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NSWC INDIAN HEAD
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VALIDATED DATA PACKAGE, 76413, NSWC INDIAN HEAD MD
6/19/2015
APPL LABS

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Summary Report

June 19, 2015

Tetra Tech
5700 Lake Wright Drive, Suite 309
Norfolk, Virginia 23502

Attn: Ed Corack

Title: Report of Data: Case 76413

Project: CTO JU11 112G02622 NSF Indian Head, MD

Contract #: Prime contract # for DoD: Navy CLEAN. N62470-08-D-1001
Subcontract: MSA # 1045497, Work Release # 08-JU11

Dear Mr. Corack:

Four water samples were received May 13, 2015, in good condition. Written results for the requested analyses are provided on this June 19, 2015.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/rp
Enclosure
cc: File

Number of pages in this report: 74

Sample receipt information

ARF: 76413

Project: CTO JU11 112G02622 NSF Indian Head, MD

Sample Receipt Information:

The water samples were received on May 13, 2015, at 3.0C, 3.0C, and 3.0C. The samples were assigned Analytical Request Form (ARF) number 76413. The sample numbers and requested analyses were compared to the chain of custody. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
S67-MW007-051215	AZ16287	WATER	05/12/15	05/13/15
S67-MW003-051215	AZ16288	WATER	05/12/15	05/13/15
S67-MW002-051215	AZ16289	WATER	05/12/15	05/13/15
S67-MW009-051215	AZ16290	WATER	05/12/15	05/13/15

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

Laboratory control limits generated in house do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control limits generated for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation and Analysis Information:

The water samples were extracted according to EPA method 3510C. The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS. All holding times were met.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Method blanks

No target metal was detected above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered slightly below the 50% lower control limit for sample S67-MW007-051215. The 8270D-SIM extract also had similar 2-Fluorobiphenyl surrogate recovery for this sample. All other surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation and Analysis Information:

The water samples were extracted according to EPA method 3510C. The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS with selective ion monitoring. All holding times were met.

Manual integrations were performed in accordance to APPL's SOP. Naphthalene was manually integrated in the CCV (data file 0515L195). Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered below the 50% lower control limit in the method blank and sample S67-MW007-051215. The 8270D SVOC extract also had similar 2-Fluorobiphenyl surrogate recovery for this sample. All other surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

Dissolved Gasses
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector.

Manual integrations were performed in accordance with APPL's SOP. Methane was manually integrated in the calibration standards. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All target analytes recovered outside the 70-130% control limit.

Method blanks

No target compound was detected at or above one-half the PQL in the method blank.

Calibration

The initial and continuing calibrations were performed with guidance from RSK-175. All acceptance criteria were met.

Summary:

No analytical exception is noted. All data generated are acceptable.

EPA Method 6850

Perchlorate by LC-Mass Spec

Sample Preparation and Analysis Information:

The water samples were prepared according to the method. The samples were analyzed according to EPA Method 6850 using an Agilent 6460 Triple Quad LC/MS. The samples were prepared and analyzed within acceptable hold time.

Manual integrations were performed in accordance to APPL's SOP. Perchlorate was manually integrated in the calibration curve, the ICS and the LCS. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Calibrations:

Calibrations were performed according to the method. All calibration acceptance criteria were met. The second source met acceptance criteria.

Blanks:

Perchlorate was not detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

Laboratory Control Spike (LCS) and Interference Check Sample (I.C.S.) were used for quality assurance. All LCS acceptance criteria were met..

The Interference Check Sample (I.C.S.) was prepared using a mixed anions solution. The ICS recovery met acceptance criteria.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Internal Standards:

The area counts of the sample Internal Standards were compared to the average IS area counts of the initial calibration. All internal standards were within the 50%D acceptance criteria.

Summary:

All data were acceptable. No analytical exception is noted.

EPA Method 8330B
Energetics

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis:

The samples were analyzed according to EPA Method 8330B using an Agilent 1290 HPLC with DA detector. Manual integrations were performed in accordance with APPL's SOP. The following analytes were manually integrated in the calibration standards: HMX, Nitroglycerin, PETN, 1,2-Dinitrobenzene, 1,3- Dinitrobenzene, Nitrobenzene, 2,4,6-Trinitrotoluene, Tetryl, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, 2-Nitrotoluene, 4-Nitrotoluene, 3-Nitrotoluene, 4-Amino-2,6-Dinitrotoluene, 2-Amino-4,6-Dinitrotoluene and 3,5-Dinitroaniline. HMX was manually integrated in the samples. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance:

Spike Recovery:

A Laboratory Control Spike (LCS) was used for quality assurance. All spike acceptance criteria was met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All MS/MSD acceptance criteria were met.

Method blanks:

No target analyte was detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogates had acceptable recoveries.

Calibration:

The initial and continuing calibrations and second source were analyzed according to the method. All calibration criteria were met.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 6010C
Total and Dissolved Metals

Digestion and Analysis Information:

The water samples were digested according to EPA method 3010A. The samples were analyzed for total and dissolved metals according to EPA method 6010C using a Perkin Elmer Optima 5300DV. All holding times were met.

Quality Control/Assurance:

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

Laboratory Control Spike (LCS), Matrix Spikes (MS/MSD), and Post-Digestion Spike (PDS) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All MS/MSD and PDS acceptance criteria were met.

Summary:

No analytical problem was encountered. The data generated are acceptable.

Inorganic Analyses

EPA Method 300.0 and SW846 9060

Sample Preparation and Analysis

The samples were prepared and analyzed according to the methods. All holding times were met. The samples were analyzed for Anions according to EPA method 300.0 using a Dionex DX500. The samples were analyzed for TOC according to EPA method 9060 using a Tekmar Apollo 9000.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. Nitrite and total organic carbon recovered above the 110% upper control limit in the MS/MSD. The MS/MSDs were re0-analyzed with similar recoveries. All other spike recoveries were acceptable.

Method blanks

No target analyte was detected one-half the limit of quantitation (LOQ) in the method blank. The opening CCB bracketing only the LCS had a detection for sulfate above the LOQ. CCBs bracketing samples were non-detect for all analytes.

Calibration

Calibrations were performed according to the method for the initial calibration and the continuing calibration verification. The initial calibration verification is prepared from a second source standard. All calibration criteria were met.

Summary:

No other analytical exception was noted.

EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16287
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	74.4	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	47.7 #	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	34.3	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	49.7	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	22.5	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	98.9	50-135			%	5/18/2015	5/19/2015

= Recovery (or RPD) is outside QC limits.

Quant Method: Y0511TT.M
Run #: 0511Y116
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16288
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	75.0	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	50.8	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	29.2	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	51.8	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	23.3	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	79.5	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y117
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 5/12/2015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16289
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	79.5	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	56.5	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	40.5	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.7	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	27.6	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	85.7	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y118
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16290
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	81.3	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	55.0	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	41.8	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.4	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	30.4	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	78.4	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y119
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:20 AM
APPL-F1-SC-NoMC-REG MDLs

Method Blank
EPA 8270D WATER

Blank Name/QCG: **150518W-16287 - 197636**
Batch ID: #87DJU-150518A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
BLANK	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
BLANK	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
BLANK	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
BLANK	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
BLANK	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
BLANK	SURROGATE: 2,4,6-TRIBROMOP	120	40-125			%	5/18/2015	5/19/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	79.6	50-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: 2-FLUOROPHENO	47.5	20-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: NITROBENZENE-	81.1	40-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: PHENOL (S)	34.0	10-115			%	5/18/2015	5/19/2015
BLANK	SURROGATE: TERPHENYL-D14 (	119	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y108
Instrument: Yoda
Sequence: Y150511
Initials: DA

GC SC-Blank-REG MDLs
Printed: 6/3/2015 10:19:46 AM

Laboratory Control Spike Recovery

EPA 8270D WATER

APPL ID: **150518W-16287 LCS - 197636**
Batch ID: #87DJU-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BIS (2-ETHYLHEXYL) PHTHALATE	50.0	45.0	90.0	40-125
BUTYL BENZYL PHTHALATE	50.0	42.2	84.4	45-115
DI-N-BUTYL PHTHALATE	50.0	45.3	90.6	55-115
DI-N-OCTYL PHTHALATE	50.0	50.1	100	35-135
DIETHYL PHTHALATE	50.0	43.9	87.8	40-120
DIMETHYL PHTHALATE	50.0	44.1	88.2	25-125
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	193	96.5	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	75.9	75.9	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	118	59.0	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	78.9	78.9	40-110
SURROGATE: PHENOL (S)	200	84.1	42.0	10-115
SURROGATE: TERPHENYL-D14 (S)	100	95.4	95.4	50-135

Comments: _____

Primary	SPK
Quant Method :	Y0511TT.M
Extraction Date :	5/18/2015
Analysis Date :	5/19/2015
Instrument :	Yoda
Run :	0511Y109
Initials :	DA

Printed: 6/3/2015 10:19:37 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **150518W-16287 MS - 197636**
Batch ID: #87DJU-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BIS (2-ETHYLHEXYL) PHTHALATE	46.7	0.11	46.4	42.6	99.1	91.0	40-125	8.5	30
BUTYL BENZYL PHTHALATE	46.7	ND	43.5	41.4	93.1	88.7	45-115	4.9	30
DI-N-BUTYL PHTHALATE	46.7	ND	45.8	41.5	98.1	88.9	55-115	9.9	30
DI-N-OCTYL PHTHALATE	46.7	ND	51.0	47.2	109	101	35-135	7.7	30
DIETHYL PHTHALATE	46.7	ND	42.4	40.3	90.8	86.3	40-120	5.1	30
DIMETHYL PHTHALATE	46.7	0.29	44.6	39.0	94.9	82.9	25-125	13.4	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	187	NA	191	173	102	92.5	40-125		
SURROGATE: 2-FLUORBIPHENYL (S)	93.5	NA	71.6	67.1	76.6	71.8	50-110		
SURROGATE: 2-FLUOROPHENOL (S)	187	NA	95.0	92.7	50.8	49.6	20-110		
SURROGATE: NITROBENZENE-D5 (S)	93.5	NA	72.5	68.3	77.5	73.0	40-110		
SURROGATE: PHENOL (S)	187	NA	67.5	64.5	36.1	34.5	10-115		
SURROGATE: TERPHENYL-D14 (S)	93.5	NA	93.9	90.0	100	96.3	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0511TT.M	Y0511TT.M
Extraction Date :	5/18/2015	5/18/2015
Analysis Date :	5/19/2015	5/19/2015
Instrument :	Yoda	Yoda
Run :	0511Y114	0511Y115
Initials :	DA	

Printed: 6/3/2015 10:19:27 AM
APPL MSD SCII

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	40-125	120		50-110	79.6	
150518A-LCS	Lab Control Spike	40-125	96.5		50-110	75.9	
AZ16287-MS	Matrix Spike	40-125	102		50-110	76.6	
AZ16287-MSD	Matrix SpikeD	40-125	92.5		50-110	71.8	
AZ16287	S67-MW007-051215	40-125	74.4		50-110	47.7	#
AZ16288	S67-MW003-051215	40-125	75.0		50-110	50.8	
AZ16289	S67-MW002-051215	40-125	79.5		50-110	56.5	
AZ16290	S67-MW009-051215	40-125	81.3		50-110	55.0	

Comments: Batch: #87DJU-150518A

= Recovery outside of Control Limits on Sample.

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	20-110	47.5		40-110	81.1	
150518A-LCS	Lab Control Spike	20-110	59.0		40-110	78.9	
AZ16287-MS	Matrix Spike	20-110	50.8		40-110	77.5	
AZ16287-MSD	Matrix SpikeD	20-110	49.6		40-110	73.0	
AZ16287	S67-MW007-051215	20-110	34.3		40-110	49.7	
AZ16288	S67-MW003-051215	20-110	29.2		40-110	51.8	
AZ16289	S67-MW002-051215	20-110	40.5		40-110	58.7	
AZ16290	S67-MW009-051215	20-110	41.8		40-110	58.4	

Comments: Batch: #87DJU-150518A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	10-115	34.0		50-135	119	
150518A-LCS	Lab Control Spike	10-115	42.0		50-135	95.4	
AZ16287-MS	Matrix Spike	10-115	36.1		50-135	100	
AZ16287-MSD	Matrix SpikeD	10-115	34.5		50-135	96.3	
AZ16287	S67-MW007-051215	10-115	22.5		50-135	98.9	
AZ16288	S67-MW003-051215	10-115	23.3		50-135	79.5	
AZ16289	S67-MW002-051215	10-115	27.6		50-135	85.7	
AZ16290	S67-MW009-051215	10-115	30.4		50-135	78.4	

Comments: Batch: #87DJU-150518A

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

Blank ID: 150518A-BLK Time Analyzed: 1521

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150518A-BLK	Blank	0511Y108	5/19/2015 1521
150518A-LCS	Lab Control Spike	0511Y109	5/19/2015 1551
150518A-MS	Matrix Spike	0511Y114	5/19/2015 1819
150518A-MSD	Matrix SpikeD	0511Y115	5/19/2015 1849
AZ16287	S67-MW007-051215	0511Y116	5/19/2015 1919
AZ16288	S67-MW003-051215	0511Y117	5/19/2015 1948
AZ16289	S67-MW002-051215	0511Y118	5/19/2015 2018
AZ16290	S67-MW009-051215	0511Y119	5/19/2015 2048

Comments: Batch: #87DJU-150518A

Printed: 6/3/2015 10:19:23 AM

Form 4, Blank Summary

EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 76413

Sample ID: S67-MW007-051215

APPL ID: AZ16287

Sample Collection Date: 5/12/2015

QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.11 J	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.31	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.057 J	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.084 J	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.38	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.11 J	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	45.3 #	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	48.2	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	73.8	50-135			%	5/18/2015	5/27/2015

J = Estimated value.
# = Recovery (or RPD) is outside QC limits.

Quant Method: P0518-42.M
Run #: 0515L202
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

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APPL-F1-SC-NoMC-REG MDLs

EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16288
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	57.3	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	67.2	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	86.1	50-135			%	5/18/2015	5/27/2015

Quant Method: P0518-42.M
Run #: 0515L203
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

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APPL-F1-SC-NoMC-REG MDLs

EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16289
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	55.2	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	58.5	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	85.0	50-135			%	5/18/2015	5/27/2015

Quant Method: P0518-42.M
Run #: 0515L204
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

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APPL-F1-SC-NoMC-REG MDLs

EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16290
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	55.9	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	63.4	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	88.2	50-135			%	5/18/2015	5/27/2015

Quant Method: P0518-42.M
Run #: 0515L205
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 12:58:59 PM
APPL-F1-SC-NoMC-REG MDLs

Method Blank

EPA 8270D LL WATER DODv3

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **150518W-16287 - 197649**
Batch ID: #SIMDD-150518A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8 #	50-110			%	5/18/2015	5/27/2015
BLANK	SURROGATE: NITROBENZENE-	62.2	40-110			%	5/18/2015	5/27/2015
BLANK	SURROGATE: TERPHENYL-D14 (	85.4	50-135			%	5/18/2015	5/27/2015

= Recovery (or RPD) is outside QC limits.

Quant Method: P0518-42.M
Run #: 0515L196
Instrument: Linus
Sequence: L150515
Initials: DA

GC SC-Blank-REG MDLs
Printed: 6/3/2015 12:59:26 PM

Laboratory Control Spike Recovery

EPA 8270D LL WATER DODv3

APPL ID: **150518W-16287 LCS - 197649**
Batch ID: #SIMDD-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-METHYLNAPHTHALENE	5.00	3.17	63.4	45-105
ACENAPHTHENE	5.00	4.06	81.2	45-110
ACENAPHTHYLENE	5.00	3.64	72.8	50-105
ANTHRACENE	5.00	3.57	71.4	55-110
BENZ (A) ANTHRACENE	5.00	4.01	80.2	55-110
BENZO (A) PYRENE	5.00	4.09	81.8	55-110
BENZO (B) FLUORANTHENE	5.00	3.88	77.6	45-120
BENZO (G,H,I) PERYLENE	5.00	3.96	79.2	40-125
BENZO (K) FLUORANTHENE	5.00	4.36	87.2	45-125
CHRYSENE	5.00	4.46	89.2	55-110
DIBENZ (A,H) ANTHRACENE	5.00	4.05	81.0	40-125
FLUORANTHENE	5.00	3.75	75.0	55-115
FLUORENE	5.00	3.71	74.2	50-110
INDENO (1,2,3-CD) PYRENE	5.00	4.24	84.8	45-125
NAPHTHALENE	5.00	3.90	78.0	40-100
PHENANTHRENE	5.00	3.64	72.8	50-115
PYRENE	5.00	4.34	86.8	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.55	1.44	56.4	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.55	1.72	67.4	40-110
SURROGATE: TERPHENYL-D14 (S)	2.55	2.15	84.3	50-135

Comments: _____

Primary	SPK
Quant Method :	P0518-42.M
Extraction Date :	5/18/2015
Analysis Date :	5/27/2015
Instrument :	Linus
Run :	0515L197
Initials :	DA

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APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D LL WATER DODv3

APPL ID: **150518W-16287 MS - 197649**
Batch ID: #SIMDD-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-METHYLNAPHTHALENE	5.00	0.11	3.23	4.08	62.4	79.4	45-105	23.3	30
ACENAPHTHENE	5.00	ND	3.92	4.82	78.4	96.4	45-110	20.6	30
ACENAPHTHYLENE	5.00	0.31	3.60	4.35	65.8	80.8	50-105	18.9	30
ANTHRACENE	5.00	0.057	3.70	4.49	72.9	88.7	55-110	19.3	30
BENZ (A) ANTHRACENE	5.00	0.084	4.08	4.88	79.9	95.9	55-110	17.9	30
BENZO (A) PYRENE	5.00	ND	4.18	4.94	83.6	98.8	55-110	16.7	30
BENZO (B) FLUORANTHENE	5.00	ND	3.94	4.76	78.8	95.2	45-120	18.9	30
BENZO (G,H,I) PERYLENE	5.00	ND	4.04	4.77	80.8	95.4	40-125	16.6	30
BENZO (K) FLUORANTHENE	5.00	0.38	4.44	5.18	81.2	96.0	45-125	15.4	30
CHRYSENE	5.00	ND	4.49	5.20	89.8	104	55-110	14.7	30
DIBENZ (A,H) ANTHRACENE	5.00	ND	4.08	4.84	81.6	96.8	40-125	17.0	30
FLUORANTHENE	5.00	ND	3.85	4.54	77.0	90.8	55-115	16.4	30
FLUORENE	5.00	0.11	3.68	4.42	71.4	86.2	50-110	18.3	30
INDENO (1,2,3-CD) PYRENE	5.00	ND	4.28	5.02	85.6	100	45-125	15.9	30
NAPHTHALENE	5.00	ND	3.96	4.92	79.2	98.4	40-100	21.6	30
PHENANTHRENE	5.00	ND	3.79	4.34	75.8	86.8	50-115	13.5	30
PYRENE	5.00	0.053	4.41	5.20	87.1	103	50-130	16.4	30
SURROGATE: 2-FLUORBIPHENYL (S)	2.55	NA	1.50	1.58	58.8	61.9	50-110		
SURROGATE: NITROBENZENE-D5 (S)	2.55	NA	1.53	1.78	60.0	69.8	40-110		
SURROGATE: TERPHENYL-D14 (S)	2.55	NA	2.17	2.49	85.1	97.6	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	P0518-42.M	P0518-42.M
Extraction Date :	5/18/2015	5/18/2015
Analysis Date :	5/27/2015	5/27/2015
Instrument :	Linus	Linus
Run :	0515L200	0515L201
Initials :	DA	

Printed: 6/3/2015 12:59:08 PM
APPL MSD SCII

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/27/2015

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	50-110	47.8	#	40-110	62.2	
150518A-LCS	Lab Control Spike	50-110	56.4		40-110	67.4	
AZ16287-MS	Matrix Spike	50-110	58.8		40-110	60.0	
AZ16287-MSD	Matrix SpikeD	50-110	61.9		40-110	69.8	
AZ16287	S67-MW007-051215	50-110	45.3	#	40-110	48.2	
AZ16288	S67-MW003-051215	50-110	57.3		40-110	67.2	
AZ16289	S67-MW002-051215	50-110	55.2		40-110	58.5	
AZ16290	S67-MW009-051215	50-110	55.9		40-110	63.4	

Comments: Batch: #SIMDD-150518A

= Recovery outside of Control Limits on Sample.

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/27/2015

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	50-135	85.4				
150518A-LCS	Lab Control Spike	50-135	84.3				
AZ16287-MS	Matrix Spike	50-135	85.1				
AZ16287-MSD	Matrix SpikeD	50-135	97.6				
AZ16287	S67-MW007-051215	50-135	73.8				
AZ16288	S67-MW003-051215	50-135	86.1				
AZ16289	S67-MW002-051215	50-135	85.0				
AZ16290	S67-MW009-051215	50-135	88.2				

Comments: Batch: #SIMDD-150518A

8270D-LL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/27/2015

Matrix: WATER Instrument: Linus

Blank ID: 150518A-BLK Time Analyzed: 0219

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150518A-BLK	Blank	0515L196	5/27/2015 0219
150518A-LCS	Lab Control Spike	0515L197	5/27/2015 0245
150518A-MS	Matrix Spike	0515L200	5/27/2015 0402
150518A-MSD	Matrix SpikeD	0515L201	5/27/2015 0428
AZ16287	S67-MW007-051215	0515L202	5/27/2015 0453
AZ16288	S67-MW003-051215	0515L203	5/27/2015 0519
AZ16289	S67-MW002-051215	0515L204	5/27/2015 0545
AZ16290	S67-MW009-051215	0515L205	5/27/2015 0610

Comments: Batch: #SIMDD-150518A

RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 76413

Sample ID: S67-MW007-051215

APPL ID: AZ16287

Sample Collection Date: 05/12/15

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	36	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F009
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	SD

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APPL-F1-SC-NoMC-REG MDLs

RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW003-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16288

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	5.2	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F010
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	RSA

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APPL-F1-SC-NoMC-REG MDLs

RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW002-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16289

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	11	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F011
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	SD

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APPL-F1-SC-NoMC-REG MDLs

RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 76413

Sample ID: S67-MW009-051215

APPL ID: AZ16290

Sample Collection Date: 05/12/15

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	13	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F012
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	RSA

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APPL-F1-SC-NoMC-REG MDLs

Method Blank
RSK 175

Blank Name/QCG: **150520W-16287 - 197488**
Batch ID: #RSK-150520A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
BLANK	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
BLANK	METHANE	0.45 U	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method: 402RSK.M
Run #: 0520F006
Instrument: Frodo
Sequence: 150520
Initials: RSA

GC SC-Blank-REG MDLs
Printed: 06/02/15 3:53:36 PM

Laboratory Control Spike Recovery

RSK 175

APPL ID: **150520W-16287 LCS - 197488**
Batch ID: #RSK-150520A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
ETHANE	25.0	21.6	86.4	70-130
ETHENE	23.3	19.3	82.8	70-130
METHANE	13.3	15.6	117	70-130

Comments: _____

Primary	SPK
Quant Method :	402RSK.M
Extraction Date :	05/20/15
Analysis Date :	05/20/15
Instrument :	Frodo
Run :	0520F005
Initials :	SD

Printed: 06/02/15 3:43:22 PM
APPL Standard LCS

Matrix Spike Recoveries

RSK 175

APPL ID: **150520W-16287 MS - 197488**
Batch ID: #RSK-150520A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
ETHANE	25.0	ND	16.4	14.8	65.6 #	59.2 #	70-130	10.3	30
ETHENE	23.3	ND	14.9	13.8	63.9 #	59.2 #	70-130	7.7	30
METHANE	13.3	36	57.3	36.1	160 #	0.8 #	70-130	45.4 #	30

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	402RSK.M	402RSK.M
Extraction Date :	05/20/15	05/20/15
Analysis Date :	05/20/15	05/20/15
Instrument :	Frodo	Frodo
Run :	0520F014	0520F016
Initials :	SD	

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APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/20/15

Matrix: WATER Instrument: Frodo

Blank ID: 150520A-BLK Time Analyzed: 1132

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150520A-LCS	Lab Control Spike	0520F005	05/20/15 1115
150520A-BLK	Blank	0520F006	05/20/15 1132
AZ16287	S67-MW007-051215	0520F009	05/20/15 1148
AZ16288	S67-MW003-051215	0520F010	05/20/15 1152
AZ16289	S67-MW002-051215	0520F011	05/20/15 1157
AZ16290	S67-MW009-051215	0520F012	05/20/15 1202
150520A-MS	Matrix Spike	0520F014	05/20/15 1216
150520A-MSD	Matrix SpikeD	0520F016	05/20/15 1558

Comments: Batch: #RSK-150520A

Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16287
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	0.400 U	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

Quant Method:	QTLMFL2
Run #:	T523_022.d
Instrument:	AGIL_6460
Sequence:	TQ052315
Dilution Factor:	1
Initials:	RP

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APPL-F1-SC-NoMC-REG MDLs

Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16288
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	160	60	40.0	20.0	ug/L	05/18/15	05/24/15

Quant Method:	QTLMFL2
Run #:	T524_014.d
Instrument:	AGIL_6460
Sequence:	TQ052415
Dilution Factor:	100
Initials:	RP

Printed: 06/19/15 2:34:35 PM
APPL-F1-SC-NoMC-REG MDLs

Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16289
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	0.59 J	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

J = Estimated value.

Quant Method:	QTLMFL2
Run #:	T523_026.d
Instrument:	AGIL_6460
Sequence:	TQ052315
Dilution Factor:	1
Initials:	RP

Printed: 06/19/15 2:34:35 PM
APPL-F1-SC-NoMC-REG MDLs

Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 76413

Sample ID: S67-MW009-051215

APPL ID: AZ16290

Sample Collection Date: 05/12/15

QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	290	60	40.0	20.0	ug/L	05/18/15	05/24/15

Quant Method:	QTLMFL2
Run #:	T524_019.d
Instrument:	AGIL_6460
Sequence:	TQ052415
Dilution Factor:	100
Initials:	RP

Printed: 06/19/15 2:34:35 PM

APPL-F1-SC-NoMC-REG MDLs

Method Blank
Perchlorate

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **150518W-16287 - 198054**
Batch ID: #6850-150518A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PERCHLORATE	0.400 U	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

Quant Method: QTLMFL2
Run #: T523_021.d
Instrument: AGIL_6460
Sequence: TQ052315
Initials: RP

GC SC-Blank-REG MDLs
Printed: 06/19/15 2:34:38 PM

Laboratory Control Spike Recovery
Perchlorate

APPL ID: **150518W-16287 LCS - 198054**
Batch ID: #6850-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PERCHLORATE	0.600	0.567	94.5	80-120

Comments: _____

Primary	SPK
Quant Method :	QTLMFL2
Extraction Date :	05/18/15
Analysis Date :	05/23/15
Instrument :	AGIL_6460
Run :	T523_019.d
Initials :	RP

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APPL Standard LCS

Matrix Spike Recoveries

Perchlorate

APPL ID: **150518W-16287 MS - 198054**
Batch ID: #6850-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PERCHLORATE	0.600	ND	0.639	0.657	107	110	80-120	2.8	15

Comments: _____

Primary	SPK	DUP
Quant Method :	QTLMFL2	QTLMFL2
Extraction Date :	05/18/15	05/18/15
Analysis Date :	05/23/15	05/23/15
Instrument :	AGIL_6460	AGIL_6460
Run :	T523_023.d	T523_024.d
Initials :	RP	

Printed: 06/19/15 2:34:42 PM
APPL MSD SCII

EPA 6850

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/23/15

Matrix: WATER Instrument: AGIL_6460

Blank ID: 150518A-BLK Time Analyzed: 2146

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150518A-LCS	Lab Control Spike	T523_019.d	05/23/15 2109
150518A-BLK	Blank	T523_021.d	05/23/15 2146
AZ16287	S67-MW007-051215	T523_022.d	05/23/15 2205
150518A-MS	Matrix Spike	T523_023.d	05/23/15 2224
150518A-MSD	Matrix SpikeD	T523_024.d	05/23/15 2242
AZ16289	S67-MW002-051215	T523_026.d	05/23/15 2320
AZ16288	S67-MW003-051215	T524_014.d	05/24/15 1805
AZ16290	S67-MW009-051215	T524_019.d	05/24/15 1938

Comments: Batch: #6850-150518A

EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16287
QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	89.6	70-130			%	05/15/15	05/18/15

Quant Method:	W150517.M
Run #:	0517_000036
Instrument:	Waldorf
Sequence:	150517
Dilution Factor:	1
Initials:	MP

Printed: 05/19/15 7:25:54 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16288
QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	85.0	70-130			%	05/15/15	05/18/15

Quant Method:	W150517.M
Run #:	0517_000037
Instrument:	Waldorf
Sequence:	150517
Dilution Factor:	1
Initials:	MP

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APPL-F1-SC-NoMC-REG MDLs

EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: **AZ16289**
QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	89.2	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000038
Instrument: Waldorf
Sequence: 150517
Dilution Factor: 1
Initials: MP

Printed: 05/19/15 7:25:54 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: **AZ16290**
QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	89.1	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000039
Instrument: Waldorf
Sequence: 150517
Dilution Factor: 1
Initials: MP

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APPL-F1-SC-NoMC-REG MDLs

Method Blank
EPA 8330B WATER

Blank Name/QCG: **150515W-16287 - 197118**
Batch ID: #83BJU-150515A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
BLANK	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
BLANK	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
BLANK	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
BLANK	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
BLANK	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
BLANK	SURROGATE: 1,2-DINITROBENZ	86.2	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_00003
Instrument: Waldorf
Sequence: 150517
Initials: MP

GC SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

EPA 8330B WATER

APPL ID: **150515W-16287 LCS - 197118**
Batch ID: #83BJU-150515A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2,4-DINITROTOLUENE	8.00	7.14	89.3	60-135
2,6-DINITROTOLUENE	8.00	7.12	89.0	60-135
HMX	8.00	7.74	96.8	80-115
NITROGLYCERIN	8.00	7.43	92.9	70-130
RDX	8.00	7.16	89.5	50-160
TETRYL	8.00	7.43	92.9	20-175
SURROGATE: 1,2-DINITROBENZENE (S	8.00	7.22	90.3	70-130

Comments: _____

Primary	SPK
Quant Method :	W150517.M
Extraction Date :	05/15/15
Analysis Date :	05/18/15
Instrument :	Waldorf
Run :	0517_000030
Initials :	MP

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APPL Standard LCS

Matrix Spike Recoveries

EPA 8330B WATER

APPL ID: **150515W-16287 MS - 197118**
Batch ID: #83BJU-150515A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4-DINITROTOLUENE	8.00	ND	7.08	7.10	88.5	88.8	60-135	0.28	20
2,6-DINITROTOLUENE	8.00	ND	7.11	7.12	88.9	89.0	60-135	0.14	20
HMX	8.00	ND	7.72	8.05	96.5	101	80-115	4.2	20
NITROGLYCERIN	8.00	ND	7.72	7.64	96.5	95.5	70-130	1.0	20
RDX	8.00	ND	7.20	7.06	90.0	88.3	50-160	2.0	20
TETRYL	8.00	ND	7.59	7.51	94.9	93.9	20-175	1.1	20
SURROGATE: 1,2-DINITROBENZENE (S	8.00	NA	7.14	7.14	89.3	89.3	70-130		

Comments:

Primary	SPK	DUP
Quant Method :	W150517.M	W150517.M
Extraction Date :	05/15/15	05/15/15
Analysis Date :	05/18/15	05/18/15
Instrument :	Waldorf	Waldorf
Run :	0517_000031	0517_000032
Initials :	MP	

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APPL MSD SCII

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/18/15

Matrix: WATER Instrument: Waldorf

APPL ID.	Client Sample No.	SURROGATE: 1,2-DINITROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
150515A-LCS	Lab Control Spike	70-130	90.3				
AZ16287-MS	Matrix Spike	70-130	89.3				
AZ16287-MSD	Matrix SpikeD	70-130	89.3				
150515A-BLK	Blank	70-130	86.2				
AZ16287	S67-MW007-051215	70-130	89.6				
AZ16288	S67-MW003-051215	70-130	85.0				
AZ16289	S67-MW002-051215	70-130	89.2				
AZ16290	S67-MW009-051215	70-130	89.1				

Comments: Batch: #83BJU-150515A

EPA 8330B

Form 4

Blank Summary

Lab Name: APPL, Inc.. SDG No: 76413

Case No: 76413 Date Analyzed: 05/18/15

Matrix: WATER Instrument: Waldorf

Blank ID: 150515A-BLK Time Analyzed: 0638

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150515A-LCS	Lab Control Spike	0517_000030	05/18/15 0446
150515A-MS	Matrix Spike	0517_000031	05/18/15 0523
150515A-MSD	Matrix SpikeD	0517_000032	05/18/15 0601
150515A-BLK	Blank	0517_000033	05/18/15 0638
AZ16287	S67-MW007-051215	0517_000036	05/18/15 0831
AZ16288	S67-MW003-051215	0517_000037	05/18/15 0909
AZ16289	S67-MW002-051215	0517_000038	05/18/15 0946
AZ16290	S67-MW009-051215	0517_000039	05/18/15 1024

Comments: Batch: #83BJU-150515A

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16287

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	28.7J	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	77.5	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	0.82J	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	20.00U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	80.00U	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	75.9	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	0.70J	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	20.00U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16288

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	443	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	73.5	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	11.4	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	774	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	370	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	76.2	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	10.9	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	759	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16289

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	80.00U	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	53.4	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	11.1	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	20.00U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	82.0J	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	54.9	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	11.6	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	20.00U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16290

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	115J	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	224	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	3.2	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	20.00U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	80.00U	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	228	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	4.9	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	18.3J	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	80.00 U	300.0	80.00	27.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	BORON (B)	40.00 U	50.0	40.00	29.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	LITHIUM (LI)	0.80 U	1.0	0.80	0.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	ZINC (ZN)	20.00 U	150.0	20.00	13.70	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	ALUMINUM (AL) (DI	80.00 U	300.0	80.00	27.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	BORON (B) (DISSOL	40.00 U	50.0	40.00	29.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	LITHIUM (LI) (DISSO	0.80 U	1.0	0.80	0.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	ZINC (ZN) (DISSOLV	20.00 U	150.0	20.00	13.70	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287

Metals SC-Blank-REG MDLs
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Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL) (DISSOLVED)	2000	1840	92.0	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	BORON (B) (DISSOLVED)	250	239	95.6	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	LITHIUM (LI) (DISSOLVED)	100.0	92.7	92.7	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	ZINC (ZN) (DISSOLVED)	500	468	93.6	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	ALUMINUM (AL)	2000	2020	101	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	BORON (B)	250	246	98.4	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	LITHIUM (LI)	100.0	94.5	94.5	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	ZINC (ZN)	500	480	96.0	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **150526W-16287 MS - 198124**

Sample ID: AZ16287

Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL) (DISS	2000	ND	2140	2140	107	107	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	BORON (B) (DISSOLV	250	75.9	343	343	107	107	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	LITHIUM (LI) (DISSOLV	100.0	0.70	110	110	109	109	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	ZINC (ZN) (DISSOLVE	500	ND	510	506	102	101	0.8	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	ALUMINUM (AL)	2000	28.7	2120	2160	105	107	1.9	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	BORON (B)	250	77.5	345	347	107	108	0.6	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	LITHIUM (LI)	100.0	0.82	110	109	109	108	0.9	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	ZINC (ZN)	500	ND	512	517	102	103	1.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287

Comments: _____

6010C/3010A^

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 06/04/15

Matrix: WATER Instrument: Jules

Blank ID: 150526A2-BLK Time Analyzed: 1700

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150526A2-MSD	Matrix SpikeD	150611A	06/11/15 1450
AZ16288	S67-MW003-051215	150611A	06/11/15 1457
AZ16289	S67-MW002-051215	150611A	06/11/15 1502
AZ16290	S67-MW009-051215	150611A	06/11/15 1510
150526A2-BLK	Blank	150611A	06/04/15 1700
150526A2-LCS	Lab Control Spike	150611A	06/04/15 1707
AZ16287	S67-MW007-051215	150611A	06/11/15 1436
150526A2-MS	Matrix Spike	150611A	06/11/15 1443

Comments: Batch: #61CJU-150526A2

Printed: 06/18/15 4:13:20 PM
Form 4, Blank Summary

6010C/3010A^

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 06/04/15

Matrix: WATER Instrument: Jules

Blank ID: 150526A3-BLK Time Analyzed: 1712

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150526A3-MSD	Matrix SpikeD	150611A	06/11/15 1552
AZ16288	S67-MW003-051215	150611A	06/11/15 1559
AZ16289	S67-MW002-051215	150611A	06/11/15 1604
AZ16290	S67-MW009-051215	150611A	06/11/15 1612
150526A3-BLK	Blank	150611A	06/04/15 1712
150526A3-LCS	Lab Control Spike	150611A	06/04/15 1719
150526A3-MS	Matrix Spike	150611A	06/11/15 1544
AZ16287	S67-MW007-051215	150611A	06/11/15 1537

Comments: Batch: #61CJU-150526A3

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW007-051215

APPL ID: AZ16287

Sample Collection Date: 05/12/15

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date Analysis Date
EPA 300.0	CHLORIDE	65.1	2.0	0.40	0.16	mg/L	2	05/13/15 05/13/15
EPA 300.0	NITRATE	2.2	0.5	0.18	0.04	mg/L	1	05/13/15 05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15 05/13/15
EPA 300.0	SULFATE	6.6	1.0	0.20	0.09	mg/L	1	05/13/15 05/13/15
SW846 9060	TOTAL ORGANIC CARBON	0.76	0.5	0.35	0.13	mg/L	1	05/19/15 05/19/15

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW003-051215

Sample Collection Date: 05/12/15

APPL ID: AZ16288

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	SULFATE	146	5.0	1.00	0.45	mg/L	5	05/13/15	05/13/15
EPA 300.0	CHLORIDE	4.4	1.0	0.20	0.08	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRATE	5.4	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	3.7	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW002-051215

APPL ID: AZ16289

Sample Collection Date: 05/12/15

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	1.5	1.0	0.20	0.08	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRATE	1.8	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
EPA 300.0	SULFATE	22.3	1.0	0.20	0.09	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	4.6	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

Printed: 06/10/15 1:06:32 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW009-051215

Sample Collection Date: 05/12/15

APPL ID: AZ16290

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	SULFATE	58.1	2.0	0.40	0.18	mg/L	2	05/13/15	05/13/15
EPA 300.0	CHLORIDE	134	5.0	1.00	0.40	mg/L	5	05/13/15	05/13/15
EPA 300.0	NITRATE	1.2	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	1.4	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

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APPL-F1-SC-NoMC-REG MDLs

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	SULFATE	1.1	1.0	0.20	0.09	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	05/13/15	05/13/15	#300WD-150513B-AZ16287
SW846 90	TOTAL ORGANIC C	0.35 U	0.5	0.35	0.13	mg/L	05/19/15	05/19/15	#906-150519A-AZ16287

Wetlab SC-Blank-REG MDLs
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Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	SULFATE	20.0	19.3	96.5	90-110	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRATE	22.1	22.0	99.5	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRITE	9.98	9.47	94.9	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	SULFATE	20.0	19.1	95.5	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
SW846 906	TOTAL ORGANIC CARBON	10.00	10.8	108	90-110	05/19/15	05/19/15	#906-150519A-AZ16287

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **150513W-16287 MS - 197256**

Sample ID: AZ16287

Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	CHLORIDE	40	65.1	107	107	105	105	0.0	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197256	AZ16287
EPA 300.0	NITRATE	22.1	2.2	22.6	23.8	92.3	97.7	5.2	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
EPA 300.0	NITRITE	9.98	ND	11.4	13.3	114 #	133 #	15.4	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
EPA 300.0	SULFATE	20	6.6	25.5	25.5	94.5	94.5	0.0	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
SW846 906	TOTAL ORGANIC CAR	10.00	0.76	11.9	12.7	111 #	119 #	6.5	20	90-110	05/19/15	05/19/15	05/19/15	05/19/15	197186	AZ16287

= Recovery is outside QC limits.

Comments: _____

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/13/15

Matrix: WATER Instrument: Dionex

Blank ID: 150513A1-BLK Time Analyzed: 0850

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AZ16287	S67-MW007-051215	36	05/13/15 1541
150513A1-MSD	Matrix SpikeD	38	05/13/15 1602
150513A1-MS	Matrix Spike	39	05/13/15 1613
AZ16288	S67-MW003-051215	42	05/13/15 1644
AZ16289	S67-MW002-051215	43	05/13/15 1655
AZ16290	S67-MW009-051215	44	05/13/15 1706
150513A1-BLK	Blank	5	05/13/15 0850
150513A1-LCS	Lab Control Spike	6	05/13/15 0900

Comments: Batch: #300W-150513A1

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/13/15

Matrix: WATER Instrument: Dionex

Blank ID: 150513B-BLK Time Analyzed: 1634

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150513B-BLK	Blank	41	05/13/15 1634
150513B-LCS	Lab Control Spike	45	05/13/15 1716
AZ16287	S67-MW007-051215	49	05/13/15 1759
150513B-MS	Matrix Spike	51	05/13/15 1820
150513B-MSD	Matrix SpikeD	54	05/13/15 1852
AZ16288	S67-MW003-051215	55	05/13/15 1902
AZ16290	S67-MW009-051215	56	05/13/15 1913
AZ16290	S67-MW009-051215	57	05/13/15 1923

Comments: Batch: #300WD-150513B

SW846 9060

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/19/15

Matrix: WATER Instrument: Tekmar

Blank ID: 150519A-BLK Time Analyzed: 1212

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150519A-MS	Matrix Spike	10	05/19/15 1609
150519A-MSD	Matrix SpikeD	11	05/19/15 1640
AZ16288	S67-MW003-051215	12	05/19/15 1710
AZ16289	S67-MW002-051215	13	05/19/15 1740
AZ16290	S67-MW009-051215	14	05/19/15 1809
150519A-BLK	Blank	2	05/19/15 1212
150519A-LCS	Lab Control Spike	3	05/19/15 1244
AZ16287	S67-MW007-051215	8	05/19/15 1510
150519A-DUP	Duplicate	8	05/19/15 1539

Comments: Batch: #906-150519A

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Data Validatable Report

June 19, 2015

Tetra Tech
5700 Lake Wright Drive, Suite 309
Norfolk, Virginia 23502

Attn: Ed Corack

Title: Report of Data: Case 76413

Project: CTO JU11 112G02622 NSF Indian Head, MD

Contract #: Prime contract # for DoD: Navy CLEAN. N62470-08-D-1001
Subcontract: MSA # 1045497, Work Release # 08-JU11

Dear Mr. Corack:

Four water samples were received May 13, 2015, in good condition. Written results for the requested analyses are provided on this June 19, 2015.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/rp
Enclosure
cc: File

Number of pages in this report: 869

Data Validation Package

for

CTO JU11 112G02622 NSF Indian Head

ARF 76413

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Raw Data 847

SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 76413

Project: CTO JU11 112G02622 NSF Indian Head, MD

Sample Receipt Information:

The water samples were received on May 13, 2015, at 3.0C, 3.0C, and 3.0C. The samples were assigned Analytical Request Form (ARF) number 76413. The sample numbers and requested analyses were compared to the chain of custody. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
S67-MW007-051215	AZ16287	WATER	05/12/15	05/13/15
S67-MW003-051215	AZ16288	WATER	05/12/15	05/13/15
S67-MW002-051215	AZ16289	WATER	05/12/15	05/13/15
S67-MW009-051215	AZ16290	WATER	05/12/15	05/13/15

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

Laboratory control limits generated in house do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control limits generated for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8270D
Semi-Volatile Organic Compounds

Sample Preparation and Analysis Information:

The water samples were extracted according to EPA method 3510C. The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS. All holding times were met.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Method blanks

No target metal was detected above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered slightly below the 50% lower control limit for sample S67-MW007-051215. The 8270D-SIM extract also had similar 2-Fluorobiphenyl surrogate recovery for this sample. All other surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Method 8270D-SIM
Polynuclear Aromatic Hydrocarbons

Sample Preparation and Analysis Information:

The water samples were extracted according to EPA method 3510C. The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS with selective ion monitoring. All holding times were met.

Manual integrations were performed in accordance to APPL's SOP. Naphthalene was manually integrated in the CCV (data file 0515L195). Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered below the 50% lower control limit in the method blank and sample S67-MW007-051215. The 8270D SVOC extract also had similar 2-Fluorobiphenyl surrogate recovery for this sample. All other surrogate recoveries were within the control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8260. All method criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

Dissolved Gasses
RSK-175

Sample Preparation and Analysis

The water samples were analyzed with guidance from RSK-175. The samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed using a Hewlett Packard Gas Chromatograph with a flame ionization detector.

Manual integrations were performed in accordance with APPL's SOP. Methane was manually integrated in the calibration standards. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All target analytes recovered outside the 70-130% control limit.

Method blanks

No target compound was detected at or above one-half the PQL in the method blank.

Calibration

The initial and continuing calibrations were performed with guidance from RSK-175. All acceptance criteria were met.

Summary:

No analytical exception is noted. All data generated are acceptable.

EPA Method 6850

Perchlorate by LC-Mass Spec

Sample Preparation and Analysis Information:

The water samples were prepared according to the method. The samples were analyzed according to EPA Method 6850 using an Agilent 6460 Triple Quad LC/MS. The samples were prepared and analyzed within acceptable hold time.

Manual integrations were performed in accordance to APPL's SOP. Perchlorate was manually integrated in the calibration curve, the ICS and the LCS. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance

Calibrations:

Calibrations were performed according to the method. All calibration acceptance criteria were met. The second source met acceptance criteria.

Blanks:

Perchlorate was not detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

Laboratory Control Spike (LCS) and Interference Check Sample (I.C.S.) were used for quality assurance. All LCS acceptance criteria were met..

The Interference Check Sample (I.C.S.) was prepared using a mixed anions solution. The ICS recovery met acceptance criteria.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All spike recoveries were acceptable.

Internal Standards:

The area counts of the sample Internal Standards were compared to the average IS area counts of the initial calibration. All internal standards were within the 50%D acceptance criteria.

Summary:

All data were acceptable. No analytical exception is noted.

EPA Method 8330B
Energetics

Sample Preparation:

The water samples were extracted according to EPA method 3535. All holding times were met.

Analysis:

The samples were analyzed according to EPA Method 8330B using an Agilent 1290 HPLC with DA detector. Manual integrations were performed in accordance with APPL's SOP. The following analytes were manually integrated in the calibration standards: HMX, Nitroglycerin, PETN, 1,2-Dinitrobenzene, 1,3- Dinitrobenzene, Nitrobenzene, 2,4,6-Trinitrotoluene, Tetryl, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, 2-Nitrotoluene, 4-Nitrotoluene, 3-Nitrotoluene, 4-Amino-2,6-Dinitrotoluene, 2-Amino-4,6-Dinitrotoluene and 3,5-Dinitroaniline. HMX was manually integrated in the samples. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance:

Spike Recovery:

A Laboratory Control Spike (LCS) was used for quality assurance. All spike acceptance criteria was met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All MS/MSD acceptance criteria were met.

Method blanks:

No target analyte was detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogates had acceptable recoveries.

Calibration:

The initial and continuing calibrations and second source were analyzed according to the method. All calibration criteria were met.

Summary:

No analytical problem was encountered. The data generated are acceptable.

EPA Method 6010C
Total and Dissolved Metals

Digestion and Analysis Information:

The water samples were digested according to EPA method 3010A. The samples were analyzed for total and dissolved metals according to EPA method 6010C using a Perkin Elmer Optima 5300DV. All holding times were met.

Quality Control/Assurance:

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

Laboratory Control Spike (LCS), Matrix Spikes (MS/MSD), and Post-Digestion Spike (PDS) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. All MS/MSD and PDS acceptance criteria were met.

Summary:

No analytical problem was encountered. The data generated are acceptable.

Inorganic Analyses

EPA Method 300.0 and SW846 9060

Sample Preparation and Analysis

The samples were prepared and analyzed according to the methods. All holding times were met. The samples were analyzed for Anions according to EPA method 300.0 using a Dionex DX500. The samples were analyzed for TOC according to EPA method 9060 using a Tekmar Apollo 9000.

Quality Control/Assurance

Spike Recovery

Laboratory Control Spikes (LCS) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-MW007-051215 was designated by the client for MS/MSD analysis. Nitrite and total organic carbon recovered above the 110% upper control limit in the MS/MSD. The MS/MSDs were re0-analyzed with similar recoveries. All other spike recoveries were acceptable.

Method blanks

No target analyte was detected one-half the limit of quantitation (LOQ) in the method blank. The opening CCB bracketing only the LCS had a detection for sulfate above the LOQ. CCBs bracketing samples were non-detect for all analytes.

Calibration

Calibrations were performed according to the method for the initial calibration and the continuing calibration verification. The initial calibration verification is prepared from a second source standard. All calibration criteria were met.

Summary:

No other analytical exception was noted.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 76413

Client: Tetra Tech
Address: 5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502
Attn: Ed Corack
Phone: 757-466-4908 Fax: 757-461-4148
Job: CTO JU11 112G02622 NSF Indian Head
PO #: MSA #1045497 Release #08-CTO JU11
Chain of Custody (Y/N): Y # 088453
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: STD

Received by: YL
Date Received: 05/13/15 Time: 09:35
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y Time Zone: -4
Chest Temp(s): 3X3.0°C
Color: VOA,B-Red,Q-OrgYell
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Cynthia Clark
QC Report Type: DVP4/LEDD/MD
Due Date: 06/03/15

Comments:
login to ed.corack@ & tobrena.sedlmyer@tetratech.com.
21 calendar day TAT for final report
1HC DVP4 and summary report & 2 BOOKMARKED CDs of DVP4 and
Summary report (sample & QC results w/surrogate & blank summaries) to Amy Thomson (Pittsburgh)
Include original COC with report. NOTHING to Ed in VA office
EDD: TTEC LEDD to http://isg.applications.tetratech.com/LEDDChecker2010/
Guidance: DOD QSM v4.2: DOD Forms, LOD Database
RSK: report Methane only

Sample Distribution:
GC: 4-$87DJU11W, 4-$SIMDDODW
Extractions: 4-_HPL6850, 4-_MWE3535, 4-_SEP004, 4-_SEP004S
VOA: 4-$RSK
LCMS: 4-$6850, 4-$83BJU11W
Metals: 4-$61CJU11W2(Al,B,Li,Zn), 4-$61CJU11WD2(Al,B,Li,Zn)
Wetlab: 4-$300W(NO2,NO3,CL,SO4), 4-$906
Other: 4-_M3010, 4-_M3010F

Charges:

Invoice To:
ACCOUNTS PAYABLE
661 Andersen Dr, Foster Plaza 7
Pittsburgh, PA 15220-2745
Invoice in triplicate per SOW

	Client ID	APPL ID	Sampled	Analyses Requested
1.	S67-MW007-051215 ms/msd	AZ16287W	05/12/15 09:15	$300W(NO2,NO3,CL,SO4), $61CJU11W2(Al,B,Li,Zn), $61CJU11WD2(Al,B,Li,Zn), $6850, $83BJU11W, $87DJU11W, $906, $RSK, $SIMDDODW
2.	S67-MW003-051215	AZ16288W	05/12/15 12:15	$300W(NO2,NO3,CL,SO4), $61CJU11W2(Al,B,Li,Zn), $61CJU11WD2(Al,B,Li,Zn), $6850, $83BJU11W, $87DJU11W, $906, $RSK, $SIMDDODW

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -4 UTC
Page 1 Client Code: TTECNUS-JU11 *Printed 05/13/15 6:14:39 PM* Computer: RENEECOMPUT # 76413

3.	S67-MW002-051215	AZ16289W 05/12/15	13:40	$300W(NO2,NO3,CL,SO4), $61CJU11W2(Al,B,Li,Zn), $61CJU11WD2(Al,B,Li,Zn), $6850, $83BJU11W, $87DJU11W, $906, $RSK, $SIMDDODW
4.	S67-MW009-051215	AZ16290W 05/12/15	15:20	$300W(NO2,NO3,CL,SO4), $61CJU11W2(Al,B,Li,Zn), $61CJU11WD2(Al,B,Li,Zn), $6850, $83BJU11W, $87DJU11W, $906, $RSK, $SIMDDODW

APPL Sample Receipt Form

ARF# **76413**

Sample	Container Type	Count	pH
AZ16287	[3] PL 250mL	3	NA
	[4] PL 125mL	3	NA
	[6] PL 500mL - HNO3	6	1.7
	[13] VOAs - HCL	9	NA
	[17] Amber Liter	6	NA
	[30] Amber 250mL - H2SO4	3	1.7
	[40] 500mL Amber, unprsrvd	6	NA
AZ16288	[3] PL 250mL	1	NA
	[4] PL 125mL	1	NA
	[6] PL 500mL - HNO3	2	1.7
	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[30] Amber 250mL - H2SO4	1	1.7
	[40] 500mL Amber, unprsrvd	2	NA
AZ16289	[3] PL 250mL	1	NA
	[4] PL 125mL	1	NA
	[6] PL 500mL - HNO3	2	1.7
	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[30] Amber 250mL - H2SO4	1	1.7
	[40] 500mL Amber, unprsrvd	2	NA
AZ16290	[3] PL 250mL	1	NA
	[4] PL 125mL	1	NA
	[6] PL 500mL - HNO3	2	1.7
	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[30] Amber 250mL - H2SO4	1	1.7
	[40] 500mL Amber, unprsrvd	2	NA

Sample	Container Type	Count	pH

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

3.0 X 3
CHEMTECH PROJECT NO. 76413
QUOTE NO.
COC Number 088453

CLIENT INFORMATION
REPORT TO BE SENT TO:
COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Ed Corack
PHONE: 757-466-4908 FAX:

CLIENT PROJECT INFORMATION
PROJECT NAME: NSF-Indian Head Site 67
PROJECT NO.: 112G02622 LOCATION:
PROJECT MANAGER: Ed Corack
e-mail: Ed.Corack@tetratech.com
PHONE: 757-466-4908 FAX:

CLIENT BILLING INFORMATION
BILL TO: See Contract PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION
FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION
☐ RESULTS ONLY ☐ USEPA CLP
☒ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☒ EDD FORMAT _____

ANALYSIS
1 Perchlorate
2 PAHs
3 Phthalates Energetics
4 Total Metals
5 Diss. Metals
6 Anions
7 TOC
8 Methane
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								E	E	E	B	B	E	C	A		← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	S67-MW007-051215	GW		X	5-12-15	0915	36	3	6	6	3	3	3	3	9		Run MSMSD
2.	S67-MW003-051215	GW		X	5-12-15	1215	12	1	2	2	1	1	1	1	3		
3.	S67-MW002-051215	GW		X	5-12-15	1340	12	1	2	2	1	1	1	1	3		
4.	S67-MW009-051215	GW		X	5-12-15	1520	12	1	2	2	1	1	1	1	3		
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

JB 5-12-15

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkett	5-12-15 1730	1. FedEx
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3.	5-13-15 9:35	3. Brian Brown

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant Cooler Temp. _____
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: Ice in Cooler?: _____

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT
Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

COOLER RECEIPT FORM **ARF: 76413**

1) Project: CTO JU11 112G02622 NSF Indian Head Date Received: 05/13/15

2) Coolers: Number of Coolers: 3

3) YES Were custody seals present and intact?
How many? 6 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FED EX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags
X wet ice __ dry ice __ no ice __ other

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use J5297

8) Cooler temp(s): In °C
1: 3.0 2: 3.0 3: 3.0 4: 5: 6:
7: 8: 9: 10: 11: 12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) No Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea:
Smaller than a pea:

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: 90B2031
Lab notified if pH was not adequate:

Notes/Deficiencies:

Personnel receiving samples: BB Second reviewer:
Personnel labeling samples:
Project manager notified: Date/Time of notification
Name of client notified: Date/Time of notification

CHEMTECH
CHAIN OF CUSTODY RECORD

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(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

3.0 X 3
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PROJECT NO.: 112G02622 LOCATION:
PROJECT MANAGER: Ed Corack
e-mail: Ed.Corack@tetratech.com
PHONE: 757-466-4908 FAX:

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CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

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☒ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☒ EDD FORMAT

ANALYSIS

1 Perchlorate
2 PAHs, Phthalates
3 Energetics
4 Total Metals
5 Diss. Metals
6 Anions
7 TOC
8 Methane
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								E	E	E	B	B	E	C	A		← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	S67-MW007-051215	GW		X	5-12-15	0915	36	3	6	6	3	3	3	3	9		Run MSMSD
2.	S67-MW003-051215	GW		X	5-12-15	1215	12	1	2	2	1	1	1	1	3		
3.	S67-MW002-051215	GW		X	5-12-15	1340	12	1	2	2	1	1	1	1	3		
4.	S67-MW009-051215	GW		X	5-12-15	1520	12	1	2	2	1	1	1	1	3		
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

JBB 5-12-15

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkett	5-12-15 1730	1. FedEx
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3.	5-13-15 9:35	3. Brian Brown

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant Cooler Temp.
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:
Ice in Cooler?:

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT
Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

EPA METHOD 8270D
Semivolatile Organic Compounds

EPA METHOD 8270D
Semivolatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **150518W-16287 - 197636**
Batch ID: #87DJU-150518A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
BLANK	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
BLANK	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
BLANK	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
BLANK	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
BLANK	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
BLANK	SURROGATE: 2,4,6-TRIBROMOP	120	40-125			%	5/18/2015	5/19/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	79.6	50-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: 2-FLUOROPHENO	47.5	20-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: NITROBENZENE-	81.1	40-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: PHENOL (S)	34.0	10-115			%	5/18/2015	5/19/2015
BLANK	SURROGATE: TERPHENYL-D14 (	119	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y108
Instrument: Yoda
Sequence: Y150511
Initials: DA

GC SC-Blank-REG MDLs
Printed: 6/3/2015 10:19:46 AM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	40-125	120		50-110	79.6	
150518A-LCS	Lab Control Spike	40-125	96.5		50-110	75.9	
AZ16287-MS	Matrix Spike	40-125	102		50-110	76.6	
AZ16287-MSD	Matrix SpikeD	40-125	92.5		50-110	71.8	
AZ16287	S67-MW007-051215	40-125	74.4		50-110	47.7	#
AZ16288	S67-MW003-051215	40-125	75.0		50-110	50.8	
AZ16289	S67-MW002-051215	40-125	79.5		50-110	56.5	
AZ16290	S67-MW009-051215	40-125	81.3		50-110	55.0	

Comments: Batch: #87DJU-150518A

= Recovery outside of Control Limits on Sample.

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	20-110	47.5		40-110	81.1	
150518A-LCS	Lab Control Spike	20-110	59.0		40-110	78.9	
AZ16287-MS	Matrix Spike	20-110	50.8		40-110	77.5	
AZ16287-MSD	Matrix SpikeD	20-110	49.6		40-110	73.0	
AZ16287	S67-MW007-051215	20-110	34.3		40-110	49.7	
AZ16288	S67-MW003-051215	20-110	29.2		40-110	51.8	
AZ16289	S67-MW002-051215	20-110	40.5		40-110	58.7	
AZ16290	S67-MW009-051215	20-110	41.8		40-110	58.4	

Comments: Batch: #87DJU-150518A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	10-115	34.0		50-135	119	
150518A-LCS	Lab Control Spike	10-115	42.0		50-135	95.4	
AZ16287-MS	Matrix Spike	10-115	36.1		50-135	100	
AZ16287-MSD	Matrix SpikeD	10-115	34.5		50-135	96.3	
AZ16287	S67-MW007-051215	10-115	22.5		50-135	98.9	
AZ16288	S67-MW003-051215	10-115	23.3		50-135	79.5	
AZ16289	S67-MW002-051215	10-115	27.6		50-135	85.7	
AZ16290	S67-MW009-051215	10-115	30.4		50-135	78.4	

Comments: Batch: #87DJU-150518A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **150518W-16287 LCS - 197636**
Batch ID: #87DJU-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BIS (2-ETHYLHEXYL) PHTHALATE	50.0	45.0	90.0	40-125
BUTYL BENZYL PHTHALATE	50.0	42.2	84.4	45-115
DI-N-BUTYL PHTHALATE	50.0	45.3	90.6	55-115
DI-N-OCTYL PHTHALATE	50.0	50.1	100	35-135
DIETHYL PHTHALATE	50.0	43.9	87.8	40-120
DIMETHYL PHTHALATE	50.0	44.1	88.2	25-125
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	193	96.5	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	75.9	75.9	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	118	59.0	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	78.9	78.9	40-110
SURROGATE: PHENOL (S)	200	84.1	42.0	10-115
SURROGATE: TERPHENYL-D14 (S)	100	95.4	95.4	50-135

Comments: _____

Primary	SPK
Quant Method :	Y0511TT.M
Extraction Date :	5/18/2015
Analysis Date :	5/19/2015
Instrument :	Yoda
Run :	0511Y109
Initials :	DA

Printed: 6/3/2015 10:19:36 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **150518W-16287 MS - 197636**
Batch ID: #87DJU-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BIS (2-ETHYLHEXYL) PHTHALATE	46.7	0.11	46.4	42.6	99.1	91.0	40-125	8.5	30
BUTYL BENZYL PHTHALATE	46.7	ND	43.5	41.4	93.1	88.7	45-115	4.9	30
DI-N-BUTYL PHTHALATE	46.7	ND	45.8	41.5	98.1	88.9	55-115	9.9	30
DI-N-OCTYL PHTHALATE	46.7	ND	51.0	47.2	109	101	35-135	7.7	30
DIETHYL PHTHALATE	46.7	ND	42.4	40.3	90.8	86.3	40-120	5.1	30
DIMETHYL PHTHALATE	46.7	0.29	44.6	39.0	94.9	82.9	25-125	13.4	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	187	NA	191	173	102	92.5	40-125		
SURROGATE: 2-FLUORBIPHENYL (S)	93.5	NA	71.6	67.1	76.6	71.8	50-110		
SURROGATE: 2-FLUOROPHENOL (S)	187	NA	95.0	92.7	50.8	49.6	20-110		
SURROGATE: NITROBENZENE-D5 (S)	93.5	NA	72.5	68.3	77.5	73.0	40-110		
SURROGATE: PHENOL (S)	187	NA	67.5	64.5	36.1	34.5	10-115		
SURROGATE: TERPHENYL-D14 (S)	93.5	NA	93.9	90.0	100	96.3	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0511TT.M	Y0511TT.M
Extraction Date :	5/18/2015	5/18/2015
Analysis Date :	5/19/2015	5/19/2015
Instrument :	Yoda	Yoda
Run :	0511Y114	0511Y115
Initials :	DA	

Printed: 6/3/2015 10:19:30 AM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/19/2015

Matrix: WATER Instrument: Yoda

Blank ID: 150518A-BLK Time Analyzed: 1521

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150518A-BLK	Blank	0511Y108	5/19/2015 1521
150518A-LCS	Lab Control Spike	0511Y109	5/19/2015 1551
150518A-MS	Matrix Spike	0511Y114	5/19/2015 1819
150518A-MSD	Matrix SpikeD	0511Y115	5/19/2015 1849
AZ16287	S67-MW007-051215	0511Y116	5/19/2015 1919
AZ16288	S67-MW003-051215	0511Y117	5/19/2015 1948
AZ16289	S67-MW002-051215	0511Y118	5/19/2015 2018
AZ16290	S67-MW009-051215	0511Y119	5/19/2015 2048

Comments: Batch: #87DJU-150518A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: ~~0511Y001.D~~ 76413
Matrix: Water np 6-19-15
ID: SV Tune 03/12/15

SDG No: np 6-19-15 ~~Yoda~~ 76413
Date Analyzed: 5/11/2015
Instrument: Yoda
Time Analyzed: 14:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5ug/ml SVOC 05/11/15	0511Y002.D	5/11/2015 15:02
2		10ug/ml SVOC	0511Y003.D	5/11/2015 15:31
3		20ug/ml SVOC	0511Y004.D	5/11/2015 16:01
4		40ug/ml SVOC	0511Y005.D	5/11/2015 16:31
5		50ug/ml SVOC	0511Y006.D	5/11/2015 17:00
6		60ug/ml SVOC	0511Y007.D	5/11/2015 17:31
7		80ug/ml SVOC	0511Y008.D	5/11/2015 18:00
8		100ug/ml SVOC	0511Y009.D	5/11/2015 18:30
9		50ug/ml SVOC SS 05/1	0511Y010.D	5/11/2015 19:00
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	32.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.1
127	40 - 60% of mass 198	50.9
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	28.2
365	1 - 100% of mass 198	3.4
441	0.01 - 100% of mass 443	76.3
442	40 - 150% of mass 198	111.4
443	17 - 23% of mass 442	18.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 76413
Matrix: Water
ID: SV TUNE 5/14/15

SDG No: 76413
Date Analyzed: 5/19/2015
Instrument: Yoda
Time Analyzed: 13:02

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml SVOC 05/19/1	0511Y107.D	5/19/2015 13:20
2	Blank	150518A BLK 1/1000	0511Y108.D	5/19/2015 15:21
3	Lab Control Spike	150518A LCS-1 1/1000	0511Y109.D	5/19/2015 15:51
4		AZ16287W21 MS-1 1/98	0511Y114.D	5/19/2015 18:19
5		AZ16287W23 MSD-1 1/9	0511Y115.D	5/19/2015 18:49
6	S67-MW007-051215	AZ16287W24 1/1040	0511Y116.D	5/19/2015 19:19
7	S67-MW003-051215	AZ16288W07 1/1040	0511Y117.D	5/19/2015 19:48
8	S67-MW002-051215	AZ16289W07 1/1000	0511Y118.D	5/19/2015 20:18
9	S67-MW009-051215	AZ16290W08 1/900	0511Y119.D	5/19/2015 20:48
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60.04% of mass 198	30.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	51.5
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.2
365	1 - 100% of mass 198	3.2
441	0.01 - 100% of mass 443	76.6
442	40 - 150% of mass 198	97.9
443	17 - 23% of mass 442	19.4

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 76413

Lab File ID (Standard): 0511Y007.D Date Analyzed: 05/11/15

Instrument ID: Yoda Time Analyzed: 17:31

GC Column: _____ ID: Heated Purge: (Y/N) _____

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1006010	5.19	4566840	6.64	2449390	8.63
	UPPER LIMIT	2012020	5.69	9133680	7.14	4898780	9.13
	LOWER LIMIT	503005	4.69	2283420	6.14	1224695	8.13
	SAMPLE NO.						
01	50ug/ml SVOC 05/19/15	923455	5.17	4127210	6.62	2370250	8.61
02	150518A BLK 1/1000	764910	5.17	2850830	6.63	1560640	8.62
03	150518A LCS-1 1/1000	737045	5.17	3351210	6.63	1937340	8.61
04	AZ16287W21 MS-1 1/9	819223	5.17	3688690	6.63	2197110	8.62
05	AZ16287W23 MSD-1 1/	822262	5.17	3739940	6.63	2144330	8.61
06	AZ16287W24 1/1040	836181	5.17	3702600	6.63	2170710	8.62
07	AZ16288W07 1/1040	886052	5.17	4074540	6.63	2278320	8.62
08	AZ16289W07 1/1000	869092	5.17	3827100	6.63	2218590	8.62
09	AZ16290W08 1/900	816101	5.17	3742420	6.62	2155560	8.61
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 76413

Lab File ID (Standard): 0511Y007.D Date Analyzed: 05/11/15

Instrument ID: Yoda Time Analyzed: 17:31

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3972630	10.37	3769900	13.44	2455420	15.19
	UPPER LIMIT	7945260	10.87	7539800	13.94	4910840	15.69
	LOWER LIMIT	1986315	9.87	1884950	12.94	1227710	14.69
	SAMPLE NO.						
01	50ug/ml SVOC 05/19/15	3836650	10.35	2886160	13.42	2303260	15.17
02	150518A BLK 1/1000	2942400	10.35	2528080	13.43	1695160	15.18
03	150518A LCS-1 1/1000	3272170	10.35	3061970	13.42	1959930	15.17
04	AZ16287W21 MS-1 1/9	3620430	10.35	3364030	13.42	2240150	15.17
05	AZ16287W23 MSD-1 1/	3586630	10.35	3203910	13.42	2203010	15.18
06	AZ16287W24 1/1040	3816360	10.35	2749860	13.42	2147800	15.18
07	AZ16288W07 1/1040	4046770	10.35	3572140	13.42	2377600	15.17
08	AZ16289W07 1/1000	3993820	10.35	3534200	13.42	2331050	15.18
09	AZ16290W08 1/900	3941520	10.35	3527360	13.42	2310400	15.17
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8270D
Semivolatile Organic Compounds
Sample Data

APPL, INC.

EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 5/12/2015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16287
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	74.4	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	47.7 #	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	34.3	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	49.7	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	22.5	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	98.9	50-135			%	5/18/2015	5/19/2015

= Recovery (or RPD) is outside QC limits.

Quant Method: Y0511TT.M
Run #: 0511Y116
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:18 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y116.D Vial: 16
Acq On : 19 May 15 19:19 Operator: csc
Sample : AZ16287W24 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jun 3 8:57 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	836181	40.00	ppb	-0.02
7) Napthalene-D8(IS)	6.63	136	3702598	40.00	ppb	0.00
13) Acenaphthene-D10(IS)	8.62	164	2170707	40.00	ppb	0.00
23) Phenanthrene-D10(IS)	10.35	188	3816362	40.00	ppb	-0.02
27) Chrysene-D12(IS)	13.42	240	2749859	40.00	ppb	-0.02
32) Perylene-D12(IS)	15.18	264	2147804	40.00	ppb	0.00
System Monitoring Compounds						
2) 2-Fluorophenol (S)	4.45	112	2000954	65.96	ppb	0.02
Spiked Amount 192.308			Recovery =	34.302%		
3) Phenol-D6 (S)	5.57	99	1719770	43.26	ppb	-0.07
Spiked Amount 192.308			Recovery =	22.493%		
8) Nitrobenzene-D5(S)	5.90	82	1746108	47.78	ppb	0.00
Spiked Amount 96.154			Recovery =	49.690%		
16) 2-Fluorobiphenyl(S)	7.84	172	3636860	45.83	ppb	0.00
Spiked Amount 96.154			Recovery =	47.663%		
22) 2,4,6-Tribromophenol(S)	9.63	330	773375	142.99	ppb	-0.04
Spiked Amount 192.308			Recovery =	74.353%		
28) Terphenyl-D14(S)	12.14	244	6006217	95.06	ppb	-0.02
Spiked Amount 96.154			Recovery =	98.864%		
Target Compounds						Qvalue
17) Dimethyl phthalate	8.36	163	22586	0.29	ppb	97
21) Diethyl phthalate	9.10	149	1166216	-0.66	ppb	98
30) Bis (2-ethylhexyl) phthala	13.19	149	7092	0.11	ppb	91

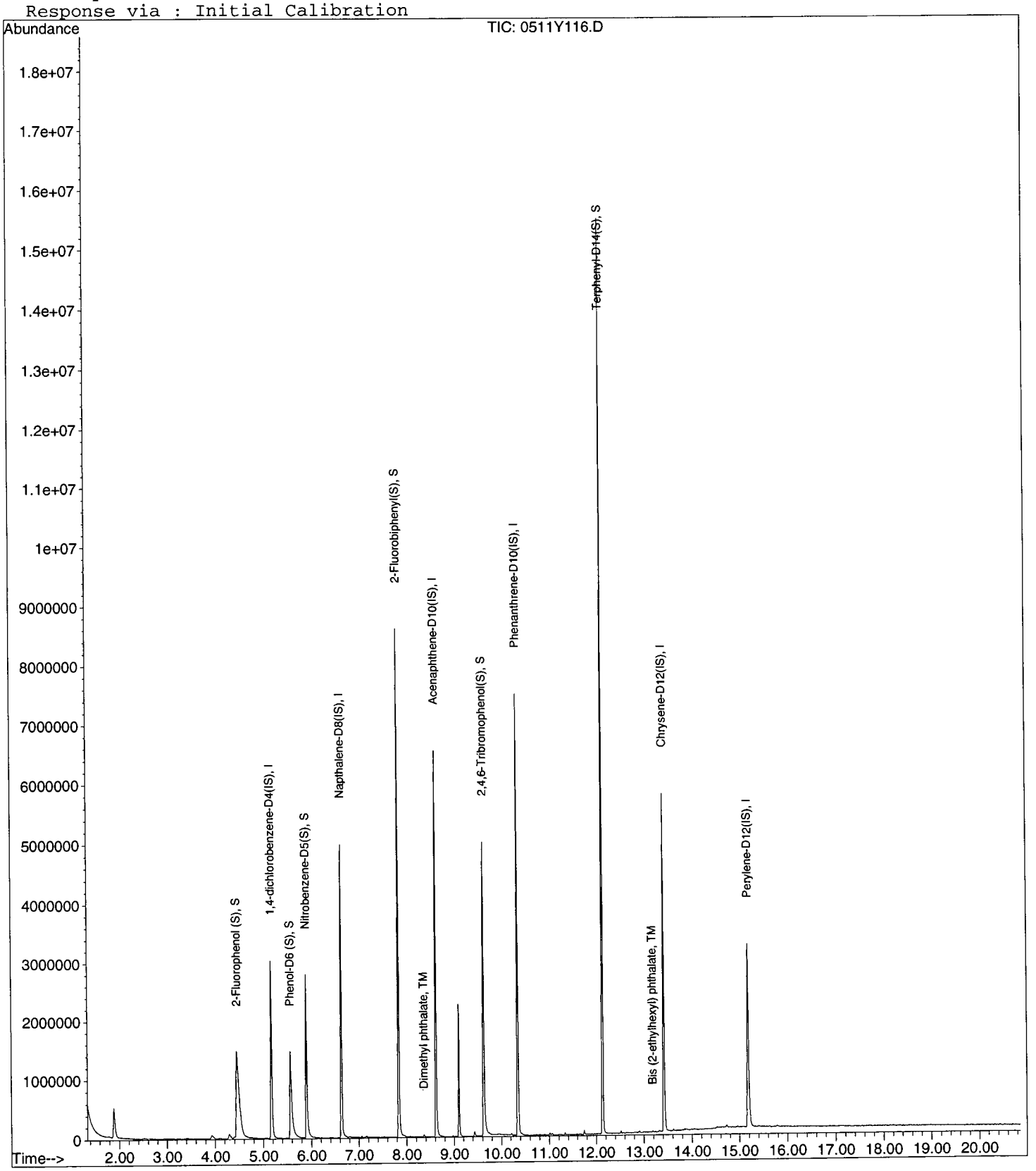
(#) = qualifier out of range (m) = manual integration

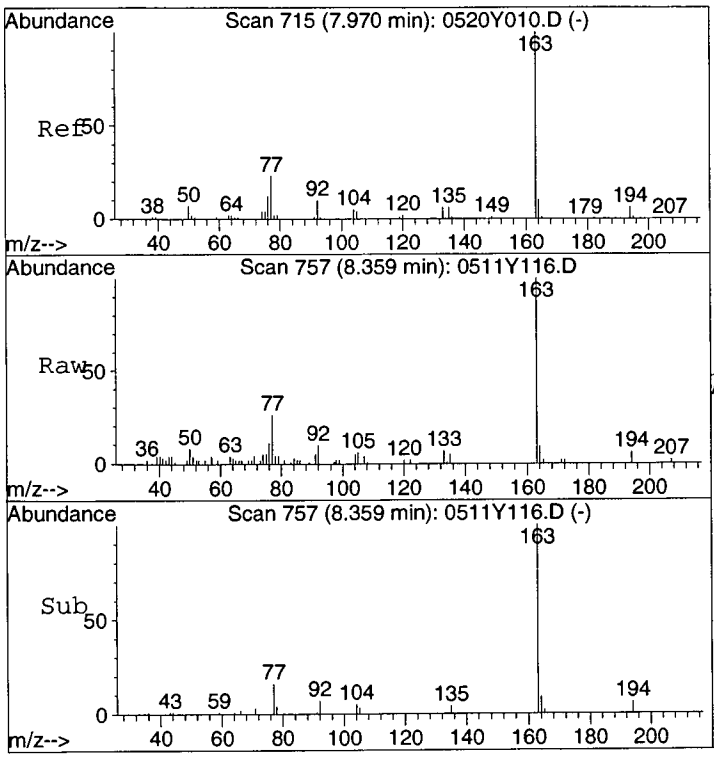
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y116.D Vial: 16
Acq On : 19 May 15 19:19 Operator: csc
Sample : AZ16287W24 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jun 3 8:57 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration

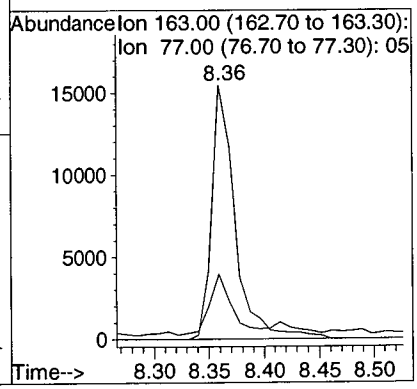


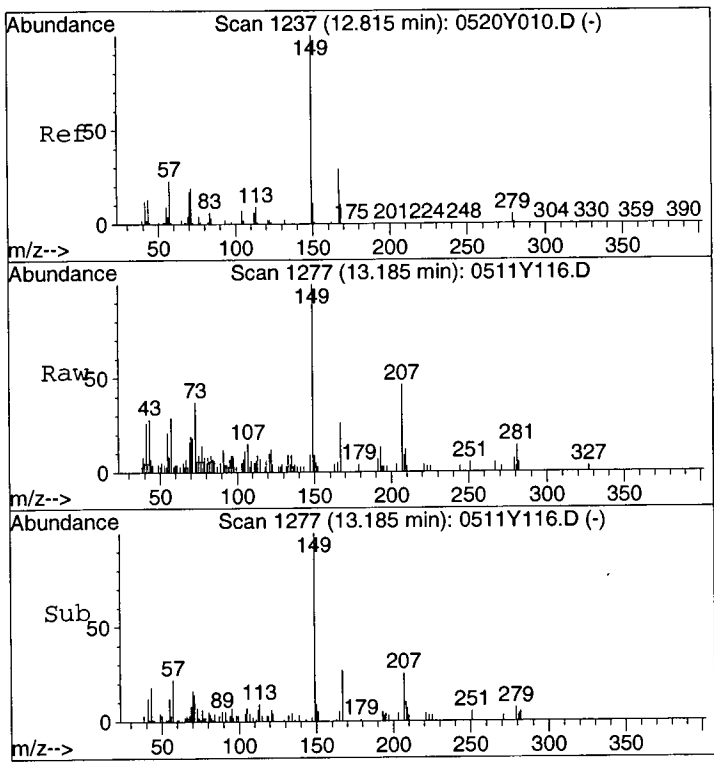


#17
Dimethyl phthalate
Concen: 0.29 ppb
RT: 8.36 min Scan# 757
Delta R.T. -0.01 min
Lab File: 0511Y116.D
Acq: 19 May 15 19:19

Tgt Ion:163 Resp: 22586

Ion	Ratio	Lower	Upper
163	100		
77	23.2	17.3	32.1

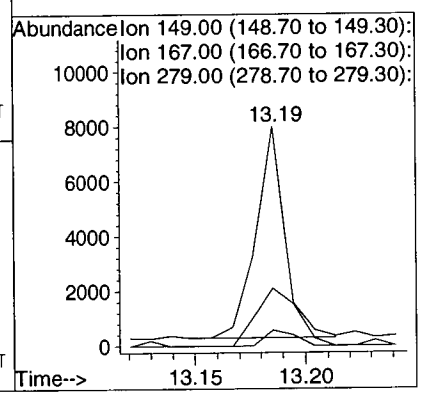




#30
Bis (2-ethylhexyl) phthalate
Concen: 0.11 ppb
RT: 13.19 min Scan# 1277
Delta R.T. -0.02 min
Lab File: 0511Y116.D
Acq: 19 May 15 19:19

Tgt Ion:149 Resp: 7092

Ion	Ratio	Lower	Upper
149	100		
167	27.3	23.1	42.9
279	7.5	7.1	13.3



EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW003-051215

Sample Collection Date: 5/12/2015

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16288

QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	75.0	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	50.8	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	29.2	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	51.8	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	23.3	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	79.5	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y117
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:18 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y117.D Vial: 17
Acq On : 19 May 15 19:48 Operator: csc
Sample : AZ16288W07 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jun 3 8:58 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	886052	40.00 ppb	-0.02
7) Napthalene-D8(IS)	6.63	136	4074542	40.00 ppb	0.00
13) Acenaphthene-D10(IS)	8.62	164	2278324	40.00 ppb	0.00
23) Phenanthrene-D10(IS)	10.35	188	4046767	40.00 ppb	-0.02
27) Chrysene-D12(IS)	13.42	240	3572140	40.00 ppb	-0.02
32) Perylene-D12(IS)	15.17	264	2377595	40.00 ppb	-0.02
System Monitoring Compounds					
2) 2-Fluorophenol (S)	4.44	112	1813701	56.24 ppb	0.00
Spiked Amount 192.308			Recovery =	29.247%	
3) Phenol-D6 (S)	5.56	99	1883548	44.78 ppb	-0.08
Spiked Amount 192.308			Recovery =	23.285%	
8) Nitrobenzene-D5(S)	5.90	82	2001398	49.77 ppb	0.00
Spiked Amount 96.154			Recovery =	51.757%	
16) 2-Fluorobiphenyl(S)	7.84	172	4072293	48.89 ppb	0.00
Spiked Amount 96.154			Recovery =	50.849%	
22) 2,4,6-Tribromophenol(S)	9.63	330	818798	144.23 ppb	-0.04
Spiked Amount 192.308			Recovery =	75.000%	
28) Terphenyl-D14(S)	12.14	244	6273450	76.44 ppb	-0.02
Spiked Amount 96.154			Recovery =	79.492%	
Target Compounds					Qvalue
17) Dimethyl phthalate	8.36	163	22239	0.28 ppb	97
21) Diethyl phthalate	9.10	149	1250867	-0.33 ppb	99
30) Bis (2-ethylhexyl) phthala	13.19	149	8978	0.11 ppb	97

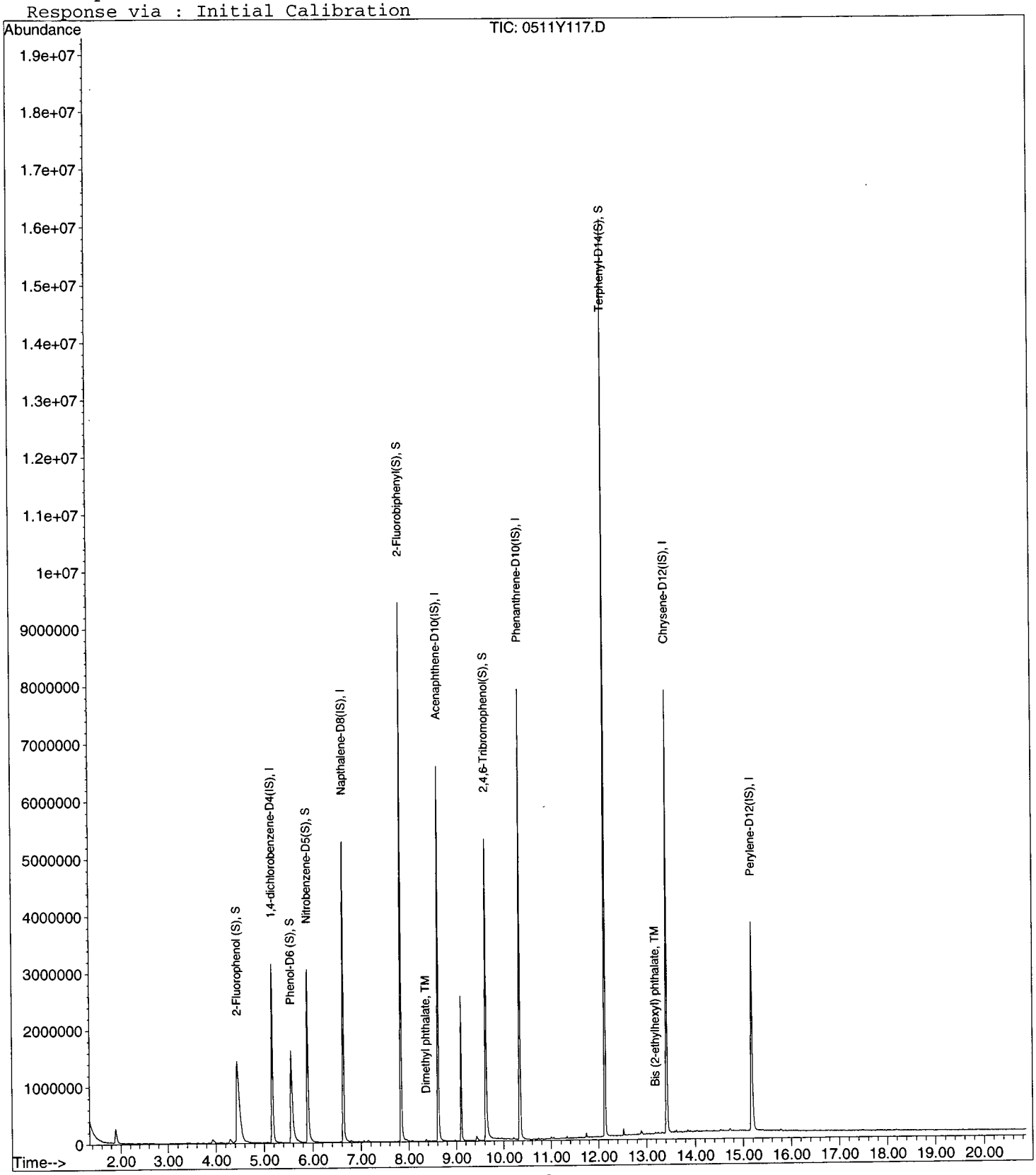
(#) = qualifier out of range (m) = manual integration

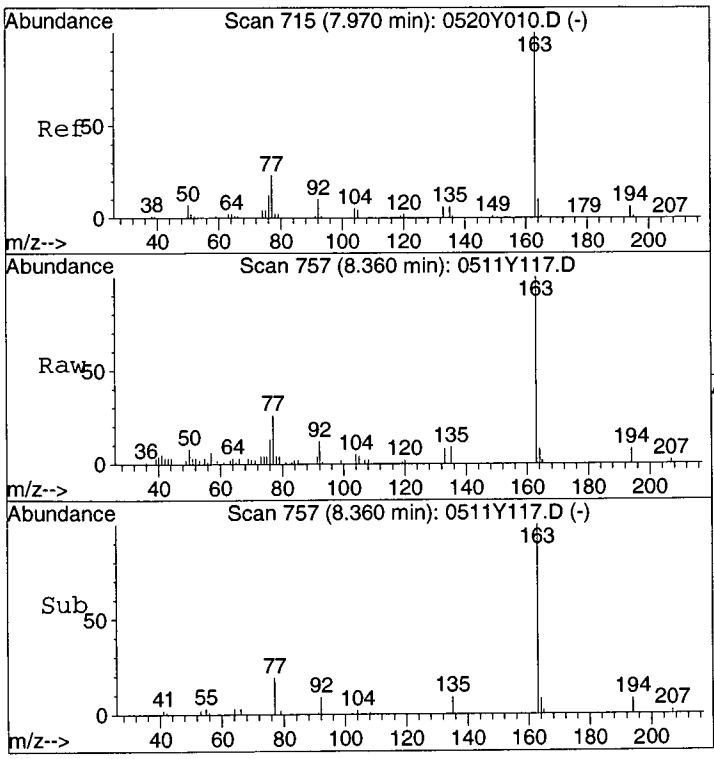
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y117.D Vial: 17
Acq On : 19 May 15 19:48 Operator: csc
Sample : AZ16288W07 1/1040 Inst : Yoda
Misc : water Multiplr: 0.96

Quant Time: Jun 3 8:58 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration

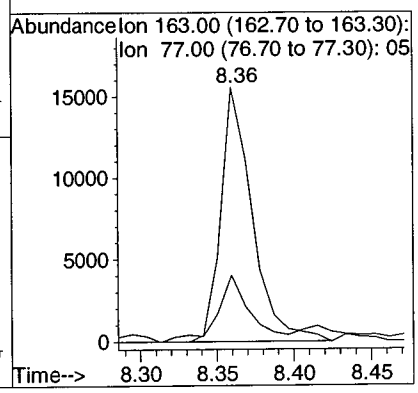


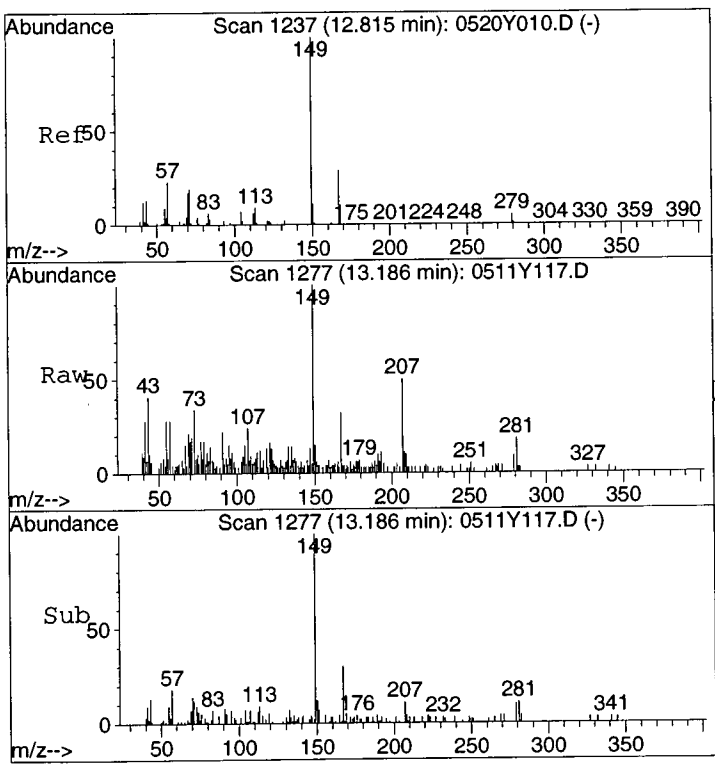


#17
Dimethyl phthalate
Concen: 0.28 ppb
RT: 8.36 min Scan# 757
Delta R.T. -0.01 min
Lab File: 0511Y117.D
Acq: 19 May 15 19:48

Tgt Ion:163 Resp: 22239

Ion	Ratio	Lower	Upper
163	100		
77	23.4	17.3	32.1

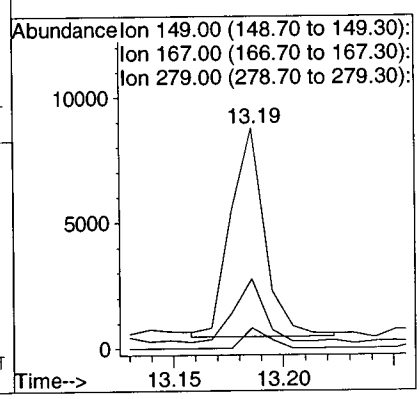




#30
Bis (2-ethylhexyl) phthalate
Concen: 0.11 ppb
RT: 13.19 min Scan# 1277
Delta R.T. -0.02 min
Lab File: 0511Y117.D
Acq: 19 May 15 19:48

Tgt Ion:149 Resp: 8978

Ion	Ratio	Lower	Upper
149	100		
167	30.8	23.1	42.9
279	10.2	7.1	13.3



EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16289
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	79.5	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	56.5	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	40.5	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.7	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	27.6	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	85.7	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y118
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:18 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y118.D Vial: 18
Acq On : 19 May 15 20:18 Operator: csc
Sample : AZ16289W07 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jun 3 8:59 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	869092	40.00	ppb		-0.02
7) Napthalene-D8(IS)	6.63	136	3827100	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.62	164	2218585	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.35	188	3993819	40.00	ppb		-0.02
27) Chrysene-D12(IS)	13.42	240	3534203	40.00	ppb		-0.02
32) Perylene-D12(IS)	15.18	264	2331047	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.43	112	2446186	80.92	ppb		0.00
Spiked Amount 200.000			Recovery =	40.462%			
3) Phenol-D6 (S)	5.56	99	2177549	55.27	ppb		-0.08
Spiked Amount 200.000			Recovery =	27.634%			
8) Nitrobenzene-D5(S)	5.89	82	2133347	58.74	ppb		-0.02
Spiked Amount 100.000			Recovery =	58.735%			
16) 2-Fluorobiphenyl(S)	7.84	172	4403850	56.47	ppb		0.00
Spiked Amount 100.000			Recovery =	56.470%			
22) 2,4,6-Tribromophenol(S)	9.63	330	845746	159.09	ppb		-0.04
Spiked Amount 200.000			Recovery =	79.544%			
28) Terphenyl-D14(S)	12.14	244	6689143	85.67	ppb		-0.02
Spiked Amount 100.000			Recovery =	85.670%			
Target Compounds							Qvalue
17) Dimethyl phthalate	8.36	163	28237	0.37	ppb		90
21) Diethyl phthalate	9.10	149	1204465	-0.52	ppb		99
30) Bis (2-ethylhexyl) phthala	13.19	149	8439	0.11	ppb	#	95

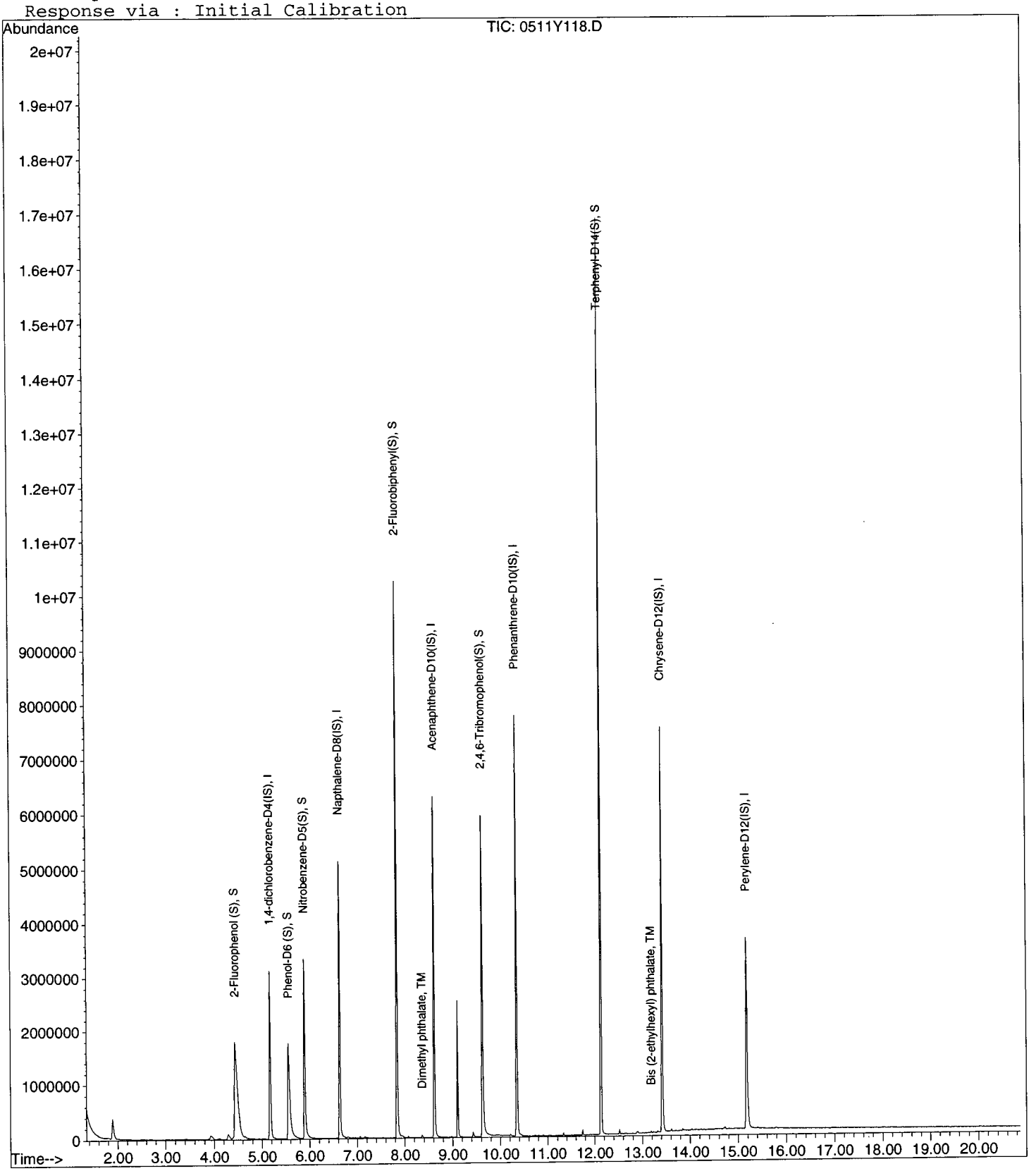
(#) = qualifier out of range (m) = manual integration

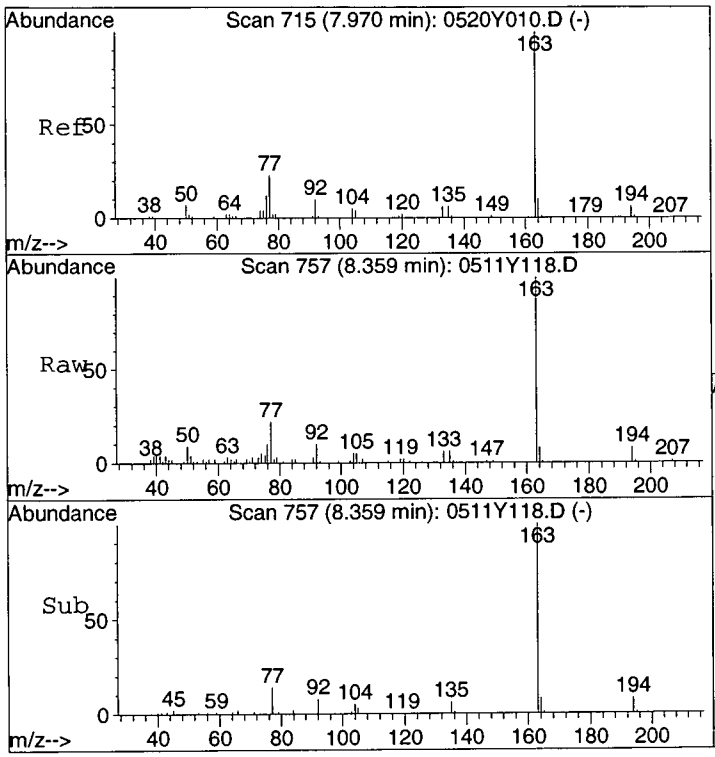
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y118.D Vial: 18
Acq On : 19 May 15 20:18 Operator: csc
Sample : AZ16289W07 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jun 3 8:59 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration

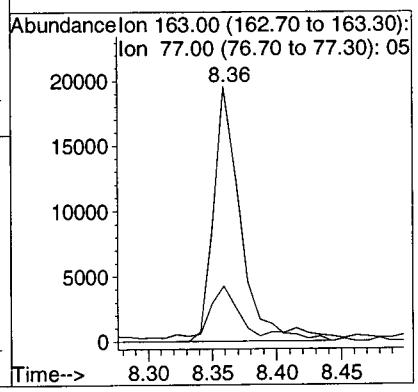


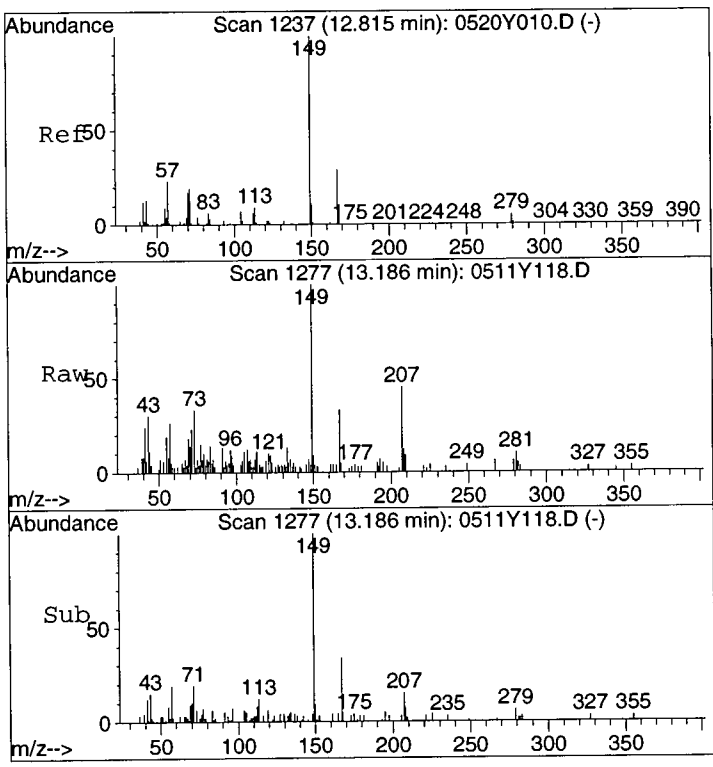


#17
Dimethyl phthalate
Concen: 0.37 ppb
RT: 8.36 min Scan# 757
Delta R.T. -0.01 min
Lab File: 0511Y118.D
Acq: 19 May 15 20:18

Tgt Ion:163 Resp: 28237

Ion	Ratio	Lower	Upper
163	100		
77	19.8	17.3	32.1

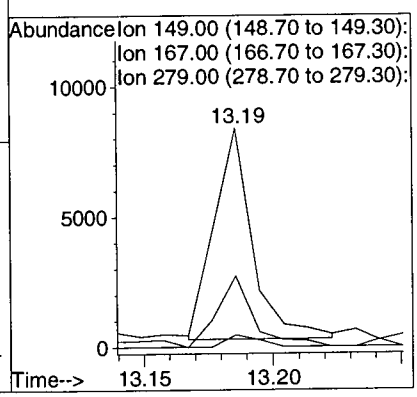




#30
Bis (2-ethylhexyl) phthalate
Concen: 0.11 ppb
RT: 13.19 min Scan# 1277
Delta R.T. -0.02 min
Lab File: 0511Y118.D
Acq: 19 May 15 20:18

Tgt Ion:149 Resp: 8439

Ion	Ratio	Lower	Upper
149	100		
167	34.4	23.1	42.9
279	5.9	7.1	13.3#



EPA 8270D WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16290
QCG: #87DJU-150518A-197636

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
EPA 8270D	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
EPA 8270D	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	81.3	40-125			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	55.0	50-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	41.8	20-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	58.4	40-110			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: PHENOL (S)	30.4	10-115			%	5/18/2015	5/19/2015
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	78.4	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y119
Instrument: Yoda
Sequence: Y150511
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 10:19:18 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y119.D Vial: 19
Acq On : 19 May 15 20:48 Operator: csc
Sample : AZ16290W08 1/900 Inst : Yoda
Misc : water Multiplr: 1.11

Quant Time: Jun 3 9:02 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	816101	40.00	ppb	-0.02
7) Napthalene-D8(IS)	6.62	136	3742421	40.00	ppb	-0.02
13) Acenaphthene-D10(IS)	8.61	164	2155562	40.00	ppb	-0.02
23) Phenanthrene-D10(IS)	10.35	188	3941515	40.00	ppb	-0.02
27) Chrysene-D12(IS)	13.42	240	3527361	40.00	ppb	-0.02
32) Perylene-D12(IS)	15.17	264	2310404	40.00	ppb	-0.02
System Monitoring Compounds						
2) 2-Fluorophenol (S)	4.43	112	2369425	92.79	ppb	0.00
Spiked Amount 222.222			Recovery =	41.757%		
3) Phenol-D6 (S)	5.55	99	2241419	67.54	ppb	-0.09
Spiked Amount 222.222			Recovery =	30.393%		
8) Nitrobenzene-D5(S)	5.89	82	2074978	64.91	ppb	-0.02
Spiked Amount 111.111			Recovery =	58.421%		
16) 2-Fluorobiphenyl(S)	7.84	172	4163624	61.06	ppb	0.00
Spiked Amount 111.111			Recovery =	54.950%		
22) 2,4,6-Tribromophenol(S)	9.63	330	840077	180.70	ppb	-0.04
Spiked Amount 222.222			Recovery =	81.317%		
28) Terphenyl-D14(S)	12.14	244	6107389	87.08	ppb	-0.02
Spiked Amount 111.111			Recovery =	78.370%		
Target Compounds						Qvalue
17) Dimethyl phthalate	8.36	163	26712	0.40	ppb	89
21) Diethyl phthalate	9.10	149	1164129	-0.68	ppb	99

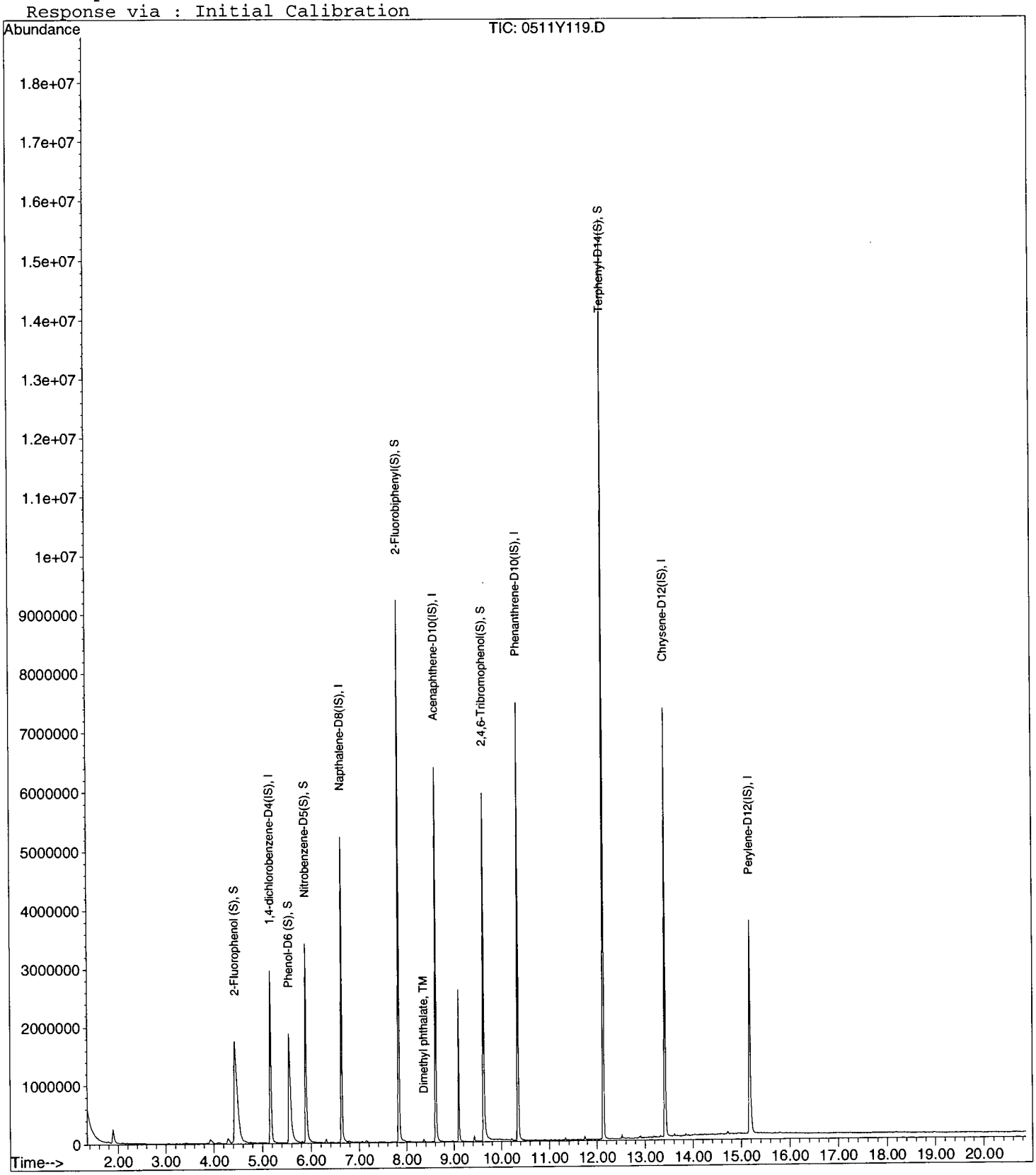
(#) = qualifier out of range (m) = manual integration

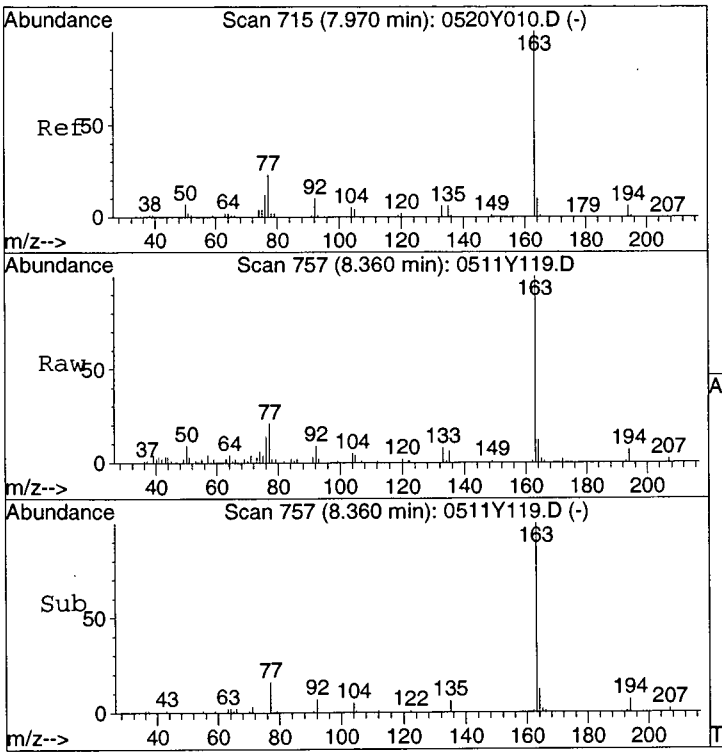
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y119.D Vial: 19
Acq On : 19 May 15 20:48 Operator: csc
Sample : AZ16290W08 1/900 Inst : Yoda
Misc : water Multiplr: 1.11

Quant Time: Jun 3 9:02 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration

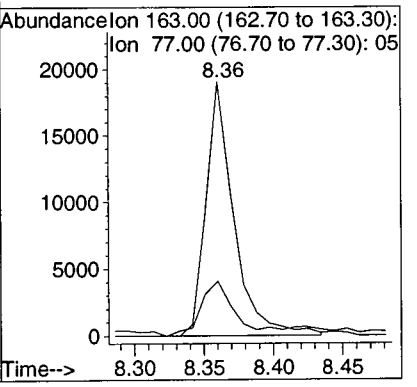




#17
Dimethyl phthalate
Concen: 0.40 ppb
RT: 8.36 min Scan# 757
Delta R.T. -0.01 min
Lab File: 0511Y119.D
Acq: 19 May 15 20:48

Tgt Ion:163 Resp: 26712

Ion	Ratio	Lower	Upper
163	100		
77	19.3	17.3	32.1



EPA METHOD 8270D
Semivolatile Organic Compounds
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 5/11/2015
Matrix: Instrument: Yoda
Initials:

		Compound	0511Y002.D 5	0511Y003.D 10	0511Y004.D 20	0511Y005.D 40	0511Y006.D 50	0511Y007 D 60	0511Y008.D 80	0511Y009.D 100			Avg	%RSD		
1	I	1,4-dichlorobenzene-D4(IS)														
2	SL	2-Fluorophenol (S)	1.373	1.358	1.352	1.416	1.497	1.389	1.334				1.4	4.0	SL	0.994
3	SL	Phenol-D6 (S)	3.483	1.736	1.721	1.781	1.900	1.760	1.706	1.790			2.0	31	SL	0.997
4	*TM	Phenol							1.907	2.026			2.0	4.3	*TM	
5	*TM	1,4-DCB	1.860	1.772	1.788	1.896	2.006	1.849	1.810	1.904			1.9	4.1	*TM	
6	**TM	n-Nitrosodi-n-propylamine	0.8465	0.8515	1.001	1.134	1.098	0.9101	1.115	1.142			1.0	13	**TM	
7	I	Napthalene-D8(IS)														
8	S	Nitrobenzene-D5(S)	0.3510	0.3735	0.3567	0.4048	0.4039	0.3834	0.3761	0.3877			0.38	5.2	S	
9	*TM	2-Nitrophenol	0.1729	0.1743	0.1730	0.2130	0.2134	0.2022	0.1984	0.2049			0.19	9.2	*TM	
10	*TM	2,4-Dichlorophenol	0.2566	0.2452	0.2461	0.2769	0.2791	0.2797	0.2897	0.2821			0.27	6.5	*TM	
11	*TM	Hexachlorobutadiene	0.1596	0.1504	0.1474	0.1695	0.1656	0.1570	0.1534	0.1596			0.16	4.7	*TM	
12	*TM	4-Chloro-3-methylphenol	0.0244	0.0219	0.0220	0.0238	0.0238	0.0221	0.0218	0.0223			0.02	4.6	*TM	
13	I	Acenaphthene-D10(IS)														
14	**TMQ	Hexachlorocyclopentadiene	0.0036	0.0155	0.0490	0.1088	0.1442	0.1504	0.1819	0.2019			0.11	71	**TMQ	0.998
15	*TM	2,4,6-Trichlorophenol	0.2879	0.2873	0.2958	0.3307	0.3389	0.3271	0.3276	0.3327			0.32	6.9	*TM	
16	S	2-Fluorobiphenyl(S)	1.377	1.415	1.346	1.446	1.447	1.382	1.411	1.426			1.4	2.5	S	
17	TM	Dimethyl phthalate	1.345	1.265	1.281	1.417	1.439	1.397	1.365	1.389			1.4	4.6	TM	
18	*TM	Acenaphthene	1.168	1.121	1.119	1.224	1.257	1.218	1.211	1.229			1.2	4.3	*TM	
19	**TMQ	2,4-Dinitrophenol				0.0932	0.1118	0.1079	0.1232	0.1326			0.11	13	**TMQ	0.997
20	**TM	4-Nitrophenol	0.3069	0.3054	0.3154	0.3505	0.3579	0.3661	0.3376	0.3373			0.33	7.0	**TM	
21	TML	Diethyl phthalate	5.762	3.407	2.384	1.966	1.856	1.730	1.588	1.557			2.5	57	TML	0.998
22	SL	2,4,6-Tribromophenol(S)	0.1652	0.0865	0.0856	0.0937	0.0975	0.0990	0.0938	0.0963			0.10	25	SL	0.998
23	I	Phenanthrene-D10(IS)														
24	*TM	n-Nitrosodiphenylamine	1.030	1.004	0.9537	1.162	1.214	1.171	1.138	1.080			1.1	8.4	*TM	
25	*TM	Pentachlorophenol				0.0284	0.0359	0.0340	0.0456	0.0446			0.04	19	*TM	
26	TM	Di-n-butylphthalate	1.164	1.150	1.121	1.359	1.387	1.355	1.186	1.028			1.2	11	TM	
27	I	Chrysene-D12(IS)														
28	S	Terphenyl-D14(S)	0.9047	0.8763	0.8336	0.8991	0.8949	0.8869	0.8794	0.8949			0.88	2.5	S	
29	TM	Butyl benzylphthalate	0.6353	0.5914	0.6032	0.6781	0.6853	0.6909	0.6773	0.6905			0.66	6.2	TM	
30	TM	Bis (2-ethylhexyl) phthalate	0.8594	0.8129	0.8142	0.9603	0.9746	0.9418	0.9057	0.8196			0.89	7.7	TM	
31	*TM	Di-n-octylphthalate	1.512	1.410	1.476	1.756	1.546	1.469	1.232	1.164			1.4	13	*TM	
32	I	Perylene-D12(IS)														
33																
34																
35																

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y002.D Vial: 2
Acq On : 11 May 15 15:02 Operator: csc
Sample : 5ug/ml SVOC 05/11/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:09 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.18	152	1138706	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.65	136	5373454	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	3000493	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.37	188	5249885	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.43	240	4302960	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2997621	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.68	112	390731	8.35	ppb		0.00
Spiked Amount 200.000			Recovery	=	4.177%		
3) Phenol-D6 (S)	5.71	99	495793	5.56	ppb		0.07
Spiked Amount 200.000			Recovery	=	2.780%		
8) Nitrobenzene-D5(S)	5.92	82	235741	4.62	ppb		0.01
Spiked Amount 100.000			Recovery	=	4.623%		
16) 2-Fluorobiphenyl(S)	7.85	172	516567	85308.30	ppb		0.00
Spiked Amount 100.000			Recovery	=	85308.305%		
22) 2,4,6-Tribromophenol(S)	9.68	330	61976	8.93	ppb		0.01
Spiked Amount 200.000			Recovery	=	4.464%		
28) Terphenyl-D14(S)	12.15	244	486594	5.12	ppb		0.00
Spiked Amount 100.000			Recovery	=	5.119%		
Target Compounds							Qvalue
5) 1,4-DCB	5.21	146	264725	5.00	ppb		97
6) n-Nitrosodi-n-propylamine	5.68	43	120493	4.18	ppb		96
9) 2-Nitrophenol	6.29	139	116111	4.42	ppb	#	91
10) 2,4-Dichlorophenol	6.96	162	172376	4.76	ppb		98
11) Hexachlorobutadiene	6.75	225	107207	5.06	ppb		99
12) 4-Chloro-3-methylphenol	7.61	107	16367	5.70	ppb	#	15
14) Hexachlorocyclopentadiene	7.57	237	1362	8.61	ppb	#	77
15) 2,4,6-Trichlorophenol	8.04	196	107979	4.56	ppb		99
17) Dimethyl phthalate	8.36	163	504309	4.93	ppb		98
18) Acenaphthene	8.67	154	438052	4.89	ppb		98
19) 2,4-Dinitrophenol	9.05	184	1269	8.90	ppb		100
20) 4-Nitrophenol	9.63	65	115107	4.58	ppb		99
21) Diethyl phthalate	9.12	149	2161055	4.77	ppb		98
24) n-Nitrosodiphenylamine	10.80	167	675664	4.71	ppb		100
25) Pentachlorophenol	10.44	266	10337	2.09	ppb		91
26) Di-n-butylphthalate	10.93	149	764059	4.78	ppb		98
29) Butyl benzylphthalate	12.67	149	341723	4.84	ppb		97
30) Bis (2-ethylhexyl) phthala	13.20	149	462244	4.85	ppb	#	95
31) Di-n-octylphthalate	13.89	149	813257	5.23	ppb		97

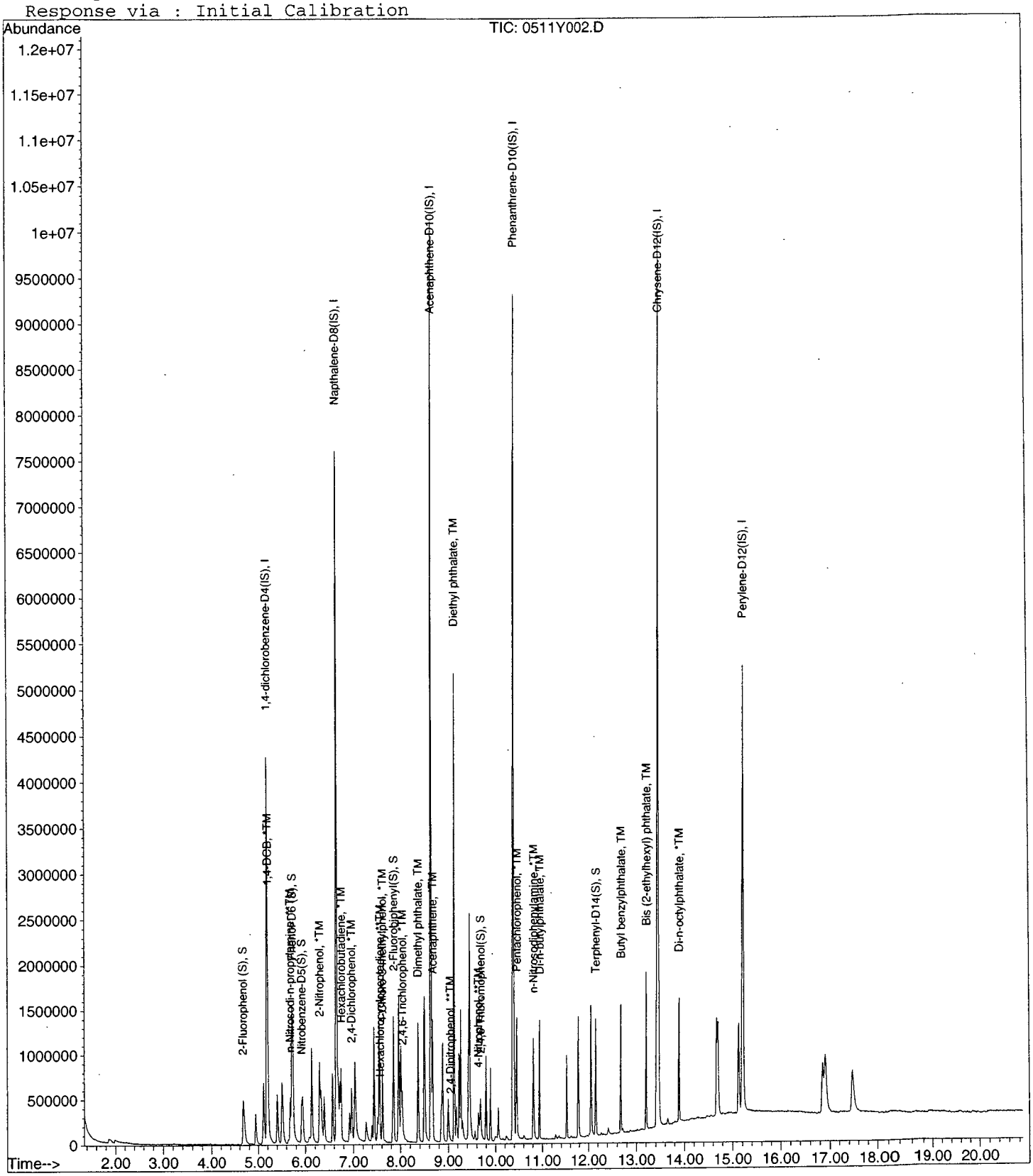
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y002.D Vial: 2
Acq On : 11 May 15 15:02 Operator: csc
Sample : 5ug/ml SVOC 05/11/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:09 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y003.D Vial: 3
Acq On : 11 May 15 15:31 Operator: csc
Sample : 10ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1178502	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	5210699	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2755221	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.37	188	4621109	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.43	240	4092258	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2713698	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.66	112	800082	18.16	ppb		-0.02
Spiked Amount 200.000			Recovery =	9.082%			
3) Phenol-D6 (S)	5.70	99	1023183	15.62	ppb		0.06
Spiked Amount 200.000			Recovery =	7.811%			
8) Nitrobenzene-D5(S)	5.92	82	486515	9.84	ppb		0.01
Spiked Amount 100.000			Recovery =	9.838%			
16) 2-Fluorobiphenyl(S)	7.85	172	974495	175259.05	ppb		0.00
Spiked Amount 100.000			Recovery =	175259.047%			
22) 2,4,6-Tribromophenol(S)	9.68	330	119229	18.35	ppb		0.01
Spiked Amount 200.000			Recovery =	9.174%			
28) Terphenyl-D14(S)	12.15	244	896504	9.92	ppb		0.00
Spiked Amount 100.000			Recovery =	9.916%			
Target Compounds							Qvalue
5) 1,4-DCB	5.21	146	522173	9.53	ppb		99
6) n-Nitrosodi-n-propylamine	5.68	43	250875	8.41	ppb		92
9) 2-Nitrophenol	6.29	139	227009	8.91	ppb	#	91
10) 2,4-Dichlorophenol	6.96	162	319475	9.10	ppb		98
11) Hexachlorobutadiene	6.75	225	195982	9.53	ppb		99
12) 4-Chloro-3-methylphenol	7.61	107	28525	10.24	ppb	#	17
14) Hexachlorocyclopentadiene	7.57	237	10680	9.80	ppb		92
15) 2,4,6-Trichlorophenol	8.04	196	197909	9.09	ppb		96
17) Dimethyl phthalate	8.36	163	871619	9.29	ppb		98
18) Acenaphthene	8.67	154	772479	9.40	ppb		98
19) 2,4-Dinitrophenol	9.08	184	826	8.85	ppb		100
20) 4-Nitrophenol	9.63	65	210394	9.12	ppb		98
21) Diethyl phthalate	9.12	149	2346472	8.69	ppb		98
24) n-Nitrosodiphenylamine	10.80	167	1160295	9.18	ppb		100
25) Pentachlorophenol	10.44	266	6435	1.48	ppb		88
26) Di-n-butylphthalate	10.93	149	1329024	9.44	ppb		98
29) Butyl benzylphthalate	12.67	149	605002	9.01	ppb		92
30) Bis (2-ethylhexyl) phthala	13.20	149	831683	9.17	ppb	#	93
31) Di-n-octylphthalate	13.88	149	1442686	9.76	ppb		100

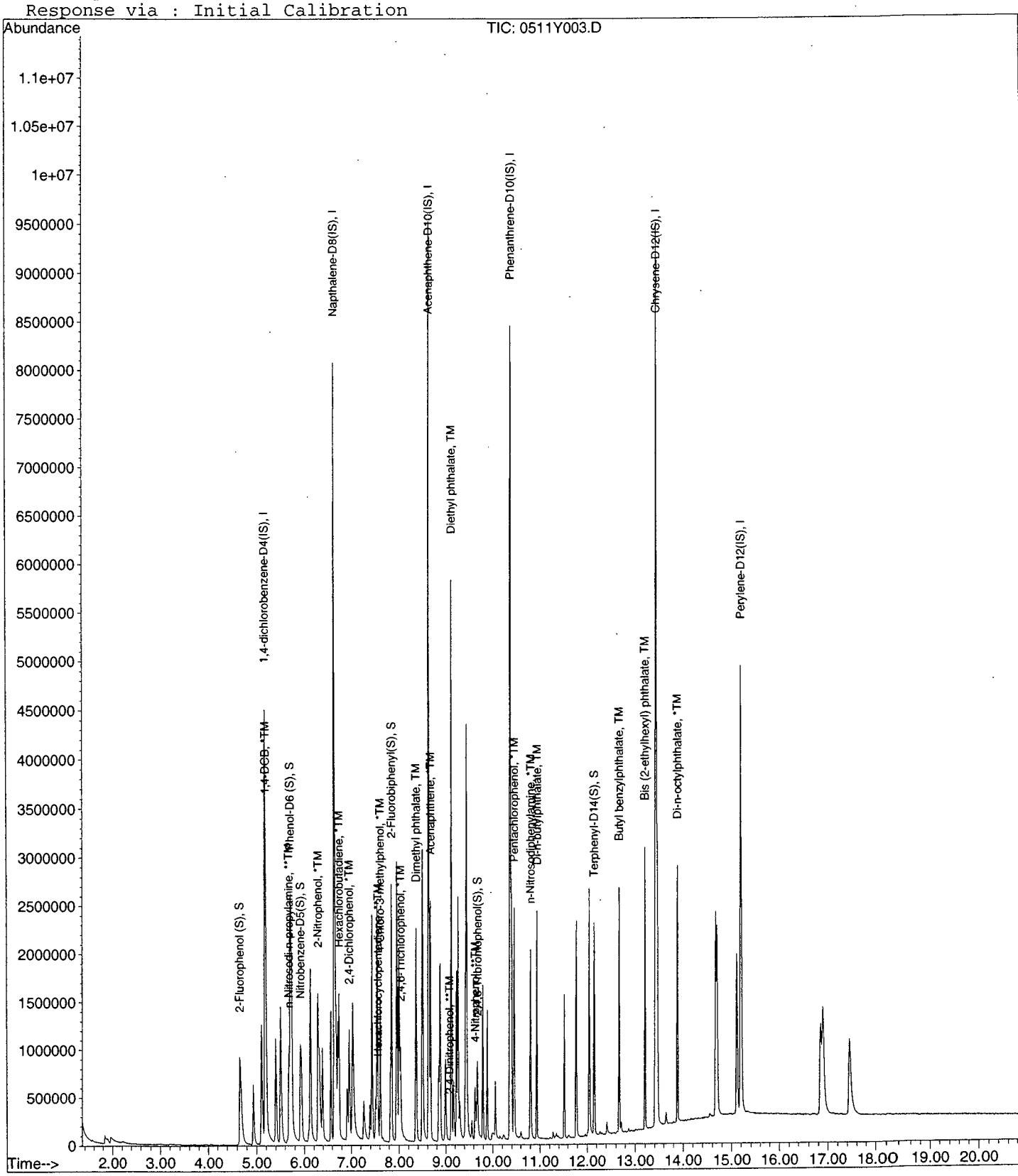
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y003.D Vial: 3
Acq On : 11 May 15 15:31 Operator: csc
Sample : 10ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y004.D Vial: 4
Acq On : 11 May 15 16:01 Operator: csc
Sample : 20ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1020025	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	4933793	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2659042	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.36	188	4601746	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	3940933	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2533558	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.65	112	1378810	37.82	ppb		-0.03
Spiked Amount 200.000			Recovery =	18.911%			
3) Phenol-D6 (S)	5.69	99	1755591	35.45	ppb		0.05
Spiked Amount 200.000			Recovery =	17.727%			
8) Nitrobenzene-D5(S)	5.92	82	880019	18.79	ppb		0.00
Spiked Amount 100.000			Recovery =	18.794%			
16) 2-Fluorobiphenyl(S)	7.85	172	1788984	333379.22	ppb		0.00
Spiked Amount 100.000			Recovery =	333379.224%			
22) 2,4,6-Tribromophenol(S)	9.68	330	227716	35.99	ppb		0.00
Spiked Amount 200.000			Recovery =	17.996%			
28) Terphenyl-D14(S)	12.15	244	1642527	18.87	ppb		0.00
Spiked Amount 100.000			Recovery =	18.865%			
Target Compounds							Qvalue
5) 1,4-DCB	5.20	146	912065	19.22	ppb		98
6) n-Nitrosodi-n-propylamine	5.68	43	510344	19.77	ppb		88
9) 2-Nitrophenol	6.28	139	426892	17.70	ppb	#	92
10) 2,4-Dichlorophenol	6.96	162	606995	18.27	ppb		99
11) Hexachlorobutadiene	6.74	225	363580	18.68	ppb		99
12) 4-Chloro-3-methylphenol	7.61	107	54228	20.56	ppb	#	15
14) Hexachlorocyclopentadiene	7.57	237	65085	16.43	ppb		96
15) 2,4,6-Trichlorophenol	8.03	196	393270	18.72	ppb		99
17) Dimethyl phthalate	8.36	163	1702989	18.80	ppb		98
18) Acenaphthene	8.67	154	1487740	18.75	ppb		97
19) 2,4-Dinitrophenol	9.07	184	2872	9.16	ppb		100
20) 4-Nitrophenol	9.62	65	419319	18.84	ppb		98
21) Diethyl phthalate	9.12	149	3169371	18.85	ppb		100
24) n-Nitrosodiphenylamine	10.80	167	2194315	17.43	ppb		98
25) Pentachlorophenol	10.43	266	17617	4.06	ppb		94
26) Di-n-butylphthalate	10.93	149	2578197	18.39	ppb		98
29) Butyl benzylphthalate	12.67	149	1188545	18.38	ppb		89
30) Bis (2-ethylhexyl) phthala	13.20	149	1604266	18.38	ppb		99
31) Di-n-octylphthalate	13.88	149	2907969	20.42	ppb		100

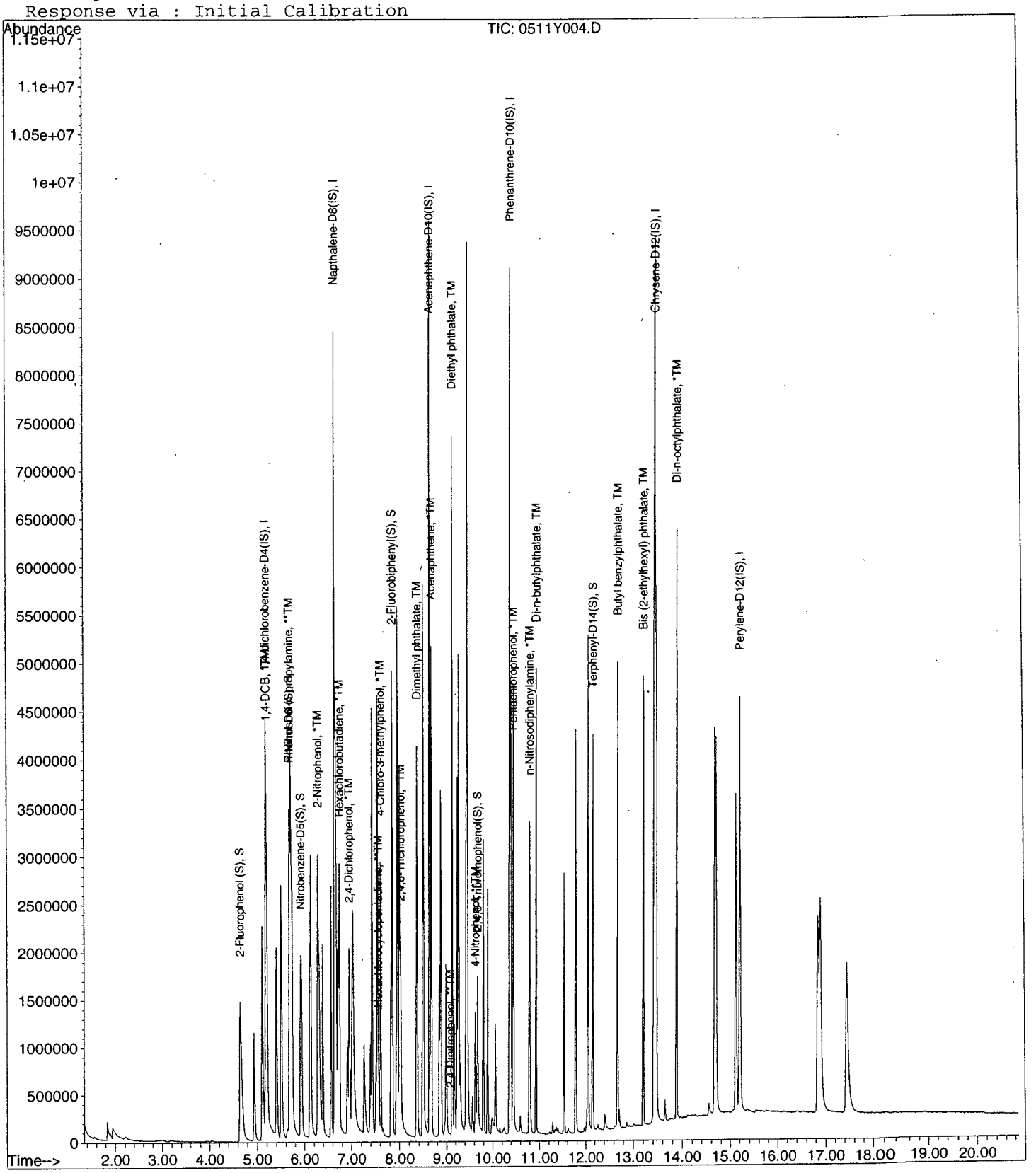
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y004.D Vial: 4
Acq On : 11 May 15 16:01 Operator: csc
Sample : 20ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y005.D Vial: 5
Acq On : 11 May 15 16:31 Operator: csc
Sample : 40ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1013635	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	4423901	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2574343	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.36	188	4201904	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	3846909	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2512246	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.62	112	2871462	81.10	ppb		-0.06
Spiked Amount 200.000			Recovery = 40.548%				
3) Phenol-D6 (S)	5.65	99	3610936	78.26	ppb		0.00
Spiked Amount 200.000			Recovery = 39.131%				
8) Nitrobenzene-D5(S)	5.91	82	1790926	42.66	ppb		0.00
Spiked Amount 100.000			Recovery = 42.656%				
16) 2-Fluorobiphenyl(S)	7.85	172	3722478	716511.23	ppb		0.00
Spiked Amount 100.000			Recovery = 716511.228%				
22) 2,4,6-Tribromophenol(S)	9.67	330	482209	78.34	ppb		0.00
Spiked Amount 200.000			Recovery = 39.168%				
28) Terphenyl-D14(S)	12.15	244	3458764	40.70	ppb		0.00
Spiked Amount 100.000			Recovery = 40.697%				
Target Compounds							Qvalue
5) 1,4-DCB	5.20	146	1922032	40.76	ppb		99
6) n-Nitrosodi-n-propylamine	5.68	43	1149274	44.81	ppb		91
9) 2-Nitrophenol	6.28	139	942187	43.57	ppb		95
10) 2,4-Dichlorophenol	6.95	162	1224996	41.11	ppb		99
11) Hexachlorobutadiene	6.75	225	749835	42.96	ppb		100
12) 4-Chloro-3-methylphenol	7.61	107	105205	44.48	ppb	#	16
14) Hexachlorocyclopentadiene	7.57	237	280080	37.79	ppb		99
15) 2,4,6-Trichlorophenol	8.03	196	851342	41.87	ppb		95
17) Dimethyl phthalate	8.37	163	3648924	41.62	ppb	#	84
18) Acenaphthene	8.67	154	3150125	41.02	ppb		97
19) 2,4-Dinitrophenol	8.94	184	240044	40.61	ppb	#	100
20) 4-Nitrophenol	9.61	65	902268	41.88	ppb		97
21) Diethyl phthalate	9.13	149	5060608	41.95	ppb		98
24) n-Nitrosodiphenylamine	10.79	167	4881037	42.47	ppb		98
25) Pentachlorophenol	10.42	266	119279	30.12	ppb		93
26) Di-n-butylphthalate	10.93	149	5711781	44.61	ppb		97
29) Butyl benzylphthalate	12.67	149	2608403	41.31	ppb		87
30) Bis (2-ethylhexyl) phthala	13.21	149	3694082	43.35	ppb		97
31) Di-n-octylphthalate	13.88	149	6753599	48.58	ppb		100

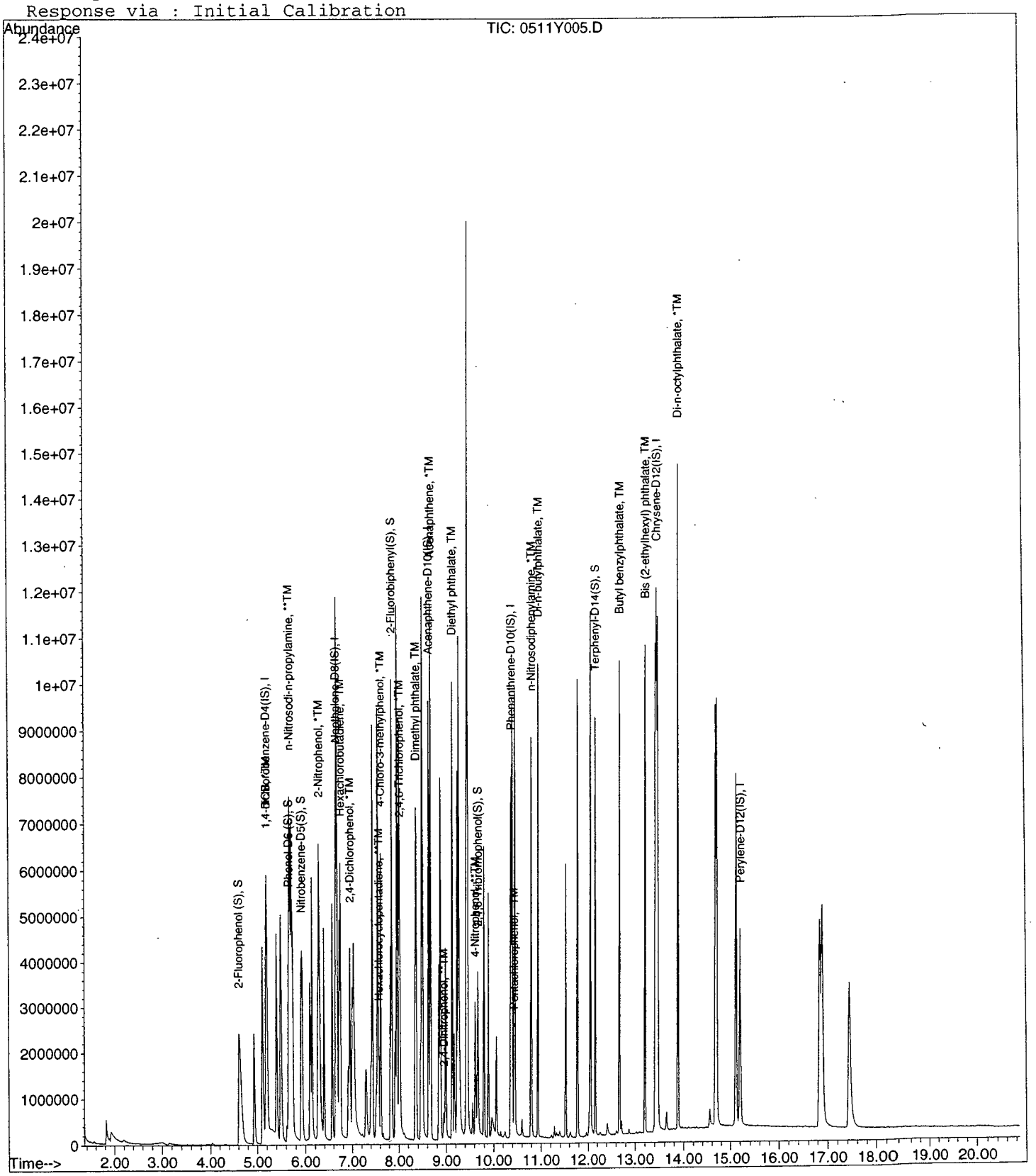
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y005.D Vial: 5
Acq On : 11 May 15 16:31 Operator: csc
Sample : 40ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y006.D Vial: 6
Acq On : 11 May 15 17:00 Operator: csc
Sample : 50ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1047137	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	4821015	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2679462	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.36	188	4287254	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	4052606	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2666723	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.60	112	3919715	107.70	ppb		-0.08
Spiked Amount 200.000			Recovery = 53.849%				
3) Phenol-D6 (S)	5.64	99	4973035	105.86	ppb		0.00
Spiked Amount 200.000			Recovery = 52.928%				
8) Nitrobenzene-D5(S)	5.91	82	2433777	53.19	ppb		0.00
Spiked Amount 100.000			Recovery = 53.192%				
16) 2-Fluorobiphenyl(S)	7.85	172	4845940	896164.43	ppb		0.00
Spiked Amount 100.000			Recovery = 896164.430%				
22) 2,4,6-Tribromophenol(S)	9.67	330	653172	101.85	ppb		0.00
Spiked Amount 200.000			Recovery = 50.925%				
28) Terphenyl-D14(S)	12.16	244	4533282	50.63	ppb		0.00
Spiked Amount 100.000			Recovery = 50.632%				
Target Compounds							Qvalue
5) 1,4-DCB	5.20	146	2625217	53.90	ppb		98
6) n-Nitrosodi-n-propylamine	5.68	43	1437152	54.24	ppb		97
9) 2-Nitrophenol	6.28	139	1286210	54.58	ppb		96
10) 2,4-Dichlorophenol	6.95	162	1682029	51.80	ppb		99
11) Hexachlorobutadiene	6.74	225	997720	52.46	ppb		99
12) 4-Chloro-3-methylphenol	7.61	107	143252	55.57	ppb	#	14
14) Hexachlorocyclopentadiene	7.57	237	483055	52.04	ppb		99
15) 2,4,6-Trichlorophenol	8.02	196	1134976	53.63	ppb		99
17) Dimethyl phthalate	8.37	163	4818491	52.80	ppb		88
18) Acenaphthene	8.67	154	4211055	52.68	ppb		96
19) 2,4-Dinitrophenol	8.94	184	374484	53.59	ppb	#	100
20) 4-Nitrophenol	9.61	65	1198596	53.45	ppb		97
21) Diethyl phthalate	9.13	149	6214695	52.50	ppb		99
24) n-Nitrosodiphenylamine	10.79	167	6507355	55.50	ppb		98
25) Pentachlorophenol	10.42	266	192231	47.58	ppb		99
26) Di-n-butylphthalate	10.93	149	7431108	56.88	ppb		98
29) Butyl benzylphthalate	12.68	149	3471406	52.19	ppb		91
30) Bis (2-ethylhexyl) phthala	13.20	149	4937048	55.00	ppb		96
31) Di-n-octylphthalate	13.88	149	7830724	53.47	ppb		95

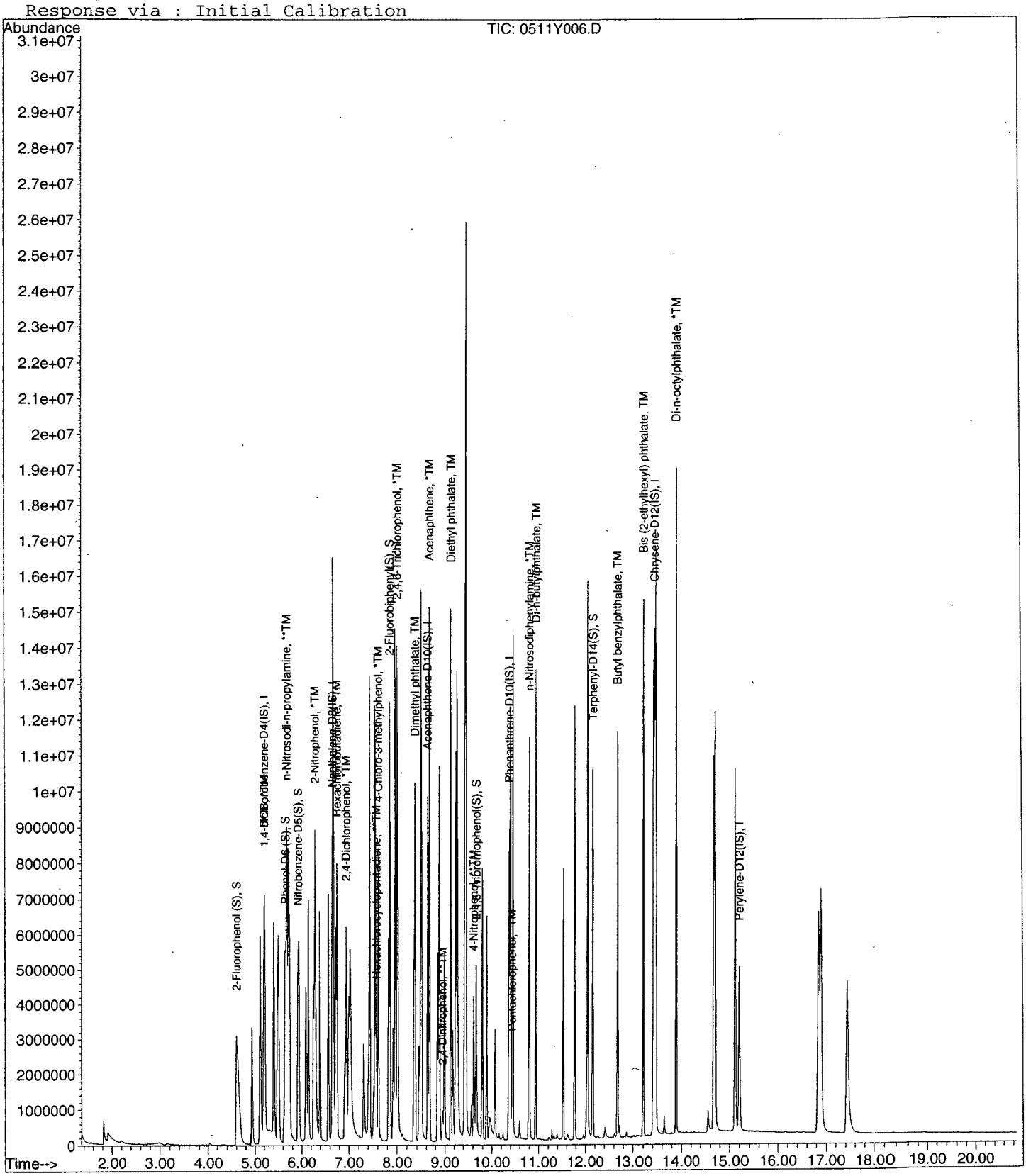
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y006.D Vial: 6
Acq On : 11 May 15 17:00 Operator: csc
Sample : 50ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y007.D
Acq On : 11 May 15 17:31
Sample : 60ug/ml SVOC
Misc :

Vial: 7
Operator: csc
Inst : Yoda
Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1006009	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	4566836	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2449387	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.37	188	3972629	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	3769898	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2455423	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.59	112	4192295	120.09	ppb		-0.09
Spiked Amount 200.000			Recovery = 60.043%				
3) Phenol-D6 (S)	5.63	99	5313218	118.23	ppb		0.00
Spiked Amount 200.000			Recovery = 59.116%				
8) Nitrobenzene-D5(S)	5.91	82	2626334	60.60	ppb		0.00
Spiked Amount 100.000			Recovery = 60.596%				
16) 2-Fluorobiphenyl(S)	7.85	172	5076766	1027039.18	ppb		0.00
Spiked Amount 100.000			Recovery = 1027039.175%				
22) 2,4,6-Tribromophenol(S)	9.67	330	727637	124.05	ppb		0.00
Spiked Amount 200.000			Recovery = 62.023%				
28) Terphenyl-D14(S)	12.16	244	5015140	60.21	ppb		0.00
Spiked Amount 100.000			Recovery = 60.215%				
Target Compounds							Qvalue
5) 1,4-DCB	5.20	146	2790147	59.62	ppb		99
6) n-Nitrosodi-n-propylamine	5.68	43	1373409	53.95	ppb		90
9) 2-Nitrophenol	6.28	139	1385334	62.06	ppb		95
10) 2,4-Dichlorophenol	6.94	162	1916108	62.29	ppb		98
11) Hexachlorobutadiene	6.75	225	1075620	59.70	ppb		99
12) 4-Chloro-3-methylphenol	7.61	107	151687	62.12	ppb	#	14
14) Hexachlorocyclopentadiene	7.57	237	552625	60.01	ppb		98
15) 2,4,6-Trichlorophenol	8.02	196	1201659	62.11	ppb		99
17) Dimethyl phthalate	8.37	163	5133318	61.53	ppb		88
18) Acenaphthene	8.67	154	4473980	61.23	ppb		97
19) 2,4-Dinitrophenol	8.94	184	396460	59.31	ppb	#	100
20) 4-Nitrophenol	9.61	65	1345173	65.62	ppb		98
21) Diethyl phthalate	9.13	149	6355625	60.72	ppb		99
24) n-Nitrosodiphenylamine	10.79	167	6978672	64.23	ppb		98
25) Pentachlorophenol	10.41	266	202664	54.13	ppb		97
26) Di-n-butylphthalate	10.93	149	8073558	66.70	ppb		97
29) Butyl benzylphthalate	12.67	149	3906726	63.14	ppb		85
30) Bis (2-ethylhexyl) phthala	13.21	149	5325476	63.77	ppb		96
31) Di-n-octylphthalate	13.88	149	8304646	60.96	ppb	#	92

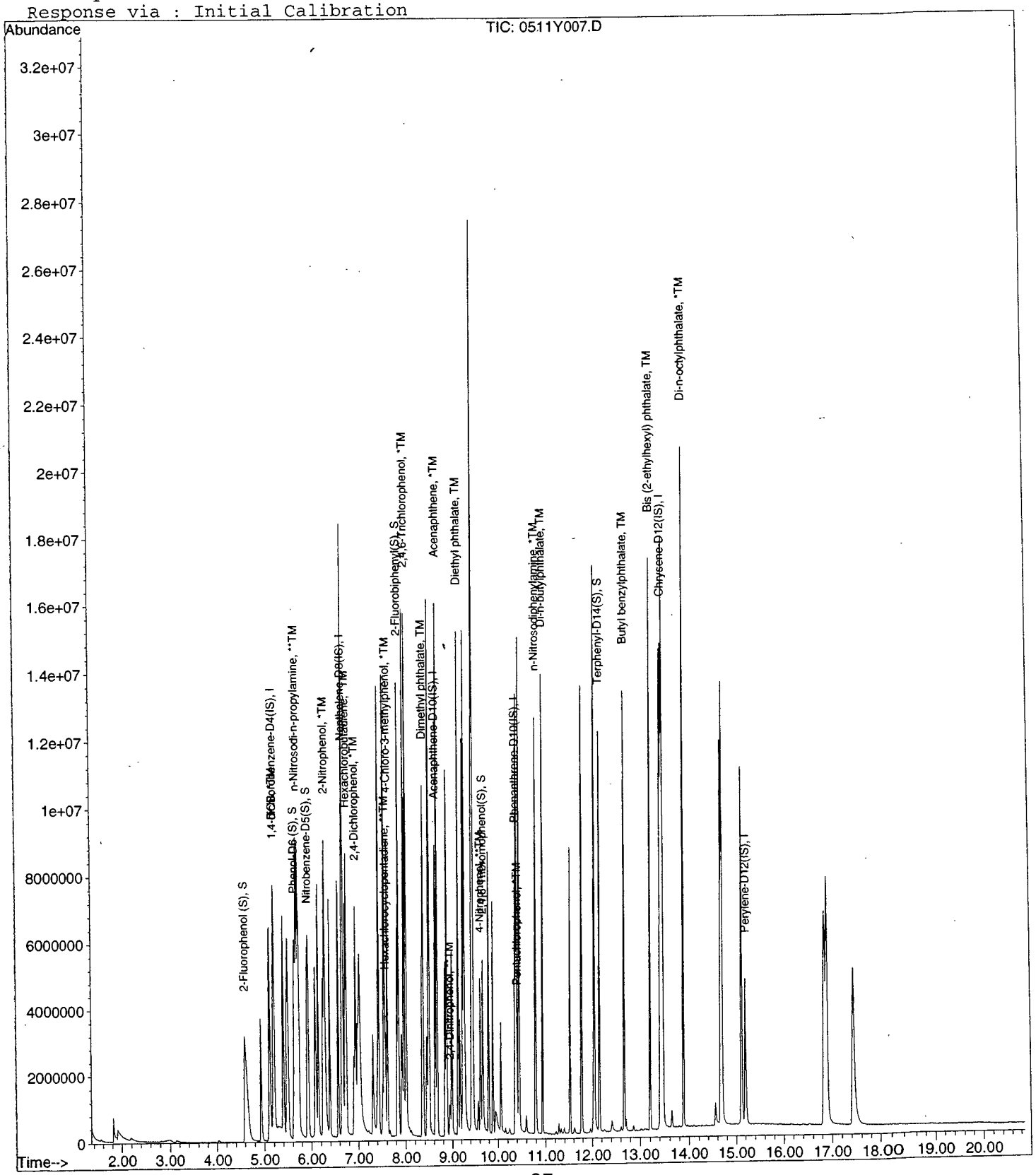
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y007.D Vial: 7
Acq On : 11 May 15 17:31 Operator: csc
Sample : 60ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y008.D Vial: 8
Acq On : 11 May 15 18:00 Operator: csc
Sample : 80ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1159400	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	5180087	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2776886	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.36	188	4498323	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	4195318	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2752772	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.56	112	6188226	154.28	ppb		-0.11
Spiked Amount 200.000			Recovery = 77.138%				
3) Phenol-D6 (S)	5.61	99	7912340	154.11	ppb		-0.03
Spiked Amount 200.000			Recovery = 77.054%				
8) Nitrobenzene-D5(S)	5.92	82	3896108	79.25	ppb		0.00
Spiked Amount 100.000			Recovery = 79.250%				
16) 2-Fluorobiphenyl(S)	7.85	172	7833673	1397863.16	ppb		0.00
Spiked Amount 100.000			Recovery = 1397863.161%				
22) 2,4,6-Tribromophenol(S)	9.67	330	1041925	156.59	ppb		0.00
Spiked Amount 200.000			Recovery = 78.296%				
28) Terphenyl-D14(S)	12.16	244	7378981	79.61	ppb		0.00
Spiked Amount 100.000			Recovery = 79.612%				
Target Compounds							Qvalue
4) Phenol	5.63	94	4422424	77.58	ppb		96
5) 1,4-DCB	5.20	146	4196621	77.81	ppb		99
6) n-Nitrosodi-n-propylamine	5.69	43	2584370	88.09	ppb		95
9) 2-Nitrophenol	6.28	139	2055111	81.16	ppb		96
10) 2,4-Dichlorophenol	6.94	162	3000879	86.01	ppb		99
11) Hexachlorobutadiene	6.74	225	1588965	77.75	ppb		100
12) 4-Chloro-3-methylphenol	7.61	107	225976	81.59	ppb	#	14
14) Hexachlorocyclopentadiene	7.57	237	1010074	81.09	ppb		98
15) 2,4,6-Trichlorophenol	8.02	196	1819654	82.96	ppb		97
17) Dimethyl phthalate	8.37	163	7583527	80.18	ppb		94
18) Acenaphthene	8.67	154	6723570	81.16	ppb		97
19) 2,4-Dinitrophenol	8.94	184	684392	79.27	ppb	#	100
20) 4-Nitrophenol	9.62	65	1874814	80.67	ppb		98
21) Diethyl phthalate	9.13	149	8817254	78.05	ppb		99
24) n-Nitrosodiphenylamine	10.79	167	10234447	83.19	ppb		98
25) Pentachlorophenol	10.41	266	410077	96.73	ppb		96
26) Di-n-butylphthalate	10.93	149	10672577	77.86	ppb		98
29) Butyl benzylphthalate	12.68	149	5683167	82.54	ppb		95
30) Bis (2-ethylhexyl) phthala	13.20	149	7599344	81.77	ppb	#	98
31) Di-n-octylphthalate	13.88	149	10338190	68.19	ppb	#	79

(#) = qualifier out of range (m) = manual integration

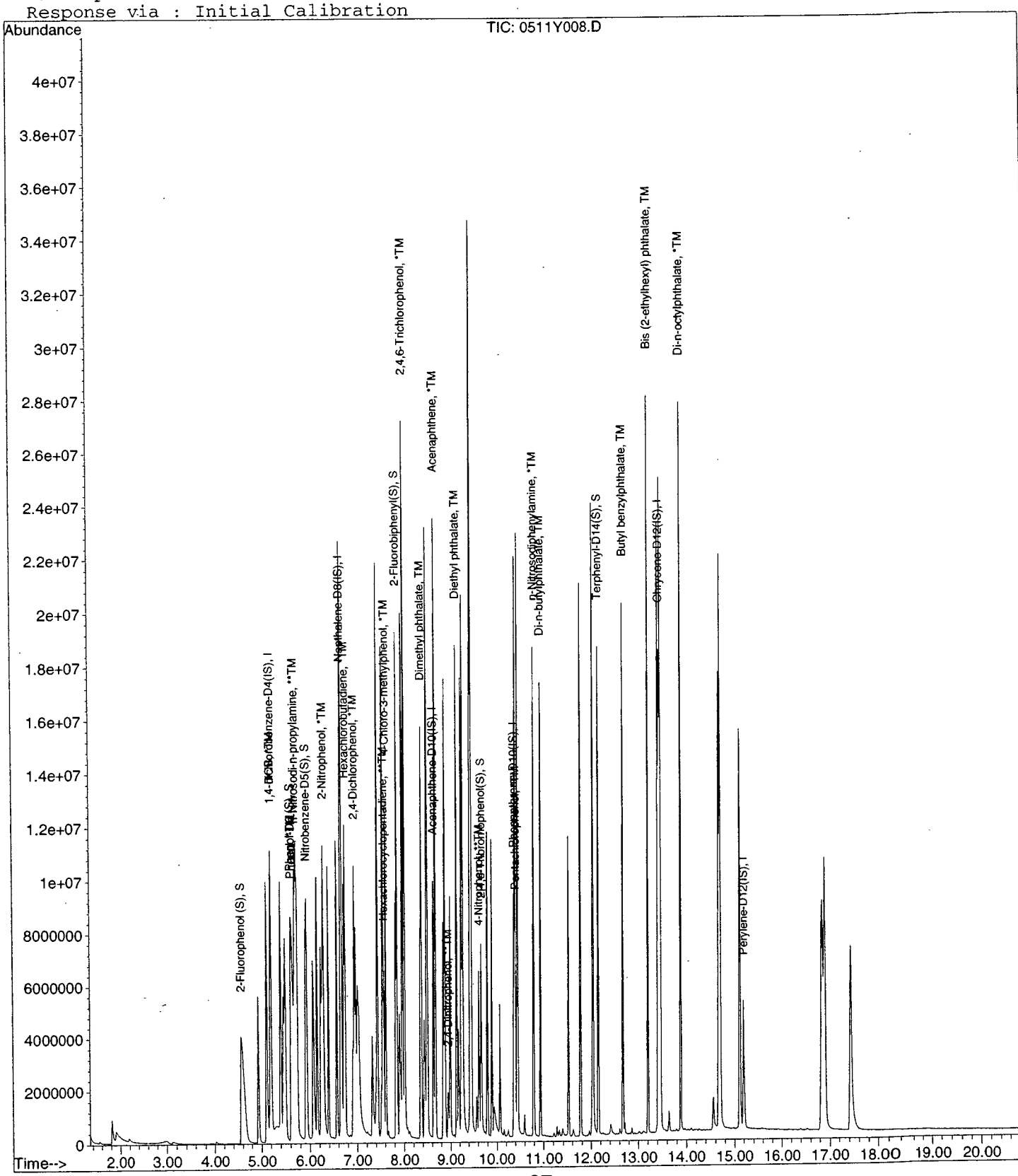
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y008.D
Acq On : 11 May 15 18:00
Sample : 80ug/ml SVOC
Misc :

Vial: 8
Operator: csc
Inst : Yoda
Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y009.D Vial: 9
Acq On : 11 May 15 18:30 Operator: csc
Sample : 100ug/ml SVOC Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1055273	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	4775142	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2629736	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.36	188	4228462	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	3946101	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2566399	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	0.00	112	0	0.00	ppb		
Spiked Amount 200.000			Recovery = 0.000%				
3) Phenol-D6 (S)	5.59	99	9445339	203.54	ppb		-0.05
Spiked Amount 200.000			Recovery = 101.771%				
8) Nitrobenzene-D5(S)	5.92	82	4627792	102.12	ppb		0.00
Spiked Amount 100.000			Recovery = 102.116%				
16) 2-Fluorobiphenyl(S)	7.85	172	9372802	1766097.04	ppb		0.00
Spiked Amount 100.000			Recovery = 1766097.040%				
22) 2,4,6-Tribromophenol(S)	9.67	330	1266557	200.91	ppb		0.00
Spiked Amount 200.000			Recovery = 100.455%				
28) Terphenyl-D14(S)	12.16	244	8828282	101.26	ppb		0.00
Spiked Amount 100.000			Recovery = 101.264%				
Target Compounds							Qvalue
4) Phenol	5.62	94	5345783	103.03	ppb		97
5) 1,4-DCB	5.20	146	5023333	102.33	ppb		98
6) n-Nitrosodi-n-propylamine	5.70	43	3013081	112.84	ppb		95
9) 2-Nitrophenol	6.28	139	2445521	104.77	ppb		97
10) 2,4-Dichlorophenol	6.94	162	3367079	104.69	ppb		99
11) Hexachlorobutadiene	6.74	225	1905248	101.13	ppb		100
12) 4-Chloro-3-methylphenol	7.61	107	265907	104.14	ppb	#	13
14) Hexachlorocyclopentadiene	7.57	237	1327306	99.32	ppb		99
15) 2,4,6-Trichlorophenol	8.01	196	2187578	105.32	ppb		100
17) Dimethyl phthalate	8.38	163	9134695	101.99	ppb	#	82
18) Acenaphthene	8.67	154	8078541	102.97	ppb		97
19) 2,4-Dinitrophenol	8.94	184	872028	97.02	ppb	#	100
20) 4-Nitrophenol	9.62	65	2217701	100.76	ppb		99
21) Diethyl phthalate	9.14	149	10238040	99.47	ppb		98
24) n-Nitrosodiphenylamine	10.79	167	11413910	98.70	ppb		97
25) Pentachlorophenol	10.40	266	471830	118.40	ppb		98
26) Di-n-butylphthalate	10.93	149	10868870	84.36	ppb		95
29) Butyl benzylphthalate	12.68	149	6811732	105.18	ppb		96
30) Bis (2-ethylhexyl) phthala	13.20	149	8085581	92.50	ppb		91
31) Di-n-octylphthalate	13.88	149	11484643	80.53	ppb	#	70

(#) = qualifier out of range (m) = manual integration

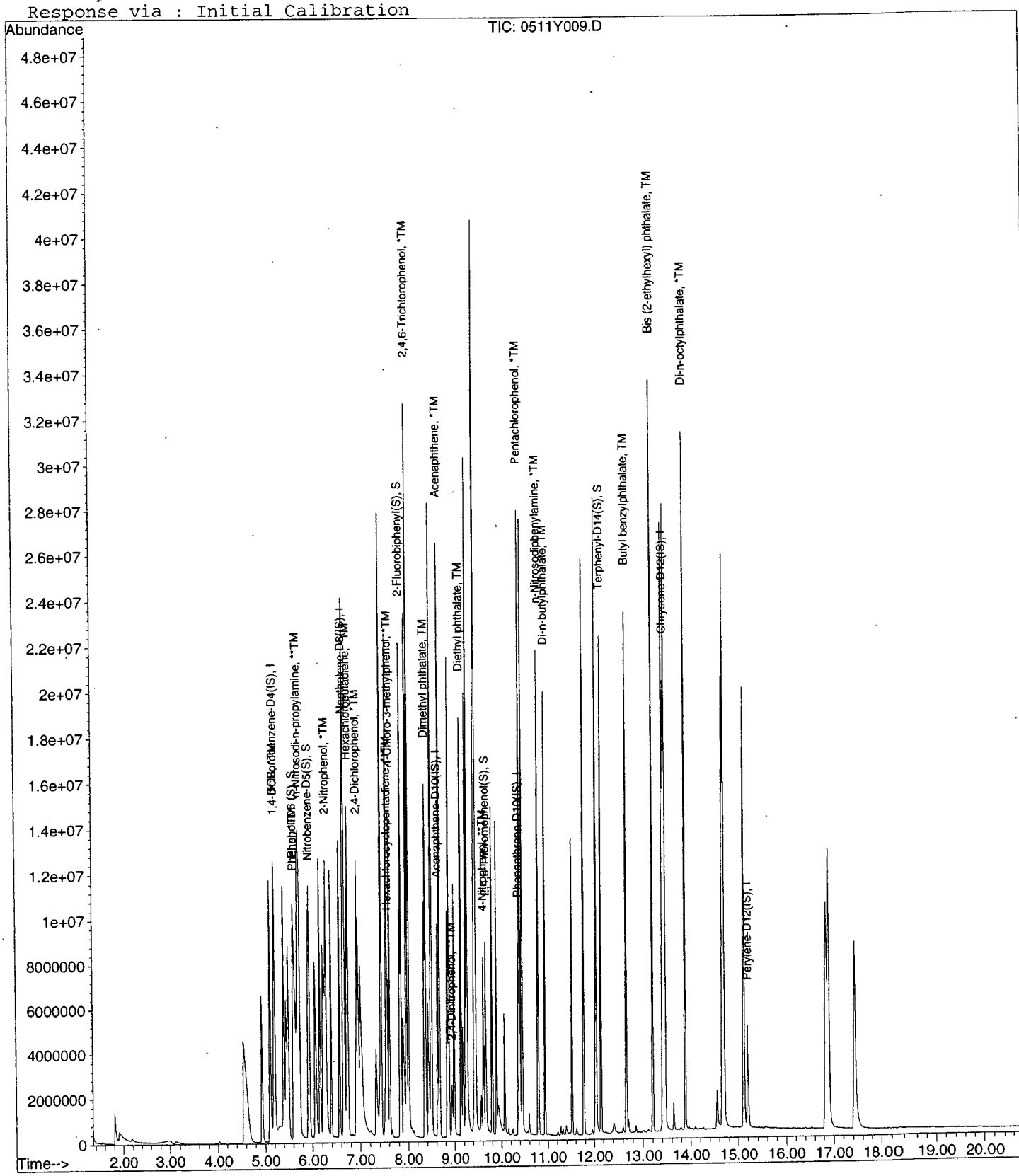
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y009.D
Acq On : 11 May 15 18:30
Sample : 100ug/ml SVOC
Misc :

Vial: 9
Operator: csc
Inst : Yoda
Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5/11/2015
Instrument: Yoda
Initial Cal. Date: 5/11/2015
Data File: 0511Y010.D

		Compound	MEAN	CCRF	%D		%Drift
1	*TM	1,4-DCB	1.861	1.746	6.2	*TM	
2	**TM	n-Nitrosodi-n-propylamine	1.012	0.8599	15	**TM	
3	*TM	2-Nitrophenol	0.1940	0.1856	4.3	*TM	
4	*TM	2,4-Dichlorophenol	0.2694	0.2480	8.0	*TM	
5	*TM	Hexachlorobutadiene	0.1578	0.1471	6.8	*TM	
6	*TM	4-Chloro-3-methylphenol	0.0228	0.0218	4.4	*TM	
7	**TMQ	Hexachlorocyclopentadiene	0.1069	0.1317	23	**TMQ	1.8
8	*TM	2,4,6-Trichlorophenol	0.3160	0.2999	5.1	*TM	
9	TM	Dimethyl phthalate	1.362	1.294	5.0	TM	
10	*TM	Acenaphthene	1.193	1.117	6.4	*TM	
11	**TMQ	2,4-Dinitrophenol	0.1138	0.0981	14	**TMQ	2.1
12	**TM	4-Nitrophenol	0.3346	0.3189	4.7	**TM	
13	TML	Diethyl phthalate	2.531	1.742	31	TML	3.5
14	*TM	n-Nitrosodiphenylamine	1.094	1.072	2.0	*TM	
15	*TM	Pentachlorophenol	0.0377	0.0339	10.0	*TM	
16	TM	Di-n-butylphthalate	1.219	1.227	0.66	TM	
17	TM	Butyl benzylphthalate	0.6565	0.6219	5.3	TM	
18	TM	Bis (2-ethylhexyl) phthalate	0.8861	0.8597	3.0	TM	
19	*TM	Di-n-octylphthalate	1.446	1.467	1.5	*TM	
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y010.D Vial: 10
Acq On : 11 May 15 19:00 Operator: csc
Sample : 50ug/ml SVOC SS 05/11/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:09:49 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.19	152	1141630	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.64	136	5124811	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.63	164	2810687	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.37	188	4555451	40.00	ppb		0.00
27) Chrysene-D12(IS)	13.44	240	4241350	40.00	ppb		0.00
32) Perylene-D12(IS)	15.19	264	2775925	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	0.00	112	0	0.00	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
3) Phenol-D6 (S)	5.68	99	5853	-4.44	ppb		0.04
Spiked Amount 200.000			Recovery =	-2.223%			
8) Nitrobenzene-D5(S)	0.00	82	0	0.00	ppb		
Spiked Amount 100.000			Recovery =	0.000%			
16) 2-Fluorobiphenyl(S)	7.85	172	467	82.33	ppb		0.00
Spiked Amount 100.000			Recovery =	82.331%			
22) 2,4,6-Tribromophenol(S)	9.66	330	1366	0.53	ppb		0.00
Spiked Amount 200.000			Recovery =	0.265%			
28) Terphenyl-D14(S)	12.16	244	920	0.01	ppb		0.00
Spiked Amount 100.000			Recovery =	0.010%			
Target Compounds							Qvalue
5) 1,4-DCB	5.20	146	2491413	46.92	ppb		99
6) n-Nitrosodi-n-propylamine	5.68	43	1227053	42.48	ppb		92
9) 2-Nitrophenol	6.28	139	1188775	47.46	ppb		95
10) 2,4-Dichlorophenol	6.94	162	1588511	46.02	ppb		98
11) Hexachlorobutadiene	6.75	225	942035	46.59	ppb		99
12) 4-Chloro-3-methylphenol	7.61	107	139369	50.86	ppb	#	14
14) Hexachlorocyclopentadiene	7.57	237	462859	49.12	ppb		99
15) 2,4,6-Trichlorophenol	8.02	196	1053518	47.45	ppb		98
17) Dimethyl phthalate	8.37	163	4547253	47.50	ppb	#	85
18) Acenaphthene	8.67	154	3922978	46.79	ppb		96
19) 2,4-Dinitrophenol	8.95	184	344578	48.96	ppb	#	100
20) 4-Nitrophenol	9.61	65	1120252	47.62	ppb		98
21) Diethyl phthalate	9.13	149	6119632	48.26	ppb		99
24) n-Nitrosodiphenylamine	10.79	167	6104772	49.00	ppb		98
25) Pentachlorophenol	10.42	266	193294	45.02	ppb		97
26) Di-n-butylphthalate	10.93	149	6986118	50.33	ppb		97
29) Butyl benzylphthalate	12.67	149	3297081	47.37	ppb		91
30) Bis (2-ethylhexyl) phthala	13.21	149	4557897	48.51	ppb		98
31) Di-n-octylphthalate	13.88	149	7776867	50.74	ppb		97

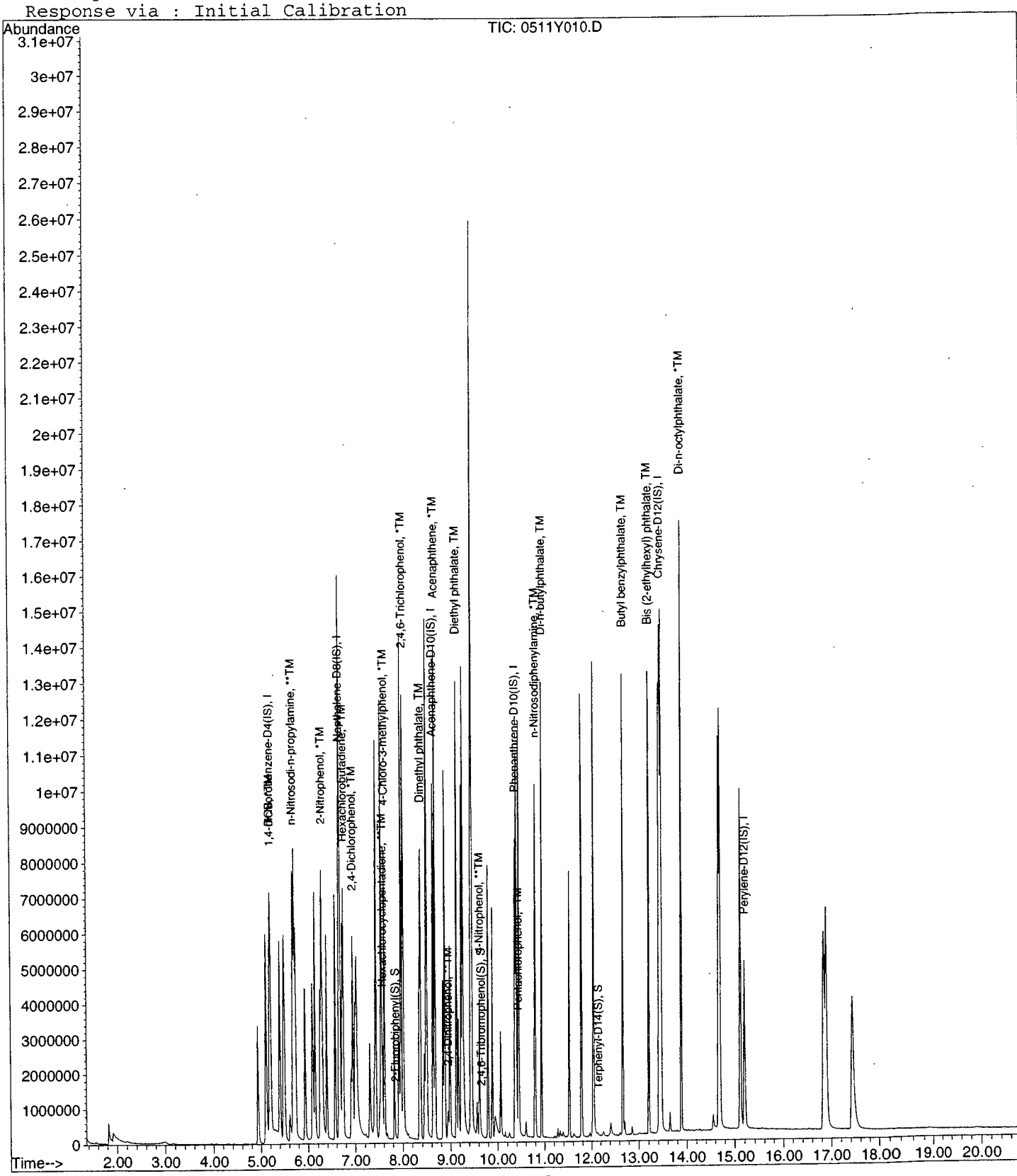
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y010.D Vial: 10
Acq On : 11 May 15 19:00 Operator: csc
Sample : 50ug/ml SVOC SS 05/11/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 8:10 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5/19/2015
Instrument: Yoda
Initial Cal. Date: 5/11/2015
Data File: 0511Y107.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	SL	2-Fluorophenol (S)	1.388	1.298	6.5	SL	6.5	
3	SL	Phenol-D6 (S)	1.985	1.682	15	SL	5.8	
4	*TM	Phenol	1.967	1.912	2.8	*TM		
5	*TM	1,4-DCB	1.861	1.731	6.9	*TM		
6	**TM	n-Nitrosodi-n-propylamine	1.012	0.9978	1.4	**TM		
7	I	Napthalene-D8(IS)	ISTD			I		
8	S	Nitrobenzene-D5(S)	0.3796	0.3575	5.8	S		
9	*TM	2-Nitrophenol	0.1940	0.1922	0.95	*TM		
10	*TM	2,4-Dichlorophenol	0.2694	0.5421	101	*TM		*
11	*TM	Hexachlorobutadiene	0.1578	0.1494	5.3	*TM		
12	*TM	4-Chloro-3-methylphenol	0.0228	0.0209	8.0	*TM		
13	I	Acenaphthene-D10(IS)	ISTD			I		
14	**TMQ	Hexachlorocyclopentadiene	0.1069	0.1075	0.51	**TMQ	14	
15	*TM	2,4,6-Trichlorophenol	0.3160	0.3079	2.6	*TM		
16	S	2-Fluorobiphenyl(S)	1.406	1.269	9.8	S		
17	TM	Dimethyl phthalate	1.362	1.278	6.2	TM		
18	*TM	Acenaphthene	1.193	1.118	6.3	*TM		
19	**TMQ	2,4-Dinitrophenol	0.1138	0.1098	3.5	**TMQ	3.3	
20	**TM	4-Nitrophenol	0.3346	0.3196	4.5	**TM		
21	TML	Diethyl phthalate	2.531	1.734	31	TML	4.1	
22	SL	2,4,6-Tribromophenol(S)	0.1022	0.0969	5.2	SL	1.2	
23	I	Phenanthrene-D10(IS)	ISTD			I		
24	*TM	n-Nitrosodiphenylamine	1.094	1.108	1.3	*TM		
25	*TM	Pentachlorophenol	0.0377	0.0472	25	*TM		*
26	TM	Di-n-butylphthalate	1.219	1.280	5.0	TM		
27	I	Chrysene-D12(IS)	ISTD			I		
28	S	Terphenyl-D14(S)	0.8837	0.8251	6.6	S		
29	TM	Butyl benzylphthalate	0.6565	0.6827	4.0	TM		
30	TM	Bis (2-ethylhexyl) phthalate	0.8861	0.9312	5.1	TM		
31	*TM	Di-n-octylphthalate	1.446	1.730	20	*TM		
32	I	Perylene-D12(IS)	ISTD			I		
33								
34								
35								
36								
37								
38								
39								
40								
		Average			11.2			

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y107.D Vial: 7
Acq On : 19 May 15 13:20 Operator: csc
Sample : 50ug/ml SVOC 05/19/15 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jun 3 9:19 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	923455	40.00	ppb		-0.02
7) Napthalene-D8(IS)	6.62	136	4127214	40.00	ppb		-0.02
13) Acenaphthene-D10(IS)	8.61	164	2370251	40.00	ppb		-0.02
23) Phenanthrene-D10(IS)	10.35	188	3836649	40.00	ppb		-0.02
27) Chrysene-D12(IS)	13.42	240	2886163	40.00	ppb		-0.02
32) Perylene-D12(IS)	15.17	264	2303262	40.00	ppb		-0.02
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.44	112	2996806	93.50	ppb		0.01
Spiked Amount 200.000			Recovery =	46.751%			
3) Phenol-D6 (S)	5.52	99	3884074	94.22	ppb		-0.12
Spiked Amount 200.000			Recovery =	47.110%			
8) Nitrobenzene-D5(S)	5.89	82	1844232	47.08	ppb		-0.02
Spiked Amount 100.000			Recovery =	47.083%			
16) 2-Fluorobiphenyl(S)	7.84	172	3759427	45.12	ppb		0.00
Spiked Amount 100.000			Recovery =	45.122%			
22) 2,4,6-Tribromophenol(S)	9.63	330	574210	101.22	ppb		-0.04
Spiked Amount 200.000			Recovery =	50.610%			
28) Terphenyl-D14(S)	12.14	244	2976850	46.69	ppb		-0.02
Spiked Amount 100.000			Recovery =	46.686%			
Target Compounds							Qvalue
4) Phenol	5.54	94	2206655	48.60	ppb		97
5) 1,4-DCB	5.19	146	1998537	46.53	ppb		99
6) n-Nitrosodi-n-propylamine	5.67	43	1151805	49.29	ppb	#	87
9) 2-Nitrophenol	6.26	139	991344	49.52	ppb		91
10) 2,4-Dichlorophenol	6.89	162	2796883	100.61	ppb		97
11) Hexachlorobutadiene	6.74	225	770832	47.34	ppb		99
12) 4-Chloro-3-methylphenol	7.59	107	107964	45.99	ppb	#	14
14) Hexachlorocyclopentadiene	7.56	237	318367	43.16	ppb		99
15) 2,4,6-Trichlorophenol	7.96	196	912157	48.71	ppb		95
17) Dimethyl phthalate	8.35	163	3787099	46.91	ppb		94
18) Acenaphthene	8.65	154	3312733	46.85	ppb		97
19) 2,4-Dinitrophenol	8.91	184	325176	51.66	ppb	#	100
20) 4-Nitrophenol	9.57	65	946902	47.75	ppb		97
21) Diethyl phthalate	9.11	149	5137761	47.97	ppb		100
24) n-Nitrosodiphenylamine	10.75	167	5315233	50.65	ppb		99
25) Pentachlorophenol	10.35	266	226436	62.63	ppb		97
26) Di-n-butylphthalate	10.91	149	6139464	52.52	ppb		98
29) Butyl benzylphthalate	12.66	149	2462855	51.99	ppb		93
30) Bis (2-ethylhexyl) phthala	13.19	149	3359435	52.55	ppb	#	94
31) Di-n-octylphthalate	13.86	149	6243136	59.86	ppb		100

(#) = qualifier out of range (m) = manual integration

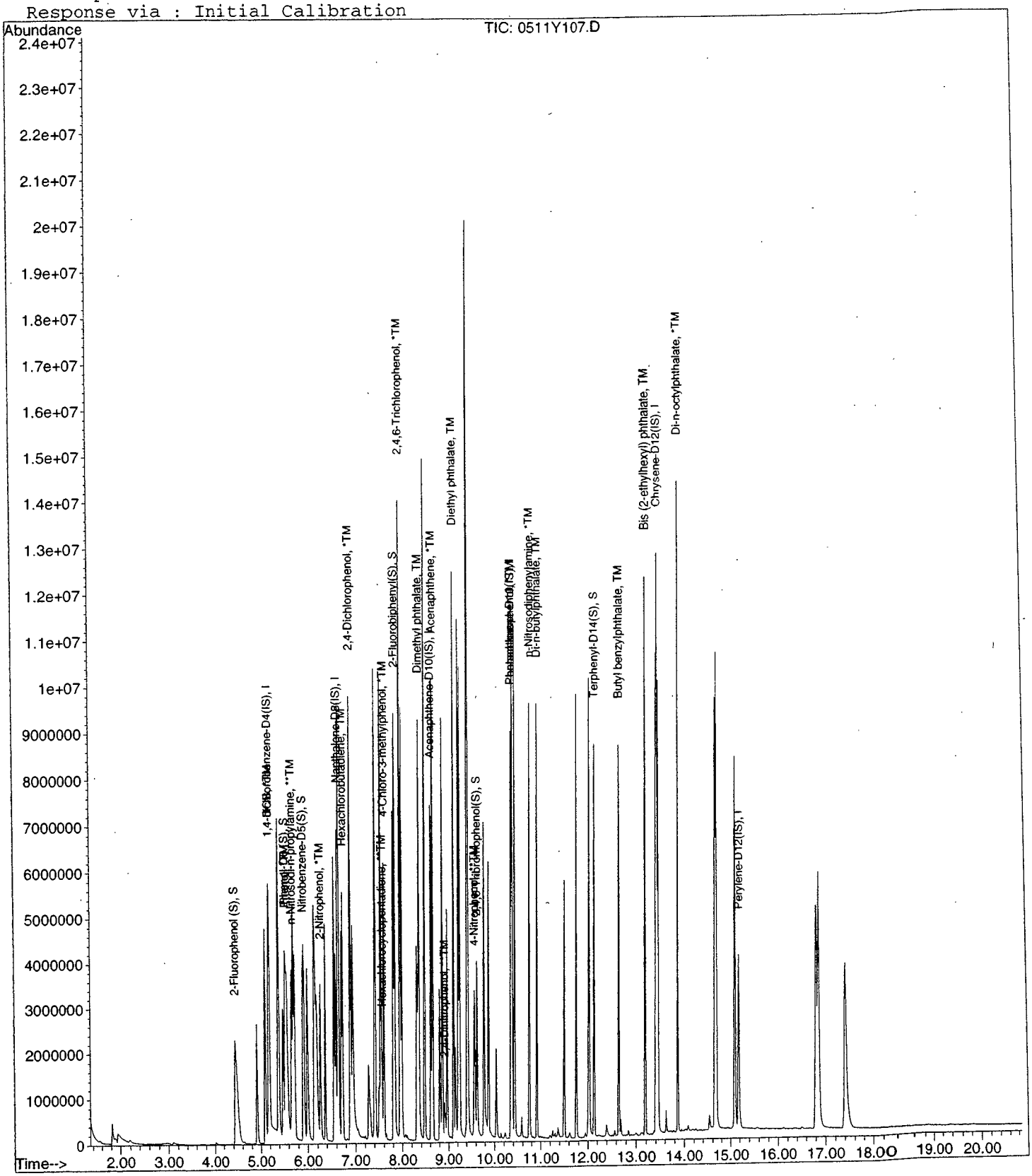
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y107.D
Acq On : 19 May 15 13:20
Sample : 50ug/ml SVOC 05/19/15
Misc :

Vial: 7
Operator: csc
Inst : Yoda
Multiplr: 1.00

Quant Time: Jun 3 9:19 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



EPA METHOD 8270D
Semivolatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **150518W-16287 - 197636**
Batch ID: #87DJU-150518A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BIS (2-ETHYLHEXYL) PHTHALAT	5.00 U	20.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
BLANK	BUTYL BENZYL PHTHALATE	5.00 U	10.0	5.00	2.80	ug/L	5/18/2015	5/19/2015
BLANK	DI-N-BUTYL PHTHALATE	5.00 U	10.0	5.00	3.20	ug/L	5/18/2015	5/19/2015
BLANK	DI-N-OCTYL PHTHALATE	5.00 U	10.0	5.00	2.60	ug/L	5/18/2015	5/19/2015
BLANK	DIETHYL PHTHALATE	5.00 U	10.0	5.00	3.00	ug/L	5/18/2015	5/19/2015
BLANK	DIMETHYL PHTHALATE	5.00 U	10.0	5.00	2.90	ug/L	5/18/2015	5/19/2015
BLANK	SURROGATE: 2,4,6-TRIBROMOP	120	40-125			%	5/18/2015	5/19/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	79.6	50-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: 2-FLUOROPHENO	47.5	20-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: NITROBENZENE-	81.1	40-110			%	5/18/2015	5/19/2015
BLANK	SURROGATE: PHENOL (S)	34.0	10-115			%	5/18/2015	5/19/2015
BLANK	SURROGATE: TERPHENYL-D14 (	119	50-135			%	5/18/2015	5/19/2015

Quant Method: Y0511TT.M
Run #: 0511Y108
Instrument: Yoda
Sequence: Y150511
Initials: DA

GC SC-Blank-REG MDLs
Printed: 6/3/2015 10:19:47 AM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y108.D Vial: 8
Acq On : 19 May 15 15:21 Operator: csc
Sample : 150518A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00000
MS Integration Params: rteint.p
Quant Time: Jun 3 10:12 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 09:56:52 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	764910	40.00	ppb		0.00
7) Napthalene-D8(IS)	6.63	136	2850826	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.62	164	1560639	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.35	188	2942395	40.00	ppb		-0.02
27) Chrysene-D12(IS)	13.43	240	2528080	40.00	ppb		0.00
32) Perylene-D12(IS)	15.18	264	1695164	40.00	ppb		0.00
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.44	112	2519873	94.94	ppb		0.00
Spiked Amount 200.000			Recovery =	47.469%			
3) Phenol-D6 (S)	5.56	99	2338782	67.91	ppb		-0.08
Spiked Amount 200.000			Recovery =	33.957%			
8) Nitrobenzene-D5(S)	5.89	82	2194869	81.12	ppb		-0.02
Spiked Amount 100.000			Recovery =	81.123%			
16) 2-Fluorobiphenyl(S)	7.84	172	4368434	79.63	ppb		0.00
Spiked Amount 100.000			Recovery =	79.631%			
22) 2,4,6-Tribromophenol(S)	9.63	330	897224	239.76	ppb		-0.04
Spiked Amount 200.000			Recovery =	119.879%			
28) Terphenyl-D14(S)	12.15	244	6646198	119.00	ppb		0.00
Spiked Amount 100.000			Recovery =	118.996%			
Target Compounds							Qvalue
17) Dimethyl phthalate	8.36	163	74803	1.41	ppb		94
21) Diethyl phthalate	9.11	149	876240	0.03	ppb		95
26) Di-n-butylphthalate	10.92	149	20744	0.23	ppb		98
30) Bis (2-ethylhexyl) phthala	13.19	149	22270	0.40	ppb	#	97

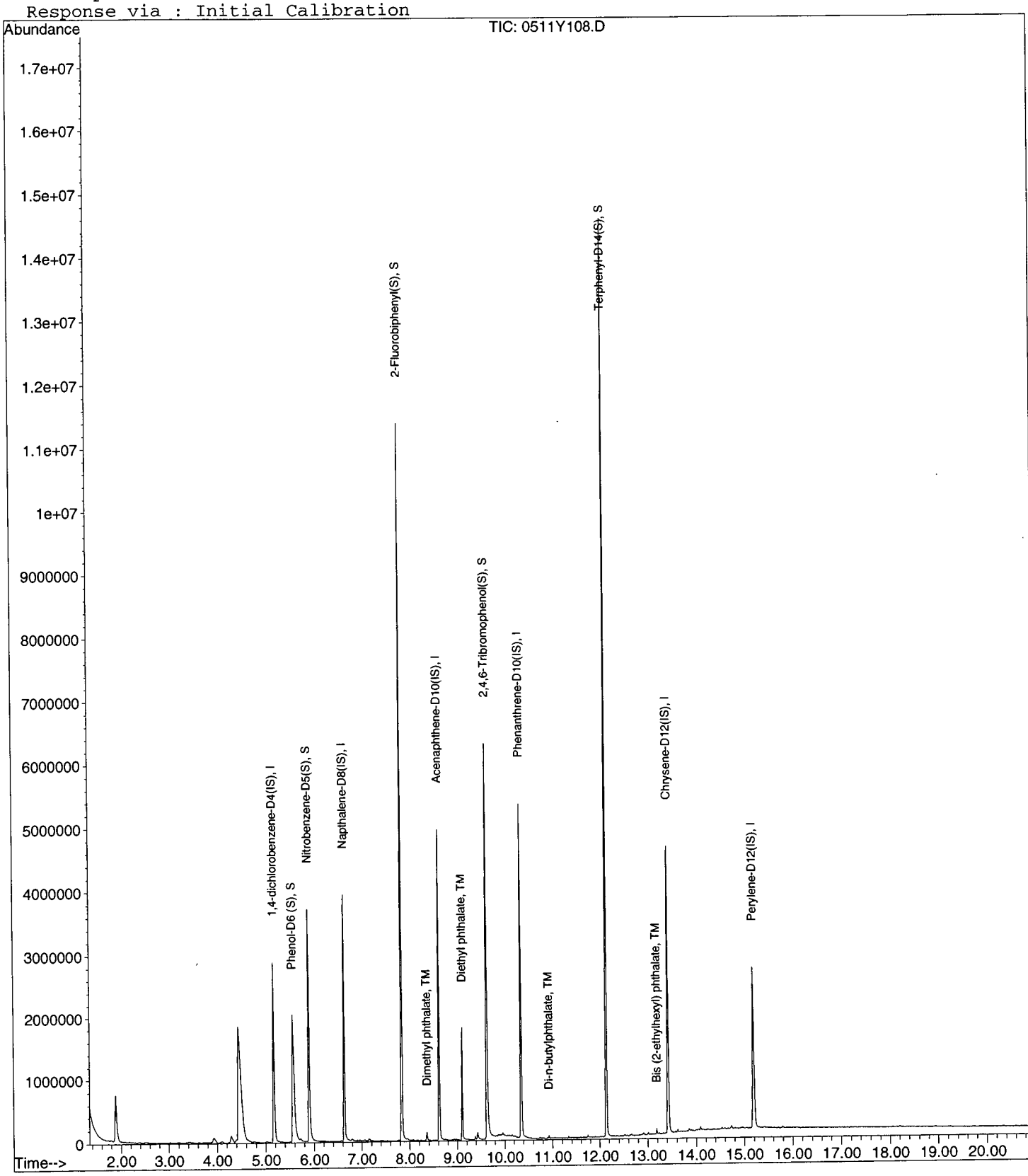
(#) = qualifier out of range (m) = manual integration
0511Y108.D Y0511TT.M Wed Jun 03 10:12:30 2015

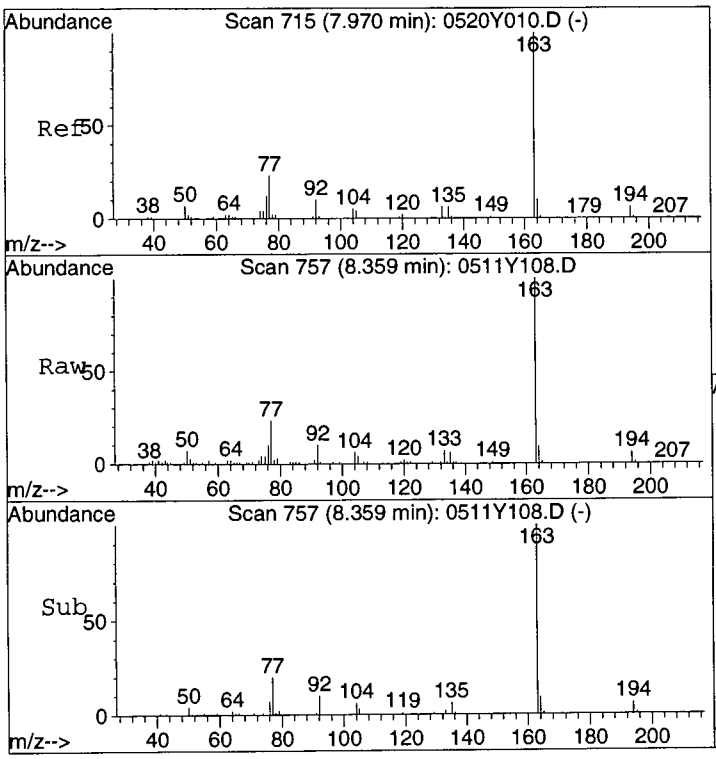
Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y108.D Vial: 8
Acq On : 19 May 15 15:21 Operator: csc
Sample : 150518A BLK 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jun 3 8:40 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration

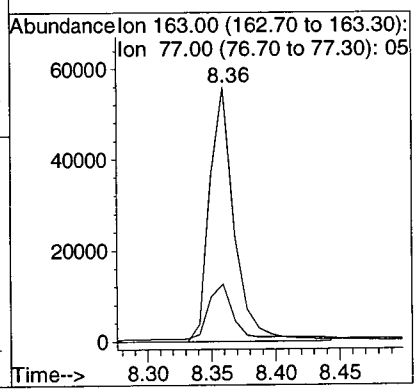


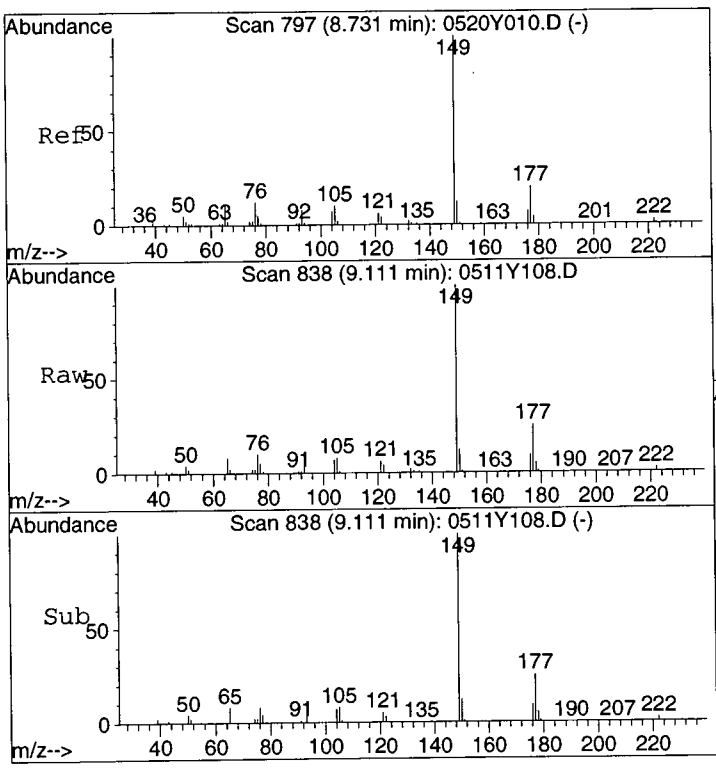


#17
Dimethyl phthalate
Concen: 1.41 ppb
RT: 8.36 min Scan# 757
Delta R.T. -0.01 min
Lab File: 0511Y108.D
Acq: 19 May 15 15:21

Tgt Ion:163 Resp: 74803

Ion	Ratio	Lower	Upper
163	100		
77	21.6	17.3	32.1

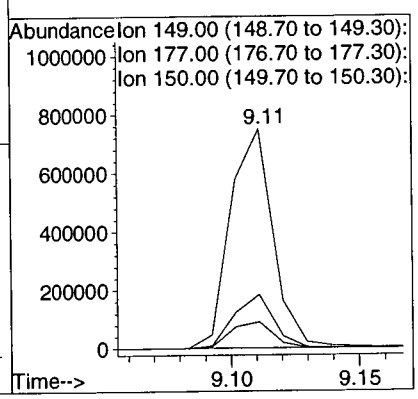


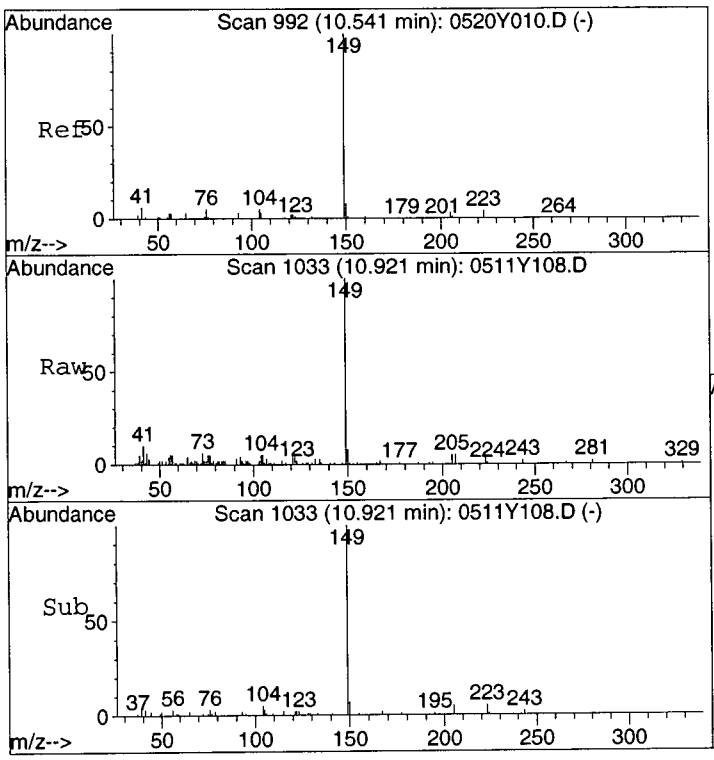


#21
Diethyl phthalate
Concen: 0.03 ppb
RT: 9.11 min Scan# 838
Delta R.T. -0.02 min
Lab File: 0511Y108.D
Acq: 19 May 15 15:21

Tgt Ion:149 Resp: 876240

Ion	Ratio	Lower	Upper
149	100		
177	24.8	15.1	28.0
150	12.2	8.3	15.5

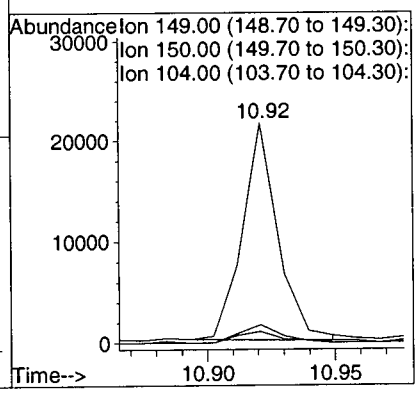


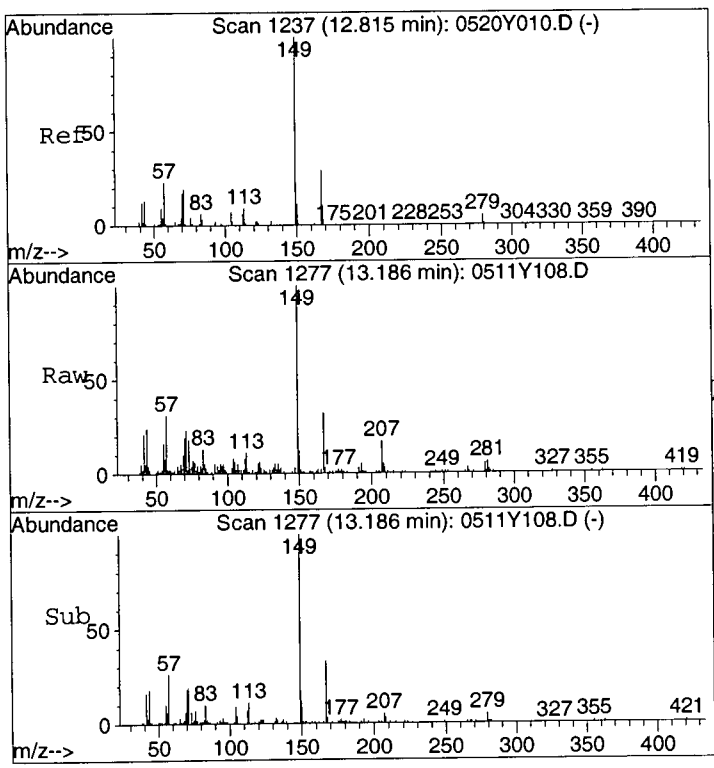


#26
Di-n-butylphthalate
Concen: 0.23 ppb
RT: 10.92 min Scan# 1033
Delta R.T. -0.01 min
Lab File: 0511Y108.D
Acq: 19 May 15 15:21

Tgt Ion:149 Resp: 20744

Ion	Ratio	Lower	Upper
149	100		
150	8.3	6.4	11.8
104	5.3	4.3	7.9

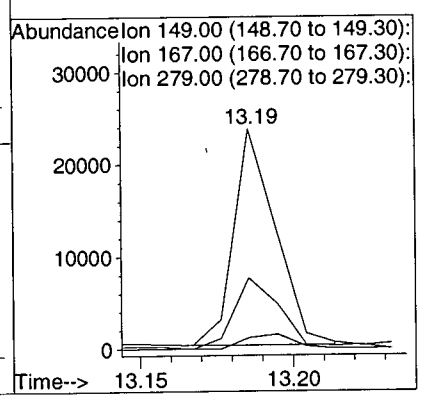




#30
Bis (2-ethylhexyl) phthalate
Concen: 0.40 ppb
RT: 13.19 min Scan# 1277
Delta R.T. -0.02 min
Lab File: 0511Y108.D
Acq: 19 May 15 15:21

Tgt Ion:149 Resp: 22270

Ion	Ratio	Lower	Upper
149	100		
167	33.1	23.1	42.9
279	5.3	7.1	13.3#



Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **150518W-16287 LCS - 197636**
Batch ID: #87DJU-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BIS (2-ETHYLHEXYL) PHTHALATE	50.0	45.0	90.0	40-125
BUTYL BENZYL PHTHALATE	50.0	42.2	84.4	45-115
DI-N-BUTYL PHTHALATE	50.0	45.3	90.6	55-115
DI-N-OCTYL PHTHALATE	50.0	50.1	100	35-135
DIETHYL PHTHALATE	50.0	43.9	87.8	40-120
DIMETHYL PHTHALATE	50.0	44.1	88.2	25-125
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	193	96.5	40-125
SURROGATE: 2-FLUORBIPHENYL (S)	100	75.9	75.9	50-110
SURROGATE: 2-FLUOROPHENOL (S)	200	118	59.0	20-110
SURROGATE: NITROBENZENE-D5 (S)	100	78.9	78.9	40-110
SURROGATE: PHENOL (S)	200	84.1	42.0	10-115
SURROGATE: TERPHENYL-D14 (S)	100	95.4	95.4	50-135

Comments: _____

Primary	SPK
Quant Method :	Y0511TT.M
Extraction Date :	5/18/2015
Analysis Date :	5/19/2015
Instrument :	Yoda
Run :	0511Y109
Initials :	DA

Printed: 6/3/2015 10:19:35 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y109.D Vial: 9
Acq On : 19 May 15 15:51 Operator: csc
Sample : 150518A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jun 3 8:45 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:45:07 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	737045	40.00	ppb		-0.02
7) Napthalene-D8(IS)	6.63	136	3351211	40.00	ppb		-0.02
13) Acenaphthene-D10(IS)	8.61	164	1937344	40.00	ppb		-0.02
23) Phenanthrene-D10(IS)	10.35	188	3272171	40.00	ppb		-0.02
27) Chrysene-D12(IS)	13.42	240	3061969	40.00	ppb		-0.02
32) Perylene-D12(IS)	15.17	264	1959930	40.00	ppb		-0.02
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.43	112	2999227	117.58	ppb		0.00
Spiked Amount 200.000			Recovery =	58.789%			
3) Phenol-D6 (S)	5.53	99	2774803	84.11	ppb		-0.11
Spiked Amount 200.000			Recovery =	42.056%			
8) Nitrobenzene-D5(S)	5.89	82	2510067	78.92	ppb		-0.02
Spiked Amount 100.000			Recovery =	78.921%			
16) 2-Fluorobiphenyl(S)	7.83	172	5171812	75.94	ppb		0.00
Spiked Amount 100.000			Recovery =	75.944%			
22) 2,4,6-Tribromophenol(S)	9.62	330	897609	193.28	ppb		-0.04
Spiked Amount 200.000			Recovery =	96.642%			
28) Terphenyl-D14(S)	12.14	244	6456964	95.45	ppb		-0.02
Spiked Amount 100.000			Recovery =	95.450%			
Target Compounds							Qvalue
4) Phenol	5.55	94	812069	22.41	ppb		90
5) 1,4-DCB	5.19	146	1072002	31.27	ppb		98
6) n-Nitrosodi-n-propylamine	5.66	43	696632	37.35	ppb	#	89
9) 2-Nitrophenol	6.26	139	703216	43.26	ppb		99
10) 2,4-Dichlorophenol	6.90	162	2024510	89.69	ppb		98
11) Hexachlorobutadiene	6.74	225	394466	29.84	ppb		98
12) 4-Chloro-3-methylphenol	7.59	107	68936	36.16	ppb	#	14
14) Hexachlorocyclopentadiene	7.56	237	71363	20.05	ppb		96
15) 2,4,6-Trichlorophenol	7.95	196	675344	44.12	ppb		97
17) Dimethyl phthalate	8.35	163	2910869	44.11	ppb	#	85
18) Acenaphthene	8.65	154	2316574	40.08	ppb		97
19) 2,4-Dinitrophenol	8.91	184	190034	40.44	ppb	#	100
20) 4-Nitrophenol	9.57	65	743750	45.89	ppb		99
21) Diethyl phthalate	9.10	149	3935044	43.90	ppb		100
24) n-Nitrosodiphenylamine	10.76	167	3989905	44.58	ppb		99
25) Pentachlorophenol	10.36	266	122097	39.59	ppb		96
26) Di-n-butylphthalate	10.91	149	4518197	45.32	ppb		98
29) Butyl benzylphthalate	12.65	149	2123107	42.25	ppb		93
30) Bis (2-ethylhexyl) phthala	13.19	149	3053762	45.02	ppb		99
31) Di-n-octylphthalate	13.87	149	5539617	50.06	ppb		100

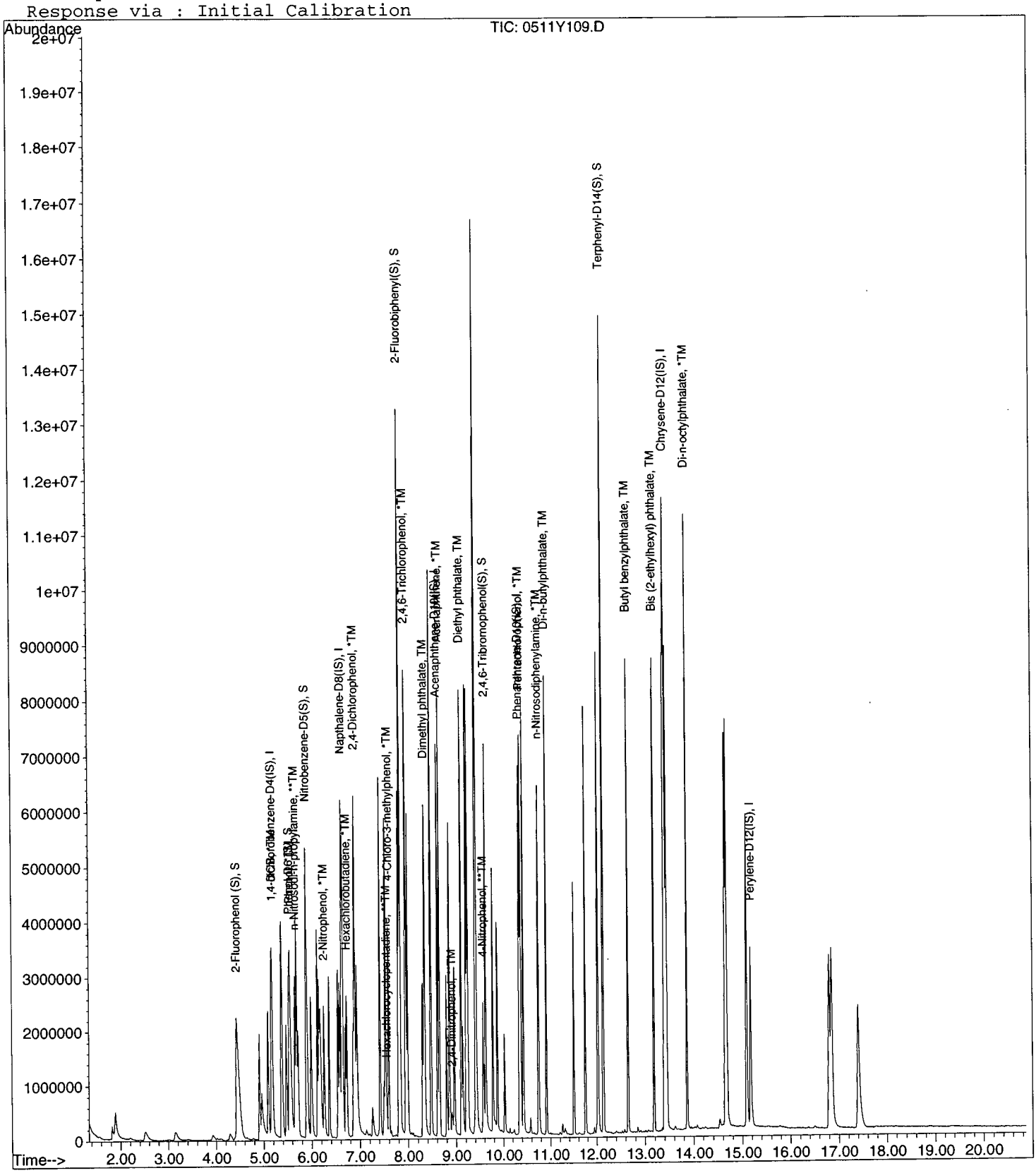
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y109.D Vial: 9
Acq On : 19 May 15 15:51 Operator: csc
Sample : 150518A LCS-1 1/1000 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Jun 3 8:45 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D WATER

APPL ID: **150518W-16287 MS - 197636**
Batch ID: #87DJU-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BIS (2-ETHYLHEXYL) PHTHALATE	46.7	0.11	46.4	42.6	99.1	91.0	40-125	8.5	30
BUTYL BENZYL PHTHALATE	46.7	ND	43.5	41.4	93.1	88.7	45-115	4.9	30
DI-N-BUTYL PHTHALATE	46.7	ND	45.8	41.5	98.1	88.9	55-115	9.9	30
DI-N-OCTYL PHTHALATE	46.7	ND	51.0	47.2	109	101	35-135	7.7	30
DIETHYL PHTHALATE	46.7	ND	42.4	40.3	90.8	86.3	40-120	5.1	30
DIMETHYL PHTHALATE	46.7	0.29	44.6	39.0	94.9	82.9	25-125	13.4	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	187	NA	191	173	102	92.5	40-125		
SURROGATE: 2-FLUORBIPHENYL (S)	93.5	NA	71.6	67.1	76.6	71.8	50-110		
SURROGATE: 2-FLUOROPHENOL (S)	187	NA	95.0	92.7	50.8	49.6	20-110		
SURROGATE: NITROBENZENE-D5 (S)	93.5	NA	72.5	68.3	77.5	73.0	40-110		
SURROGATE: PHENOL (S)	187	NA	67.5	64.5	36.1	34.5	10-115		
SURROGATE: TERPHENYL-D14 (S)	93.5	NA	93.9	90.0	100	96.3	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y0511TT.M	Y0511TT.M
Extraction Date :	5/18/2015	5/18/2015
Analysis Date :	5/19/2015	5/19/2015
Instrument :	Yoda	Yoda
Run :	0511Y114	0511Y115
Initials :	DA	

Printed: 6/3/2015 10:19:31 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y114.D Vial: 14
Acq On : 19 May 15 18:19 Operator: csc
Sample : AZ16287W21 MS-1 1/980 Inst : Yoda
Misc : water Multiplr: 1.02

Quant Time: Jun 3 8:55 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	819223	40.00	ppb		-0.02
7) Napthalene-D8(IS)	6.63	136	3688686	40.00	ppb		0.00
13) Acenaphthene-D10(IS)	8.62	164	2197114	40.00	ppb		0.00
23) Phenanthrene-D10(IS)	10.35	188	3620427	40.00	ppb		-0.02
27) Chrysene-D12(IS)	13.42	240	3364032	40.00	ppb		-0.02
32) Perylene-D12(IS)	15.17	264	2240154	40.00	ppb		-0.02
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.43	112	2648534	95.05	ppb		0.00
Spiked Amount 204.082			Recovery =	46.573%			
3) Phenol-D6 (S)	5.54	99	2443162	67.54	ppb		-0.10
Spiked Amount 204.082			Recovery =	33.094%			
8) Nitrobenzene-D5(S)	5.89	82	2486297	72.47	ppb		-0.02
Spiked Amount 102.041			Recovery =	71.022%			
16) 2-Fluorobiphenyl(S)	7.84	172	5420771	71.62	ppb		0.00
Spiked Amount 102.041			Recovery =	70.189%			
22) 2,4,6-Tribromophenol(S)	9.63	330	988057	191.44	ppb		-0.04
Spiked Amount 204.082			Recovery =	93.808%			
28) Terphenyl-D14(S)	12.14	244	6840250	93.91	ppb		-0.02
Spiked Amount 102.041			Recovery =	92.037%			
Target Compounds							Qvalue
4) Phenol	5.56	94	707976	17.93	ppb		93
5) 1,4-DCB	5.18	146	976631	26.15	ppb		98
6) n-Nitrosodi-n-propylamine	5.66	43	730319	35.95	ppb		96
9) 2-Nitrophenol	6.26	139	717401	40.92	ppb		92
10) 2,4-Dichlorophenol	6.89	162	2006917	82.43	ppb		97
11) Hexachlorobutadiene	6.73	225	363630	25.50	ppb		99
12) 4-Chloro-3-methylphenol	7.60	107	72463	35.24	ppb	#	14
14) Hexachlorocyclopentadiene	7.56	237	54443	16.86	ppb		97
15) 2,4,6-Trichlorophenol	7.96	196	724626	42.60	ppb		95
17) Dimethyl phthalate	8.35	163	3271634	44.61	ppb		92
18) Acenaphthene	8.66	154	2485420	38.69	ppb		98
19) 2,4-Dinitrophenol	8.91	184	211443	40.70	ppb	#	100
20) 4-Nitrophenol	9.57	65	776986	43.13	ppb		97
21) Diethyl phthalate	9.11	149	4289561	42.39	ppb		99
24) n-Nitrosodiphenylamine	10.75	167	4282584	44.13	ppb		98
25) Pentachlorophenol	10.35	266	149819	44.81	ppb		98
26) Di-n-butylphthalate	10.91	149	4956452	45.85	ppb		98
29) Butyl benzylphthalate	12.66	149	2351466	43.46	ppb		92
30) Bis (2-ethylhexyl) phthala	13.19	149	3386826	46.38	ppb	#	95
31) Di-n-octylphthalate	13.86	149	6072943	50.97	ppb		100

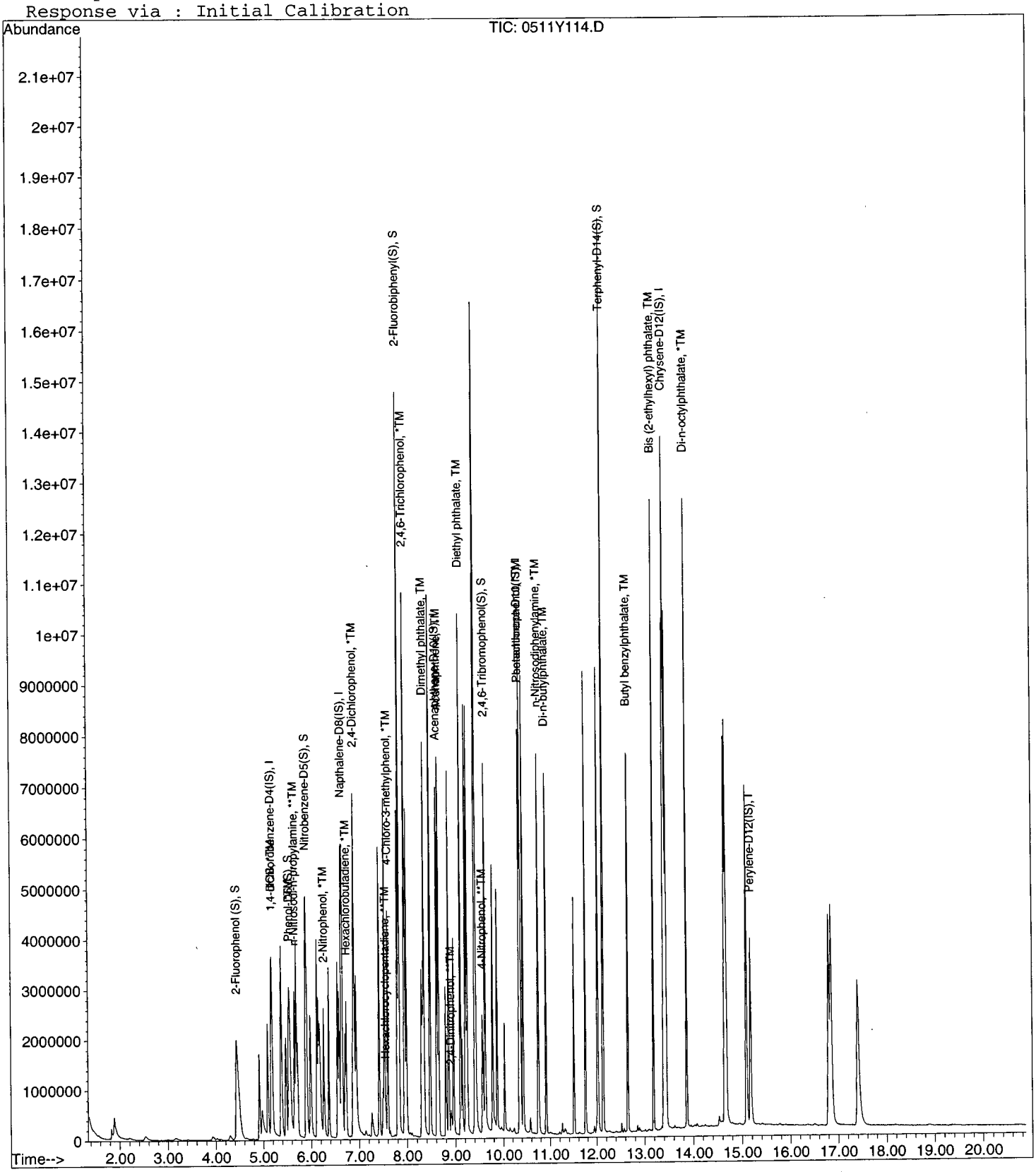
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y114.D Vial: 14
Acq On : 19 May 15 18:19 Operator: csc
Sample : AZ16287W21 MS-1 1/980 Inst : Yoda
Misc : water Multiplr: 1.02

Quant Time: Jun 3 8:55 2015 Quant Results File: Y0511TT.RES

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y150511\0511Y115.D Vial: 15
Acq On : 19 May 15 18:49 Operator: csc
Sample : AZ16287W23 MSD-1 1/980 Inst : Yoda
Misc : water Multiplr: 1.02

Quant Time: Jun 3 8:55 2015 Quant Results File: Y0511TT.RES

Quant Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration
DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.17	152	822262	40.00	ppb		-0.02
7) Napthalene-D8(IS)	6.63	136	3739940	40.00	ppb		-0.02
13) Acenaphthene-D10(IS)	8.61	164	2144330	40.00	ppb		-0.02
23) Phenanthrene-D10(IS)	10.35	188	3586625	40.00	ppb		-0.02
27) Chrysene-D12(IS)	13.42	240	3203910	40.00	ppb		-0.02
32) Perylene-D12(IS)	15.18	264	2203012	40.00	ppb		-0.02
System Monitoring Compounds							
2) 2-Fluorophenol (S)	4.43	112	2593532	92.70	ppb		0.00
Spiked Amount 204.082			Recovery =	45.421%			
3) Phenol-D6 (S)	5.53	99	2346054	64.52	ppb		-0.11
Spiked Amount 204.082			Recovery =	31.615%			
8) Nitrobenzene-D5(S)	5.89	82	2375220	68.28	ppb		-0.02
Spiked Amount 102.041			Recovery =	66.918%			
16) 2-Fluorobiphenyl(S)	7.83	172	4955157	67.08	ppb		0.00
Spiked Amount 102.041			Recovery =	65.739%			
22) 2,4,6-Tribromophenol(S)	9.63	330	872843	173.32	ppb		-0.04
Spiked Amount 204.082			Recovery =	84.924%			
28) Terphenyl-D14(S)	12.14	244	6245672	90.04	ppb		-0.02
Spiked Amount 102.041			Recovery =	88.236%			
Target Compounds							Qvalue
4) Phenol	5.55	94	679201	17.14	ppb		91
5) 1,4-DCB	5.19	146	1011015	26.97	ppb		99
6) n-Nitrosodi-n-propylamine	5.66	43	646618	31.71	ppb	#	90
9) 2-Nitrophenol	6.27	139	670579	37.72	ppb		91
10) 2,4-Dichlorophenol	6.90	162	1936629	78.45	ppb		98
11) Hexachlorobutadiene	6.74	225	380823	26.34	ppb		98
12) 4-Chloro-3-methylphenol	7.59	107	71062	34.08	ppb	#	16
14) Hexachlorocyclopentadiene	7.56	237	59503	17.77	ppb		96
15) 2,4,6-Trichlorophenol	7.95	196	653060	39.34	ppb		98
17) Dimethyl phthalate	8.35	163	2788706	38.96	ppb		85
18) Acenaphthene	8.65	154	2245165	35.81	ppb		98
19) 2,4-Dinitrophenol	9.03	184	7123	10.13	ppb		100
20) 4-Nitrophenol	9.57	65	729329	41.48	ppb		98
21) Diethyl phthalate	9.11	149	4039037	40.30	ppb		99
24) n-Nitrosodiphenylamine	10.76	167	3840066	39.95	ppb		98
25) Pentachlorophenol	10.35	266	132516	40.01	ppb		97
26) Di-n-butylphthalate	10.92	149	4439538	41.45	ppb		98
29) Butyl benzylphthalate	12.65	149	2132476	41.38	ppb		94
30) Bis (2-ethylhexyl) phthala	13.19	149	2962629	42.60	ppb		98
31) Di-n-octylphthalate	13.87	149	5353363	47.18	ppb		100

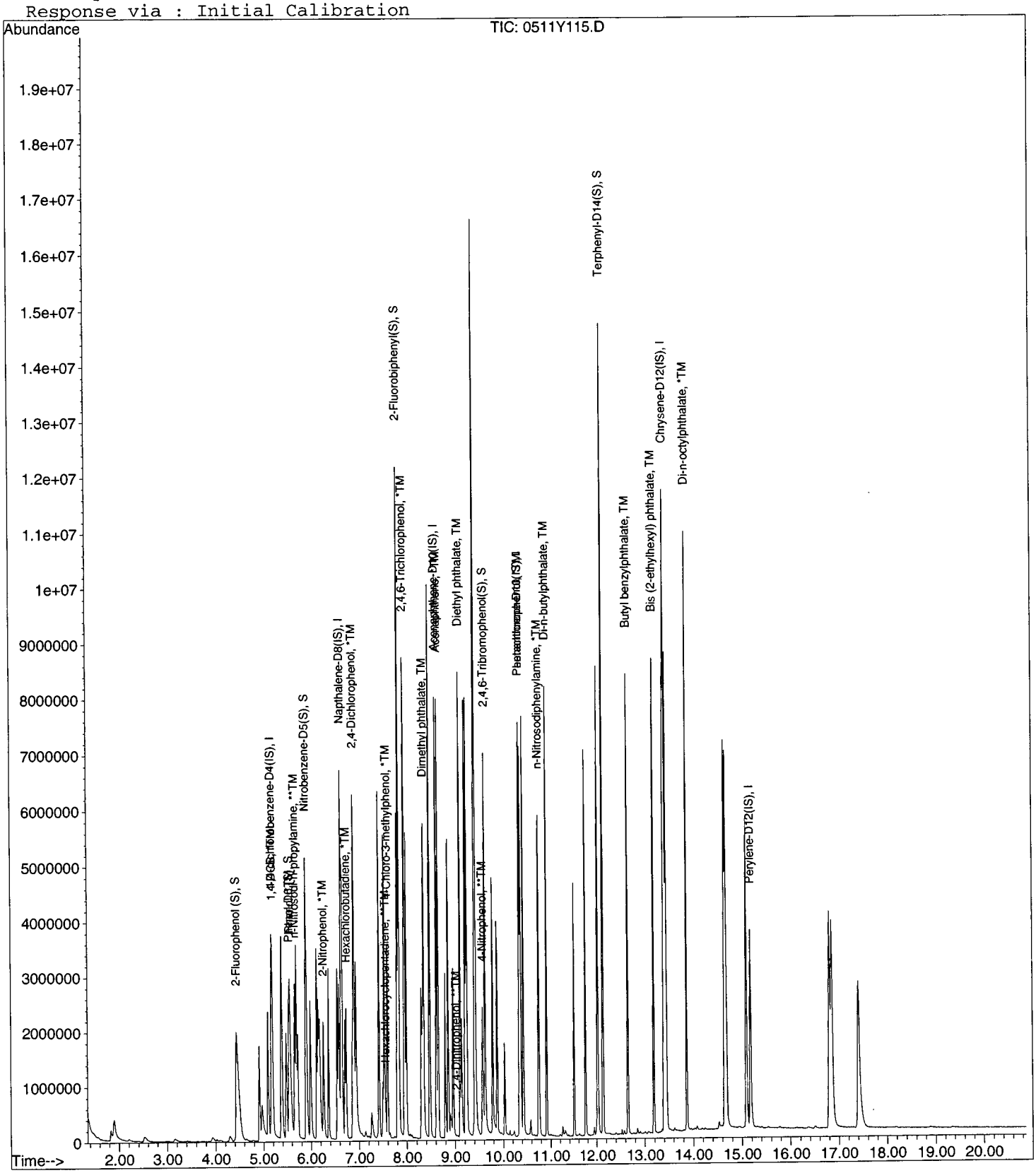
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y150511\0511Y115.D Vial: 15
Acq On : 19 May 15 18:49 Operator: csc
Sample : AZ16287W23 MSD-1 1/980 Inst : Yoda
Misc : water Multiplr: 1.02

Quant Time: Jun 3 8:55 2015 Quant Results File: Y0511TT.RES

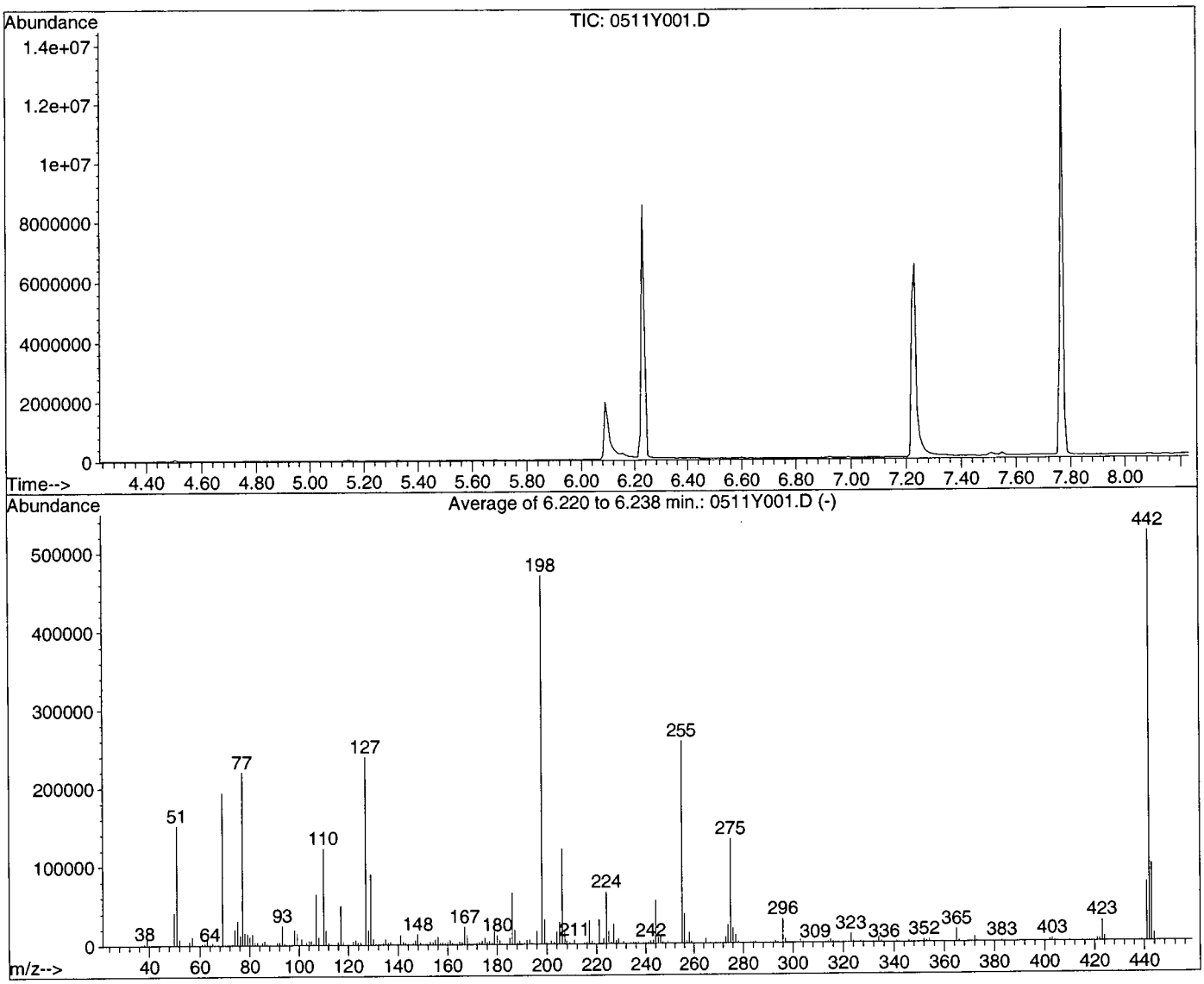
Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 03 08:54:38 2015
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y150511\0511Y001.D Vial: 1
Acq On : 11 May 15 14:44 Operator: csc
Sample : SV Tune 03/12/15 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C



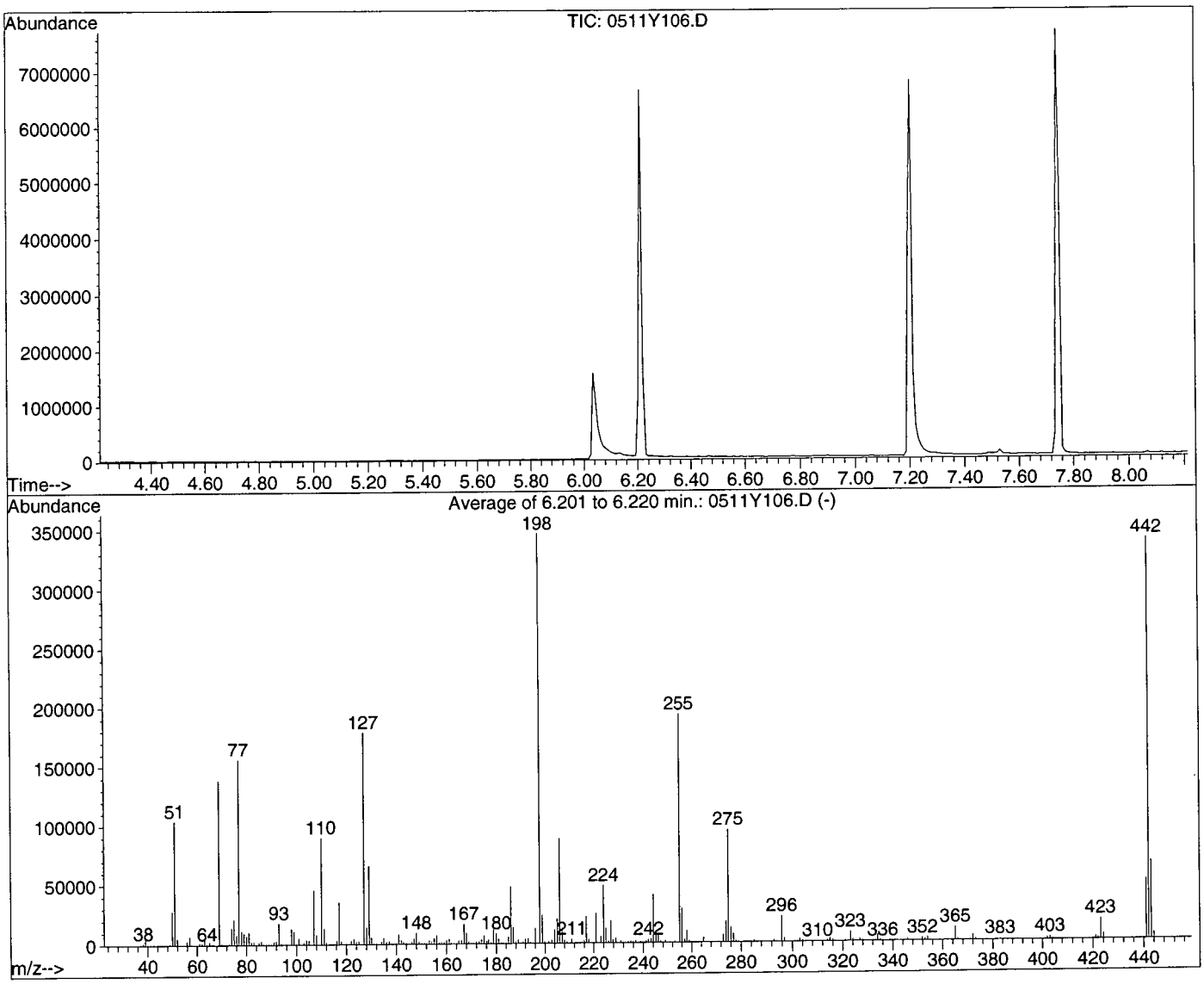
AutoFind: Scans 284, 285, 286; Background Corrected with Scan 282

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.3	151779	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.1	195	PASS
127	198	40	60	50.9	239324	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	470045	PASS
199	198	5	9	6.7	31497	PASS
275	198	10	30	28.2	132412	PASS
365	198	1	100	3.4	16188	PASS
441	443	0.01	100	76.3	74568	PASS
442	198	40	150	111.4	523796	PASS
443	442	17	23	18.7	97779	PASS

DFTPP

Data File : M:\YODA\DATA\Y150511\0511Y106.D Vial: 6
Acq On : 19 May 15 13:02 Operator: csc
Sample : SV TUNE 5/14/15 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y150511\Y0511TT.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 282, 283, 284; Background Corrected with Scan 280

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.0	104130	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	728	PASS
127	198	40	60	51.5	178403	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	346589	PASS
199	198	5	9	6.8	23604	PASS
275	198	10	30	27.2	94220	PASS
365	198	1	100	3.2	11011	PASS
441	443	0.01	100	76.6	50279	PASS
442	198	40	150	97.9	339233	PASS
443	442	17	23	19.4	65680	PASS

0511Y106.D Y0511TT.M Wed Jun 03 09:48:54 2015

GC/MS STANDARD PREPARATION BOOK # L PAGE

LH 5/7/15

PREP DATE:	05/07/15					
8270 Second Source (SS) 50ug/mL						
Exp:	**05/14/15**					
		Conc.		Date		**50**
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock SS	200	VAR	03/23/15	09/23/15	25
EM Science	Methylene Chloride		54200	11/06/14		75
Supelco	SV Internal Standard	2000	XA10079V-34496	02/27/15	09/30/17	2
				Final Vol.		102

LH 5/7/15

PREP DATE:	05/07/15					
8270 Continuing Calibration Verification 50ug/ml						
Exp:	**05/14/15**					
		Conc.		Date		**50**
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Absolute	8270 Stock	200	VAR	11/18/14	05/21/15	25
o2si	8270 BN:A (200:400) Surroga	VAR	242352-34963	05/04/15	01/01/17	25
EM Science	Methylene Chloride		54200	11/06/14		50
Supelco	SV Internal Standard	2000	XA10079V-34496	02/27/15	09/30/17	2
				Final Vol.		102

PREP DATE:	05/12/15													
Sulfolane Standard Curve-L.H.														
EXP.DATE	05/19/15													
						1	5	10	20	40	50	60	80	100
Supplier	ID #	Conc. µg/mL	Lot#	Date Code	Exp. Date	µL	µL	µL	µL	µL	µL	µL	µL	µL
o2si	Sulfolane Calibration Standard	200	VAR	03/11/15	09/11/15	5	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		54200	11/06/14		995	195	95	90	80	75	70	60	50
				Final Vol.		1000	200	100	100	100	100	100	100	100

LH 5/11/15

8270 SS						
PREP DATE:	05/11/15					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
o2si	8270 Stock S	200	VAR	03/23/15	9/23/15	25
EM Science	Methylene Chloride		54200	11/06/14		75
Supelco	SV Internal	2000	A10079V-3449	02/27/15	09/30/17	2
				Final Vol.		102

PREP DATE:	5/11/15-L.H.													
8270 Standard Curve														
Exp:	05/18/15													
		Conc.		Date			5	10	20	40	50	60	80	100
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date		µL	µL	µL	µL	µL	µL	µL	µL
Absolute	8270 Stock	200	VAR	11/18/14	05/21/15		5	5	10	20	25	30	40	50
o2si	8270 BN:A (2	VAR	242352-34963	02/27/15	10/8/16		5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		54200	11/06/14			190	90	80	60	50	40	20	0
Supelco	SV Internal	2000	A10079V-3449	02/27/15	09/30/17		4	2	2	2	2	2	2	2
				Final Vol.			204	102	102	102	102	102	##	102

086

GC/MS STANDARD PREPARATION BOOK # L PAGE

03/23/15 CSC

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 121713 Exp: 121716 Storage 4 °C

EPA Method 8270A - Mix #11
4 components
2000 ug/mL in ac
ABSOLUTE STANDA

EPA Method 8270A-Mix#11
Lot #: 121713 - 34241
Rec: 11/10/14 MFR exp. 12/17/16

03/23/15 CSC

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 121713 Exp: 121716 Storage 4 °C

EPA Method 8270A - Mix #11
4 components
2000 ug/mL in a
ABSOLUTE STANDA

EPA Method 8270A-Mix#11
Lot #: 121713 - 34242
Rec: 11/10/14 MFR exp. 12/17/16

03/28/15 CSC

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 082914 Exp: 082919 Storage 4 °C

Semi-Volatile Standard
11 components
Varied µg/mL in meth
ABSOLUTE STANDARD

Semi-Volatile Standard
Lot #: 082914 - 34597
Rec: 1/22/15 MFR exp. 8/29/19

03/28/15 CSC

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 082914 Exp: 082919 Storage 4 °C

Semi-Volatile Standard
11 components
Varied µg/mL in m
ABSOLUTE STANDA

Semi-Volatile Standard
Lot #: 082914 - 34247
Rec: 11/10/14 MFR exp. 8/29/19

03/23/15 CSC

PREP DATE:	03/23/15					
8270 Stock/Spike Standard 2000ug/mL				(Atrazine 1000ug/ml)		
Exp:	09/23/15					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Absolute	10001	2000	053014-34201	11/10/14	05/30/17	1000
Absolute	10001	2000	053014-34202	11/10/14	05/30/17	1000
Absolute	10002	2000	032814-34206	11/10/14	03/28/17	1000
Absolute	10002	2000	032814-34207	11/10/14	03/28/17	1000
Absolute	10004	2000	091911-34208	11/10/14	09/19/16	1000
Absolute	10004	2000	091911-34212	11/10/14	09/19/16	1000
Absolute	10005	2000	110314-34216	11/10/14	11/03/19	1000
Absolute	10005	2000	110314-34217	11/10/14	11/03/19	1000
Absolute	10006	2000	090414-34221	11/10/14	09/04/17	1000
Absolute	10006	2000	090414-34222	11/10/14	09/04/17	1000
Absolute	10007	2000	071013-34226	11/10/14	07/10/18	1000
Absolute	10007	2000	071013-34227	11/10/14	07/10/18	1000
Absolute	10018	2000	050213-34231	11/10/14	05/02/18	1000
Absolute	10018	2000	050213-34232	11/10/14	05/02/18	1000
Absolute	70023	1000	032014-34236	11/10/14	03/20/19	1000
Absolute	70023	1000	032014-34236	11/10/14	03/20/19	1000
Absolute	82705	2000	121713-34242	11/10/14	12/17/16	1000
Absolute	82705	2000	121713-34242	11/10/14	12/17/16	1000
Absolute	94552	2000	082914-34597	01/22/15	08/29/19	1000
Absolute	94552	2000	082914-34247	11/10/14	08/29/19	1000
				Final Vol.		20000

GC/MS STANDARD PREPARATION BOOK # L PAGE #

11/18/14
CSL

PREP DATE:	11/18/14					
8270 Stock/Spike Standard						CSL
Exp:	05-21-15					
		Conc.				
Supplier	ID #	µg/mL	Lot #	Open Date	Exp.Date	µL
Absolute	10001	2000	053014-34198	11/18/14	05/03/17	1000
Absolute	10001	2000	053014-34199	11/18/14	05/03/17	1000
Absolute	10001	2000	053014-34200	11/18/14	05/03/17	1000
Absolute	10002	2000	032814-34203	11/18/14	03/28/17	1000
Absolute	10002	2000	032814-34205	11/18/14	03/28/17	1000
Absolute	10002	2000	032814-34204	11/18/14	03/28/17	1000
Absolute	10004	2000	091911-34209	11/18/14	09/19/16	1000
Absolute	10004	2000	091911-34211	11/18/14	09/19/16	1000
Absolute	10004	2000	091911-34210	11/18/14	09/19/16	1000
Absolute	10005	2000	110314-34215	11/18/14	11/03/19	1000
Absolute	10005	2000	110314-34213	11/18/14	11/03/19	1000
Absolute	10005	2000	110314-34214	11/18/14	11/03/19	1000
Absolute	10006	2000	090414-34220	11/18/14	09/04/17	1000
Absolute	10006	2000	090414-34218	11/18/14	09/04/17	1000
Absolute	10006	2000	090414-34219	11/18/14	09/04/17	1000
Absolute	10007	2000	071014-34224	11/18/14	07/10/18	1000
Absolute	10007	2000	071014-34223	11/18/14	07/10/18	1000
Absolute	10007	2000	071014-34225	11/18/14	07/10/18	1000
Absolute	10018	2000	050213-34230	11/18/14	05/02/18	1000
Absolute	10018	2000	050213-34229	11/18/14	05/02/18	1000
Absolute	10018	2000	050213-34228	11/18/14	05/02/18	1000
Absolute	70023	1000	032014-34235	11/18/14	03/20/19	1000
Absolute	70023	1000	032014-34233	11/18/14	03/20/19	1000
Absolute	70023	1000	032014-34234	11/18/14	03/20/19	1000
Absolute	82705	2000	121713-34240	11/18/14	12/17/16	1000
Absolute	82705	2000	121713-34239	11/18/14	12/17/16	1000
Absolute	82705	2000	121713-34238	11/18/14	12/17/16	1000
Absolute	94552	2000	082914-34244	11/18/14	08/29/19	1000
Absolute	94552	2000	082914-34245	11/18/14	08/29/19	1000
Absolute	94552	2000	082914-34246	11/18/14	08/29/19	1000
				Final Vol.		30000

CSL
end of page

02/27/15 CSC

8270D PAH SIM Solution, Second Source, 200 mg/L, 1 mL

110780-01-SS

Lot #	Storage	Expiry
243252	≤-10 °C	15/Jan/2017

Solv: Methylene Chloride

8270D PAH SIM (SS)
Lot #: 243252 - 34609
Rec: 1/23/15 MFR exp. 1/15/17

Received : 01/23/15
Opened : 02/27/15
Expired: 01/15/17

02/27/15 CSC

Part #: 30031 Laboratory Use Only - See MSDS
Lot #: 060111 Exp:060116 Storage 20 °C

EPA Method 525 - Internal Standard
4 components CAUTION: Sonicate Before Use
500 ug/mL in acetc
ABSOLUTE STANDA

EPA Method 525 Internal Std
Lot #: 060111 - 32256
Rec: 4/16/13 MFR exp. 6/1/16

Received : 04/16/13
opened : 02/27/15
Expired : 06/01/16

02/27/15 CSC

PREP DATE:	02/27/15						CSC
8270 SIM PAH Internal Standard Mix 125ug/ml							
Exp.DATE:	08/27/15						
		Conc.		Date	Exp.	125	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL	
Supelco	Internal Standard	2000	XA10079V-34496	12/11/14	09/30/17	50	
EM Science	Methylene Chloride		54200	11/06/14		750	
				Final Vol.		800	

02/27/15 CSC

PREP DATE:	02/27/15						CSC
525 Working Standard 20ug/mL (PCP @ 80ug/ml)							
Exp. DATE:	03/04/15					20	
		Conc.		Date	Exp.		
Supplier	ID #	ug/ml	Lot #	Code	Date	ul	
Ultra-Scientific	Extractables Mixture (PSM-525A)	500	CK-2769-34658	02/17/15	09/30/16	24	
Ultra-Scientific	PAH Mixture (PM-525B)	500	CK-2706-34660	02/17/15	09/30/16	24	
EM Science	Methylene Chloride		54200	11/06/14		552	
				Final Vol.		600	

27/15 CSC

PREP DATE:	02/27/15						CSC
525 Continuing Calibration Verification 5ug/ml (20ppb PC							
Exp.DATE:	03/04/15					5	
		Conc.		Date	Exp.		
Supplier	ID #	µg/mL	Lot #	Code	Date	µL	
Ultra Scienti	525 Working Std (PSM-525A) & (PM-525B)	20	VAR	02/17/15	09/30/16	50	
Absolute	525 Internal Std (30031)	500	060111-32256	04/16/13	06/01/16	2	
EM Science	Methylene Chloride		54200	11/06/14		148	
				Final Vol.		200	

15

PREP DATE:	02/26/15		EXP:	03/03/15										
Sulfolane Standard Curve														
						1	5	10	20	40	50	60	80	100
		Conc.		Date	Exp.									
Supplier	ID #	µg/mL	Lot#	Code	Date	µL	µL	µL	µL	µL	µL	µL	µL	µL
o2si	Sulfolane Calibration Standard	200	VAR	10/22/14	03/11/15	5	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		54200	11/06/14		995	195	95	90	80	75	70	60	50
				Final Vol.		1000	200	100	100	100	100	100	100	100

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	150518A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 4-27-15 EXP 10-27-15		Surrogate ID 1	8270 Surrogate 248398-35028	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/18/15 15:00	
Spiked ID 8			Ext. End Time:	05/19/15 12:00	
			GC Requires Extract By:	**06/02/15 0:00**	

pH1	2	05/18/15 3:15:00 PM	Water Bath Temp Criteria	79,80,75 °
pH2	14	05/18/15 4:45:00 PM		
pH3				

Spiked By: KY **Date** 05/18/15 **Witnessed By:** CFM **Date** 05/18/15

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	150518A Blk				1	1 equip	1000 E-WB7	1	2/1	05/18/15 15:00	
2	150518A LCS-1		0.250	1	1	1 equip	1000 E-WB7	1	2/1	05/18/15 15:00	
3	150518A LCSD-1		0.250	1	1	1 equip	1000 E-WB5	1	2/1	05/18/15 15:00	
4	AZ16235	AZ16235W09			1	1 equip	1000 E-WB7	1	2/1	05/18/15 15:00	76401
5	AZ16236	AZ16236W10			1	1 equip	1050 E-WB7	1	2/1	05/18/15 15:00	76401
6	AZ16287 MS-1	AZ16287W21	0.250	1	1	1 equip	980 E-WB7	1	2/1	05/18/15 15:00	76413
7	AZ16287 MSD-1	AZ16287W23	0.250	1	1	1 equip	980 E-WB7	1	2/1	05/18/15 15:00	76413
8	AZ16287	AZ16287W24			1	1 equip	1040 E-WB7	1	2/1	05/18/15 15:00	76413
9	AZ16288	AZ16288W07			1	1 equip	1040 E-WB7	1	2/1	05/18/15 15:00	76413
10	AZ16289	AZ16289W07			1	1 equip	1000 E-WB7	1	2/1	05/18/15 15:00	76413
11	AZ16290	AZ16290W08			1	1 equip	900 E-WB7	1	2/1	05/18/15 15:00	76413
12	AZ16334	AZ16334W10			1	1 equip	930 E-WB6	1	2/1	05/18/15 15:00	76424
13	AZ16335	AZ16335W09			1	1 equip	950 E-WB6	1	2/1	05/18/15 15:00	76424
14	AZ16336	AZ16336W10			1	1 equip	1050 E-WB6	1	2/1	05/18/15 15:00	76424
15	AZ16337	AZ16337W10			1	1 equip	950 E-WB6	1	2/1	05/18/15 15:00	76424
16	AZ16338	AZ16338W10			1	1 equip	900 E-WB6	1	2/1	05/18/15 15:00	76424

Solvent and Lot#	
MC	55006
1+1 Sulfuric Acid	3-6-15
Acidified Na2SO4	4-13-15
Na2SO4	XE21E
10N NaOH	3-6-15
ph strips	HC421273
Filter Paper	400091

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	5/19/15
Time	12:20
Refrigerator	GC-C

	Technician's Initials
Scanned By	DC
Sample Preparation	DC,KY
Extraction	DC,KY,CFM,DL
Concentration	IC

Modified	05/19/15 12:18:52 PM

Reviewed By: Ky **Date** 5/19/15

_SEP004

Organic Extraction Worksheet

Method	625/8270 Separatory Funnel Extra 3510C	Extraction Set	150518A	Extraction Method	SEP004	Units	mL

Spiked ID 1	8270T Spike 4-27-15 EXP 10-27-15		Surrogate ID 1	8270 Surrogate 248398-35028	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/18/15 15:00	
Spiked ID 8			Ext. End Time:	05/19/15 12:00	
			GC Requires Extract By:	**06/02/15 0:00**	

pH1	2	05/18/15 3:15:00 PM	Water Bath Temp Criteria	79,80,75 °
pH2	14	05/18/15 4:45:00 PM		
pH3				

Spiked By: KY **Date** 05/18/15 **Witnessed By:** CFM **Date** 05/18/15

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ16339	AZ16339W09			1	1	1030	1	2/1	05/18/15 15:00	76424
						equip	E-WB6				
18	AZ16340	AZ16340W10			1	1	980	1	2/1	05/18/15 15:00	76424
						equip	E-WB6				
19	AZ16341	AZ16341W10			1	1	900	1	2/1	05/18/15 15:00	76424
						equip	E-WB6				
20	AZ16342	AZ16342W10			1	1	950	1	2/1	05/18/15 15:00	76424
						equip	E-WB6				
21	AZ16457	AZ16457W07			1	1	150	1	2/1	05/18/15 15:00	76463 RUSH 48HRS
						equip	E-WB6				

KY 5/19/15

olvent and Lot#	
4C	55006
+1 Sulfuric Acid	3-6-15
cidified Na2SO4	4-13-15
la2SO4	XE21E
0N NaOH	3-6-15
h-strips	HC421273
ilter Paper	400091

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	5/19/15
Time	12:20
Refrigerator	RC-C

	Technician's Initials
Scanned By	DC
Sample Preparation	DC,KY
Extraction	DC,KY,CFM,DL
Concentration	IC

Modified	05/19/15 12:18:52 PM

Reviewed By: KY **Date** 5/19/15

Injection Log

Directory: M:\YODA\DATA\Y150511

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0511Y001.D	1	SV Tune 03/12/15		05/11/2015 14:44
2	2	0511Y002.D	1	5ug/ml SVOC 05/11/15		05/11/2015 15:02
3	3	0511Y003.D	1	10ug/ml SVOC		05/11/2015 15:31
4	4	0511Y004.D	1	20ug/ml SVOC		05/11/2015 16:01
5	5	0511Y005.D	1	40ug/ml SVOC		05/11/2015 16:31
6	6	0511Y006.D	1	50ug/ml SVOC		05/11/2015 17:00
7	7	0511Y007.D	1	60ug/ml SVOC		05/11/2015 17:31
8	8	0511Y008.D	1	80ug/ml SVOC		05/11/2015 18:00
9	9	0511Y009.D	1	100ug/ml SVOC		05/11/2015 18:30
10	10	0511Y010.D	1	50ug/ml SVOC SS 05/11/15		05/11/2015 19:00
11	6	0511Y106.D	1	SV TUNE 5/14/15		05/19/2015 13:02
12	7	0511Y107.D	1	50ug/ml SVOC 05/19/15		05/19/2015 13:20
13	8	0511Y108.D	1	150518A BLK 1/1000	water	05/19/2015 15:21
14	14	0511Y114.D	1.02041	AZ16287W21 MS-1 1/980	water	05/19/2015 18:19
15	15	0511Y115.D	1.02041	AZ16287W23 MSD-1 1/980	water	05/19/2015 18:49
16	16	0511Y116.D	0.96154	AZ16287W24 1/1040	water	05/19/2015 19:19
17	17	0511Y117.D	0.96154	AZ16288W07 1/1040	water	05/19/2015 19:48
18	18	0511Y118.D	1	AZ16289W07 1/1000	water	05/19/2015 20:18
19	19	0511Y119.D	1.11111	AZ16290W08 1/900	water	05/19/2015 20:48

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
QC Summary

APPL, INC.

Method Blank

EPA 8270D LL WATER DODv3

Blank Name/QCG: **150518W-16287 - 197649**

Batch ID: #SIMDD-150518A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8 #	50-110			%	5/18/2015	5/27/2015
BLANK	SURROGATE: NITROBENZENE-	62.2	40-110			%	5/18/2015	5/27/2015
BLANK	SURROGATE: TERPHENYL-D14 (	85.4	50-135			%	5/18/2015	5/27/2015

= Recovery (or RPD) is outside QC limits.

Quant Method: P0518-42.M
Run #: 0515L196
Instrument: Linus
Sequence: L150515
Initials: DA

GC SC-Blank-REG MDLs
Printed: 6/3/2015 12:59:24 PM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/27/2015

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	50-110	47.8	#	40-110	62.2	
150518A-LCS	Lab Control Spike	50-110	56.4		40-110	67.4	
AZ16287-MS	Matrix Spike	50-110	58.8		40-110	60.0	
AZ16287-MSD	Matrix SpikeD	50-110	61.9		40-110	69.8	
AZ16287	S67-MW007-051215	50-110	45.3	#	40-110	48.2	
AZ16288	S67-MW003-051215	50-110	57.3		40-110	67.2	
AZ16289	S67-MW002-051215	50-110	55.2		40-110	58.5	
AZ16290	S67-MW009-051215	50-110	55.9		40-110	63.4	

Comments: Batch: #SIMDD-150518A

= Recovery outside of Control Limits on Sample.

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/27/2015

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
150518A-BLK	Blank	50-135	85.4				
150518A-LCS	Lab Control Spike	50-135	84.3				
AZ16287-MS	Matrix Spike	50-135	85.1				
AZ16287-MSD	Matrix SpikeD	50-135	97.6				
AZ16287	S67-MW007-051215	50-135	73.8				
AZ16288	S67-MW003-051215	50-135	86.1				
AZ16289	S67-MW002-051215	50-135	85.0				
AZ16290	S67-MW009-051215	50-135	88.2				

Comments: Batch: #SIMDD-150518A

Laboratory Control Spike Recovery
EPA 8270D LL WATER DODv3

APPL ID: **150518W-16287 LCS - 197649**
Batch ID: #SIMDD-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-METHYLNAPHTHALENE	5.00	3.17	63.4	45-105
ACENAPHTHENE	5.00	4.06	81.2	45-110
ACENAPHTHYLENE	5.00	3.64	72.8	50-105
ANTHRACENE	5.00	3.57	71.4	55-110
BENZ (A) ANTHRACENE	5.00	4.01	80.2	55-110
BENZO (A) PYRENE	5.00	4.09	81.8	55-110
BENZO (B) FLUORANTHENE	5.00	3.88	77.6	45-120
BENZO (G,H,I) PERYLENE	5.00	3.96	79.2	40-125
BENZO (K) FLUORANTHENE	5.00	4.36	87.2	45-125
CHRYSENE	5.00	4.46	89.2	55-110
DIBENZ (A,H) ANTHRACENE	5.00	4.05	81.0	40-125
FLUORANTHENE	5.00	3.75	75.0	55-115
FLUORENE	5.00	3.71	74.2	50-110
INDENO (1,2,3-CD) PYRENE	5.00	4.24	84.8	45-125
NAPHTHALENE	5.00	3.90	78.0	40-100
PHENANTHRENE	5.00	3.64	72.8	50-115
PYRENE	5.00	4.34	86.8	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.55	1.44	56.4	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.55	1.72	67.4	40-110
SURROGATE: TERPHENYL-D14 (S)	2.55	2.15	84.3	50-135

Comments: _____

Primary	SPK
Quant Method :	P0518-42.M
Extraction Date :	5/18/2015
Analysis Date :	5/27/2015
Instrument :	Linus
Run :	0515L197
Initials :	DA

Printed: 6/3/2015 12:59:10 PM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D LL WATER DODv3

APPL ID: **150518W-16287 MS - 197649**
Batch ID: #SIMDD-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-METHYLNAPHTHALENE	5.00	0.11	3.23	4.08	62.4	79.4	45-105	23.3	30
ACENAPHTHENE	5.00	ND	3.92	4.82	78.4	96.4	45-110	20.6	30
ACENAPHTHYLENE	5.00	0.31	3.60	4.35	65.8	80.8	50-105	18.9	30
ANTHRACENE	5.00	0.057	3.70	4.49	72.9	88.7	55-110	19.3	30
BENZ (A) ANTHRACENE	5.00	0.084	4.08	4.88	79.9	95.9	55-110	17.9	30
BENZO (A) PYRENE	5.00	ND	4.18	4.94	83.6	98.8	55-110	16.7	30
BENZO (B) FLUORANTHENE	5.00	ND	3.94	4.76	78.8	95.2	45-120	18.9	30
BENZO (G,H,I) PERYLENE	5.00	ND	4.04	4.77	80.8	95.4	40-125	16.6	30
BENZO (K) FLUORANTHENE	5.00	0.38	4.44	5.18	81.2	96.0	45-125	15.4	30
CHRYSENE	5.00	ND	4.49	5.20	89.8	104	55-110	14.7	30
DIBENZ (A,H) ANTHRACENE	5.00	ND	4.08	4.84	81.6	96.8	40-125	17.0	30
FLUORANTHENE	5.00	ND	3.85	4.54	77.0	90.8	55-115	16.4	30
FLUORENE	5.00	0.11	3.68	4.42	71.4	86.2	50-110	18.3	30
INDENO (1,2,3-CD) PYRENE	5.00	ND	4.28	5.02	85.6	100	45-125	15.9	30
NAPHTHALENE	5.00	ND	3.96	4.92	79.2	98.4	40-100	21.6	30
PHENANTHRENE	5.00	ND	3.79	4.34	75.8	86.8	50-115	13.5	30
PYRENE	5.00	0.053	4.41	5.20	87.1	103	50-130	16.4	30
SURROGATE: 2-FLUORBIPHENYL (S)	2.55	NA	1.50	1.58	58.8	61.9	50-110		
SURROGATE: NITROBENZENE-D5 (S)	2.55	NA	1.53	1.78	60.0	69.8	40-110		
SURROGATE: TERPHENYL-D14 (S)	2.55	NA	2.17	2.49	85.1	97.6	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	P0518-42.M	P0518-42.M
Extraction Date :	5/18/2015	5/18/2015
Analysis Date :	5/27/2015	5/27/2015
Instrument :	Linus	Linus
Run :	0515L200	0515L201
Initials :	DA	

Printed: 6/3/2015 12:59:07 PM
APPL MSD SCII

8270D-LL

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 5/27/2015

Matrix: WATER Instrument: Linus

Blank ID: 150518A-BLK Time Analyzed: 0219

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150518A-BLK	Blank	0515L196	5/27/2015 0219
150518A-LCS	Lab Control Spike	0515L197	5/27/2015 0245
150518A-MS	Matrix Spike	0515L200	5/27/2015 0402
150518A-MSD	Matrix SpikeD	0515L201	5/27/2015 0428
AZ16287	S67-MW007-051215	0515L202	5/27/2015 0453
AZ16288	S67-MW003-051215	0515L203	5/27/2015 0519
AZ16289	S67-MW002-051215	0515L204	5/27/2015 0545
AZ16290	S67-MW009-051215	0515L205	5/27/2015 0610

Comments: Batch: #SIMDD-150518A

Form 5
Tune Summary

np 6-19-15

Lab Name: APPL Inc.
Case No: ~~0515L002.D~~ 76413
Matrix: Water np 6-19-15
ID: SV Tune 05/14/15

SDG No: ~~Linus~~ 76413
Date Analyzed: 5/15/2015
Instrument: Linus
Time Analyzed: 16:56

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1ug/ml PAH 05/15/1	0515L003.D	5/15/2015 17:15
2		0.2ug/ml PAH	0515L004.D	5/15/2015 17:41
3		0.5ug/ml PAH	0515L005.D	5/15/2015 18:06
4		1.0ug/ml PAH	0515L006.D	5/15/2015 18:32
5		5.0ug/ml PAH	0515L007.D	5/15/2015 18:58
6		10ug/ml PAH	0515L008.D	5/15/2015 19:23
7		50ug/ml PAH	0515L009.D	5/15/2015 19:49
8		100ug/ml PAH	0515L010.D	5/15/2015 20:14
9		5.0ug/ml PAH SS 05/1	0515L011.D	5/15/2015 20:40
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60% of mass 198	36.1
68	0 - 2.05% of mass 69	1.4
70	0 - 2% of mass 69	0.5
127	39.5 - 60% of mass 198	46.9
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	20.7
365	1 - 100% of mass 198	2.0
441	0.01 - 100% of mass 443	76.6
442	40 - 150% of mass 198	69.5
443	17 - 23% of mass 442	19.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 76413
Matrix: Water
ID: SV TUNE 5/14/15

SDG No: 76413
Date Analyzed: 5/27/2015
Instrument: Linus
Time Analyzed: 1:35

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5.0ug/ml PAH 5/26/15	0515L195.D	5/27/2015 1:54
2	Blank	150518A BLK 1/1000	0515L196.D	5/27/2015 2:19
3	Lab Control Spike	150518A LCS-1 1/1000	0515L197.D	5/27/2015 2:45
4		AZ16287W22 MS-1 1/98	0515L200.D	5/27/2015 4:02
5		AZ16287W20 MSD-1 1/9	0515L201.D	5/27/2015 4:28
6	S67-MW007-051215	AZ16287W19 1/900	0515L202.D	5/27/2015 4:53
7	S67-MW003-051215	AZ16288W08 1/950	0515L203.D	5/27/2015 5:19
8	S67-MW002-051215	AZ16289W08 1/900	0515L204.D	5/27/2015 5:45
9	S67-MW009-051215	AZ16290W07 1/940	0515L205.D	5/27/2015 6:10
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	29.95 - 60% of mass 198	31.3
68	0 - 2.05% of mass 69	1.6
70	0 - 2% of mass 69	0.5
127	39.5 - 60% of mass 198	45.3
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	20.5
365	1 - 100% of mass 198	1.9
441	0.01 - 100% of mass 443	75.8
442	40 - 150% of mass 198	81.5
443	17 - 23% of mass 442	19.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 76413

Lab File ID (Standard): 0515L009.D Date Analyzed: 05/15/15

Instrument ID: Linus Time Analyzed: 19:49

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	9907	6.16	4610	8.16	7949	9.88
	UPPER LIMIT	19814	6.66	9220	8.66	15898	10.38
	LOWER LIMIT	4954	5.66	2305	7.66	3975	9.38
	SAMPLE NO.						
01	5.0ug/ml PAH 5/26/15	7742	6.16	3768	8.17	6621	9.91
02	150518A BLK 1/1000	8846	6.16	4669	8.17	8053	9.91
03	150518A LCS-1 1/1000	9630	6.16	4920	8.17	8948	9.90
04	AZ16287W22 MS-1 1/9	9659	6.16	4908	8.17	8426	9.90
05	AZ16287W20 MSD-1 1/	8884	6.16	4521	8.17	7924	9.90
06	AZ16287W19 1/900	10985	6.16	5029	8.17	8745	9.91
07	AZ16288W08 1/950	10064	6.16	5106	8.17	8731	9.90
08	AZ16289W08 1/900	10062	6.16	4931	8.17	8498	9.90
09	AZ16290W07 1/940	9398	6.16	4857	8.17	8455	9.90
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 76413

Lab File ID (Standard): 0515L009.D Date Analyzed: 05/15/15

Instrument ID: Linus Time Analyzed: 19:49

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	8664	12.96	5437	14.57		
	UPPER LIMIT	17328	13.46	10874	15.07		
	LOWER LIMIT	4332	12.46	2719	14.07		
	SAMPLE NO.						
01	5.0ug/ml PAH 5/26/15	6986	12.97	4581	14.59		
02	150518A BLK 1/1000	8343	12.98	5471	14.59		
03	150518A LCS-1 1/1000	9112	12.97	5936	14.59		
04	AZ16287W22 MS-1 1/9	8777	12.97	5696	14.59		
05	AZ16287W20 MSD-1 1/	8256	12.97	5300	14.59		
06	AZ16287W19 1/900	8892	12.97	6106	14.59		
07	AZ16288W08 1/950	9194	12.97	6032	14.59		
08	AZ16289W08 1/900	8877	12.97	5811	14.59		
09	AZ16290W07 1/940	8704	12.97	5746	14.59		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
Sample Data

APPL, INC.

EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16287
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.11 J	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.31	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.057 J	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.084 J	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.38	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.11 J	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	45.3 #	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	48.2	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	73.8	50-135			%	5/18/2015	5/27/2015

J = Estimated value.
# = Recovery (or RPD) is outside QC limits.

Quant Method:	P0518-42.M
Run #:	0515L202
Instrument:	Linus
Sequence:	L150515
Dilution Factor:	1
Initials:	DA

Printed: 6/3/2015 12:58:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L202.D Vial: 2
Acq On : 27 May 15 4:53 Operator: MA
Sample : AZ16287W19 1/900 Inst : Linus
Misc : water Multiplr: 1.11

Quant Time: Jun 3 10:27 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	10985	2.50 ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	5029	2.50 ppb		0.01
11) Phenanthrene-D10(IS)	9.91	188	8745	2.50 ppb		0.01
15) Chrysene-D12(IS)	12.97	240	8892	2.50 ppb		0.01
21) Perylene-D12(IS)	14.59	264	6106	2.50 ppb		0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.36	82	1469	1.34 ppb		0.00
Spiked Amount 2.778			Recovery	= 48.168%		
7) Surrogate Recovery (FBP)	7.41	172	3599	1.26 ppb		0.01
Spiked Amount 2.778			Recovery	= 45.324%		
17) Surrogate Recovery (TPH)	11.77	244	5267	2.05 ppb		0.00
Spiked Amount 2.778			Recovery	= 73.764%		
Target Compounds						Qvalue
4) 2-Methylnaphthalene	6.98	142	79	0.11 ppb		79
8) Acenaphthylene	8.00	152	117	0.31 ppb		92
10) Fluorene	8.81	166	95	0.11 ppb		86
13) Anthracene	9.99	178	126	0.06 ppb		92
14) Fluoranthene	11.30	202	169	-0.09 ppb		96
16) Pyrene	11.56	202	239	0.05 ppb		97
18) Benz (a) anthracene	12.97	228	155	0.08 ppb		94
22) Benzo (b) fluoranthene	14.15	252	180	-0.15 ppb	#	85
23) Benzo (k) fluoranthene	14.19	252	125	0.38 ppb		97

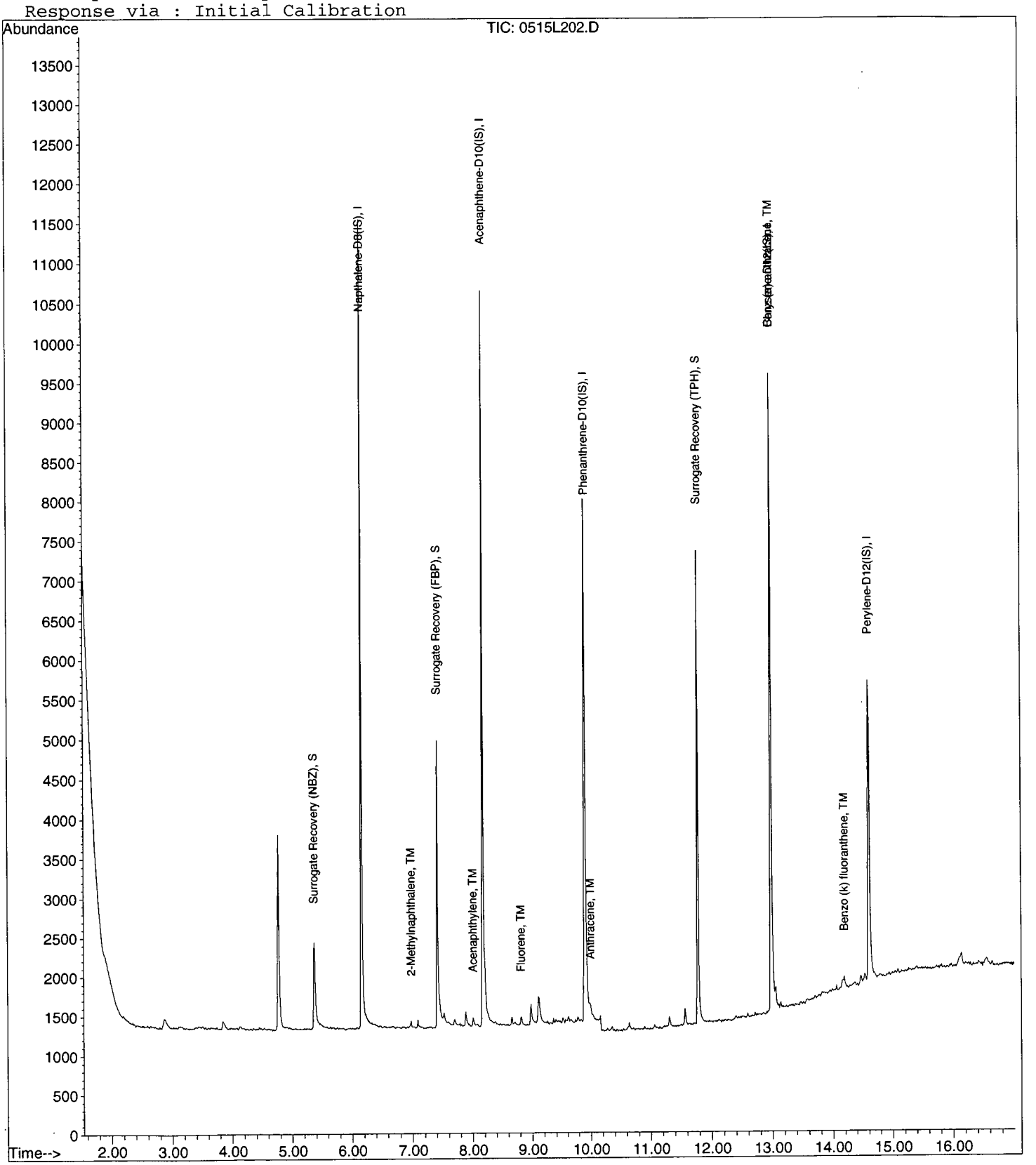
(#) = qualifier out of range (m) = manual integration

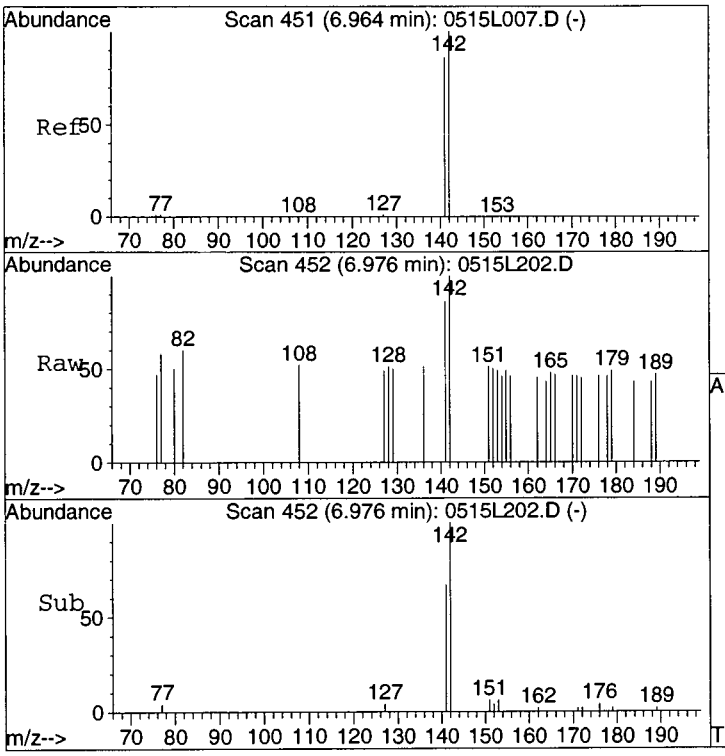
Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L202.D Vial: 2
Acq On : 27 May 15 4:53 Operator: MA
Sample : AZ16287W19 1/900 Inst : Linus
Misc : water Multiplr: 1.11

Quant Time: Jun 3 10:27 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration

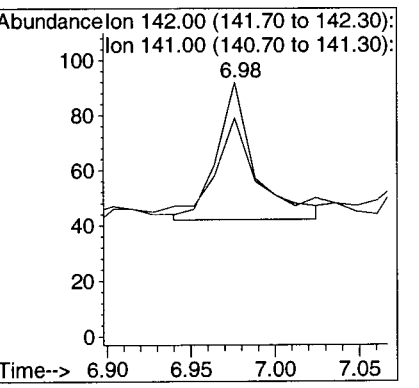


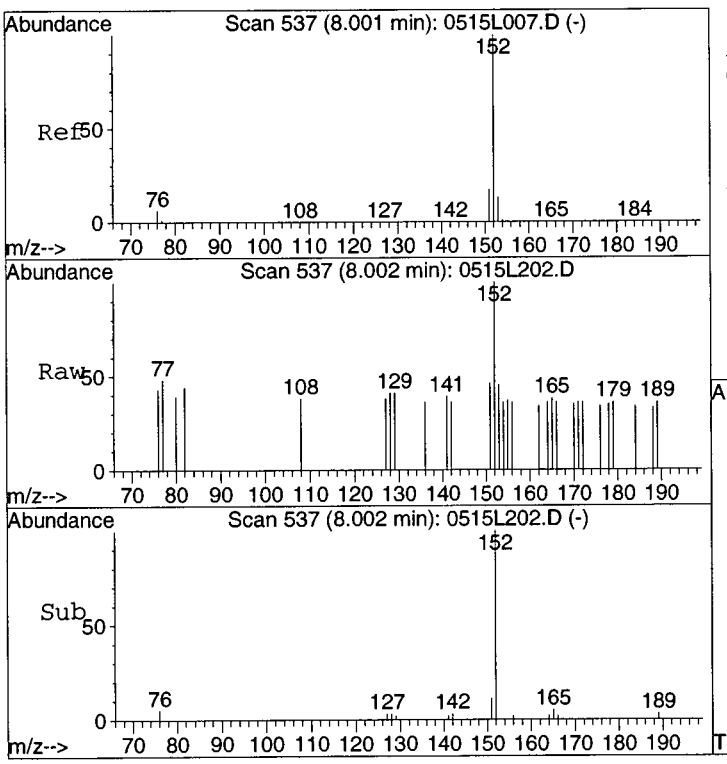


#4
2-Methylnaphthalene
Concen: 0.11 ppb
RT: 6.98 min Scan# 452
Delta R.T. 0.01 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:142 Resp: 79

Ion	Ratio	Lower	Upper
142	100		
141	66.7	60.1	111.5

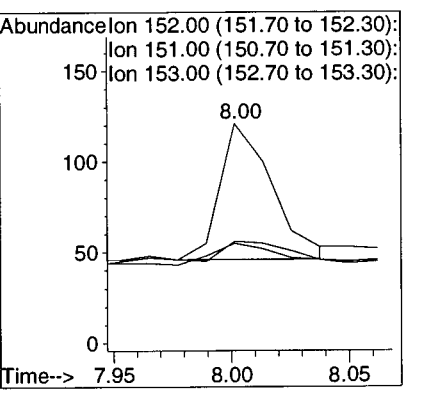


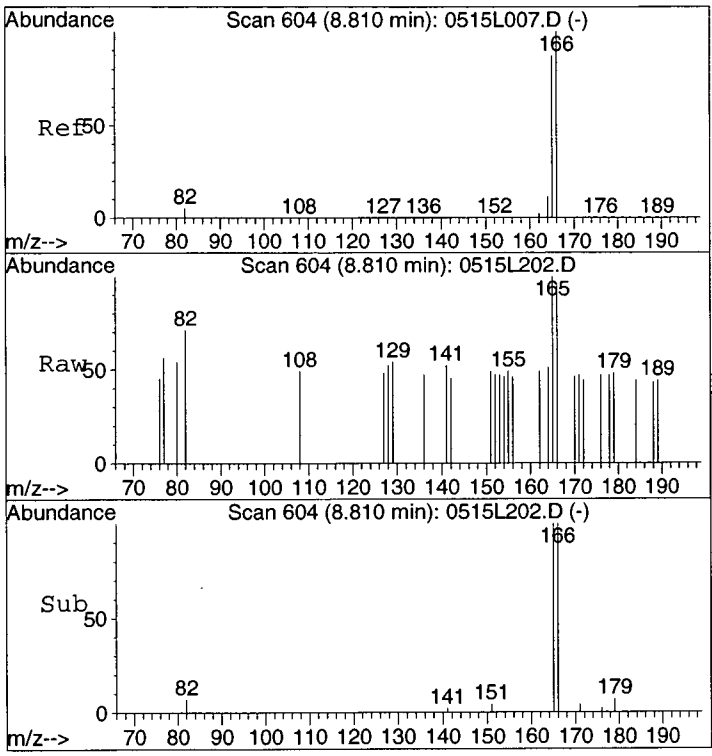


#8
Acenaphthylene
Concen: 0.31 ppb
RT: 8.00 min Scan# 537
Delta R.T. 0.00 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:152 Resp: 117

Ion	Ratio	Lower	Upper
152	100		
151	13.3	12.1	22.5
153	16.0	9.2	17.2

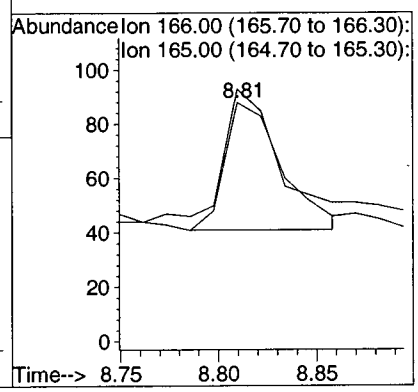


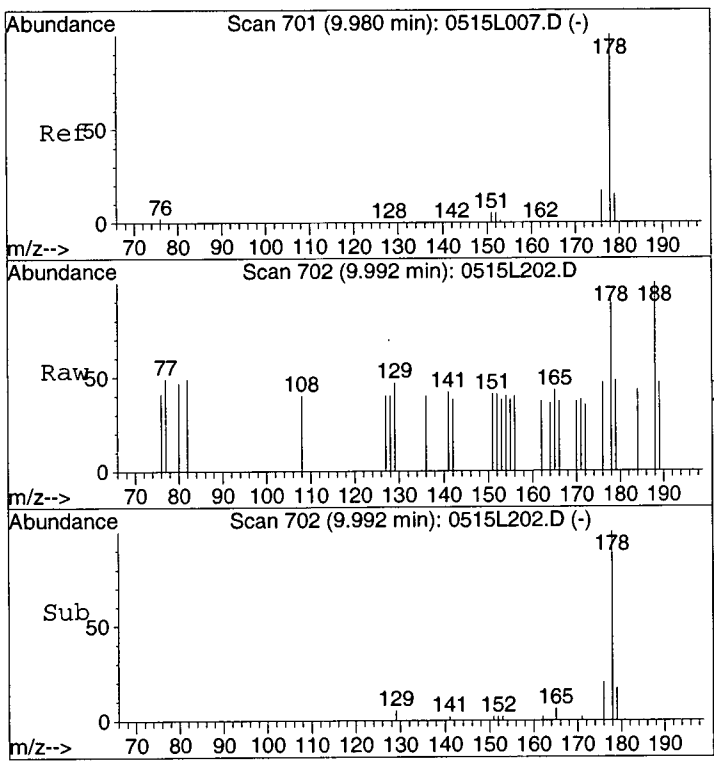


#10
Fluorene
Concen: 0.11 ppb
RT: 8.81 min Scan# 604
Delta R.T. 0.00 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:166 Resp: 95

Ion	Ratio	Lower	Upper
166	100		
165	100.0	60.7	112.7

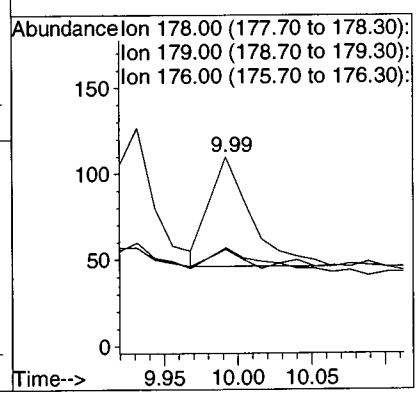


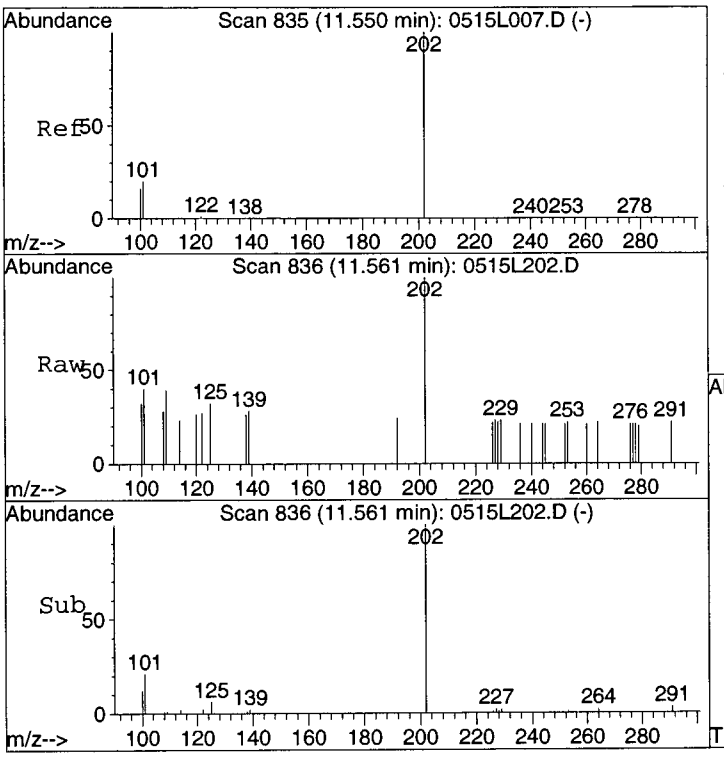


#13
Anthracene
Concen: 0.06 ppb
RT: 9.99 min Scan# 702
Delta R.T. 0.01 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:178 Resp: 126

Ion	Ratio	Lower	Upper
178	100		
179	18.8	10.5	19.5
176	20.3	12.0	22.4

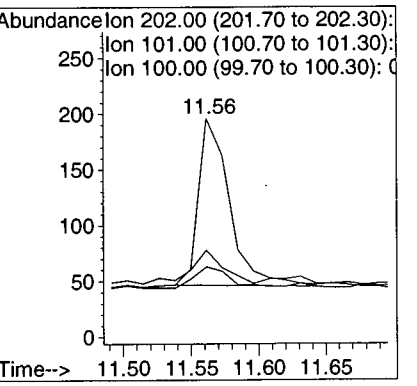


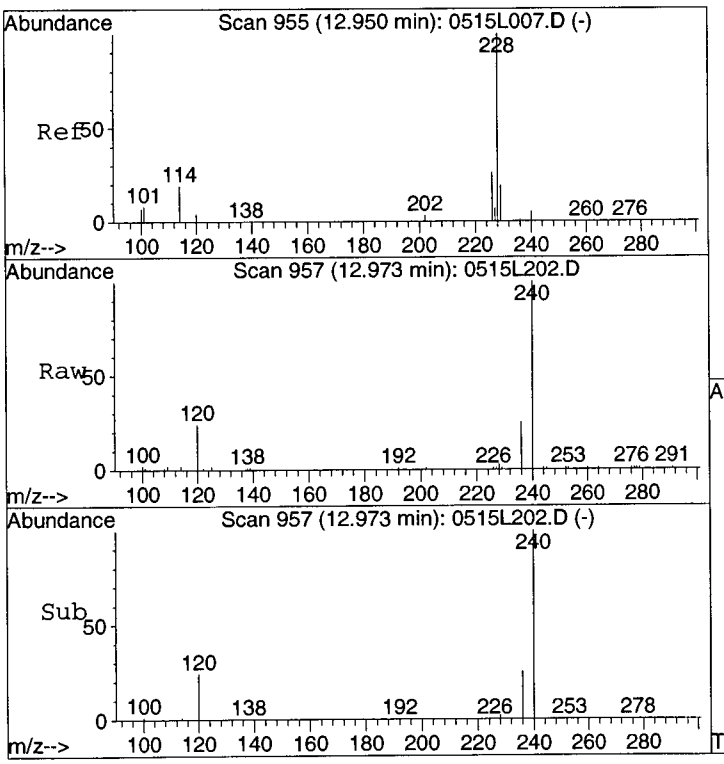


#16
Pyrene
Concen: 0.05 ppb
RT: 11.56 min Scan# 836
Delta R.T. 0.01 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:202 Resp: 239

Ion	Ratio	Lower	Upper
202	100		
101	20.1	14.3	26.5
100	12.8	10.9	20.3

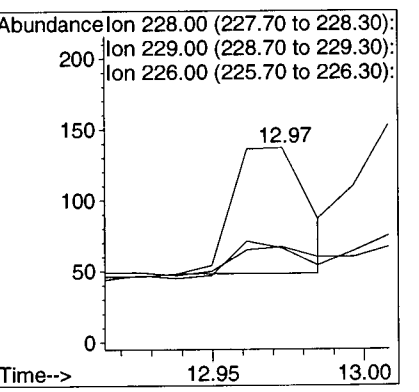


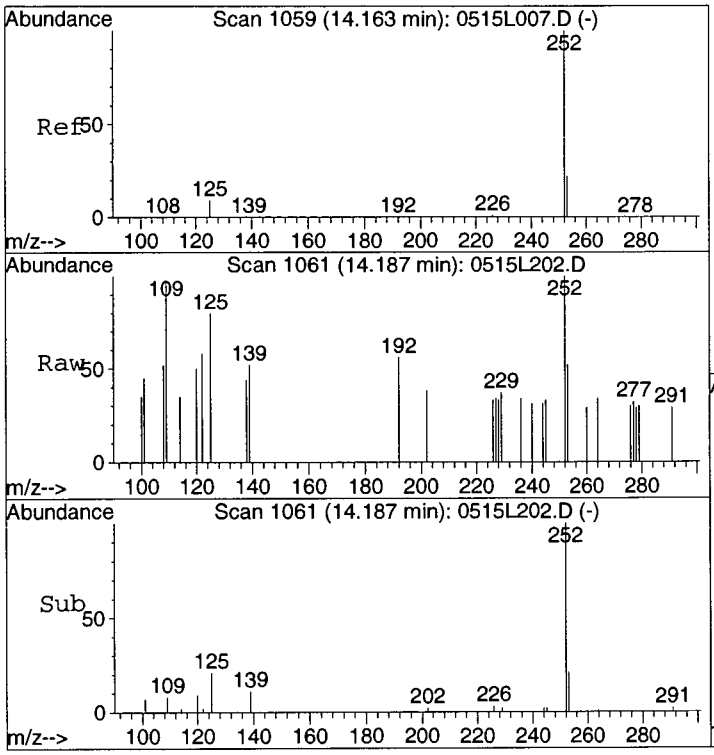


#18
Benz (a) anthracene
Concen: 0.08 ppb
RT: 12.97 min Scan# 957
Delta R.T. 0.02 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:228 Resp: 155

Ion	Ratio	Lower	Upper
228	100		
229	22.5	13.1	24.3
226	23.6	18.3	33.9

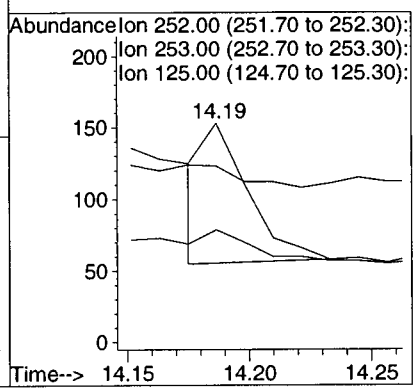




#23
Benzo (k) fluoranthene
Concen: 0.38 ppb
RT: 14.19 min Scan# 1061
Delta R.T. 0.01 min
Lab File: 0515L202.D
Acq: 27 May 15 4:53

Tgt Ion:252 Resp: 125

Ion	Ratio	Lower	Upper
252	100		
253	23.2	15.6	29.0
125	12.6	7.0	13.0



EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16288
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	57.3	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	67.2	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	86.1	50-135			%	5/18/2015	5/27/2015

Quant Method: P0518-42.M
Run #: 0515L203
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 12:58:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L203.D Vial: 3
Acq On : 27 May 15 5:19 Operator: MA
Sample : AZ16288W08 1/950 Inst : Linus
Misc : water Multiplr: 1.05

Quant Time: Jun 3 10:28 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	10064	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	5106	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	8731	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	9194	2.50	ppb		0.01
21) Perylene-D12(IS)	14.59	264	6032	2.50	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.36	82	1966	1.77	ppb		0.00
Spiked Amount 2.632			Recovery =	67.184%			
7) Surrogate Recovery (FBP)	7.41	172	4622	1.51	ppb		0.01
Spiked Amount 2.632			Recovery =	57.304%			
17) Surrogate Recovery (TPH)	11.77	244	6356	2.27	ppb		0.00
Spiked Amount 2.632			Recovery =	86.108%			
Target Compounds							Qvalue
14) Fluoranthene	11.30	202	31	-0.12	ppb		94
22) Benzo (b) fluoranthene	14.15	252	38	-0.17	ppb	#	81
24) Benzo (a) pyrene	14.47	252	46	-0.06	ppb	#	83

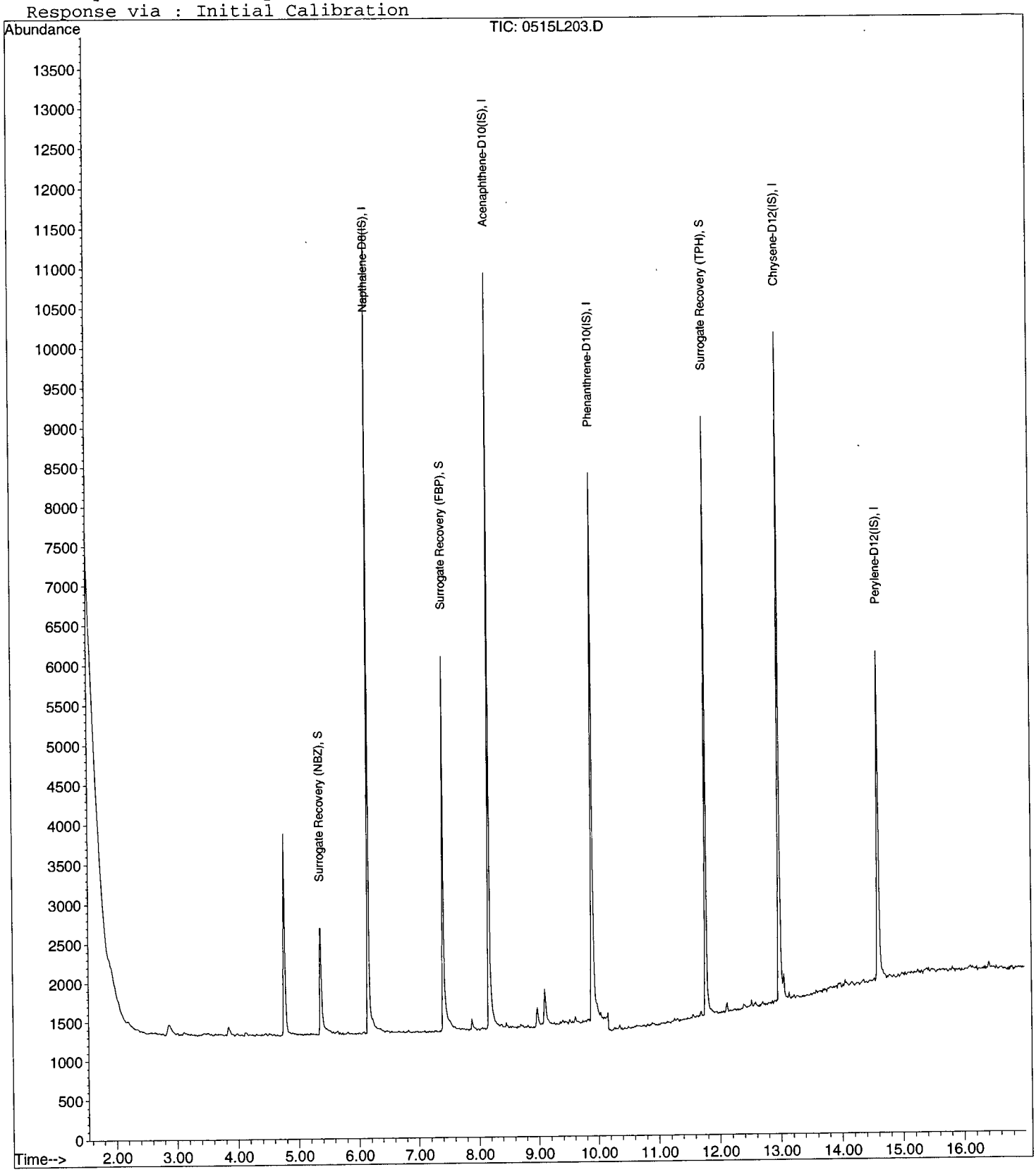
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L203.D Vial: 3
Acq On : 27 May 15 5:19 Operator: MA
Sample : AZ16288W08 1/950 Inst : Linus
Misc : water Multiplr: 1.05

Quant Time: Jun 3 10:28 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16289
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	55.2	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	58.5	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	85.0	50-135			%	5/18/2015	5/27/2015

Quant Method: P0518-42.M
Run #: 0515L204
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 12:58:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L204.D Vial: 4
Acq On : 27 May 15 5:45 Operator: MA
Sample : AZ16289W08 1/900 Inst : Linus
Misc : water Multiplr: 1.11

Quant Time: Jun 3 10:29 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.16	136	10062	2.50 ppb	0.00
6) Acenaphthene-D10(IS)	8.17	164	4931	2.50 ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	8498	2.50 ppb	0.00
15) Chrysene-D12(IS)	12.97	240	8877	2.50 ppb	0.01
21) Perylene-D12(IS)	14.59	264	5811	2.50 ppb	0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.36	82	1681	1.62 ppb	0.00
Spiked Amount 2.778			Recovery =	58.464%	
7) Surrogate Recovery (FBP)	7.41	172	4301	1.53 ppb	0.01
Spiked Amount 2.778			Recovery =	55.224%	
17) Surrogate Recovery (TPH)	11.77	244	6054	2.36 ppb	0.00
Spiked Amount 2.778			Recovery =	84.960%	
Target Compounds					Qvalue
14) Fluoranthene	11.30	202	24	-0.12 ppb #	42
22) Benzo (b) fluoranthene	14.17	252	65	-0.18 ppb #	66
24) Benzo (a) pyrene	14.47	252	22	-0.07 ppb #	31

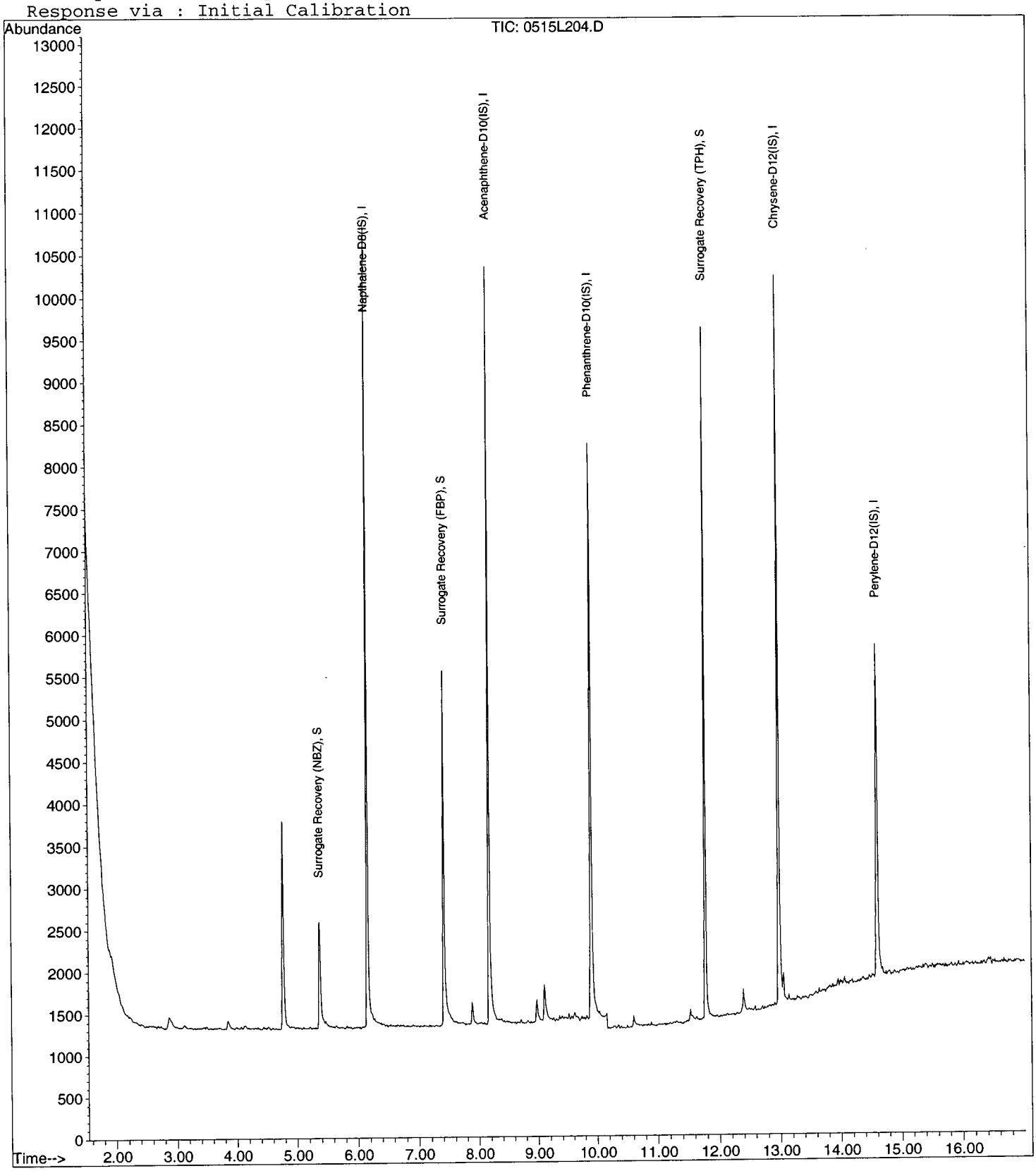
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L204.D Vial: 4
Acq On : 27 May 15 5:45 Operator: MA
Sample : AZ16289W08 1/900 Inst : Linus
Misc : water Multiplr: 1.11

Quant Time: Jun 3 10:29 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



EPA 8270D LL WATER DODv3

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 5/12/2015

ARF: 76413
APPL ID: AZ16290
QCG: #SIMDD-150518A-197649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-LL	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
8270D-LL	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
8270D-LL	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	55.9	50-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	63.4	40-110			%	5/18/2015	5/27/2015
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	88.2	50-135			%	5/18/2015	5/27/2015

Quant Method: P0518-42.M
Run #: 0515L205
Instrument: Linus
Sequence: L150515
Dilution Factor: 1
Initials: DA

Printed: 6/3/2015 12:58:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L205.D Vial: 5
Acq On : 27 May 15 6:10 Operator: MA
Sample : AZ16290W07 1/940 Inst : Linus
Misc : water Multiplr: 1.06

Quant Time: Jun 3 10:30 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9398	2.50 ppb	0.00
6) Acenaphthene-D10(IS)	8.17	164	4857	2.50 ppb	0.01
11) Phenanthrene-D10(IS)	9.90	188	8455	2.50 ppb	0.00
15) Chrysene-D12(IS)	12.97	240	8704	2.50 ppb	0.01
21) Perylene-D12(IS)	14.59	264	5746	2.50 ppb	0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.37	82	1722	1.69 ppb	0.01
Spiked Amount 2.660			Recovery	= 63.431%	
7) Surrogate Recovery (FBP)	7.41	172	4285	1.49 ppb	0.01
Spiked Amount 2.660			Recovery	= 55.874%	
17) Surrogate Recovery (TPH)	11.77	244	6168	2.35 ppb	0.00
Spiked Amount 2.660			Recovery	= 88.247%	
Target Compounds					Qvalue
14) Fluoranthene	11.30	202	59	-0.11 ppb #	69
22) Benzo (b) fluoranthene	14.16	252	39	-0.17 ppb #	71

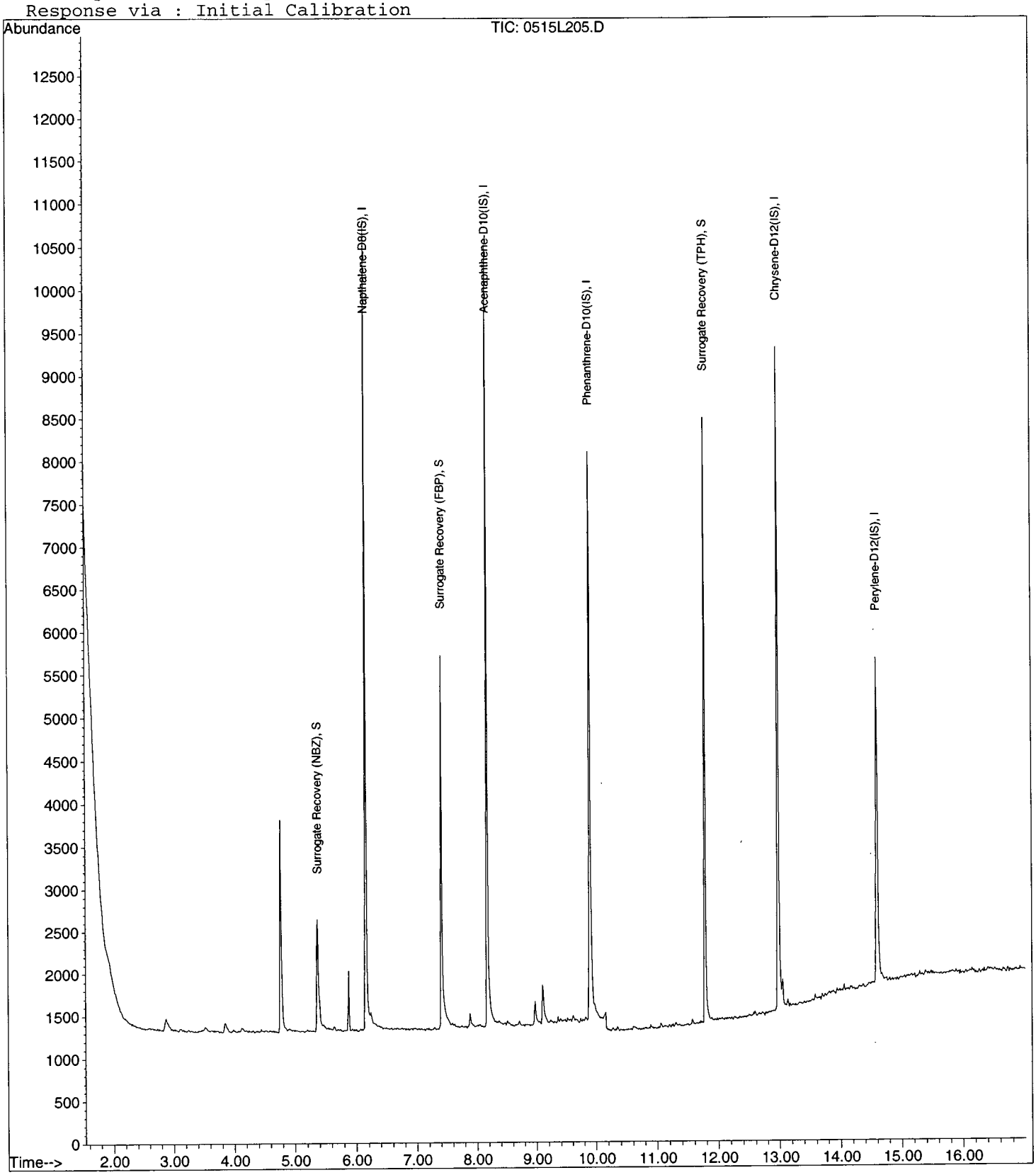
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L205.D Vial: 5
Acq On : 27 May 15 6:10 Operator: MA
Sample : AZ16290W07 1/940 Inst : Linus
Misc : water Multiplr: 1.06

Quant Time: Jun 3 10:30 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
Calibration Data

APPL, INC.

EPA 8270C SIM
P0518-42

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 7643
Case No: Initial Cal. Date: 5/15/2015
Matrix: Instrument: Linus
Initials: MA

			0515L003.D	0515L004.D	0515L005.D	0515L006.D	0515L007.D	0515L008.D	0515L009.D	0515L010.D						
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	SL	Surrogate Recovery (NBZ)	0.2254	0.3678	0.1834	0.1860	0.2776	0.2909	0.3391	0.3198			0.27	25	SL	0.999
3	TM	Naphthalene	0.8554	0.8475	0.7845	0.9100	1.049	1.089	1.174	1.113			0.98	15	TM	
4	TML	2-Methylnaphthalene	0.4994	0.5010	0.4785	0.5210	0.6104	0.6851	0.7669	0.7167			0.60	19	TML	0.999
5	TM	1-Methylnaphthalene	0.5762	0.5810	0.4580	0.5662	0.6341	0.6730	0.7484	0.6954			0.62	15	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)				1.217	1.812	1.617	1.675	1.577			1.6	14	S	
8	TML	Acenaphthylene	1.795	1.721	1.606	1.730	2.314	2.330	2.600	2.556			2.1	20	TML	1.000
9	*TM	Acenaphthene	1.152	1.120	1.004	1.083	1.397	1.402	1.500	1.468			1.3	15	*TM	
10	TML	Fluorene	1.331	1.190	1.050	1.116	1.471	1.579	1.671	1.606			1.4	17	TML	1.000
11	I	Phenanthrene-D10(IS)														
12	TML	Phenanthrene	1.072	1.012	0.9085	0.9592	1.237	1.307	1.401	1.315			1.2	16	TML	0.999
13	TML	Anthracene	0.9138	0.9496	0.8756	0.9497	1.174	1.229	1.322	1.259			1.1	17	TML	0.999
14	*TML	Fluoranthene	1.292	1.160	1.048	1.124	1.461	1.555	1.707	1.564			1.4	18	*TML	0.998
15	I	Chrysene-D12(IS)														
16	TM	Pyrene	1.385	1.349	1.165	1.236	1.554	1.564	1.593	1.529			1.4	11	TM	
17	S	Surrogate Recovery (TPH)	0.7828	0.7480	0.6866	0.6959	0.9635	0.8453	0.8659	0.8351			0.80	12	S	
18	TML	Benz (a) anthracene	1.074	0.9169	0.8316	0.8680	1.146	1.248	1.372	1.288			1.1	19	TML	0.999
19	TM	Chrysene	1.181	1.069	1.140	1.165	1.314	1.284	1.211	1.171			1.2	6.6	TM	
20	TML	Indeno (1,2,3-cd) pyrene	1.032	0.8816	0.8741	0.9520	1.205	1.296	1.416	1.386			1.1	20	TML	1.000
21	I	Perylene-D12(IS)														
22	TML	Benzo (b) fluoranthene	1.181	1.366	0.9970	1.080	1.710	1.633	2.174	1.841			1.5	27	TML	0.993
23	TML	Benzo (k) fluoranthene	1.572	0.9926	1.318	1.357	1.658	1.985	1.740	1.877			1.6	21	TML	0.999
24	*TML	Benzo (a) pyrene	1.523	1.336	1.301	1.388	1.764	1.857	1.940	1.838			1.6	16	*TML	0.999
25	TML	Dibenz (a,h) anthracene	1.133	1.051	1.104	1.146	1.622	1.761	1.922	1.826			1.4	26	TML	0.999
26	TML	Benzo (g,h,i) perylene	1.398	1.182	1.173	1.261	1.698	1.811	1.927	1.828			1.5	20	TML	0.999
27																
28																
29																
30																
31																
32																
33																
34																
35																

Data File : M:\LINUS\DATA\L150515\0515L003.D Vial: 3
Acq On : 15 May 15 17:15 Operator: csc
Sample : 0.1ug/ml PAH 05/15/15 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 10:26 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

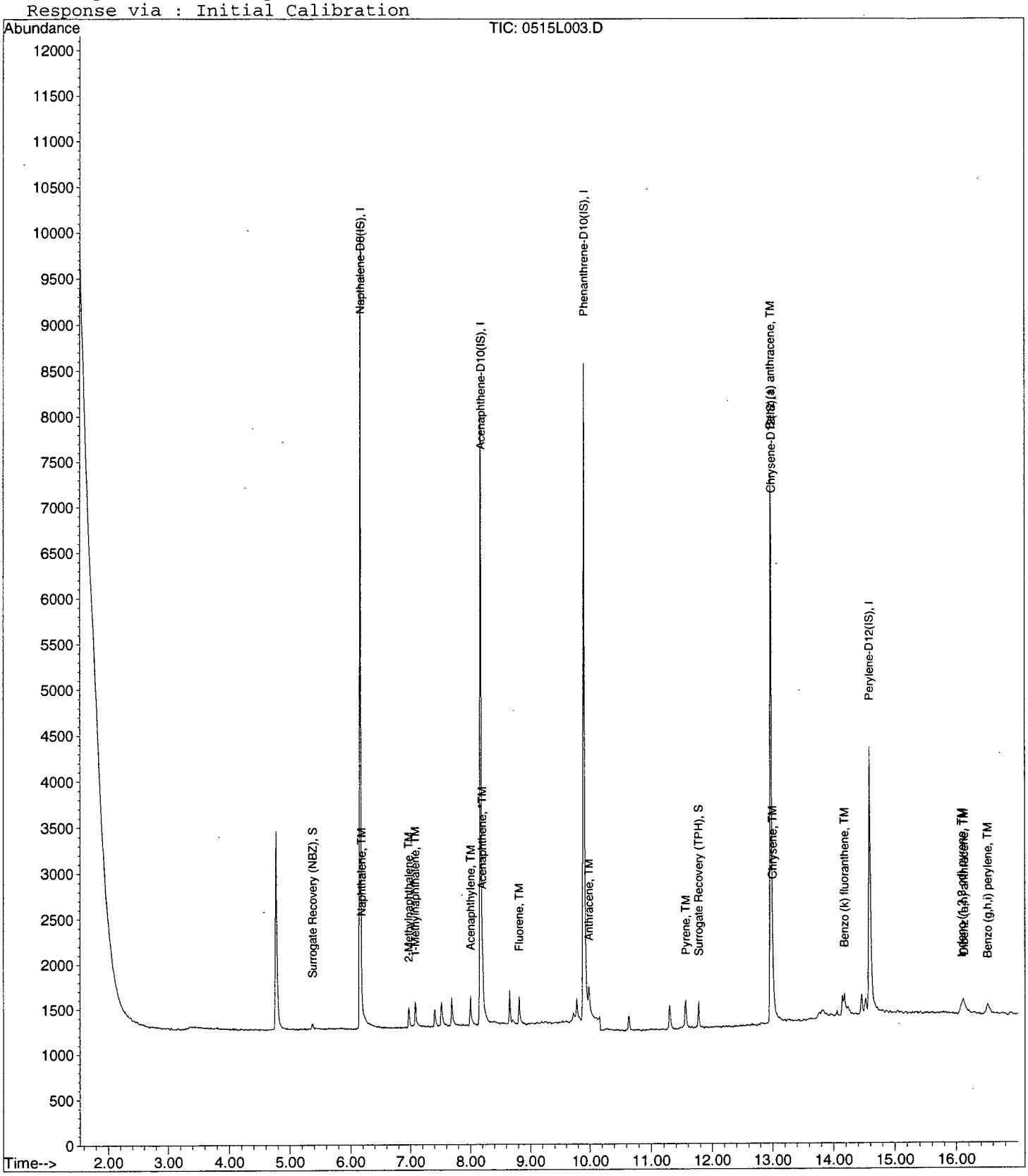
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9762	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	4471	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	7606	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	7218	2.50	ppb		0.01
21) Perylene-D12(IS)	14.58	264	4613	2.50	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	88	0.24	ppb		0.01
Spiked Amount 2.500			Recovery =	9.680%			
7) Surrogate Recovery (FBP)	7.41	172	230	-0.18	ppb		0.01
Spiked Amount 2.500			Recovery =	-7.400%			
17) Surrogate Recovery (TPH)	11.77	244	226	0.10	ppb		0.00
Spiked Amount 2.500			Recovery =	3.880%			
Target Compounds							Qvalue
3) Naphthalene	6.18	128	334	0.09	ppb		96
4) 2-Methylnaphthalene	6.96	142	195	0.14	ppb		95
5) 1-Methylnaphthalene	7.07	142	225	0.09	ppb		100
8) Acenaphthylene	8.00	152	321	0.33	ppb		96
9) Acenaphthene	8.19	154	208	0.09	ppb		98
10) Fluorene	8.81	166	238	0.15	ppb		99
13) Anthracene	9.98	178	278	0.09	ppb		94
16) Pyrene	11.56	202	400	0:10	ppb		92
18) Benz (a) anthracene	12.96	228	310	0.12	ppb		97
19) Chrysene	13.00	228	341	0.10	ppb		94
20) Indeno (1,2,3-cd) pyrene	16.09	276	298	0.31	ppb	#	97
22) Benzo (b) fluoranthene	14.14	252	218	-0.11	ppb		96
23) Benzo (k) fluoranthene	14.17	252	290	0.40	ppb	#	94
25) Dibenz (a,h) anthracene	16.12	278	209	0.17	ppb		90
26) Benzo (g,h,i) perylene	16.51	276	258	0.09	ppb		88

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L150515\0515L003.D Vial: 3
Acq On : 15 May 15 17:15 Operator: csc
Sample : 0.1ug/ml PAH 05/15/15 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 10:26 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L150515\0515L004.D Vial: 4
Acq On : 15 May 15 17:41 Operator: csc
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:13:03 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

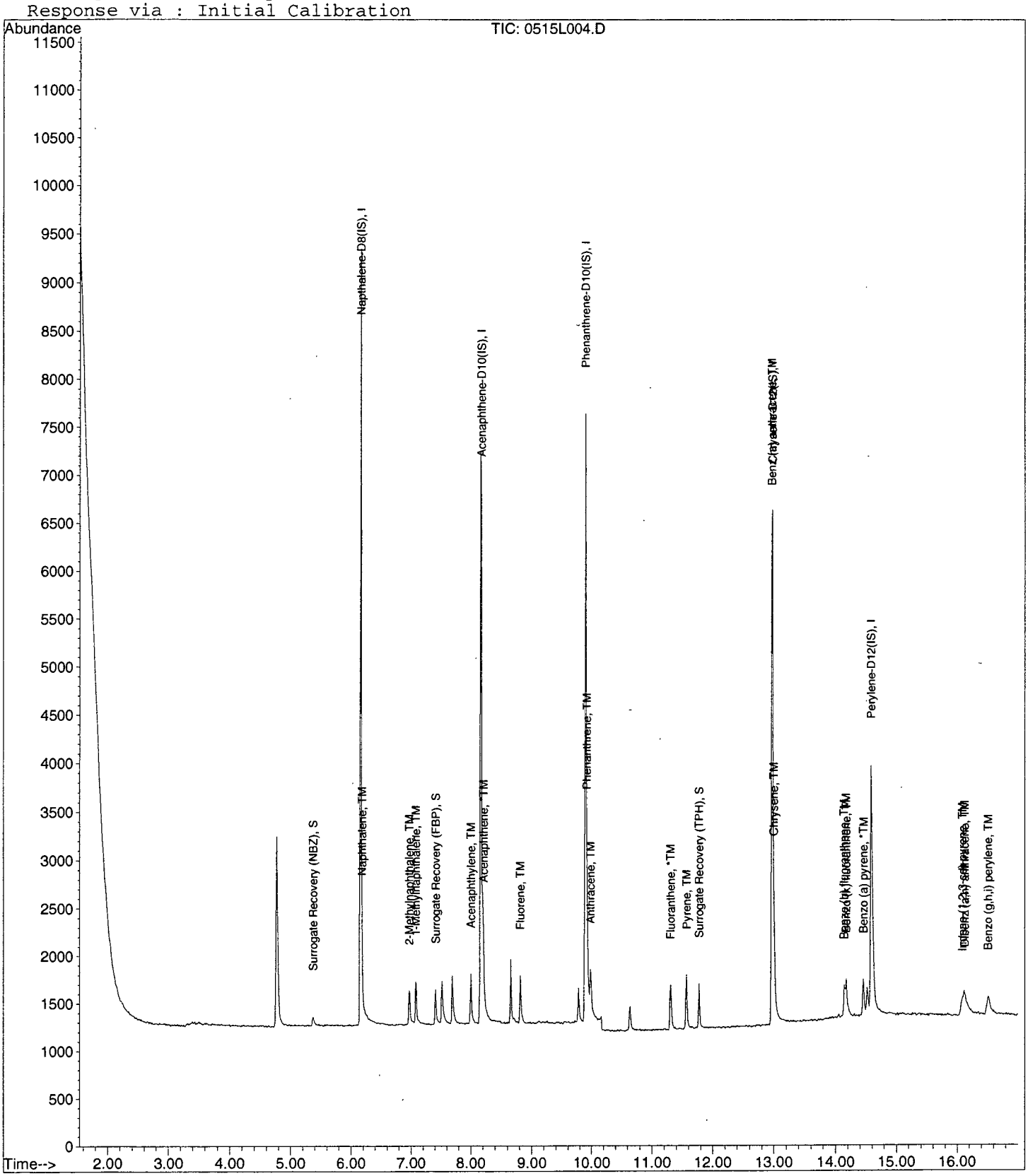
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9381	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	4264	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	7253	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	6735	2.50	ppb		0.01
21) Perylene-D12(IS)	14.58	264	4483	2.50	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	138	0.81	ppb		0.01
Spiked Amount 2.500			Recovery = 32.400%				
7) Surrogate Recovery (FBP)	7.41	172	438	0.18	ppb		0.01
Spiked Amount 2.500			Recovery = 7.280%				
17) Surrogate Recovery (TPH)	11.77	244	403	0.20	ppb		0.00
Spiked Amount 2.500			Recovery = 8.000%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	636	0.50	ppb		99
4) 2-Methylnaphthalene	6.96	142	376	0.79	ppb		100
5) 1-Methylnaphthalene	7.07	142	436	0.52	ppb		99
8) Acenaphthylene	8.00	152	587	0.32	ppb		99
9) Acenaphthene	8.21	154	382	0.40	ppb		91
10) Fluorene	8.81	166	406	0.46	ppb		91
12) Phenanthrene	9.92	178	587	0.19	ppb		99
13) Anthracene	9.98	178	551	0.55	ppb		99
14) Fluoranthene	11.30	202	673	0.78	ppb		92
16) Pyrene	11.56	202	727	0.21	ppb		91
18) Benz (a) anthracene	12.96	228	494	0.17	ppb		93
19) Chrysene	13.00	228	576	0.20	ppb		97
20) Indeno (1,2,3-cd) pyrene	16.09	276	475	0.63	ppb	#	92
22) Benzo (b) fluoranthene	14.14	252	490	0.41	ppb	#	89
23) Benzo (k) fluoranthene	14.17	252	356	0.38	ppb		97
24) Benzo (a) pyrene	14.45	252	479	0.38	ppb		97
25) Dibenz (a,h) anthracene	16.12	278	377	0.57	ppb		95
26) Benzo (g,h,i) perylene	16.51	276	424	0.55	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L150515\0515L004.D Vial: 4
Acq On : 15 May 15 17:41 Operator: csc
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L005.D Vial: 5
Acq On : 15 May 15 18:06 Operator: csc
Sample : 0.5ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:13:03 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9050	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	4233	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	7149	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	6590	2.50	ppb		0.01
21) Perylene-D12(IS)	14.58	264	4308	2.50	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	332	0.98	ppb		0.01
Spiked Amount 2.500			Recovery = 39.000%				
7) Surrogate Recovery (FBP)	7.41	172	955	0.40	ppb		0.01
Spiked Amount 2.500			Recovery = 15.960%				
17) Surrogate Recovery (TPH)	11.77	244	905	0.46	ppb		0.00
Spiked Amount 2.500			Recovery = 18.400%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	1420	0.70	ppb		100
4) 2-Methylnaphthalene	6.96	142	866	0.97	ppb		99
5) 1-Methylnaphthalene	7.07	142	829	0.67	ppb		94
8) Acenaphthylene	8.00	152	1360	0.51	ppb		97
9) Acenaphthene	8.21	154	850	0.60	ppb		96
10) Fluorene	8.81	166	889	0.64	ppb		94
12) Phenanthrene	9.92	178	1299	0.42	ppb		98
13) Anthracene	9.98	178	1252	0.76	ppb		98
14) Fluoranthene	11.30	202	1498	0.96	ppb		93
16) Pyrene	11.56	202	1536	0.46	ppb		91
18) Benz (a) anthracene	12.96	228	1096	0.39	ppb		96
19) Chrysene	13.00	228	1502	0.53	ppb		97
20) Indeno (1,2,3-cd) pyrene	16.08	276	1152	0.83	ppb	#	90
22) Benzo (b) fluoranthene	14.14	252	859	0.55	ppb	#	96
23) Benzo (k) fluoranthene	14.17	252	1136	0.72	ppb		97
24) Benzo (a) pyrene	14.45	252	1121	0.64	ppb		94
25) Dibenz (a,h) anthracene	16.11	278	951	0.80	ppb		94
26) Benzo (g,h,i) perylene	16.51	276	1011	0.80	ppb		97

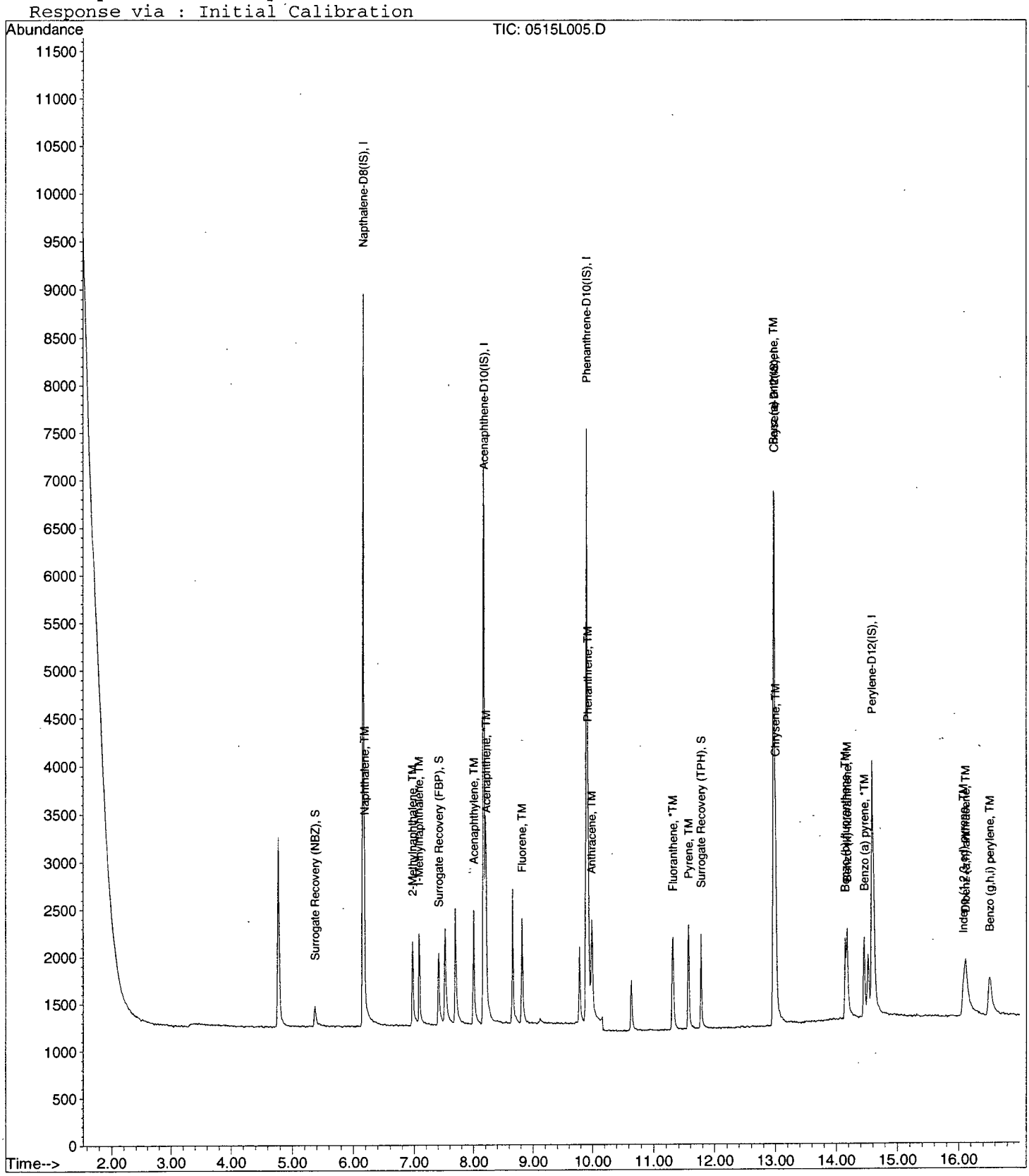
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L005.D Vial: 5
Acq On : 15 May 15 18:06 Operator: csc
Sample : 0.5ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L150515\0515L006.D Vial: 6
Acq On : 15 May 15 18:32 Operator: csc
Sample : 1.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:13:03 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	8964	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.16	164	4488	2.50	ppb		0.00
11) Phenanthrene-D10(IS)	9.90	188	7363	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	6941	2.50	ppb		0.01
21) Perylene-D12(IS)	14.58	264	4617	2.50	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	667	1.26	ppb		0.01
Spiked Amount 2.500			Recovery = 50.400%				
7) Surrogate Recovery (FBP)	7.41	172	2185	0.86	ppb		0.01
Spiked Amount 2.500			Recovery = 34.440%				
17) Surrogate Recovery (TPH)	11.77	244	1932	0.93	ppb		0.00
Spiked Amount 2.500			Recovery = 37.280%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	3263	1.16	ppb		99
4) 2-Methylnaphthalene	6.96	142	1868	1.34	ppb		98
5) 1-Methylnaphthalene	7.07	142	2030	1.14	ppb		96
8) Acenaphthylene	8.00	152	3106	0.91	ppb		99
9) Acenaphthene	8.19	154	1945	1.01	ppb		97
10) Fluorene	8.81	166	2003	1.02	ppb		94
12) Phenanthrene	9.92	178	2825	0.89	ppb		99
13) Anthracene	9.98	178	2797	1.18	ppb		98
14) Fluoranthene	11.30	202	3311	1.32	ppb		92
16) Pyrene	11.56	202	3431	0.97	ppb	#	87
18) Benz (a) anthracene	12.96	228	2410	0.81	ppb		97
19) Chrysene	13.00	228	3235	1.09	ppb		98
20) Indeno (1,2,3-cd) pyrene	16.08	276	2643	1.22	ppb	#	97
22) Benzo (b) fluoranthene	14.14	252	1994	0.91	ppb		96
23) Benzo (k) fluoranthene	14.17	252	2506	1.22	ppb		96
24) Benzo (a) pyrene	14.45	252	2564	1.14	ppb		96
25) Dibenz (a,h) anthracene	16.11	278	2117	1.20	ppb		98
26) Benzo (g,h,i) perylene	16.51	276	2328	1.27	ppb		98

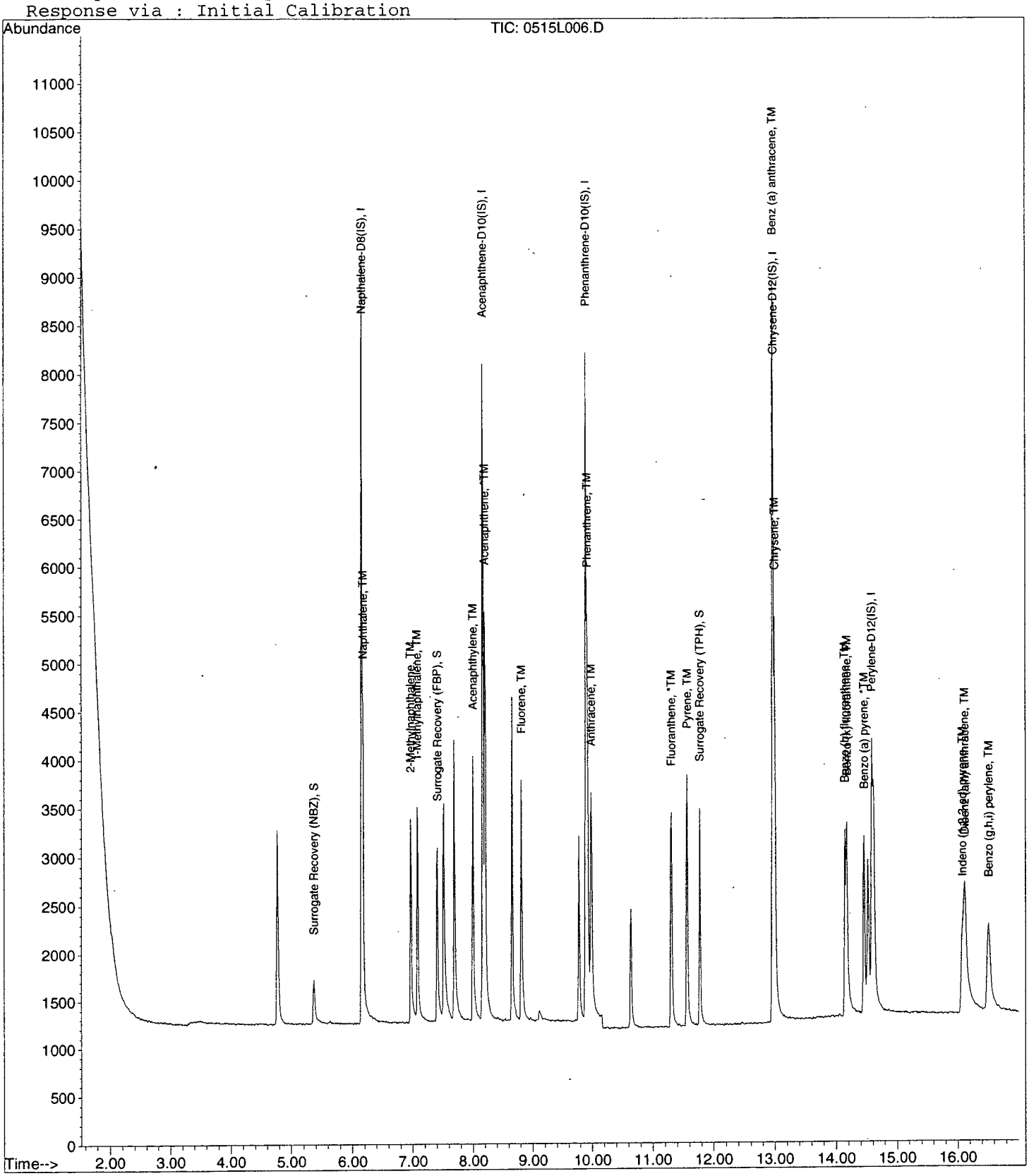
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L006.D Vial: 6
Acq On : 15 May 15 18:32 Operator: csc
Sample : 1.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L150515\0515L007.D Vial: 7
Acq On : 15 May 15 18:58 Operator: csc
Sample : 5.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:13:03 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	7444	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.16	164	3374	2.50	ppb		0.00
11) Phenanthrene-D10(IS)	9.90	188	5789	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.96	240	5736	2.50	ppb		0.00
21) Perylene-D12(IS)	14.58	264	3671	2.50	ppb		0.00
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.36	82	4133	4.89	ppb		0.00
Spiked Amount 2.500			Recovery	=	195.520%		
7) Surrogate Recovery (FBP)	7.40	172	12230	6.41	ppb		0.00
Spiked Amount 2.500			Recovery	=	256.280%		
17) Surrogate Recovery (TPH)	11.77	244	11053	6.45	ppb		0.00
Spiked Amount 2.500			Recovery	=	258.000%		
Target Compounds							Qvalue
3) Naphthalene	6.18	128	15624	5.05	ppb		100
4) 2-Methylnaphthalene	6.96	142	9087	4.65	ppb		100
5) 1-Methylnaphthalene	7.07	142	9441	4.77	ppb		100
8) Acenaphthylene	8.00	152	15612	5.09	ppb		100
9) Acenaphthene	8.19	154	9425	5.21	ppb		100
10) Fluorene	8.81	166	9927	5.02	ppb		100
12) Phenanthrene	9.92	178	14320	5.74	ppb		100
13) Anthracene	9.98	178	13594	5.20	ppb		100
14) Fluoranthene	11.29	202	16914	5.05	ppb		100
16) Pyrene	11.55	202	17823	6.08	ppb		100
18) Benz (a) anthracene	12.95	228	13150	5.34	ppb		100
19) Chrysene	13.00	228	15075	6.16	ppb		100
20) Indeno (1,2,3-cd) pyrene	16.06	276	13822	5.05	ppb	#	100
22) Benzo (b) fluoranthene	14.14	252	12555	5.60	ppb		100
23) Benzo (k) fluoranthene	14.16	252	12170	6.25	ppb		100
24) Benzo (a) pyrene	14.44	252	12949	6.16	ppb		100
25) Dibenz (a,h) anthracene	16.10	278	11907	5.92	ppb		100
26) Benzo (g,h,i) perylene	16.50	276	12470	6.31	ppb		100

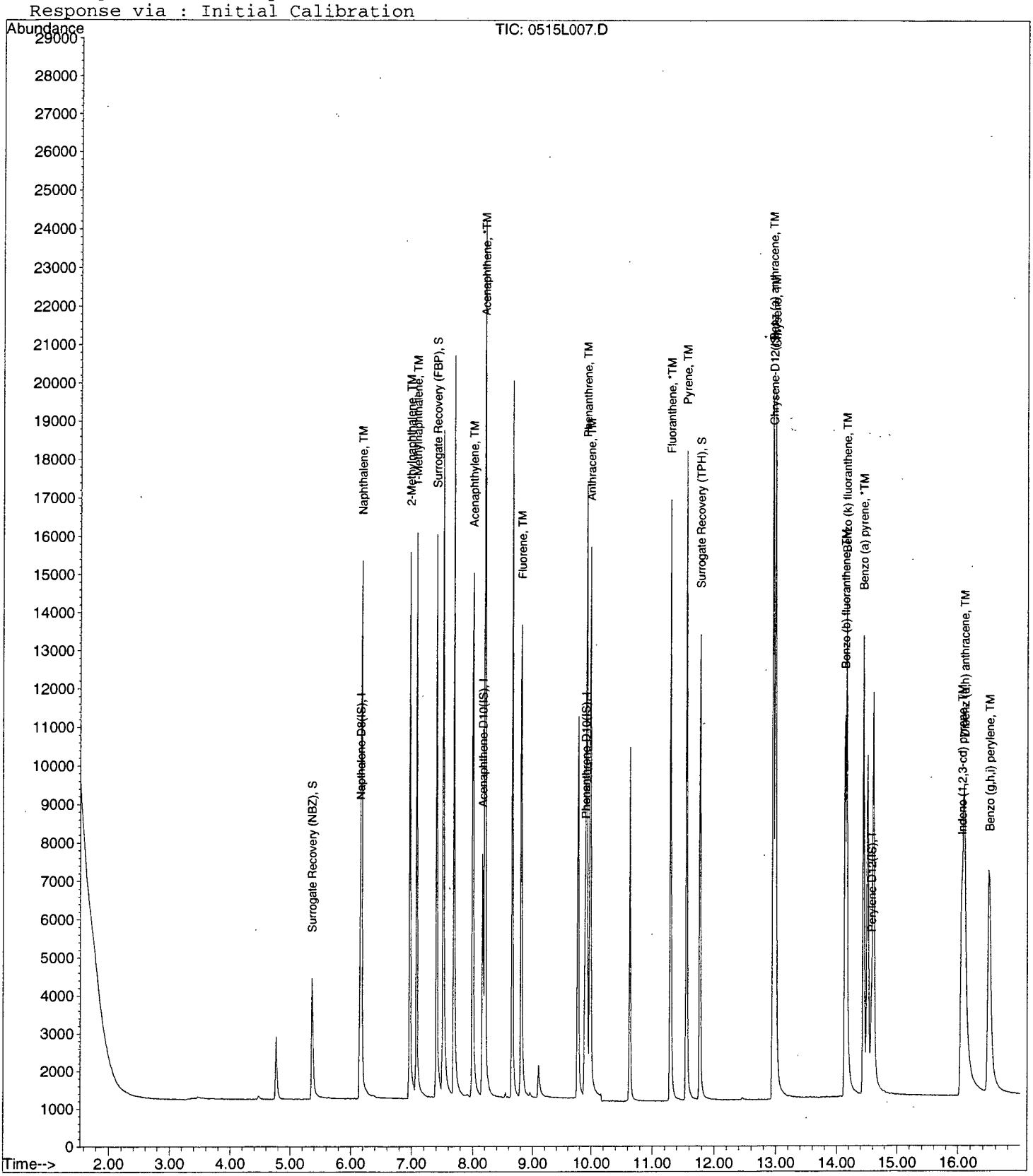
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L007.D Vial: 7
Acq On : 15 May 15 18:58 Operator: csc
Sample : 5.0ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L150515\0515L008.D Vial: 8
Acq On : 15 May 15 19:23 Operator: csc
Sample : 10ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:13:03 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	10891	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.16	164	5030	2.50	ppb		0.00
11) Phenanthrene-D10(IS)	9.88	188	8662	2.50	ppb		-0.01
15) Chrysene-D12(IS)	12.96	240	8905	2.50	ppb		0.00
21) Perylene-D12(IS)	14.57	264	5552	2.50	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.36	82	12674	9.48	ppb		0.00
Spiked Amount 2.500			Recovery = 379.120%				
7) Surrogate Recovery (FBP)	7.40	172	32526	11.43	ppb		0.00
Spiked Amount 2.500			Recovery = 457.200%				
17) Surrogate Recovery (TPH)	11.77	244	30110	11.32	ppb		0.00
Spiked Amount 2.500			Recovery = 452.680%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	47430	10.10	ppb		100
4) 2-Methylnaphthalene	6.96	142	29844	9.62	ppb		99
5) 1-Methylnaphthalene	7.07	142	29320	9.71	ppb		98
8) Acenaphthylene	7.99	152	46873	10.07	ppb		97
9) Acenaphthene	8.19	154	28199	10.20	ppb		99
10) Fluorene	8.80	166	31766	10.43	ppb		92
12) Phenanthrene	9.92	178	45279	12.14	ppb		100
13) Anthracene	9.98	178	42591	10.46	ppb		99
14) Fluoranthene	11.29	202	53862	10.02	ppb		94
16) Pyrene	11.55	202	55714	12.24	ppb		95
18) Benz (a) anthracene	12.95	228	44470	11.64	ppb		98
19) Chrysene	12.98	228	45739	12.03	ppb	#	93
20) Indeno (1,2,3-cd) pyrene	16.05	276	46158	10.29	ppb	#	96
22) Benzo (b) fluoranthene	14.13	252	36269	10.48	ppb		96
23) Benzo (k) fluoranthene	14.16	252	44089	14.63	ppb		95
24) Benzo (a) pyrene	14.44	252	41250	12.77	ppb		95
25) Dibenz (a,h) anthracene	16.09	278	39115	12.37	ppb		98
26) Benzo (g,h,i) perylene	16.48	276	40228	13.02	ppb		98

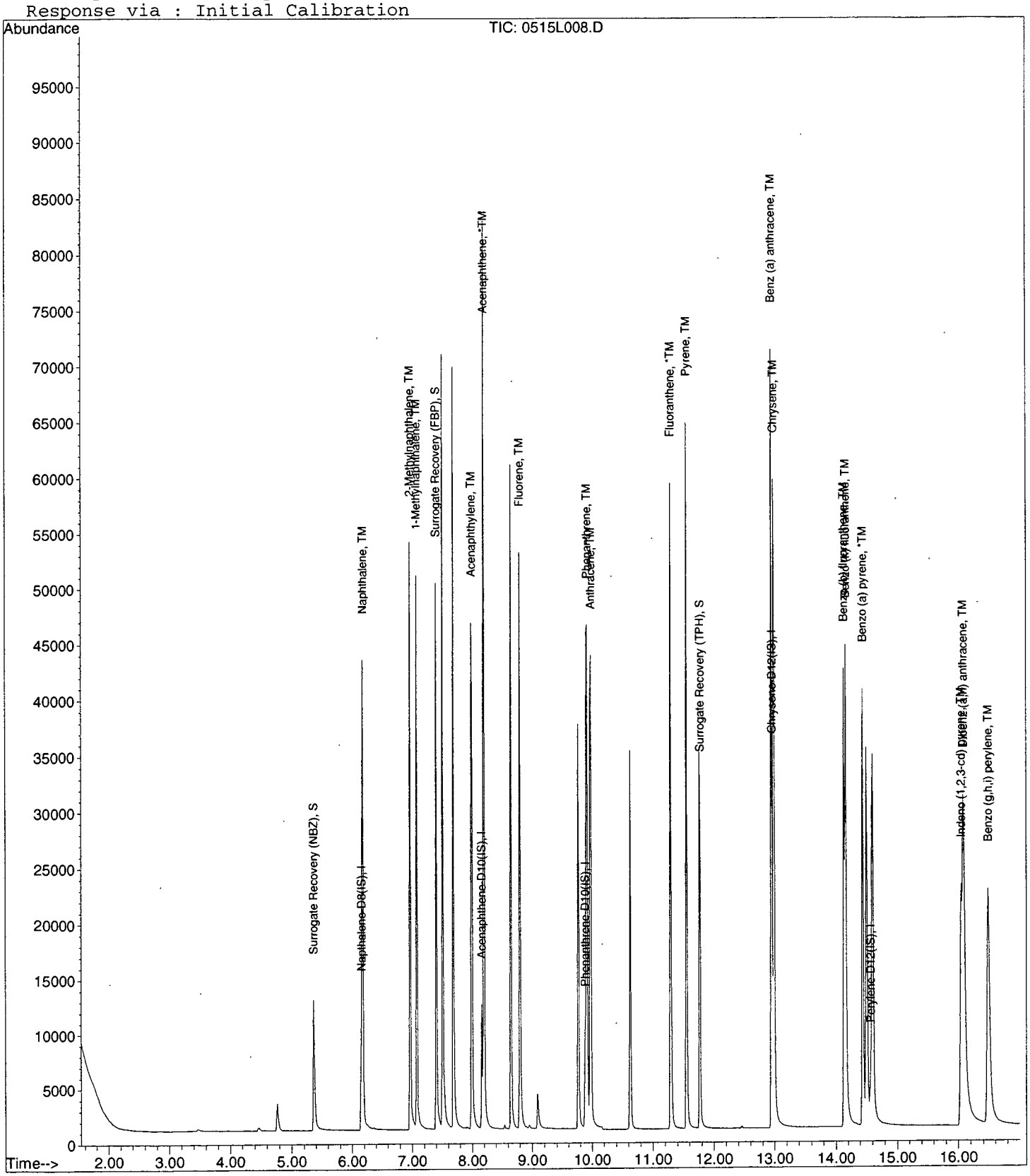
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L008.D Vial: 8
Acq On : 15 May 15 19:23 Operator: csc
Sample : 10ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L150515\0515L009.D Vial: 9
Acq On : 15 May 15 19:49 Operator: csc
Sample : 50ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:13:03 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

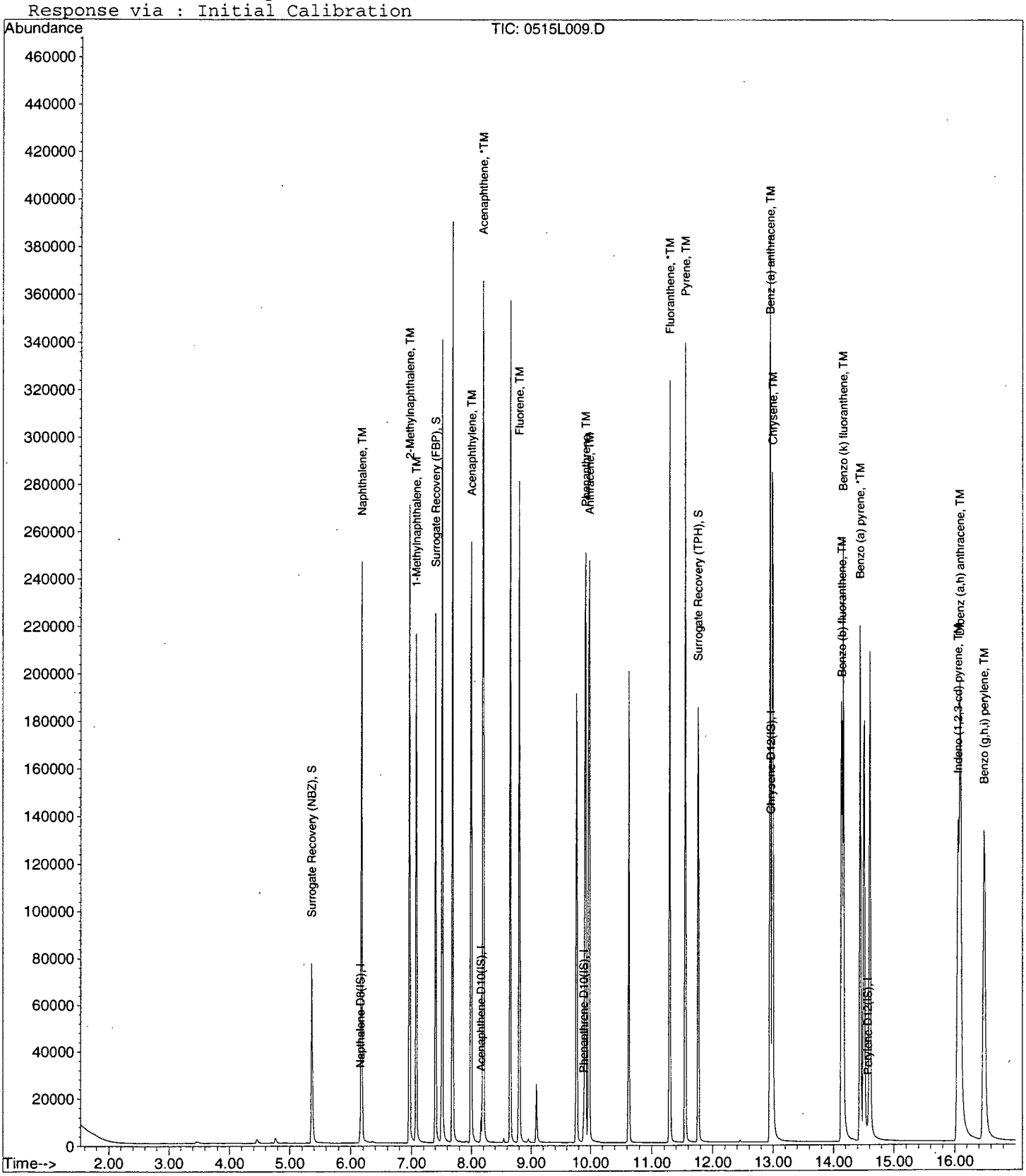
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9907	2.50 ppb		0.00
6) Acenaphthene-D10(IS)	8.16	164	4610	2.50 ppb		0.00
11) Phenanthrene-D10(IS)	9.88	188	7949	2.50 ppb		-0.01
15) Chrysene-D12(IS)	12.96	240	8664	2.50 ppb		0.00
21) Perylene-D12(IS)	14.57	264	5437	2.50 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.36	82	67181	51.86 ppb		0.00
Spiked Amount 2.500			Recovery	= 2074.400%		
7) Surrogate Recovery (FBP)	7.40	172	154415	59.21 ppb		0.00
Spiked Amount 2.500			Recovery	= 2368.360%		
17) Surrogate Recovery (TPH)	11.76	244	150044	57.96 ppb		-0.01
Spiked Amount 2.500			Recovery	= 2318.600%		
Target Compounds						Qvalue
3) Naphthalene	6.18	128	232647	52.94 ppb		100
4) 2-Methylnaphthalene	6.96	142	151960	50.80 ppb		99
5) 1-Methylnaphthalene	7.07	142	148295	52.39 ppb		99
8) Acenaphthylene	8.00	152	239701	55.40 ppb		99
9) Acenaphthene	8.19	154	138275	53.52 ppb		98
10) Fluorene	8.80	166	154069	53.88 ppb		93
12) Phenanthrene	9.92	178	222761	65.08 ppb		99
13) Anthracene	9.98	178	210206	54.53 ppb		99
14) Fluoranthene	11.29	202	271453	52.11 ppb		95
16) Pyrene	11.55	202	276045	62.33 ppb		99
18) Benz (a) anthracene	12.95	228	237738	63.94 ppb		99
19) Chrysene	13.00	228	209845	56.74 ppb	#	96
20) Indeno (1,2,3-cd) pyrene	16.05	276	245430	54.01 ppb	#	98
22) Benzo (b) fluoranthene	14.14	252	236425	68.41 ppb		97
23) Benzo (k) fluoranthene	14.16	252	189251	63.32 ppb		100
24) Benzo (a) pyrene	14.44	252	210997	65.87 ppb		98
25) Dibenz (a,h) anthracene	16.09	278	208974	65.60 ppb		94
26) Benzo (g,h,i) perylene	16.48	276	209511	67.57 ppb		92

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L150515\0515L009.D Vial: 9
Acq On : 15 May 15 19:49 Operator: csc
Sample : 50ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:13 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L150515\0515L010.D Vial: 10
Acq On : 15 May 15 20:14 Operator: csc
Sample : 100ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:16 2015 Quant Results File: P0518.RES

Quant Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:16:04 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	10112	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.16	164	4552	2.50	ppb		0.00
11) Phenanthrene-D10(IS)	9.90	188	7824	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.96	240	8642	2.50	ppb		0.00
21) Perylene-D12(IS)	14.57	264	5573	2.50	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.36	82	129333	98.87	ppb		0.00
Spiked Amount 2.500			Recovery	= 3954.600%			
7) Surrogate Recovery (FBP)	7.40	172	287071	108.77	ppb		0.00
Spiked Amount 2.500			Recovery	= 4350.920%			
17) Surrogate Recovery (TPH)	11.77	244	288680	104.01	ppb		0.00
Spiked Amount 2.500			Recovery	= 4160.560%			
Target Compounds							Qvalue
3) Naphthalene	6.18	128	450212	98.96	ppb		99
4) 2-Methylnaphthalene	6.96	142	289899	98.68	ppb		99
5) 1-Methylnaphthalene	7.08	142	281266	98.57	ppb		89
8) Acenaphthylene	8.00	152	465419	99.67	ppb		99
9) Acenaphthene	8.21	154	267375	99.59	ppb		90
10) Fluorene	8.81	166	292349	99.21	ppb		98
12) Phenanthrene	9.92	178	411564	114.22	ppb		98
13) Anthracene	9.98	178	393985	99.04	ppb		98
14) Fluoranthene	11.29	202	489534	98.27	ppb		96
16) Pyrene	11.55	202	528567	107.53	ppb		91
18) Benz (a) anthracene	12.95	228	445303	117.84	ppb		99
19) Chrysene	13.00	228	404821	98.25	ppb		98
20) Indeno (1,2,3-cd) pyrene	16.06	276	479086	99.57	ppb		94
22) Benzo (b) fluoranthene	14.14	252	410473	96.69	ppb		100
23) Benzo (k) fluoranthene	14.17	252	418502	102.96	ppb		100
24) Benzo (a) pyrene	14.45	252	409725	98.93	ppb		94
25) Dibenz (a,h) anthracene	16.11	278	407020	98.99	ppb	#	91
26) Benzo (g,h,i) perylene	16.51	276	407552	98.96	ppb		98

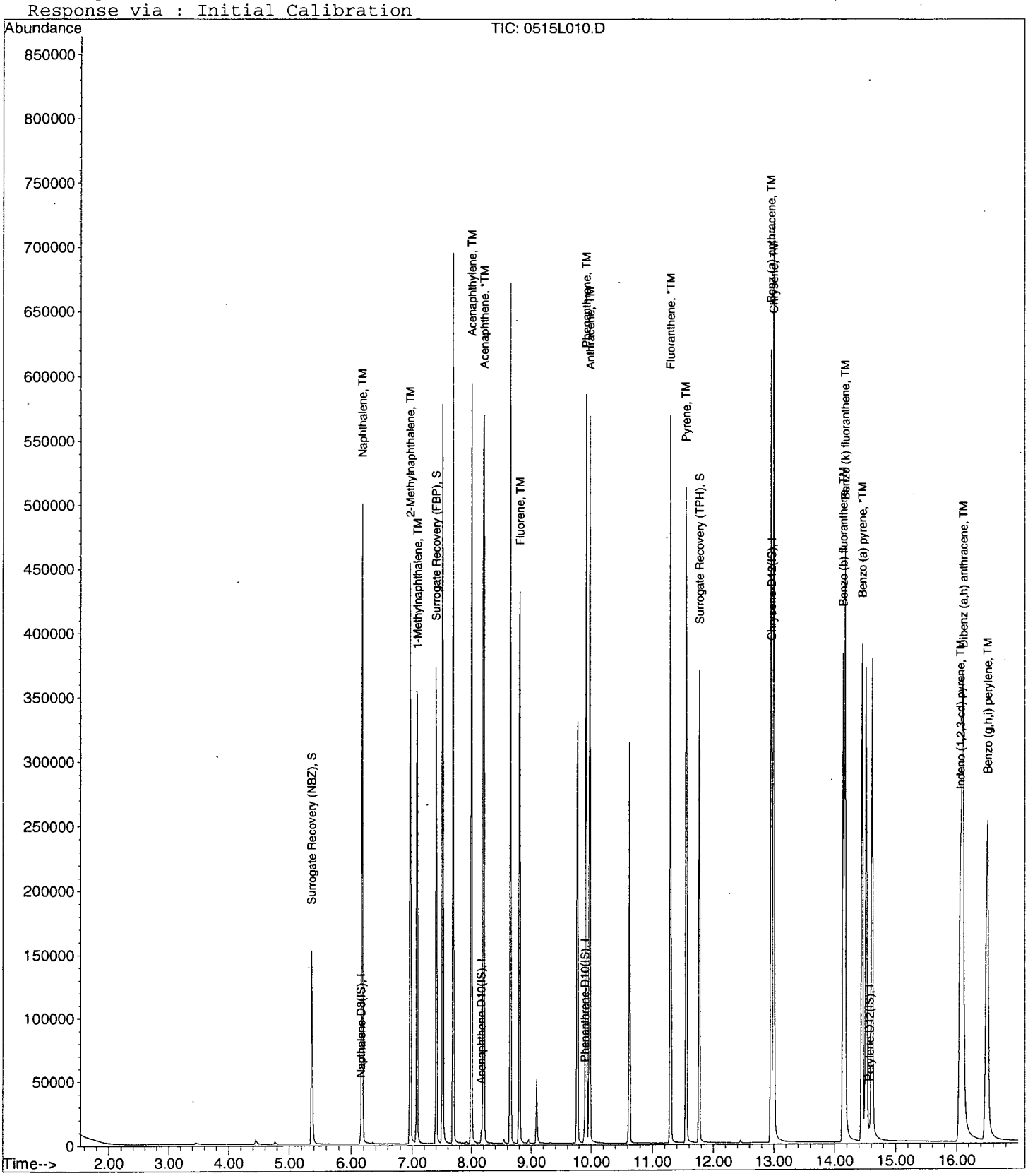
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L010.D Vial: 10
Acq On : 15 May 15 20:14 Operator: csc
Sample : 100ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: May 18 9:16 2015 Quant Results File: P0518.RES

Method : M:\LINUS\DATA\L150515\P0518.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon May 18 09:20:47 2015
Response via : Initial Calibration



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 76413
Date Analyzed: 5/15/2015
Instrument: Linus
Initial Cal. Date: 5/15/2015
Data File: 0515L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	0.9778	1.160	19	TM	
2	TML	2-Methylnaphthalene	0.5974	0.6612	11	TML	7.6
3	TM	1-Methylnaphthalene	0.6165	0.6742	9.3	TM	
4	TML	Acenaphthylene	2.081	2.416	16	TML	0.82
5	*TM	Acenaphthene	1.266	1.506	19	*TM	
6	TML	Fluorene	1.377	1.617	17	TML	1.2
7	TML	Phenanthrene	1.151	1.293	12	TML	3.9
8	TML	Anthracene	1.084	1.193	10	TML	5.7
9	*TML	Fluoranthene	1.364	1.541	13	*TML	5.4
10	TM	Pyrene	1.422	1.591	12	TM	
11	TML	Benz (a) anthracene	1.093	1.209	11	TML	6.5
12	TM	Chrysene	1.192	1.400	17	TM	
13	TML	Indeno (1,2,3-cd) pyrene	1.130	1.364	21	TML	2.6
14	TML	Benzo (b) fluoranthene	1.498	1.918	28	TML	2.6
15	TML	Benzo (k) fluoranthene	1.563	1.660	6.2	TML	4.3
16	*TML	Benzo (a) pyrene	1.618	1.795	11	*TML	4.7
17	TML	Dibenz (a,h) anthracene	1.446	1.775	23	TML	1.7
18	TML	Benzo (g,h,i) perylene	1.535	1.762	15	TML	4.4
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
		Average			15.0		

Data File : M:\LINUS\DATA\L150515\0515L011.D Vial: 11
Acq On : 15 May 15 20:40 Operator: csc
Sample : 5.0ug/ml PAH SS 05/15/15 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jun 2 13:17 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

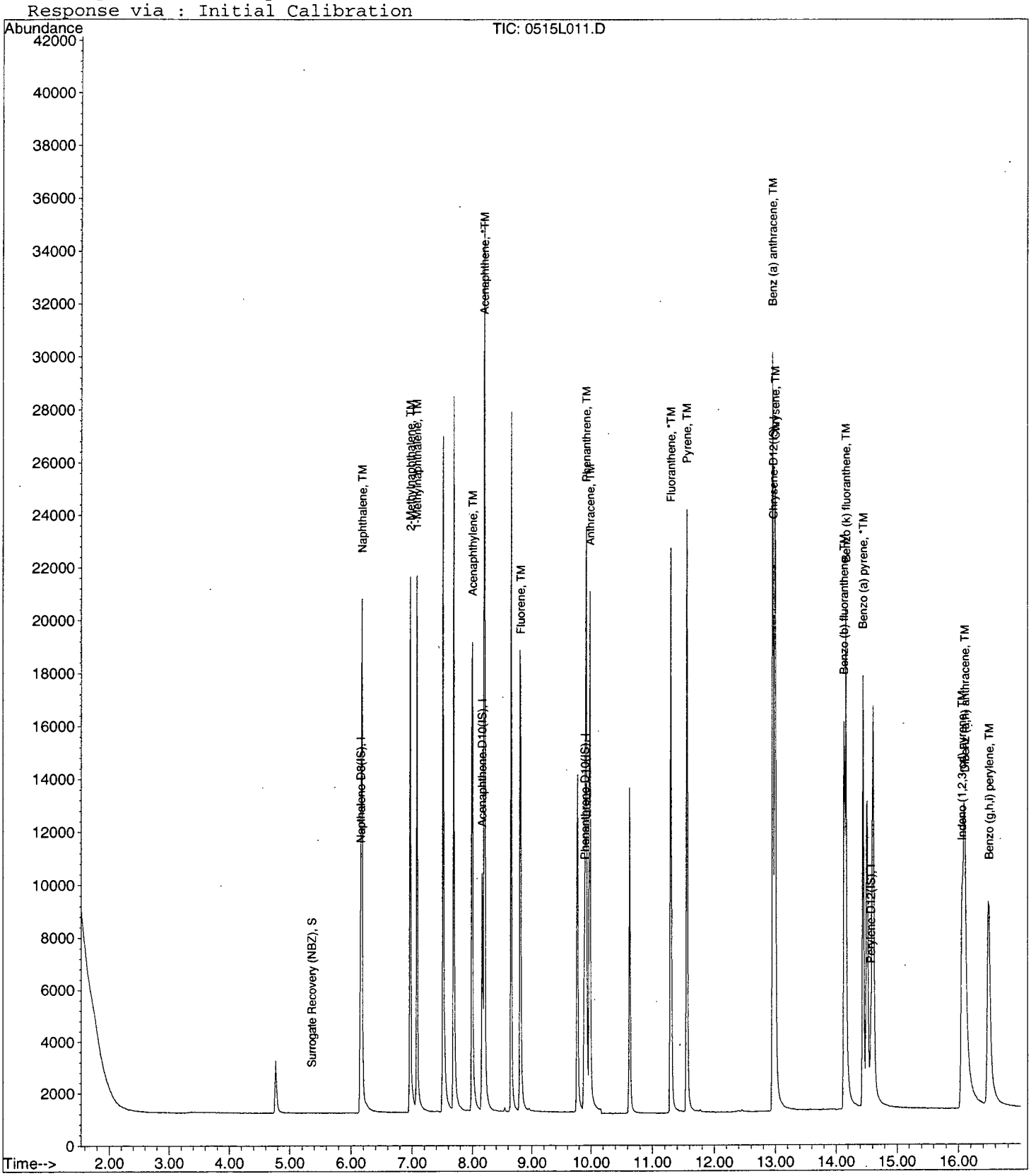
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9571	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.16	164	4405	2.50	ppb		0.00
11) Phenanthrene-D10(IS)	9.90	188	7622	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.96	240	7750	2.50	ppb		0.00
21) Perylene-D12(IS)	14.57	264	4908	2.50	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.36	82	6	0.18	ppb		0.00
Spiked Amount 2.500			Recovery =	7.080%			
7) Surrogate Recovery (FBP)	7.40	172	46	0.02	ppb		0.00
Spiked Amount 2.500			Recovery =	0.680%			
17) Surrogate Recovery (TPH)	11.77	244	66	0.03	ppb		0.00
Spiked Amount 2.500			Recovery =	1.080%			
Target Compounds							Qvalue
3) Naphthalene	6.18	128	22202	5.93	ppb		99
4) 2-Methylnaphthalene	6.96	142	12656	4.62	ppb		100
5) 1-Methylnaphthalene	7.07	142	12905	5.47	ppb		100
8) Acenaphthylene	8.00	152	21286	4.96	ppb		99
9) Acenaphthene	8.19	154	13269	5.95	ppb		99
10) Fluorene	8.81	166	14244	5.06	ppb		100
12) Phenanthrene	9.92	178	19706	4.81	ppb		99
13) Anthracene	9.98	178	18184	4.71	ppb		99
14) Fluoranthene	11.29	202	23497	4.73	ppb		99
16) Pyrene	11.55	202	24659	5.59	ppb		98
18) Benz (a) anthracene	12.95	228	18746	4.68	ppb		99
19) Chrysene	13.00	228	21695	5.87	ppb		98
20) Indeno (1,2,3-cd) pyrene	16.05	276	21147	5.13	ppb		93
22) Benzo (b) fluoranthene	14.13	252	18824	4.87	ppb	#	93
23) Benzo (k) fluoranthene	14.16	252	16293	4.78	ppb	#	95
24) Benzo (a) pyrene	14.44	252	17615	4.77	ppb		100
25) Dibenz (a,h) anthracene	16.10	278	17424	4.91	ppb		99
26) Benzo (g,h,i) perylene	16.50	276	17299	4.78	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\LINUS\DATA\L150515\0515L011.D Vial: 11
Acq On : 15 May 15 20:40 Operator: csc
Sample : 5.0ug/ml PAH SS 05/15/15 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jun 2 13:17 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



EPA 8270C SIM
P0518-42

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 76413
Date Analyzed: 5/27/2015
Instrument: Linus
Initial Cal. Date: 5/15/2015
Data File: 0515L195.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	SL	Surrogate Recovery (NBZ)	0.2737	0.2814	2.8	SL	9.7
3	TM	Naphthalene	0.9778	1.166	19	TM	
4	TML	2-Methylnaphthalene	0.5974	0.7906	32	TML	10
5	TM	1-Methylnaphthalene	0.6165	0.8252	34	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	1.580	1.569	0.66	S	
8	TML	Acenaphthylene	2.081	2.631	26	TML	7.5
9	*TM	Acenaphthene	1.266	1.509	19	*TM	
10	TML	Fluorene	1.377	1.712	24	TML	7.1
11	I	Phenanthrene-D10(IS)	ISTD			I	
12	TML	Phenanthrene	1.151	1.372	19	TML	2.1
13	TML	Anthracene	1.084	1.349	24	TML	6.6
14	*TML	Fluoranthene	1.364	1.682	23	*TML	3.5
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.422	1.669	17	TM	
17	S	Surrogate Recovery (TPH)	0.8029	0.8763	9.1	S	
18	TML	Benz (a) anthracene	1.093	1.399	28	TML	8.1
19	TM	Chrysene	1.192	1.391	17	TM	
20	TML	Indeno (1,2,3-cd) pyrene	1.130	1.488	32	TML	11
21	I	Perylene-D12(IS)	ISTD			I	
22	TML	Benzo (b) fluoranthene	1.498	2.001	34	TML	1.8
23	TML	Benzo (k) fluoranthene	1.563	2.053	31	TML	17
24	*TML	Benzo (a) pyrene	1.618	1.993	23	*TML	6.0
25	TML	Dibenz (a,h) anthracene	1.446	1.930	34	TML	6.7
26	TML	Benzo (g,h,i) perylene	1.535	1.942	27	TML	5.4
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			22.6		

* NT HA 6/2/15

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L195.D Vial: 95
Acq On : 27 May 15 1:54 Operator: MA
Sample : 5.0ug/ml PAH 5/26/15 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jun 3 13:27 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	7742	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	3768	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.91	188	6621	2.50	ppb		0.01
15) Chrysene-D12(IS)	12.97	240	6986	2.50	ppb		0.01
21) Perylene-D12(IS)	14.59	264	4581	2.50	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	4357	4.51	ppb		0.01
Spiked Amount 2.500			Recovery	=	180.600%		
7) Surrogate Recovery (FBP)	7.41	172	11824	4.97	ppb		0.01
Spiked Amount 2.500			Recovery	=	198.680%		
17) Surrogate Recovery (TPH)	11.77	244	12243	5.46	ppb		0.00
Spiked Amount 2.500			Recovery	=	218.280%		
Target Compounds							Qvalue
3) Naphthalene	6.18	128	18047m	5.96	ppb		99
4) 2-Methylnaphthalene	6.98	142	12242	5.51	ppb		94
5) 1-Methylnaphthalene	7.08	142	12777	6.69	ppb		94
8) Acenaphthylene	8.00	152	19829	5.38	ppb		97
9) Acenaphthene	8.21	154	11374	5.96	ppb		95
10) Fluorene	8.81	166	12905	5.35	ppb		95
12) Phenanthrene	9.93	178	18167	5.10	ppb		99
13) Anthracene	9.99	178	17868	5.33	ppb		100
14) Fluoranthene	11.30	202	22273	5.17	ppb		99
16) Pyrene	11.56	202	23316	5.87	ppb		96
18) Benz (a) anthracene	12.96	228	19552	5.40	ppb		99
19) Chrysene	13.01	228	19434	5.83	ppb		98
20) Indeno (1,2,3-cd) pyrene	16.09	276	20793	5.57	ppb		99
22) Benzo (b) fluoranthene	14.15	252	18337	5.09	ppb		96
23) Benzo (k) fluoranthene	14.17	252	18813	5.84	ppb	#	92
24) Benzo (a) pyrene	14.47	252	18256	5.30	ppb		93
25) Dibenz (a,h) anthracene	16.12	278	17686	5.33	ppb		98
26) Benzo (g,h,i) perylene	16.53	276	17795	5.27	ppb		99

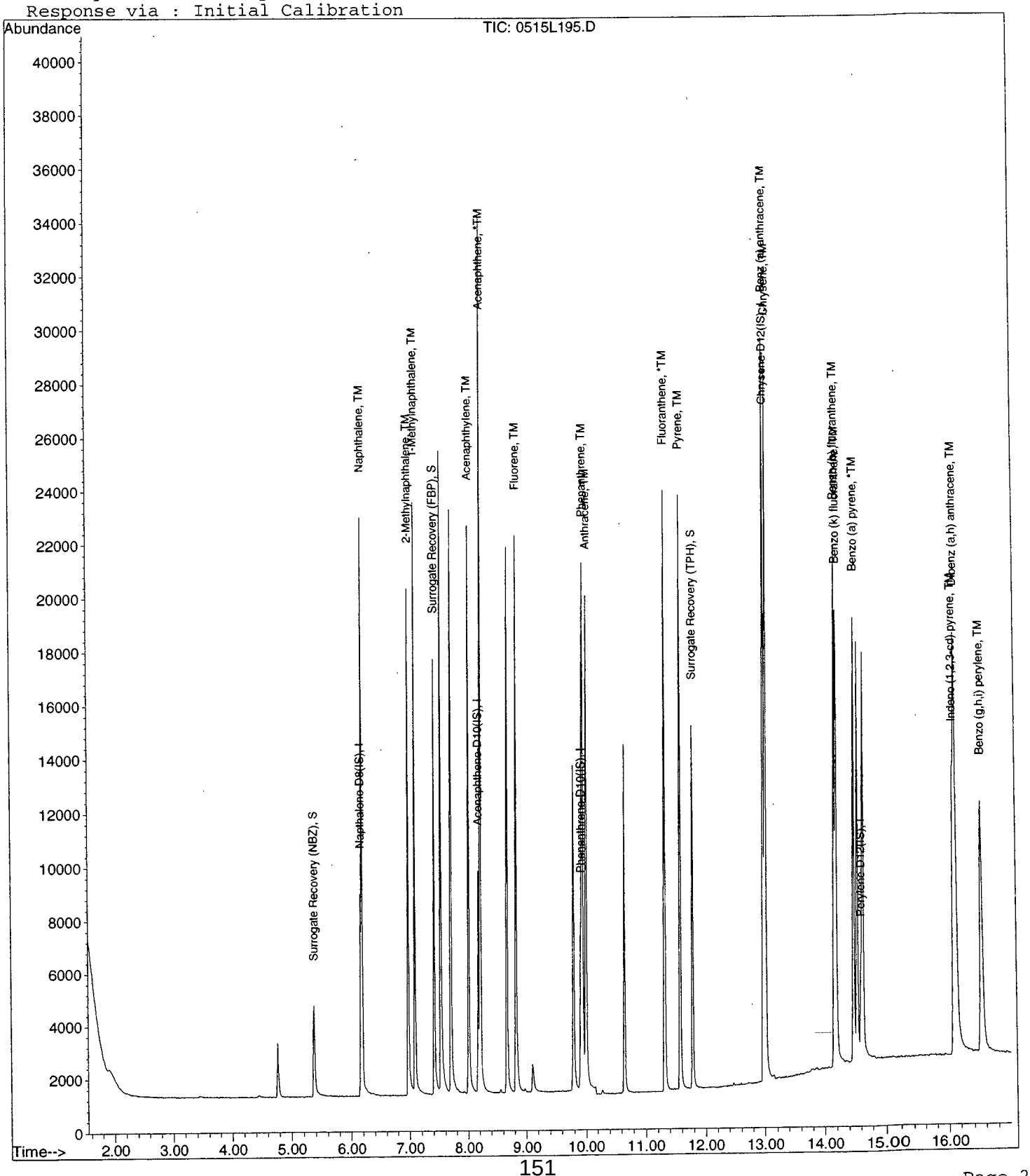
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L195.D Vial: 95
Acq On : 27 May 15 1:54 Operator: MA
Sample : 5.0ug/ml PAH 5/26/15 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jun 3 13:27 2015 Quant Results File: P0518-42.RES

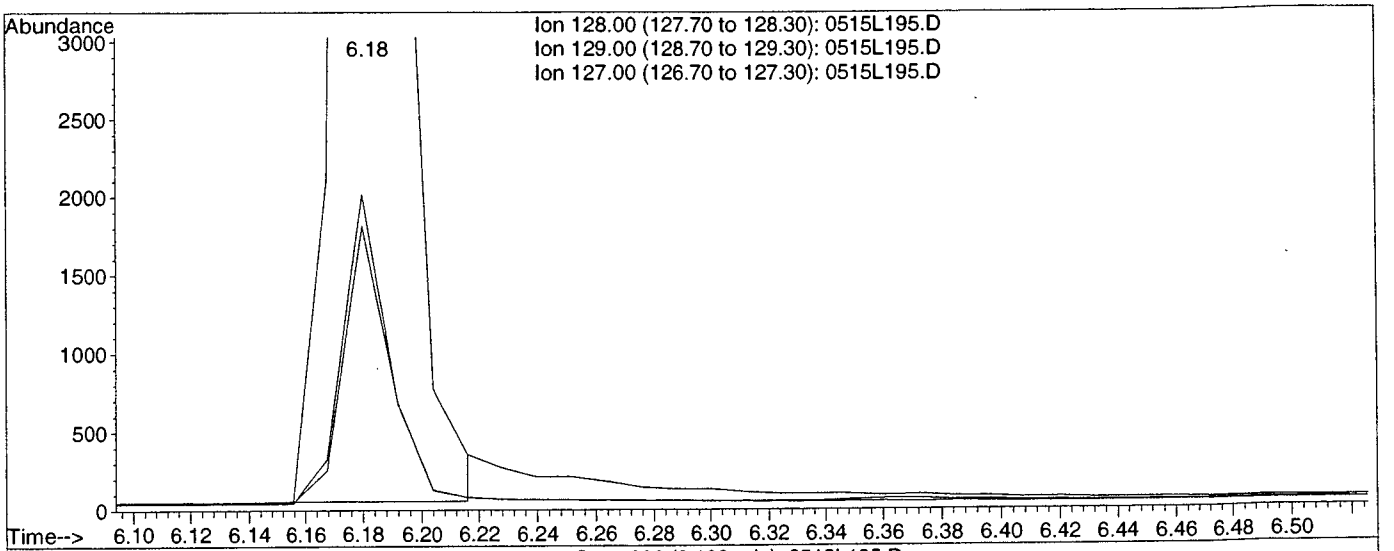
Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration

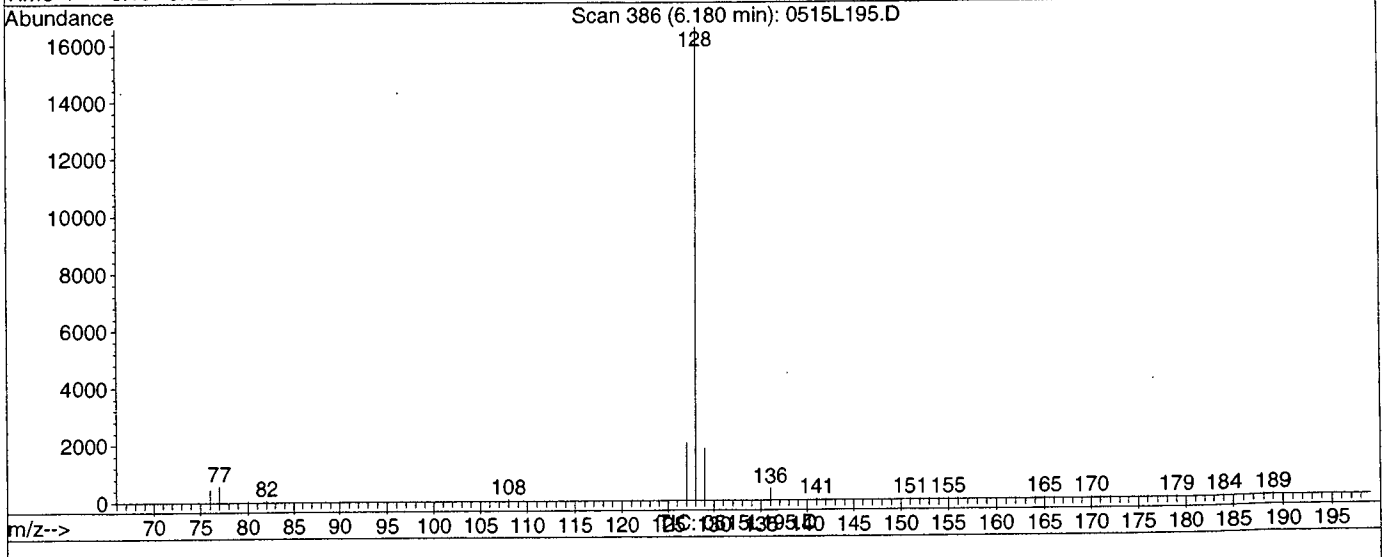


Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L195.D Vial: 95
Acq On : 27 May 15 1:54 Operator: MA
Sample : 5.0ug/ml PAH 5/26/15 Inst : Linus
Misc : Multiplr: 1.00
Quant Time: Jun 3 13:23 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Multiple Level Calibration





(3) Naphthalene (TM)

6.18min 6.0274ppb

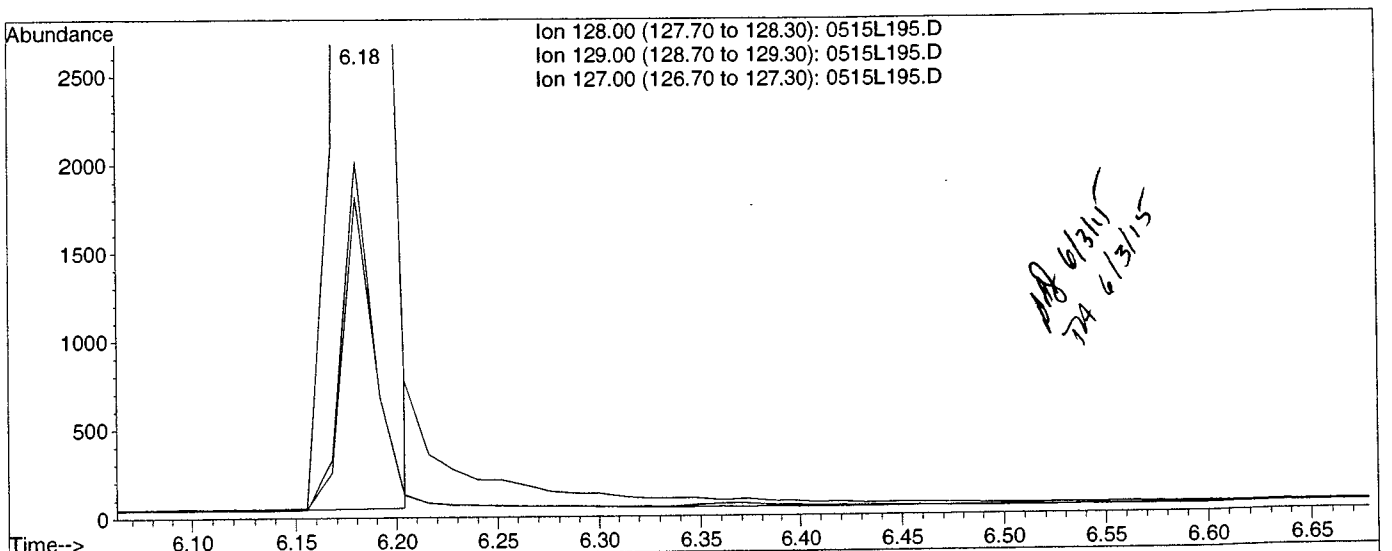
response 18252

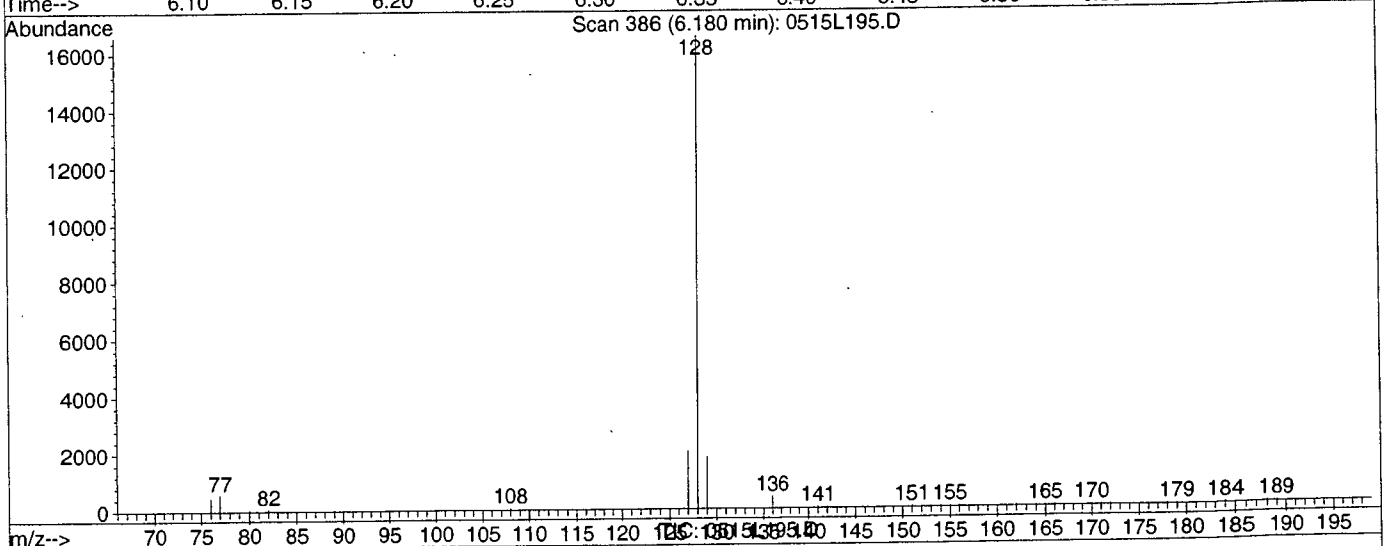
Ion	Exp%	Act%
128.00	100	100
129.00	11.20	10.67
127.00	11.40	11.94
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L195.D Vial: 95
Acq On : 27 May 15 1:54 Operator: MA
Sample : 5.0ug/ml PAH 5/26/15 Inst : Linus
Misc : Multiplr: 1.00
Quant Time: Jun 3 13:27 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Multiple Level Calibration





(3) Naphthalene (TM)

6.18min 5.9597ppb m

response 18047

Ion	Exp%	Act%
128.00	100	100
129.00	11.20	10.95
127.00	11.40	12.17
0.00	0.00	0.00

0515L195.D P0518-42.M Wed Jun 03 13:27:26 2015

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
Raw Data

APPL, INC.

Method Blank

EPA 8270D LL WATER DODv3

Blank Name/QCG: **150518W-16287 - 197649**

Batch ID: #SIMDD-150518A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ACENAPHTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ACENAPHTHYLENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	BENZ (A) ANTHRACENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (A) PYRENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (B) FLUORANTHENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (G,H,I) PERYLENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	BENZO (K) FLUORANTHENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	DIBENZ (A,H) ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	FLUORANTHENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	FLUORENE	0.10 U	0.2	0.10	0.06	ug/L	5/18/2015	5/27/2015
BLANK	INDENO (1,2,3-CD) PYRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	5/18/2015	5/27/2015
BLANK	PHENANTHRENE	0.10 U	0.2	0.10	0.07	ug/L	5/18/2015	5/27/2015
BLANK	PYRENE	0.10 U	0.2	0.10	0.08	ug/L	5/18/2015	5/27/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	47.8 #	50-110			%	5/18/2015	5/27/2015
BLANK	SURROGATE: NITROBENZENE-	62.2	40-110			%	5/18/2015	5/27/2015
BLANK	SURROGATE: TERPHENYL-D14 (	85.4	50-135			%	5/18/2015	5/27/2015

= Recovery (or RPD) is outside QC limits.

