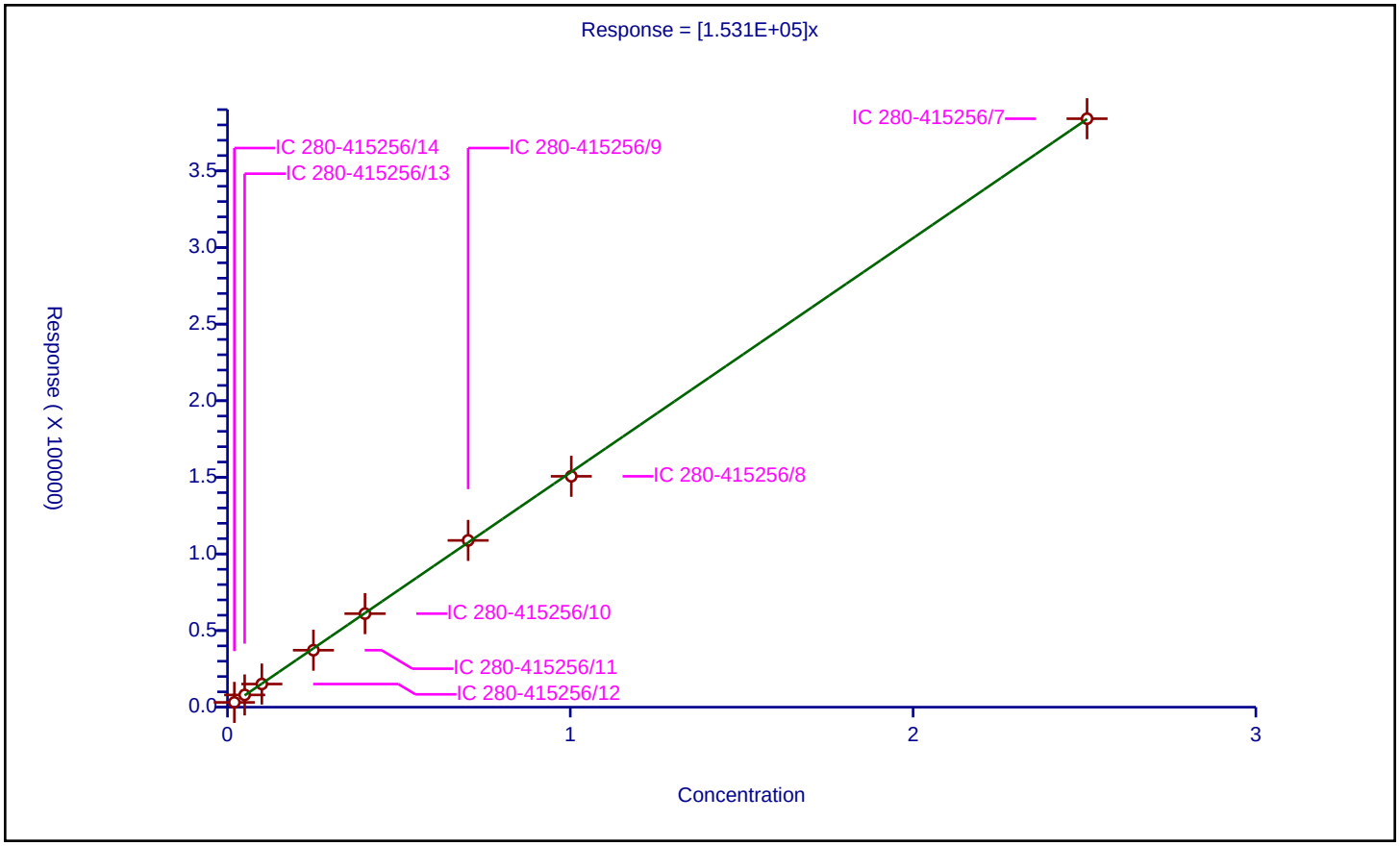
Curve Coefficients

Intercept:	0
Slope:	1.531E+05

Error Coefficients

Standard Error:	1300
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3125.0			155782.652044	Y
2	IC 280-415256/13	0.05015	7991.0			159341.974078	Y
3	IC 280-415256/12	0.1003	15104.0			150588.235294	Y
4	IC 280-415256/11	0.25075	37173.0			148247.258225	Y
5	IC 280-415256/10	0.4012	61046.0			152158.524427	Y
6	IC 280-415256/9	0.7021	108831.0			155007.833642	Y
7	IC 280-415256/8	1.003	150677.0			150226.321037	Y
8	IC 280-415256/7	2.5075	384067.0			153167.298106	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

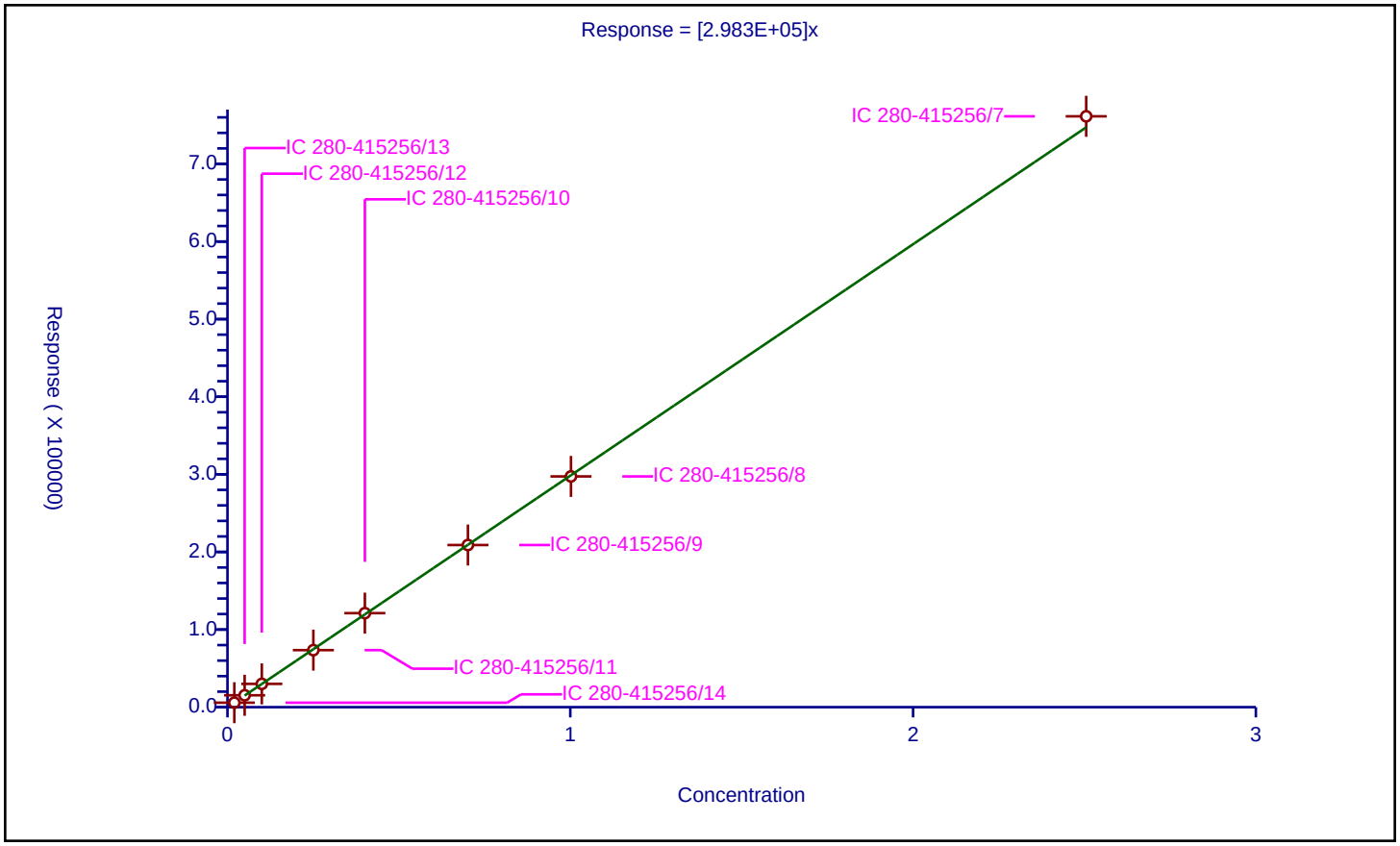
Curve Coefficients

Intercept:	0
Slope:	2.983E+05

Error Coefficients

Standard Error:	5460
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	5750.0			286926.147705	Y
2	IC 280-415256/13	0.0501	15313.0			305648.702595	Y
3	IC 280-415256/12	0.1002	30008.0			299481.037924	Y
4	IC 280-415256/11	0.2505	73471.0			293297.40519	Y
5	IC 280-415256/10	0.4008	121158.0			302290.419162	Y
6	IC 280-415256/9	0.7014	208912.0			297850.014257	Y
7	IC 280-415256/8	1.002	297313.0			296719.560878	Y
8	IC 280-415256/7	2.505	761362.0			303936.926148	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

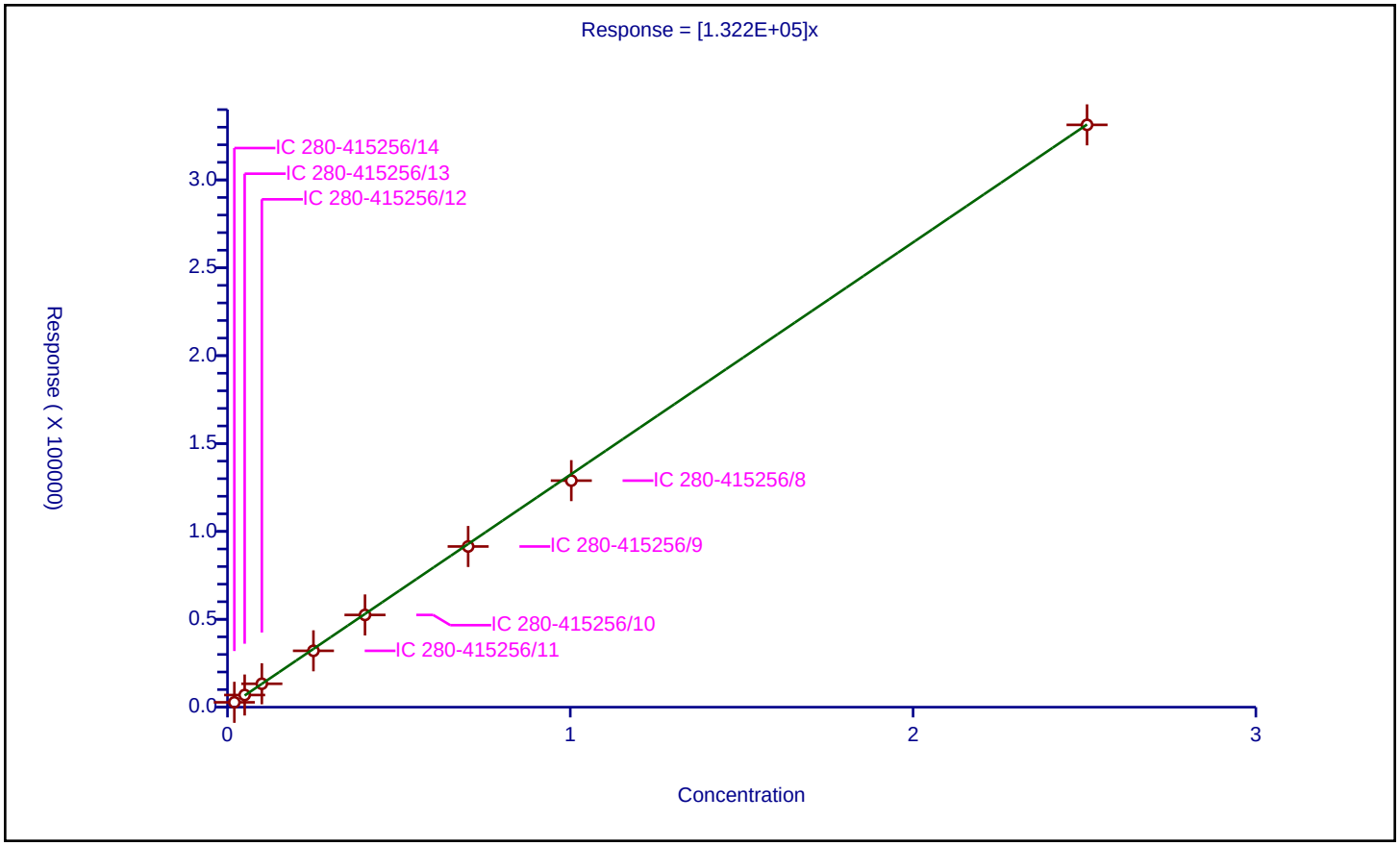
Curve Coefficients

Intercept:	0
Slope:	1.322E+05

Error Coefficients

Standard Error:	1580
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	2761.0			137637.088734	Y
2	IC 280-415256/13	0.05015	6915.0			137886.340977	Y
3	IC 280-415256/12	0.1003	13314.0			132741.774676	Y
4	IC 280-415256/11	0.25075	32062.0			127864.40678	Y
5	IC 280-415256/10	0.4012	52478.0			130802.592223	Y
6	IC 280-415256/9	0.7021	91427.0			130219.341974	Y
7	IC 280-415256/8	1.003	128893.0			128507.477567	Y
8	IC 280-415256/7	2.5075	331335.0			132137.587238	Y



Calibration / p-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

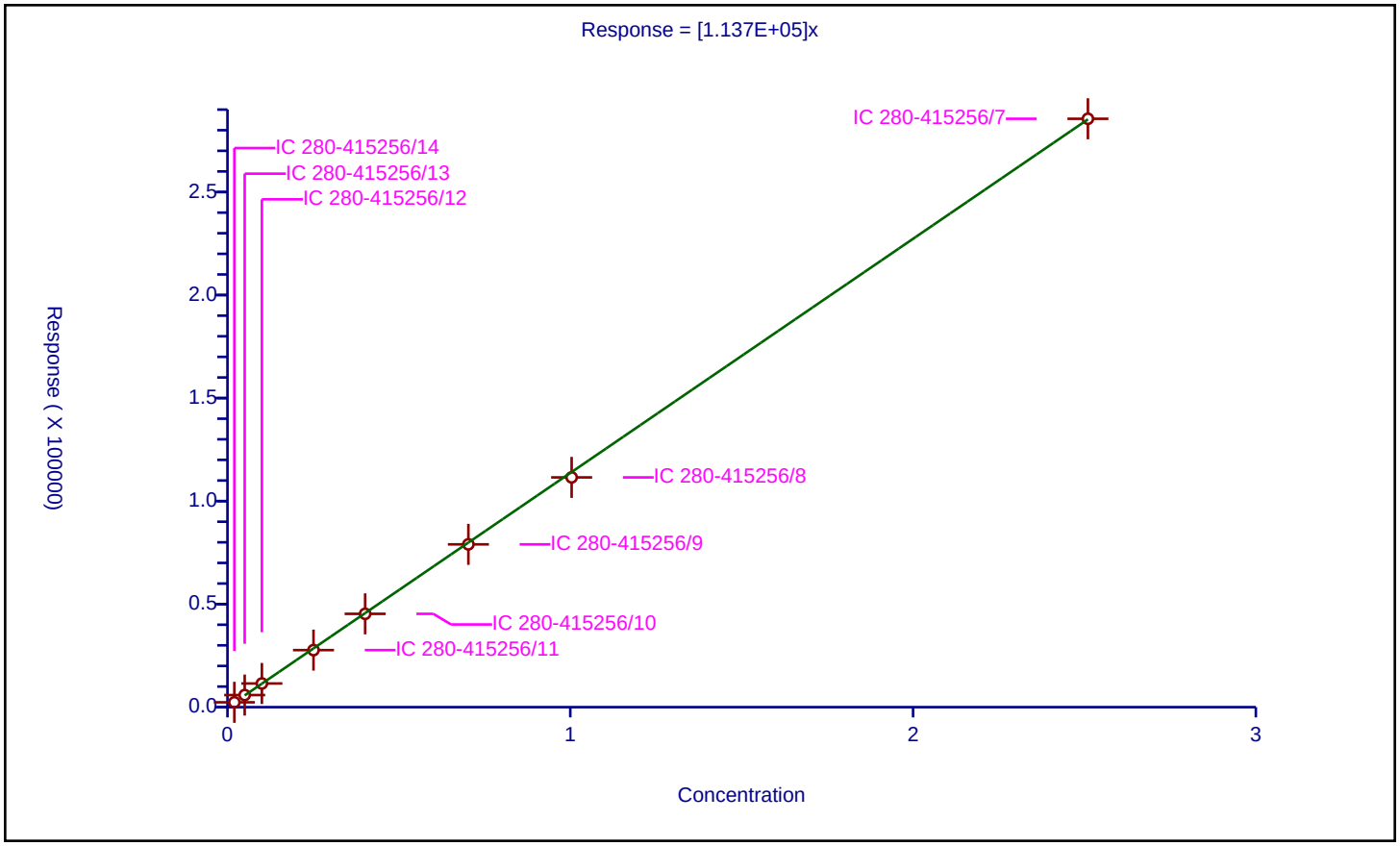
Curve Coefficients

Intercept:	0
Slope:	1.137E+05

Error Coefficients

Standard Error:	1100
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	2355.0			117280.876494	Y
2	IC 280-415256/13	0.0502	5884.0			117211.155378	Y
3	IC 280-415256/12	0.1004	11487.0			114412.350598	Y
4	IC 280-415256/11	0.251	27683.0			110290.836653	Y
5	IC 280-415256/10	0.4016	45295.0			112786.354582	Y
6	IC 280-415256/9	0.7028	79009.0			112420.318725	Y
7	IC 280-415256/8	1.004	111505.0			111060.756972	Y
8	IC 280-415256/7	2.51	285557.0			113767.729084	Y



Calibration / m-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

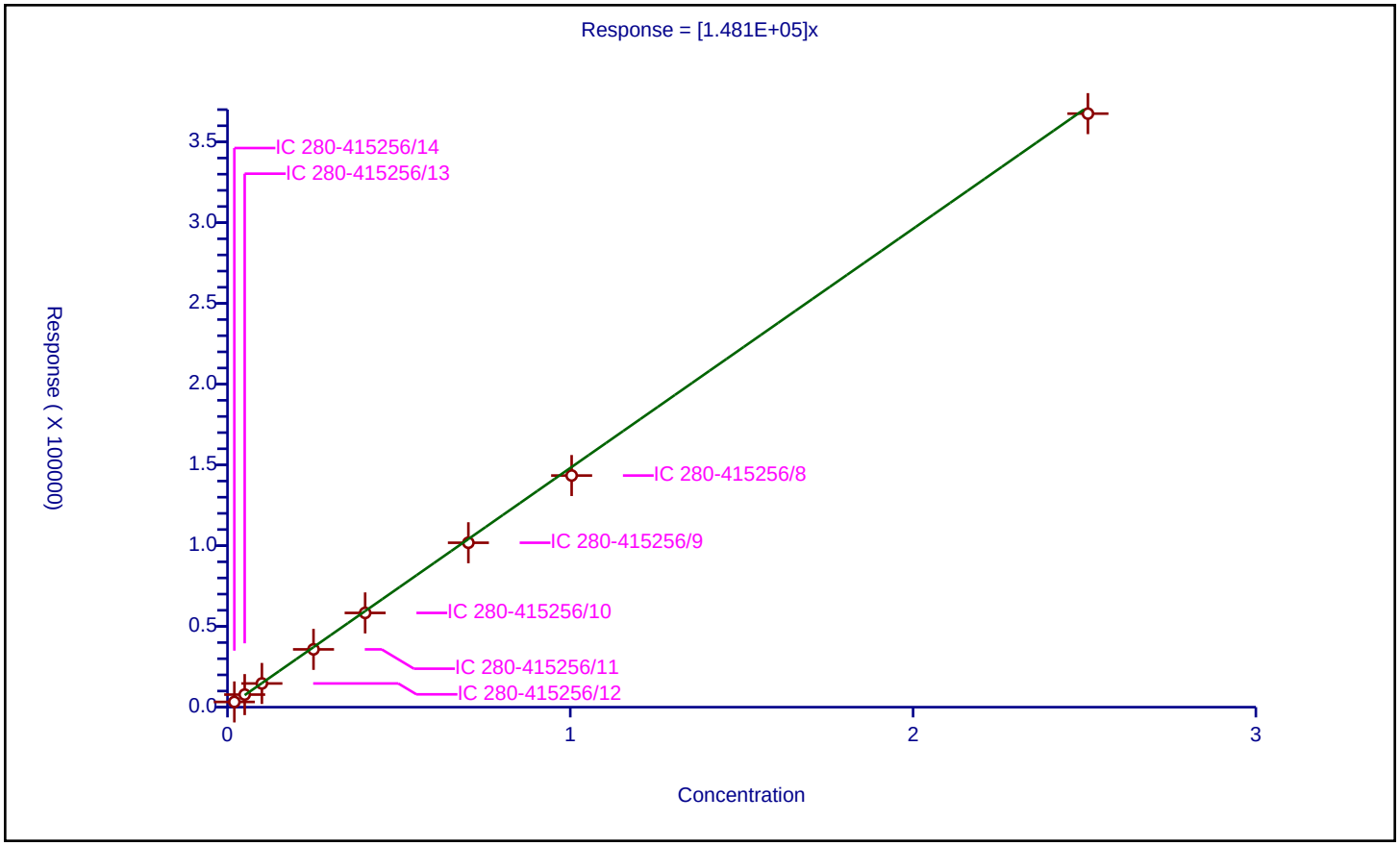
Curve Coefficients

Intercept:	0
Slope:	1.481E+05

Error Coefficients

Standard Error:	2790
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	3245.0			161603.585657	Y
2	IC 280-415256/13	0.0502	7786.0			155099.601594	Y
3	IC 280-415256/12	0.1004	14675.0			146165.338645	Y
4	IC 280-415256/11	0.251	35788.0			142581.673307	Y
5	IC 280-415256/10	0.4016	58353.0			145301.294821	Y
6	IC 280-415256/9	0.7028	101807.0			144859.134889	Y
7	IC 280-415256/8	1.004	143426.0			142854.581673	Y
8	IC 280-415256/7	2.51	367509.0			146417.928287	Y



Calibration / PETN

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

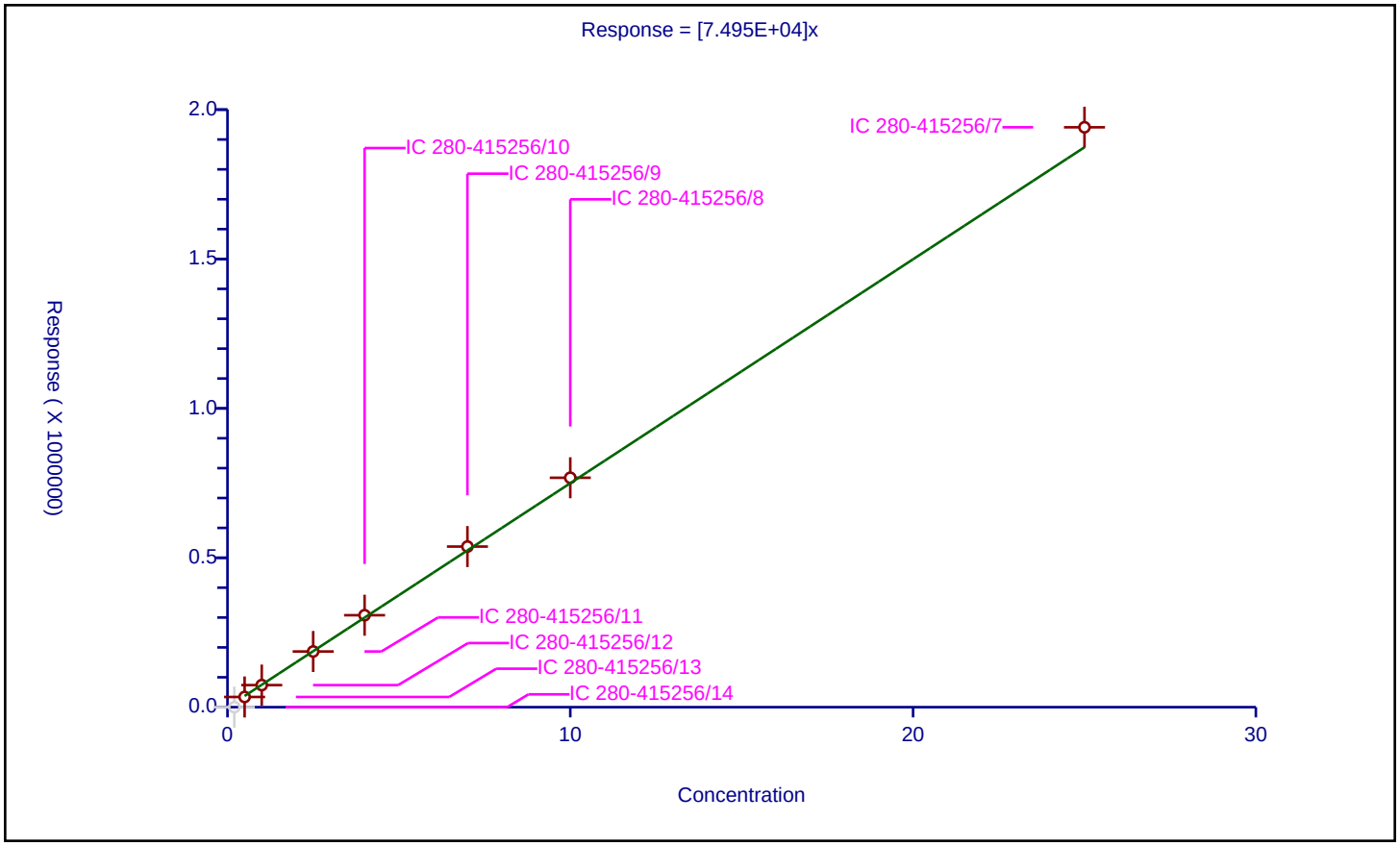
Curve Coefficients

Intercept:	0
Slope:	7.495E+04

Error Coefficients

Standard Error:	29000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	0.0			0.0	N
2	IC 280-415256/13	0.5	34097.0			68194.0	Y
3	IC 280-415256/12	1.0	73842.0			73842.0	Y
4	IC 280-415256/11	2.5	186281.0			74512.4	Y
5	IC 280-415256/10	4.0	307741.0			76935.25	Y
6	IC 280-415256/9	7.0	537514.0			76787.714286	Y
7	IC 280-415256/8	10.0	767790.0			76779.0	Y
8	IC 280-415256/7	25.0	1940836.0			77633.44	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: ICV 280-433312/15 Calibration Date: 10/13/2018 21:03

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 10130015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Ave	175530	164130		374	400	-6.5	20.0
HMX	Ave	190873	163040		342	400	-14.6	20.0
RDX	Ave	240568	205278		341	400	-14.7	20.0
Nitrobenzene	Ave	436516	402705		369	400	-7.7	20.0
3,5-Dinitroaniline	Lin2		455585		359	400	-10.3	20.0
Nitroglycerin	Ave	195290	170580		3490	4000	-12.7	20.0
1,3-Dinitrobenzene	Ave	697670	622870		357	400	-10.7	20.0
2-Nitrotoluene	Ave	274675	248953		363	400	-9.4	20.0
4-Nitrotoluene	Ave	235818	225210		382	400	-4.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	290775		356	400	-11.0	20.0
3-Nitrotoluene	Ave	312824	277105		354	400	-11.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	410053		340	400	-15.0	20.0
1,3,5-Trinitrobenzene	Ave	508674	458213		360	400	-9.9	20.0
2,6-Dinitrotoluene	Ave	328921	281518		342	400	-14.4	20.0
2,4-Dinitrotoluene	Ave	629622	554770		352	400	-11.9	20.0
Tetryl	Ave	390101	337900		346	400	-13.4	20.0
2,4,6-Trinitrotoluene	Ave	448100	381930		341	400	-14.8	20.0
PETN	Ave	140771	126804		3600	4000	-9.9	20.0
1,2-Dinitrobenzene	Ave	308876	269188		349	400	-12.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: ICV 280-433312/15 Calibration Date: 10/13/2018 21:03

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 10130015.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	6.06	5.93	6.23
HMX	7.13	7.00	7.30
RDX	9.19	9.07	9.37
Nitrobenzene	12.12	12.01	12.31
3,5-Dinitroaniline	15.08	14.96	15.26
Nitroglycerin	15.64	15.52	15.82
1,3-Dinitrobenzene	15.68	15.56	15.86
2-Nitrotoluene	16.44	16.32	16.62
4-Nitrotoluene	16.78	16.66	16.96
4-Amino-2,6-dinitrotoluene	17.19	17.07	17.37
3-Nitrotoluene	17.69	17.57	17.87
2-Amino-4,6-dinitrotoluene	18.23	18.10	18.40
1,3,5-Trinitrobenzene	19.00	18.87	19.17
2,6-Dinitrotoluene	19.80	19.68	19.98
2,4-Dinitrotoluene	20.37	20.24	20.54
Tetryl	23.71	23.57	23.87
2,4,6-Trinitrotoluene	24.72	24.58	24.88
PETN	25.14	24.99	25.29
1,2-Dinitrobenzene	13.13	13.01	13.31

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130015.D
Lims ID: ICV FULL 8330
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:03:26 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV FULL 8330
Misc. Info.: 280-0075057-015
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist:

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:04 Calib Date: 13-Oct-2018 20:28:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:54:52

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	4.382	4.401	-0.019	171602	0.4000	0.3920	
3 2,4-diamino-6-nitrotoluene	1	4.988	4.954	0.034	95793	0.4000	0.3450	M
4 2,4,6-Trinitrophenol	1	6.055	6.081	-0.026	65652	0.4000	0.3740	
5 HMX	1	7.128	7.148	-0.020	65216	0.4000	0.3417	
7 RDX	1	9.188	9.221	-0.033	82111	0.4000	0.3413	
8 Nitrobenzene	1	12.115	12.161	-0.046	161082	0.4000	0.3690	
$ 9 1,2-Dinitrobenzene	1	13.128	13.161	-0.033	107675	0.4000	0.3486	
10 3,5-Dinitroaniline	1	15.082	15.114	-0.032	182234	0.4000	0.3586	
12 Nitroglycerin	2	15.642	15.667	-0.025	682321	4.00	3.49	
11 1,3-Dinitrobenzene	1	15.682	15.707	-0.025	249148	0.4000	0.3571	
13 o-Nitrotoluene	1	16.442	16.474	-0.032	99581	0.4000	0.3625	
14 p-Nitrotoluene	1	16.775	16.814	-0.039	90084	0.4000	0.3820	
15 4-Amino-2,6-dinitrotoluene	1	17.188	17.221	-0.033	116310	0.4000	0.3559	
16 m-Nitrotoluene	1	17.688	17.721	-0.033	110842	0.4000	0.3543	
17 2-Amino-4,6-dinitrotoluene	1	18.228	18.254	-0.026	164021	0.4000	0.3401	
18 1,3,5-Trinitrobenzene	1	18.995	19.021	-0.026	183285	0.4000	0.3603	
19 2,6-Dinitrotoluene	1	19.802	19.834	-0.032	112607	0.4000	0.3424	
20 2,4-Dinitrotoluene	1	20.368	20.394	-0.026	221908	0.4000	0.3524	
21 Tetryl	1	23.708	23.721	-0.013	135160	0.4000	0.3465	
22 2,4,6-Trinitrotoluene	1	24.715	24.734	-0.019	152772	0.4000	0.3409	
23 PETN	2	25.135	25.141	-0.006	507215	4.00	3.60	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

3,5-DNA LCS_00031	Amount Added:	40.00	Units: uL
8330Surrogate_00098	Amount Added:	40.00	Units: uL
8330DiaminLCS_00030	Amount Added:	40.00	Units: uL
8330 LCS_00081	Amount Added:	40.00	Units: uL

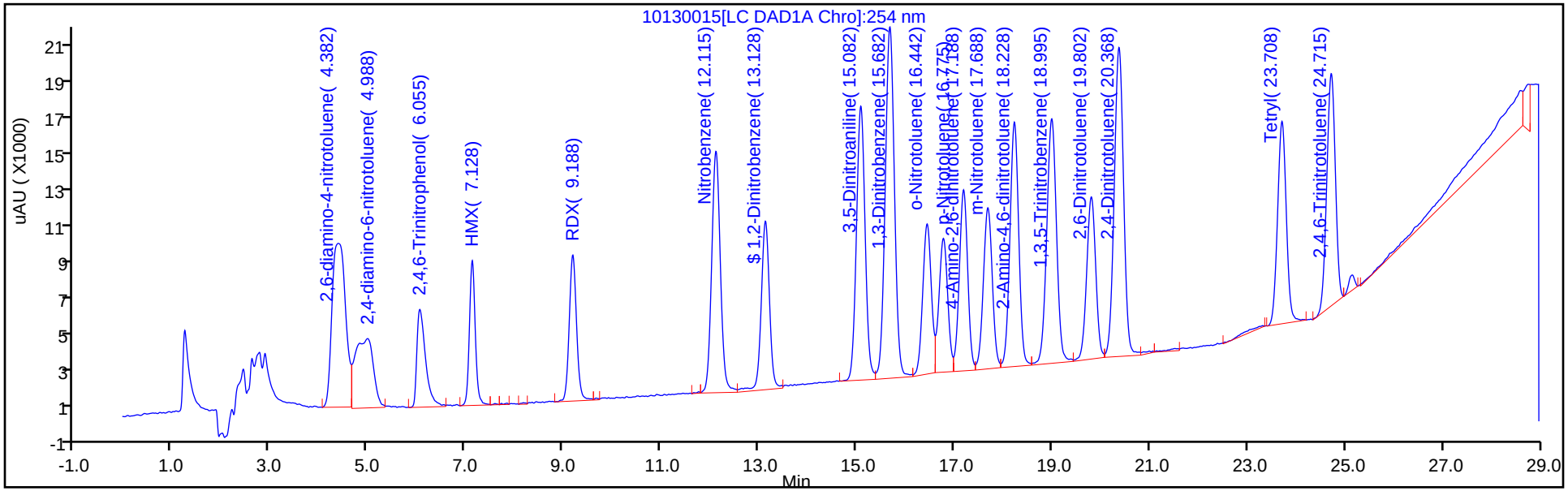
Report Date: 14-Oct-2018 14:03:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