Quant Method: P0518-42.M
Run #: 0515L196
Instrument: Linus
Sequence: L150515
Initials: DA

GC SC-Blank-REG MDLs
Printed: 6/3/2015 12:59:25 PM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L196.D
Acq On : 27 May 15 2:19
Sample : 150518A BLK 1/1000
Misc : water

Vial: 96
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jun 3 10:23 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.16	136	8846	2.50 ppb	0.00
6) Acenaphthene-D10(IS)	8.17	164	4669	2.50 ppb	0.01
11) Phenanthrene-D10(IS)	9.91	188	8053	2.50 ppb	0.01
15) Chrysene-D12(IS)	12.98	240	8343	2.50 ppb	0.02
21) Perylene-D12(IS)	14.59	264	5471	2.50 ppb	0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.37	82	1587	1.56 ppb	0.01
Spiked Amount 2.500			Recovery =	62.240%	
7) Surrogate Recovery (FBP)	7.41	172	3527	1.20 ppb	0.01
Spiked Amount 2.500			Recovery =	47.840%	
17) Surrogate Recovery (TPH)	11.78	244	5724	2.14 ppb	0.01
Spiked Amount 2.500			Recovery =	85.440%	

Target Compounds Qvalue

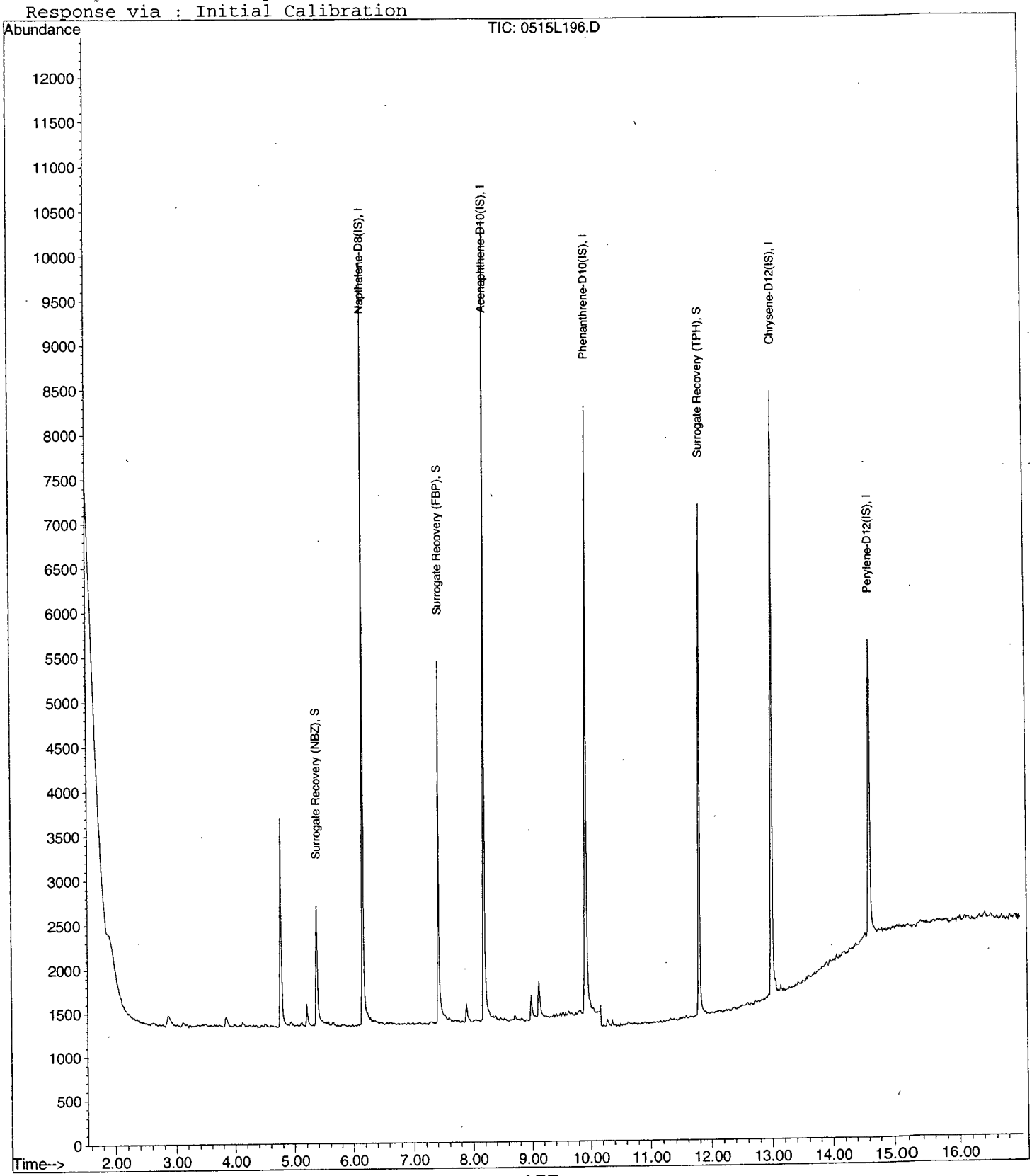
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L196.D Vial: 96
Acq On : 27 May 15 2:19 Operator: MA
Sample : 150518A BLK 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: Jun 3 10:23 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D LL WATER DODv3

APPL ID: **150518W-16287 LCS - 197649**
Batch ID: #SIMDD-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-METHYLNAPHTHALENE	5.00	3.17	63.4	45-105
ACENAPHTHENE	5.00	4.06	81.2	45-110
ACENAPHTHYLENE	5.00	3.64	72.8	50-105
ANTHRACENE	5.00	3.57	71.4	55-110
BENZ (A) ANTHRACENE	5.00	4.01	80.2	55-110
BENZO (A) PYRENE	5.00	4.09	81.8	55-110
BENZO (B) FLUORANTHENE	5.00	3.88	77.6	45-120
BENZO (G,H,I) PERYLENE	5.00	3.96	79.2	40-125
BENZO (K) FLUORANTHENE	5.00	4.36	87.2	45-125
CHRYSENE	5.00	4.46	89.2	55-110
DIBENZ (A,H) ANTHRACENE	5.00	4.05	81.0	40-125
FLUORANTHENE	5.00	3.75	75.0	55-115
FLUORENE	5.00	3.71	74.2	50-110
INDENO (1,2,3-CD) PYRENE	5.00	4.24	84.8	45-125
NAPHTHALENE	5.00	3.90	78.0	40-100
PHENANTHRENE	5.00	3.64	72.8	50-115
PYRENE	5.00	4.34	86.8	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.55	1.44	56.4	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.55	1.72	67.4	40-110
SURROGATE: TERPHENYL-D14 (S)	2.55	2.15	84.3	50-135

Comments: _____

Primary	SPK
Quant Method :	P0518-42.M
Extraction Date :	5/18/2015
Analysis Date :	5/27/2015
Instrument :	Linus
Run :	0515L197
Initials :	DA

Printed: 6/3/2015 12:59:11 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L197.D Vial: 97
Acq On : 27 May 15 2:45 Operator: MA
Sample : 150518A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: May 27 13:26 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9630	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	4920	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	8948	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	9112	2.50	ppb		0.01
21) Perylene-D12(IS)	14.59	264	5936	2.50	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	1936	1.72	ppb		0.01
Spiked Amount 2.500			Recovery = 68.920%				
7) Surrogate Recovery (FBP)	7.41	172	4482	1.44	ppb		0.01
Spiked Amount 2.500			Recovery = 57.680%				
17) Surrogate Recovery (TPH)	11.77	244	6285	2.15	ppb		0.00
Spiked Amount 2.500			Recovery = 85.920%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	14688	3.90	ppb		99
4) 2-Methylnaphthalene	6.98	142	8678	3.17	ppb		95
5) 1-Methylnaphthalene	7.08	142	10045	4.23	ppb		94
8) Acenaphthylene	8.00	152	17110	3.64	ppb		97
9) Acenaphthene	8.21	154	10125	4.06	ppb		96
10) Fluorene	8.81	166	11622	3.71	ppb		95
12) Phenanthrene	9.93	178	17573	3.64	ppb		100
13) Anthracene	9.99	178	16137	3.57	ppb		99
14) Fluoranthene	11.30	202	22022	3.75	ppb		95
16) Pyrene	11.56	202	22487	4.34	ppb		99
18) Benz (a) anthracene	12.96	228	18854	4.01	ppb		99
19) Chrysene	13.01	228	19385	4.46	ppb		97
20) Indeno (1,2,3-cd) pyrene	16.09	276	20326	4.24	ppb		99
22) Benzo (b) fluoranthene	14.15	252	18274	3.88	ppb		96
23) Benzo (k) fluoranthene	14.17	252	17828	4.36	ppb	#	91
24) Benzo (a) pyrene	14.47	252	18326	4.09	ppb		94
25) Dibenz (a,h) anthracene	16.12	278	17277	4.05	ppb		99
26) Benzo (g,h,i) perylene	16.53	276	17321	3.96	ppb		99

Algorithm = $\frac{14688 \times 2.5}{0.9778 \times 9630} = 3.90$ MA 6/8/15

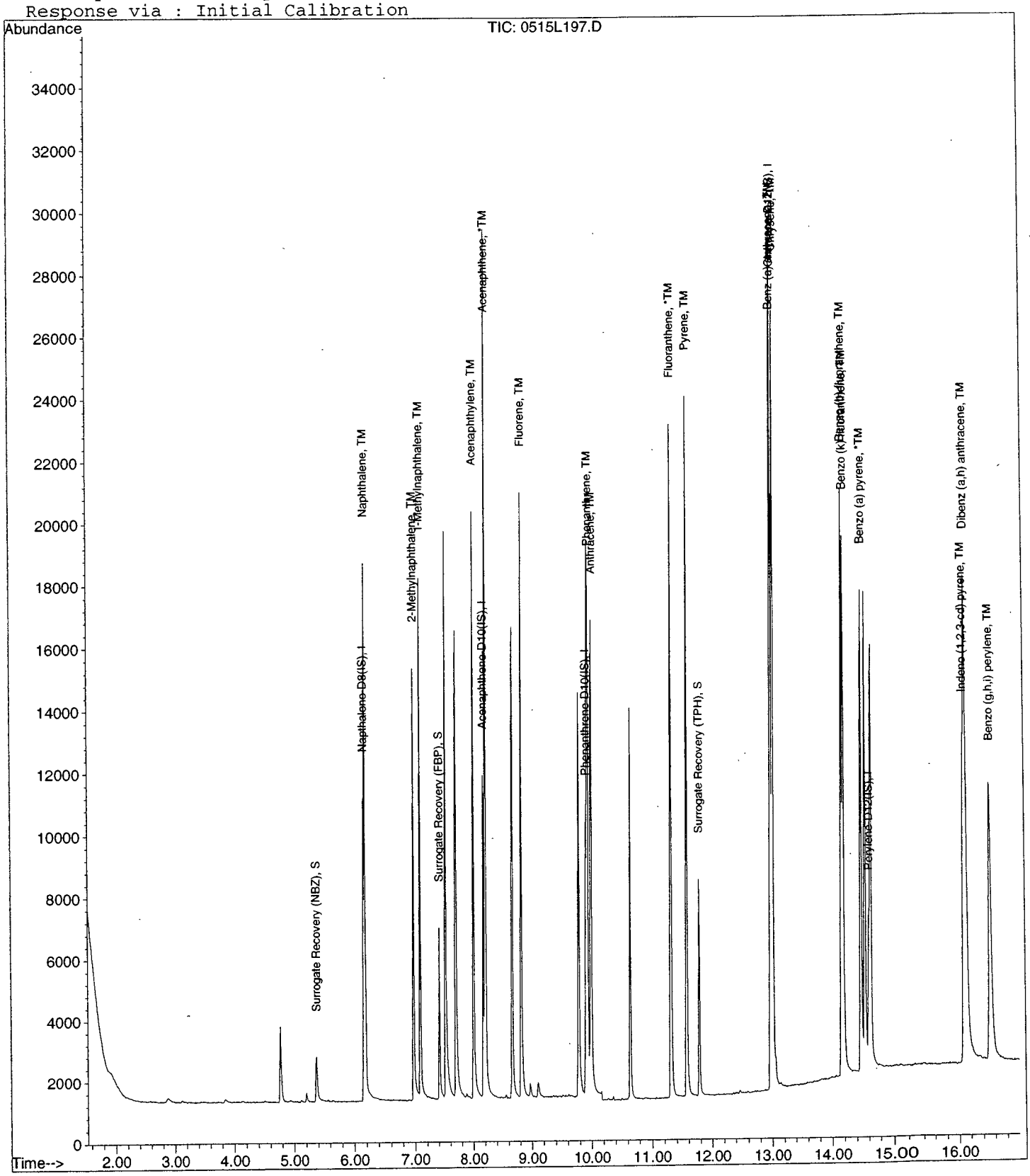
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L197.D Vial: 97
Acq On : 27 May 15 2:45 Operator: MA
Sample : 150518A LCS-1 1/1000 Inst : Linus
Misc : water Multiplr: 1.00

Quant Time: May 27 13:26 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D LL WATER DODv3

APPL ID: **150518W-16287 MS - 197649**
Batch ID: #SIMDD-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-METHYLNAPHTHALENE	5.00	0.11	3.23	4.08	62.4	79.4	45-105	23.3	30
ACENAPHTHENE	5.00	ND	3.92	4.82	78.4	96.4	45-110	20.6	30
ACENAPHTHYLENE	5.00	0.31	3.60	4.35	65.8	80.8	50-105	18.9	30
ANTHRACENE	5.00	0.057	3.70	4.49	72.9	88.7	55-110	19.3	30
BENZ (A) ANTHRACENE	5.00	0.084	4.08	4.88	79.9	95.9	55-110	17.9	30
BENZO (A) PYRENE	5.00	ND	4.18	4.94	83.6	98.8	55-110	16.7	30
BENZO (B) FLUORANTHENE	5.00	ND	3.94	4.76	78.8	95.2	45-120	18.9	30
BENZO (G,H,I) PERYLENE	5.00	ND	4.04	4.77	80.8	95.4	40-125	16.6	30
BENZO (K) FLUORANTHENE	5.00	0.38	4.44	5.18	81.2	96.0	45-125	15.4	30
CHRYSENE	5.00	ND	4.49	5.20	89.8	104	55-110	14.7	30
DIBENZ (A,H) ANTHRACENE	5.00	ND	4.08	4.84	81.6	96.8	40-125	17.0	30
FLUORANTHENE	5.00	ND	3.85	4.54	77.0	90.8	55-115	16.4	30
FLUORENE	5.00	0.11	3.68	4.42	71.4	86.2	50-110	18.3	30
INDENO (1,2,3-CD) PYRENE	5.00	ND	4.28	5.02	85.6	100	45-125	15.9	30
NAPHTHALENE	5.00	ND	3.96	4.92	79.2	98.4	40-100	21.6	30
PHENANTHRENE	5.00	ND	3.79	4.34	75.8	86.8	50-115	13.5	30
PYRENE	5.00	0.053	4.41	5.20	87.1	103	50-130	16.4	30
SURROGATE: 2-FLUORBIPHENYL (S)	2.55	NA	1.50	1.58	58.8	61.9	50-110		
SURROGATE: NITROBENZENE-D5 (S)	2.55	NA	1.53	1.78	60.0	69.8	40-110		
SURROGATE: TERPHENYL-D14 (S)	2.55	NA	2.17	2.49	85.1	97.6	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	P0518-42.M	P0518-42.M
Extraction Date :	5/18/2015	5/18/2015
Analysis Date :	5/27/2015	5/27/2015
Instrument :	Linus	Linus
Run :	0515L200	0515L201
Initials :	DA	

Printed: 6/3/2015 12:59:06 PM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L200.D Vial: 100
Acq On : 27 May 15 4:02 Operator: MA
Sample : AZ16287W22 MS-1 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: May 27 13:26 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	9659	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	4908	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	8426	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	8777	2.50	ppb		0.01
21) Perylene-D12(IS)	14.59	264	5696	2.50	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.37	82	1663	1.53	ppb		0.01
Spiked Amount 2.551			Recovery = 60.015%				
7) Surrogate Recovery (FBP)	7.41	172	4551	1.50	ppb		0.01
Spiked Amount 2.551			Recovery = 58.722%				
17) Surrogate Recovery (TPH)	11.77	244	5985	2.17	ppb		0.00
Spiked Amount 2.551			Recovery = 84.946%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	14667	3.96	ppb		99
4) 2-Methylnaphthalene	6.98	142	8689	3.23	ppb		92
5) 1-Methylnaphthalene	7.08	142	8854	3.79	ppb		92
8) Acenaphthylene	8.00	152	16508	3.60	ppb		98
9) Acenaphthene	8.21	154	9554	3.92	ppb		94
10) Fluorene	8.81	166	11244	3.68	ppb		96
12) Phenanthrene	9.92	178	16867	3.79	ppb		98
13) Anthracene	9.99	178	15443	3.70	ppb		99
14) Fluoranthene	11.30	202	20845	3.85	ppb		94
16) Pyrene	11.56	202	21596	4.41	ppb		93
18) Benz (a) anthracene	12.96	228	18142	4.08	ppb		99
19) Chrysene	13.01	228	18403	4.49	ppb		98
20) Indeno (1,2,3-cd) pyrene	16.09	276	19392	4.28	ppb	#	96
22) Benzo (b) fluoranthene	14.15	252	17484	3.94	ppb		96
23) Benzo (k) fluoranthene	14.17	252	17079	4.44	ppb	#	92
24) Benzo (a) pyrene	14.47	252	17614	4.18	ppb	#	92
25) Dibenz (a,h) anthracene	16.12	278	16379	4.08	ppb		98
26) Benzo (g,h,i) perylene	16.52	276	16604	4.04	ppb		94

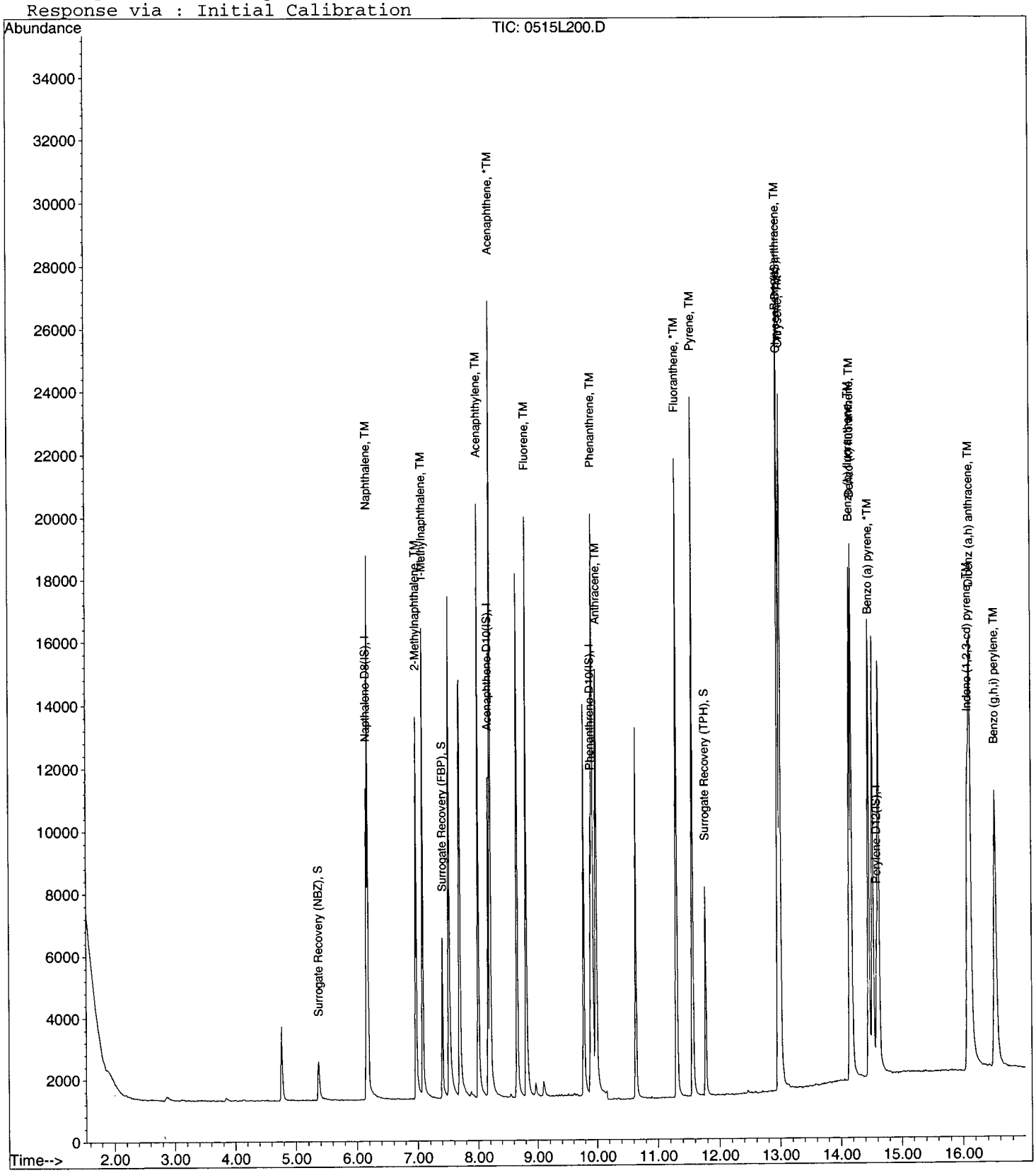
(#) = qualifier out of range (m) = manual integration
0515L200.D P0518-42.M Wed Jun 03 13:36:33 2015

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L200.D Vial: 100
Acq On : 27 May 15 4:02 Operator: MA
Sample : AZ16287W22 MS-1 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: May 27 13:26 2015 Quant Results File: P0518-42.RES

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L150515\0515L201.D Vial: 1
Acq On : 27 May 15 4:28 Operator: MA
Sample : AZ16287W20 MSD-1 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: May 27 13:26 2015 Quant Results File: P0518-42.RES

Quant Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.16	136	8884	2.50	ppb		0.00
6) Acenaphthene-D10(IS)	8.17	164	4521	2.50	ppb		0.01
11) Phenanthrene-D10(IS)	9.90	188	7924	2.50	ppb		0.00
15) Chrysene-D12(IS)	12.97	240	8256	2.50	ppb		0.01
21) Perylene-D12(IS)	14.59	264	5300	2.50	ppb		0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.36	82	1812	1.78	ppb		0.00
Spiked Amount 2.551			Recovery = 69.854%				
7) Surrogate Recovery (FBP)	7.41	172	4428	1.58	ppb		0.01
Spiked Amount 2.551			Recovery = 62.014%				
17) Surrogate Recovery (TPH)	11.77	244	6466	2.49	ppb		0.00
Spiked Amount 2.551			Recovery = 97.530%				
Target Compounds							Qvalue
3) Naphthalene	6.18	128	16739	4.92	ppb		99
4) 2-Methylnaphthalene	6.98	142	10138	4.08	ppb		92
5) 1-Methylnaphthalene	7.08	142	10407	4.85	ppb		92
8) Acenaphthylene	8.00	152	18599	4.35	ppb		99
9) Acenaphthene	8.21	154	10809	4.82	ppb		94
10) Fluorene	8.81	166	12500	4.42	ppb		97
12) Phenanthrene	9.92	178	18146	4.34	ppb		99
13) Anthracene	9.98	178	17651	4.49	ppb		99
14) Fluoranthene	11.30	202	22988	4.54	ppb	#	90
16) Pyrene	11.56	202	23913	5.20	ppb		90
18) Benz (a) anthracene	12.96	228	20407	4.88	ppb		98
19) Chrysene	13.01	228	20045	5.20	ppb		97
20) Indeno (1,2,3-cd) pyrene	16.09	276	21553	5.02	ppb	#	99
22) Benzo (b) fluoranthene	14.15	252	19475	4.76	ppb	#	95
23) Benzo (k) fluoranthene	14.17	252	18769	5.18	ppb	#	91
24) Benzo (a) pyrene	14.47	252	19329	4.94	ppb		92
25) Dibenz (a,h) anthracene	16.12	278	18155	4.84	ppb		99
26) Benzo (g,h,i) perylene	16.52	276	18278	4.77	ppb		95

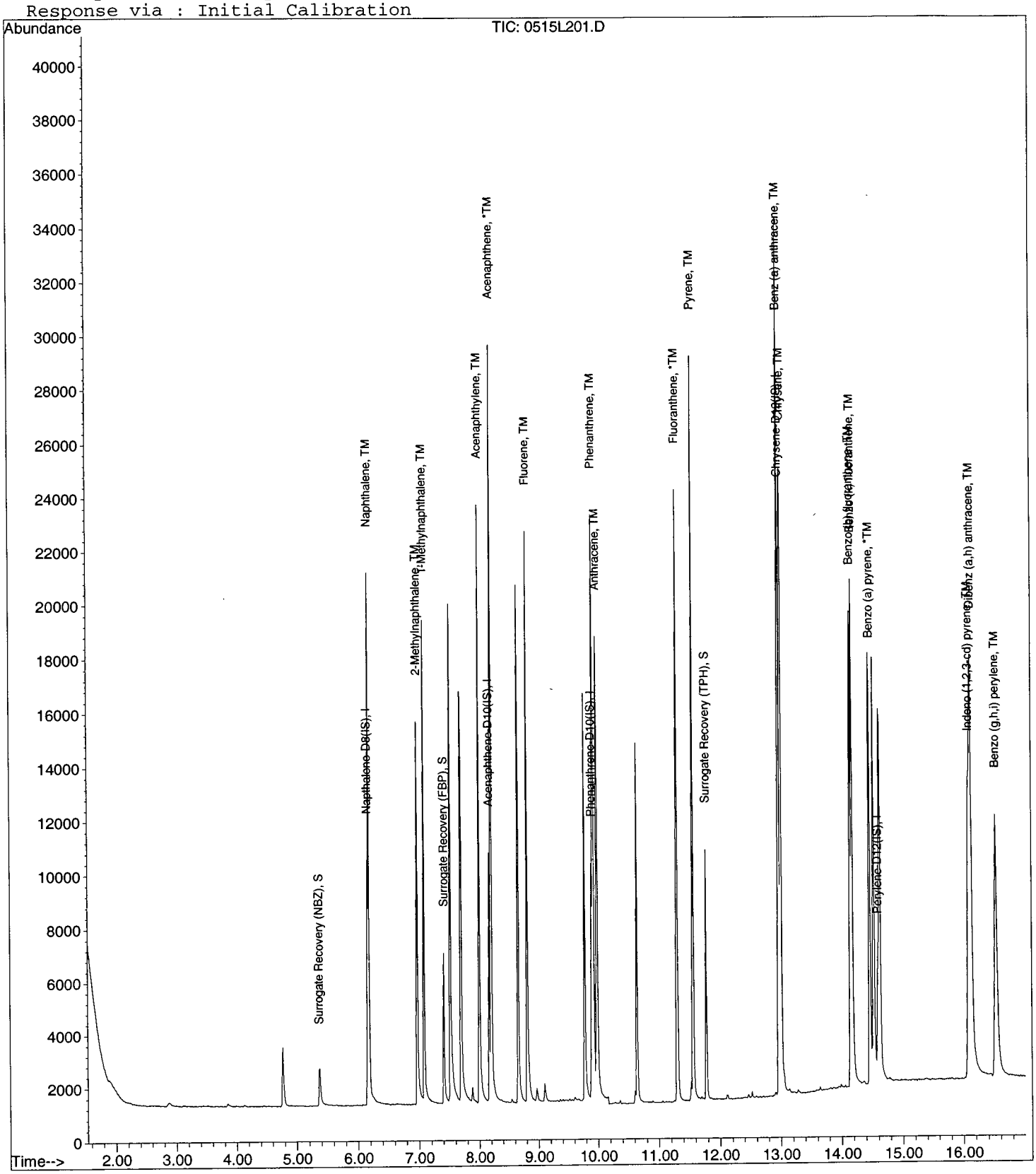
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L150515\0515L201.D Vial: 1
Acq On : 27 May 15 4:28 Operator: MA
Sample : AZ16287W20 MSD-1 1/980 Inst : Linus
Misc : water Multiplr: 1.02

Quant Time: May 27 13:26 2015 Quant Results File: P0518-42.RES

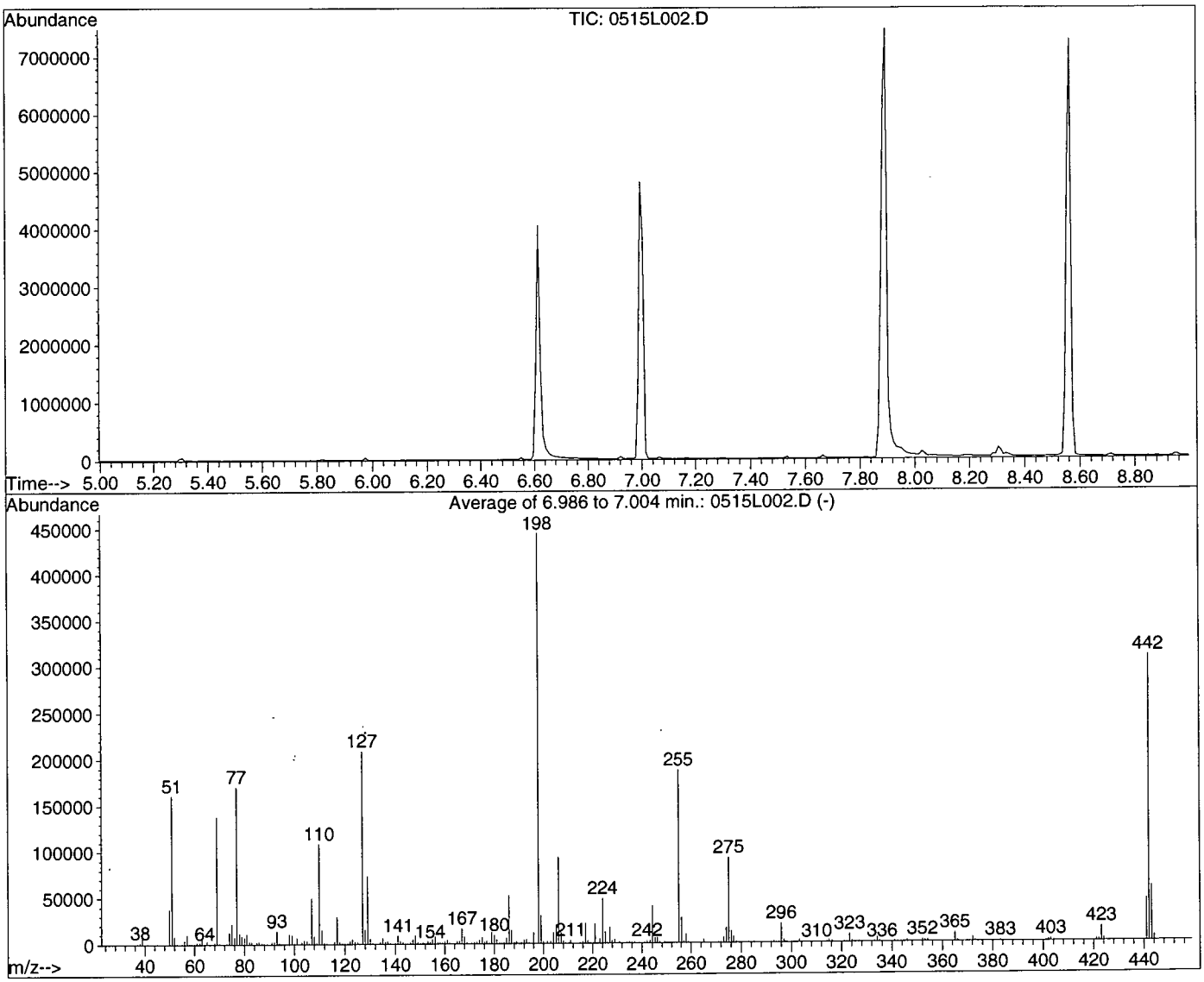
Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed May 27 13:24:37 2015
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L150515\0515L002.D Vial: 2
Acq On : 15 May 15 16:56 Operator: csc
Sample : SV Tune 05/14/15 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 475, 476, 477; Background Corrected with Scan 472

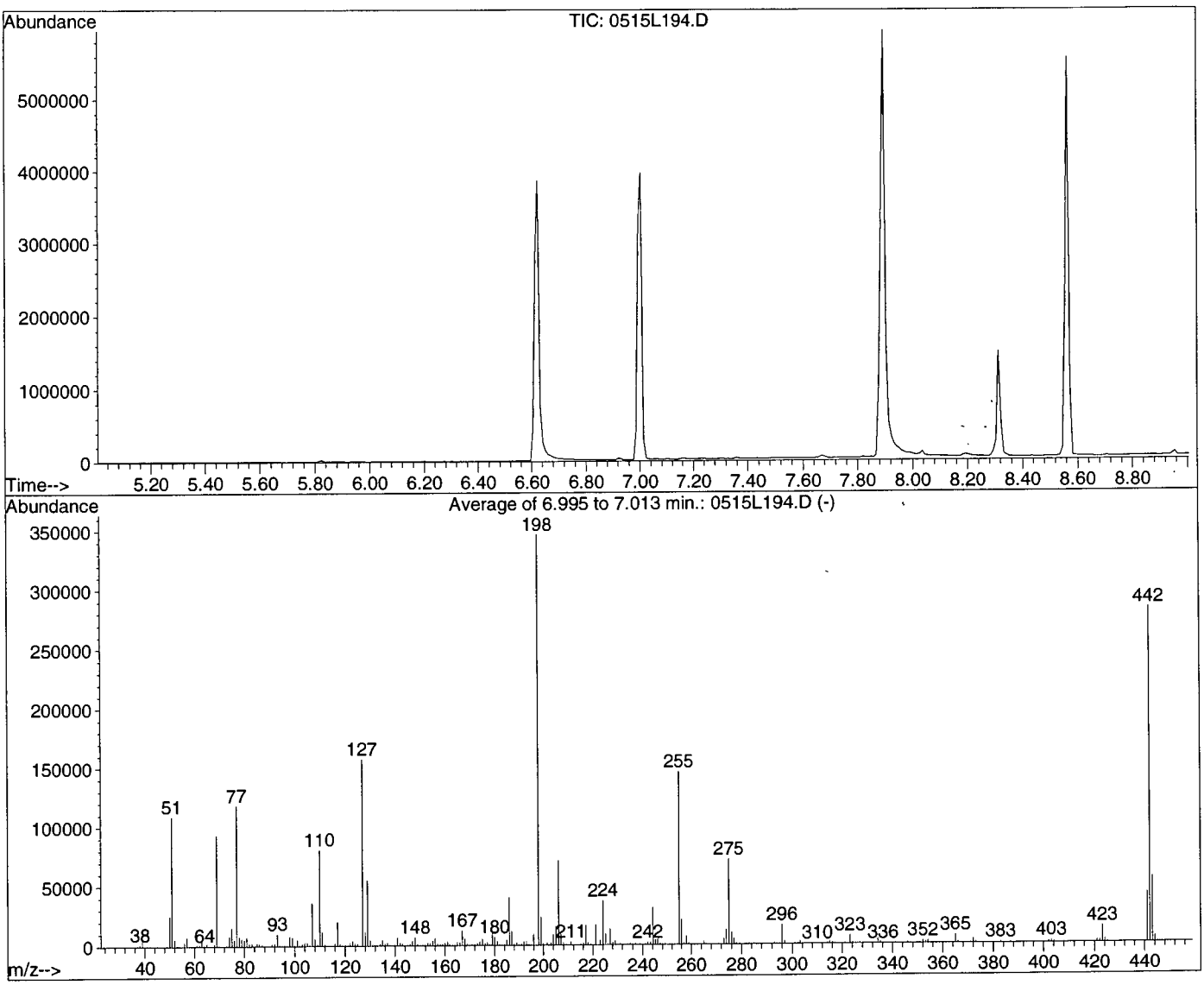
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.1	160774	PASS
68	69	0.00	2	1.4	1998	PASS
70	69	0.00	2	0.5	725	PASS
127	198	40	60	46.9	208571	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	444800	PASS
199	198	5	9	6.8	30375	PASS
275	198	10	30	20.7	91932	PASS
365	198	1	100	2.0	9111	PASS
441	443	0.01	100	76.6	45477	PASS
442	198	40	150	69.5	309146	PASS
443	442	17	23	19.2	59336	PASS

0515L002.D P0518-42.M Wed Jun 03 13:16:17 2015

DFTPP

Data File : M:\LINUS\DATA\L150515\0515L194.D Vial: 94
Acq On : 27 May 15 1:35 Operator: MA
Sample : SV TUNE 5/14/15 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L150515\P0518-42.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 476, 477, 478; Background Corrected with Scan 473

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.3	108560	PASS
68	69	0.00	2	1.6	1447	PASS
70	69	0.00	2	0.5	428	PASS
127	198	40	60	45.3	157151	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	346531	PASS
199	198	5	9	6.7	23257	PASS
275	198	10	30	20.5	71206	PASS
365	198	1	100	1.9	6584	PASS
441	443	0.01	100	75.8	41651	PASS
442	198	40	150	81.5	282581	PASS
443	442	17	23	19.4	54955	PASS

0515L194.D P0518-42.M Wed Jun 03 13:17:55 2015

INDOXACARB CURVE											
Prep: 5/14/15 Ex: 7/31/15-L.H.											
Supplier	ID#	ug/mL	LOT#	DATE	EXP.DATE	µL	µL	µL	µL	µL	µL
INDOXACARB STD.		1		07/31/14	07/31/15	5	50	100	150	200	250
						995	950	900	850	800	750
	Hexane		051914A		FINAL VOL	1000	1000	1000	1000	1000	1000

8270 Full Scan Second Source Stock						
	5/14/15-L.H.					
8270 Second Source Stock						
Exp:	7/21/15					
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	116070-02	2000	34696-3398	5/14/15	5/14/16	1000
o2si	110391-01	2000	34693-3401	5/14/15	5/14/16	1000
o2si	010337-01	1000	17950-3514	5/14/15	11/14/15	1000
o2si	110396-01	2000	34698-3515	5/14/15	5/14/16	1000
o2si	110397-01	2000	50011-3505	5/14/15	7/21/15	1000
o2si	110393-01	2000	34694-3515	5/14/15	5/14/16	1000
o2si	110394-01	2000	35110-3515	5/14/15	5/14/16	1000
o2si	110395-01	2000	34697-3402	5/14/15	5/14/16	1000
o2si	110392-01	2000	18075-3397	5/14/15	5/14/16	1000
EM Science	Methylene Chloride		55006	11/06/14		1000
				Final Vol.		10000

Semivolatile (SV) Tuning Solution -L.H.						
PREP DATE:	5/14/15					
Semivolatile (SV) Tune Solution 50ug/ml						
Exp:	5/14/16					
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Ultra Scient	Semivolatile	1000	CL-5063-3518	05/14/15	5/14/16	1000
EM Science	Methylene Chloride		47186	11/06/14		19000
				Final Vol.		20000

8270 PAH SIM Standard Curve

PREP DATE:	05/15/15-L.H.												
8270 PAH SIM STANDARD CURVE													
Exp.DATE:	05/22/15												
		Conc.		Date		0.1	0.2	0.5	1	5	10	50	100
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
o2si	8270 PAH SIM Stock	200	230271-34569	02/27/15	06/08/16	0	0	0	0	5	5	25	50
	5.0ug/mL	5		05/15/15	05/22/15	0	0	10	20	0	0	0	0
	1.0ug/mL	1		05/15/15	05/22/15	10	20	0	0	0	0	0	0
o2si	8270 BN:A (200:400	VAR	242352-34963	05/04/15	01/01/17	0	0	0	0	5	5	25	50
EM Science	Methylene Chloride		54200	11/06/14		90	80	90	80	190	90	50	0
Supelco	SIM SV Internal St	125	A10079V-3449	05/15/15	5/15/16	2	2	2	2	4	2	2	2
				Final Vol.		102	102	102	102	204	102	102	102

8270 PAH SIM SS

PREP DATE:	05/15/15-L.H.					
8270 PAH SIM Second Source 5µg/mL						
Exp.DATE:	05/15/15					5
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	8270 PAH SIM Stock	200	243252-34609	02/27/15	01/15/17	5
EM Science	Methylene Chloride		54200	11/06/14		195
Supelco	SIM SV Internal St	125	A10079V-3449	05/15/15	5/15/16	4
				Final Vol.		204

8270 PAH SIM CCV

PREP DATE:	05/15/15					
8270 PAH SIM Continuing Calibration Verification 5ug/ml						
Exp.DATE:	05/22/15					5
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	8270 PAH SIM Stock	200	230271-34569	02/27/15	06/08/16	5
o2si	8270 BN:A (200:400	VAR	242352-34963	05/04/15	01/01/17	5
EM Science	Methylene Chloride		54200	11/06/14		190
Supelco	SIM SV Internal St	125	A10079V-3449	05/15/15	5/15/16	4
				Final Vol.		204

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GC/MS STANDARD PREPARATION BOOK # L PAGE #

02/24/15
csc

PREP DATE:	02/24/15					
8270 PAH SIM Continuing Calibration Verification 5ug/ml						
Exp.DATE:	02/31/15					5
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	8270 PAH SIM Stock	10	213931-33759	12/23/14	08/26/15	5
o2si	8270 BN:A Surrogate	VAR	226244-34103	12/23/14	04/10/16	5
EM Science	Methylene Chloride		54200	11/06/14		190
Supelco	SIM Internal Standard	125	XA10079V-34507	12/23/14	09/30/17	4
				Final Vol.		204

02/27/15
csc

8270D PAH SIM Solution, 200 mg/L, 1 ml
110780-01
Lot # 230271 Storage ≤ -10 °C Expiry 8/Jun/2016
Solv: Methylene Chloride
R&D only, not human consump. Made in the USA

8270D PAH SIM
Lot #: 230271 - 34569
Rec: 1/13/15 MFR exp. 6/8/16

Recieved: 01/31/15
Opened: 02/27/15
Expired: 06/8/16

02/27/15
csc

8270 BN:A (200:400) Surrogate Solution, 1 mL
110004-17
Lot # 237956 Storage ≤ -10 °C Expiry 8/Oct/2016
Solv: Methylene Chloride
R&D only, not human consump. Made in the USA

8270 BN:A (200:400) Surrogate Solution
Lot #: 237956 - 34559
Rec: 1/13/15 MFR exp. 10/8/16

Recieved: 01/13/15
Opened: 02/27/15
Expired: 10/8/16

NOTEBOOK INSERT LABEL

Semivolatile Internal Std Mix CRM48902
Lot: XA10079V EXP: SEP/2017 STORAGE: REFRIGERATE 2 x 1ml
DATE RECEIVED:
SUPELCO Solutions within.
595 North Harrison Road • Bellefonte, PA 16823-0048 USA • Phone 814-359-3441

STANDARD TRANSFER LABEL

Date of Preparation:
Reference Number:
Description:
Exp. Date:
Storage: EXP: SEP/2017 REFRIGERATE
CHEMST

02/27/15
csc

Semivolatile Internal Standard Mix
Lot #: XA10079V - 34496
Rec: 12/11/14 MFR exp. 9/30/17
CRM48902 XA10079V
Semivolatile Internal Std Mix
2000ug/ml in dichloromethane

Recieved: 12/11/14
Opened: 02/27/15
Expired: 09/30/17

8270 SIM PAH Internal Standard

PREP DATE:	5/15/15-L.H.					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	11/15/15					
		Conc.		Date	Exp.	**125**
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	SV Internal Standa	2000	A10079V-3449	05/15/15	5/15/16	50
EM Science	Methylene Chloride		47186	11/06/14		750
				Final Vol.		800

8270 Full Scan CCV

PREP DATE:	05/15/15-L.H.					
8270 Continuing Calibration Verification 50ug/ml						
Exp:	05/22/15					**50**
		Conc.		Date		
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
Absolute	8270 Stock	200	VAR	11/18/14	05/21/15	25
o2si	8270 BN:A (200:400	VAR	242352-34963	02/27/15	10/8/16	25
EM Science	Methylene Chloride		47186	11/06/14		50
Supelco	SV Internal Standa	2000	A10079V-3449	02/27/15	09/30/17	2

1ug/ml 1,2,3-TCP

PREP DATE:	05/15/15-LH					
1,2,3-TCP 1ug/ml						
Exp. Date:	11/04/15					
		Conc.		Date	Exp.	
Supplier	ID#	µg/mL	Lot #	Code	Date	µL
O2si	1,2,3-TCP	1000	02872-3201	05/15/15-LH	01/23/16	5
J.T.Baker	Purge & Trap MeoH		0000062345	10/10/13		4995

1,2,3-TCP CCV

PREP DATE:	5/15/15-L.H.					
1,2,3-TCP Continuing Calibration Verification 0.05ug/mL						
Exp. Date:	11/4/15					
		Conc.		Date	Exp.	
Supplier	ID#	µg/mL	Lot #	Code	Date	µL
O2si	1,2,3-TCP	1.0	02641-3200	5/4/15	01/23/16	50
O2si	1,2,3-TCP-d5	2.0	02640-3200	5/4/15	01/27/16	25
J.T.Baker	Purge & Trap MeoH		0000062345	10/10/13		925
				Final Vol.		1000

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02/27/15 CSC

8270D PAH SIM Solution, Second Source, 200 mg/L, 1 mL

110780-01-SS

Lot #	Storage	Expiry
243252	≤ -10 °C	15/Jan/2017

Solv: Methylene Chloride

8270D PAH SIM (SS)
Lot #: 243252 - 34609
Rec: 1/23/15 MFR exp. 1/15/17

Received: 01/23/15
Opened: 02/27/15
Expired: 01/15/17

02/27/15 CSC

Part #: 30031
Lot #: 060111
Laboratory Use Only - See MSDS
Exp: 060116 Storage 20 °C

EPA Method 525 - Internal Standard
4 components CAUTION: Sonicate Before Use
500 ug/mL in acetc
ABSOLUTE STANDA

EPA Method 525 Internal Std
Lot #: 060111 - 32256
Rec: 4/16/13 MFR exp. 6/1/16

Received: 04/16/13
opened: 02/27/15
Expired: 06/01/16

02/27/15 CSC

PREP DATE:	02/27/15					
8270 SIM PAH Internal Standard Mix 125ug/ml						
Exp.DATE:	08/27/15					
		Conc.		Date	Exp.	125
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Supelco	Internal Standard	2000	XA10079V-34496	12/11/14	09/30/17	50
EM Science	Methylene Chloride		54200	11/06/14		750
				Final Vol.		800

02/27/15 CSC

PREP DATE:	02/27/15					
525 Working Standard 20ug/mL (PCP @ 80ug/ml)						
Exp. DATE:	03/04/15					20
		Conc.		Date	Exp.	
Supplier	ID #	ug/ml	Lot #	Code	Date	u1
Ultra-Scientific	Extractables Mixture (PSM-525A)	500	CK-2769-34658	02/17/15	09/30/16	24
Ultra-Scientific	PAH Mixture (PM-525B)	500	CK-2706-34660	02/17/15	09/30/16	24
EM Science	Methylene Chloride		54200	11/06/14		552
				Final Vol.		600

02/27/15 CSC

PREP DATE:	02/27/15					
525 Continuing Calibration Verification 5ug/ml (20ppb PC						
Exp.DATE:	03/04/15					5
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
Ultra Scienti	525 Working Std (PSM-525A) & (PM-525B)	20	VAR	02/17/15	09/30/16	50
Absolute	525 Internal Std (30031)	500	060111-32256	04/16/13	06/01/16	2
EM Science	Methylene Chloride		54200	11/06/14		148
				Final Vol.		200

02/26/15 CSC

PREP DATE:	02/26/15		EXP:	03/03/15										
Sulfolane Standard Curve														
						1	5	10	20	40	50	60	80	100
		Conc.		Date	Exp.									
Supplier	ID #	µg/mL	Lot#	Code	Date	µL	µL	µL	µL	µL	µL	µL	µL	µL
o2si	Sulfolane Calibration Standard	200	VAR	10/22/14	03/11/15	5	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		54200	11/06/14		995	195	95	90	80	75	70	60	50
				Final Vol.		1000	200	100	100	100	100	100	100	100

8270 PAH SIM CCV

PREP DATE:	05/26/15-LH					
8270 PAH SIM Continuing Calibration Verification 5ug/ml						
Exp.DATE:	06/02/15					5
Supplier	ID #	Conc. µg/mL	Lot #	Date Code	Exp. Date	µL
o2si	8270 PAH SIM Stock	200	230271-34569	02/27/15	06/08/16	5
o2si	8270 BN:A (200:400)S	VAR	242352-34963	02/27/15	10/08/16	5
EM Science	Methylene Chloride		54200	11/06/14		190
Supelco	SIM SV Internal Star	125	A10079V-3449	05/15/15	5/15/16	4
				Final Vol.		204

8270 Full Scan CCV

PREP DATE:	06/02/15-L.H.					
8270 Continuing Calibration Verification 50ug/ml						
Exp:	05/22/15					50
Supplier	ID #	Conc. µg/mL	Lot #	Date Code	Exp.Date	µL
Absolute	8270 Stock	200	VAR	04/27/15	10/27/15	25
o2si	8270 BN:A (200:400)	VAR	242352-34963	05/21/15	5/21/16	25
EM Science	Methylene Chloride		47186	11/06/14		50
Supelco	SV Internal Standard	2000	A10079V-3449	05/21/15	5/21/16	2

Prep: 05/26/15 Exp: 04/27/15 GA **HERB SECOND SOURCE**

Analytes:	Conc. in mix (ug/ml)	Conc. In Stock (ug/ml)	Aliqout (uL)	OCK SOUIR O2SI	Final Vol. Solvent (ml)
Dalapon	12.8	64	1000	AT: 132070-0	5
3,5 Dichlorobenzoic Acid	1.28	6.4		Lot: 207738	MTBE
4-Nitrophenol	3.2	16		OP: 5/26/15	Lot #
2,4-DCAA (S)	6.4	32		Exp: 4/27/16	50223
Dicamba	1.28	6.4			
MCPP	1280	6400			
MCPA	1280	6400			
2,4-DP	6.4	32			
2,4-D	6.4	32			
DNOC	2.56	12.8			
PCP	1.28	6.4			
2,4,5-TP	1.28	6.4			
Chloramben	6.4	32			
2,4,5-T	1.28	6.4			
Dinoseb	3.2	16			
2,4-DB	12.8	64			
Bentazon	6.4	32			
Picloram	1.28	6.4			
Dacthal	1.28	6.4			
Acifluorfen	3.2	16			

***1 ml ampule is derivitized by extraction and brought up to 5ml in MTBE*

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	150518A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	SIM Spike 230271-33745		Surrogate ID 1	SIM Surrogate 248398-35028	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/18/15 10:25	
Spiked ID 8			Ext. End Time:	05/18/15 16:00	
			GC Requires Extract By:	**06/02/15 0:00**	

pH1	2	5/18/15 10:35:00 AM	Water Bath Temp Criteria	79,79 °C
pH2	14	5/18/15 11:55:00 AM		
pH3				

Spiked By: DL **Date** 05/18/15 **Witnessed By:** DC **Date** 05/18/15

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	150518A Blk				0.0250	1	1000	1	2/1	05/18/15 10:25	
						equip	E-WB6				
2	150518A LCS-1		0.0250	1	0.0250	1	1000	1	2/1	05/18/15 10:25	
						equip	E-WB6				
3	AZ16235	AZ16235W10			0.0250	1	850	1	2/1	05/18/15 10:25	76401
						equip	E-WB6				
4	AZ16236	AZ16236W09			0.0250	1	980	1	2/1	05/18/15 10:25	76401
						equip	E-WB6				
5	AZ16287 MS-1	AZ16287W22	0.0250	1	0.0250	1	980	1	2/1	05/18/15 10:25	76413
						equip	E-WB6				
6	AZ16287 MSD-1	AZ16287W20	0.0250	1	0.0250	1	980	1	2/1	05/18/15 10:25	76413
						equip	E-WB6				
7	AZ16287	AZ16287W19			0.0250	1	900	1	2/1	05/18/15 10:25	76413
						equip	E-WB6				
8	AZ16288	AZ16288W08			0.0250	1	950	1	2/1	05/18/15 10:25	76413
						equip	E-WB6				
9	AZ16289	AZ16289W08			0.0250	1	900	1	2/1	05/18/15 10:25	76413
						equip	E-WB6				
10	AZ16290	AZ16290W07			0.0250	1	940	1	2/1	05/18/15 10:25	76413
						equip	E-WB6				
11	AZ16334	AZ16334W09			0.0250	1	940	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
12	AZ16335	AZ16335W10			0.0250	1	980	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
13	AZ16336	AZ16336W09			0.0250	1	980	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
14	AZ16337	AZ16337W09			0.0250	1	1070	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
15	AZ16338	AZ16338W09			0.0250	1	1050	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
16	AZ16339	AZ16339W10			0.0250	1	1050	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				

lvent and Lot#	
C	55006
2SO4	XE21E
N NaOH	3-6-15
l Acid	3-6-15
Na2SO4	4-13-15
strips	HC421273
ter Paper	400091

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	5/19/15
Time	12:15
Refrigerator	GC-C

	Technician's Initials
Scanned By	DC
Sample Preparation	DC,KY
Extraction	DC,KY,DL
Concentration	DL

Modified	05/19/15 9:08:10 AM

Reviewed By: KY **Date** 5/19/15

'19/15 9:08:26 AM Ext_ID 14795

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	150518A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	SIM Spike 230271-33745		Surrogate ID 1	SIM Surrogate 248398-35028	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/18/15 10:25	
Spiked ID 8			Ext. End Time:	05/18/15 16:00	
			GC Requires Extract By:	06/02/15 0:00	

pH1	2	5/18/15 10:35:00 AM	Water Bath Temp Criteria	79,79 °C
pH2	14	5/18/15 11:55:00 AM		
pH3				

Spiked By: DL **Date** 05/18/15 **Witnessed By:** DC **Date** 05/18/15

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ16340	AZ16340W09			0.0250	1	1070	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
18	AZ16341	AZ16341W09			0.0250	1	1040	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				
19	AZ16342	AZ16342W09			0.0250	1	1020	1	2/1	05/18/15 10:25	76424
						equip	E-WB7				

KLg 5/19/15

lvent and Lot#	
ɔ	55006
2SO4	XE21E
N NaOH	3-6-15
l Acid	3-6-15
Na2SO4	4-13-15
strips	HC421273
:er Paper	400091

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	5/19/15
Time	12:15
Refrigerator	GC-C

	Technician's Initials
Scanned By	DC
Sample Preparation	DC,KY
Extraction	DC,KY,DL
Concentration	DL

Modified	05/19/15 9:08:10 AM

19/15 9:08:26 AM

Reviewed By: Klg **Date** 5/19/15

Ext_ID 17795

Injection Log

Directory: M:\LINUS\DATA\L150515

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0515L002.D	1	SV Tune 05/14/15		05/15/2015 16:56
2	3	0515L003.D	1	0.1ug/ml PAH 05/15/15		05/15/2015 17:15
3	4	0515L004.D	1	0.2ug/ml PAH		05/15/2015 17:41
4	5	0515L005.D	1	0.5ug/ml PAH		05/15/2015 18:06
5	6	0515L006.D	1	1.0ug/ml PAH		05/15/2015 18:32
6	7	0515L007.D	1	5.0ug/ml PAH		05/15/2015 18:58
7	8	0515L008.D	1	10ug/ml PAH		05/15/2015 19:23
8	9	0515L009.D	1	50ug/ml PAH		05/15/2015 19:49
9	10	0515L010.D	1	100ug/ml PAH		05/15/2015 20:14
10	11	0515L011.D	1	5.0ug/ml PAH SS 05/15/15		05/15/2015 20:40
11	94	0515L194.D	1	SV TUNE 5/14/15		05/27/2015 01:35
12	95	0515L195.D	1	5.0ug/ml PAH 5/26/15		05/27/2015 01:54
13	96	0515L196.D	1	150518A BLK 1/1000	water	05/27/2015 02:19
14	97	0515L197.D	1	150518A LCS-1 1/1000	water	05/27/2015 02:45
15	100	0515L200.D	1.02041	AZ16287W22 MS-1 1/980	water	05/27/2015 04:02
16	1	0515L201.D	1.02041	AZ16287W20 MSD-1 1/980	water	05/27/2015 04:28
17	2	0515L202.D	1.11111	AZ16287W19 1/900	water	05/27/2015 04:53
18	3	0515L203.D	1.05263	AZ16288W08 1/950	water	05/27/2015 05:19
19	4	0515L204.D	1.11111	AZ16289W08 1/900	water	05/27/2015 05:45
20	5	0515L205.D	1.06383	AZ16290W07 1/940	water	05/27/2015 06:10

RSK-175

APPL, INC.

RSK-175
QC Summary

APPL, INC.

Method Blank
RSK 175

Blank Name/QCG: **150520W-16287 - 197488**
Batch ID: #RSK-150520A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
BLANK	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
BLANK	METHANE	0.45 U	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method: 402RSK.M
Run #: 0520F006
Instrument: Frodo
Sequence: 150520
Initials: RSA

GC SC-Blank-REG MDLs
Printed: 06/02/15 3:53:36 PM

Laboratory Control Spike Recovery
RSK 175

APPL ID: **150520W-16287 LCS - 197488**
Batch ID: #RSK-150520A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
ETHANE	25.0	21.6	86.4	70-130
ETHENE	23.3	19.3	82.8	70-130
METHANE	13.3	15.6	117	70-130

Comments: _____

Primary	SPK
Quant Method :	402RSK.M
Extraction Date :	05/20/15
Analysis Date :	05/20/15
Instrument :	Frodo
Run :	0520F005
Initials :	SD

Printed: 06/02/15 3:43:22 PM
APPL Standard LCS

Matrix Spike Recoveries

RSK 175

APPL ID: **150520W-16287 MS - 197488**
Batch ID: #RSK-150520A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
ETHANE	25.0	ND	16.4	14.8	65.6 #	59.2 #	70-130	10.3	30
ETHENE	23.3	ND	14.9	13.8	63.9 #	59.2 #	70-130	7.7	30
METHANE	13.3	36	57.3	36.1	160 #	0.8 #	70-130	45.4 #	30

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	402RSK.M	402RSK.M
Extraction Date :	05/20/15	05/20/15
Analysis Date :	05/20/15	05/20/15
Instrument :	Frodo	Frodo
Run :	0520F014	0520F016
Initials :	SD	

Printed: 06/02/15 3:53:15 PM
APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/20/15

Matrix: WATER Instrument: Frodo

Blank ID: 150520A-BLK Time Analyzed: 1132

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150520A-LCS	Lab Control Spike	0520F005	05/20/15 1115
150520A-BLK	Blank	0520F006	05/20/15 1132
AZ16287	S67-MW007-051215	0520F009	05/20/15 1148
AZ16288	S67-MW003-051215	0520F010	05/20/15 1152
AZ16289	S67-MW002-051215	0520F011	05/20/15 1157
AZ16290	S67-MW009-051215	0520F012	05/20/15 1202
150520A-MS	Matrix Spike	0520F014	05/20/15 1216
150520A-MSD	Matrix SpikeD	0520F016	05/20/15 1558

Comments: Batch: #RSK-150520A

Printed: 06/03/15 12:00:36 PM

Form 4, Blank Summary

RSK-175
Sample Data

APPL, INC.

RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW007-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16287

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	36	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F009
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	SD

Printed: 06/02/15 3:43:28 PM

APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (Not Reviewed)

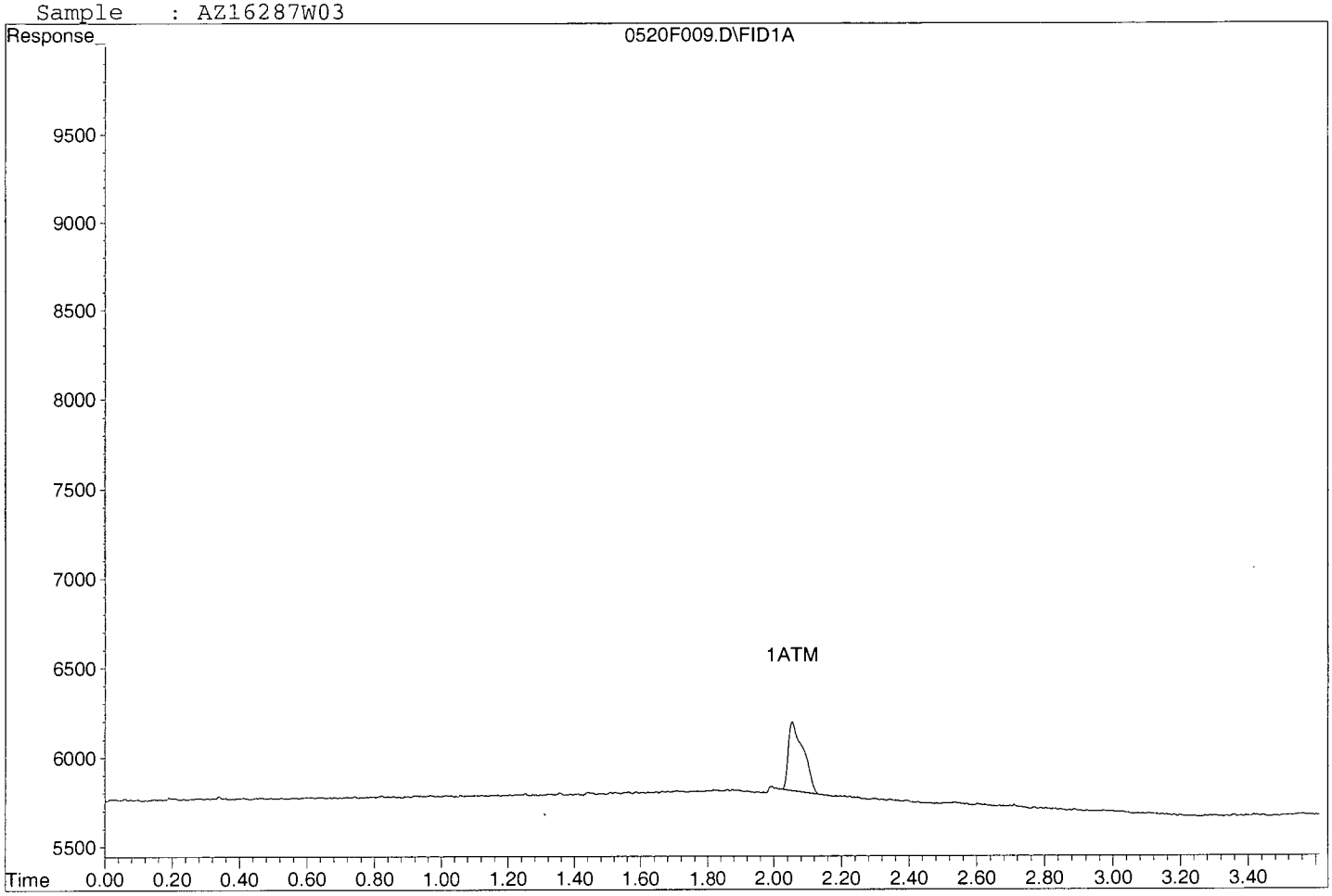
Data File : V:\FRODO\DATA\150520\0520F009.D Vial: 9
Acq On : 20 May 2015 11:48 Operator: SD
Sample : AZ16287W03 Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 11:52 2015 Quant Results File: 402RSK.RES

Method : V:\FRODO\DATA\150520\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.05	11997	36.247 ppb

Data File: V:\FRODO\DATA\150520\0520F009.D
Sample : AZ16287W03



RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW003-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16288

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	5.2	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F010
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	RSA

Printed: 06/02/15 3:43:28 PM

APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : V:\FRODO\DATA\150520\0520F010.D Vial: 10
Acq On : 20 May 2015 11:52 Operator: SD
Sample : AZ16288W03 Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 13:33 2015 Quant Results File: 402RSK.RES

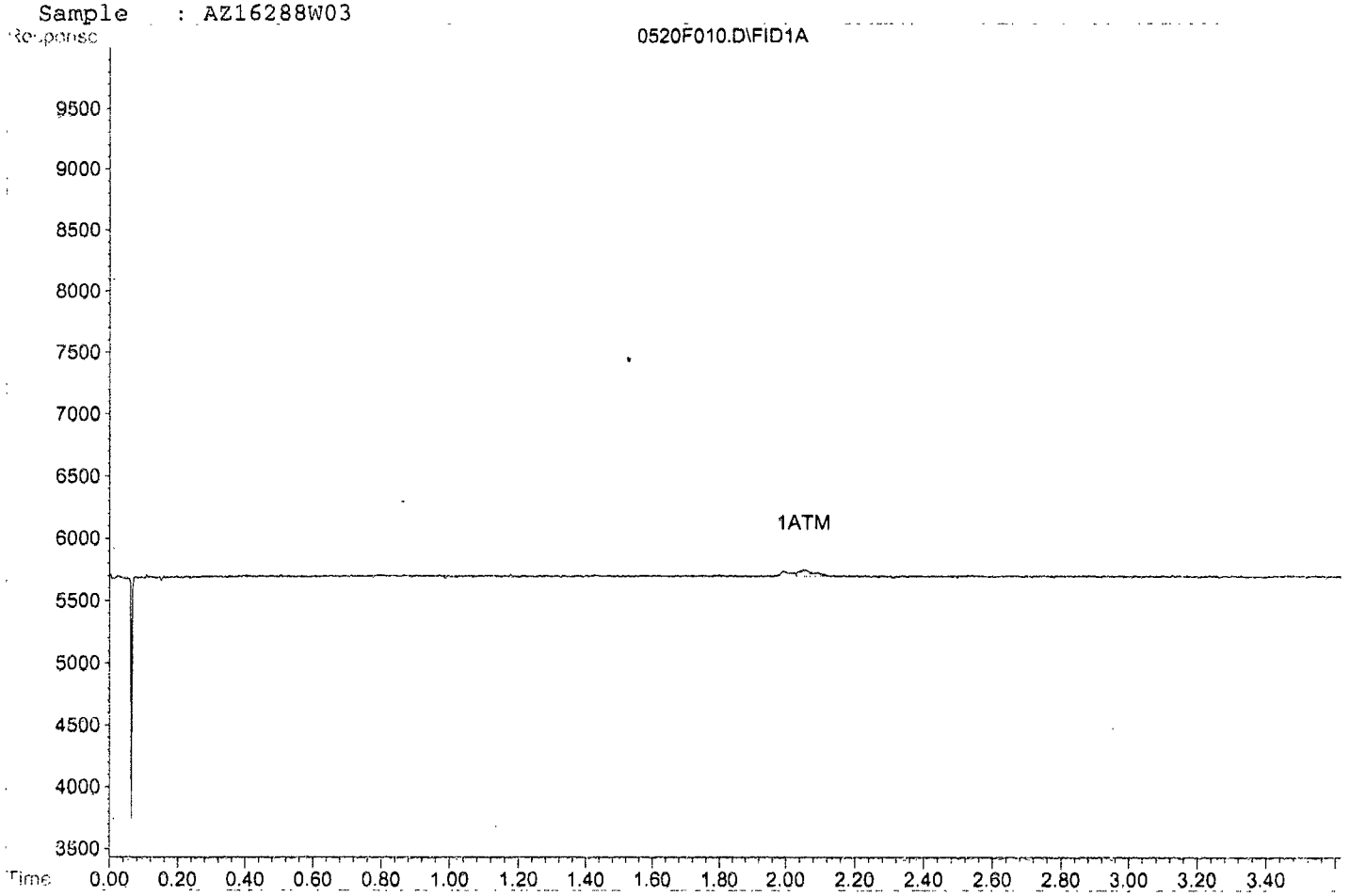
Method : V:\FRODO\DATA\150526\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue May 26 11:01:24 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.05	1729	5.222 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: V:\FRODO\DATA\150520\0520F010.D
Sample : AZ16288W03



RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 76413

Sample ID: S67-MW002-051215

APPL ID: AZ16289

Sample Collection Date: 05/12/15

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	11	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method: 402RSK.M
Run #: 0520F011
Instrument: Frodo
Sequence: 150520
Dilution Factor: 1
Initials: SD

Printed: 06/10/15 1:35:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150520\0520F011.D Vial: 11
Acq On : 20 May 2015 11:57 Operator: SD
Sample : AZ16289W03 Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 12:01 2015 Quant Results File: 402RSK.RES

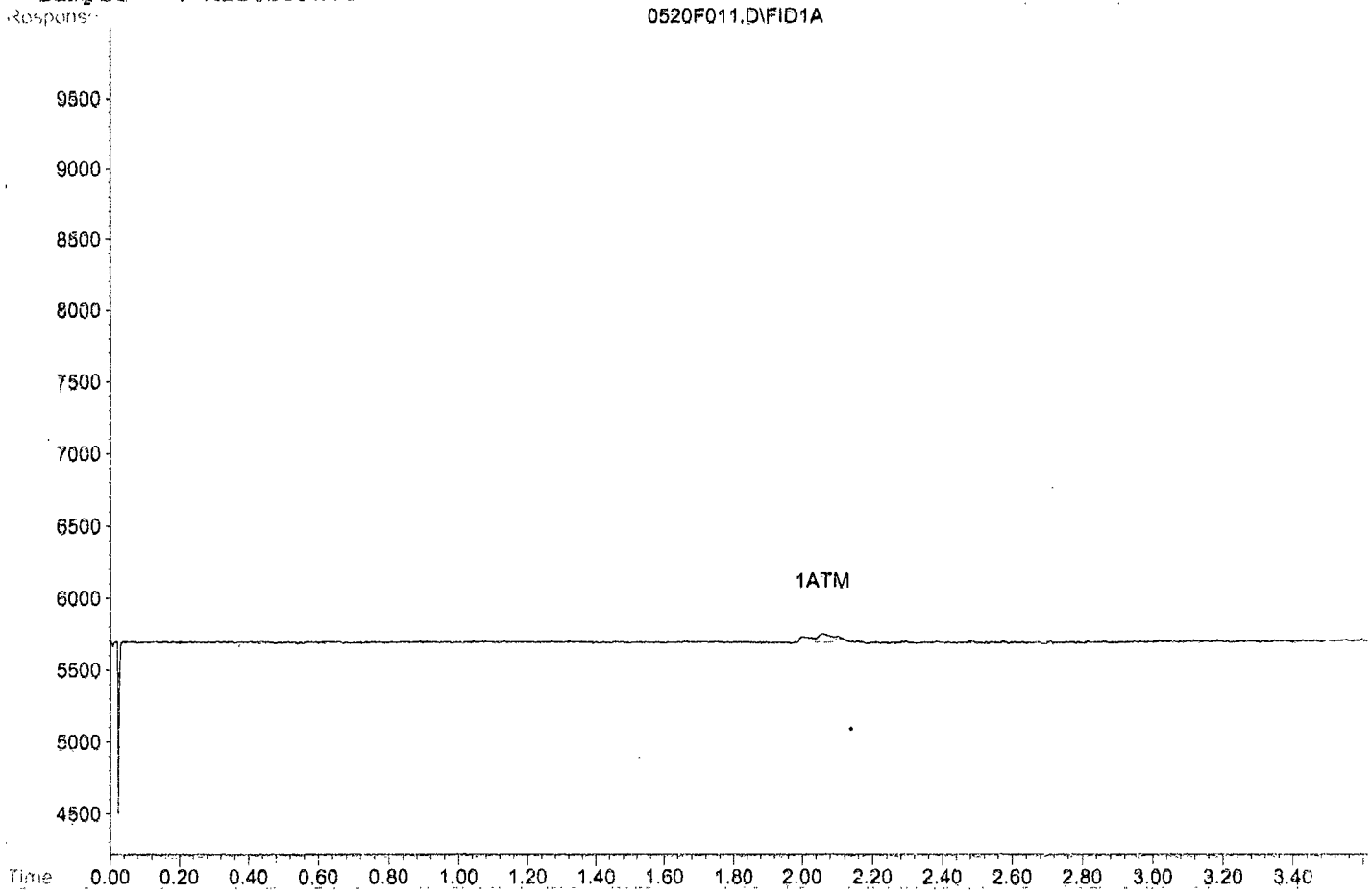
Method : V:\FRODO\DATA\150526\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue May 26 11:01:24 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.06	1572	4.749 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: V:\FRODO\DATA\150520\0520F011.D
Sample : AZ16289W03



RSK 175

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW009-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16290

QCG: #RSK-150520A-197488

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
RSK 175	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
RSK 175	METHANE	13	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method:	402RSK.M
Run #:	0520F012
Instrument:	Frodo
Sequence:	150520
Dilution Factor:	1
Initials:	RSA

Printed: 06/02/15 3:43:28 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (Not Reviewed)

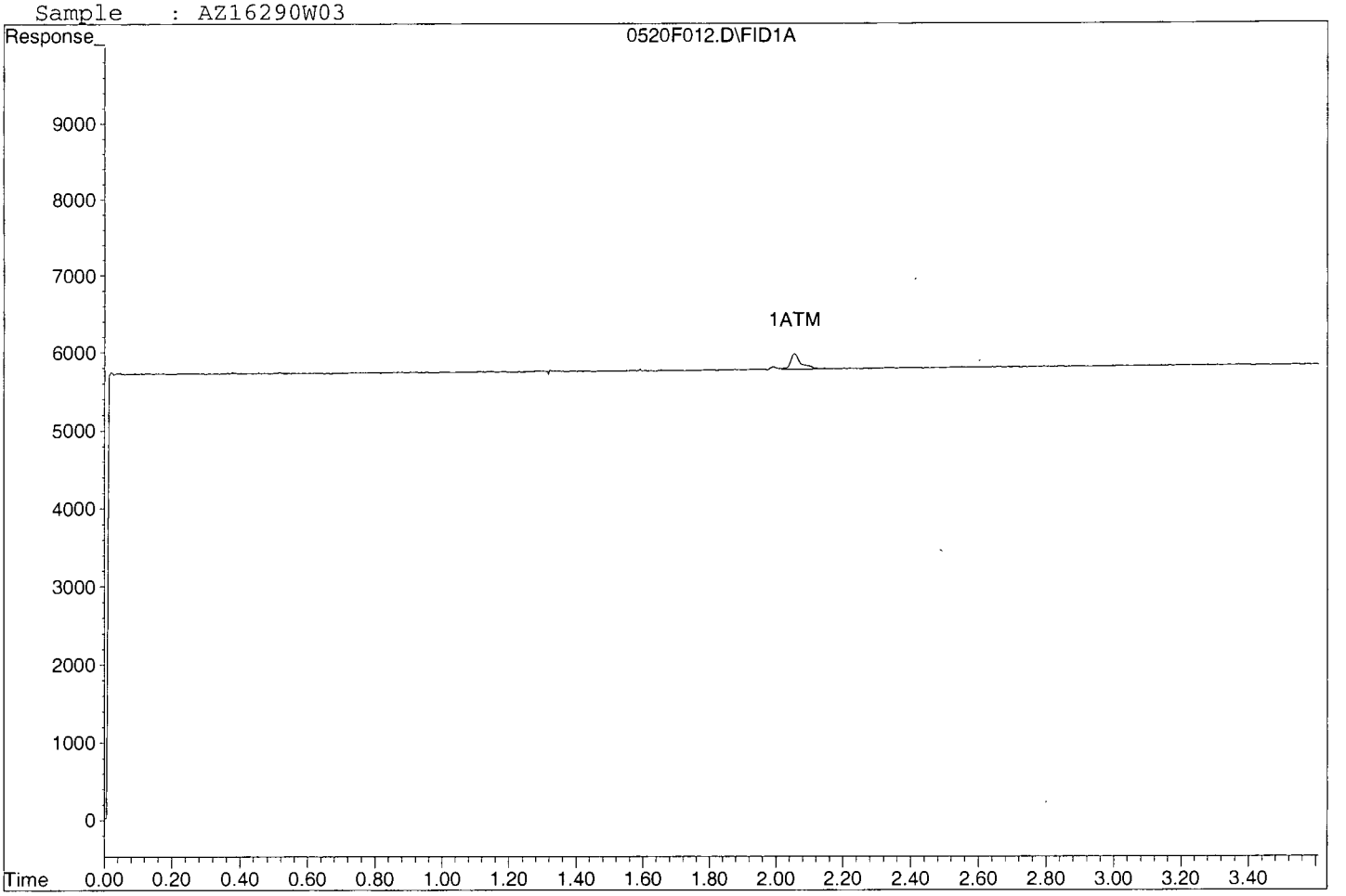
Data File : V:\FRODO\DATA\150520\0520F012.D Vial: 12
Acq On : 20 May 2015 12:02 Operator: SD
Sample : AZ16290W03 Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 12:06 2015 Quant Results File: 402RSK.RES

Method : V:\FRODO\DATA\150520\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.05	4339	13.110 ppb

Data File: V:\FRODO\DATA\150520\0520F012.D
Sample : AZ16290W03



RSK-175
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water
SDG No:
Initial Cal. Date: 3/29/15 and 4/2/15
Instrument: Frodo
Initials: sd

		Compound	1	2	3	4	5	6	7	8	1A		Avg	%RSD		
			0329F010.D	0329F001.D	0329F005.D	0329F012.D	0329F013.D	0329F015.D	0329F016.D	0402F001.D	0329F009.D					
1	ATM	Methane	364	332	325	371	276	318	258	300	433		331	16	ATM	
2	ATM	Ethane	285	219	313	327	277	316	267	321	232		284	14	ATM	
3	ATM	Ethene	352	253	348	326	293	340	281	333	205		303	16	ATM	
4																
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1.3236504

AIR LIQUIDE Air Liquide America Specialty Gases LLC Scott™

Gas Mix 1%
Lot #: 164PLU4SPC05L - 34437
Rec: 12/1/14 MFR exp. 7/8/17

Shipped From: 6141 EASTON ROAD, BLDG 1 PO BOX 310
PLUMSTEADVILLE PA 18949-0310
Phone: 800-331-4953 Fax: 215-766-7226

CERTIFICATE OF ANALYSIS

SIGMA-ALDRICH
PO#P442671
595 NORTH HARRISON ROAD
BELLEFONTE PA 16823
US

DOCUMENT#:56058812 -005
PO#: P442671
ITEM #: T216-48
CUST ITEM #: 23462
DATE: 08Jul2014

ANALYTICAL ACCURACY: +/-02%
PRODUCT EXPIRATION: 08Jul2017

LOT # : 164PLU4SPC05L

COMPONENT	REQUESTED GAS CONC MOLES		ANALYSIS (MOLES)	
ACETYLENE	1.	%	1.0	%
CARBON DIOXIDE	1.	%	1.0	%
CARBON MONOXIDE	1.	%	1.01	%
ETHANE	1.	%	1.01	%
ETHYLENE	1.	%	1.01	%
METHANE	1.	%	1.01	%
NITROGEN		BALANCE		BALANCE

MANUFACTURED DATE: 08Jul2014 SCOTTY SIZE: 48

APPROVED BY: _____
DAN TRAVISANO

Quantitation Report (QT Reviewed)

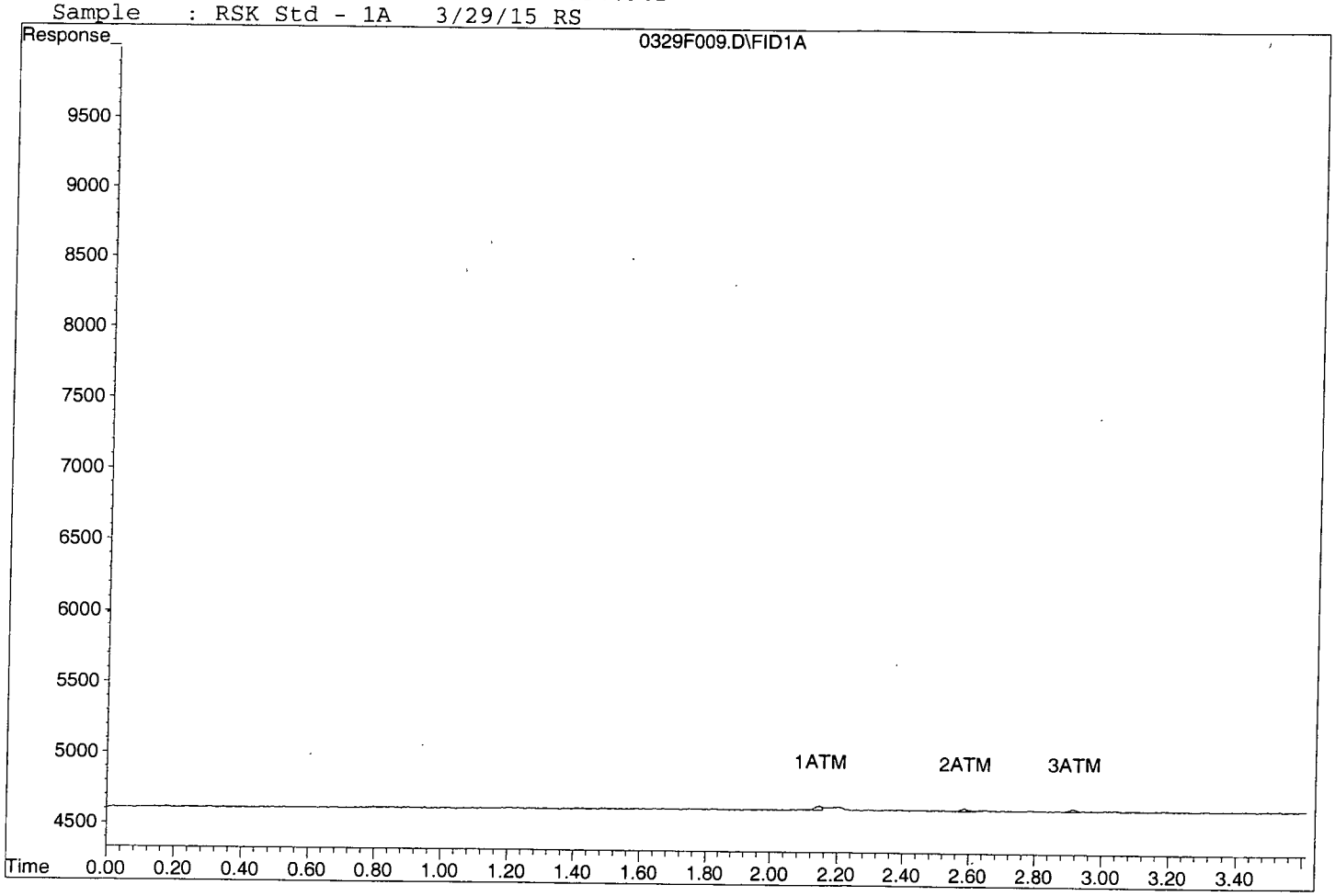
Data File : V:\FRODO\DATA\150329\0329F009.D Vial: 9
Acq On : 29 Mar 2015 09:45 Operator: SD
Sample : RSK Std - 1A 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:37 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.15	390	1.029 ppb m
2) ATM Ethane	2.59	395	1.285 ppb
3) ATM Ethene	2.92	328	0.962 ppb

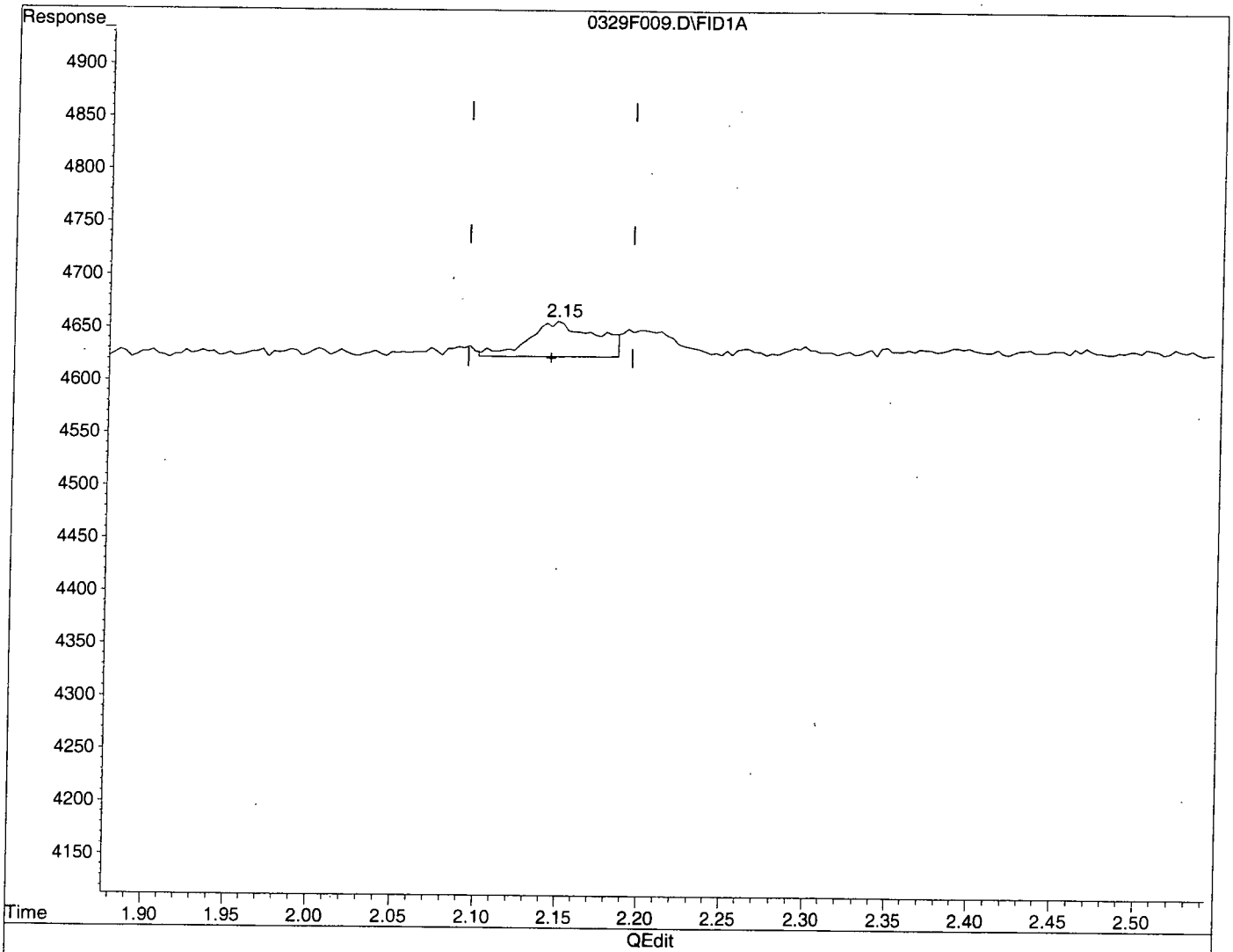
Data File: V:\FRODO\DATA\150329\0329F009.D
Sample : RSK Std - 1A 3/29/15 RS



Quantitation Report

Data File : V:\FRODO\DATA\150329\0329F009.D Vial: 9
Acq On : 29 Mar 2015 09:45 Operator: SD
Sample : RSK Std - 1A 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 10:54 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 10:50:10 2015
Response via : Multiple Level Calibration



(1) Methane (ATM)

2.15min 2.405ppb

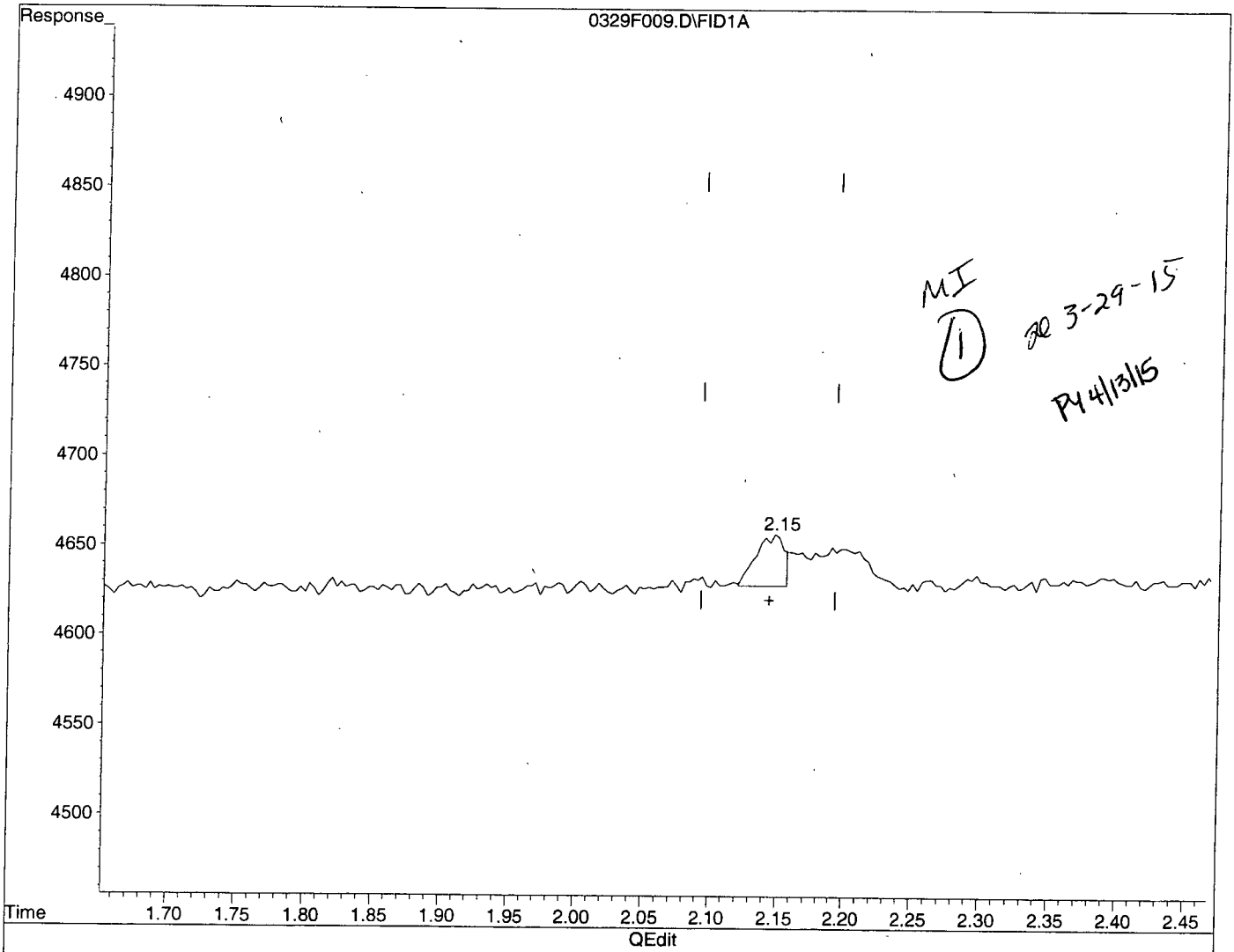
response 911

(+) = Expected Retention Time

Quantitation Report

Data File : V:\FRODO\DATA\150329\0329F009.D Vial: 9
Acq On : 29 Mar 2015 09:45 Operator: SD
Sample : RSK Std - 1A 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 10:55 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration



(1) Methane (ATM)

2.15min 1.029ppb m

response 390

(+) = Expected Retention Time

0329F009.D RSK175Q.M Sun Mar 29 11:38:16 2015

Quantitation Report (QT Reviewed)

Data File : V:\FRODO\DATA\150329\0329F010.D Vial: 10
Acq On : 29 Mar 2015 10:04 Operator: SD
Sample : RSK Std 1 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:43 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

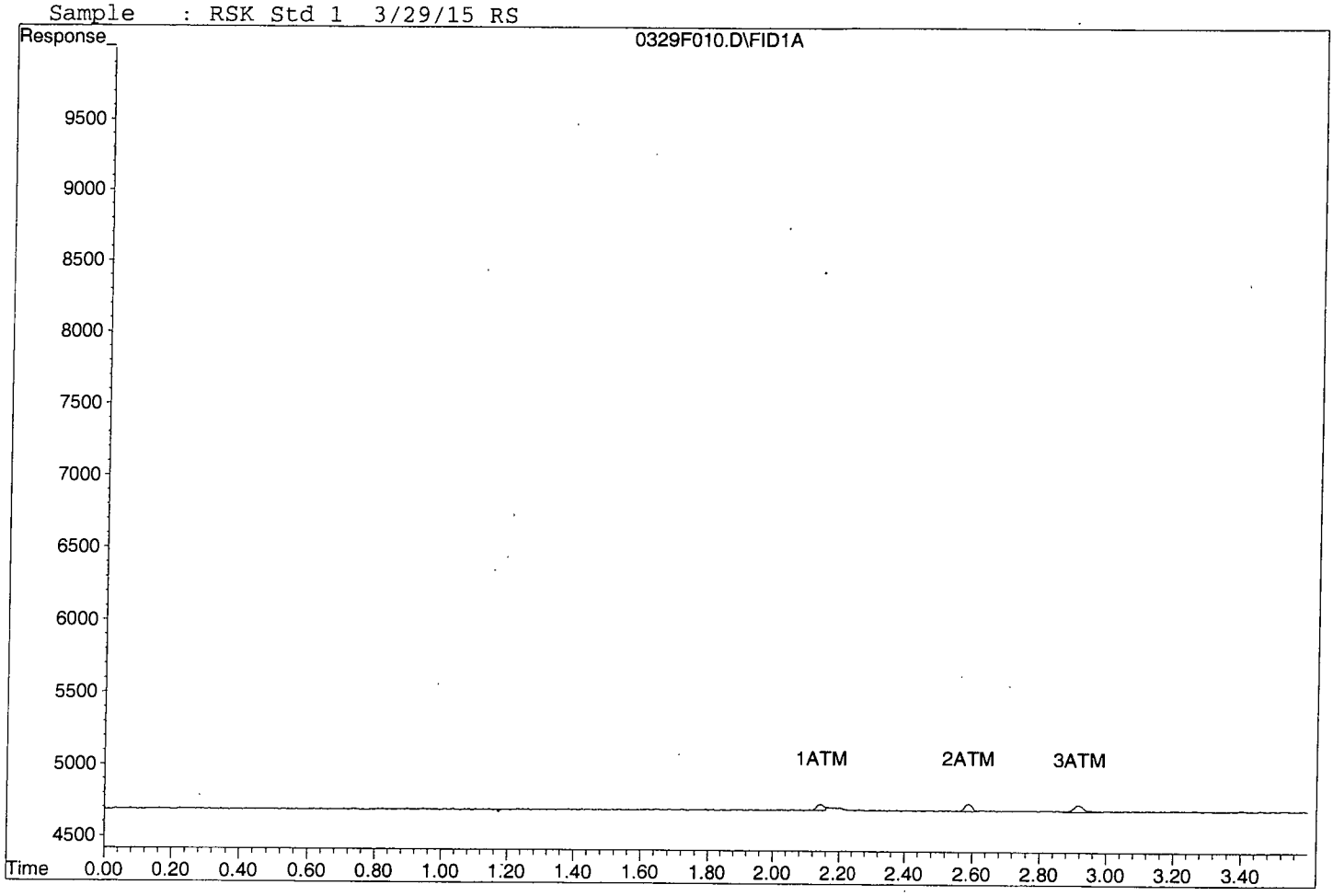
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
1) ATM Methane	2.14	656	1.735	ppb	m
2) ATM Ethane	2.59	968	3.187	ppb	
3) ATM Ethene	2.92	1125	3.540	ppb	

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: V:\FRODO\DATA\150329\0329F010.D
Sample : RSK Std 1 3/29/15 RS

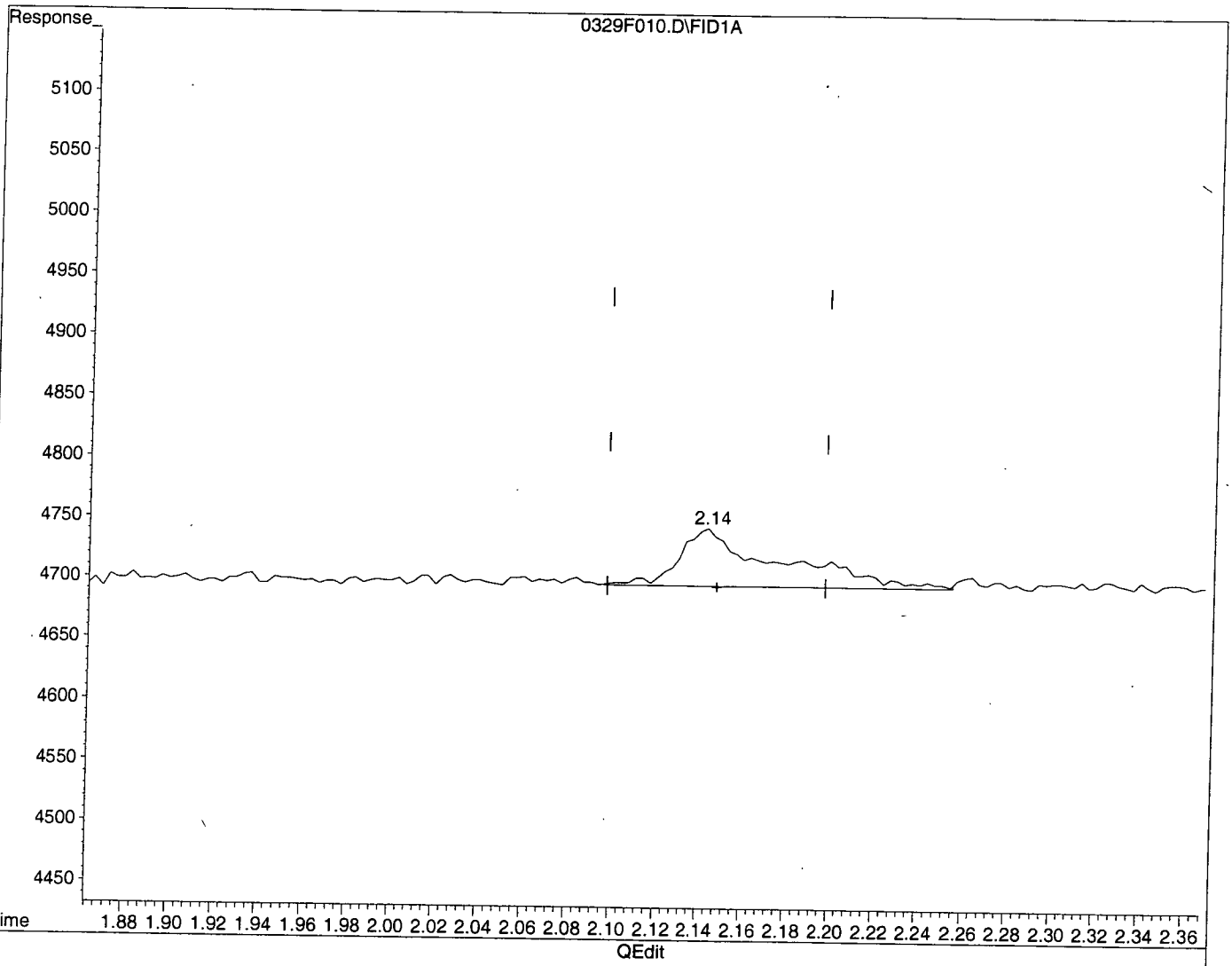


Quantitation Report

Data File : V:\FRODO\DATA\150329\0329F010.D
Acq On : 29 Mar 2015 10:04
Sample : RSK Std 1 3/29/15 RS
Misc : Water
IntFile : autoint1.e
Quant Time: Mar 29 10:08 2015 Quant Results File: RSK175Q.RES

Vial: 10
Operator: SD
Inst : Frodo
Multiplr: 1.00

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 10:50:10 2015
Response via : Multiple Level Calibration



QEdit

(1) Methane (ATM)

2.14min 1.589ppb

response 1509

(+) = Expected Retention Time

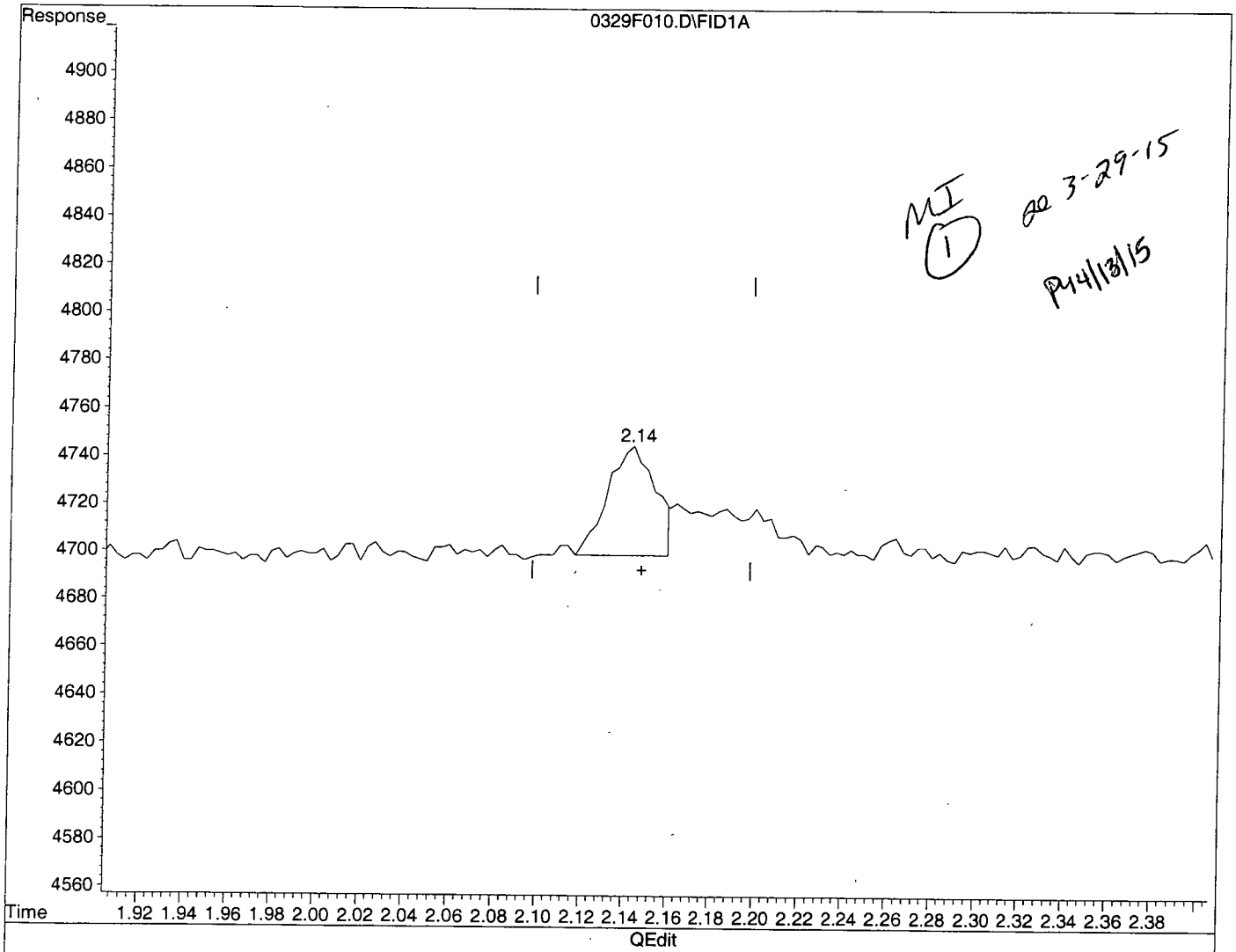
0329F010.D RSK175Q.M Sun Mar 29 10:51:16 2015

Quantitation Report

Data File : V:\FRODO\DATA\150329\0329F010.D
Acq On : 29 Mar 2015 10:04
Sample : RSK Std 1 3/29/15 RS
Misc : Water
IntFile : autoint1.e
Quant Time: Mar 29 10:57 2015 Quant Results File: RSK175Q.RES

Vial: 10
Operator: SD
Inst : Frodo
Multiplr: 1.00

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration



MI (1) ae 3-29-15 PM 4/13/15

(1) Methane (ATM)

2.14min 1.735ppb m

response 656

(+) = Expected Retention Time

0329F010.D RSK175Q.M Sun Mar 29 11:43:55 2015

Quantitation Report (Not Reviewed)

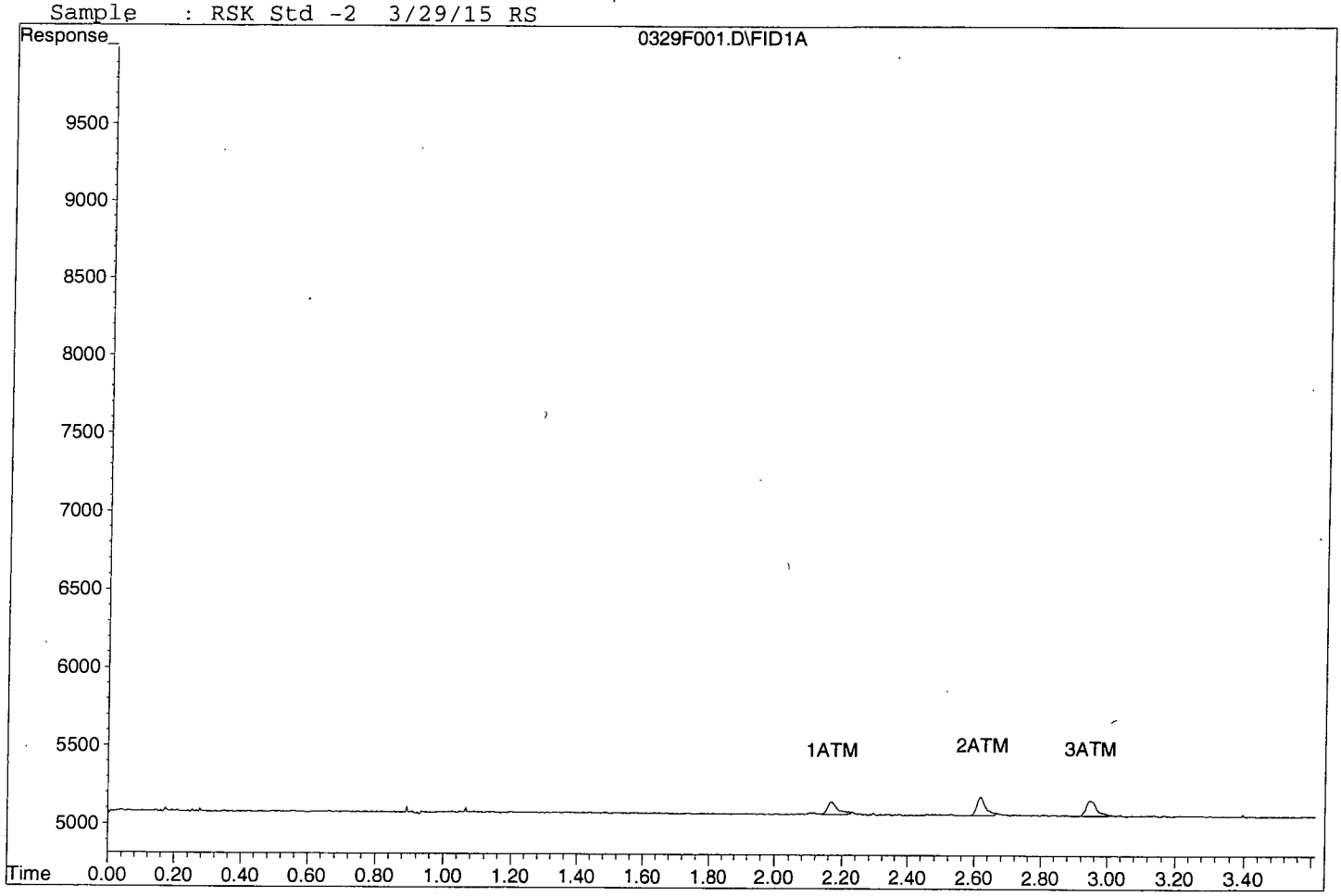
Data File : V:\FRODO\DATA\150329\0329F001.D Vial: 1
Acq On : 29 Mar 2015 08:09 Operator: SD
Sample : RSK Std -2 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:36 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.17	1692	4.997 ppb
2) ATM Ethane	2.62	2079	7.159 ppb
3) ATM Ethene	2.95	2255	7.357 ppb

Data File: V:\FRODO\DATA\150329\0329F001.D
Sample : RSK Std -2 3/29/15 RS



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150329\0329F005.D Vial: 5
Acq On : 29 Mar 2015 09:04 Operator: SD
Sample : RSK Std -3 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:31 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

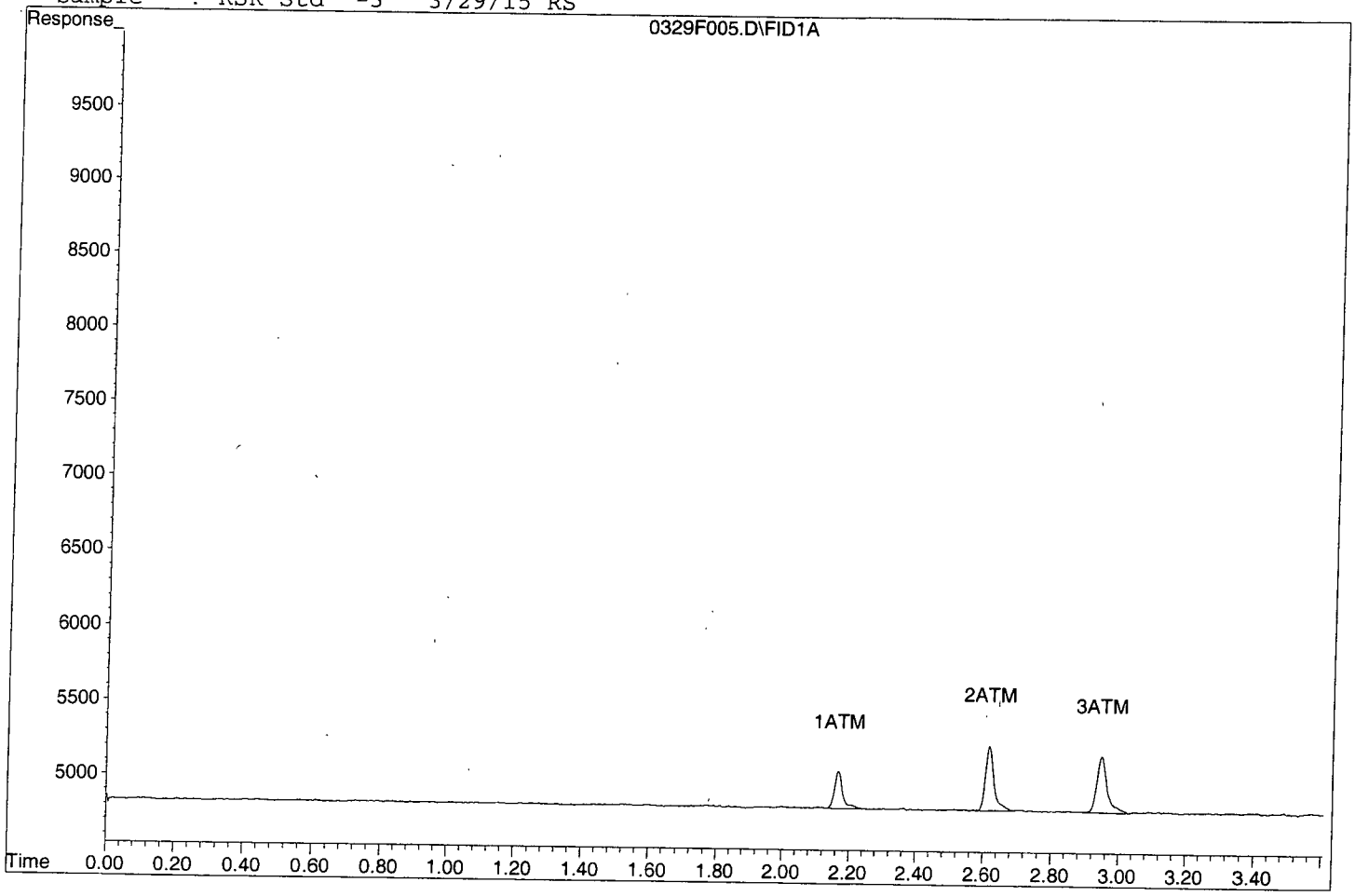
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.17	4339	12.304 ppb
2) ATM Ethane	2.62	7833	26.979 ppb
3) ATM Ethene	2.95	8101	26.692 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: V:\FRODO\DATA\150329\0329F005.D
Sample : RSK Std -3 3/29/15 RS



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150329\0329F012.D Vial: 12
Acq On : 29 Mar 2015 10:16 Operator: SD
Sample : RSK Std - 4 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:31 2015 Quant Results File: RSK175Q.RES

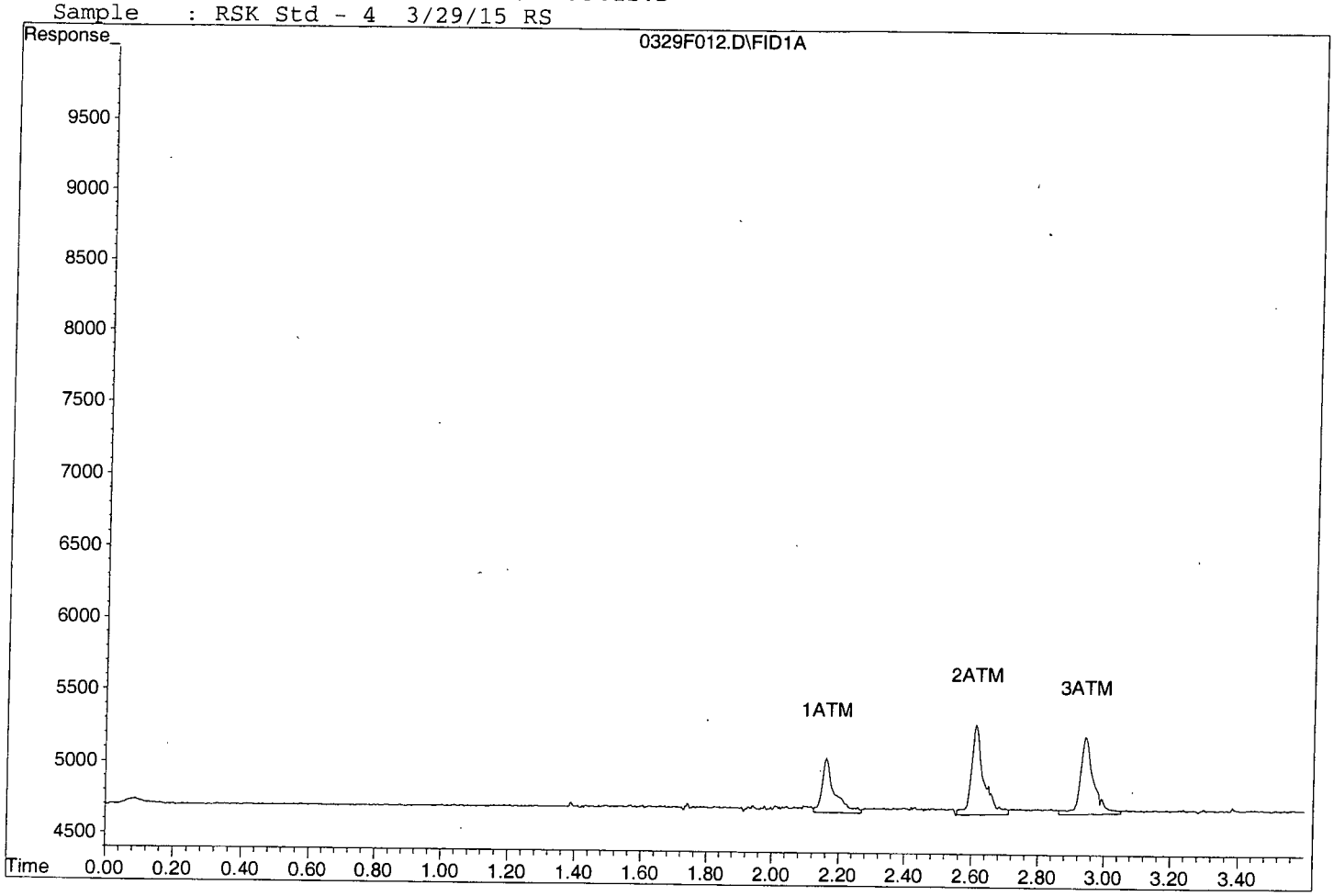
Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.16	9905	28.474 ppb
2) ATM Ethane	2.61	16348	56.938 ppb
3) ATM Ethene	2.94	15197	50.416 ppb

Quantitation Report

Data File: V:\FRODO\DATA\150329\0329F012.D
Sample : RSK Std - 4 3/29/15 RS



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150329\0329F013.D Vial: 13
Acq On : 29 Mar 2015 10:20 Operator: SD
Sample : RSK Std - 5 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:33 2015 Quant Results File: RSK175Q.RES

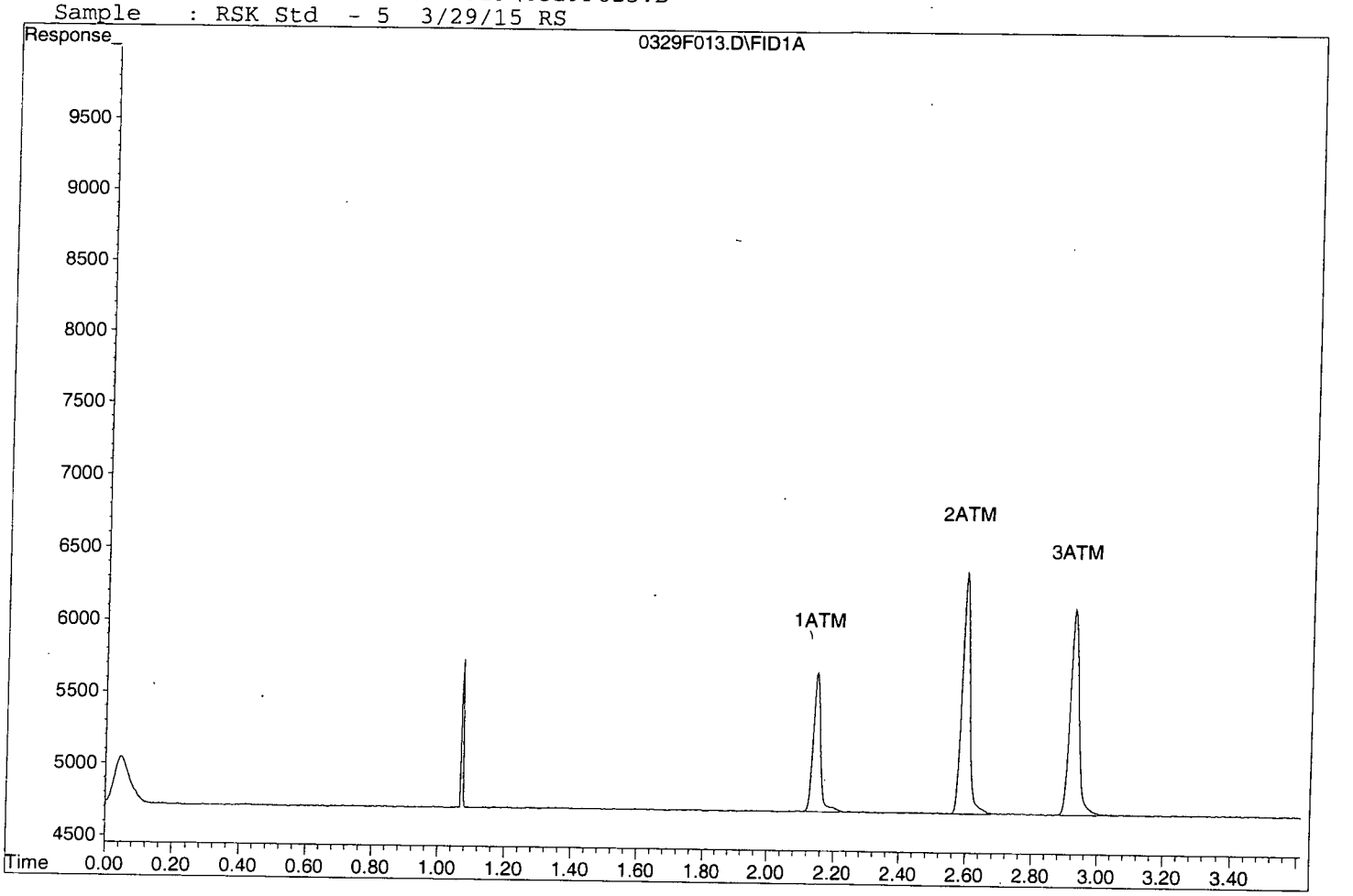
Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.15	14757	37.309 ppb
2) ATM Ethane	2.60	27687	82.950 ppb
3) ATM Ethene	2.93	27304	77.476 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
0329F013.D RSK175Q.M Sun Mar 29 11:47:48 2015 Page 1

Data File: V:\FRODO\DATA\150329\0329F013.D
Sample : RSK Std - 5 3/29/15 RS



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150329\0329F015.D Vial: 15
Acq On : 29 Mar 2015 10:34 Operator: SD
Sample : RSK Std 6 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:32 2015 Quant Results File: RSK175Q.RES

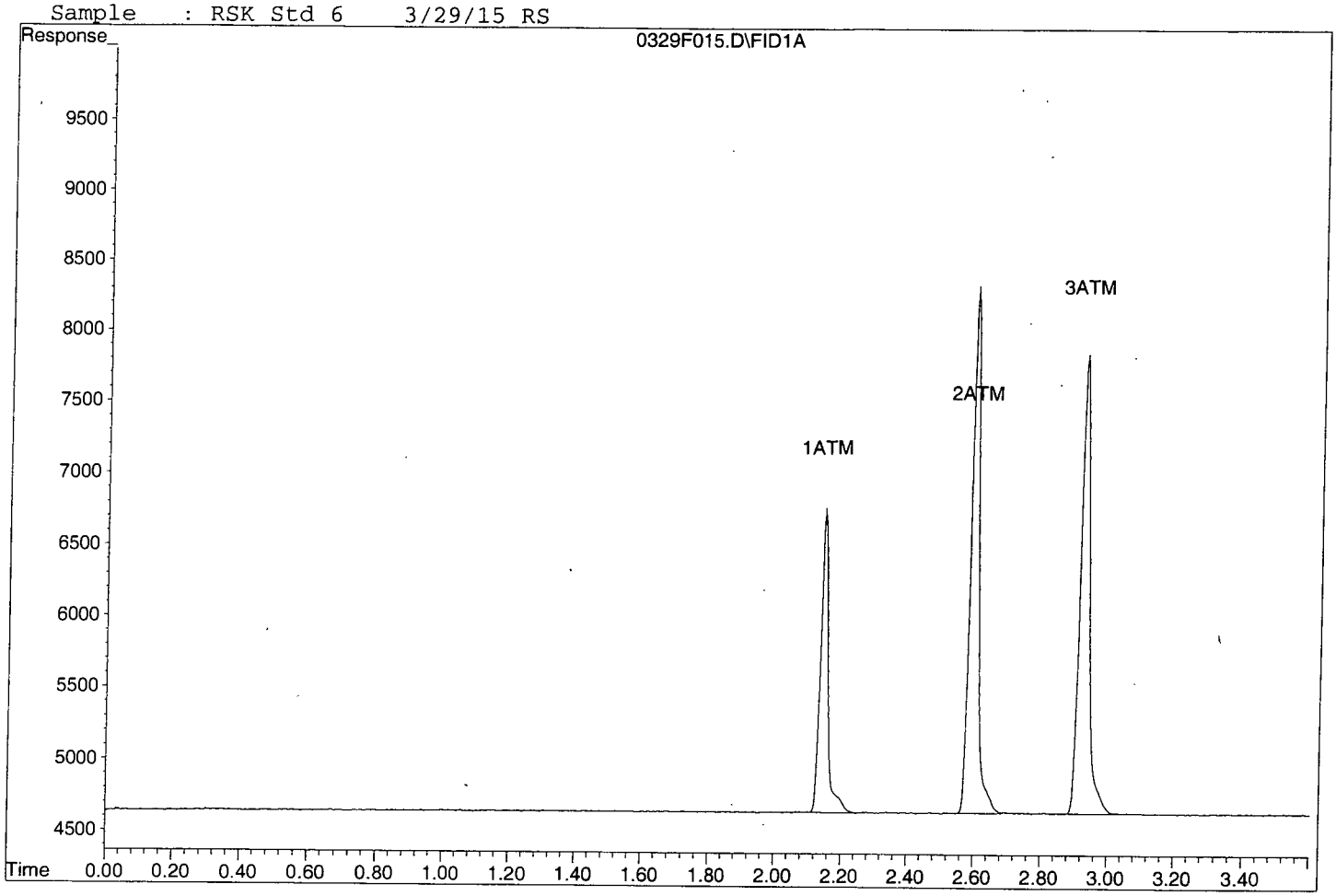
Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.15	33981	96.772 ppb
2) ATM Ethane	2.59	63177	217.921 ppb
3) ATM Ethene	2.92	63376	208.092 ppb

Quantitation Report

Data File: V:\FRODO\DATA\150329\0329F015.D
Sample : RSK Std 6 3/29/15 RS



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150329\0329F016.D Vial: 16
Acq On : 29 Mar 2015 11:11 Operator: SD
Sample : RSK Std - 7 3/29/15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 29 11:33 2015 Quant Results File: RSK175Q.RES

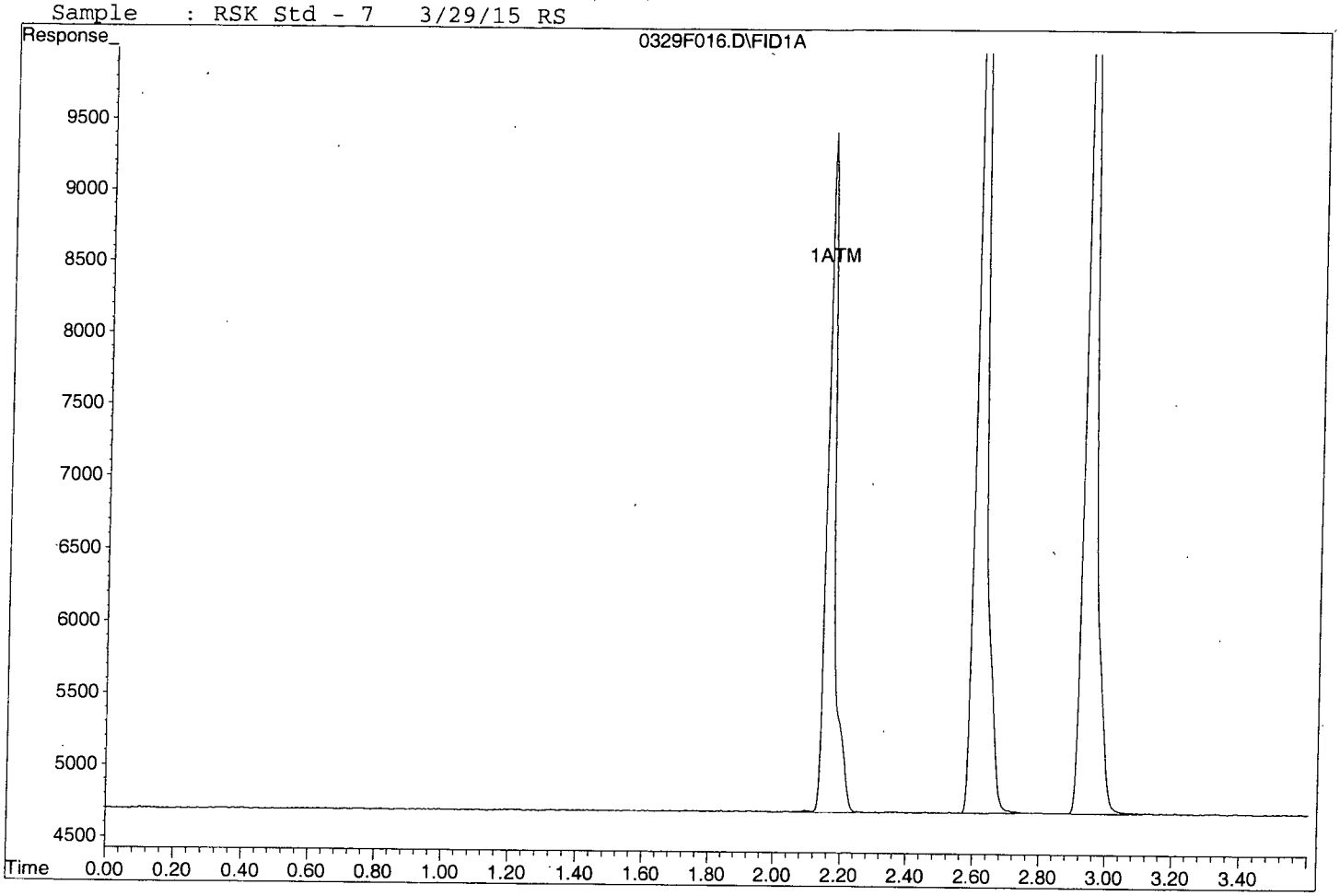
Method : V:\FRODO\DATA\150329\RSK175Q.M (Chemstation Integrator)
Title : RSK 175
Last Update : Sun Mar 29 11:20:33 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.16	82685	235.885 ppb
2) ATM Ethane	2.61	160017	552.898 ppb
3) ATM Ethene	2.94	156995	516.370 ppb

Quantitation Report

Data File: V:\FRODO\DATA\150329\0329F016.D
Sample : RSK Std - 7 3/29/15 RS



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150402\0402F001.D Vial: 1
Acq On : 2 Apr 2015 07:55 Operator: SD
Sample : RSK STD - 8 04-02-15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 2 10:14 2015 Quant Results File: RSK175Q.RES

Method : V:\FRODO\DATA\150402\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Apr 02 11:00:03 2015
Response via : Multiple Level Calibration

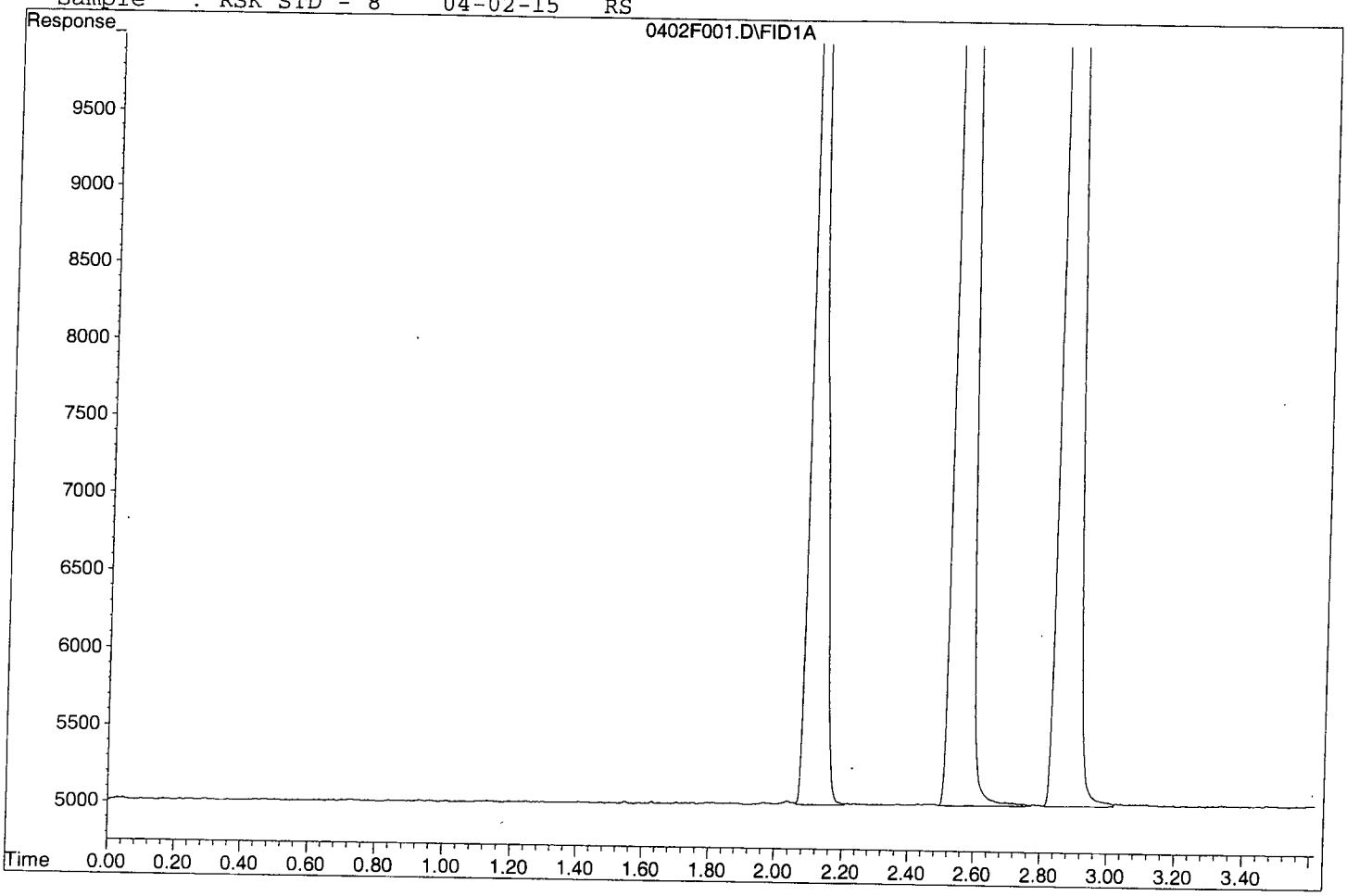
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	2.10	240698	719.028	ppb
2) ATM Ethane	2.54	482100	1724.981	ppb
3) ATM Ethene	2.86	466060	1555.247	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: V:\FRODO\DATA\150402\0402F001.D
Sample : RSK STD - 8 04-02-15 RS



Form 7

Second Source

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 2 Apr 2015 08:15
Instrument: Frodo
Initial Cal. Date: 04/02/15
Data File: 0402F002.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	331	331	0.04	ATM	
2	ATM	Ethane	284	303	6.5	ATM	
3	ATM	Ethene	303	312	2.8	ATM	
4							
5							
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35							
36							
37							
38							
39							
40							
		Average			3.1		

Quantitation Report (Not Reviewed)

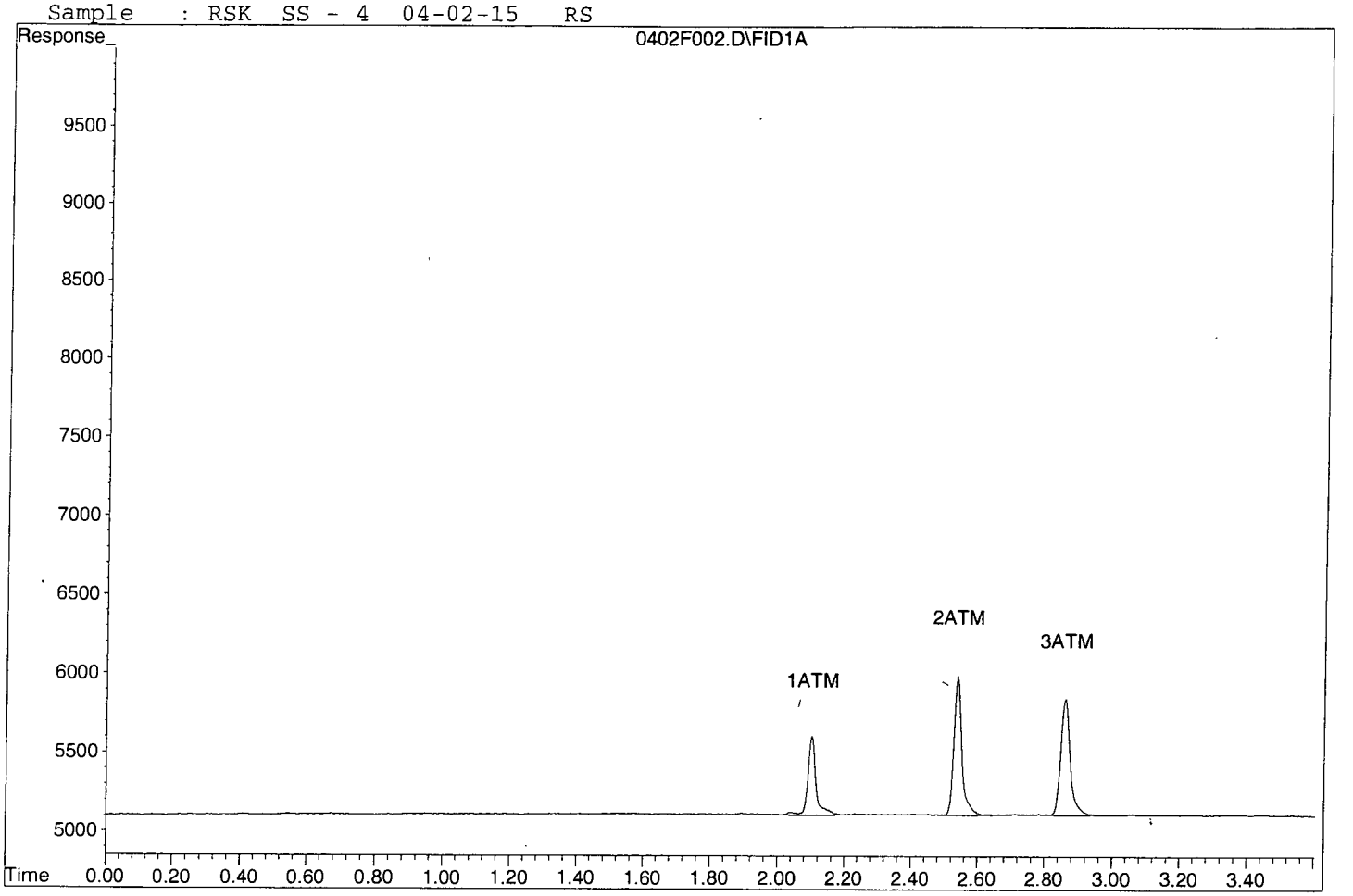
Data File : V:\FRODO\DATA\150402\0402F002.D Vial: 2
Acq On : 2 Apr 2015 08:15 Operator: SD
Sample : RSK SS - 4 04-02-15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 10 17:44 2015 Quant Results File: 402RSK.RES

Method : V:\FRODO\DATA\150402\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Fri Apr 03 10:14:53 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.10	8834	26.690 ppb
2) ATM Ethane	2.54	15133	53.264 ppb
3) ATM Ethene	2.86	14529	47.882 ppb

Data File: V:\FRODO\DATA\150402\0402F002.D
Sample : RSK SS - 4 04-02-15 RS



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/20/15
Instrument: Frodo
Initial Cal. Date: 05/20/15
Data File: 0520F004.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	331	376	14	ATM	
2	ATM	Ethane	284	266	6.5	ATM	
3	ATM	Ethene	303	283	6.8	ATM	
4							
5							
6							
7							
8							
9							
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36							
37							
38							
39							
40							
		Average			9.1		

Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150520\0520F004.D Vial: 4
Acq On : 20 May 2015 11:08 Operator: SD
Sample : RSK CCV3 05-20-15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 11:13 2015 Quant Results File: 402RSK.RES

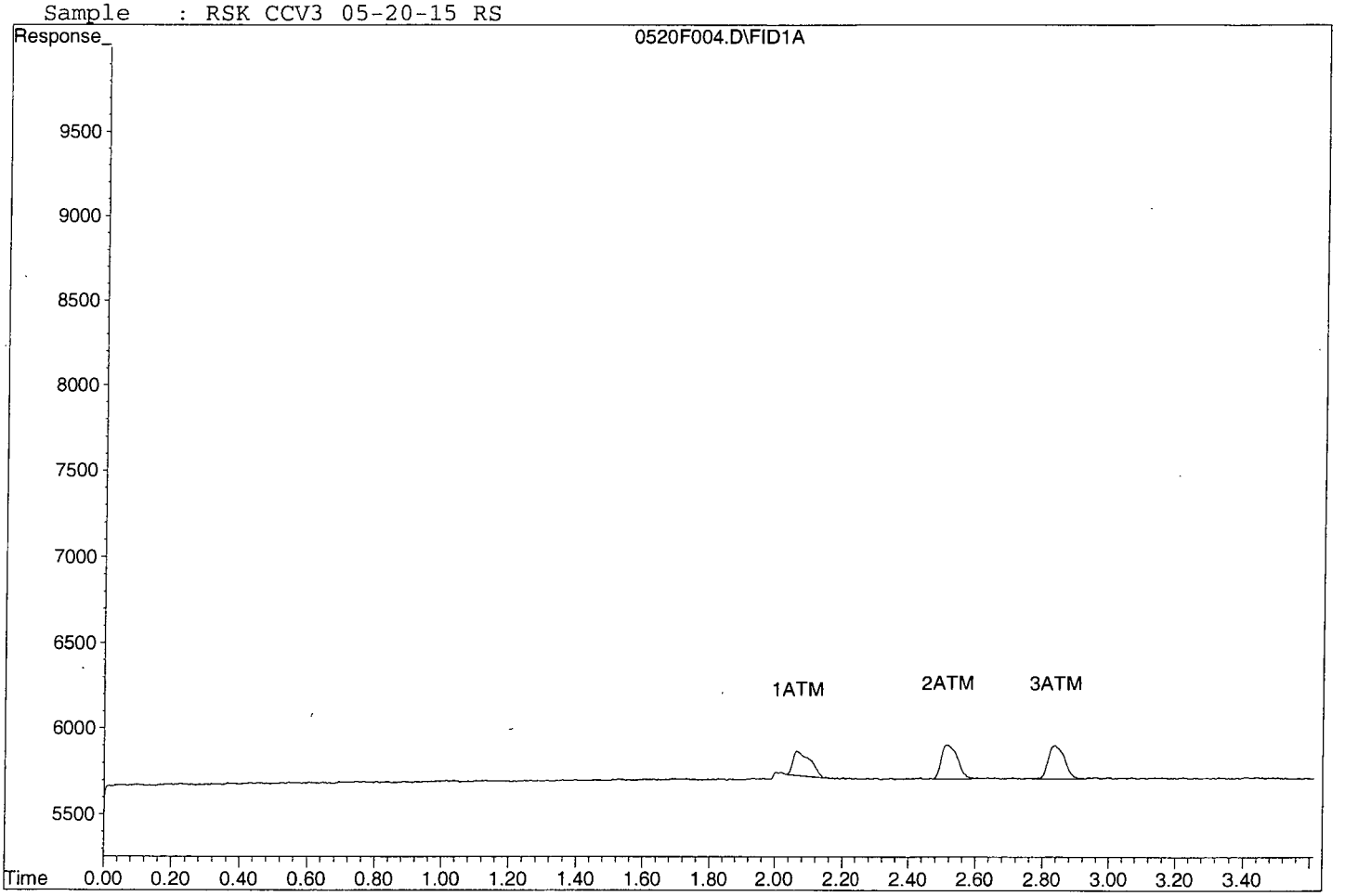
Method : V:\FRODO\DATA\150520\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.07	5017	15.158 ppb
2) ATM Ethane	2.51	6643	23.381 ppb
3) ATM Ethene	2.84	6591	21.722 ppb

Quantitation Report

Data File: V:\FRODO\DATA\150520\0520F004.D
Sample : RSK CCV3 05-20-15 RS



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/20/15
Instrument: Frodo
Initial Cal. Date: 05/20/15
Data File: 0520F020.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	331	398	20	ATM	
2	ATM	Ethane	284	351	24	ATM	
3	ATM	Ethene	303	357	18	ATM	
4							
5							
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39							
40							
		Average			20.7		

Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150520\0520F020.D Vial: 20
Acq On : 20 May 2015 18:07 Operator: SD
Sample : RSK CCV 3 05-20-15 RS Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 18:12 2015 Quant Results File: 402RSK.RES

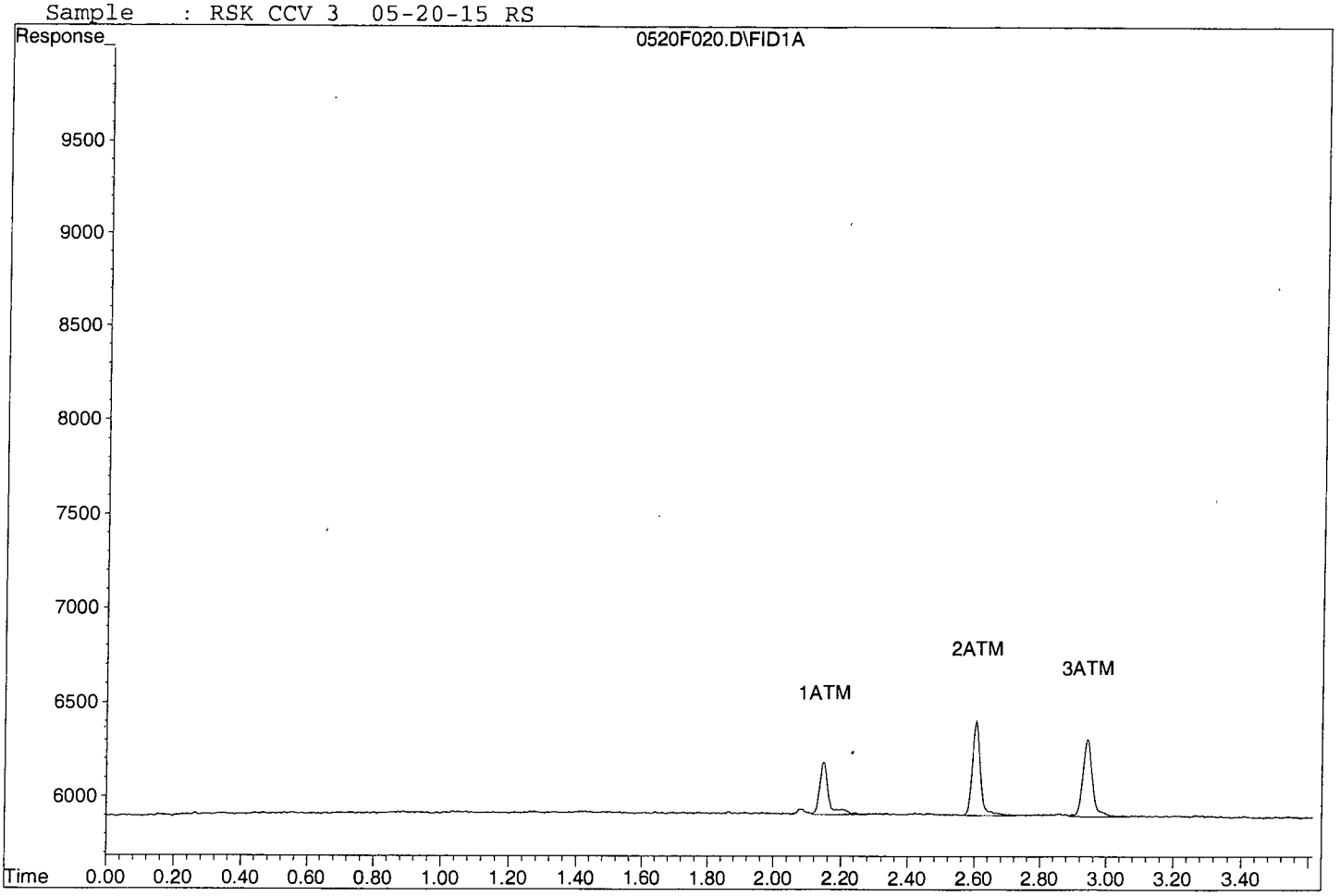
Method : V:\FRODO\DATA\150520\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 18:12:22 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.15	5306	16.031 ppb
2) ATM Ethane	2.60	8783	30.914 ppb
3) ATM Ethene	2.94	8316	27.407 ppb

Quantitation Report

Data File: V:\FRODO\DATA\150520\0520F020.D
Sample : RSK CCV 3 05-20-15 RS



RSK-175
Raw Data

APPL, INC.

Method Blank
RSK 175

Blank Name/QCG: **150520W-16287 - 197488**
Batch ID: #RSK-150520A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	ETHANE	0.85 U	1.7	0.85	0.51	ug/L	05/20/15	05/20/15
BLANK	ETHENE	0.80 U	1.8	0.80	0.47	ug/L	05/20/15	05/20/15
BLANK	METHANE	0.45 U	1.0	0.45	0.25	ug/L	05/20/15	05/20/15

Quant Method: 402RSK.M
Run #: 0520F006
Instrument: Frodo
Sequence: 150520
Initials: RSA

GC SC-Blank-REG MDLs
Printed: 06/03/15 12:00:54 PM

Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150520\0520F006.D Vial: 6
Acq On : 20 May 2015 11:32 Operator: SD
Sample : 150520A BLK-1 Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 11:38 2015 Quant Results File: 402RSK.RES

Method : V:\FRODO\DATA\150520\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

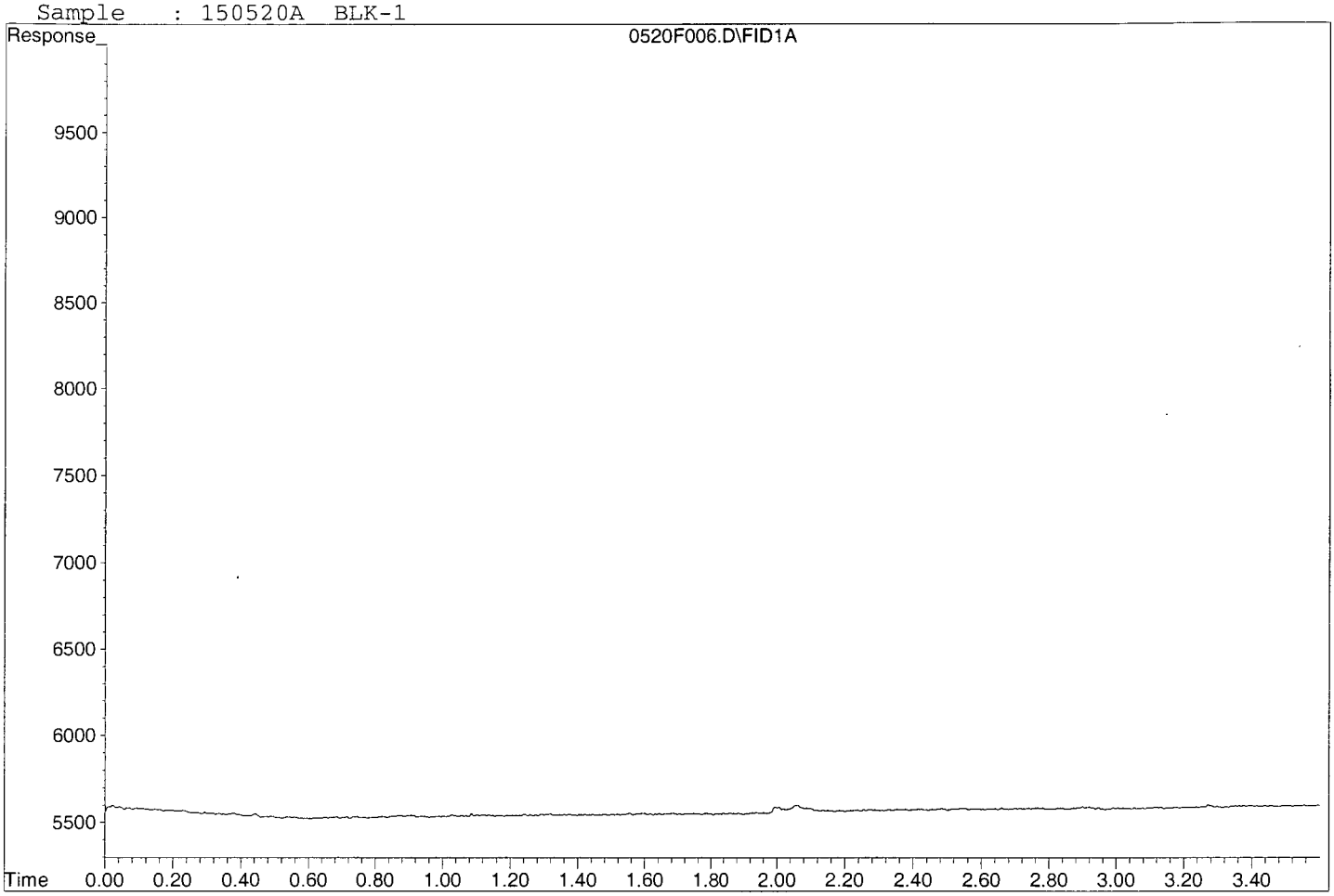
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units

Target Compounds

Quantitation Report

Data File: V:\FRODO\DATA\150520\0520F006.D
Sample : 150520A BLK-1



Laboratory Control Spike Recovery
RSK 175

APPL ID: **150520W-16287 LCS - 197488**
Batch ID: #RSK-150520A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
ETHANE	25.0	21.6	86.4	70-130
ETHENE	23.3	19.3	82.8	70-130
METHANE	13.3	15.6	117	70-130

Comments: _____

Primary	SPK
Quant Method :	402RSK.M
Extraction Date :	05/20/15
Analysis Date :	05/20/15
Instrument :	Frodo
Run :	0520F005
Initials :	SD

Printed: 06/02/15 3:43:11 PM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150520\0520F005.D Vial: 5
Acq On : 20 May 2015 11:15 Operator: SD
Sample : 150520A LCS-3 Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 11:23 2015 Quant Results File: 402RSK.RES

Method : V:\FRODO\DATA\150520\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

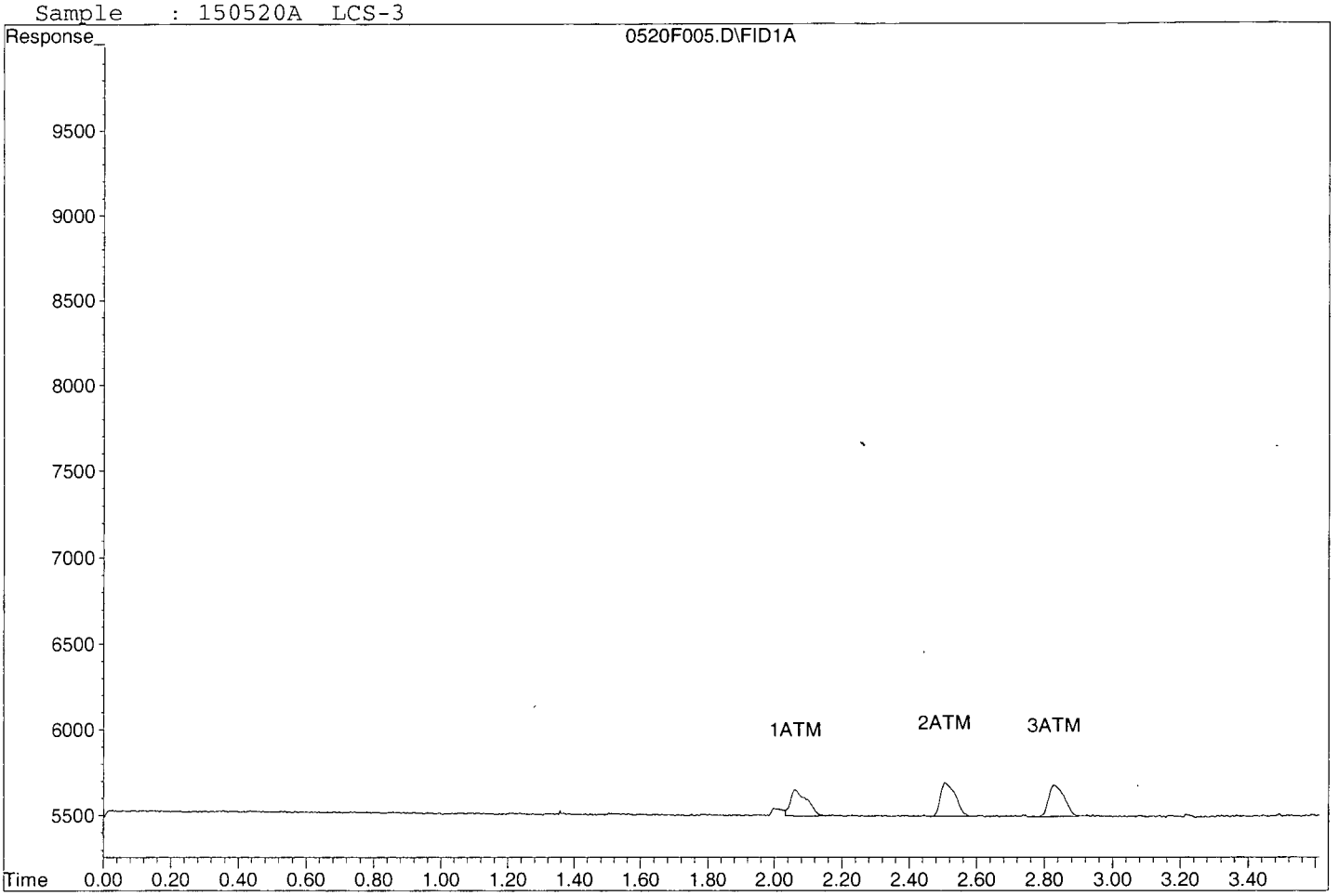
Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.06	5177	15.640 ppb
2) ATM Ethane	2.51	6124	21.553 ppb
3) ATM Ethene	2.83	5844	19.260 ppb

Algorithm ~~RE~~ 5.26.15

$\frac{5177}{331}(1.00) = 15.6$ ✓

Data File: V:\FRODO\DATA\150520\0520F005.D
Sample : 150520A LCS-3



Matrix Spike Recoveries

RSK 175

APPL ID: **150520W-16287 MS - 197488**
Batch ID: #RSK-150520A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
ETHANE	25.0	ND	16.4	14.8	65.6 #	59.2 #	70-130	10.3	30
ETHENE	23.3	ND	14.9	13.8	63.9 #	59.2 #	70-130	7.7	30
METHANE	13.3	36	57.3	36.1	160 #	0.8 #	70-130	45.4 #	30

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	402RSK.M	402RSK.M
Extraction Date :	05/20/15	05/20/15
Analysis Date :	05/20/15	05/20/15
Instrument :	Frodo	Frodo
Run :	0520F014	0520F016
Initials :	SD	

Printed: 06/03/15 11:59:48 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

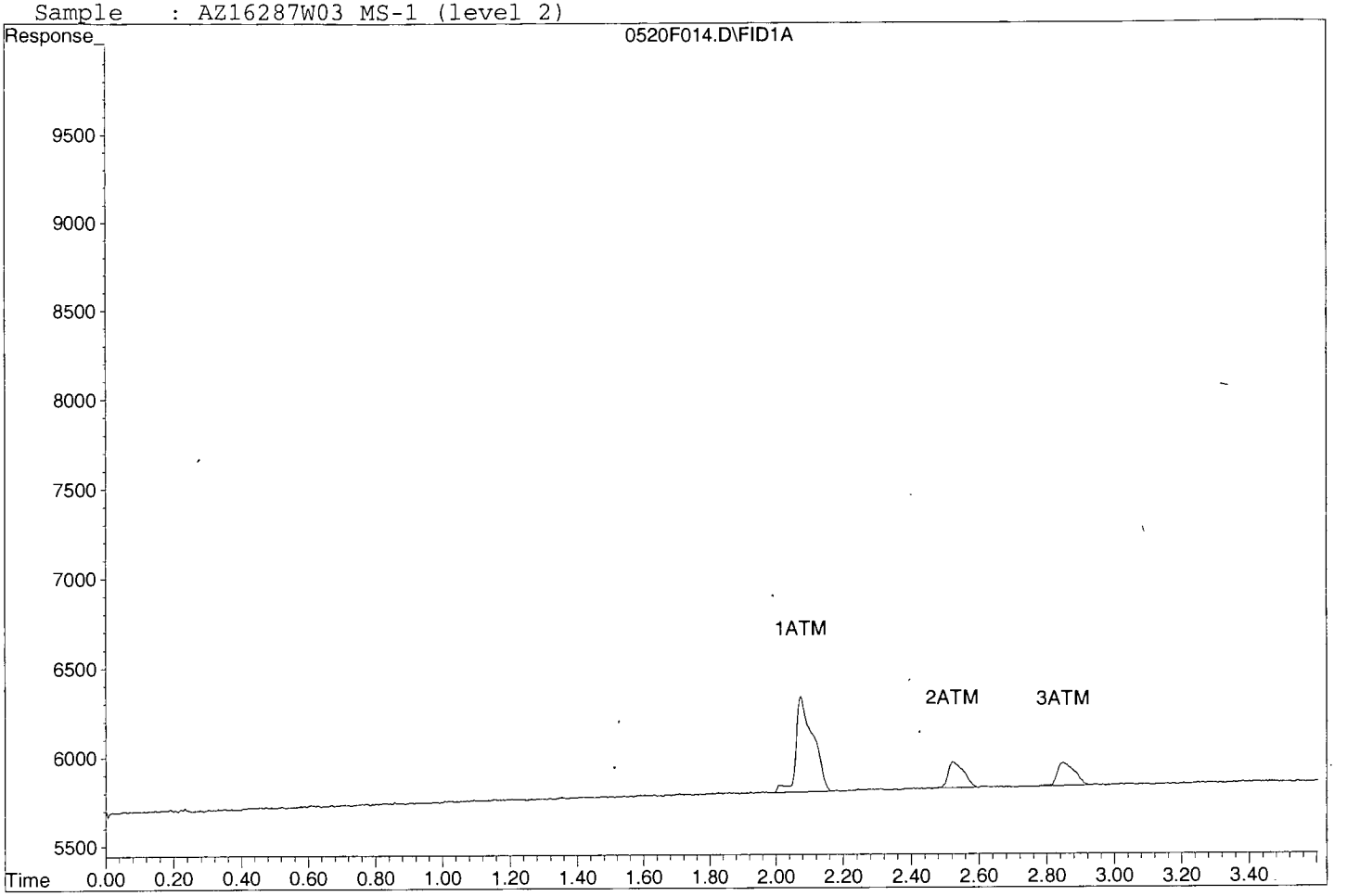
Data File : V:\FRODO\DATA\150520\0520F014.D Vial: 14
Acq On : 20 May 2015 12:16 Operator: SD
Sample : AZ16287W03 MS-1 (level 2) Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 12:20 2015 Quant Results File: 402RSK.RES

Method : V:\FRODO\DATA\150512\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.07	18954	57.265 ppb
2) ATM Ethane	2.52	4654	16.380 ppb
3) ATM Ethene	2.85	4524	14.910 ppb

Data File: V:\FRODO\DATA\150520\0520F014.D
Sample : AZ16287W03 MS-1 (level 2)



Quantitation Report (Not Reviewed)

Data File : V:\FRODO\DATA\150520\0520F016.D Vial: 16
Acq On : 20 May 2015 15:58 Operator: SD
Sample : AZ16287W04 MSD-1 (level 2) Inst : Frodo
Misc : Water Multiplr: 1.00
IntFile : autoint1.e
Quant Time: May 20 16:02 2015 Quant Results File: 402RSK.RES

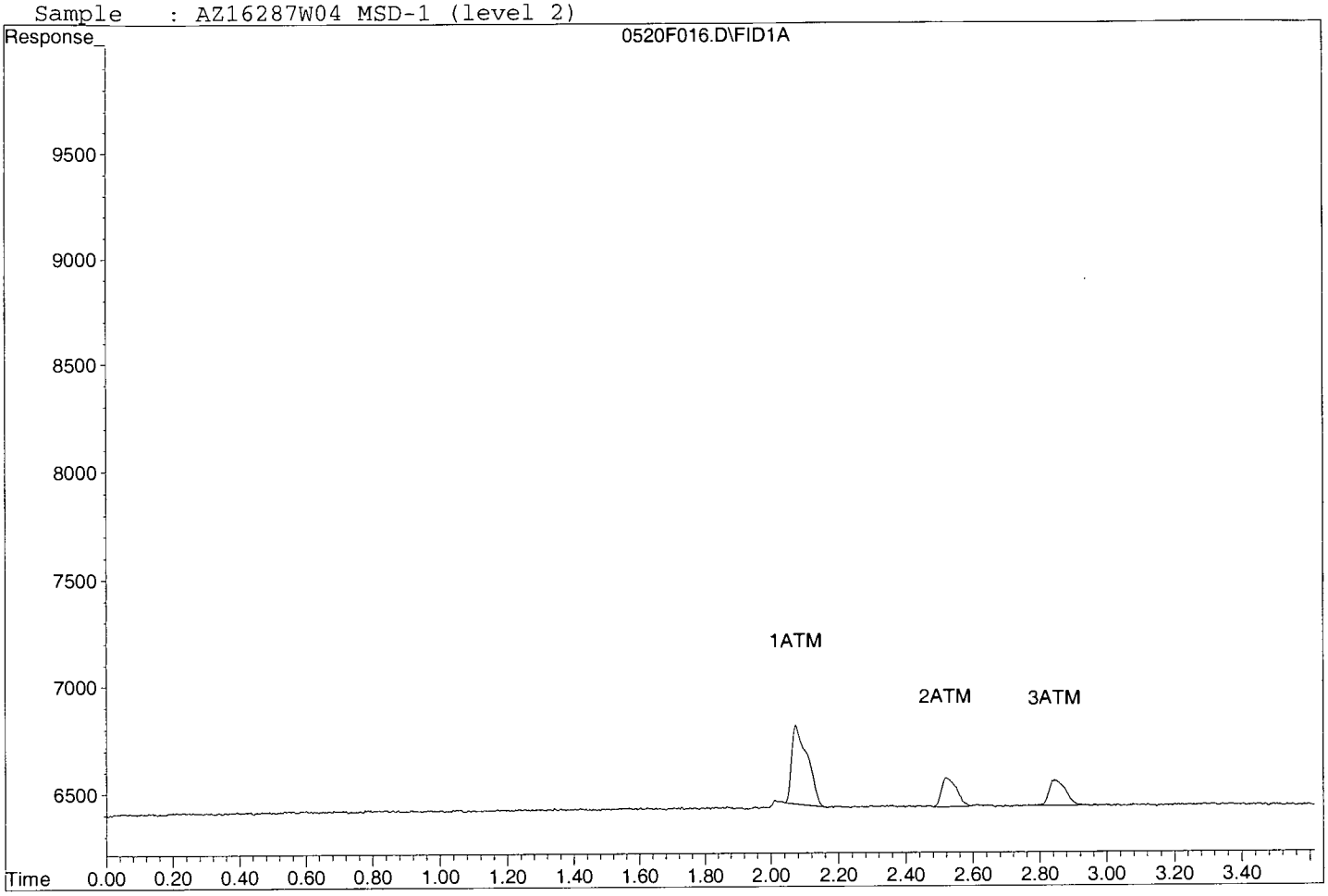
Method : V:\FRODO\DATA\150512\402RSK.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed May 20 10:29:31 2015
Response via : Multiple Level Calibration

Volume Inj. : 1ML
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	2.07	11931	36.047 ppb
2) ATM Ethane	2.52	4215	14.835 ppb
3) ATM Ethene	2.84	4179	13.773 ppb

Quantitation Report

Data File: V:\FRODO\DATA\150520\0520F016.D
Sample : AZ16287W04 MSD-1 (level 2)



Primary Source Stock Standard 10,000ppmV **Expires 7-8-2017**

RSK Gas Mix (Scott Specialty Gas) Cat.# T216-48, Lot # 164PLU4SPC95L-34437, Manufacturer Exp Date 7-8-2017 RS 3/29/15

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Calibration Stock Standard 100ppmV 3/29/15 **Expires 4/29/15** RS 3/29/15

Prepared in a 1 L Tedlar bag. Add 990mL Helium and 10mL of 164PLU4SPC05L-34437 standard.

RSK Calibration Curve **Vial expiration date 4/29/14** RS 3/29/15

Analye	Conc Std 1A (ug/L)	Conc Std 1 (ug/L)	Conc Std 2 (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	0.90	1.80	5.10	13.33	26.70	53.40	106.80	320.40
Ethane (MW 30.07)	1.70	3.40	9.50	25.00	50.00	100.00	200.00	600.00
Ethene (MW 28.05)	1.60	3.20	8.90	23.30	46.60	93.20	186.40	559.20
Stock Source	Intermediate Calib Std 3/29/15	Intermediate Calib Std 3/29/16	Intermediate Calib Std 3/29/17	Intermediate Calib Std 3/29/18	Intermediate Calib Std 3/29/19	Intermediate Calib Std 3/29/20	Primary Source Std #164PLU4SPC05L-34439	Primary Source Std #164PLU4SPC05L-34440
Stock Conc (ppmv)	100 ppmV	100 ppmV	100 ppmV	100 ppmV	100 ppmV	0 100 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.135 mL	0.270 mL	0.760 mL	2.0 mL	4.0 mL	8.0 mL	0.160 mL	0.480 mL
Final Volume P&T Water	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL	10 mL

Second Source Stock Standard 10,000ppmV APPL extended Exp Date: 9/29/15 (comparrison to primary source on 3/29/15)

RSK Gas Mix (Scott Specialty Gas) Cat.# 0104E40028`4, Lot # 248PLU2SPC03L-31312, Manufacturer Exp Date 9-6-12 RS 3/29/15

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Intermediate Second Source Standard 100ppmV 3/29/15 **Expires 7/29/15** RS 3/29/15

Prepared in a 1 L Tedlar bag. Add 990mL Helium and 10mL of 248PLU2SPC03L-31312 standard.

Second Source - Level 3, 3/29/15 **Expires 04/29/15** RS 3/29/15

2mL of Intermediate cal stock 3/29/15 into 10mL P&T water

final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

Analye	Conc Std 8 (ug/L)
Methane (MW 16.04)	801.00
Ethane (MW 30.07)	1500.00
Ethene (MW 28.05)	1398.00
Stock Source	Primary Source Std #164PLU4SPC05L-34440
Stock Conc (ppmv)	10,000 ppmV
Stock Aliquot (mL)	1.20 mL
Final Volume P&T Water	10 mL

Added higher ICAL point to curve. RS 04/02/15

Second Source - Level 4 3/29/15 **Expires 05/02/15** RS 04/02/15

4mL of Intermediate cal stock 1/26/15A into 10mL P&T water

final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6ppb Ethene

CCV3 5/20/15 Expires 06/20/15 RS 05/20/15
2mL of Intermediate cal stock 3/29/15A into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

LCS-3 150520A RS 05/20/15
2mL of Intermediate cal stock 3/29/15A into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

AZ16287W03 MS/MSD (level2) RS 05/20/15
1mL of Intermediate cal stock 13/29/15A into 10mL Sample AZ15731W05
final conc:6.65ppb Methane, 12.5ppb Ethane, and 11.7ppb Ethene

Intermediate Calibration Stock Standard 100ppmV 05/12/15 **Expires 6/12/15** **RS 05/12/15**
Prepared in a 1 L Tedlar bag. Add 990mL Helium and 10mL of 164PLU4SPC05L-34437 standard.

CCV3 5/12/15 Expires 06/12/15 **RS 05/12/15**
2mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

CCV4 5/12/15 Expires 06/12/15 **RS 05/12/15**
4mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6ppb Ethene

LCS-3 150512A **RS 05/12/15**
2mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

AZ15731W05 MS/MSD **RS 05/12/15**
1mL of Intermediate cal stock 5/12/15 into 10mL Sample AZ15731W05
final conc:6.65ppb Methane, 12.5ppb Ethane, and 11.7ppb Ethene

CCV3 5/20/15 Expires 06/20/15 **RS 05/20/15**
2mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

LCS-3 150520A **RS 05/20/15**
2mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

AZ16287W03 MS/MSD (level2) **RS 05/20/15**
1mL of Intermediate cal stock 5/12/15 into 10mL Sample AZ15731W05
final conc:6.65ppb Methane, 12.5ppb Ethane, and 11.7ppb Ethene

CCV4 5/26/15 Expires 06/12/15 **RS 05/26/15**
4mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6ppb Ethene

LCS-3 150526A **RS 05/26/15**
2mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

CCV4 06/04/15 Expires 06/12/15 **RS 06/04/15**
4mL of Intermediate cal stock 5/12/15 into 10mL P&T water
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6ppb Ethene

CCV3 06/04/15
2mL of Intermediate cal stock 5/12/15 into 10mL P&T water **RS 06/04/15**
final conc:13.3ppb Methane, 25.0ppb Ethane, and 23.3ppb Ethene

LCS-4 150604A
4mL of Intermediate cal stock 5/12/15 into 10mL P&T water **RS 06/04/15**
final conc:26.7ppb Methane, 50.0ppb Ethane, and 46.6ppb Ethene

Injection Log

Directory: V:\FRODO\DATA\150329\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0329F001.D	1	RSK Std -2 3/29/15 RS	Water	29 Mar 2015 08:09
2	5	0329F005.D	1	RSK Std -3 3/29/15 RS	Water	29 Mar 2015 09:04
3	9	0329F009.D	1	RSK Std - 1A 3/29/15 RS	Water	29 Mar 2015 09:45
4	10	0329F010.D	1	RSK Std 1 3/29/15 RS	Water	29 Mar 2015 10:04
5	12	0329F012.D	1	RSK Std - 4 3/29/15 RS	Water	29 Mar 2015 10:16
6	13	0329F013.D	1	RSK Std - 5 3/29/15 RS	Water	29 Mar 2015 10:20
7	15	0329F015.D	1	RSK Std 6 3/29/15 RS	Water	29 Mar 2015 10:34
8	16	0329F016.D	1	RSK Std - 7 3/29/15 RS	Water	29 Mar 2015 11:11
9	1	0402F001.D	1	RSK STD - 8 04-02-15 RS	Water	2 Apr 2015 07:55
10	2	0402F002.D	1	RSK SS - 4 04-02-15 RS	Water	2 Apr 2015 08:15
11	4	0520F004.D	1	RSK CCV3 05-20-15 RS	Water	20 May 2015 11:08
12	5	0520F005.D	1	150520A LCS-3	Water	20 May 2015 11:15
13	6	0520F006.D	1	150520A BLK-1	Water	20 May 2015 11:32
14	9	0520F009.D	1	AZ16287W03	Water	20 May 2015 11:48
15	10	0520F010.D	1	AZ16288W03	Water	20 May 2015 11:52
16	11	0520F011.D	1	AZ16289W03	Water	20 May 2015 11:57
17	12	0520F012.D	1	AZ16290W03	Water	20 May 2015 12:02
18	14	0520F014.D	1	AZ16287W03 MS-1 (level 2)	Water	20 May 2015 12:16
19	16	0520F016.D	1	AZ16287W04 MSD-1 (level 2)	Water	20 May 2015 15:58
20	20	0520F020.D	1	RSK CCV 3 05-20-15 RS	Water	20 May 2015 18:07

EPA METHOD 6850
Perchlorate
LC/MS

APPL, INC.

EPA METHOD 6850
Perchlorate
LC/MS

QC Summary

APPL, INC.

Method Blank
Perchlorate

Blank Name/QCG: **150518W-16287 - 198054**
Batch ID: #6850-150518A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PERCHLORATE	0.400 U	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

Quant Method: QTLMFL2
Run #: T523_021.d
Instrument: AGIL_6460
Sequence: TQ052315
Initials: RP

GC SC-Blank-REG MDLs
Printed: 06/18/15 12:26:22 PM

Laboratory Control Spike Recovery
Perchlorate

APPL ID: **150518W-16287 LCS - 198054**
Batch ID: #6850-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PERCHLORATE	0.600	0.567	94.5	80-120

Comments: _____

Primary	SPK
Quant Method :	QTLMFL2
Extraction Date :	05/18/15
Analysis Date :	05/23/15
Instrument :	AGIL_6460
Run :	T523_019.d
Initials :	RP

Printed: 06/18/15 12:26:12 PM
APPL Standard LCS

Matrix Spike Recoveries

Perchlorate

APPL ID: **150518W-16287 MS - 198054**
Batch ID: #6850-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PERCHLORATE	0.600	ND	0.639	0.657	107	110	80-120	2.8	15

Comments: _____

Primary	SPK	DUP
Quant Method :	QTLMFL2	QTLMFL2
Extraction Date :	05/18/15	05/18/15
Analysis Date :	05/23/15	05/23/15
Instrument :	AGIL_6460	AGIL_6460
Run :	T523_023.d	T523_024.d
Initials :	RP	

Printed: 06/18/15 12:31:56 PM
APPL MSD SCII

EPA 6850

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/23/15

Matrix: WATER Instrument: AGIL_6460

Blank ID: 150518A-BLK Time Analyzed: 2146

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150518A-LCS	Lab Control Spike	T523_019.d	05/23/15 2109
150518A-BLK	Blank	T523_021.d	05/23/15 2146
AZ16287	S67-MW007-051215	T523_022.d	05/23/15 2205
150518A-MS	Matrix Spike	T523_023.d	05/23/15 2224
150518A-MSD	Matrix SpikeD	T523_024.d	05/23/15 2242
AZ16289	S67-MW002-051215	T523_026.d	05/23/15 2320
AZ16288	S67-MW003-051215	T524_014.d	05/24/15 1805
AZ16290	S67-MW009-051215	T524_019.d	05/24/15 1938

Comments: Batch: #6850-150518A

Interferrence Check Sample

Perchlorate EPA 6850 Water

APPL ID: 150518W-16287 ICS-198054
Batch ID: #6850-150518A

APPL Inc.
908 N. Temperance Ave.
Clovis, CA 93711

Compound Name	Spike Level ug/L	Spk Result ug/L	SPK% Recovery	Recovery Limits
Perchlorate	0.600	0.585	97.5%	70-130

Comments:

Quant Method:	QTLMFL2
Extraction Date:	05/18/15
Analysis Date:	05/23/15
Instrument:	AGIL_6560
Run:	T523_020.D
Initials:	RP

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. **SDG No.**

Lab File ID (Standard): T312_003-_008.d

Instrument ID: Agilent 6460 Triple Quad LC/MS

	PER_IS			
	12_HOUR_STD AVERAGE	11032021		
	UPPER LIMIT RESPONSE	16548032		
	LOWER LIMIT RESPONSE	5516011		
Data File ID:	Sample ID:	Analysis Date and Time	IS AREA COUNT #	IS R.T. #
T312_003.d	PERCHLORATE 0.0002 ug/ml 11/11/14	3/12/15 17:52	8337058	13.732
T312_004.d	PERCHLORATE 0.0004 ug/ml 11/11/14	3/12/15 18:11	10671196	13.783
T312_005.d	PERCHLORATE 0.001 ug/ml 11/11/14	3/12/15 18:29	10651968	13.803
T312_006.d	PERCHLORATE 0.002 ug/ml 11/11/14	3/12/15 18:48	13529952	13.803
T312_007.d	PERCHLORATE 0.005 ug/ml 11/11/14	3/12/15 19:07	11028880	13.874
T312_008.d	PERCHLORATE 0.010 ug/ml 08/27/14	3/12/15 19:25	11973072	13.874
T312_010.d	PER_SS 0.0004 ug/ml 11/11/14	3/12/15 20:02	12977621	13.946
T312_011.d	PER_SS 0.002 ug/ml 11/11/14	3/12/15 20:21	13747369	13.976
T312_013.d	PER_CCV_1 0.0004 ug/ml 11/11/14	3/12/15 20:58	12323795	14.109
T312_014.d	PER_CCV_1 0.002 ug/ml 11/11/14	3/12/15 21:17	13576634	14.139

AREA UPPER LIMIT = +50% of internal standard average
AREA LOWER LIMIT = -50% of internal standard average
Column used to flag values outside QC limits
* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. **SDG No.** **76413**

Lab File ID (Standard): T523_003.d

Instrument ID: Agilent 6460 Triple Quad LC/MS

	PER_IS			
	12_HOUR_STD AVERAGE	8764619		
	UPPER LIMIT RESPONSE	13146929		
	LOWER LIMIT RESPONSE	4382310		
Data File ID:	Sample ID:	Analysis Date and Time	IS AREA COUNT #	IS R.T. #
T523_002.d	PER_CCV 0.0004 ug/ml 05/07/15	5/23/15 15:38	7841423	12.957
T523_003.d	PER_CCV 0.002 ug/ml 05/07/15	5/23/15 15:57	8764619	13.13
T523_016.d	PER_CCV 0.0004 ug/ml 05/07/15	5/23/15 20:13	5972858	13.294
T523_017.d	PER_CCV 0.002 ug/ml 05/07/15	5/23/15 20:32	6513163	13.416
T523_019.d	150518WA_LCS-1 1052.6 DF 05/18/15	5/23/15 21:09	4862068	13.528
T523_020.d	150518W_ICSA 1052.6 DF 05/18/15	5/23/15 21:28	4707314	12.489
T523_021.d	150518WBLKA 1052.6 DF 05/18/15	5/23/15 21:46	5254586	13.609
T523_022.d	AZ16287_W10 1052.6 DF 05/18/15	5/23/15 22:05	4796548	13.273
T523_023.d	AZ16287_W10_MS-1 1052.6 DF 05/18/15	5/23/15 22:24	5127260	13.294
T523_024.d	AZ16287_W10_MSD-1 1052.6 DF 05/18/15	5/23/15 22:42	5963270	13.294
T523_026.d	AZ16289_W04 1052.6 DF 05/18/15	5/23/15 23:20	5876336	12.815
T523_030.d	PER_CCV 0.0004 ug/ml 05/07/15	5/24/15 0:34	5763820	13.783
T523_031.d	PER_CCV 0.002 ug/ml 05/07/15	5/24/15 0:53	6154538	13.864

AREA UPPER LIMIT = +50% of internal standard average
AREA LOWER LIMIT = -50% of internal standard average
Column used to flag values outside QC limits
* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. **SDG No.** **76413**

Lab File ID (Standard): T524_003.d

Instrument ID: Agilent 6460 Triple Quad LC/MS

	PER_IS			
	12_HOUR_STD AVERAGE	7069813		
	UPPER LIMIT RESPONSE	10604720		
	LOWER LIMIT RESPONSE	3534907		
Data File ID:	Sample ID:	Analysis Date and Time	IS AREA COUNT #	IS R.T. #
T524_002.d	PER_CCV 0.0004 ug/ml 05/07/15	5/24/15 14:14	6449100	13.039
T524_003.d	PER_CCV 0.002 ug/ml 05/07/15	5/24/15 14:33	7069813	13.09
T524_014.d	AZ16288_W04 105263.2 DF 05/07/15_5/24	5/24/15 18:05	4668361	13.039
T524_016.d	PER_CCV 0.0004 ug/ml 05/07/15	5/24/15 18:42	6085038	12.967
T524_017.d	PER_CCV 0.002 ug/ml 05/07/15	5/24/15 19:01	6666617	13.069
T524_019.d	AZ16290_W04 105263.2 DF 05/07/15_5/24	5/24/15 19:38	5734852	12.957
T524_030.d	PER_CCV 0.0004 ug/ml 05/07/15	5/24/15 23:03	5852670	13.324
T524_031.d	PER_CCV 0.002 ug/ml 05/07/15	5/24/15 23:21	6323824	13.477

AREA UPPER LIMIT = +50% of internal standard average
AREA LOWER LIMIT = -50% of internal standard average
Column used to flag values outside QC limits
* Values outside of QC limits

Perchlorate LC/MS Ion Ratio Report

acceptable ratio is between 2.3 and 3.8 (DoD Perchlorate Handbook, 2006)

Data File Path : D:\masshunter\data\150312
Instrument Name : TQ (Agilent 6460 Triple Quad LC/MS)
Method File : 6460_ESI_PER_N_NEWER_K'_COLUMN.m
Operator : BA

Date Aquired: 03/12/15 17:15 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/11/14 Data File ID: T312_001.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.014	113760	3.1
2)	Perchlorate_85	14.071	36914	

Date Aquired: 03/12/15 17:33 Vial Number: NA
Sample Name: PERCHLORATE 0.0001 ug/ml 11/11/14 Data File ID: T312_002.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.504	237168	3.1
2)	Perchlorate_85	13.541	77486	

Date Aquired: 03/12/15 17:52 Vial Number: NA
Sample Name: PERCHLORATE 0.0002 ug/ml 11/11/14 Data File ID: T312_003.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.789	446712	3.1
2)	Perchlorate_85	13.704	144754	

Date Aquired: 03/12/15 18:11 Vial Number: NA
Sample Name: PERCHLORATE 0.0004 ug/ml 11/11/14 Data File ID: T312_004.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.8	1023403	3.0
2)	Perchlorate_85	13.827	337305	

Date Aquired: 03/12/15 18:29 Vial Number: NA
Sample Name: PERCHLORATE 0.001 ug/ml 11/11/14 Data File ID: T312_005.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.82	2483393	3.2
2)	Perchlorate_85	13.827	781617	

Date Aquired: 03/12/15 18:48 Vial Number: NA
Sample Name: PERCHLORATE 0.002 ug/ml 11/11/14 Data File ID: T312_006.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.83	6351752	3.3
2)	Perchlorate_85	13.817	1920912	

Date Aquired: 03/12/15 19:07 Vial Number: NA
Sample Name: PERCHLORATE 0.005 ug/ml 11/11/14 Data File ID: T312_007.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.861	14499255	3.4
2)	Perchlorate_85	13.878	4209044	

Date Aquired: 03/12/15 19:25 Vial Number: NA
Sample Name: PERCHLORATE 0.010 ug/ml 08/27/14 Data File ID: T312_008.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.881	34223790	3.4
2)	Perchlorate_85	13.878	9985270	

Date Aquired: 03/12/15 19:44 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/11/14 Data File ID: T312_009.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.912	249406	2.9
2)	Perchlorate_85	13.949	85978	

Date Aquired: 03/12/15 20:02 Vial Number: NA
Sample Name: PER_SS 0.0004 ug/ml 11/11/14 Data File ID: T312_010.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.942	1472839	3.3
2)	Perchlorate_85	13.959	440675	

Date Aquired: 03/12/15 20:21 Vial Number: NA
Sample Name: PER_SS 0.002 ug/ml 11/11/14 Data File ID: T312_011.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.014	7468678	3.4
2)	Perchlorate_85	14	2222387	

Date Aquired: 03/12/15 20:40 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/11/14 Data File ID: T312_012.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.657	10916	2.0
2)	Perchlorate_85	13.776	5521	

Date Aquired: 03/12/15 20:58 Vial Number: NA
Sample Name: PER_CCV_1 0.0004 ug/ml 11/11/14 Data File ID: T312_013.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.105	1267031	3.1
2)	Perchlorate_85	14.143	410558	

Date Aquired: 03/12/15 21:17 Vial Number: NA
Sample Name: PER_CCV_1 0.002 ug/ml 11/11/14 Data File ID: T312_014.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.146	6907110	3.3
2)	Perchlorate_85	14.122	2093567	

Date Aquired: 03/12/15 21:36 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/11/14 Data File ID: T312_015.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.36	64783	9.6
2)	Perchlorate_85	13.715	6730	

Perchlorate LC/MS Ion Ratio Report

acceptable ratio is between 2.3 and 3.8 (DoD Perchlorate Handbook, 2006)

Data File Path : D:\masshunter\data\150523
Instrument Name : TQ (Agilent 6460 Triple Quad LC/MS)
Method File : 6460_ESI_PER_N_NEWER_K'_COLUMN.m
Operator : BA

Date Aquired: 05/23/15 15:20 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_001.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.117	71005	1.9
2)	Perchlorate_85	13.134	37385	

Date Aquired: 05/23/15 15:38 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T523_002.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.974	857023	2.7
2)	Perchlorate_85	12.981	313246	

Date Aquired: 05/23/15 15:57 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T523_003.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.127	4097326	3.3
2)	Perchlorate_85	13.134	1252418	

Date Aquired: 05/23/15 16:15 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_004.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.147	50856	2.5
2)	Perchlorate_85	12.981	20452	

Date Aquired: 05/23/15 16:37 Vial Number: NA
Sample Name: 150521SA_LCS-1 10422.1 DF 05/21/15 Data File ID: T523_005.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.147	595644	2.8
2)	Perchlorate_85	13.175	215686	

Date Aquired: 05/23/15 17:05 Vial Number: NA
Sample Name: 150521S_ICSA 10526.3 DF 05/21/15 Data File ID: T523_006.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	11.986	838693	2.4
2)	Perchlorate_85	12.013	355640	

Date Aquired: 05/23/15 17:24 Vial Number: NA
Sample Name: 150521SBLKA 10121.5 DF 05/21/15 Data File ID: T523_007.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.097	1068	0.5
2)	Perchlorate_85	12.92	2287	

Date Aquired: 05/23/15 17:43 Vial Number: NA
Sample Name: AZ16473_S04 8558.0 DF 05/21/15 Data File ID: T523_008.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.025	1130631	3.1
2)	Perchlorate_85	13.001	367229	

Date Aquired: 05/23/15 18:03 Vial Number: NA
Sample Name: AZ16474_S04 7683.4 DF 05/21/15 Data File ID: T523_009.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.985	1586560	3.0
2)	Perchlorate_85	13.012	530666	

Date Aquired: 05/23/15 18:21 Vial Number: NA
Sample Name: 150521SA_LCS-1 10422.1 DF 05/21/15 Data File ID: T523_010.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.148	862434	2.9
2)	Perchlorate_85	13.144	299560	

Date Aquired: 05/23/15 18:40 Vial Number: NA
Sample Name: 150521S_ICSA 10526.3 DF 05/21/15 Data File ID: T523_011.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.108	808424	2.4
2)	Perchlorate_85	12.105	331775	

Date Aquired: 05/23/15 18:59 Vial Number: NA
Sample Name: 150521SBLKA 10121.5 DF 05/21/15 Data File ID: T523_012.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.832	2790	3.5
2)	Perchlorate_85	12.889	806	

Date Aquired: 05/23/15 19:17 Vial Number: NA
Sample Name: AZ16473_S04 8558.0 DF 05/21/15 Data File ID: T523_013.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.158	1100562	2.8
2)	Perchlorate_85	13.165	389757	

Date Aquired: 05/23/15 19:36 Vial Number: NA
Sample Name: AZ16474_S04 7683.4 DF 05/21/15 Data File ID: T523_014.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.168	1578905	3.0
2)	Perchlorate_85	13.165	518303	

Date Aquired: 05/23/15 19:55 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_015.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.311	61433	14.6
2)	Perchlorate_85	12.961	4219	

Date Aquired: 05/23/15 20:13 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T523_016.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.3	652656	3.0
2)	Perchlorate_85	13.256	216334	

Date Aquired: 05/23/15 20:32 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T523_017.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.423	3082637	3.2
2)	Perchlorate_85	13.399	975975	

Date Aquired: 05/23/15 20:50 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_018.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.412	64516	11.2
2)	Perchlorate_85	12.889	5773	

Date Aquired: 05/23/15 21:09 Vial Number: NA
Sample Name: 150518WA_LCS-1 1052.6 DF 05/18/15 Data File ID: T523_019.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.555	665139	3.3
2)	Perchlorate_85	13.541	200728	

Date Aquired: 05/23/15 21:28 Vial Number: NA
Sample Name: 150518W_ICSA 1052.6 DF 05/18/15 Data File ID: T523_020.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.516	664547	2.2
2)	Perchlorate_85	12.502	307706	

Date Aquired: 05/23/15 21:46 Vial Number: NA
Sample Name: 150518WBLKA 1052.6 DF 05/18/15 Data File ID: T523_021.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.015	2031	0.2
2)	Perchlorate_85	12.849	8841	

Date Aquired: 05/23/15 22:05 Vial Number: NA
Sample Name: AZ16287_W10 1052.6 DF 05/18/15 Data File ID: T523_022.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.249	67686	24.4
2)	Perchlorate_85	12.686	2778	

Date Aquired: 05/23/15 22:24 Vial Number: NA
Sample Name: AZ16287_W10_MS-1 1052.6 DF 05/18/15 Data File ID: T523_023.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.311	790539	3.0
2)	Perchlorate_85	13.317	260884	

Date Aquired: 05/23/15 22:42 Vial Number: NA
Sample Name: AZ16287_W10_MSD-1 1052.6 DF 05/18/15 Data File ID: T523_024.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.311	944951	3.0
2)	Perchlorate_85	13.317	310703	

Date Aquired: 05/23/15 23:01 Vial Number: NA
Sample Name: AZ16288_W04 1052.6 DF 05/18/15 Data File ID: T523_025.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.689	205032312	3.0
2)	Perchlorate_85	12.686	67665361	

Date Aquired: 05/23/15 23:20 Vial Number: NA
Sample Name: AZ16289_W04 1052.6 DF 05/18/15 Data File ID: T523_026.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.832	838542	2.9
2)	Perchlorate_85	12.788	286601	

Date Aquired: 05/23/15 23:38 Vial Number: NA
Sample Name: AZ16290_W04 1052.6 DF 05/18/15 Data File ID: T523_027.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.251	212854131	3.1
2)	Perchlorate_85	12.258	69367602	

Date Aquired: 05/23/15 23:57 Vial Number: NA
Sample Name: AZ16334_W04 1052.6 DF 05/18/15 Data File ID: T523_028.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.821	906074091	2.5
2)	Perchlorate_85	12.808	368463307	

Date Aquired: 05/24/15 0:15 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_029.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.718	72196	13.9
2)	Perchlorate_85	12.951	5194	

Date Aquired: 05/24/15 0:34 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T523_030.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.8	666150	3.1
2)	Perchlorate_85	13.817	216626	

Date Aquired: 05/24/15 0:53 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T523_031.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.902	2871773	3.3
2)	Perchlorate_85	13.898	880296	

Date Aquired: 05/24/15 1:11 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_032.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.932	65339	59.8
2)	Perchlorate_85	12.91	1092	

Date Aquired: 05/24/15 1:30 Vial Number: NA
Sample Name: AZ16335_W04 1052.6 DF 05/18/15 Data File ID: T523_033.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.229	532183921	2.7
2)	Perchlorate_85	13.215	200150581	

Date Aquired: 05/24/15 1:48 Vial Number: NA
Sample Name: AZ16336_W04 1052.6 DF 05/18/15 Data File ID: T523_034.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.219	502148432	2.7
2)	Perchlorate_85	13.236	186208076	

Date Aquired: 05/24/15 2:07 Vial Number: NA
Sample Name: AZ16337_W04 1052.6 DF 05/18/15 Data File ID: T523_035.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.903	88240244	3.2
2)	Perchlorate_85	12.9	27251061	

Date Aquired: 05/24/15 2:26 Vial Number: NA
Sample Name: AZ16338_W04 1052.6 DF 05/18/15 Data File ID: T523_036.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.832	725861229	2.5
2)	Perchlorate_85	12.828	285902242	

Date Aquired: 05/24/15 2:44 Vial Number: NA
Sample Name: AZ16339_W04 1052.6 DF 05/18/15 Data File ID: T523_037.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.351	133242727	3.1
2)	Perchlorate_85	13.348	42847535	

Date Aquired: 05/24/15 3:03 Vial Number: NA
Sample Name: AZ16340_W04 1052.6 DF 05/18/15 Data File ID: T523_038.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.606	749200	2.9
2)	Perchlorate_85	13.623	258064	

Date Aquired: 05/24/15 3:22 Vial Number: NA
Sample Name: AZ16341_W04 1052.6 DF 05/18/15 Data File ID: T523_039.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.893	436781196	2.8
2)	Perchlorate_85	12.9	158150361	

Date Aquired: 05/24/15 3:40 Vial Number: NA
Sample Name: AZ16342_W04 1052.6 DF 05/18/15 Data File ID: T523_040.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.382	137592520	3.1
2)	Perchlorate_85	13.389	44336749	

Date Aquired: 05/24/15 3:59 Vial Number: NA
Sample Name: AZ16343_W01 1052.6 DF 05/18/15 Data File ID: T523_041.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.126	79506	35.6
2)	Perchlorate_85	12.961	2233	

Date Aquired: 05/24/15 4:17 Vial Number: NA
Sample Name: AZ16403_W04 1052.6 DF 05/18/15 Data File ID: T523_042.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.626	6933729	3.3
2)	Perchlorate_85	13.613	2075967	

Date Aquired: 05/24/15 4:36 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T523_043.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.126	79123	26.2
2)	Perchlorate_85	12.94	3023	

Date Aquired: 05/24/15 4:55 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T523_044.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.024	691196	2.8
2)	Perchlorate_85	14.031	247754	

Date Aquired: 05/24/15 5:13 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T523_045.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	14.217	3171297	3.3
2)	Perchlorate_85	14.194	970030	

Perchlorate LC/MS Ion Ratio Report

acceptable ratio is between 2.3 and 3.8 (DoD Perchlorate Handbook, 2006)

Data File Path : D:\masshunter\data\150524
Instrument Name : TQ (Agilent 6460 Triple Quad LC/MS)
Method File : 6460_ESI_PER_N_NEWER_K'_COLUMN.m
Operator : BA

Date Aquired: 05/24/15 13:56 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T524_001.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.158	57055	3.7
2)	Perchlorate_85	13.154	15456	

Date Aquired: 05/24/15 14:14 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T524_002.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.035	704937	3.6
2)	Perchlorate_85	13.073	197517	

Date Aquired: 05/24/15 14:33 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T524_003.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.107	3283186	3.2
2)	Perchlorate_85	13.083	1021413	

Date Aquired: 05/24/15 14:51 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T524_004.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.127	66611	2.5
2)	Perchlorate_85	13.114	27066	

Date Aquired: 05/24/15 15:13 Vial Number: NA
Sample Name: AZ16335_W04 10526315.8 DF 05/18/15_5/24 Data File ID: T524_005.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.097	166961	2.9
2)	Perchlorate_85	13.124	57679	

Date Aquired: 05/24/15 15:35 Vial Number: NA
Sample Name: AZ16335_W04 1052631.6 DF 05/18/15_5/24 Data File ID: T524_006.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.137	971405	3.1
2)	Perchlorate_85	13.124	316991	

Date Aquired: 05/24/15 15:54 Vial Number: NA
Sample Name: AZ16335_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_007.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.107	8958922	3.4
2)	Perchlorate_85	13.083	2630377	

Date Aquired: 05/24/15 16:12 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 05/14/15 Data File ID: T524_008.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.117	59155	3.6
2)	Perchlorate_85	13.185	16586	

Date Aquired: 05/24/15 16:31 Vial Number: NA
Sample Name: AZ16334_W04 10526315.8 DF 05/18/15_5/24 Data File ID: T524_009.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.097	144973	2.9
2)	Perchlorate_85	13.083	49882	

Date Aquired: 05/24/15 16:50 Vial Number: NA
Sample Name: AZ16334_W04 1052631.6 DF 05/18/15_5/24 Data File ID: T524_010.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.117	1318222	3.4
2)	Perchlorate_85	13.083	391225	

Date Aquired: 05/24/15 17:08 Vial Number: NA
Sample Name: AZ16334_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_011.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.097	12831006	3.5
2)	Perchlorate_85	13.114	3695569	

Date Aquired: 05/24/15 17:27 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 05/14/15 Data File ID: T524_012.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.025	37467	2.1
2)	Perchlorate_85	12.991	18125	

Date Aquired: 05/24/15 17:46 Vial Number: NA
Sample Name: AZ16289_W04 1052.6 DF 05/18/15 Data File ID: T524_013.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.18	651648	2.9
2)	Perchlorate_85	12.115	225883	

Date Aquired: 05/24/15 18:05 Vial Number: NA
Sample Name: AZ16288_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_014.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.035	1845071	3.3
2)	Perchlorate_85	13.022	556319	

Date Aquired: 05/24/15 18:23 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T524_015.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.035	50759	2.0
2)	Perchlorate_85	13.093	24912	

Date Aquired: 05/24/15 18:42 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T524_016.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.005	679067	3.1
2)	Perchlorate_85	12.991	216301	

Date Aquired: 05/24/15 19:01 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T524_017.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.066	3131136	3.3
2)	Perchlorate_85	13.073	937320	

Date Aquired: 05/24/15 19:19 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T524_018.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.097	52714	1.9
2)	Perchlorate_85	13.083	27232	

Date Aquired: 05/24/15 19:38 Vial Number: NA
Sample Name: AZ16290_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_019.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.964	3946219	3.4
2)	Perchlorate_85	12.961	1173842	

Date Aquired: 05/24/15 19:57 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 05/14/15 Data File ID: T524_020.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.229	31662	7.5
2)	Perchlorate_85	13.154	4224	

Date Aquired: 05/24/15 20:15 Vial Number: NA
Sample Name: AZ16336_W04 1052631.6 DF 05/18/15_5/24 Data File ID: T524_021.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.229	636978	3.2
2)	Perchlorate_85	13.246	200672	

Date Aquired: 05/24/15 20:34 Vial Number: NA
Sample Name: AZ16336_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_022.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.198	8382177	3.4
2)	Perchlorate_85	13.185	2476282	

Date Aquired: 05/24/15 20:52 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 05/14/15 Data File ID: T524_023.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.219	51225	3.9
2)	Perchlorate_85	13.205	12971	

Date Aquired: 05/24/15 21:11 Vial Number: NA
Sample Name: AZ16338_W04 1052631.6 DF 05/18/15_5/24 Data File ID: T524_024.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.27	1613892	3.2
2)	Perchlorate_85	13.266	507127	

Date Aquired: 05/24/15 21:30 Vial Number: NA
Sample Name: AZ16338_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_025.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.229	20449254	3.4
2)	Perchlorate_85	13.236	5991004	

Date Aquired: 05/24/15 21:48 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 05/14/15 Data File ID: T524_026.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.331	52468	6.1
2)	Perchlorate_85	13.195	8564	

Date Aquired: 05/24/15 22:07 Vial Number: NA
Sample Name: AZ16341_W04 1052631.6 DF 05/18/15_5/24 Data File ID: T524_027.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.321	751851	3.1
2)	Perchlorate_85	13.327	245934	

Date Aquired: 05/24/15 22:25 Vial Number: NA
Sample Name: AZ16341_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_028.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.351	5610654	3.4
2)	Perchlorate_85	13.358	1650413	

Date Aquired: 05/24/15 22:44 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T524_029.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.412	69437	16.5
2)	Perchlorate_85	12.9	4217	

Date Aquired: 05/24/15 23:03 Vial Number: NA
Sample Name: PER_CCV 0.0004 ug/ml 05/07/15 Data File ID: T524_030.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.341	663221	3.2
2)	Perchlorate_85	13.348	204756	

Date Aquired: 05/24/15 23:21 Vial Number: NA
Sample Name: PER_CCV 0.002 ug/ml 05/07/15 Data File ID: T524_031.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.484	3004259	3.4
2)	Perchlorate_85	13.48	881774	

Date Aquired: 05/24/15 23:40 Vial Number: NA
Sample Name: PER_IS 0.005 ug/ml 05/07/15 Data File ID: T524_032.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.484	58582	9.0
2)	Perchlorate_85	12.9	6534	

Date Aquired: 05/24/15 23:58 Vial Number: NA
Sample Name: AZ16337_W04 105263.2 DF 05/18/15_5/24 Data File ID: T524_033.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.453	1184794	3.3
2)	Perchlorate_85	13.491	355894	

EPA METHOD 6850
Perchlorate
LC/MS

Sample Data

APPL, INC.

Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16287
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	0.400 U	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

Quant Method:	QTLMFL2
Run #:	T523_022.d
Instrument:	AGIL_6460
Sequence:	TQ052315
Dilution Factor:	1
Initials:	RP

Printed: 06/18/15 12:26:19 PM
APPL-F1-SC-NoMC-REG MDLs

Data File ID: T523_022.d

Date Injected : 05/23/15

Time Injected : 22:05

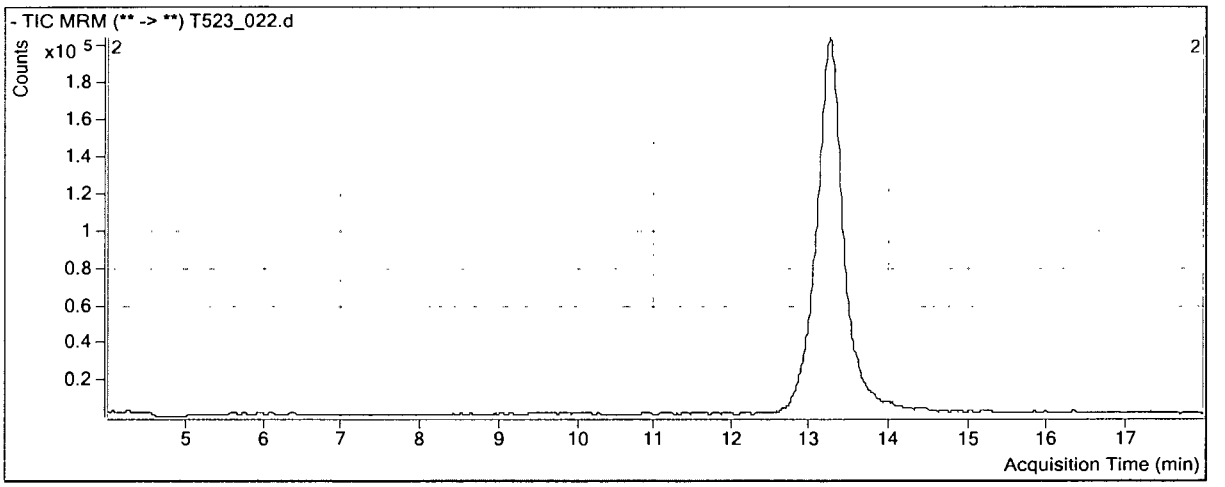
Sample ID : AZ16287_W10 1052.6 DF 05/18/15

Client ID : S67-MW007-051215

Retention Time	Area Count Response	Compound_ID Product Ion			
13.273	4796548	PER_IS_89			
13.249	67686	Perchlorate_83	(67686 * 0.0050) / (1.27 * 4796548.00) *	1052.60 =	0.058467 ppb
12.686	2778	Perchlorate_85	(2778 * 0.0050) / (0.39 * 4796548.00) *	1052.60 =	0.007784 ppb

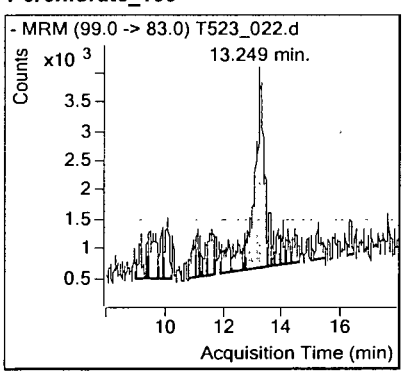
Quantitative Analysis Sample Report

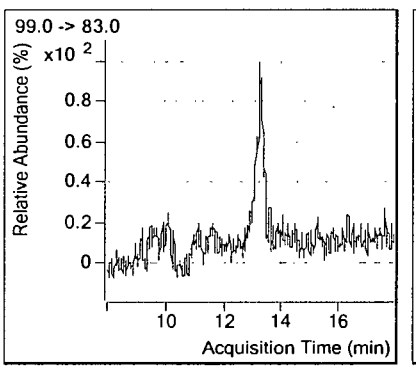
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_022.d	**Sample Name**	AZ16287_W10 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	22:05
ClientID	S67-MW007-051215	**Inj Vol**	20

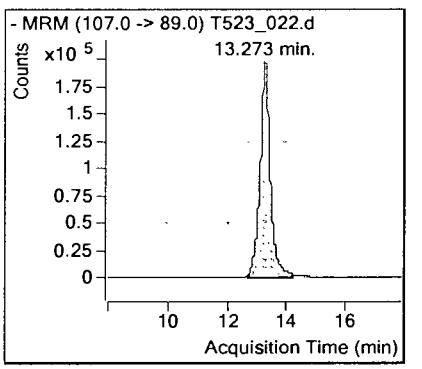


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.249	67686	4796548
Perchlorate_102	PER_IS_108	12.686	2778	4796548

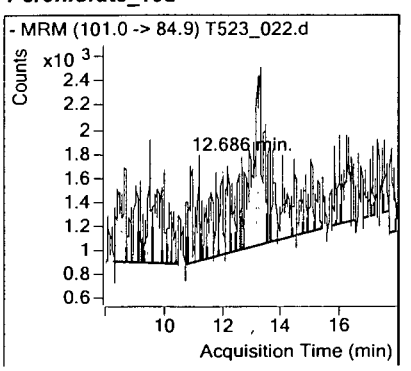
Perchlorate_100

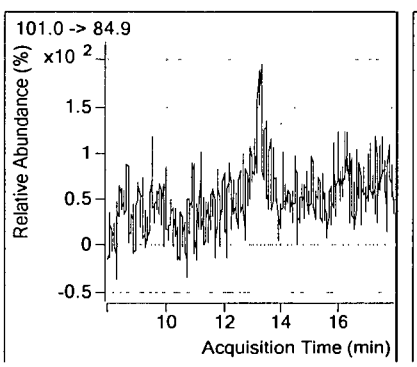


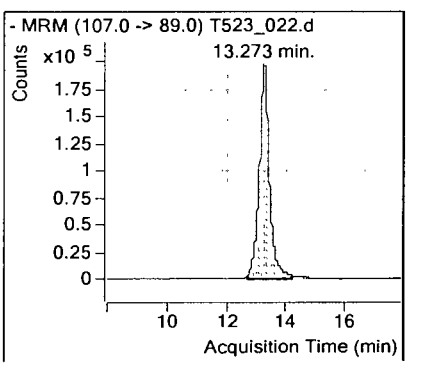




Perchlorate_102







Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16288
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	160	60	40.0	20.0	ug/L	05/18/15	05/24/15

Quant Method:	QTLMFL2
Run #:	T524_014.d
Instrument:	AGIL_6460
Sequence:	TQ052415
Dilution Factor:	100
Initials:	RP

Printed: 06/19/15 9:31:09 AM
APPL-F1-SC-NoMC-REG MDLs

Data File ID: T524_014.d

Date Injected : 05/24/15

Time Injected : 18:05

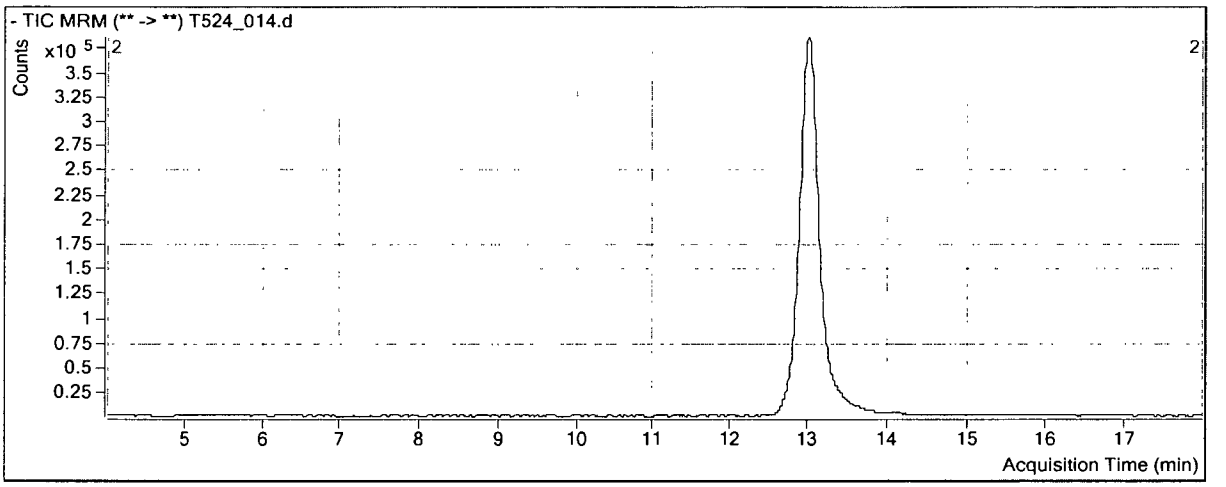
Sample ID : AZ16288_W04 105263.2 DF 05/18/15_5/24

Client ID : S67-MW003-051215

Retention Time	Area Count Response	Compound_ID Product Ion		
13.039	4668361	PER_IS_89		
13.035	1845071	Perchlorate_83	(1845071 * 0.0050) / (1.27 * 4668361.00) * 105263.20 =	163.758637 ppb
13.022	556319	Perchlorate_85	(556319 * 0.0050) / (0.39 * 4668361.00) * 105263.20 =	160.161381 ppb

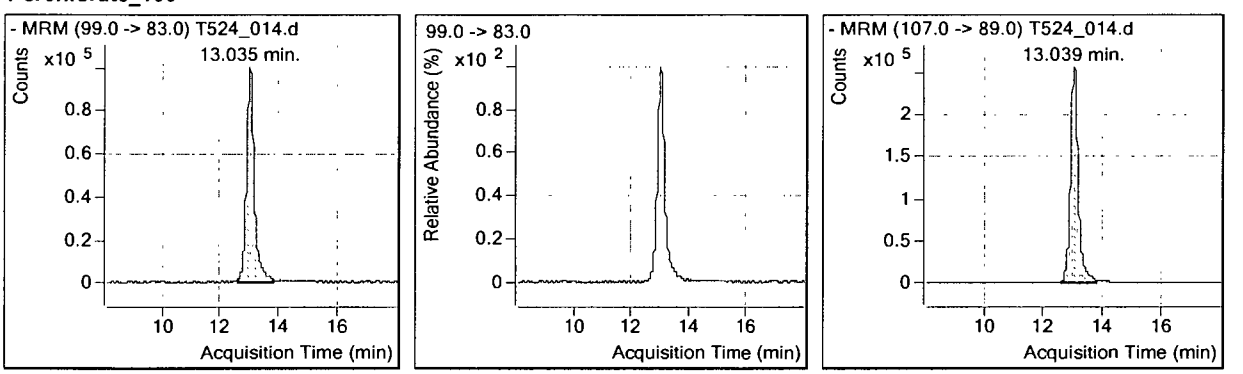
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_014.d	**Sample Name**	AZ16288_W04 105263.2 DF 05/18/15_5/24
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	18:05
ClientID	S67-MW003-051215	**Inj Vol**	20

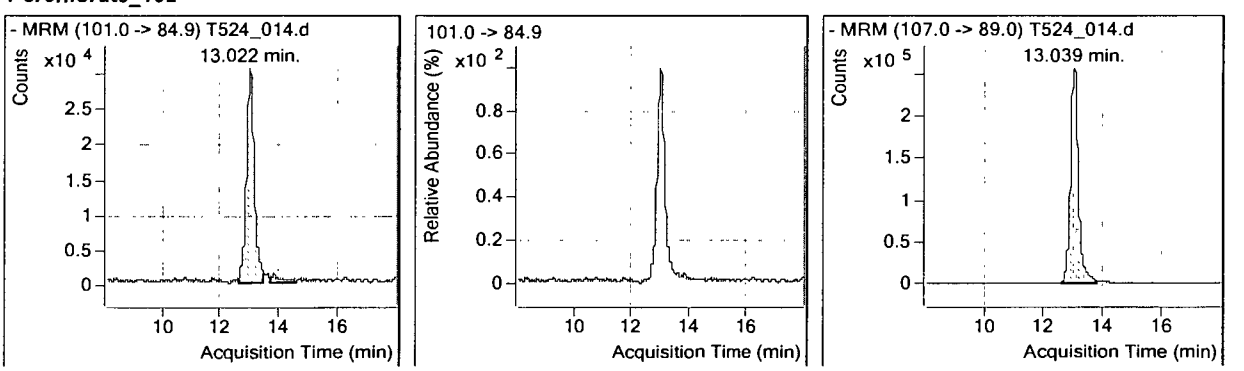


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.035	1845071	4668361
Perchlorate_102	PER_IS_108	13.022	556319	4668361

Perchlorate_100



Perchlorate_102



Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16289
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	0.59 J	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

J = Estimated value.

Quant Method:	QTLMFL2
Run #:	T523_026.d
Instrument:	AGIL_6460
Sequence:	TQ052315
Dilution Factor:	1
Initials:	RP

Printed: 06/18/15 12:26:19 PM
APPL-F1-SC-NoMC-REG MDLs

Data File ID: T523_026.d

Date Injected : 05/23/15

Time Injected : 23:20

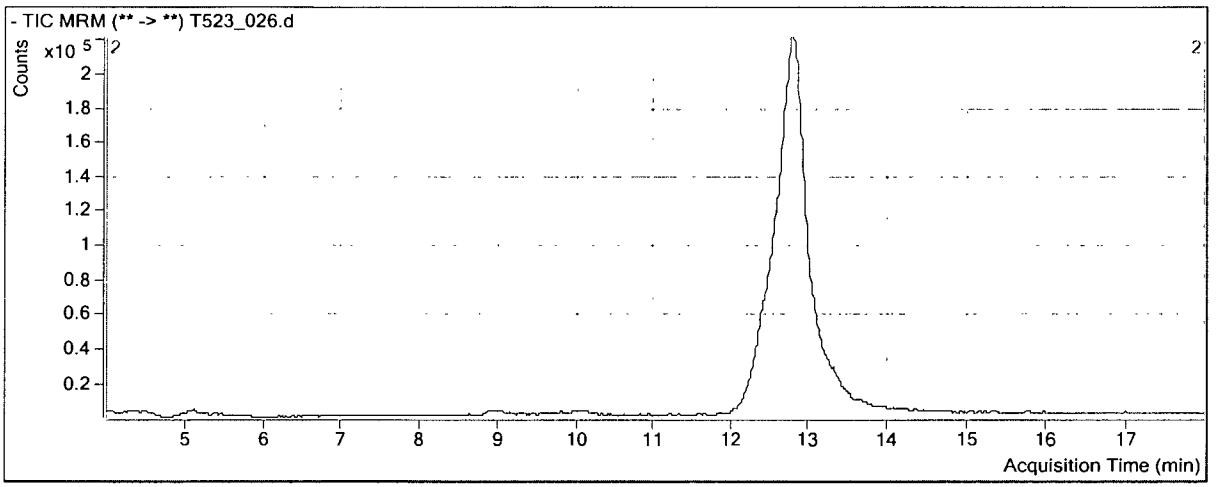
Sample ID : AZ16289_W04 1052.6 DF 05/18/15

Client ID : S67-MW002-051215

Retention Time	Area Count Response	Compound_ID Product Ion		
12.815	5876336	PER_IS_89		
12.832	838542	Perchlorate_83	(838542 * 0.0050) / (1.27 * 5876336.00) * 1052.60 =	0.591236 ppb
12.788	286601	Perchlorate_85	(286601 * 0.0050) / (0.39 * 5876336.00) * 1052.60 =	0.655475 ppb

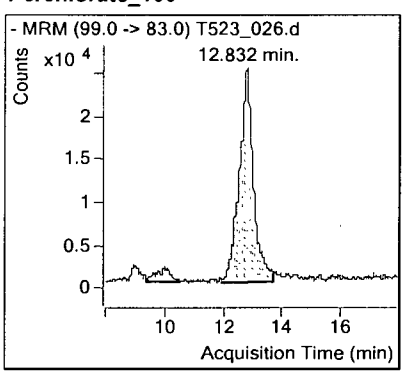
Quantitative Analysis Sample Report

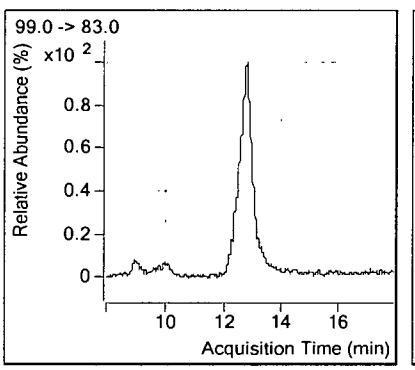
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_026.d	**Sample Name**	AZ16289_W04 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	23:20
ClientID	S67-MW002-051215	**Inj Vol**	20

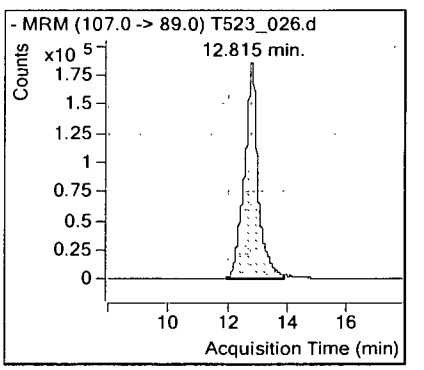


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.832	838542	5876336
Perchlorate_102	PER_IS_108	12.788	286601	5876336

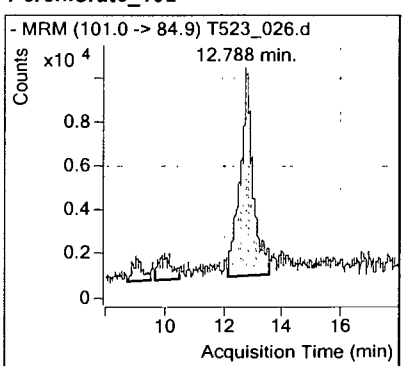
Perchlorate_100

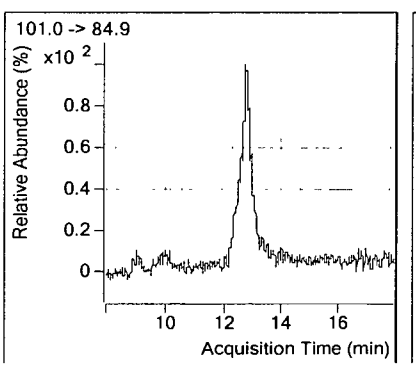


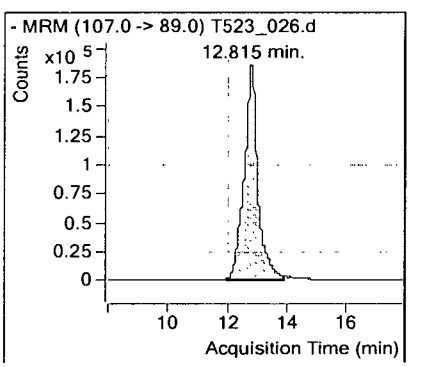




Perchlorate_102







Perchlorate

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413
APPL ID: AZ16290
QCG: #6850-150518A-198054

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 6850	PERCHLORATE	290	60	40.0	20.0	ug/L	05/18/15	05/24/15

Quant Method: QTLMFL2
Run #: T524_019.d
Instrument: AGIL_6460
Sequence: TQ052415
Dilution Factor: 100
Initials: RP

Printed: 06/19/15 9:31:09 AM
APPL-F1-SC-NoMC-REG MDLs

Data File ID: T524_019.d

Date Injected : 05/24/15

Time Injected : 19:38

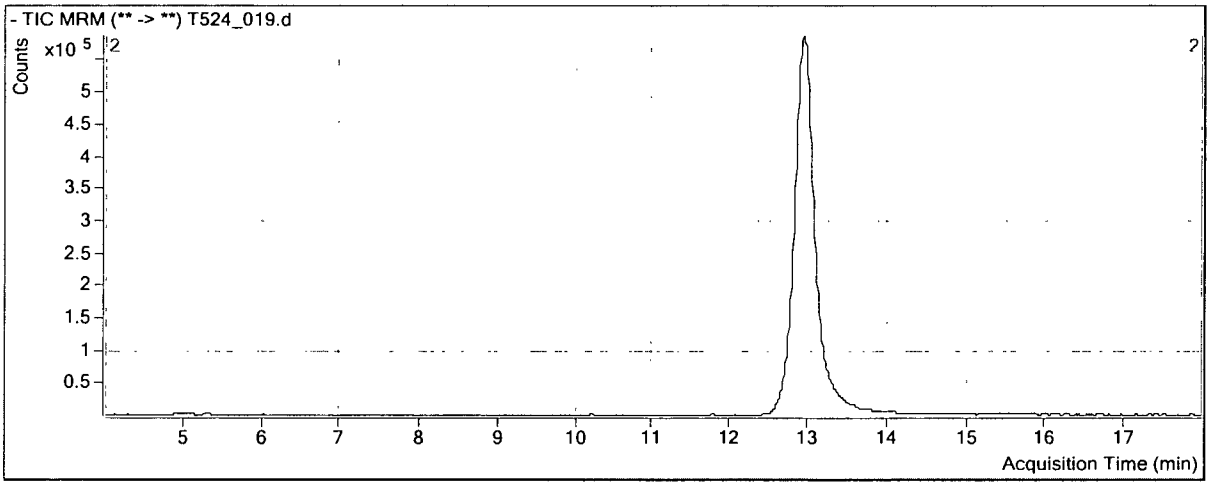
Sample ID : AZ16290_W04 105263.2 DF 05/18/15_5/24

Client ID : S67-MW009-051215

Retention Time	Area Count Response	Compound_ID Product Ion			
12.957	5734852	PER_IS_89			
12.964	3946219	Perchlorate_83	(3946219 * 0.0050) / (1.27 * 5734852.00) *	105263.20 =	285.111367 ppb
12.961	1173842	Perchlorate_85	(1173842 * 0.0050) / (0.39 * 5734852.00) *	105263.20 =	275.096949 ppb

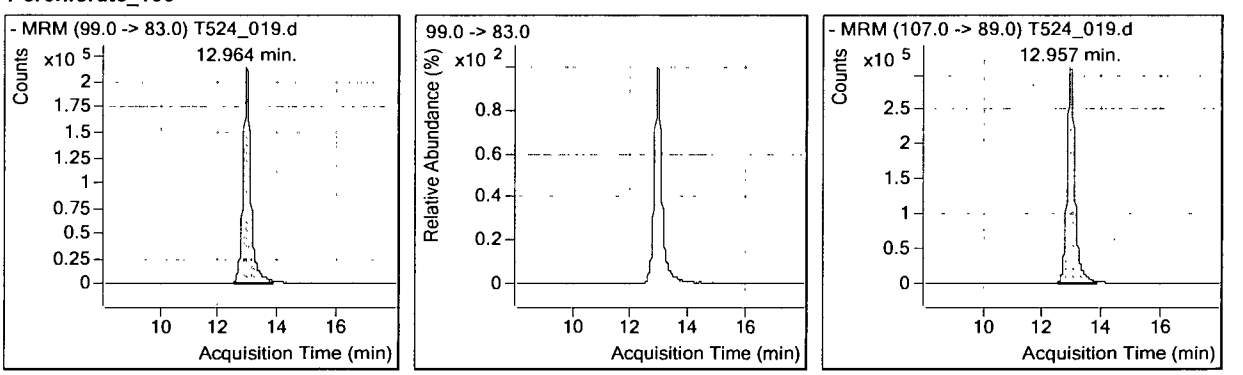
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_019.d	**Sample Name**	AZ16290_W04 105263.2 DF 05/18/15_5/24
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	19:38
ClientID	S67-MW009-051215	**Inj Vol**	20

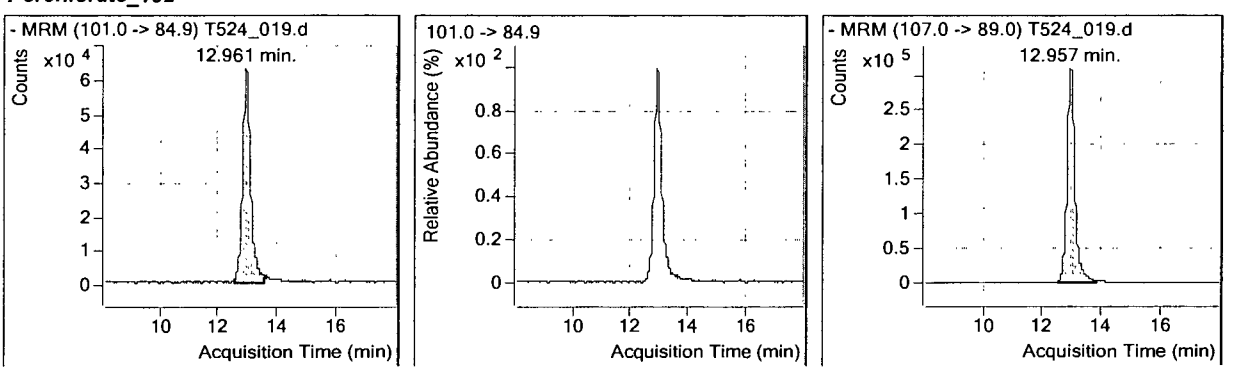


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.964	3946219	5734852
Perchlorate_102	PER_IS_108	12.961	1173842	5734852

Perchlorate_100



Perchlorate_102



EPA METHOD 6850
Perchlorate
LC/MS

Calibration Data

APPL, INC.

METHOD 6850 CALIBRATION SUMMARY

Lab Name: APPL Inc. **DETECTOR ID : Agilent 6460 Triple Quad LC/MS**

Average Relative Response Factor Summary

Analyte Id:	R.R.F.#1 PERCHLORATE 0.0002 PPM	R.R.F.#2 PERCHLORATE 0.0004 PPM	R.R.F.#3 PERCHLORATE 0.001 PPM	R.R.F.#4 PERCHLORATE 0.002 PPM	R.R.F.#5 PERCHLORATE 0.005 PPM	R.R.F.#6 PERCHLORATE 0.010 PPM	AVERAGE REL.RESP. FACTOR	%RSD RRF
Perchlorate_83	1.339537	1.198791	1.165697	1.173646	1.314663	1.429198	1.270255	8.44
Perchlorate_85	0.434068	0.395112	0.366889	0.354937	0.381638	0.416989	0.391605	7.67

FILE ID : TQ0312A.FRB

Perchlorate_83

RESPONSE FACTOR CALCULATIONS - AREA COUNTS

DATA FILES : T312_003.d - T312_008.d

The Data points that were Read Were

Standard Response	Standard Concentration µg/ml	Internal Standard Response	Internal Standard Concentration µg/ml	Response Factor	RPD	%RSD
446712.00	0.0002	8337058.00	0.0050	1.339537	5.45	8.44
1023403.00	0.0004	10671196.00	0.0050	1.198791	5.63	
2483393.00	0.0010	10651968.00	0.0050	1.165697	8.23	
6351752.00	0.0020	13529952.00	0.0050	1.173646	7.61	
14499255.00	0.0050	11028880.00	0.0050	1.314663	3.50	
34223790.00	0.0100	11973072.00	0.0050	1.429198	12.51	

The Average Response Factor = 1.270255

Perchlorate_85

RESPONSE FACTOR CALCULATIONS - AREA COUNTS

DATA FILES : T312_003.d - T312_008.d

The Data points that were Read Were

Standard Response	Standard Concentration µg/ml	Internal Standard Response	Internal Standard Concentration µg/ml	Response Factor	RPD	%RSD
144754.00	0.0002	8337058.00	0.0050	0.434068	10.84	7.67
337305.00	0.0004	10671196.00	0.0050	0.395112	0.90	
781617.00	0.0010	10651968.00	0.0050	0.366889	6.31	
1920912.00	0.0020	13529952.00	0.0050	0.354937	9.36	
4209044.00	0.0050	11028880.00	0.0050	0.381638	2.55	
9985270.00	0.0100	11973072.00	0.0050	0.416989	6.48	

The Average Response Factor = 0.391605

Data File ID: T312_002.d

Date Injected : 03/12/15

Time Injected : 17:33

Sample ID : PERCHLORATE 0.0001 ug/ml 11/11/14

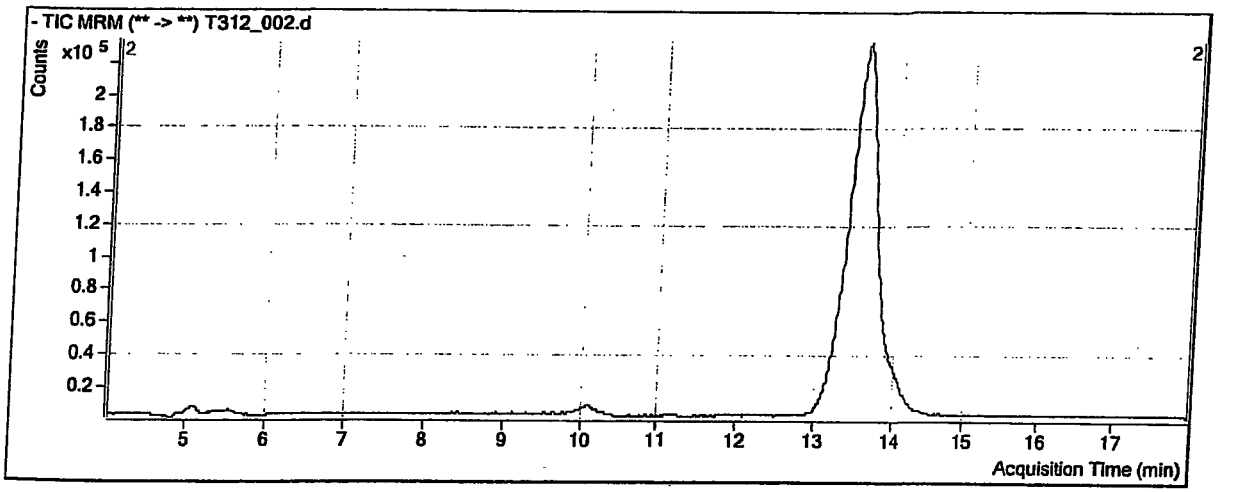
Client ID : NA

Retention Time		Area Count Response	Compound_ID Product Ion
13.548		5980396	PER_IS_89
13.504	*	237168	Perchlorate_83
13.541	*	77486	Perchlorate_85

* MANUAL INTEGRAION

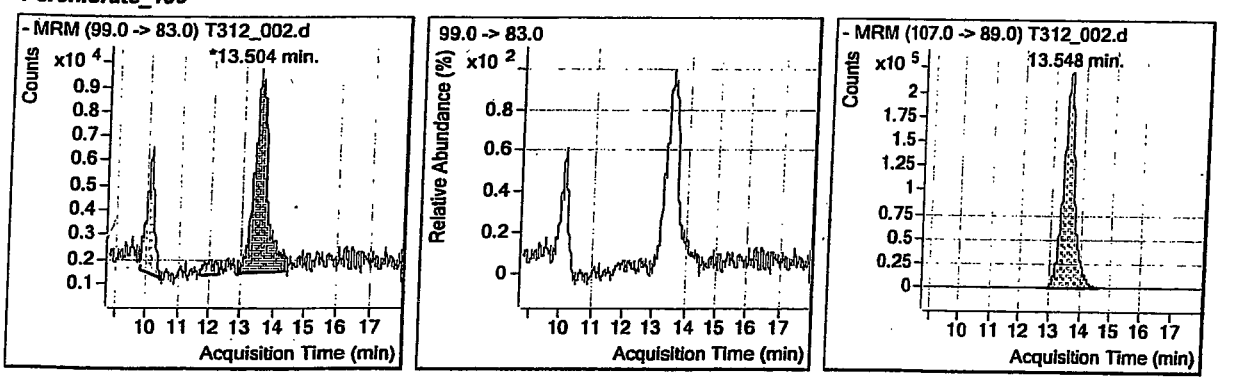
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_002.d	**Sample Name**	PERCHLORATE 0.0001 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	17:33
ClientID	NA	**Inj Vol**	20

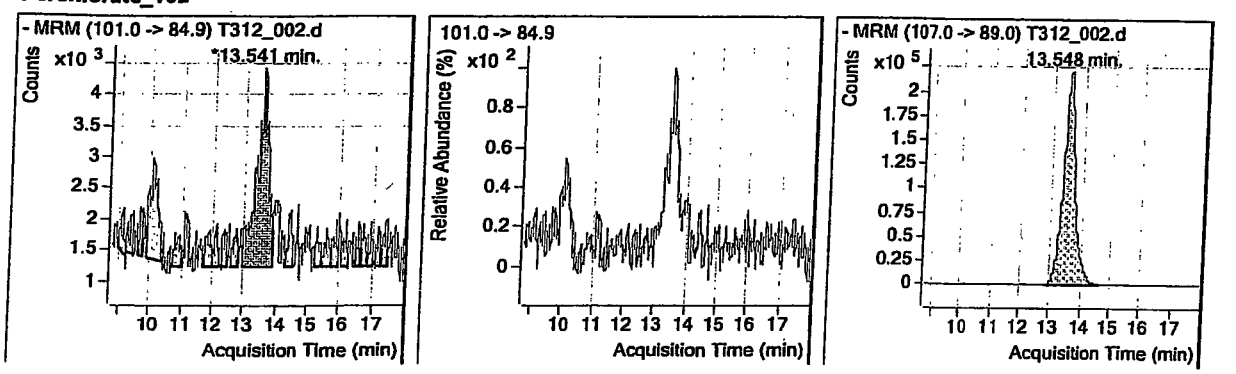


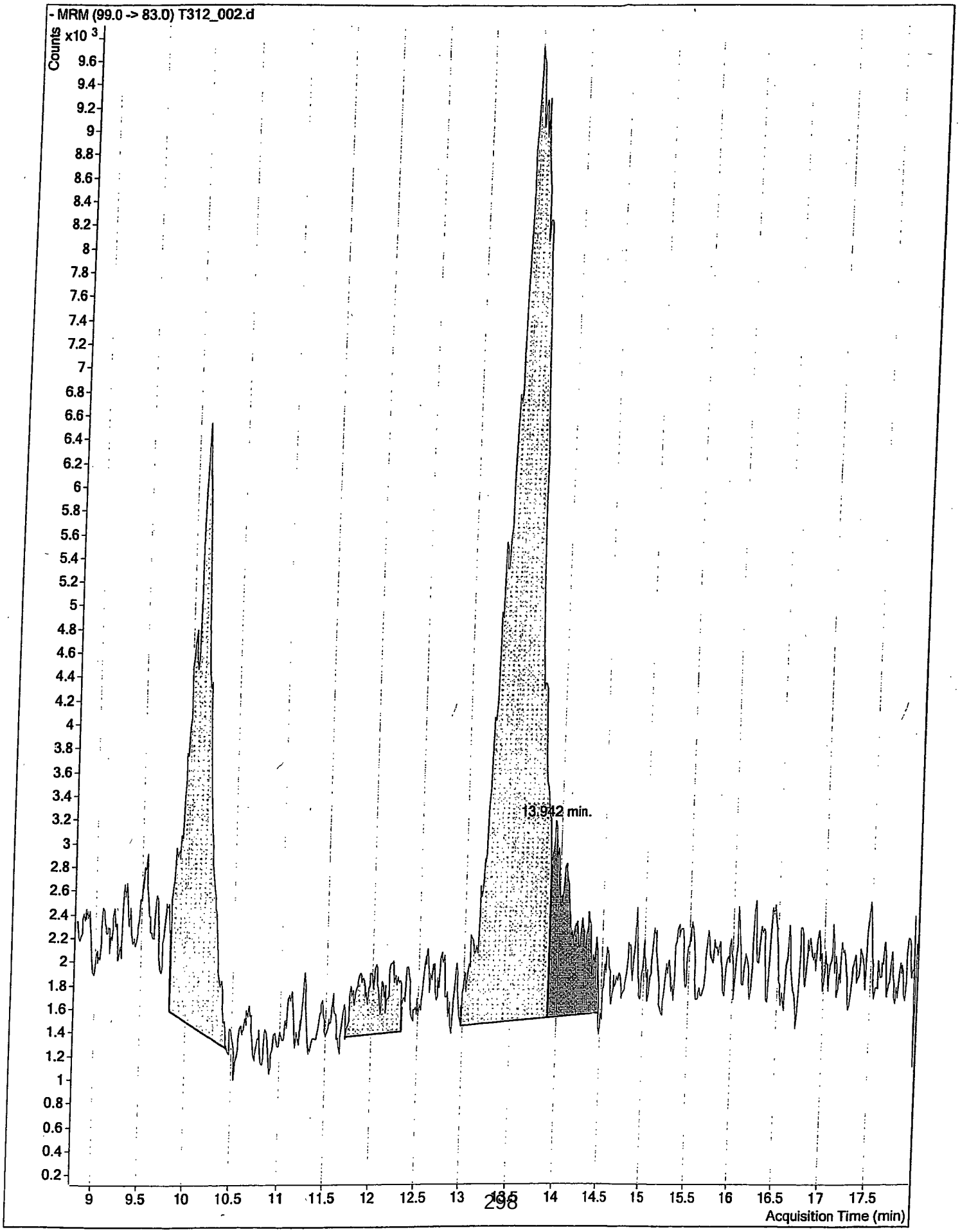
Compound	ISTD		RT	Resp	ISTD Resp	
Perchlorate_100	PER_IS_108	*	13.504	237168	5980396	* MANUAL INT
Perchlorate_102	PER_IS_108	*	13.541	77486	5980396	* MANUAL INT

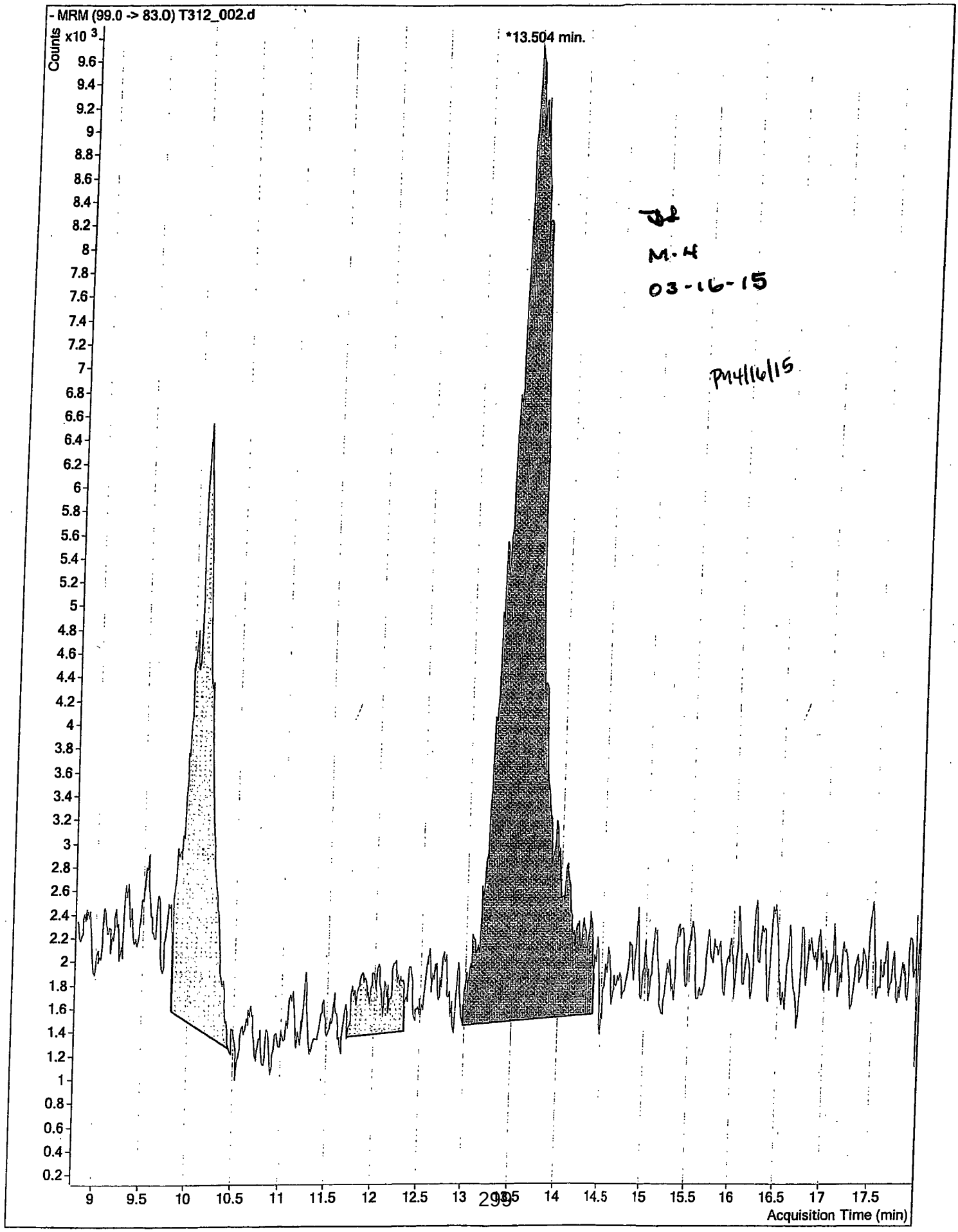
Perchlorate_100

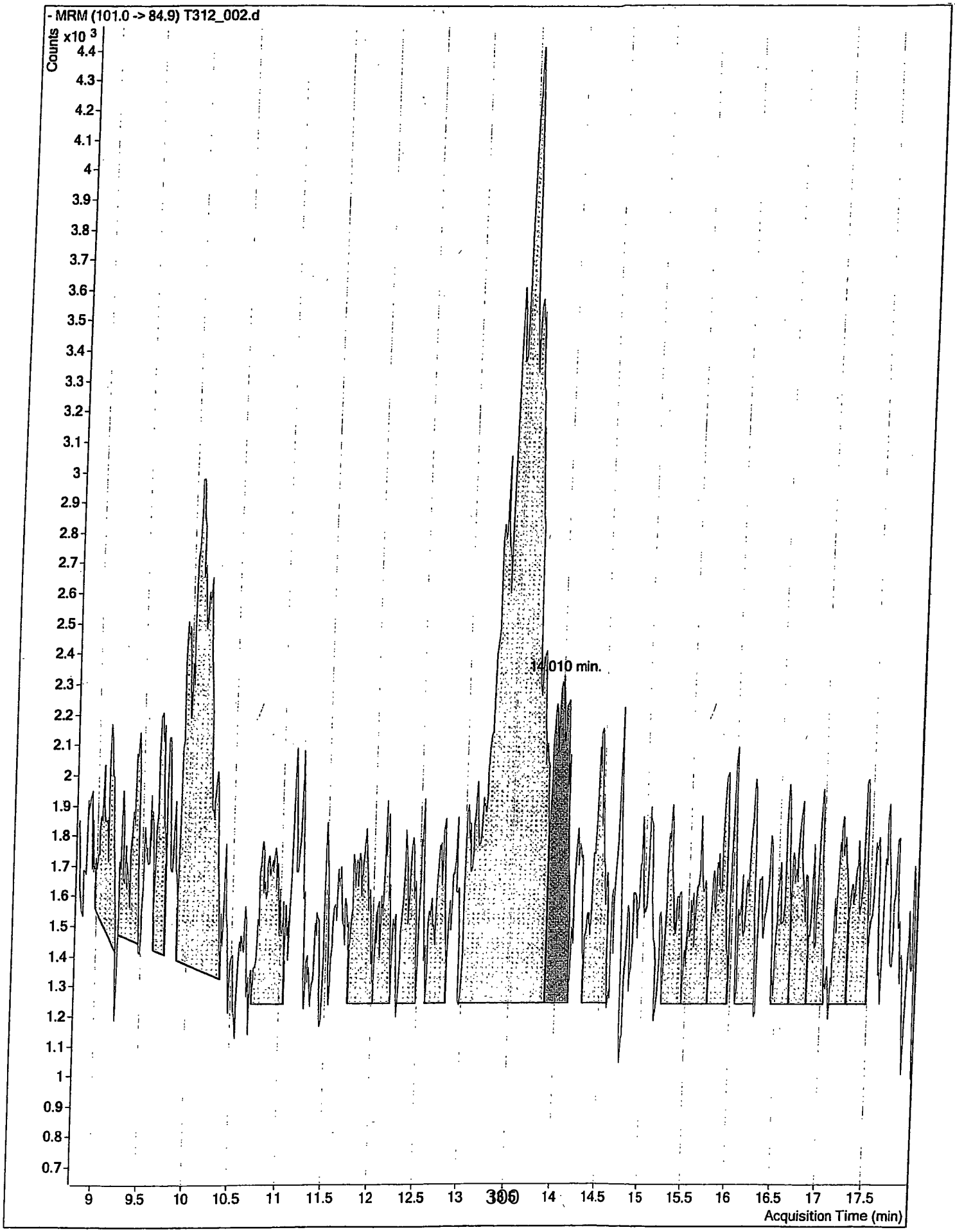


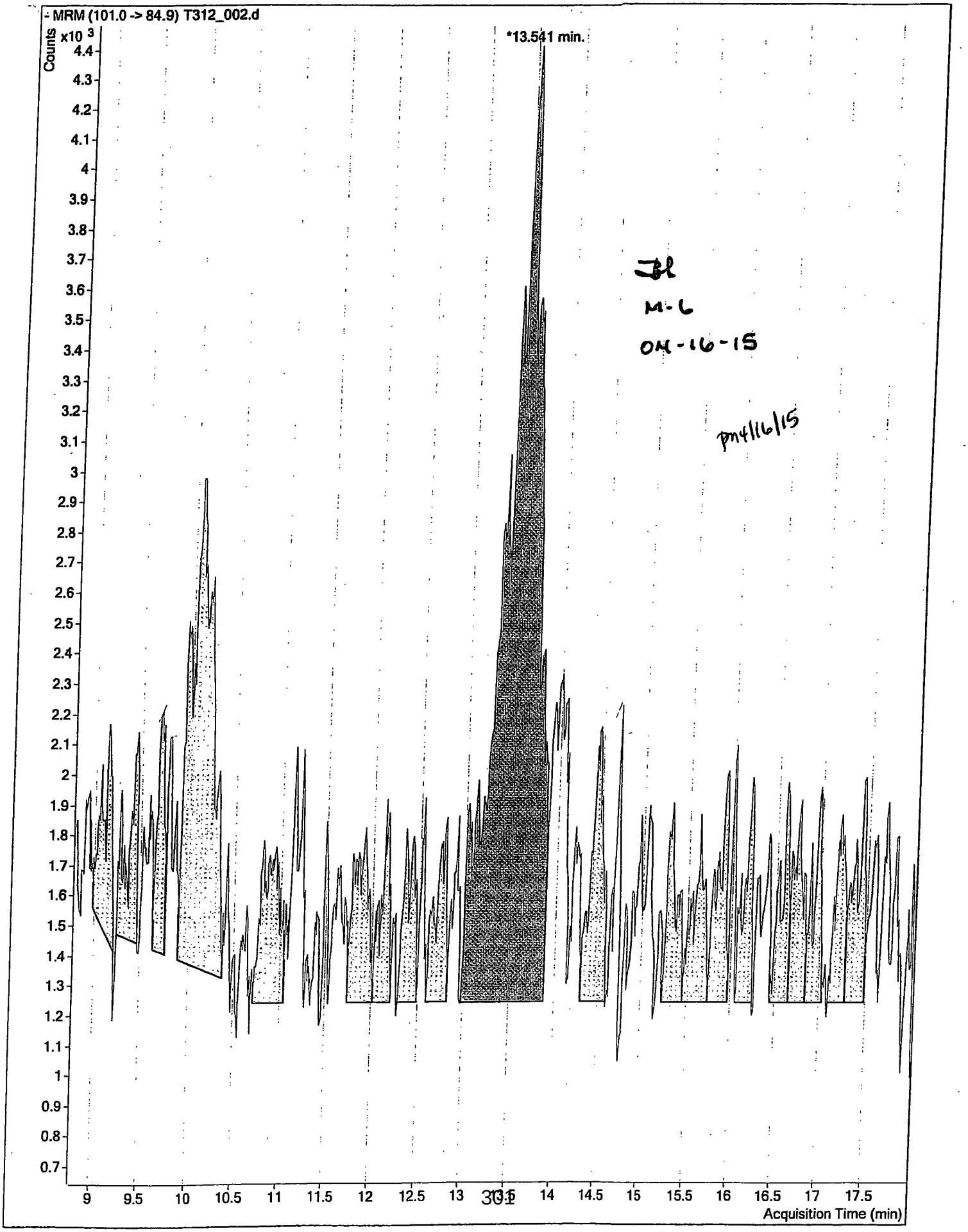
Perchlorate_102




- MRM (99.0 -> 83.0) T312_002.d
Counts
x10 3
9.6
9.4
9.2
9
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
7
6.8
6.6
6.4
6.2
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
13.942 min.
9
9.5
10
10.5
11
11.5
12
12.5
13
13.5
14
14.5
15
15.5
16
16.5
17
17.5
Acquisition Time (min)


- MRM (99.0 -> 83.0) T312_002.d
Counts
x10 3
*13.504 min.
Acquisition Time (min)
M-4
03-16-15
PM 4/16/15


- MRM (101.0 -> 84.9) T312_002.d
Counts
x10 3
4.4
4.3
4.2
4.1
4
3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
14.010 min.
9
9.5
10
10.5
11
11.5
12
12.5
13
14
14.5
15
15.5
16
16.5
17
17.5
Acquisition Time (min)


MRM (101.0 -> 84.9) T312_002.d
Counts
x10 3
*13.541 min.
4.4
4.3
4.2
4.1
4
3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
9
9.5
10
10.5
11
11.5
12
12.5
13
13.5
14
14.5
15
15.5
16
16.5
17
17.5
Acquisition Time (min)
JL
M-L
04-16-15
pm 4/16/15

Data File ID: T312_004.d

Date Injected : 03/12/15

Time Injected : 18:11

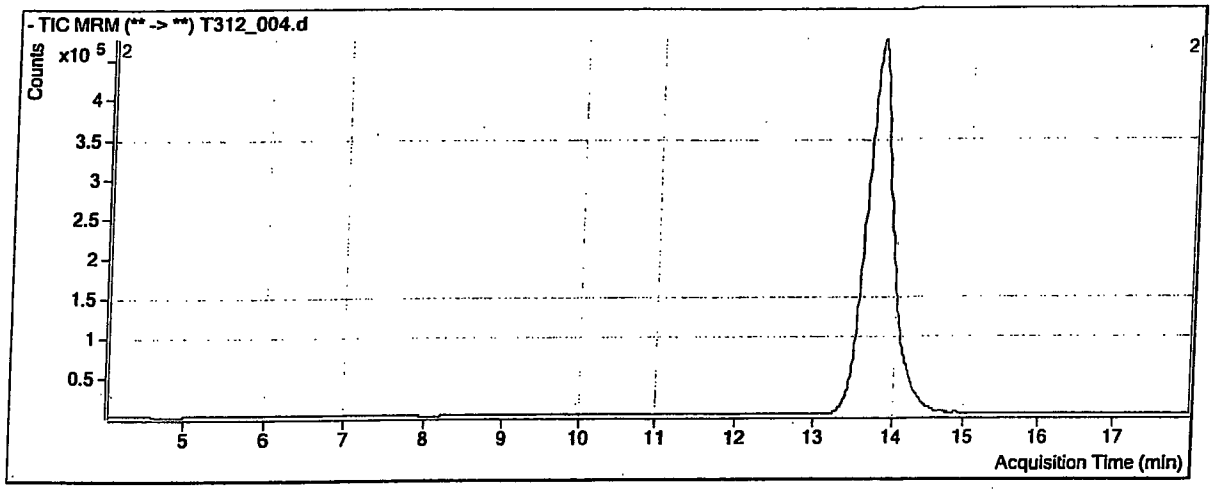
Sample ID : PERCHLORATE 0.0004 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.783	10671196	PER_IS_89
13.8	1023403	Perchlorate_83
13.827	337305	Perchlorate_85

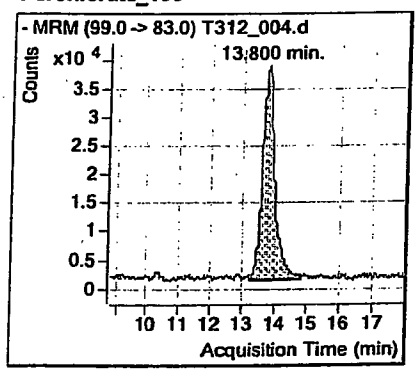
Quantitative Analysis Sample Report

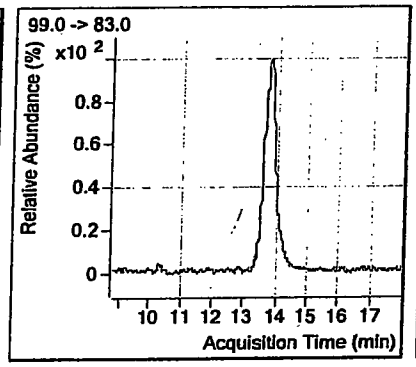
Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_004.d	**Sample Name**	PERCHLORATE 0.0004 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	18:11
ClientID	NA	**Inj Vol**	20

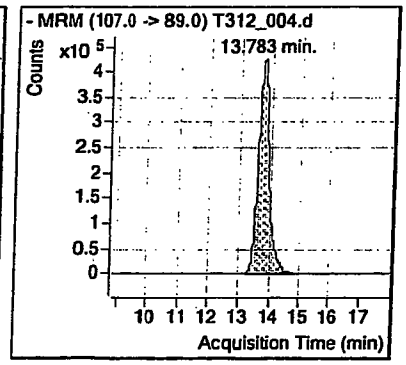


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.800	1023403	10671196
Perchlorate_102	PER_IS_108	13.827	337305	10671196

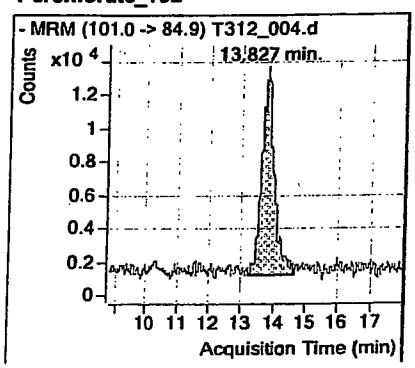
Perchlorate_100

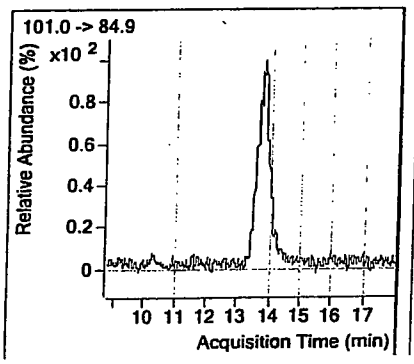


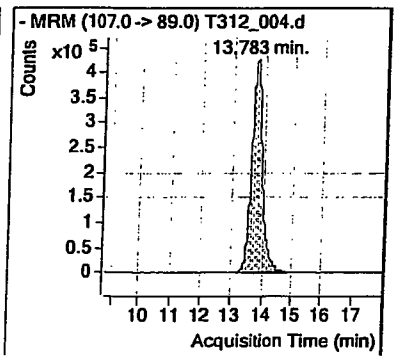




Perchlorate_102







Data File ID: T312_005.d

Date Injected : 03/12/15

Time Injected : 18:29

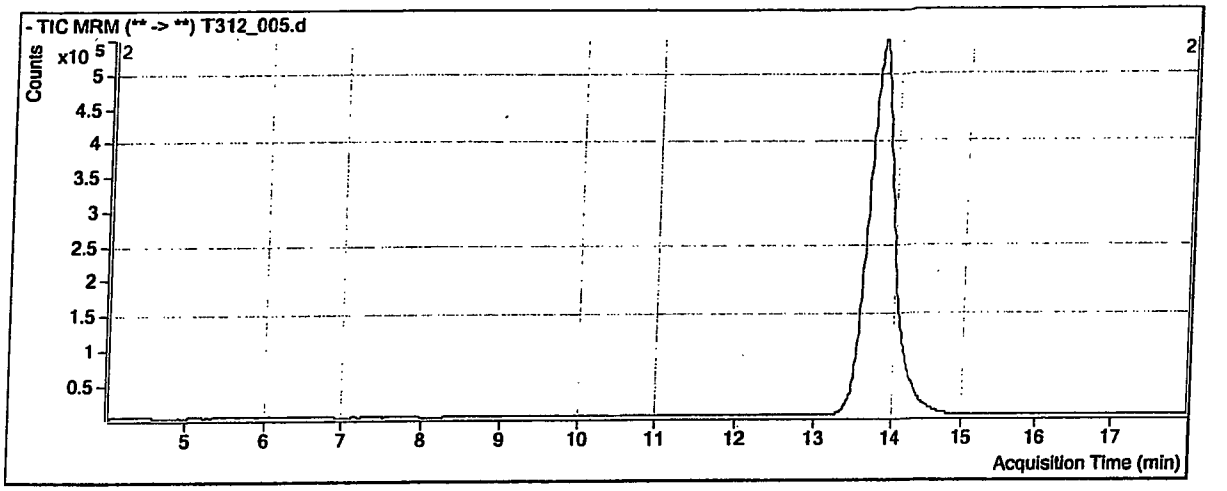
Sample ID : PERCHLORATE 0.001 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.803	10651968	PER_IS_89
13.82	2483393	Perchlorate_83
13.827	781617	Perchlorate_85

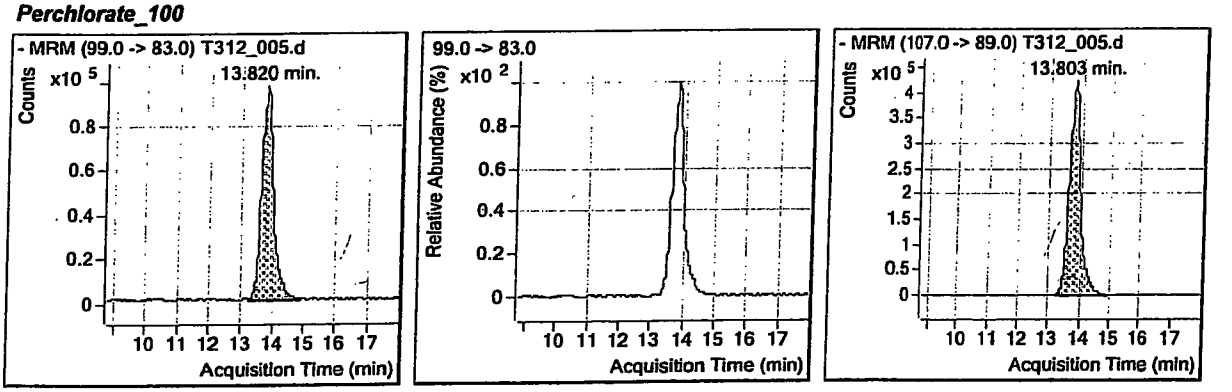
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_005.d	**Sample Name**	PERCHLORATE 0.001 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	18:29
ClientID	NA	**Inj Vol**	20

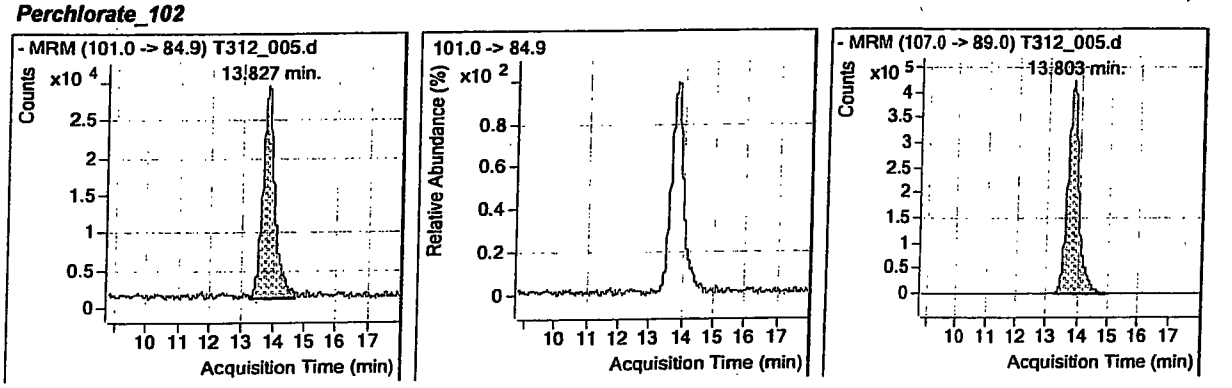


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.820	2483393	10651968
Perchlorate_102	PER_IS_108	13.827	781617	10651968

Perchlorate_100



Perchlorate_102



Data File ID: T312_006.d

Date Injected : 03/12/15

Time Injected : 18:48

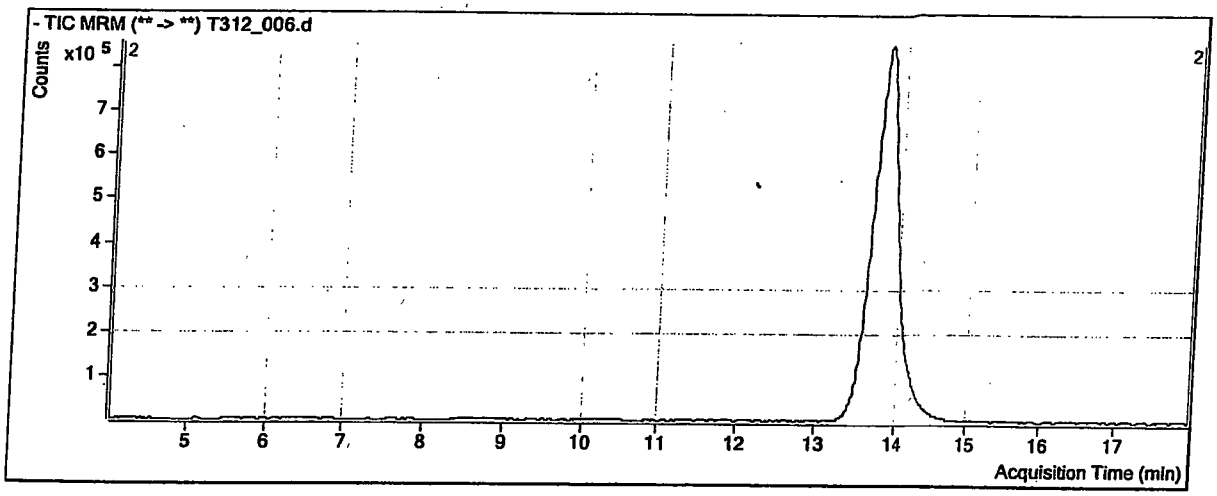
Sample ID : PERCHLORATE 0.002 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.803	13529952	PER_IS_89
13.83	6351752	Perchlorate_83
13.817	1920912	Perchlorate_85

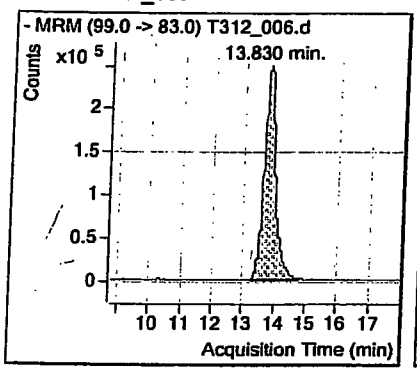
Quantitative Analysis Sample Report

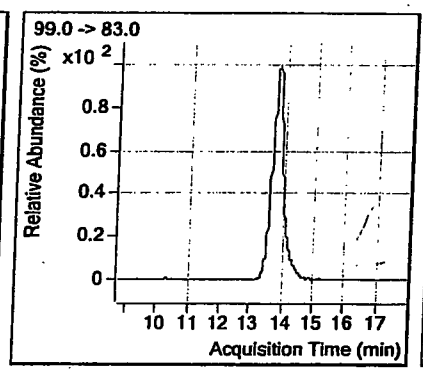
Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_006.d	**Sample Name**	PERCHLORATE 0.002 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	18:48
ClientID	NA	**Inj Vol**	20

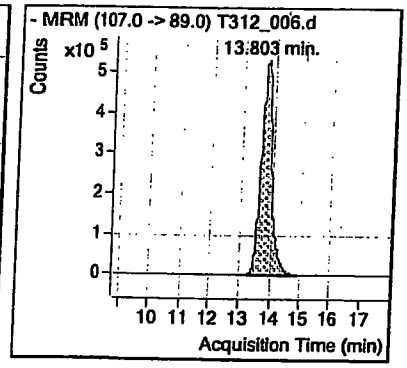


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.830	6351752	13529952
Perchlorate_102	PER_IS_108	13.817	1920912	13529952

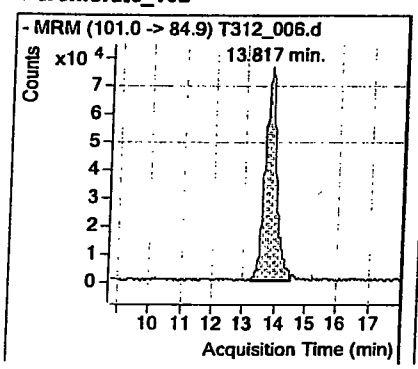
Perchlorate_100

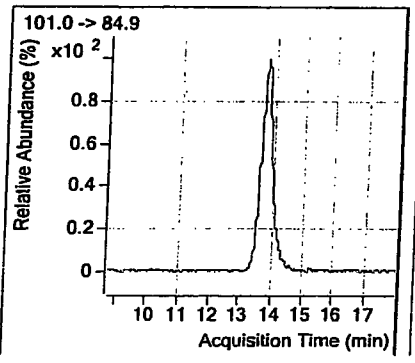


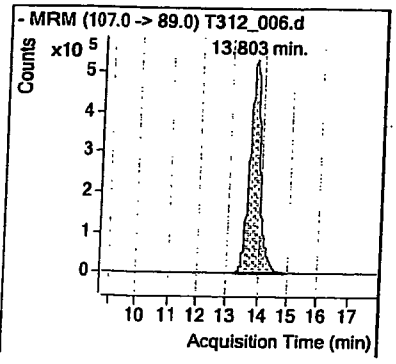




Perchlorate_102







Data File ID: T312_007.d

Date Injected : 03/12/15

Time Injected : 19:07

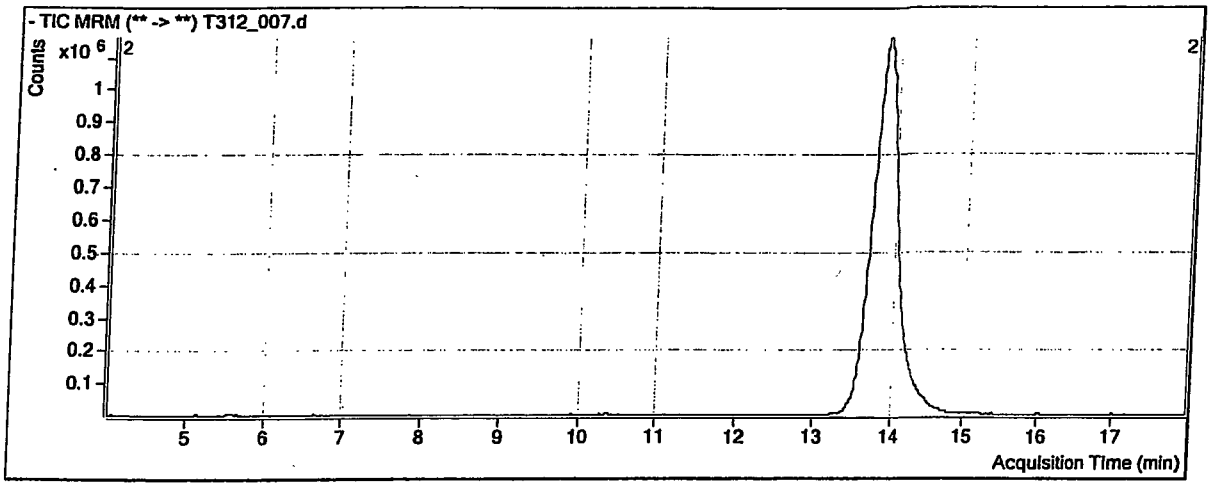
Sample ID : PERCHLORATE 0.005 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.874	11028880	PER_IS_89
13.861	14499255	Perchlorate_83
13.878	4209044	Perchlorate_85

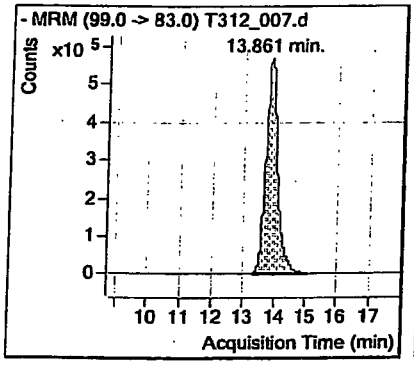
Quantitative Analysis Sample Report

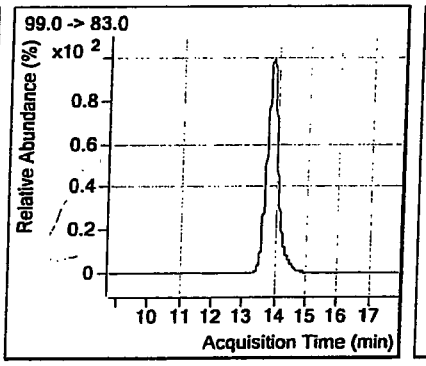
Batch-Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_007.d	**Sample Name**	PERCHLORATE 0.005 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	19:07
ClientID	NA	**Inj Vol**	20

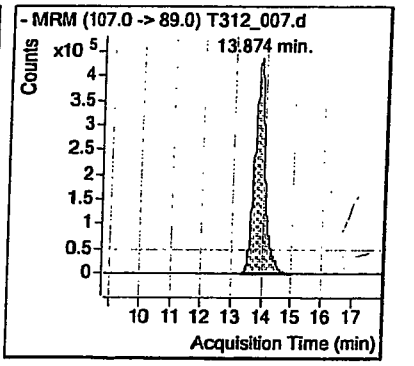


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.861	14499255	11028880
Perchlorate_102	PER_IS_108	13.878	4209044	11028880

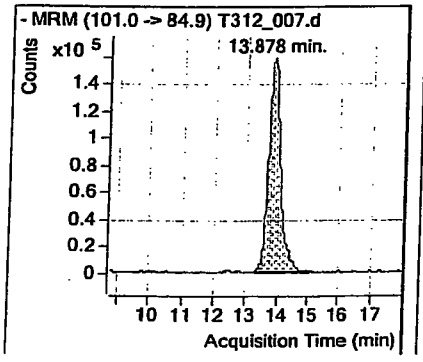
Perchlorate_100

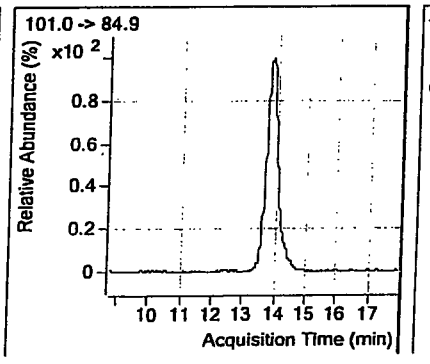


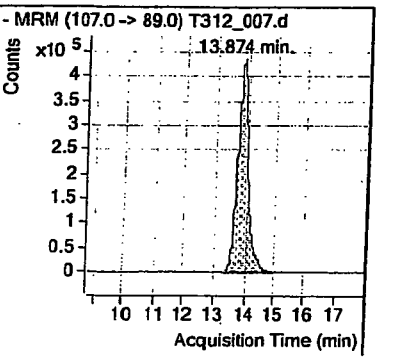




Perchlorate_102







Data File ID: T312_008.d

Date Injected : 03/12/15

Time Injected : 19:25

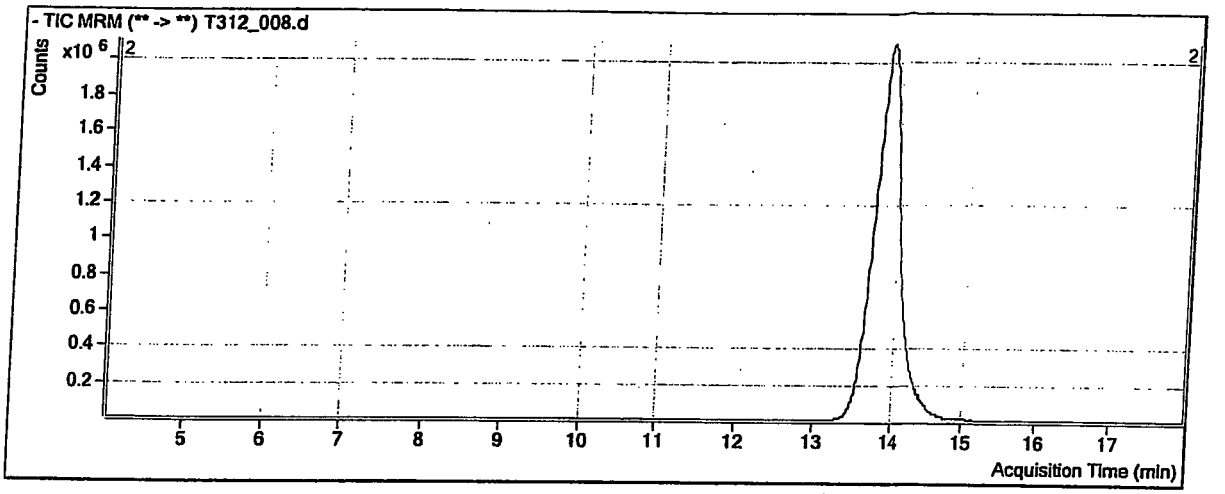
Sample ID : PERCHLORATE 0.010 ug/ml 08/27/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.874	11973072	PER_IS_89
13.881	34223790	Perchlorate_83
13.878	9985270	Perchlorate_85

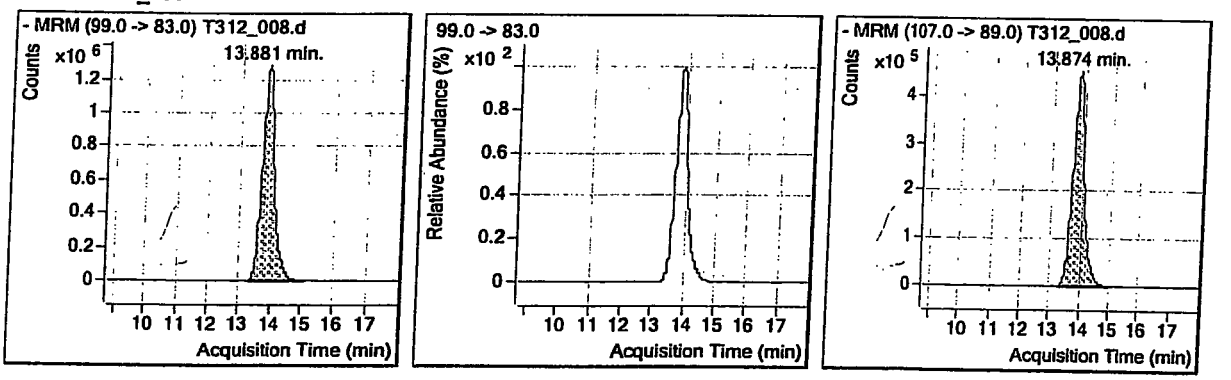
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_008.d	**Sample Name**	PERCHLORATE 0.010 ug/ml 08/27/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	19:25
ClientID	NA	**Inj Vol**	20

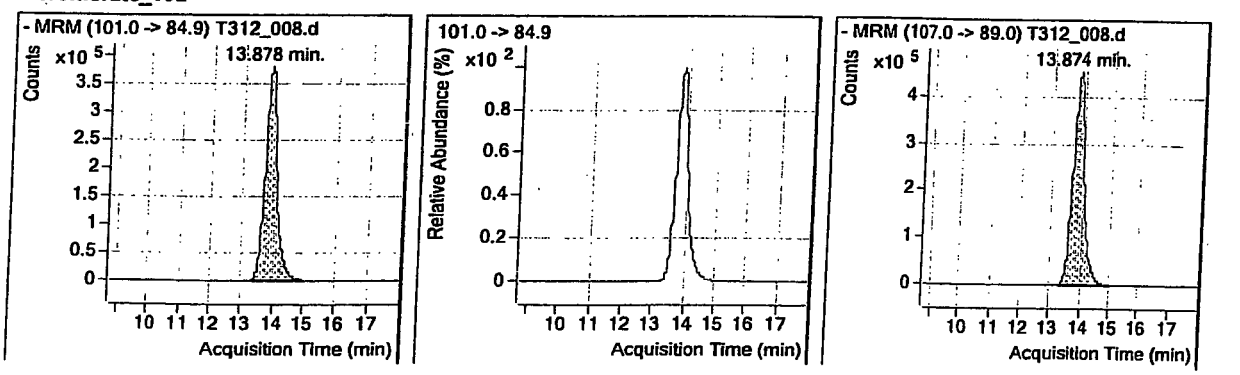


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.881	34223790	11973072
Perchlorate_102	PER_IS_108	13.878	9985270	11973072

Perchlorate_100



Perchlorate_102



SECOND SOURCE CALIBRATION VERIFICATION SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T312_010.d

	Date (s) of Analysis From:03/12/15 To:03/12/15 Time (s) of Analysis From:17:33 To:19:44				Date of Analysis: 03/12/15 Time of Analysis: 20:02 Standard Id: PER_SS (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.50	13.40	13.60	1.270255	13.94	1.418633	N	11.7
Perchlorate_85	13.54	13.44	13.64	0.391605	13.96	0.424457	N	8.4

ILE ID : TQCK1210.RFB

Data File ID: T312_010.d

Date Injected : 03/12/15

Time Injected : 20:02

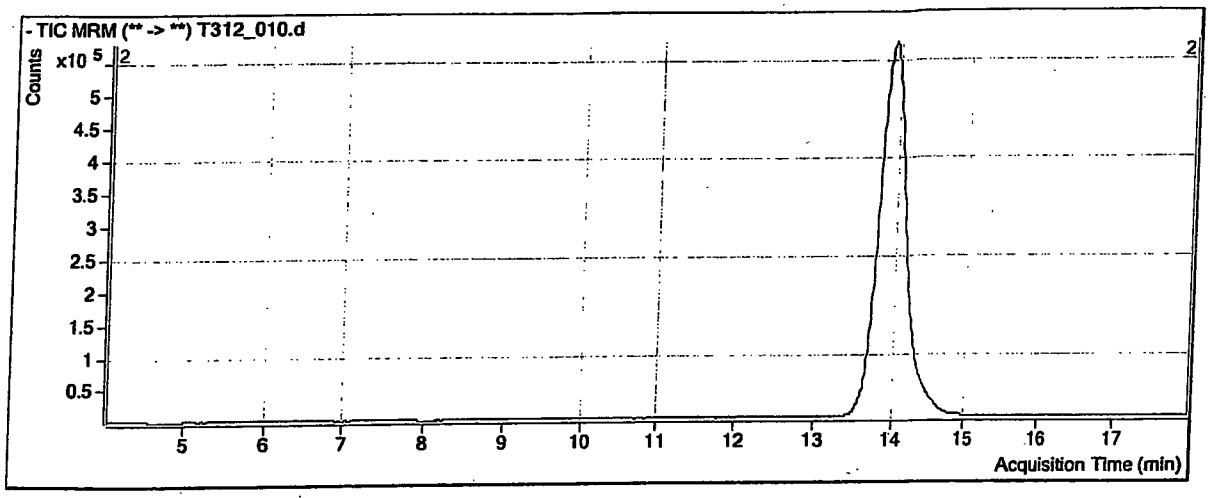
Sample ID : PER_SS 0.0004 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.946	12977621	PER_IS_89
13.942	1472839	Perchlorate_83
13.959	440675	Perchlorate_85

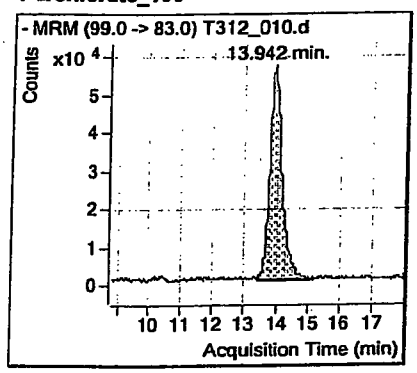
Quantitative Analysis Sample Report

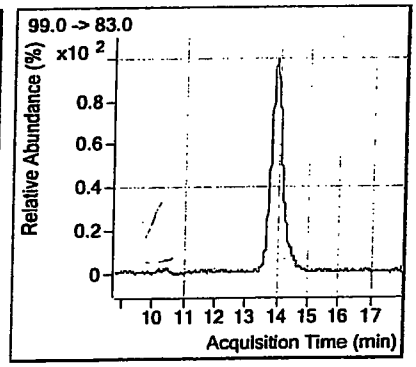
Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_010.d	**Sample Name**	PER_SS 0.0004 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	20:02
ClientID	NA	**Inj Vol**	20

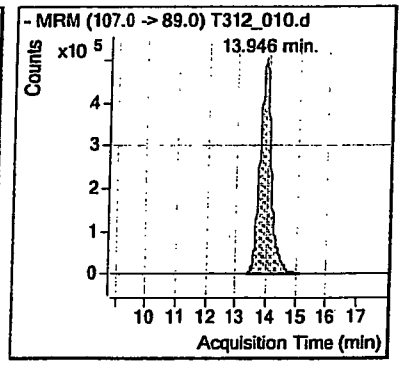


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.942	1472839	12977621
Perchlorate_102	PER_IS_108	13.959	440675	12977621

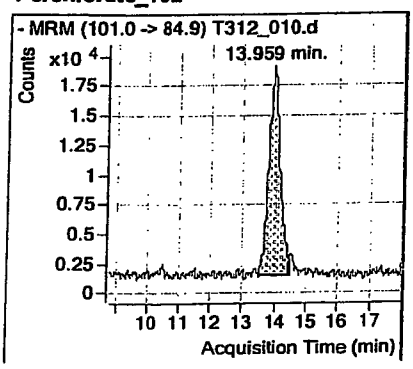
Perchlorate_100

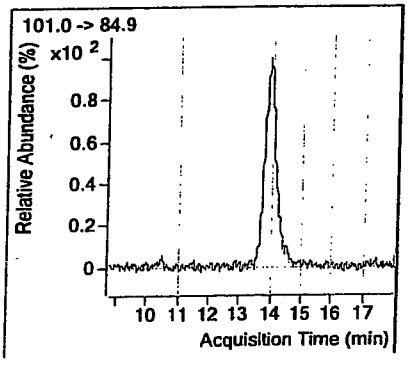


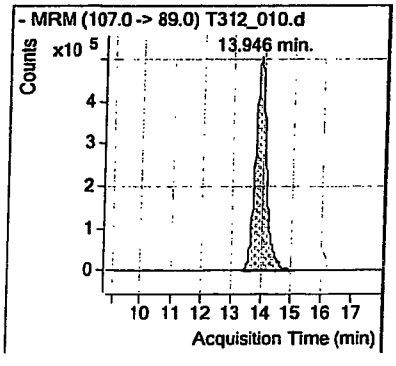




Perchlorate_102







SECOND SOURCE CALIBRATION VERIFICATION SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T312_011.d

	Date (s) of Analysis From:03/12/15 To:03/12/15 Time (s) of Analysis From:17:33 To:19:44				Date of Analysis: 03/12/15 Time of Analysis: 20:21 Standard Id: PER_SS (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.50	13.40	13.60	1.270255	14.01	1.358201	N	6.9
Perchlorate_85	13.54	13.44	13.64	0.391605	14.00	0.404148	N	3.2

FILE ID : TQCK1211.RFB

Data File ID: T312_011.d

Date Injected : 03/12/15

Time Injected : 20:21

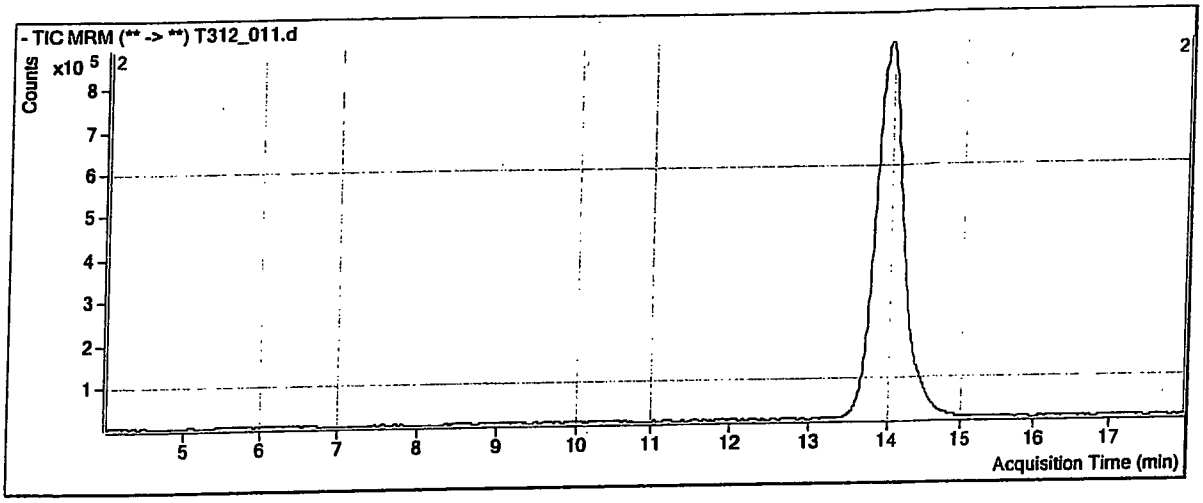
Sample ID : PER_SS 0.002 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.976	13747369	PER_IS_89
14.014	7468678	Perchlorate_83
14.000	2222387	Perchlorate_85

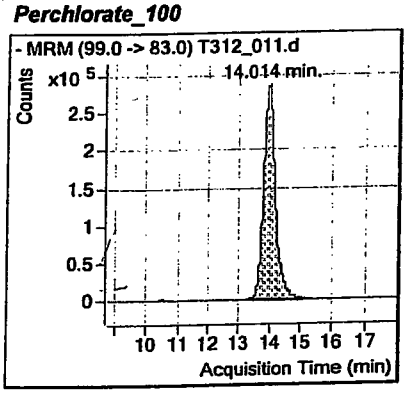
Quantitative Analysis Sample Report

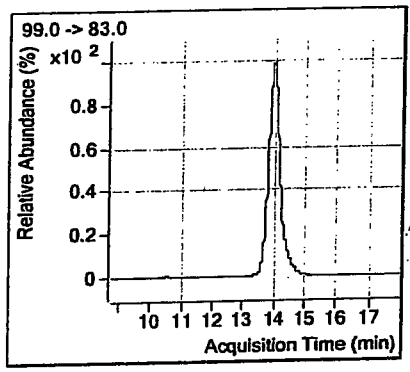
Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_011.d	**Sample Name**	PER_SS 0.002 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	20:21
ClientID	NA	**Inj Vol**	20

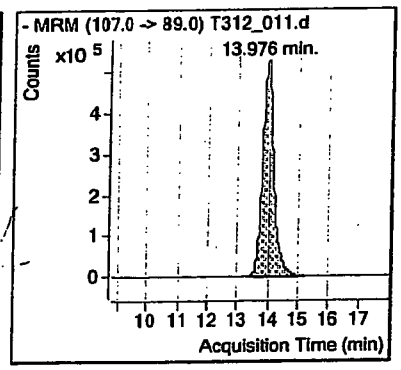


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	14.014	7468678	13747369
Perchlorate_102	PER_IS_108	14.000	2222387	13747369

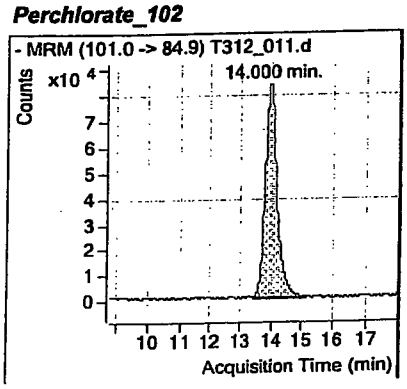
Perchlorate_100

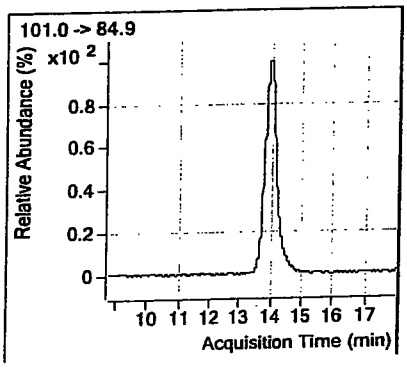


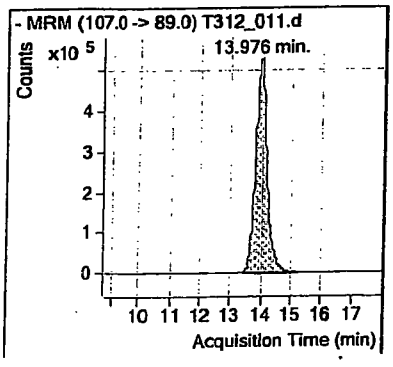




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T312_013.d

	Date (s) of Analysis From:03/12/15 To:03/12/15 Time (s) of Analysis From:17:33 To:20:40				Date of Analysis: 03/12/15 Time of Analysis: 20:58 Standard Id: PER_CCV_1 (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.50	13.40	13.60	1.270255	14.10	1.285147	N	1.2
Perchlorate_85	13.54	13.44	13.64	0.391605	14.14	0.416428	N	6.3

ILE ID : TQCK1213.RFB

Data File ID: T312_013.d

Date Injected : 03/12/15

Time Injected : 20:58

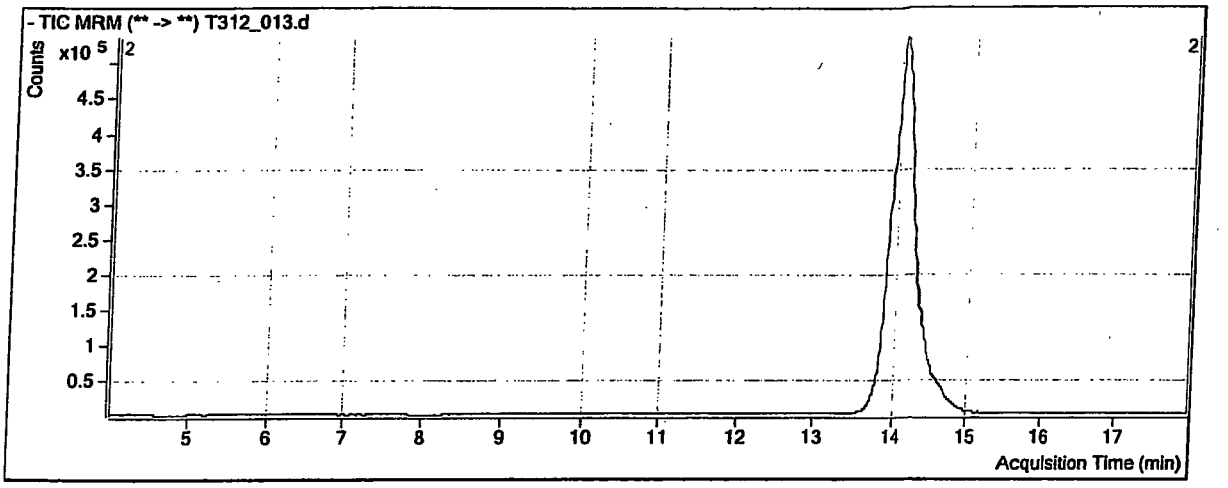
Sample ID : PER_CCV_1 0.0004 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
14.109	12323795	PER_IS_89
14.105	1267031	Perchlorate_83
14.143	410558	Perchlorate_85

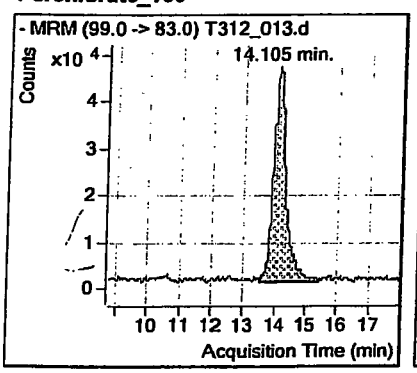
Quantitative Analysis Sample Report

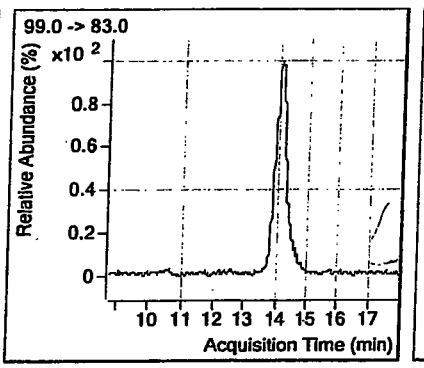
Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_013.d	**Sample Name**	PER_CCV_1 0.0004 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	20:58
ClientID	NA	**Inj Vol**	20

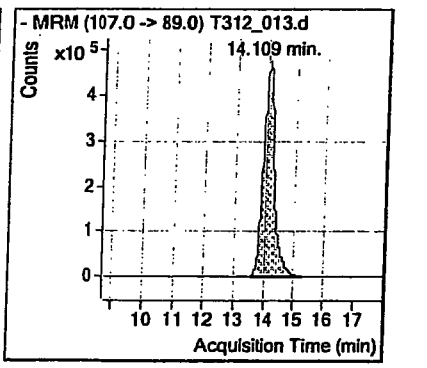


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	14.105	1267031	12323795
Perchlorate_102	PER_IS_108	14.143	410558	12323795

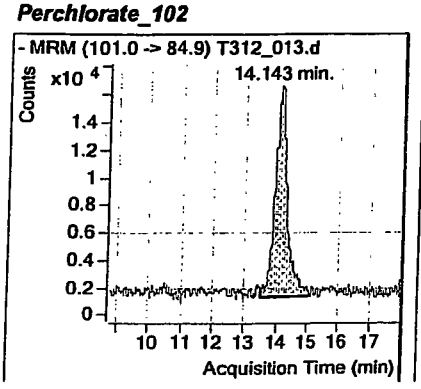
Perchlorate_100

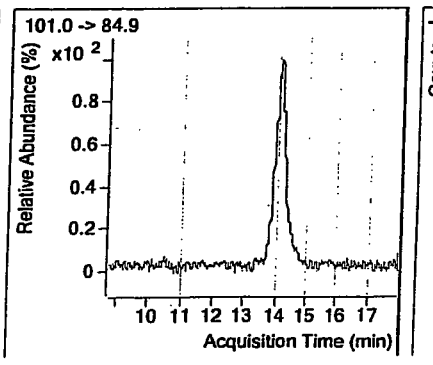


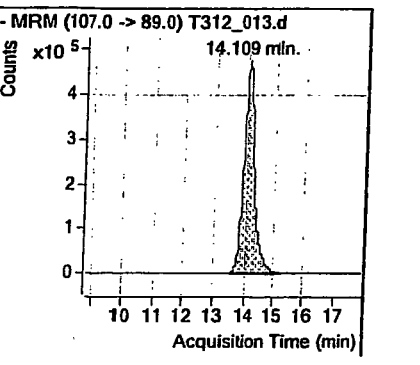




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T312_014.d

	Date (s) of Analysis From:03/12/15 To:03/12/15 Time (s) of Analysis From:17:33 To:20:40				Date of Analysis: 03/12/15 Time of Analysis: 21:17 Standard Id: PER_CCV_1 (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.50	13.40	13.60	1.270255	14.15	1.271875	N	0.1
Perchlorate_85	13.54	13.44	13.64	0.391605	14.12	0.385509	N	1.6

ILE ID : TQCK1214.RFB

Data File ID: T312_014.d

Date Injected : 03/12/15

Time Injected : 21:17

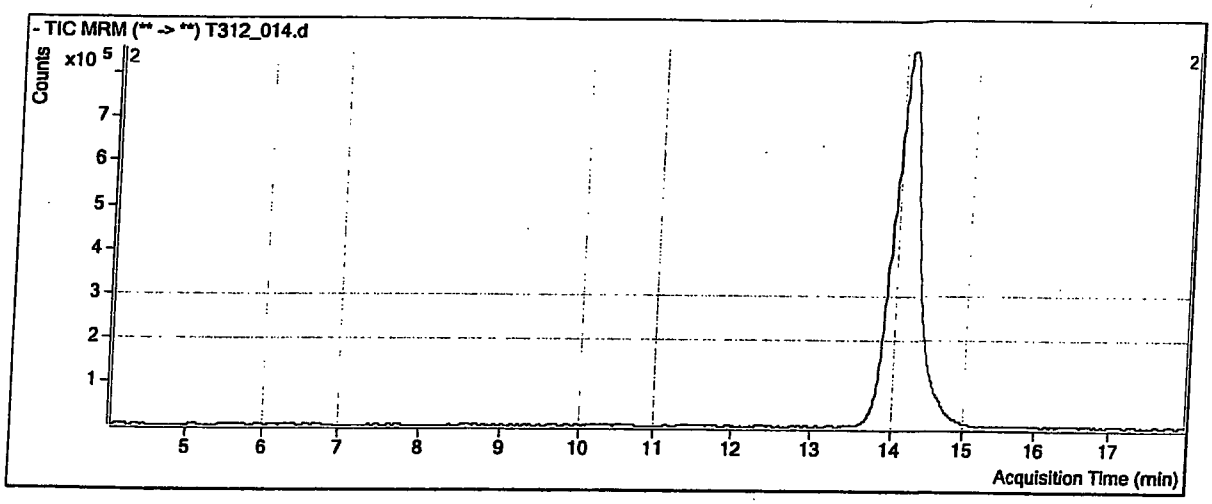
Sample ID : PER_CCV_1 0.002 ug/ml 11/11/14

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
14.139	13576634	PER_IS_89
14.146	6907110	Perchlorate_83
14.122	2093567	Perchlorate_85

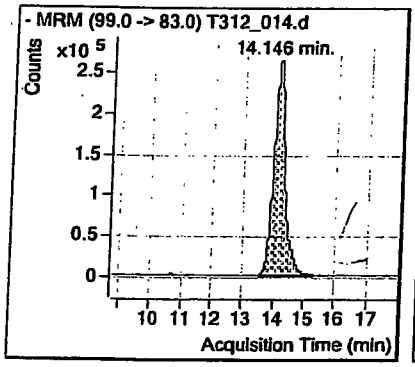
Quantitative Analysis Sample Report

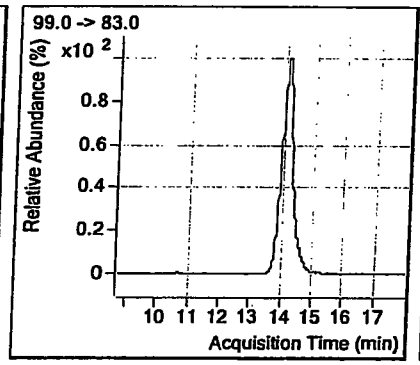
Batch Data Path	D:\MassHunter\Data\150312\QuantResults\150312_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T312_014.d	**Sample Name**	PER_CCV_1 0.002 ug/ml 11/11/14
Sample Type	Sample	**Acq_Date**	03/12/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	21:17
ClientID	NA	**Inj Vol**	20

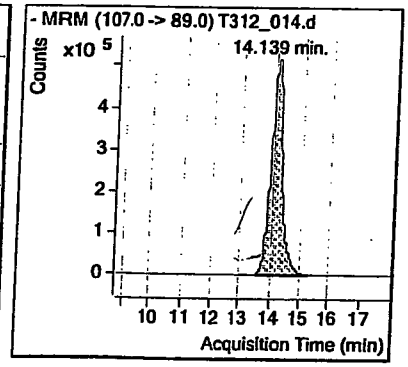


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	14.146	6907110	13576634
Perchlorate_102	PER_IS_108	14.122	2093567	13576634

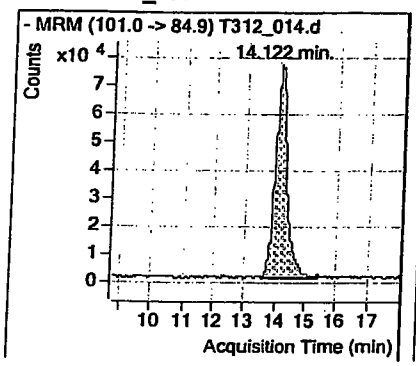
Perchlorate_100

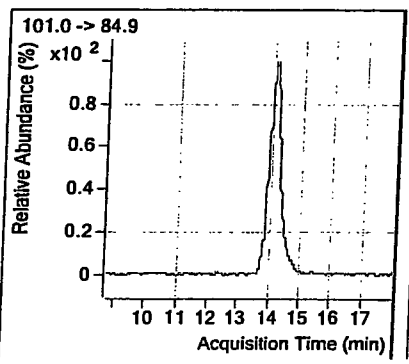


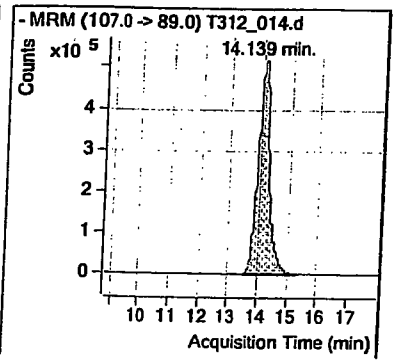




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T523_002.d

	Date (s) of Analysis From:03/12/15 To:05/23/15 Time (s) of Analysis From:17:52 To:15:20				Date of Analysis: 05/23/15 Time of Analysis: 15:38 Standard Id: PER_CCV (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	12.97	1.366179	N	7.6
Perchlorate_85	13.70	13.60	13.80	0.391605	12.98	0.499345	N	27.5

FILE ID : TQCK2302.RFB

Data File ID: T523_002.d

Date Injected : 05/23/15

Time Injected : 15:38

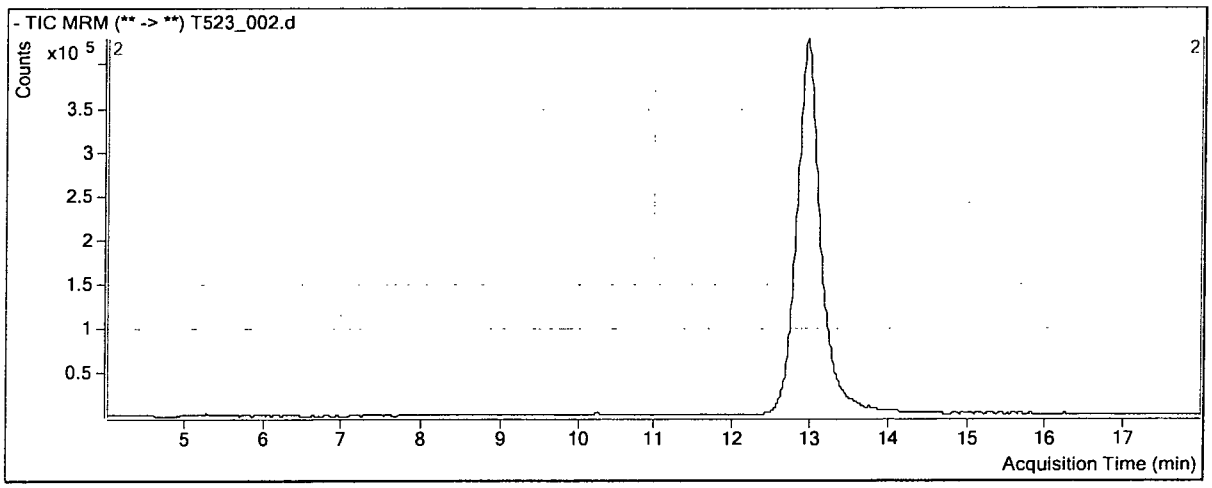
Sample ID : PER_CCV 0.0004 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.957	7841423	PER_IS_89
12.974	857023	Perchlorate_83
12.981	313246	Perchlorate_85

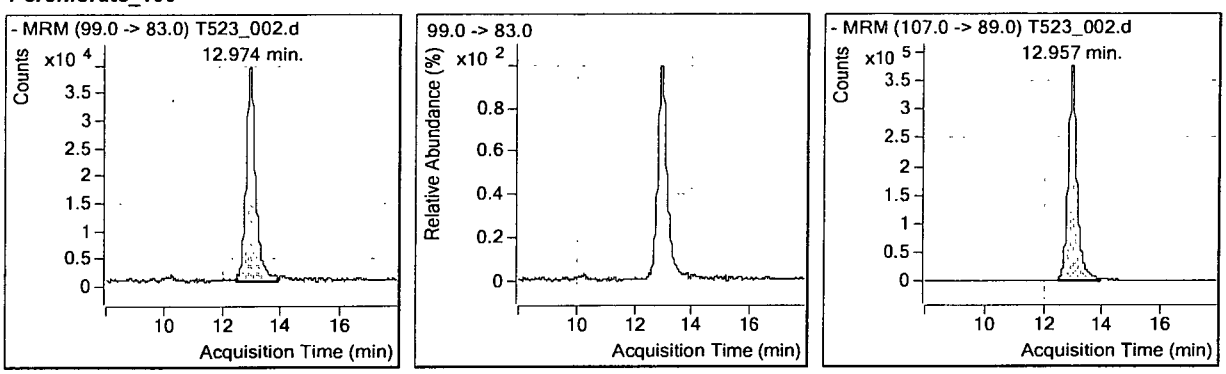
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_002.d	**Sample Name**	PER_CCV 0.0004 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	15:38
ClientID	NA	**Inj Vol**	20

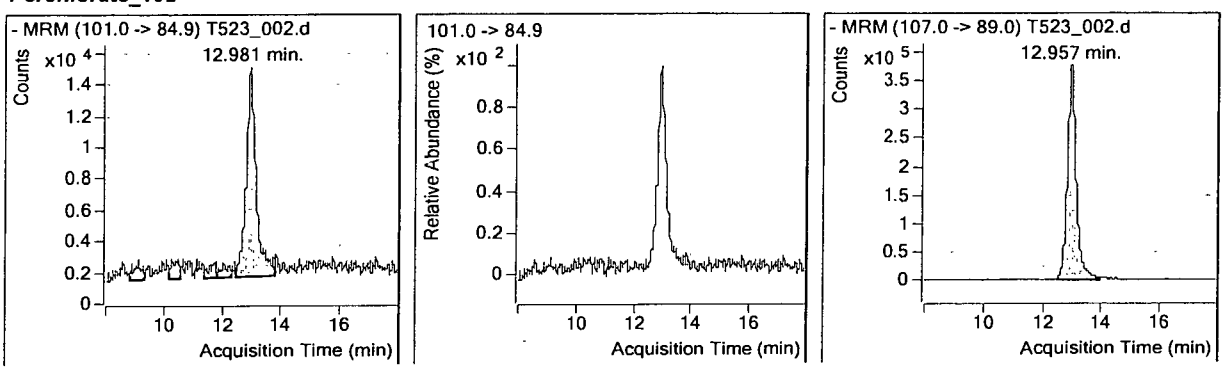


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.974	857023	7841423
Perchlorate_102	PER_IS_108	12.981	313246	7841423

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T523_003.d

	Date (s) of Analysis From:03/12/15 To:05/23/15 Time (s) of Analysis From:17:52 To:15:20				Date of Analysis: 05/23/15 Time of Analysis: 15:57 Standard Id: PER_CCV (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.13	1.168712	N	8.0
Perchlorate_85	13.70	13.60	13.80	0.391605	13.13	0.357237	N	8.8

FILE ID : TQCK2303.RFB

Data File ID: T523_003.d

Date Injected : 05/23/15

Time Injected : 15:57

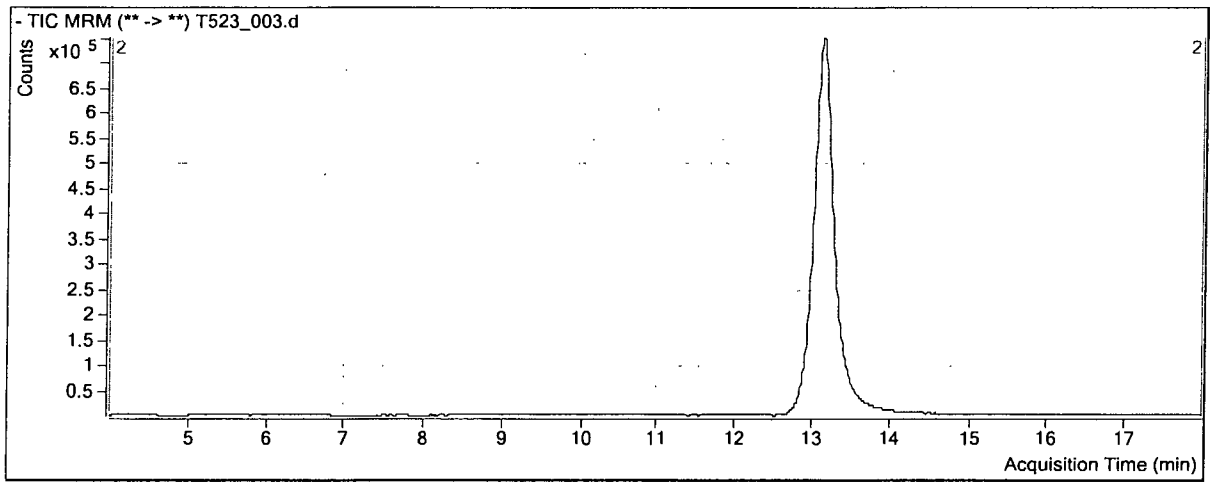
Sample ID : PER_CCV 0.002 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.13	8764619	PER_IS_89
13.127	4097326	Perchlorate_83
13.134	1252418	Perchlorate_85

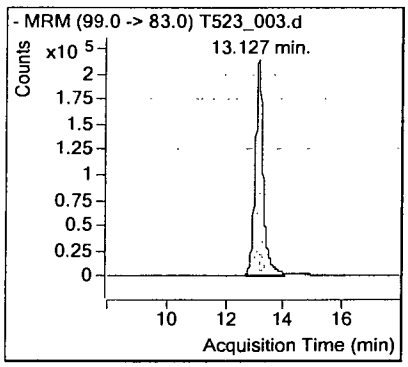
Quantitative Analysis Sample Report

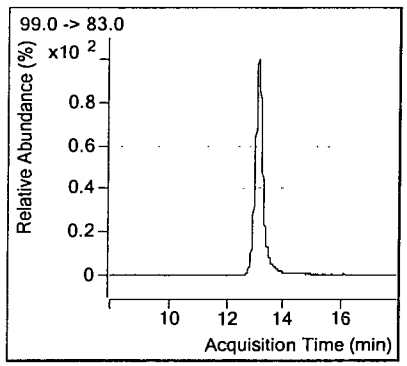
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_003.d	**Sample Name**	PER_CCV 0.002 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	15:57
ClientID	NA	**Inj Vol**	20

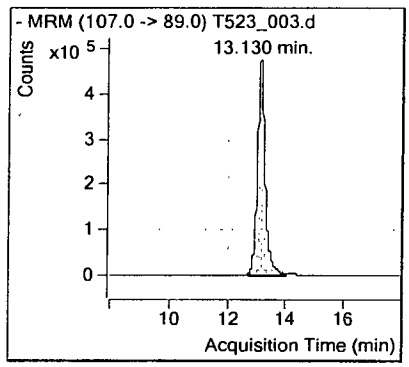


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.127	4097326	8764619
Perchlorate_102	PER_IS_108	13.134	1252418	8764619

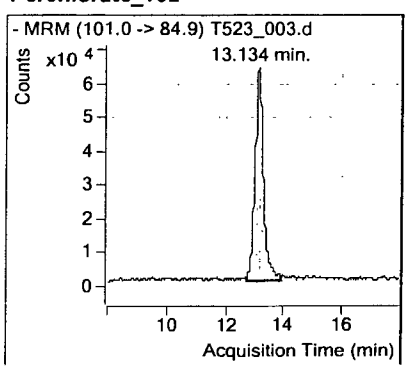
Perchlorate_100

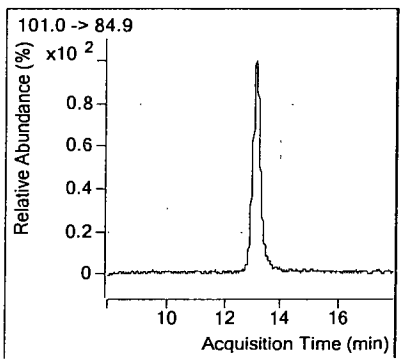


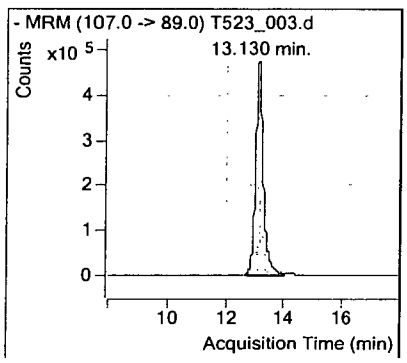




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T523_016.d

	Date (s) of Analysis From:03/12/15 To:05/23/15 Time (s) of Analysis From:17:52 To:19:36				Date of Analysis: 05/23/15 Time of Analysis: 20:13 Standard Id: PER_CCV (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.30	1.365879	N	7.5
Perchlorate_85	13.70	13.60	13.80	0.391605	13.26	0.452744	N	15.6

FILE ID : TQCK2316.RFB

Data File ID: T523_016.d

Date Injected : 05/23/15

Time Injected : 20:13

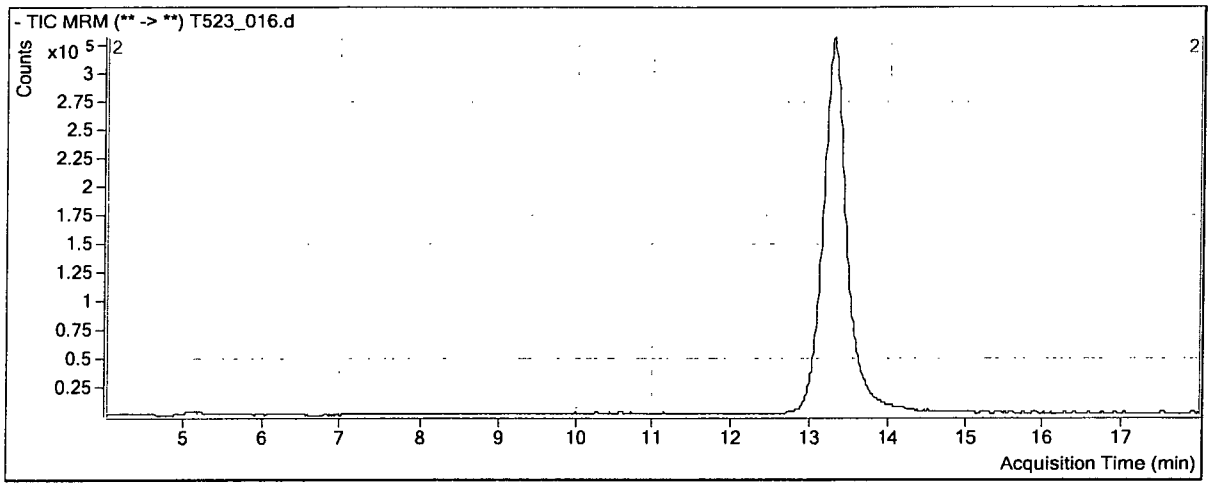
Sample ID : PER_CCV 0.0004 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.294	5972858	PER_IS_89
13.3	652656	Perchlorate_83
13.256	216334	Perchlorate_85

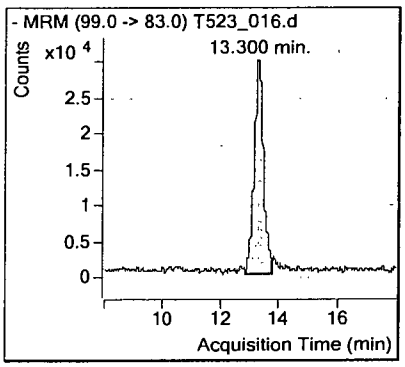
Quantitative Analysis Sample Report

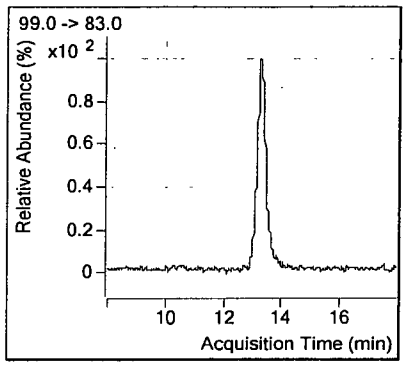
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_016.d	**Sample Name**	PER_CCV 0.0004 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	20:13
ClientID	NA	**Inj Vol**	20

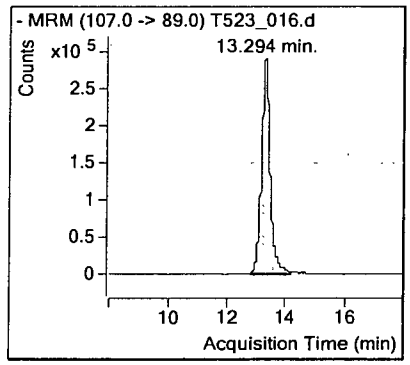


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.300	652656	5972858
Perchlorate_102	PER_IS_108	13.256	216334	5972858

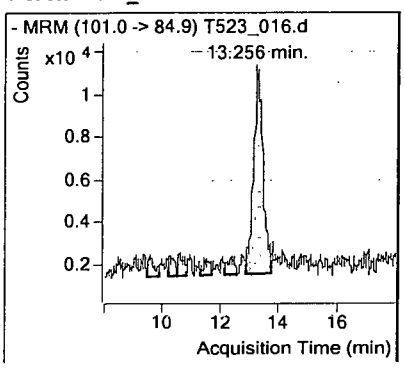
Perchlorate_100

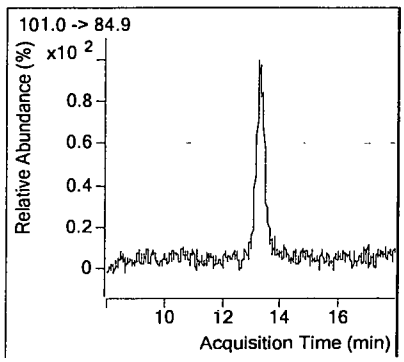


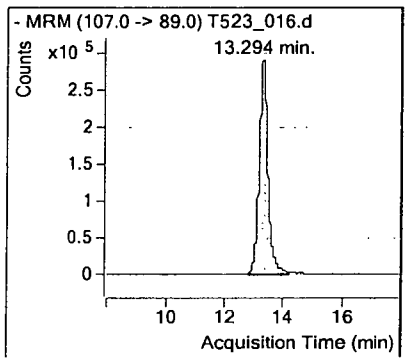




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T523_017.d

	Date (s) of Analysis From:03/12/15 To:05/23/15 Time (s) of Analysis From:17:52 To:19:36				Date of Analysis: 05/23/15 Time of Analysis: 20:32 Standard Id: PER_CCV (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.42	1.183233	N	6.9
Perchlorate_85	13.70	13.60	13.80	0.391605	13.40	0.374616	N	4.3

FILE ID : TQCK2317.RFB

Data File ID: T523_017.d

Date Injected : 05/23/15

Time Injected : 20:32

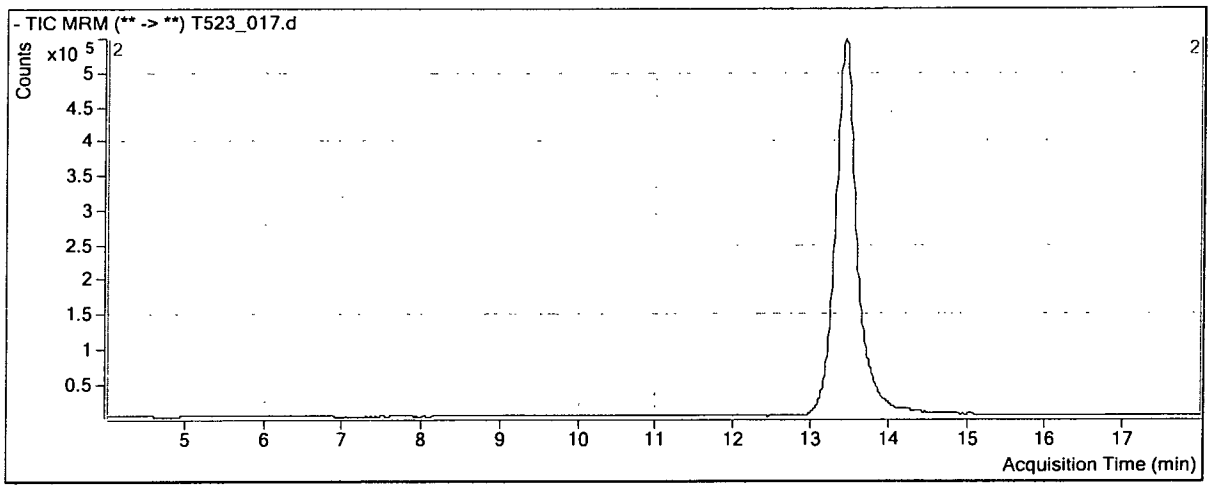
Sample ID : PER_CCV 0.002 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.416	6513163	PER_IS_89
13.423	3082637	Perchlorate_83
13.399	975975	Perchlorate_85

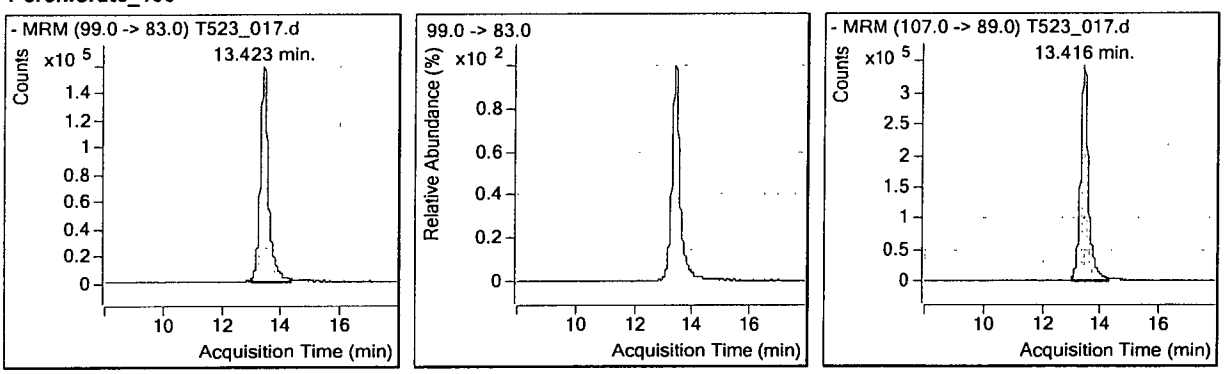
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_017.d	**Sample Name**	PER_CCV 0.002 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	20:32
ClientID	NA	**Inj Vol**	20

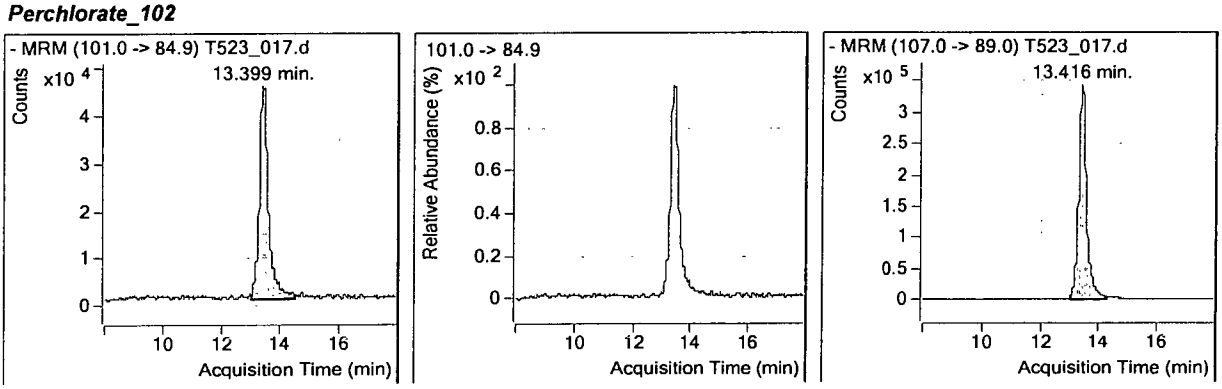


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.423	3082637	6513163
Perchlorate_102	PER_IS_108	13.399	975975	6513163

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T523_030.d

	Date (s) of Analysis From:03/12/15 To:05/23/15 Time (s) of Analysis From:17:52 To:23:57				Date of Analysis: 05/24/15 Time of Analysis: 0:34 Standard Id: PER_CCV (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.80	1.444680	N	13.7
Perchlorate_85	13.70	13.60	13.80	0.391605	13.82	0.469797	N	20.0

FILE ID : TQCK2330.RFB

Data File ID: T523_030.d

Date Injected : 05/24/15

Time Injected : 0:34

Sample ID : PER_CCV 0.0004 ug/ml 05/07/15

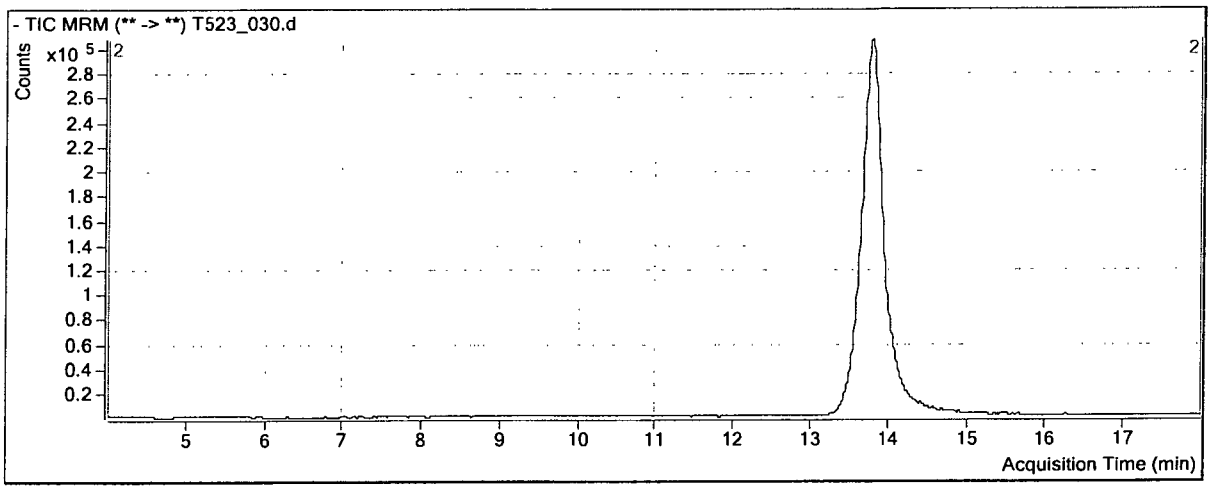
Client ID : NA

Retention Time		Area Count Response	Compound_ID Product Ion
13.783		5763820	PER_IS_89
13.8		666150	Perchlorate_83
13.817	*	216626	Perchlorate_85

* MANUAL INTEGRAION

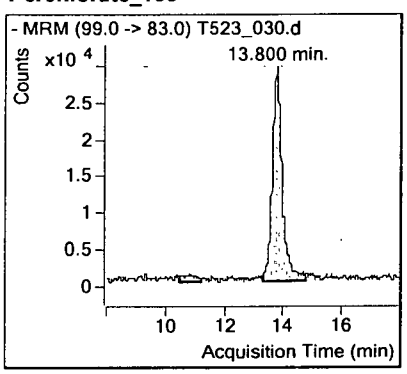
Quantitative Analysis Sample Report

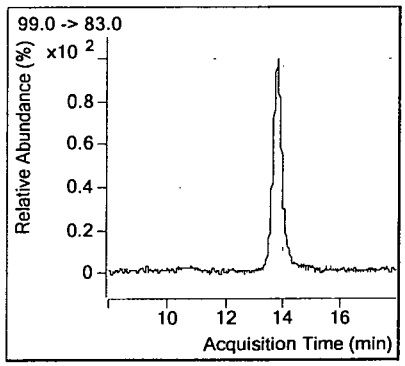
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_030.d	**Sample Name**	PER_CCV 0.0004 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	0:34
ClientID	NA	**Inj Vol**	20

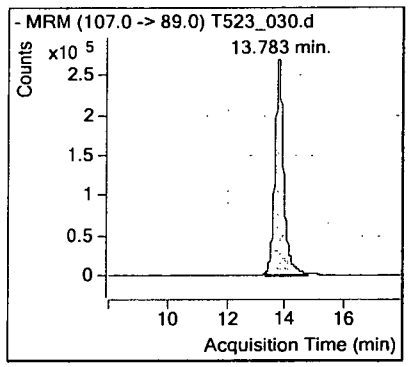


Compound	ISTD		RT	Resp	ISTD Resp	
Perchlorate_100	PER_IS_108		13.800	666150	5763820	
Perchlorate_102	PER_IS_108	*	13.817	216626	5763820	* MANUAL INT

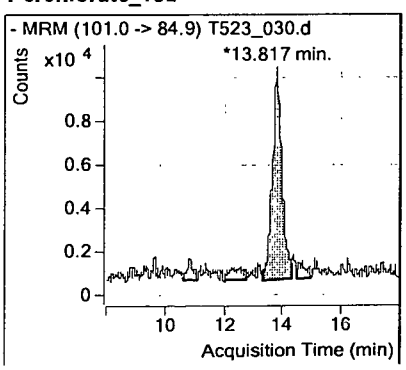
Perchlorate_100

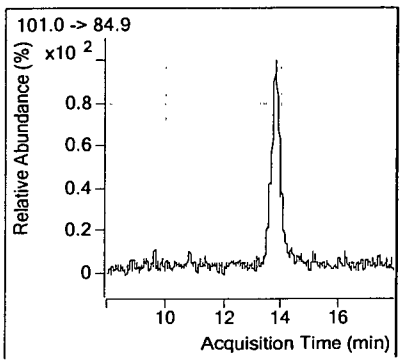


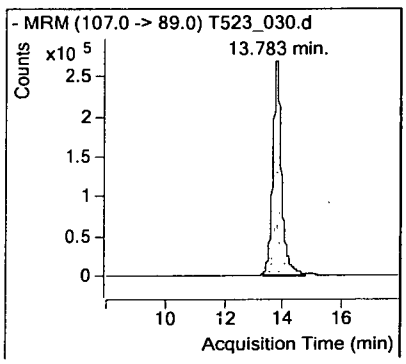


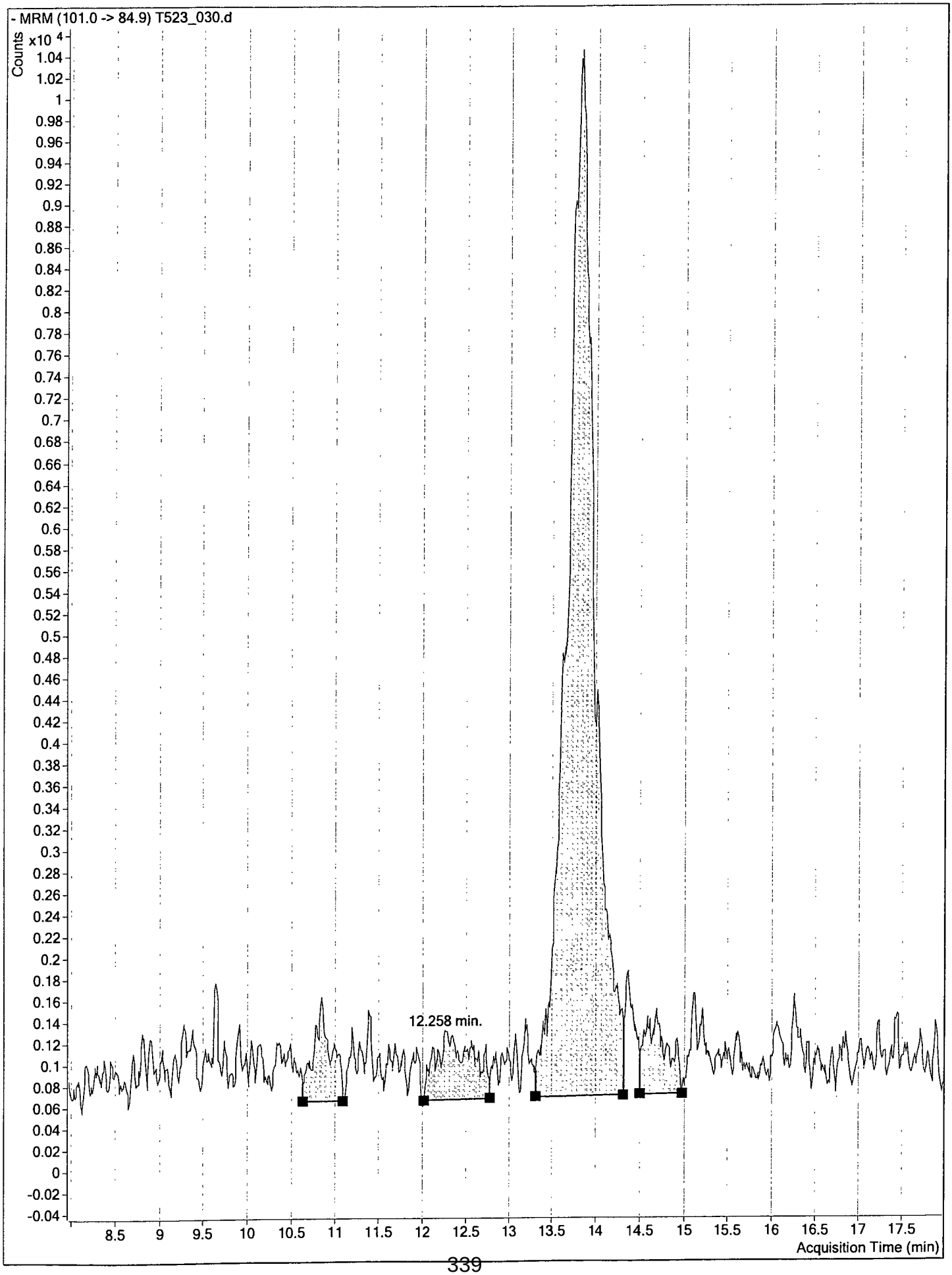


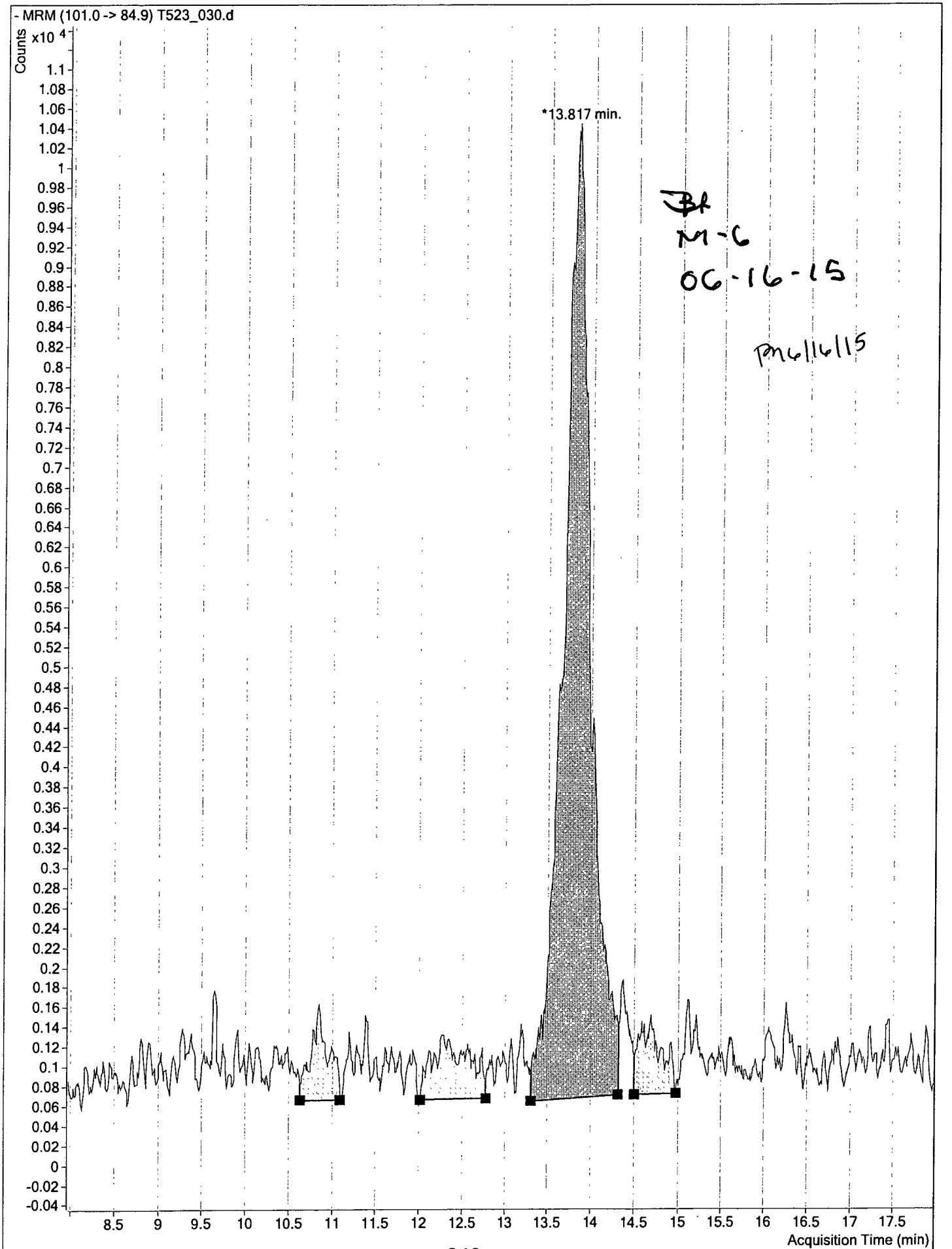
Perchlorate_102








- MRM (101.0 -> 84.9) T523_030.d
Counts
x10 4
1.04
1.02
1
0.98
0.96
0.94
0.92
0.9
0.88
0.86
0.84
0.82
0.8
0.78
0.76
0.74
0.72
0.7
0.68
0.66
0.64
0.62
0.6
0.58
0.56
0.54
0.52
0.5
0.48
0.46
0.44
0.42
0.4
0.38
0.36
0.34
0.32
0.3
0.28
0.26
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
12.258 min.
8.5
9
9.5
10
10.5
11
11.5
12
12.5
13
13.5
14
14.5
15
15.5
16
16.5
17
17.5
Acquisition Time (min)


- MRM (101.0 -> 84.9) T523_030.d
Counts
x10 4
*13.817 min.
Acquisition Time (min)

CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T523_031.d

	Date (s) of Analysis From:03/12/15 To:05/23/15 Time (s) of Analysis From:17:52 To:23:57				Date of Analysis: 05/24/15 Time of Analysis: 0:53 Standard Id: PER_CCV (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.90	1.166527	N	8.2
Perchlorate_85	13.70	13.60	13.80	0.391605	13.90	0.357580	N	8.7

FILE ID : TQCK2331.RFB

Data File ID: T523_031.d

Date Injected : 05/24/15

Time Injected : 0:53

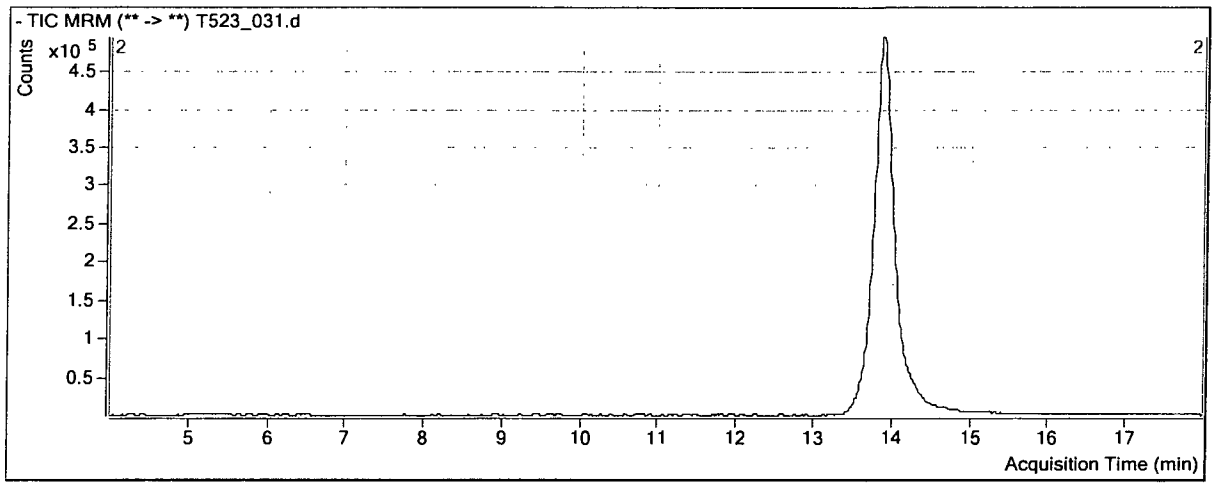
Sample ID : PER_CCV 0.002 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.864	6154538	PER_IS_89
13.902	2871773	Perchlorate_83
13.898	880296	Perchlorate_85

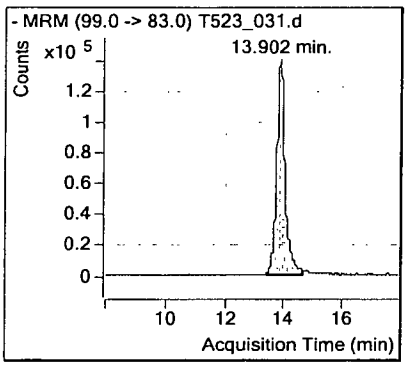
Quantitative Analysis Sample Report

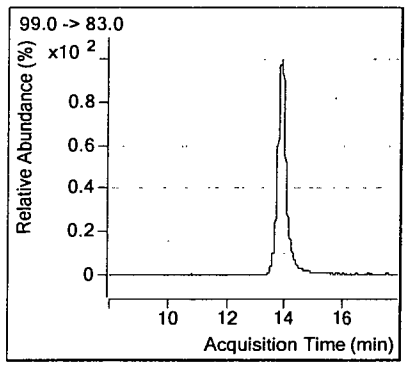
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_031.d	**Sample Name**	PER_CCV 0.002 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	0:53
ClientID	NA	**Inj Vol**	20

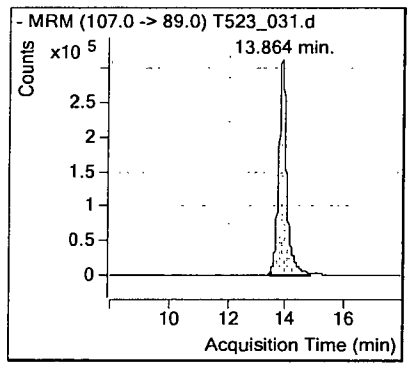


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.902	2871773	6154538
Perchlorate_102	PER_IS_108	13.898	880296	6154538

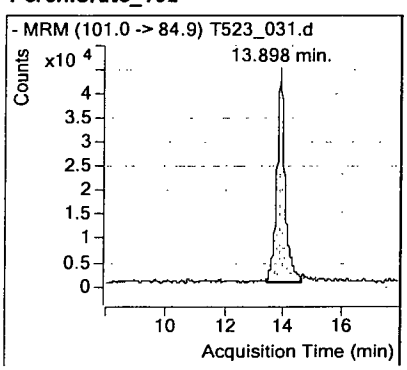
Perchlorate_100

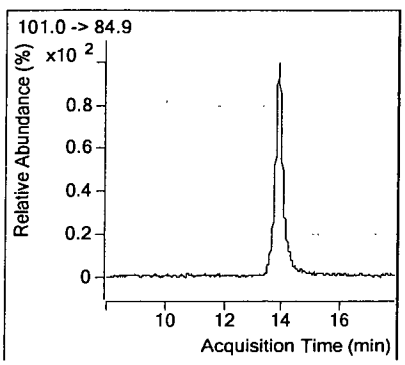


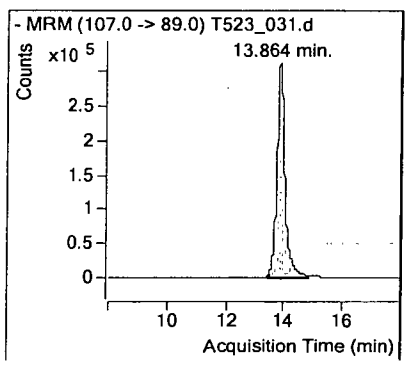




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T524_002.d

	Date (s) of Analysis From:03/12/15 To:05/24/15 Time (s) of Analysis From:17:52 To:13:56				Date of Analysis: 05/24/15 Time of Analysis: 14:14 Standard Id: PER_CCV (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.03	1.366348	N	7.6
Perchlorate_85	13.70	13.60	13.80	0.391605	13.07	0.382838	N	2.2

FILE ID : TQCK2402.RFB

Data File ID: T524_002.d

Date Injected : 05/24/15

Time Injected : 14:14

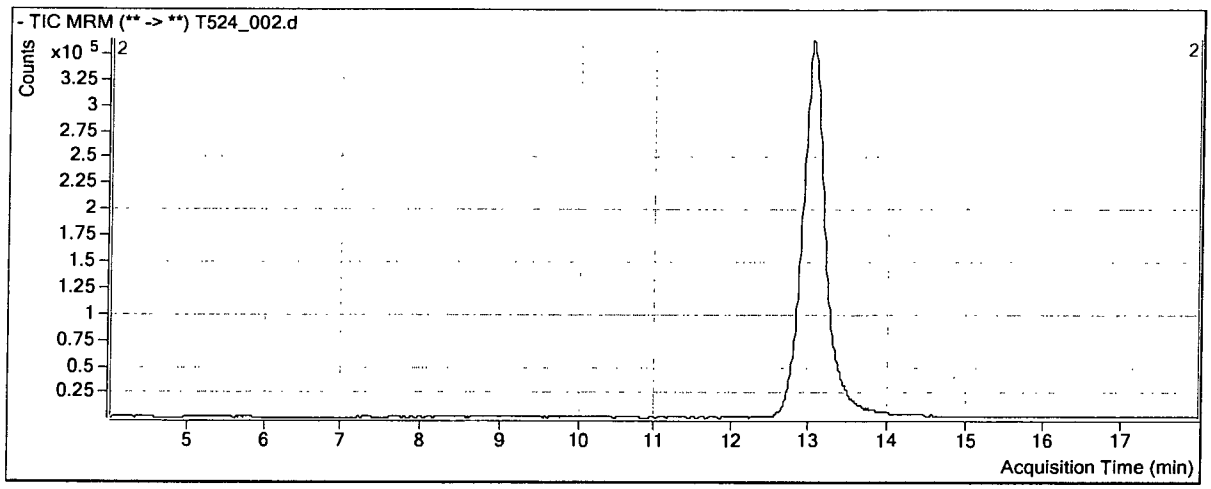
Sample ID : PER_CCV 0.0004 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.039	6449100	PER_IS_89
13.035	704937	Perchlorate_83
13.073	197517	Perchlorate_85

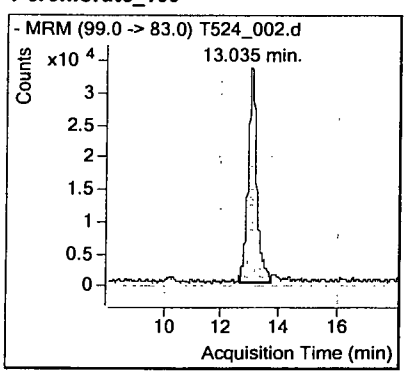
Quantitative Analysis Sample Report

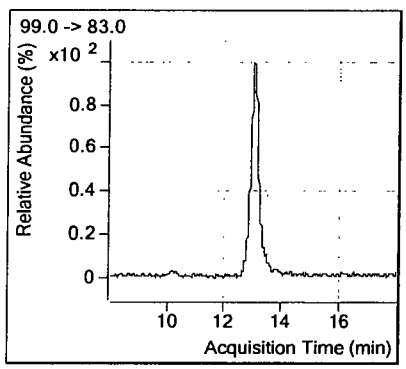
Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_002.d	**Sample Name**	PER_CCV 0.0004 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	14:14
ClientID	NA	**Inj Vol**	20

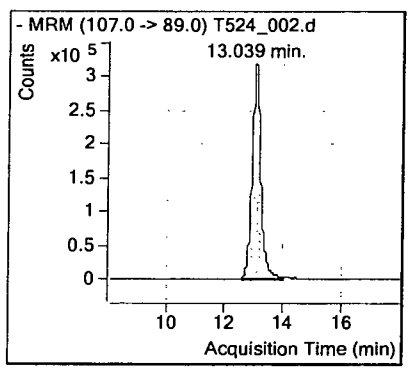


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.035	704937	6449100
Perchlorate_102	PER_IS_108	13.073	197517	6449100

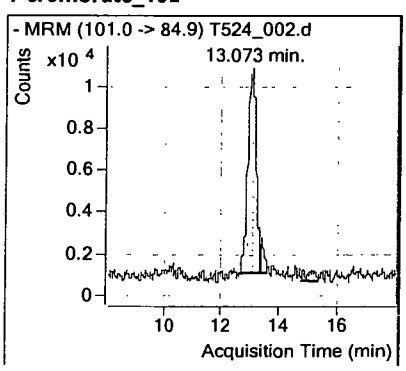
Perchlorate_100

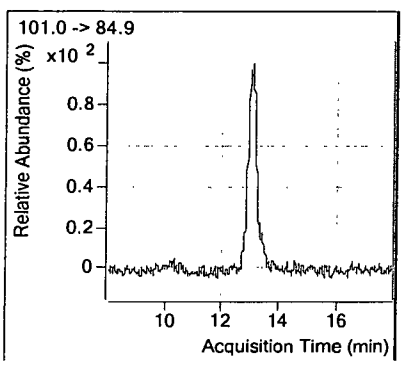


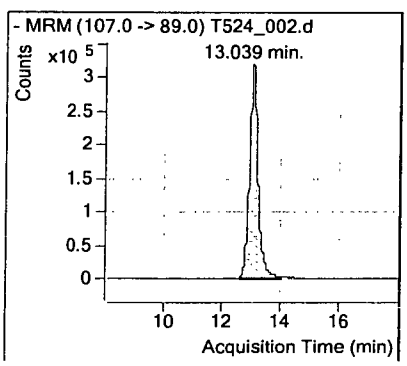




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T524_003.d

	Date (s) of Analysis From:03/12/15 To:05/24/15 Time (s) of Analysis From:17:52 To:13:56				Date of Analysis: 05/24/15 Time of Analysis: 14:33 Standard Id: PER CCV (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.11	1.160988	N	8.6
Perchlorate_85	13.70	13.60	13.80	0.391605	13.08	0.361188	N	7.8

FILE ID : TQCK2403.RFB

Data File ID: T524_003.d

Date Injected : 05/24/15

Time Injected : 14:33

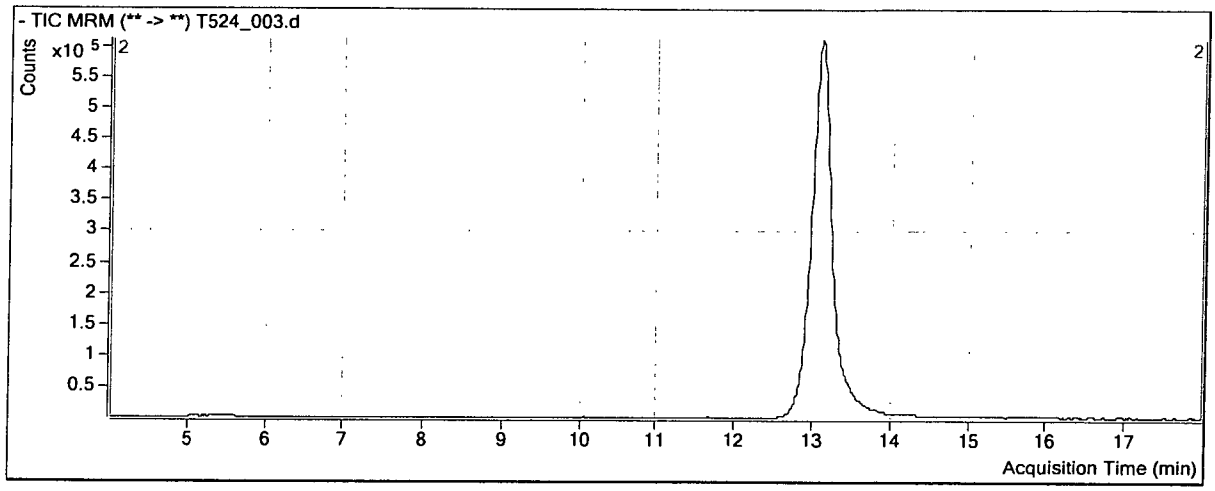
Sample ID : PER_CCV 0.002 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.09	7069813	PER_IS_89
13.107	3283186	Perchlorate_83
13.083	1021413	Perchlorate_85

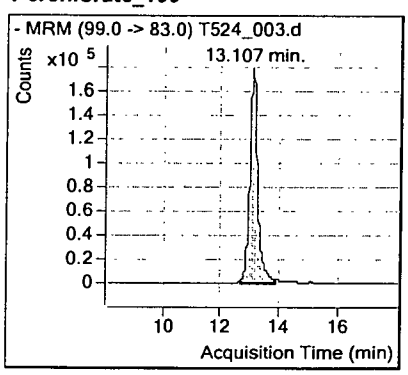
Quantitative Analysis Sample Report

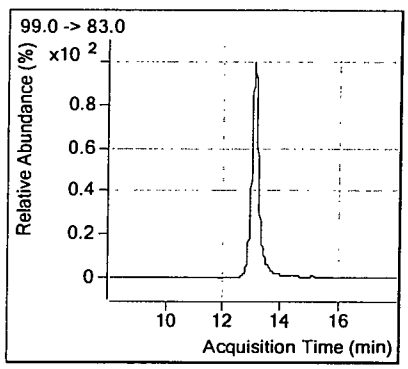
Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_003.d	**Sample Name**	PER_CCV 0.002 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	14:33
ClientID	NA	**Inj Vol**	20

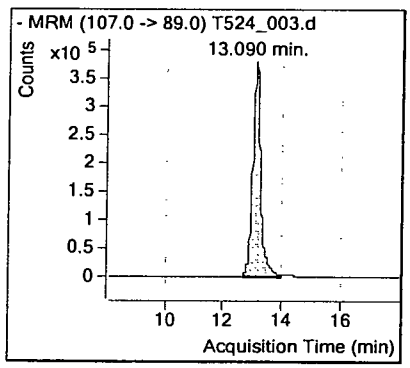


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.107	3283186	7069813
Perchlorate_102	PER_IS_108	13.083	1021413	7069813

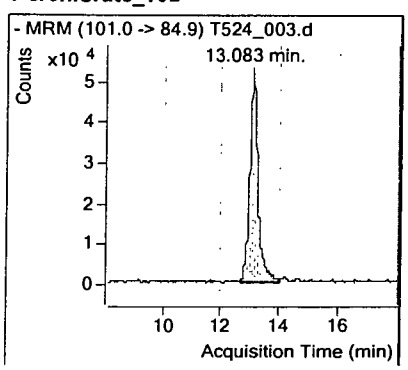
Perchlorate_100

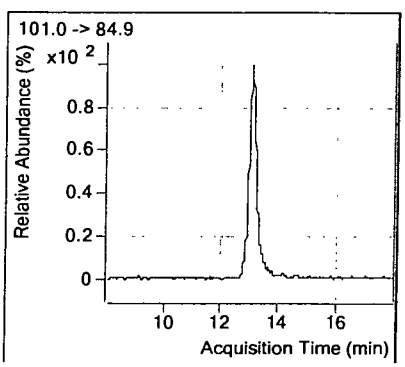


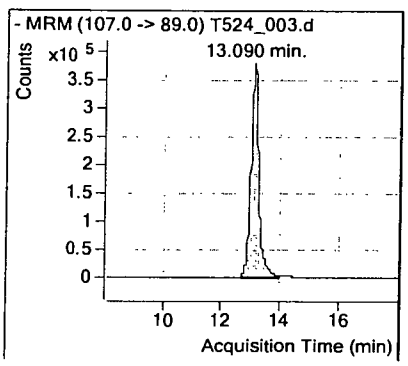




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T524_016.d

	Date (s) of Analysis From:03/12/15 To:05/24/15 Time (s) of Analysis From:17:52 To:18:05				Date of Analysis: 05/24/15 Time of Analysis: 18:42 Standard Id: PER_CCV (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.01	1.394952	N	9.8
Perchlorate_85	13.70	13.60	13.80	0.391605	12.99	0.444330	N	13.5

FILE ID : TQCK2416.RFB

Data File ID: T524_016.d

Date Injected : 05/24/15

Time Injected : 18:42

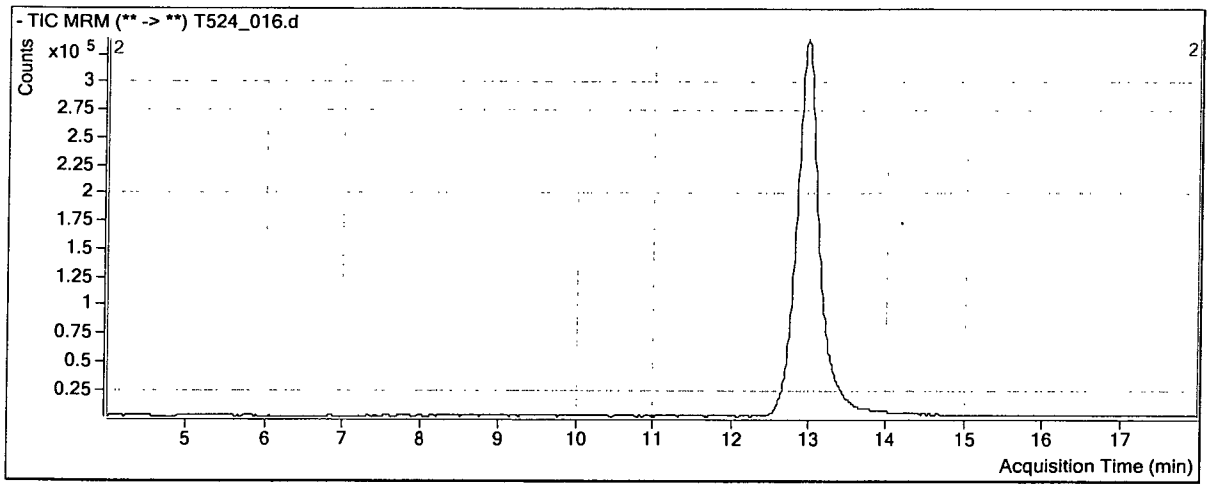
Sample ID : PER_CCV 0.0004 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.967	6085038	PER_IS_89
13.005	679067	Perchlorate_83
12.991	216301	Perchlorate_85

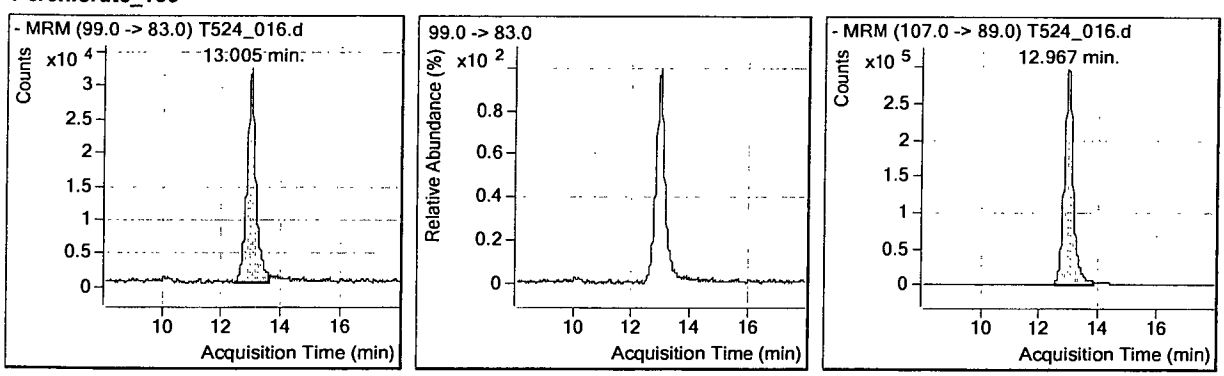
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_016.d	**Sample Name**	PER_CCV 0.0004 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	18:42
ClientID	NA	**Inj Vol**	20

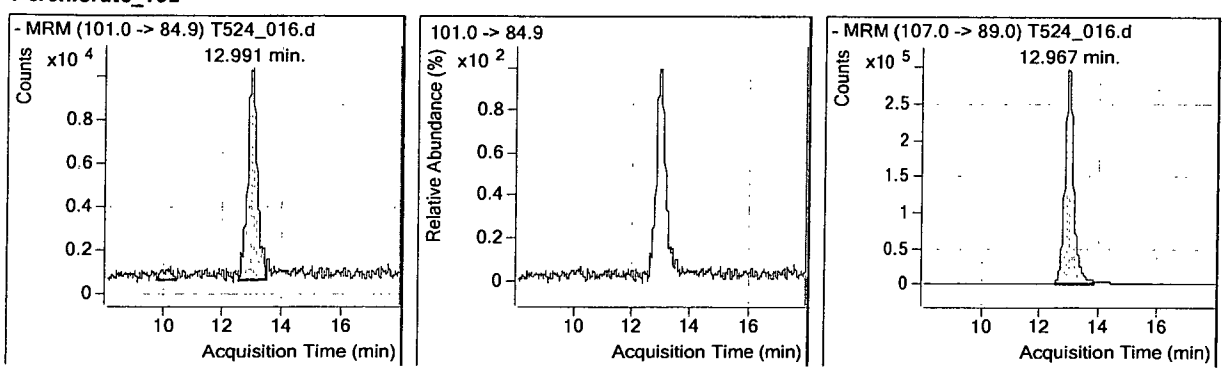


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.005	679067	6085038
Perchlorate_102	PER_IS_108	12.991	216301	6085038

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T524_017.d

	Date (s) of Analysis From:03/12/15 To:05/24/15 Time (s) of Analysis From:17:52 To:18:05				Date of Analysis: 05/24/15 Time of Analysis: 19:01 Standard Id: PER_CCV (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.07	1.174185	N	7.6
Perchlorate_85	13.70	13.60	13.80	0.391605	13.07	0.351498	N	10.2

FILE ID : TQCK2417.RFB

Data File ID: T524_017.d

Date Injected : 05/24/15

Time Injected : 19:01

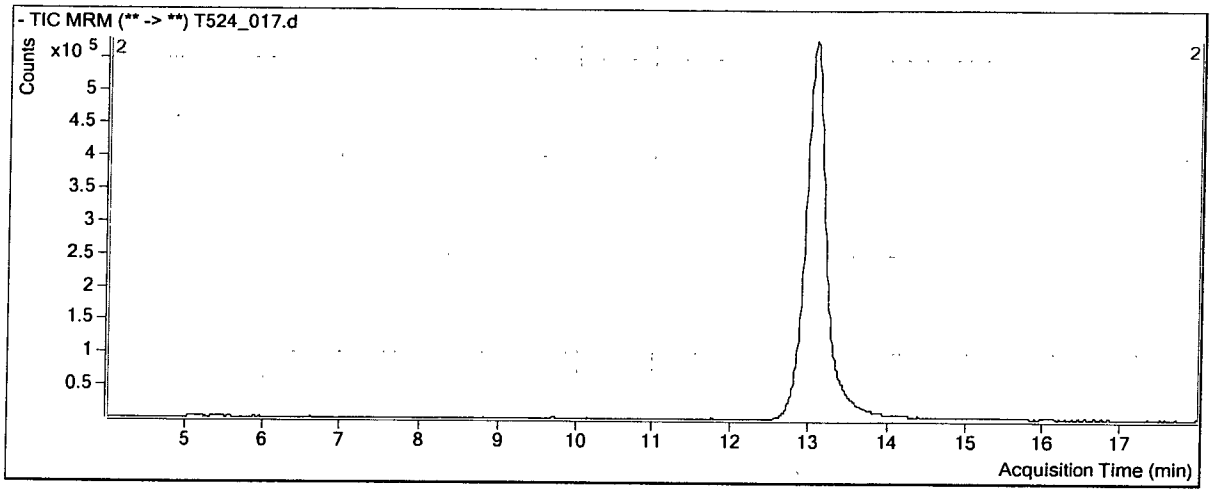
Sample ID : PER_CCV 0.002 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.069	6666617	PER_IS_89
13.066	3131136	Perchlorate_83
13.073	937320	Perchlorate_85

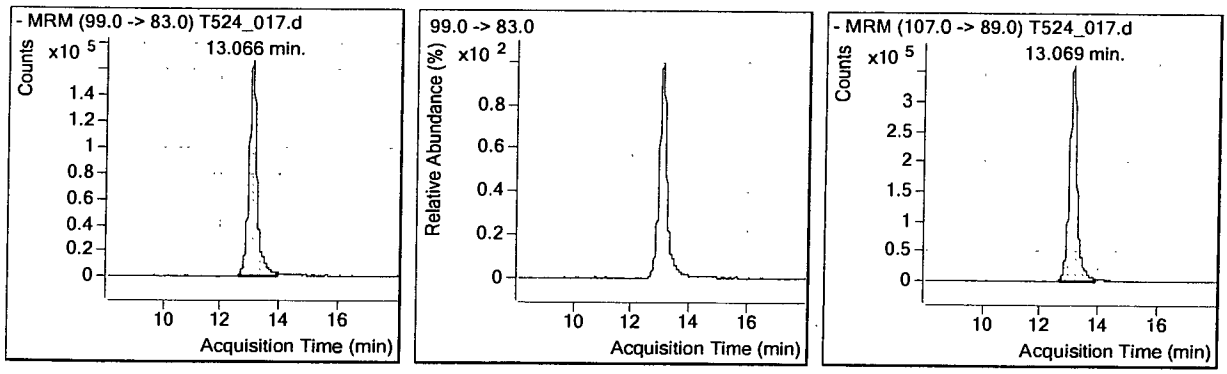
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_017.d	**Sample Name**	PER_CCV 0.002 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	19:01
ClientID	NA	**Inj Vol**	20

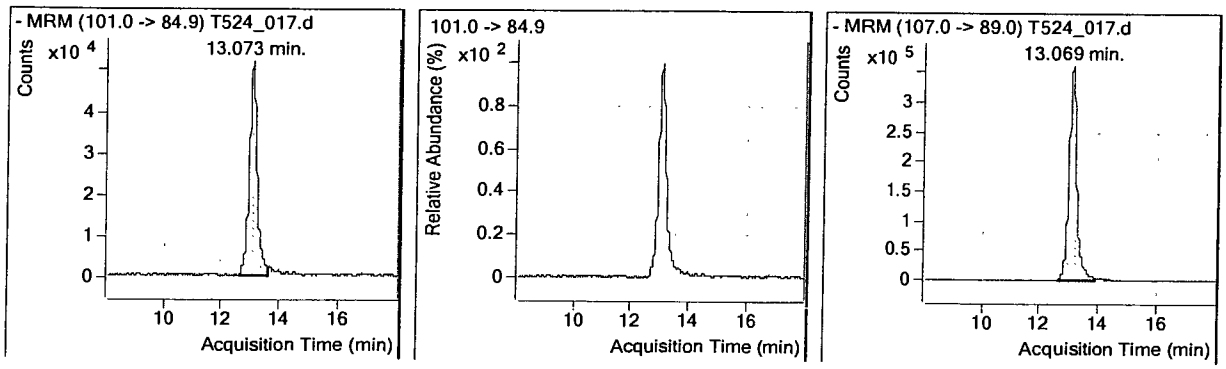


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.066	3131136	6666617
Perchlorate_102	PER_IS_108	13.073	937320	6666617

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T524_030.d

	Date (s) of Analysis From:03/12/15 To:05/24/15 Time (s) of Analysis From:17:52 To:22:44				Date of Analysis: 05/24/15 Time of Analysis: 23:03 Standard Id: PER_CCV (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.34	1.416492	N	11.5
Perchlorate_85	13.70	13.60	13.80	0.391605	13.35	0.437313	N	11.7

FILE ID : TQCK2430.RFB

Data File ID: T524_030.d

Date Injected : 05/24/15

Time Injected : 23:03

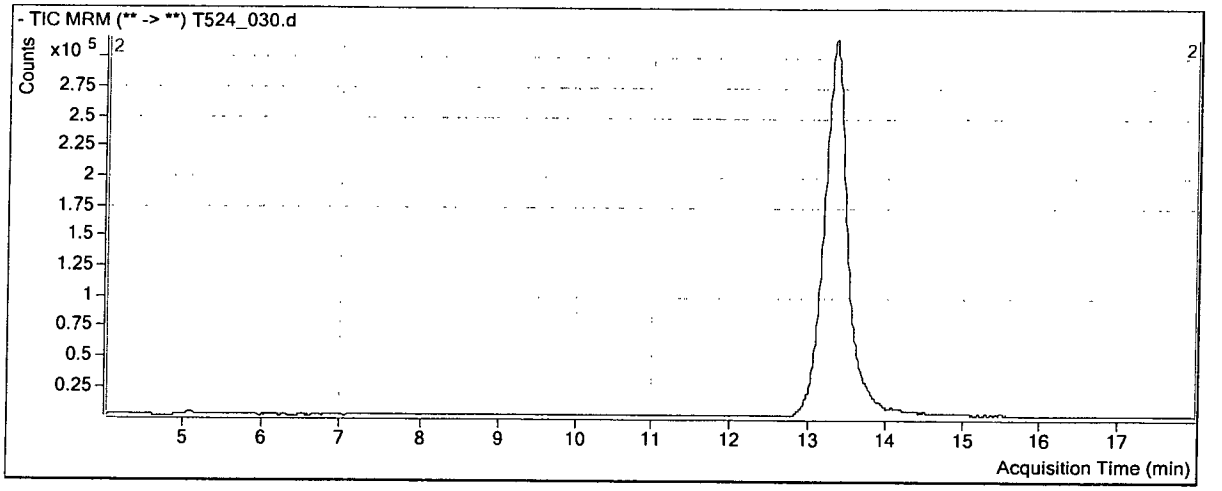
Sample ID : PER_CCV 0.0004 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.324	5852670	PER_IS_89
13.341	663221	Perchlorate_83
13.348	204756	Perchlorate_85

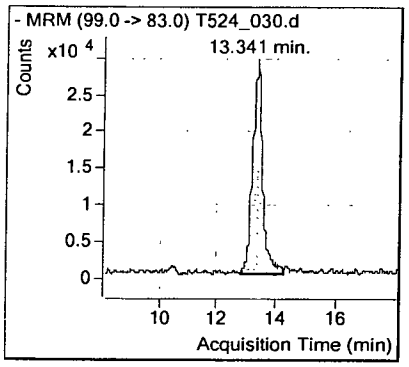
Quantitative Analysis Sample Report

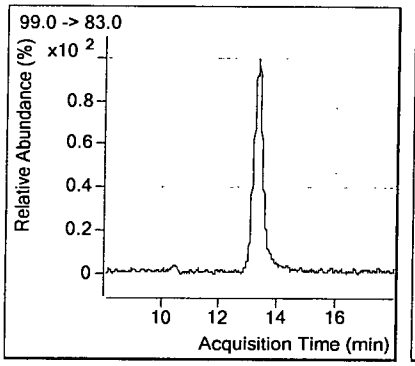
Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_030.d	**Sample Name**	PER_CCV 0.0004 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	23:03
ClientID	NA	**Inj Vol**	20

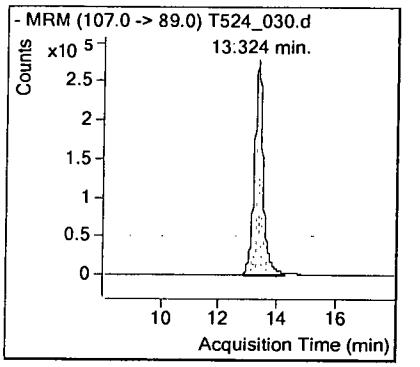


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.341	663221	5852670
Perchlorate_102	PER_IS_108	13.348	204756	5852670

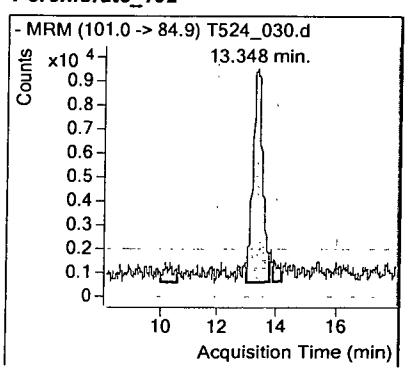
Perchlorate_100

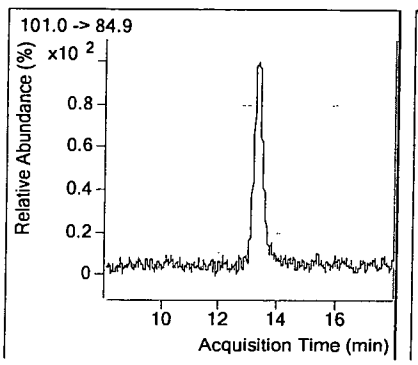


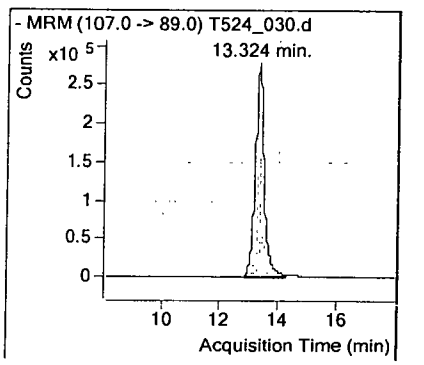




Perchlorate_102







CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: T524_031.d

	Date (s) of Analysis From:03/12/15 To:05/24/15 Time (s) of Analysis From:17:52 To:22:44				Date of Analysis: 05/24/15 Time of Analysis: 23:21 Standard Id: PER CCV (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	13.79	13.69	13.89	1.270255	13.48	1.187675	N	6.5
Perchlorate_85	13.70	13.60	13.80	0.391605	13.48	0.348592	N	11.0

FILE ID : TQCK2431.RFB

Data File ID: T524_031.d

Date Injected : 05/24/15

Time Injected : 23:21

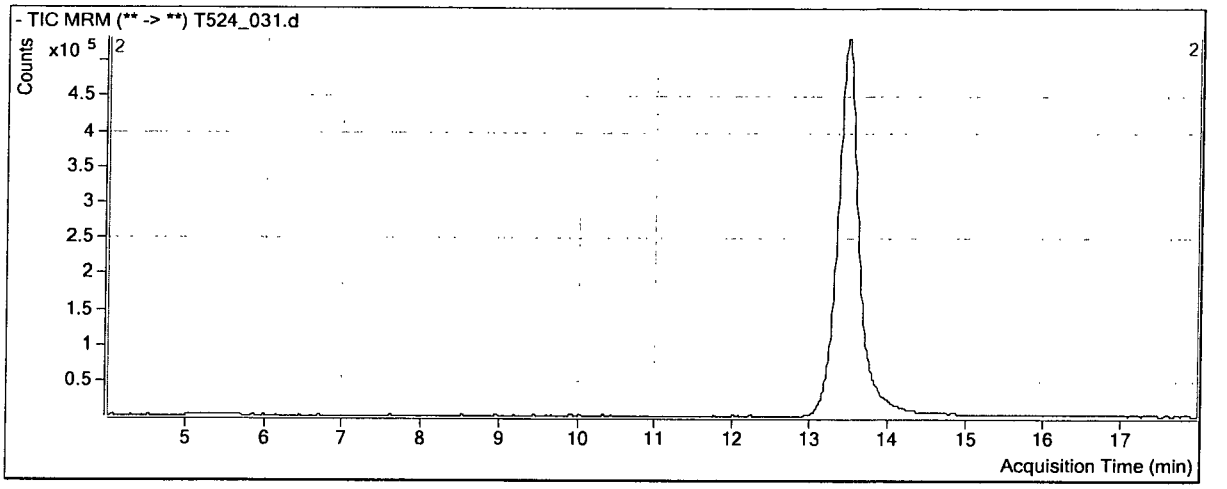
Sample ID : PER_CCV 0.002 ug/ml 05/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.477	6323824	PER_IS_89
13.484	3004259	Perchlorate_83
13.48	881774	Perchlorate_85

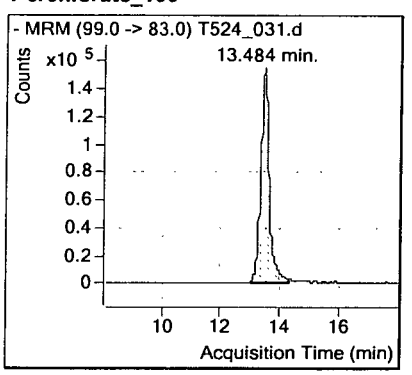
Quantitative Analysis Sample Report

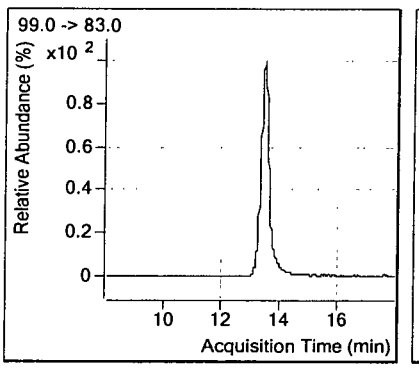
Batch Data Path	D:\MassHunter\Data\150524\QuantResults\150524_A_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T524_031.d	**Sample Name**	PER_CCV 0.002 ug/ml 05/07/15
Sample Type	Sample	**Acq_Date**	05/24/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	23:21
ClientID	NA	**Inj Vol**	20

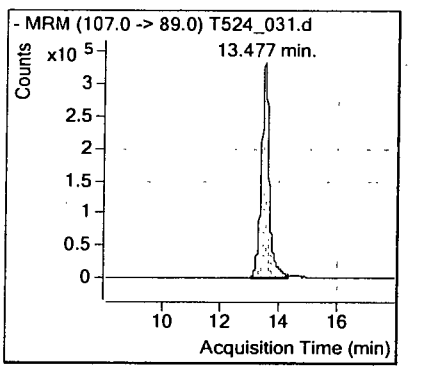


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.484	3004259	6323824
Perchlorate_102	PER_IS_108	13.480	881774	6323824

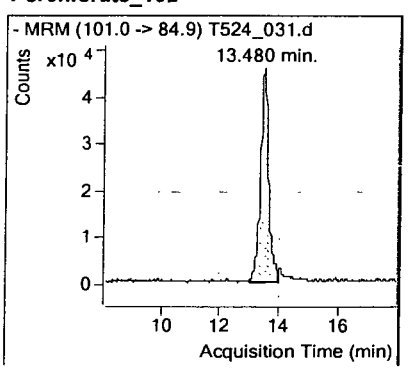
Perchlorate_100

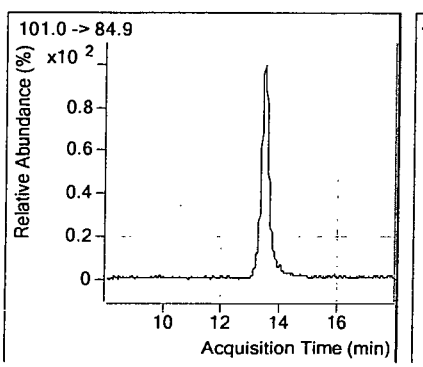


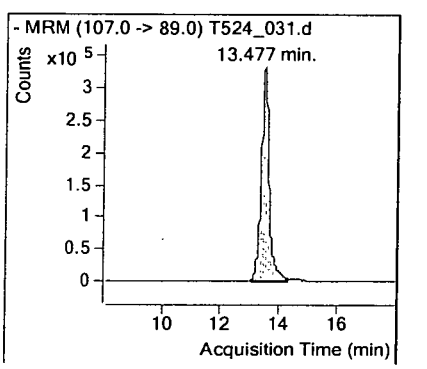




Perchlorate_102







EPA METHOD 6850
Perchlorate
LC/MS

Raw Data

APPL, INC.