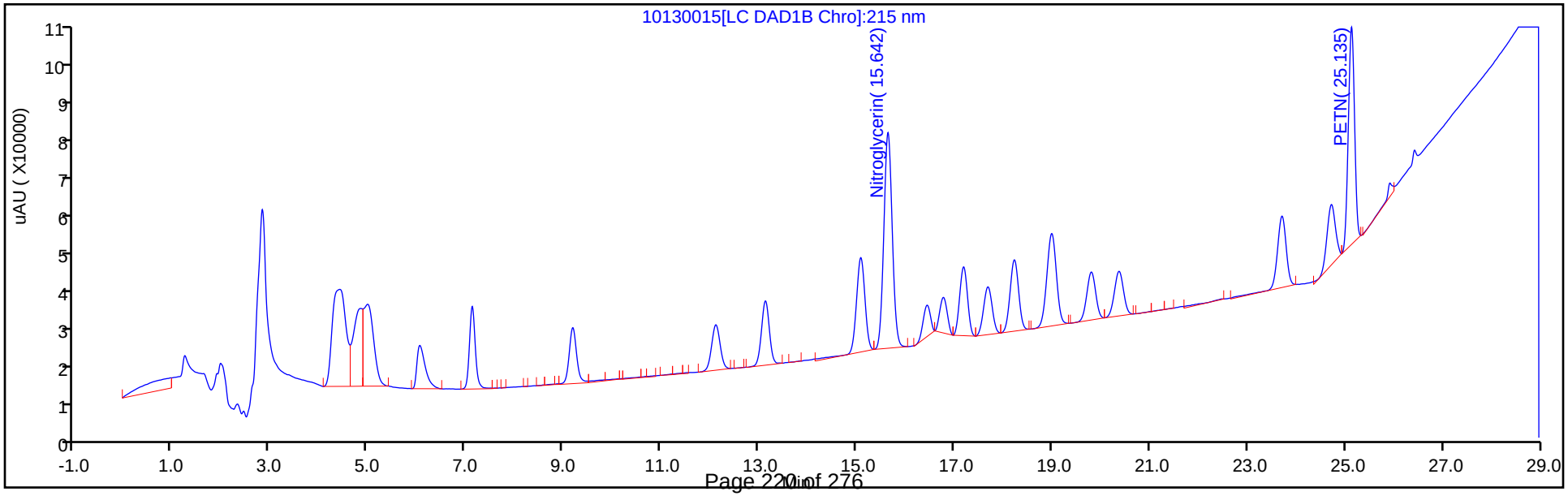
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130015.D

Injection Date:	13-Oct-2018 21:03:26	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	ICV FULL 8330			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
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.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437787/51 Calibration Date: 11/15/2018 16:16

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11140051.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	190873	193328		253	250	1.3	20.0
Picric acid	Ave	175530	174668		249	250	-0.5	20.0
RDX	Ave	240568	243852		253	250	1.4	20.0
Nitrobenzene	Ave	436516	388172		223	251	-11.1	20.0
3,5-Dinitroaniline	Lin2		531564		261	250	4.6	20.0
Nitroglycerin	Ave	195290	206504		2640	2500	5.7	20.0
1,3-Dinitrobenzene	Ave	697670	707073		254	250	1.3	20.0
2-Nitrotoluene	Ave	274675	247254		226	251	-10.0	20.0
4-Nitrotoluene	Ave	235818	220267		234	251	-6.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	335745		258	251	2.7	20.0
3-Nitrotoluene	Ave	312824	281681		226	251	-10.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	485029		252	251	0.6	20.0
1,3,5-Trinitrobenzene	Ave	508674	515780		253	250	1.4	20.0
2,6-Dinitrotoluene	Ave	328921	325910		248	251	-0.9	20.0
2,4-Dinitrotoluene	Ave	629622	655453		261	251	4.1	20.0
Tetryl	Ave	390101	395464		253	250	1.4	20.0
2,4,6-Trinitrotoluene	Ave	448100	481590		270	251	7.5	20.0
PETN	Ave	140771	159601		2830	2500	13.4	20.0
1,2-Dinitrobenzene	Ave	308876	316236		256	250	2.4	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437787/51 Calibration Date: 11/15/2018 16:16

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11140051.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	7.21	7.02	7.32
Picric acid	7.56	7.20	7.50
RDX	9.29	9.10	9.40
Nitrobenzene	12.17	11.98	12.28
3,5-Dinitroaniline	15.22	15.02	15.32
Nitroglycerin	15.73	15.52	15.82
1,3-Dinitrobenzene	15.76	15.56	15.86
2-Nitrotoluene	16.49	16.28	16.58
4-Nitrotoluene	16.83	16.62	16.92
4-Amino-2,6-dinitrotoluene	17.29	17.08	17.38
3-Nitrotoluene	17.74	17.53	17.83
2-Amino-4,6-dinitrotoluene	18.38	18.17	18.47
1,3,5-Trinitrobenzene	19.05	18.84	19.14
2,6-Dinitrotoluene	19.86	19.64	19.94
2,4-Dinitrotoluene	20.45	20.24	20.54
Tetryl	23.81	23.59	23.89
2,4,6-Trinitrotoluene	24.77	24.55	24.85
PETN	25.21	25.00	25.30
1,2-Dinitrobenzene	13.23	13.02	13.32

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181114-76195.b\11140051.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 15-Nov-2018 16:16:02 ALS Bottle#: 7 Worklist Smp#: 51
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076195-051
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181114-76195.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 16-Nov-2018 09:21:27 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0321

First Level Reviewer: fiedlerh Date: 16-Nov-2018 09:15:08

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	4.414	4.393	0.021	109970	0.2500	0.2512	
3 2,4-diamino-6-nitrotoluene	1	4.874	4.966	-0.092	52834	0.2500	0.1903	
5 HMX	1	7.207	7.173	0.034	48332	0.2500	0.2532	
4 2,4,6-Trinitrophenol	1	7.561	7.346	0.215	43667	0.2500	0.2488	a
7 RDX	1	9.287	9.246	0.041	60963	0.2500	0.2534	
8 Nitrobenzene	1	12.174	12.126	0.048	97237	0.2505	0.2228	
$ 9 1,2-Dinitrobenzene	1	13.227	13.173	0.054	79059	0.2500	0.2560	
10 3,5-Dinitroaniline	1	15.221	15.166	0.055	132891	0.2500	0.2615	
12 Nitroglycerin	2	15.734	15.673	0.061	516259	2.50	2.64	
11 1,3-Dinitrobenzene	1	15.761	15.713	0.048	176945	0.2503	0.2536	
13 o-Nitrotoluene	1	16.487	16.433	0.054	61999	0.2508	0.2257	
14 p-Nitrotoluene	1	16.834	16.773	0.061	55287	0.2510	0.2344	
15 4-Amino-2,6-dinitrotoluene	1	17.294	17.233	0.061	84188	0.2508	0.2576	
16 m-Nitrotoluene	1	17.741	17.680	0.061	70702	0.2510	0.2260	
17 2-Amino-4,6-dinitrotoluene	1	18.381	18.320	0.061	121621	0.2508	0.2522	
18 1,3,5-Trinitrobenzene	1	19.054	18.986	0.068	128945	0.2500	0.2535	
19 2,6-Dinitrotoluene	1	19.861	19.793	0.068	81722	0.2508	0.2485	
20 2,4-Dinitrotoluene	1	20.454	20.386	0.068	164191	0.2505	0.2608	
21 Tetryl	1	23.814	23.740	0.074	98866	0.2500	0.2534	
22 2,4,6-Trinitrotoluene	1	24.767	24.700	0.067	120879	0.2510	0.2698	
23 PETN	2	25.214	25.146	0.068	399002	2.50	2.83	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

8330IntermStk_00056	Amount Added:	12.50	Units: uL
8330_ADDs_00017	Amount Added:	12.50	Units: uL

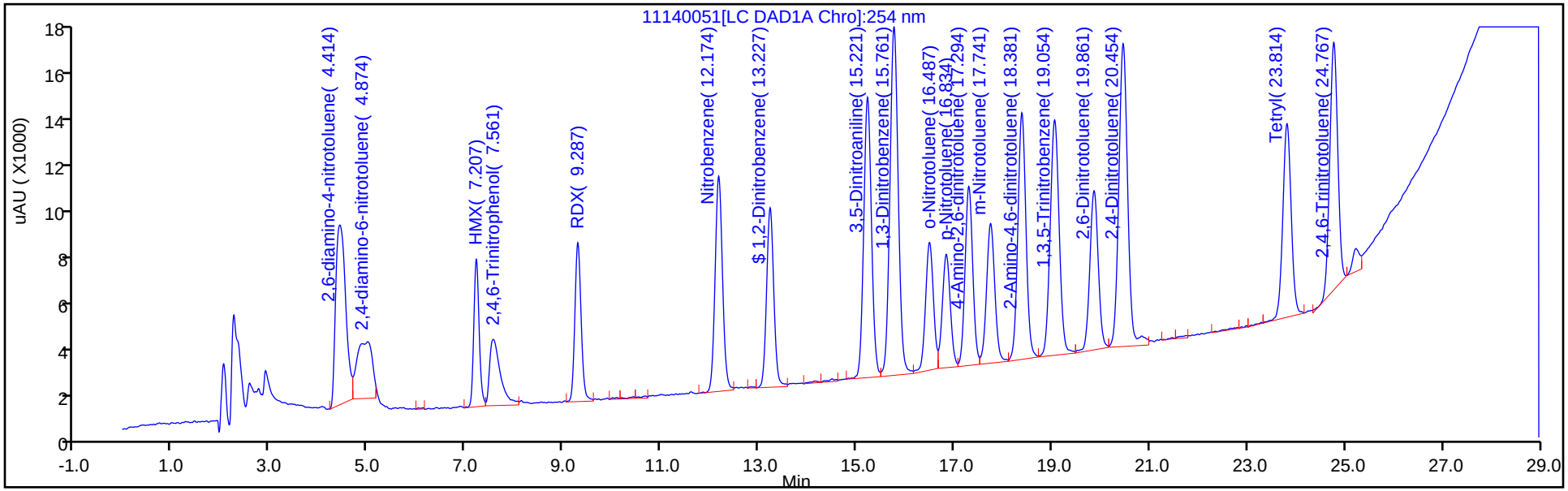
Report Date: 16-Nov-2018 09:21:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

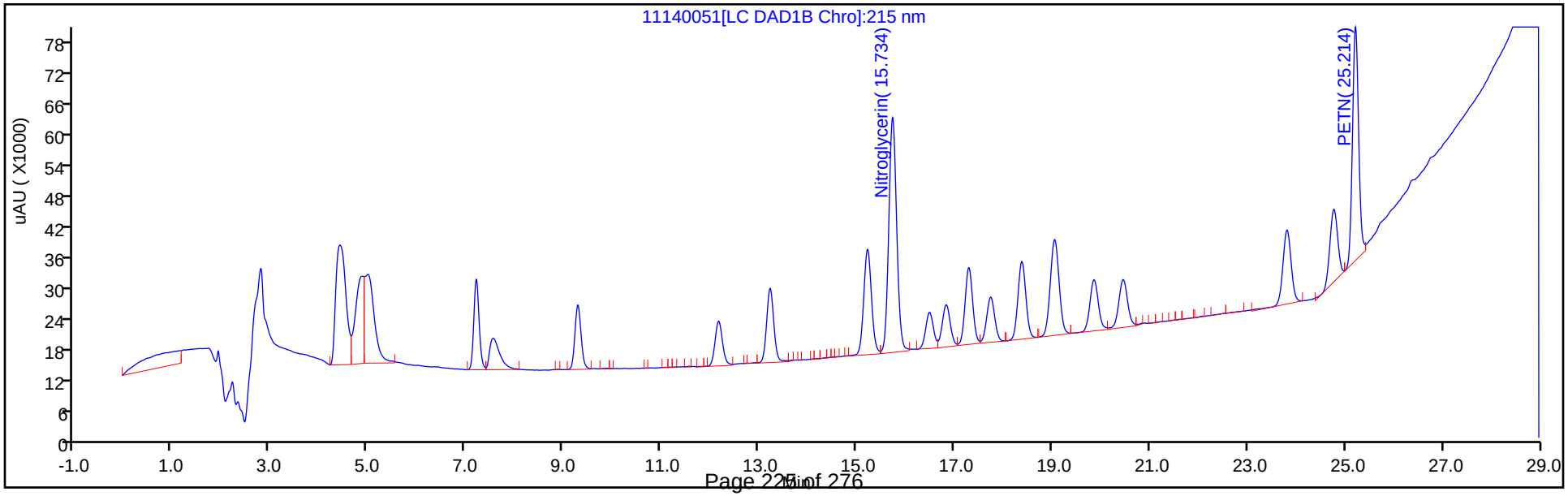
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181114-76195.b\11140051.D

Injection Date:	15-Nov-2018 16:16:02	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	CCV			Worklist Smp#:	51
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



Manual Integration/User Assign Peak Report

TestAmerica Denver

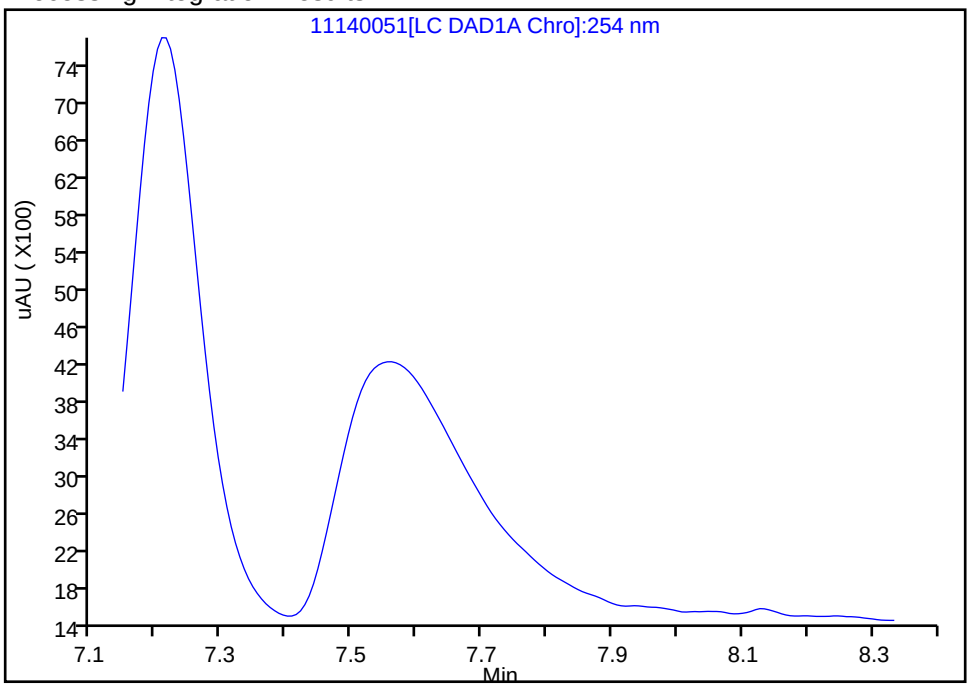
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181114-76195.b\11140051.D				
Injection Date:	15-Nov-2018 16:16:02	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	7	Worklist Smp#:	51
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

4 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

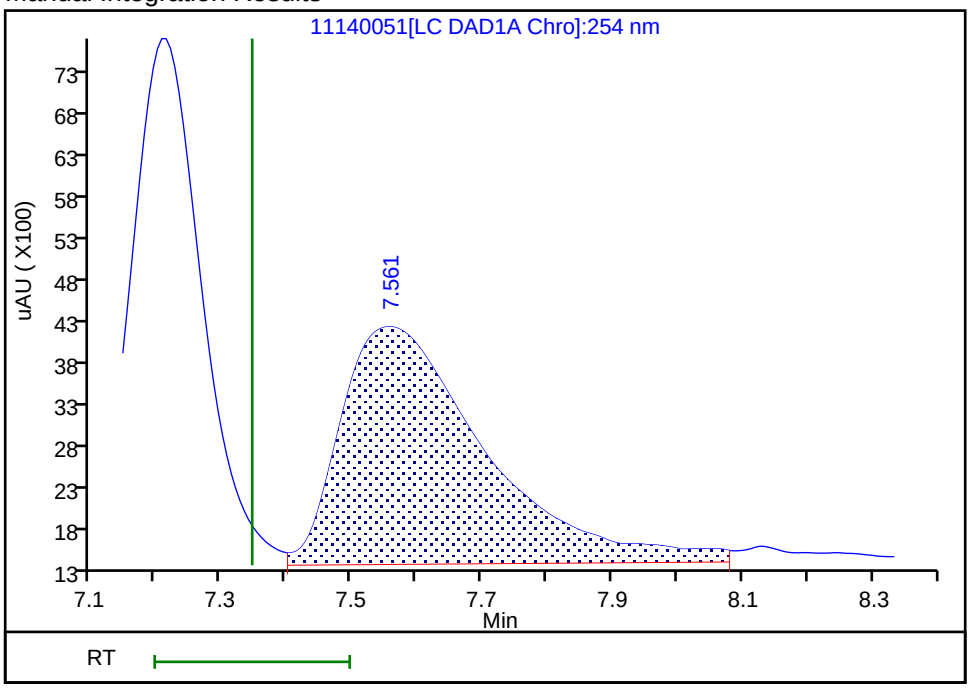
Not Detected
Expected RT: 7.35

Processing Integration Results



Manual Integration Results

RT: 7.56
Area: 43667
Amount: 0.248773
Amount Units: ug/ml



Reviewer: fiedlerh, 16-Nov-2018 09:15:06
Audit Action: Assigned Compound ID Audit Reason:

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
MNX	Ave	13140	139188			400	959.2*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
MNX	7.30	7.15	7.45

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

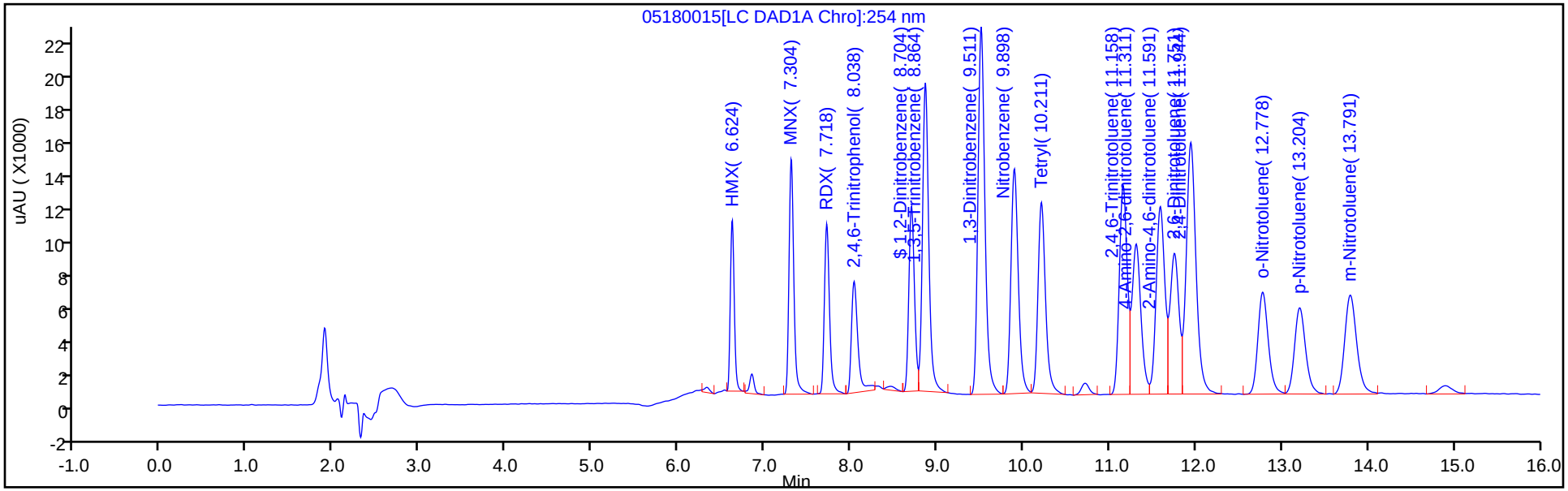
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

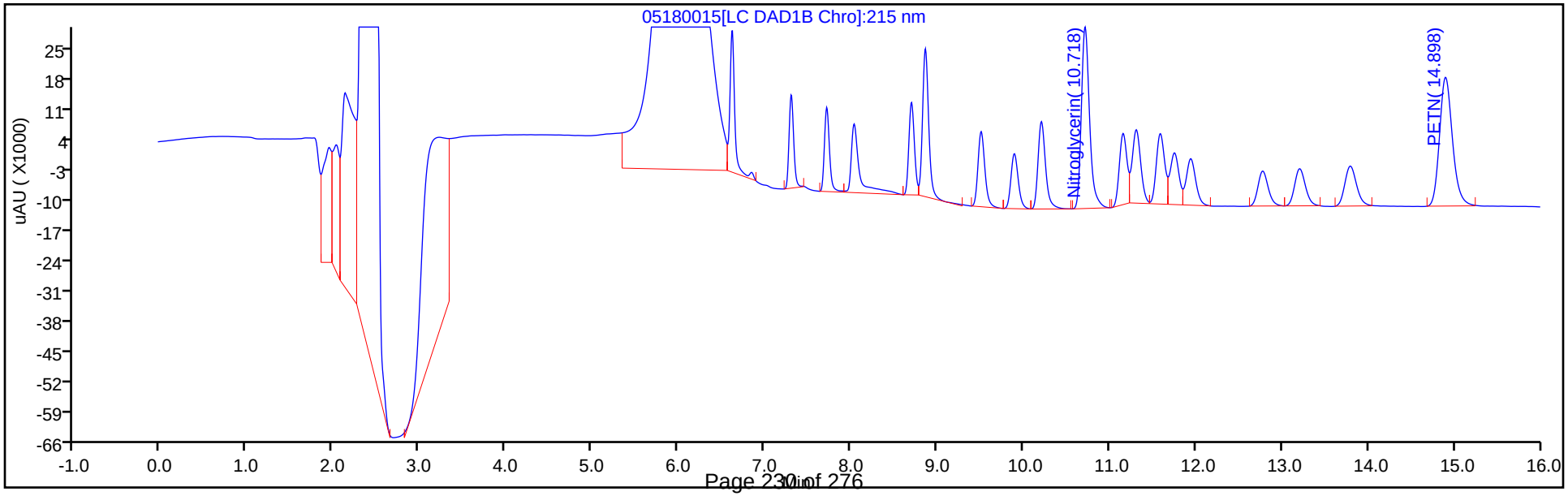
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	82798		390	400	-2.5	20.0
RDX	Ave	104577	107300		410	400	2.6	20.0
Picric acid	Ave	84340	88468		420	400	4.9	20.0
1,3,5-Trinitrobenzene	Ave	228408	236678		414	400	3.6	20.0
1,3-Dinitrobenzene	Ave	301023	314290		418	400	4.4	20.0
Nitrobenzene	Ave	198781	203228		409	400	2.2	20.0
Tetryl	Ave	163448	176798		433	400	8.2	20.0
Nitroglycerin	Ave	67945	69335		4080	4000	2.0	20.0
2,4,6-Trinitrotoluene	Ave	214478	203085		379	400	-5.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	166093		401	400	0.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	200635		402	400	0.6	20.0
2,6-Dinitrotoluene	Ave	153065	155268		406	400	1.4	20.0
2,4-Dinitrotoluene	Ave	298269	302013		405	400	1.3	20.0
2-Nitrotoluene	Ave	132225	130453		395	400	-1.3	20.0
4-Nitrotoluene	Ave	113654	117055		412	400	3.0	20.0
3-Nitrotoluene	Ave	148110	145963		394	400	-1.5	20.0
PETN	Ave	74955	77410		4130	4000	3.3	20.0
1,2-Dinitrobenzene	Ave	128727	128060		398	400	-0.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.62	6.47	6.77
RDX	7.72	7.57	7.87
Picric acid	8.04	7.89	8.19
1,3,5-Trinitrobenzene	8.86	8.71	9.01
1,3-Dinitrobenzene	9.51	9.36	9.66
Nitrobenzene	9.90	9.75	10.05
Tetryl	10.21	10.06	10.36
Nitroglycerin	10.72	10.57	10.87
2,4,6-Trinitrotoluene	11.16	11.06	11.26
4-Amino-2,6-dinitrotoluene	11.31	11.21	11.41
2-Amino-4,6-dinitrotoluene	11.59	11.49	11.69
2,6-Dinitrotoluene	11.75	11.65	11.85
2,4-Dinitrotoluene	11.94	11.84	12.04
2-Nitrotoluene	12.78	12.63	12.93
4-Nitrotoluene	13.20	13.05	13.35
3-Nitrotoluene	13.79	13.64	13.94
PETN	14.90	14.75	15.05
1,2-Dinitrobenzene	8.70	8.55	8.85

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

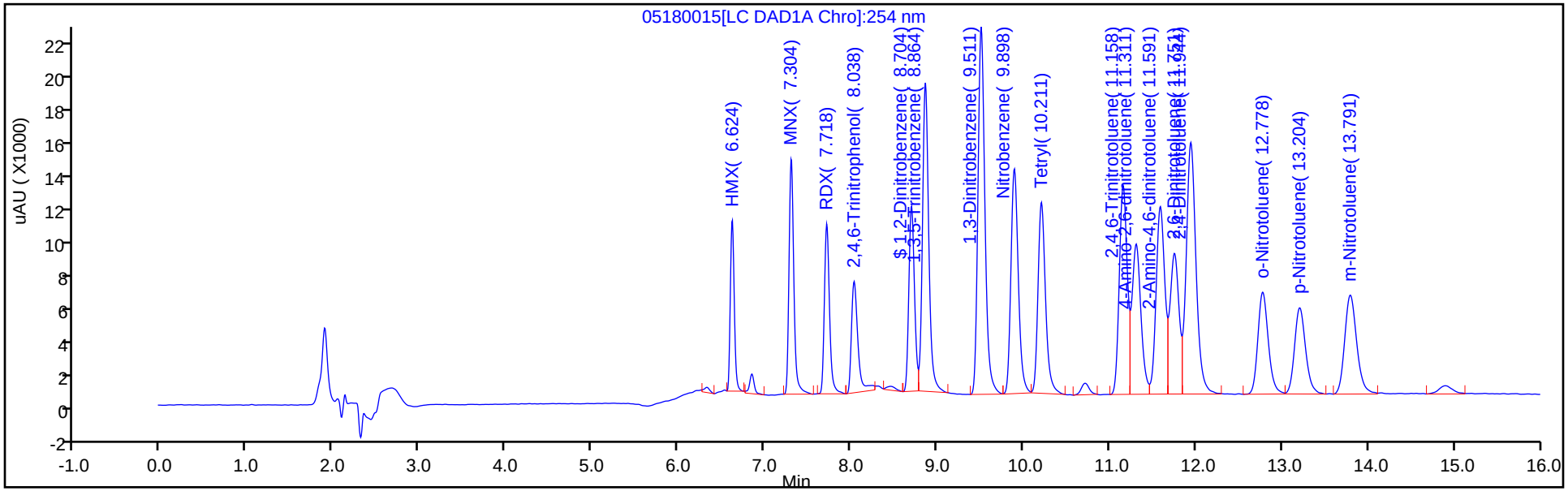
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

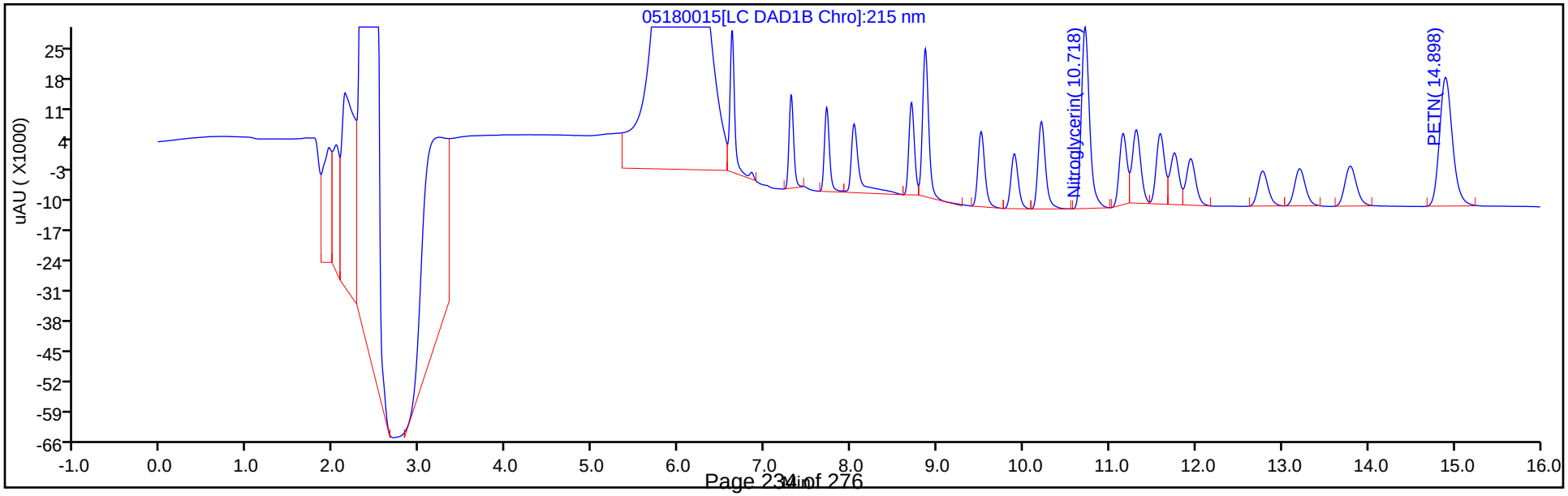
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/7 Calibration Date: 11/13/2018 10:53

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	94460		278	250	11.2	20.0
RDX	Ave	104577	117120		280	250	12.0	20.0
Picric acid	Ave	84340	92600		274	250	9.8	20.0
1,3,5-Trinitrobenzene	Ave	228408	256500		281	250	12.3	20.0
1,3-Dinitrobenzene	Ave	301023	329103		274	250	9.3	20.0
Nitrobenzene	Ave	198781	207321		261	251	4.3	20.0
Tetryl	Ave	163448	197240		302	250	20.7*	20.0
Nitroglycerin	Ave	67945	78274		2880	2500	15.2	20.0
2,4,6-Trinitrotoluene	Ave	214478	249024		291	251	16.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	173340		263	251	4.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	223442		281	251	12.0	20.0
2,6-Dinitrotoluene	Ave	153065	165049		270	251	7.8	20.0
2,4-Dinitrotoluene	Ave	298269	318152		267	251	6.7	20.0
2-Nitrotoluene	Ave	132225	141623		269	251	7.1	20.0
4-Nitrotoluene	Ave	113654	124207		274	251	9.3	20.0
3-Nitrotoluene	Ave	148110	148219		251	251	0.0	20.0
PETN	Ave	74955	84191		2810	2500	12.3	20.0
1,2-Dinitrobenzene	Ave	128727	149152		290	250	15.9	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/7 Calibration Date: 11/13/2018 10:53

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.75	7.60	7.90
Picric acid	8.09	7.94	8.24
1,3,5-Trinitrobenzene	8.91	8.76	9.06
1,3-Dinitrobenzene	9.57	9.42	9.72
Nitrobenzene	9.96	9.81	10.11
Tetryl	10.29	10.14	10.44
Nitroglycerin	10.80	10.65	10.95
2,4,6-Trinitrotoluene	11.25	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.43	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.71	11.61	11.81
2,6-Dinitrotoluene	11.87	11.77	11.97
2,4-Dinitrotoluene	12.06	11.96	12.16
2-Nitrotoluene	12.91	12.76	13.06
4-Nitrotoluene	13.35	13.20	13.50
3-Nitrotoluene	13.95	13.80	14.10
PETN	15.08	14.93	15.23
1,2-Dinitrobenzene	8.75	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130007.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 10:53:42 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0076126-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:09 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

First Level Reviewer: fiedlerh Date: 13-Nov-2018 13:35:45

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	6.646	0.000	23615	0.2500	0.2780	
5 RDX	1	7.752	7.752	0.000	29280	0.2500	0.2800	
6 2,4,6-Trinitrophenol	1	8.092	8.092	0.000	23150	0.2500	0.2745	
$ 7 1,2-Dinitrobenzene	1	8.746	8.746	0.000	37288	0.2500	0.2897	
8 1,3,5-Trinitrobenzene	1	8.906	8.906	0.000	64125	0.2500	0.2807	
9 1,3-Dinitrobenzene	1	9.566	9.566	0.000	82358	0.2503	0.2736	
11 Nitrobenzene	1	9.959	9.959	0.000	51934	0.2505	0.2613	
12 Tetryl	1	10.286	10.286	0.000	49310	0.2500	0.3017	
13 Nitroglycerin	2	10.799	10.799	0.000	195684	2.50	2.88	
14 2,4,6-Trinitrotoluene	1	11.252	11.252	0.000	62505	0.2510	0.2914	
15 4-Amino-2,6-dinitrotoluene	1	11.426	11.426	0.000	43465	0.2508	0.2626	
16 2-Amino-4,6-dinitrotoluene	1	11.712	11.712	0.000	56028	0.2508	0.2809	
17 2,6-Dinitrotoluene	1	11.866	11.866	0.000	41386	0.2508	0.2704	
18 2,4-Dinitrotoluene	1	12.059	12.059	0.000	79697	0.2505	0.2672	
19 o-Nitrotoluene	1	12.912	12.912	0.000	35512	0.2508	0.2686	
20 p-Nitrotoluene	1	13.346	13.346	0.000	31176	0.2510	0.2743	
21 m-Nitrotoluene	1	13.952	13.952	0.000	37203	0.2510	0.2512	
22 PETN	2	15.079	15.079	0.000	210478	2.50	2.81	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