Method Blank
Perchlorate

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **150518W-16287 - 198054**
Batch ID: #6850-150518A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PERCHLORATE	0.400 U	0.60	0.400	0.200	ug/L	05/18/15	05/23/15

Quant Method: QTLMFL2
Run #: T523_021.d
Instrument: AGIL_6460
Sequence: TQ052315
Initials: RP

GC SC-Blank-REG MDLs
Printed: 06/18/15 12:26:22 PM

Data File ID: T523_021.d

Date Injected : 05/23/15

Time Injected : 21:46

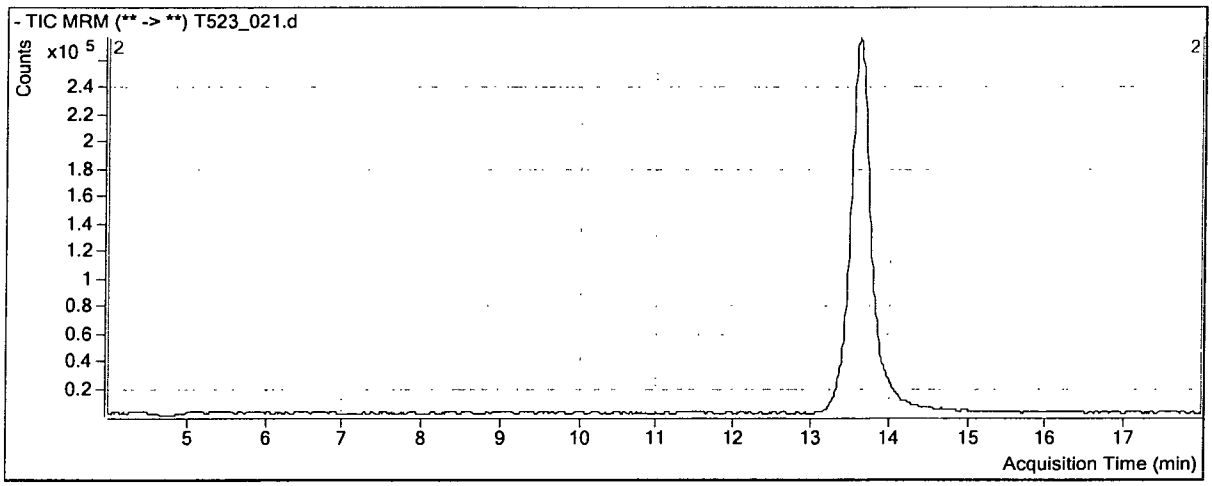
Sample ID : 150518WBLKA 1052.6 DF 05/18/15

Client ID : LAB_CNTL_W_BLKA

Retention Time	Area Count Response	Compound_ID Product Ion			
13.609	5254586	PER_IS_89			
13.015	2031	Perchlorate_83	(2031 * 0.0050) / (1.27 * 5254586.00) *	1052.60 =	0.001601 ppb
12.849	8841	Perchlorate_85	(8841 * 0.0050) / (0.39 * 5254586.00) *	1052.60 =	0.022612 ppb

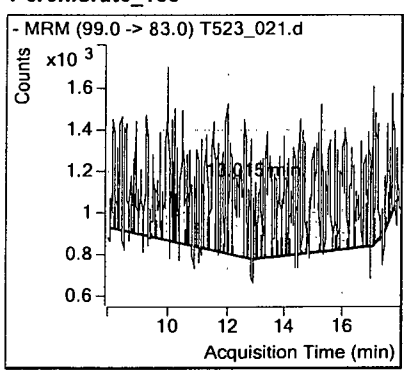
Quantitative Analysis Sample Report

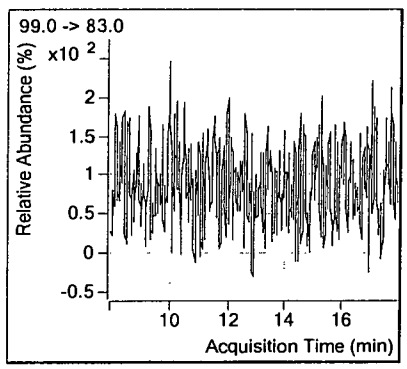
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_021.d	**Sample Name**	150518WBLKA 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	21:46
ClientID	LAB_CNTL_W_BLKA	**Inj Vol**	20

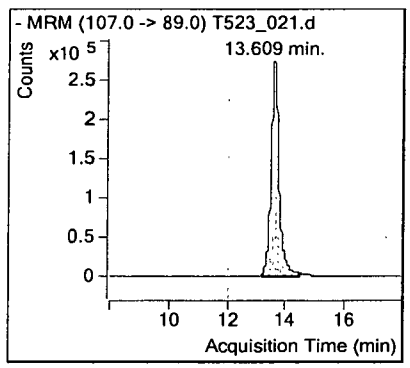


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.015	2031	5254586
Perchlorate_102	PER_IS_108	12.849	8841	5254586

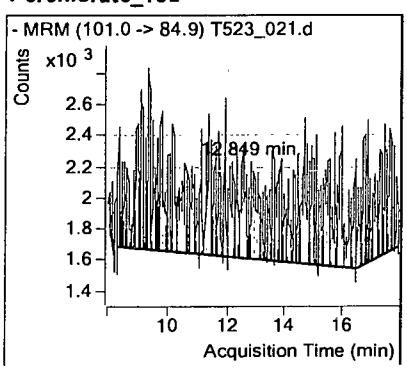
Perchlorate_100

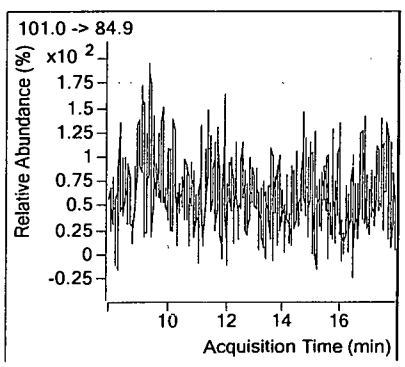


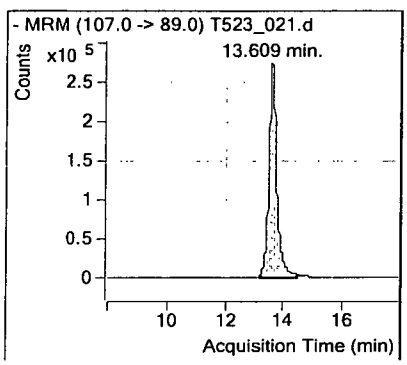




Perchlorate_102







Laboratory Control Spike Recovery

Perchlorate

APPL ID: **150518W-16287 LCS - 198054**
Batch ID: #6850-150518A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PERCHLORATE	0.600	0.567	94.5	80-120

Comments: _____

Primary	SPK
Quant Method :	QTLMFL2
Extraction Date :	05/18/15
Analysis Date :	05/23/15
Instrument :	AGIL_6460
Run :	T523_019.d
Initials :	RP

Printed: 06/18/15 12:26:14 PM
APPL Standard LCS

Data File ID: T523_019.d

Date Injected : 05/23/15

Time Injected : 21:09

Sample ID : 150518WA_LCS-1 1052.6 DF 05/18/15

Client ID : LAB_CNTL_W_SPKA

Retention Time		Area Count Response	Compound_ID Product Ion		
13.528		4862068	PER_IS_89		
13.555		665139	Perchlorate_83	(665139 * 0.0050) / (1.27 * 4862068.00) * 1052.60 =	0.566805 ppb
13.541	*	200728	Perchlorate_85	(200728 * 0.0050) / (0.39 * 4862068.00) * 1052.60 =	0.554846 ppb

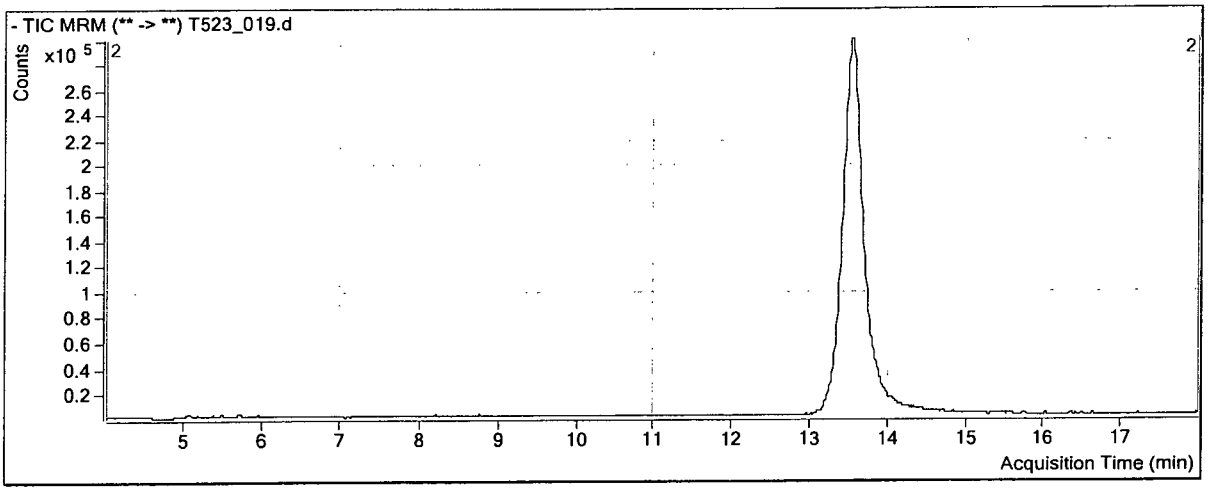
* MANUAL INTEGRAION

$$\frac{(1052.6)(665139)(0.0050)}{(1.270255)(4862068)} = 0.566805$$

6/18/15 BA

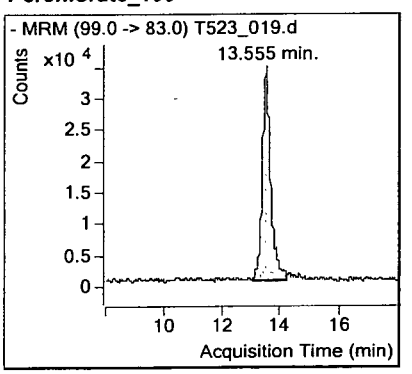
Quantitative Analysis Sample Report

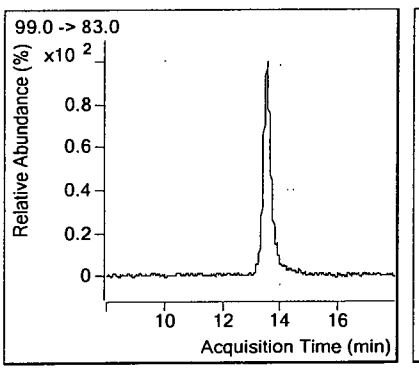
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_019.d	**Sample Name**	150518WA_LCS-1 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	21:09
ClientID	LAB_CNTL_W_SPKA	**Inj Vol**	20

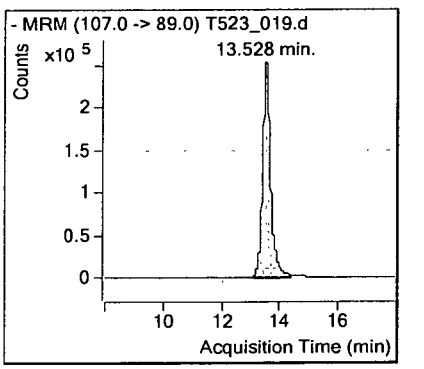


Compound	ISTD		RT	Resp	ISTD Resp	
Perchlorate_100	PER_IS_108		13.555	665139	4862068	
Perchlorate_102	PER_IS_108	*	13.541	200728	4862068	* MANUAL INT

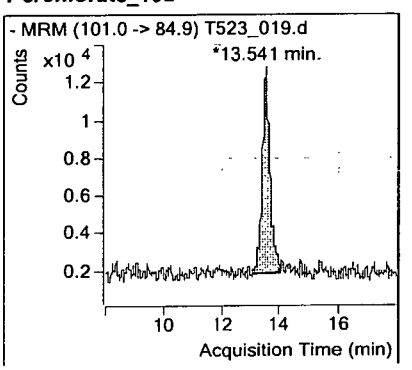
Perchlorate_100

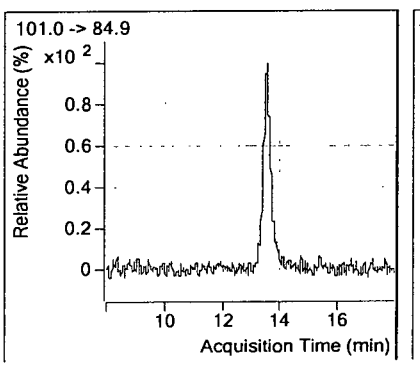


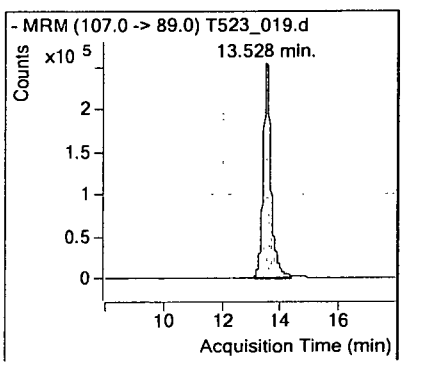


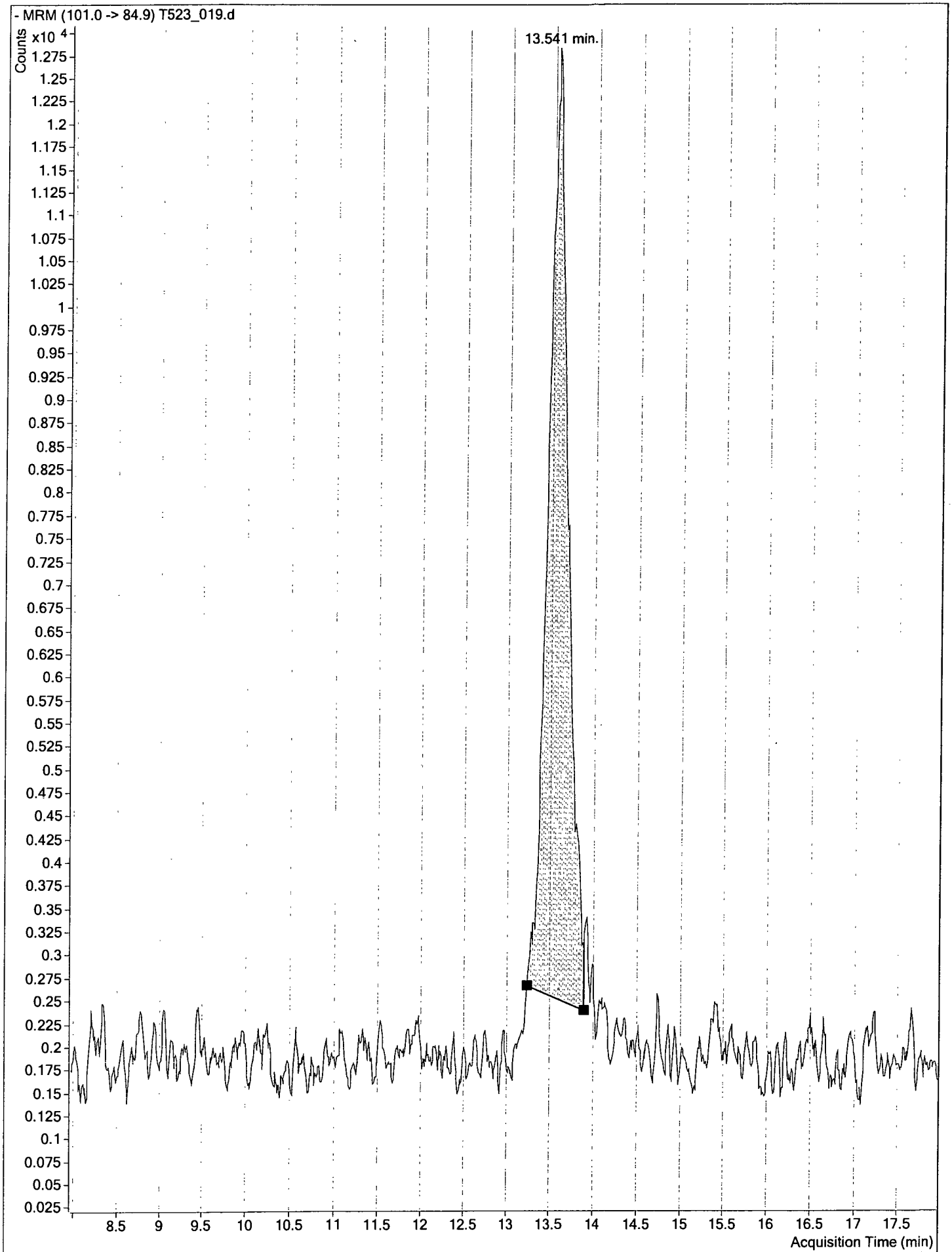


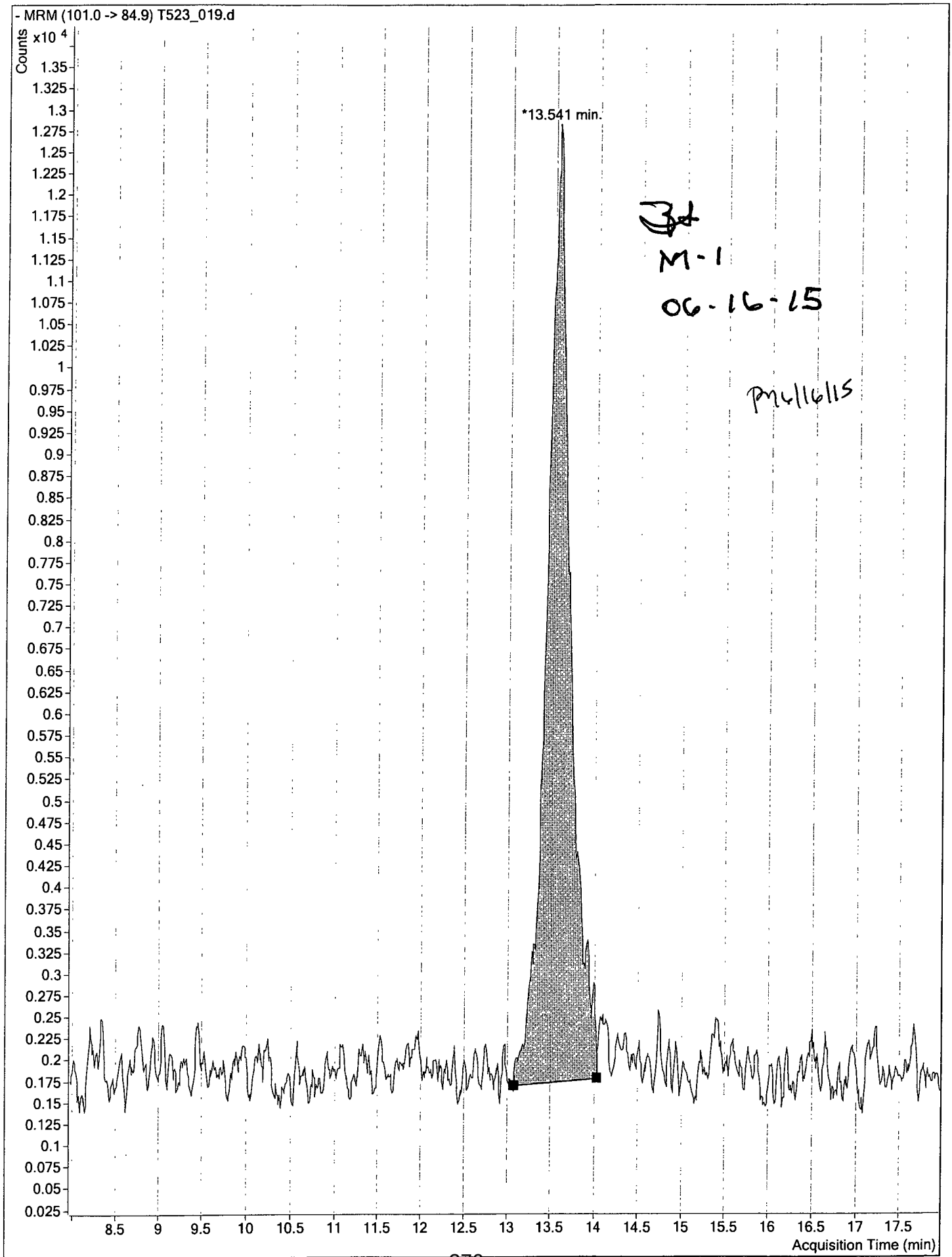
Perchlorate_102








- MRM (101.0 -> 84.9) T523_019.d
Counts
x10 4
13.541 min.
Acquisition Time (min)


- MRM (101.0 -> 84.9) T523_019.d
Counts
x10 4
*13.541 min.
3d
M-1
06-16-15
PM 6/16/15
Acquisition Time (min)

Matrix Spike Recoveries

Perchlorate

APPL ID: **150518W-16287 MS - 198054**
Batch ID: #6850-150518A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PERCHLORATE	0.600	ND	0.639	0.657	107	110	80-120	2.8	15

Comments: _____

Primary	SPK	DUP
Quant Method :	QTLMFL2	QTLMFL2
Extraction Date :	05/18/15	05/18/15
Analysis Date :	05/23/15	05/23/15
Instrument :	AGIL_6460	AGIL_6460
Run :	T523_023.d	T523_024.d
Initials :	RP	

Printed: 06/18/15 12:31:57 PM
APPL MSD SCII

Data File ID: T523_023.d

Date Injected : 05/23/15

Time Injected : 22:24

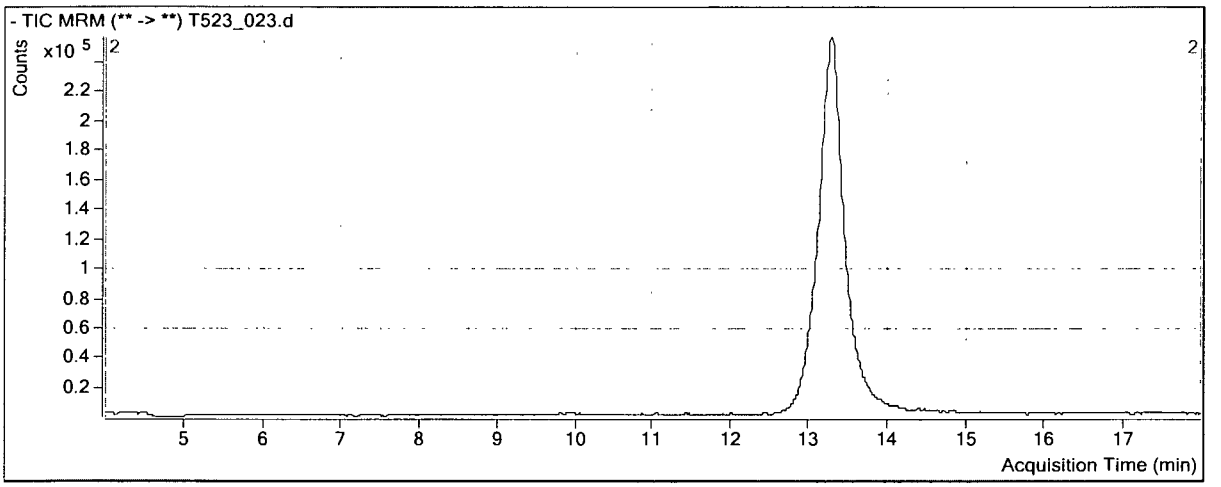
Sample ID : AZ16287_W10_MS-1 1052.6 DF 05/18/15

Client ID : S67-MW007-051215_MS-1

Retention Time	Area Count Response	Compound_ID Product Ion		
13.294	5127260	PER_IS_89		
13.311	790539	Perchlorate_83	(790539 * 0.0050) / (1.27 * 5127260.00) * 1052.60 =	0.638823 ppb
13.317	260884	Perchlorate_85	(260884 * 0.0050) / (0.39 * 5127260.00) * 1052.60 =	0.683829 ppb

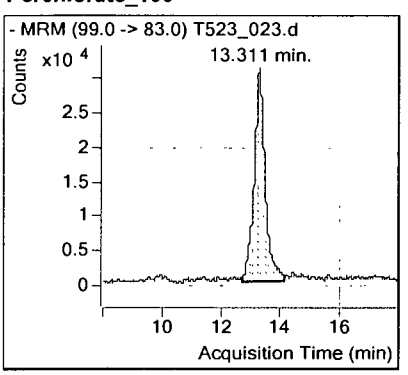
Quantitative Analysis Sample Report

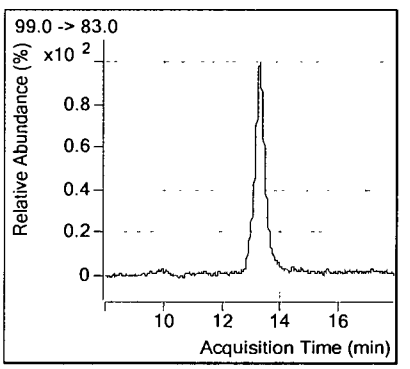
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_023.d	**Sample Name**	AZ16287_W10_MS-1 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	22:24
ClientID	S67-MW007-051215_MS-1	**Inj Vol**	20

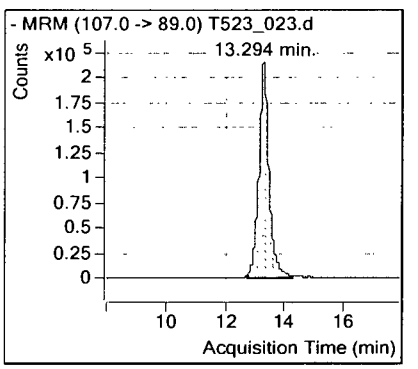


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.311	790539	5127260
Perchlorate_102	PER_IS_108	13.317	260884	5127260

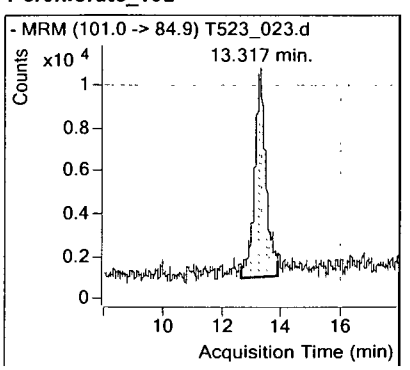
Perchlorate_100

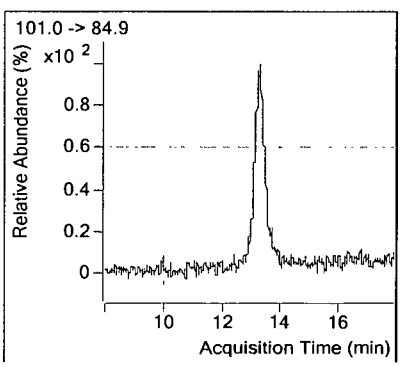


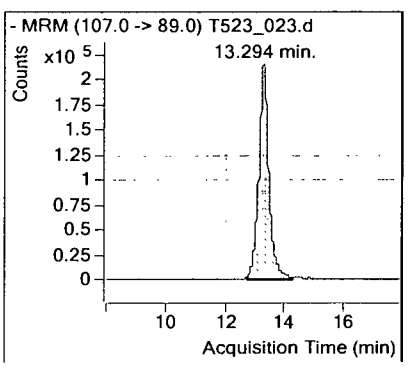




Perchlorate_102







Data File ID: T523_024.d

Date Injected : 05/23/15

Time Injected : 22:42

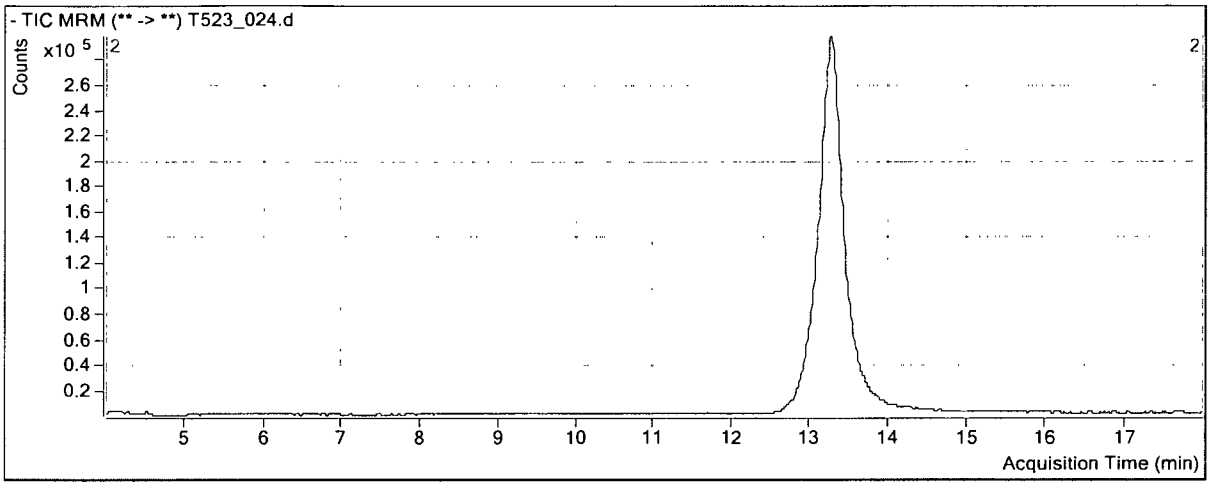
Sample ID : AZ16287_W10_MSD-1 1052.6 DF 05/18/15

Client ID : S67-MW007-051215_MSD-1

Retention Time	Area Count Response	Compound_ID Product Ion		
13.294	5963270	PER_IS_89		
13.311	944951	Perchlorate_83	(944951 * 0.0050) / (1.27 * 5963270.00) * 1052.60 =	0.656549 ppb
13.317	310703	Perchlorate_85	(310703 * 0.0050) / (0.39 * 5963270.00) * 1052.60 =	0.700239 ppb

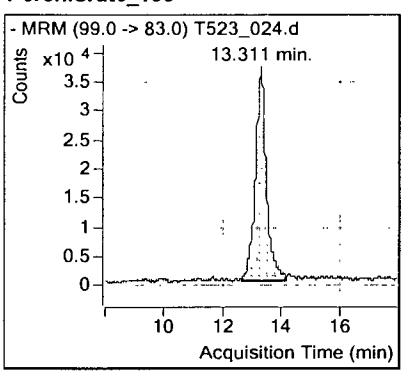
Quantitative Analysis Sample Report

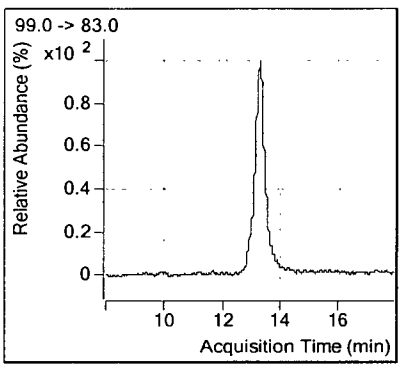
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_024.d	**Sample Name**	AZ16287_W10_MSD-1 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	22:42
ClientID	S67-MW007-051215_MSD-1	**Inj Vol**	20

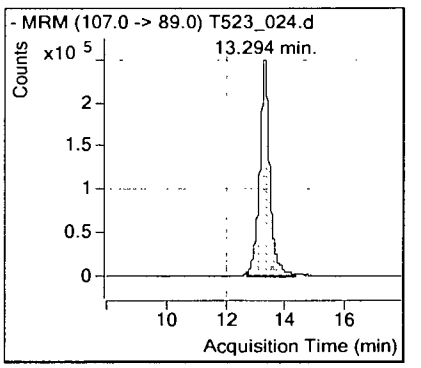


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.311	944951	5963270
Perchlorate_102	PER_IS_108	13.317	310703	5963270

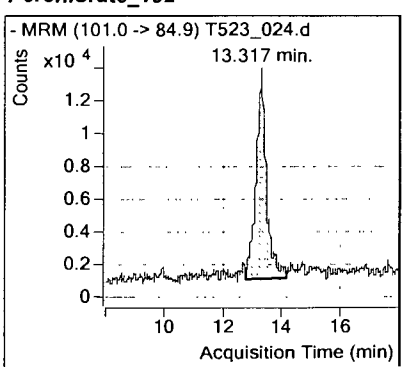
Perchlorate_100

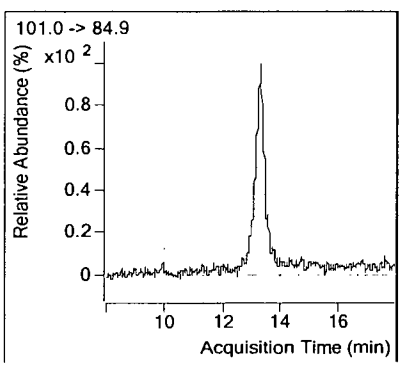


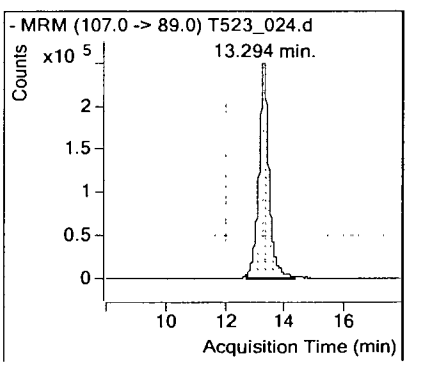




Perchlorate_102







Interferrence Check Sample

Perchlorate EPA 6850 Water

APPL ID: 150518W-16287 ICS-198054
Batch ID: #6850-150518A

APPL Inc.
908 N. Temperance Ave.
Clovis, CA 93711

Compound Name	Spike Level ug/L	Spk Result ug/L	SPK% Recovery	Recovery Limits
Perchlorate	0.600	0.585	97.5%	70-130

Comments:

Quant Method:	QTLMFL2
Extraction Date:	05/18/15
Analysis Date:	05/23/15
Instrument:	AGIL_6560
Run:	T523_020.D
Initials:	RP

Data File ID: T523_020.d

Date Injected : 05/23/15

Time Injected : 21:28

Sample ID : 150518W_ICSA 1052.6 DF 05/18/15

Client ID : LAB_CNTL_W_ICSA

Retention Time		Area Count Response	Compound_ID Product Ion			
12.489		4707314	PER_IS_89			
12.516	*	664547	Perchlorate_83	(664547 * 0.0050) / (1.27 * 4707314.00) *	1052.60 =	0.584918 ppb
12.502		307706	Perchlorate_85	(307706 * 0.0050) / (0.39 * 4707314.00) *	1052.60 =	0.878512 ppb

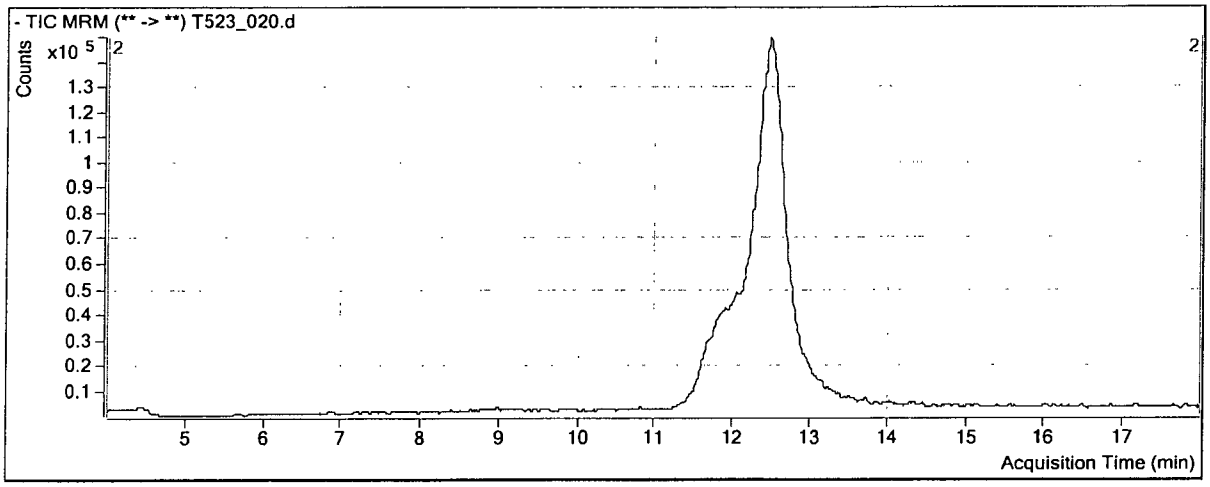
* MANUAL INTEGRAION

$$\frac{(1052.6)(664547)(0.005)}{(1.27085)(4707314)} = 0.584918$$

6/16/15
PP

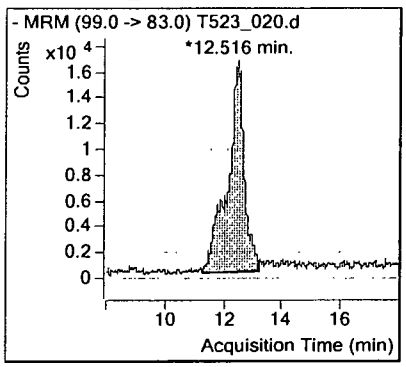
Quantitative Analysis Sample Report

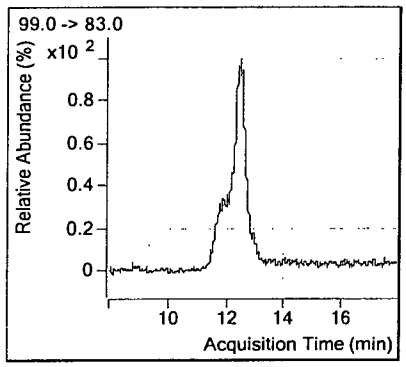
Batch Data Path	D:\MassHunter\Data\150523\QuantResults\150523_A1_MI.batch.bin		
Instrument	LCMS QQQ	**Operator**	ba
Data File	T523_020.d	**Sample Name**	150518W_ICSA 1052.6 DF 05/18/15
Sample Type	Sample	**Acq_Date**	05/23/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	**Acq Time**	21:28
ClientID	LAB_CNTL_W_ICSA	**Inj Vol**	20

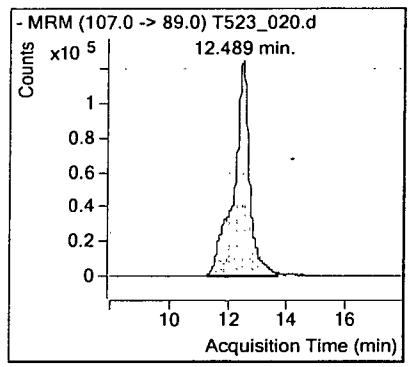


Compound	ISTD		RT	Resp	ISTD Resp	
Perchlorate_100	PER_IS_108	*	12.516	664547	4707314	* MANUAL INT
Perchlorate_102	PER_IS_108		12.502	307706	4707314	

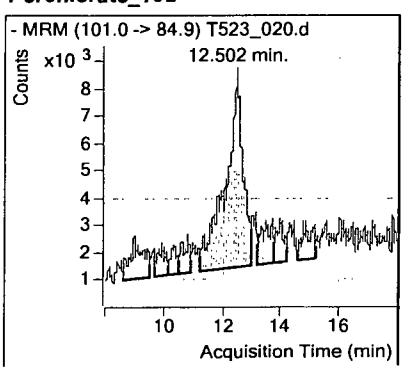
Perchlorate_100

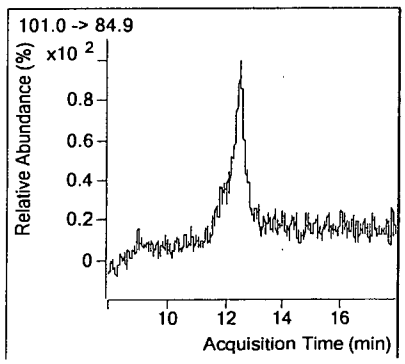


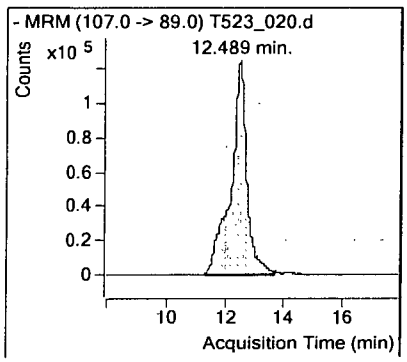


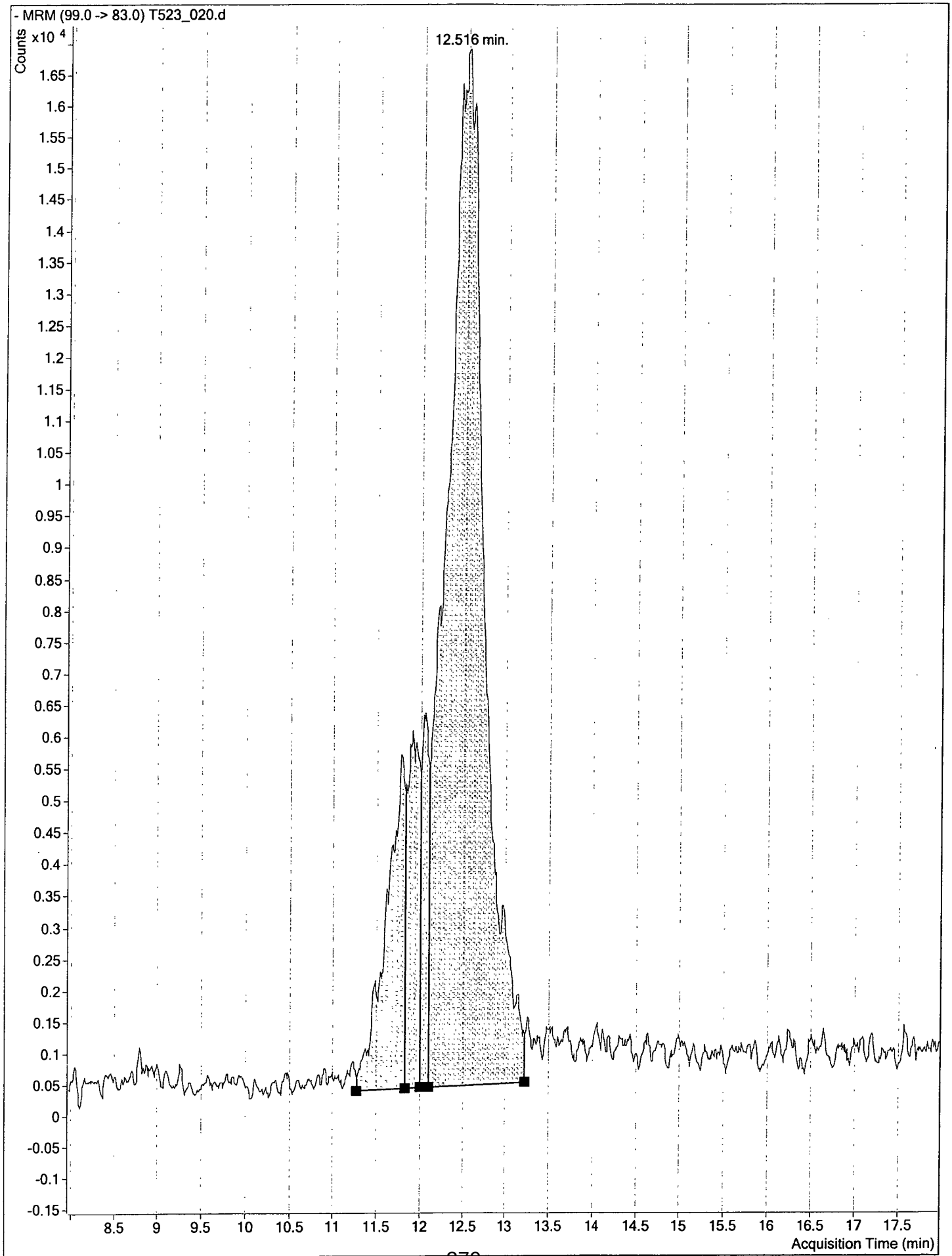


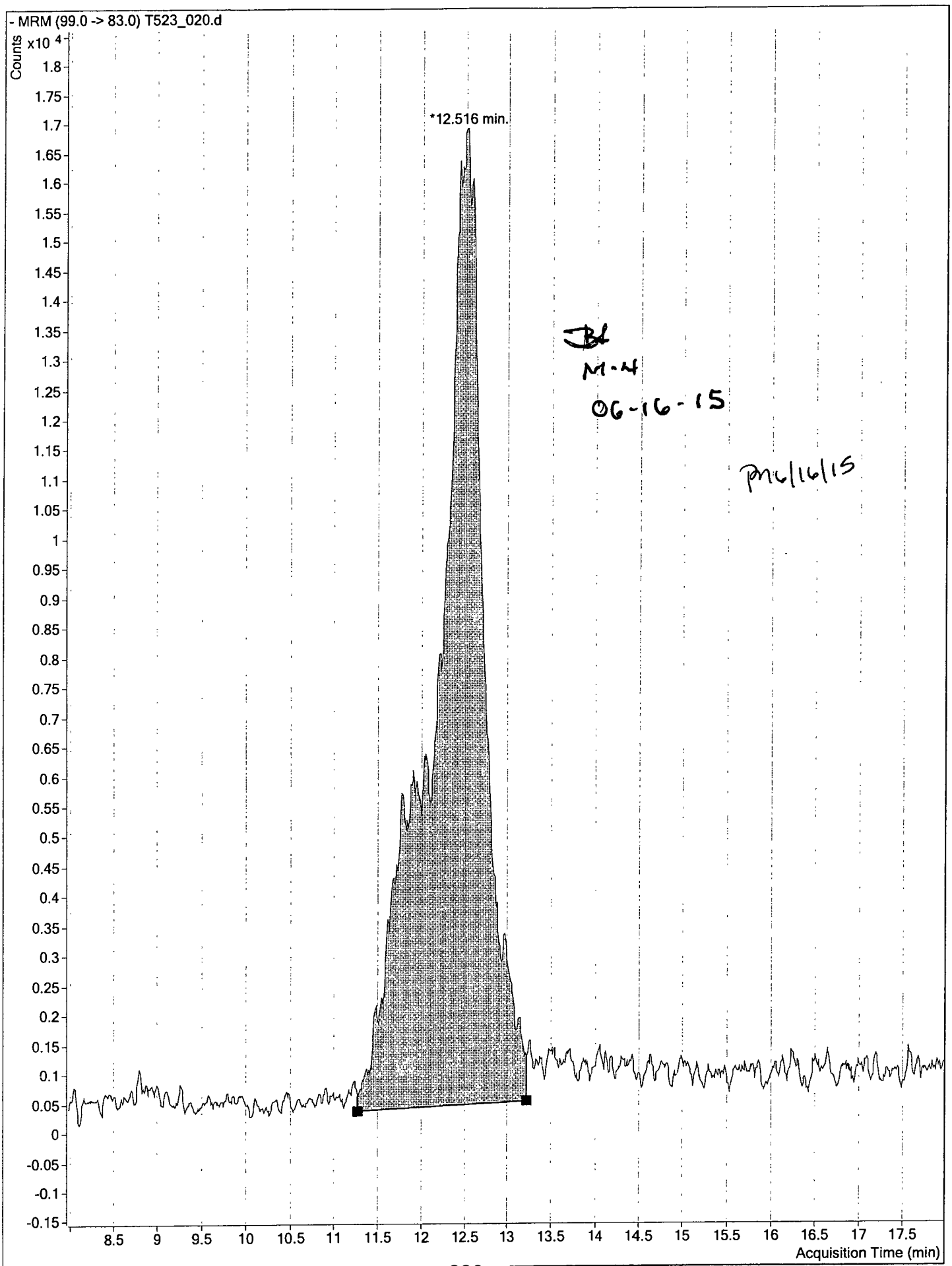
Perchlorate_102








- MRM (99.0 -> 83.0) T523_020.d
Counts
x10 4
12.516 min.
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
8.5
9
9.5
10
10.5
11
11.5
12
12.5
13
13.5
14
14.5
15
15.5
16
16.5
17
17.5
Acquisition Time (min)


- MRM (99.0 -> 83.0) T523_020.d
Counts
x10 4
*12.516 min.
Acquisition Time (min)
JBL
M-4
06-16-15
PM 6/16/15

ACN_H20_50:50 1 DF 08/27/14: Burdick & Jackson Acetonitrile Lot DL308 took 10.000 ml and added to 10.000 ml Laboratory Source DI_H20 Note : Above solution was prepared as needed.
PER_IS_50:50 0.005 ug/ml 11/11/14: Took 19.000 ml ACN_H20_50:50 11/11/14 and added 1.000 ml O2SI 18_O_4 Perchlorate 100 ug/L lot 1059192-33479 Note: Solution prepared as needed.
PERCHLORATE 0.005 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/28/14 took 0.500 ml and added to 0.500 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PERCHLORATE 0.002 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PERCHLORATE 0.001 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.100 ml and added to 0.900 ml PER_IS_50:50 0.005 ug/ml 11/11/14.

PERCHLORATE 0.0004 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PERCHLORATE 0.0002 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.020 ml and added to 0.980 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PERCHLORATE 0.0001 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.010 ml and added to 0.990 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_1 0.0004 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_1 0.002 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_2 0.0004 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/11/14.

PER_CCV_2 0.002 ug/ml 08/27/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_3 0.0004 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_3 0.002 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/28/14 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_4 0.0004 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_CCV_4 0.002 ug/ml 11/11/14: PERCHLORATE 0.010 ug/ml 08/27/14 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_SS 0.0004 ug/ml 11/11/14: PER_SS 0.010 ug/ml 08/28/14 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/11/14.
PER_SS 0.002 ug/ml 11/11/14: PER_SS 0.010 ug/ml 08/28/14 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/11/14.

LCMS STANDARD PREP LOG# 103 PAGE 34

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE / INITIALS
ScaV_spk 250 ng/mL								
Hexahydro-1,3,5-tris-hydroxyethyltriazine	1010	04-10-15	1.24	5.0	250	ACN/DM394		04-17-15
2,2'-thiodiethanol	1090	04-10-15	1.15					
2-(1,3,5-Dithiazinan-5-yl)ethanol	1020	04-10-15	1.23					

PER_CCV 0.0004 µg/mL 04-20-15:
PER_SS 0.010 µg/mL 08-28-14
took 0.040 mL and added to
0.910 mL laboratory Source DI_H2O
that had previously received
0.050 mL 02SI $^{18}O_4$ Perchlorate
100 µg/L lot 1059192-33479

PER_CCV 0.002 µg/mL 04-20-15:
PER_SS 0.010 µg/mL 08-28-14
took 0.200 mL and added to
0.750 mL Laboratory Source DI_H2O
that had previously received
0.050 mL 02SI $^{18}O_4$ Perchlorate
100 µg/L lot 1059192-33479

040 ...MS STANDARD PREP LOG# 105 PAGE# 40

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE/ INITIALS

PER IS 0.005 µg/ml 04-20-15: BL

02SI $^{18}O_4$ Perchlorate 100 µg/L 04-21-15

Lot 1059192-33479 took 0.050 ml and added to 0.950 ml Laboratory Source DI-H2O.

NOTE: Repeated the above process four times in order to prepare 2-2ml vials that were full. The above was performed as dated. BL

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT #	DATE INITIALS

NOTE: THE FOLLOWING DOCUMENTATION JH
WAS PERFORMED AS DATED: 05-19-15

PER. CCV 0.00004 µg/mL 05:07-15: JH
PER. SS 0.010 µg/mL 08-28-14 took 05-07-15
0.040 mL and added to 0.910 mL
Laboratory Source DI-H20 that
had previously received 0.050 mL
02SI $^{18}O_4$ Perchlorate 100µg/L
lot 1074176-35163

PER. CCV 0.002 µg/mL 05-07-15:
PER. SS 0.010 µg/mL 08-28-14
took 0.200 mL and added to
0.750 ML Laboratory Source
DI-H20 that had previously
received 0.050 mL 02SI $^{18}O_4$
Perchlorate 100µg/L lot
1074176-35163

PER. IS 0.005µg/mL 05-07-15:
02SI $^{18}O_4$ Perchlorate 100µg/L
Lot 1074176-35163 took 0.050
mL and added to 0.950 mL
Laboratory Source DI-H20
NOTE: Repeated the above
process four times in order
to prepare 2-2mL vials
that were full.

076

LC/MS STANDARD PREP LOG# 105 PAGE# 76

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE & INITIALS
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: 06-02-15							JL 06-02-15
PER_IS_50:50 0.005µg/mL 05-10-15: COMBINED 10.000 mL Laboratory Source DI_H2O with 10.000 mL Burdick & Jackson Acetonitrile lot DL308. Withdrew 1.000mL and then delivered 1.000 mL 02 5I $^{18}O_4$ Perchlorate 100µg/L lot 10TH176-35163							JL 05-10-15
AZ16057_W01 10526.3 DF 05-07-15_5/10: AZ16057_W01 1052.6 DF 05-07-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							
AZ16057_W01 105263.2 DF 05-07-15_5/10: AZ16057_W01 10526.3 DF 05-07-15_5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							
AZ16057_W01 1052631.6 DF 05-07-15_5/10: AZ16057_W01 105263.2 DF 05-07-15_5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'VENT LOT #	DATE/ INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED! 06.02.15 06.02.15

AZ16057_W01 10526315.8 DF 05-07-15_5/10: AZ16057_W01 1052631.6 DF 05-07-15_5/10 05-10-15
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-10-15

AZ16059_W01 10526.3 DF 05-07-15_5/10: AZ16059_W01 1052.6 DF 05-07-15_5/10
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-10-15

AZ16059_W01 105263.2 DF 05-07-15_5/10: AZ16059_W01 10526.3 DF 05-07-15_5/10
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-10-15

AZ16059_W01 1052631.6 DF 05-07-15_5/10: AZ16059_W01 105263.2 DF 05-07-15_5/10
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-10-15

AZ16059_W01 10526315.8 DF 05-07-15_5/10: AZ16059_W01 1052631.6 DF 05-07-15_5/10
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-10-15

078

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	ENTER INITIALS
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED. JR 06.02.15							JR 06.02.15
AZ16061_IW01 10526.3 DF 05-07-15_5/10; AZ16061_IW01 10526 DF 05-07-15 TOOK 0.050mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							JR 05.10.15
AZ16061_IW01 105263.2 DF 05-07-15_5/10; AZ16061_IW01 10526.3 DF 05-07-15_5/10 TOOK 0.050mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							
AZ16061_IW01 1052631.6 DF 05-07-15_5/10; AZ16061_IW01 105263.2 DF 05-07-15_5/10 TOOK 0.050mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							
AZ16061_IW01 10526315.8 DF 05-07-15_5/10 AZ16061_IW01 1052631.6 DF 05-07-15_5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15							

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT # 079	DATE · INITIAL

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JH 06-02-15 — JH 06-02-15

15 AZ16062-W01 10526.3 DF 05-07-15_5/10: JH
AZ16062-W01 1052.6 DF 05-07-15_5/10 05-10-15
TOOK 0.050 mL AND ADDED TO 0.450
15 mL PER_IS_50:50 0.005µg/mL 05-10-15

AZ16062_W01 105263.2 DF 05-07-15_5/10:
AZ16062-W01 10526.3 DF 05-07-15_5/10
TOOK 0.050 mL AND ADDED TO
0.450 mL PER_IS_50:50 0.005µg/mL 05-10-15

AZ16062_W01 1052631.6 DF 05-07-15_5/10:
AZ16062-W01 105263.2 DF 05-07-15_5/10
~~TOOK 0.450 mL~~ JH 06-02-15 TOOK 0.050 mL
AND ADDED TO 0.450 mL PER_IS_50:50
0.005 µg/mL 05-10-15

AZ16062_W01 10526315.8 DF 05-07-15_5/10:
AZ16062-W01 1052631.6 DF 05-07-15_5/10
TOOK 0.050 mL AND ADDED TO 0.450
mL PER_IS_50:50 0.005µg/mL 05-10-15

AZ16062_W01_MS-1 10526.3 DF 05-07-15_5/10
AZ16062_W01_MS-1 1052.6 DF 05-07-15
TOOK 0.050 mL AND ADDED TO 0.450
mL PER_IS_50:50 0.005µg/mL 05-10-15

080

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'VENT / LOT#	DATE / INITIALS
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JB 06-02-15							JB 06-02-15
AZ16062-W01-MS-1 10526 3.2 DF 05-07-15_5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50150 0.005 µg/mL 05-10-15							JB
AZ16062-W01-MS-1 10526.3 DF 05-07-15_5/10							05-10
AZ16062-W01-MS-1 105263.1.6 DF 05-07-15_5/10; AZ16062-W01-MS-1 105263.2 DF 05-07-15_5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-10-15							
AZ16062_W01_MS-1 10526315.8 DF 05-07-15_5/10 AZ16062_W01_MS-1 10526316.6 DF 05-07-15 5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-10-15							
AZ16062_W01_MSD-1 10526.3 DF 05-07-15_5/10 AZ16062_W01_MSD-1 1052.6 DF 05-07-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-10-15							
AZ16062_W01_MSD-1 105263.2 DF 05-07-15_5/10 AZ16062_W01_MSD-1 10526.3 DF 05-07-15_5/10 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-10-15							

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT#	DATE & INITIALS

NOTE: THE FOLLOWING DOCUMENTATION JH
WAS PERFORMED AS DATED: JH 06-02-15 06-02-15

AZ16062-W01_MSD-1 1052631.6 DF 05-07-15_5/10 JH
AZ16062-W01_MSD-1 105263.2 DF 05-07-15_5/10 05-10-15
TOOK 0.050 mL AND ADDED TO 0.450
mL PER_IS_50:50 0.005 µg/mL 05-10-15

AZ16062-W01_MSD-1 10526315.8 DF 05-07-15_5/10
AZ16062-W01_MSD-1 1052631.6 DF
05-07-15_5/10 TOOK 0.050 mL AND ADDED
TO 0.450 mL PER_IS_50:50 0.005 µg/mL
05-10-15

AZ16058_W01 10526.3 DF 05-07-15_5/10:
AZ16058_W01 1052.6 DF 05-07-15_5/10
TOOK 0.050 mL AND ADDED TO 0.450
mL PER_IS_50:50 0.005 µg/mL 05-10-15

AZ16058-W01 105263.2 DF 05-07-15_5/10:
AZ16058_W01 10526.3 DF 05-07-15_5/10
TOOK 0.050 mL AND ADDED TO 0.450
mL PER_IS_50:50 0.005 µg/mL 05-10-15

AZ16058_W01 1052631.6 DF 05-07-15_5/10:
AZ16058_W01 105263.2 DF 05-07-15_5/10
TOOK 0.050 mL AND ADDED TO
0.450 mL PER_IS_50:50 0.005 µg/mL 05-10-15

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STANDARD	INITIAL CONC	SOURCE DATE	AMOUNT	FINAL VOLUME	FINAL CONC	SOL'N. LOT #	DATE/INITIAL

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED JR 06-02-15 JR 06-02-15

AZ16060_W01 10526.3 DF 05-07-15_5/10: JR
AZ16060_W01 1052.6 DF 05-07-15 05-10-15
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005µg/ml 05-10-15

5/11 JR
AZ16055_W01 10526.3 DF 05-07-15_~~5/10~~: JR
AZ16055_W01 1052.6 DF 05-07-15 05-11-15
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005µg/ml 05-10-15

5/11 JR
AZ16055_W01 105263.2 DF 05-07-15_~~5/10~~:
AZ16055_W01 10526.3 DF 05-07-15_5/10
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005µg/ml 05-10-15

5/11 JR
AZ16055_W01 10526 31.6 DF 05-07-15_~~5/10~~
AZ16055_W01 105263.2 DF 05-07-15_5/10
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005µg/ml 05-10-15

JR 5/11
AZ16056_W01 10526.3 DF 05-07-15_~~5/10~~:
AZ16056_W01 1052.6 DF 05-07-15
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005µg/ml 05-10-15

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083

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT #	DATE / INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED JH 06.02.15 06-02-15 JH 5/11

AZ16056-WO1 105263.2 DF 05-07-15 ~~5/10~~: AZ16056-WO1 10526.3 DF 05-07-15 5/~~10~~ TOOK 0.050 ml AND ADDED TO 0.450 ml PER IS 50:50 0.005 µg/ml 05-10-15 JH 05-11-15

AZ16056-WO1 1052631.6 DF 05-07-15 ~~5/10~~: AZ16056-WO1 105263.2 DF 05-07-15 5/~~10~~ TOOK 0.050 ml AND ADDED TO 0.450 ml PER IS 50:50 0.005 µg/ml 05-10-15 JH 5/11

AZ16136-WO1 H210.4 DF 05-08-15 5/11: AZ16136-WO1 1052.6 DF 05-08-15 TOOK 0.050 ml AND ADDED TO 0.150 ml PER IS 50150 0.005 µg/ml 05-10-15

AZ16237-WO1 ~~1052.6~~ 10526.3 JH DF 05-12-15 5/13: AZ16237-WO1 1052.6 DF 05-12-15 TOOK 0.050 ml AND ADDED TO 0.450 ml PER IS 50:50 0.005 µg/ml 05-10-15 JH 05-13-15

AZ16237-WO1 105263.2 DF 05-12-15 5/13 AZ16237-WO1 10526.3 DF 05-12-15 5/13 TOOK 0.050 ml AND ADDED TO 0.450 ml PER IS 50:50 0.005 µg/ml 05-10-15

084

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STANDARD	INITIAL CONC	SOURCE DATE	AMOUNT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE & INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JL 06-02-15 06-02-15

AZ16237_WO1 10526316 DF 05-12-15_5-13 JL
AZ16237_WO1 105263.2 DF 05-12-15_5/13 05-13-15
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml
05-10-15

AZ16237_WO1 10526315.8 DF 05-12-15_5/13
AZ16237_WO1 10526316 DF 05-12-15_5/13
TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml
05-10-15

AZ16229_WO1 10526.3 DF 05-12-15_5/13 :
AZ16229_WO1 10526 DF 05-12-15
TOOK 0.050 ml AND ADDED TO
~~0.05~~ JL 0.450 ml PER_IS_50:50
0.005 µg/ml 05-10-15

AZ16229_WO1 105263.2 DF 05-12-15_5/13
AZ16229_WO1 10526.3 DF 05-12-15_5/13
TOOK 0.050 ml AND ADDED TO
0.450 ml PER_IS_50:50 0.005 µg/ml
05-10-15

VOMS STANDARD PREP LOG# 105 PAGE 85

085

STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT VOLUME	FINAL VOL.	FINAL CONC	SOLVENT LOT #	DATE INITIALS
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED JH 06-02-15								JH 06-02-15
AZ16229-W01	1052631.6	DF	05-12-15_S/13					JH
AZ16229-W01	105263.2	DF	05-12-15_S/13					05-13-15
TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50	0.005	µg/mL	05-10-15					

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT#	DATE/ INITIALS
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: BK 06-18-15							JH 06-18-15
AZ16233_W01 105263.2 DF 05-12-15_5/14: AZ16233.W01 10526.3 DF 05-12-15_5/14 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							JH 05-14-15
AZ16231_W01 10526.3 DF 05-12-15_5/15: AZ16231_W01 1052.6 DF 05-12-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16231_W01 105263.2 DF 05-12-15_5/15: AZ16231_W01 10526.3 DF 05-12-15_5/15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16231_W01 1052631.6 DF 05-12-15_5/15: AZ16231_W01 105263.2 DF 05-12-15_5/15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16335_W0N 10526.3 DF 05-18-15_5/24: AZ16335_W0N 1052.6 DF 05-18-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							JH 05-24-15

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REF# MS	STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT#	DATE INITIALS
JL	NOTE: THE FOLLOWING DOCUMENTATION							JL
18-15	WAS PERFORMED AS DATED: JL 06-18-15							06-18-15
JL	AZ16335_WOH 105263.2 DF 05-18-15_5/24:							JL
14-15	AZ16335_WOH 10526.3 DF 05-18-15_5/24:							05-24-15
	TOOK 0.050 mL AND ADDED TO 0.450 mL							
	PER_IS_50:50 0.005 µg/mL 05-14-15							
	AZ16335_WOH 1052631.6 DF 05-18-15_5/24:							
	AZ16335_WOH 105263.2 DF 05-18-15_5/24							
	TOOK 0.050mL AND ADDED TO 0.450mL							
	PER_IS_50:50 0.005µg/mL 05-14-15							
	AZ16335_WOH 10526315.8 DF 05-18-15_5/24:							
	AZ16335_WOH 1052631.6 DF 05-18-15_5/24							
	TOOK 0.050mL AND ADDED TO 0.450mL							
	PER_IS_50:50 0.005µg/mL 05-14-15							
	AZ16334_WOH 10526.3 DF 05-18-15_5/24:							
	AZ16334_WOH 1052.6 DF 05-18-15 TOOK							
	0.050mL AND ADDED TO 0.450mL							
	PER_IS_50:50 0.005µg/mL 05-14-15.							
	AZ16334_WOH 105263.2 DF 05-18-15_5/24:							
4-15	AZ16334_WOH 10526.3 DF 05-18-15 TOOK							
	0.050mL AND ADDED TO 0.450mL							
	PER_IS_50:50 0.005µg/mL 05-14-15							

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	DATE / INITIALS
NOTE! THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JR 06-18-15							JR 06-18-15
AZ16334_WO4 105263.2 DF 05-18-15_5/24 AZ16334_WO4 105.26.3 DF 05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							JR 05-24-15
AZ16334_WO4 1052631.6 DF 05-18-15_5/24: AZ16334_WO4 105263.2 DF 05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16334_WO4 10526315.8 DF 05-18-15_5/24: AZ16334_WO4 1052631.6 DF 05-18-15_5/24 TOOK 0.950 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16288_WO4 10526.3 DF 05-18-15_5/24: AZ16288_WO4 1052.6 DF 05-18-15_TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16290_WO4 10526.3 DF 06-18-15_5/24: AZ16290_WO4 1052.6 DF 05-18-15_~~5/24~~ JR TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE / INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: BR 06-18-15 — JR 06-18-15

AZ16336_WO#_105263_DF_05-18-15_5/24: AZ16336_WO#_1052.6_DF_05-18-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15 — BR 05-24-15

AZ16336_WO#_105263.2_DF_05-18-15_5/24: AZ16336_WO#_105263_DF_05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15

AZ16336_WO#_105263.16_DF_05-18-15_5/24: AZ16336_WO#_105263.2_DF_05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15

AZ16338_WO#_10526.3_DF_05-18-15_5/24: AZ16338_WO#_1052.6_DF_05-18-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15

AZ16338_WO#_105263.2_DF_05-18-15_5/24: AZ16338_WO#_10526.3_DF_05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT#	DATE/INITIALS
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JR 06-18-15							JR 06-18-15
AZ16338_WOH 1052631.6 DF 05-18-15_5/24							JR
AZ16338_WOH 105263.2 DF 05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450mL PER_IS_50:50 0.005 µg/mL 05-14-15							05-24-15
AZ16341_WOH 10526.3 DF 05-18-15_5/24: AZ16341_WOH 1052.6 DF 05-18-15 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50150 0.005 µg/mL 05-14-15							
AZ16341_WOH 105263.2 DF 05-18-15_5/24: AZ16341_WOH 10526.3 DF 05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450 mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16341_WOH 1052631.6 DF 05-18-15_5/24: AZ16341_WOH 10526.3 DF 05-18-15_5/24 TOOK 0.050 mL AND ADDED TO 0.450mL PER_IS_50:50 0.005 µg/mL 05-14-15							
AZ16337_WOH 10526.3 DF 05-18-15_5/24: AZ16337_WOH 1052.6 DF 05-18-15 TOOK 0.050 mL AND ADDED TO 0.450mL PER_IS_50:50 0.005 µg/mL 05-14-15							

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	VOL. EN. LOT #	DATE INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: 06-19-15 — JBL 06-19-15

AZ16337_W04 105263.2 DF 05-18-15_5/24: AZ16337_W04 10526.3 DF 05-18-15_5/24 TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-14-15 — JBL 05-24-15

AZ16339_W04 10526.3 DF 05-18-15_5/24: AZ16339_W04 1052.6 DF 05-18-15 TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-14-15

AZ16339_W04 105263.2 DF 05-18-15_5/24: AZ16339_W04 10526.3 DF 05-18-15_5/24 TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-14-15

AZ16342_W04 10526.3 DF 05-18-15_5/24: AZ16342_W04 1052.6 DF 05-18-15 TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-14-15

AZ16342_W04 105263.2 DF 05-18-15_5/24: AZ16342_W04 10526.3 DF 05-18-15_5/24 TOOK 0.050 ml AND ADDED TO 0.450 ml PER_IS_50:50 0.005 µg/ml 05-14-15

DATE INITIALS JBL 06-18-15 JBL 05-24-15

_HPL6850

Organic Extraction Worksheet

Method	EPA 6850 HPLC Perchlorate Extraction	Extraction Set	150518A	Extraction Method	HPL6850	Units	mL

Spiked ID 1	Perchlorate Spike Mix 0.1ppm 8-28-14 EXP 7-31-15		Surrogate ID 1		
Spiked ID 2	Mix Anions 25,000ppm 2-10-15 EXP 2-10-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/18/15 10:05	
Spiked ID 8			Ext. End Time:	05/18/15 10:23	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: CFM **Date** 05/18/15 10:03:00 AM **Witnessed By:** DL **Date** 05/18/15 10:03:00 AM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	150518A Blk				NA	NA equip	5ML	5ML	NA	05/18/15 10:05	
2	150518A LCS-1		0.030	1	NA	NA equip	5ML	5ML	NA	05/18/15 10:05	
3	150518A ICS		0.030/0.060	1/2	NA	NA equip	5ML	5ML	NA	05/18/15 10:05	
4	AZ16287 MS-1	AZ16287W10	0.030	1	NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76413
5	AZ16287 MSD-1	AZ16287W10	0.030	1	NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76413
6	AZ16287	AZ16287W10			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76413
7	AZ16288	AZ16288W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76413
8	AZ16289	AZ16289W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76413
9	AZ16290	AZ16290W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76413
10	AZ16334	AZ16334W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
11	AZ16335	AZ16335W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
12	AZ16336	AZ16336W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
13	AZ16337	AZ16337W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
14	AZ16338	AZ16338W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
15	AZ16339	AZ16339W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
16	AZ16340	AZ16340W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424

olvent and Lot#	
)I WATER	5-18-15

Extraction COC Transfer	
Extraction lab employee Initials	CFM
GC analyst's initials	PY
Date	5/18/15
Time	11:00
Refrigerator	NA

	Technician's Initials
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	05/18/15 10:25:11 AM

Reviewed By: PY **Date** 5/18/15

_HPL6850

Organic Extraction Worksheet

Method	EPA 6850 HPLC Perchlorate Extraction	Extraction Set	150518A	Extraction Method	HPL6850	Units	mL

Spiked ID 1	Perchlorate Spike Mix 0.1ppm 8-28-14 EXP 7-31-15		Surrogate ID 1		
Spiked ID 2	Mix Anions 25,000ppm 2-10-15 EXP 2-10-16		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/18/15 10:05	
Spiked ID 8			Ext. End Time:	05/18/15 10:23	
			GC Requires Extract By:		

pH1			Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: CFM **Date** 05/18/15 10:03:00 AM **Witnessed By:** DL **Date** 05/18/15 10:03:00 AM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	AZ16341	AZ16341W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
18	AZ16342	AZ16342W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
19	AZ16343	AZ16343W01			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76424
20	AZ16403	AZ16403W04			NA	NA equip	5ML	5ML	NA	05/18/15 10:05	76447

PY 5/18/15

Solvent and Lot#	
DI WATER	5-18-15

Extraction COC Transfer	
Extraction lab employee Initials	CFM
GC analyst's initials	PY
Date	5/18/15
Time	11:00
Refrigerator	NA

	Technician's Initials
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	05/18/15 10:25:11 AM

Reviewed By: PY **Date** 5/18/15

METHOD 6850 INJECTION LOG: 03/12/15, 05/23/15, 05/24/15

DETECTOR ID: Agilent 6460 Triple Quad LC/MS

SAMPLE INJECTION ID:	DATA FILE ID:	INJECTION DATE/TIME
PERCHLORATE 0.0002 ug/ml 11/11/14	T312_003.d	03/12/15 17:52
PERCHLORATE 0.0004 ug/ml 11/11/14	T312_004.d	03/12/15 18:11
PERCHLORATE 0.001 ug/ml 11/11/14	T312_005.d	03/12/15 18:29
PERCHLORATE 0.002 ug/ml 11/11/14	T312_006.d	03/12/15 18:48
PERCHLORATE 0.005 ug/ml 11/11/14	T312_007.d	03/12/15 19:07
PERCHLORATE 0.010 ug/ml 08/27/14	T312_008.d	03/12/15 19:25
PER_SS 0.0004 ug/ml 11/11/14	T312_010.d	03/12/15 20:02
PER_SS 0.002 ug/ml 11/11/14	T312_011.d	03/12/15 20:21
PER_CCV_1 0.0004 ug/ml 11/11/14	T312_013.d	03/12/15 20:58
PER_CCV_1 0.002 ug/ml 11/11/14	T312_014.d	03/12/15 21:17
PER_CCV 0.0004 ug/ml 05/07/15	T523_002.d	05/23/15 15:38
PER_CCV 0.002 ug/ml 05/07/15	T523_003.d	05/23/15 15:57
PER_CCV 0.0004 ug/ml 05/07/15	T523_016.d	05/23/15 20:13
PER_CCV 0.002 ug/ml 05/07/15	T523_017.d	05/23/15 20:32
150518WA_LCS-1 1052.6 DF 05/18/15	T523_019.d	05/23/15 21:09
150518W_ICSA 1052.6 DF 05/18/15	T523_020.d	05/23/15 21:28
150518WBLKA 1052.6 DF 05/18/15	T523_021.d	05/23/15 21:46
AZ16287_W10 1052.6 DF 05/18/15	T523_022.d	05/23/15 22:05
AZ16287_W10_MS-1 1052.6 DF 05/18/15	T523_023.d	05/23/15 22:24
AZ16287_W10_MSD-1 1052.6 DF 05/18/15	T523_024.d	05/23/15 22:42
AZ16289_W04 1052.6 DF 05/18/15	T523_026.d	05/23/15 23:20
PER_CCV 0.0004 ug/ml 05/07/15	T523_030.d	05/24/15 0:34
PER_CCV 0.002 ug/ml 05/07/15	T523_031.d	05/24/15 0:53
PER_CCV 0.0004 ug/ml 05/07/15	T524_002.d	05/24/15 14:14
PER_CCV 0.002 ug/ml 05/07/15	T524_003.d	05/24/15 14:33
AZ16288_W04 105263.2 DF 05/07/15_5/24	T524_014.d	05/24/15 18:05
PER_CCV 0.0004 ug/ml 05/07/15	T524_016.d	05/24/15 18:42
PER_CCV 0.002 ug/ml 05/07/15	T524_017.d	05/24/15 19:01
AZ16290_W04 105263.2 DF 05/07/15_5/24	T524_019.d	05/24/15 19:38
PER_CCV 0.0004 ug/ml 05/07/15	T524_030.d	05/24/15 23:03
PER_CCV 0.002 ug/ml 05/07/15	T524_031.d	05/24/15 23:21

EXPLOSIVES
EPA METHOD 8330

APPL, INC.

EPA 8330
EXPLOSIVES

QC Summary

APPL, INC.

Method Blank
EPA 8330B WATER

Blank Name/QCG: **150515W-16287 - 197118**
Batch ID: #83BJU-150515A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
BLANK	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
BLANK	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
BLANK	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
BLANK	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
BLANK	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
BLANK	SURROGATE: 1,2-DINITROBENZ	86.2	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000033
Instrument: Waldorf
Sequence: 150517
Initials: MP

GC SC-Blank-REG MDLs
Printed: 05/19/15 10:03:53 AM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/18/15

Matrix: WATER Instrument: Waldorf

APPL ID.	Client Sample No.	SURROGATE: 1,2-DINITROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
150515A-LCS	Lab Control Spike	70-130	90.3				
AZ16287-MS	Matrix Spike	70-130	89.3				
AZ16287-MSD	Matrix SpikeD	70-130	89.3				
150515A-BLK	Blank	70-130	86.2				
AZ16287	S67-MW007-051215	70-130	89.6				
AZ16288	S67-MW003-051215	70-130	85.0				
AZ16289	S67-MW002-051215	70-130	89.2				
AZ16290	S67-MW009-051215	70-130	89.1				

Comments: Batch: #83BJU-150515A

Laboratory Control Spike Recovery
EPA 8330B WATER

APPL ID: **150515W-16287 LCS - 197118**
Batch ID: #83BJU-150515A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2,4-DINITROTOLUENE	8.00	7.14	89.3	60-135
2,6-DINITROTOLUENE	8.00	7.12	89.0	60-135
HMX	8.00	7.74	96.8	80-115
NITROGLYCERIN	8.00	7.43	92.9	70-130
RDX	8.00	7.16	89.5	50-160
TETRYL	8.00	7.43	92.9	20-175
SURROGATE: 1,2-DINITROBENZENE (S	8.00	7.22	90.3	70-130

Comments: _____

Primary	SPK
Quant Method :	W150517.M
Extraction Date :	05/15/15
Analysis Date :	05/18/15
Instrument :	Waldorf
Run :	0517_000030
Initials :	MP

Printed: 05/19/15 10:03:47 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8330B WATER

APPL ID: **150515W-16287 MS - 197118**
Batch ID: #83BJU-150515A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4-DINITROTOLUENE	8.00	ND	7.08	7.10	88.5	88.8	60-135	0.28	20
2,6-DINITROTOLUENE	8.00	ND	7.11	7.12	88.9	89.0	60-135	0.14	20
HMX	8.00	ND	7.72	8.05	96.5	101	80-115	4.2	20
NITROGLYCERIN	8.00	ND	7.72	7.64	96.5	95.5	70-130	1.0	20
RDX	8.00	ND	7.20	7.06	90.0	88.3	50-160	2.0	20
TETRYL	8.00	ND	7.59	7.51	94.9	93.9	20-175	1.1	20
SURROGATE: 1,2-DINITROBENZENE (S)	8.00	NA	7.14	7.14	89.3	89.3	70-130		

Comments: _____

Primary	SPK	DUP
Quant Method :	W150517.M	W150517.M
Extraction Date :	05/15/15	05/15/15
Analysis Date :	05/18/15	05/18/15
Instrument :	Waldorf	Waldorf
Run :	0517_000031	0517_000032
Initials :	MP	

Printed: 05/19/15 10:03:41 AM
APPL MSD SCII

EPA 8330B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/18/15

Matrix: WATER Instrument: Waldorf

Blank ID: 150515A-BLK Time Analyzed: 0638

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150515A-LCS	Lab Control Spike	0517_000030	05/18/15 0446
150515A-MS	Matrix Spike	0517_000031	05/18/15 0523
150515A-MSD	Matrix SpikeD	0517_000032	05/18/15 0601
150515A-BLK	Blank	0517_000033	05/18/15 0638
AZ16287	S67-MW007-051215	0517_000036	05/18/15 0831
AZ16288	S67-MW003-051215	0517_000037	05/18/15 0909
AZ16289	S67-MW002-051215	0517_000038	05/18/15 0946
AZ16290	S67-MW009-051215	0517_000039	05/18/15 1024

Comments: Batch: #83BJU-150515A

Printed: 05/19/15 10:03:25 AM

Form 4, Blank Summary

EPA 8330
EXPLOSIVES

Sample Data

APPL, INC.

EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW007-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16287
QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	89.6	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000036
Instrument: Waldorf
Sequence: 150517
Dilution Factor: 1
Initials: MP

Printed: 05/19/15 10:03:58 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000036.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 08:31:29
Operator : MP
Sample : AZ16287W25 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8454 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:41:13 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb		ppb	
	System Monitoring Compounds								
4)	S 1,2-DINIT...	0.000	3.511	0	762965	N.D.		0.896	#
	Spiked Amount 1.000			Recovery	=	0.00%		89.60%	
	Target Compounds								
1)	TM HMX	0.000	0.000	0	0	N.D.		N.D.	
2)	TM RDX	0.000	0.000	0	0	N.D.	<DL	N.D.	d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.		N.D.	
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.		N.D.	
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.		N.D.	
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.		N.D.	
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D.	d<DL	N.D.	
9)	TM TETRYL	6.410	0.000	36738	0	NoCal		N.D.	
10)	TM 2,4,6-TRI...	6.894	0.000	41865	0	NoCal		N.D.	
11)	TM 2-AMINO-4...	7.154	0.000	29561	0	NoCal		N.D.	
12)	TM 4-AMINO-2...	7.541	0.000	23840	0	NoCal		N.D.	
13)	TM 2,4-DINIT...	8.565	0.000	32073	0	NoCal		N.D.	
14)	TM 2,6-DINIT...	9.024	0.000	21391	0	NoCal	<DL	N.D.	d
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.		N.D.	
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	NT	N.D.	d
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.		N.D.	
18)	TM PETN	0.000	0.000	0	0	N.D.		N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

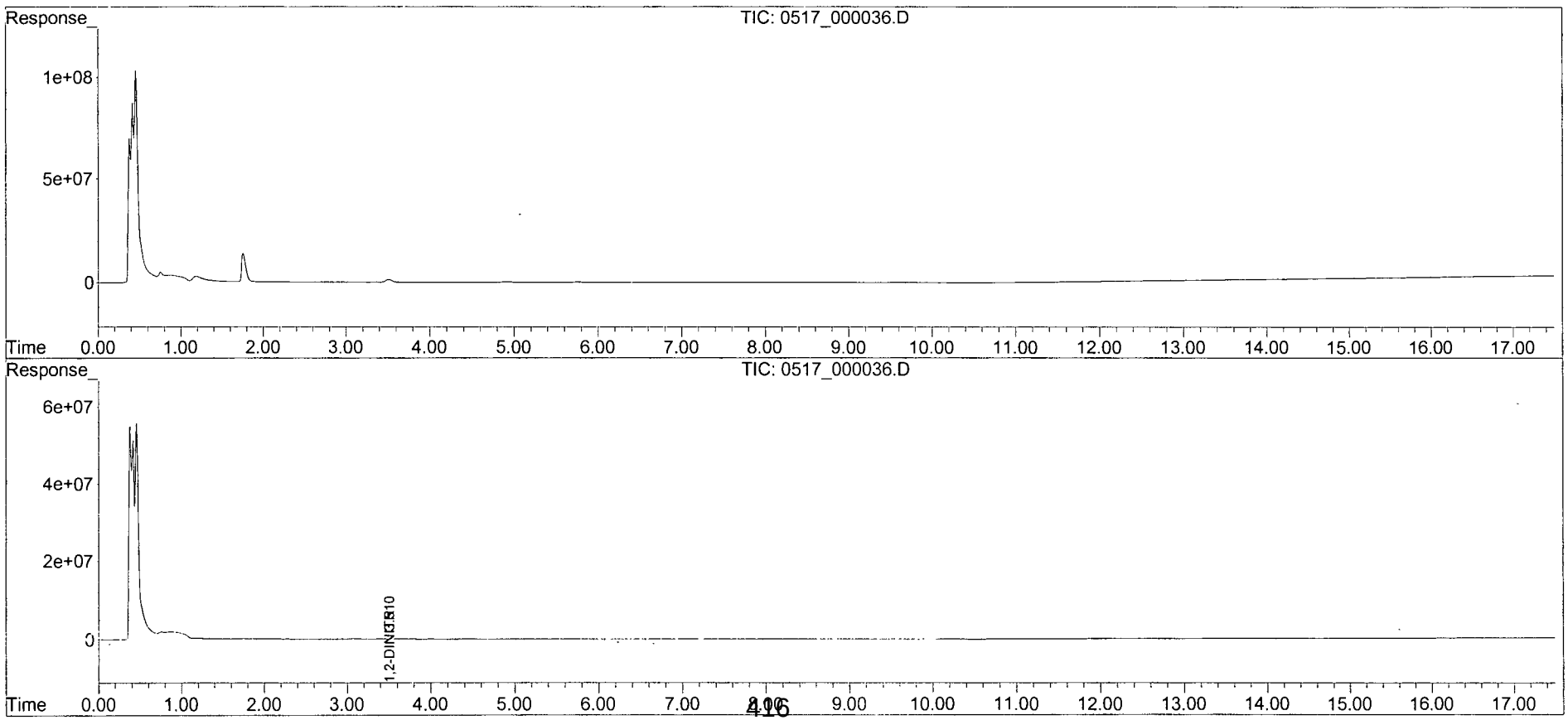
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000036.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 08:31:29
Operator : MP
Sample : AZ16287W25 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8454 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:41:13 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW003-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16288

QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	85.0	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000037
Instrument: Waldorf
Sequence: 150517
Dilution Factor: 1
Initials: MP

Printed: 05/19/15 10:03:58 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000037.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:09:00
Operator : MP
Sample : AZ16288W09 0.0172 DF 05/15/15
Misc : Water
ALS Vial : 8455 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:41:44 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.503	0	724329	N.D.	0.850	#
	Spiked Amount 1.000			Recovery =		0.00%	85.00%	
	Target Compounds							
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.	
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D.	d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.	
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.	
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D.	N.D.	
9)	TM TETRYL	6.377	0.000	1369	0	NoCal	N.D.	
10)	TM 2,4,6-TRI...	6.956	0.000	19007	0	NoCal	N.D.	
11)	TM 2-AMINO-4...	7.079	0.000	12883	0	NoCal	N.D.	
12)	TM 4-AMINO-2...	7.499	0.000	12373	0	NoCal	N.D.	
13)	TM 2,4-DINIT...	8.587	0.000	15477	0	NoCal	N.D.	
14)	TM 2,6-DINIT...	8.937	0.000	3412	0	NoCal	N.D.	
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.	
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.	
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.	
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.	

LDL

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

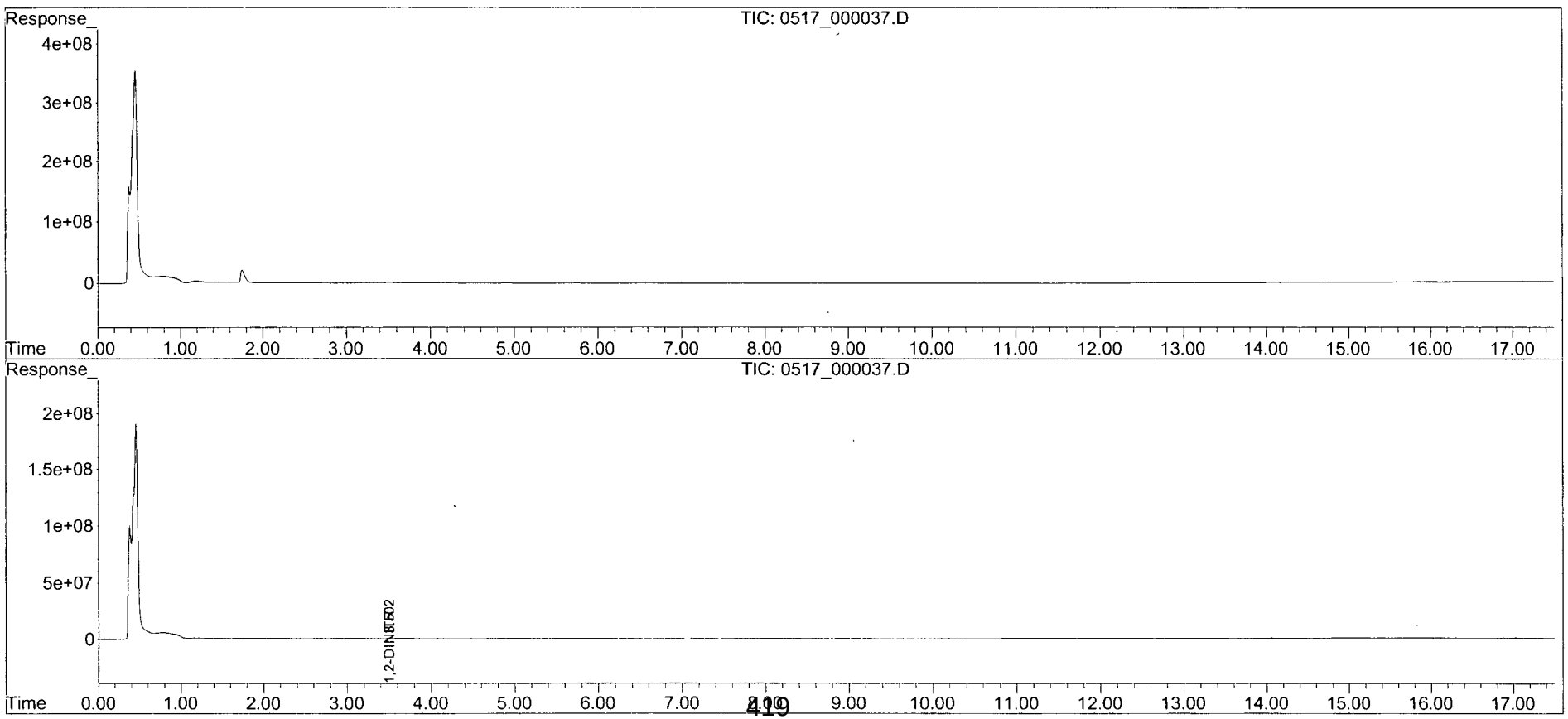
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000037.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:09:00
Operator : MP
Sample : AZ16288W09 0.0172 DF 05/15/15
Misc : Water
ALS Vial : 8455 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:41:44 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW002-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16289

QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	89.2	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000038
Instrument: Waldorf
Sequence: 150517
Dilution Factor: 1
Initials: MP

Printed: 05/19/15 10:03:58 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000038.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:46:31
Operator : MP
Sample : AZ16289W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8456 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:43:52 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	3.502	0	759797	N.D.	0.892 #
	Spiked Amount 1.000			Recovery =		0.00%	89.20%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	<DL N.D. d
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D.
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	<DL N.D.
9)	TM TETRYL	6.418	0.000	2053	0	NoCal	N.D.
10)	TM 2,4,6-TRI...	6.918	0.000	9759	0	NoCal	N.D.
11)	TM 2-AMINO-4...	7.184	0.000	9554	0	NoCal	N.D.
12)	TM 4-AMINO-2...	7.500	0.000	10225	0	NoCal	N.D.
13)	TM 2,4-DINIT...	8.614	0.000	14840	0	NoCal	N.D.
14)	TM 2,6-DINIT...	9.013	0.000	11426	0	NoCal	N.D.
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

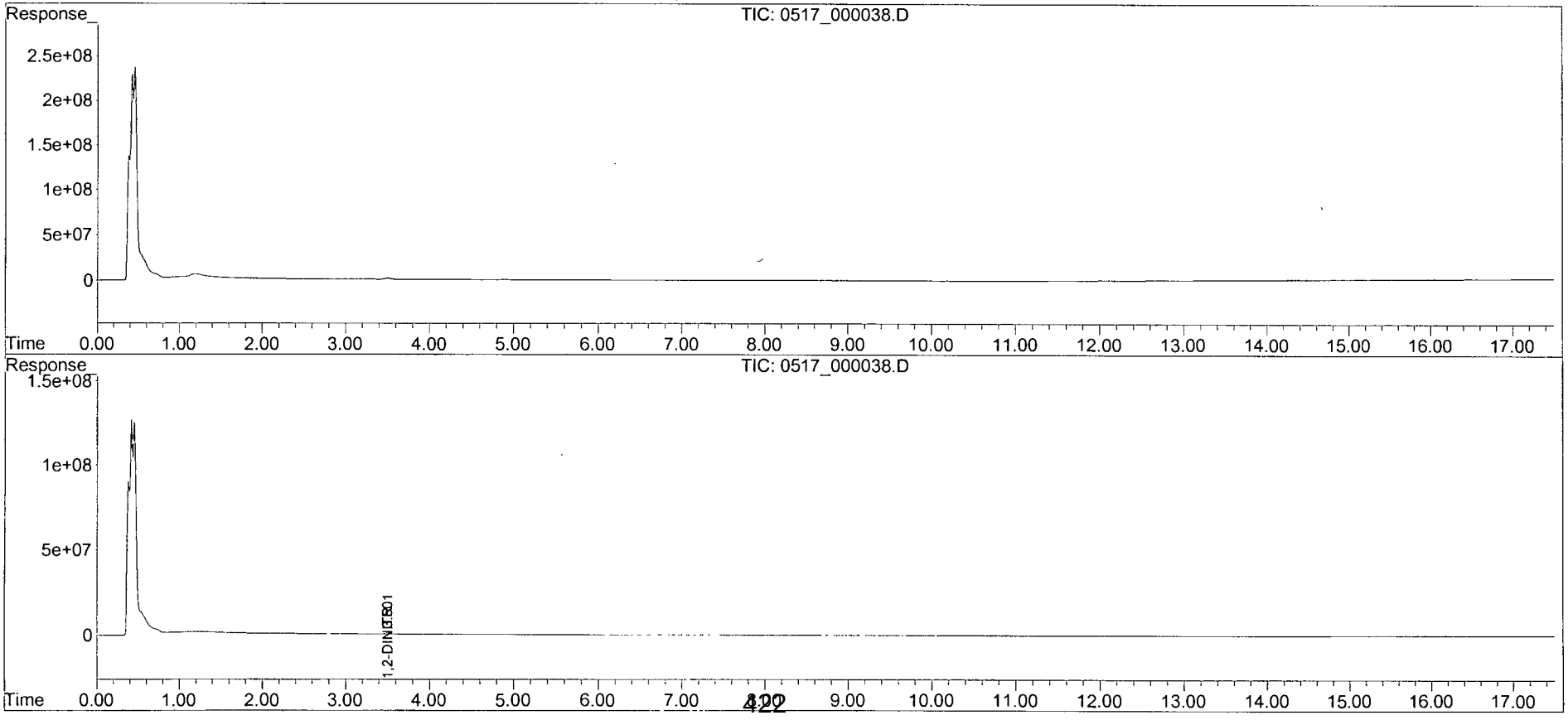
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000038.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:46:31
Operator : MP
Sample : AZ16289W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8456 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:43:52 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B WATER

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW009-051215

Sample Collection Date: 05/12/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 76413

APPL ID: AZ16290

QCG: #83BJU-150515A-197118

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
EPA 8330B	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
EPA 8330B	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
EPA 8330B	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
EPA 8330B	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	89.1	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000039
Instrument: Waldorf
Sequence: 150517
Dilution Factor: 1
Initials: MP

Printed: 05/19/15 10:03:58 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000039.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 10:24:01
Operator : MP 6 mp 05-19-15
Sample : AZ18290W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8512 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:45:33 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb		ppb	
	System Monitoring Compounds								
4) S	1,2-DINIT...	0.000	3.503	0	758494	N.D.		0.891	#
Spiked Amount	1.000			Recovery	=	0.00%		89.10%	
	Target Compounds								
1) TM	HMX	0.000	0.000	0	0	N.D.	LOL	N.D.	d
2) TM	RDX	0.000	0.000	0	0	N.D.		N.D.	
3) TM	1,3,5-TRI...	0.000	0.000	0	0	N.D.		N.D.	
5) TM	1,3-DINIT...	0.000	0.000	0	0	N.D.		N.D.	
6) TM	3,5-DINIT...	0.000	0.000	0	0	N.D.		N.D.	
7) TM	NITROBENZENE	0.000	0.000	0	0	N.D.		N.D.	
8) TM	NITROGLYC...	5.908	0.000	50002	0	0.144		N.D.	#
9) TM	TETRYL	6.395	0.000	7925	0	NoCal		N.D.	
10) TM	2,4,6-TRI...	6.825	0.000	18626	0	NoCal		N.D.	
11) TM	2-AMINO-4...	7.078	0.000	7014	0	NoCal		N.D.	
12) TM	4-AMINO-2...	7.459	0.000	14768	0	NoCal		N.D.	
13) TM	2,4-DINIT...	8.583	0.000	7973	0	NoCal		N.D.	
14) TM	2,6-DINIT...	9.006	0.000	21741	0	NoCal	LOL	N.D.	d
15) TM	2-NITROTO...	0.000	0.000	0	0	N.D.		N.D.	
16) TM	4-NITROTO...	0.000	0.000	0	0	N.D.	NT	N.D.	d
17) TM	3-NITROTO...	0.000	0.000	0	0	N.D.		N.D.	
18) TM	PETN	0.000	0.000	0	0	N.D.	d NT	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

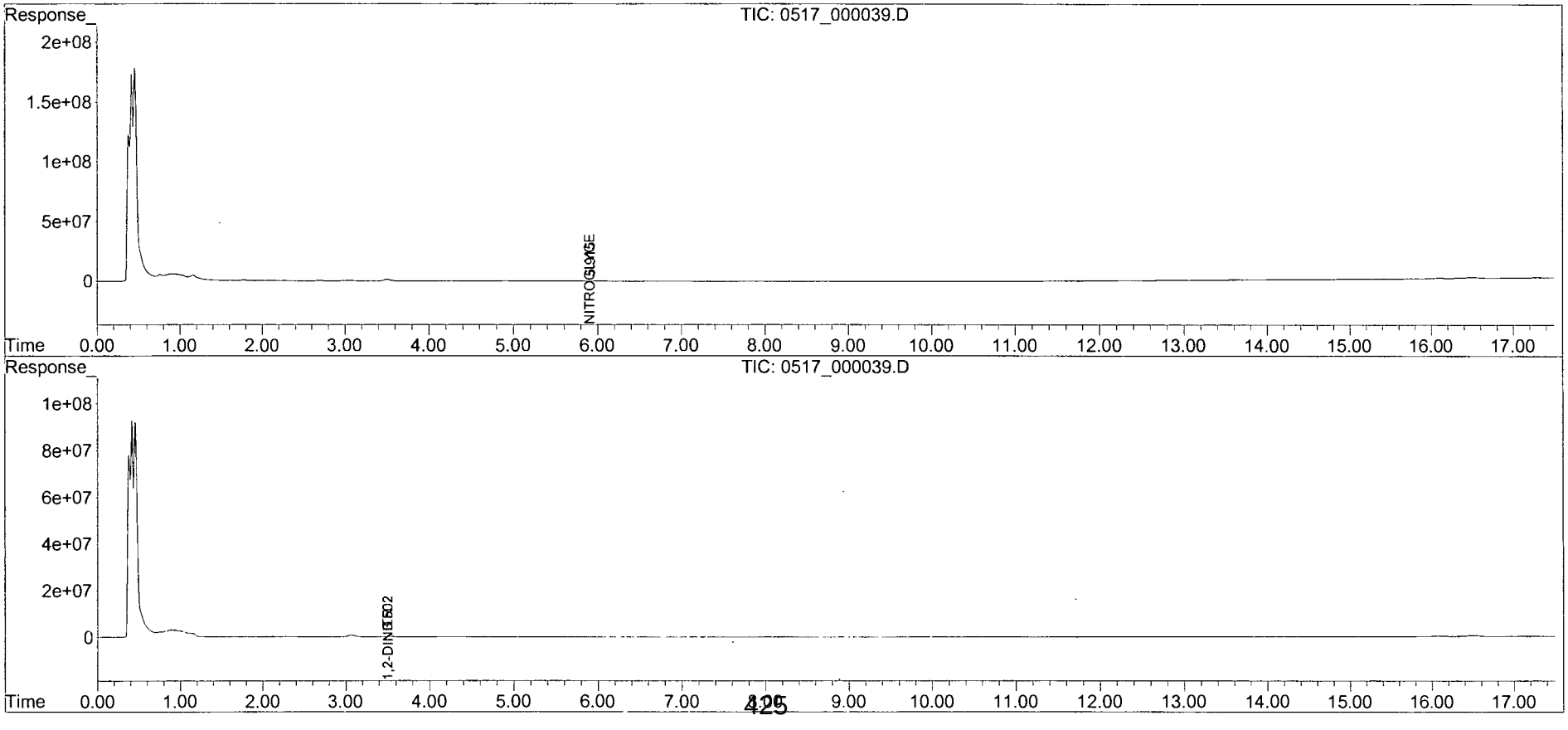
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000039.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 10:24:01
Operator : MP
Sample : AZ13290W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8512 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 16:45:33 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000050.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 23:28:17
Operator : MP
Sample : AZ16290W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 4416 Sample Multiplier: 0.016

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:54:05 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	8.080	0	85875	N.D.	0.893 #
	Spiked Amount 1.000			Recovery =	0.00%	89.30%	
	Target Compounds						
1) TM	HMX	0.000	4.078	0	24032	N.D.	0.238m#
2) TM	RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM	1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM	1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM	NITROBENZENE	0.000	0.000	0	0	N.D.	NT N.D. d
7) TM	2,4,6-TRI...	0.000	0.000	0	0	N.D.	NT N.D. d
8) TM	NITROGLYC...	0.000	11.954	0	396	N.D.	NoCal
9) TM	TETRYL	0.000	0.000	0	0	N.D.	<DL N.D. d
10) TM	2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM	2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM	2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM	4-NITROTO...	0.000	0.000	0	0	N.D.	NT N.D. d
14) TM	3,5-DINIT...	0.000	0.000	0	0	N.D.	NT N.D. d
15) TM	3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM	4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM	2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM	PETN	0.000	0.000	0	0	N.D. d	NT N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

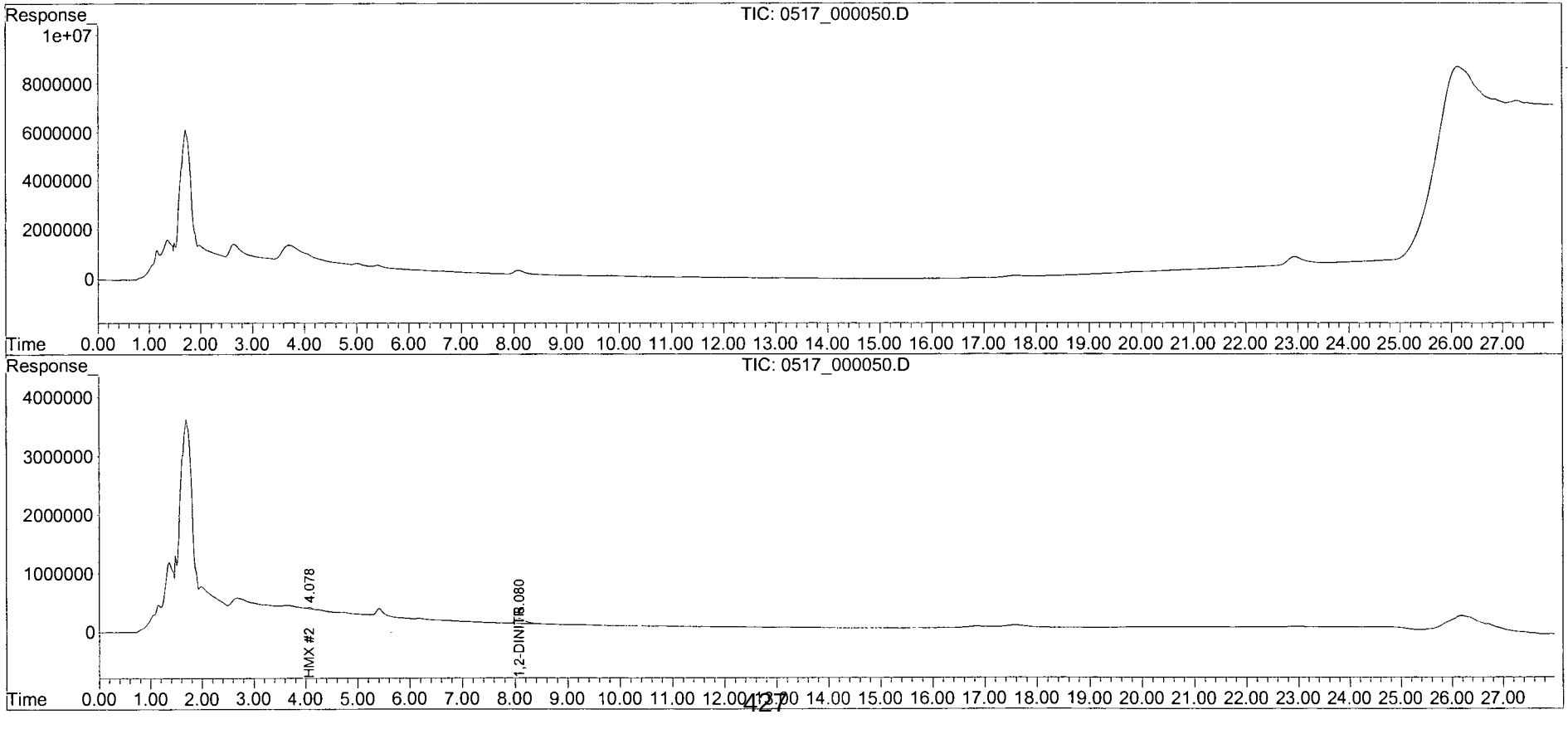
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000050.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 23:28:17
Operator : MP
Sample : AZ16290W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 4416 Sample Multiplier: 0.016

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:54:05 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

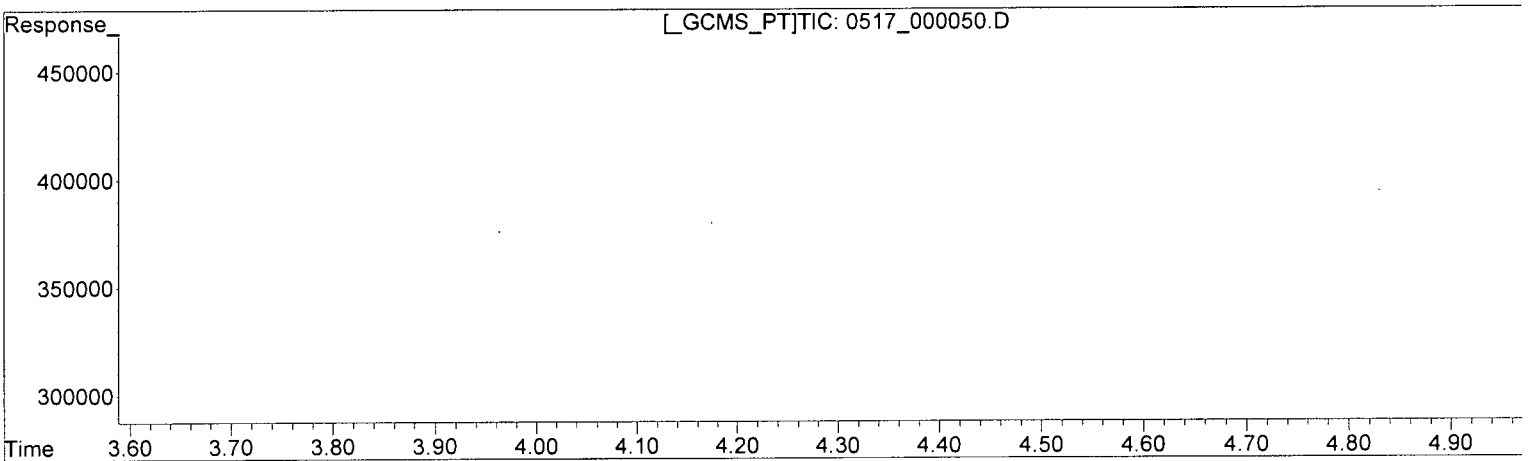


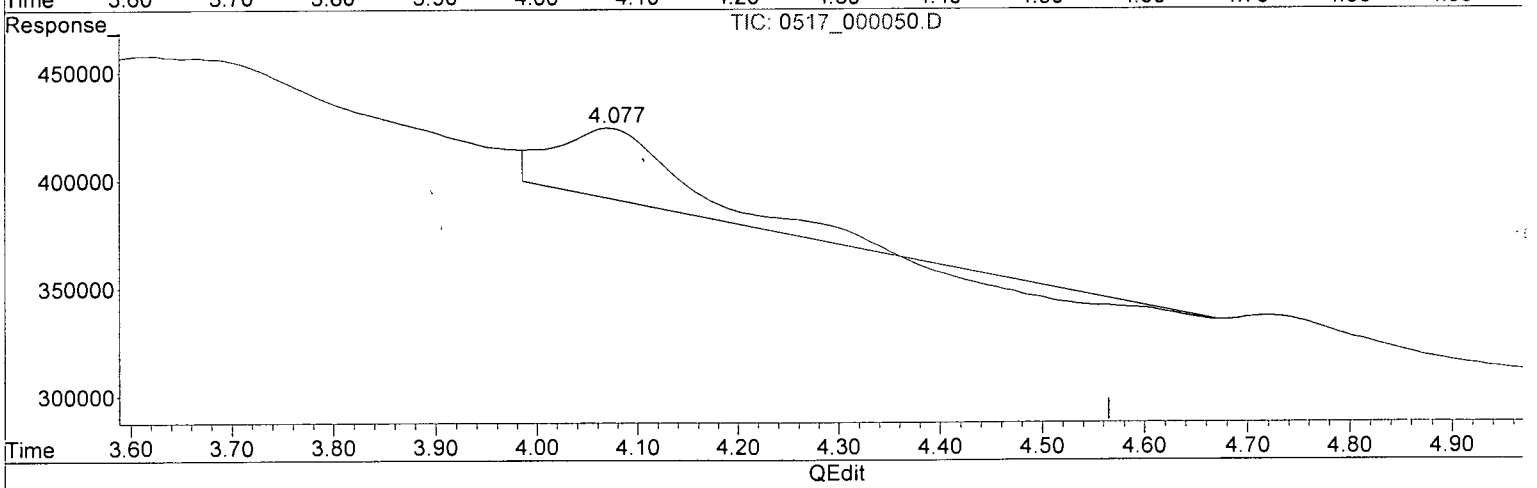
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000050.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 23:28:17
Operator : MP
Sample : AZ16290W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 4416 Sample Multiplier: 0.016

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:07:47 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.070min 0.320 ppb

response 32354

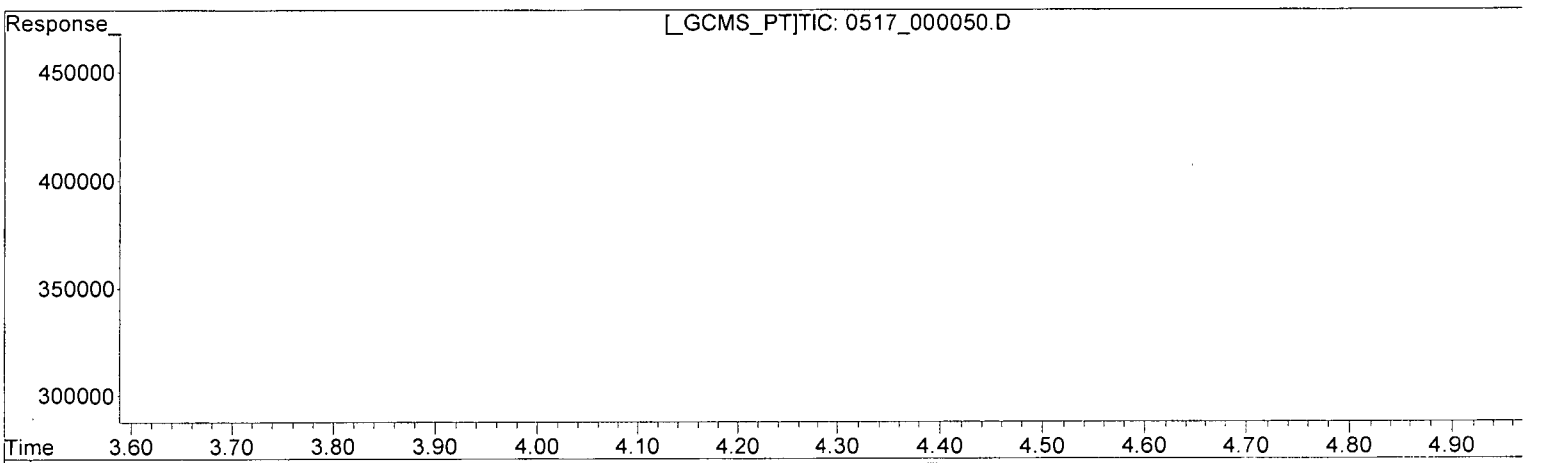
(+) = Expected Retention Time

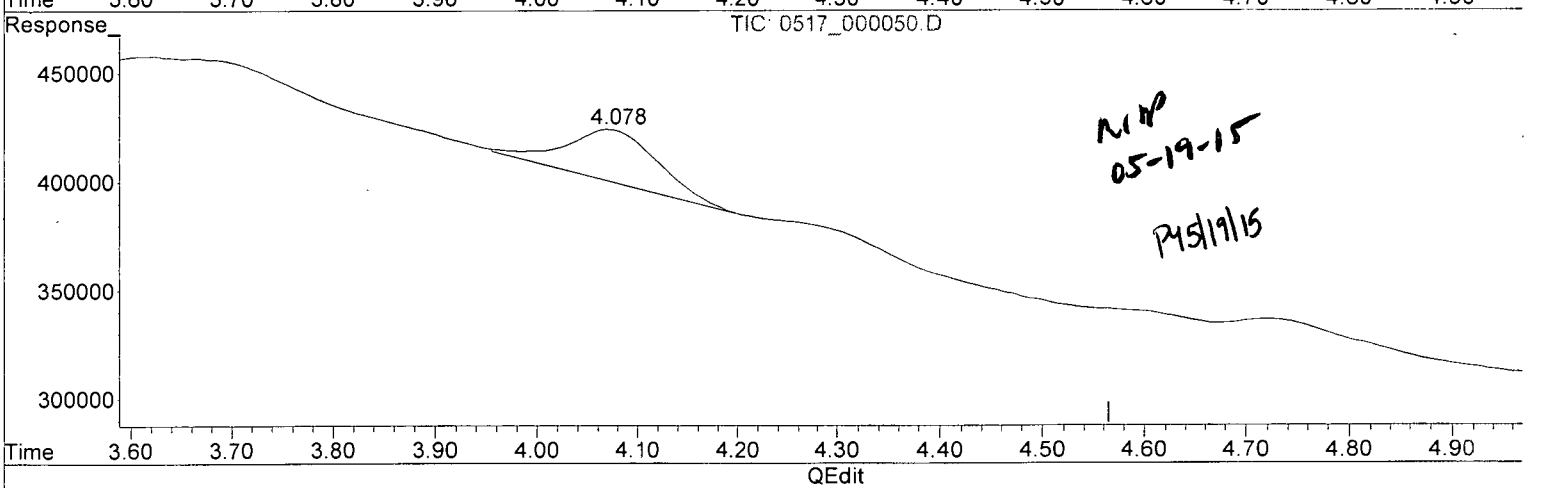
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000050.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 23:28:17
Operator : MP
Sample : AZ16290W09 0.016 DF 05/15/15
Misc : Water
ALS Vial : 4416 Sample Multiplier: 0.016

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:07:47 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MP 05-19-15

P 5/19/15

QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.078min 0.238 ppb m

response 24032

(+) = Expected Retention Time

EPA 8330
EXPLOSIVES

Calibration Data

APPL, INC.

Initial Calibration

Lab Name: APPL, Inc. SDG No: 76413
Case No: Initial Cal. Date: 05/17/15
Matrix: Instrument: Waldorf
Initials: MP

			0517_000006.D	0517_000007.D	0517_000008.D	0517_000009.D	0517_000010.D	0517_000011.D	0517_000012 D	0517_000013.D	0517_000015.D				
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	
####	TM	NITROGLYCERIN	129	154	139	137	137	139	139	140	140		139	4.7	TM
####	TM	PETN		121	102	112	113	117	118	118	120		115	5.3	TM
####		Signal #2													
####	TM	HMX #2	639	633	657	686	660	665	664	659	656		658	2.3	TM
####	TM	RDX #2	435	431	438	436	436	441	441	439	444		438	0.86	TM
####	TM	1,3,5-TRINITROBENZENE #2	781	783	792	789	785	794	795	797	803		791	0.91	TM
####	S	1,2-DINITROBENZENE #2	335	334	340	339	336	340	342	346	353		341	1.8	S
####	TM	1,3-DINITROBENZENE #2	743	743	753	749	748	757	762	765	779		756	1.5	TM
####	TM	3,5-DINITROANILINE #2	591	593	601	598	596	605	608	612	614		602	1.3	TM
####	TM	NITROBENZENE #2	344	343	343	343	342	347	347	350	353		346	1.1	TM
####	TM	TETRYL #2	265	259	260	261	257	260	262	267	267		262	1.3	TM
####	TM	2,4,6-TRINITROTOLUENE #2	327	327	325	321	322	326	327	327	336		326	1.3	TM
####	TM	2-AMINO-4,6-DINITROTOLUENE	311	306	307	307	306	310	312	314	319		310	1.4	TM
####	TM	4-AMINO-2,6-DINITROTOLUENE	229	226	228	225	224	227	228	228	231		227	0.91	TM
####	TM	2,4-DINITROTOLUENE #2	320	313	314	311	311	316	318	320	327		317	1.6	TM
####	TM	2,6-DINITROTOLUENE #2	177	175	176	174	174	176	177	177	181		176	1.2	TM
####	TM	2-NITROTOLUENE #2	122	123	125	123	122	124	124	124	126		124	1.00	TM
####	TM	4-NITROTOLUENE #2	124	125	125	122	121	124	123	124	126		124	1.2	TM
####	TM	3-NITROTOLUENE #2	145	143	147	145	146	148	148	149	151		147	1.6	TM
####	TM	PETN #2											0	0	TM
####															
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:26:19
Operator : MP
Sample : 8330CB 0.005 PPM 05/17/15
Misc :
ALS Vial : 8192 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:49:41 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:36:28 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

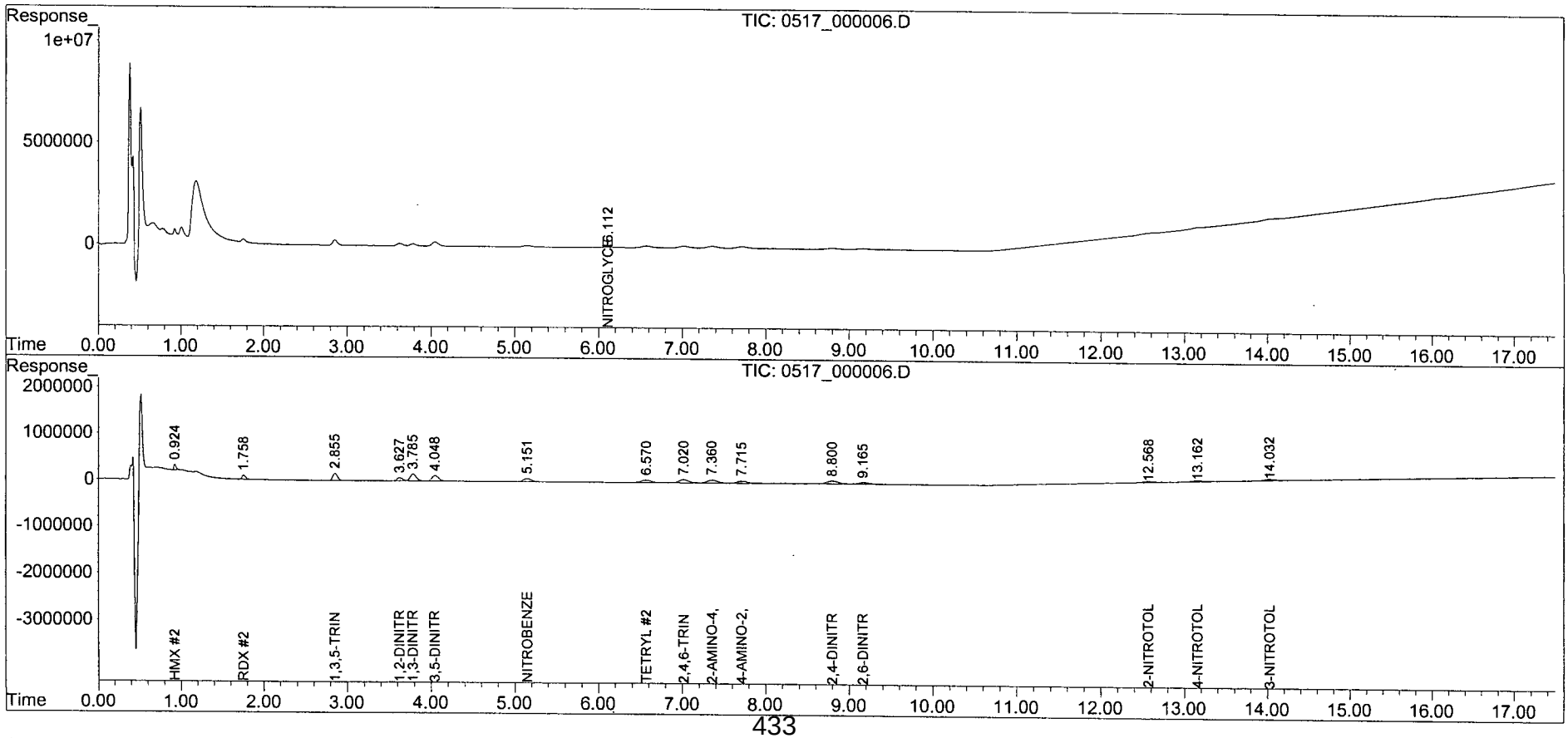
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	3.627	0	67033	N.D.	6.068 #
Spiked Amount 62.500			Recovery	=	0.00%	9.71%
Target Compounds						
1) TM HMX	0.000	0.924	0	127713	N.D.	5.324m#
2) TM RDX	0.000	1.759	0	86988	N.D.	5.686 #
3) TM 1,3,5-TRI...	0.000	2.855	0	156176	N.D.	6.061 #
5) TM 1,3-DINIT...	0.000	3.786	0	148635	N.D.	6.040 #
6) TM 3,5-DINIT...	0.000	4.049	0	118175	N.D.	5.795 #
7) TM NITROBENZENE	0.000	5.152	0	68872	N.D.	6.278 #
8) TM NITROGLYC...	6.112	0.000	25815	0	5.535m	N.D. #
9) TM TETRYL	0.000	6.570	0	53100	N.D. d	5.918
10) TM 2,4,6-TRI...	0.000	7.020	0	65367	N.D. d	6.113
11) TM 2-AMINO-4...	0.000	7.361	0	62167	N.D. d	6.016
12) TM 4-AMINO-2...	0.000	7.717	0	45726	N.D. d	5.967
13) TM 2,4-DINIT...	0.000	8.800	0	64038	N.D. d	6.587
14) TM 2,6-DINIT...	0.000	9.171	0	35430	N.D. d	5.701
15) TM 2-NITROTO...	0.000	12.570	0	24469	N.D.	6.472 #
16) TM 4-NITROTO...	0.000	13.165	0	24770	N.D.	6.610 #
17) TM 3-NITROTO...	0.000	14.033	0	29044	N.D.	6.484 #
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:26:19
Operator : MP
Sample : 8330CB 0.005 PPM 05/17/15
Misc :
ALS Vial : 8192 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:49:41 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:36:28 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

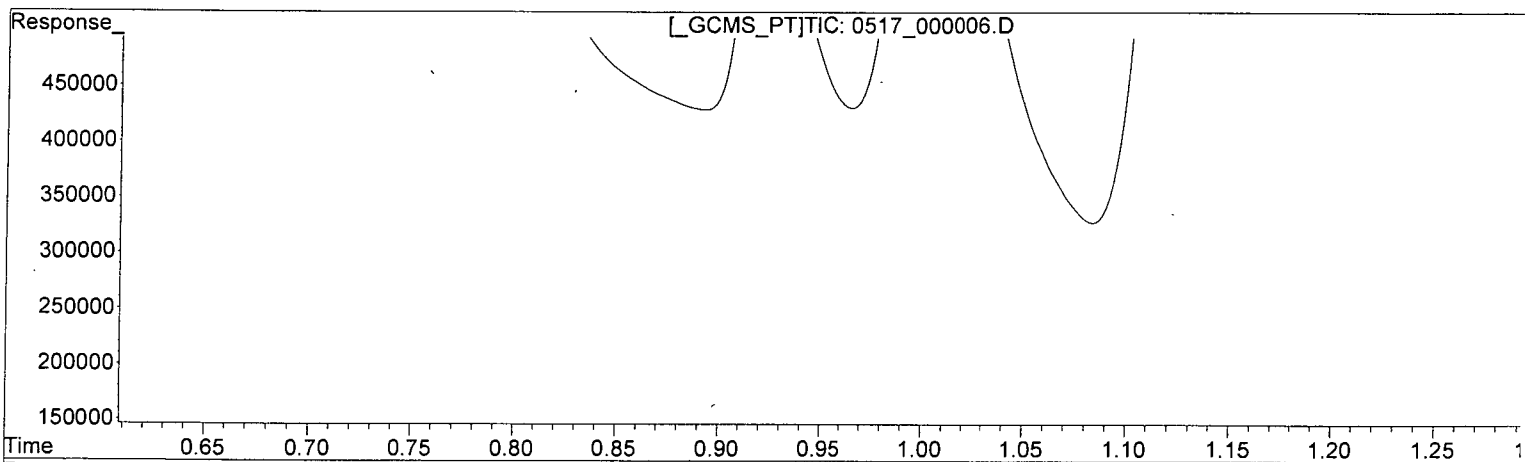


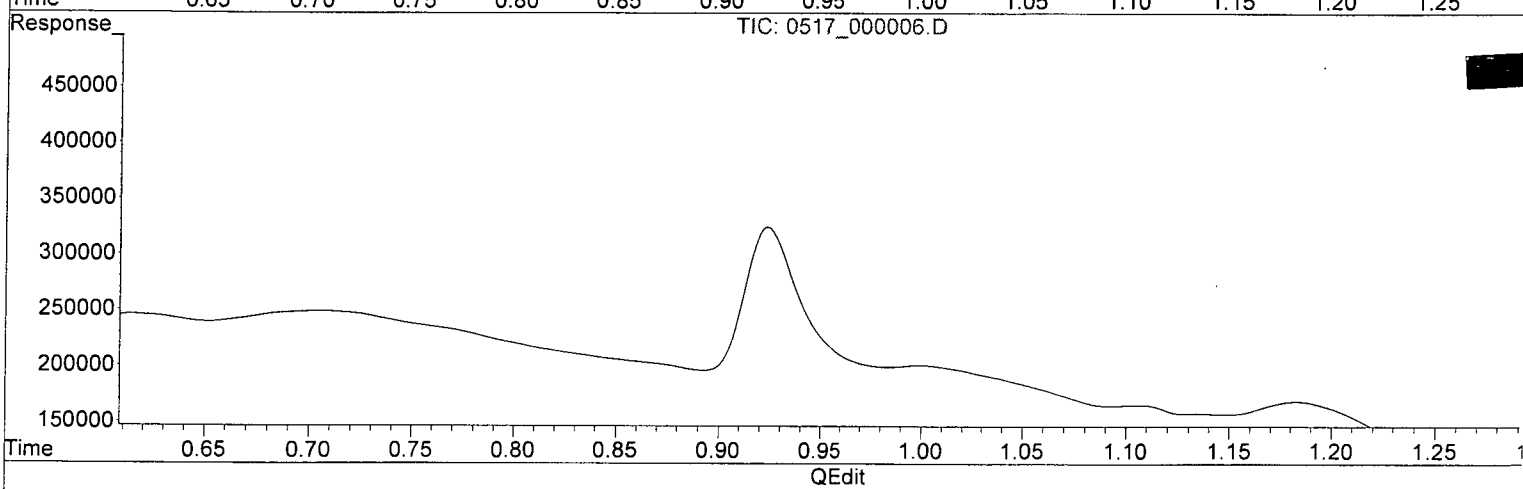
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:26:19
Operator : MP
Sample : 8330CB 0.005 PPM 05/17/15
Misc :
ALS Vial : 8192 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:40 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:36:28 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0





(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

0.000min 0.000 ppb

response 0

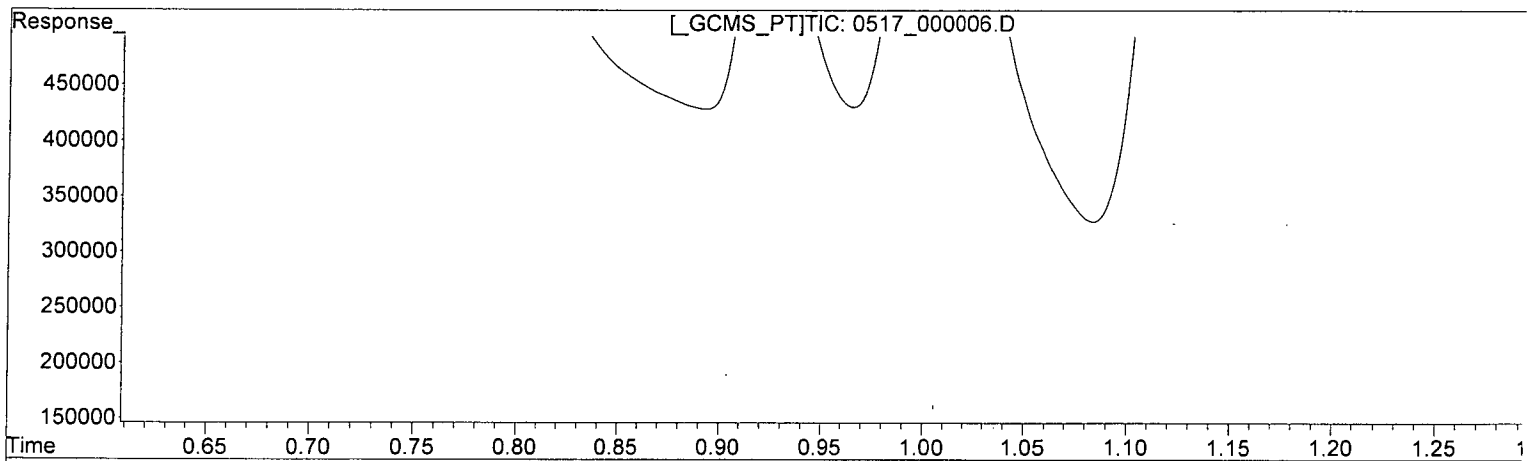
(+) = Expected Retention Time

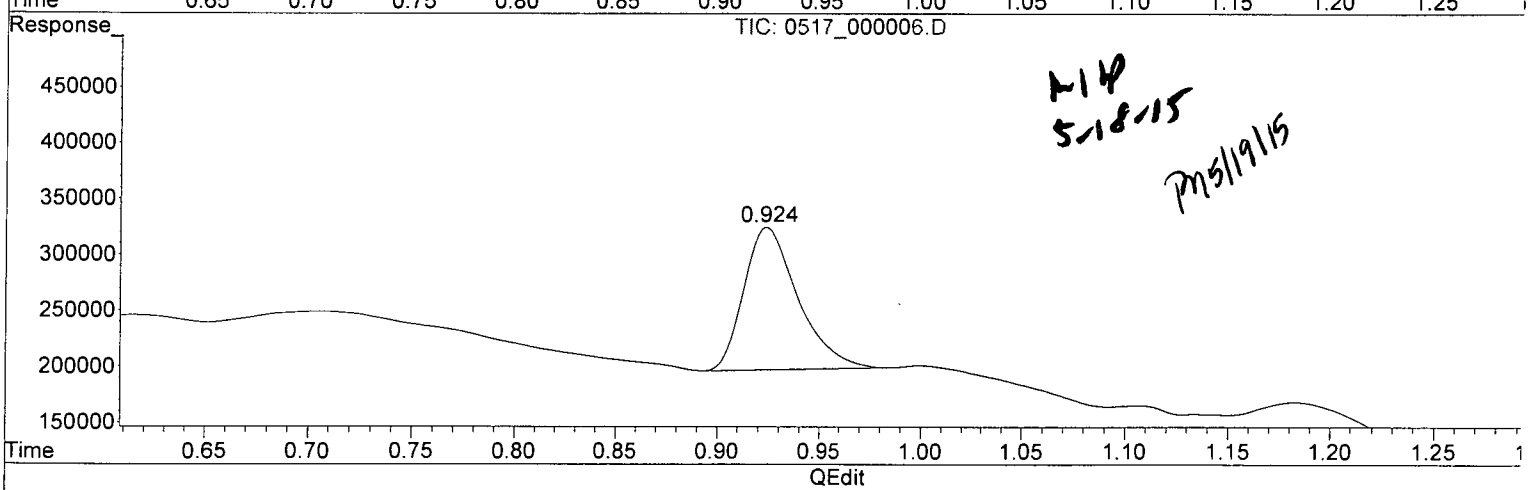
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:26:19
Operator : MP
Sample : 8330CB 0.005 PPM 05/17/15
Misc :
ALS Vial : 8192 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:40 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:36:28 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





MP 5-18-15

PM 5/19/15

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

0.924min 5.324 ppb m

response 127713

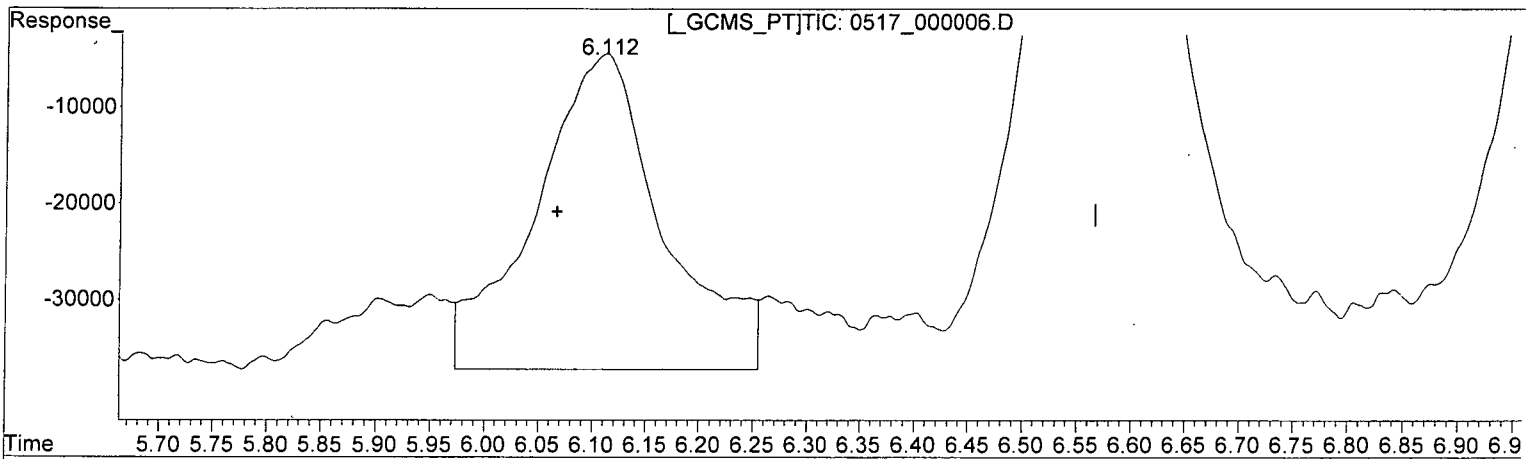
(+) = Expected Retention Time

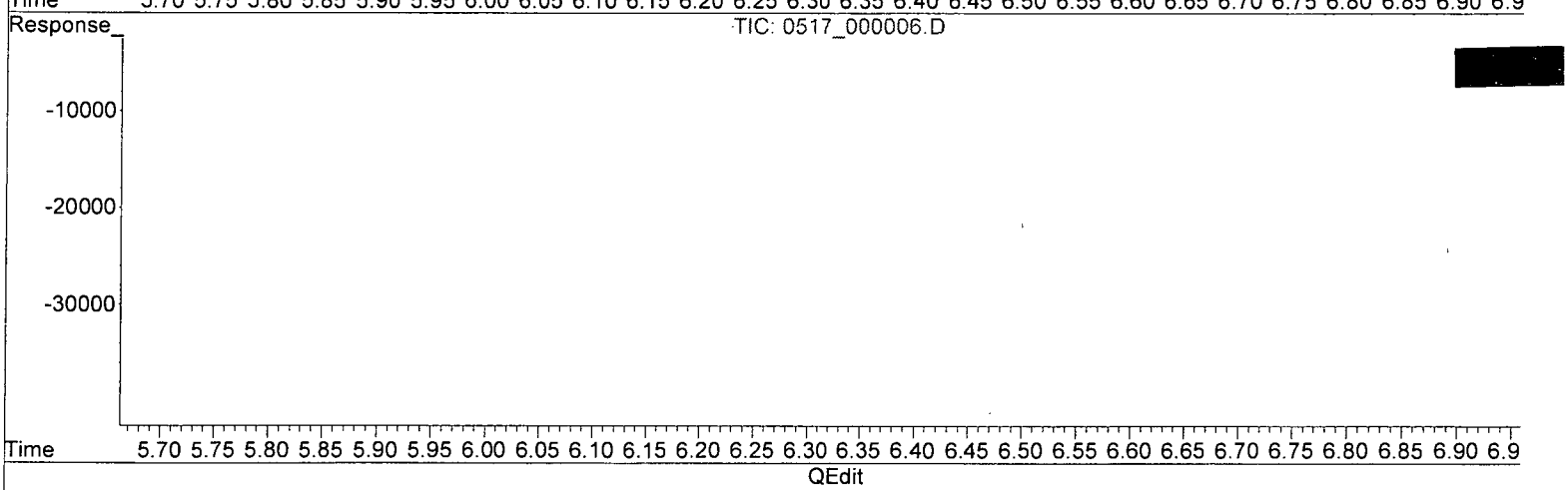
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:26:19
Operator : MP
Sample : 8330CB 0.005 PPM 05/17/15
Misc :
ALS Vial : 8192 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:40 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:36:28 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





(8) NITROGLYCERIN (TM)

6.112min 7.024 ppb

response 32759

(8) NITROGLYCERIN #2 (TM)

0.000min 0.000 ppb

response 0

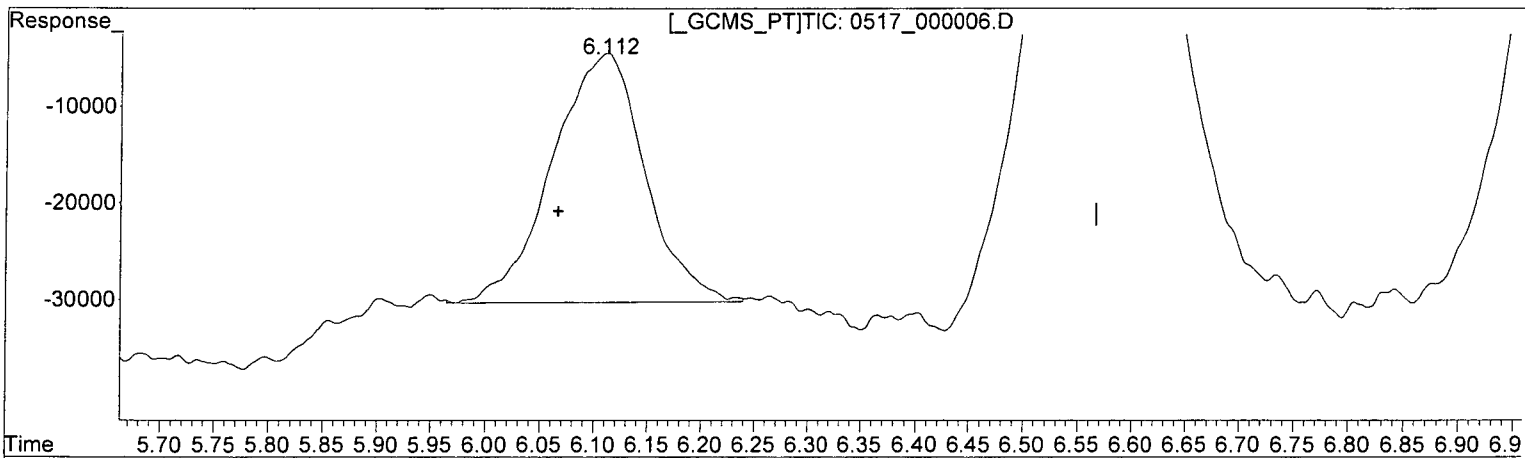
(+) = Expected Retention Time

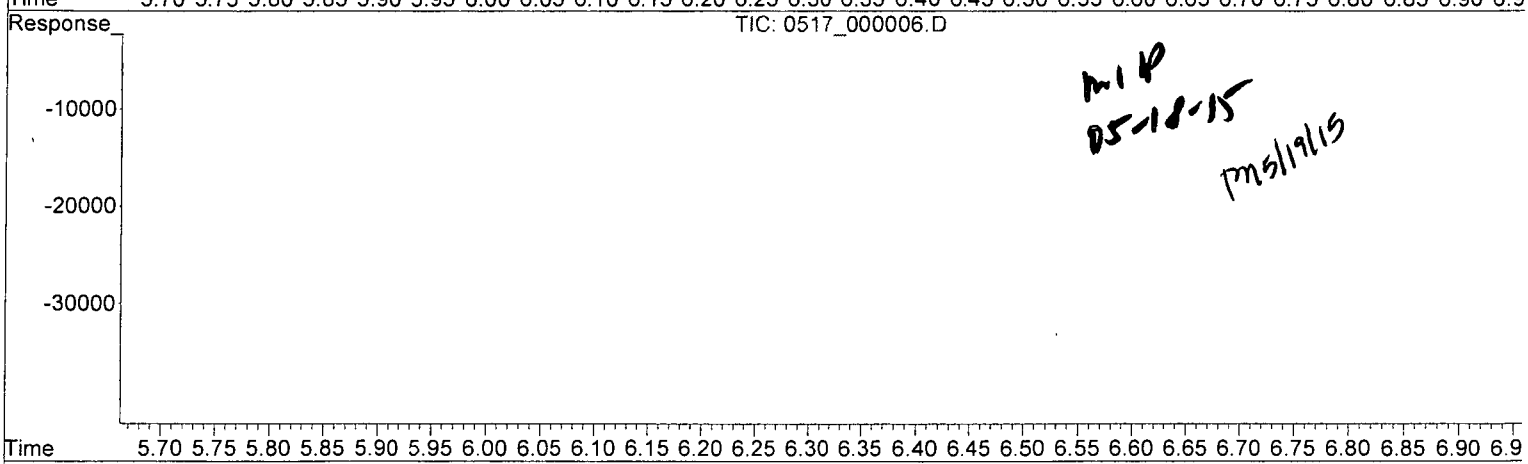
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:26:19
Operator : MP
Sample : 8330CB 0.005 PPM 05/17/15
Misc :
ALS Vial : 8192 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:40 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:36:28 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0





MP
05-18-15
PM 5/19/15

QEdit

(8) NITROGLYCERIN (TM)

6.112min 5.535 ppb m

response 25815

(8) NITROGLYCERIN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000007.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:53:49
Operator : MP
Sample : 8330CB 0.010 PPM 05/17/15
Misc :
ALS Vial : 8193 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:48:13 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
System Monitoring Compounds							
4) S 1,2-DINIT...	0.000	3.630	0	133750	N.D.	12.106	#
Spiked Amount 62.500			Recovery	=	0.00%	19.37%	
Target Compounds							
1) TM HMX	0.000	0.925	0	253349	N.D.	10.562	#
2) TM RDX	0.000	1.760	0	172490	N.D.	11.275	#
3) TM 1,3,5-TRI...	0.000	2.859	0	313013	N.D.	12.148	#
5) TM 1,3-DINIT...	0.000	3.789	0	297379	N.D.	12.085	#
6) TM 3,5-DINIT...	0.000	4.049	0	237335	N.D.	11.638	#
7) TM NITROBENZENE	0.000	5.154	0	137044	N.D.	12.492	#
8) TM NITROGLYC...	6.110	0.000	61708	0	13.232	N.D.	#
9) TM TETRYL	0.000	6.568	0	103522	N.D. d	11.537	
10) TM 2,4,6-TRI...	0.000	7.019	0	130623	N.D. d	12.215	
11) TM 2-AMINO-4...	0.000	7.357	0	122453	N.D. d	11.851	
12) TM 4-AMINO-2...	0.000	7.713	0	90295	N.D. d	11.783	
13) TM 2,4-DINIT...	0.000	8.795	0	125200	N.D. d	12.878	
14) TM 2,6-DINIT...	0.000	9.172	0	70098	N.D. d	11.279	
15) TM 2-NITROTO...	0.000	12.557	0	49037	N.D.	12.970	#
16) TM 4-NITROTO...	0.000	13.147	0	49902	N.D.	13.317	#
17) TM 3-NITROTO...	0.000	14.022	0	57207	N.D.	12.772	#
18) TM PETN	16.045	0.000	48365	0	12.987m	N.D.	#

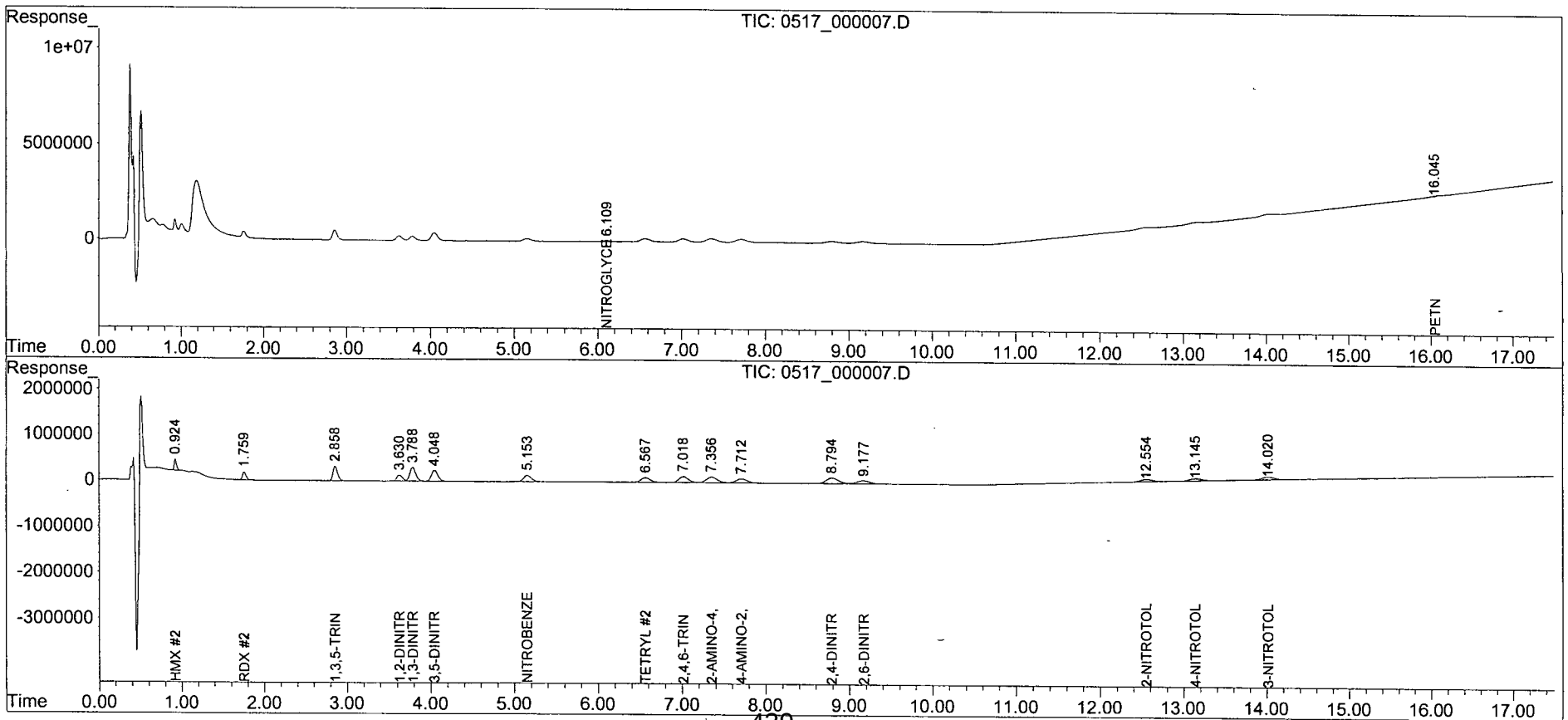
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000007.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:53:49
Operator : MP
Sample : 8330CB 0.010 PPM 05/17/15
Misc :
ALS Vial : 8193 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:48:13 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



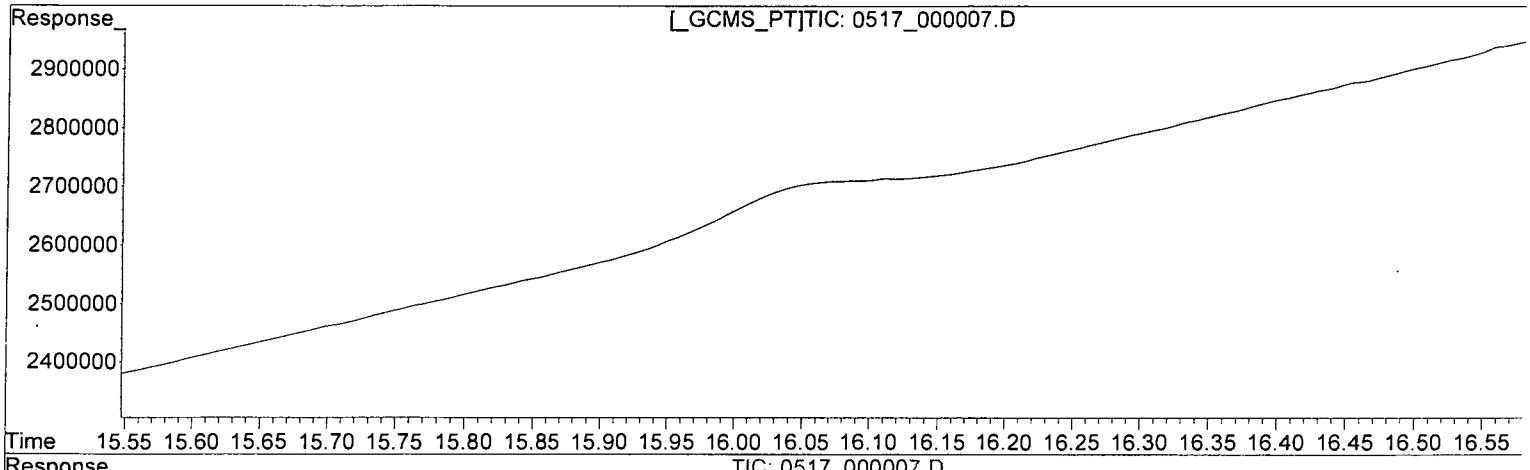
W150517.M Mon May 18 08:48:22 2015 WALDORF Page: 2

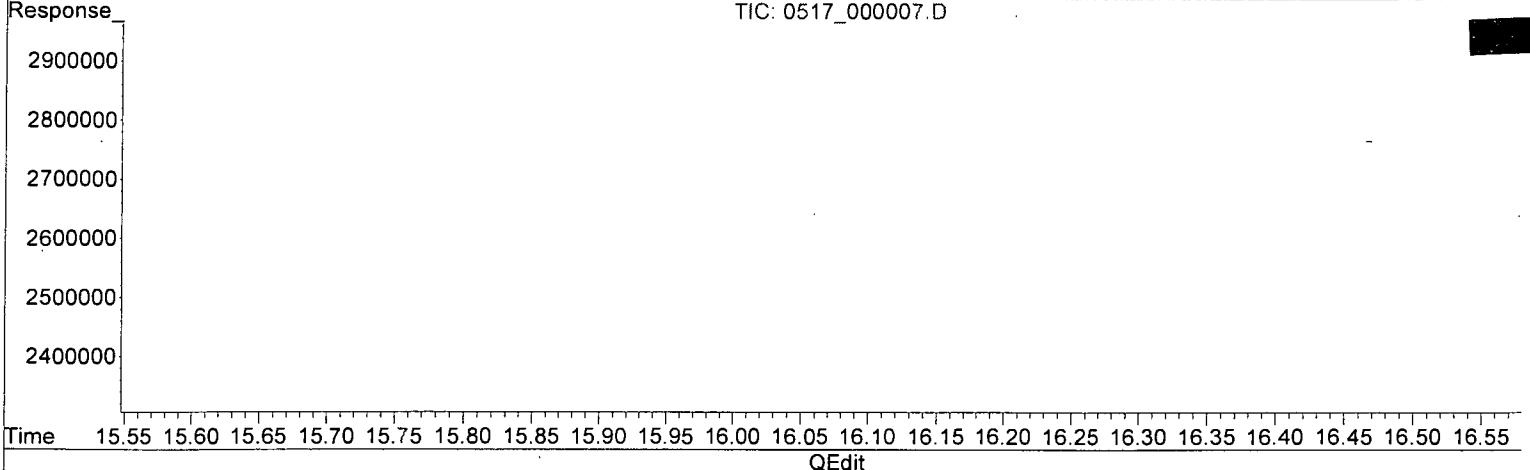
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000007.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:53:49
Operator : MP
Sample : 8330CB 0.010 PPM 05/17/15
Misc :
ALS Vial : 8193 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:44 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





QEdit

(18) PETN (TM)

0.000min 0.000 ppb

response 0

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

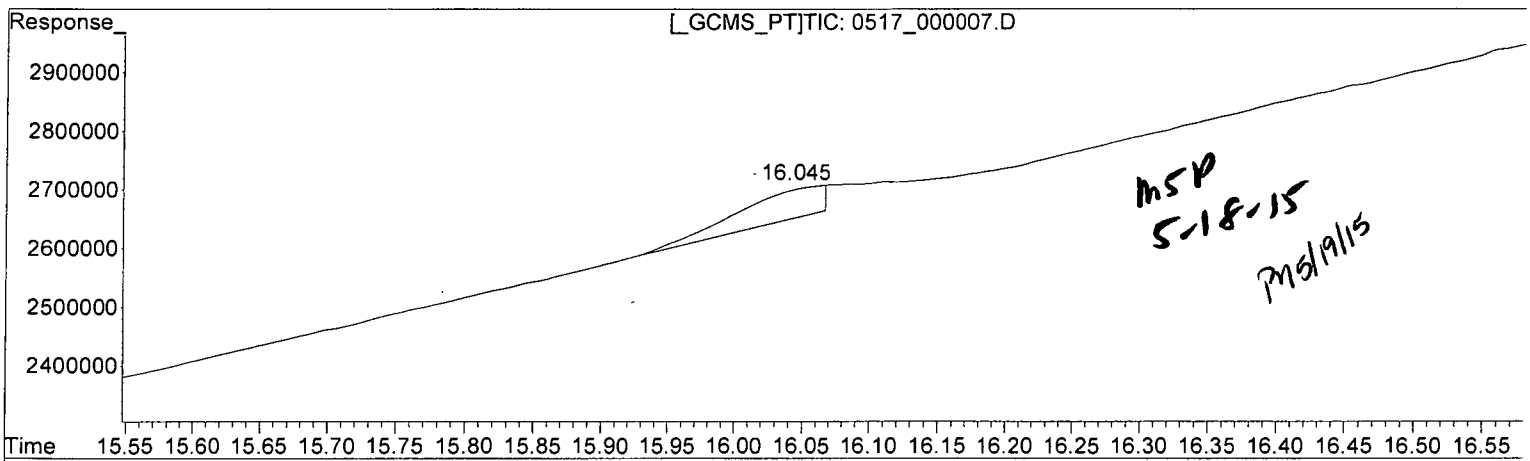
(+) = Expected Retention Time

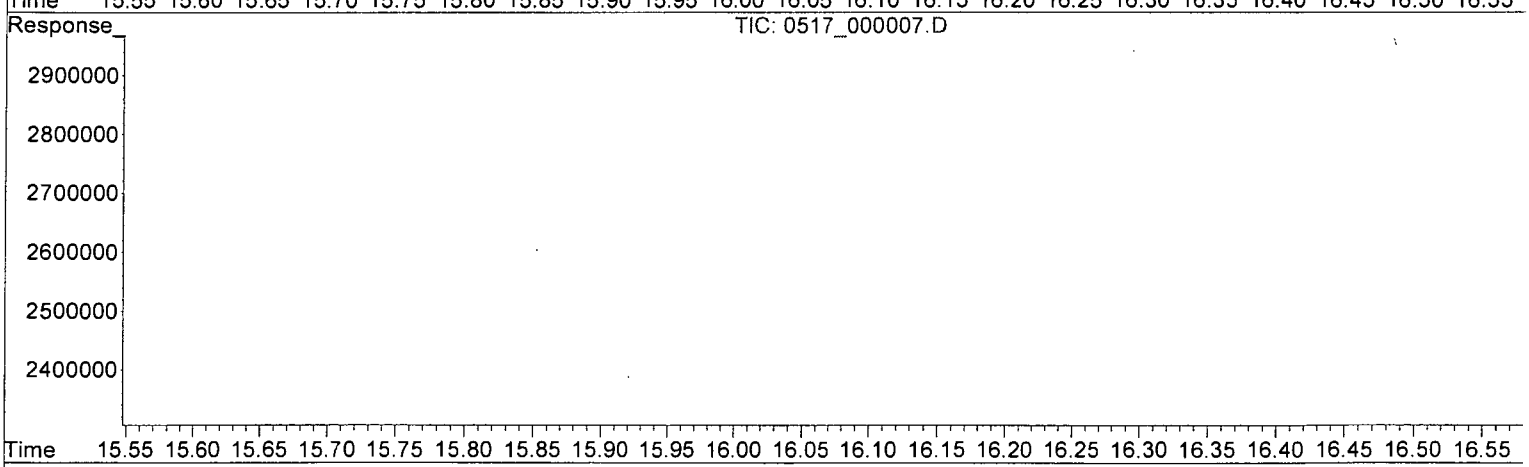
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000007.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 16:53:49
Operator : MP
Sample : 8330CB 0.010 PPM 05/17/15
Misc :
ALS Vial : 8193 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:44 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





QEdit

(18) PETN (TM)

16.045min 12.987 ppb m

response 48365

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:21:19
Operator : MP
Sample : 8330CB 0.020 PPM 05/17/15
Misc :
ALS Vial : 8194 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:46:24 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.627	0	271805	N.D.	24.603	#
	Spiked Amount 62.500			Recovery	=	0.00%	39.36%	
	Target Compounds							
1)	TM HMX	0.000	0.924	0	525894	N.D.	21.924	#
2)	TM RDX	0.000	1.758	0	350354	N.D.	22.901	#
3)	TM 1,3,5-TRI...	0.000	2.857	0	633394	N.D.	24.582	#
5)	TM 1,3-DINIT...	0.000	3.786	0	602710	N.D.	24.492	#
6)	TM 3,5-DINIT...	0.000	4.045	0	480486	N.D.	23.561	#
7)	TM NITROBENZENE	0.000	5.151	0	274692	N.D.	25.040	#
8)	TM NITROGLYC...	6.104	0.000	111133	0	23.829	N.D.	#
9)	TM TETRYL	0.000	6.565	0	208043	N.D. d	23.185	
10)	TM 2,4,6-TRI...	0.000	7.018	0	259764	N.D. d	24.291	
11)	TM 2-AMINO-4...	0.000	7.352	0	245481	N.D. d	23.757	
12)	TM 4-AMINO-2...	0.000	7.710	0	182150	N.D. d	23.770	
13)	TM 2,4-DINIT...	0.000	8.793	0	251054	N.D. d	25.824	
14)	TM 2,6-DINIT...	0.000	9.165	0	140870	N.D. d	22.666	
15)	TM 2-NITROTO...	0.000	12.553	0	99601	N.D.	26.343	#
16)	TM 4-NITROTO...	0.000	13.143	0	100132	N.D.	26.722	#
17)	TM 3-NITROTO...	0.000	14.020	0	117815	N.D.	26.303	#
18)	TM PETN	16.071	0.000	81715	0	21.942m	N.D.	#

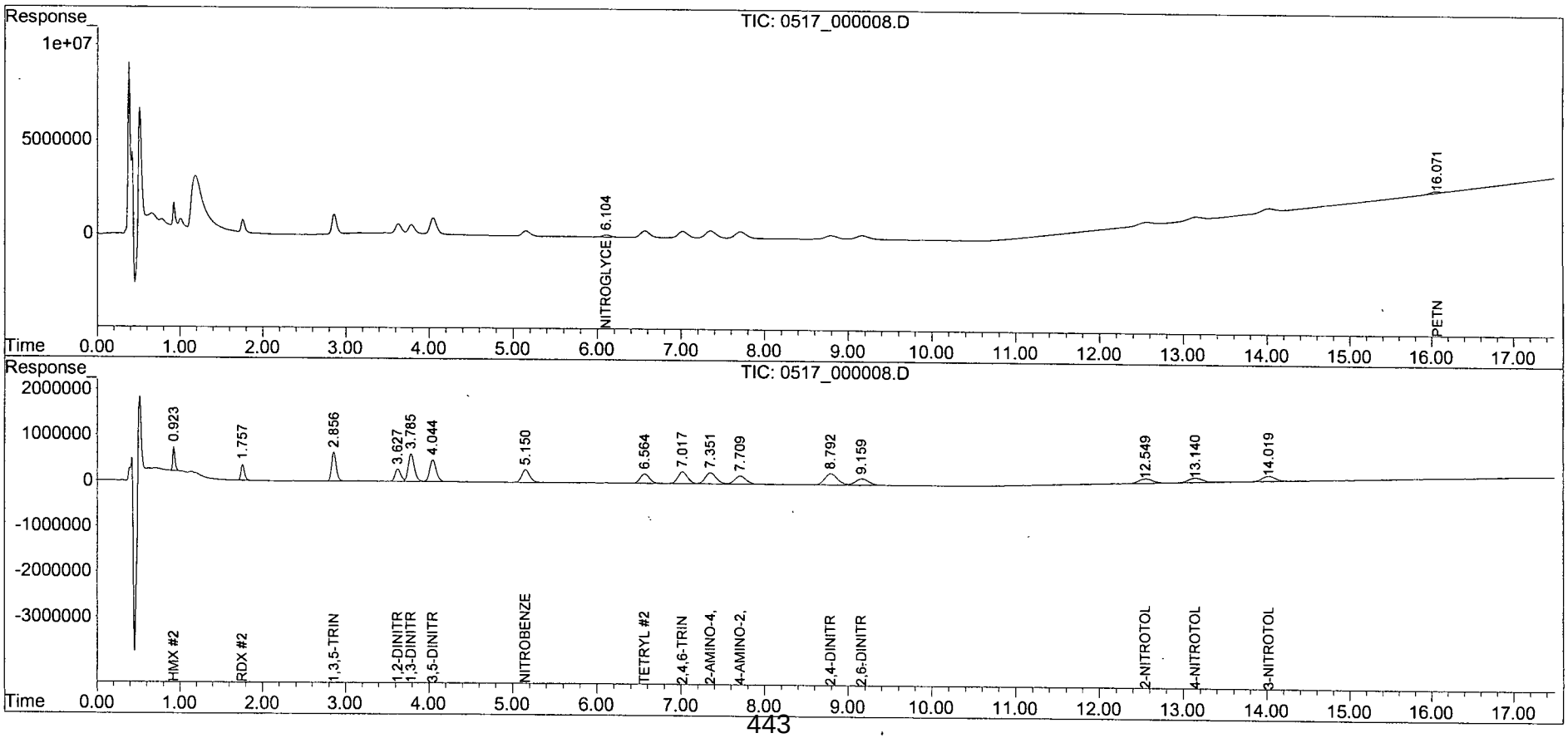
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:21:19
Operator : MP
Sample : 8330CB 0.020 PPM 05/17/15
Misc :
ALS Vial : 8194 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:46:24 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



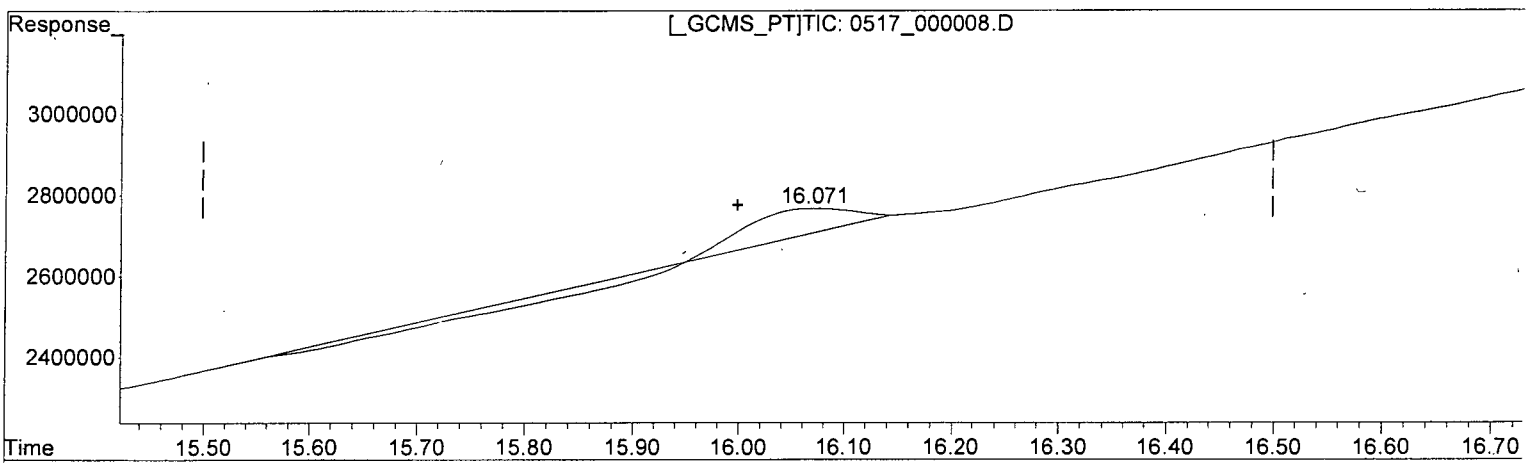
W150517.M Mon May 18 08:46:26 2015 WALDORF Page: 2

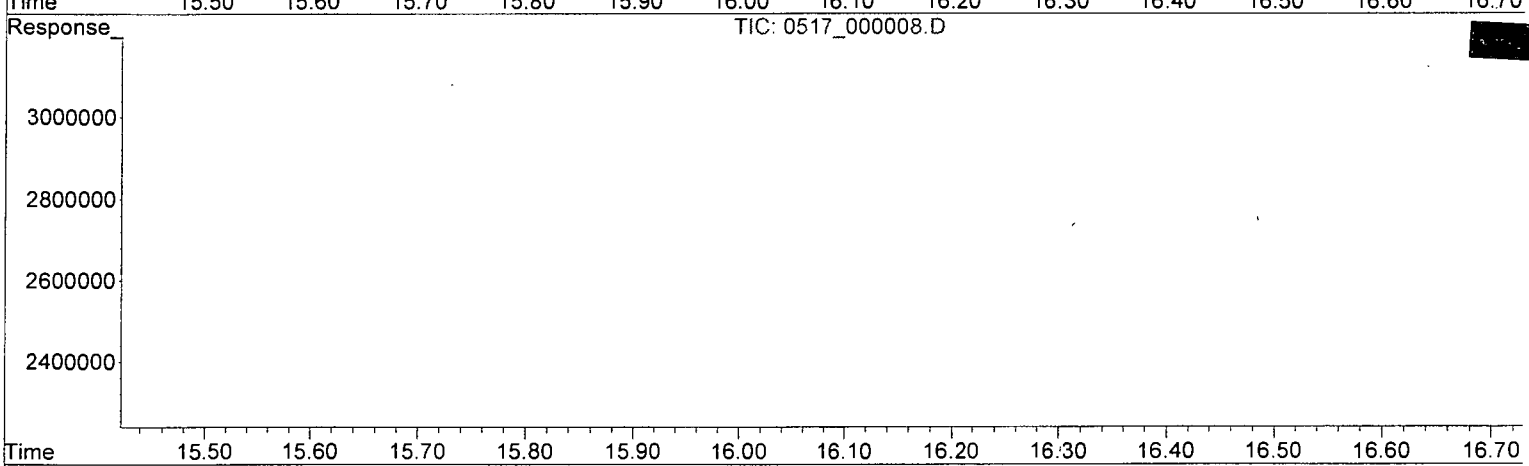
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:21:19
Operator : MP
Sample : 8330CB 0.020 PPM 05/17/15
Misc :
ALS Vial : 8194 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:46 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





QEdit

(18) PETN (TM)

16.072min 15.804 ppb

response 58857

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

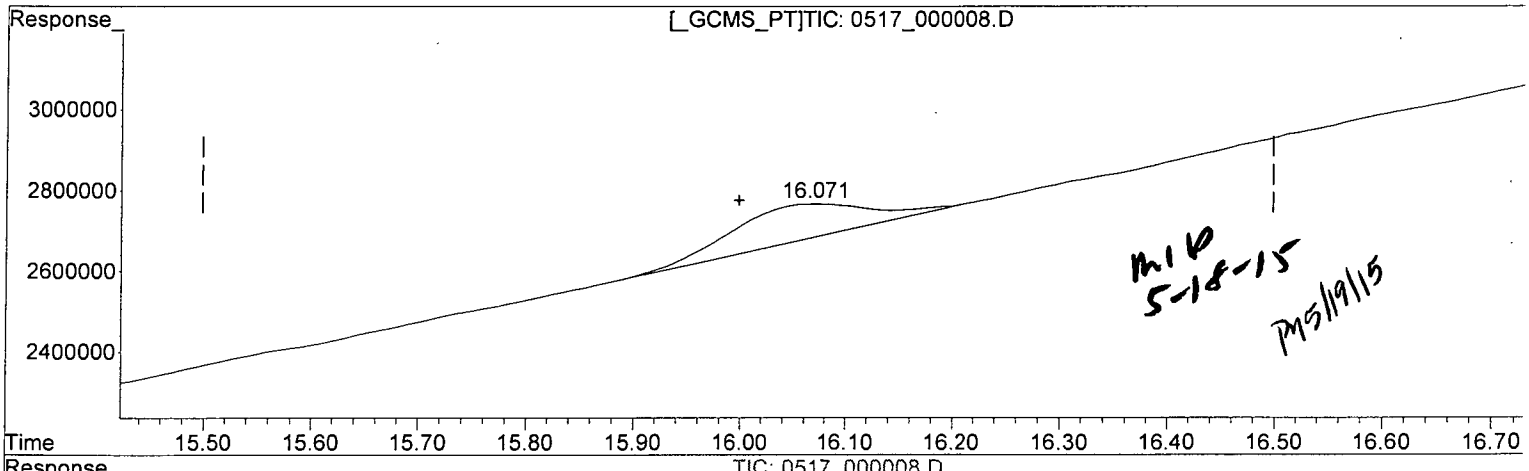
(+) = Expected Retention Time

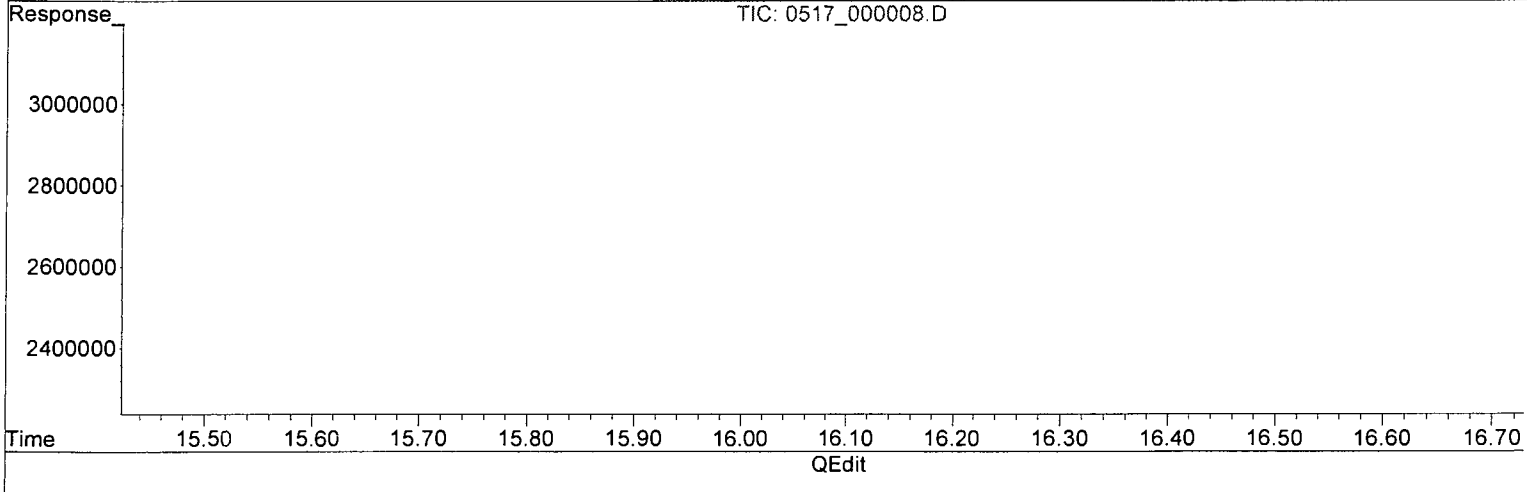
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:21:19
Operator : MP
Sample : 8330CB 0.020 PPM 05/17/15
Misc :
ALS Vial : 8194 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:36:46 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0





(18) PETN (TM)

16.071min 21.942 ppb m

response 81715

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:48:49
Operator : MP
Sample : 8330CB 0.050 PPM 05/17/15
Misc :
ALS Vial : 8195 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:44:37 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.615	0	677174	N.D.	61.295	#
	Spiked Amount 62.500			Recovery =		0.00%	98.07%	
	Target Compounds							
1)	TM HMX	0.000	0.924	0	1372886	N.D.	57.234	#
2)	TM RDX	0.000	1.755	0	871729	N.D.	56.980	#
3)	TM 1,3,5-TRI...	0.000	2.849	0	1577752	N.D.	61.233	#
5)	TM 1,3-DINIT...	0.000	3.775	0	1497922	N.D.	60.871	#
6)	TM 3,5-DINIT...	0.000	4.031	0	1196382	N.D.	58.666	#
7)	TM NITROBENZENE	0.000	5.136	0	685061	N.D.	62.448	#
8)	TM NITROGLYC...	6.090	0.000	273332	0	58.609	N.D.	#
9)	TM TETRYL	0.000	6.542	0	521800	N.D. d	58.150	
10)	TM 2,4,6-TRI...	0.000	6.997	0	642620	N.D. d	60.092	
11)	TM 2-AMINO-4...	0.000	7.324	0	613633	N.D. d	59.387	
12)	TM 4-AMINO-2...	0.000	7.680	0	450725	N.D. d	58.817	
13)	TM 2,4-DINIT...	0.000	8.764	0	622827	N.D. d	64.065	
14)	TM 2,6-DINIT...	0.000	9.137	0	347891	N.D. d	55.976	
15)	TM 2-NITROTO...	0.000	12.520	0	246164	N.D.	65.107	#
16)	TM 4-NITROTO...	0.000	13.113	0	243056	N.D.	64.864	#
17)	TM 3-NITROTO...	0.000	13.991	0	290783	N.D.	64.919	#
18)	TM PETN	16.038	0.000	223913	0	60.125	N.D.	#

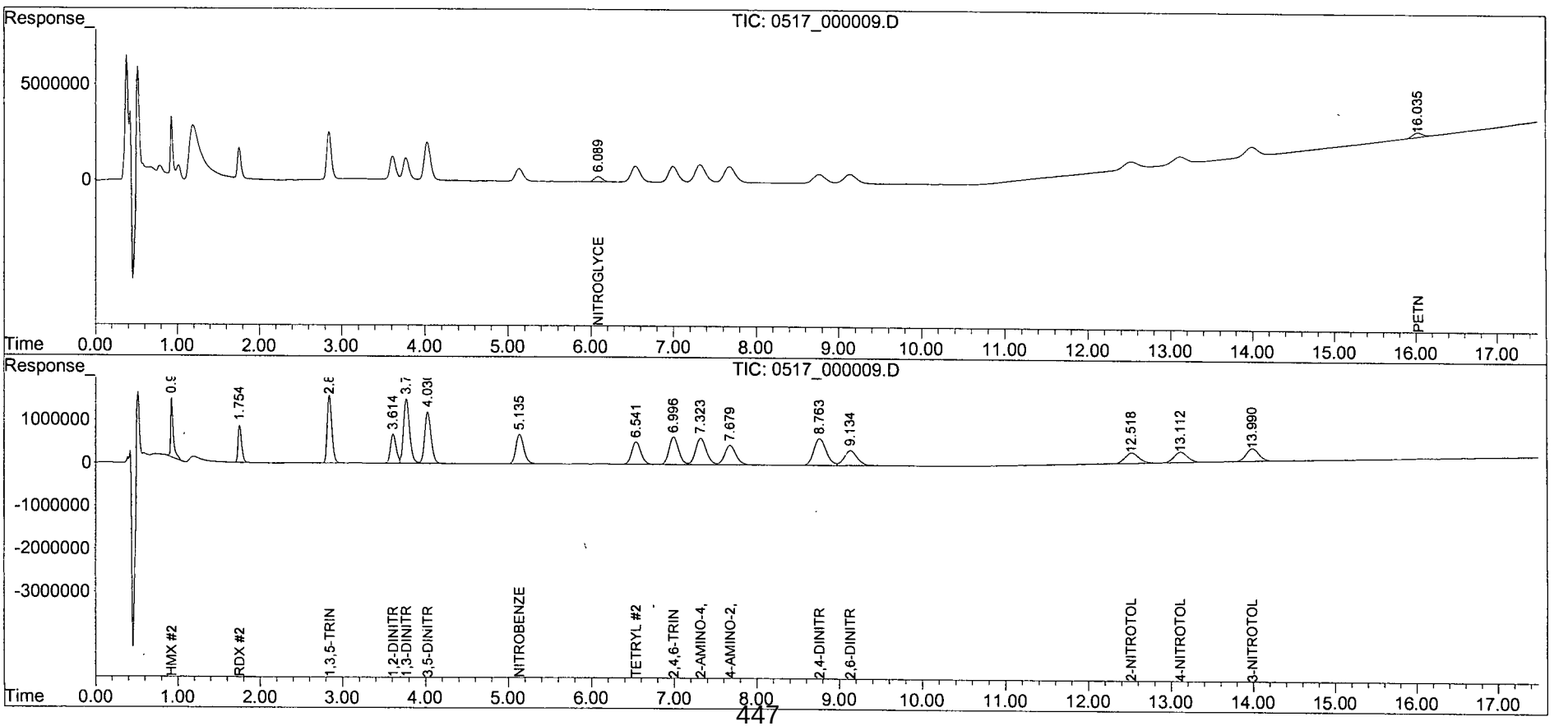
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:48:49
Operator : MP
Sample : 8330CB 0.050 PPM 05/17/15
Misc :
ALS Vial : 8195 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:44:37 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000010.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:16:18
Operator : MP
Sample : 8330CB 0.10 PPM 05/17/15
Misc :
ALS Vial : 8196 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:42:53 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.611	0	1343780	N.D.	121.633	#
	Spiked Amount 62.500			Recovery =		0.00%	194.61%	
	Target Compounds							
1)	TM HMX	0.000	0.922	0	2641696	N.D.	110.129	#
2)	TM RDX	0.000	1.752	0	1744465	N.D.	114.025	#
3)	TM 1,3,5-TRI...	0.000	2.845	0	3138894	N.D.	121.822	#
5)	TM 1,3-DINIT...	0.000	3.771	0	2991457	N.D.	121.565	#
6)	TM 3,5-DINIT...	0.000	4.025	0	2385823	N.D.	116.992	#
7)	TM NITROBENZENE	0.000	5.132	0	1369677	N.D.	124.856	#
8)	TM NITROGLYC...	6.085	0.000	548632	0	117.640	N.D.	#
9)	TM TETRYL	0.000	6.532	0	1028945	N.D. d	114.668	
10)	TM 2,4,6-TRI...	0.000	6.988	0	1287406	N.D. d	120.387	
11)	TM 2-AMINO-4...	0.000	7.314	0	1224010	N.D. d	118.459	
12)	TM 4-AMINO-2...	0.000	7.670	0	897670	N.D. d	117.141	
13)	TM 2,4-DINIT...	0.000	8.756	0	1245643	N.D. d	128.130	
14)	TM 2,6-DINIT...	0.000	9.128	0	695180	N.D. d	111.856	
15)	TM 2-NITROTO...	0.000	12.512	0	489444	N.D.	129.450	#
16)	TM 4-NITROTO...	0.000	13.103	0	485932	N.D.	129.680	#
17)	TM 3-NITROTO...	0.000	13.983	0	582278	N.D.	129.997	#
18)	TM PETN	16.029	0.000	451032	0	121.110	N.D.	#

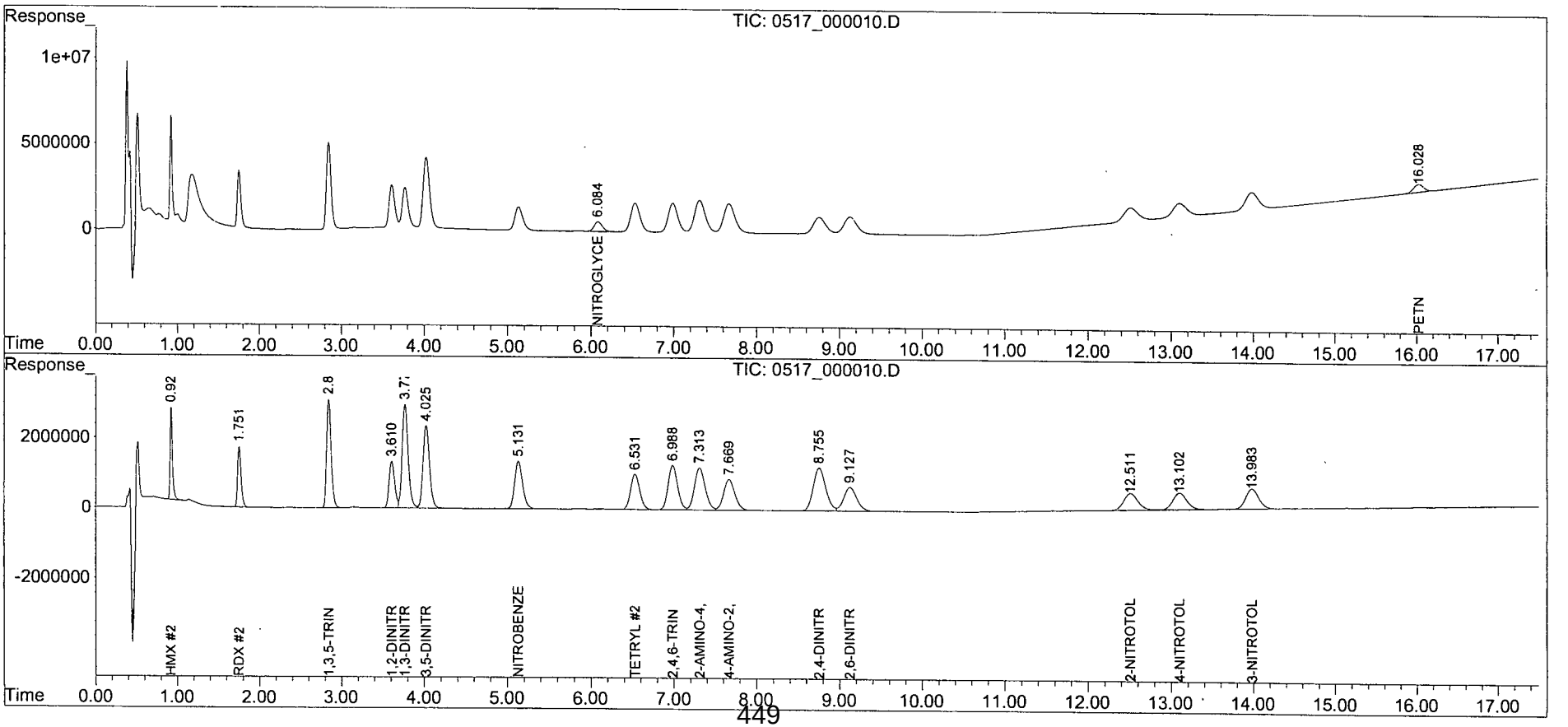
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000010.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:16:18
Operator : MP
Sample : 8330CB 0.10 PPM 05/17/15
Misc :
ALS Vial : 8196 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:42:53 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000011.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:43:48
Operator : MP
Sample : 8330CB 0.20 PPM 05/17/15
Misc :
ALS Vial : 8197 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:41:30 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

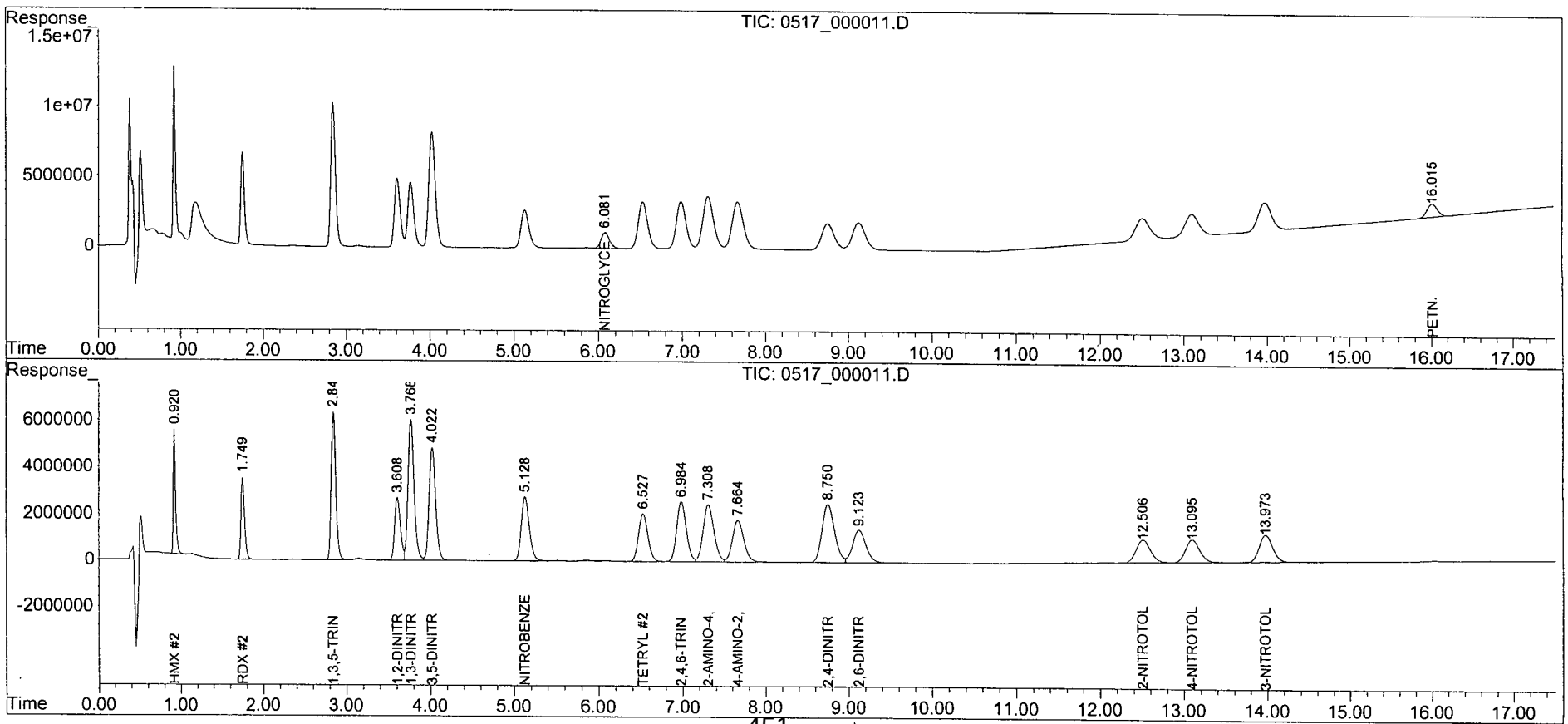
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	3.609	0	2722460	N.D.	246.425 #
Spiked Amount 62.500			Recovery	=	0.00%	394.28%
Target Compounds						
1) TM HMX	0.000	0.921	0	5323227	N.D.	221.918 #
2) TM RDX	0.000	1.750	0	3526640	N.D.	230.515 #
3) TM 1,3,5-TRI...	0.000	2.843	0	6351998	N.D.	246.525 #
5) TM 1,3-DINIT...	0.000	3.769	0	6056227	N.D.	246.108 #
6) TM 3,5-DINIT...	0.000	4.023	0	4838978	N.D.	237.285 #
7) TM NITROBENZENE	0.000	5.129	0	2773577	N.D.	252.831 #
8) TM NITROGLYC...	6.081	0.000	1112766	0	238.603	N.D. d#
9) TM TETRYL	0.000	6.528	0	2081461	N.D. d	231.962
10) TM 2,4,6-TRI...	0.000	6.985	0	2605088	N.D. d	243.605
11) TM 2-AMINO-4...	0.000	7.309	0	2481680	N.D. d	240.175
12) TM 4-AMINO-2...	0.000	7.664	0	1815122	N.D. d	236.863
13) TM 2,4-DINIT...	0.000	8.751	0	2526249	N.D. d	259.856
14) TM 2,6-DINIT...	0.000	9.124	0	1408149	N.D. d	226.574
15) TM 2-NITROTO...	0.000	12.507	0	993058	N.D.	262.649 #
16) TM 4-NITROTO...	0.000	13.096	0	988626	N.D.	263.834 #
17) TM 3-NITROTO...	0.000	13.974	0	1184763	N.D.	264.506 #
18) TM PETN	16.016	0.000	932343	0	250.351	N.D. #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000011.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:43:48
Operator : MP
Sample : 8330CB 0.20 PPM 05/17/15
Misc :
ALS Vial : 8197 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:41:30 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000012.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:11:17
Operator : MP
Sample : 8330CB 0.50 PPM 05/17/15
Misc :
ALS Vial : 8198 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:40:37 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	3.607	0	6849051	N.D.	619.946 #
Spiked Amount 62.500			Recovery =		0.00%	991.91%
Target Compounds						
1) TM HMX	0.000	0.922	0	13288021	N.D.	553.959 #
2) TM RDX	0.000	1.751	0	8820927	N.D.	576.571 #
3) TM 1,3,5-TRI...	0.000	2.843	0	15905488	N.D.	617.301 #
5) TM 1,3-DINIT...	0.000	3.767	0	15232098	N.D.	618.990 #
6) TM 3,5-DINIT...	0.000	4.020	0	12163122	N.D.	596.434 #
7) TM NITROBENZENE	0.000	5.126	0	6936673	N.D.	632.326 #
8) TM NITROGLYC...	6.078	0.000	2786965	0	597.591	N.D. d#
9) TM TETRYL	0.000	6.522	0	5240675	N.D. d	584.031
10) TM 2,4,6-TRI...	0.000	6.980	0	6541331	N.D. d	611.689
11) TM 2-AMINO-4...	0.000	7.300	0	6237486	N.D. d	603.659
12) TM 4-AMINO-2...	0.000	7.656	0	4557845	N.D. d	594.774
13) TM 2,4-DINIT...	0.000	8.743	0	6352155	N.D. d	653.398
14) TM 2,6-DINIT...	0.000	9.116	0	3532388	N.D. d	568.369
15) TM 2-NITROTO...	0.000	12.504	0	2475374	N.D.	654.699 #
16) TM 4-NITROTO...	0.000	13.092	0	2467391	N.D.	658.472 #
17) TM 3-NITROTO...	0.000	13.972	0	2967877	N.D.	662.598 #
18) TM PETN	16.013	0.000	2357470	0	633.024	N.D. #

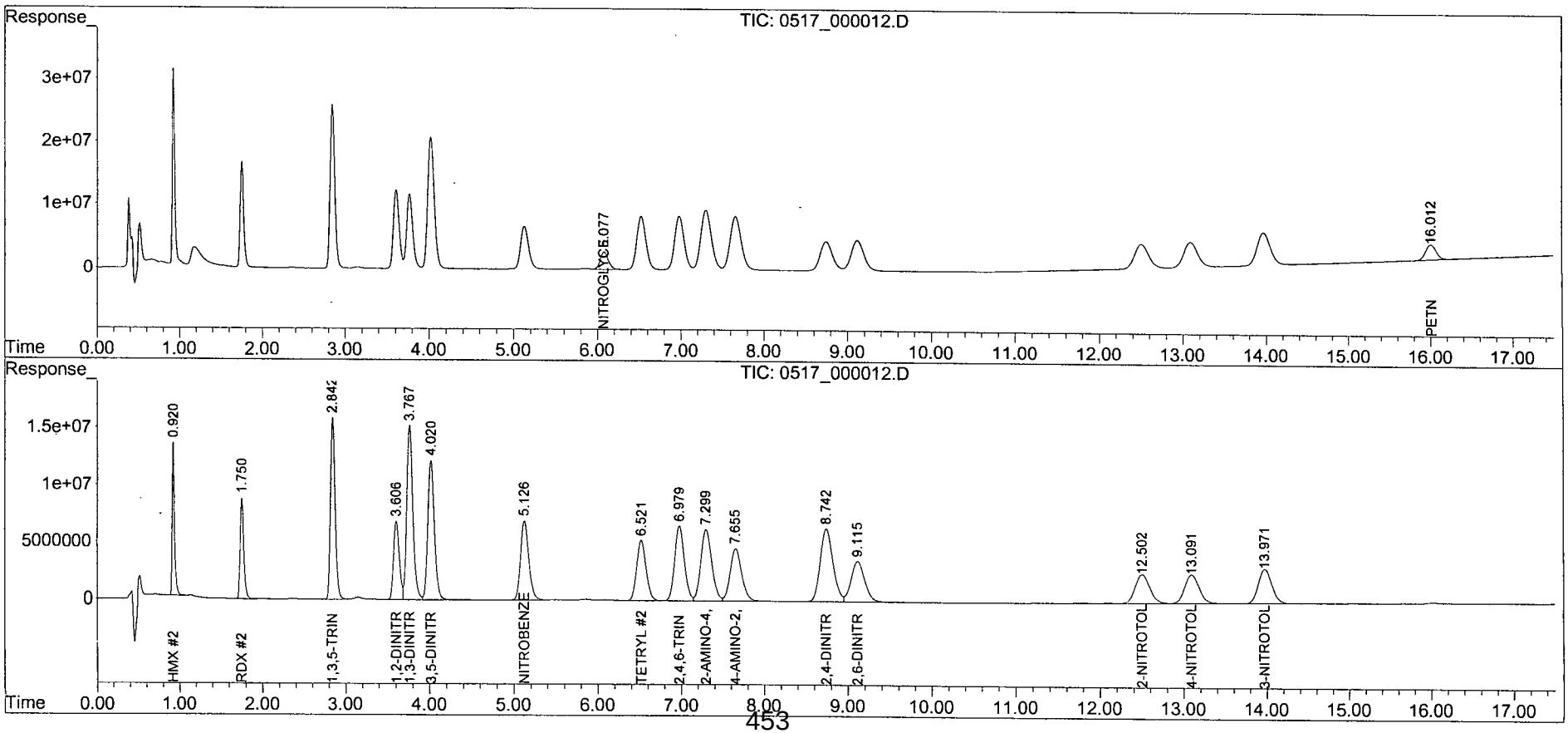
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000012.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:11:17
Operator : MP
Sample : 8330CB 0.50 PPM 05/17/15
Misc :
ALS Vial : 8198 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:40:37 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000013.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:38:46
Operator : MP
Sample : 8330CB 1.0 PPM 05/17/15
Misc :
ALS Vial : 8199 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:39:38 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	3.601	0	13853707	N.D.	1253.976 #
	Spiked Amount 62.500			Recovery	=	0.00%	2006.36%
	Target Compounds						
1)	TM HMX	0.000	0.919	0	26379367	N.D.	1099.720 #
2)	TM RDX	0.000	1.747	0	17555814	N.D.	1147.518 #
3)	TM 1,3,5-TRI...	0.000	2.839	0	31867384	N.D.	1236.792 #
5)	TM 1,3-DINIT...	0.000	3.761	0	30615927	N.D.	1244.147 #
6)	TM 3,5-DINIT...	0.000	4.013	0	24473458	N.D.	1200.087 #
7)	TM NITROBENZENE	0.000	5.117	0	13980064	N.D.	1274.380 #
8)	TM NITROGLYC...	6.067	0.000	5581526	0	1196.811	N.D. d#
9)	TM TETRYL	0.000	6.506	0	10676317	N.D. d	1189.790
10)	TM 2,4,6-TRI...	0.000	6.964	0	13091566	N.D. d	1224.211
11)	TM 2-AMINO-4...	0.000	7.280	0	12547119	N.D. d	1214.300
12)	TM 4-AMINO-2...	0.000	7.636	0	9126190	N.D. d	1190.918
13)	TM 2,4-DINIT...	0.000	8.723	0	12787679	N.D. d	1315.371
14)	TM 2,6-DINIT...	0.000	9.096	0	7090347	N.D. d	1140.853
15)	TM 2-NITROTO...	0.000	12.482	0	4976826	N.D.	1316.295 #
16)	TM 4-NITROTO...	0.000	13.071	0	4959415	N.D.	1323.518 #
17)	TM 3-NITROTO...	0.000	13.953	0	5967255	N.D.	1332.229 #
18)	TM PETN	15.999	0.000	4719578	0	1267.294	N.D. #

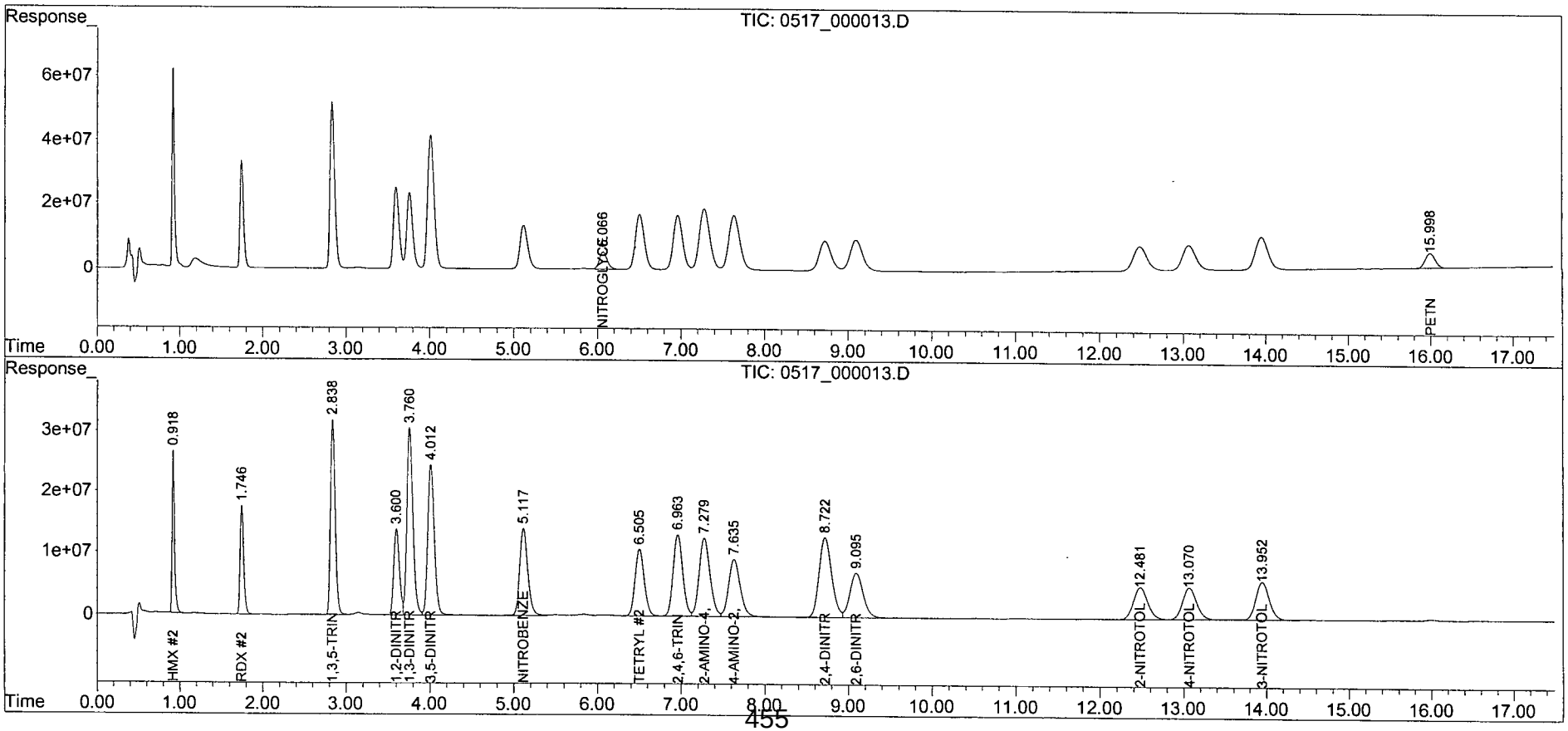
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000013.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:38:46
Operator : MP
Sample : 8330CB 1.0 PPM 05/17/15
Misc :
ALS Vial : 8199 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:39:38 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



W150517.M Mon May 18 08:39:55 2015 WALDORF Page: 2

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:06:14
Operator : MP
Sample : 8330MXA 2.0 PPM 05/17/15
Misc :
ALS Vial : 8200 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:38:39 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	3.596	0	28241700	N.D.	2556.314 #
	Spiked Amount 62.500			Recovery	=	0.00%	4090.10%
	Target Compounds						
1)	TM HMX	0.000	0.920	0	52507103	N.D.	2188.949 #
2)	TM RDX	0.000	1.747	0	35499567	N.D.	2320.392 #
3)	TM 1,3,5-TRI...	0.000	2.837	0	64212342	N.D.	2492.118 #
5)	TM 1,3-DINIT...	0.000	3.756	0	62315311	N.D.	2532.322 #
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7)	TM NITROBENZENE	0.000	5.111	0	28252131	N.D.	2575.378 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	0.000	6.500	0	21333445	N.D. d	2377.441
10)	TM 2,4,6-TRI...	0.000	6.959	0	26878427	N.D. d	2513.440
11)	TM 2-AMINO-4...	0.000	7.271	0	25547859	N.D. d	2472.502
12)	TM 4-AMINO-2...	0.000	7.627	0	18512622	N.D. d	2415.796
13)	TM 2,4-DINIT...	0.000	8.711	0	26185252	N.D. d	2693.477
14)	TM 2,6-DINIT...	0.000	9.085	0	14460139	N.D. d	2326.668
15)	TM 2-NITROTO...	0.000	12.467	0	10084697	N.D.	2667.249 #
16)	TM 4-NITROTO...	0.000	13.054	0	10046123	N.D.	2681.006 #
17)	TM 3-NITROTO...	0.000	13.940	0	12069809	N.D.	2694.665 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

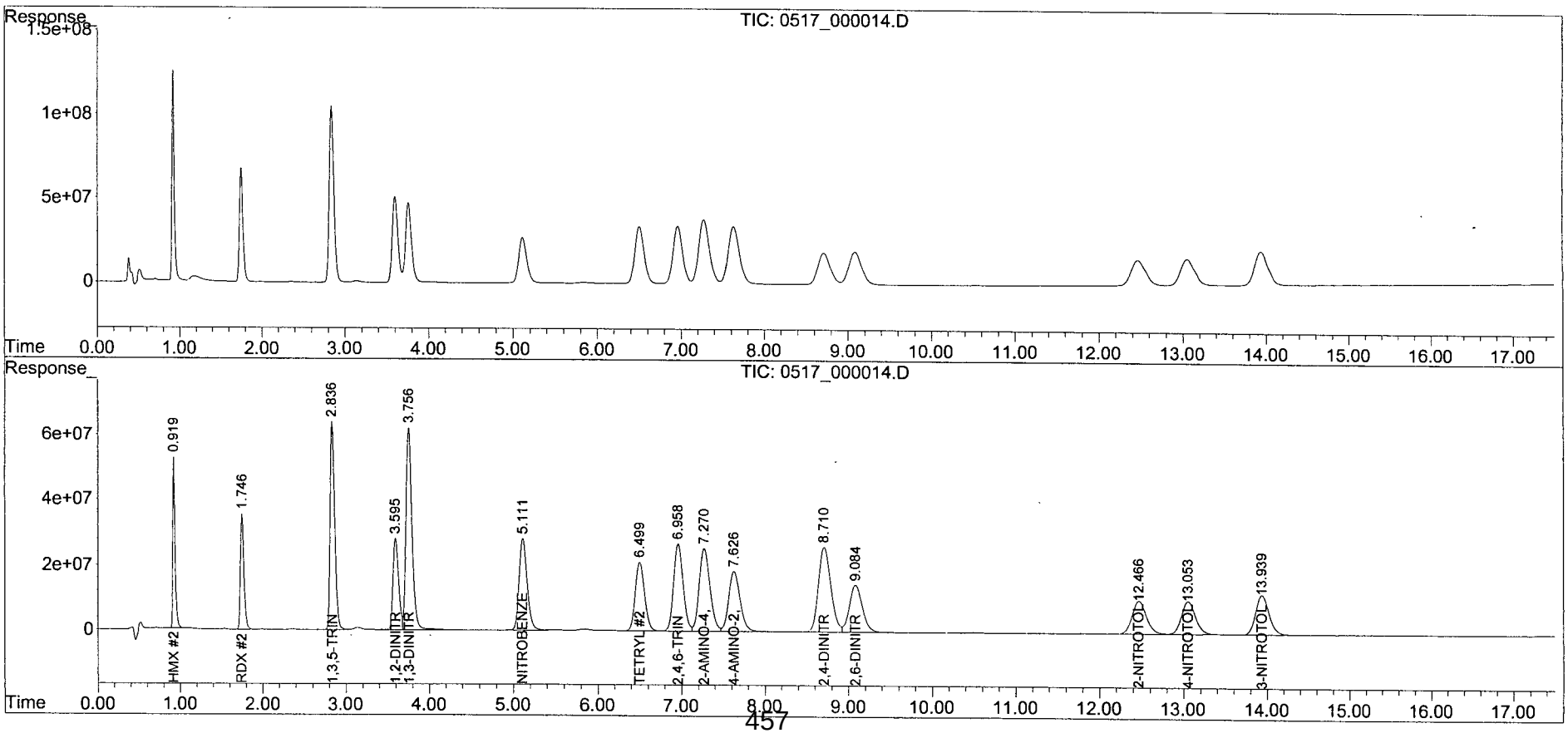
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:06:14
Operator : MP
Sample : 8330MXA 2.0 PPM 05/17/15
Misc :
ALS Vial : 8200 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:38:39 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000015.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:33:45
Operator : MP
Sample : 8330MXB 2.0 PPM 05/17/15
Misc :
ALS Vial : 8256 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:37:34 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	0.000	0	0	N.D.	N.D.
Spiked Amount 62.500			Recovery	=	0.00%	0.00%
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	4.007	0	49086037	N.D.	2406.995 #
7) TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
8) TM NITROGLYC...	6.063	0.000	11187644	0	2398.895	N.D. d#
9) TM TETRYL	6.533	0.000	12631	0	NoCal	N.D.
10) TM 2,4,6-TRI...	6.982	0.000	40436	0	NoCal	N.D.
11) TM 2-AMINO-4...	7.284	0.000	6398	0	NoCal	N.D.
12) TM 4-AMINO-2...	7.608	0.000	15304	0	NoCal	N.D.
13) TM 2,4-DINIT...	8.721	0.000	6122	0	NoCal	N.D.
14) TM 2,6-DINIT...	9.094	0.000	5987	0	NoCal	N.D.
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	15.982	0.000	9590479	0	2575.221	N.D. #

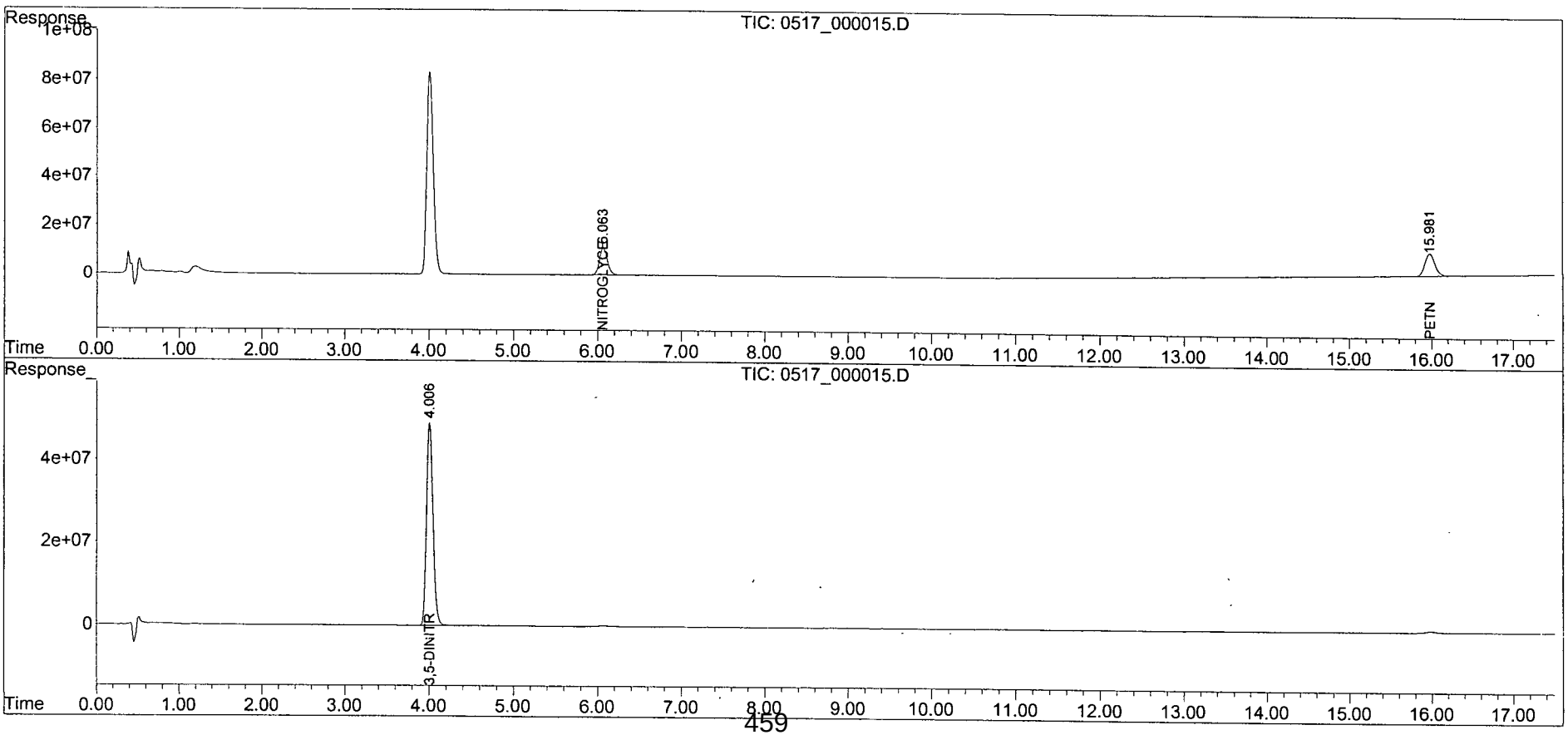
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000015.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:33:45
Operator : MP
Sample : 8330MXB 2.0 PPM 05/17/15
Misc :
ALS Vial : 8256 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:37:34 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sat May 16 09:57:37 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 76413
Date Analyzed: 17-May-2015, 21:01:15
Instrument: Waldorf
Initial Cal. Date: 05/17/15
Data File: 0517_000016-17.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	NITROGLYCERIN	139	146	5.0	TM	
2	TM	PETN	115	114	1.1	TM	
3		Signal #2					
4	TM	HMX	658	685	4.1	TM	
5	TM	RDX	438	460	5.1	TM	
6	TM	1,3,5-TRINITROBENZENE	791	754	4.7	TM	
7	S	1,2-DINITROBENZENE	341	367	7.7	S	
8	TM	1,3-DINITROBENZENE	756	796	5.3	TM	
9	TM	3,5-DINITROANILINE	602	664	10	TM	
10	TM	NITROBENZENE	346	361	4.4	TM	
11	TM	2,4,6-TRINITROTOLUENE	326	339	3.8	TM	
12	TM	2-AMINO-4,6-DINITROTOLUEN	310	299	3.5	TM	
13	TM	4-AMINO-2,6-DINITROTOLUEN	227	257	13	TM	
14	TM	2,4-DINITROTOLUENE	317	348	9.9	TM	
15	TM	2,6-DINITROTOLUENE	176	187	6.3	TM	
16	TM	2-NITROTOLUENE	124	131	5.9	TM	
17	TM	4-NITROTOLUENE	124	128	3.3	TM	
18	TM	3-NITROTOLUENE	147	160	9.1	TM	
19	TM	TETRYL	262	270	3.1	TM	
20							
21							
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000016.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:01:15
Operator : MP
Sample : 8330_SS 1.0 PPM 05/17/15
Misc :
ALS Vial : 8257 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:53:25 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.598	0	14675134	N.D.	1076.958	#
	Spiked Amount 62.500			Recovery =		0.00%	1723.13%	
	Target Compounds							
1)	TM HMX	0.000	0.920	0	27400832	N.D.	1041.100	#
2)	TM RDX	0.000	1.746	0	18398388	N.D.	1050.508	#
3)	TM 1,3,5-TRI...	0.000	2.837	0	30154786	N.D.	953.278	#
5)	TM 1,3-DINIT...	0.000	3.758	0	31828122	N.D.	1053.166	#
6)	TM 3,5-DINIT...	0.000	4.008	0	26540040	N.D.	1102.180	#
7)	TM NITROBENZENE	0.000	5.114	0	14432786	N.D.	1043.681	#
8)	TM NITROGLYC...	6.064	6.071	5853997	144712	1050.429	NoCal	#
9)	TM TETRYL	6.501	6.501	14626223	9166098	2315956.687	874.521	#
10)	TM 2,4,6-TRI...	6.961	6.961	17483739	13545367	864771.655	1037.612	#
11)	TM 2-AMINO-4...	7.273	7.273	18002686	11970537	5627627.486	964.762	#
12)	TM 4-AMINO-2...	7.628	7.628	19056044	10270100	2490389.738	1129.312	#
13)	TM 2,4-DINIT...	8.713	8.713	10195621	13919515	3330695.488	1098.822	#
14)	TM 2,6-DINIT...	9.086	9.086	10363700	7497570	3462169.596	1063.069	#
15)	TM 2-NITROTO...	0.000	12.466	0	5238162	N.D.	1058.677	#
16)	TM 4-NITROTO...	0.000	13.055	0	5111329	N.D.	1033.019	#
17)	TM 3-NITROTO...	0.000	13.938	0	6413875	N.D.	1090.787	#
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.	