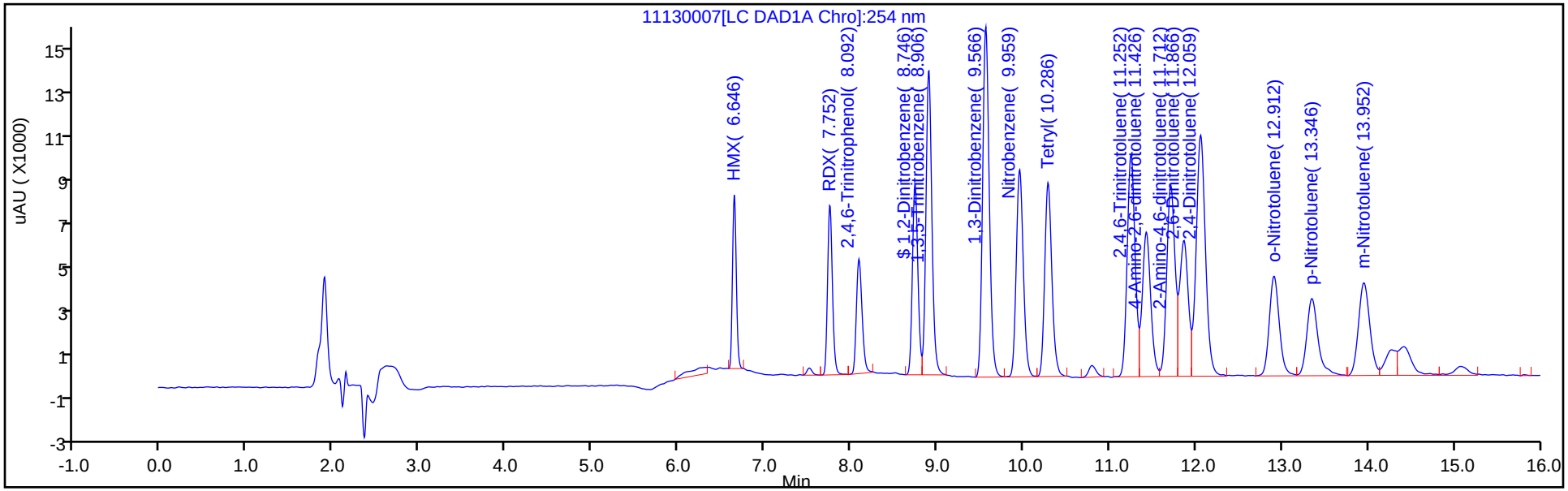
Report Date: 14-Nov-2018 08:04:11 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

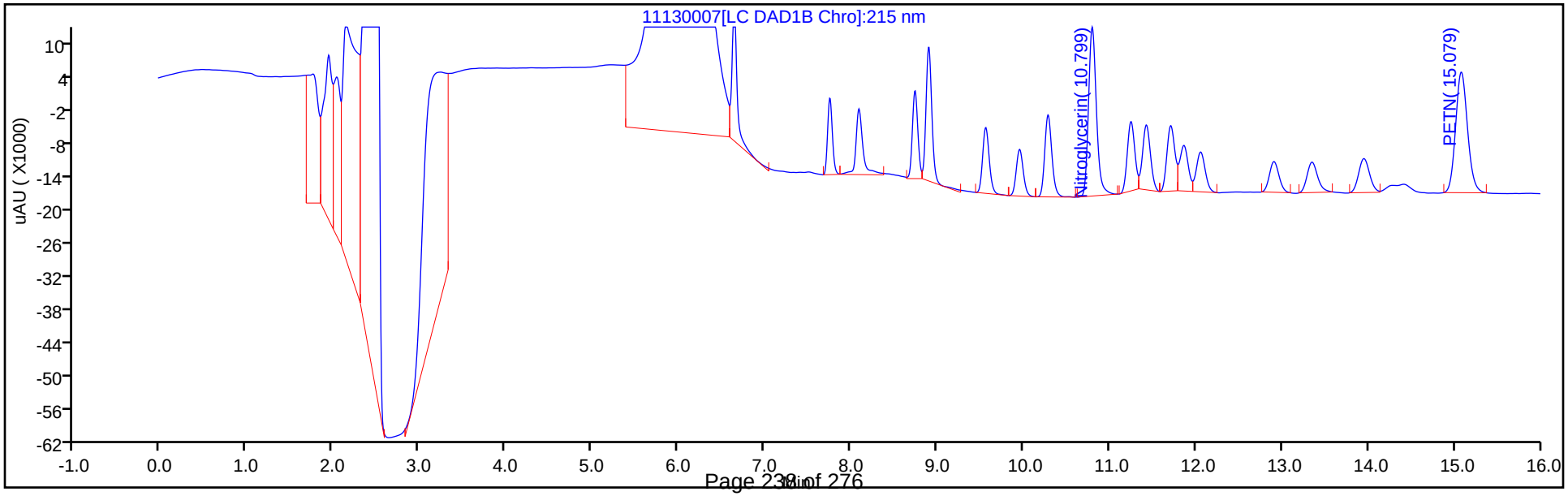
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130007.D

Injection Date:	13-Nov-2018 10:53:42	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/19 Calibration Date: 11/13/2018 15:29

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130019.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	98232		289	250	15.6	20.0
RDX	Ave	104577	117656		281	250	12.5	20.0
Picric acid	Ave	84340	95372		283	250	13.1	20.0
1,3,5-Trinitrobenzene	Ave	228408	256380		281	250	12.2	20.0
1,3-Dinitrobenzene	Ave	301023	328679		273	250	9.2	20.0
Nitrobenzene	Ave	198781	204982		258	251	3.1	20.0
Tetryl	Ave	163448	199512		305	250	22.1*	20.0
Nitroglycerin	Ave	67945	79002		2910	2500	16.3	20.0
2,4,6-Trinitrotoluene	Ave	214478	250920		294	251	17.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	173535		263	251	4.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	225511		283	251	13.1	20.0
2,6-Dinitrotoluene	Ave	153065	165460		271	251	8.1	20.0
2,4-Dinitrotoluene	Ave	298269	318762		268	251	6.9	20.0
2-Nitrotoluene	Ave	132225	138915		263	251	5.1	20.0
4-Nitrotoluene	Ave	113654	123853		274	251	9.0	20.0
3-Nitrotoluene	Ave	148110	145466		247	251	-1.8	20.0
PETN	Ave	74955	84027		2800	2500	12.1	20.0
1,2-Dinitrobenzene	Ave	128727	149500		290	250	16.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/19 Calibration Date: 11/13/2018 15:29

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.50	6.80
RDX	7.77	7.60	7.90
Picric acid	8.12	7.94	8.24
1,3,5-Trinitrobenzene	8.91	8.76	9.06
1,3-Dinitrobenzene	9.57	9.42	9.72
Nitrobenzene	9.96	9.81	10.11
Tetryl	10.28	10.14	10.44
Nitroglycerin	10.79	10.65	10.95
2,4,6-Trinitrotoluene	11.24	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.42	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.70	11.61	11.81
2,6-Dinitrotoluene	11.85	11.77	11.97
2,4-Dinitrotoluene	12.05	11.96	12.16
2-Nitrotoluene	12.89	12.76	13.06
4-Nitrotoluene	13.33	13.20	13.50
3-Nitrotoluene	13.92	13.80	14.10
PETN	15.02	14.93	15.23
1,2-Dinitrobenzene	8.75	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130019.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 15:29:12 ALS Bottle#: 7 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0076126-019
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:25 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

	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	6.646	0.012	24558	0.2500	0.2891	
	5 RDX	1	7.765	7.752	0.013	29414	0.2500	0.2813	
	6 2,4,6-Trinitrophenol	1	8.118	8.092	0.026	23843	0.2500	0.2827	
$	7 1,2-Dinitrobenzene	1	8.745	8.746	-0.001	37375	0.2500	0.2903	
	8 1,3,5-Trinitrobenzene	1	8.911	8.906	0.005	64095	0.2500	0.2806	
	9 1,3-Dinitrobenzene	1	9.571	9.566	0.005	82252	0.2503	0.2732	
	11 Nitrobenzene	1	9.958	9.959	-0.001	51348	0.2505	0.2583	
	12 Tetryl	1	10.284	10.286	-0.002	49878	0.2500	0.3052	
	13 Nitroglycerin	2	10.791	10.799	-0.008	197505	2.50	2.91	
	14 2,4,6-Trinitrotoluene	1	11.238	11.252	-0.014	62981	0.2510	0.2936	
	15 4-Amino-2,6-dinitrotoluene	1	11.418	11.426	-0.008	43514	0.2508	0.2629	
	16 2-Amino-4,6-dinitrotoluene	1	11.704	11.712	-0.008	56547	0.2508	0.2835	
	17 2,6-Dinitrotoluene	1	11.851	11.866	-0.015	41489	0.2508	0.2711	
	18 2,4-Dinitrotoluene	1	12.051	12.059	-0.008	79850	0.2505	0.2677	
	19 o-Nitrotoluene	1	12.891	12.912	-0.021	34833	0.2508	0.2634	
	20 p-Nitrotoluene	1	13.331	13.346	-0.015	31087	0.2510	0.2735	
	21 m-Nitrotoluene	1	13.924	13.952	-0.028	36512	0.2510	0.2465	
	22 PETN	2	15.018	15.079	-0.061	210067	2.50	2.80	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

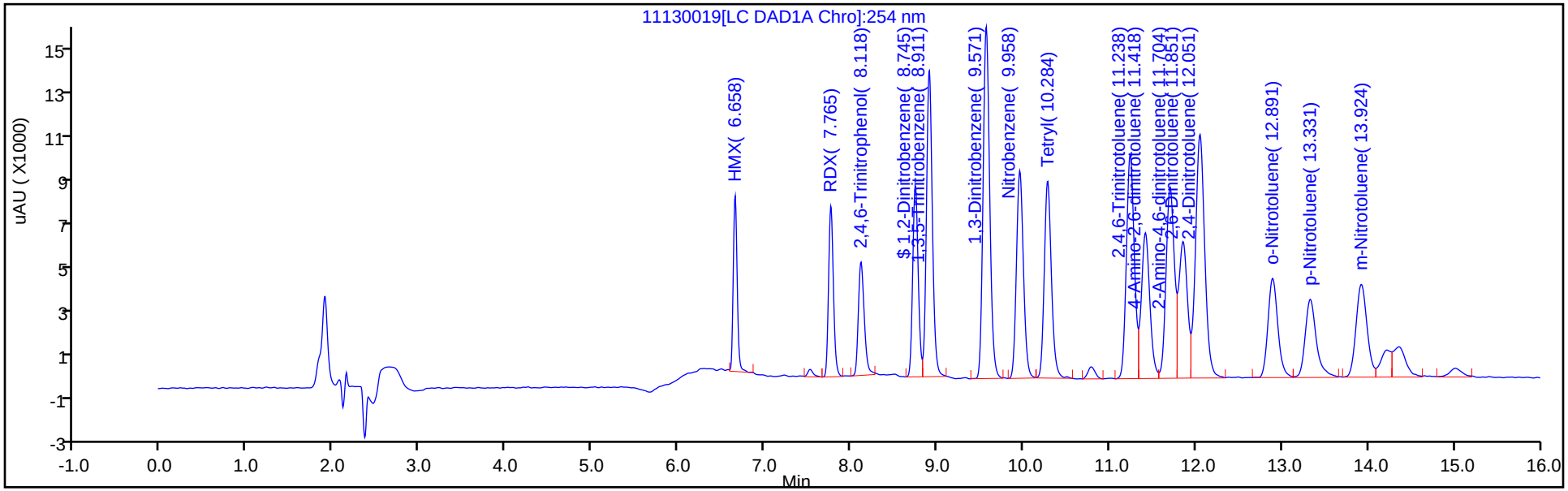
Report Date: 14-Nov-2018 08:04:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

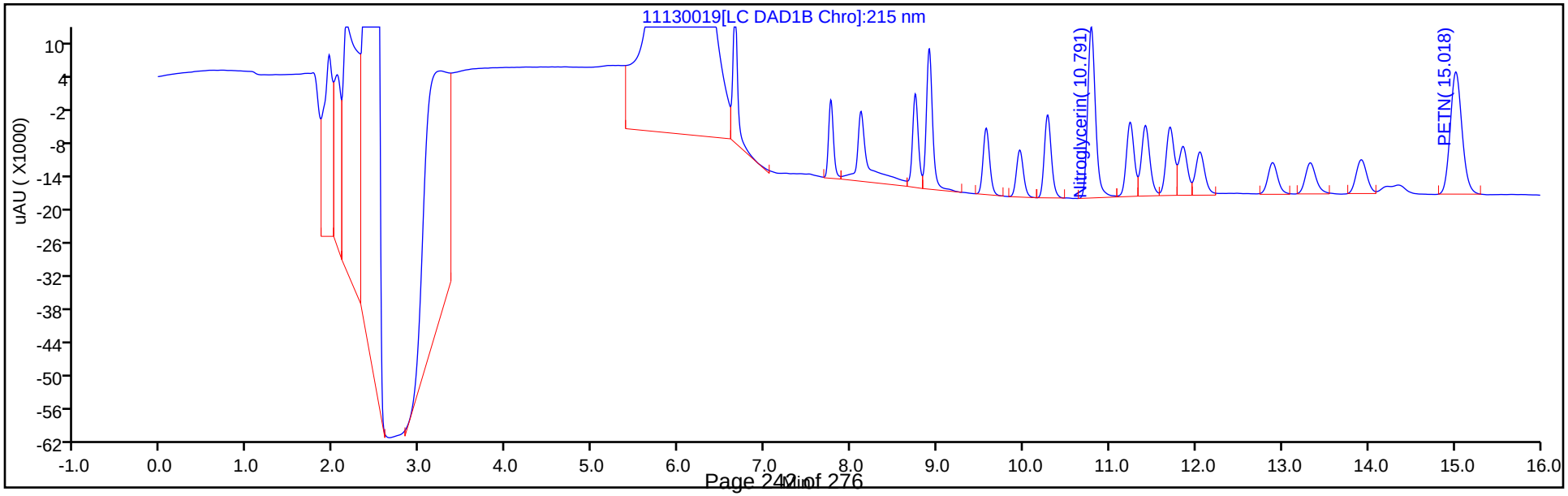
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130019.D

Injection Date:	13-Nov-2018 15:29:12	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/31 Calibration Date: 11/13/2018 20:04

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130031.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	98284		289	250	15.7	20.0
RDX	Ave	104577	117460		281	250	12.3	20.0
Picric acid	Ave	84340	94232		279	250	11.7	20.0
1,3,5-Trinitrobenzene	Ave	228408	257192		282	250	12.6	20.0
1,3-Dinitrobenzene	Ave	301023	330354		275	250	9.7	20.0
Nitrobenzene	Ave	198781	202938		256	251	2.1	20.0
Tetryl	Ave	163448	200356		306	250	22.6*	20.0
Nitroglycerin	Ave	67945	78999		2910	2500	16.3	20.0
2,4,6-Trinitrotoluene	Ave	214478	248211		290	251	15.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	173858		263	251	5.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	226911		285	251	13.8	20.0
2,6-Dinitrotoluene	Ave	153065	162796		267	251	6.4	20.0
2,4-Dinitrotoluene	Ave	298269	316942		266	251	6.3	20.0
2-Nitrotoluene	Ave	132225	137352		260	251	3.9	20.0
4-Nitrotoluene	Ave	113654	120996		267	251	6.5	20.0
3-Nitrotoluene	Ave	148110	142458		241	251	-3.8	20.0
PETN	Ave	74955	84610		2820	2500	12.9	20.0
1,2-Dinitrobenzene	Ave	128727	149084		290	250	15.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/31 Calibration Date: 11/13/2018 20:04

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130031.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.76	7.60	7.90
Picric acid	8.12	7.94	8.24
1,3,5-Trinitrobenzene	8.91	8.76	9.06
1,3-Dinitrobenzene	9.57	9.42	9.72
Nitrobenzene	9.96	9.81	10.11
Tetryl	10.28	10.14	10.44
Nitroglycerin	10.80	10.65	10.95
2,4,6-Trinitrotoluene	11.24	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.42	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.70	11.61	11.81
2,6-Dinitrotoluene	11.86	11.77	11.97
2,4-Dinitrotoluene	12.05	11.96	12.16
2-Nitrotoluene	12.89	12.76	13.06
4-Nitrotoluene	13.32	13.20	13.50
3-Nitrotoluene	13.92	13.80	14.10
PETN	15.03	14.93	15.23
1,2-Dinitrobenzene	8.75	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130031.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 20:04:42 ALS Bottle#: 7 Worklist Smp#: 31
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0076126-031
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:37 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.649	6.646	0.003	24571	0.2500	0.2893	
5 RDX	1	7.763	7.752	0.011	29365	0.2500	0.2808	
6 2,4,6-Trinitrophenol	1	8.116	8.092	0.024	23558	0.2500	0.2793	
$ 7 1,2-Dinitrobenzene	1	8.749	8.746	0.003	37271	0.2500	0.2895	
8 1,3,5-Trinitrobenzene	1	8.909	8.906	0.003	64298	0.2500	0.2815	
9 1,3-Dinitrobenzene	1	9.569	9.566	0.003	82671	0.2503	0.2746	
11 Nitrobenzene	1	9.963	9.959	0.004	50836	0.2505	0.2557	
12 Tetryl	1	10.283	10.286	-0.003	50089	0.2500	0.3065	
13 Nitroglycerin	2	10.796	10.799	-0.003	197498	2.50	2.91	
14 2,4,6-Trinitrotoluene	1	11.243	11.252	-0.009	62301	0.2510	0.2905	
15 4-Amino-2,6-dinitrotoluene	1	11.416	11.426	-0.010	43595	0.2508	0.2634	
16 2-Amino-4,6-dinitrotoluene	1	11.703	11.712	-0.009	56898	0.2508	0.2853	
17 2,6-Dinitrotoluene	1	11.856	11.866	-0.010	40821	0.2508	0.2667	
18 2,4-Dinitrotoluene	1	12.049	12.059	-0.010	79394	0.2505	0.2662	
19 o-Nitrotoluene	1	12.889	12.912	-0.023	34441	0.2508	0.2605	
20 p-Nitrotoluene	1	13.323	13.346	-0.023	30370	0.2510	0.2672	
21 m-Nitrotoluene	1	13.916	13.952	-0.036	35757	0.2510	0.2414	
22 PETN	2	15.029	15.079	-0.050	211524	2.50	2.82	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