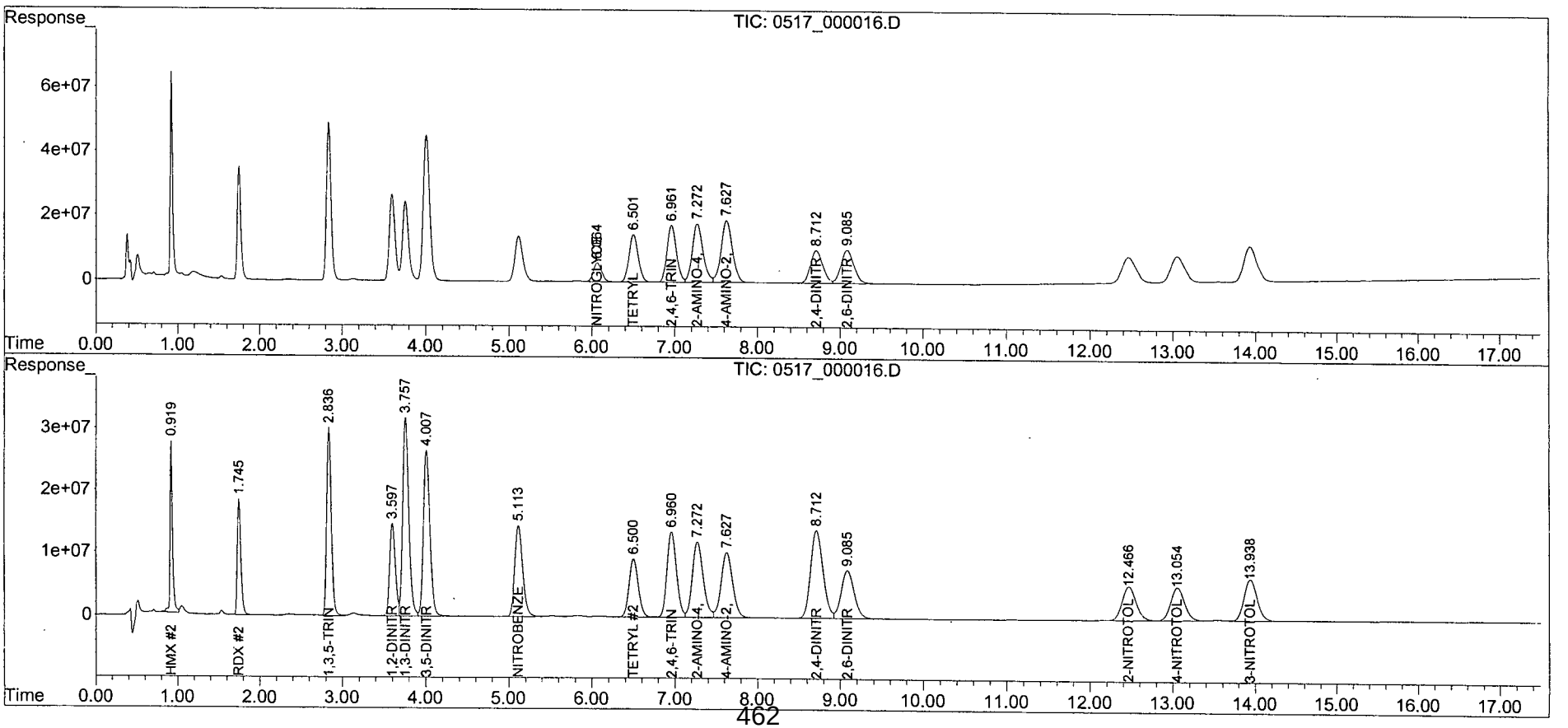
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000016.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:01:15
Operator : MP
Sample : 8330_SS 1.0 PPM 05/17/15
Misc :
ALS Vial : 8257 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:53:25 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000017.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:28:46
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 05/17/15
Misc :
ALS Vial : 8258 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:53:48 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	0.000	0	0	N.D.	N.D.
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1) TM	HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM	RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM	1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM	1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM	3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
7) TM	NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
8) TM	NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM	TETRYL	6.480	6.479	17299366	10805517	2739229.568	1030.935 #
10) TM	2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
11) TM	2-AMINO-4...	0.000	0.000	0	0	N.D. d	N.D. d
12) TM	4-AMINO-2...	0.000	0.000	0	0	N.D. d	N.D. d
13) TM	2,4-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM	2,6-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15) TM	2-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
16) TM	4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM	3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM	PETN	15.968	0.000	4548309	0	988.701	N.D. #

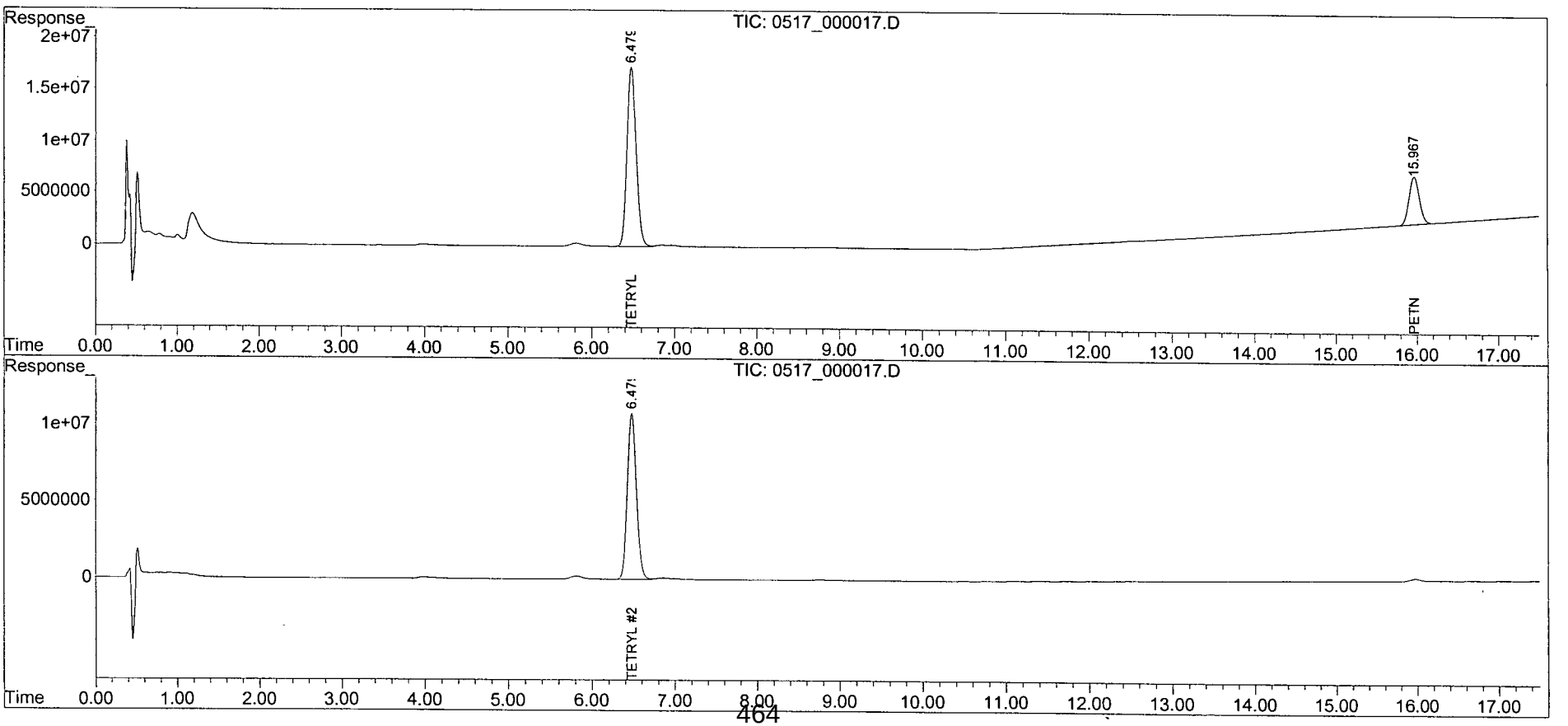
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000017.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:28:46
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 05/17/15
Misc :
ALS Vial : 8258 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:53:48 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 76413
Date Analyzed: 18-May-2015, 04:18:52
Instrument: Waldorf
Initial Cal. Date: 05/17/15
Data File: 0517_000029.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	NITROGLYCERIN	139	136	2.1	TM	
2	TM	PETN	115	113	1.6	TM	
3		Signal #2					
4	TM	HMX	658	668	1.6	TM	
5	TM	RDX	438	439	0.25	TM	
6	TM	1,3,5-TRINITROBENZENE	791	781	1.3	TM	
7	S	1,2-DINITROBENZENE	341	341	0.24	S	
8	TM	1,3-DINITROBENZENE	756	759	0.46	TM	
9	TM	3,5-DINITROANILINE	602	597	0.79	TM	
10	TM	NITROBENZENE	346	345	0.35	TM	
11	TM	TETRYL	262	253	3.5	TM	
12	TM	2,4,6-TRINITROTOLUENE	326	323	1.1	TM	
13	TM	2-AMINO-4,6-DINITROTOLUEN	310	305	1.5	TM	
14	TM	4-AMINO-2,6-DINITROTOLUEN	227	222	2.3	TM	
15	TM	2,4-DINITROTOLUENE	317	316	0.34	TM	
16	TM	2,6-DINITROTOLUENE	176	175	0.92	TM	
17	TM	2-NITROTOLUENE	124	119	3.4	TM	
18	TM	4-NITROTOLUENE	124	119	4.1	TM	
19	TM	3-NITROTOLUENE	147	143	2.9	TM	
20							
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40							

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:18:52
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:05:07 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.549	0	13659256	N.D.	1002.406	#
	Spiked Amount 62.500			Recovery	=	0.00%	1603.85%	
	Target Compounds							
1)	TM HMX	0.000	0.912	0	26733067	N.D.	1015.728	#
2)	TM RDX	0.000	1.728	0	17558086	N.D.	1002.528	#
3)	TM 1,3,5-TRI...	0.000	2.814	0	31235541	N.D.	987.443	#
5)	TM 1,3-DINIT...	0.000	3.716	0	30359934	N.D.	1004.585	#
6)	TM 3,5-DINIT...	0.000	3.944	0	23889130	N.D.	992.090	#
7)	TM NITROBENZENE	0.000	5.050	0	13780760	N.D.	996.531	#
8)	TM NITROGLYC...	6.017	6.016	5455708	137148	978.960m	NoCal	#
9)	TM TETRYL	6.407	6.407	16076629	10116341	2545618.029	965.182	#
10)	TM 2,4,6-TRI...	6.884	6.884	16595785	12916561	820852.140	989.443	#
11)	TM 2-AMINO-4...	7.140	7.140	18372764	12216373	5743313.614	984.575	#
12)	TM 4-AMINO-2...	7.486	7.486	16511957	8885387	2157908.934	977.047	#
13)	TM 2,4-DINIT...	8.595	8.595	9236186	12624714	3017268.301	996.609	#
14)	TM 2,6-DINIT...	8.957	8.957	9633540	6987758	3218247.324	990.783	#
15)	TM 2-NITROTO...	0.000	12.316	0	4777363	N.D.	965.546	#
16)	TM 4-NITROTO...	0.000	12.911	0	4743866	N.D.	958.753	#
17)	TM 3-NITROTO...	0.000	13.799	0	5709836	N.D.	971.054	#
18)	TM PETN	15.942	0.000	4527547	0	984.188	N.D.	#

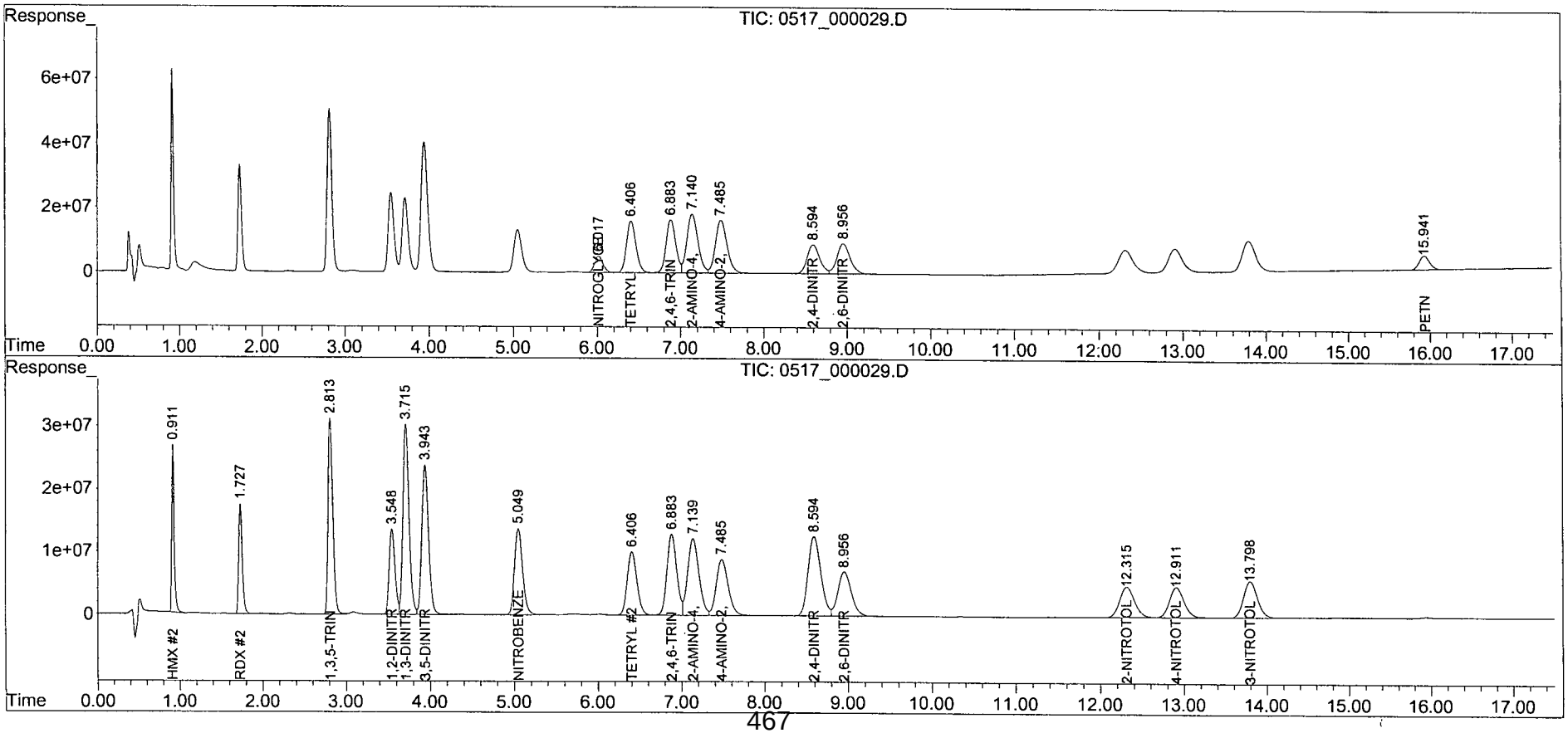
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:18:52
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:05:07 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

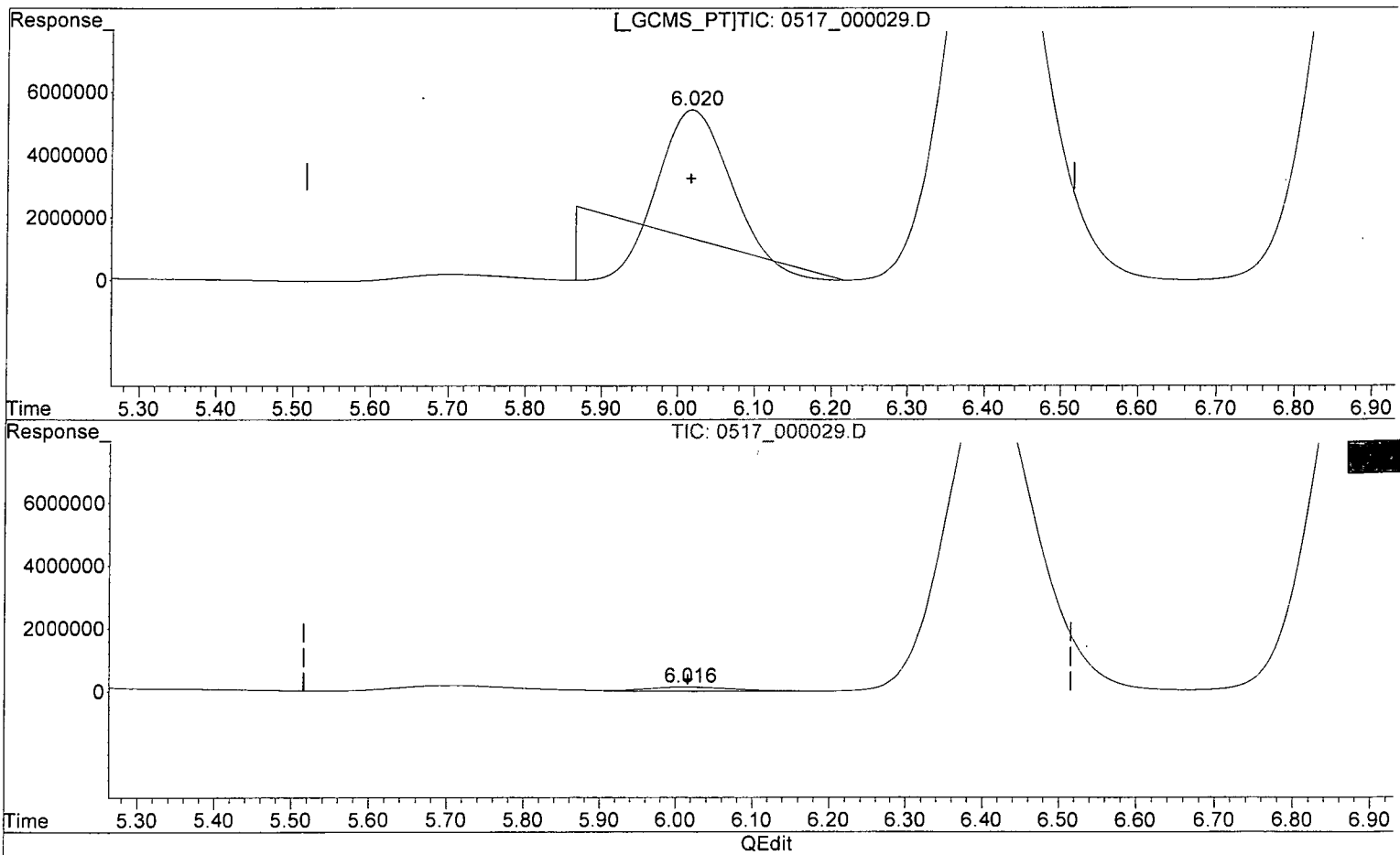


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:18:52
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:04:37 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r



(8) NITROGLYCERIN (TM)

6.018min 735.127 ppb

response 4096835

(8) NITROGLYCERIN #2 (TM)

6.016min 0.000 ppb

response 137148

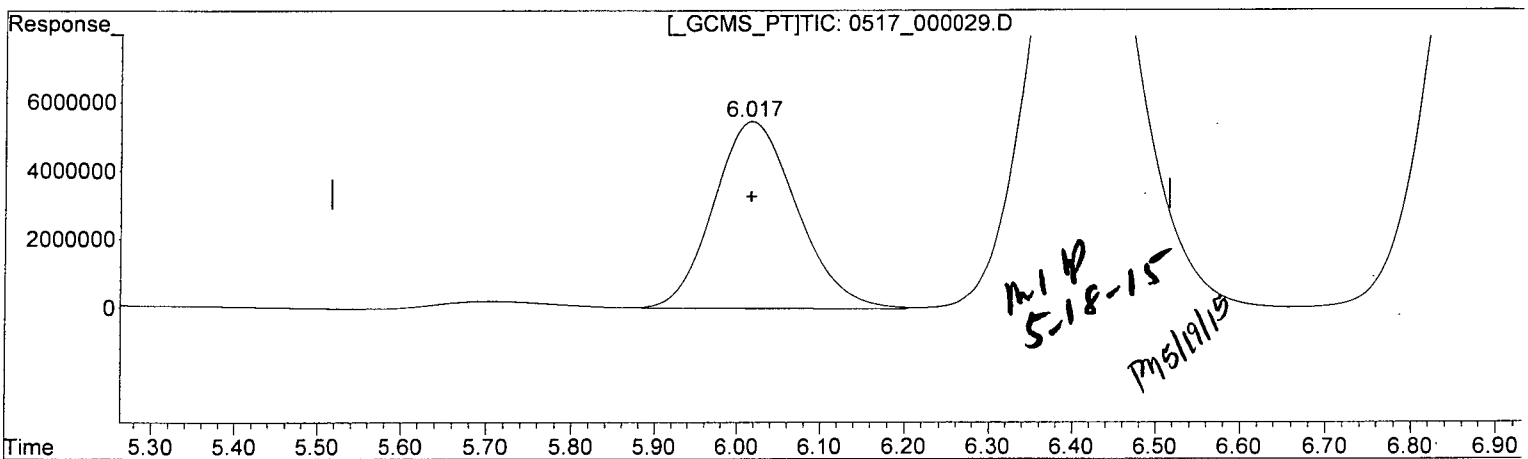
(+) = Expected Retention Time

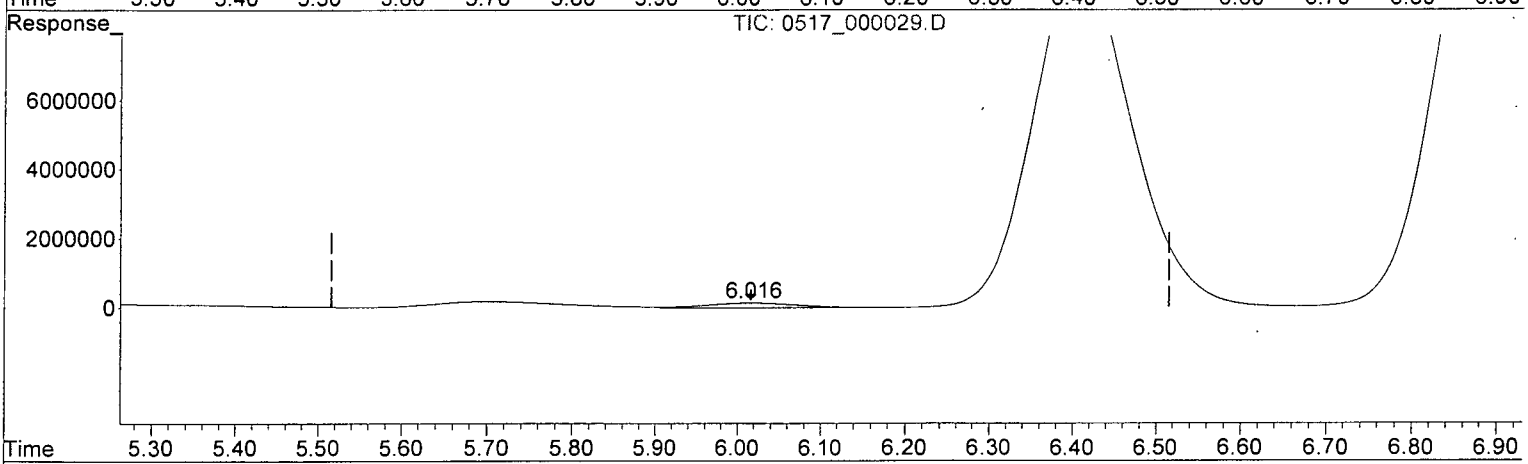
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:18:52
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:04:37 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 08:52:23 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0





QEdit

(8) NITROGLYCERIN (TM)

6.017min 978.960 ppb m

response 5455708

(8) NITROGLYCERIN #2 (TM)

6.016min 0.000 ppb

response 137148

(+) = Expected Retention Time

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 76413
Date Analyzed: 18-May-2015, 11:01:35
Instrument: Waldorf
Initial Cal. Date: 05/17/15
Data File: 0517_000040.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	NITROGLYCERIN	139	136	2.7	TM	
2	TM	PETN	115	112	2.3	TM	
3		Signal #2					
4	TM	HMX	658	670	1.9	TM	
5	TM	RDX	438	441	0.74	TM	
6	TM	1,3,5-TRINITROBENZENE	791	782	1.1	TM	
7	S	1,2-DINITROBENZENE	341	343	0.70	S	
8	TM	1,3-DINITROBENZENE	756	761	0.77	TM	
9	TM	3,5-DINITROANILINE	602	595	1.1	TM	
10	TM	NITROBENZENE	346	342	1.1	TM	
11	TM	TETRYL	262	244	6.8	TM	
12	TM	2,4,6-TRINITROTOLUENE	326	324	0.86	TM	
13	TM	2-AMINO-4,6-DINITROTOLUEN	310	306	1.4	TM	
14	TM	4-AMINO-2,6-DINITROTOLUEN	227	220	3.1	TM	
15	TM	2,4-DINITROTOLUENE	317	316	0.29	TM	
16	TM	2,6-DINITROTOLUENE	176	174	1.2	TM	
17	TM	2-NITROTOLUENE	124	115	7.2	TM	
18	TM	4-NITROTOLUENE	124	114	7.9	TM	
19	TM	3-NITROTOLUENE	147	138	6.4	TM	
20							
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000040.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 11:01:35
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 11:38:39 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 11:35:33 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.499	0	13721891	N.D.	1007.003	#
	Spiked Amount 62.500			Recovery	=	0.00%	1611.20%	
	Target Compounds							
1)	TM HMX	0.000	0.905	0	26806064	N.D.	1018.502	#
2)	TM RDX	0.000	1.708	0	17643314	N.D.	1007.395	#
3)	TM 1,3,5-TRI...	0.000	2.788	0	31293520	N.D.	989.276	#
5)	TM 1,3-DINIT...	0.000	3.672	0	30455429	N.D.	1007.745	#
6)	TM 3,5-DINIT...	0.000	3.873	0	23805619	N.D.	988.622	#
7)	TM NITROBENZENE	0.000	4.986	0	13681886	N.D.	989.381	#
8)	TM NITROGLYC...	5.963	5.958	5423334	113953	973.151	NoCal	#
9)	TM TETRYL	6.295	6.295	15582882	9763406	NoCal	931.509	#
10)	TM 2,4,6-TRI...	6.792	6.792	16617276	12942296	NoCal	991.415	#
11)	TM 2-AMINO-4...	6.986	6.986	18314565	12236736	NoCal	986.216	#
12)	TM 4-AMINO-2...	7.325	7.325	16325256	8812319	NoCal	969.012	#
13)	TM 2,4-DINIT...	8.455	8.455	9243398	12630454	NoCal	997.062	#
14)	TM 2,6-DINIT...	8.808	8.808	9613206	6967070	NoCal	987.850	#
15)	TM 2-NITROTO...	0.000	12.146	0	4592916	N.D.	928.268	m#
16)	TM 4-NITROTO...	0.000	12.747	0	4557970	N.D.	921.183	#
17)	TM 3-NITROTO...	0.000	13.643	0	5504366	N.D.	936.110	#
18)	TM PETN	15.865	0.000	4495532	0	977.229	N.D.	#

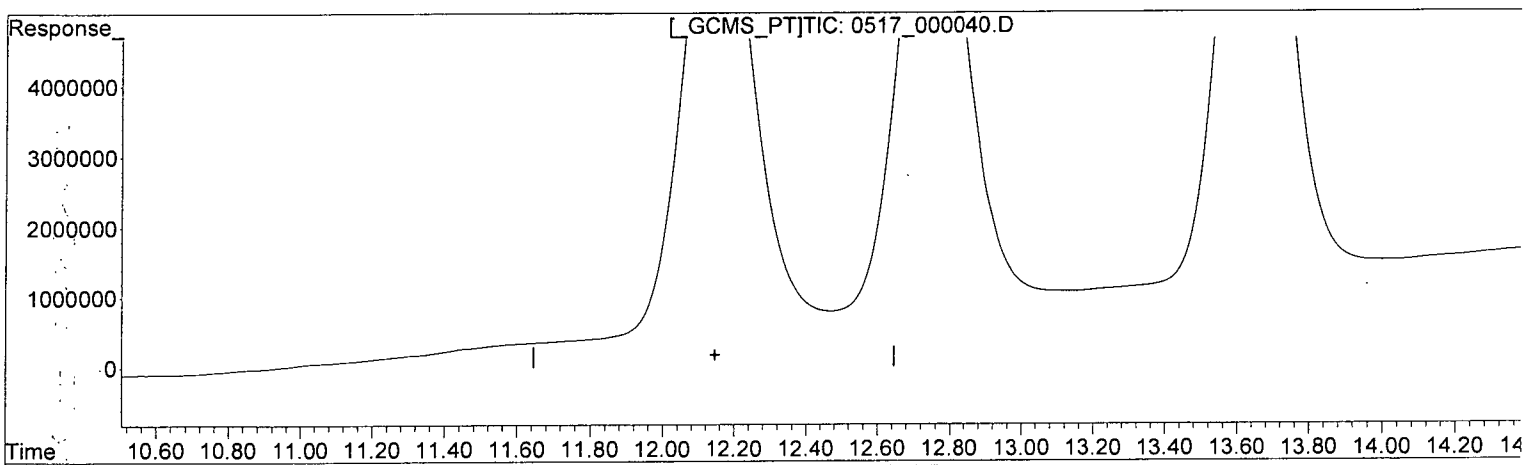
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

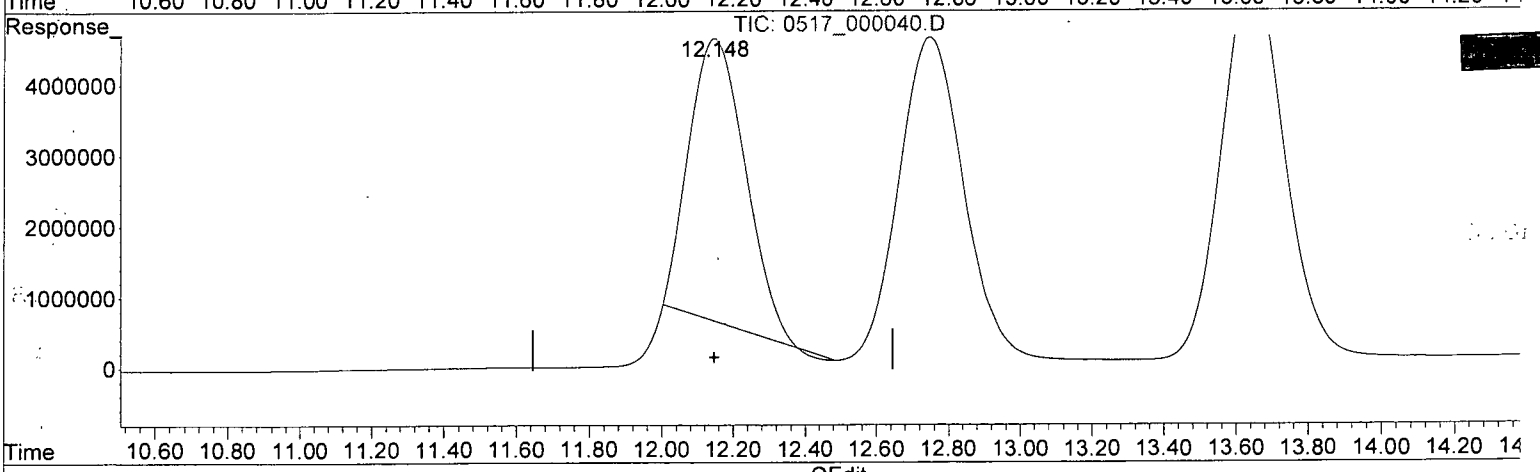
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000040.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 11:01:35
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 11:37:38 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 11:35:33 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





(15) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(15) 2-NITROTOLUENE #2 (TM)

12.147min 805.475 ppb

response 3985357

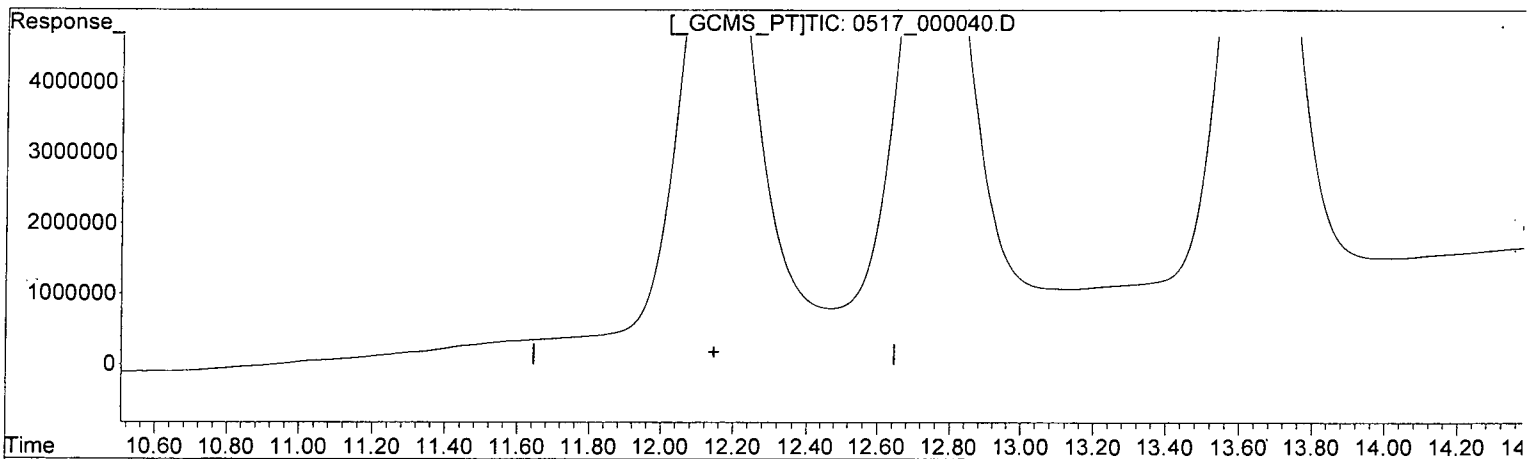
(+) = Expected Retention Time

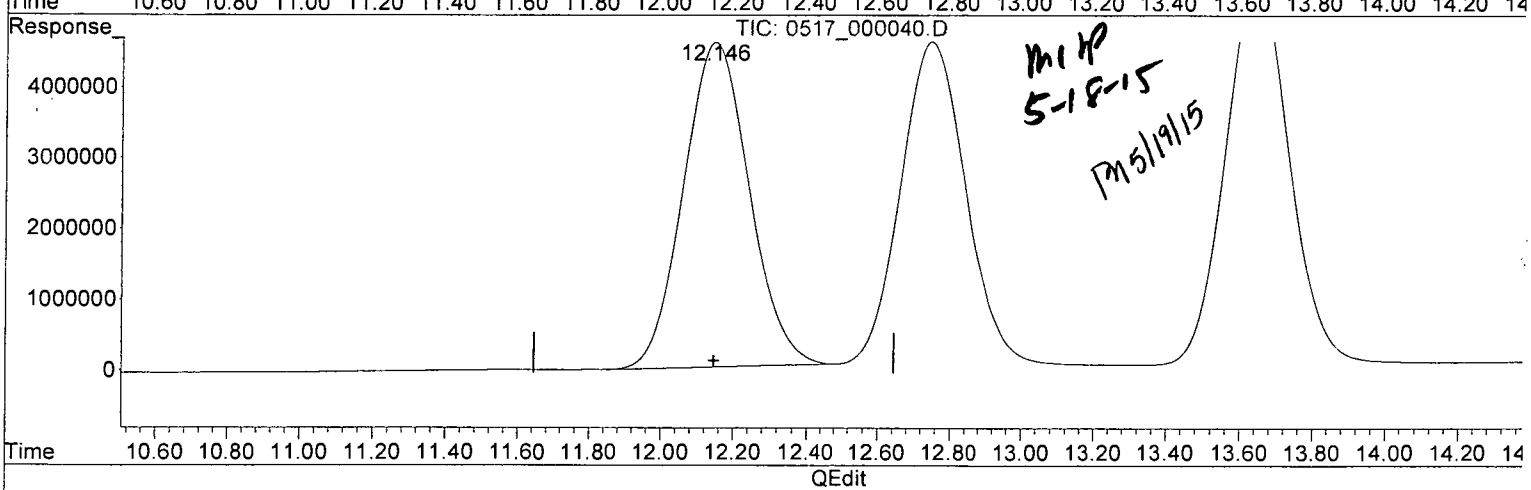
Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000040.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 11:01:35
Operator : MP
Sample : 8330_CCV 1.0 PPM 05/17/15
Misc :
ALS Vial : 8520 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 11:37:38 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 11:35:33 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0r





MHP 5-18-15

PM 5/19/15

(15) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(15) 2-NITROTOLUENE #2 (TM)

12.146min 928.268 ppb m

response 4592916

(+) = Expected Retention Time

Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 05/17/15

Matrix: Instrument: Statler Initials: MP

			0517_000005.D	0517_000007.D	0517_000009.D	0517_000011.D	0517_000013.D	0517_000015.D	0517_000017.D	0517_000019.D	0517_000021 D				
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	
####	TM	NITROGLYCERIN		14.8	16.5	16.8	16.3	16.6	16.3	16.3	16.6		16.29	3.9	TM
####	TM	PETN				12.8	15.9	16.7	17.0	16.8	17.1		16.05	10	TM
####		Signal #2													
####	TM	HMX #2	35.9	35.9	39.5	40.5	41.2	42.0	43.5	42.6	42.9		40.43	7.1	TM
####	TM	RDX #2	30.1	33.5	34.1	34.7	34.7	35.5	35.1	34.5	34.8		34.09	4.7	TM
####	TM	1,3,5-TRINITROBENZENE #2	84.8	83.6	85.8	86.9	87.2	87.8	86.7	87.5	89.4		86.64	2.0	TM
####	S	1,2-DINITROBENZENE #2	40.5	37.8	39.3	37.4	37.6	38.7	38.1	37.9	38.8		38.46	2.5	S
####	TM	1,3-DINITROBENZENE #2	83.2	86.7	88.3	86.1	86.4	88.3	88.0	87.7	89.6		87.14	2.1	TM
####	TM	NITROBENZENE #2	46.9	46.7	46.4	46.5	45.9	47.5	46.4	46.4	46.4		46.56	0.96	TM
####	TM	2,4,6-TRINITROTOLUENE #2	44.3	44.9	45.1	45.0	44.9	47.2	46.9	45.5	46.0		45.52	2.1	TM
####	TM	TETRYL #2		25.6	33.1	34.0	34.2	30.0	27.8	32.5	34.9		31.49	11	TM
####	TM	2,6-DINITROTOLUENE #2	27.2	26.4	26.7	26.7	26.6	28.4	27.8	27.3	27.9		27.24	2.5	TM
####	TM	2,4-DINITROTOLUENE #2	44.0	46.3	47.1	46.9	46.8	48.3	47.9	47.6	48.9		47.09	3.0	TM
####	TM	2-NITROTOLUENE #2	15.4	16.3	17.6	17.6	17.2	17.9	17.4	17.6	17.8		17.19	4.8	TM
####	TM	4-NITROTOLUENE #2		13.8	14.1	14.7	14.9	15.6	15.8	15.9	16.3		15.11	6.0	TM
####	TM	3,5-DINITROANILINE #2	38.6	34.9	37.6	36.5	37.2	38.0	37.3	36.7	36.8		37.08	2.8	TM
####	TM	3-NITROTOLUENE #2		16.2	17.2	17.7	17.6	18.6	18.4	18.7	18.9		17.91	5.2	TM
####	TM	4-AMINO-2,6-DINITROTOLUENE	31.6	27.6	28.2	28.3	28.6	29.0	29.1	28.8	29.3		28.95	3.9	TM
####	TM	2-AMINO-4,6-DINITROTOLUENE	37.1	35.4	36.9	36.3	36.7	37.2	37.2	36.7	37.1		36.73	1.6	TM
####	TM	PETN #2													TM
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Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:14:09 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

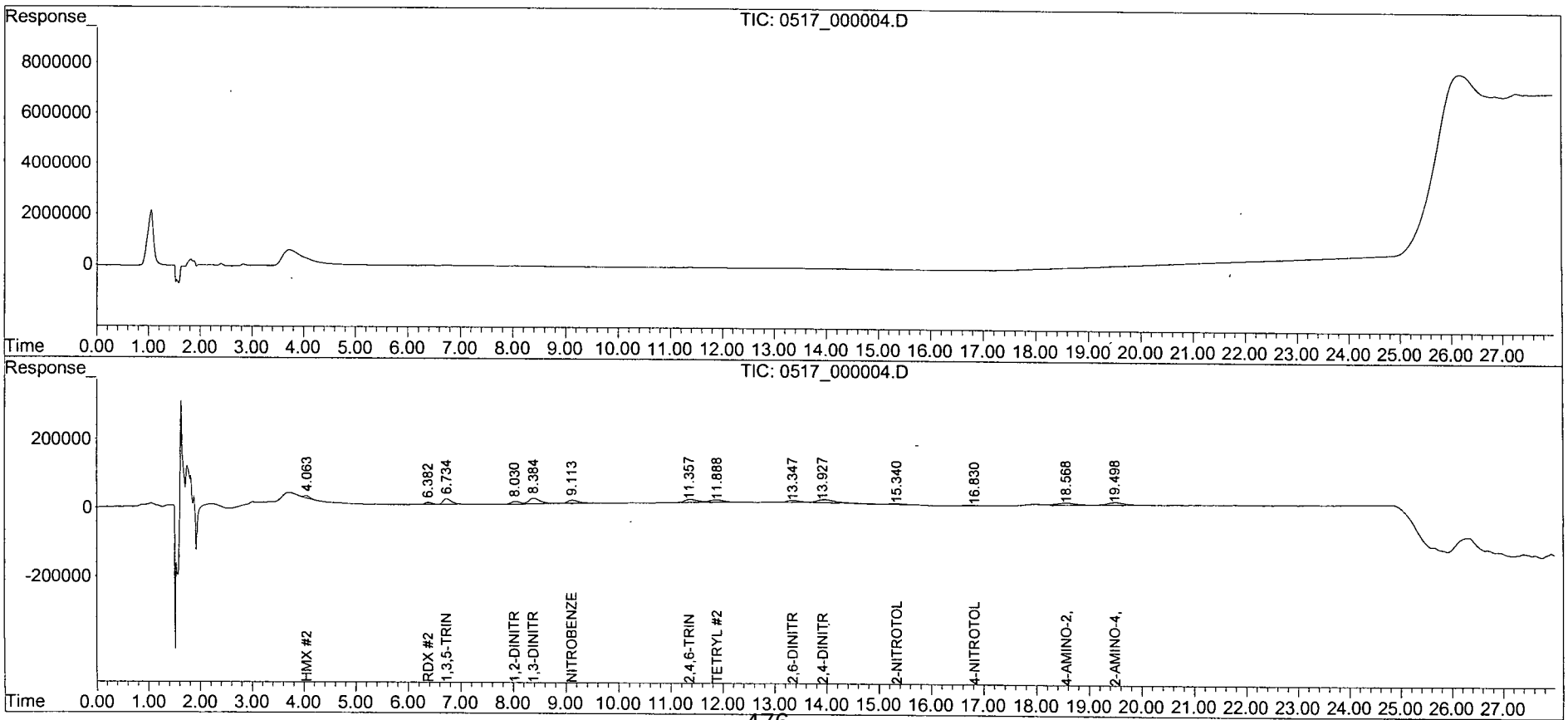
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	8.031	0	8097	N.D.	3.838 #
Spiked Amount 62.500			Recovery	=	0.00%	6.14%
Target Compounds						
1) TM HMX	0.000	4.063	0	7176	N.D.	3.413m#
2) TM RDX	0.000	6.382	0	6014	N.D.	3.247m#
3) TM 1,3,5-TRI...	0.000	6.734	0	16951	N.D.	3.792m#
5) TM 1,3-DINIT...	0.000	8.384	0	16643	N.D.	3.701m#
6) TM NITROBENZENE	0.000	9.113	0	9381	N.D.	3.662m#
7) TM 2,4,6-TRI...	0.000	11.362	0	8856	N.D.	3.489 #
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM TETRYL	11.864	11.888	6552	6945	NoCal	4.216m#
10) TM 2,6-DINIT...	13.331	13.347	7869	5449	NoCal	3.689m#
11) TM 2,4-DINIT...	0.000	13.927	0	8795	N.D.	3.491m#
12) TM 2-NITROTO...	0.000	15.340	0	3075	N.D.	2.916m#
13) TM 4-NITROTO...	0.000	16.830	0	2183	N.D.	2.493m#
14) TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
15) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-AMINO-2...	0.000	18.568	0	6326	N.D.	4.516m#
17) TM 2-AMINO-4...	0.000	19.498	0	7420	N.D.	3.640m#
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:14:09 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

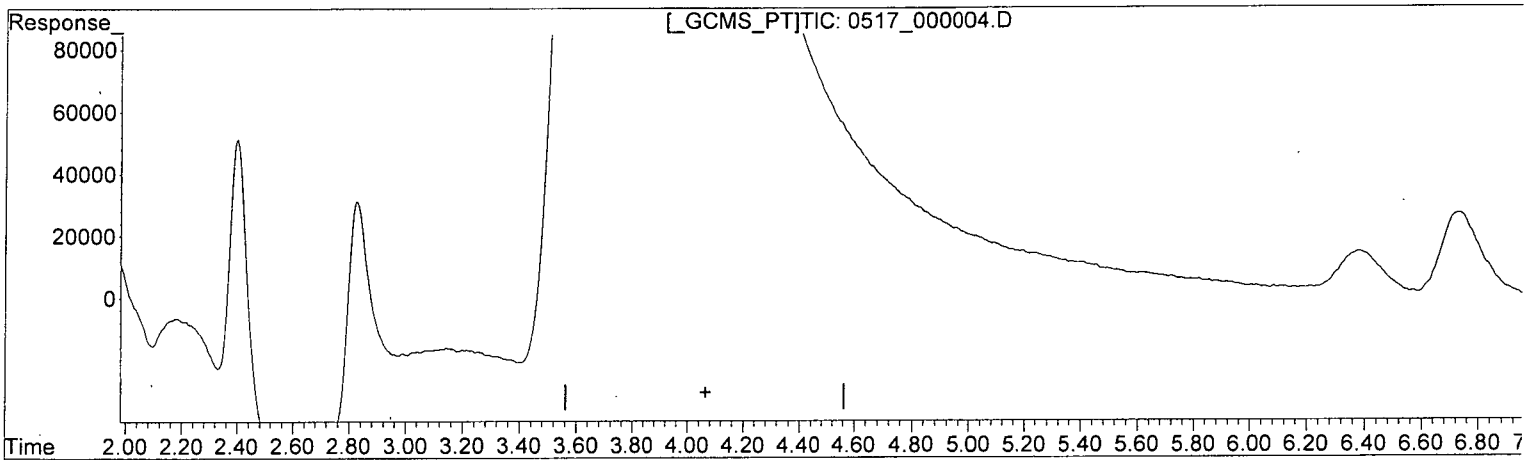


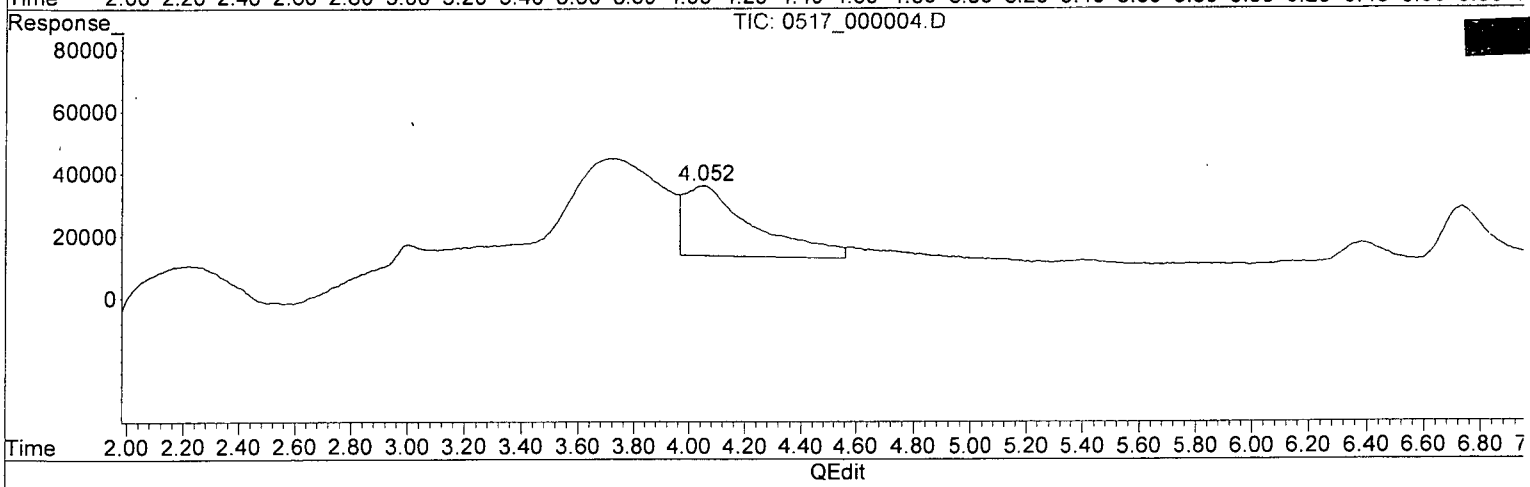
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.053min 10.654 ppb

response 22404

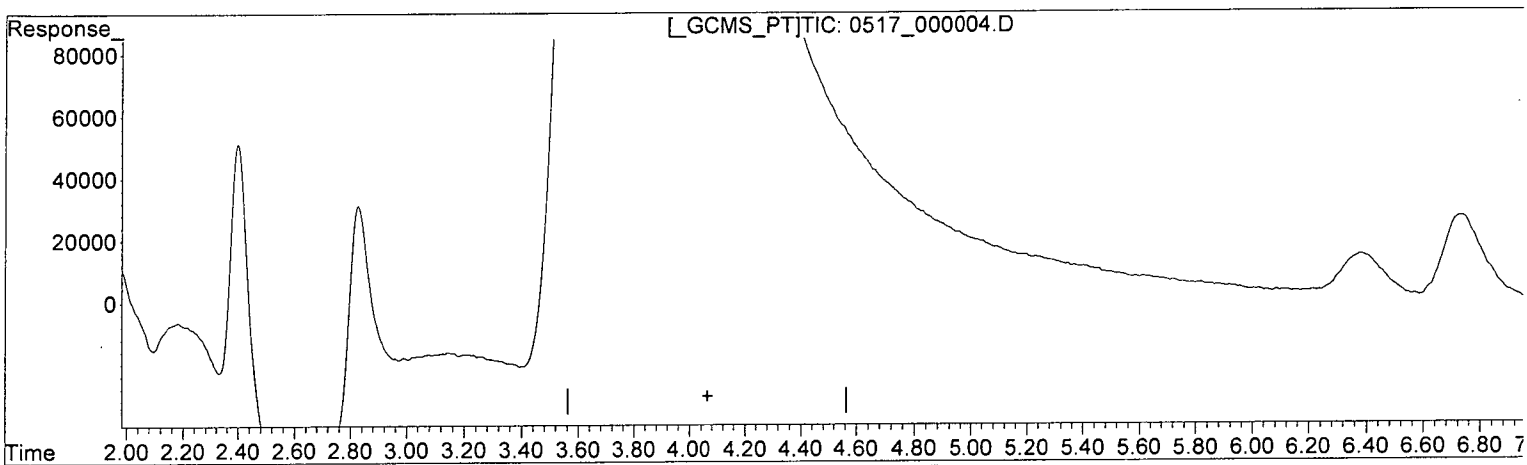
(+) = Expected Retention Time

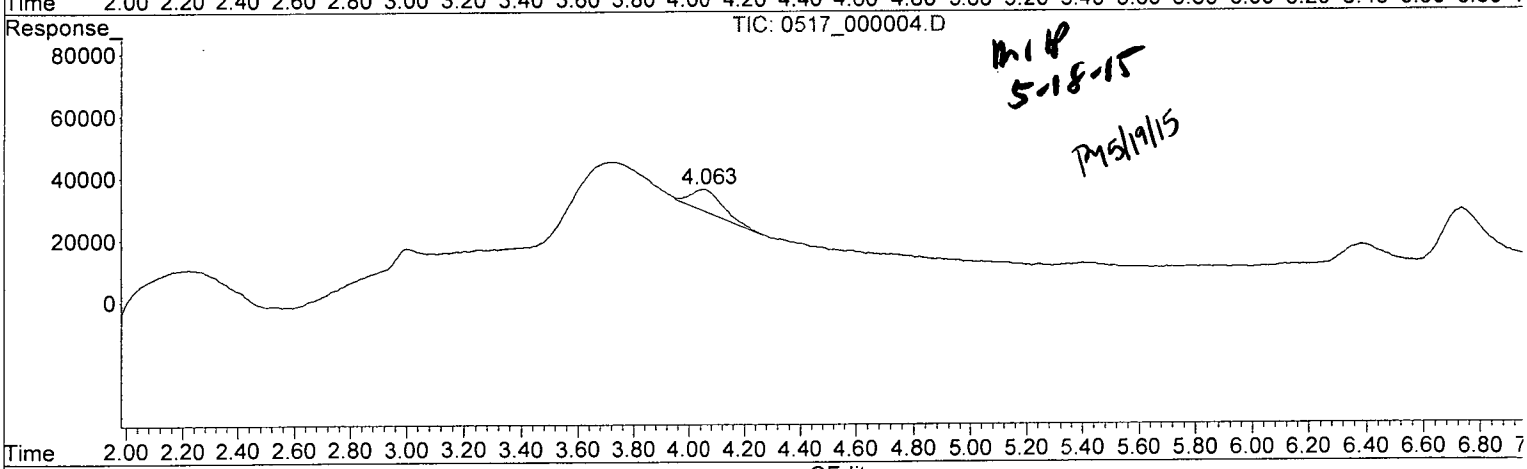
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





MLB 5-18-15

PMS/19/15

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.063min 3.413 ppb m

response 7176

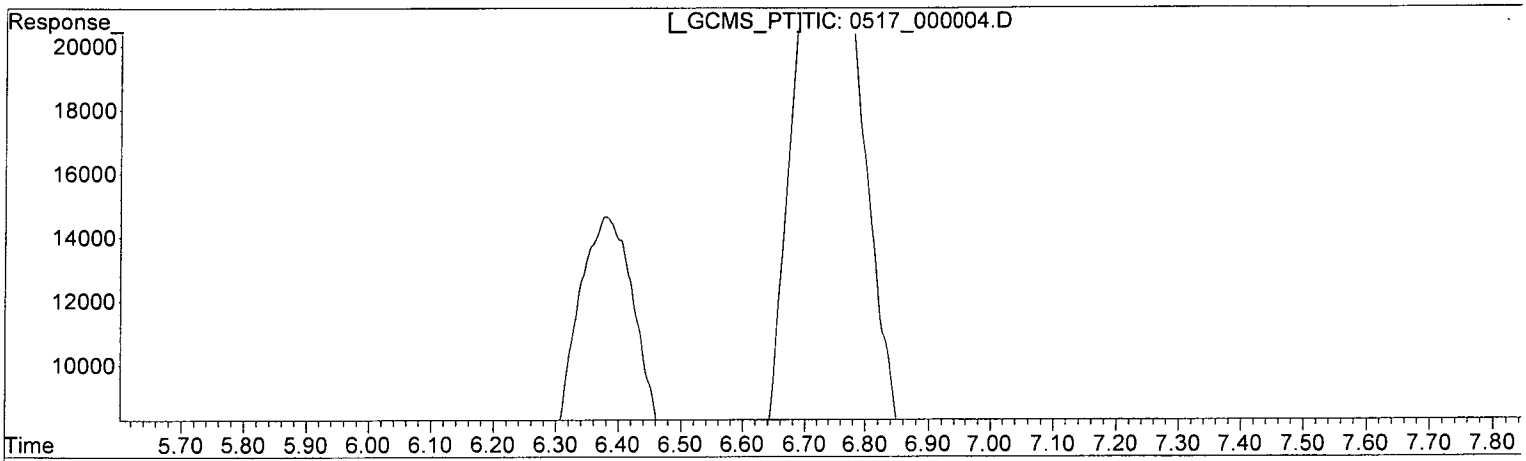
(+) = Expected Retention Time

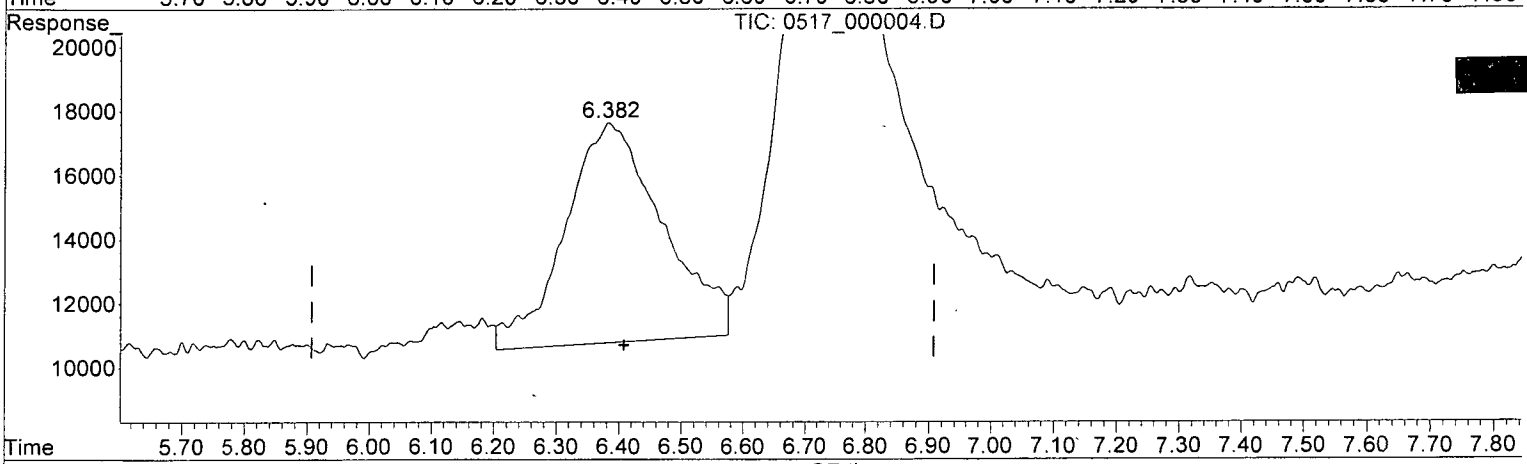
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(2) RDX (TM)

0.000min 0.000 ppb

response 0

(2) RDX #2 (TM)

6.384min 3.695 ppb

response 6843

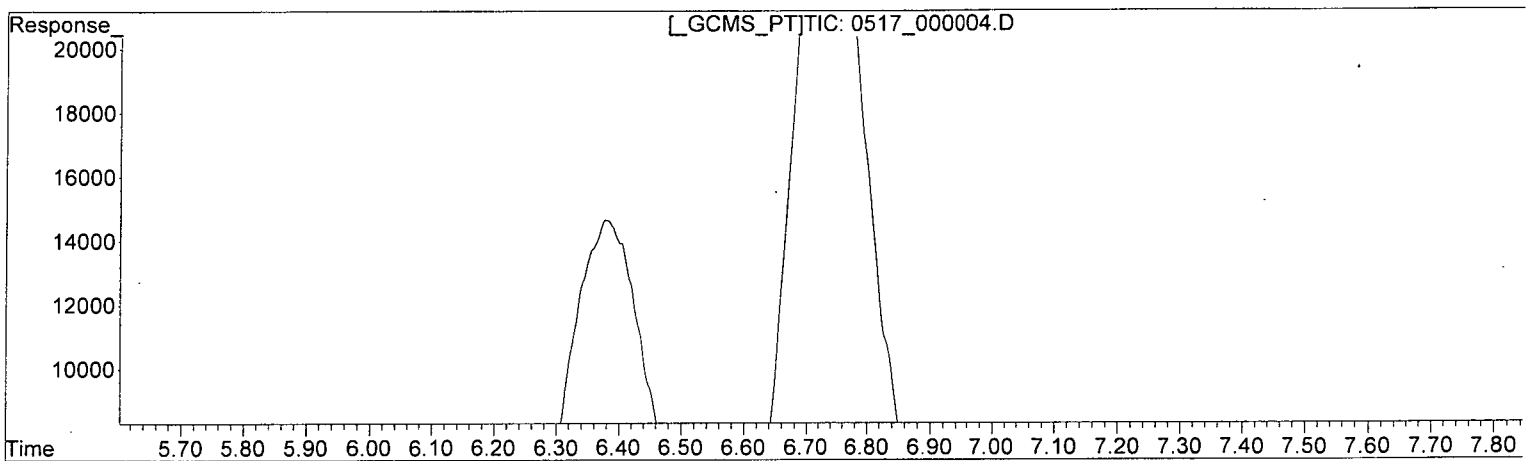
(+) = Expected Retention Time

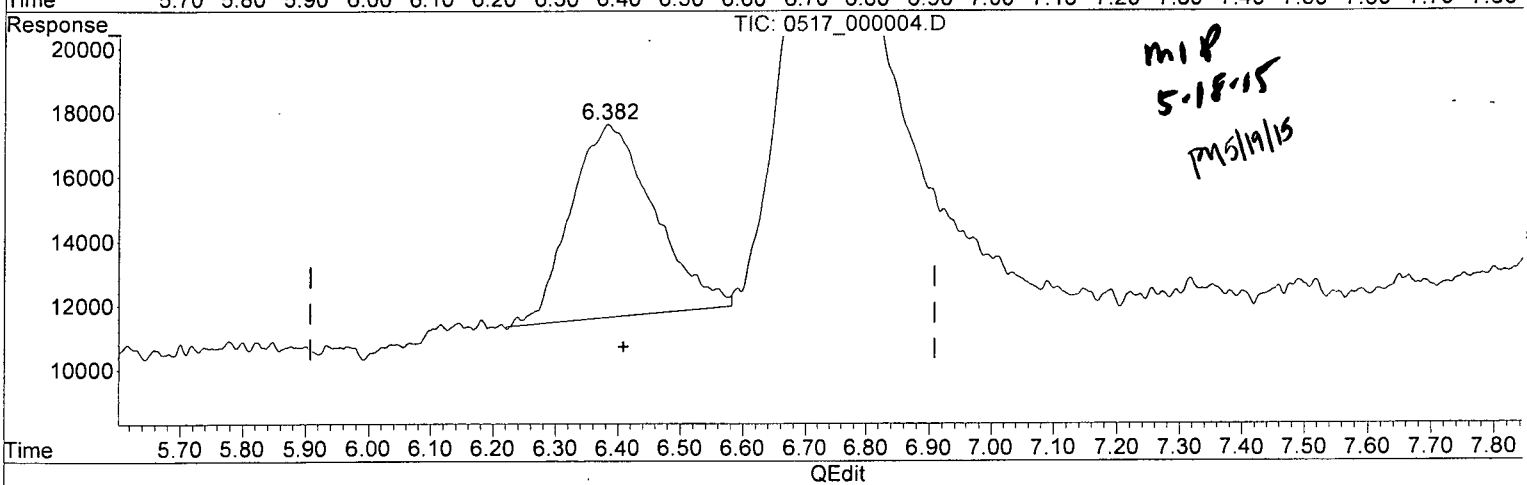
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MLP 5.18.15 PM 5/19/15

QEdit

(2) RDX (TM)

0.000min 0.000 ppb

response 0

(2) RDX #2 (TM)

6.382min 3.247 ppb m

response 6014

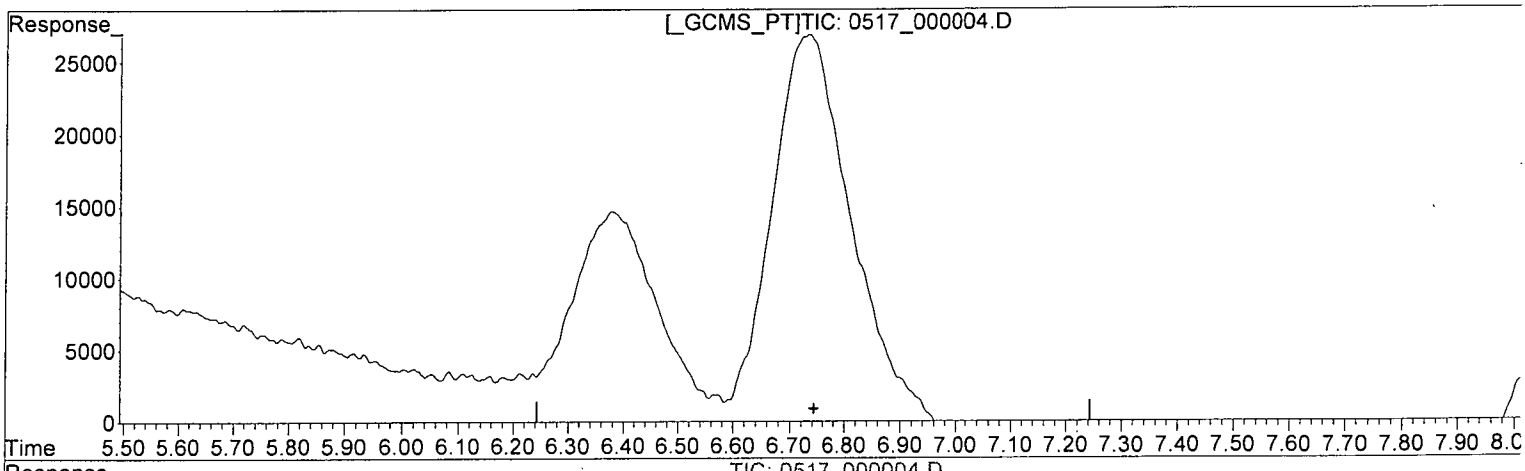
(+) = Expected Retention Time

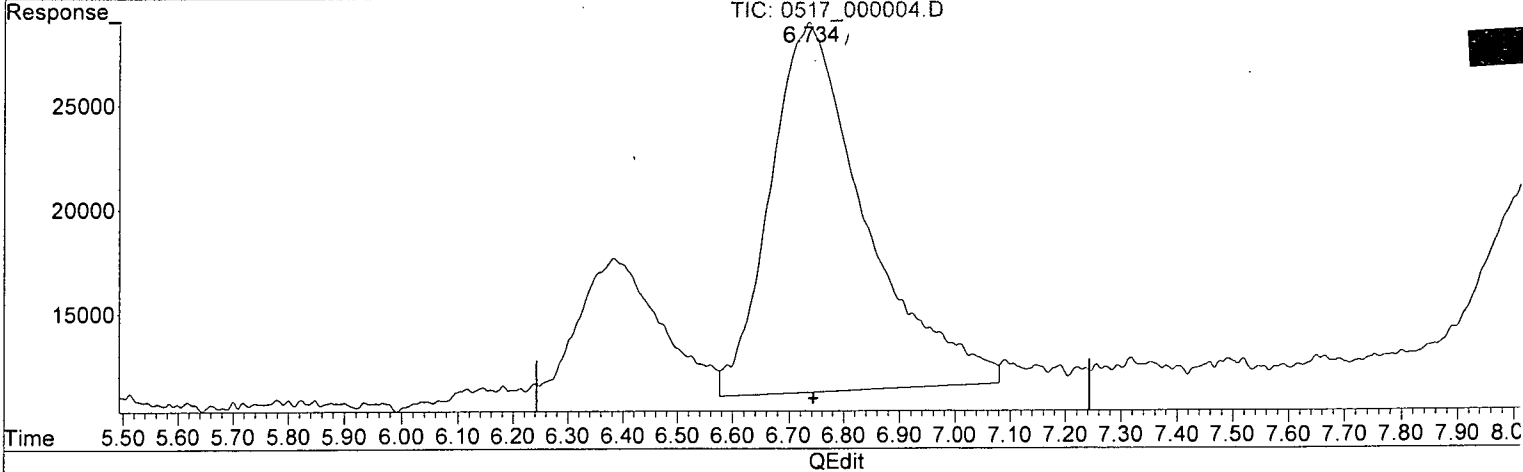
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(3) 1,3,5-TRINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(3) 1,3,5-TRINITROBENZENE #2 (TM)

6.735min 3.964 ppb

response 17717

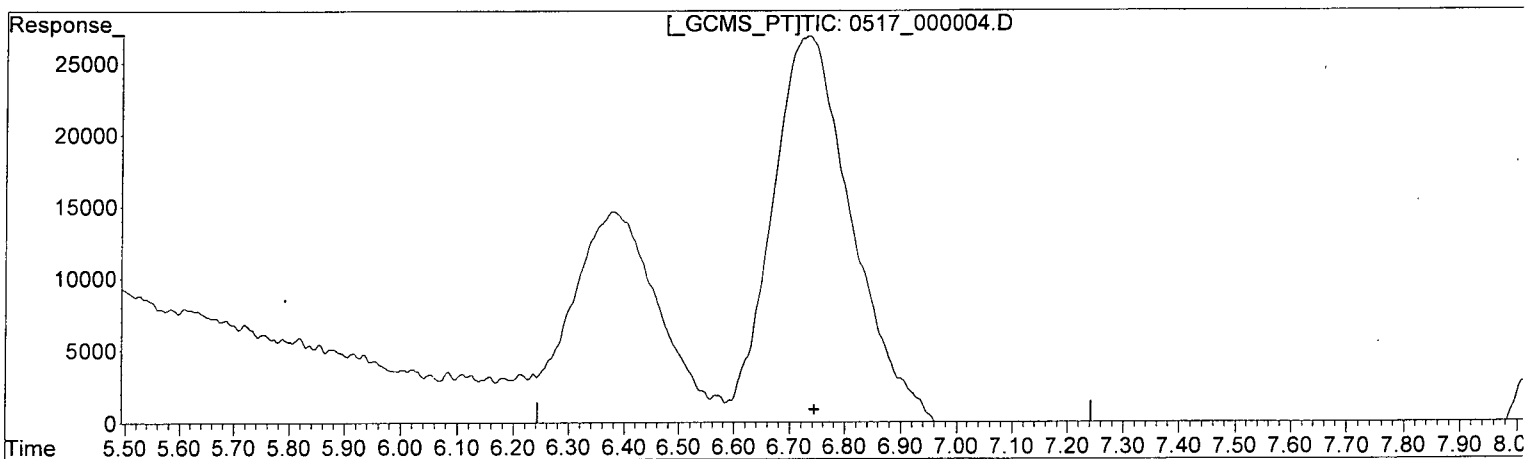
(+) = Expected Retention Time

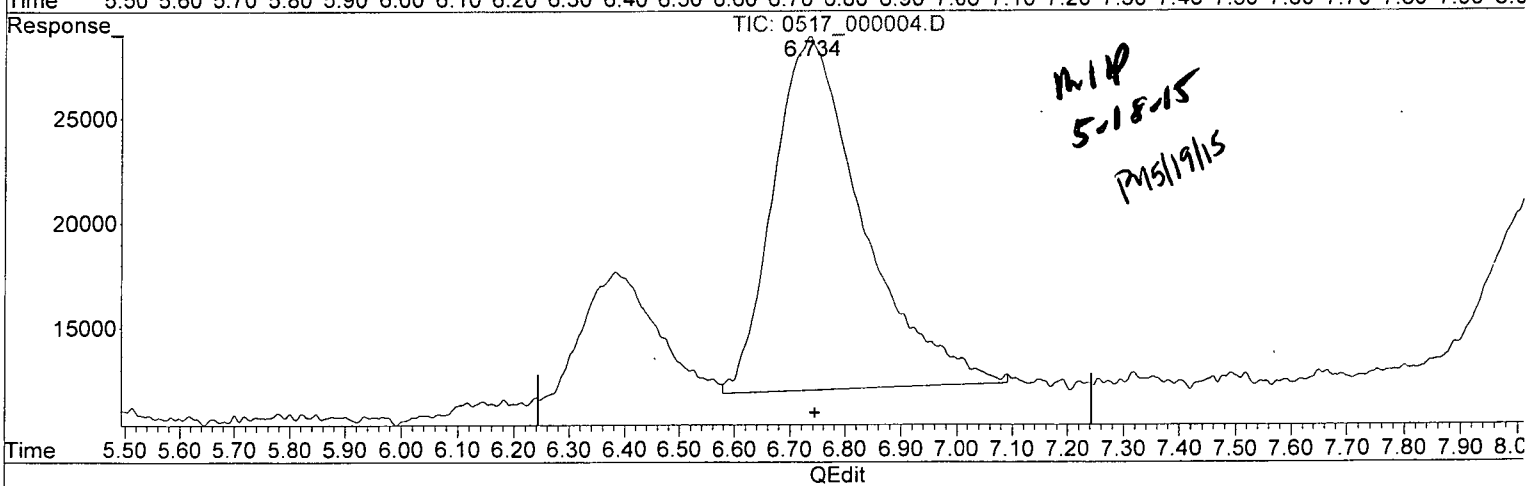
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MP 5-18-15

PM 5/19/15

QEdit

(3) 1,3,5-TRINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(3) 1,3,5-TRINITROBENZENE #2 (TM)

6.734min 3.792 ppb m

response 16951

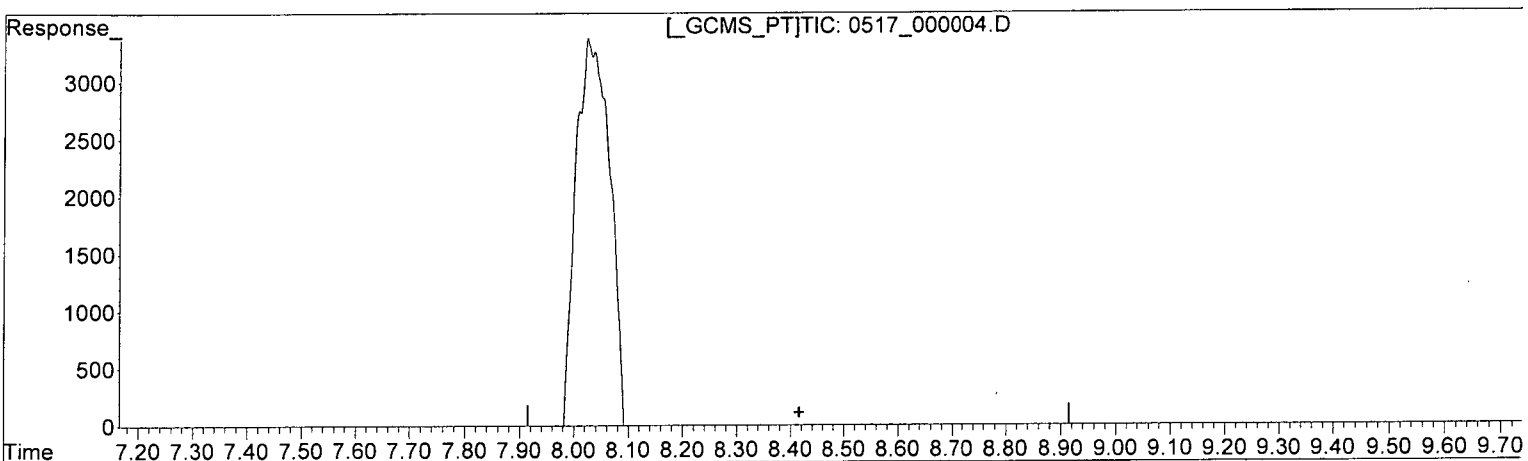
(+) = Expected Retention Time

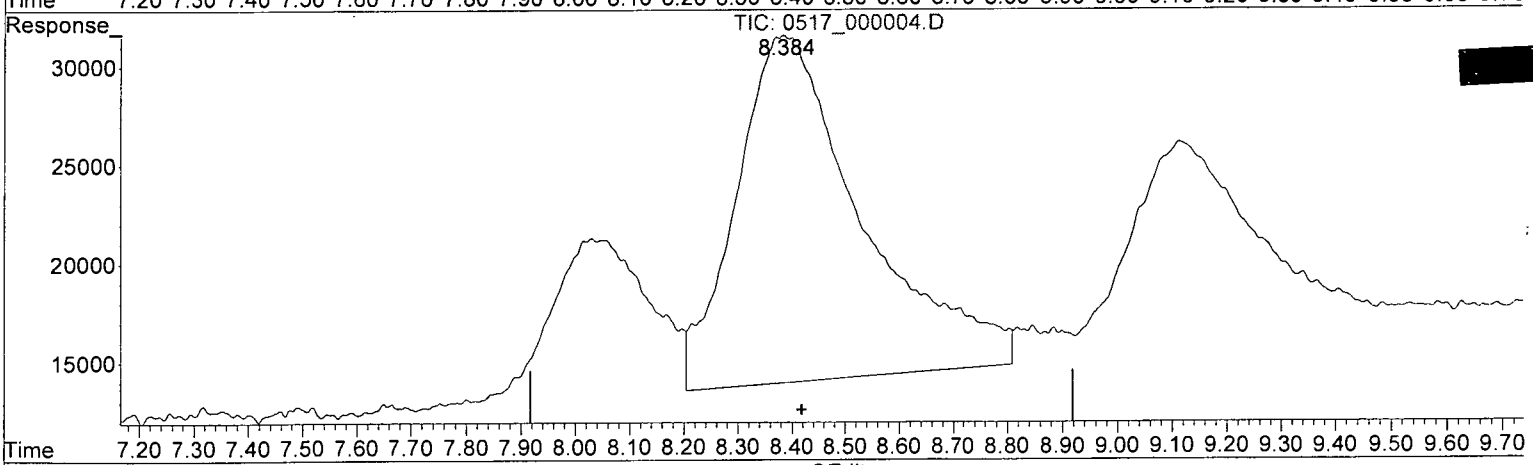
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(5) 1,3-DINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(5) 1,3-DINITROBENZENE #2 (TM)

8.384min 3.917 ppb

response 17616

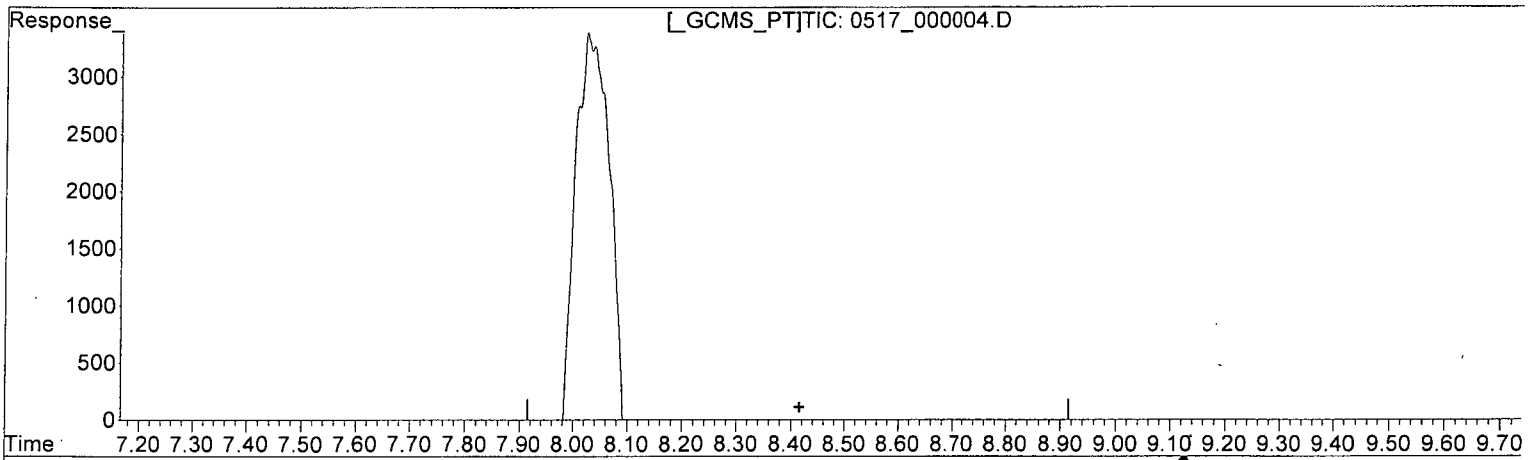
(+) = Expected Retention Time

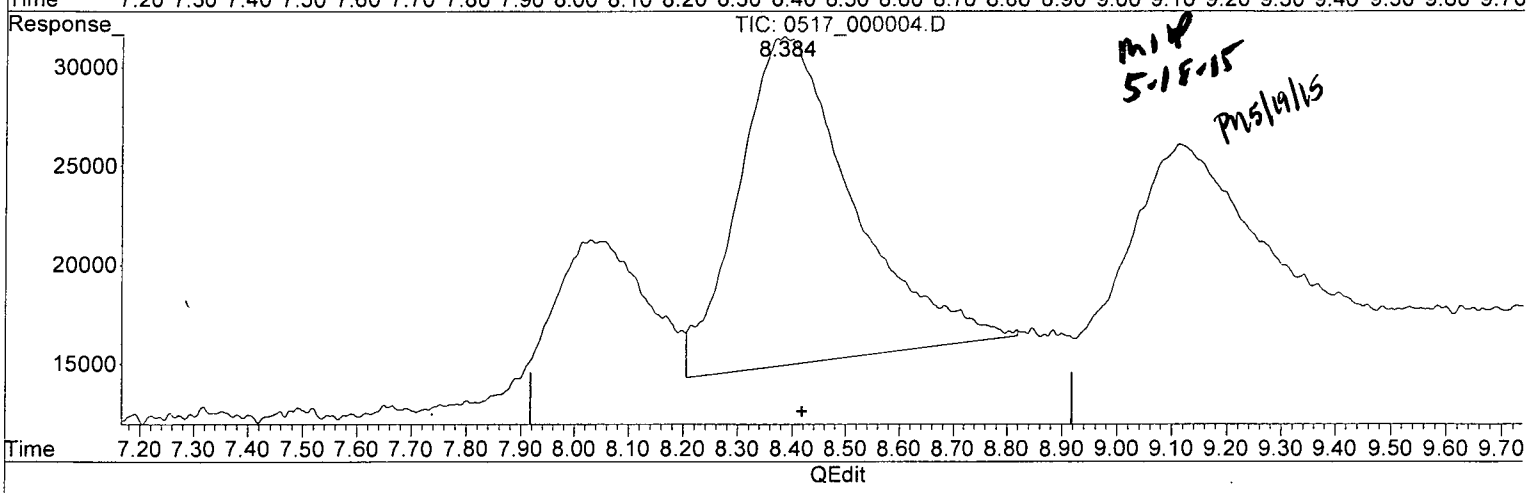
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MP 5-18-15

PM5/19/15

(5) 1,3-DINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(5) 1,3-DINITROBENZENE #2 (TM)

8.384min 3.701 ppb m

response 16643

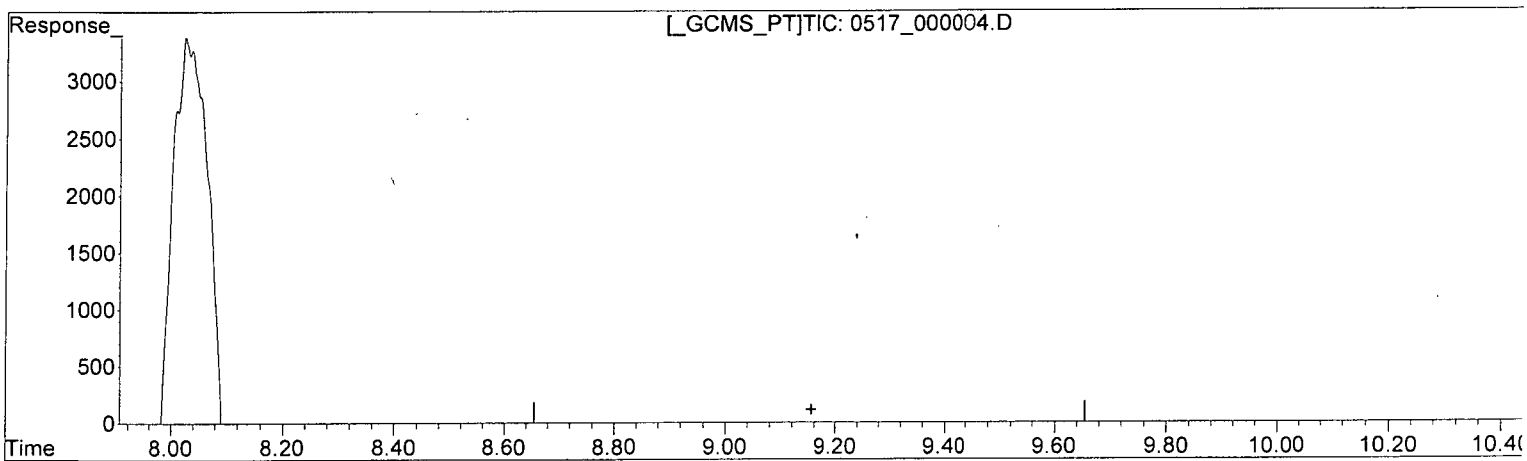
(+) = Expected Retention Time

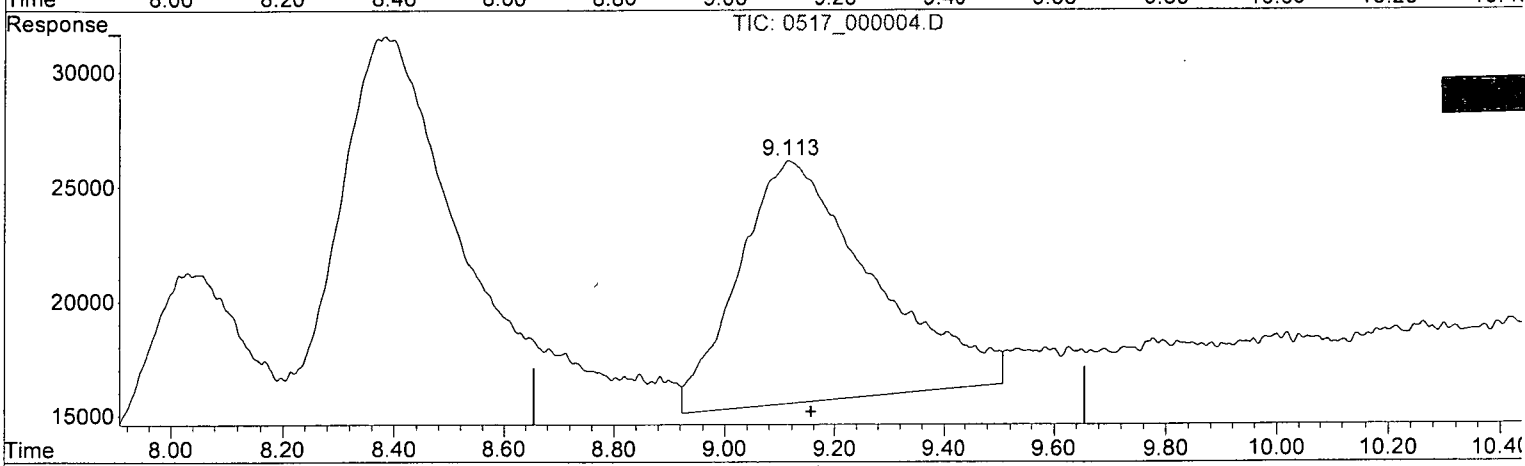
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(6) NITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(6) NITROBENZENE #2 (TM)

9.116min 4.119 ppb

response 10552

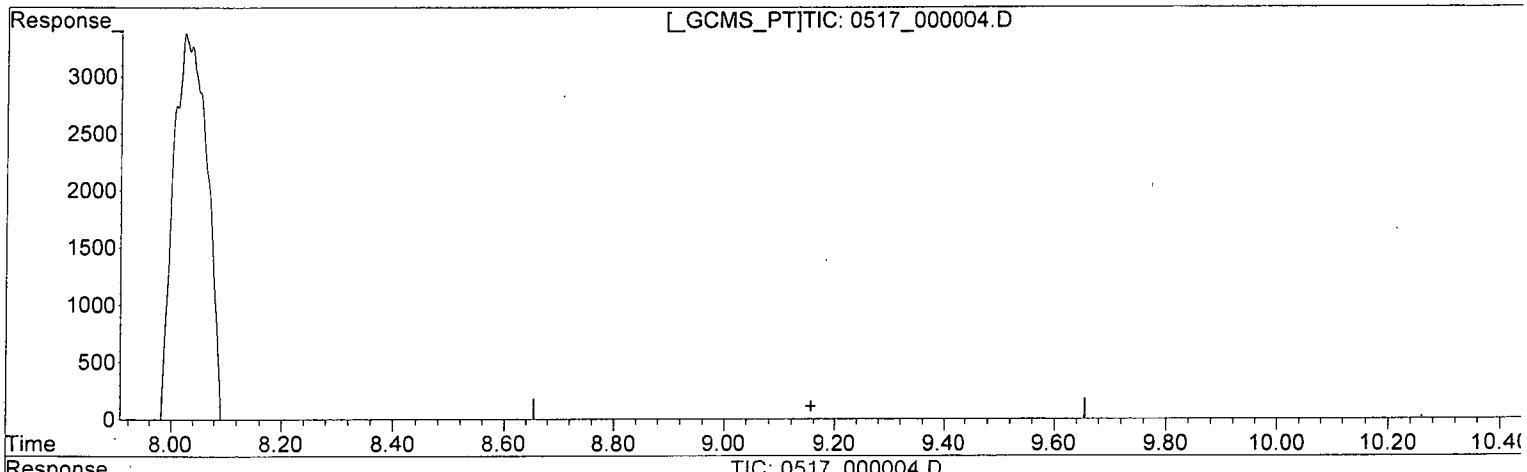
(+) = Expected Retention Time

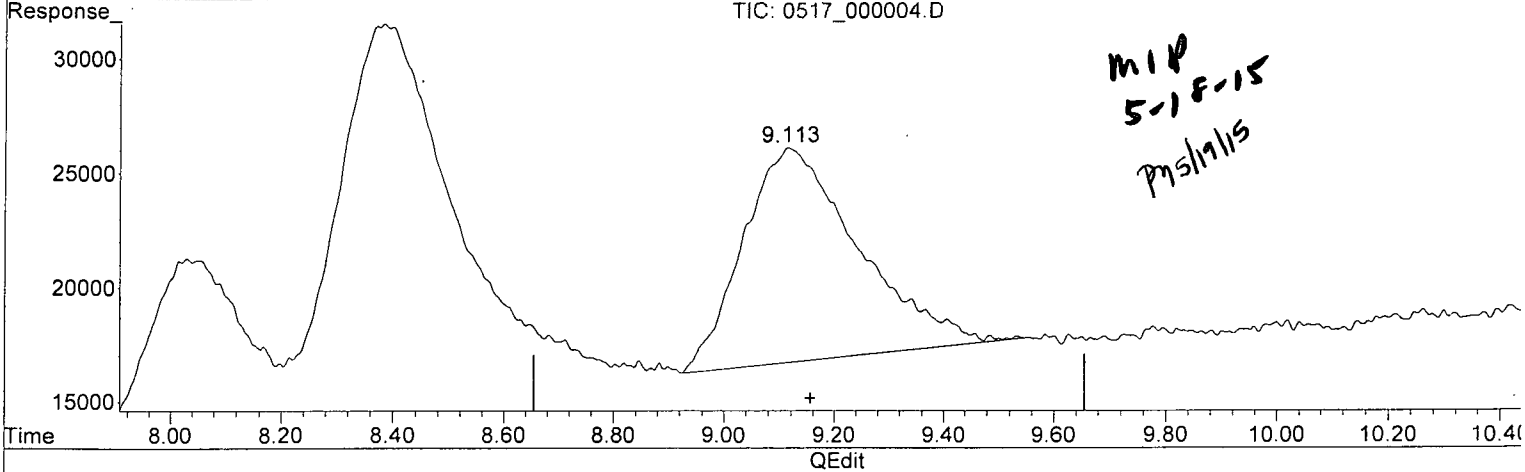
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MLP 5-18-15 PMS/19/15

QEdit

(6) NITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(6) NITROBENZENE #2 (TM)

9.113min 3.662 ppb m

response 9381

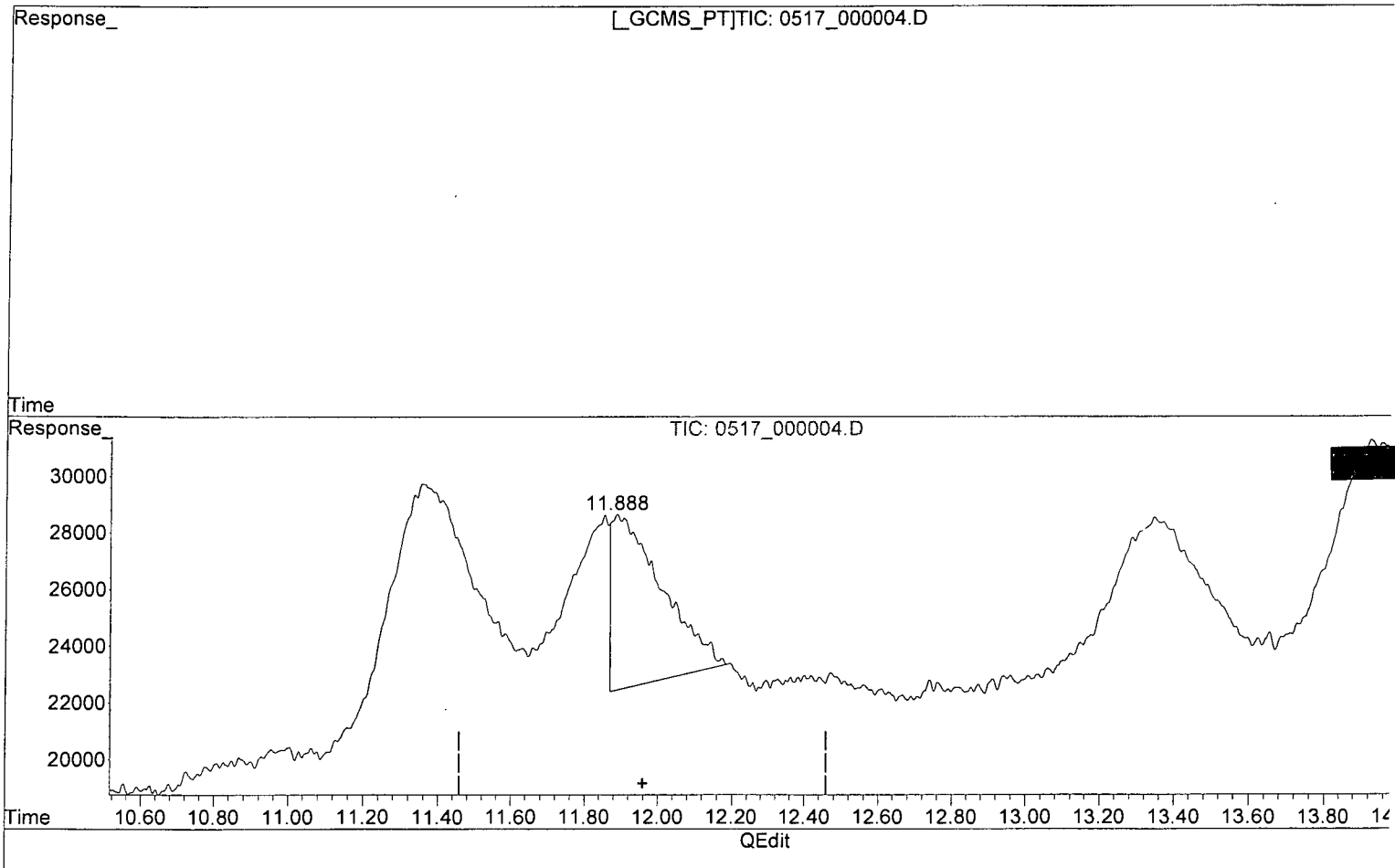
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r



(9) TETRYL (TM)

11.864min 0.000 ppb

response 6552

(9) TETRYL #2 (TM)

11.889min 3.751 ppb

response 6179

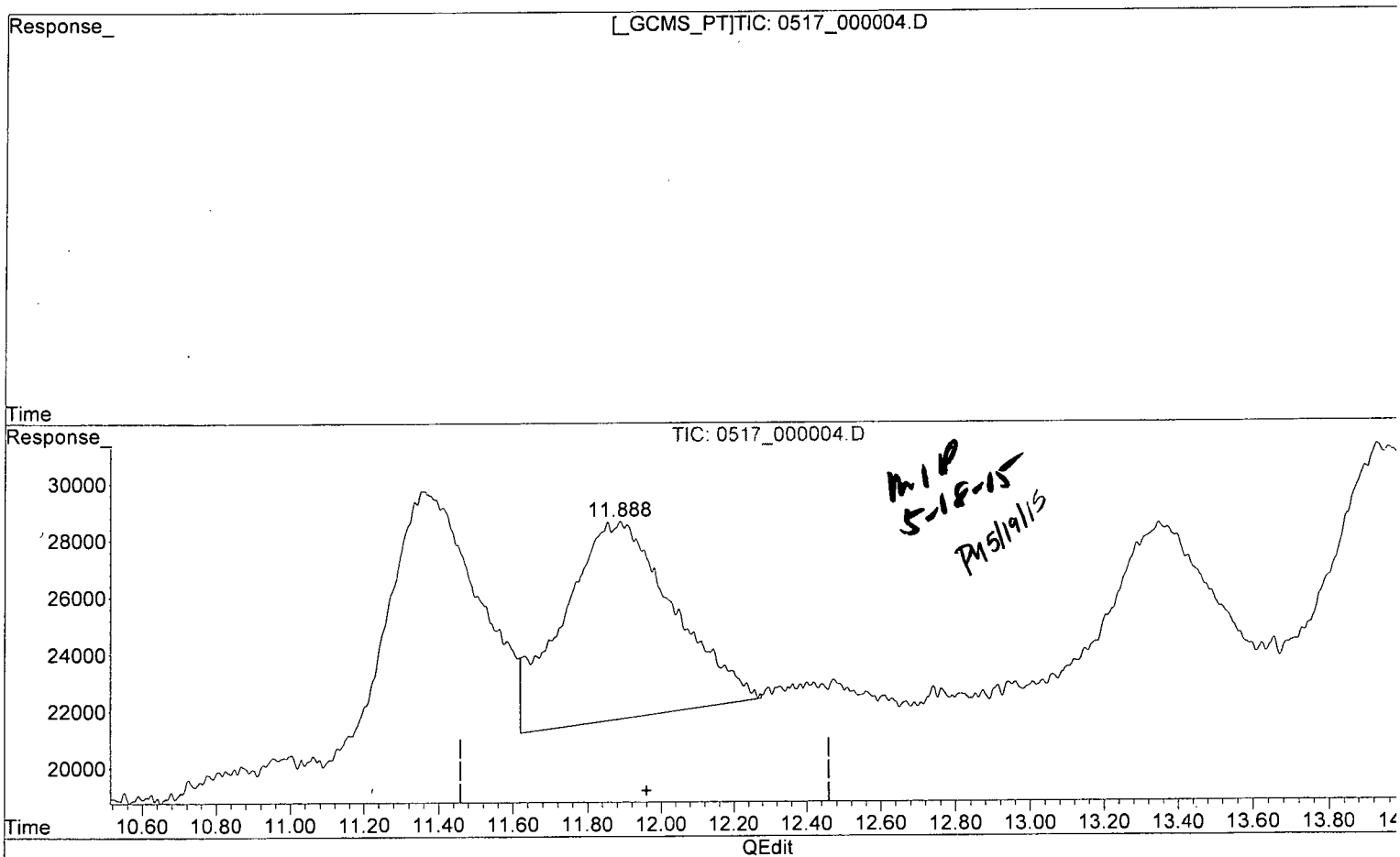
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(9) TETRYL (TM)

11.864min 0.000 ppb

response 6552

(9) TETRYL #2 (TM)

11.888min 4.216 ppb m

response 6945

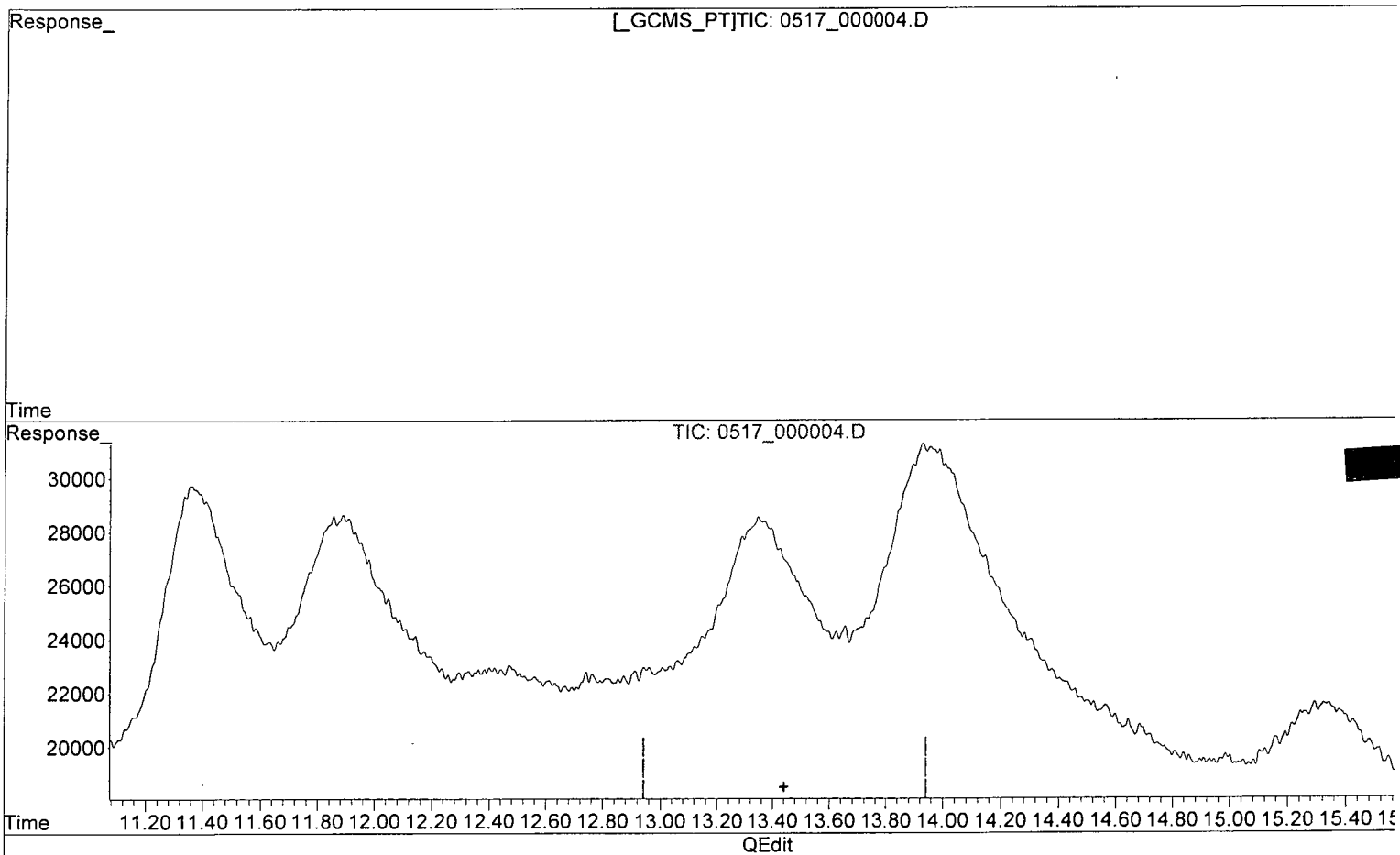
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(10) 2,6-DINITROTOLUENE (TM)

13.331min 0.000 ppb

response 7869

(10) 2,6-DINITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

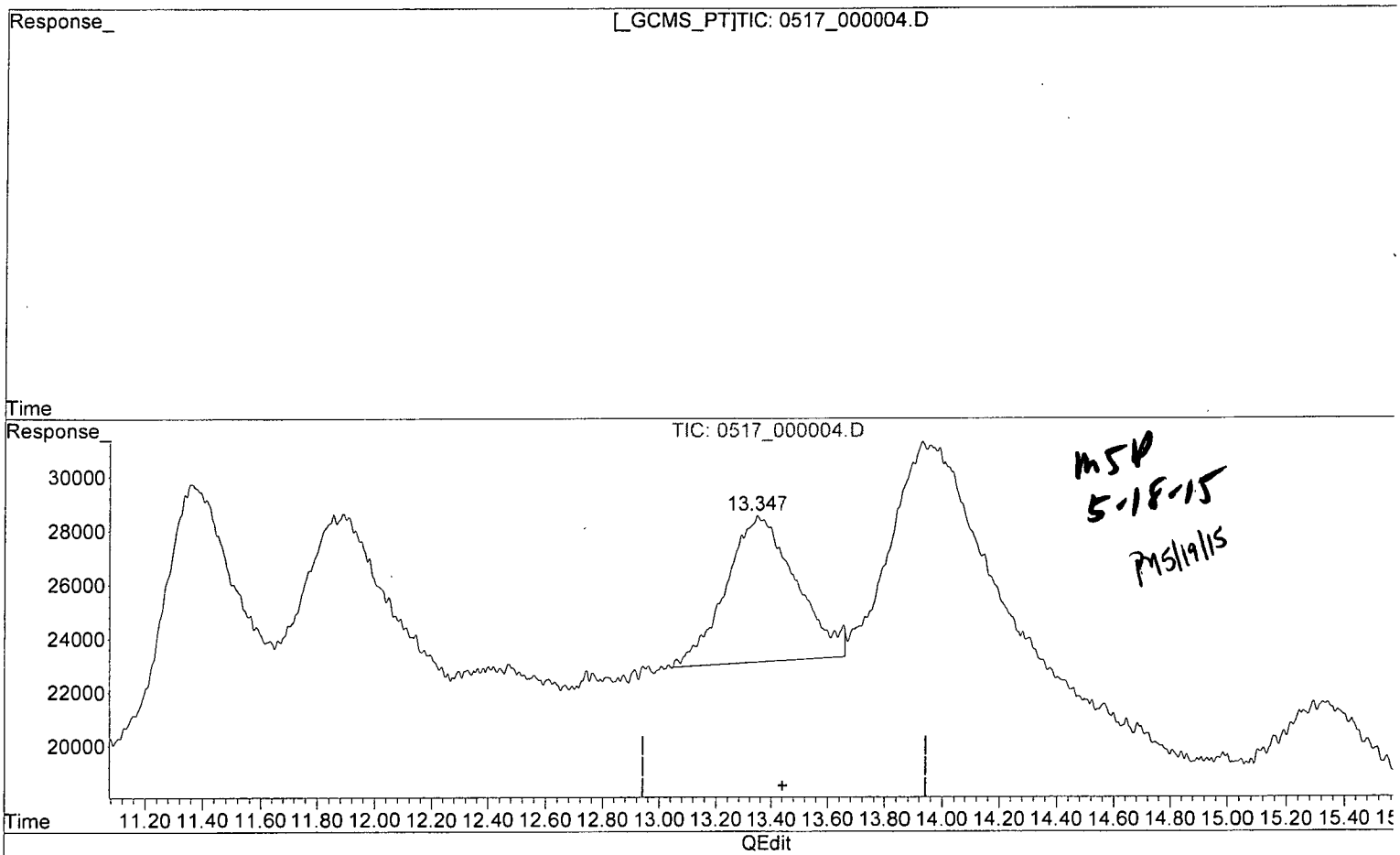
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(10) 2,6-DINITROTOLUENE (TM)

13.331min 0.000 ppb

response 7869

(10) 2,6-DINITROTOLUENE #2 (TM)

13.347min 3.689 ppb m

response 5449

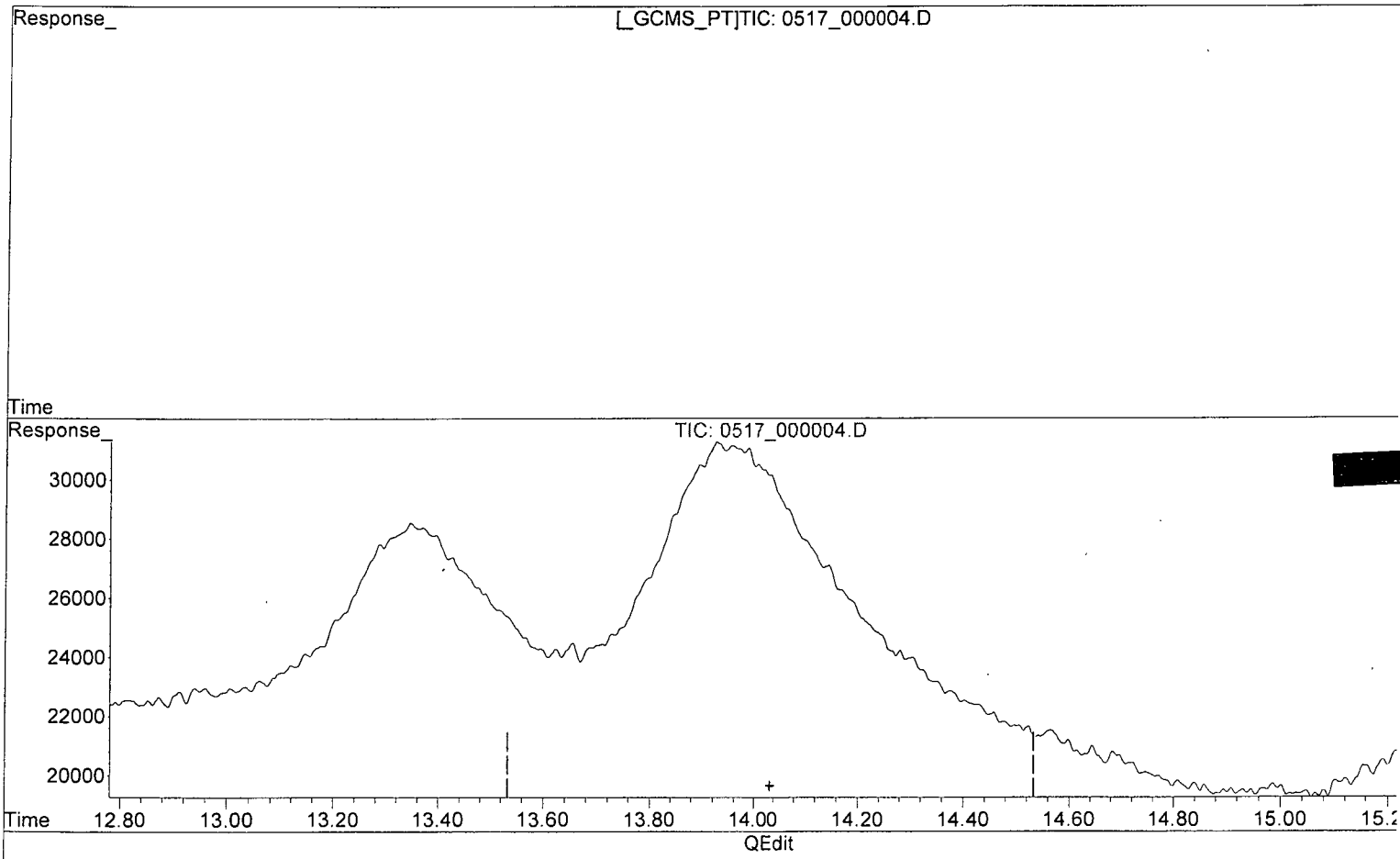
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(11) 2,4-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(11) 2,4-DINITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

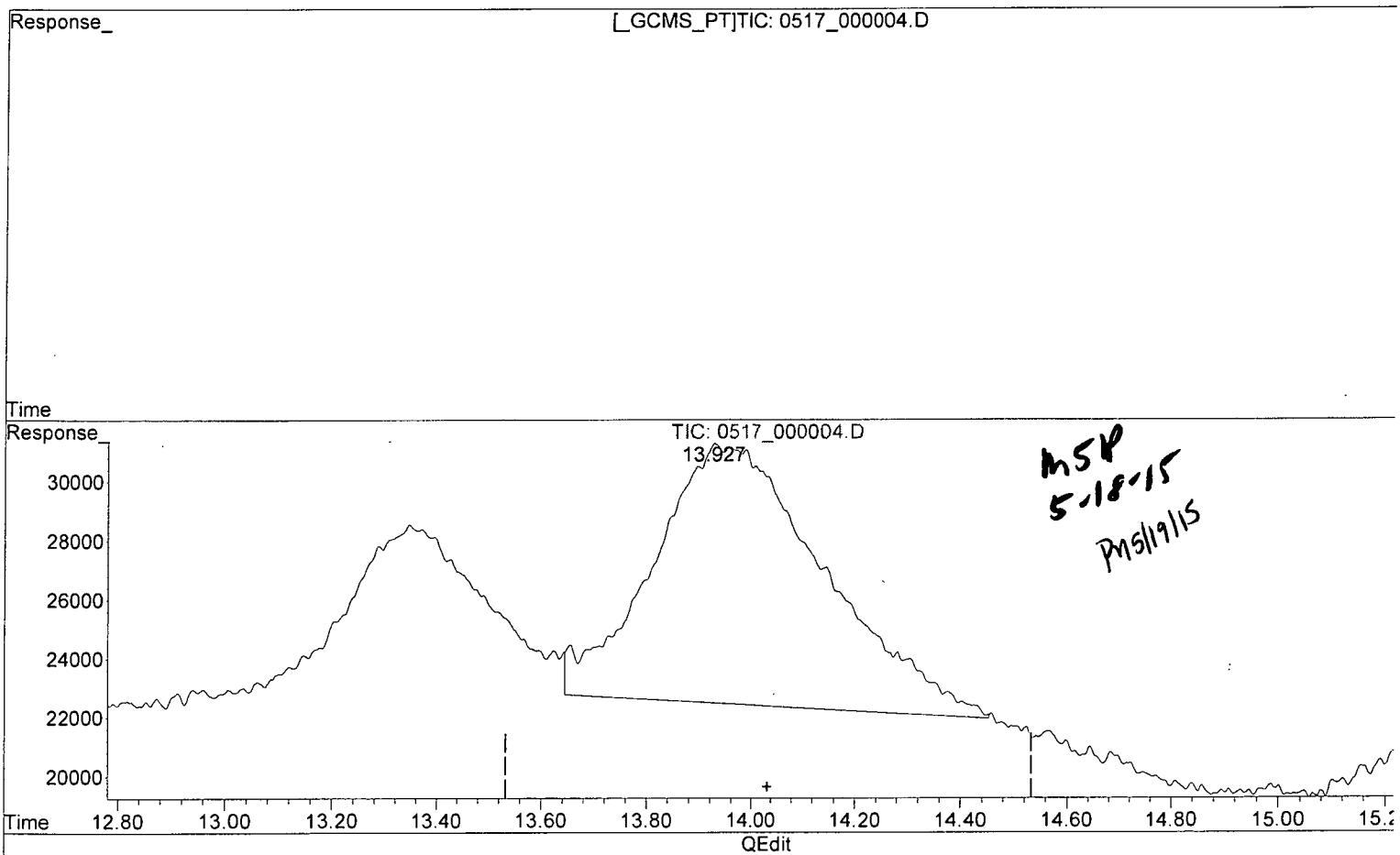
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r



MSP 5-18-15 PMS 5/19/15

(11) 2,4-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(11) 2,4-DINITROTOLUENE #2 (TM)

13.927min 3.491 ppb m

response 8795

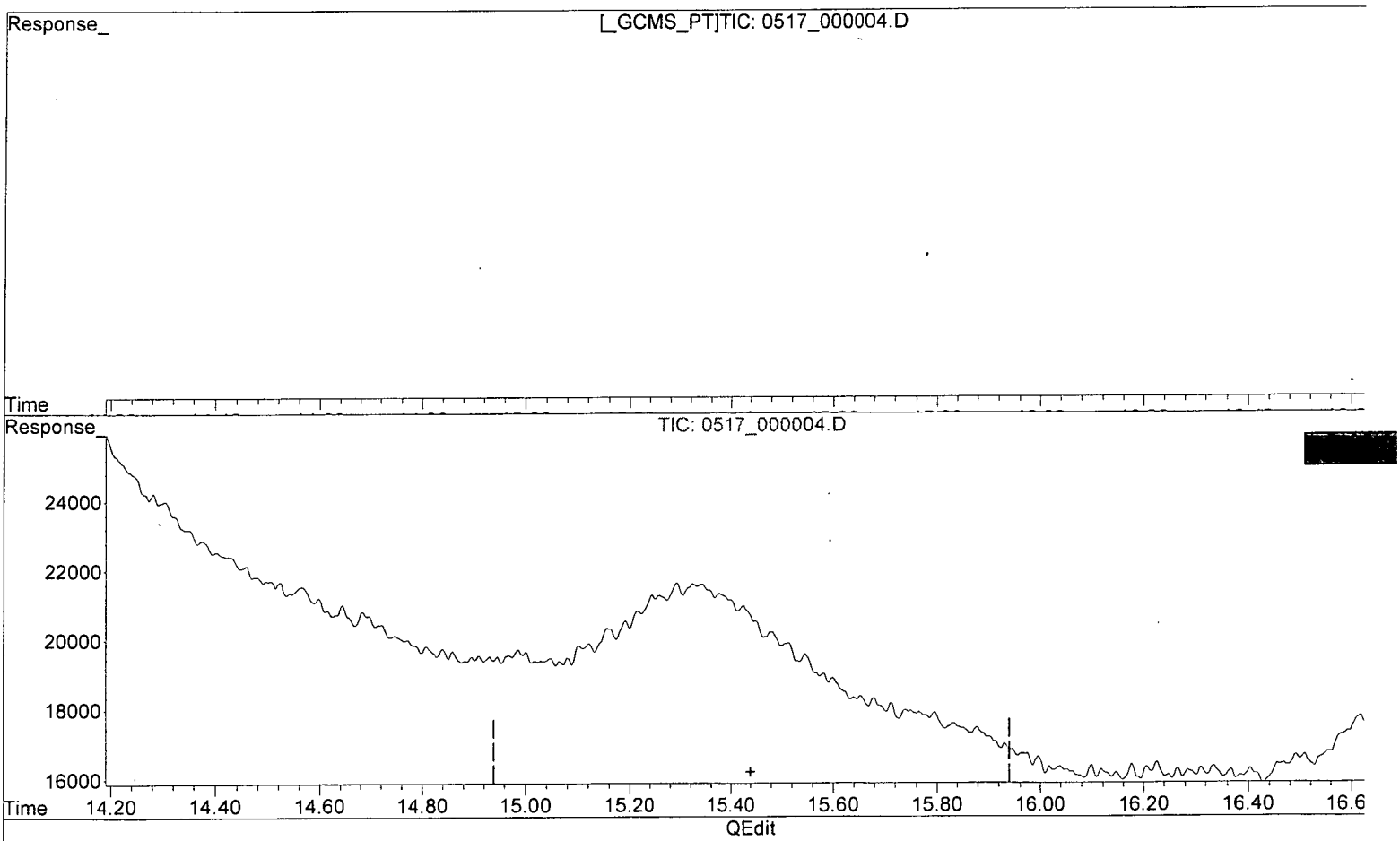
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(12) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(12) 2-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

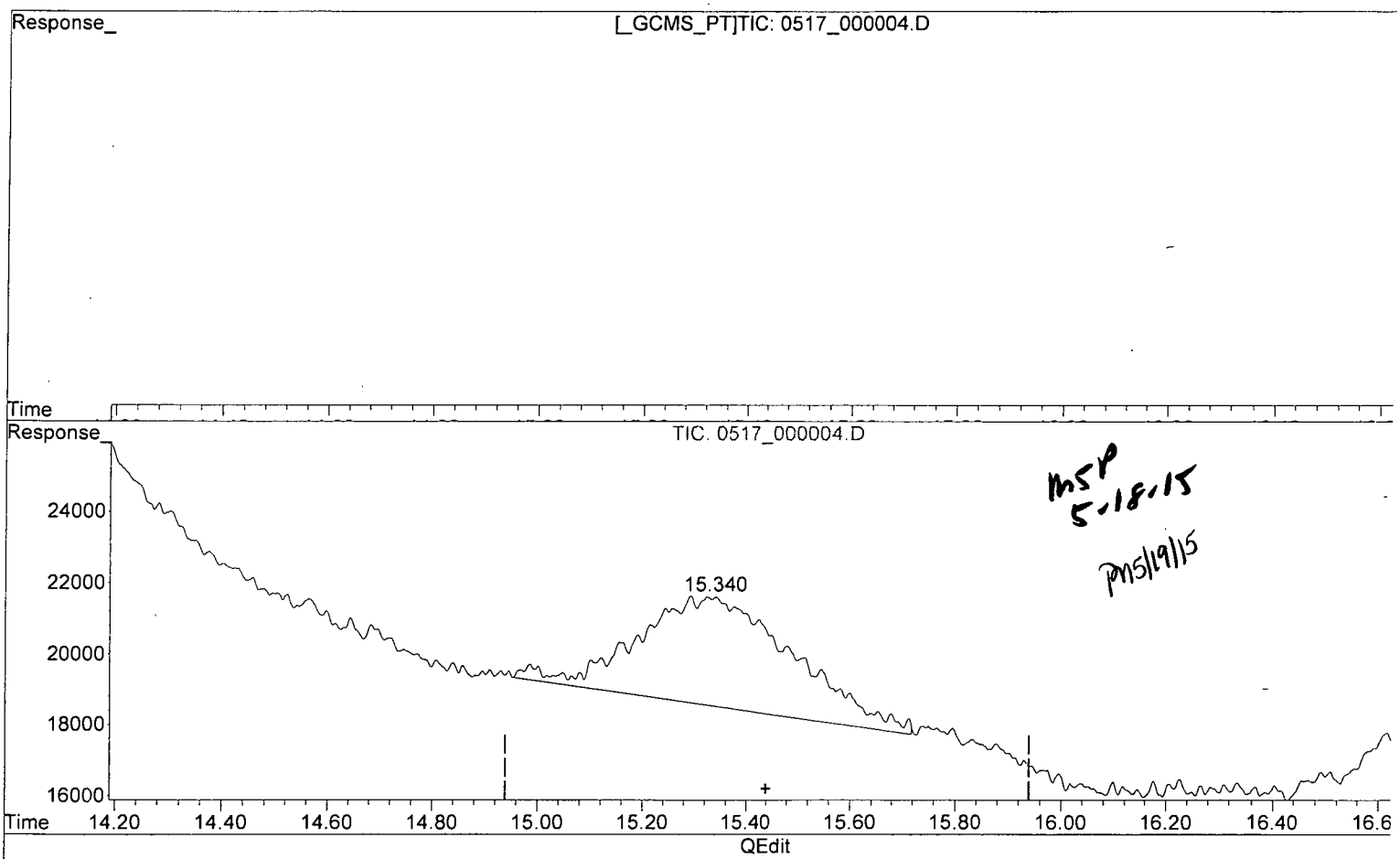
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r



MSP 5.18.15

PM5/19/15

(12) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(12) 2-NITROTOLUENE #2 (TM)

15.340min 2.916 ppb m

response 3075

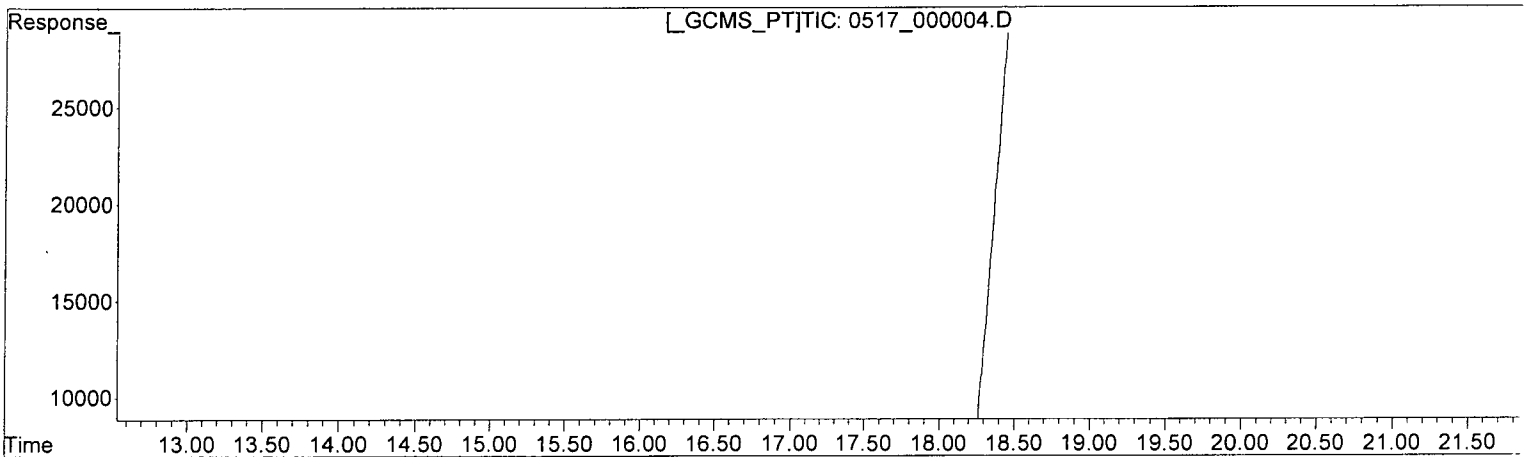
(+) = Expected Retention Time

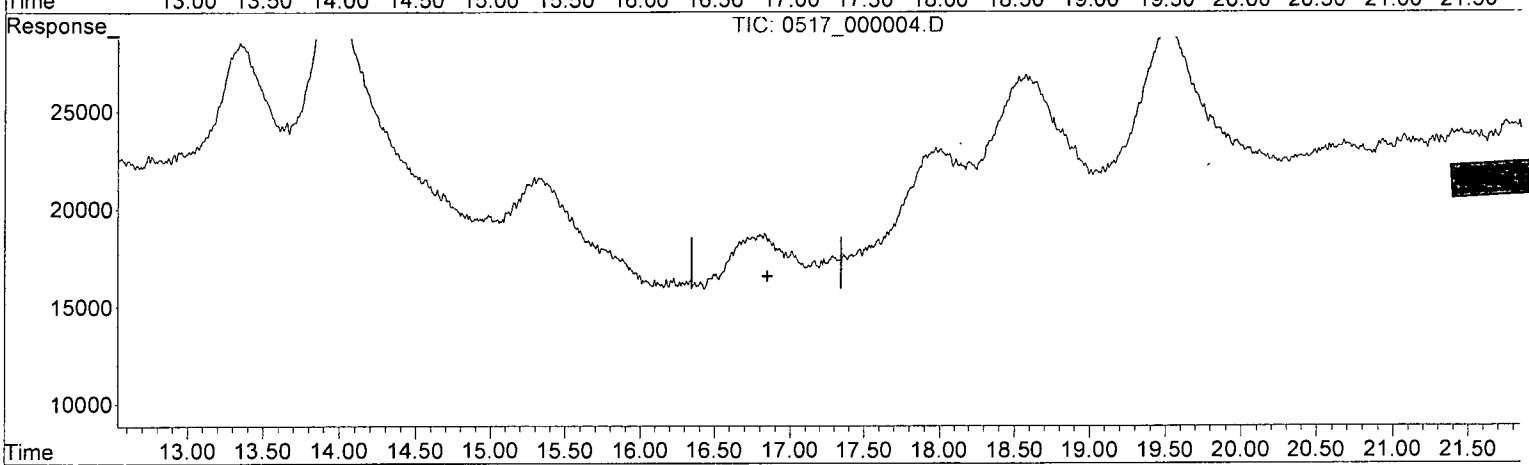
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(13) 4-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(13) 4-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

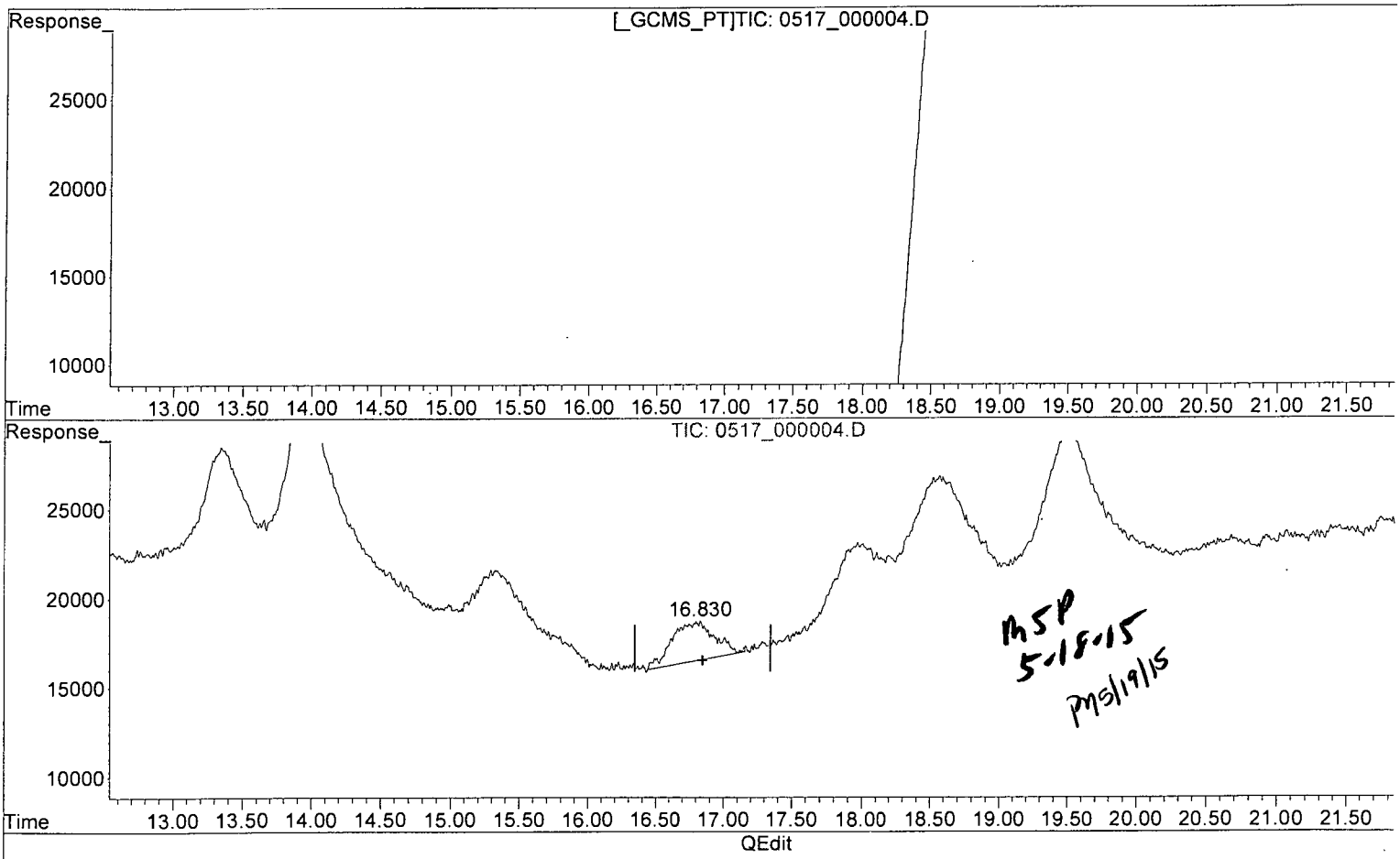
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



MSP 5-18-15 MS 5/19/15

(13) 4-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(13) 4-NITROTOLUENE #2 (TM)

16.830min 2.493 ppb m

response 2183

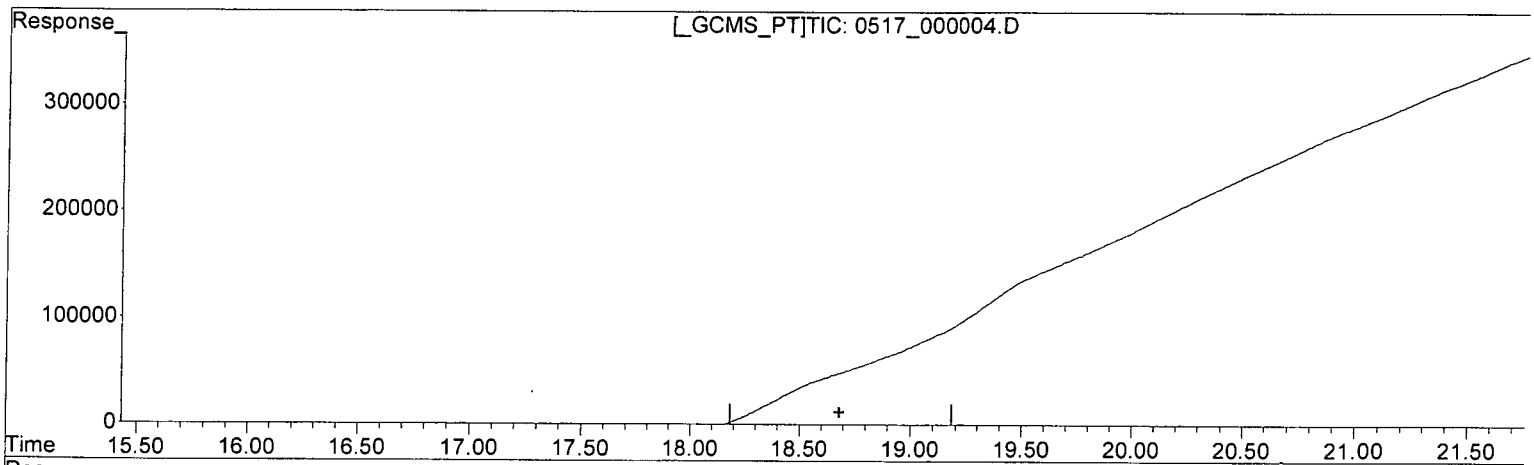
(+) = Expected Retention Time

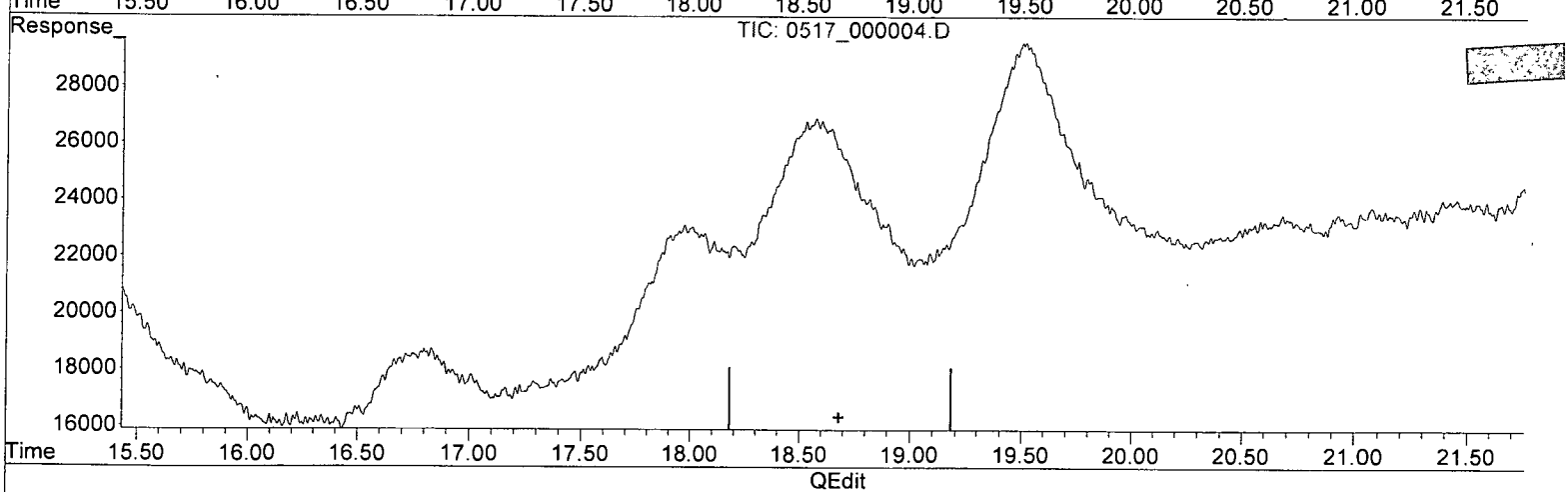
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(16) 4-AMINO-2,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(16) 4-AMINO-2,6-DINITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

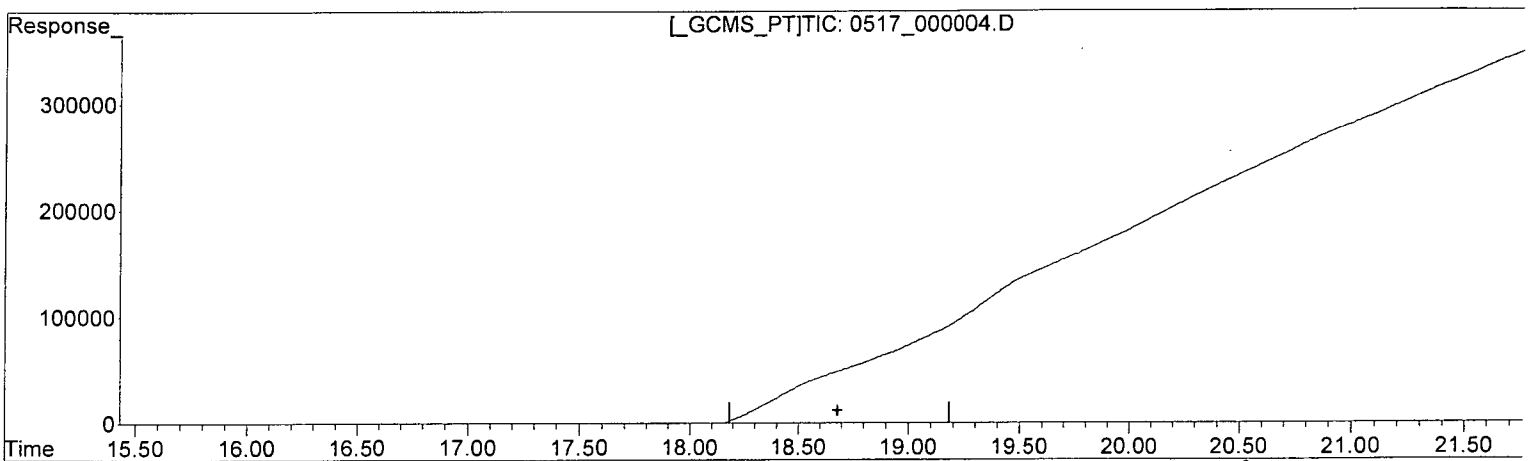
(+) = Expected Retention Time

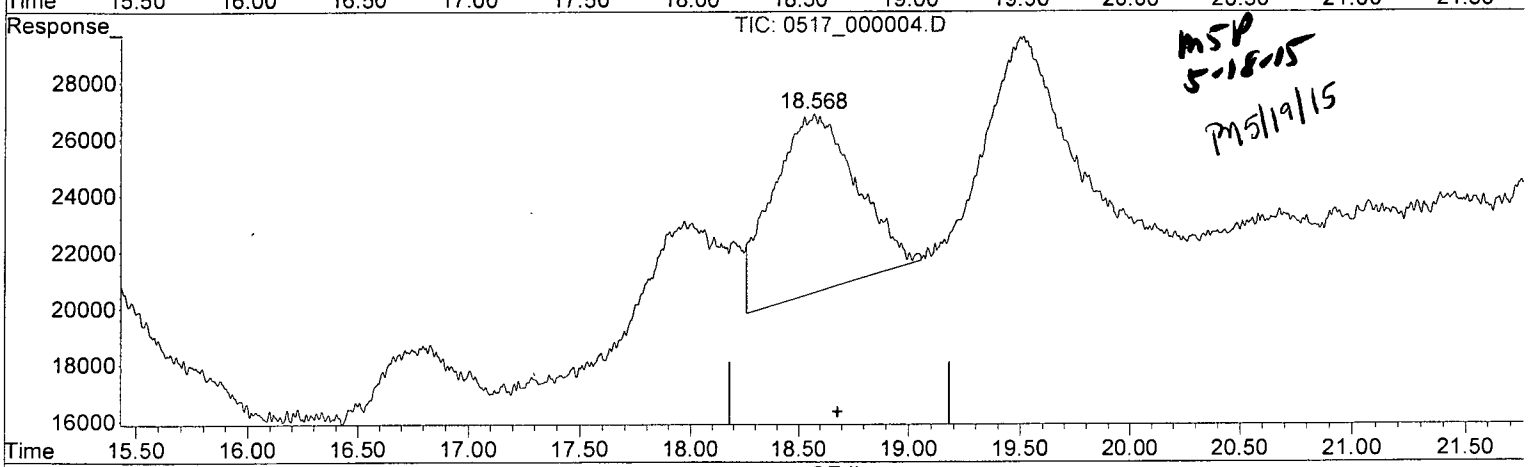
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(16) 4-AMINO-2,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(16) 4-AMINO-2,6-DINITROTOLUENE #2 (TM)

18.568min 4.516 ppb m

response 6326

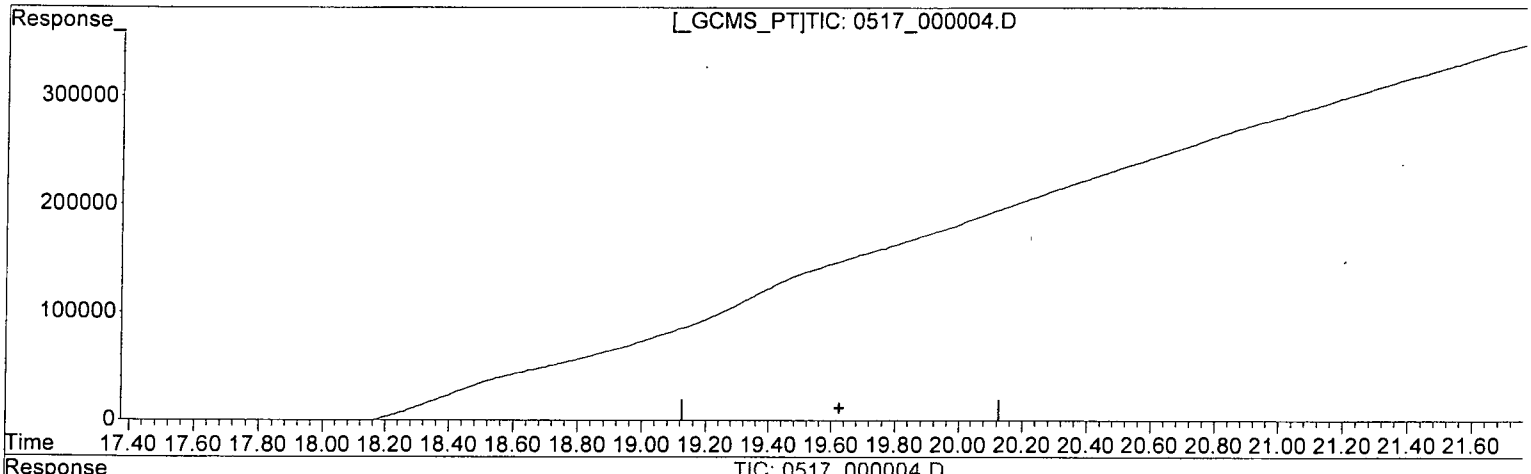
(+) = Expected Retention Time

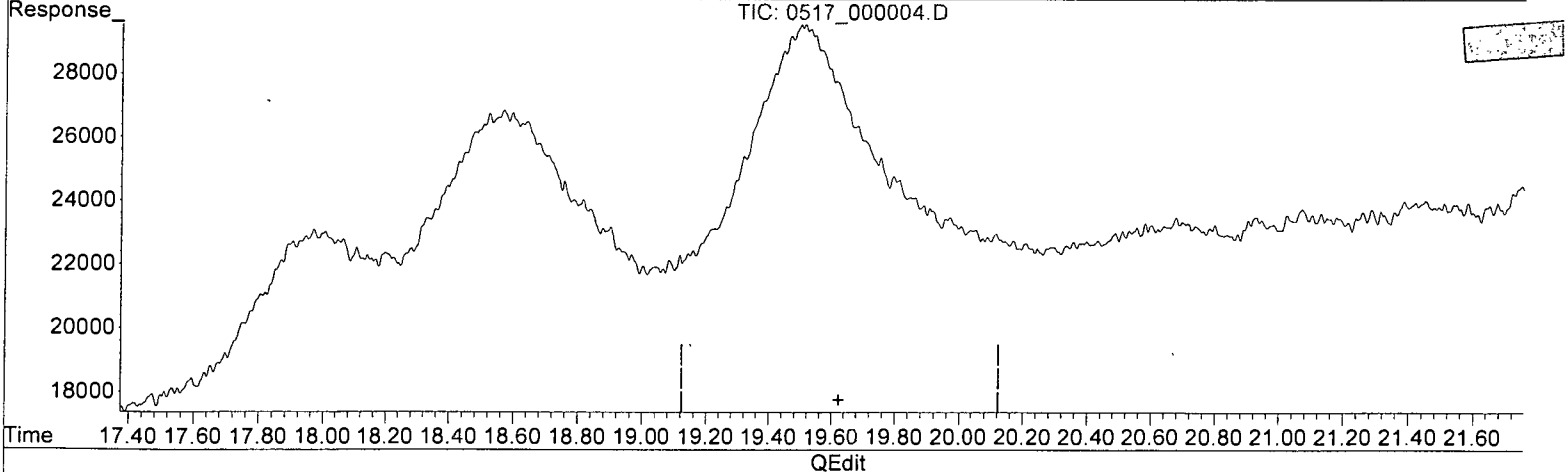
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(17) 2-AMINO-4,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(17) 2-AMINO-4,6-DINITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

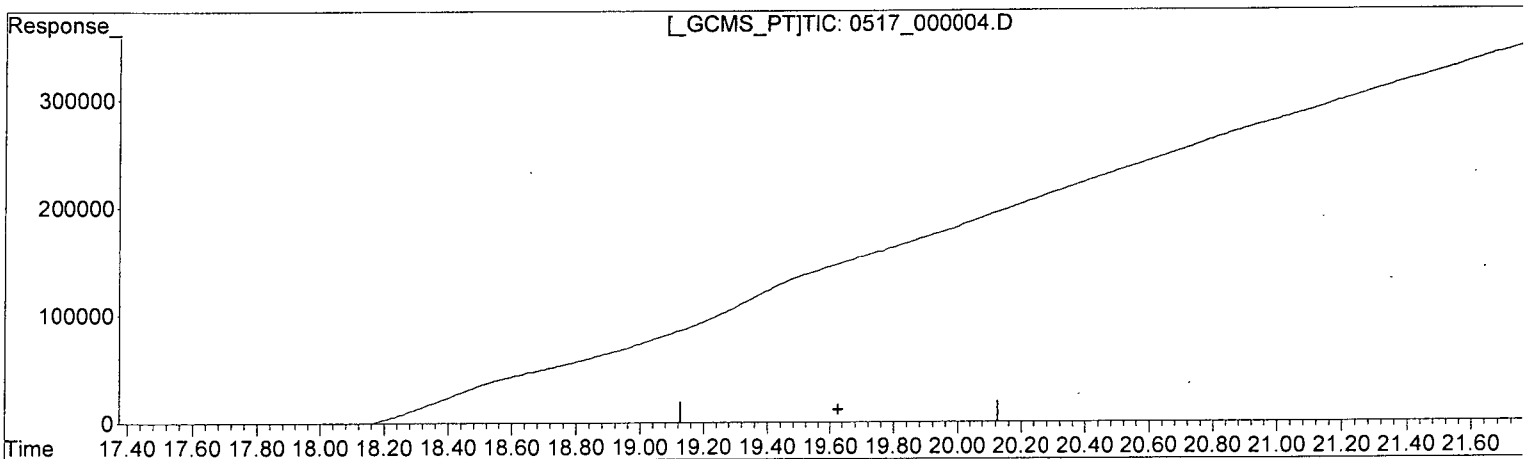
(+) = Expected Retention Time

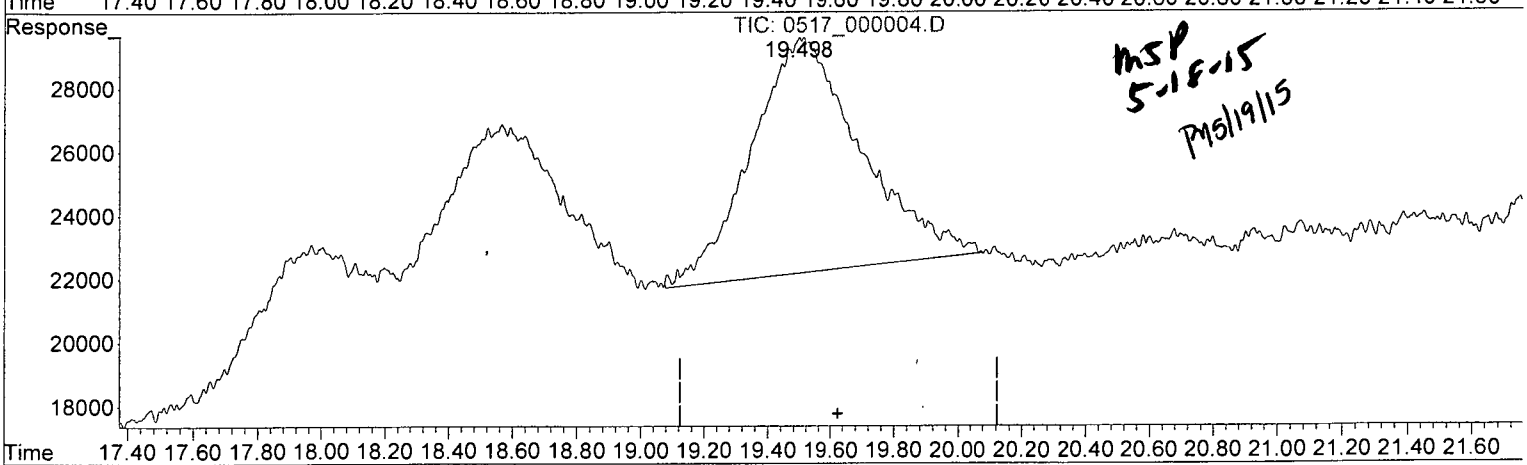
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000004.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:08:11
Operator : MP
Sample : 8330MXA_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4096 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:00 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 07:41:46 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MSP 5-18-15 PMS/19/15

(17) 2-AMINO-4,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(17) 2-AMINO-4,6-DINITROTOLUENE #2 (TM)

19.498min 3.640 ppb m

response 7420

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000005.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:47:43
Operator : MP
Sample : 8330MXB_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4097 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:09:06 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount 62.500			Recovery	=	0.00%	0.00%
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM NITROGLYC...	11.943	0.000	1951	0	2.143	N.D. d#
9) TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
14) TM 3,5-DINIT...	0.000	16.490	0	7726	N.D.	3.870m#
15) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.

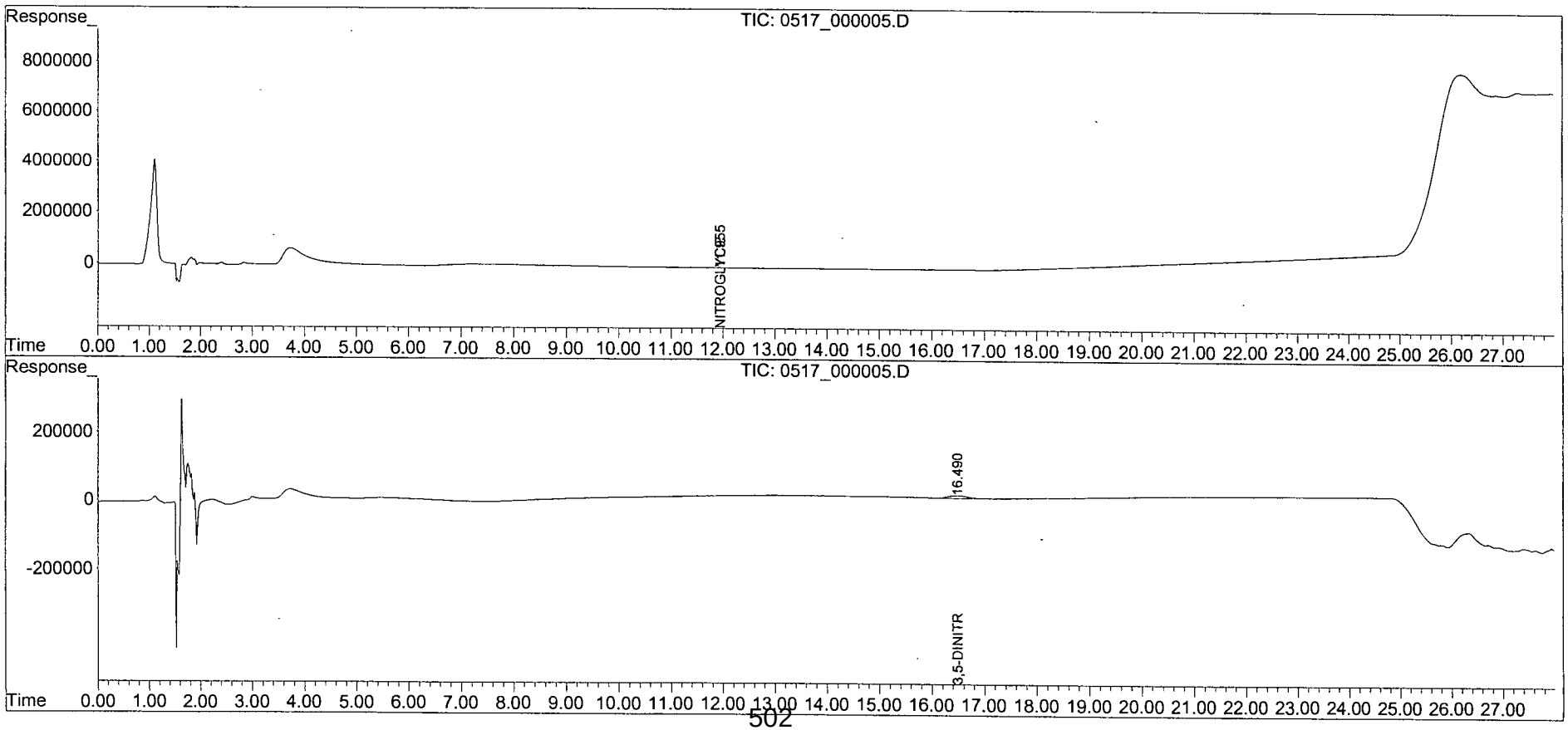
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000005.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:47:43
Operator : MP
Sample : 8330MXB_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4097 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:09:06 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

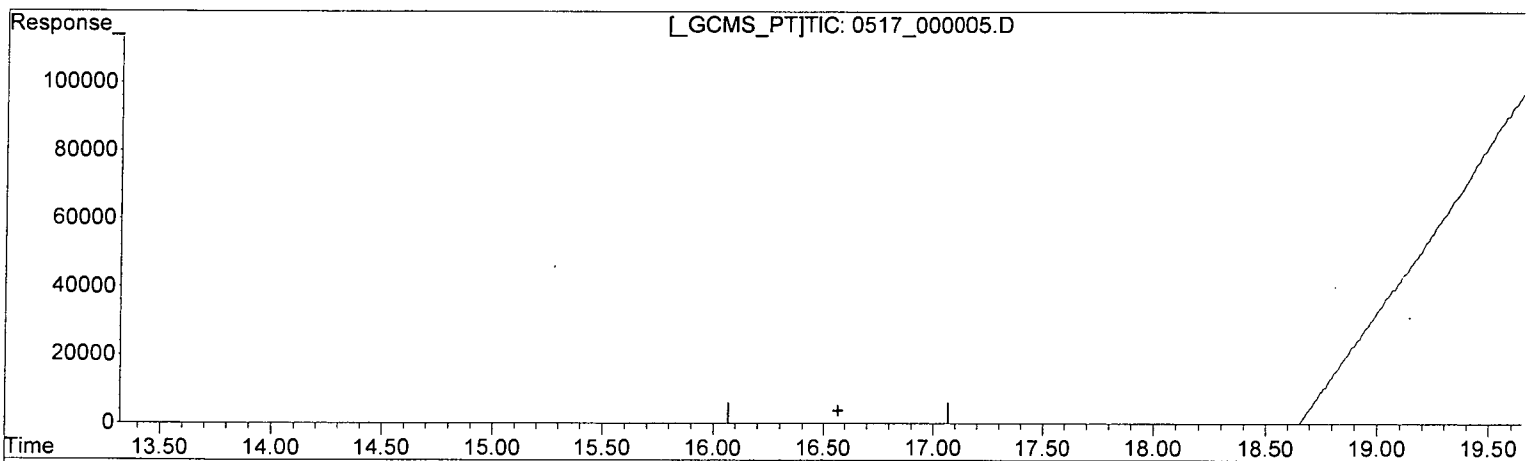


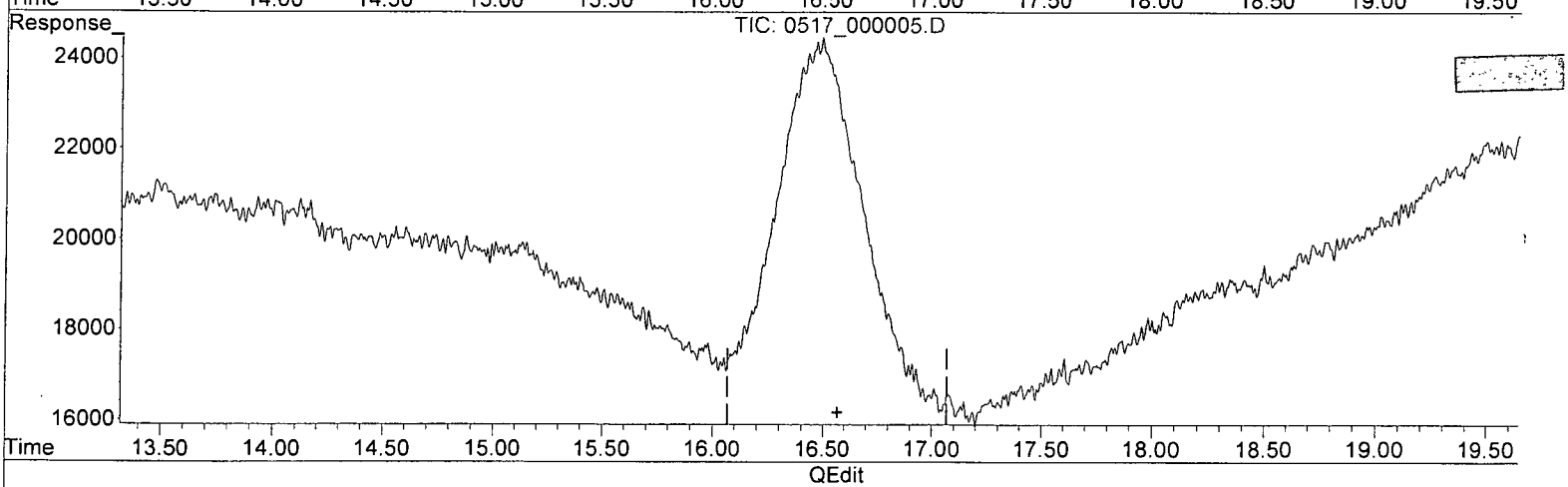
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000005.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:47:43
Operator : MP
Sample : 8330MXB_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4097 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:04 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





QEdit

(14) 3,5-DINITROANILINE (TM)

0.000min 0.000 ppb

response 0

(14) 3,5-DINITROANILINE #2 (TM)

0.000min 0.000 ppb

response 0

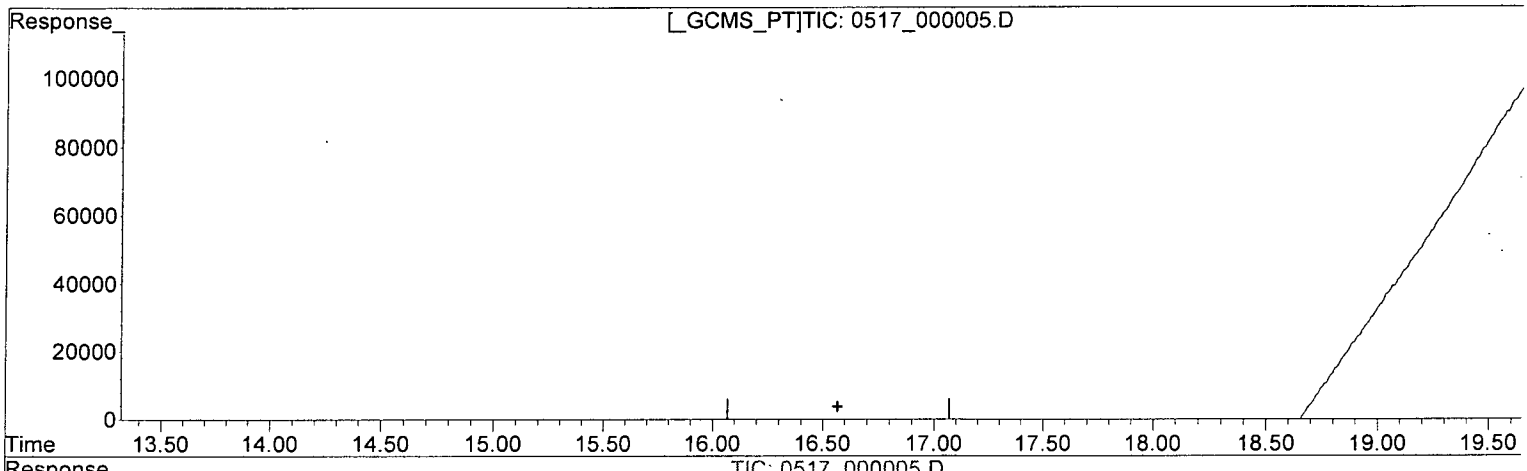
(+) = Expected Retention Time

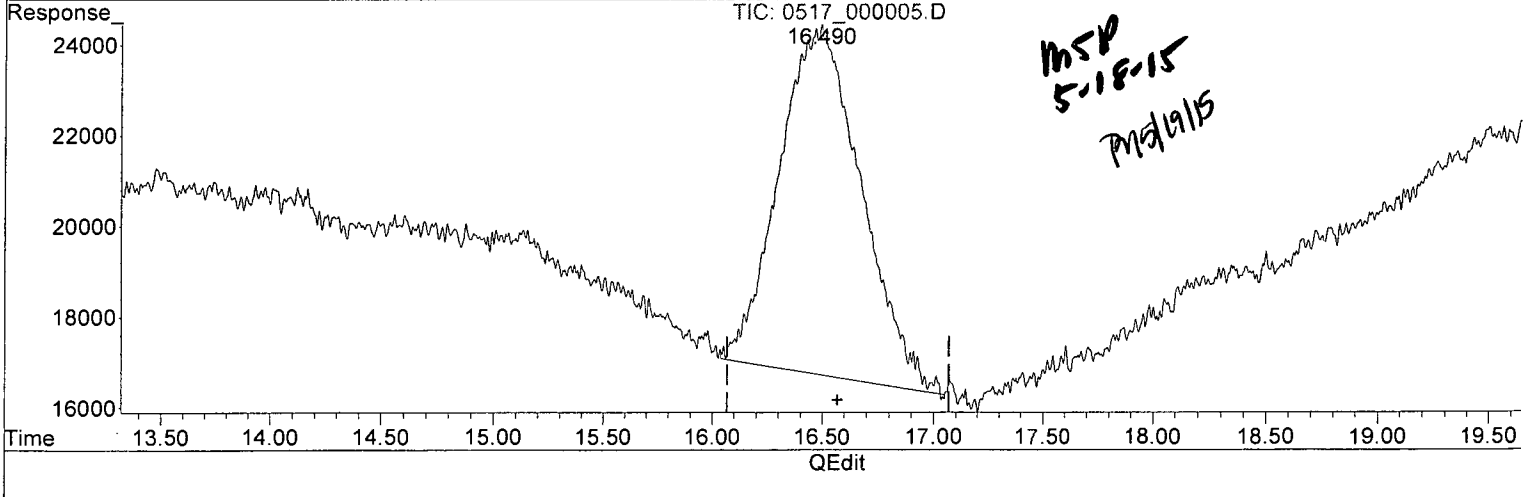
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000005.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 17:47:43
Operator : MP
Sample : 8330MXB_CB 0.005 PPM 05/16/15
Misc :
ALS Vial : 4097 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:04 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





(14) 3,5-DINITROANILINE (TM)

0.000min 0.000 ppb

response 0

(14) 3,5-DINITROANILINE #2 (TM)

16.490min 3.870 ppb m

response 7726

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:04:32 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	8.076	0	15115	N.D.	7.164 #
	Spiked Amount 62.500			Recovery	=	0.00%	11.46%
	Target Compounds						
1)	TM HMX	0.000	4.065	0	14351	N.D.	6.825m#
2)	TM RDX	0.000	6.406	0	13391	N.D.	7.230m#
3)	TM 1,3,5-TRI...	0.000	6.753	0	33429	N.D.	7.479m#
5)	TM 1,3-DINIT...	0.000	8.416	0	34686	N.D.	7.713 #
6)	TM NITROBENZENE	0.000	9.162	0	18679	N.D.	7.292 #
7)	TM 2,4,6-TRI...	0.000	11.429	0	17954	N.D.	7.072 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	11.951	11.959	8158	10221	NoCal	6.205m#
10)	TM 2,6-DINIT...	13.436	13.454	17518	10556	NoCal	7.147m#
11)	TM 2,4-DINIT...	0.000	14.027	0	18514	N.D.	7.348m#
12)	TM 2-NITROTO...	0.000	15.421	0	6527	N.D.	6.191m#
13)	TM 4-NITROTO...	0.000	16.871	0	5505	N.D.	6.286m#
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
15)	TM 3-NITROTO...	0.000	18.058	0	6474	N.D.	6.055m#
16)	TM 4-AMINO-2...	0.000	18.617	0	11046	N.D.	7.884m#
17)	TM 2-AMINO-4...	0.000	19.570	0	14150	N.D.	6.942m#
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

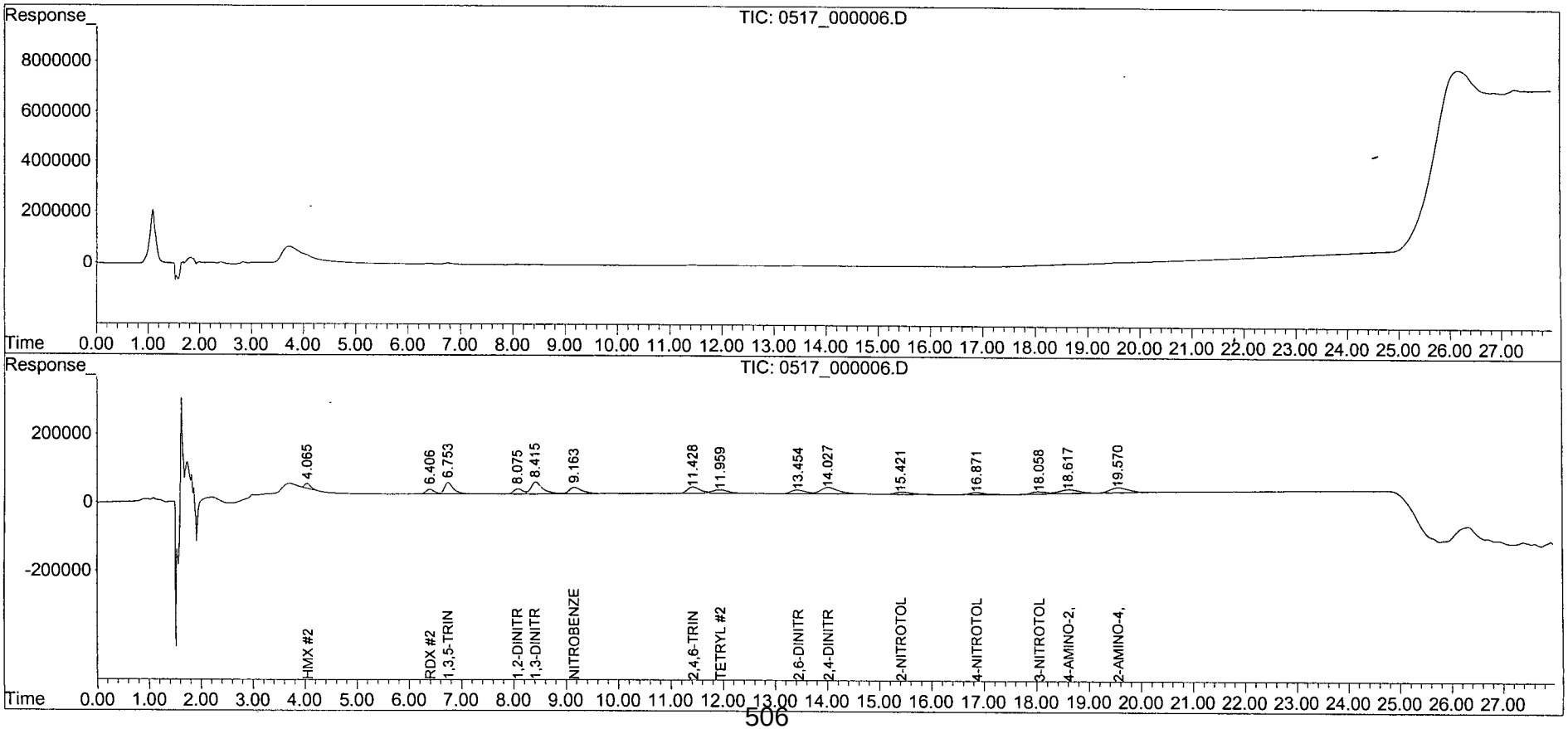
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:04:32 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

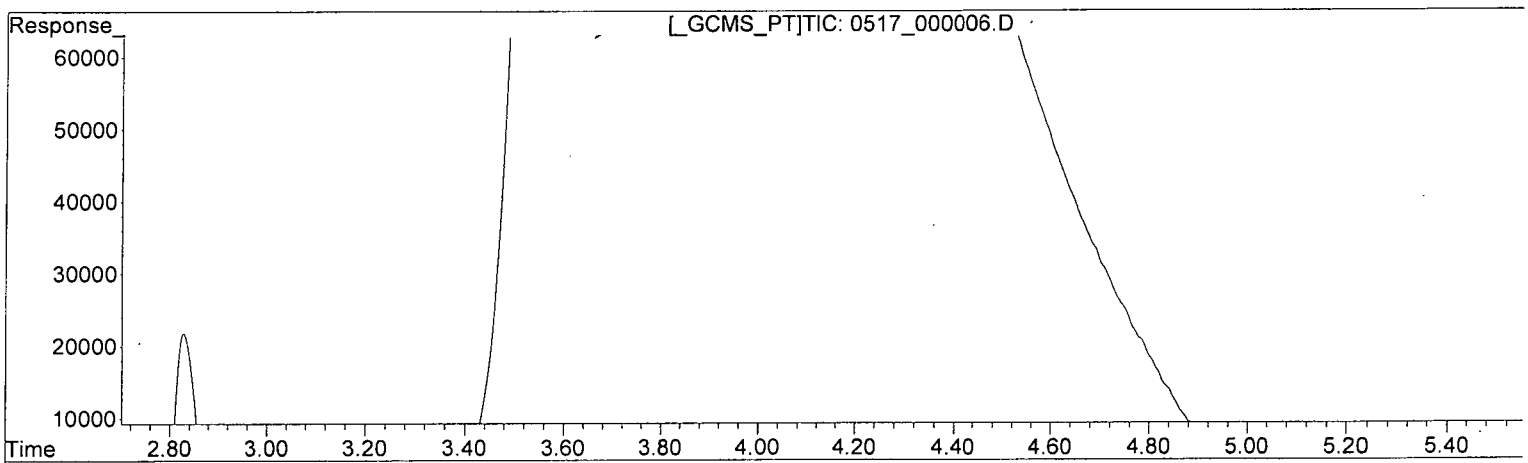


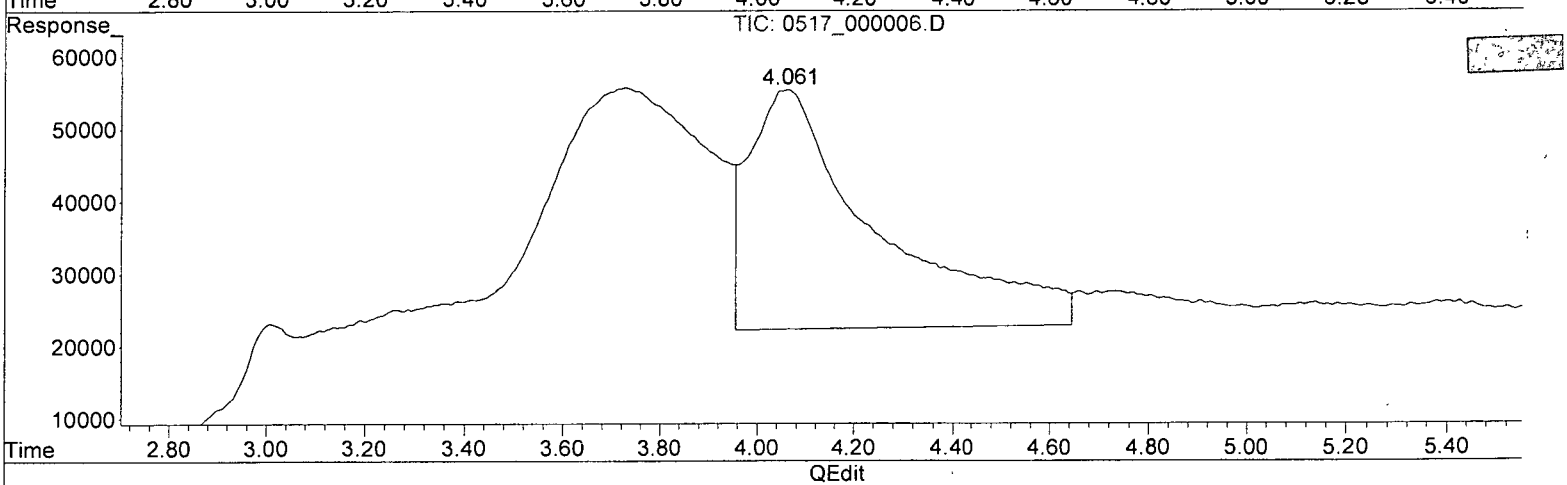
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.061min 15.712 ppb

response 33040

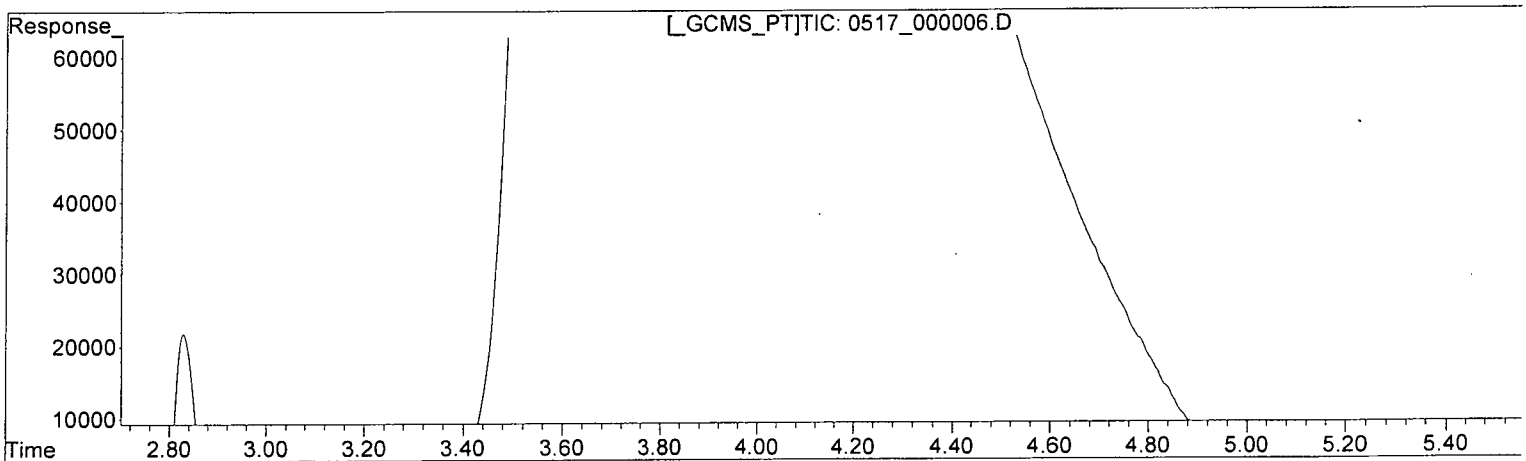
(+) = Expected Retention Time

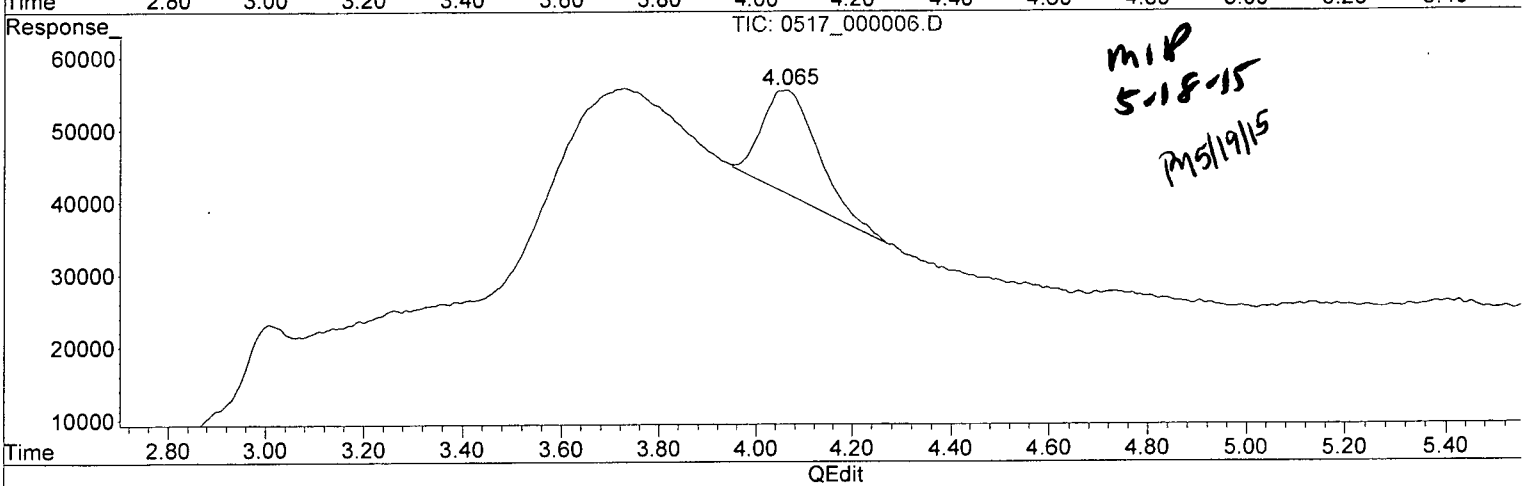
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MLP 5-18-15
PM 5/19/15

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.065min 6.825 ppb m

response 14351

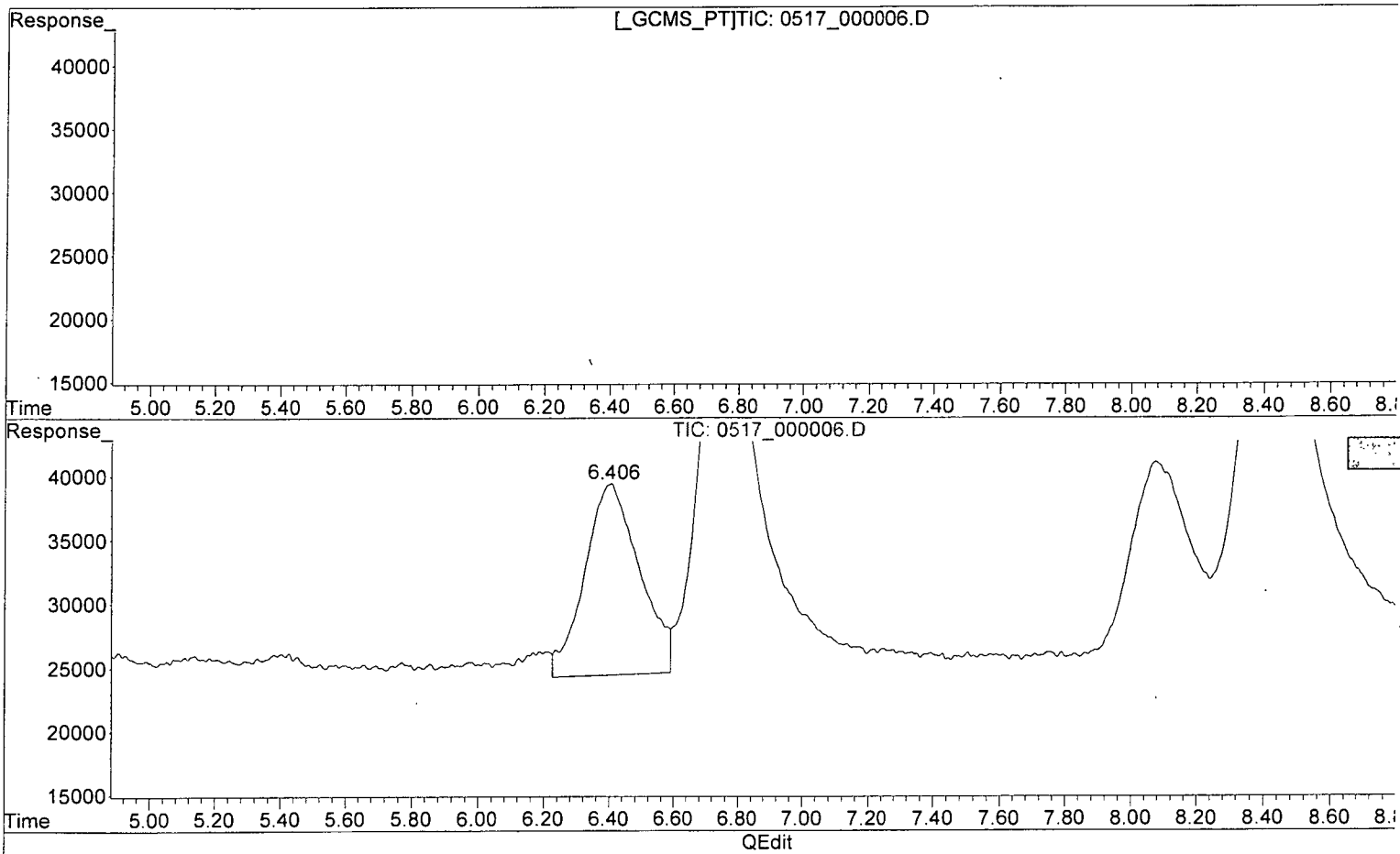
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(2) RDX (TM)

0.000min 0.000 ppb

response 0

(2) RDX #2 (TM)

6.404min 8.086 ppb

response 14976

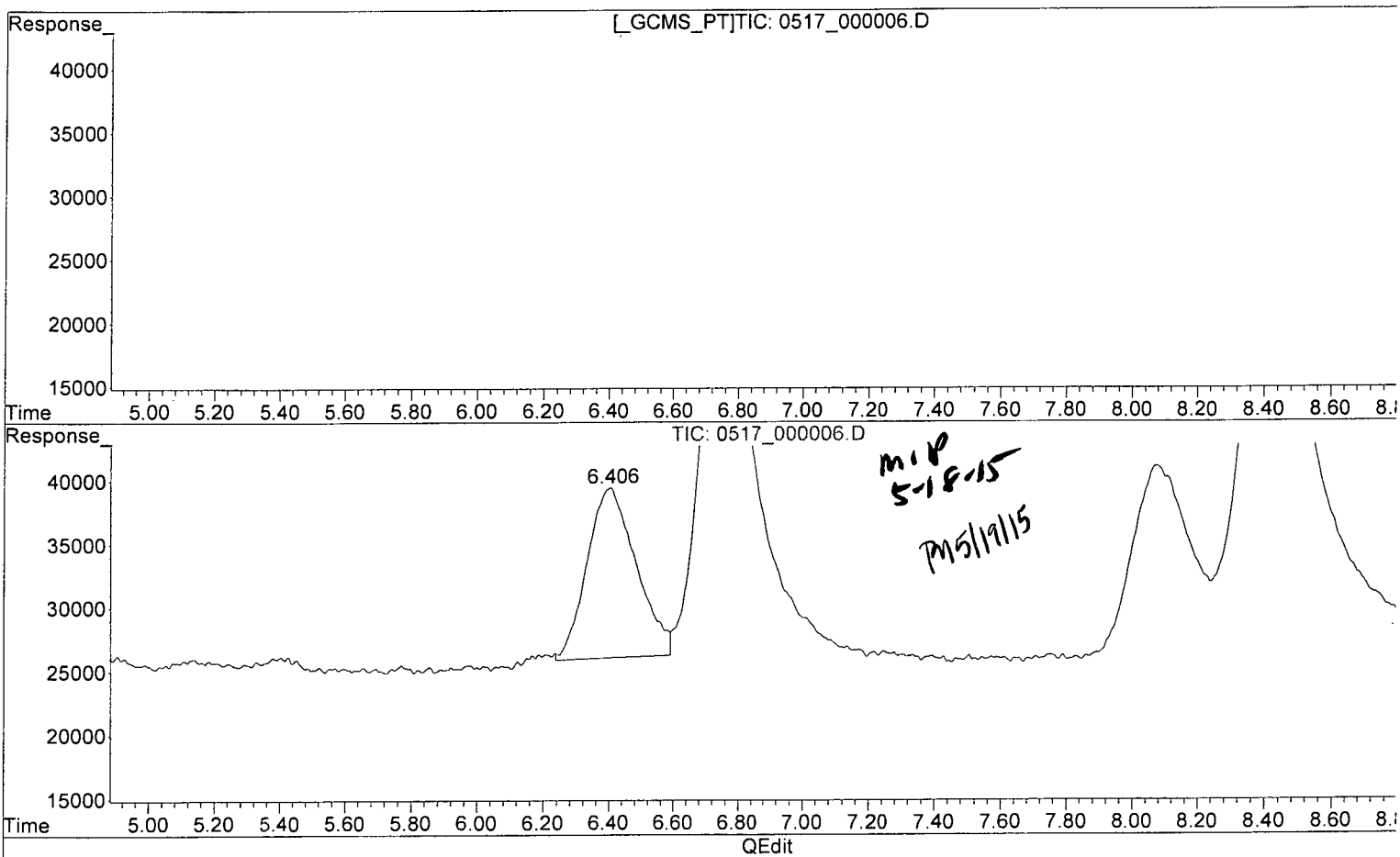
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(2) RDX (TM)

0.000min 0.000 ppb

response 0

(2) RDX #2 (TM)

6.406min 7.230 ppb m

response 13391

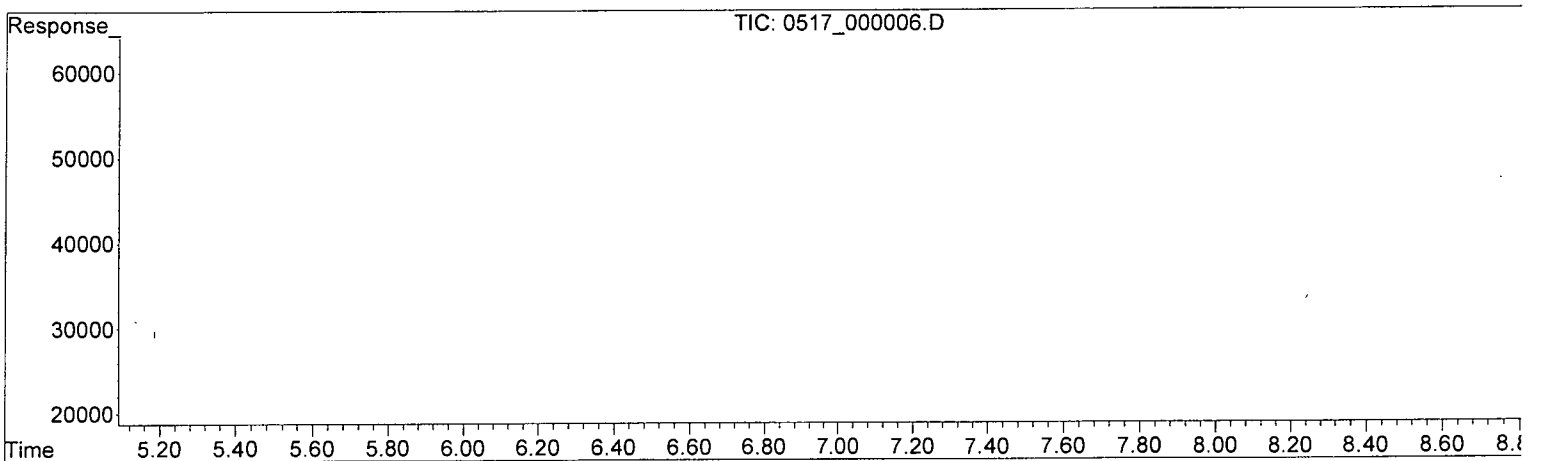
(+) = Expected Retention Time

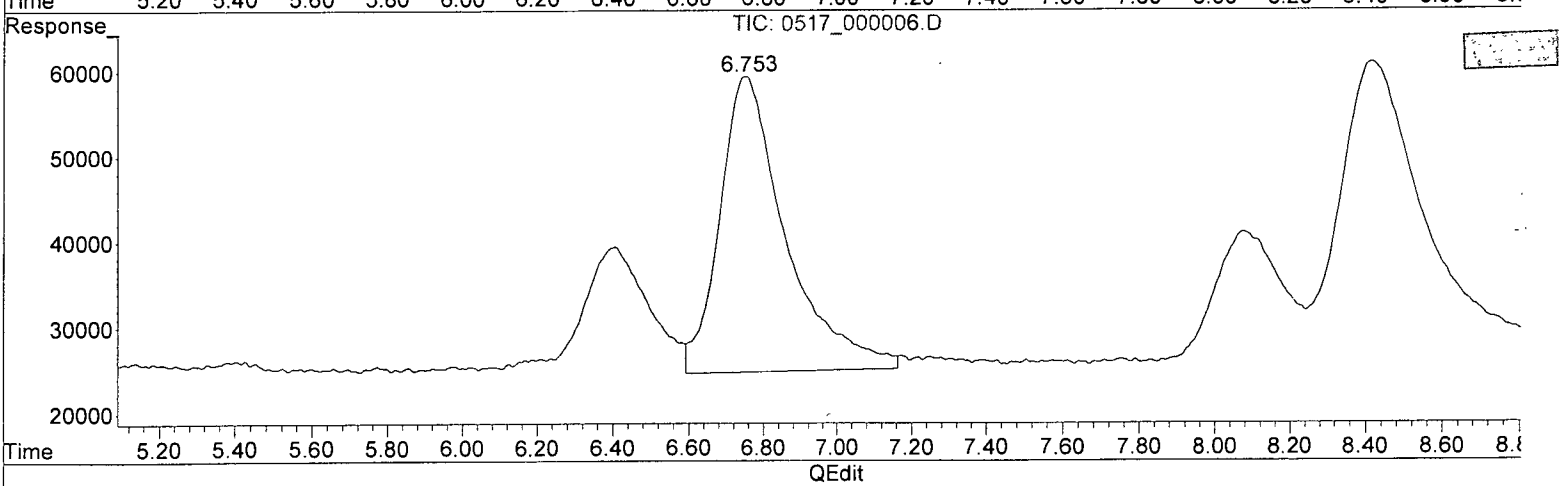
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





(3) 1,3,5-TRINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(3) 1,3,5-TRINITROBENZENE #2 (TM)

6.751min 7.736 ppb

response 34577

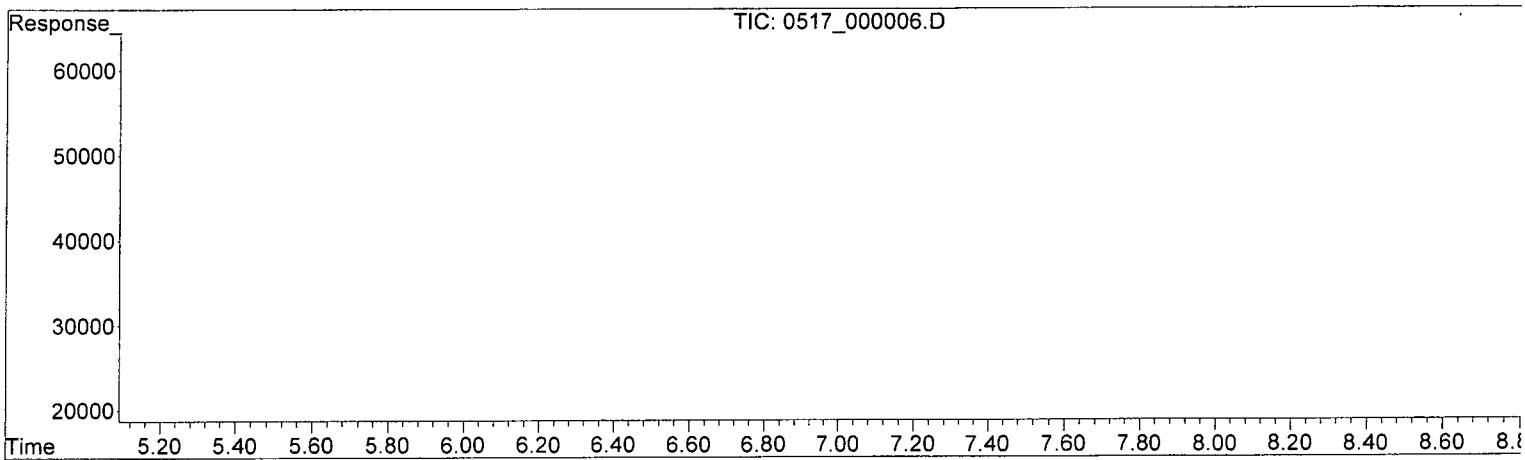
(+) = Expected Retention Time

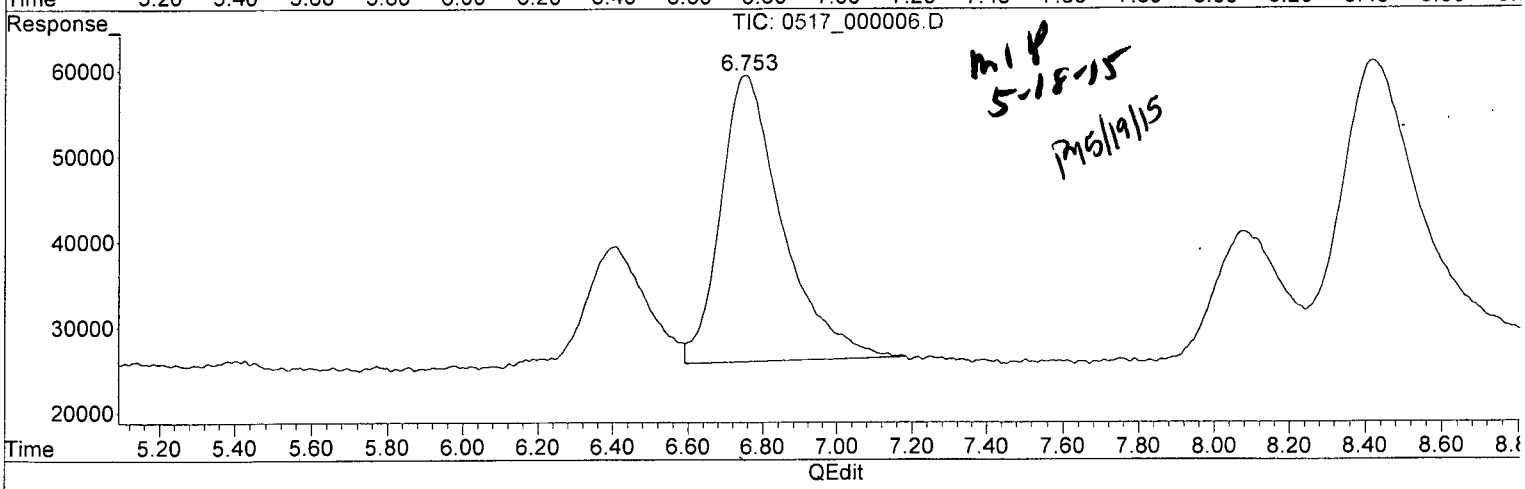
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MLP 5-18-15
PM5/19/15

(3) 1,3,5-TRINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(3) 1,3,5-TRINITROBENZENE #2 (TM)

6.753min 7.479 ppb m

response 33429

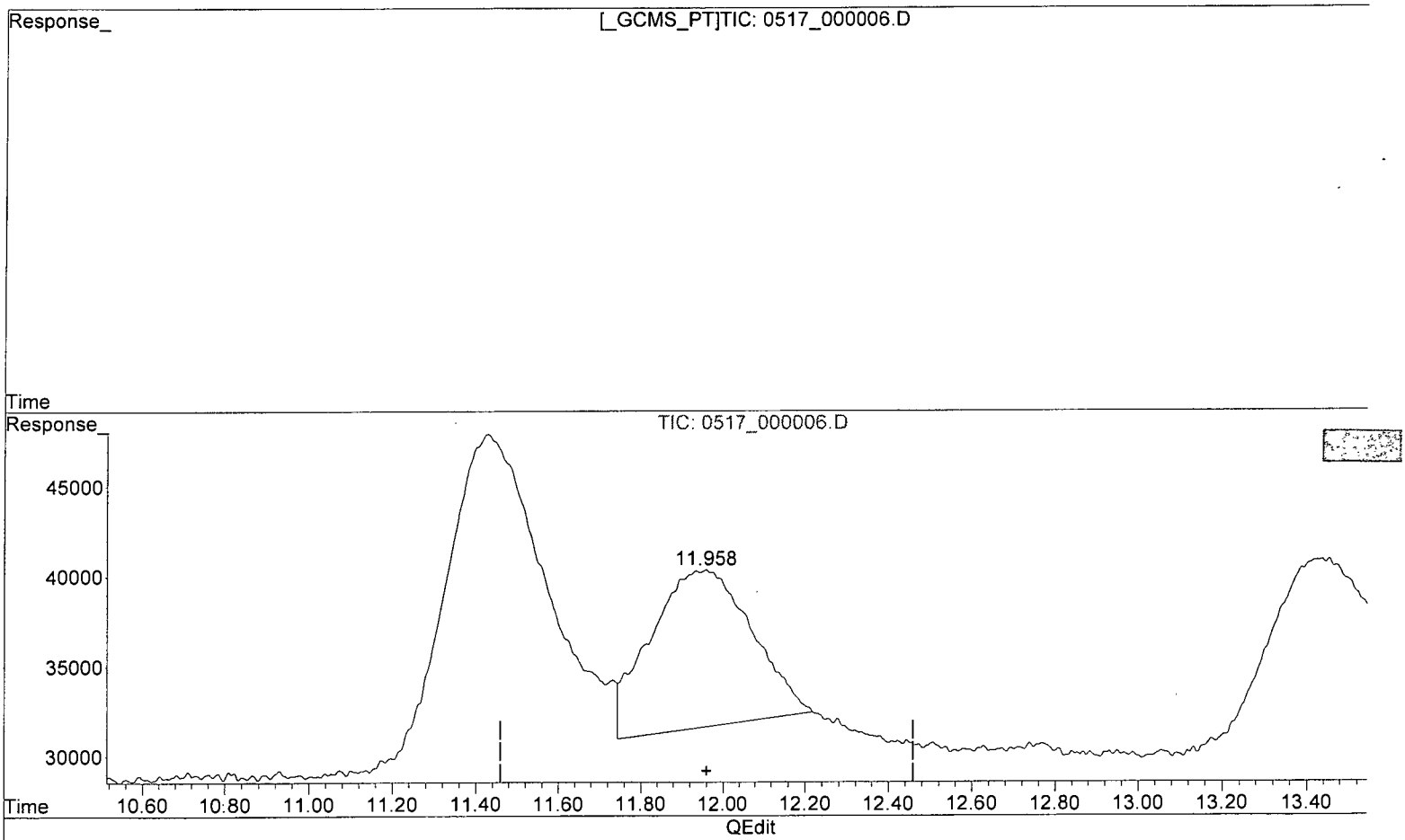
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(9) TETRYL (TM)

11.951min 0.000 ppb

response 8158

(9) TETRYL #2 (TM)

11.958min 5.277 ppb

response 8693

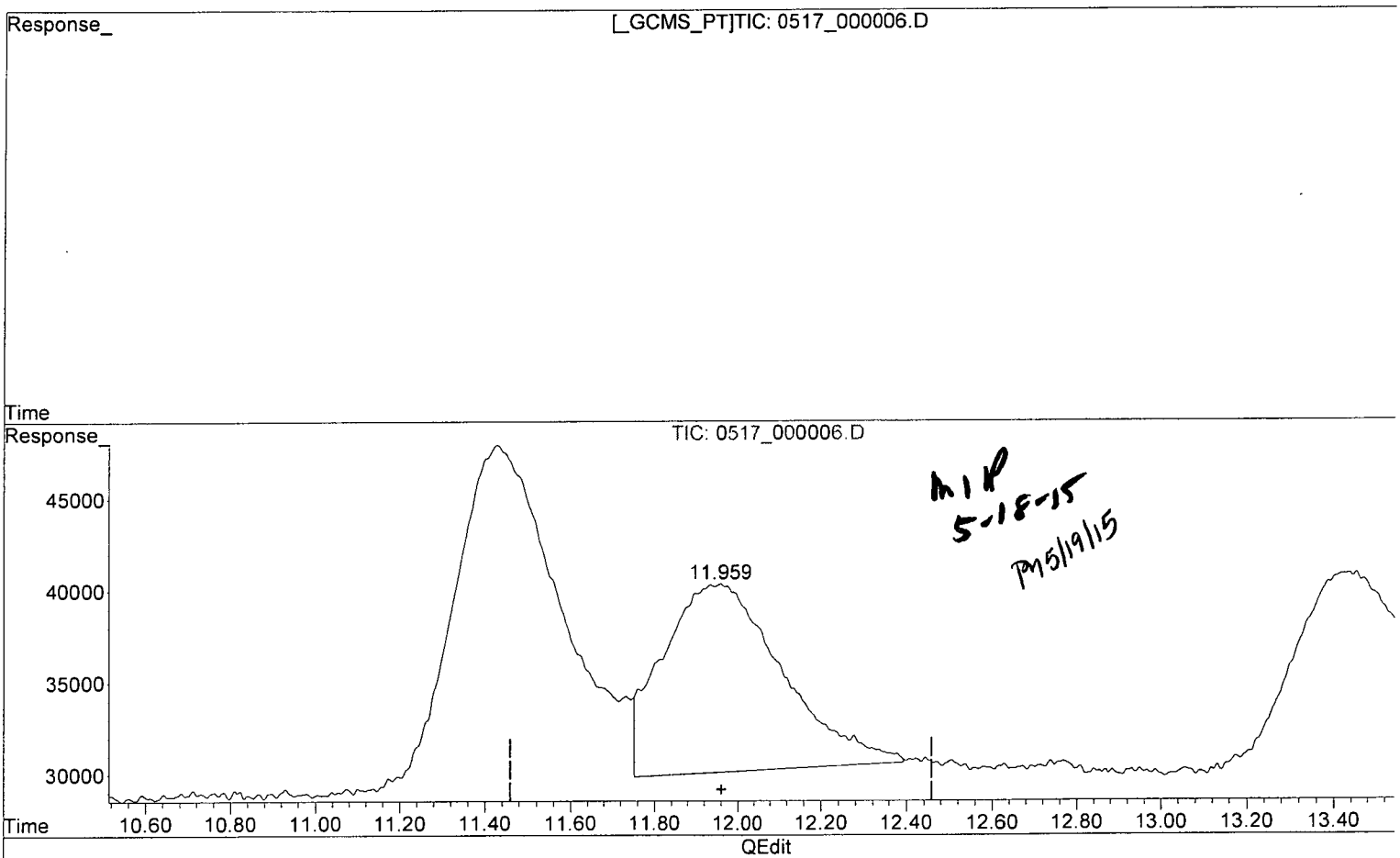
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(9) TETRYL (TM)

11.951min 0.000 ppb

response 8158

(9) TETRYL #2 (TM)

11.959min 6.205 ppb m

response 10221

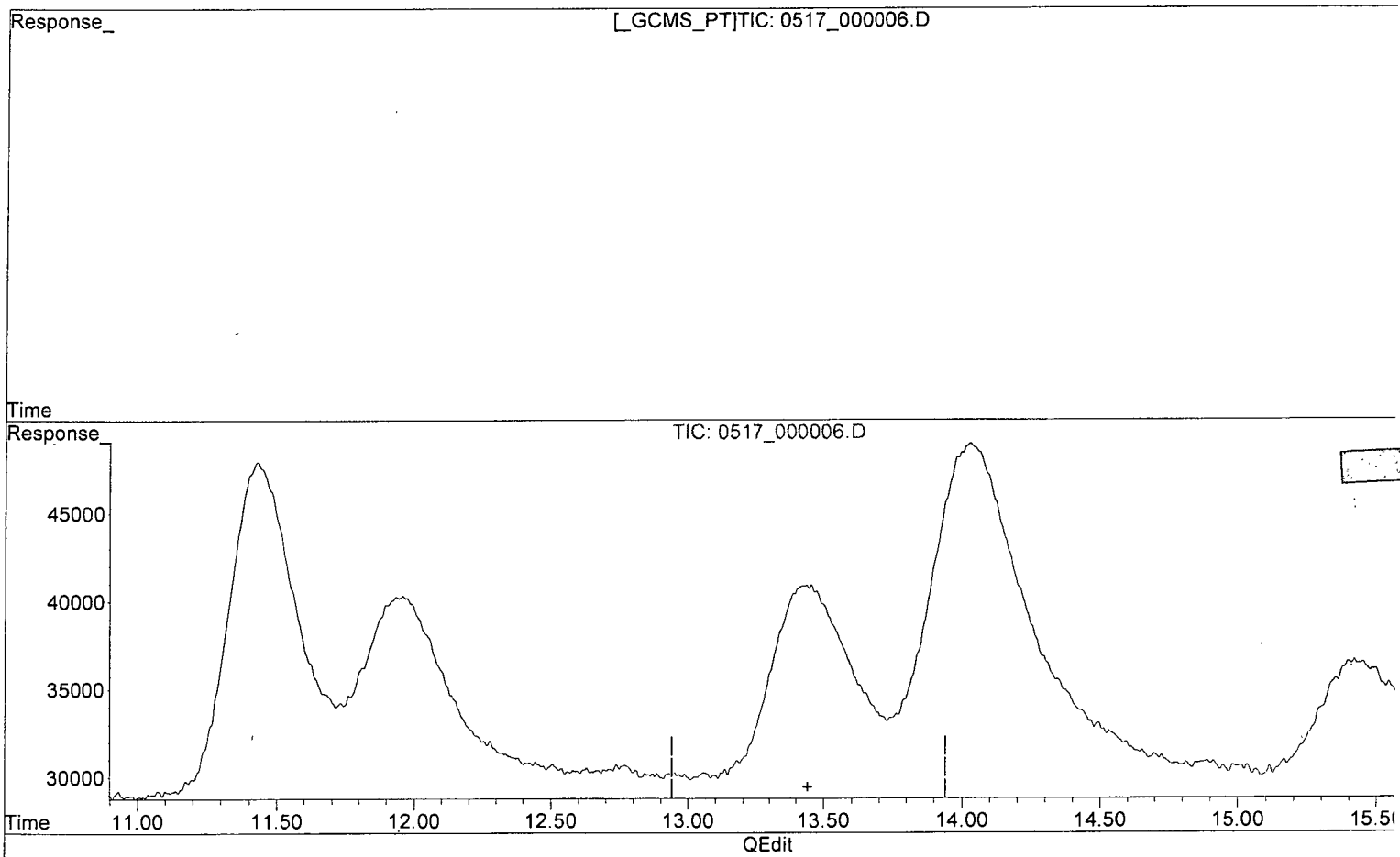
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r



(10) 2,6-DINITROTOLUENE (TM)

13.436min 0.000 ppb

response 17518

(10) 2,6-DINITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

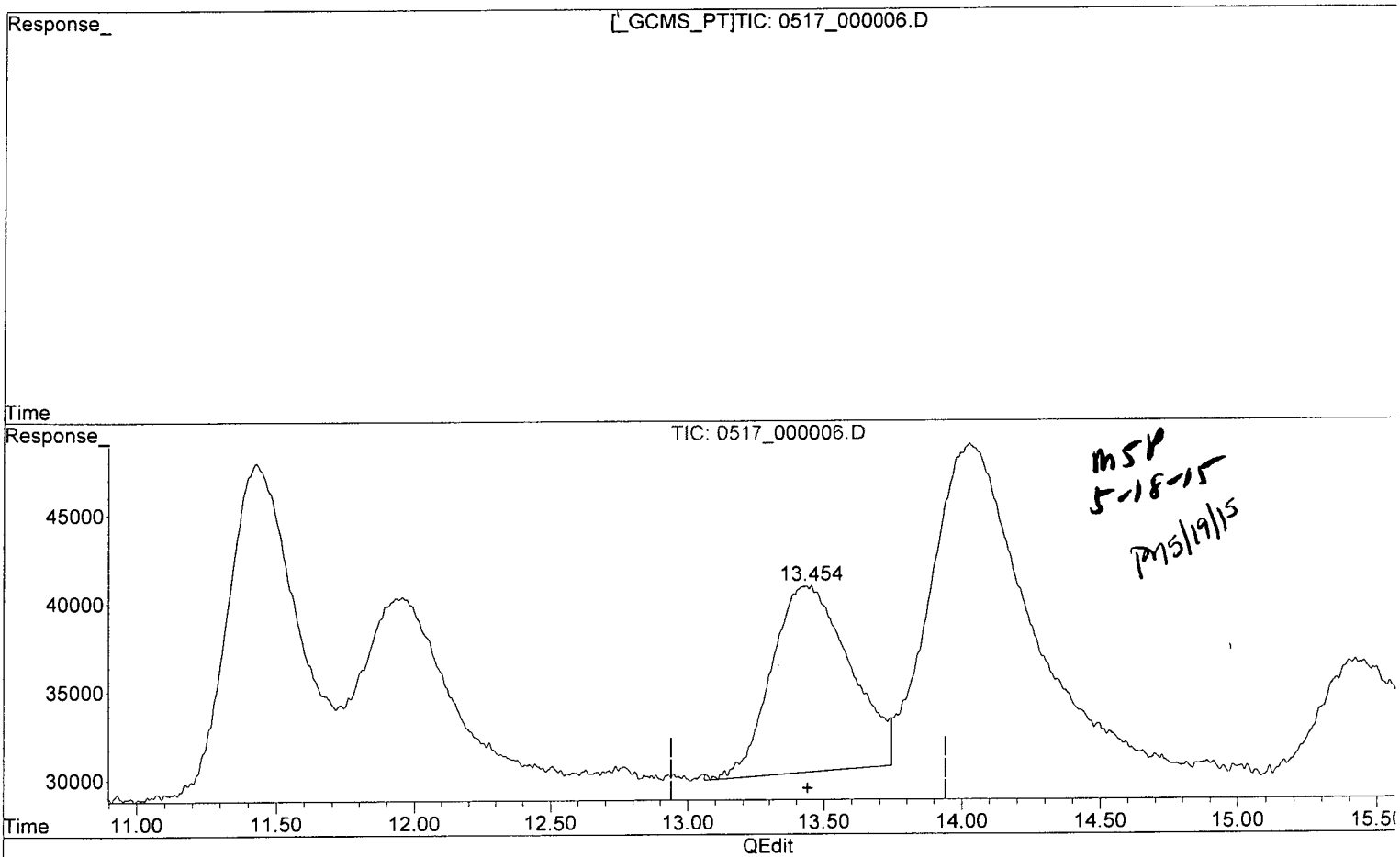
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(10) 2,6-DINITROTOLUENE (TM)

13.436min 0.000 ppb

response 17518

(10) 2,6-DINITROTOLUENE #2 (TM)

13.454min 7.147 ppb m

response 10556

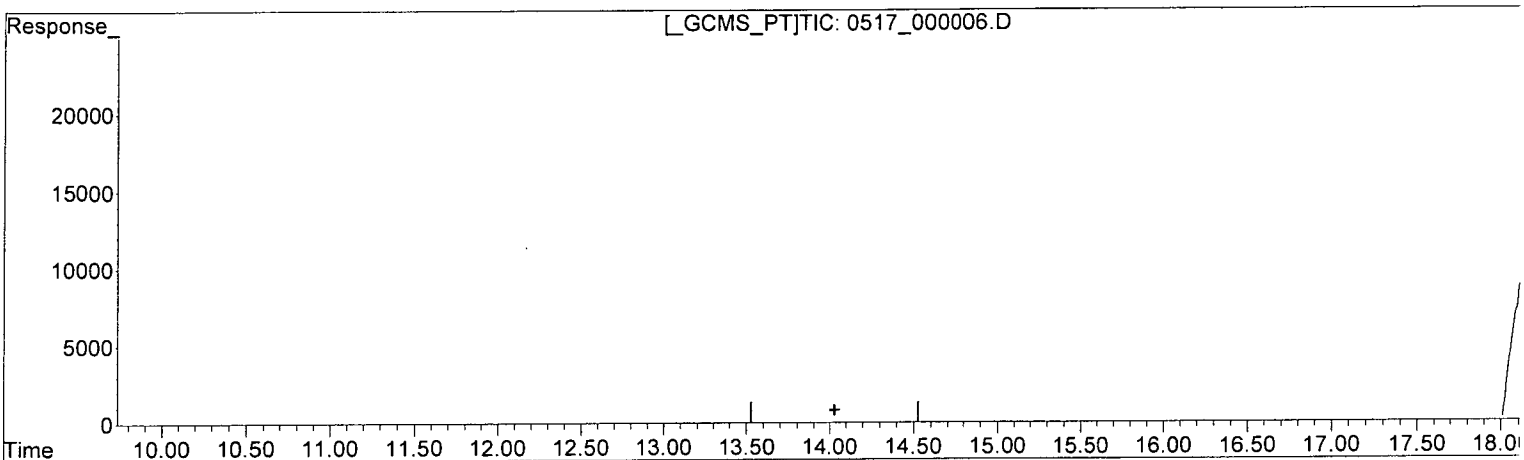
(+) = Expected Retention Time

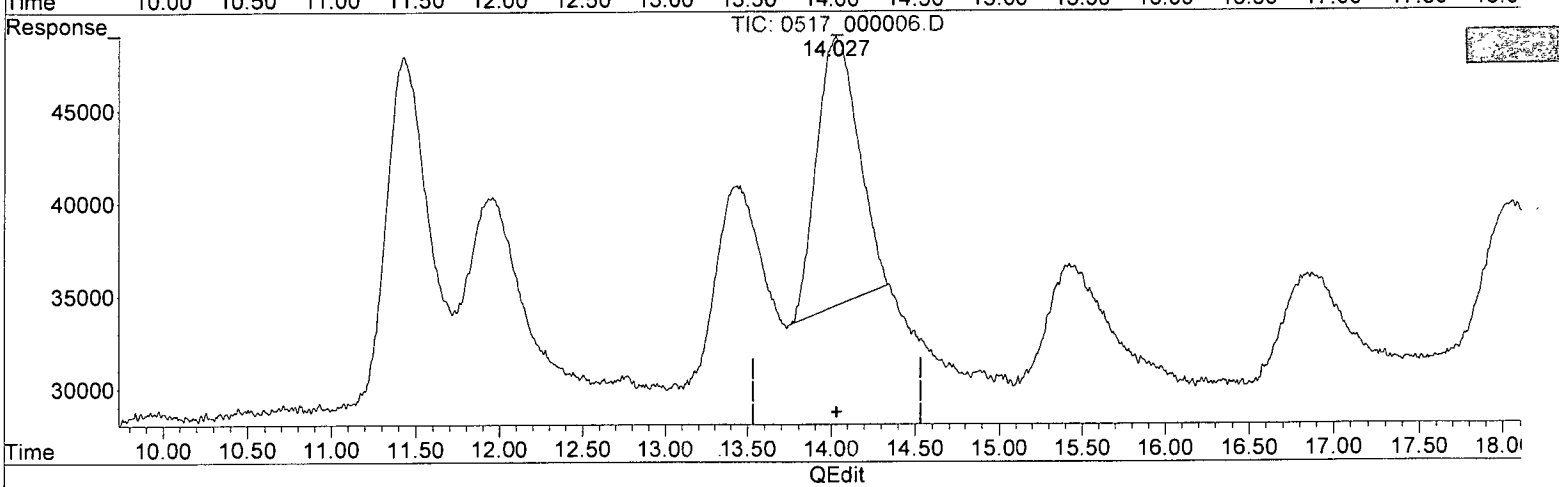
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





(11) 2,4-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(11) 2,4-DINITROTOLUENE #2 (TM)

14.028min 5.772 ppb

response 14542

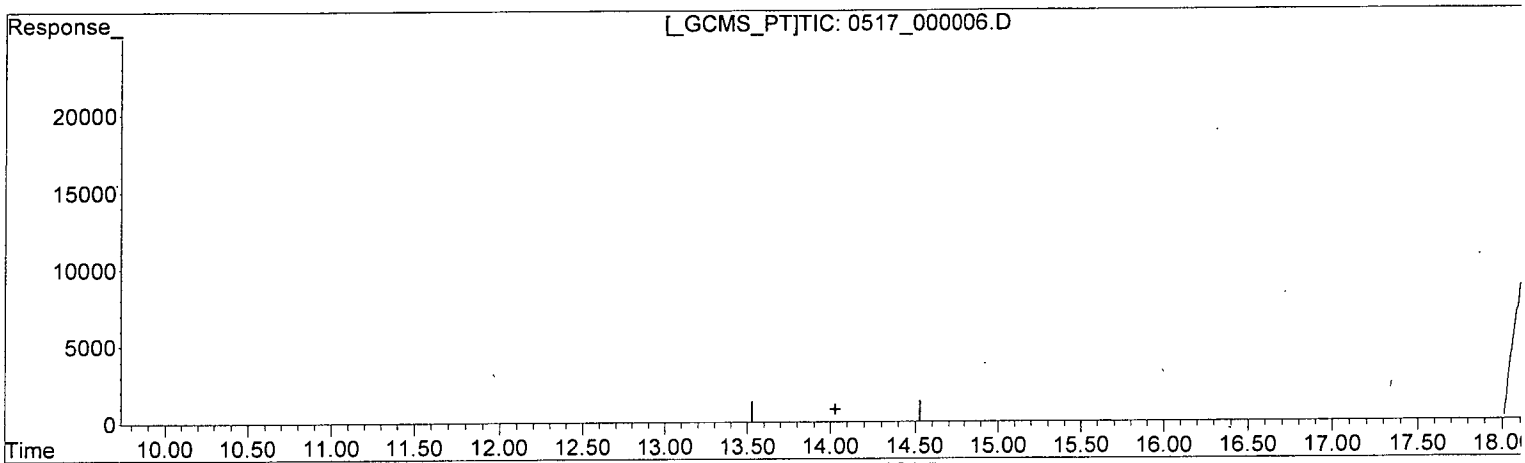
(+) = Expected Retention Time

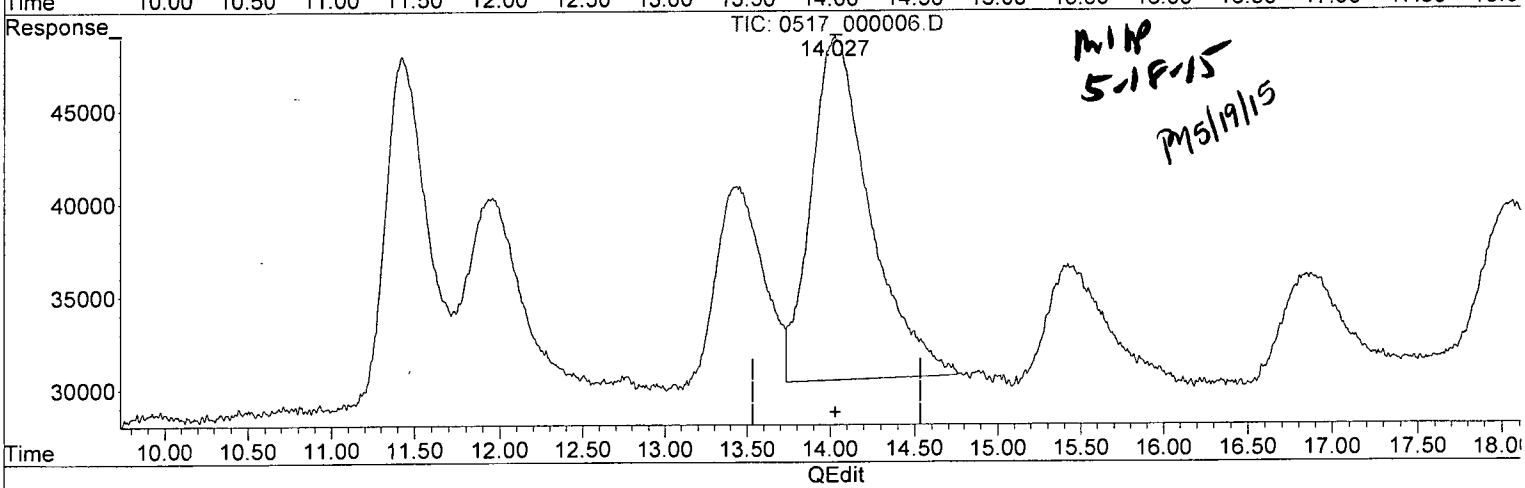
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





MWP 5-18-15
PM 5/19/15

(11) 2,4-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(11) 2,4-DINITROTOLUENE #2 (TM)

14.027min 7.348 ppb m

response 18514

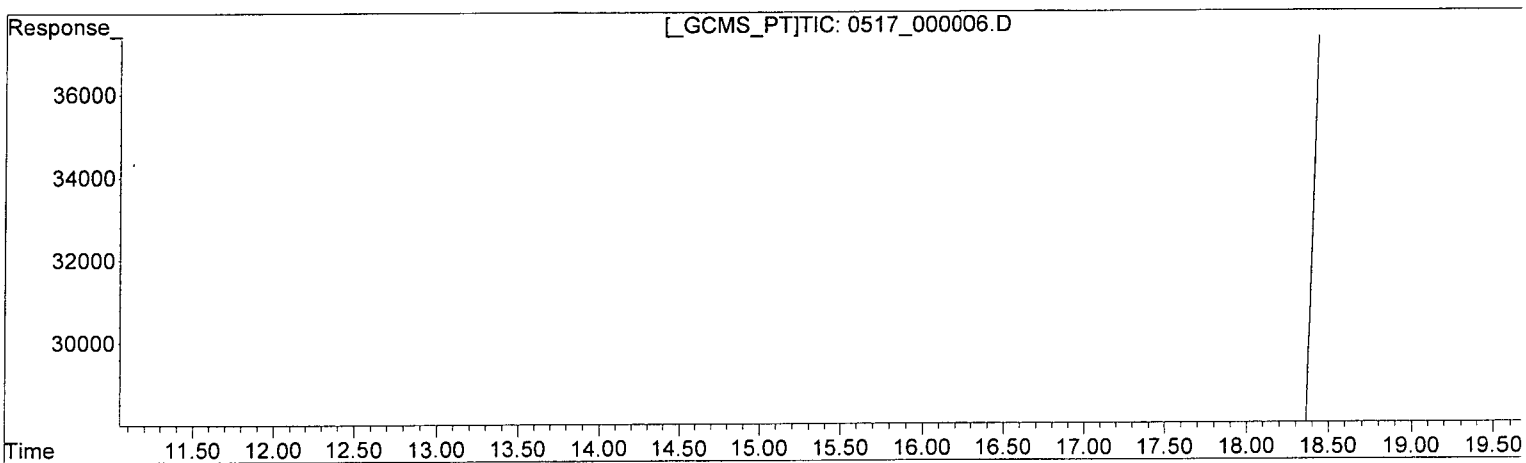
(+) = Expected Retention Time

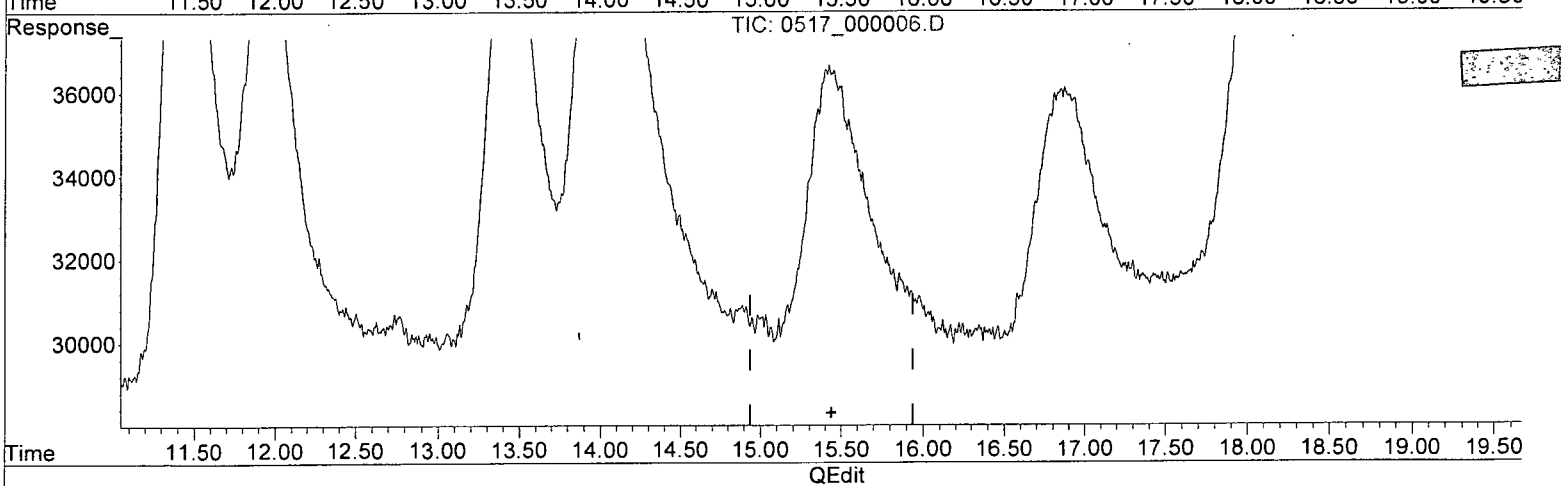
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





QEdit

(12) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(12) 2-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

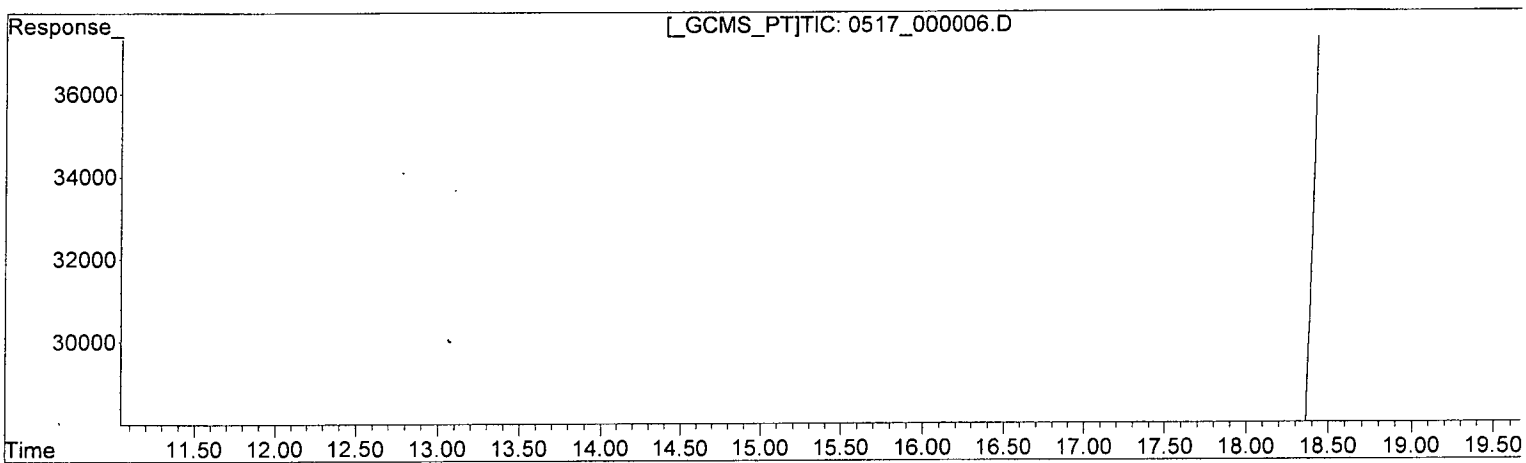
(+) = Expected Retention Time

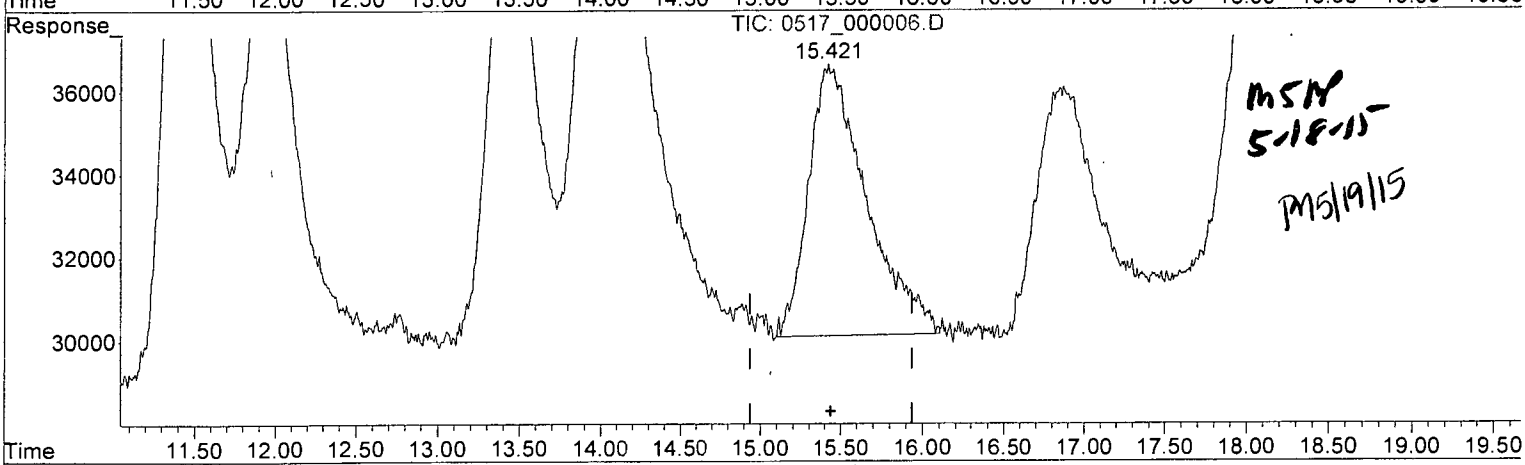
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MSM 5-18-15 PM 5/19/15

(12) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(12) 2-NITROTOLUENE #2 (TM)

15.421min 6.191 ppb m

response 6527

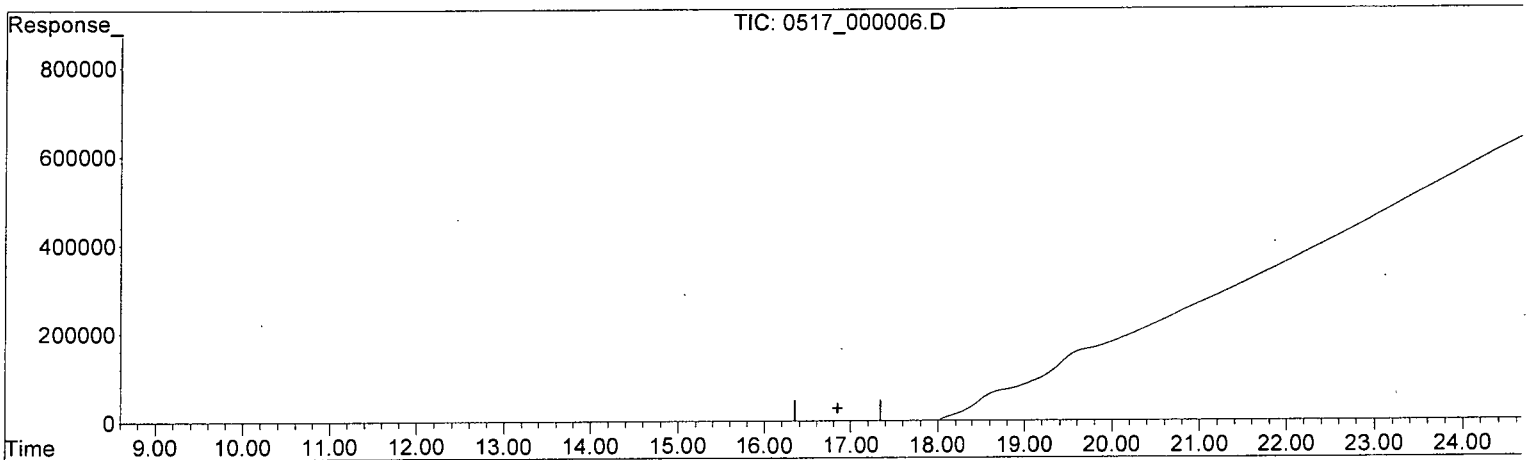
(+) = Expected Retention Time

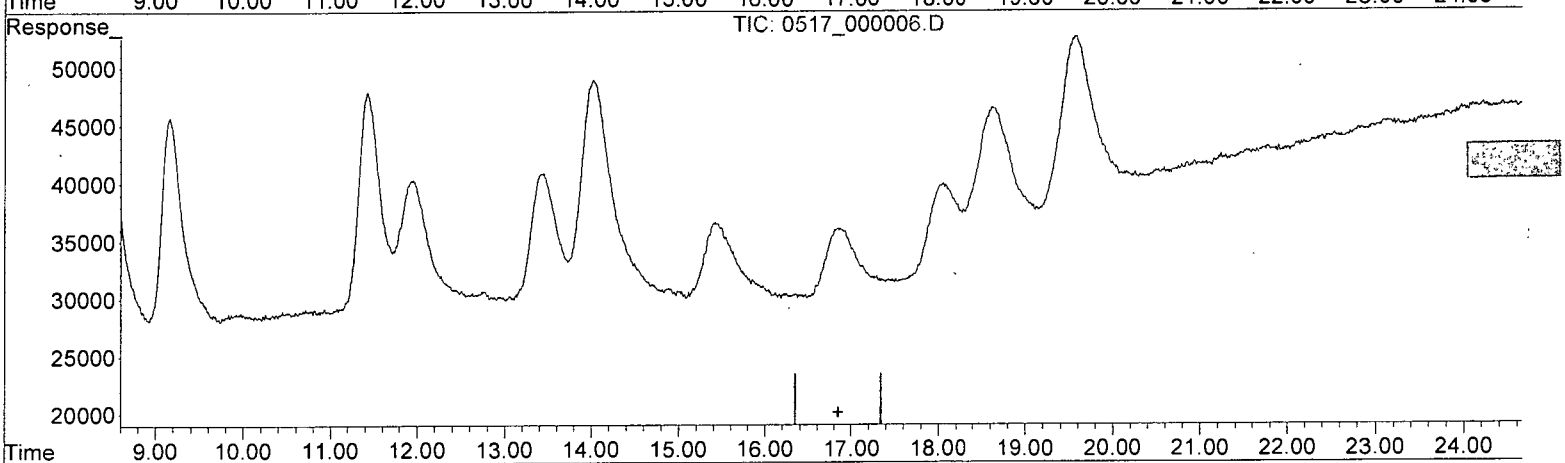
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





(13) 4-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(13) 4-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

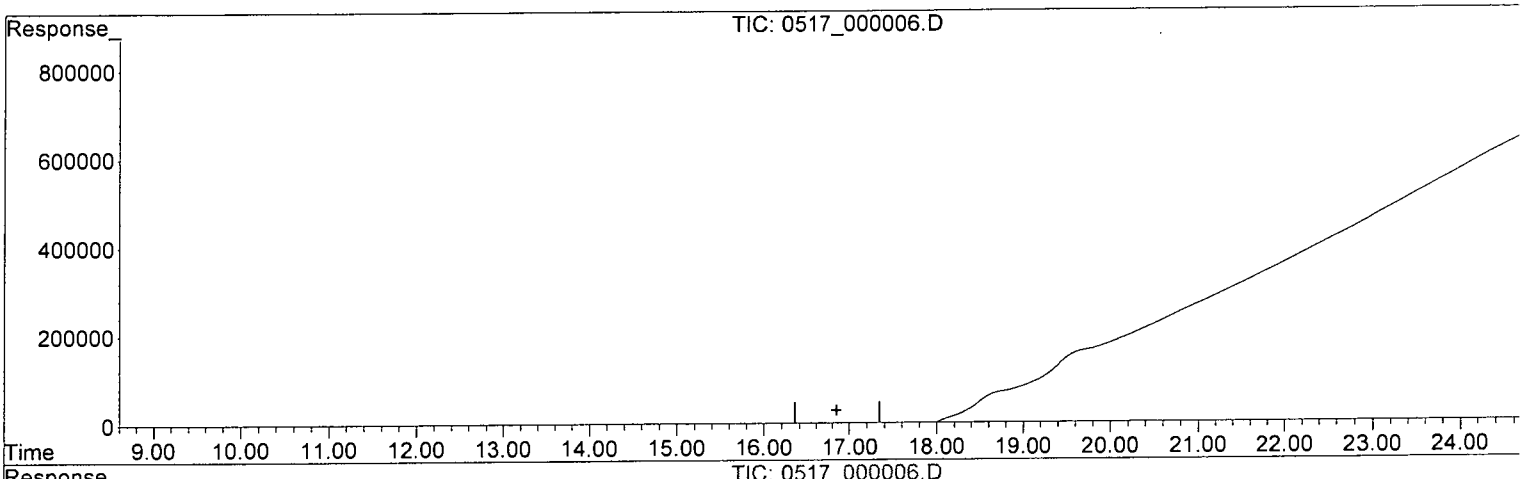
(+) = Expected Retention Time

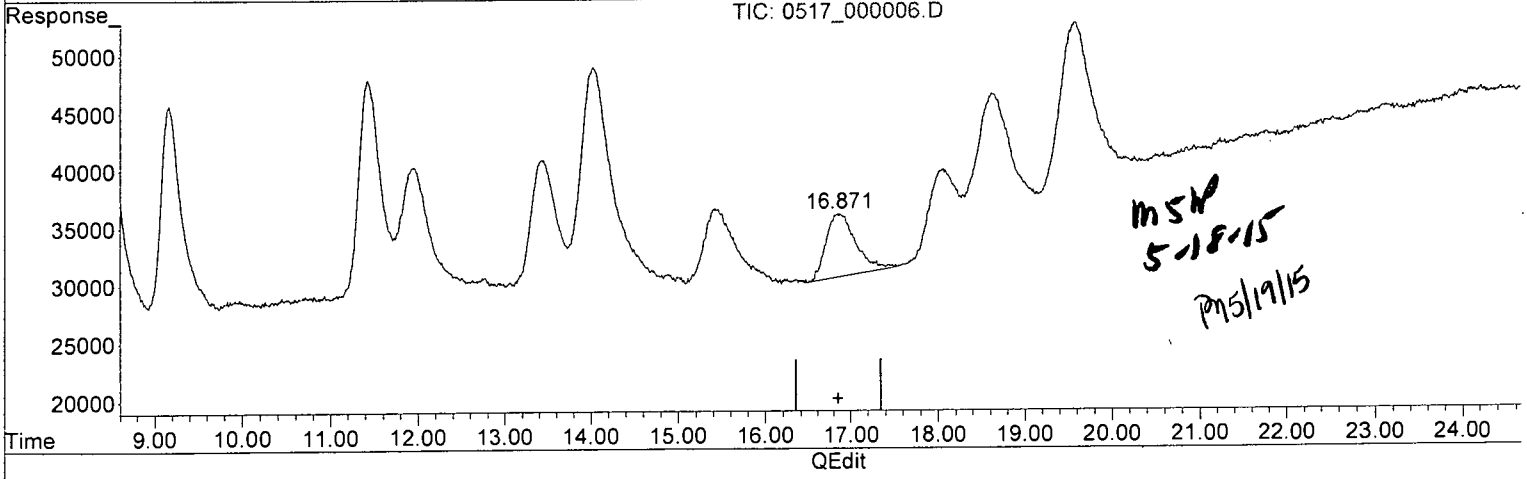
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MSW 5-18-15
PM 5/19/15

(13) 4-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(13) 4-NITROTOLUENE #2 (TM)

16.871min 6.286 ppb m

response 5505

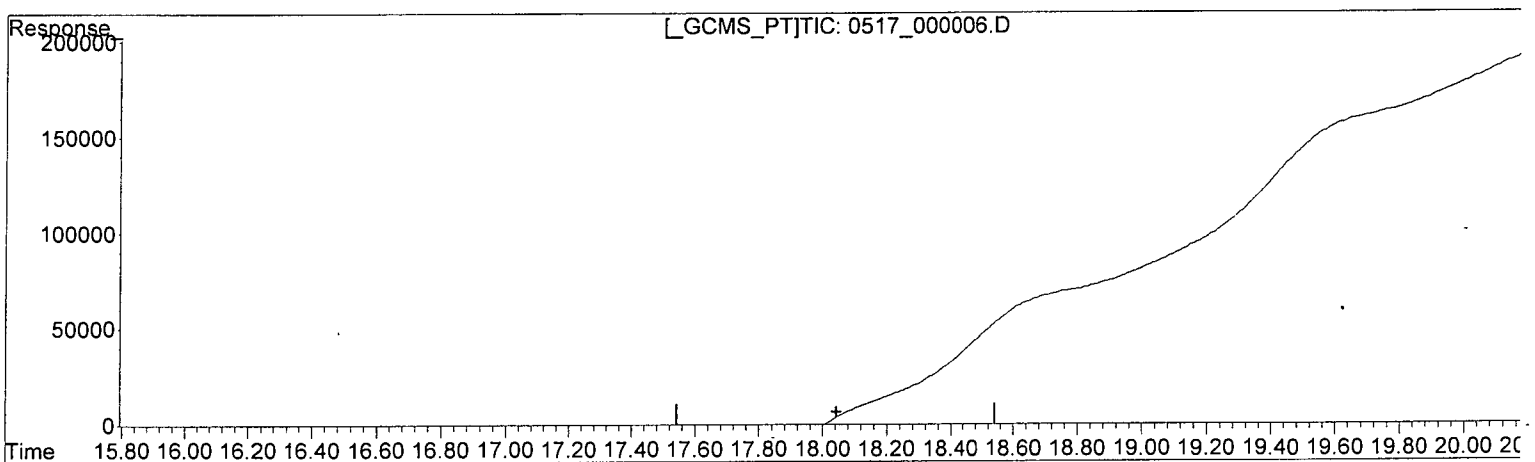
(+) = Expected Retention Time

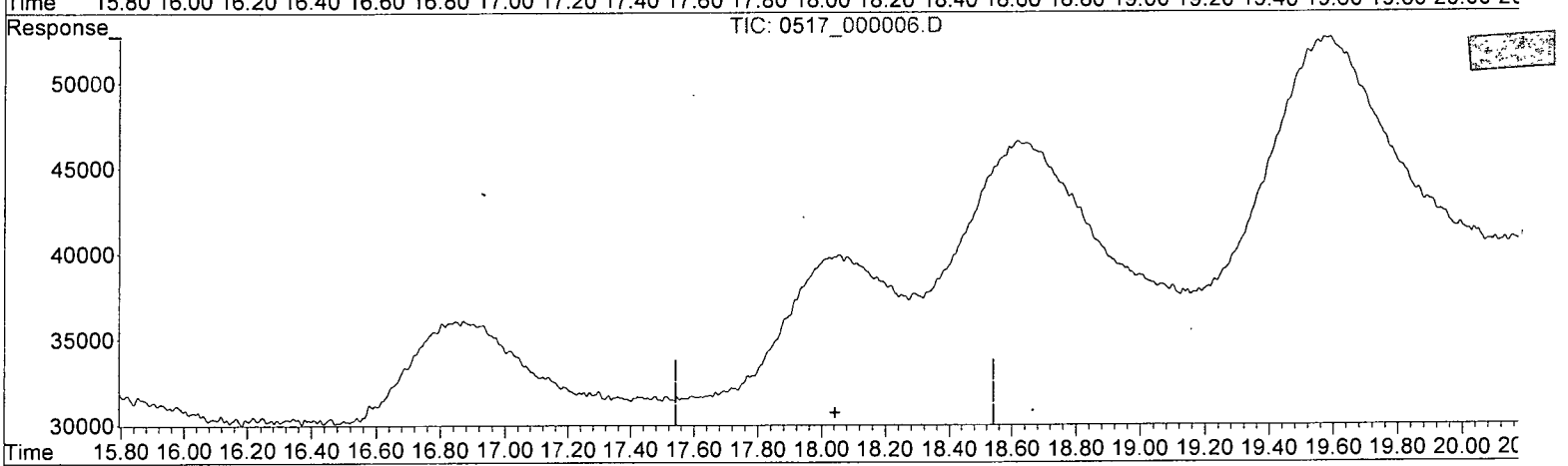
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(15) 3-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(15) 3-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

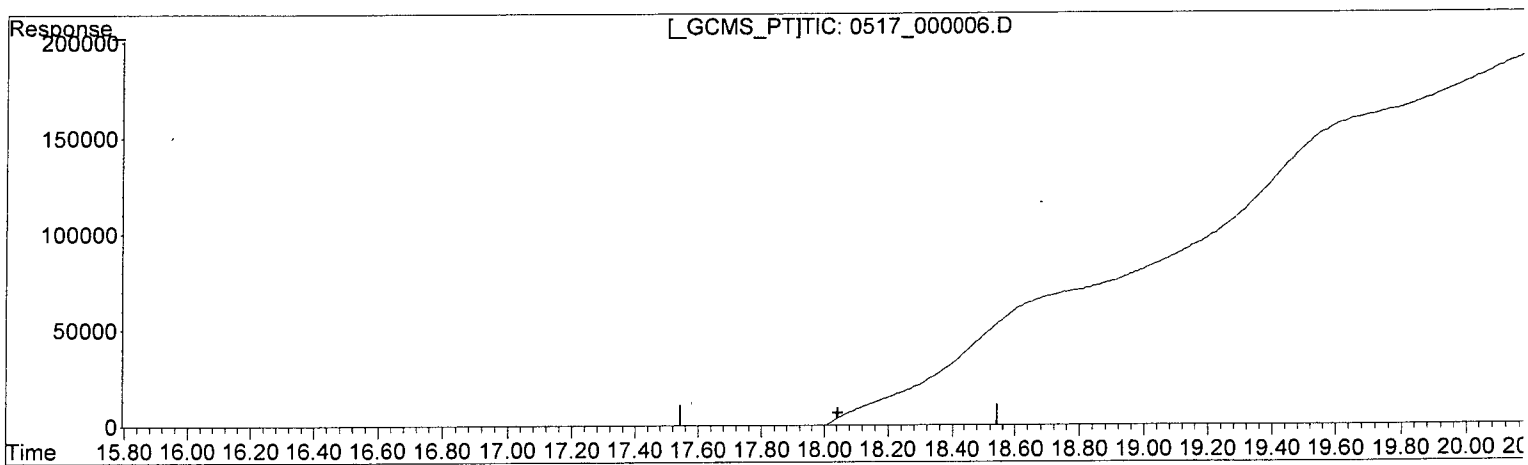
(+) = Expected Retention Time

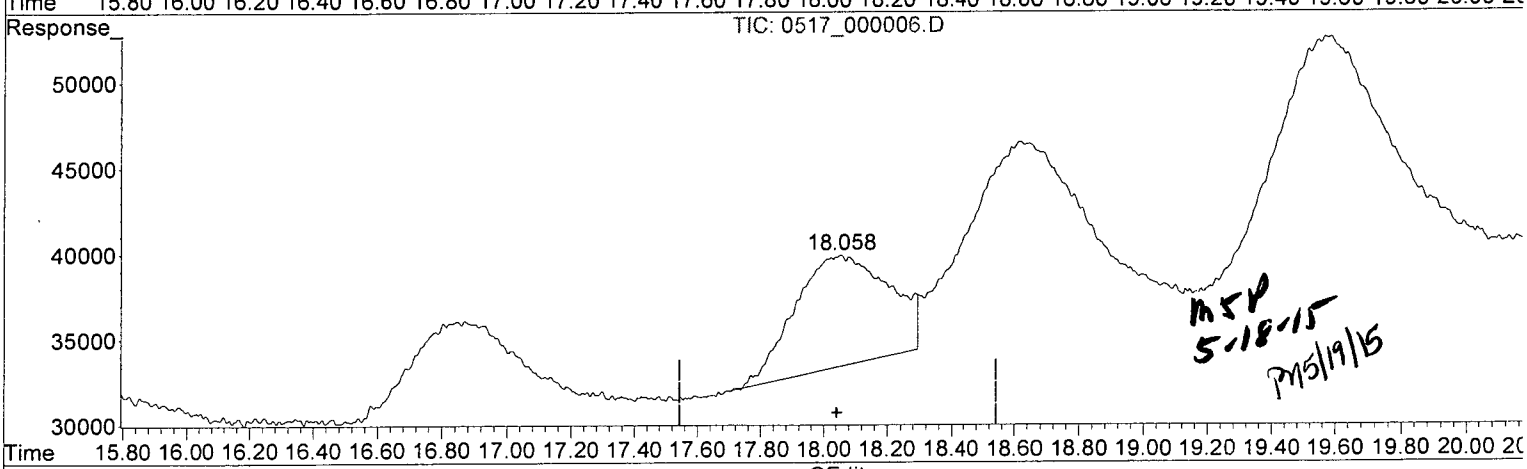
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





MSP 5-18-15 PM 5/19/15

QEdit

(15) 3-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(15) 3-NITROTOLUENE #2 (TM)

18.058min 6.055 ppb m

response 6474

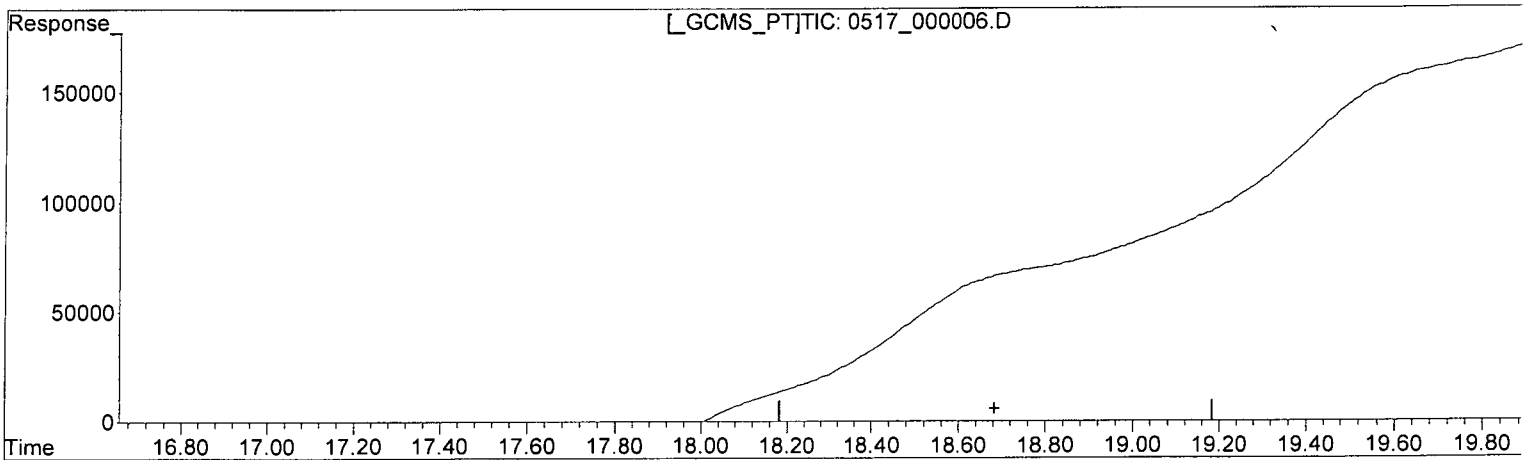
(+) = Expected Retention Time

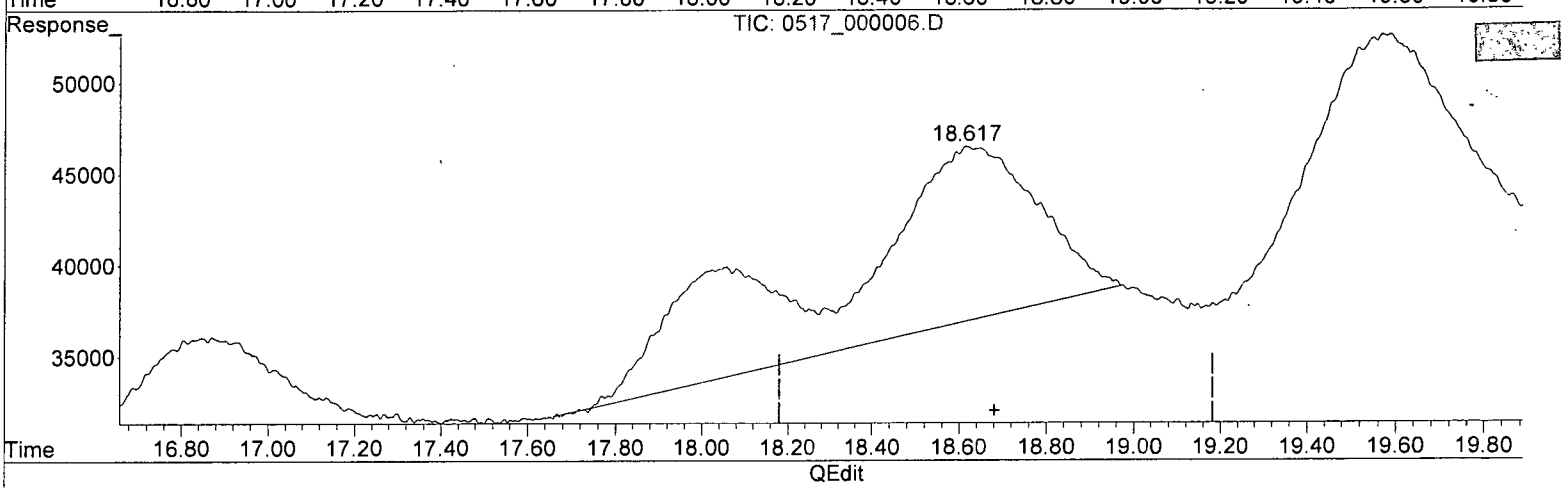
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(16) 4-AMINO-2,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(16) 4-AMINO-2,6-DINITROTOLUENE #2 (TM)

18.619min 6.820 ppb

response 9555

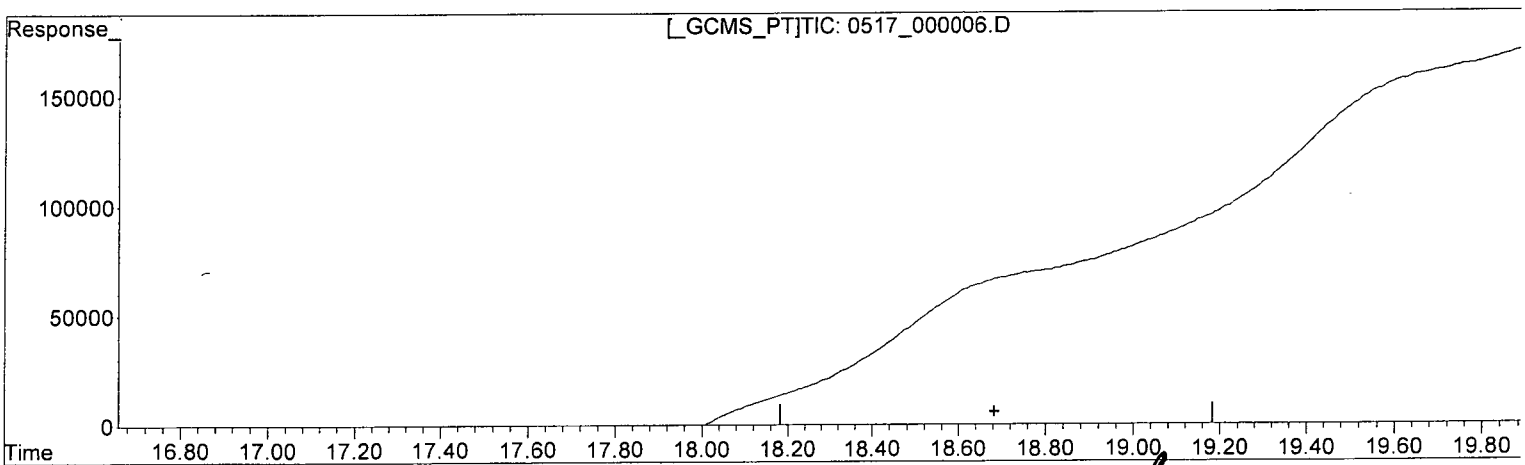
(+) = Expected Retention Time

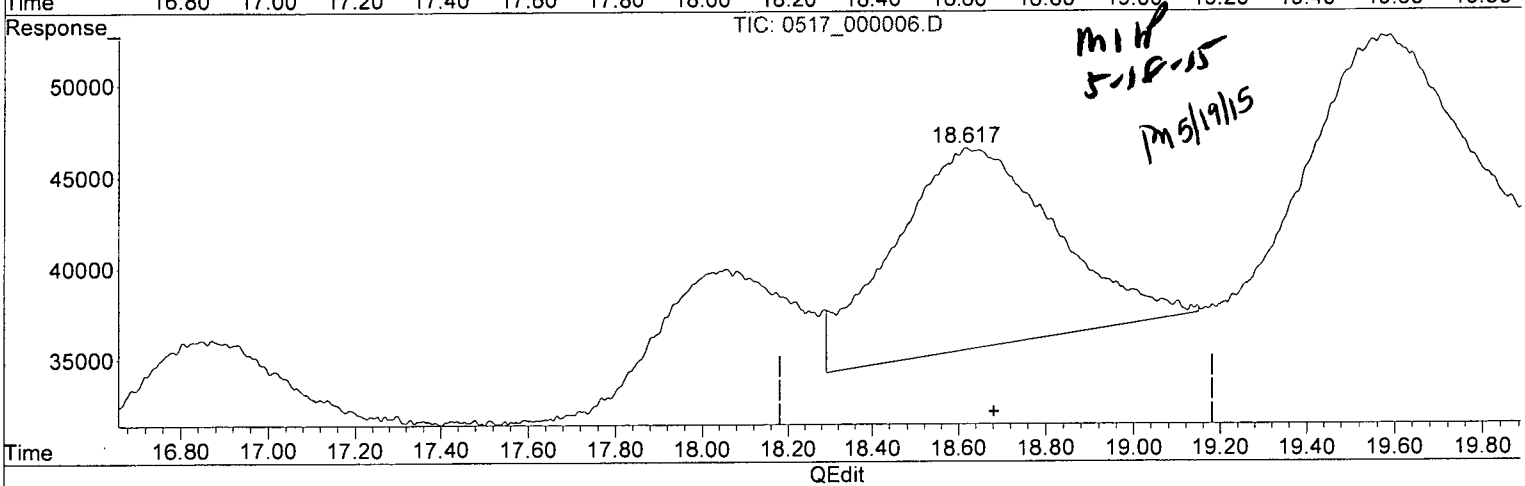
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MJH 5-18-15
JM 5/19/15

QEdit

(16) 4-AMINO-2,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(16) 4-AMINO-2,6-DINITROTOLUENE #2 (TM)

18.617min 7.884 ppb m

response 11046

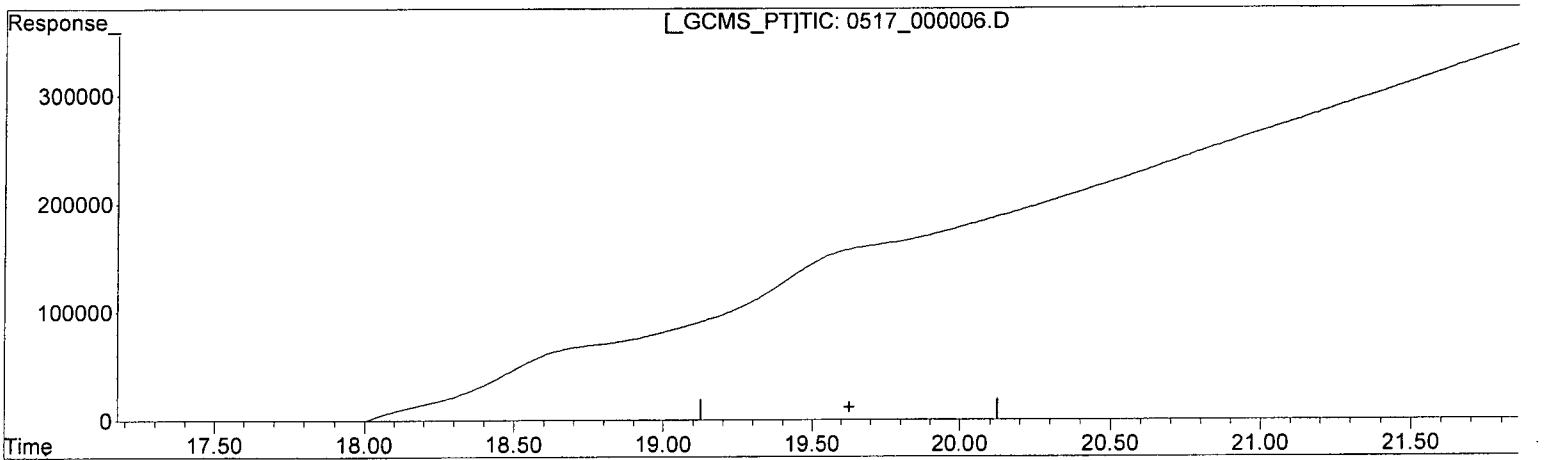
(+) = Expected Retention Time

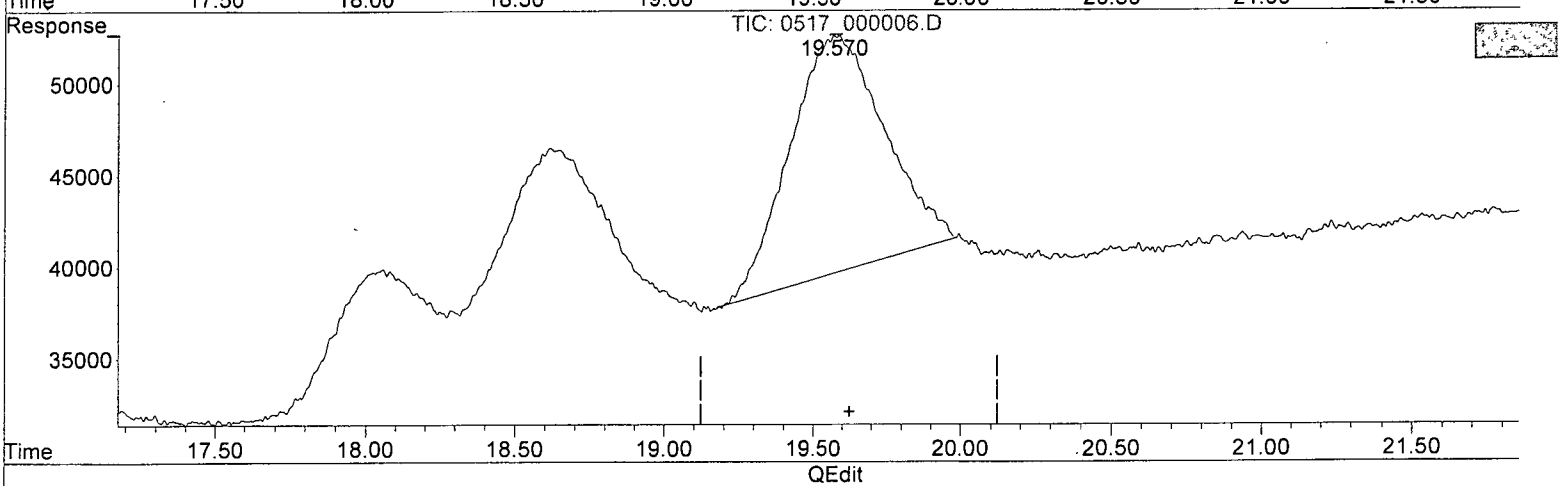
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





(17) 2-AMINO-4,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(17) 2-AMINO-4,6-DINITROTOLUENE #2 (TM)

19.575min 6.327 ppb

response 12898

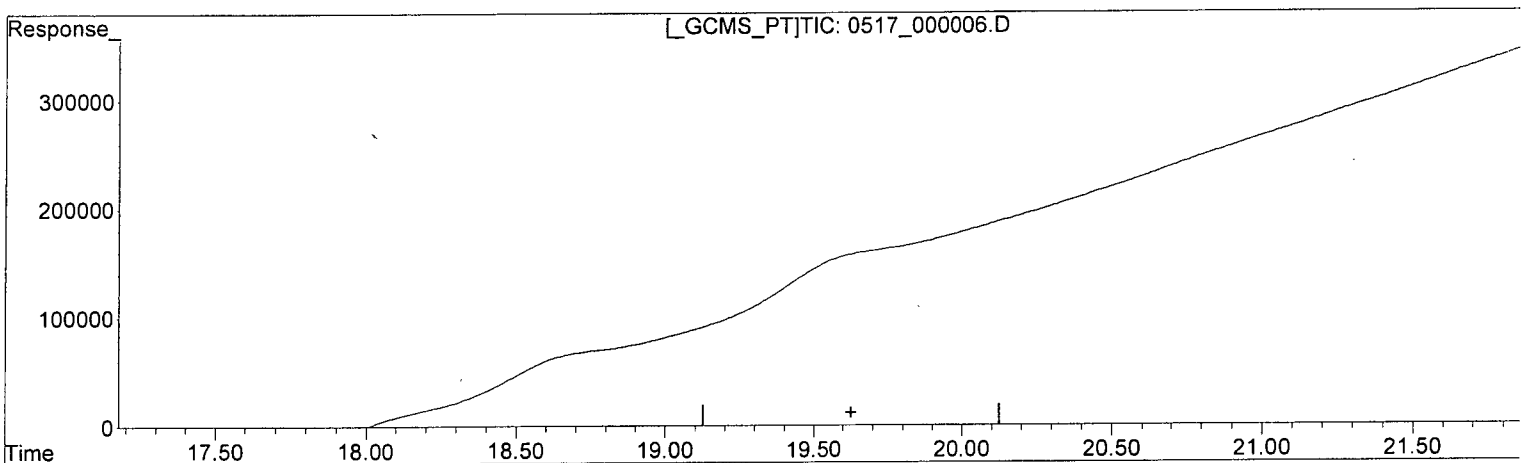
(+) = Expected Retention Time

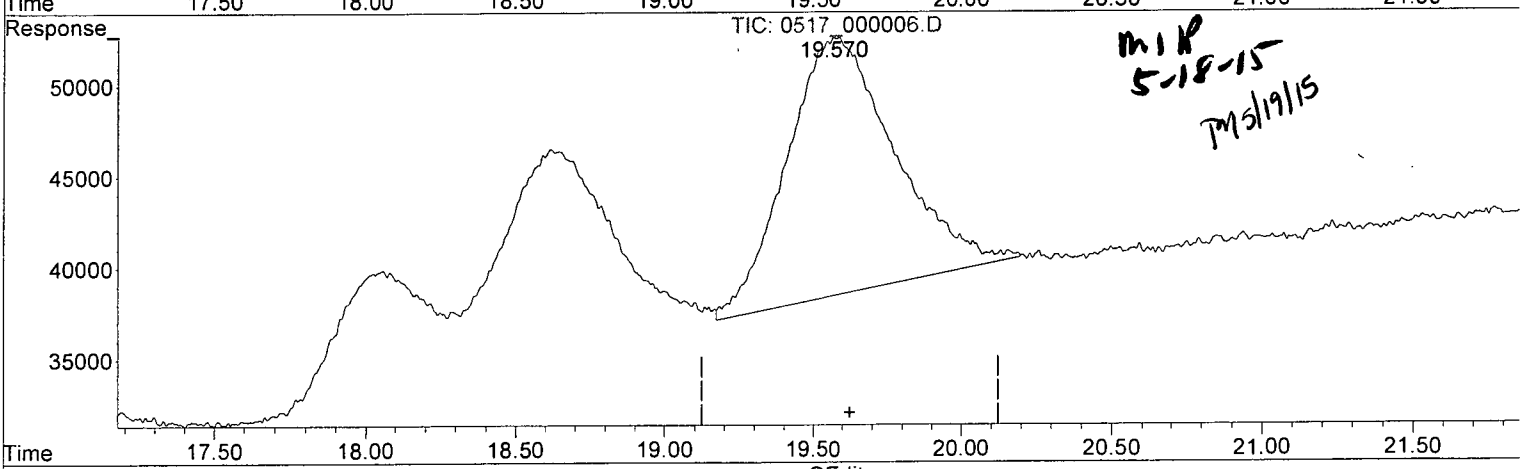
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000006.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 18:27:13
Operator : MP
Sample : 8330MXA_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4098 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MLP 5-18-15
TM 5/19/15

(17) 2-AMINO-4,6-DINITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(17) 2-AMINO-4,6-DINITROTOLUENE #2 (TM)

19.570min 6.942 ppb m

response 14150

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000007.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:06:45
Operator : MP
Sample : 8330MXB_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4099 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:00:30 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1) TM	HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM	RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM	1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM	1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM	NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM	2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM	NITROGLYC...	12.046	0.000	5922	0	6.502	N.D. d#
9) TM	TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM	2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM	2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM	2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM	4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM	3,5-DINIT...	0.000	16.538	0	13964	N.D.	6.996 #
15) TM	3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM	4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM	2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM	PETN	0.000	0.000	0	0	N.D.	N.D.

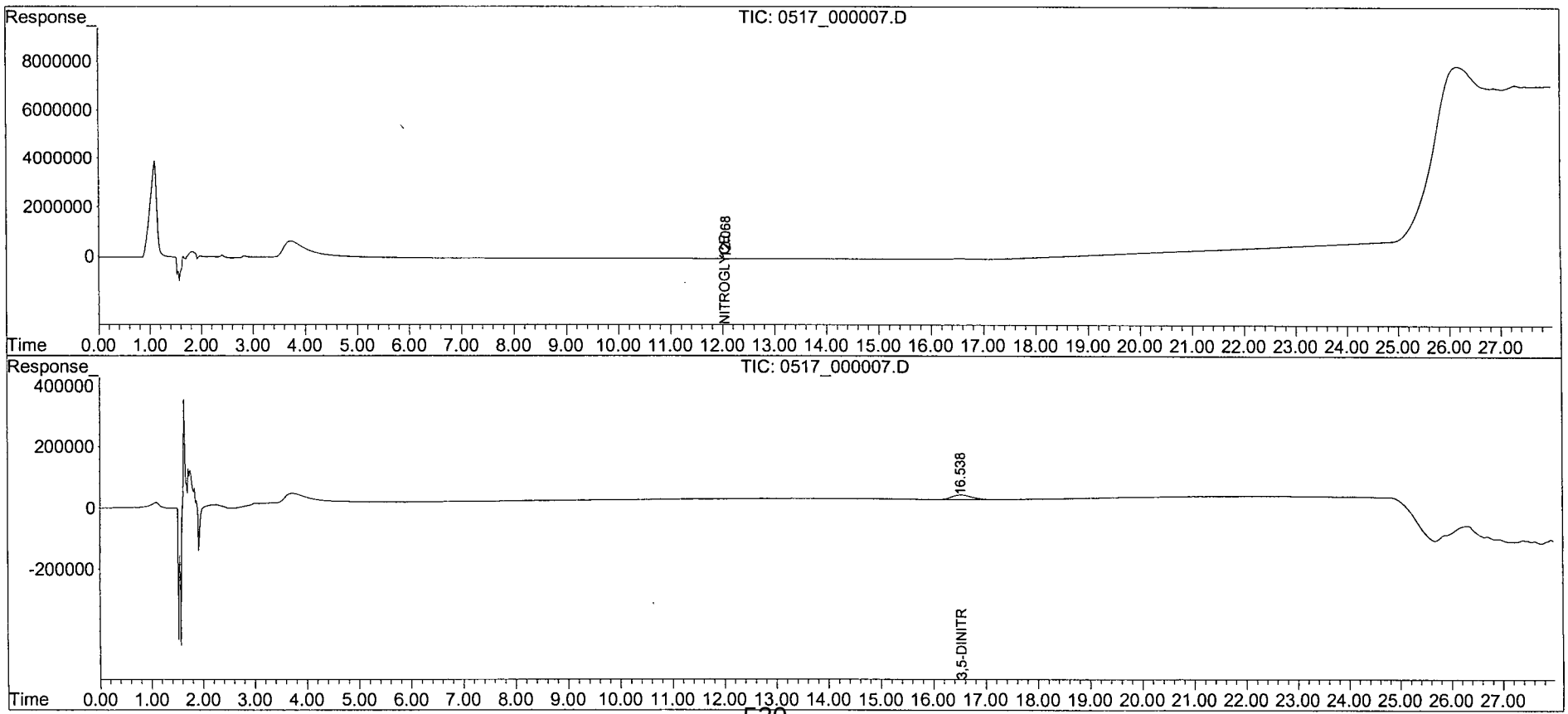
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000007.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:06:45
Operator : MP
Sample : 8330MXB_CB 0.010 PPM 05/16/15
Misc :
ALS Vial : 4099 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 08:00:30 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:59:55 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	8.088	0	31442	N.D.	14.903 #
	Spiked Amount 62.500			Recovery	=	0.00%	23.84%
	Target Compounds						
1) TM	HMX	0.000	4.063	0	31608	N.D.	15.031m#
2) TM	RDX	0.000	6.403	0	27251	N.D.	14.713m#
3) TM	1,3,5-TRI...	0.000	6.750	0	68662	N.D.	15.362m#
5) TM	1,3-DINIT...	0.000	8.421	0	70629	N.D.	15.705 #
6) TM	NITROBENZENE	0.000	9.166	0	37102	N.D.	14.484m#
7) TM	2,4,6-TRI...	0.000	11.444	0	36061	N.D.	14.205 #
8) TM	NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM	TETRYL	11.962	11.964	20009	26476	NoCal	16.072 #
10) TM	2,6-DINIT...	13.443	13.440	32645	21397	NoCal	14.486 #
11) TM	2,4-DINIT...	0.000	14.041	0	37717	N.D.	14.970 #
12) TM	2-NITROTO...	0.000	15.465	0	14068	N.D.	13.343m#
13) TM	4-NITROTO...	0.000	16.873	0	11267	N.D.	12.864m#
14) TM	3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
15) TM	3-NITROTO...	0.000	18.065	0	13775	N.D.	12.883 #
16) TM	4-AMINO-2...	0.000	18.665	0	22552	N.D.	16.098 #
17) TM	2-AMINO-4...	0.000	19.595	0	29507	N.D.	14.475 #
18) TM	PETN	0.000	0.000	0	0	N.D.	N.D.

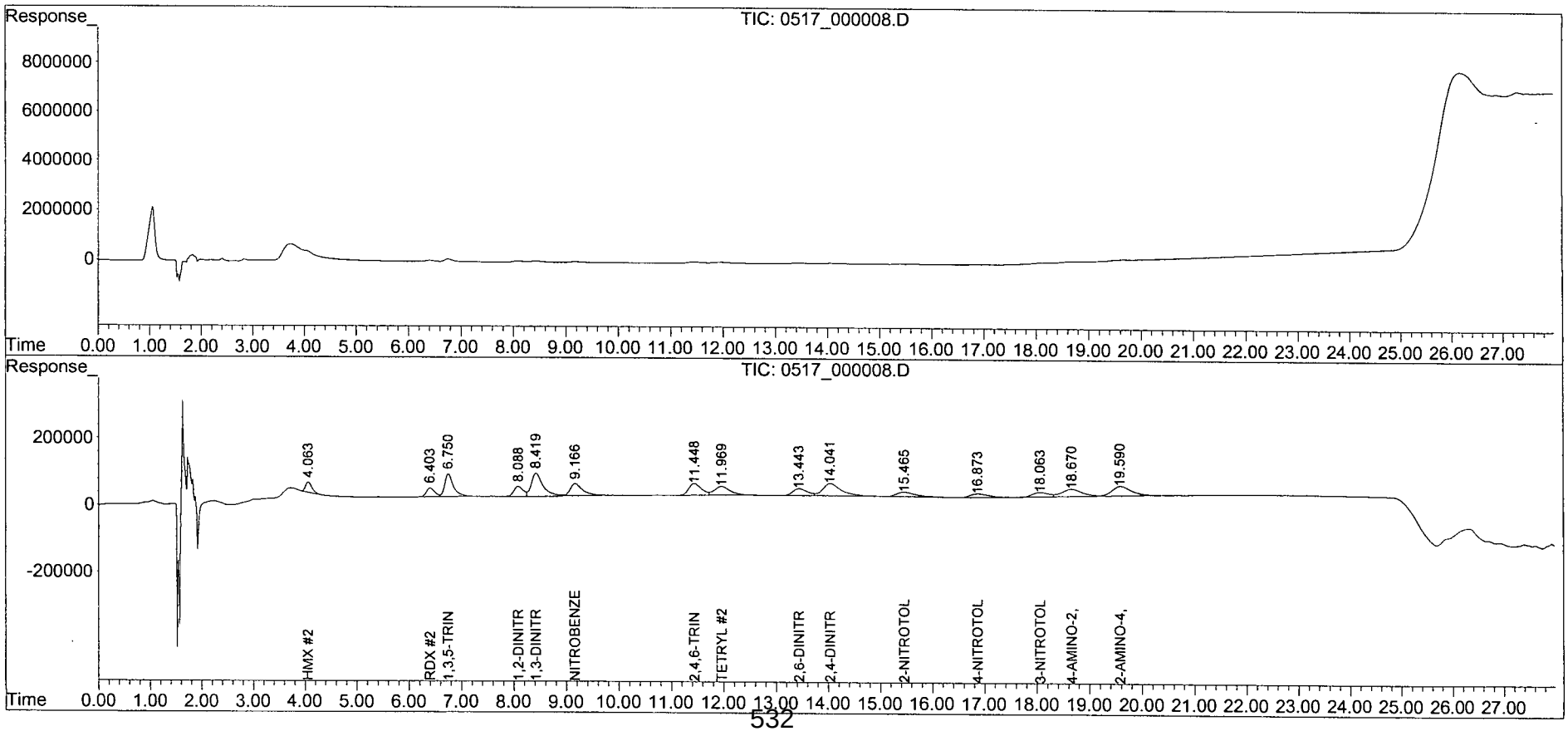
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:59:55 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

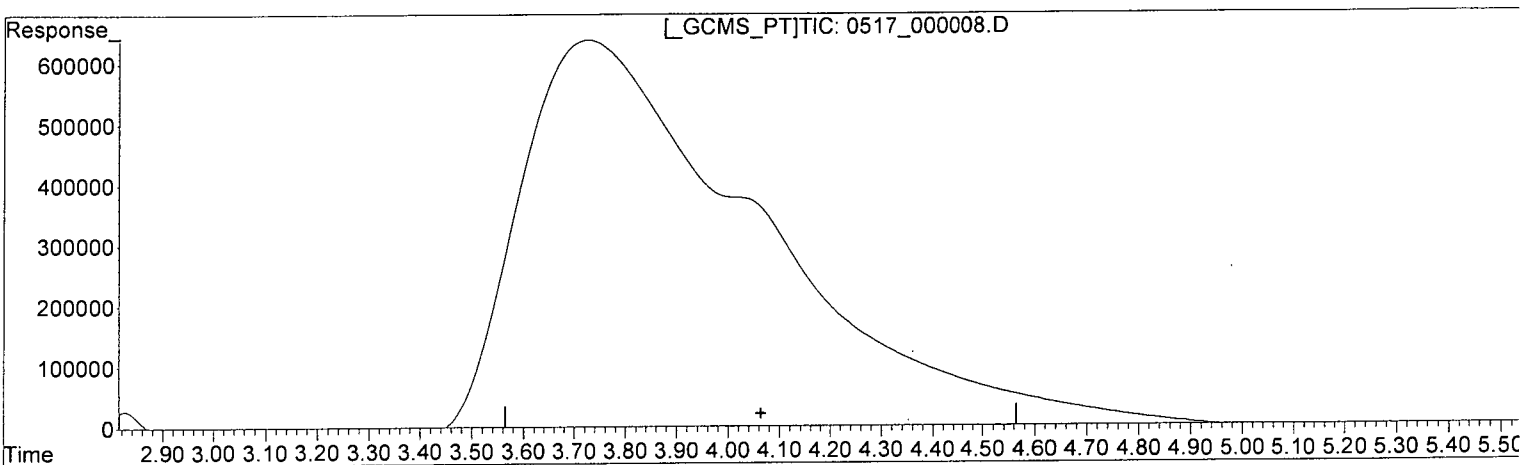


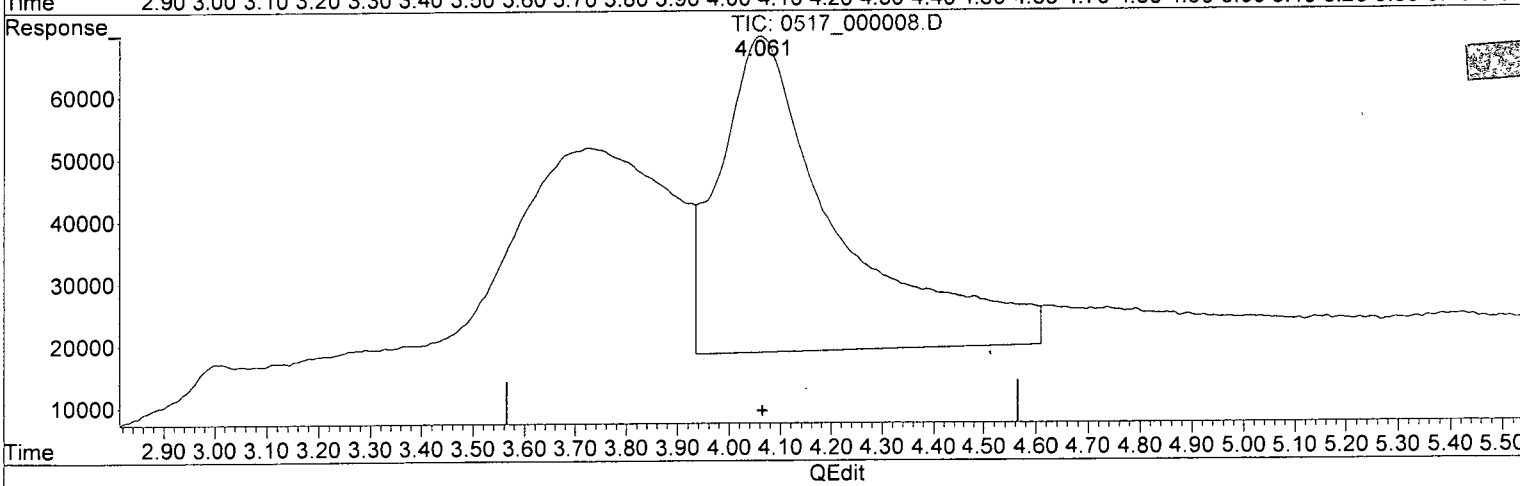
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.062min 24.169 ppb

response 50824

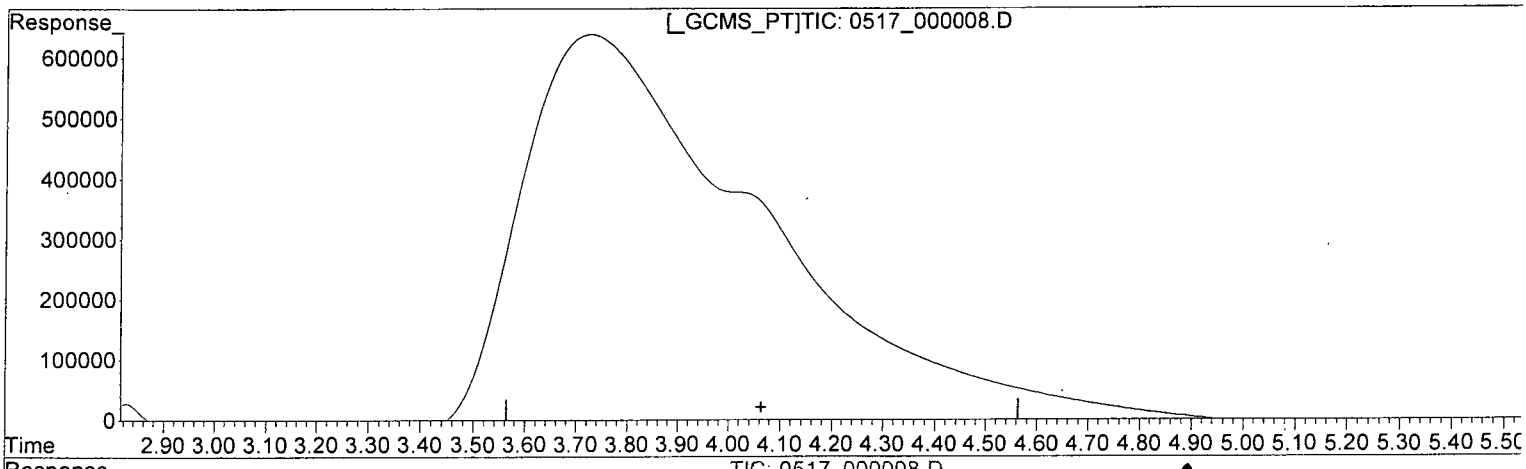
(+) = Expected Retention Time

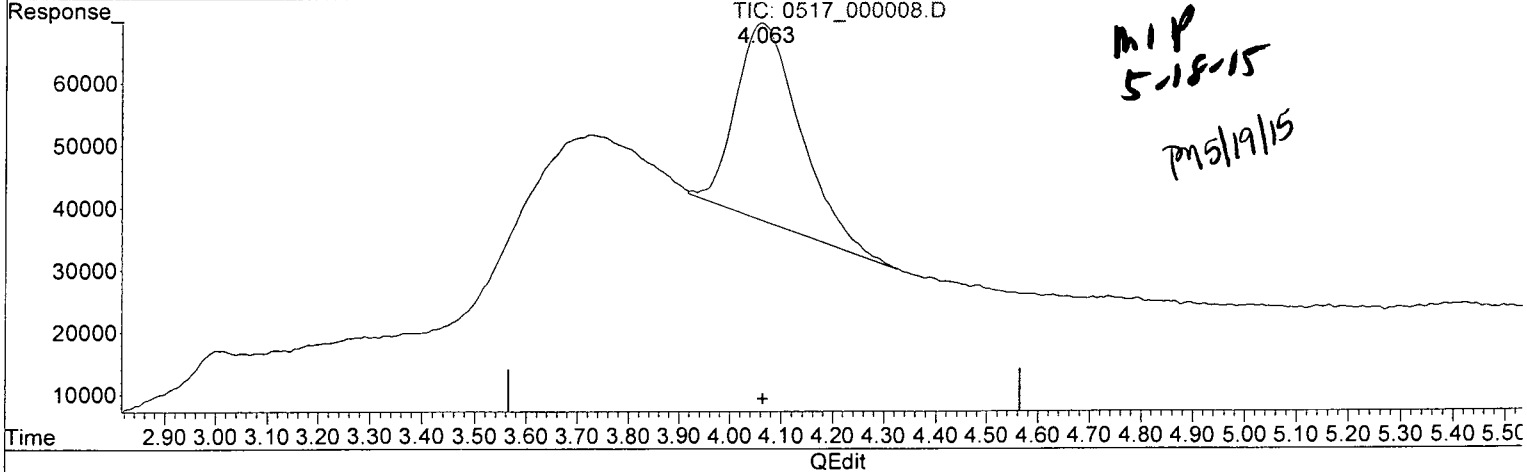
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





MP 5-18-15

PM 5/19/15

QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.063min 15.031 ppb m

response 31608

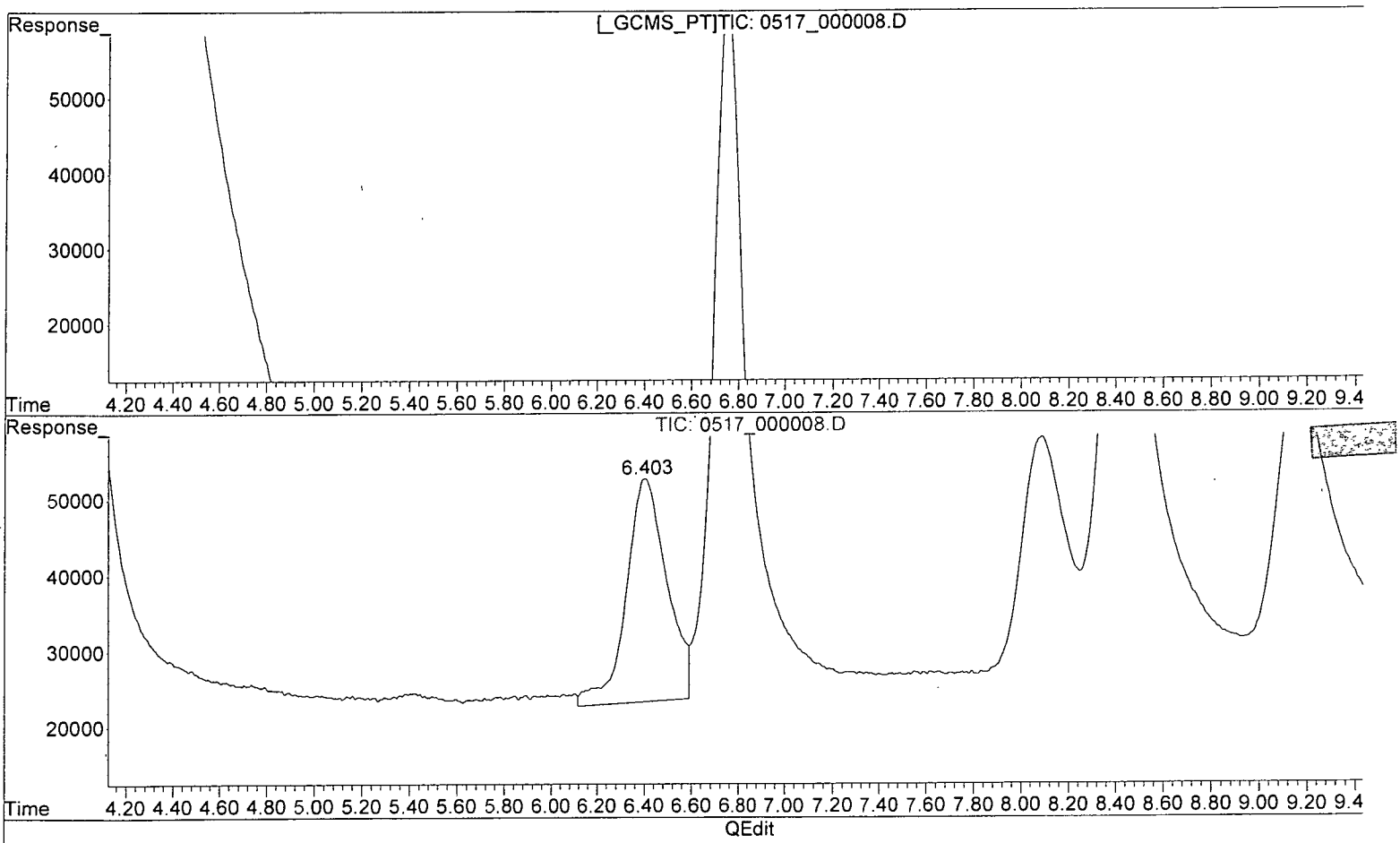
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(2) RDX (TM)

0.000min 0.000 ppb

response 0

(2) RDX #2 (TM)

6.403min 15.859 ppb

response 29373

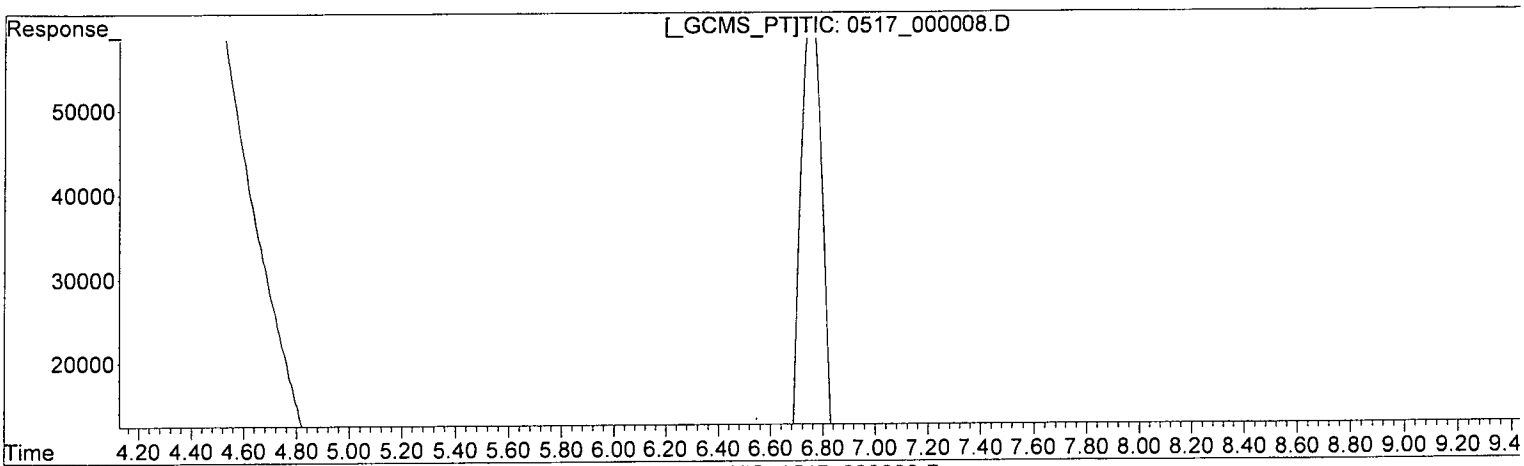
(+) = Expected Retention Time

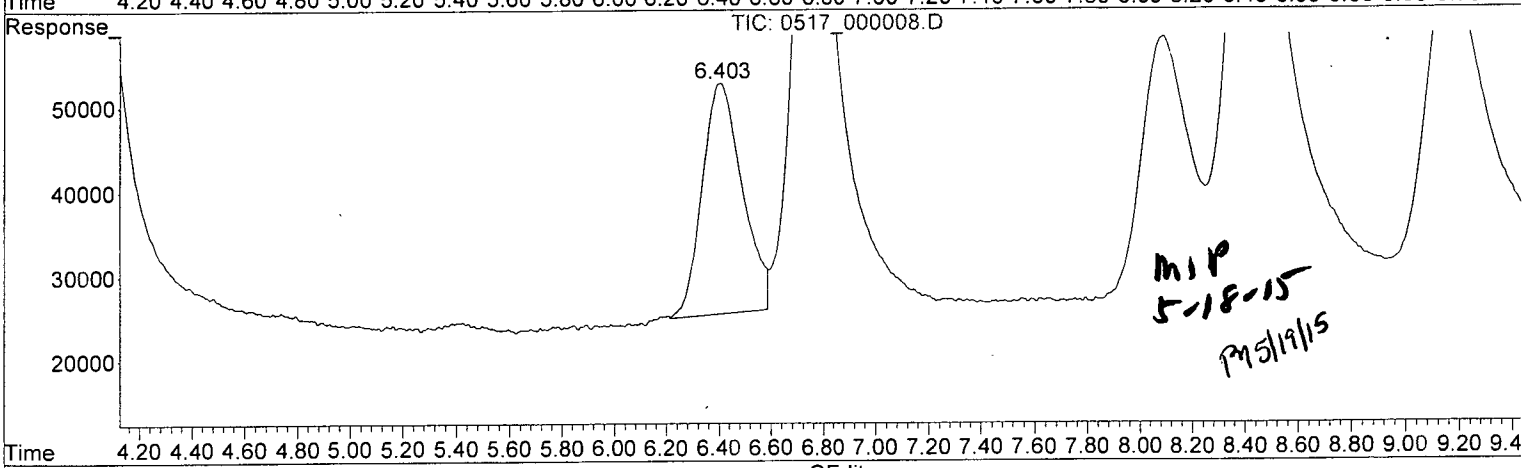
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MP 5-18-15 PM 5/19/15

(2) RDX (TM)

0.000min 0.000 ppb

response 0

(2) RDX #2 (TM)

6.403min 14.713 ppb m

response 27251

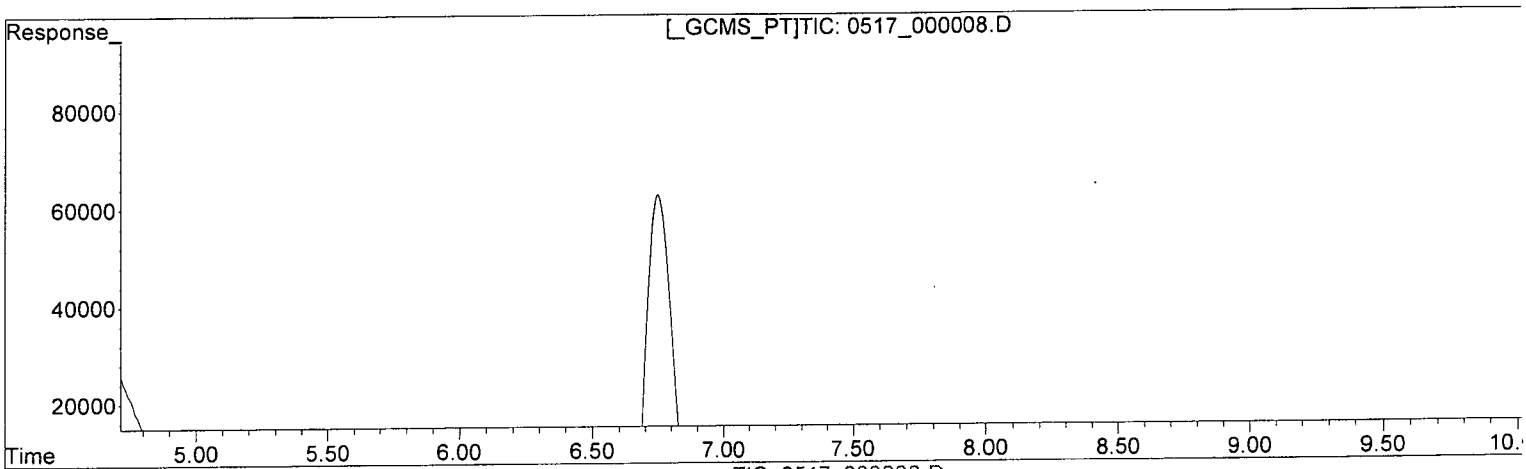
(+) = Expected Retention Time

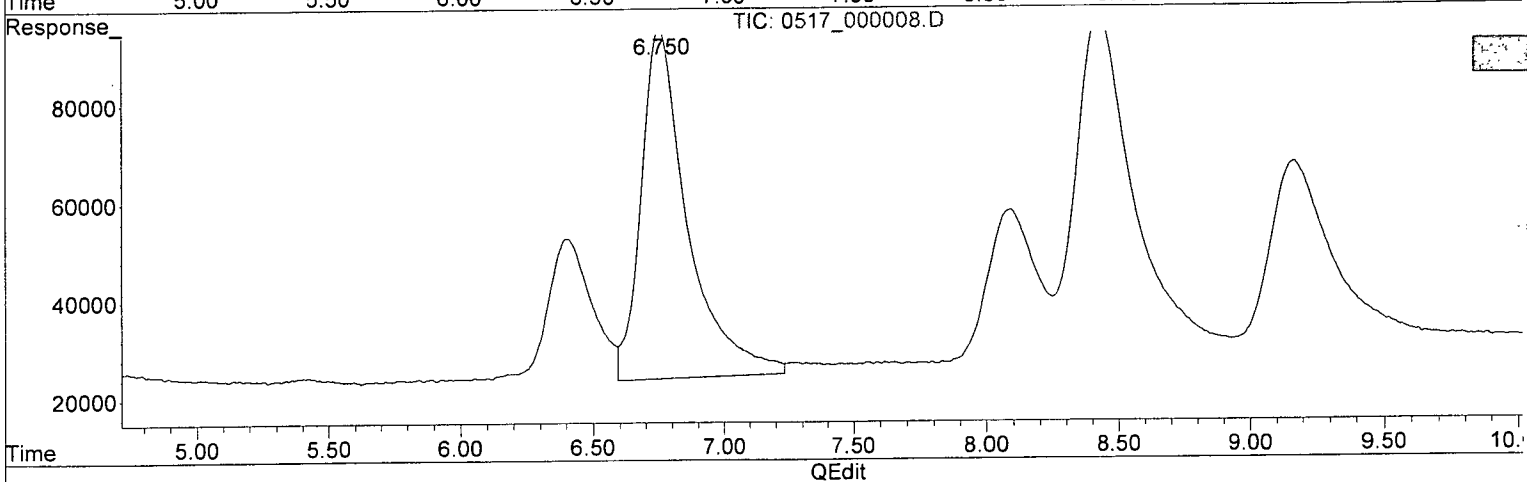
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(3) 1,3,5-TRINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(3) 1,3,5-TRINITROBENZENE #2 (TM)

6.750min 15.935 ppb

response 71224

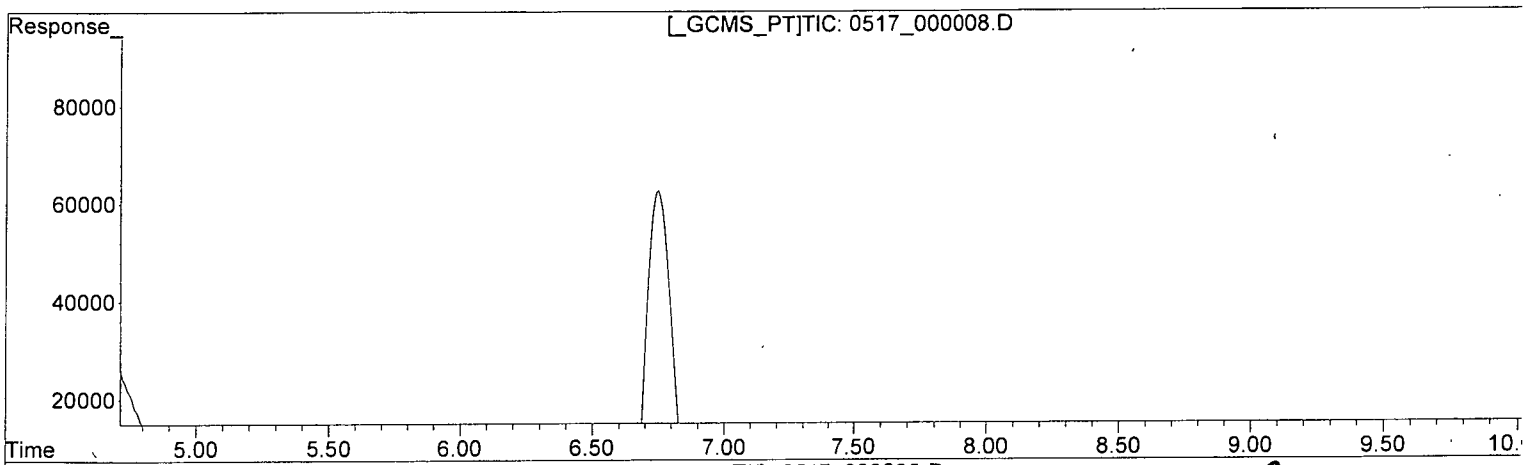
(+) = Expected Retention Time

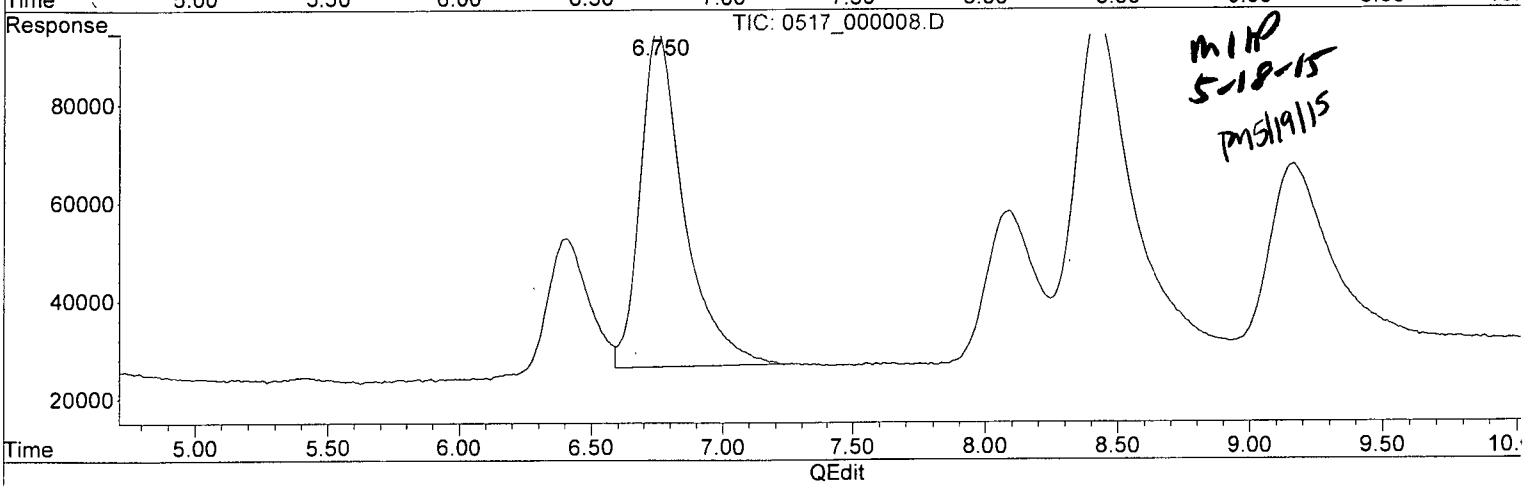
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





(3) 1,3,5-TRINITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(3) 1,3,5-TRINITROBENZENE #2 (TM)

6.750min 15.362 ppb m

response 68662

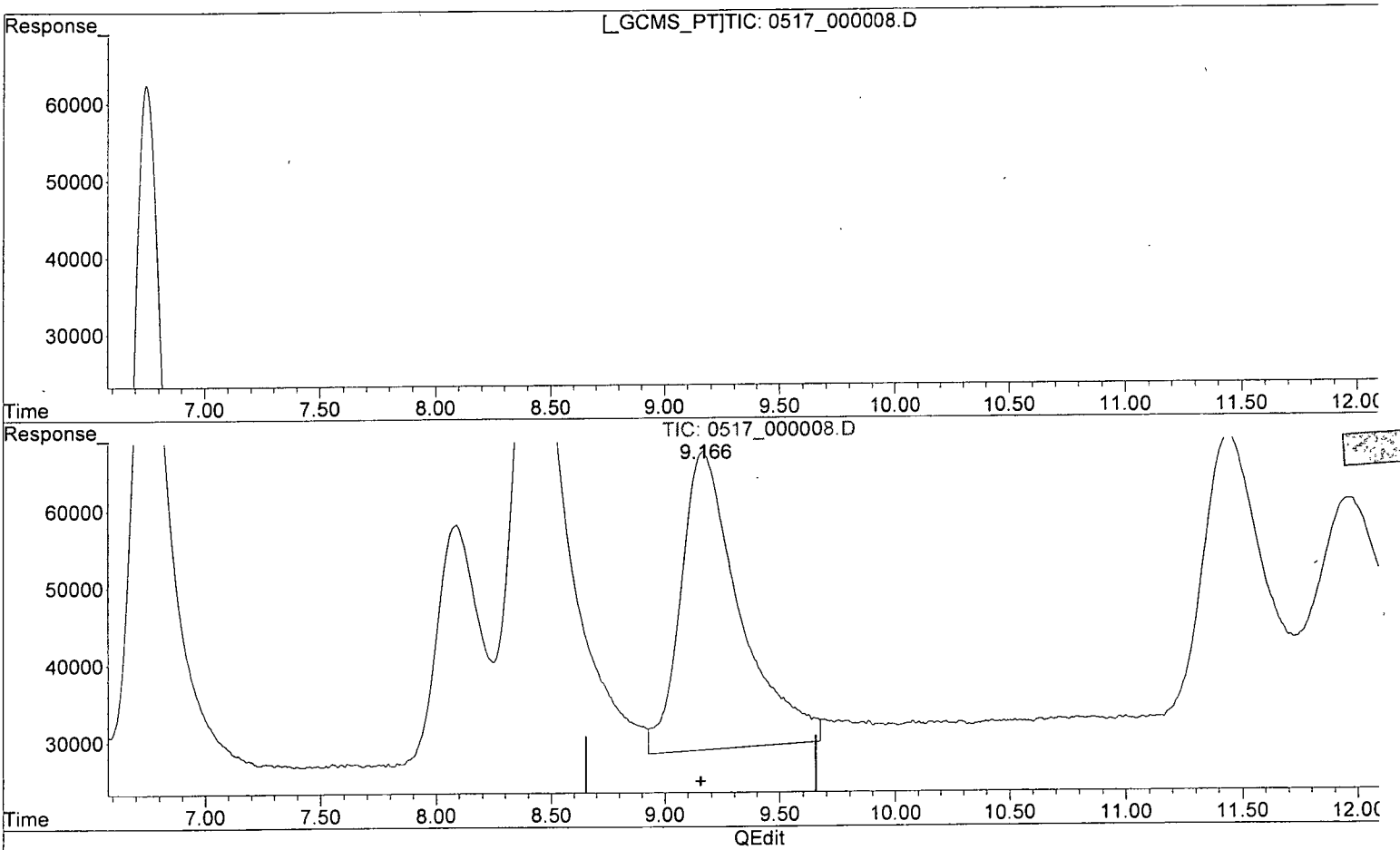
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(6) NITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(6) NITROBENZENE #2 (TM)

9.164min 15.144 ppb

response 38793

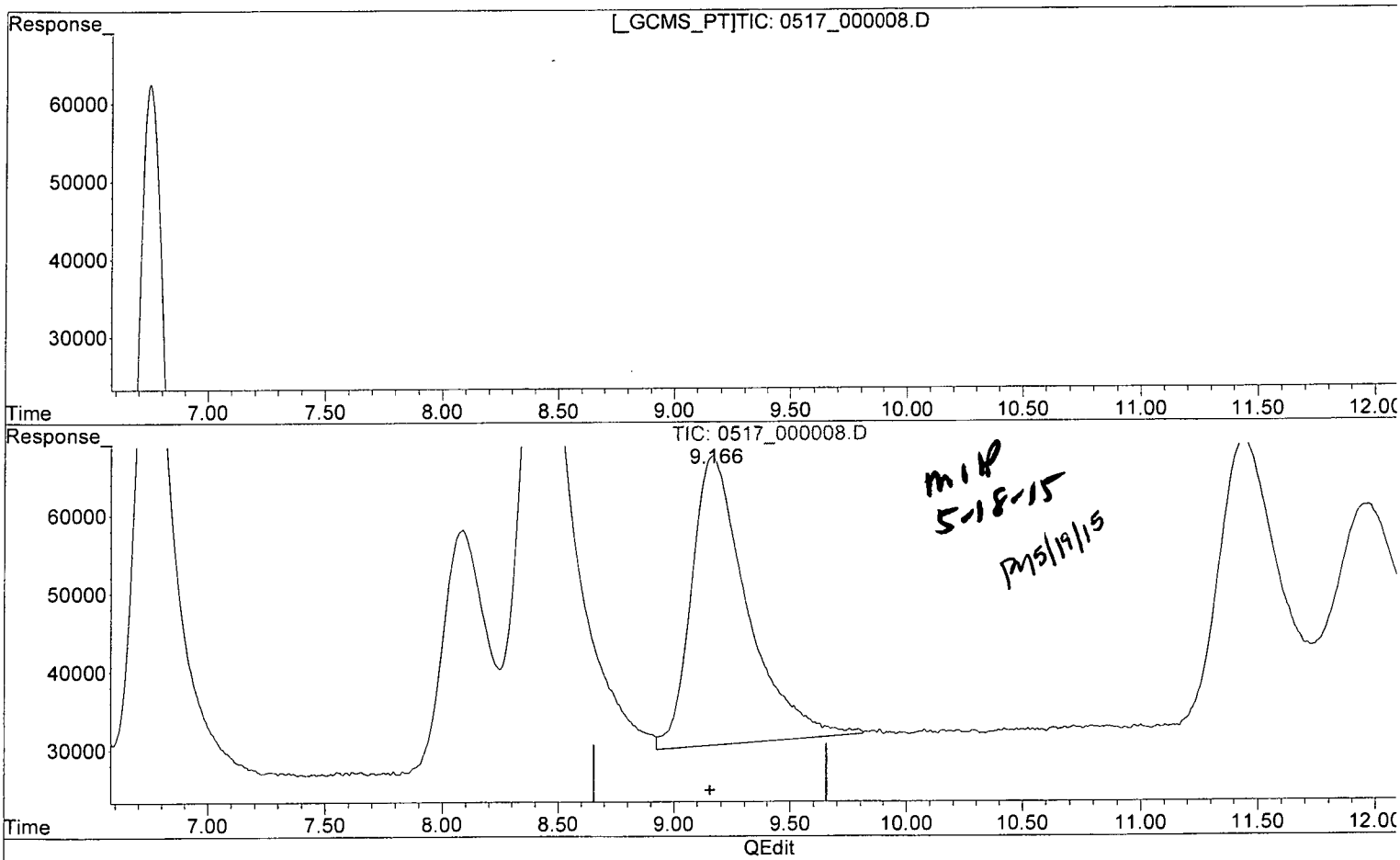
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r



(6) NITROBENZENE (TM)

0.000min 0.000 ppb

response 0

(6) NITROBENZENE #2 (TM)

9.166min 14.484 ppb m

response 37102

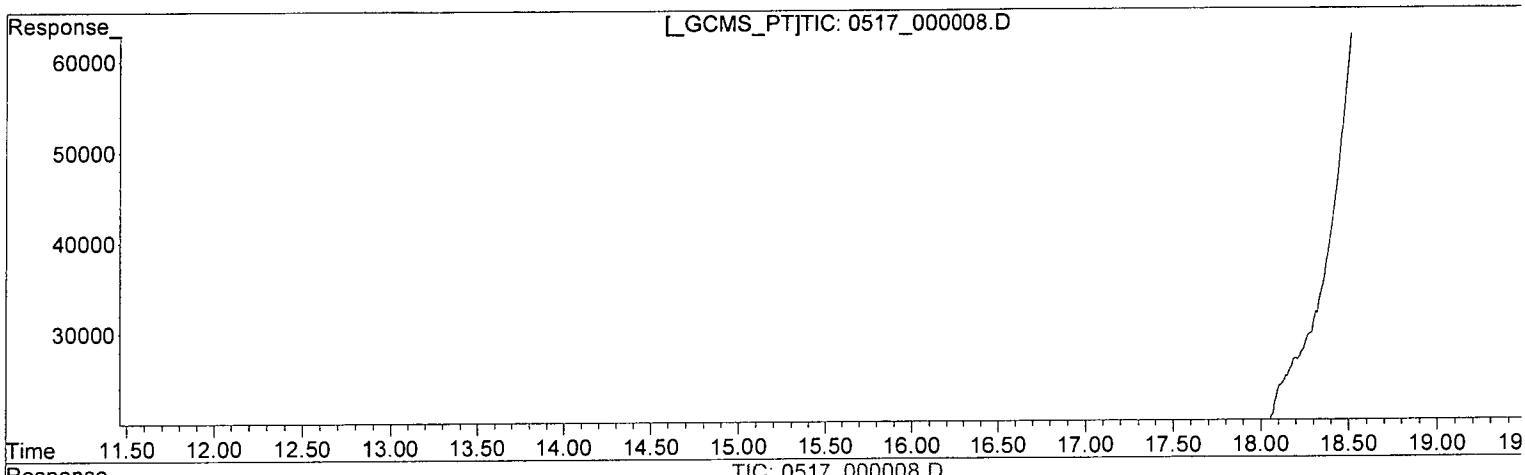
(+) = Expected Retention Time

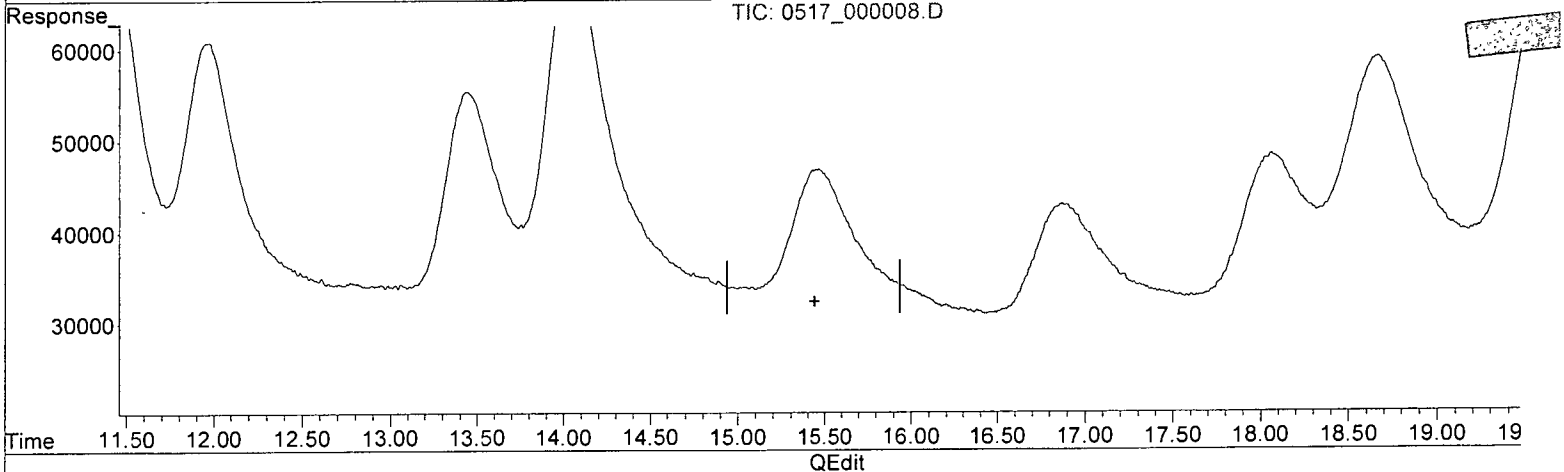
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





(12) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(12) 2-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

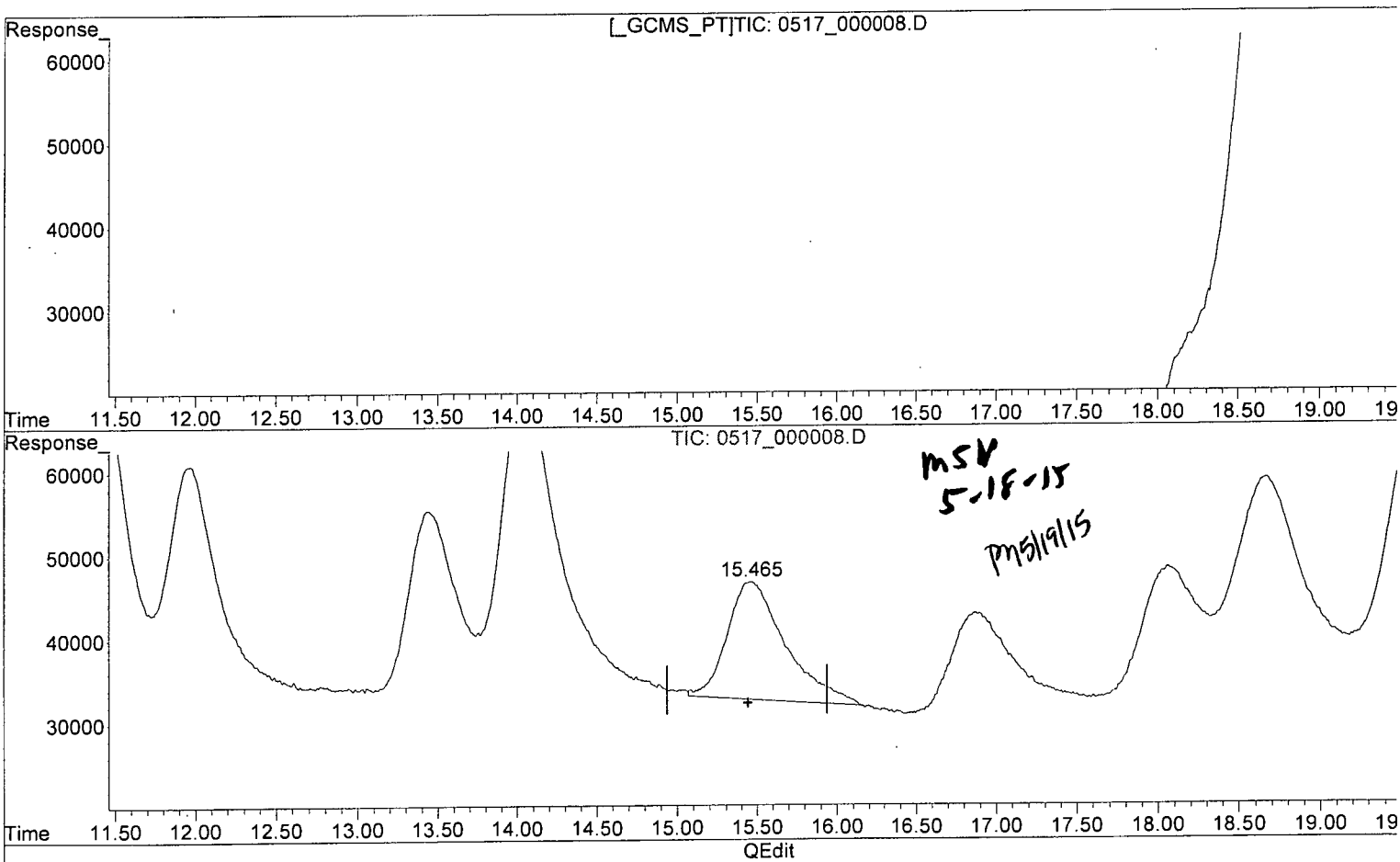
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r



(12) 2-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(12) 2-NITROTOLUENE #2 (TM)

15.465min 13.343 ppb m

response 14068

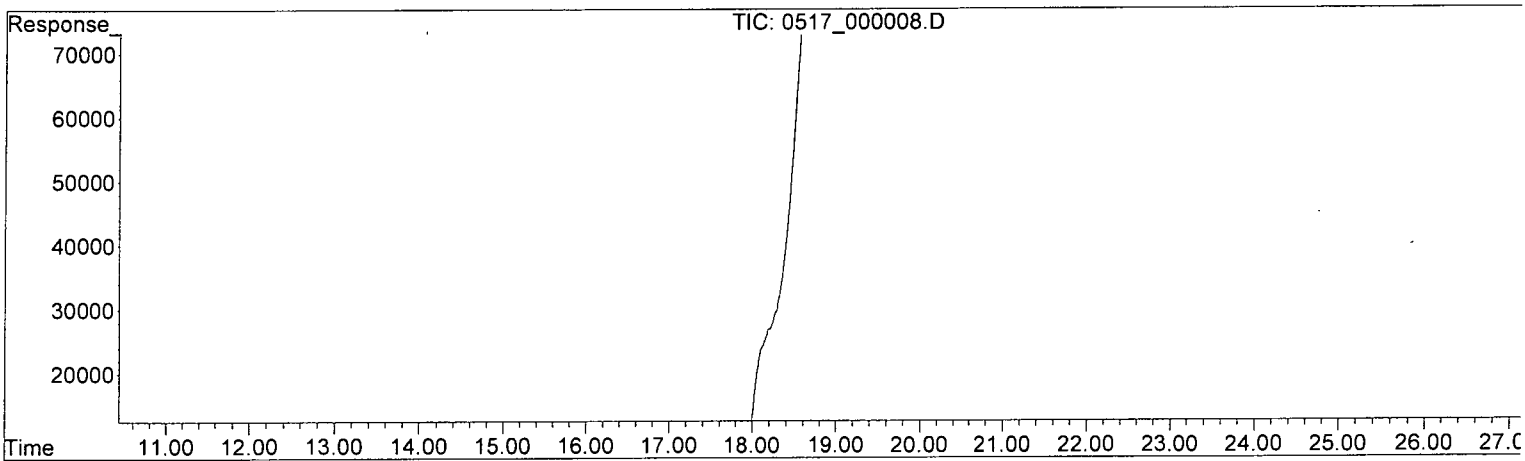
(+) = Expected Retention Time

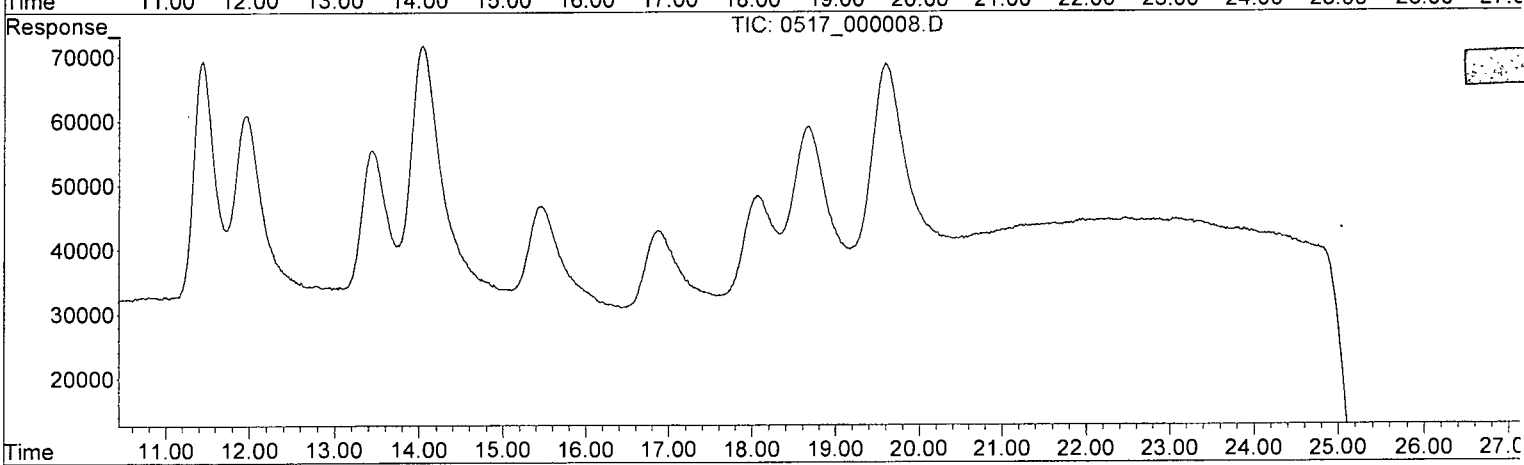
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(13) 4-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(13) 4-NITROTOLUENE #2 (TM)

0.000min 0.000 ppb

response 0

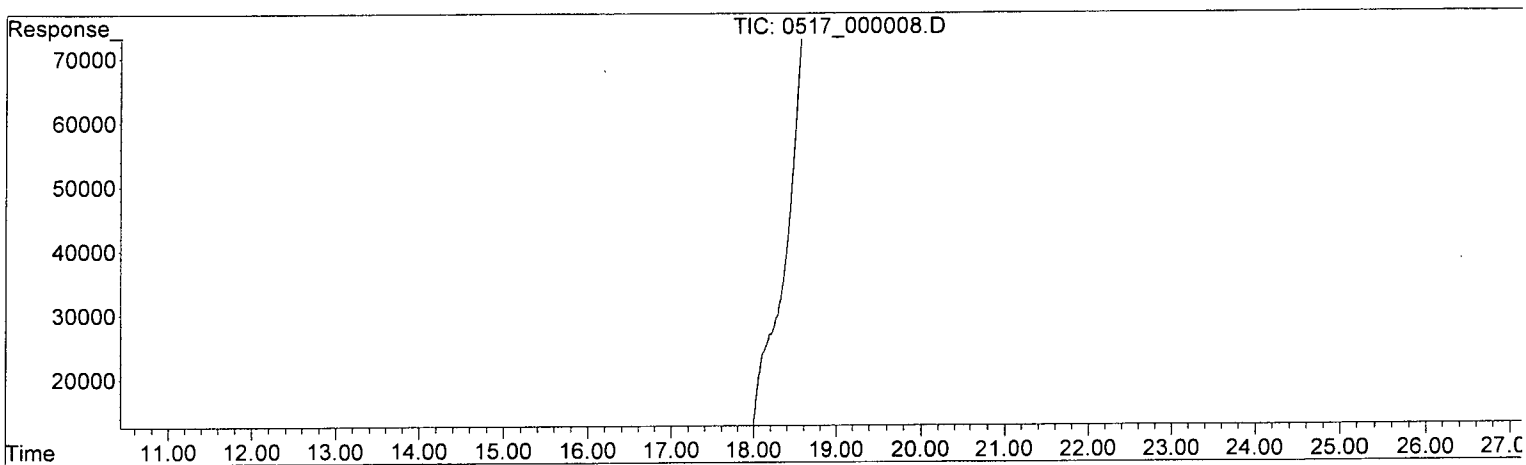
(+) = Expected Retention Time

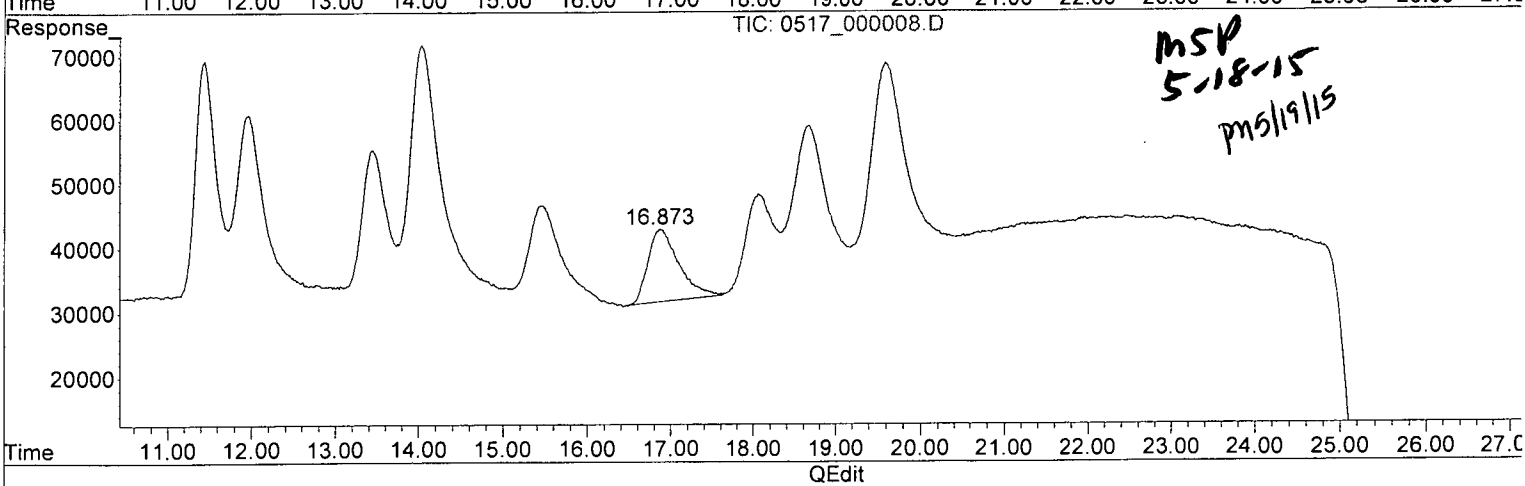
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000008.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 19:46:17
Operator : MP
Sample : 8330MXA_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4100 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:13 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





MSP 5-18-15 pm5/19/15

(13) 4-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(13) 4-NITROTOLUENE #2 (TM)

16.873min 12.864 ppb m

response 11267

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:25:49
Operator : MP
Sample : 8330MXB_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4101 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:56:01 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount 62.500			Recovery	=	0.00%	0.00%
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM NITROGLYC...	12.007	0.000	13229	0	14.526m	N.D. d#
9) TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM 3,5-DINIT...	0.000	16.502	0	30087	N.D.	15.073m#
15) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.

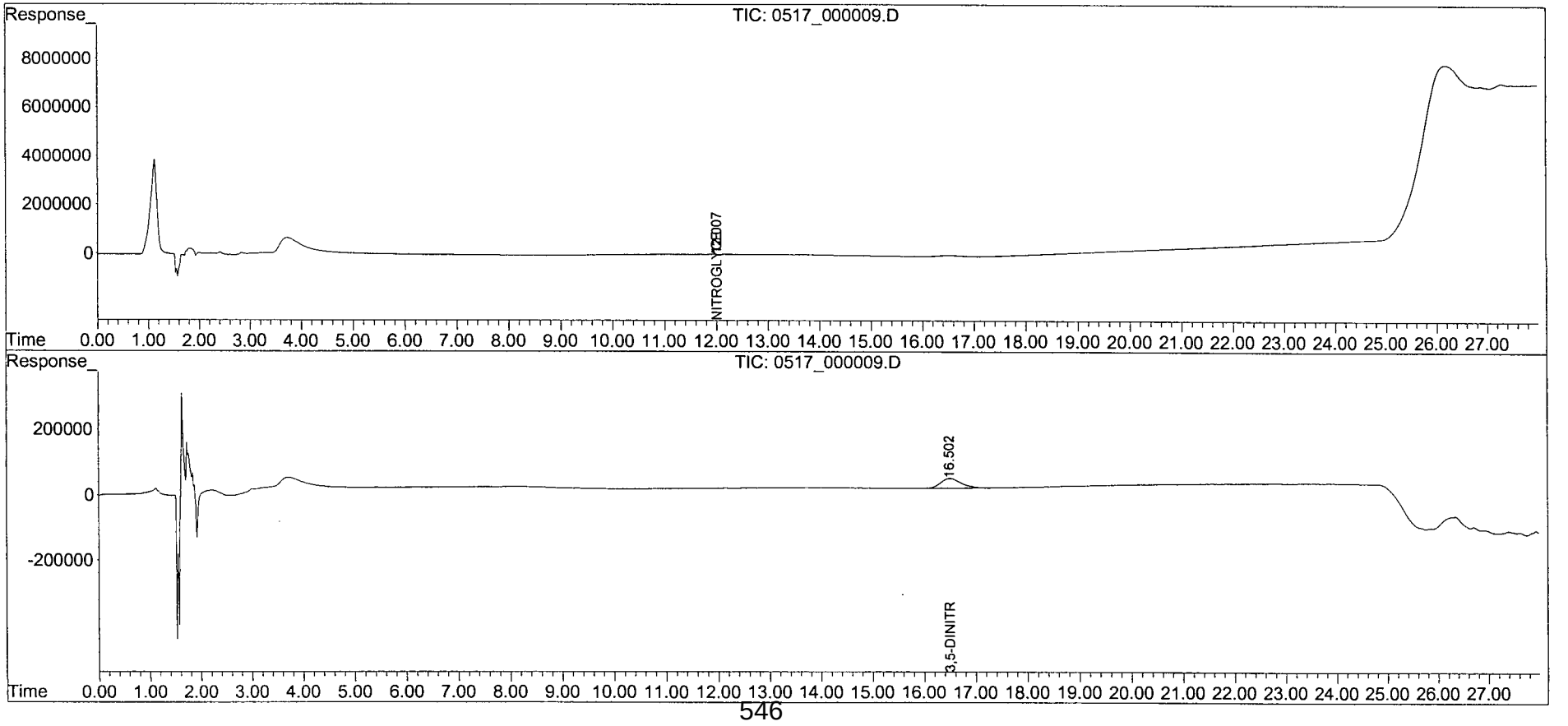
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:25:49
Operator : MP
Sample : 8330MXB_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4101 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:56:01 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

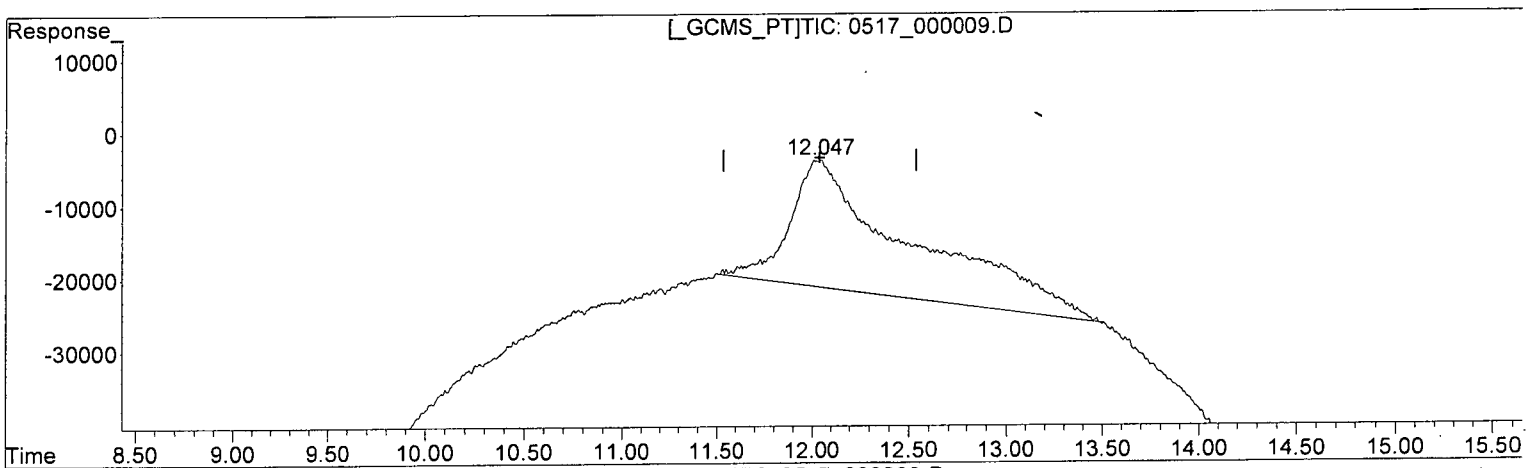


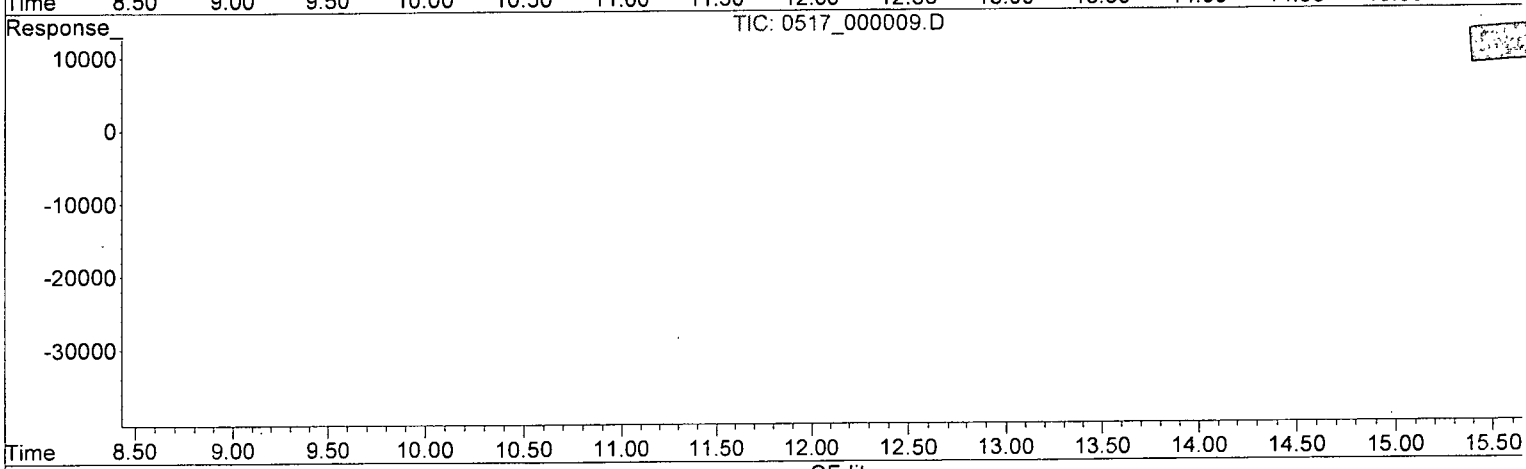
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:25:49
Operator : MP
Sample : 8330MXB_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4101 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:16 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





QEdit

(8) NITROGLYCERIN (TM)

12.029min 18.924 ppb

response 17235

(8) NITROGLYCERIN #2 (TM)

0.000min 0.000 ppb d

response 0

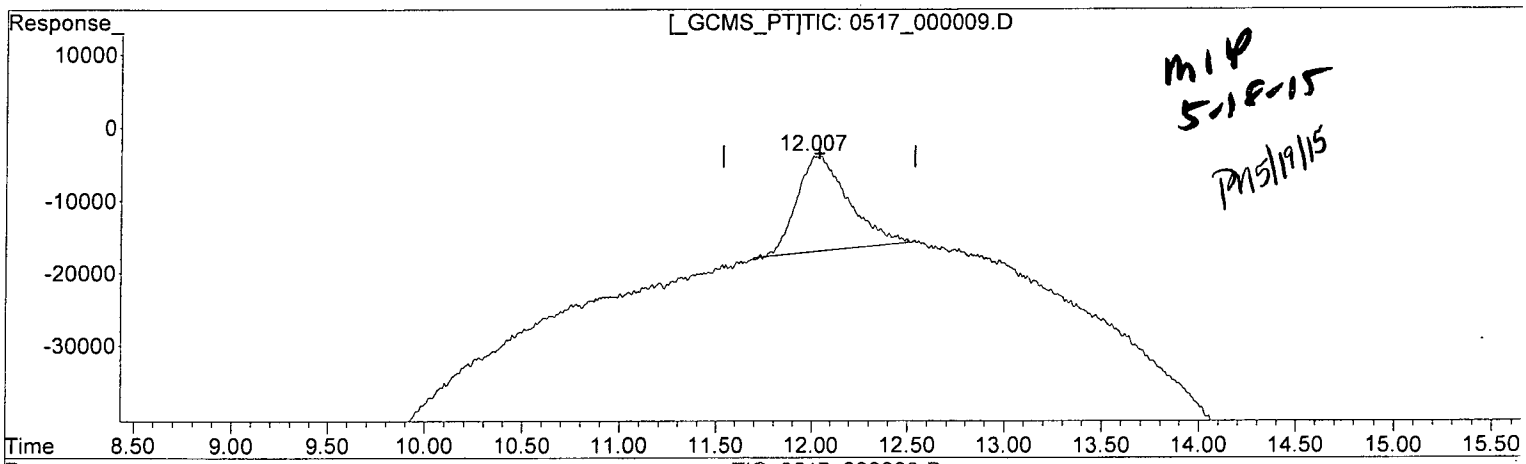
(+) = Expected Retention Time

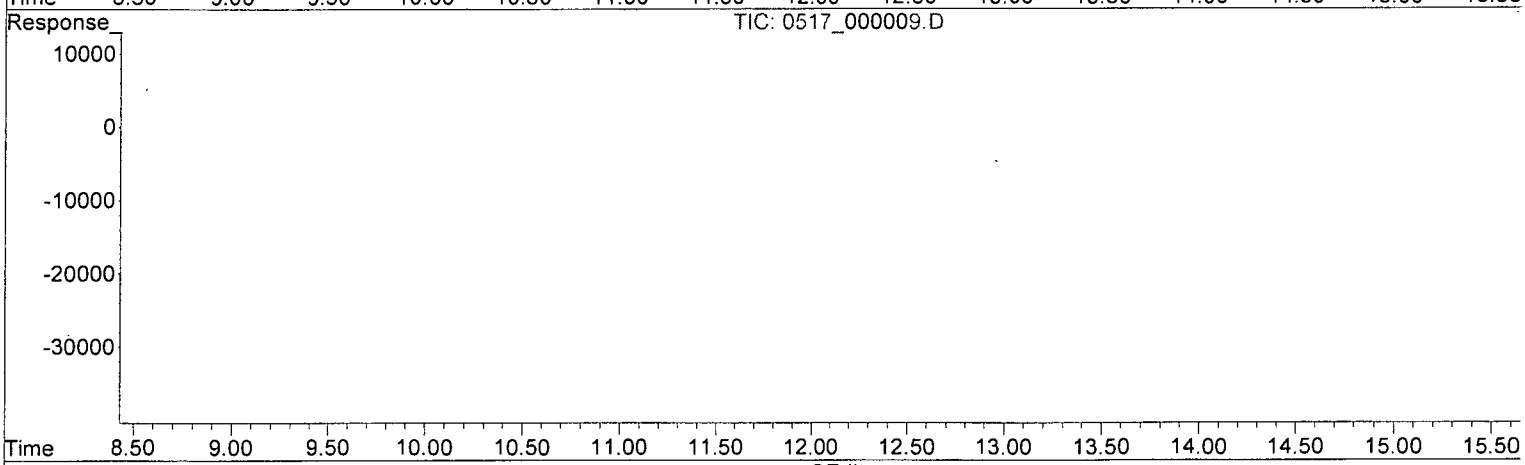
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:25:49
Operator : MP
Sample : 8330MXB_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4101 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:16 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(8) NITROGLYCERIN (TM)

12.007min 14.526 ppb m

response 13229

(8) NITROGLYCERIN #2 (TM)

0.000min 0.000 ppb d

response 0

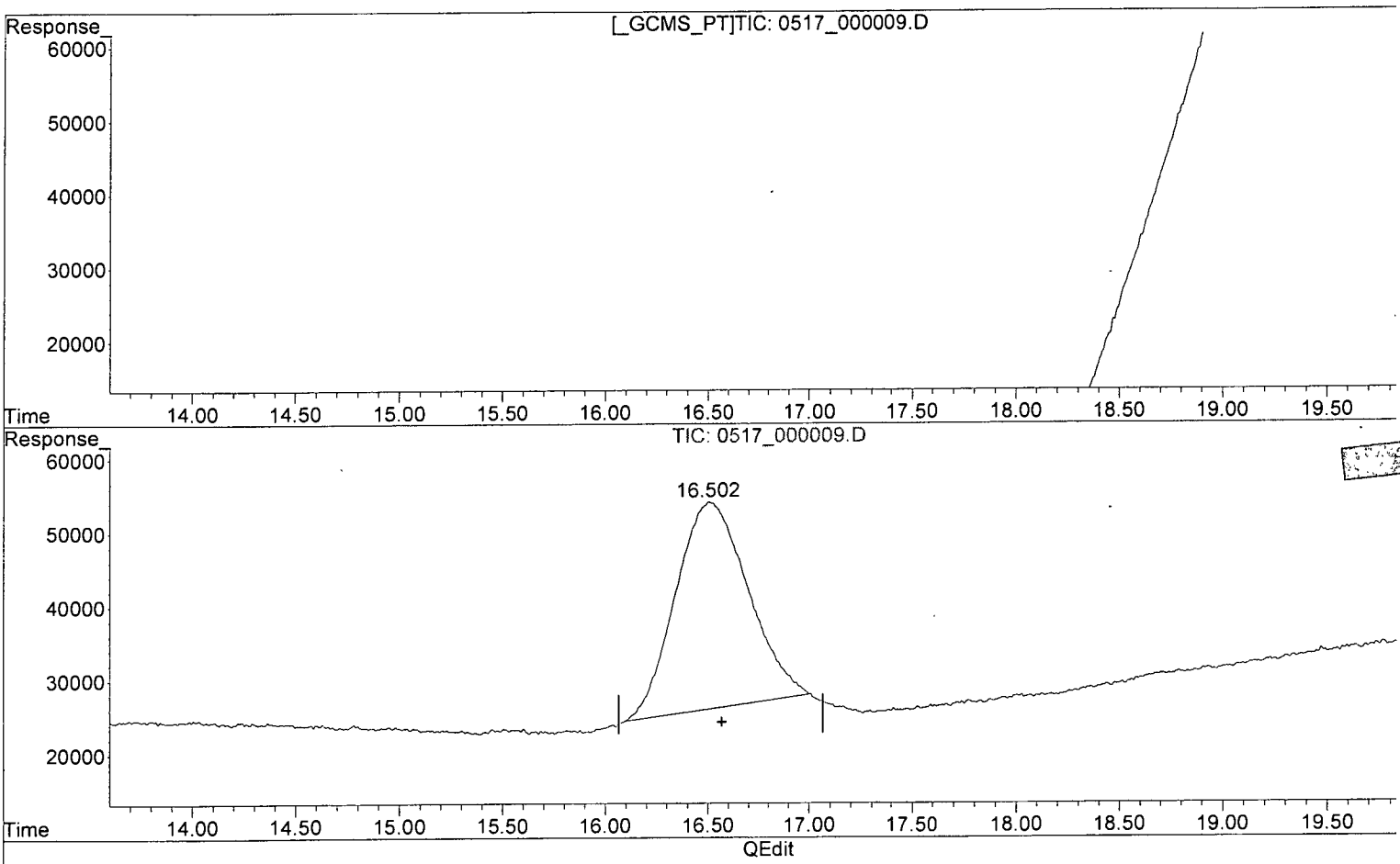
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:25:49
Operator : MP
Sample : 8330MXB_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4101 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:16 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(14) 3,5-DINITROANILINE (TM)

0.000min 0.000 ppb

response 0

(14) 3,5-DINITROANILINE #2 (TM)

16.504min 14.034 ppb

response 28013

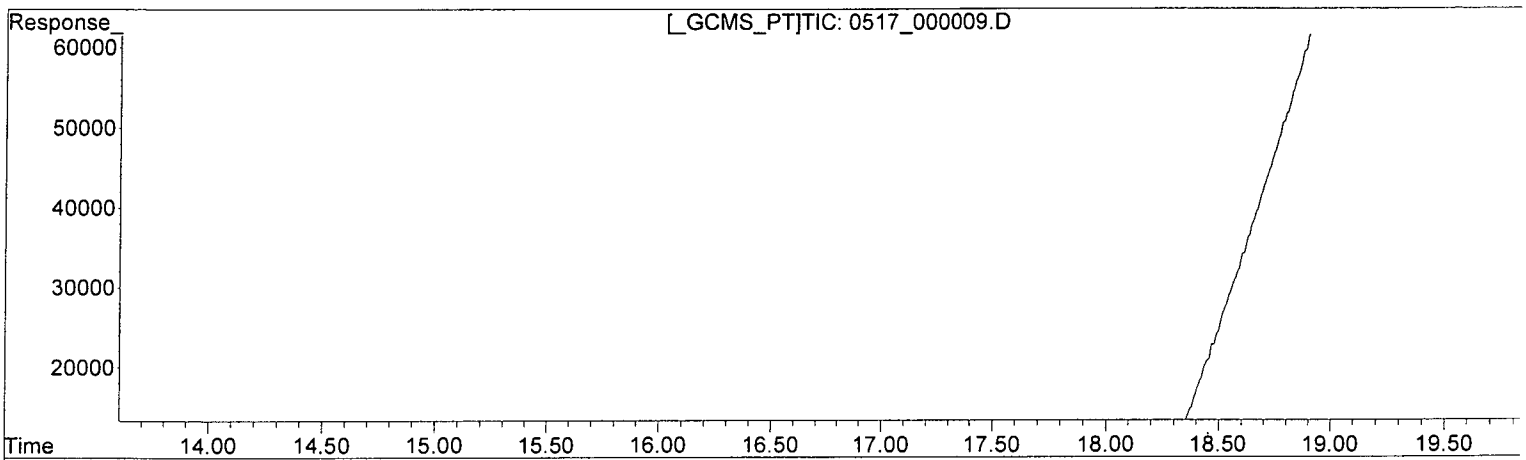
(+) = Expected Retention Time

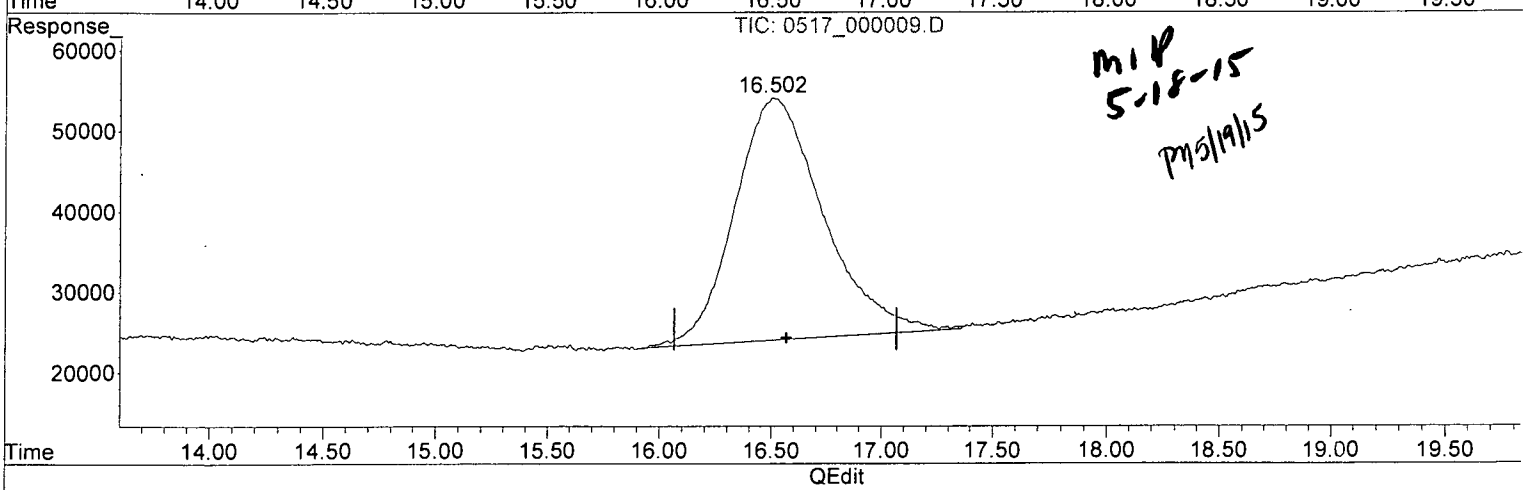
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000009.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 20:25:49
Operator : MP
Sample : 8330MXB_CB 0.020 PPM 05/16/15
Misc :
ALS Vial : 4101 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:16 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





(14) 3,5-DINITROANILINE (TM)

0.000min 0.000 ppb

response 0

(14) 3,5-DINITROANILINE #2 (TM)

16.502min 15.073 ppb m

response 30087

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000010.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:05:20
Operator : MP
Sample : 8330MXA_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4102 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:55:04 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	8.081	0	74786	N.D.	35.447 #
	Spiked Amount 62.500			Recovery	=	0.00%	56.72%
	Target Compounds						
1)	TM HMX	0.000	4.065	0	80920	N.D.	38.481m#
2)	TM RDX	0.000	6.403	0	69355	N.D.	37.446 #
3)	TM 1,3,5-TRI...	0.000	6.747	0	173729	N.D.	38.868 #
5)	TM 1,3-DINIT...	0.000	8.419	0	172151	N.D.	38.279 #
6)	TM NITROBENZENE	0.000	9.159	0	93001	N.D.	36.305 #
7)	TM 2,4,6-TRI...	0.000	11.432	0	89909	N.D.	35.415 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	11.956	11.955	52891	67907	NoCal	41.223 #
10)	TM 2,6-DINIT...	13.435	13.435	81214	53309	NoCal	36.091 #
11)	TM 2,4-DINIT...	0.000	14.033	0	93725	N.D.	37.200 #
12)	TM 2-NITROTO...	0.000	15.439	0	35208	N.D.	33.395 #
13)	TM 4-NITROTO...	0.000	16.863	0	29330	N.D.	33.489 #
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15)	TM 3-NITROTO...	0.000	18.049	0	35303	N.D.	33.018 #
16)	TM 4-AMINO-2...	0.000	18.658	0	56651	N.D.	40.437 #
17)	TM 2-AMINO-4...	0.000	19.602	0	72652	N.D.	35.640 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

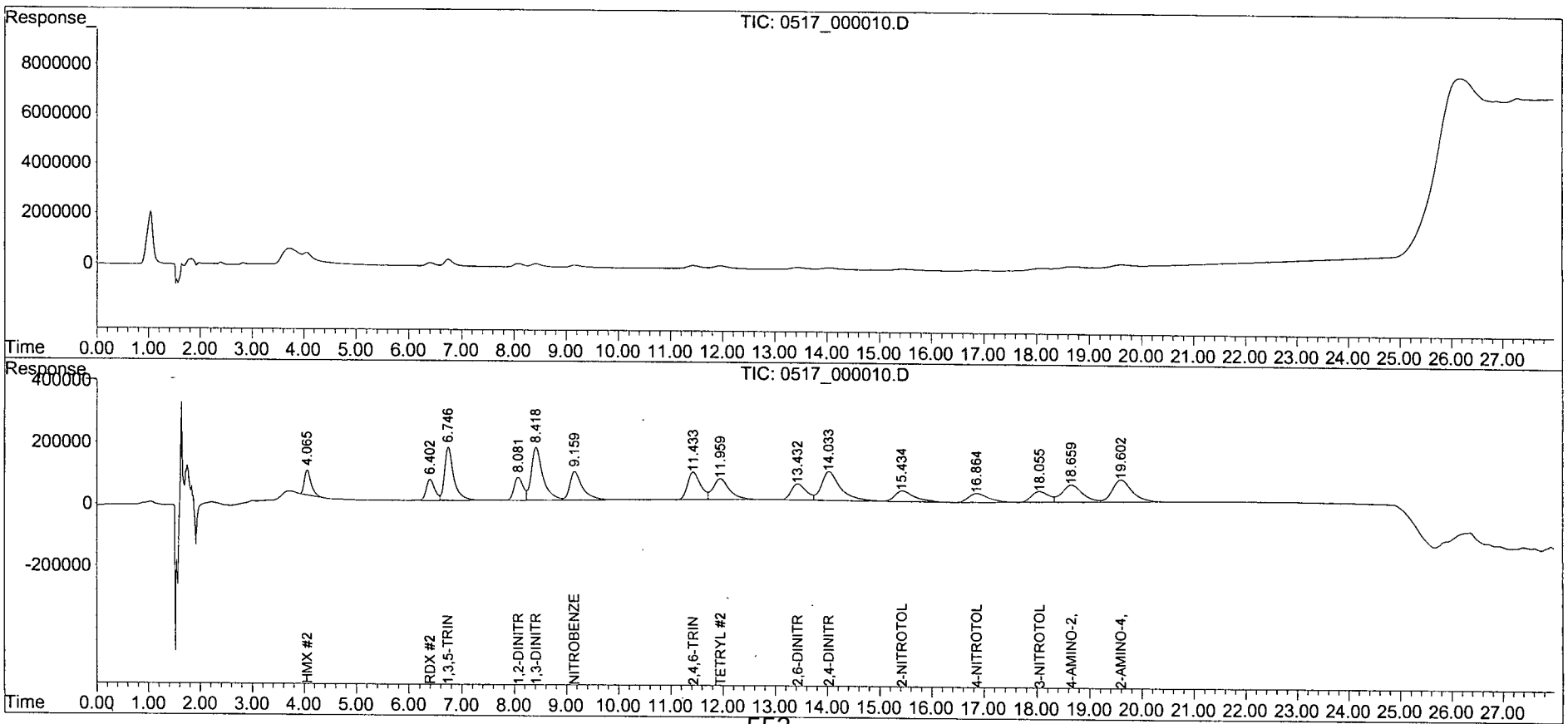
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000010.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:05:20
Operator : MP
Sample : 8330MXA_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4102 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:55:04 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

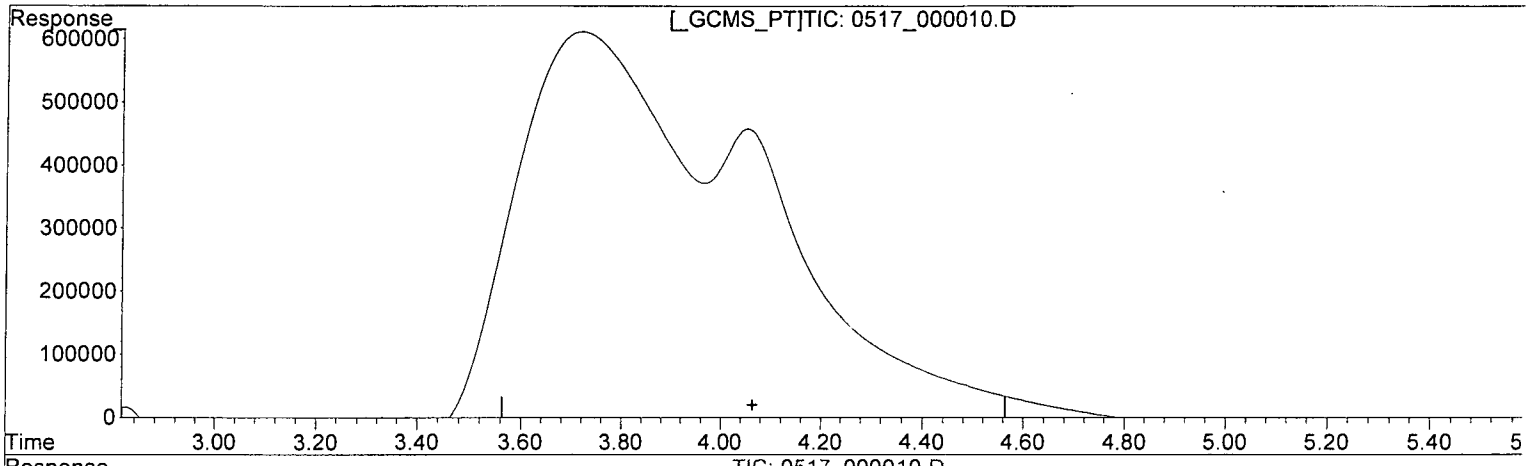


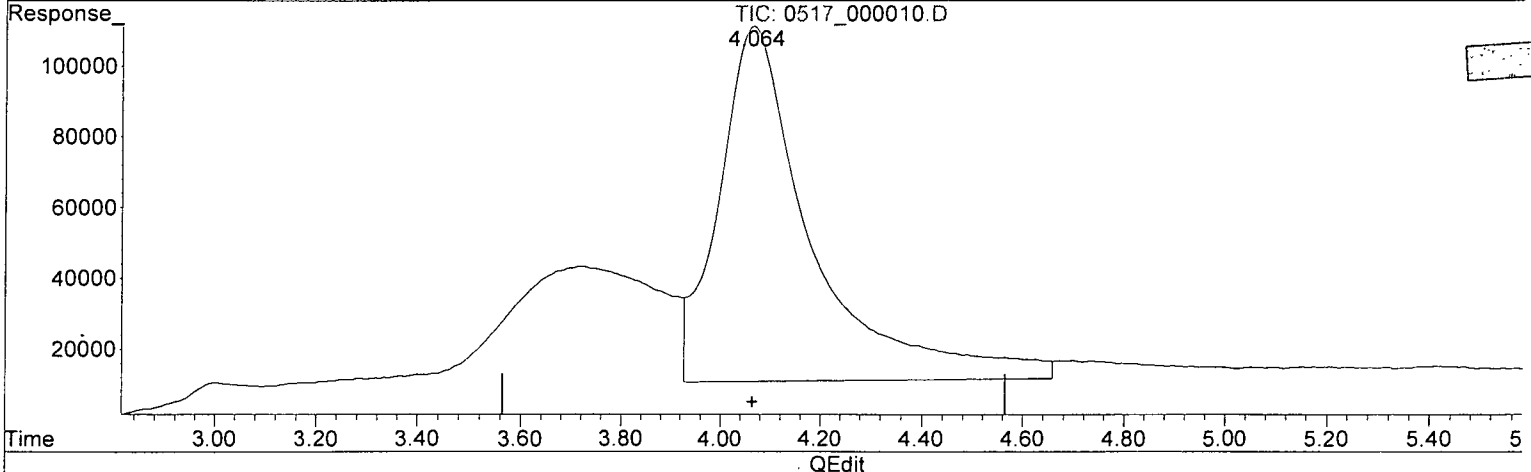
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000010.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:05:20
Operator : MP
Sample : 8330MXA_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4102 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:19 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.064min 47.735 ppb

response 100379

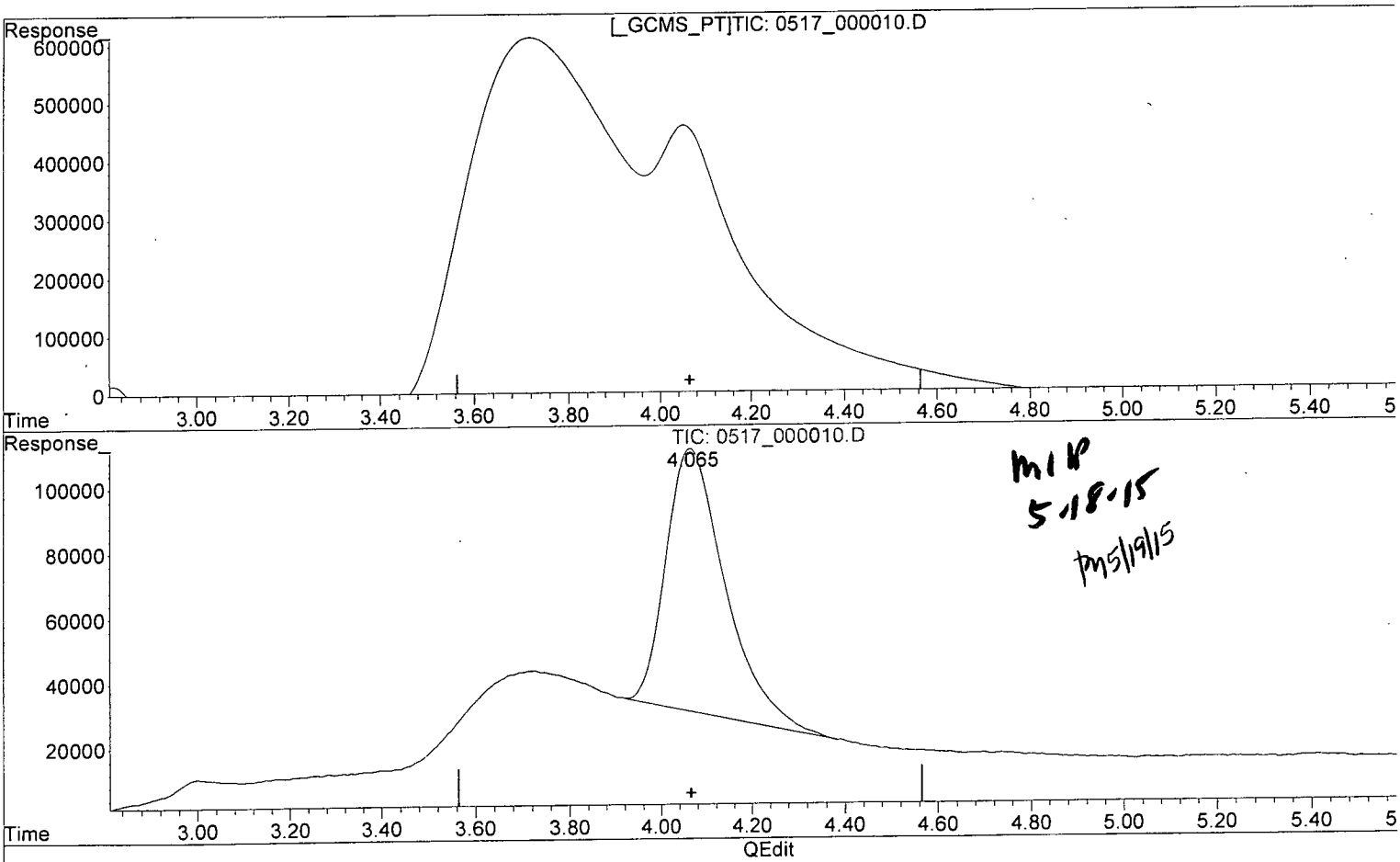
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000010.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:05:20
Operator : MP
Sample : 8330MXA_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4102 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:19 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



MLP
5.18.15
pm5/19/15

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.065min 38.481 ppb m

response 80920

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000011.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:44:53
Operator : MP
Sample : 8330MXB_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4103 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:53:57 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6)	TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7)	TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8)	TM NITROGLYC...	12.052	0.000	33674	0	36.975	N.D. d#
9)	TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10)	TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11)	TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13)	TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14)	TM 3,5-DINIT...	0.000	16.571	0	72972	N.D.	36.558 #
15)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	22.803	0.000	25694	0	28.159m	N.D. #

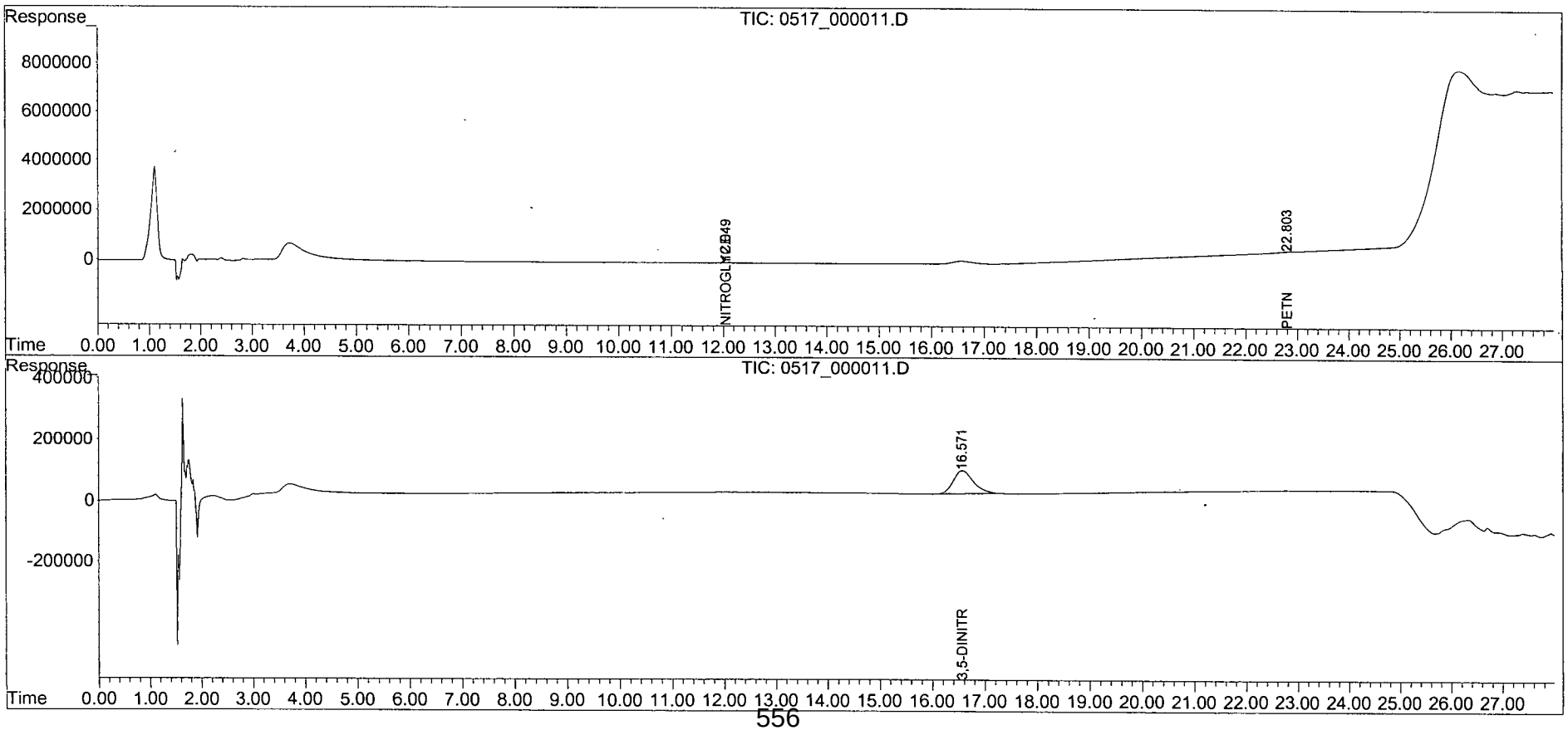
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000011.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:44:53
Operator : MP
Sample : 8330MXB_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4103 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:53:57 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

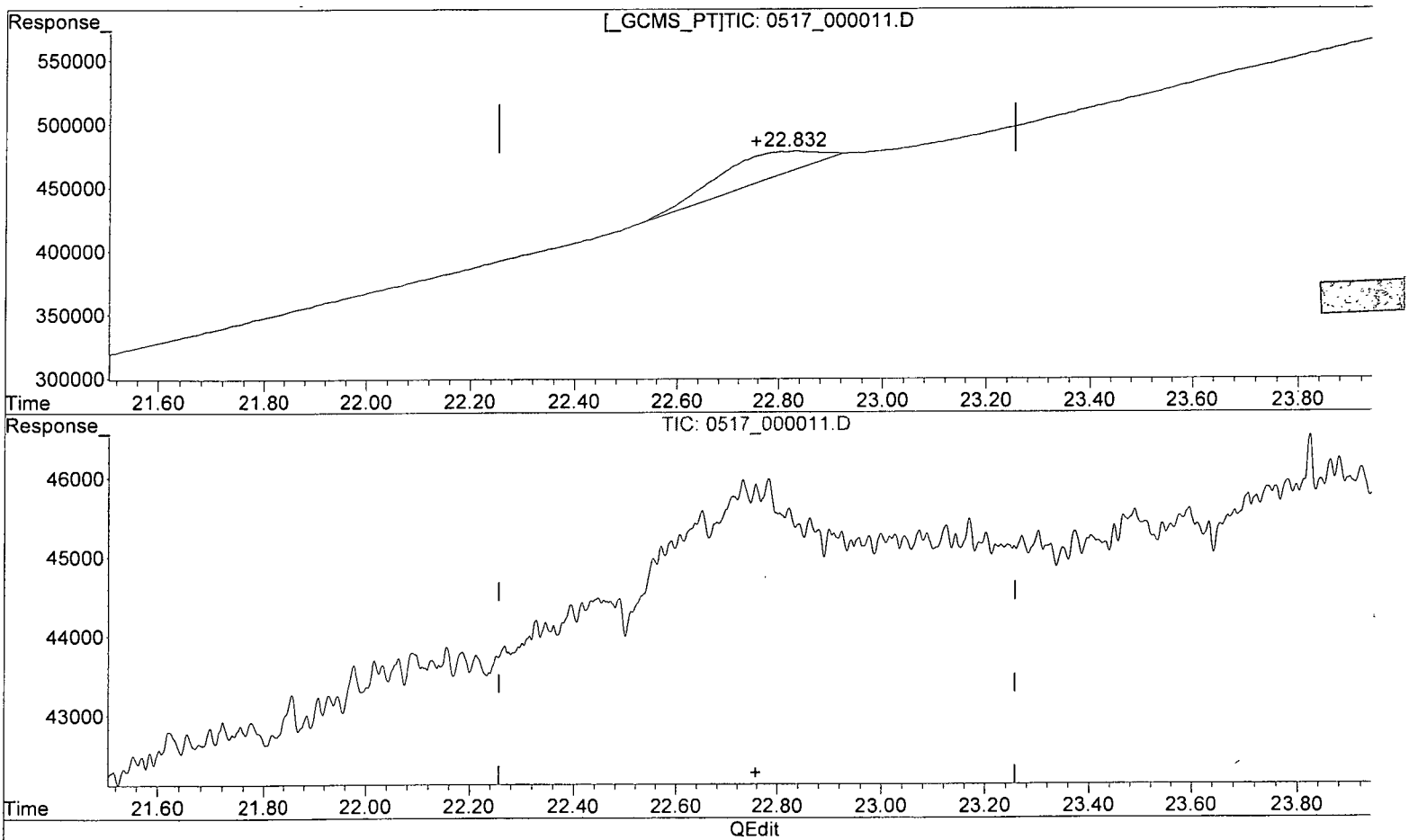


Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000011.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:44:53
Operator : MP
Sample : 8330MXB_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4103 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:22 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



QEdit

(18) PETN (TM)

22.832min 15.863 ppb

response 14474

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

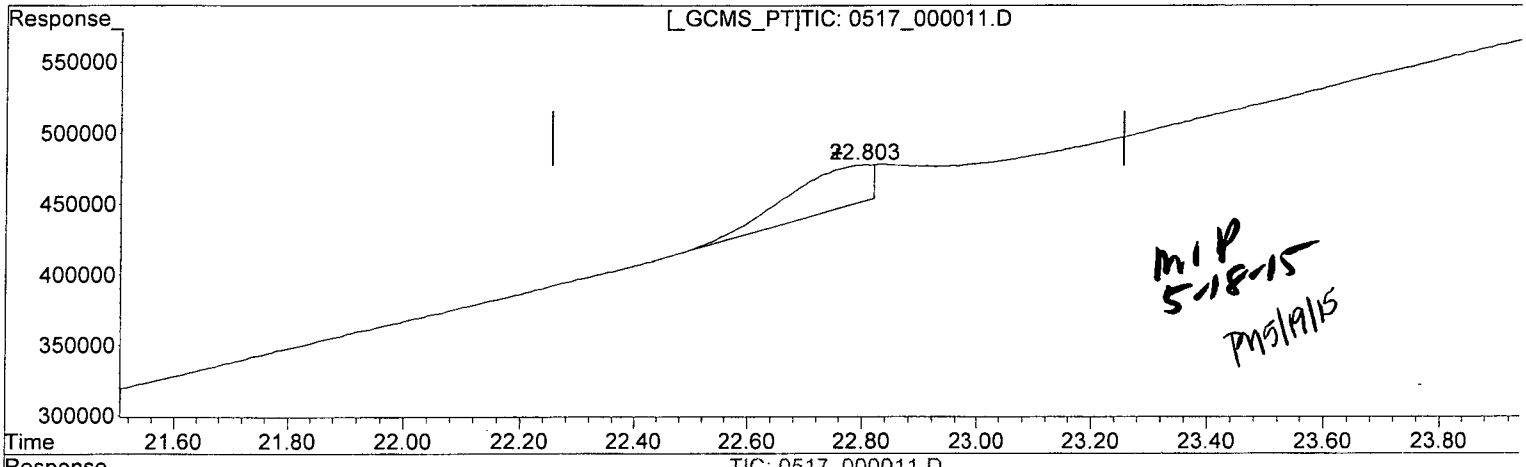
(+) = Expected Retention Time

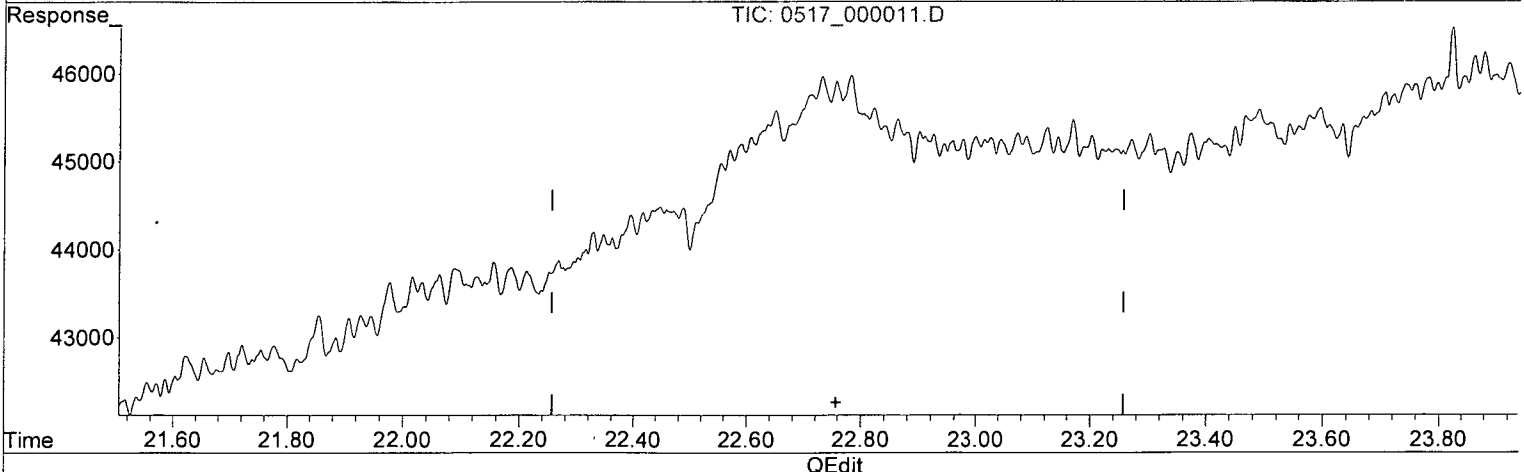
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000011.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 21:44:53
Operator : MP
Sample : 8330MXB_CB 0.050 PPM 05/16/15
Misc :
ALS Vial : 4103 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:22 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(18) PETN (TM)

22.803min 28.159 ppb m

response 25694

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000012.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 22:24:23
Operator : MP
Sample : 8330MXA_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4104 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:52:29 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	8.087	0	150523	N.D.	71.345 #
	Spiked Amount 62.500			Recovery =		0.00%	114.15%
	Target Compounds						
1)	TM HMX	0.000	4.068	0	164823	N.D.	78.381m#
2)	TM RDX	0.000	6.409	0	138854	N.D.	74.970 #
3)	TM 1,3,5-TRI...	0.000	6.751	0	348991	N.D.	78.080 #
5)	TM 1,3-DINIT...	0.000	8.424	0	345676	N.D.	76.863 #
6)	TM NITROBENZENE	0.000	9.163	0	183520	N.D.	71.641 #
7)	TM 2,4,6-TRI...	0.000	11.436	0	179653	N.D.	70.765 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	11.961	11.959	108202	136671	NoCal	82.967 #
10)	TM 2,6-DINIT...	13.436	13.434	163905	106555	NoCal	72.139 #
11)	TM 2,4-DINIT...	0.000	14.034	0	187343	N.D.	74.356 #
12)	TM 2-NITROTO...	0.000	15.440	0	68898	N.D.	65.349 #
13)	TM 4-NITROTO...	0.000	16.857	0	59612	N.D.	68.065 #
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15)	TM 3-NITROTO...	0.000	18.045	0	70355	N.D.	65.800 #
16)	TM 4-AMINO-2...	0.000	18.663	0	114531	N.D.	81.752 #
17)	TM 2-AMINO-4...	0.000	19.607	0	146900	N.D.	72.064 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

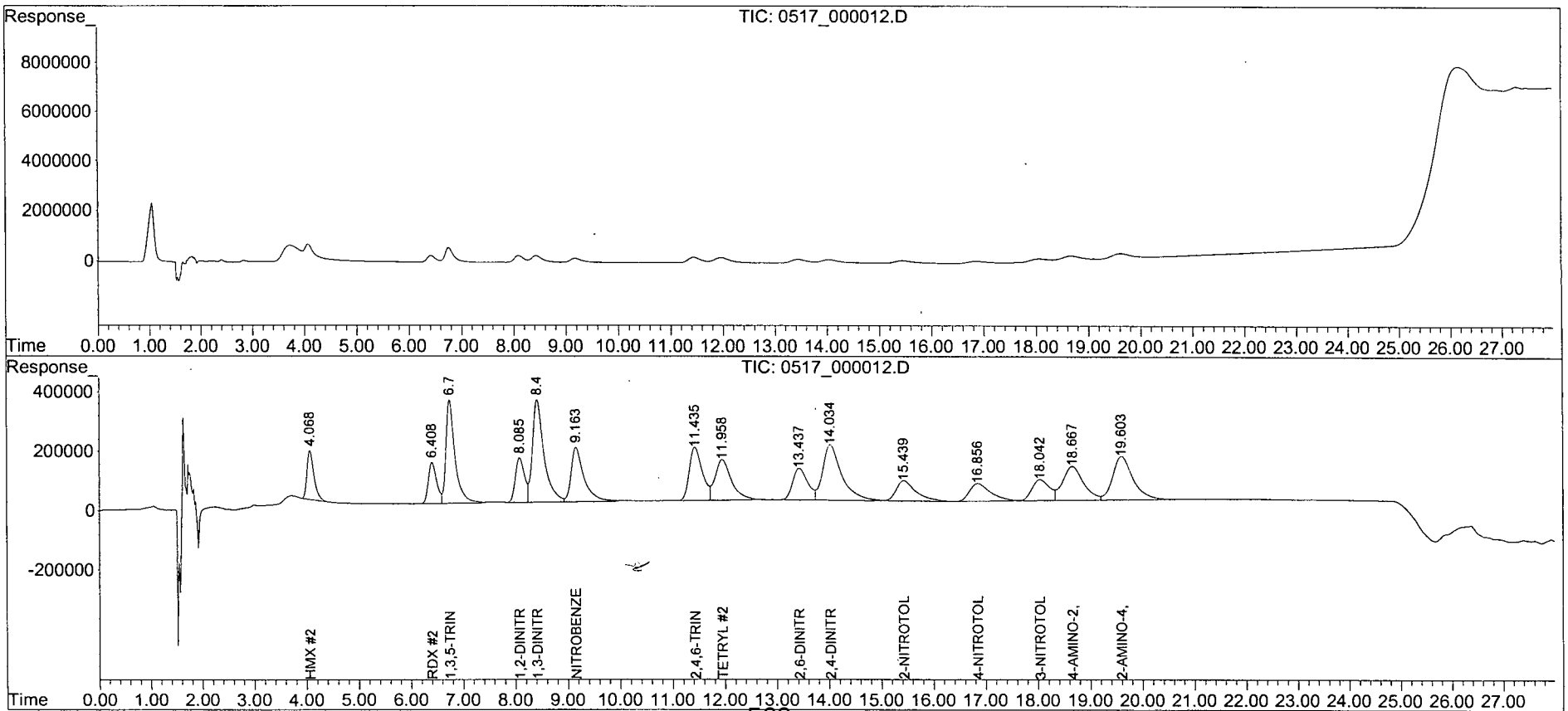
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000012.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 22:24:23
Operator : MP
Sample : 8330MXA_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4104 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:52:29 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

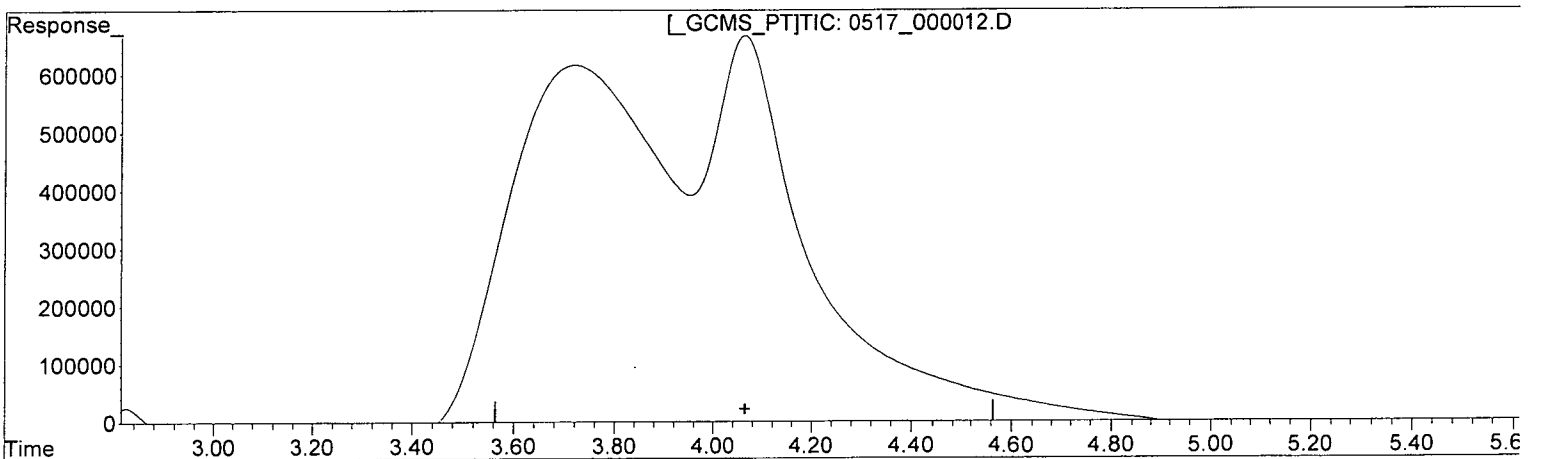


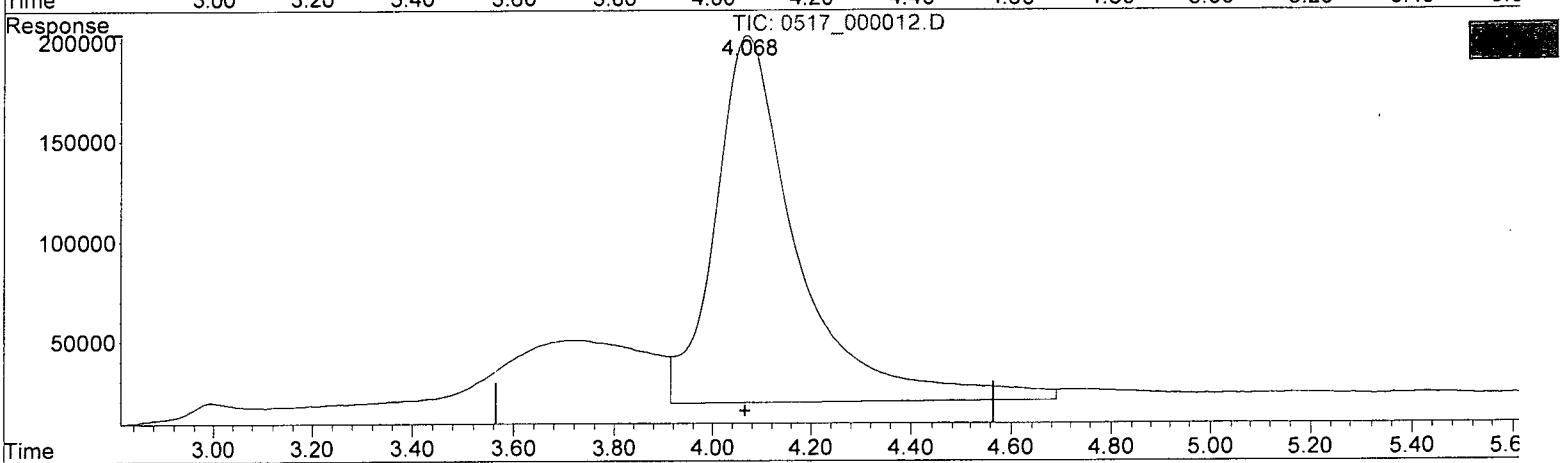
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000012.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 22:24:23
Operator : MP
Sample : 8330MXA_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4104 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:25 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.069min 87.286 ppb

response 183550

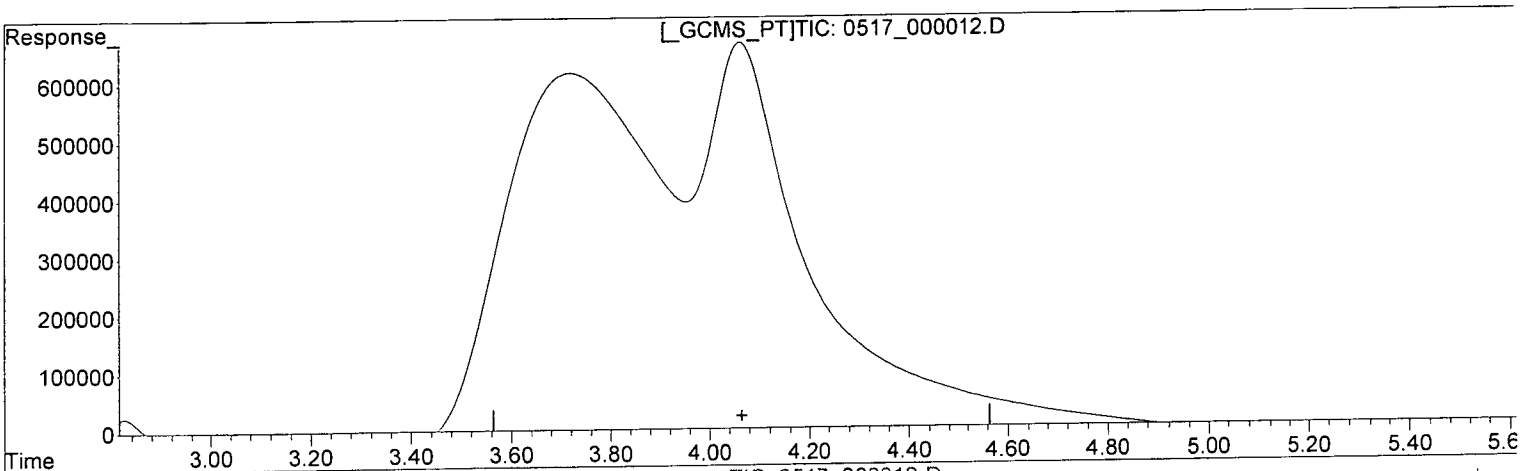
(+) = Expected Retention Time

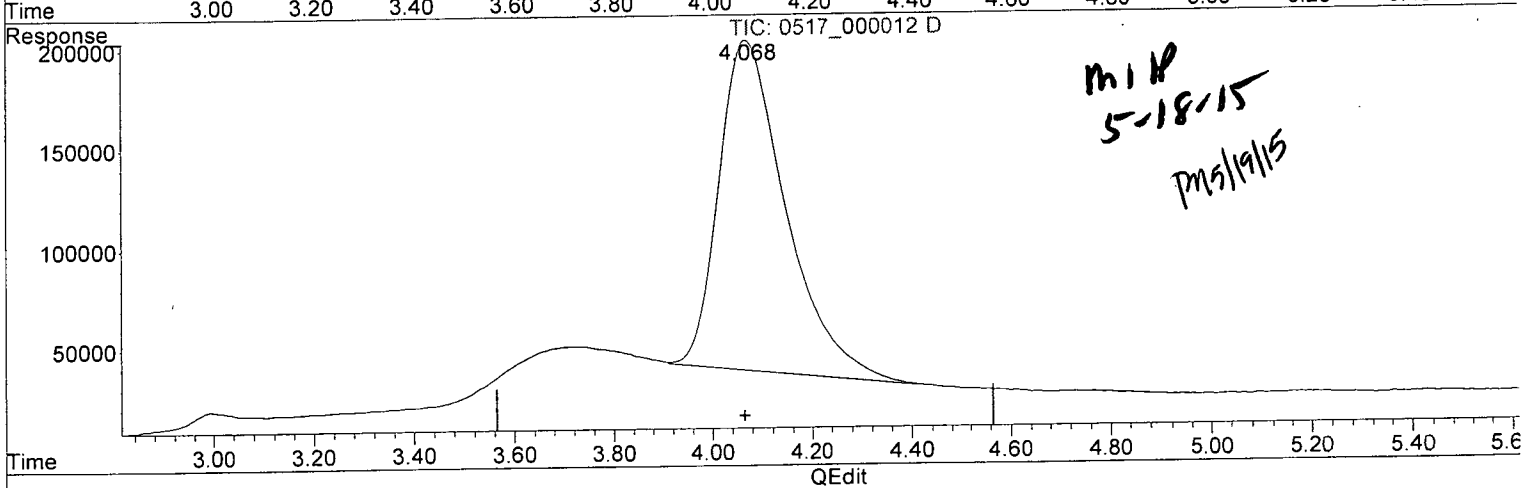
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000012.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 22:24:23
Operator : MP
Sample : 8330MXA_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4104 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:25 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MLP 5-18-15

PMS 5/19/15

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.068min 78.381 ppb m

response 164823

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000013.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:03:54
Operator : MP
Sample : 8330MXB_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4160 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:51:26 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6)	TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7)	TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8)	TM NITROGLYC...	12.038	0.000	65041	0	71.418	N.D. d#
9)	TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10)	TM 2,6-DINIT...	13.448	0.000	550	0	NoCal	N.D.
11)	TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13)	TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14)	TM 3,5-DINIT...	0.000	16.568	0	148811	N.D.	74.552 #
15)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	22.782	0.000	63459	0	69.547m	N.D. #

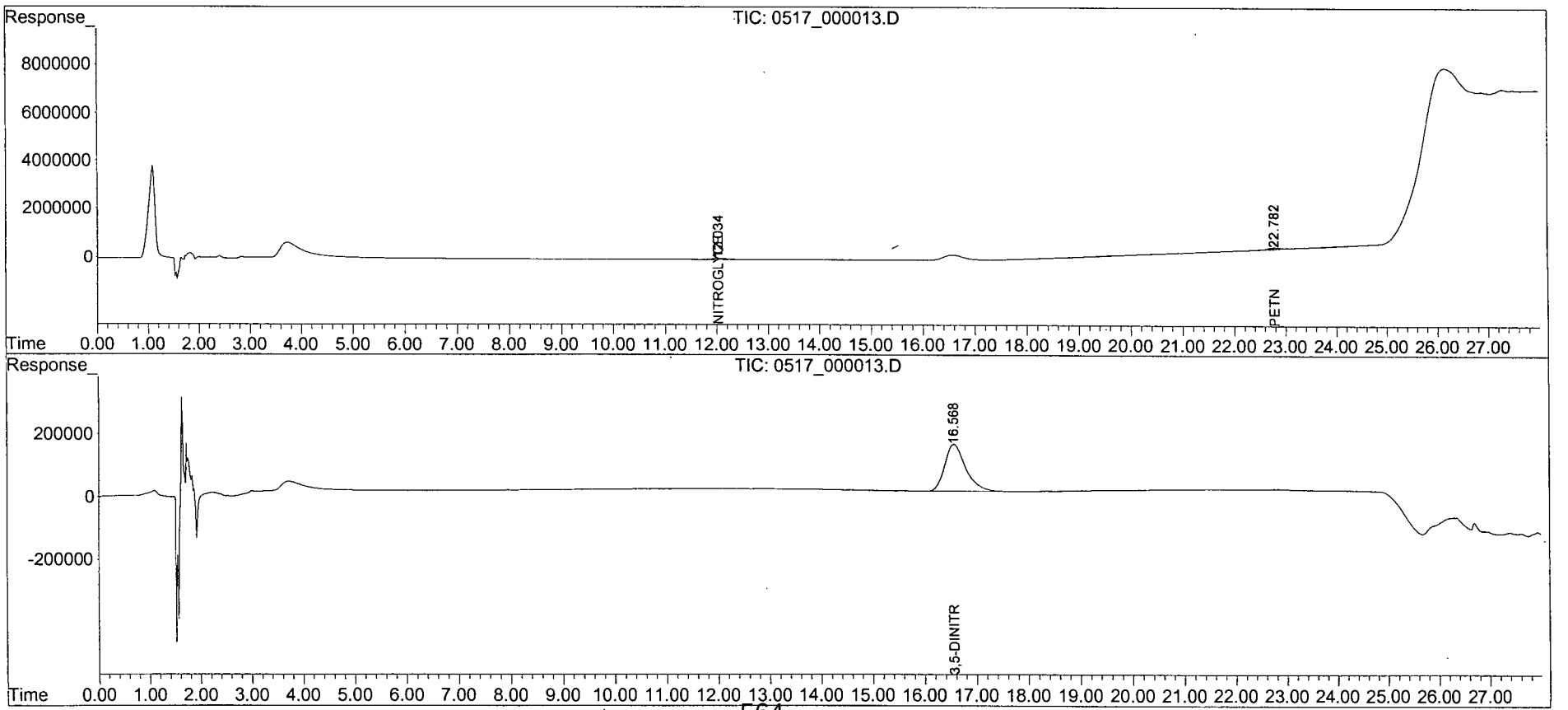
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000013.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:03:54
Operator : MP
Sample : 8330MXB_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4160 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:51:26 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

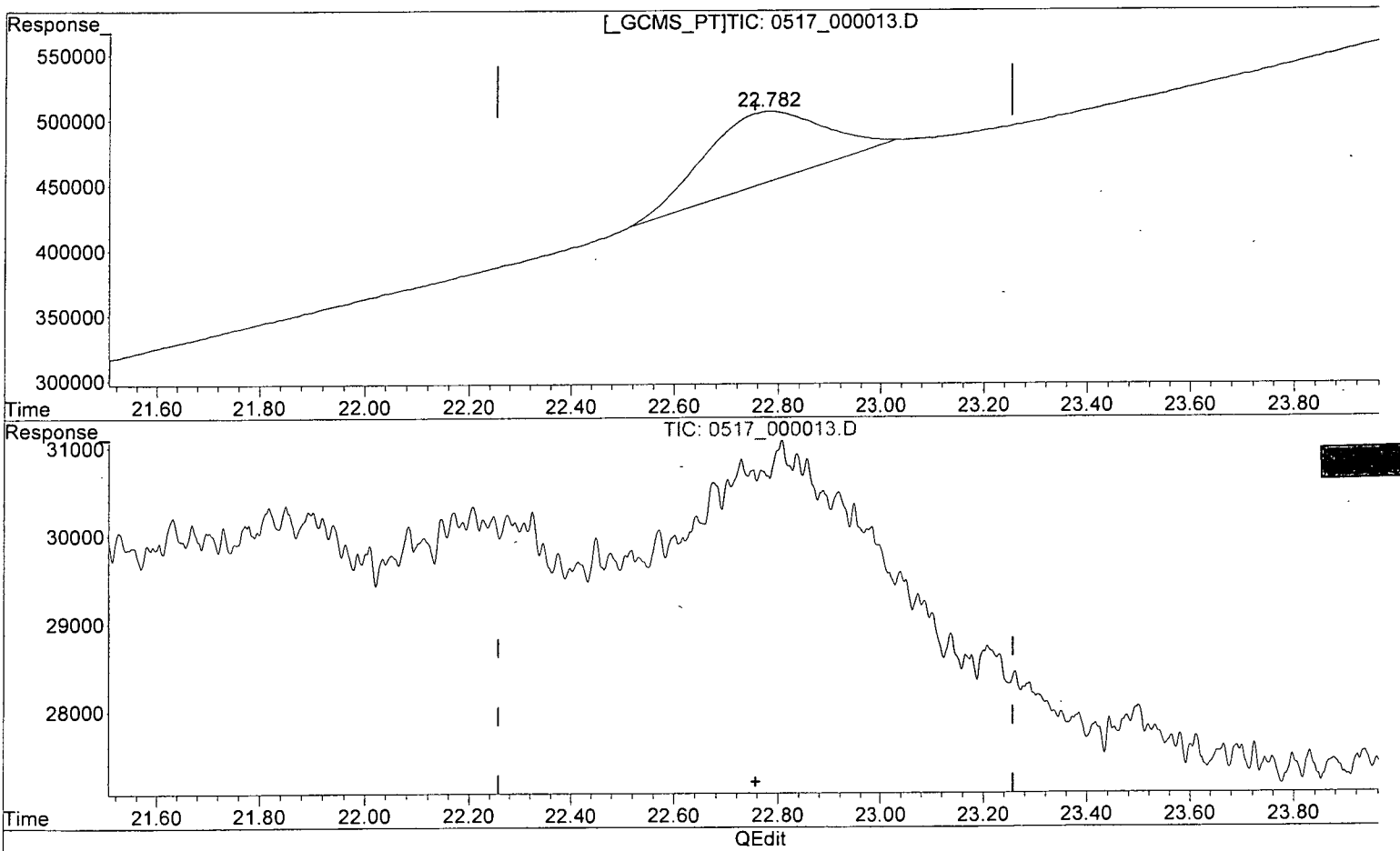


Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000013.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:03:54
Operator : MP
Sample : 8330MXB_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4160 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:28 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



(18) PETN (TM)

22.785min 58.639 ppb

response 53506

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

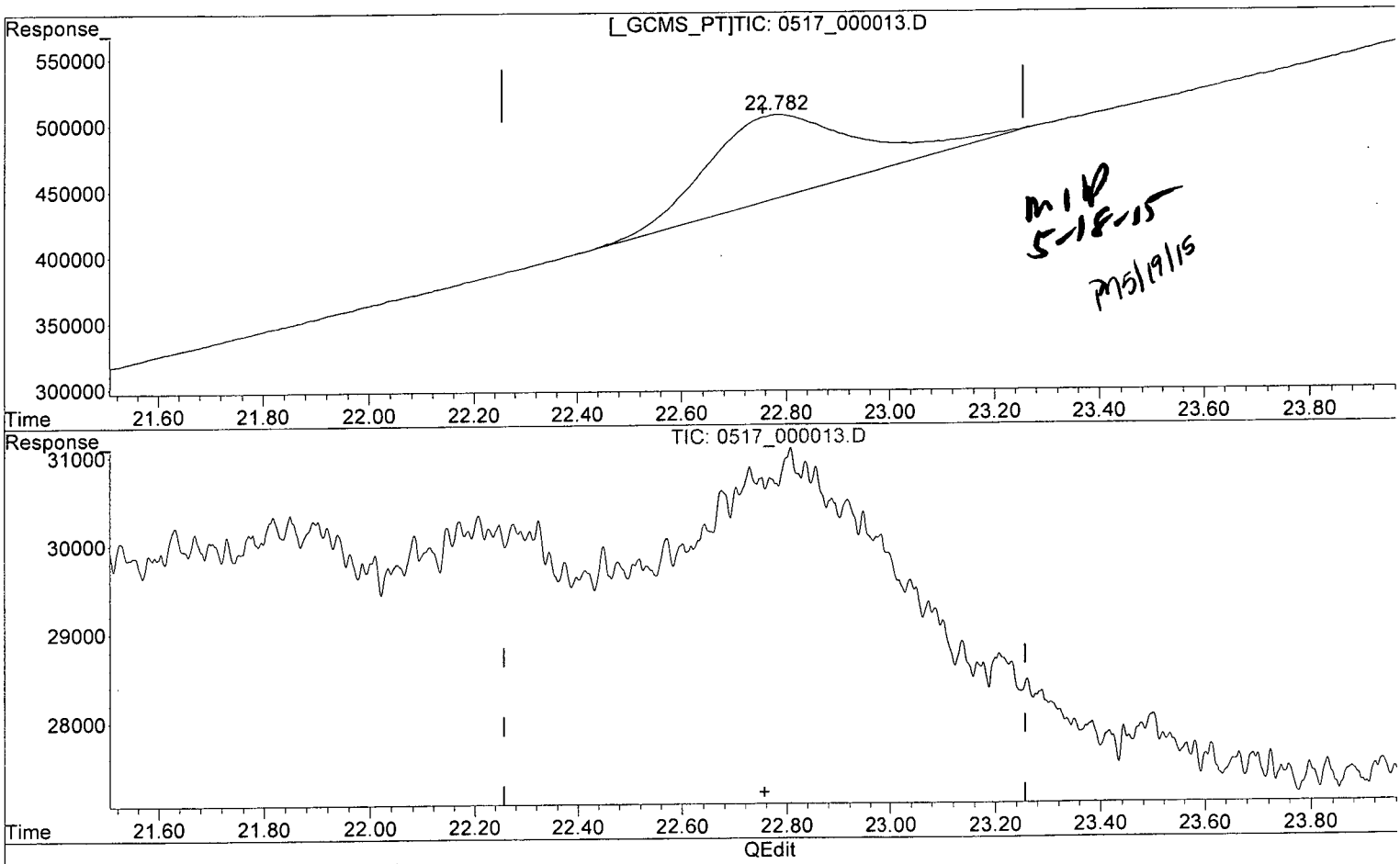
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000013.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:03:54
Operator : MP
Sample : 8330MXB_CB 0.10 PPM 05/16/15
Misc :
ALS Vial : 4160 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:28 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(18) PETN (TM)

22.782min 69.547 ppb m

response 63459

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:43:25
Operator : MP
Sample : 8330MXA_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4161 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:50:37 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	8.074	0	309240	N.D.	146.573 #
Spiked Amount 62.500			Recovery =		0.00%	234.52%
Target Compounds						
1) TM HMX	0.000	4.063	0	336074	N.D.	159.818m#
2) TM RDX	0.000	6.400	0	284260	N.D.	153.478 #
3) TM 1,3,5-TRI...	0.000	6.740	0	702696	N.D.	157.214 #
5) TM 1,3-DINIT...	0.000	8.413	0	706003	N.D.	156.983 #
6) TM NITROBENZENE	0.000	9.152	0	379993	N.D.	148.339 #
7) TM 2,4,6-TRI...	0.000	11.421	0	377296	N.D.	148.617 #
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM TETRYL	11.947	11.947	168212	239868	NoCal	145.612m#
10) TM 2,6-DINIT...	13.422	13.422	332780	227148	NoCal	153.782 #
11) TM 2,4-DINIT...	0.000	14.019	0	386438	N.D.	153.377 #
12) TM 2-NITROTO...	0.000	15.424	0	142816	N.D.	135.459 #
13) TM 4-NITROTO...	0.000	16.837	0	124638	N.D.	142.312 #
14) TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15) TM 3-NITROTO...	0.000	18.025	0	148644	N.D.	139.020 #
16) TM 4-AMINO-2...	0.000	18.655	0	232279	N.D.	165.800 #
17) TM 2-AMINO-4...	0.000	19.600	0	297208	N.D.	145.800 #
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.