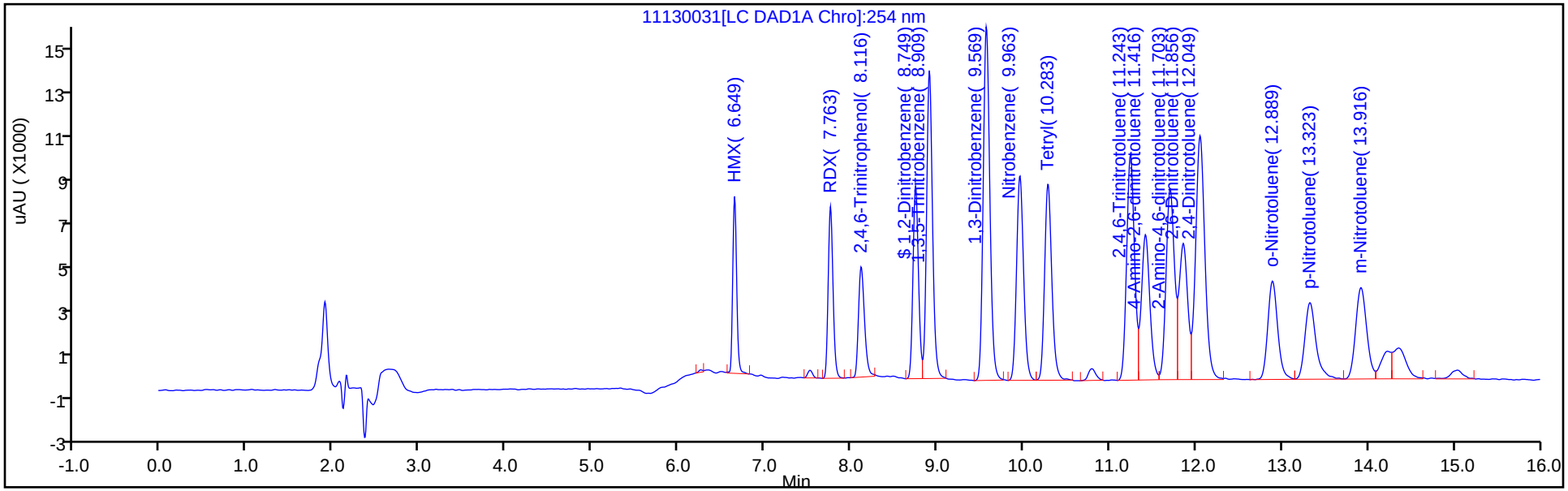
Report Date: 14-Nov-2018 08:04:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

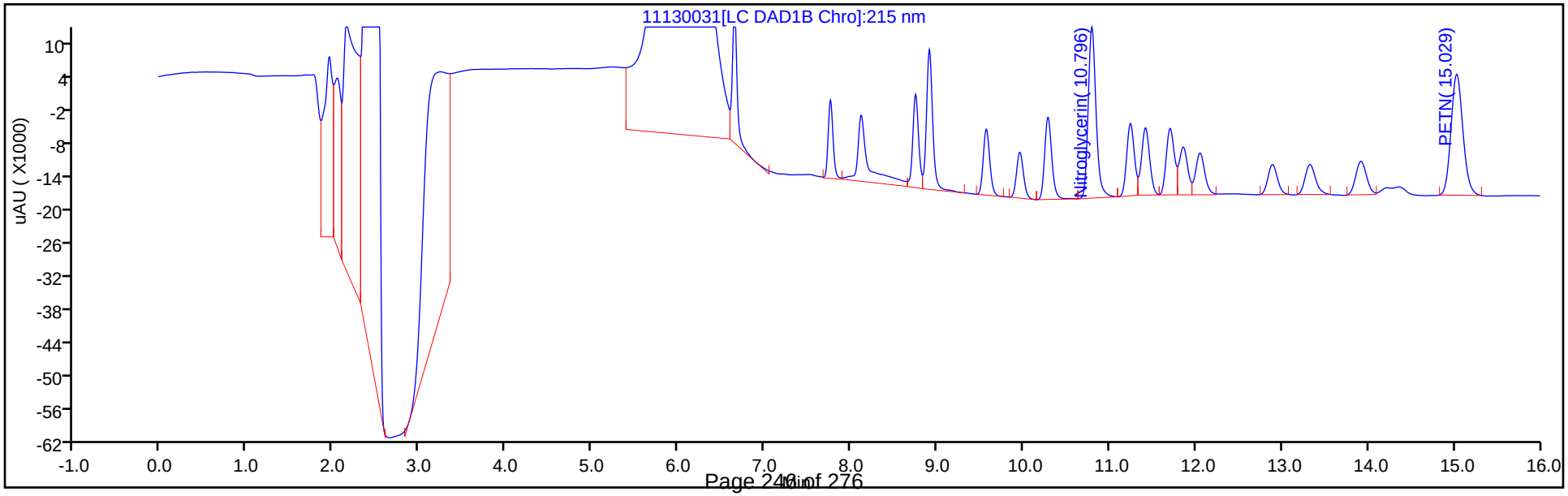
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130031.D

Injection Date:	13-Nov-2018 20:04:42	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	31
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/38 Calibration Date: 11/13/2018 22:45

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130038.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	97740		288	250	15.1	20.0
RDX	Ave	104577	118268		283	250	13.1	20.0
Picric acid	Ave	84340	94484		280	250	12.0	20.0
1,3,5-Trinitrobenzene	Ave	228408	258532		283	250	13.2	20.0
1,3-Dinitrobenzene	Ave	301023	330833		275	250	9.9	20.0
Nitrobenzene	Ave	198781	199601		252	251	0.4	20.0
Tetryl	Ave	163448	198752		304	250	21.6*	20.0
Nitroglycerin	Ave	67945	78717		2900	2500	15.9	20.0
2,4,6-Trinitrotoluene	Ave	214478	250813		294	251	16.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	175637		266	251	6.1	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	228479		287	251	14.5	20.0
2,6-Dinitrotoluene	Ave	153065	164491		269	251	7.5	20.0
2,4-Dinitrotoluene	Ave	298269	319158		268	251	7.0	20.0
2-Nitrotoluene	Ave	132225	136255		258	251	3.0	20.0
4-Nitrotoluene	Ave	113654	122299		270	251	7.6	20.0
3-Nitrotoluene	Ave	148110	142988		242	251	-3.5	20.0
PETN	Ave	74955	84703		2830	2500	13.0	20.0
1,2-Dinitrobenzene	Ave	128727	149624		291	250	16.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Lab Sample ID: CCV 280-437323/38 Calibration Date: 11/13/2018 22:45

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11130038.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.76	7.60	7.90
Picric acid	8.11	7.94	8.24
1,3,5-Trinitrobenzene	8.91	8.76	9.06
1,3-Dinitrobenzene	9.57	9.42	9.72
Nitrobenzene	9.95	9.81	10.11
Tetryl	10.28	10.14	10.44
Nitroglycerin	10.79	10.65	10.95
2,4,6-Trinitrotoluene	11.24	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.41	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.70	11.61	11.81
2,6-Dinitrotoluene	11.85	11.77	11.97
2,4-Dinitrotoluene	12.05	11.96	12.16
2-Nitrotoluene	12.89	12.76	13.06
4-Nitrotoluene	13.33	13.20	13.50
3-Nitrotoluene	13.92	13.80	14.10
PETN	15.03	14.93	15.23
1,2-Dinitrobenzene	8.75	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130038.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 22:45:30 ALS Bottle#: 7 Worklist Smp#: 38
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0076126-038
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:45 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.654	6.646	0.008	24435	0.2500	0.2877	
	5 RDX	1	7.761	7.752	0.009	29567	0.2500	0.2827	
	6 2,4,6-Trinitrophenol	1	8.114	8.092	0.022	23621	0.2500	0.2801	
$	7 1,2-Dinitrobenzene	1	8.748	8.746	0.002	37406	0.2500	0.2906	
	8 1,3,5-Trinitrobenzene	1	8.908	8.906	0.002	64633	0.2500	0.2830	
	9 1,3-Dinitrobenzene	1	9.567	9.566	0.001	82791	0.2503	0.2750	
	11 Nitrobenzene	1	9.954	9.959	-0.005	50000	0.2505	0.2515	
	12 Tetryl	1	10.281	10.286	-0.005	49688	0.2500	0.3040	
	13 Nitroglycerin	2	10.787	10.799	-0.012	196793	2.50	2.90	
	14 2,4,6-Trinitrotoluene	1	11.241	11.252	-0.011	62954	0.2510	0.2935	
	15 4-Amino-2,6-dinitrotoluene	1	11.414	11.426	-0.012	44041	0.2508	0.2661	
	16 2-Amino-4,6-dinitrotoluene	1	11.701	11.712	-0.011	57291	0.2508	0.2872	
	17 2,6-Dinitrotoluene	1	11.854	11.866	-0.012	41246	0.2508	0.2695	
	18 2,4-Dinitrotoluene	1	12.047	12.059	-0.012	79949	0.2505	0.2680	
	19 o-Nitrotoluene	1	12.887	12.912	-0.025	34166	0.2508	0.2584	
	20 p-Nitrotoluene	1	13.327	13.346	-0.019	30697	0.2510	0.2701	
	21 m-Nitrotoluene	1	13.921	13.952	-0.031	35890	0.2510	0.2423	
	22 PETN	2	15.027	15.079	-0.052	211757	2.50	2.83	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

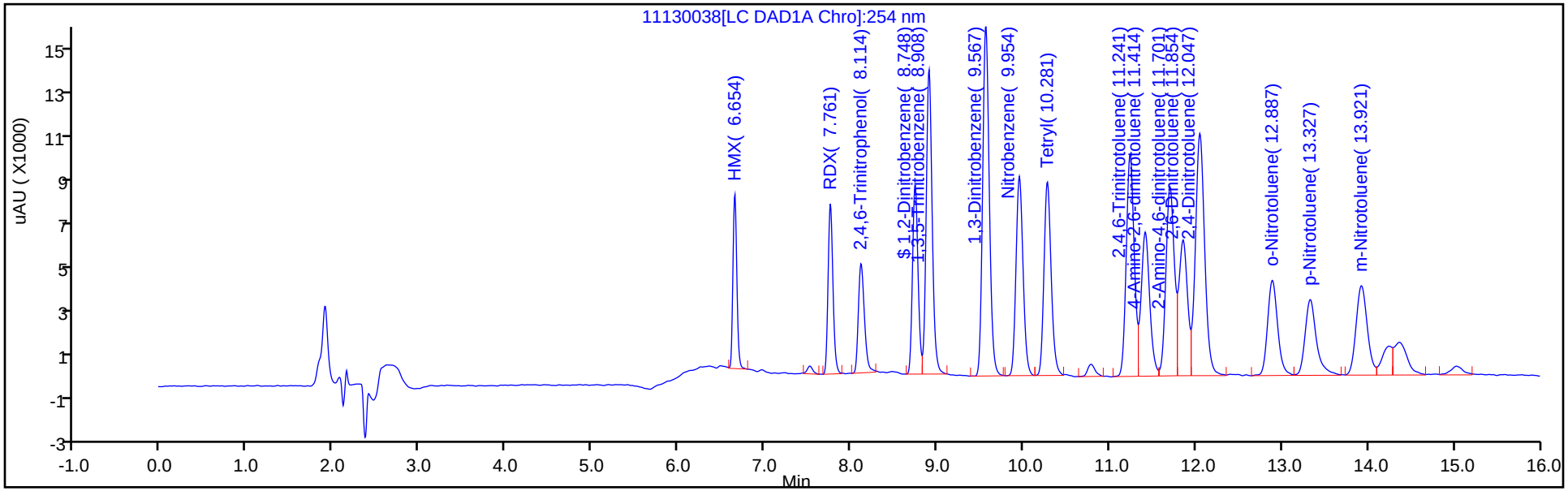
Report Date: 14-Nov-2018 08:04:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

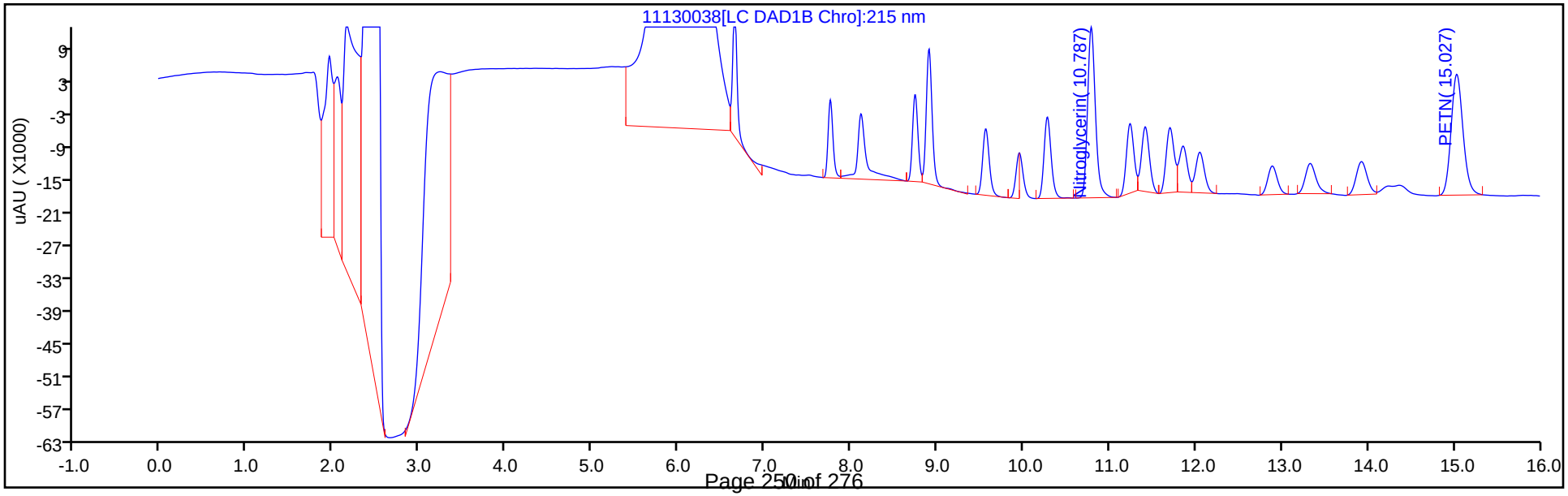
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130038.D

Injection Date:	13-Nov-2018 22:45:30	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	38
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 240-103914-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436978/1-A

Matrix: Water | Lab File ID: 11130009.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/09/2018 12:02

Sample wt/vol: 500(mL) | Date Analyzed: 11/13/2018 11:39

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.: 437323 | 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 M	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 M	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	101		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130009.D
Lims ID: MB 280-436978/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 11:39:37 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-436978/1-
Misc. Info.: 280-0076126-009
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

First Level Reviewer: fiedlerh Date: 13-Nov-2018 13:36:02

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		6.511				ND	
25 TNX	1		6.546				ND	
2 HMX	1		6.646				ND	
3 2,4-diamino-6-nitrotoluene	1		6.691				ND	
24 DNX	1		6.866				ND	
4 MNX	1		7.326				ND	
5 RDX	1		7.752				ND	
6 2,4,6-Trinitrophenol	1		8.092				ND	
$ 7 1,2-Dinitrobenzene	1	8.749	8.746	0.003	25916	0.2000	0.2013	
8 1,3,5-Trinitrobenzene	1		8.906				ND	
9 1,3-Dinitrobenzene	1		9.566				ND	
11 Nitrobenzene	1		9.959				ND	
10 3,5-Dinitroaniline	1		10.198				ND	
12 Tetryl	1		10.286				ND	
13 Nitroglycerin	2		10.799				ND	
14 2,4,6-Trinitrotoluene	1		11.252				ND	
15 4-Amino-2,6-dinitrotoluene	1		11.426				ND	
16 2-Amino-4,6-dinitrotoluene	1		11.712				ND	
17 2,6-Dinitrotoluene	1		11.866				ND	
18 2,4-Dinitrotoluene	1		12.059				ND	
19 o-Nitrotoluene	1		12.912				ND	U
20 p-Nitrotoluene	1		13.346				ND	U
21 m-Nitrotoluene	1		13.952				ND	
22 PETN	2		15.079				ND	
23 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

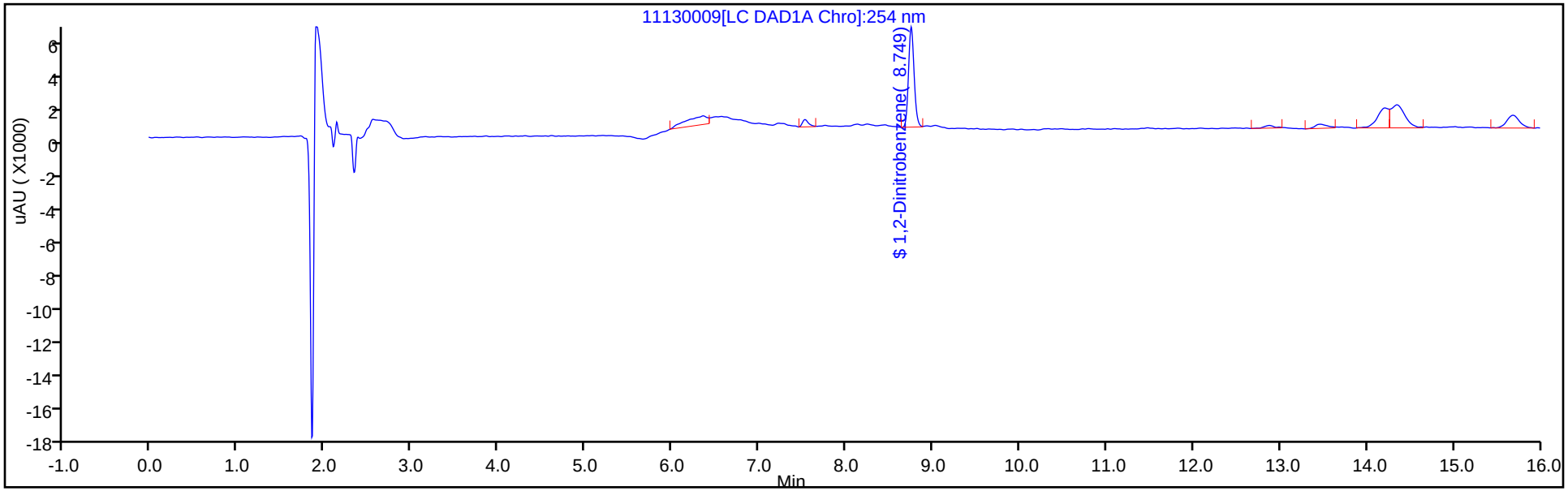
Report Date: 14-Nov-2018 08:04:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

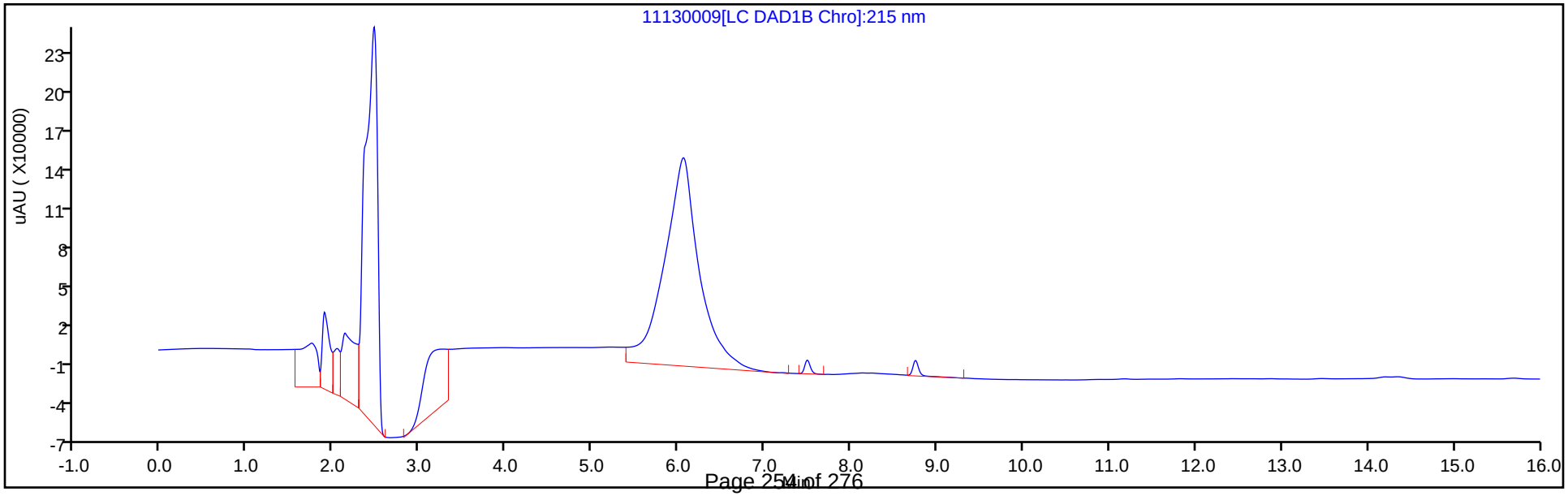
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130009.D

Injection Date:	13-Nov-2018 11:39:37	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	MB 280-436978/1-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130009.D				
Lims ID:	MB 280-436978/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	13-Nov-2018 11:39:37	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-436978/1-				
Misc. Info.:	280-0076126-009				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	14-Nov-2018 08:04:12	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0326				
First Level Reviewer: fiedlerh		Date:	13-Nov-2018 13:36:02		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2013	100.66

User Disabled Compound Report

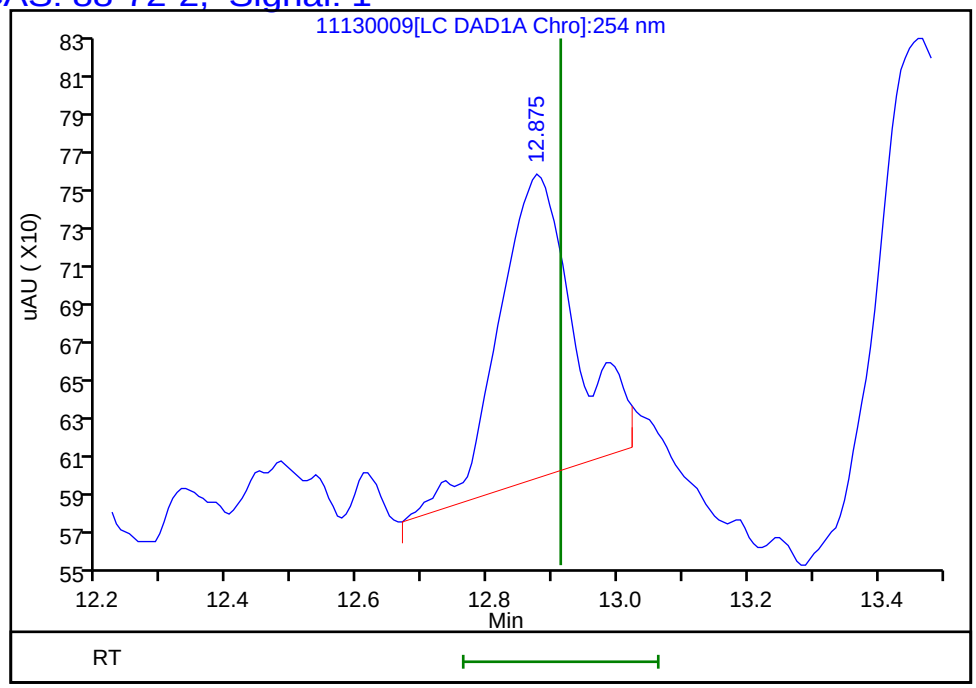
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130009.D
Injection Date: 13-Nov-2018 11:39:37 Instrument ID: CHHPLC_X3
Lims ID: MB 280-436978/1-A
Client ID:
Operator ID: hkf ALS Bottle#: 9 Worklist Smp#: 9
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

19 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 12.88
Response: 1253
Amount: 0.009476



Reviewer: fiedlerh, 13-Nov-2018 13:36:02
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

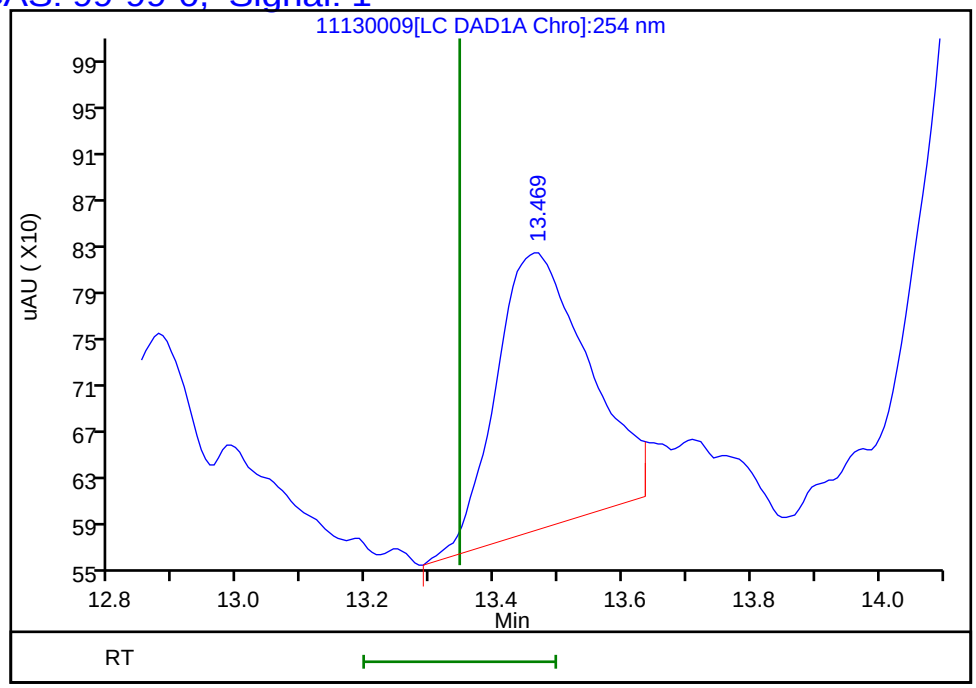
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130009.D
Injection Date: 13-Nov-2018 11:39:37 Instrument ID: CHHPLC_X3
Lims ID: MB 280-436978/1-A
Client ID:
Operator ID: hkf ALS Bottle#: 9 Worklist Smp#: 9
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

RT: 13.47
Response: 2390
Amount: 0.021029



Reviewer: fiedlerh, 13-Nov-2018 13:36:02
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 240-103914-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436978/2-A

Matrix: Water | Lab File ID: 11130010.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/09/2018 12:02

Sample wt/vol: 500(mL) | Date Analyzed: 11/13/2018 12:02

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.: 437323 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.23		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.16		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	2.08		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	2.07		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	2.06		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	2.03		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.98		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.89		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.87		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	2.13		1.0	0.40	0.20
2691-41-0	HMX	2.20		0.40	0.20	0.088
98-95-3	Nitrobenzene	2.09		0.40	0.20	0.091
55-63-0	Nitroglycerin	22.1		3.0	2.0	0.92
78-11-5	PETN	21.2		2.0	1.2	0.42
121-82-4	RDX	2.15		0.20	0.12	0.052
479-45-8	Tetryl	2.33		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\CHHPLC_X\20181113-76126.b\11130010.D
Lims ID: LCS 280-436978/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 12:02:37 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436978/2
Misc. Info.: 280-0076126-010
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

	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	6.646	0.009	18693	0.2000	0.2201	
	5 RDX	1	7.762	7.752	0.010	22531	0.2000	0.2154	
	6 2,4,6-Trinitrophenol	1	8.095	8.092	0.003	18289	0.2000	0.2168	
$	7 1,2-Dinitrobenzene	1	8.749	8.746	0.003	27279	0.2000	0.2119	
	8 1,3,5-Trinitrobenzene	1	8.909	8.906	0.003	51019	0.2000	0.2234	
	9 1,3-Dinitrobenzene	1	9.569	9.566	0.003	65124	0.2000	0.2163	
	11 Nitrobenzene	1	9.955	9.959	-0.004	41493	0.2000	0.2087	
	12 Tetryl	1	10.282	10.286	-0.004	38069	0.2000	0.2329	
	13 Nitroglycerin	2	10.795	10.799	-0.004	149939	2.00	2.21	
	14 2,4,6-Trinitrotoluene	1	11.242	11.252	-0.010	44581	0.2000	0.2079	
	15 4-Amino-2,6-dinitrotoluene	1	11.422	11.426	-0.004	30920	0.2000	0.1868	
	16 2-Amino-4,6-dinitrotoluene	1	11.709	11.712	-0.003	40527	0.2000	0.2032	
	17 2,6-Dinitrotoluene	1	11.855	11.866	-0.011	31493	0.2000	0.2057	
	18 2,4-Dinitrotoluene	1	12.055	12.059	-0.004	61715	0.2000	0.2069	
	19 o-Nitrotoluene	1	12.895	12.912	-0.017	26237	0.2000	0.1984	
	20 p-Nitrotoluene	1	13.329	13.346	-0.017	24255	0.2000	0.2134	
	21 m-Nitrotoluene	1	13.922	13.952	-0.030	28008	0.2000	0.1891	
	22 PETN	2	15.029	15.079	-0.050	158828	2.00	2.12	

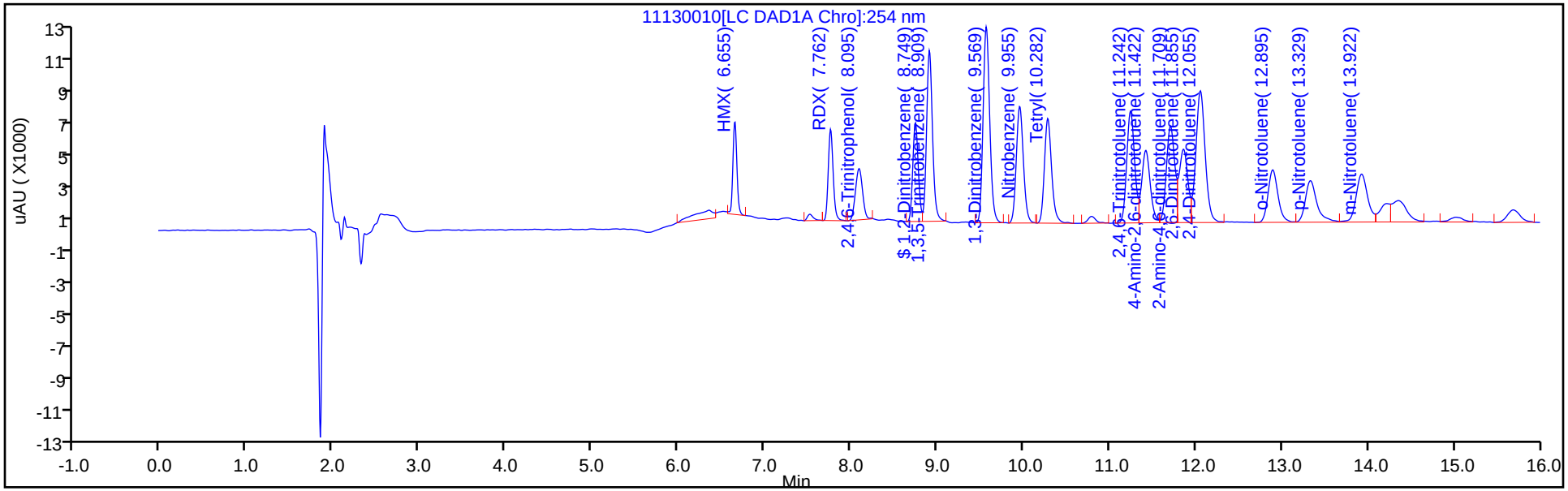
Report Date: 14-Nov-2018 08:04:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

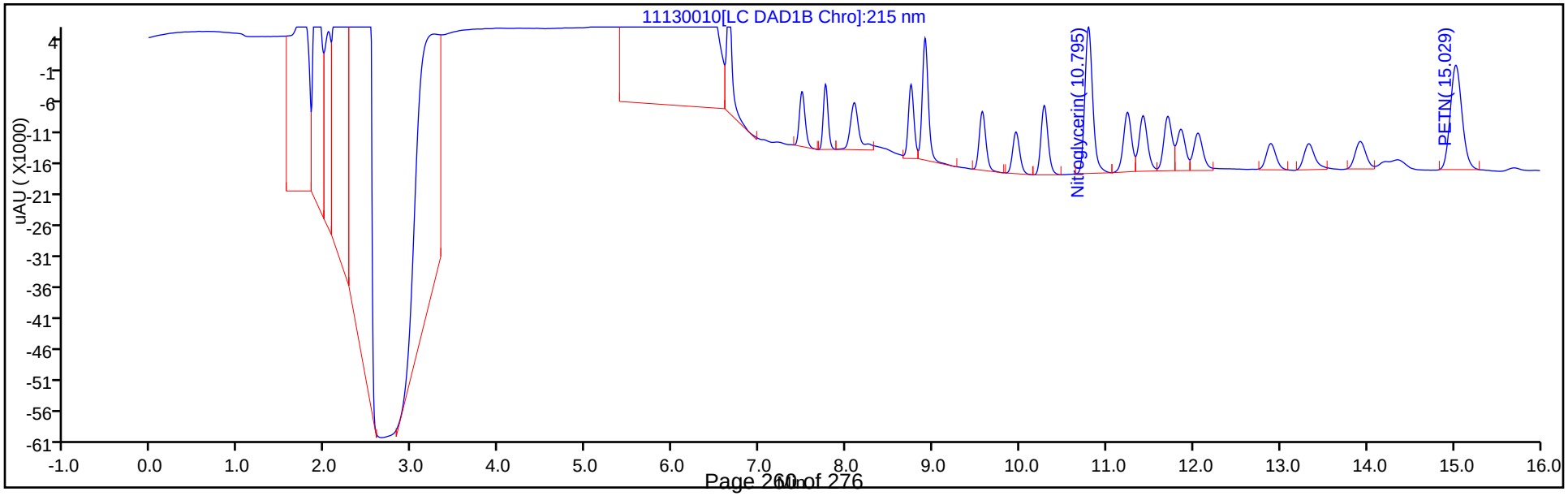
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130010.D

Injection Date:	13-Nov-2018 12:02:37	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCS 280-436978/2-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130010.D
Lims ID: LCS 280-436978/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 12:02:37 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436978/2
Misc. Info.: 280-0076126-010
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2119	105.96

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 240-103914-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436978/3-A

Matrix: Water | Lab File ID: 11130011.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/09/2018 12:02

Sample wt/vol: 500(mL) | Date Analyzed: 11/13/2018 12:25

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.: 437323 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.11		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.04		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	1.97		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	1.94		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	1.88		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.78		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.71		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	2.07		1.0	0.40	0.20
2691-41-0	HMX	2.09		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.94		0.40	0.20	0.091
55-63-0	Nitroglycerin	20.8		3.0	2.0	0.92
78-11-5	PETN	20.1		2.0	1.2	0.42
121-82-4	RDX	2.06		0.20	0.12	0.052
479-45-8	Tetryl	2.16		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130011.D
Lims ID: LCSD 280-436978/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 13-Nov-2018 12:25:37 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-436978/
Misc. Info.: 280-0076126-011
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

	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	6.646	0.009	17771	0.2000	0.2092	
	5 RDX	1	7.762	7.752	0.010	21584	0.2000	0.2064	
	6 2,4,6-Trinitrophenol	1	8.095	8.092	0.003	17691	0.2000	0.2098	
$	7 1,2-Dinitrobenzene	1	8.742	8.746	-0.004	26194	0.2000	0.2035	
	8 1,3,5-Trinitrobenzene	1	8.902	8.906	-0.004	48305	0.2000	0.2115	
	9 1,3-Dinitrobenzene	1	9.562	9.566	-0.004	61497	0.2000	0.2043	
	11 Nitrobenzene	1	9.948	9.959	-0.011	38574	0.2000	0.1941	
	12 Tetryl	1	10.268	10.286	-0.018	35294	0.2000	0.2159	
	13 Nitroglycerin	2	10.775	10.799	-0.024	141339	2.00	2.08	
	14 2,4,6-Trinitrotoluene	1	11.228	11.252	-0.024	42218	0.2000	0.1968	
	15 4-Amino-2,6-dinitrotoluene	1	11.395	11.426	-0.031	28309	0.2000	0.1711	
	16 2-Amino-4,6-dinitrotoluene	1	11.682	11.712	-0.030	37461	0.2000	0.1878	
	17 2,6-Dinitrotoluene	1	11.835	11.866	-0.031	30281	0.2000	0.1978	
	18 2,4-Dinitrotoluene	1	12.028	12.059	-0.031	57824	0.2000	0.1939	
	19 o-Nitrotoluene	1	12.875	12.912	-0.037	24798	0.2000	0.1875	
	20 p-Nitrotoluene	1	13.315	13.346	-0.031	23503	0.2000	0.2068	
	21 m-Nitrotoluene	1	13.915	13.952	-0.037	26328	0.2000	0.1778	
	22 PETN	2	15.015	15.079	-0.064	150689	2.00	2.01	

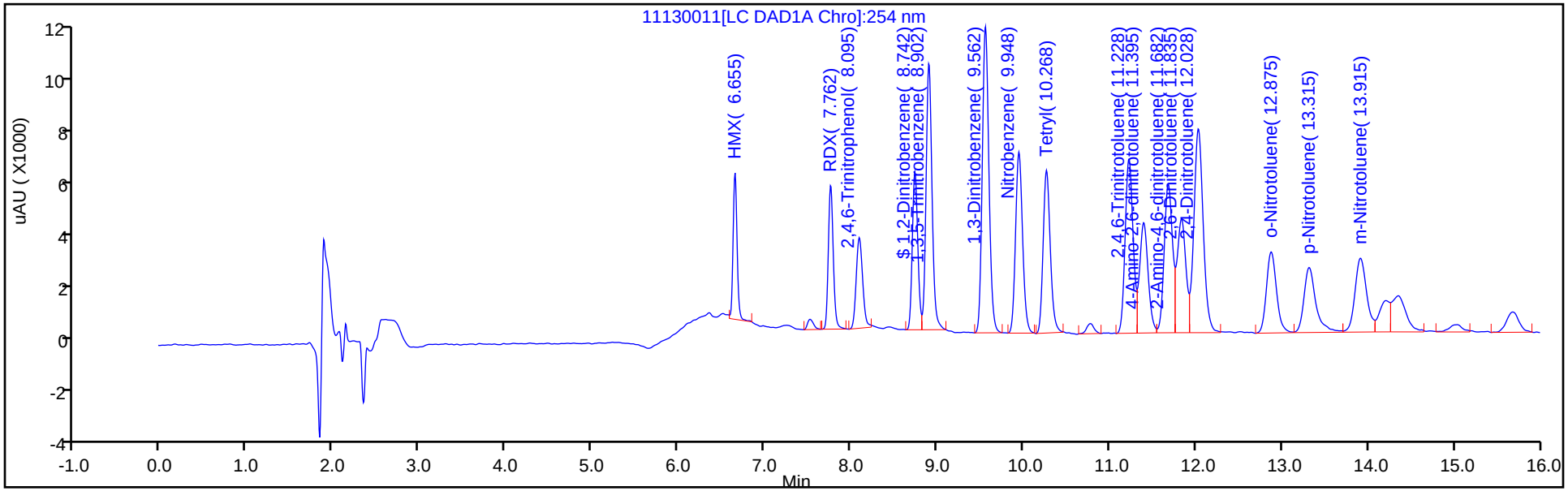
Report Date: 14-Nov-2018 08:04:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

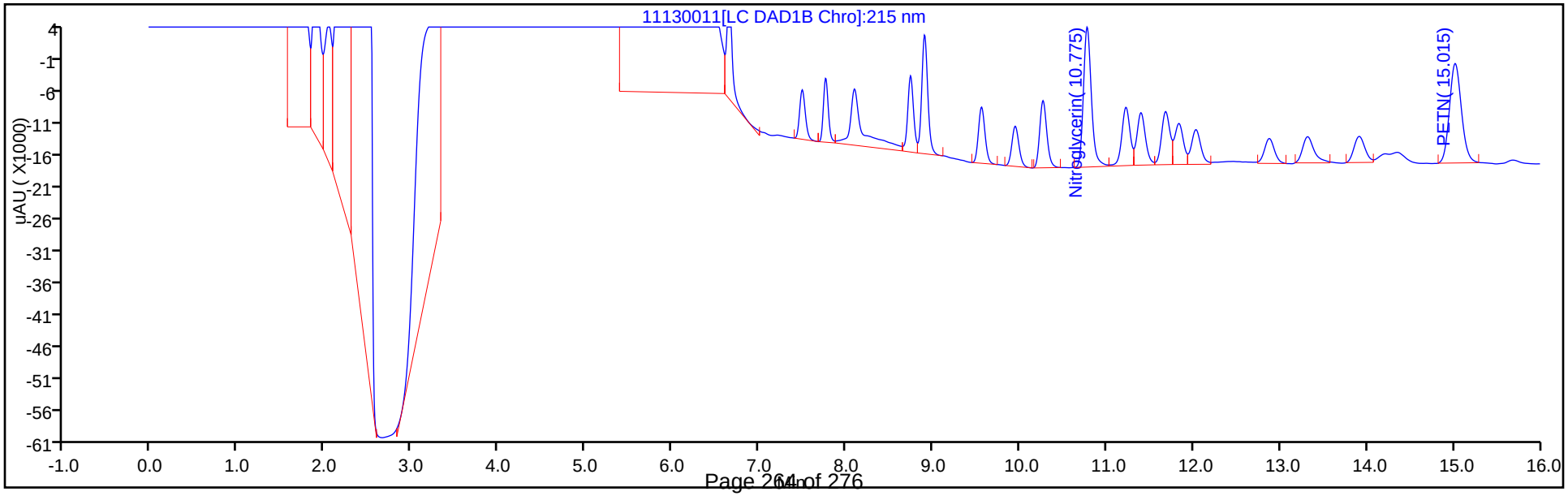
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130011.D

Injection Date:	13-Nov-2018 12:25:37	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCSD 280-436978/3-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\11130011.D
Lims ID: LCSD 280-436978/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 13-Nov-2018 12:25:37 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-436978/
Misc. Info.: 280-0076126-011
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181113-76126.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 14-Nov-2018 08:04:12 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0326

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2035	101.74

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/18/2018 10:34

Analysis Batch Number: 415256 End Date: 05/18/2018 18:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-415256/7		05/18/2018 10:34	1	05180007.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/8		05/18/2018 10:57	1	05180008.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/9		05/18/2018 11:19	1	05180009.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/10		05/18/2018 11:42	1	05180010.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/11		05/18/2018 12:05	1	05180011.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/12		05/18/2018 12:28	1	05180012.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/13		05/18/2018 12:51	1	05180013.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/14		05/18/2018 13:14	1	05180014.D	UltraCarb5uODS 4.6(mm)
ICV 280-415256/15		05/18/2018 13:37	1	05180015.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/16		05/18/2018 14:00	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/17		05/18/2018 14:23	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/18		05/18/2018 14:46	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/19		05/18/2018 15:09	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/20		05/18/2018 15:32	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/21		05/18/2018 15:55	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/22		05/18/2018 16:18	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/23		05/18/2018 16:41	1		UltraCarb5uODS 4.6(mm)
ICV 280-415256/24		05/18/2018 17:04	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:50	10		UltraCarb5uODS 4.6(mm)
CCV 280-415256/27		05/18/2018 18:13	1		UltraCarb5uODS 4.6(mm)
CCV 280-415256/28		05/18/2018 18:36	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 10/13/2018 16:23

Analysis Batch Number: 433312 End Date: 10/14/2018 07:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-433312/7		10/13/2018 16:23	1	10130007.D	Luna-phenylhex 4.6(mm)
IC 280-433312/8		10/13/2018 16:58	1	10130008.D	Luna-phenylhex 4.6(mm)
IC 280-433312/9		10/13/2018 17:33	1	10130009.D	Luna-phenylhex 4.6(mm)
IC 280-433312/10		10/13/2018 18:08	1	10130010.D	Luna-phenylhex 4.6(mm)
IC 280-433312/11		10/13/2018 18:43	1	10130011.D	Luna-phenylhex 4.6(mm)
IC 280-433312/12		10/13/2018 19:18	1	10130012.D	Luna-phenylhex 4.6(mm)
IC 280-433312/13		10/13/2018 19:53	1	10130013.D	Luna-phenylhex 4.6(mm)
IC 280-433312/14		10/13/2018 20:28	1	10130014.D	Luna-phenylhex 4.6(mm)
ICV 280-433312/15		10/13/2018 21:03	1	10130015.D	Luna-phenylhex 4.6(mm)
IC 280-433312/16		10/13/2018 21:38	1		Luna-phenylhex 4.6(mm)
IC 280-433312/17		10/13/2018 22:13	1		Luna-phenylhex 4.6(mm)
IC 280-433312/18		10/13/2018 22:48	1		Luna-phenylhex 4.6(mm)
IC 280-433312/19		10/13/2018 23:23	1		Luna-phenylhex 4.6(mm)
IC 280-433312/20		10/13/2018 23:58	1		Luna-phenylhex 4.6(mm)
IC 280-433312/21		10/14/2018 00:33	1		Luna-phenylhex 4.6(mm)
IC 280-433312/22		10/14/2018 01:08	1		Luna-phenylhex 4.6(mm)
IC 280-433312/23		10/14/2018 01:43	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 02:18	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 02:53	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 03:28	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 04:02	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 04:37	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 05:12	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 05:47	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 06:22	1		Luna-phenylhex 4.6(mm)
CCV 280-433312/32		10/14/2018 06:57	1		Luna-phenylhex 4.6(mm)
CCV 280-433312/33		10/14/2018 07:32	1		Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 11/13/2018 10:53

Analysis Batch Number: 437323 End Date: 11/13/2018 23:08

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-437323/7		11/13/2018 10:53	1	11130007.D	UltraCarb5uODS 4.6(mm)
CCV 280-437323/8		11/13/2018 11:16	1		UltraCarb5uODS 4.6(mm)
MB 280-436978/1-A		11/13/2018 11:39	1	11130009.D	UltraCarb5uODS 4.6(mm)
LCS 280-436978/2-A		11/13/2018 12:02	1	11130010.D	UltraCarb5uODS 4.6(mm)
LCSD 280-436978/3-A		11/13/2018 12:25	1	11130011.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 12:48	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 13:11	1		UltraCarb5uODS 4.6(mm)
240-103914-1		11/13/2018 13:34	1	11130014.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 13:57	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 14:20	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 14:43	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 15:06	1		UltraCarb5uODS 4.6(mm)
CCV 280-437323/19		11/13/2018 15:29	1	11130019.D	UltraCarb5uODS 4.6(mm)
CCV 280-437323/20		11/13/2018 15:52	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 16:15	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 16:38	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 17:01	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 17:24	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 17:46	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 18:09	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 18:32	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 18:55	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 19:18	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 19:41	1		UltraCarb5uODS 4.6(mm)
CCV 280-437323/31		11/13/2018 20:04	1	11130031.D	UltraCarb5uODS 4.6(mm)
CCV 280-437323/32		11/13/2018 20:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 20:50	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 21:13	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 21:36	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 21:59	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/13/2018 22:22	10		UltraCarb5uODS 4.6(mm)
CCV 280-437323/38		11/13/2018 22:45	1	11130038.D	UltraCarb5uODS 4.6(mm)
CCV 280-437323/39		11/13/2018 23:08	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 11/15/2018 16:16

Analysis Batch Number: 437787 End Date: 11/15/2018 19:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-437787/51		11/15/2018 16:16	1	11140051.D	Luna-phenylhex 4.6(mm)
240-103914-1		11/15/2018 16:51	1	052-4901.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/15/2018 17:26	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/15/2018 18:01	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/15/2018 18:35	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/15/2018 19:10	100		Luna-phenylhex 4.6(mm)
CCV 280-437787/57		11/15/2018 19:45	1		Luna-phenylhex 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 240-103914-1

SDG No.:

Batch Number: 436978 Batch Start Date: 11/09/18 12:02 Batch Analyst: Becker, Chad B

Batch Method: 3535 Batch End Date: 11/09/18 14:46

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00082	8330Surrogate 00100
MB 280-436978/1		3535, 8330B				500 mL	5 mL		0.1 mL
LCS 280-436978/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-436978/3		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
240-103914-A-1	LL7mw-006-181001 -GW	3535, 8330B	T	726.7 g	247.0 g	479.7 mL	5 mL		0.1 mL

Batch Notes	
Acid ID	0.1%AAinACN_00119
Acid Name	0.1%AAinACN
Balance ID	24350888
Batch Comment	N. Elga, CaCl_Sol_00062 Reviewer: MF
First End time	11/09/2018 13:46
Pipette/Syringe/Dispenser ID	JiJi, soot
Solvent Lot #	Acetonitrile_00018, MeCl2_Cycl_00412
Solvent Name	ACN, MeCl2
SPE Cartridge Lot ID	004838184A / 004938274A
SPE Cartridge Type	Porapak Rdx WAT047220
Solid Phase Extraction Disk ID	S18-003691
Analyst ID - Spike Analyst	CB
Analyst ID - Spike Witness Analyst	MF
First Start time	11/09/2018 12:26

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.

Subcontract Data

Shipping and Receiving Documents

1.6/2.5

Chain of Custody Record

leidos

COC No.: RVAAP-063-TA2

Page 1 of 1 Date: 11/06/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426

Sampler (Signature) (Printed Name) Roman Zoss

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Contact: Opal Johnson

Laboratory No.	Sample ID	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A) H amber R2 #1615	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	NO OF CONTAINERS	OBSERVATIONS, COMMENTS
	LL7mw-006-181001-GW	11/06/18	0920	W				2											2	

R2 11/09/18

240-103914 Chain of Custody

Relinquished by
Signature
Printed Name Roman Zoss
Company Leidos
Date 11/06/18
Time 1115

Relinquished by
Signature
Printed Name
Company
Date
Time

Notes:
Total Number of Containers: 2
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056
11. SW 6860
12. EPA 353.2
13. SW 7196

S=Soil / W=Water

Notes:

Shipment Method: Courier

Temperature Blank
Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 103914
Canton Facility

Client Leidos Site Name

Cooler unpacked by:

Cooler Received on 11/6/18 Opened on 11/6/18

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # 1 Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **+0.9** °C) Observed Cooler Temp. 1.6 °C Corrected Cooler Temp. 2.5 °C
   IR GUN #36 (CF **+0.6**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC850248**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No: 240-95427.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: donna.rydberg@testamericainc.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA		Job #: 240-103914-1
Address: 4955 Yarrow Street, .	Due Date Requested: 11/23/2018			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Leidos RFP# 001088 - Ravenna AAP-66	Project #: 28018729			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B_DOD5/3535 (MOD) Explosives	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
LL7mw-006-181001-GW (240-103914-1)	11/6/18	09:20 Eastern		Water			X	2	Q5.0

Note: Since laboratory accreditations are subject to change. TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	11-6			11/7/18 0900	TAOEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.8 to 0.7 f wntrd JAL

Ver: 09/20/2016

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 240-103914-1

Login Number: 103914
List Number: 2
Creator: Quint, Jessica A

List Source: TestAmerica Denver
List Creation: 11/07/18 03:17 PM

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.	False	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	