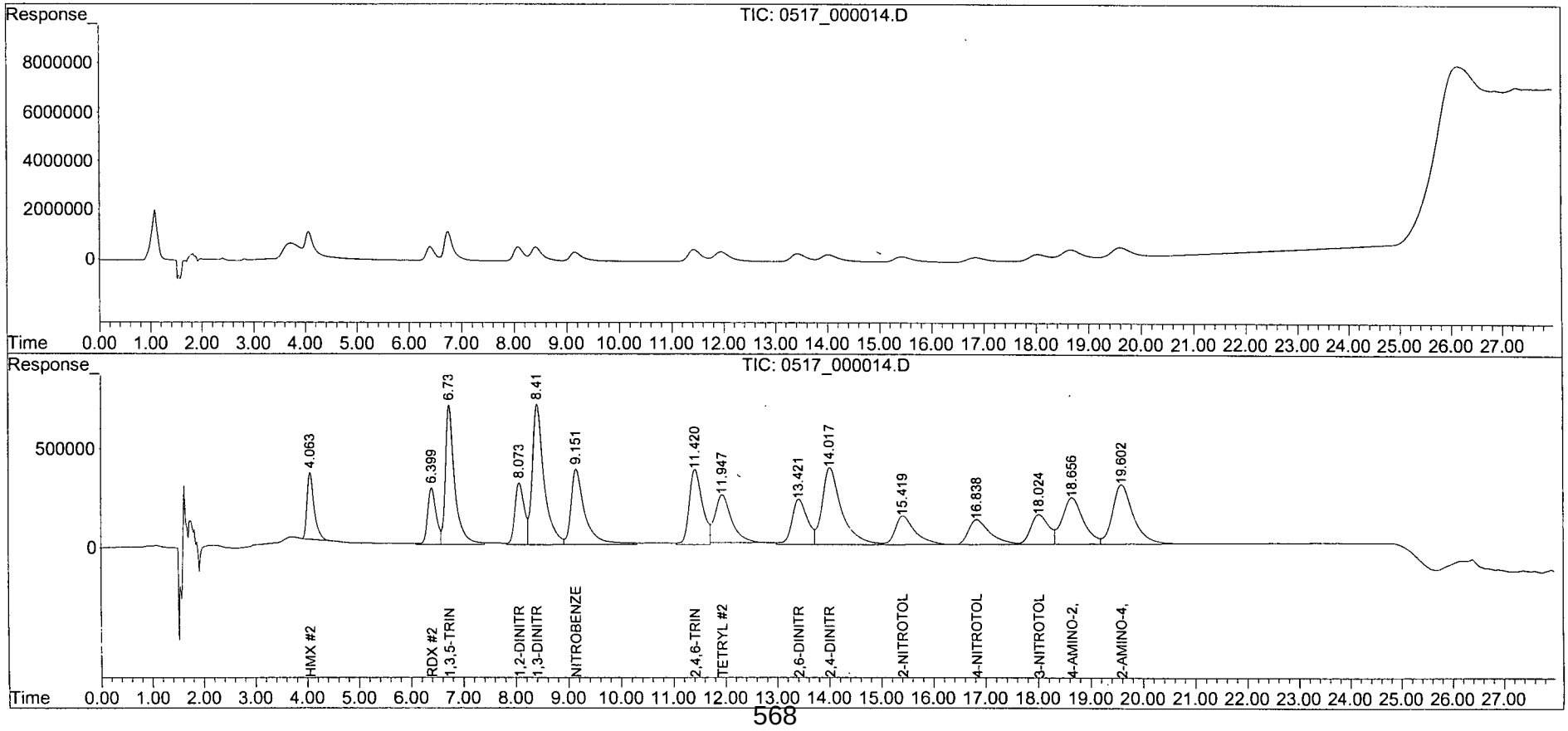
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:43:25
Operator : MP
Sample : 8330MXA_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4161 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:50:37 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

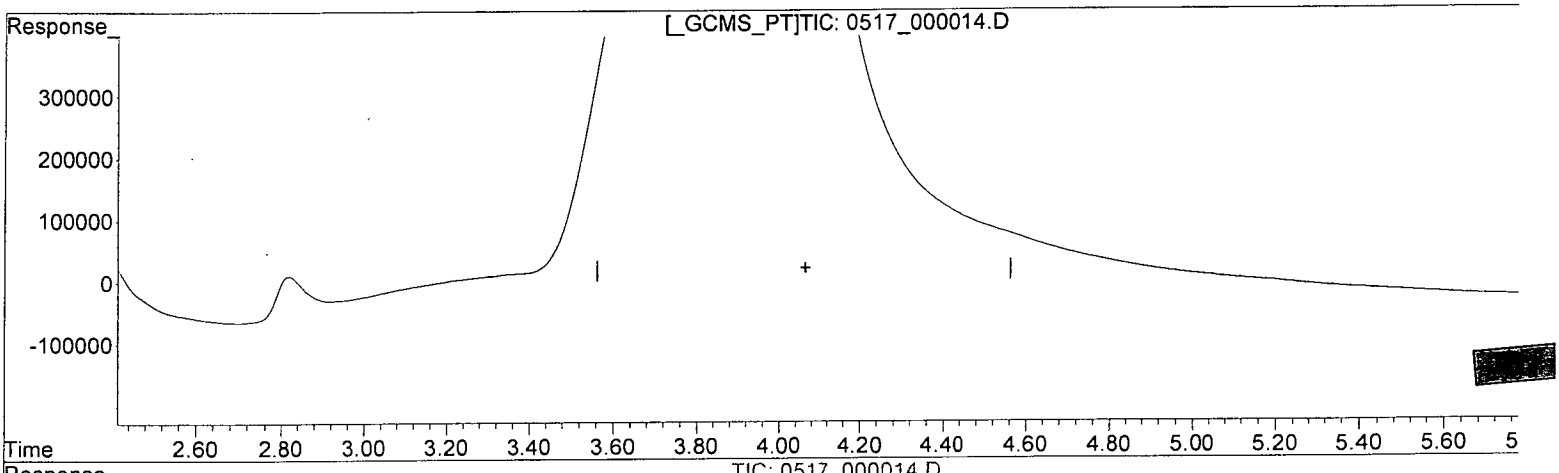


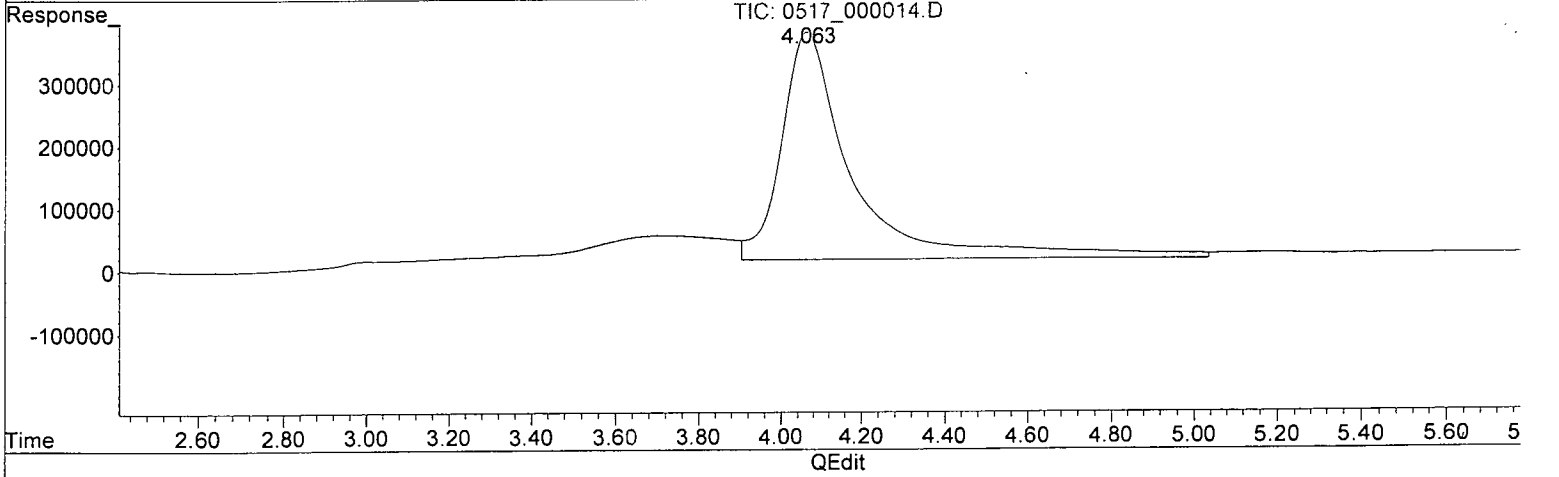
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:43:25
Operator : MP
Sample : 8330MXA_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4161 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:31 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.064min 172.619 ppb

response 362992

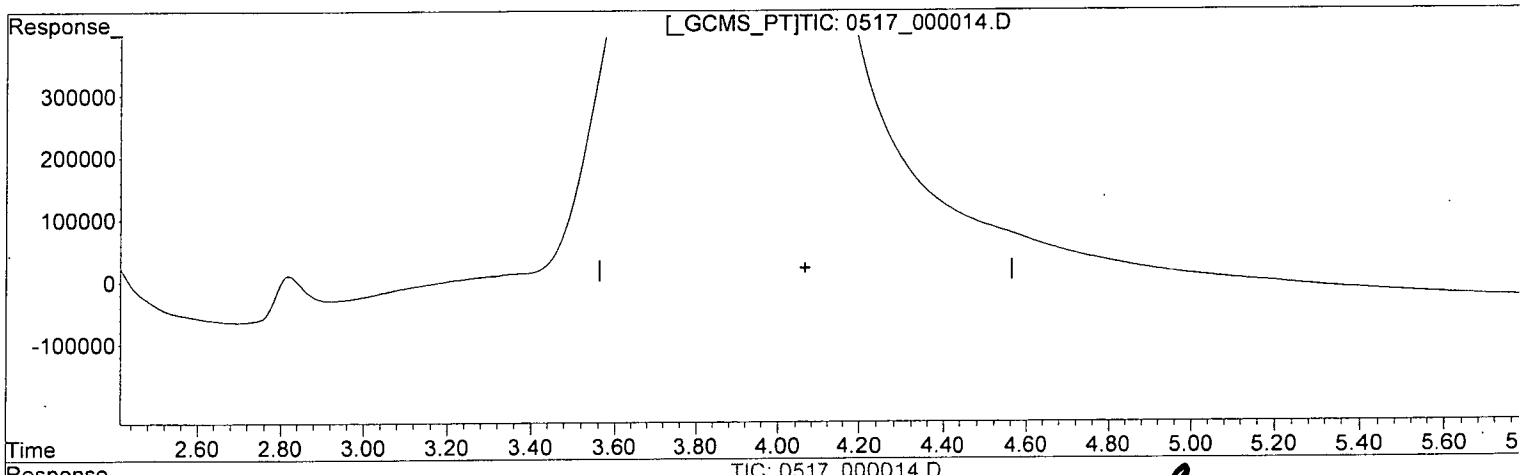
(+) = Expected Retention Time

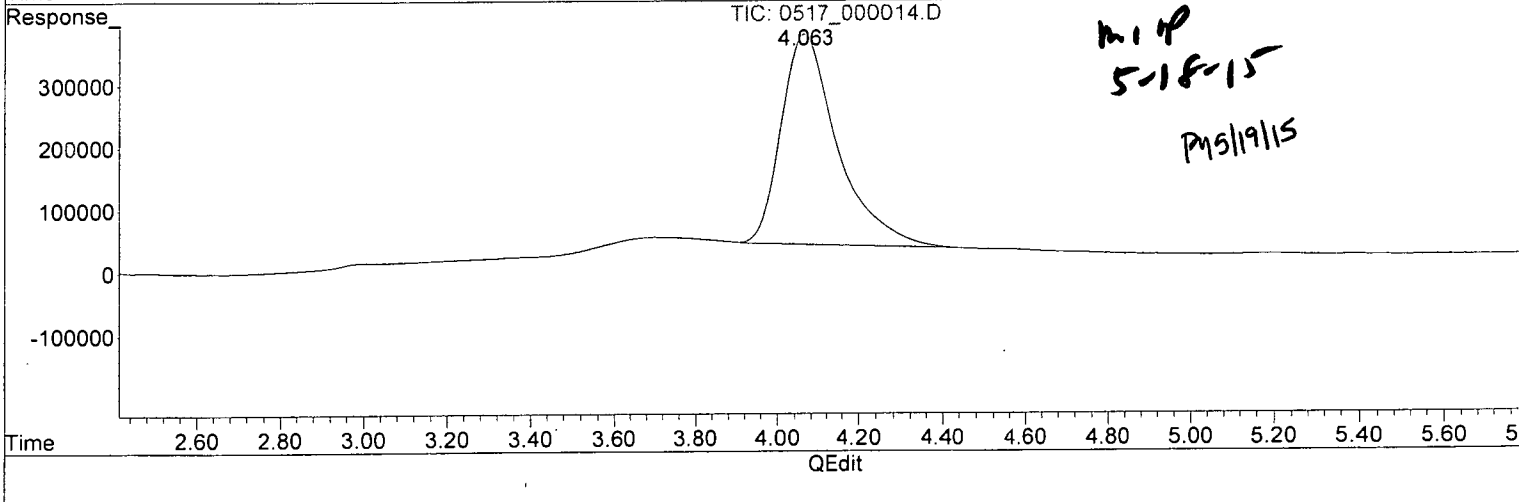
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:43:25
Operator : MP
Sample : 8330MXA_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4161 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:31 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





MP 5-18-15

PM 5/19/15

(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

4.063min 159.818 ppb m

response 336074

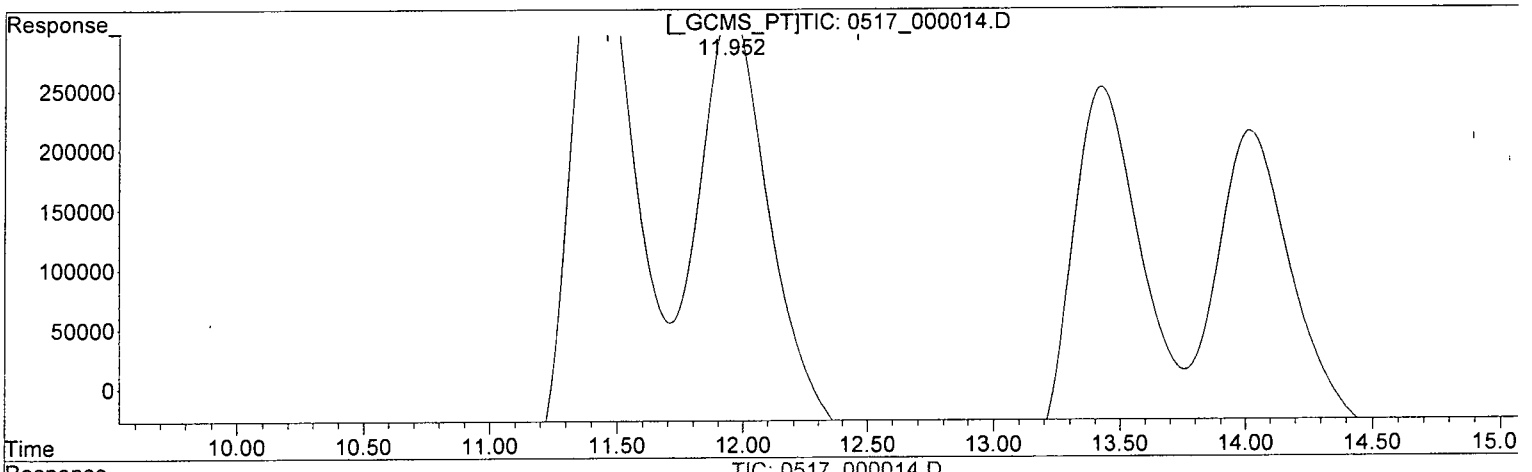
(+) = Expected Retention Time

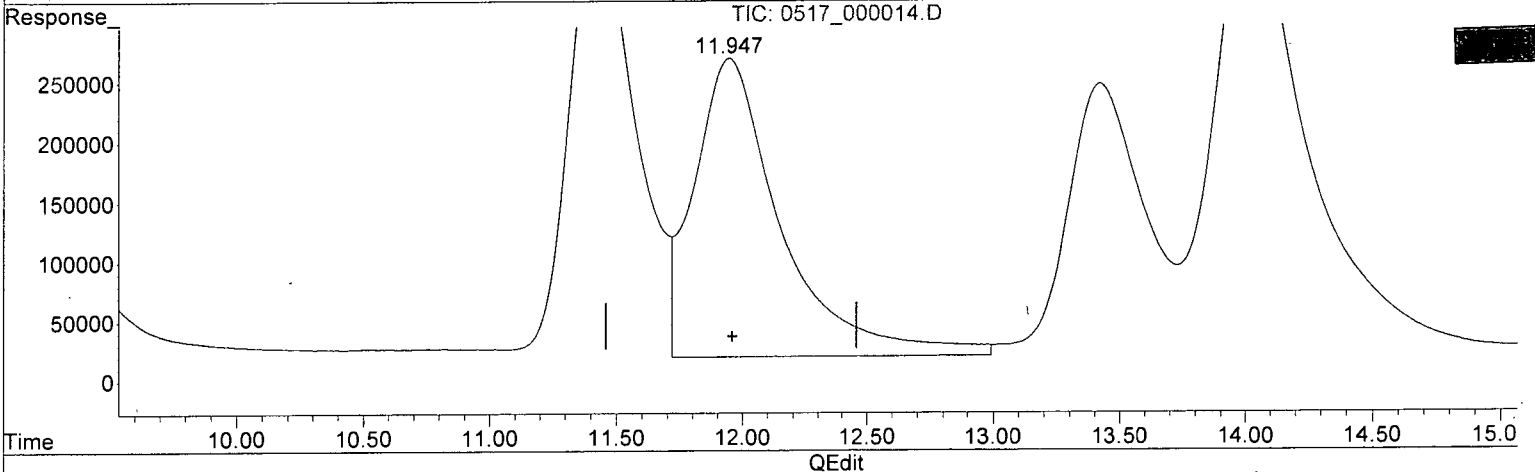
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:43:25
Operator : MP
Sample : 8330MXA_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4161 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:31 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(9) TETRYL (TM)

11.947min 0.000 ppb

response 168212

(9) TETRYL #2 (TM)

11.946min 151.586 ppb

response 249709

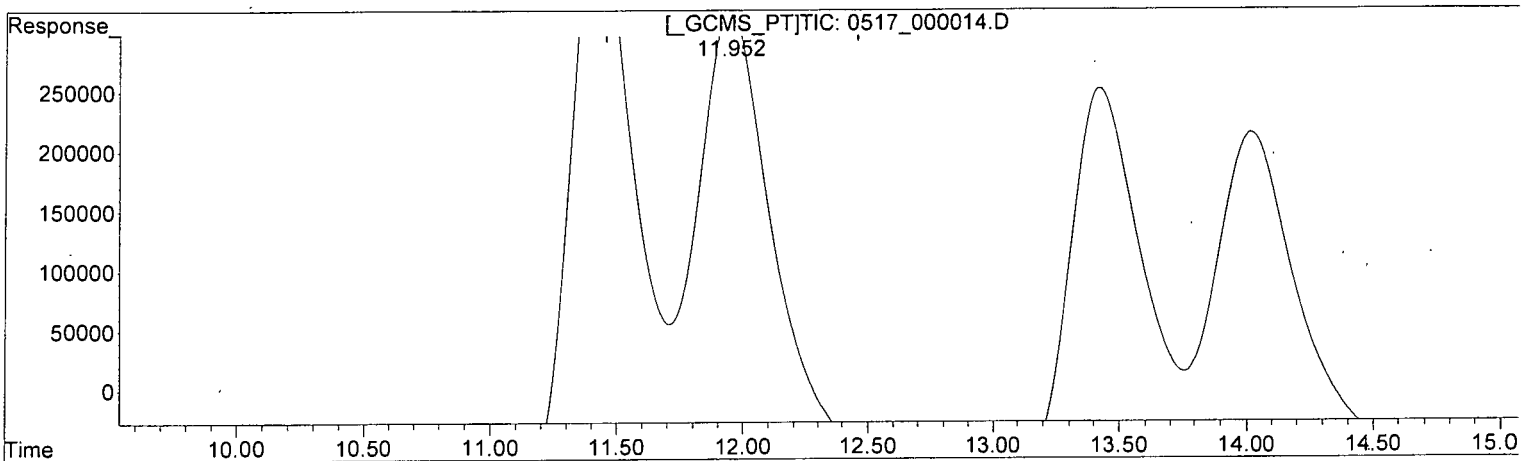
(+) = Expected Retention Time

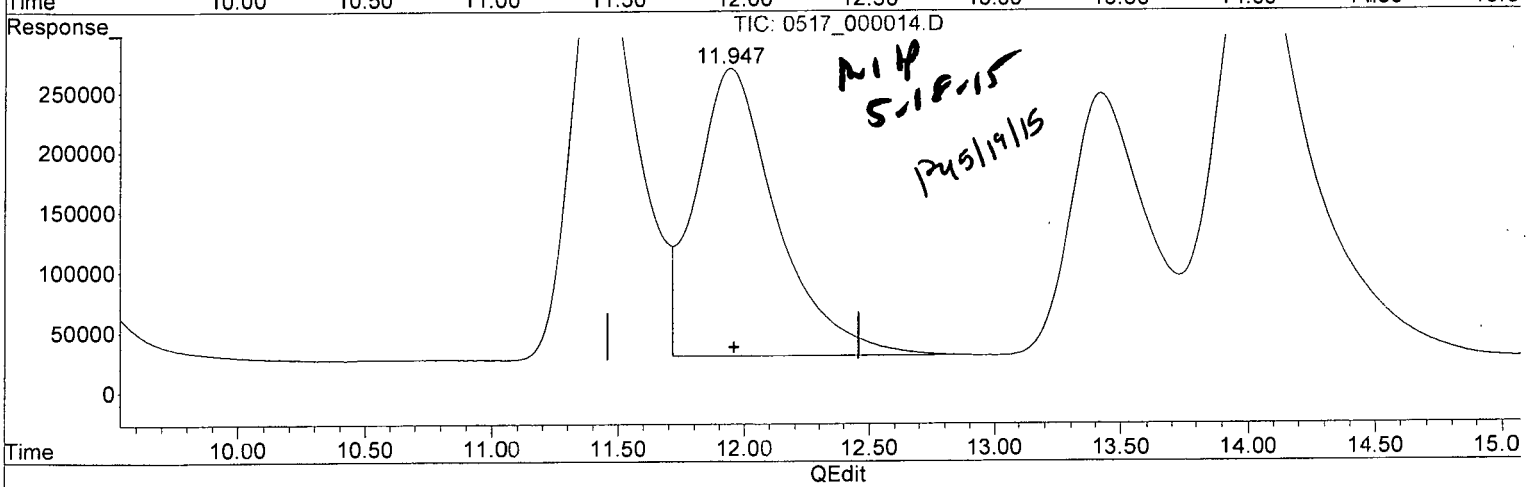
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000014.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 17-May-2015, 23:43:25
Operator : MP
Sample : 8330MXA_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4161 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:31 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





(9) TETRYL (TM)

11.947min 0.000 ppb

response 168212

(9) TETRYL #2 (TM)

11.947min 145.612 ppb m

response 239868

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000015.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 00:22:57
Operator : MP
Sample : 8330MXB_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4162 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:49:03 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount 62.500			Recovery	=	0.00%	0.00%
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM NITROGLYC...	12.039	0.000	133076	0	146.124	N.D. d#
9) TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM 3,5-DINIT...	0.000	16.575	0	304187	N.D.	152.393 #
15) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	22.768	0.000	133455	0	146.258m	N.D. #

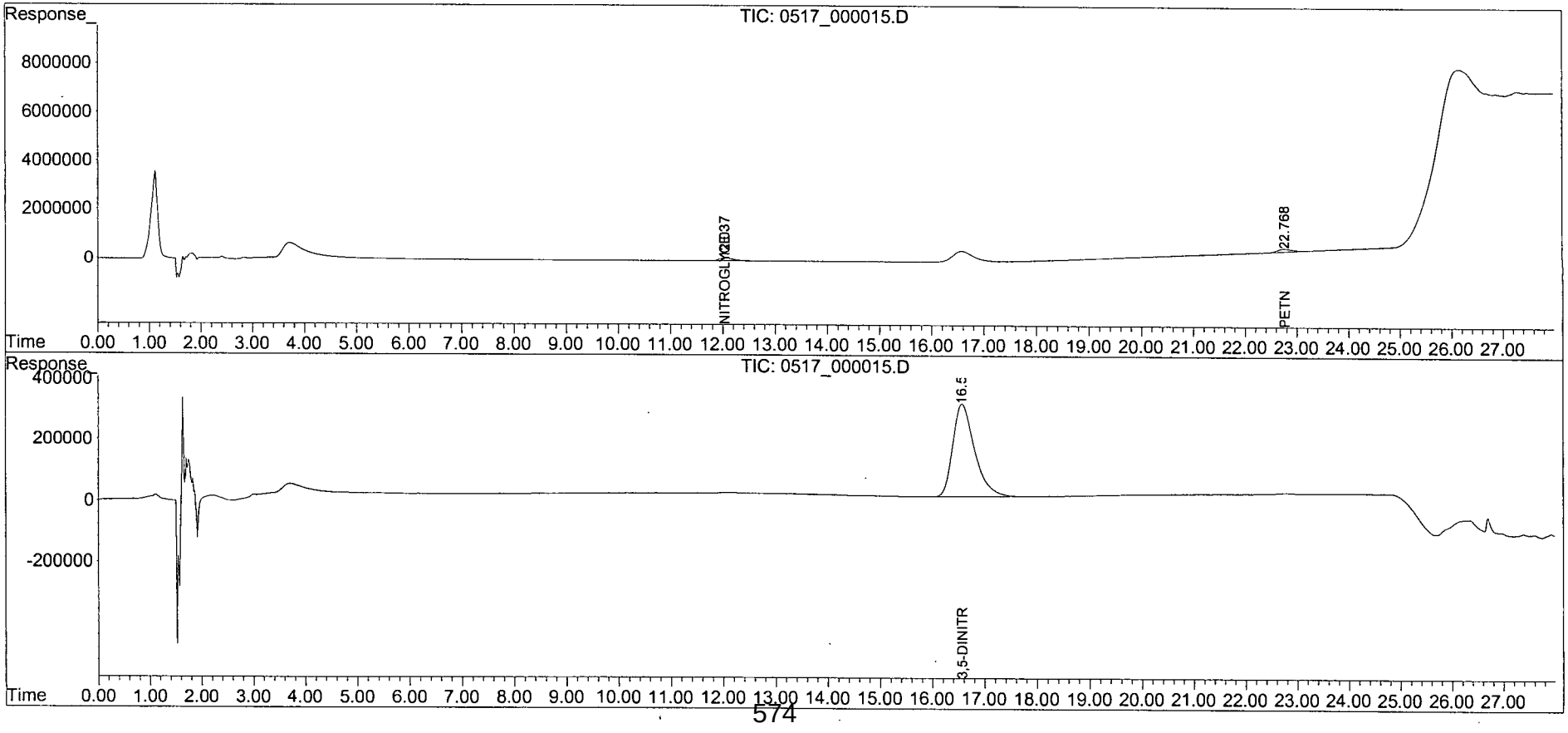
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000015.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 00:22:57
Operator : MP
Sample : 8330MXB_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4162 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:49:03 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



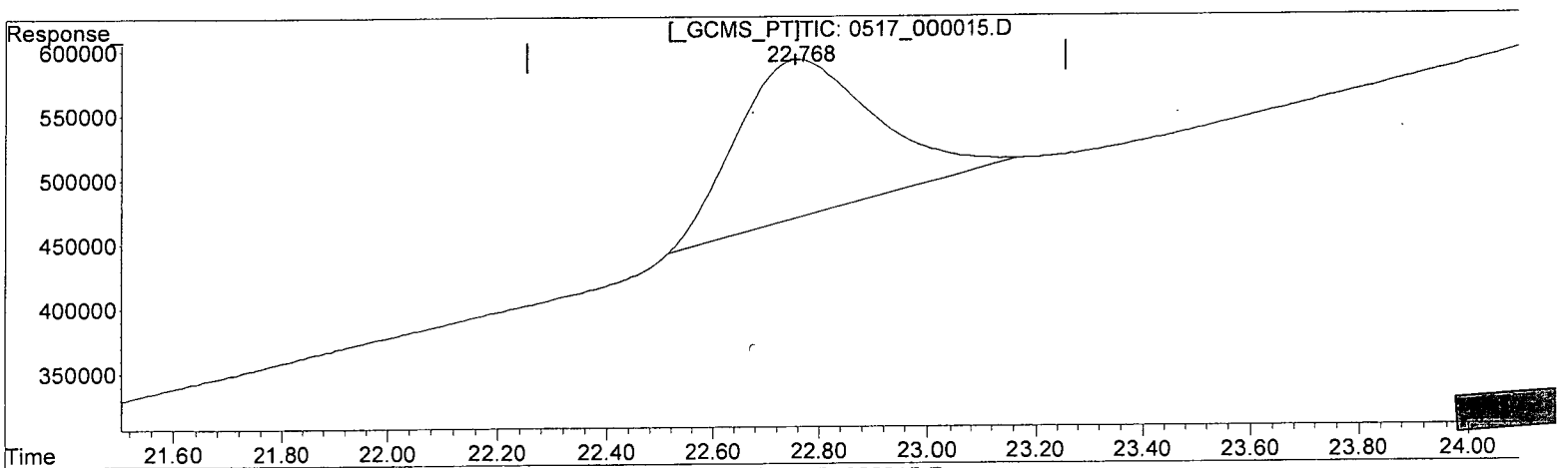
STE2_150517.M Mon May 18 07:48:11 2015 WALDORF Page: 2

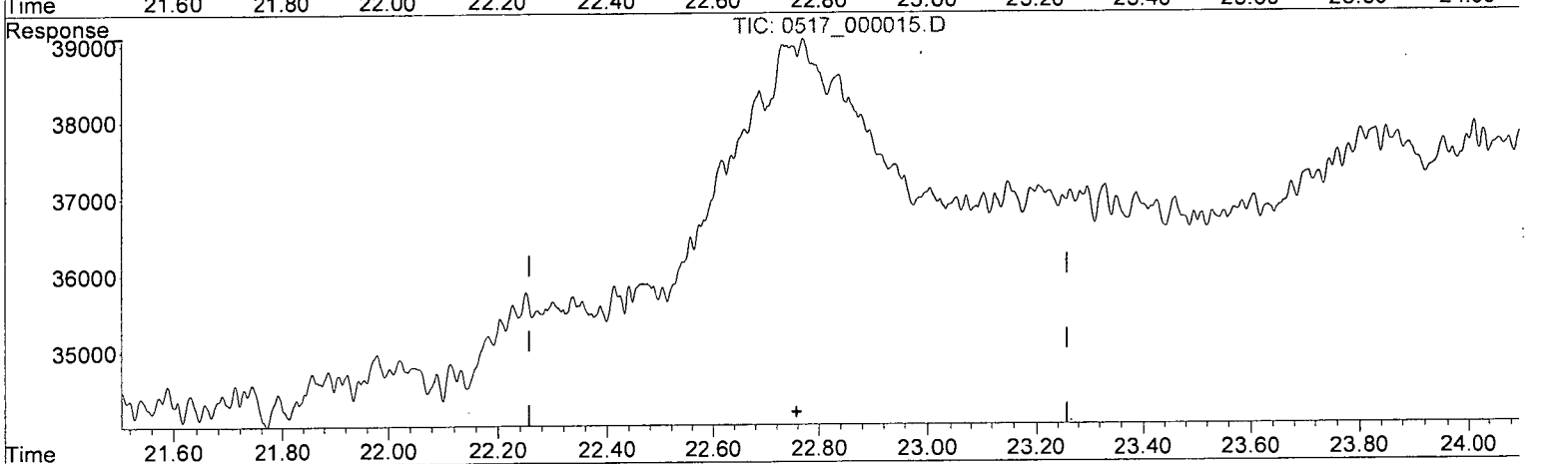
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000015.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 00:22:57
Operator : MP
Sample : 8330MXB_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4162 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:34 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(18) PETN (TM)

22.762min 133.879 ppb

response 122159

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

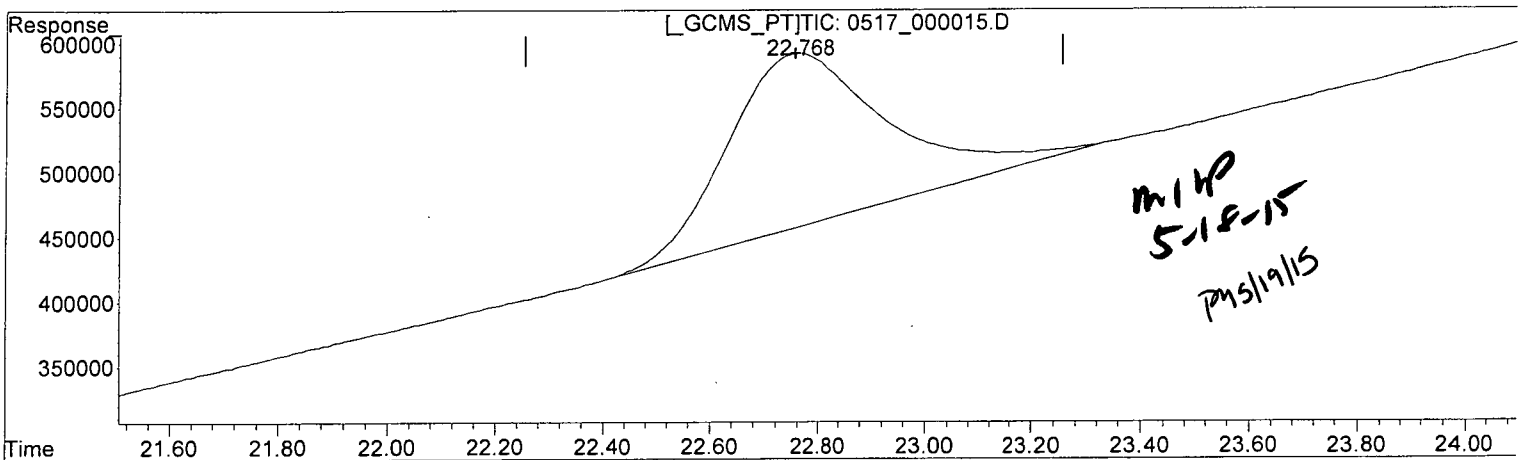
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000015.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 00:22:57
Operator : MP
Sample : 8330MXB_CB 0.20 PPM 05/16/15
Misc :
ALS Vial : 4162 Sample Multiplier: 1

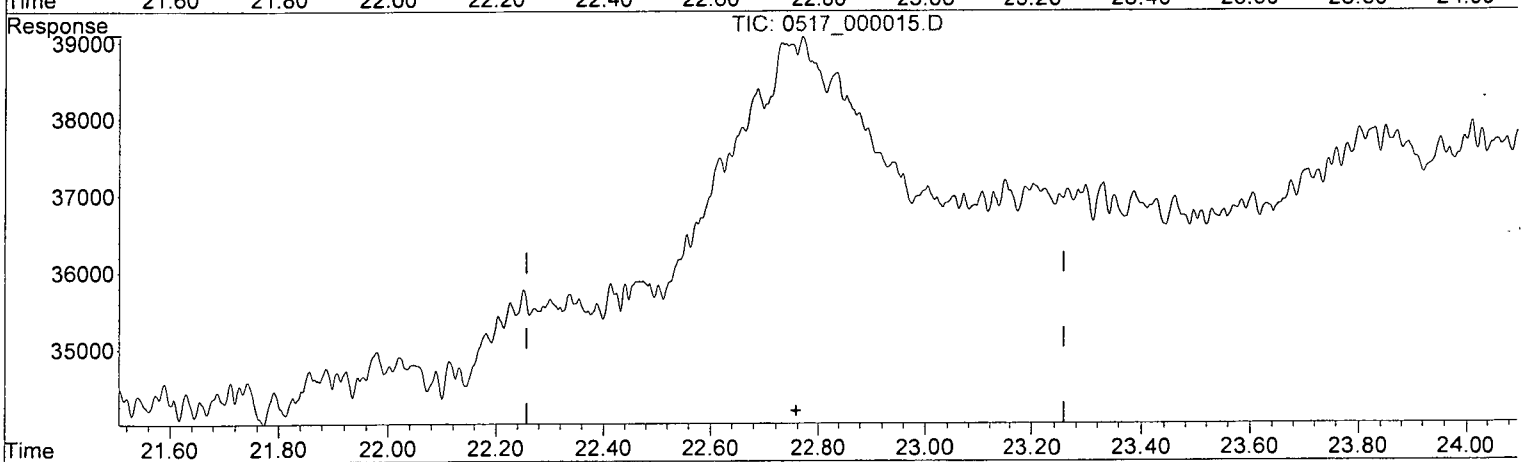
Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:34 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



MHP 5-18-15

PMS 5/19/15



QEdit

(18) PETN (TM)

22.768min 146.258 ppb m

response 133455

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000016.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 01:02:29
Operator : MP
Sample : 8330MXA_CB 0.50 PPM 05/16/15
Misc :
ALS Vial : 4163 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:48:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	8.081	0	762967	N.D.	361.630 #
	Spiked Amount 62.500			Recovery	=	0.00%	578.61%
	Target Compounds						
1) TM	HMX	0.000	4.071	0	869741	N.D.	413.601 #
2) TM	RDX	0.000	6.408	0	701296	N.D.	378.644 #
3) TM	1,3,5-TRI...	0.000	6.745	0	1733125	N.D.	387.751 #
5) TM	1,3-DINIT...	0.000	8.419	0	1759624	N.D.	391.260 #
6) TM	NITROBENZENE	0.000	9.156	0	928664	N.D.	362.525 #
7) TM	2,4,6-TRI...	0.000	11.427	0	937407	N.D.	369.245 #
8) TM	NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM	TETRYL	0.000	11.953	0	555534	N.D. d	337.238
10) TM	2,6-DINIT...	13.431	13.430	838596	556444	NoCal	376.721 #
11) TM	2,4-DINIT...	0.000	14.028	0	958592	N.D.	380.464 #
12) TM	2-NITROTO...	0.000	15.432	0	347900	N.D.	329.980 #
13) TM	4-NITROTO...	0.000	16.843	0	315126	N.D.	359.811 #
14) TM	3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15) TM	3-NITROTO...	0.000	18.031	0	368965	N.D.	345.077 #
16) TM	4-AMINO-2...	0.000	18.669	0	581422	N.D.	415.017 #
17) TM	2-AMINO-4...	0.000	19.611	0	743923	N.D.	364.944 #
18) TM	PETN	0.000	0.000	0	0	N.D.	N.D.

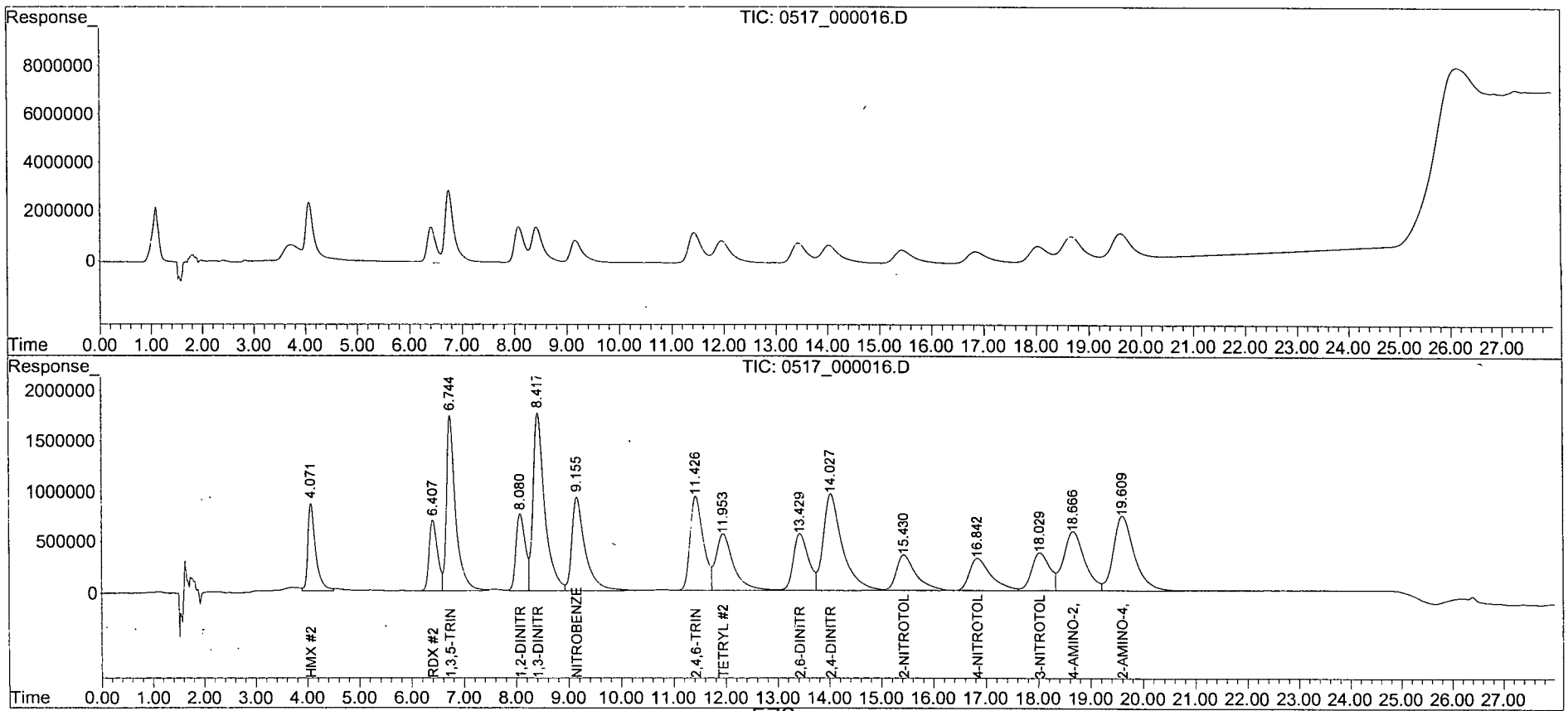
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000016.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 01:02:29
Operator : MP
Sample : 8330MXA_CB 0.50 PPM 05/16/15
Misc :
ALS Vial : 4163 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:48:07 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000017.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 01:42:00
Operator : MP
Sample : 8330MXB_CB 0.50 PPM 05/16/15
Misc :
ALS Vial : 4164 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:46:41 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount 62.500			Recovery	=	0.00%	0.00%
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM NITROGLYC...	12.031	0.000	326508	0	358.522	N.D. d#
9) TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM 3,5-DINIT...	0.000	16.574	0	746078	N.D.	373.772 #
15) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	22.748	0.000	339811	0	372.410m	N.D. #

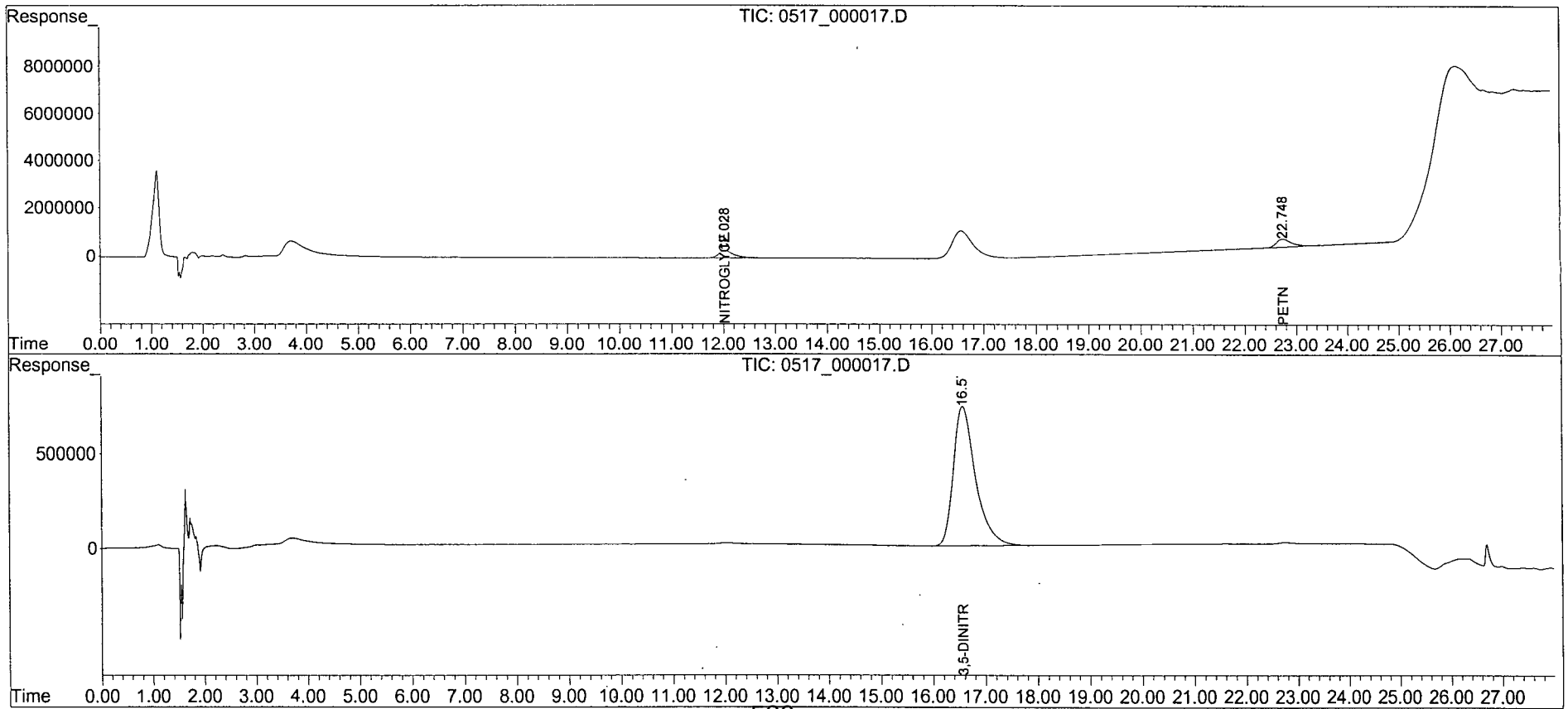
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000017.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 01:42:00
Operator : MP
Sample : 8330MXB_CB 0.50 PPM 05/16/15
Misc :
ALS Vial : 4164 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:46:41 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

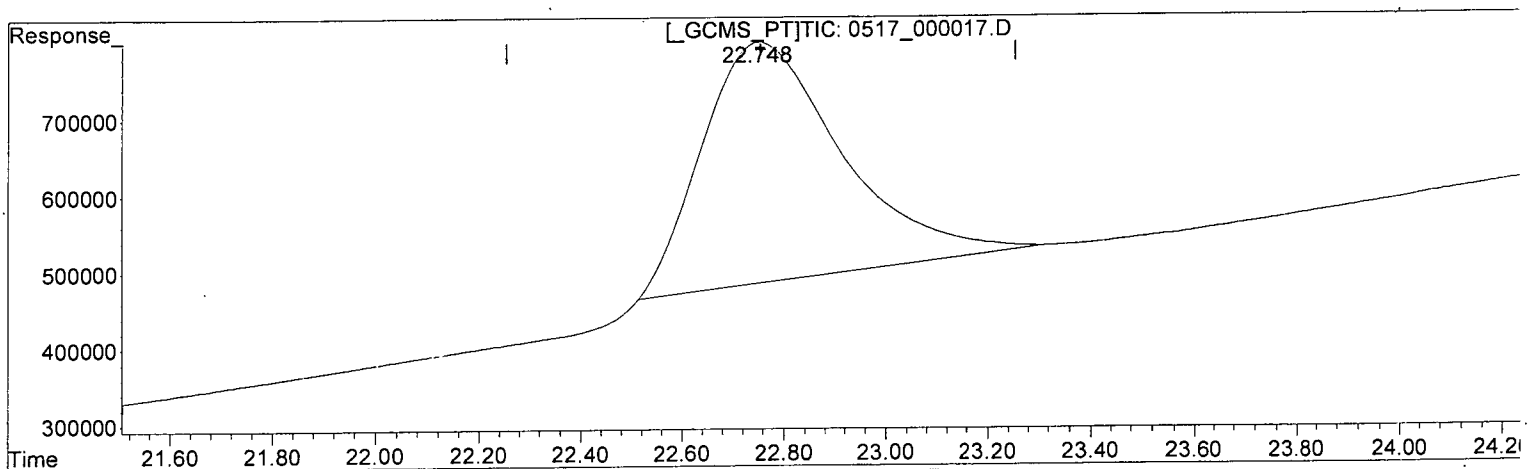


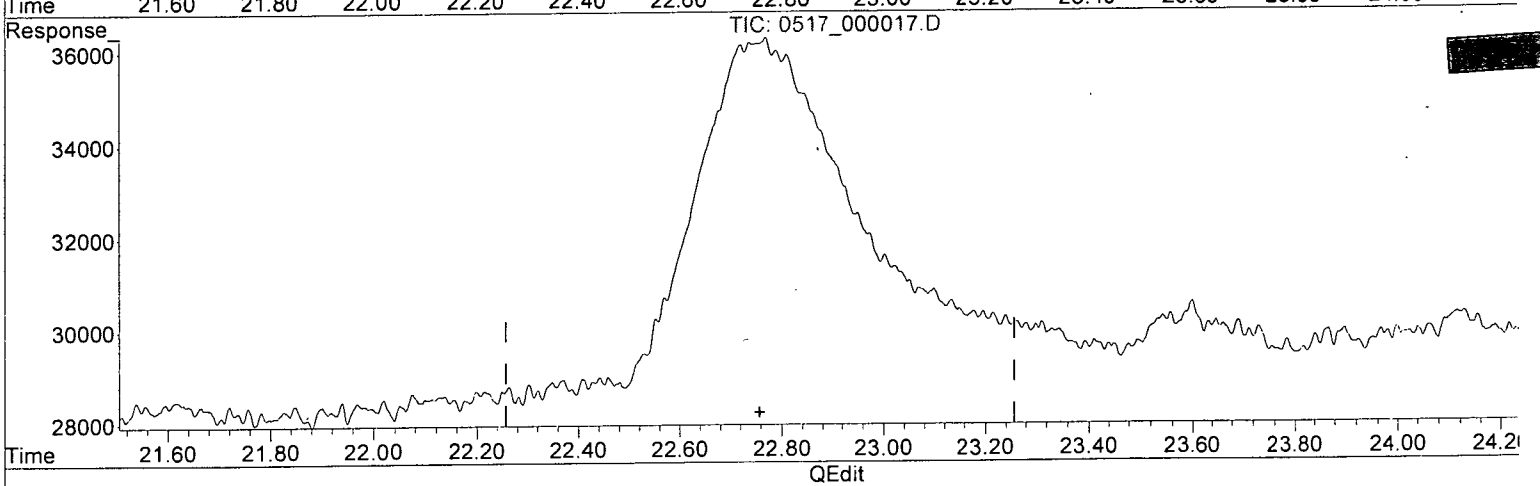
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000017.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 01:42:00
Operator : MP
Sample : 8330MXB_CB 0.50 PPM 05/16/15
Misc :
ALS Vial : 4164 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:40 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





(18) PETN (TM)

22.754min 344.751 ppb

response 314573

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

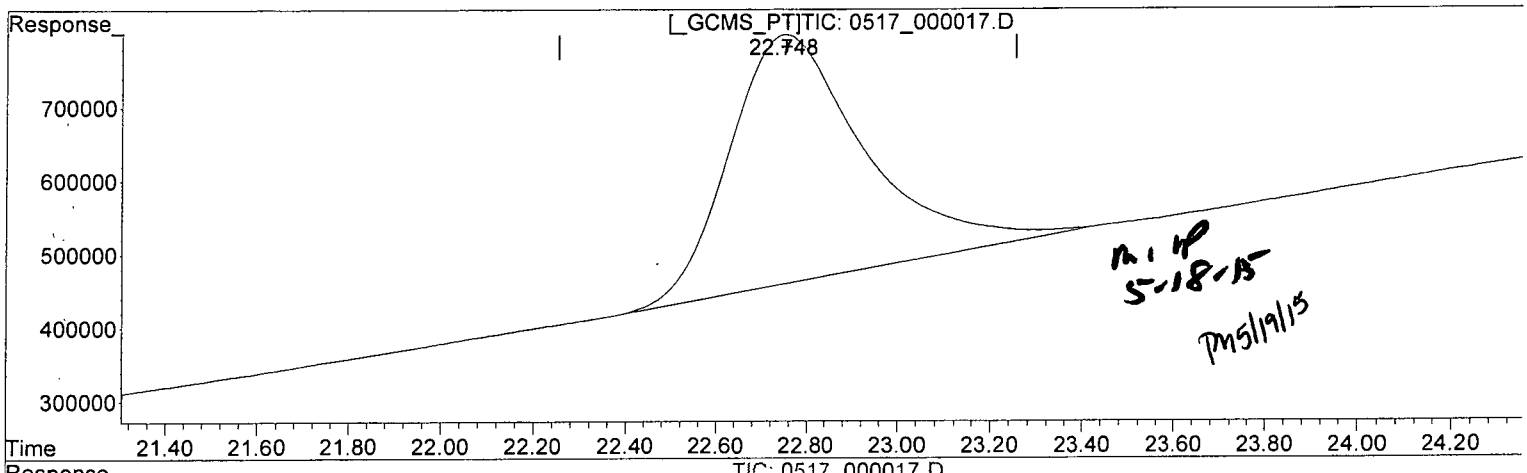
(+) = Expected Retention Time

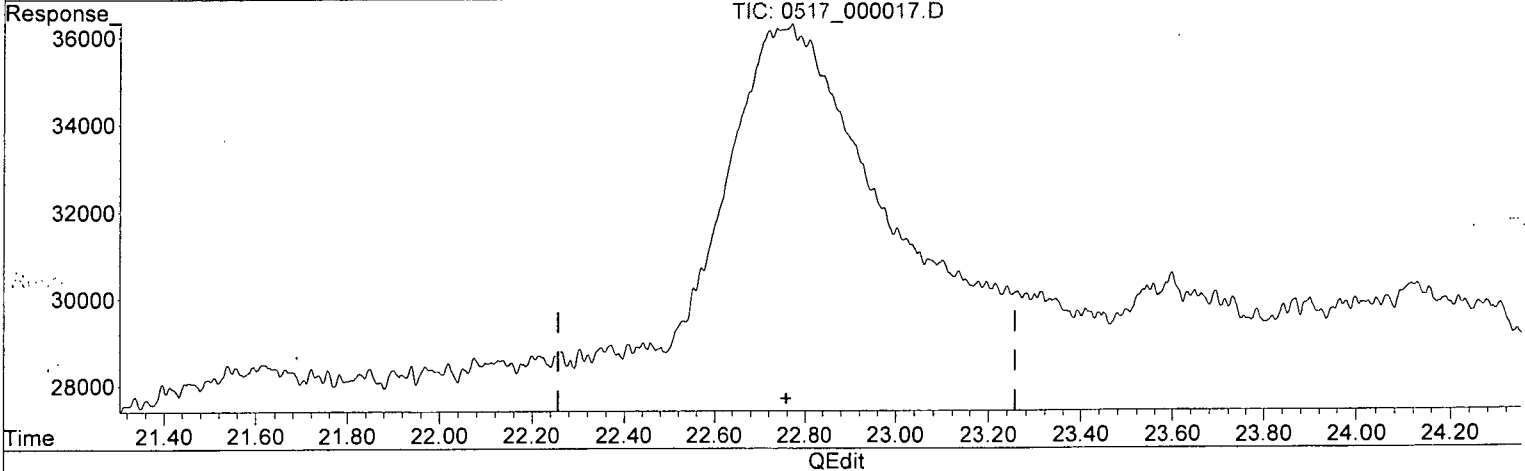
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000017.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 01:42:00
Operator : MP
Sample : 8330MXB_CB 0.50 PPM 05/16/15
Misc :
ALS Vial : 4164 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:46:41 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-r





QEdit

(18) PETN (TM)

22.748min 372.410 ppb m

response 339811

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000018.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 02:21:31
Operator : MP
Sample : 8330MXA_CB 1.0 PPM 05/16/15
Misc :
ALS Vial : 4165 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:45:27 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	8.084	0	1515856	N.D.	718.483 #
	Spiked Amount 62.500			Recovery	=	0.00%	1149.57%
	Target Compounds						
1) TM	HMX	0.000	4.066	0	1703450	N.D.	810.067 #
2) TM	RDX	0.000	6.408	0	1378320	N.D.	744.184 #
3) TM	1,3,5-TRI...	0.000	6.744	0	3501074	N.D.	783.293 #
5) TM	1,3-DINIT...	0.000	8.420	0	3507763	N.D.	779.966 #
6) TM	NITROBENZENE	0.000	9.156	0	1855181	N.D.	724.213 #
7) TM	2,4,6-TRI...	0.000	11.430	0	1819561	N.D.	716.726 #
8) TM	NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM	TETRYL	0.000	11.961	0	1301253	N.D. d	789.928
10) TM	2,6-DINIT...	13.438	13.437	1642762	1092933	NoCal	739.932 #
11) TM	2,4-DINIT...	0.000	14.036	0	1903954	N.D.	755.678 #
12) TM	2-NITROTO...	0.000	15.441	0	702186	N.D.	666.017 #
13) TM	4-NITROTO...	0.000	16.852	0	635593	N.D.	725.720 #
14) TM	3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15) TM	3-NITROTO...	0.000	18.041	0	747633	N.D.	699.230 #
16) TM	4-AMINO-2...	0.000	18.683	0	1152117	N.D.	822.377 #
17) TM	2-AMINO-4...	0.000	19.626	0	1468401	N.D.	720.349 #
18) TM	PETN	0.000	0.000	0	0	N.D.	N.D.

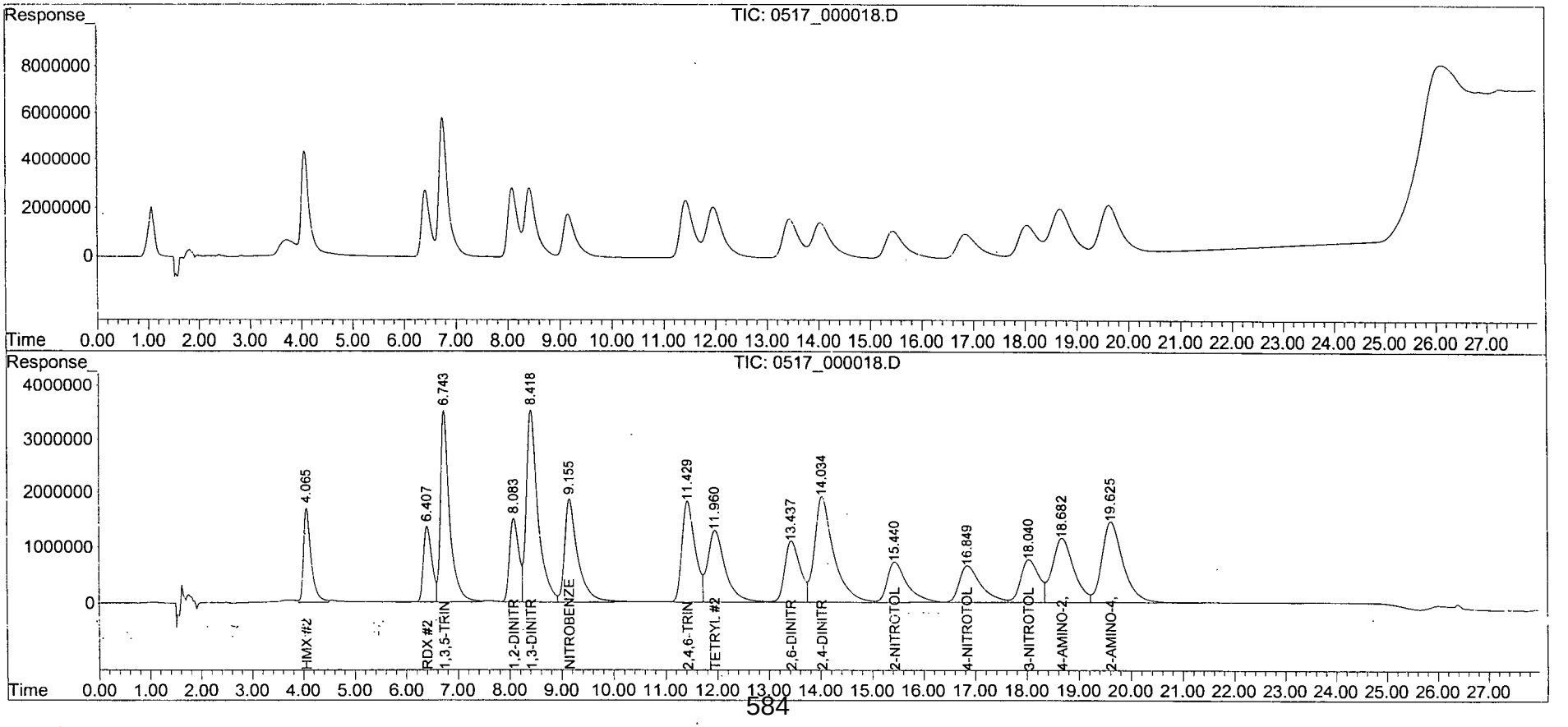
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000018.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 02:21:31
Operator : MP
Sample : 8330MXA_CB 1.0 PPM 05/16/15
Misc :
ALS Vial : 4165 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:45:27 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000019.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 03:01:03
Operator : MP
Sample : 8330MXB_CB 1.0 PPM 05/16/15
Misc :
ALS Vial : 4166 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:44:39 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6)	TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7)	TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8)	TM NITROGLYC...	12.039	0.000	652889	0	716.906	N.D. d#
9)	TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10)	TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11)	TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13)	TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14)	TM 3,5-DINIT...	0.000	16.569	0	1469284	N.D.	736.087 #
15)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	22.753	22.752	672316	13174	736.813m	NoCal #

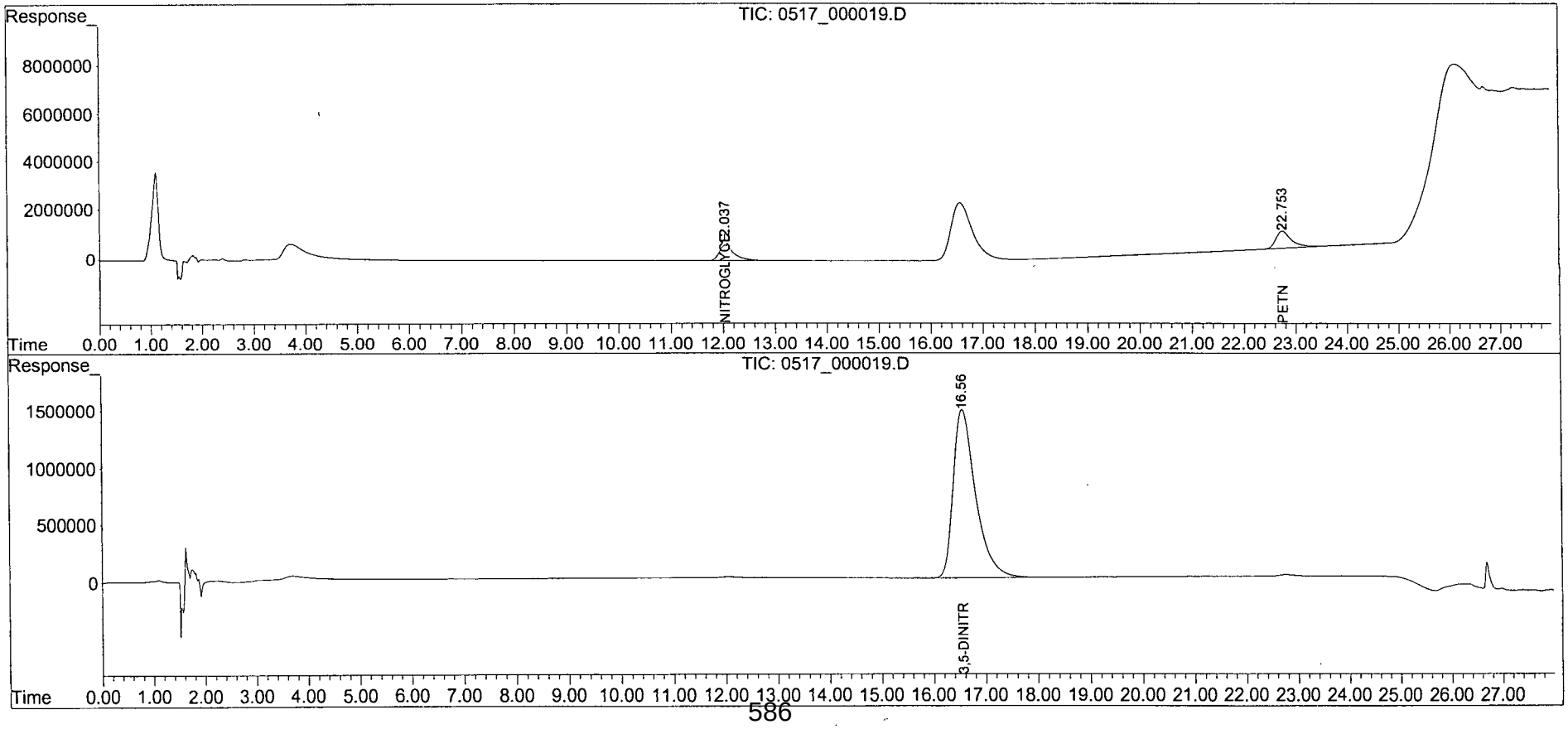
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000019.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 03:01:03
Operator : MP
Sample : 8330MXB_CB 1.0 PPM 05/16/15
Misc :
ALS Vial : 4166 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:44:39 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

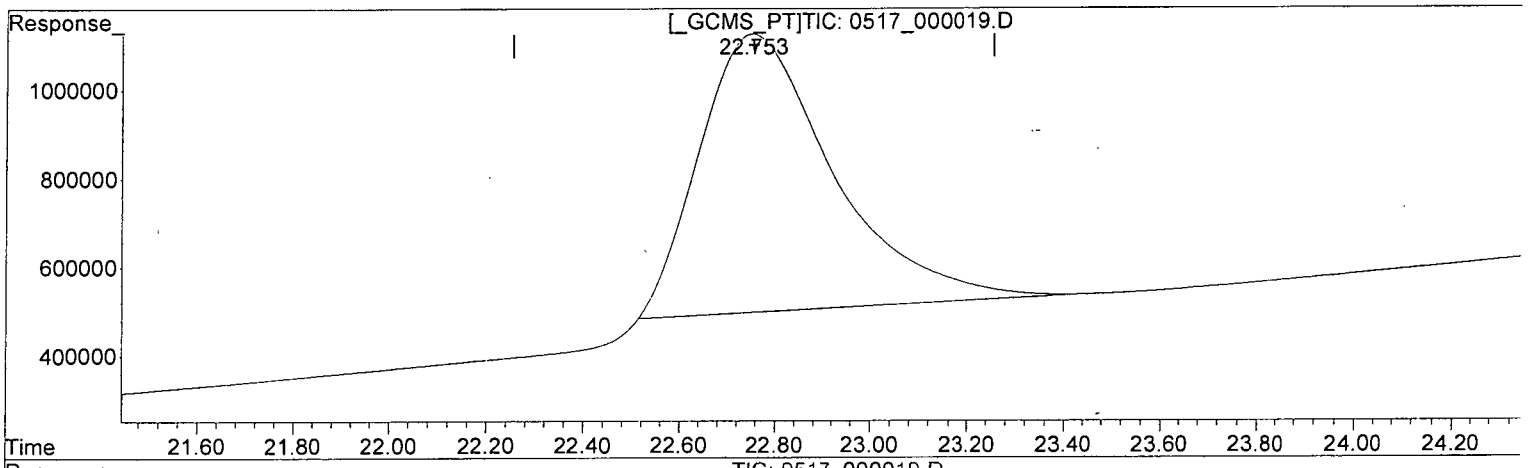


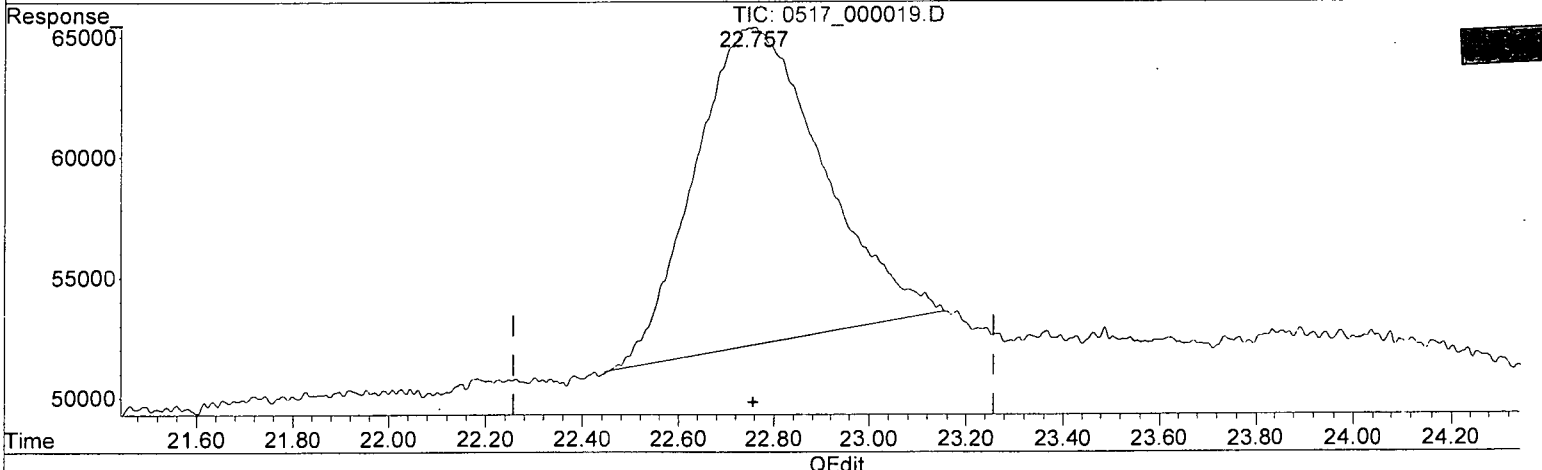
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000019.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 03:01:03
Operator : MP
Sample : 8330MXB_CB 1.0 PPM 05/16/15
Misc :
ALS Vial : 4166 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:46 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-ı





QEdit

(18) PETN (TM)

22.753min 686.320 ppb

response 626243

(18) PETN #2 (TM)

22.752min 0.000 ppb

response 13174

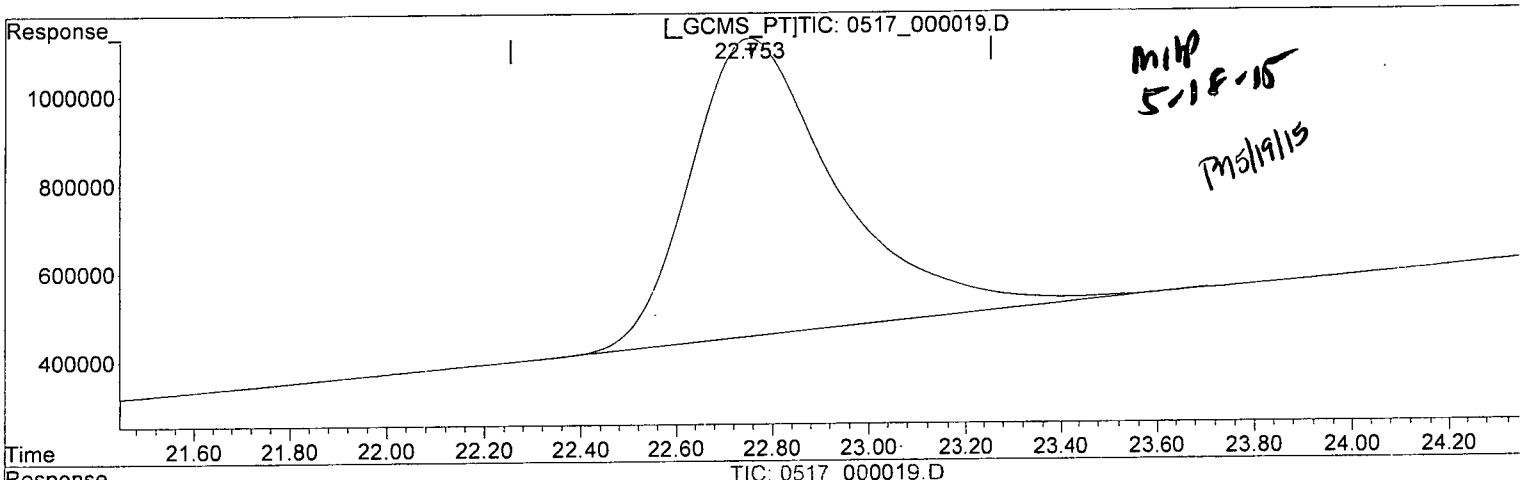
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000019.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 03:01:03
Operator : MP
Sample : 8330MXB_CB 1.0 PPM 05/16/15
Misc :
ALS Vial : 4166 Sample Multiplier: 1

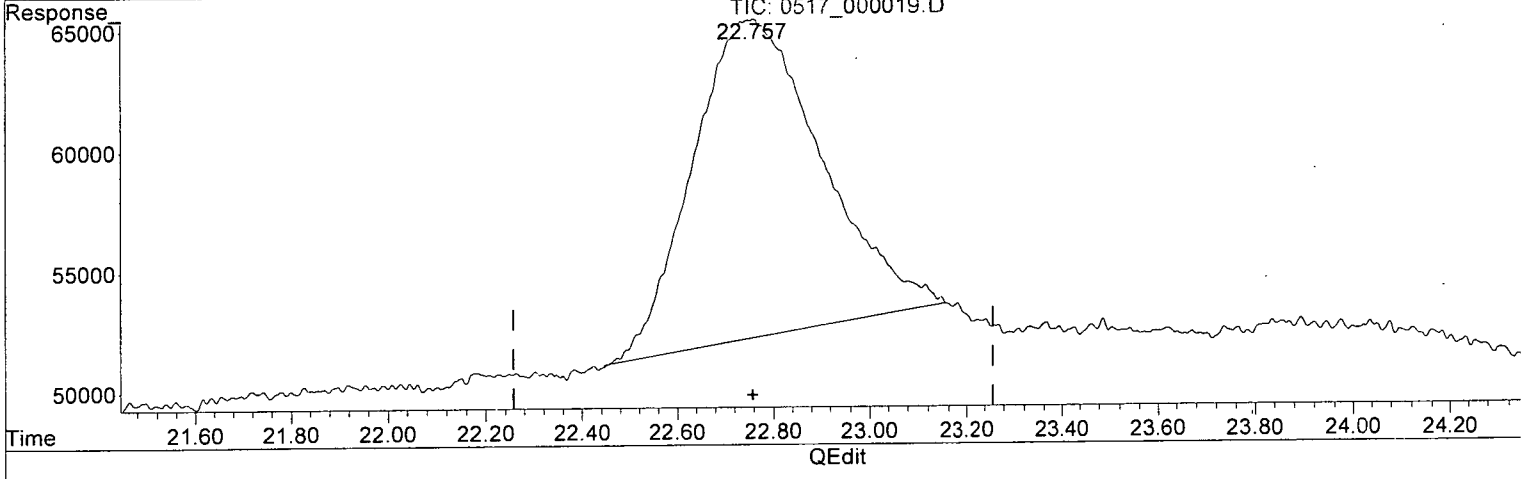
Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:46 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



MHP 5-18-15

PMS/19/15



(18) PETN (TM)

22.753min 736.813 ppb m

response 672316

(18) PETN #2 (TM)

22.752min 0.000 ppb

response 13174

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000020.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 03:40:34
Operator : MP
Sample : 8330MXA_CB 2.0 PPM 05/16/15
Misc :
ALS Vial : 4167 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:43:54 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	8.081	0	3107273	N.D.	1472.780 #
	Spiked Amount 62.500			Recovery	=	0.00%	2356.45%
	Target Compounds						
1)	TM HMX	0.000	4.064	0	3429159	N.D.	1630.719 #
2)	TM RDX	0.000	6.404	0	2783364	N.D.	1502.797 #
3)	TM 1,3,5-TRI...	0.000	6.741	0	7155789	N.D.	1600.960 #
5)	TM 1,3-DINIT...	0.000	8.417	0	7167611	N.D.	1593.749 #
6)	TM NITROBENZENE	0.000	9.155	0	3712142	N.D.	1449.121 #
7)	TM 2,4,6-TRI...	0.000	11.435	0	3682095	N.D.	1450.378 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	11.970	11.968	2158240	2791819	NoCal	1694.779 #
10)	TM 2,6-DINIT...	13.446	13.445	3344243	2234716	NoCal	1512.936 #
11)	TM 2,4-DINIT...	0.000	14.041	0	3911192	N.D.	1552.348 #
12)	TM 2-NITROTO...	0.000	15.443	0	1422711	N.D.	1349.429 #
13)	TM 4-NITROTO...	0.000	16.848	0	1300610	N.D.	1485.036 #
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15)	TM 3-NITROTO...	0.000	18.040	0	1513866	N.D.	1415.855 #
16)	TM 4-AMINO-2...	0.000	18.677	0	2340131	N.D.	1670.377 #
17)	TM 2-AMINO-4...	0.000	19.621	0	2968466	N.D.	1456.232 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

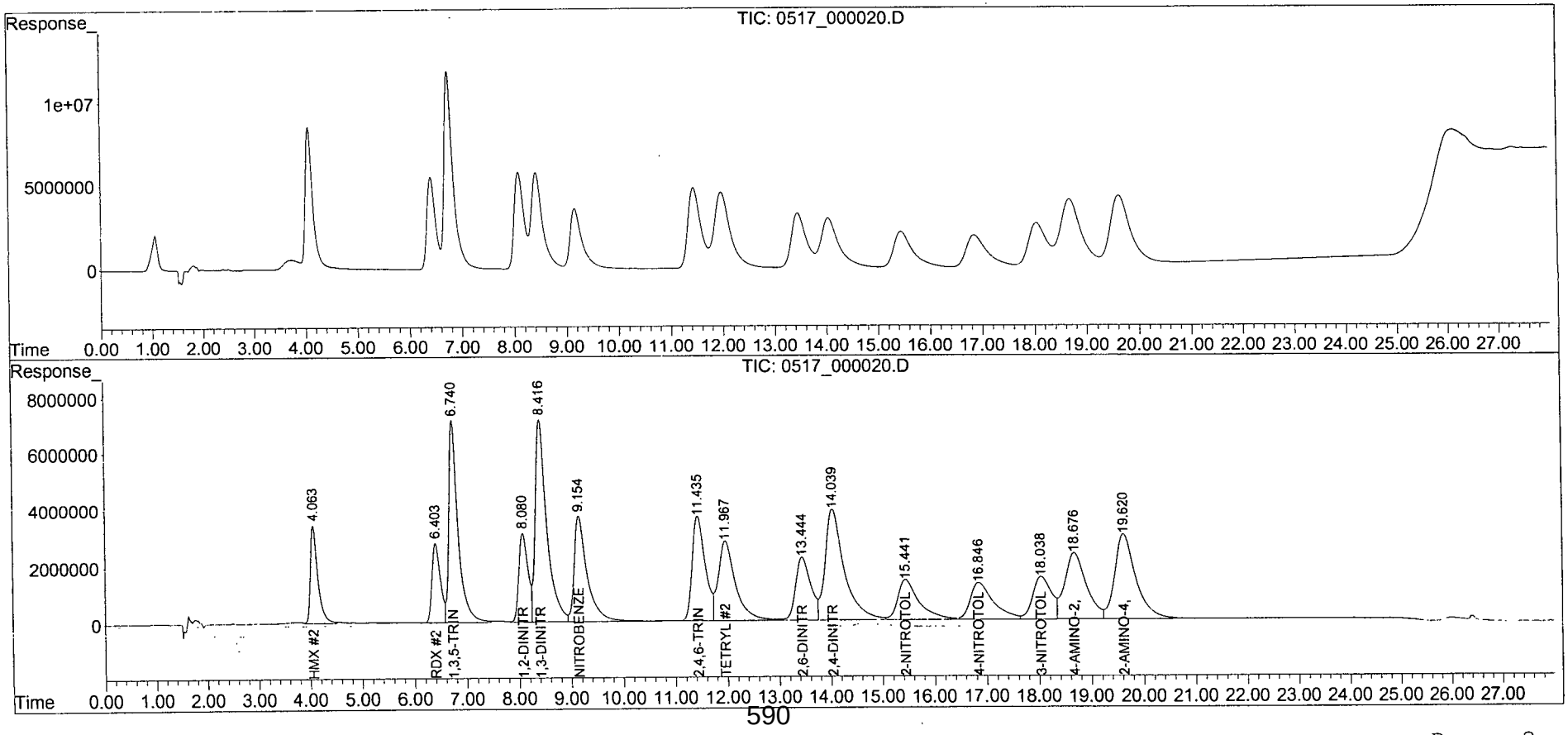
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000020.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 03:40:34
Operator : MP
Sample : 8330MXA_CB 2.0 PPM 05/16/15
Misc :
ALS Vial : 4167 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:43:54 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000021.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:20:05
Operator : MP
Sample : 8330MXB_CB 2.0 PPM 05/16/15
Misc :
ALS Vial : 4168 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:43:27 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6)	TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7)	TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8)	TM NITROGLYC...	12.032	0.000	1325924	0	1455.933	N.D. d#
9)	TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10)	TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11)	TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13)	TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14)	TM 3,5-DINIT...	0.000	16.544	0	2946798	N.D.	1476.296 #
15)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	22.742	22.746	1368035	28334	1499.274m	NoCal #

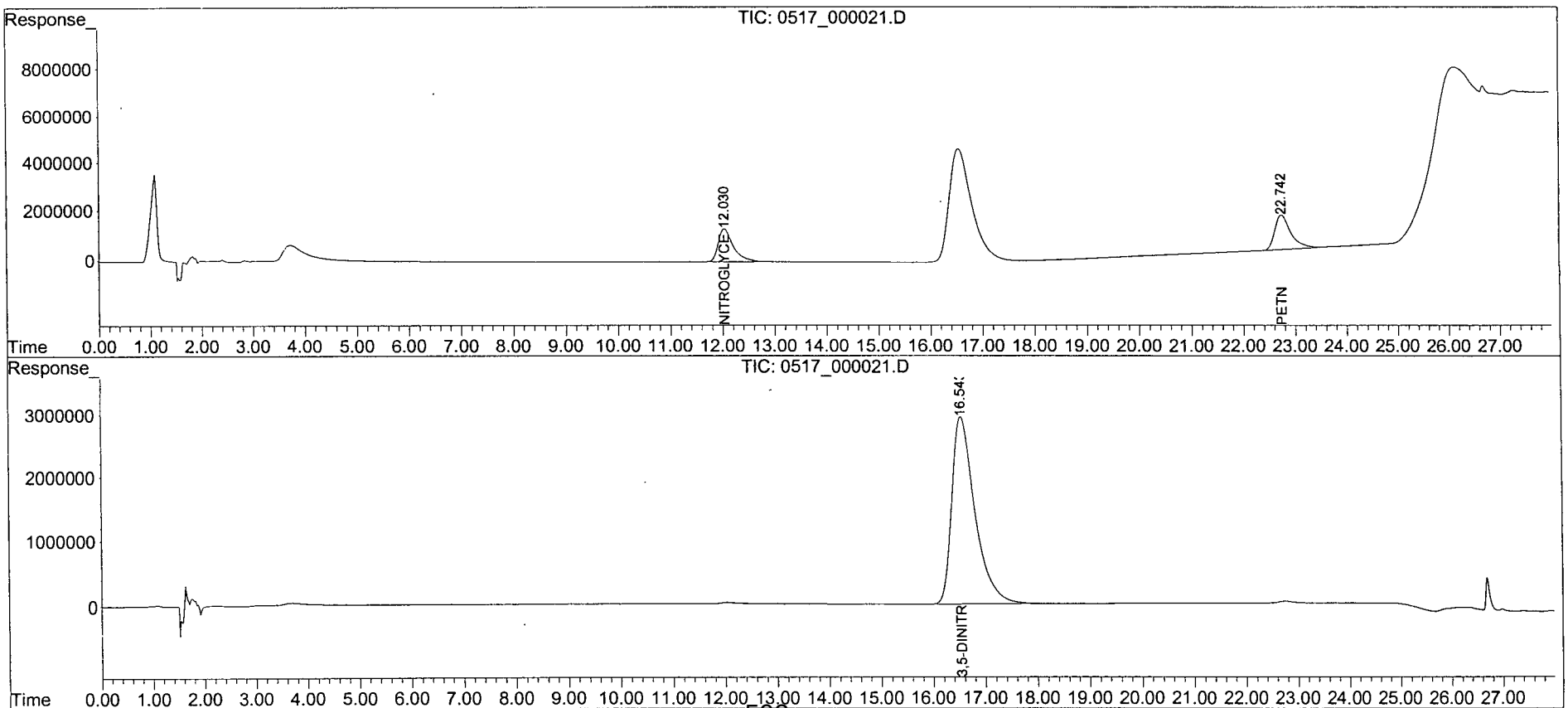
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000021.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:20:05
Operator : MP
Sample : 8330MXB_CB 2.0 PPM 05/16/15
Misc :
ALS Vial : 4168 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:43:27 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

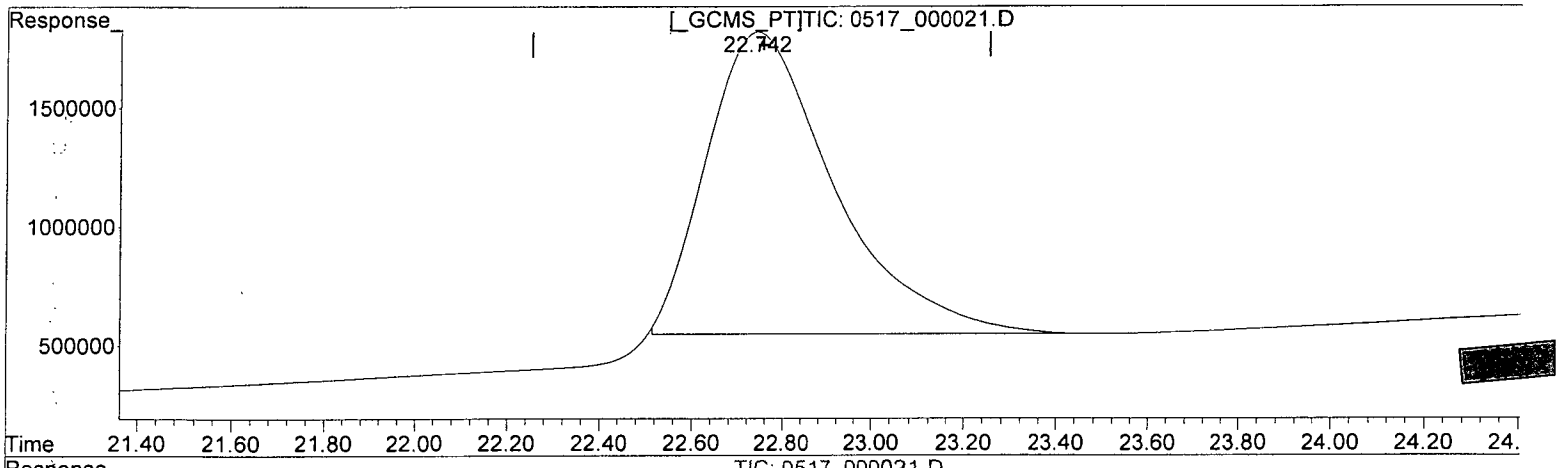


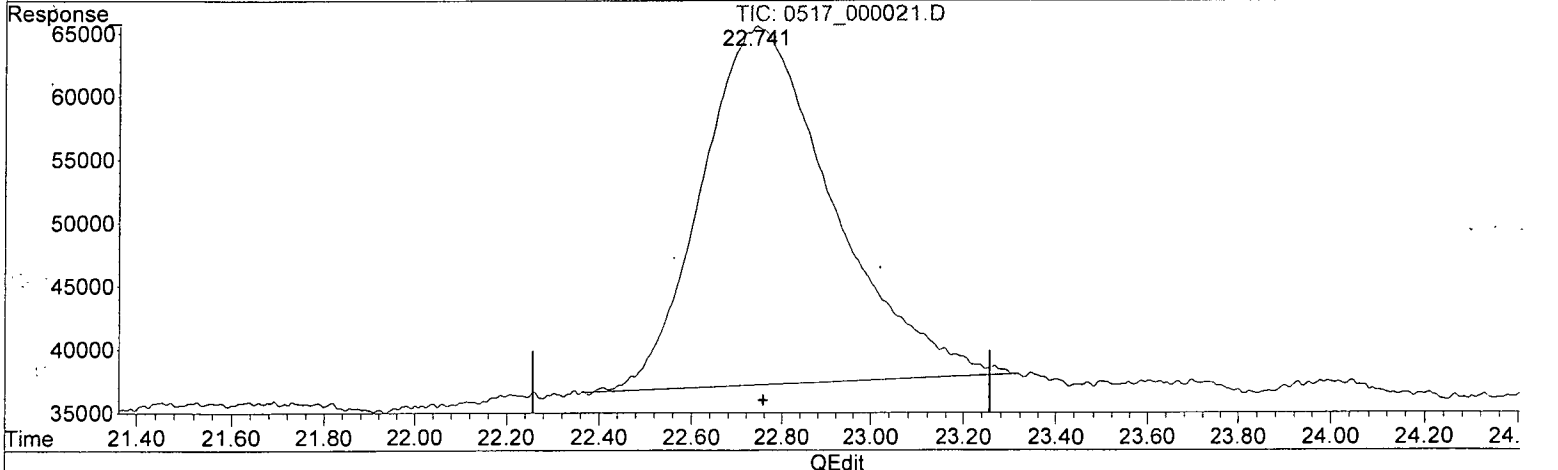
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000021.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:20:05
Operator : MP
Sample : 8330MXB_CB 2.0 PPM 05/16/15
Misc :
ALS Vial : 4168 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:52 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-





QEdit

(18) PETN (TM)

22.743min 1393.729 ppb

response 1271728

(18) PETN #2 (TM)

22.746min 0.000 ppb

response 28334

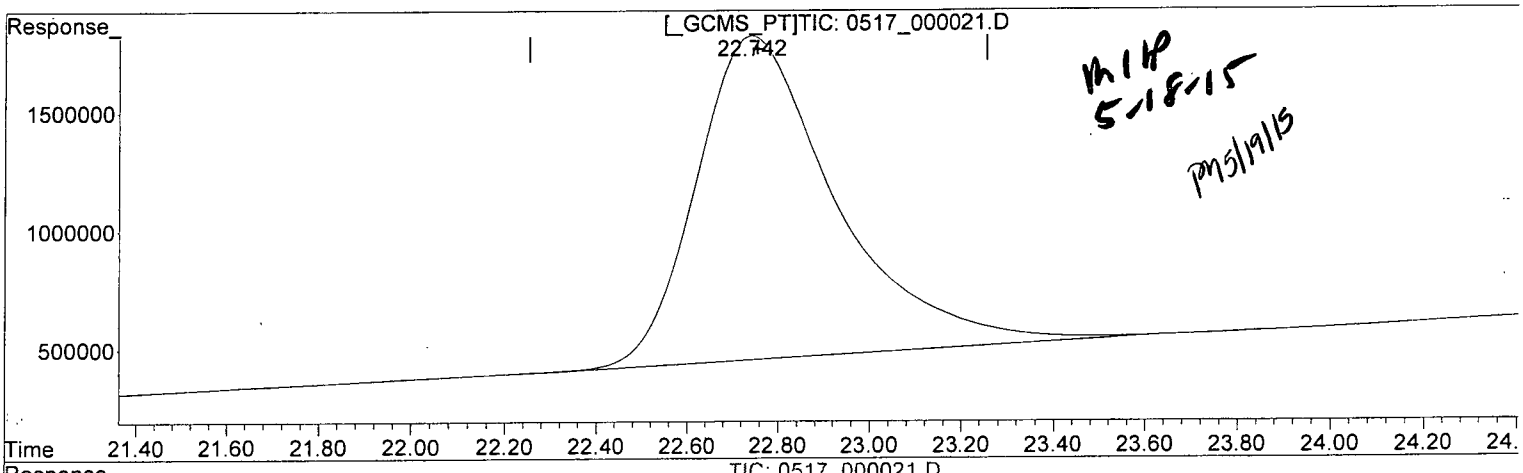
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000021.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:20:05
Operator : MP
Sample : 8330MXB_CB 2.0 PPM 05/16/15
Misc :
ALS Vial : 4168 Sample Multiplier: 1

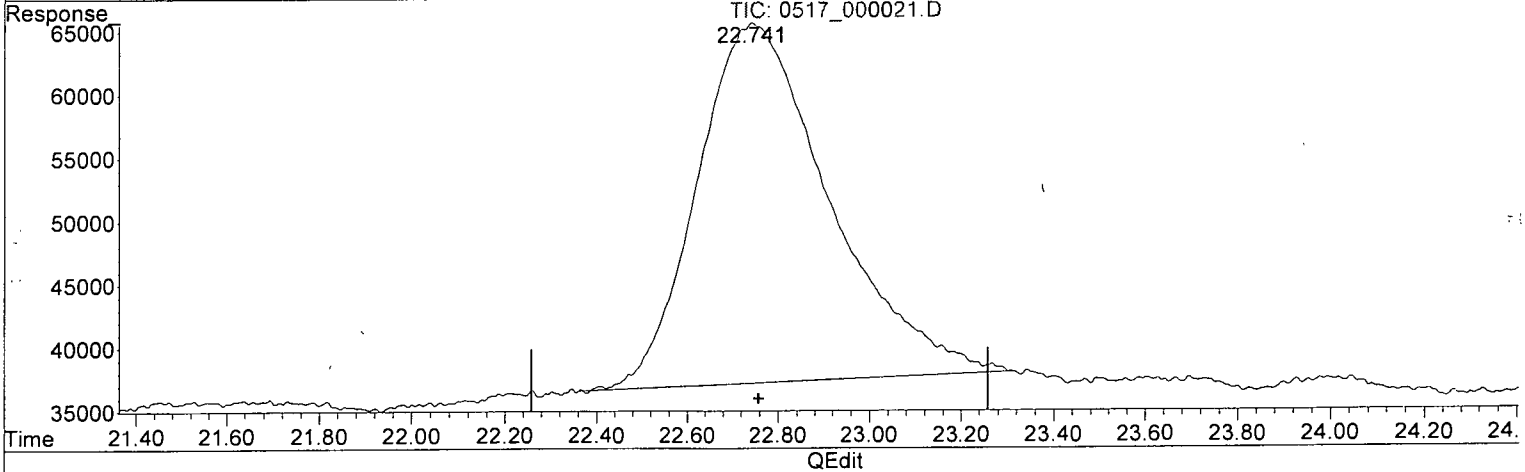
Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 07:42:52 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Fri May 15 08:45:00 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



MHP 5-18-15

PMS/19/15



QEdit

(18) PETN (TM)

22.742min 1499.274 ppb m

response 1368035

(18) PETN #2 (TM)

22.746min 0.000 ppb

response 28334

(+) = Expected Retention Time

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 7643
Date Analyzed: 18-May-2015, 10:15:43
Instrument: Statler
Initial Cal. Date: 05/17/15
Data File: 0517_000028-30.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	NITROGLYCERIN	16.3	16.3	0.33	TM	
2	TM	PETN	16.0	16.6	3.6	TM	
3		Signal #2					
4	TM	HMX	40.4	42.0	4.0	TM	
5	TM	RDX	34.1	34.7	1.8	TM	
6	TM	1,3-DINITROBENZENE	87.1	83.9	3.7	TM	
7	TM	NITROBENZENE	46.6	48.2	3.5	TM	
8	TM	2,4-DINITROTOLUENE	47.1	47.4	0.74	TM	
9	TM	3,5-DINITROANILINE	37.1	38.5	3.8	TM	
10	TM	3-NITROTOLUENE	17.9	20.4	14	TM	
11	TM	4-AMINO-2,6-DINITROTOLUEN	29.0	31.1	7.6	TM	
12	TM	1,3,5-TRINITROBENZENE	86.6	81.4	6.0	TM	
13	S	1,2-DINITROBENZENE	38.5	39.0	1.3	S	
14	TM	2,4,6-TRINITROTOLUENE	45.5	45.1	0.87	TM	
15	TM	TETRYL	31.5	30.3	3.7	TM	
16	TM	2,6-DINITROTOLUENE	27.2	28.9	6.1	TM	
17	TM	2-NITROTOLUENE	17.2	19.7	15	TM	
18	TM	4-NITROTOLUENE	15.1	16.8	11	TM	
19	TM	2-AMINO-4,6-DINITROTOLUEN	36.7	34.5	6.1	TM	
20	TM	TETRYL	31.5	33.3	5.6	TM	
21							
22							
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Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000028.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 08:56:40
Operator : MP
Sample : 8330MXB_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4225 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:36:25 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	8.090	0	1558159	N.D.	1012.840 #
	Spiked Amount 62.500			Recovery	=	0.00%	1620.54%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D. d
3)	TM 1,3,5-TRI...	0.000	6.749	0	3256048	N.D.	939.564 #
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D. d
7)	TM 2,4,6-TRI...	0.000	11.443	0	1804909	N.D.	991.325 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	11.979	11.977	762997	1212943	NoCal	962.808 #
10)	TM 2,6-DINIT...	13.460	13.459	1721941	1156407	NoCal	1061.357 #
11)	TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12)	TM 2-NITROTO...	0.000	15.467	0	787890	N.D.	1146.002 #
13)	TM 4-NITROTO...	0.000	16.880	0	672775	N.D.	1112.959 #
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 2-AMINO-4...	0.000	19.647	0	1379236	N.D.	938.754 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

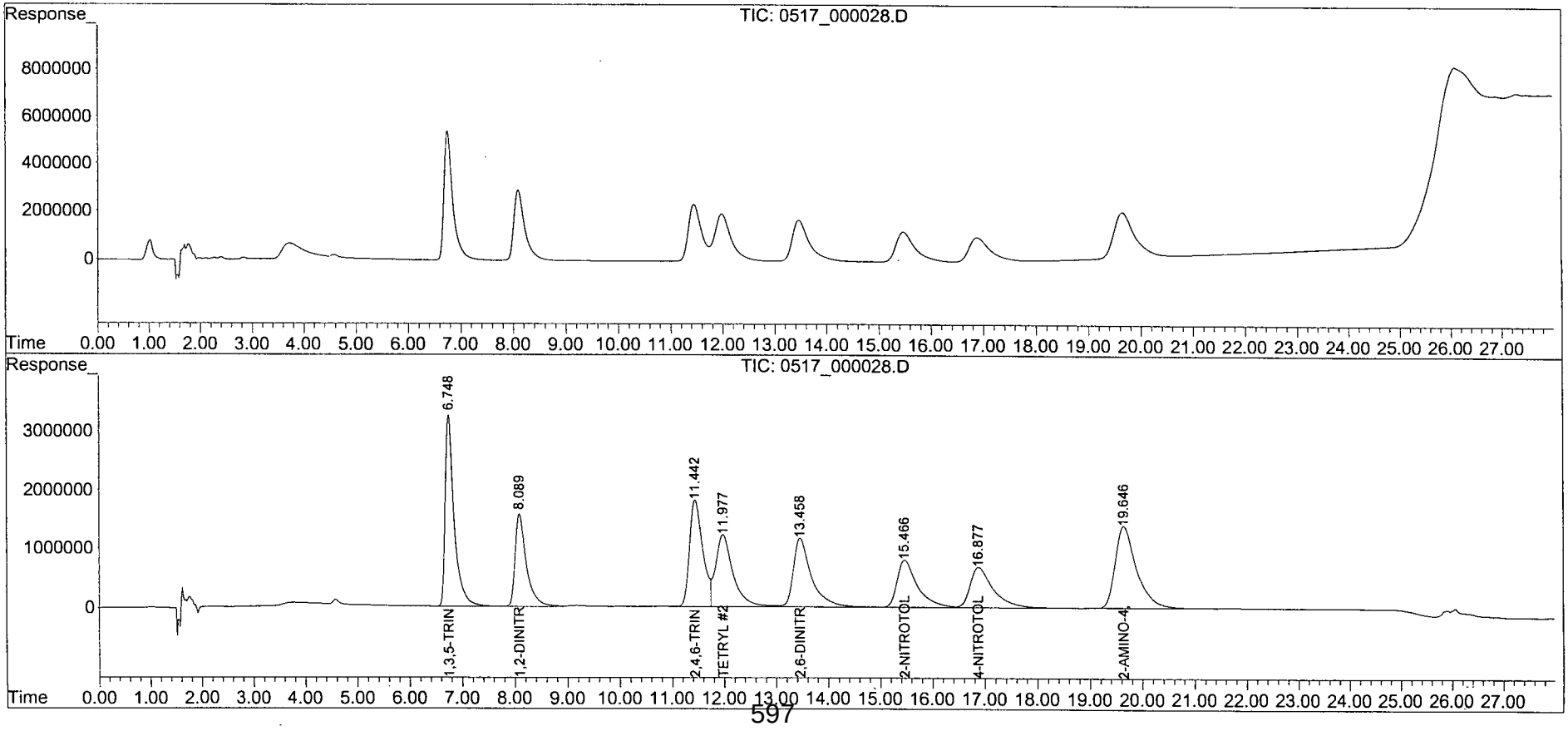
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000028.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 08:56:40
Operator : MP
Sample : 8330MXB_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4225 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:36:25 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:36:11
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4226 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 10:21:38 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-m
icron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6)	TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7)	TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	0.000	11.986	0	1330028	N.D. d	1055.747
10)	TM 2,6-DINIT...	13.431	0.000	1113	0	NoCal	N.D.
11)	TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
15)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	22.770	22.769	664810	12979	1035.611m	NoCal #

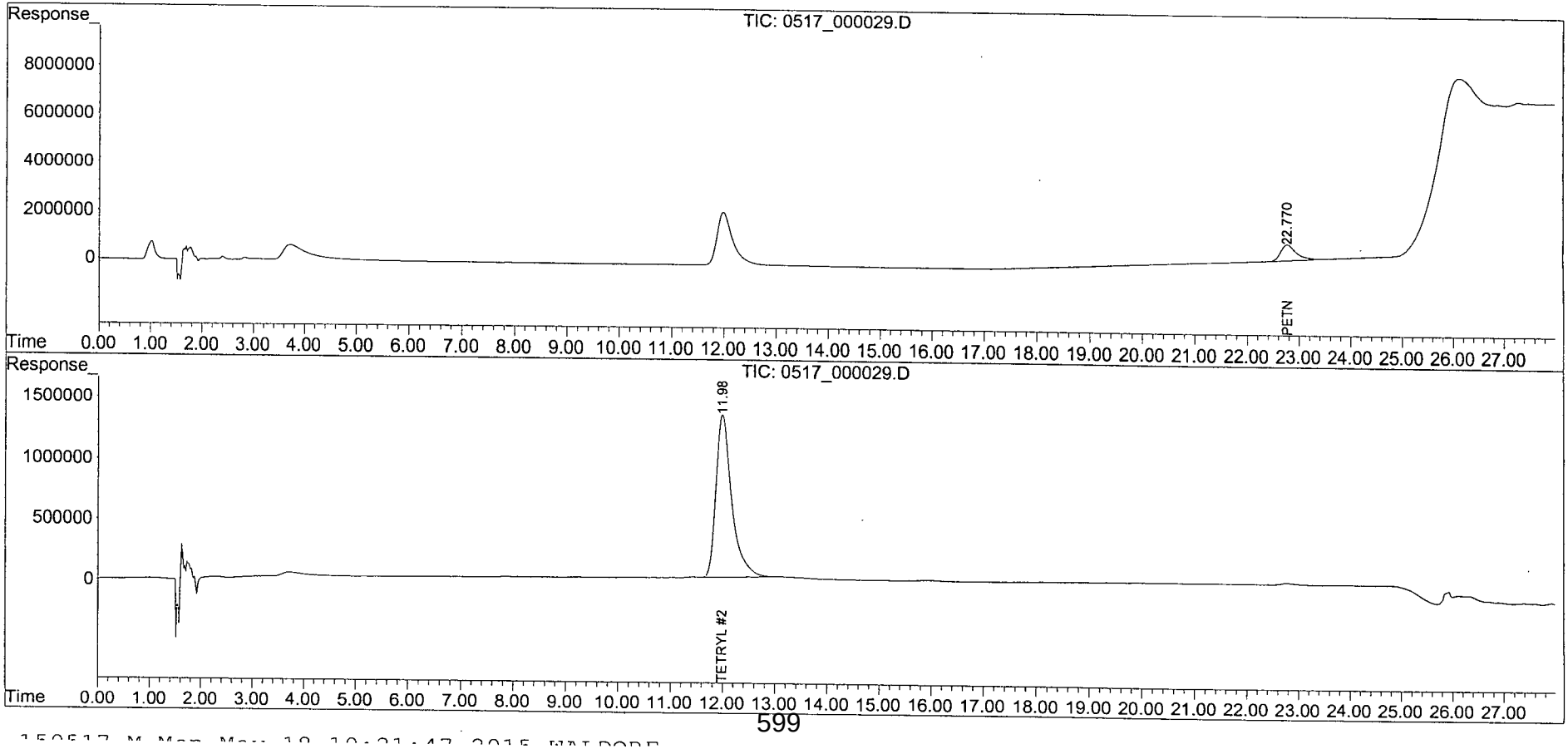
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:36:11
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4226 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 10:21:38 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

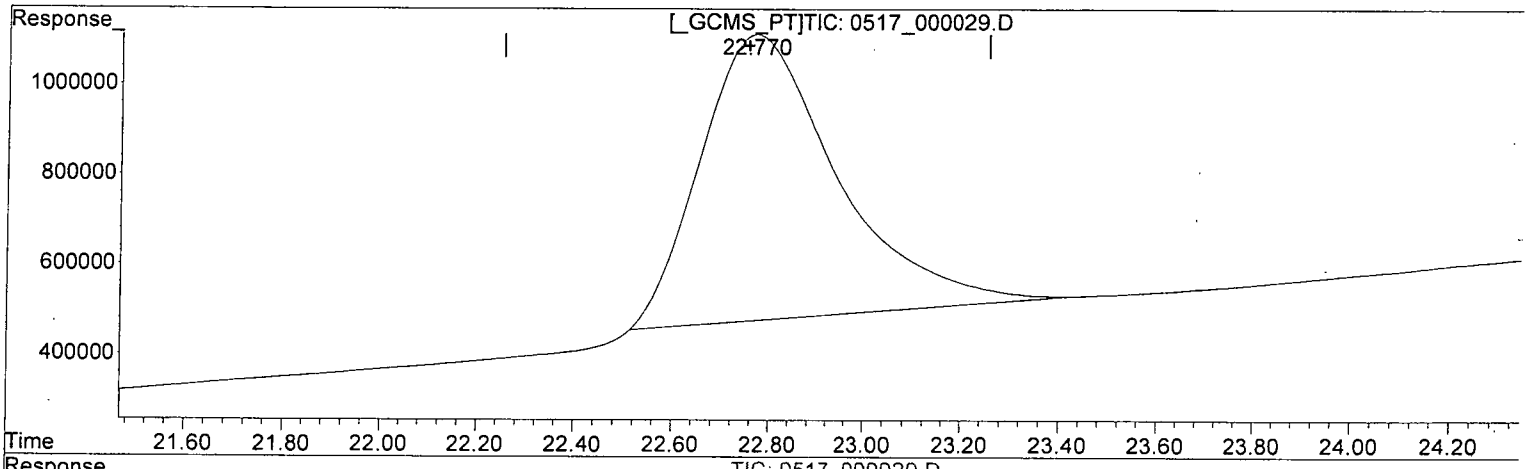


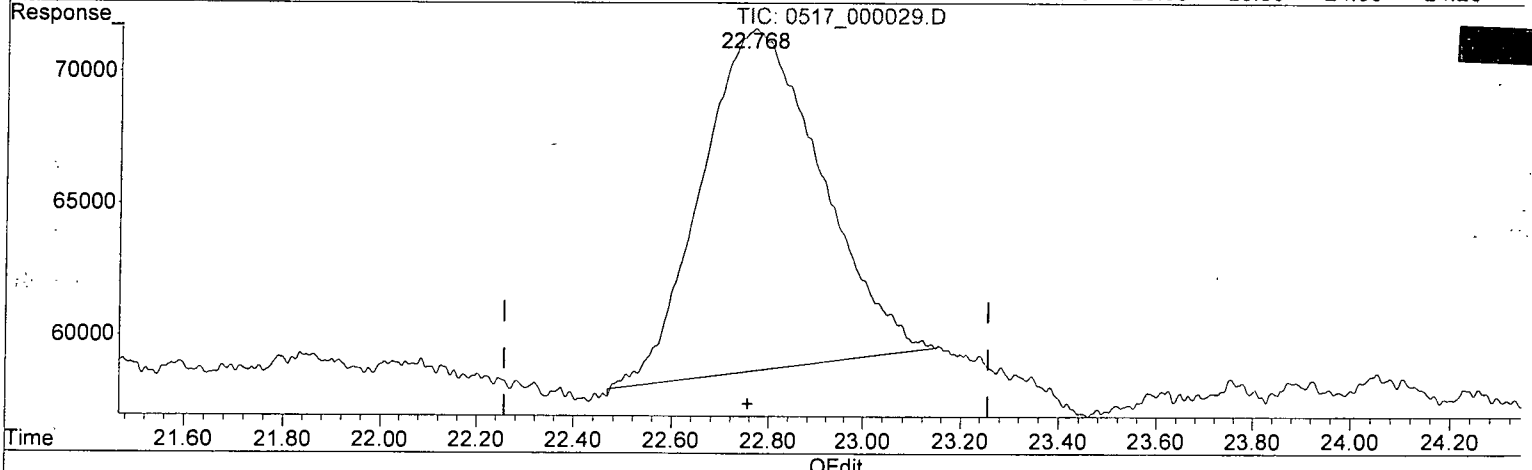
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:36:11
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4226 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 10:21:01 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(18) PETN (TM)

22.771min 990.537 ppb

response 635875

(18) PETN #2 (TM)

22.769min 0.000 ppb

response 12979

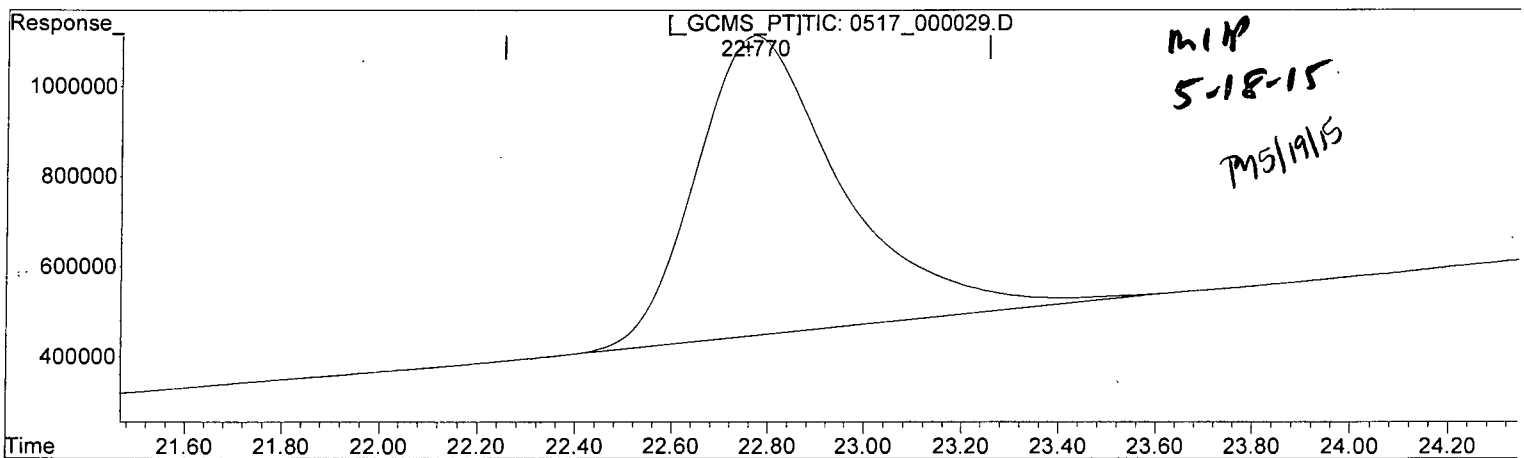
(+) = Expected Retention Time

Quantitation Report (Qedit)

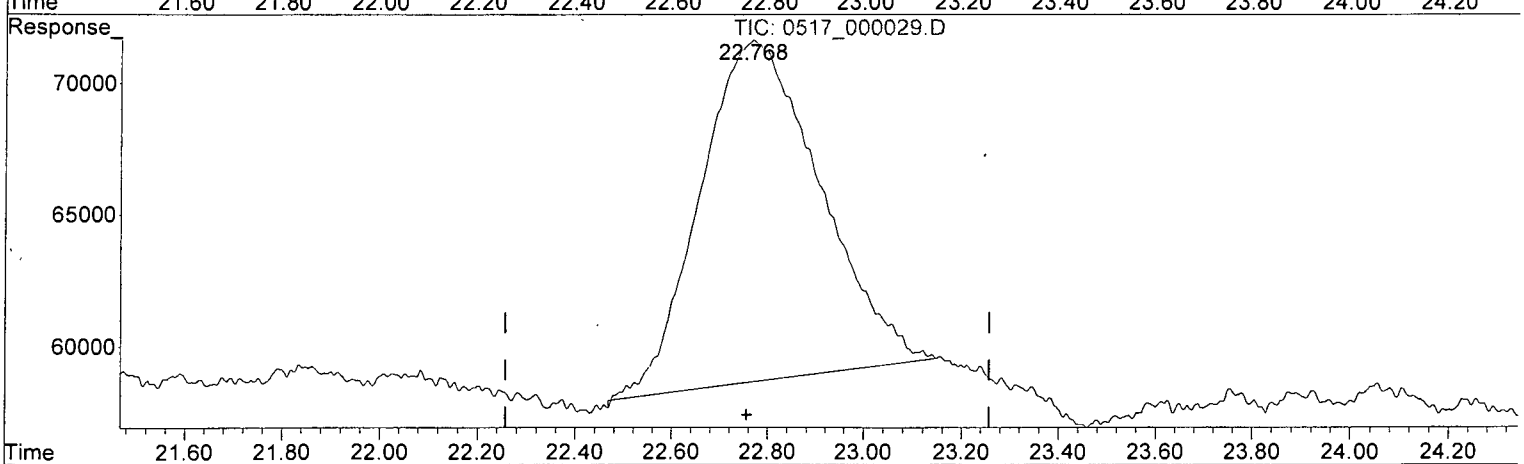
Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000029.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 09:36:11
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4226 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 10:21:01 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



MHP 5-18-15 PM5/19/15



QEdit

(18) PETN (TM)

22.770min 1035.611 ppb m

response 664810

(18) PETN #2 (TM)

22.769min 0.000 ppb

response 12979

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000030.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 10:15:43
Operator : MP
Sample : 8330MXA_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4227 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 10:55:41 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D.	N.D. d
	Spiked Amount 62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1)	TM HMX	0.000	4.068	0	1681330	N.D.	1039.616 #
2)	TM RDX	0.000	6.409	0	1387920	N.D.	1017.711 #
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5)	TM 1,3-DINIT...	0.000	8.425	0	3357041	N.D.	963.150 #
6)	TM NITROBENZENE	0.000	9.162	0	1928161	N.D.	1035.223 #
7)	TM 2,4,6-TRI...	0.000	0.000	0	0	N.D.	N.D. d
8)	TM NITROGLYC...	12.047	0.000	653647	0	1003.342	N.D. d#
9)	TM TETRYL	12.047	0.000	653647	0	NoCal	N.D. d
10)	TM 2,6-DINIT...	13.443	0.000	610	0	NoCal	N.D.
11)	TM 2,4-DINIT...	0.000	14.050	0	1897662	N.D.	1007.427 #
12)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13)	TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14)	TM 3,5-DINIT...	0.000	16.557	0	1539687	N.D.	1038.050 #
15)	TM 3-NITROTO...	0.000	18.057	0	814888	N.D.	1137.424 #
16)	TM 4-AMINO-2...	0.000	18.678	0	1245938	N.D.	1075.915 #
17)	TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

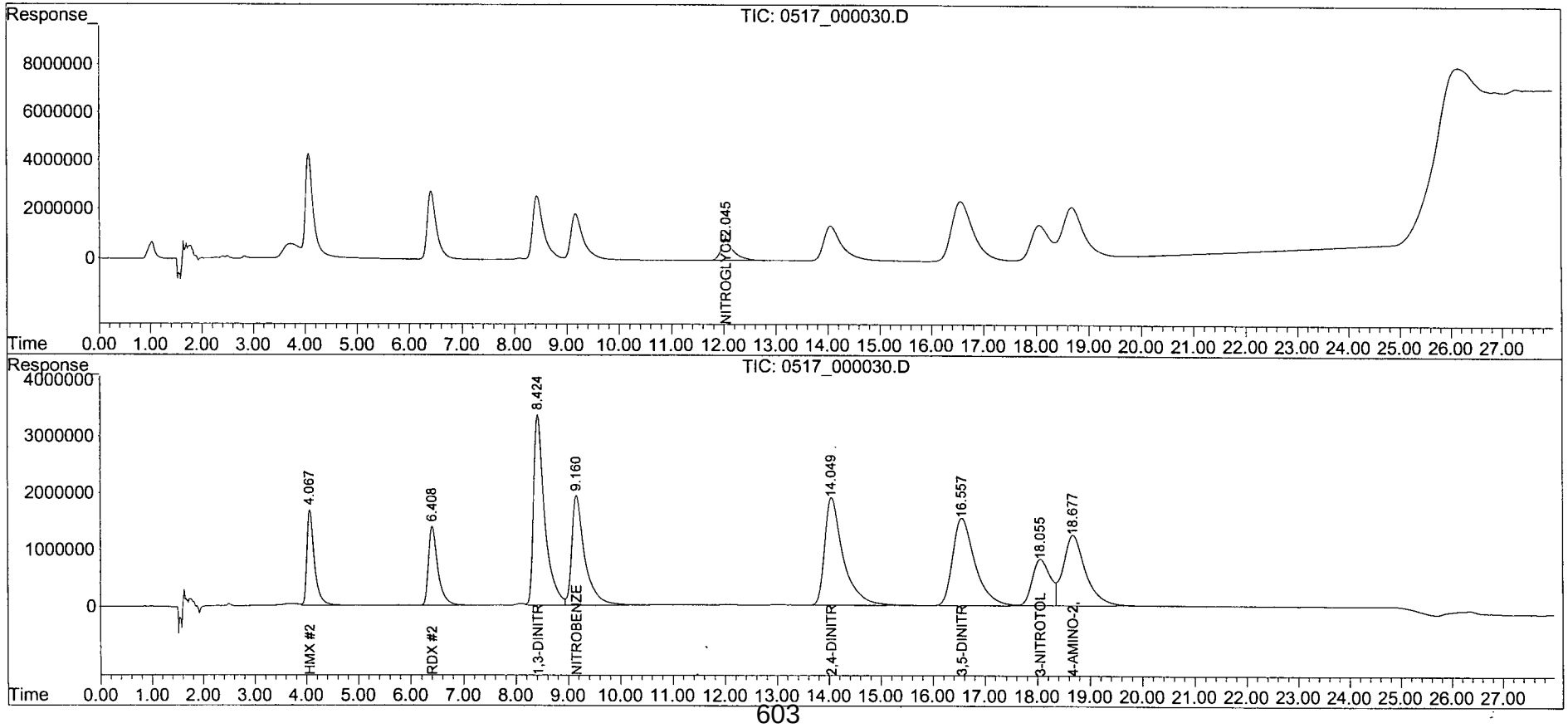
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000030.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 10:15:43
Operator : MP
Sample : 8330MXA_SS 1.0 PPM 05/18/15
Misc :
ALS Vial : 4227 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 10:55:41 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 08:20:21 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 7643
Date Analyzed: 18-May-2015, 19:31:11
Instrument: Statler
Initial Cal. Date: 05/17/15
Data File: 0517_000043-44.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	NITROGLYCERIN	16.3	16.7	2.4	TM	
2	TM	PETN	16.0	17.1	6.7	TM	
3		Signal #2					
4	TM	3,5-DINITROANILINE	37.1	38.0	2.4	TM	
5	TM	HMX	40.4	44.3	9.7	TM	
6	TM	RDX	34.1	35.7	4.8	TM	
7	TM	1,3,5-TRINITROBENZENE	86.6	89.4	3.2	TM	
8	S	1,2-DINITROBENZENE	38.5	39.1	1.6	S	
9	TM	1,3-DINITROBENZENE	87.1	89.6	2.8	TM	
10	TM	NITROBENZENE	46.6	49.0	5.3	TM	
11	TM	2,4,6-TRINITROTOLUENE	45.5	46.4	2.0	TM	
12	TM	TETRYL	31.5	33.8	7.4	TM	
13	TM	2,6-DINITROTOLUENE	27.2	28.3	3.8	TM	
14	TM	2,4-DINITROTOLUENE	47.1	49.1	4.3	TM	
15	TM	2-NITROTOLUENE	17.2	19.0	11	TM	
16	TM	4-NITROTOLUENE	15.1	16.9	12	TM	
17	TM	3-NITROTOLUENE	17.9	19.8	10	TM	
18	TM	4-AMINO-2,6-DINITROTOLUEN	29.0	30.2	4.4	TM	
19	TM	2-AMINO-4,6-DINITROTOLUEN	36.7	37.7	2.7	TM	
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Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000043.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 18:51:41
Operator : MP
Sample : 8330MXA_CCV 1.0 PPM 05/18/15
Misc :
ALS Vial : 4423 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:09:09 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

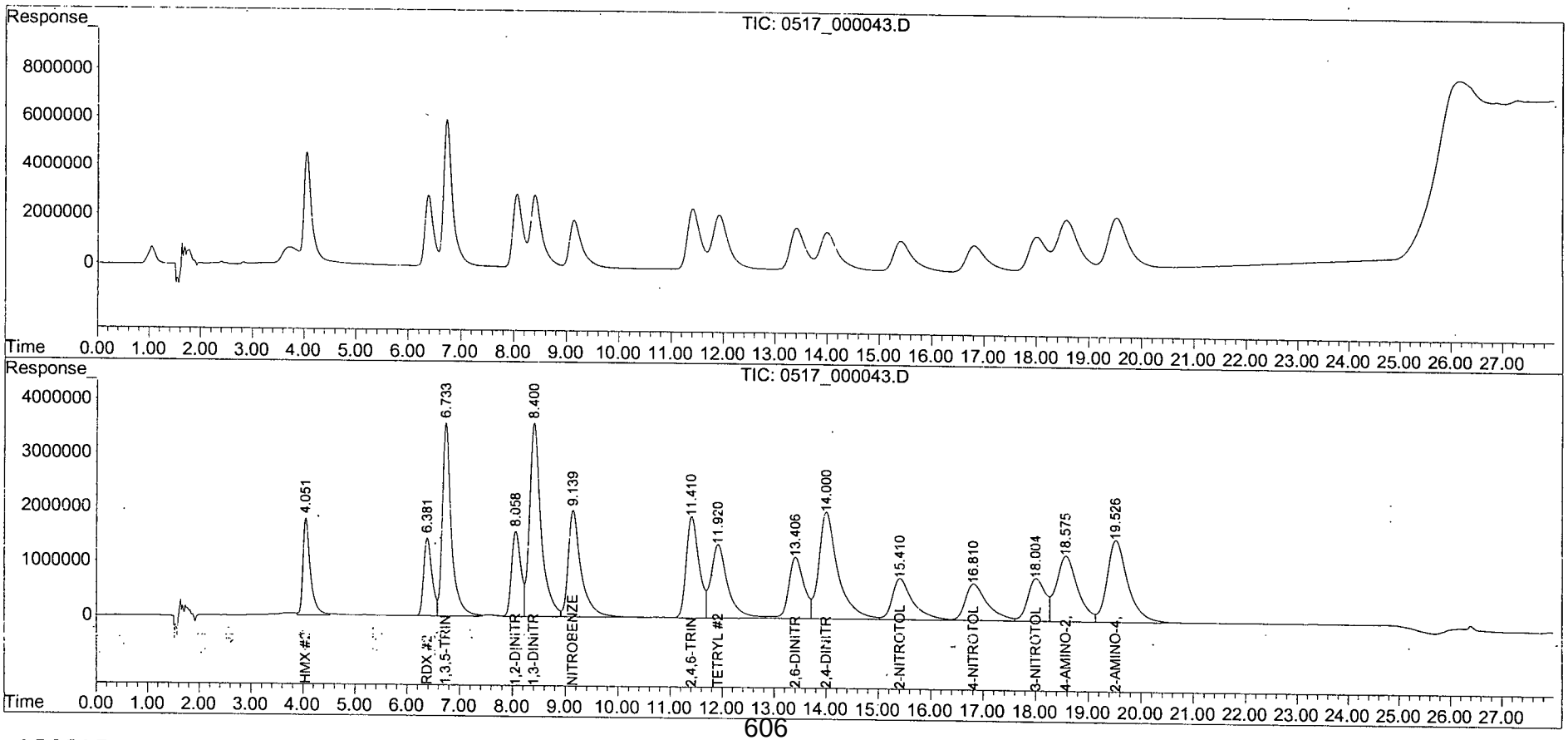
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	8.059	0	1562281	N.D.	1015.520 #
Spiked Amount 62.500			Recovery =		0.00%	1624.83%
Target Compounds						
1) TM HMX	0.000	4.051	0	1773758	N.D.	1096.767 #
2) TM RDX	0.000	6.382	0	1429214	N.D.	1047.990 #
3) TM 1,3,5-TRI...	0.000	6.734	0	3575424	N.D.	1031.723 #
5) TM 1,3-DINIT...	0.000	8.401	0	3582802	N.D.	1027.922 #
6) TM NITROBENZENE	0.000	9.140	0	1960377	N.D.	1052.520 #
7) TM 2,4,6-TRI...	0.000	11.411	0	1857436	N.D.	1020.175 #
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM TETRYL	11.922	11.920	1122810	1352416	NoCal	1073.519 #
10) TM 2,6-DINIT...	13.408	13.407	1670130	1131259	NoCal	1038.276 #
11) TM 2,4-DINIT...	0.000	14.001	0	1964676	N.D.	1043.003 #
12) TM 2-NITROTO...	0.000	15.410	0	761335	N.D.	1107.378 #
13) TM 4-NITROTO...	0.000	16.814	0	676260	N.D.	1118.724 #
14) TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15) TM 3-NITROTO...	0.000	18.006	0	790847	N.D.	1103.867 #
16) TM 4-AMINO-2...	0.000	18.576	0	1208486	N.D.	1043.573 #
17) TM 2-AMINO-4...	0.000	19.528	0	1508204	N.D.	1026.534 #
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000043.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 18:51:41
Operator : MP
Sample : 8330MXA_CCV 1.0 PPM 05/18/15
Misc :
ALS Vial : 4423 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:09:09 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000044.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 19:31:11
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/18/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:08:21 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount 62.500			Recovery	=	0.00%	0.00%
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM NITROGLYC...	12.016	12.013	667196	8404	1024.140	NoCal #
9) TM TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM 2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM 2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM 4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM 3,5-DINIT...	0.000	16.446	0	1518246	N.D.	1023.595 #
15) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM 2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	22.732	22.735	684834	13744	1066.803m	NoCal #

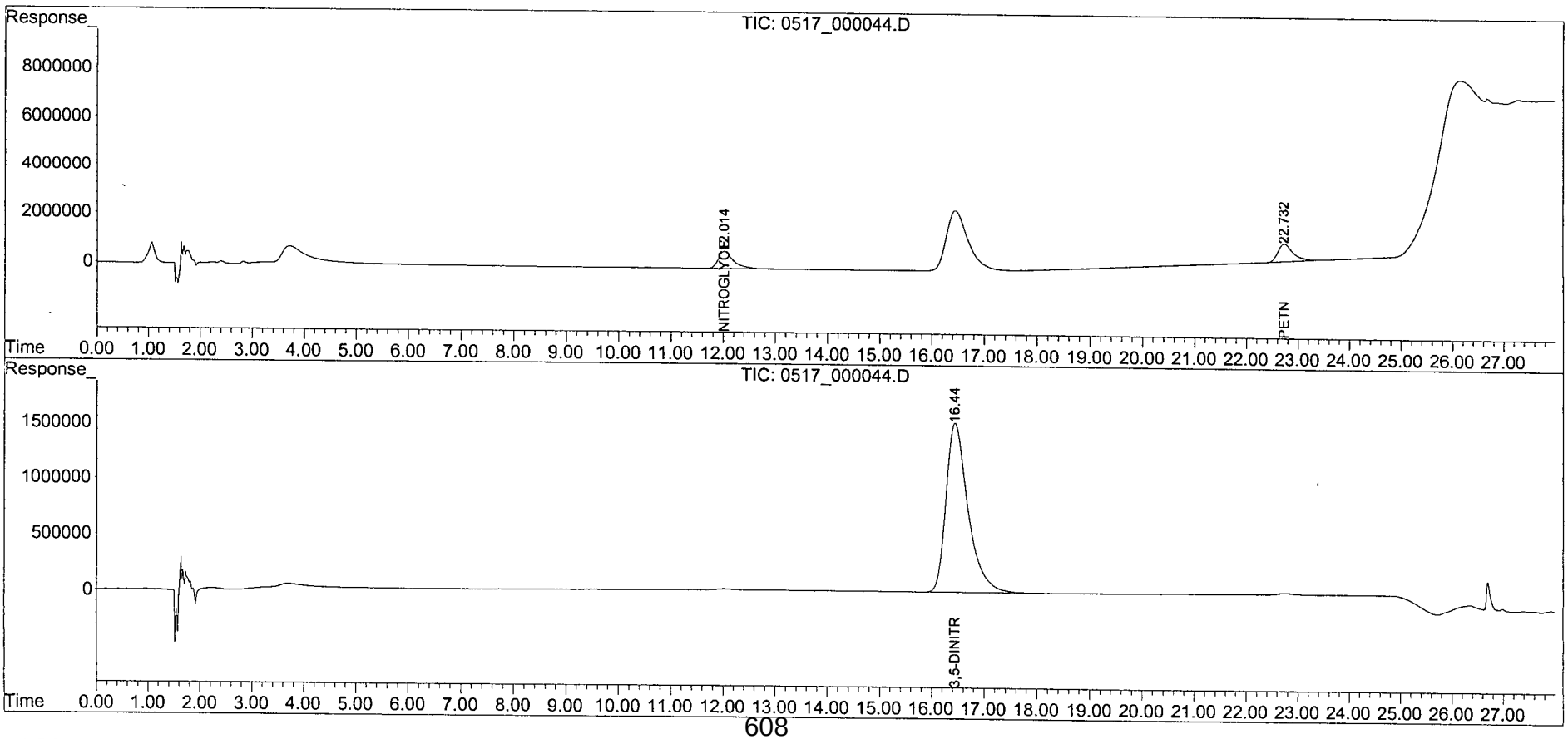
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000044.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 19:31:11
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/18/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:08:21 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

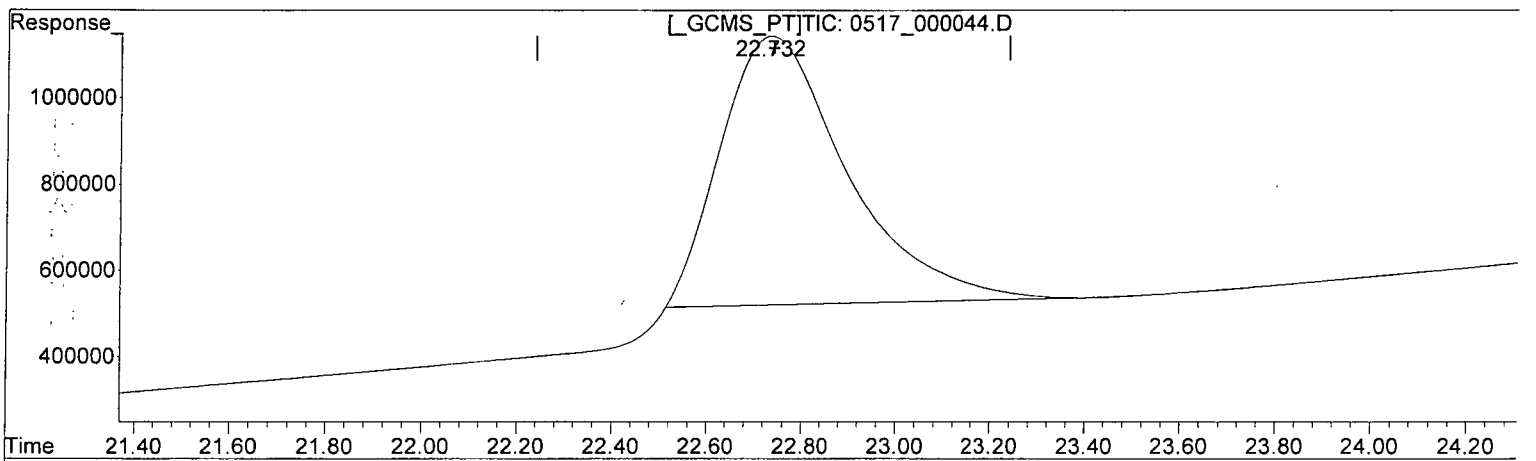


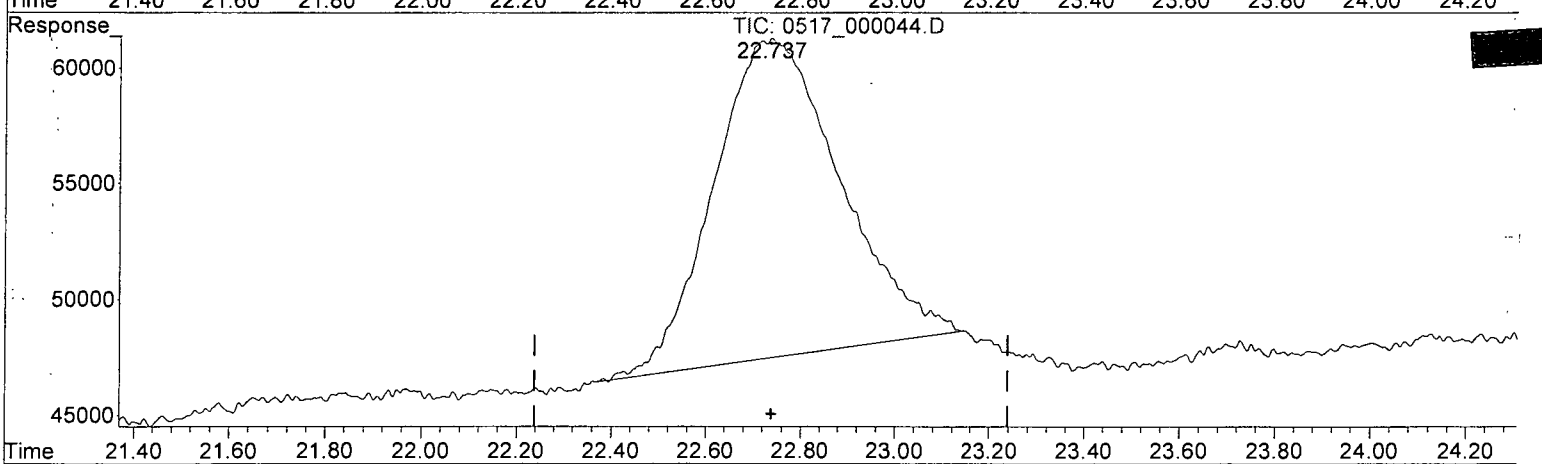
Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000044.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 19:31:11
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/18/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:07:29 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ





QEdit

(18) PETN (TM)

22.735min 967.679 ppb

response 621202

(18) PETN #2 (TM)

22.735min 0.000 ppb

response 13744

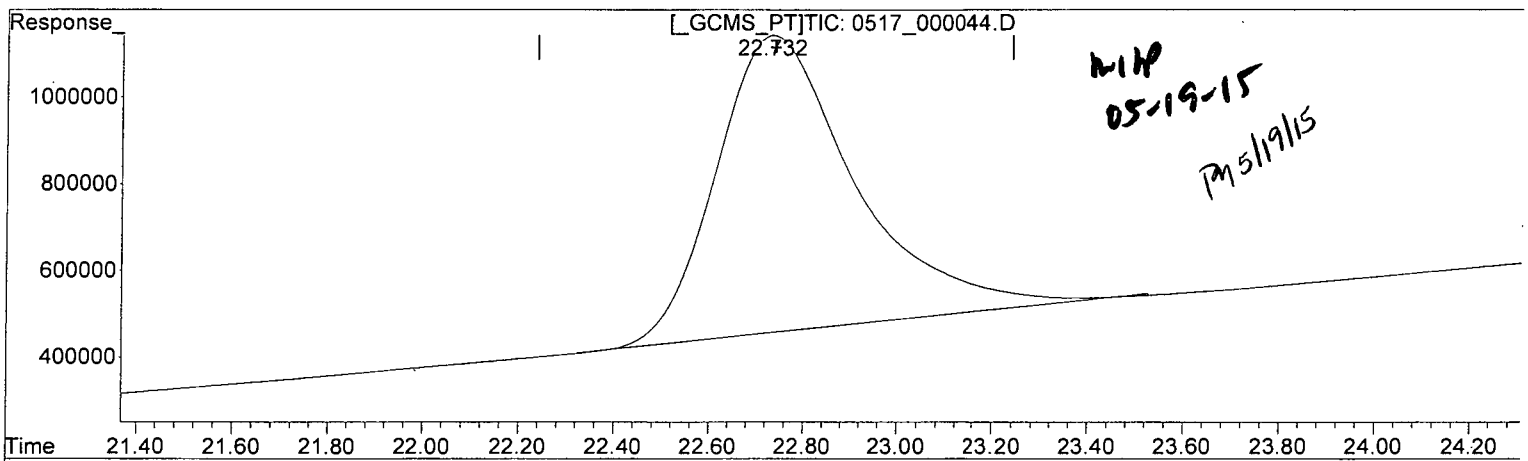
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000044.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 19:31:11
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/18/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

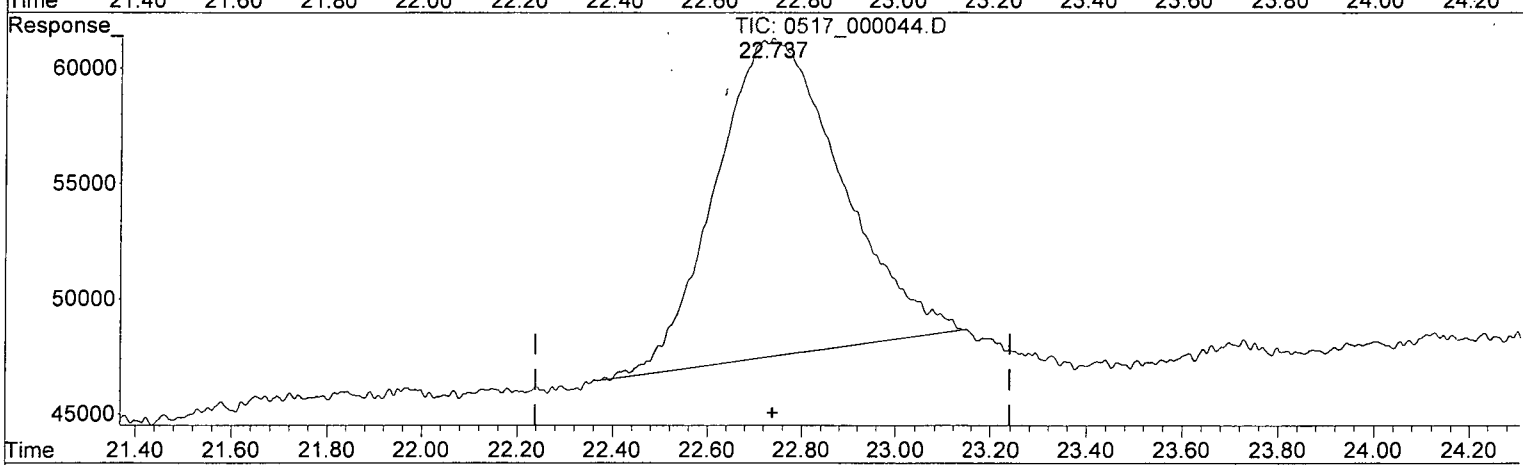
Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:07:29 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



MHP 05-19-15

PM 5/19/15



QEdit

(18) PETN (TM)

22.732min 1066.803 ppb m

response 684834

(18) PETN #2 (TM)

22.735min 0.000 ppb

response 13744

(+) = Expected Retention Time

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 76413
Date Analyzed: 19-May-2015, 00:47:18
Instrument: Statler
Initial Cal. Date: 05/17/15
Data File: 0517_000051-52.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	NITROGLYCERIN	16.3	16.7	2.6	TM	
2	TM	PETN	16.0	17.1	6.8	TM	
3		Signal #2					
4	TM	3,5-DINITROANILINE	37.1	37.6	1.5	TM	
5	TM	HMX	40.4	43.9	8.6	TM	
6	TM	RDX	34.1	35.6	4.3	TM	
7	TM	1,3,5-TRINITROBENZENE	86.6	89.7	3.5	TM	
8	S	1,2-DINITROBENZENE	38.5	39.2	2.0	S	
9	TM	1,3-DINITROBENZENE	87.1	89.9	3.2	TM	
10	TM	NITROBENZENE	46.6	48.4	4.0	TM	
11	TM	2,4,6-TRINITROTOLUENE	45.5	46.9	3.0	TM	
12	TM	TETRYL	31.5	32.8	4.0	TM	
13	TM	2,6-DINITROTOLUENE	27.2	28.2	3.7	TM	
14	TM	2,4-DINITROTOLUENE	47.1	49.0	4.0	TM	
15	TM	2-NITROTOLUENE	17.2	18.5	7.5	TM	
16	TM	4-NITROTOLUENE	15.1	16.6	9.8	TM	
17	TM	3-NITROTOLUENE	17.9	19.5	8.9	TM	
18	TM	4-AMINO-2,6-DINITROTOLUEN	29.0	29.7	2.7	TM	
19	TM	2-AMINO-4,6-DINITROTOLUEN	36.7	37.8	2.8	TM	
20							
21							
22							
23							
24							
25							
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40							

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000051.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 19-May-2015, 00:07:48
Operator : MP
Sample : 8330MXA_CCV 1.0 PPM 05/16/15
Misc :
ALS Vial : 4423 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:12:25 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4)	S 1,2-DINIT...	0.000	8.073	0	1568824	N.D.	1019.773 #
	Spiked Amount 62.500			Recovery =		0.00%	1631.64%
	Target Compounds						
1)	TM HMX	0.000	4.063	0	1755936	N.D.	1085.747 #
2)	TM RDX	0.000	6.399	0	1422641	N.D.	1043.171 #
3)	TM 1,3,5-TRI...	0.000	6.739	0	3587977	N.D.	1035.345 #
5)	TM 1,3-DINIT...	0.000	8.411	0	3596158	N.D.	1031.754 #
6)	TM NITROBENZENE	0.000	9.148	0	1936346	N.D.	1039.618 #
7)	TM 2,4,6-TRI...	0.000	11.418	0	1876031	N.D.	1030.388 #
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9)	TM TETRYL	11.944	11.942	1023752	1310420	NoCal	1040.183 #
10)	TM 2,6-DINIT...	13.421	13.420	1684203	1129609	NoCal	1036.762 #
11)	TM 2,4-DINIT...	0.000	14.016	0	1959427	N.D.	1040.216 #
12)	TM 2-NITROTO...	0.000	15.419	0	739197	N.D.	1075.177 #
13)	TM 4-NITROTO...	0.000	16.825	0	663928	N.D.	1098.324 #
14)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15)	TM 3-NITROTO...	0.000	18.016	0	780486	N.D.	1089.405 #
16)	TM 4-AMINO-2...	0.000	18.636	0	1188755	N.D.	1026.535 #
17)	TM 2-AMINO-4...	0.000	19.584	0	1510890	N.D.	1028.363 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

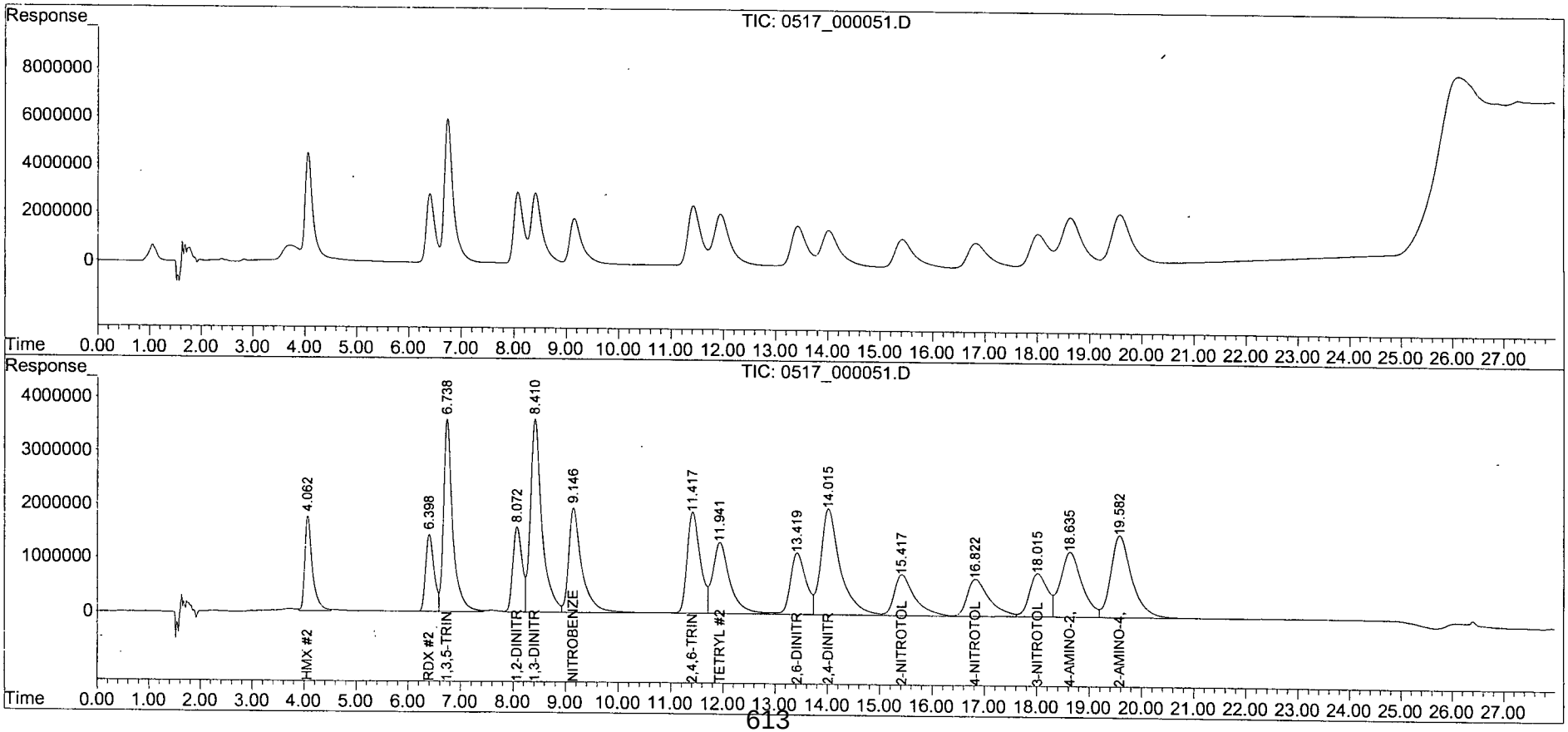
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000051.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 19-May-2015, 00:07:48
Operator : MP
Sample : 8330MXA_CCV 1.0 PPM 05/16/15
Misc :
ALS Vial : 4423 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:12:25 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000052.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 19-May-2015, 00:47:18
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/16/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:11:16 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount	62.500			Recovery	=	0.00%	0.00%
	Target Compounds						
1) TM	HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM	RDX	0.000	0.000	0	0	N.D. d	N.D. d
3) TM	1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5) TM	1,3-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
6) TM	NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
7) TM	2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
8) TM	NITROGLYC...	12.032	12.049	668724	10097	1026.486	NoCal #
9) TM	TETRYL	0.000	0.000	0	0	N.D. d	N.D. d
10) TM	2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM	2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM	2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM	4-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM	3,5-DINIT...	0.000	16.545	0	1505449	N.D.	1014.967 #
15) TM	3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM	4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM	2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM	PETN	22.740	22.734	685846	13691	1068.379m	NoCal #

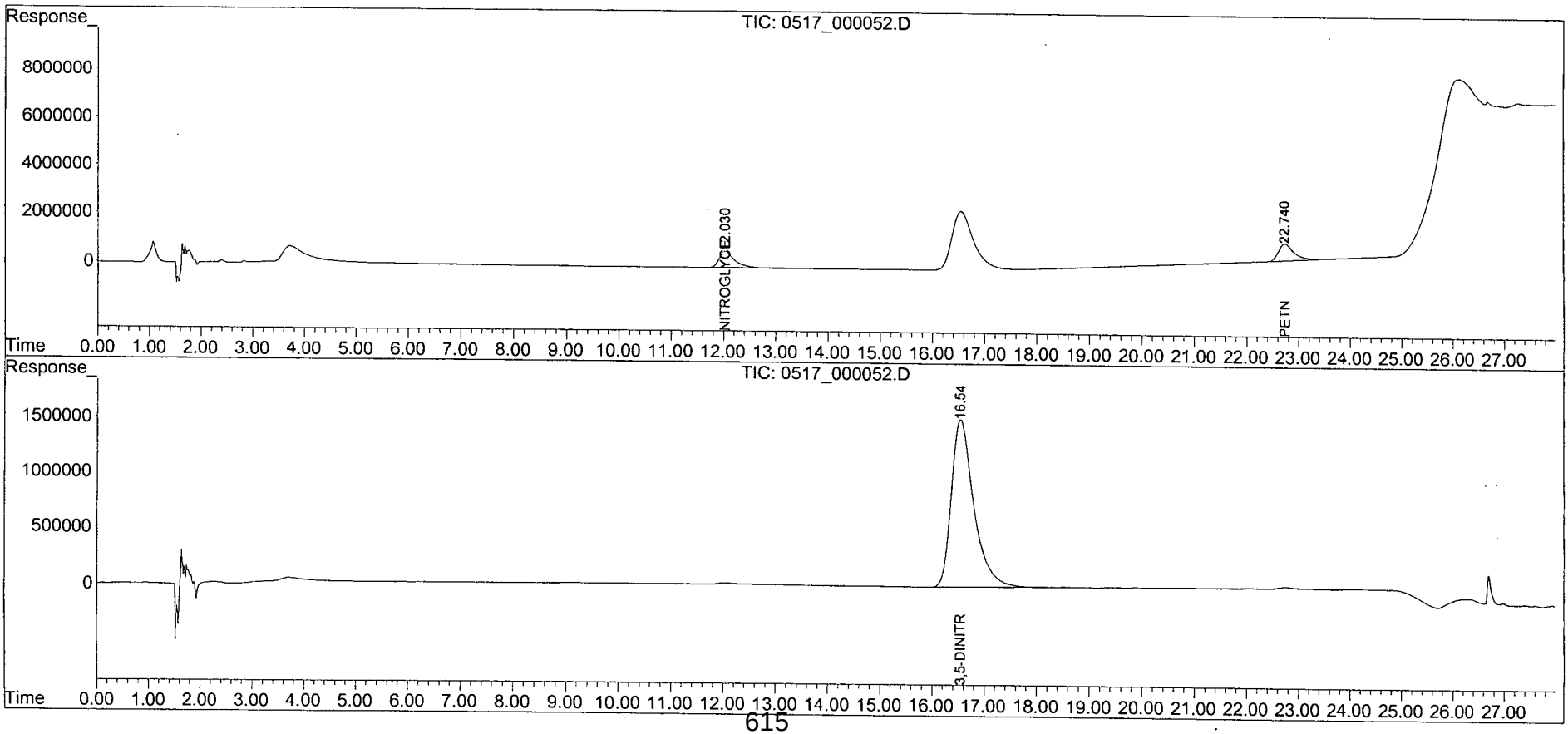
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000052.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 19-May-2015, 00:47:18
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/16/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:11:16 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

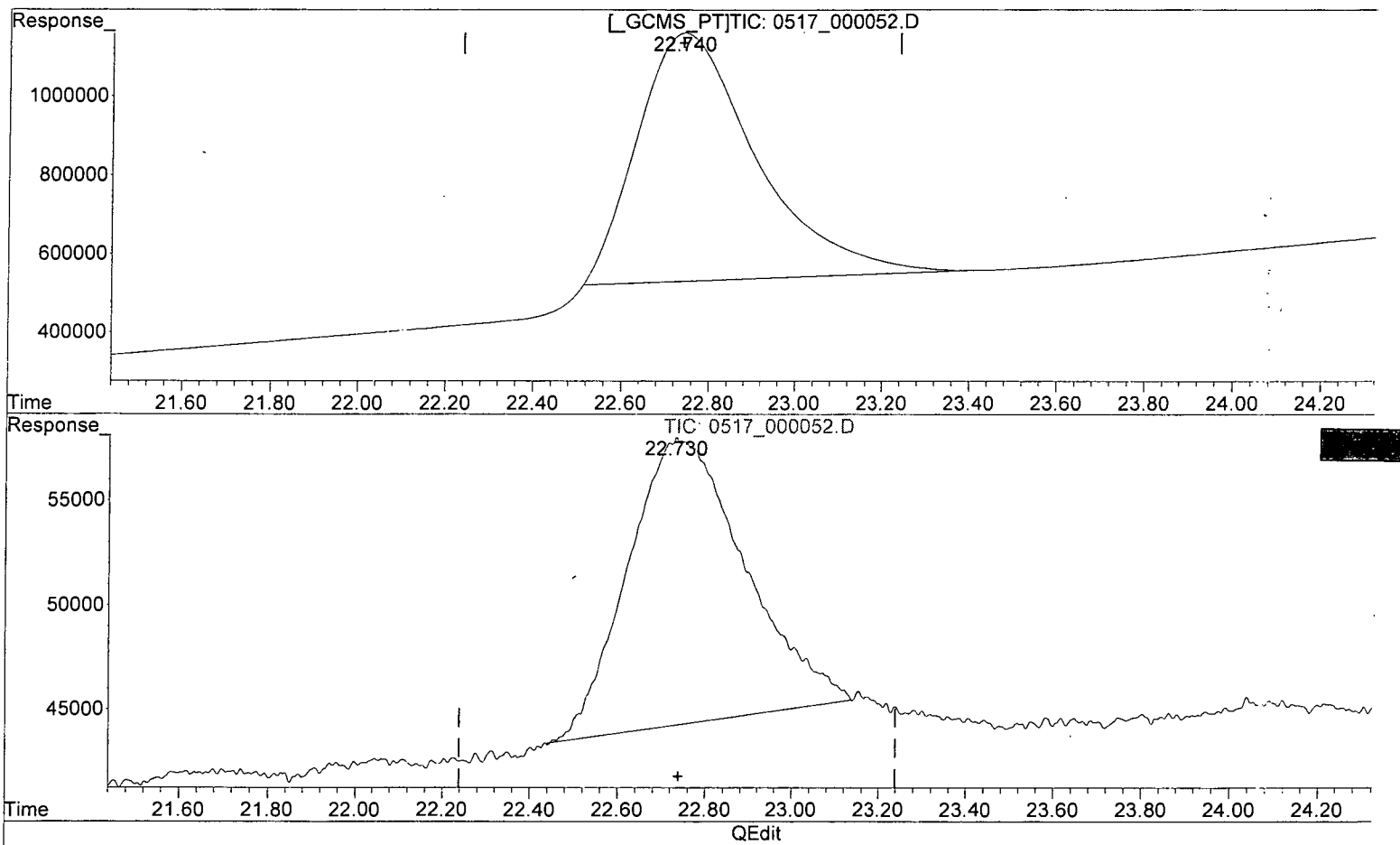


Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000052.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 19-May-2015, 00:47:18
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/16/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:07:53 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-



(18) PETN (TM)

22.742min 979.561 ppb

response 628829

(18) PETN #2 (TM)

22.734min 0.000 ppb

response 13691

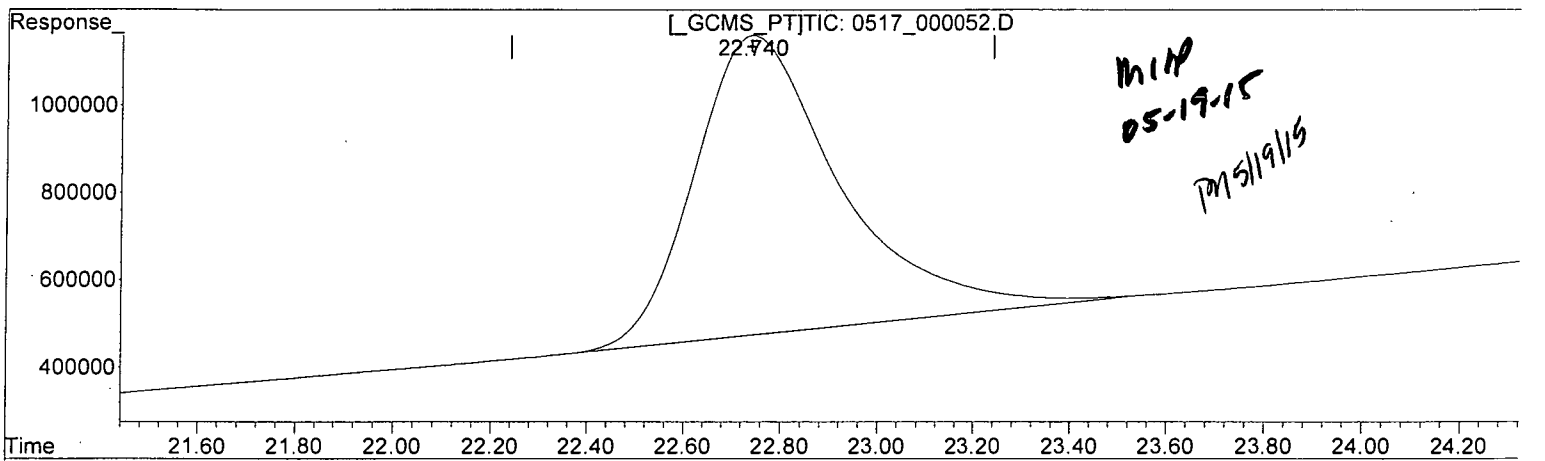
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000052.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 19-May-2015, 00:47:18
Operator : MP
Sample : 8330MXB_CCV 1.0 PPM 05/16/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

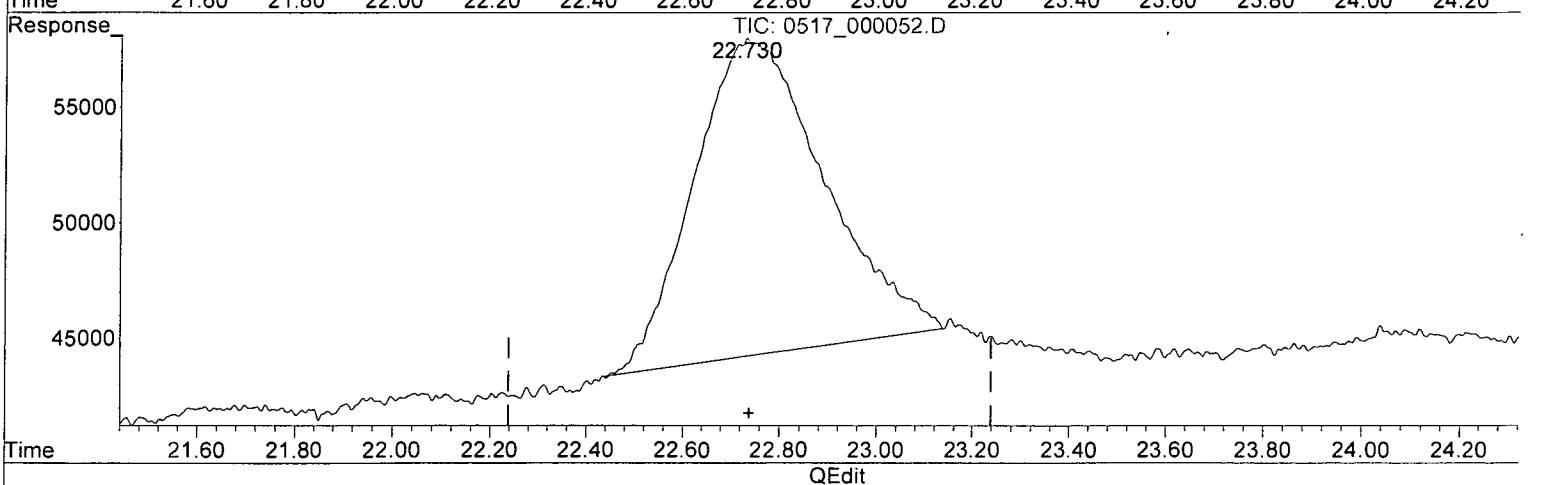
Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:07:53 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-µ



MHP 05-19-15

TM 5/19/15



QEdit

(18) PETN (TM)

22.740min 1068.379 ppb m

response 685846

(18) PETN #2 (TM)

22.734min 0.000 ppb

response 13691

(+) = Expected Retention Time

EPA 8330
EXPLOSIVES

Raw Data

APPL, INC.

Method Blank
EPA 8330B WATER

Blank Name/QCG: **150515W-16287 - 197118**
Batch ID: #83BJU-150515A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
BLANK	2,6-DINITROTOLUENE	0.300 U	0.50	0.300	0.125	ug/L	05/15/15	05/18/15
BLANK	HMX	0.300 U	0.50	0.300	0.115	ug/L	05/15/15	05/18/15
BLANK	NITROGLYCERIN	0.300 U	0.50	0.300	0.130	ug/L	05/15/15	05/18/15
BLANK	RDX	0.300 U	0.50	0.300	0.123	ug/L	05/15/15	05/18/15
BLANK	TETRYL	0.300 U	0.50	0.300	0.133	ug/L	05/15/15	05/18/15
BLANK	SURROGATE: 1,2-DINITROBENZ	86.2	70-130			%	05/15/15	05/18/15

Quant Method: W150517.M
Run #: 0517_000033
Instrument: Waldorf
Sequence: 150517
Initials: MP

GC SC-Blank-REG MDLs
Printed: 05/19/15 10:03:51 AM

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000033.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 06:38:57
Operator : MP
Sample : 150515ABLKW 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8451 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:48:08 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.524	0	733939	N.D.	0.862	#
	Spiked Amount 1.000			Recovery =		0.00%	86.20%	
	Target Compounds							
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.	
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D.	
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.	
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.	
8)	TM NITROGLYC...	5.949	5.925	81213	30287	0.233	NoCal	#
9)	TM TETRYL	6.421	0.000	5139	0	NoCal	N.D.	
10)	TM 2,4,6-TRI...	6.835	0.000	10944	0	NoCal	N.D.	
11)	TM 2-AMINO-4...	7.136	0.000	8296	0	NoCal	N.D.	
12)	TM 4-AMINO-2...	7.473	0.000	1526	0	NoCal	N.D.	
13)	TM 2,4-DINIT...	8.584	0.000	10920	0	NoCal	N.D.	
14)	TM 2,6-DINIT...	8.975	0.000	14901	0	NoCal	N.D.	
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.	
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.	
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.	
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

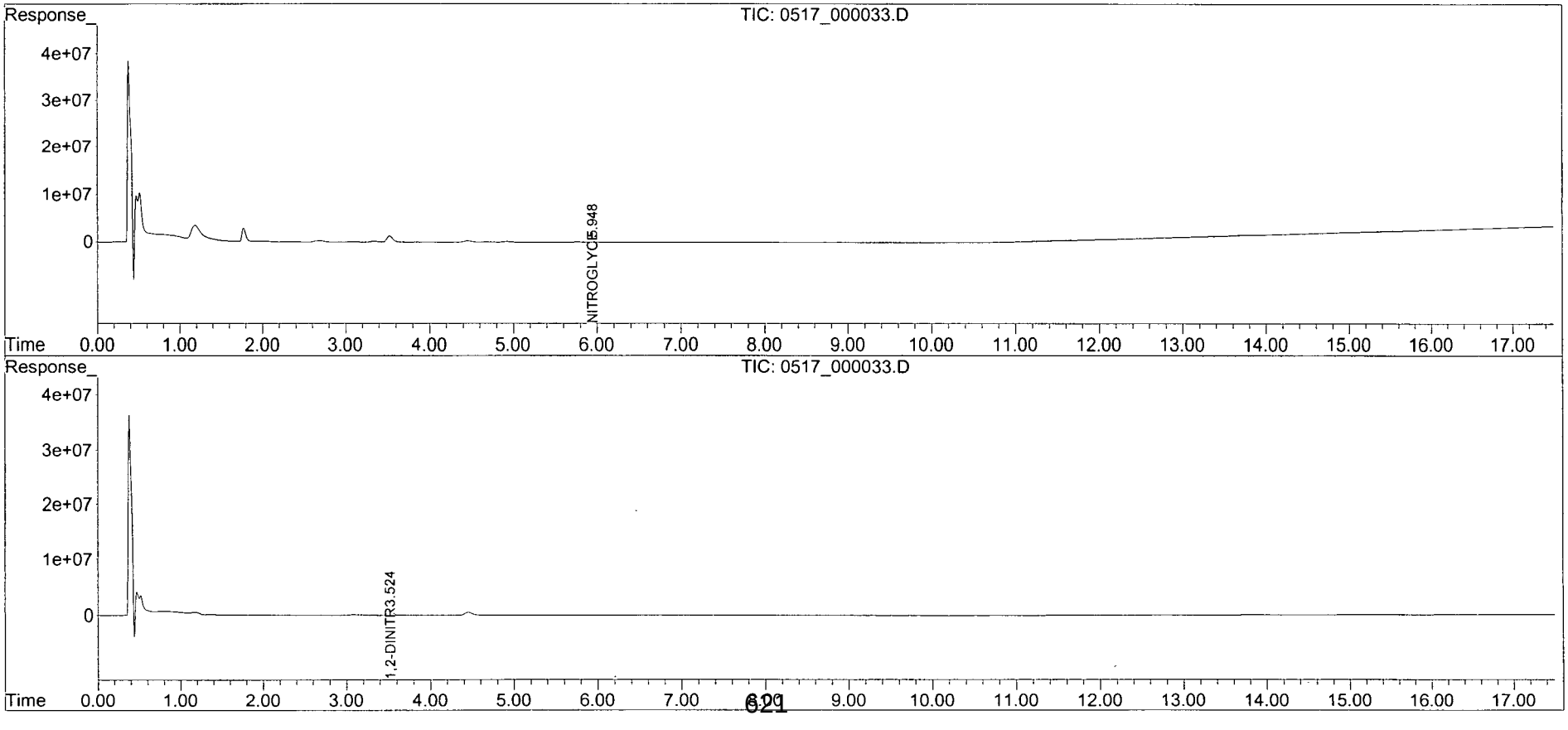
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000033.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 06:38:57
Operator : MP
Sample : 150515ABLKW 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8451 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:48:08 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000049.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq. On : 18-May-2015, 22:48:46
Operator : MP
Sample : 150515ABLKW 0.016 DF 05/15/15
Misc : Water
ALS Vial : 4355 Sample Multiplier: 0.016

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:51:42 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
4) S	1,2-DINIT...	0.000	8.071	0	84296	N.D.	0.877 #
	Spiked Amount 1.000			Recovery =		0.00%	87.70%
	Target Compounds						
1) TM	HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM	RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM	1,3,5-TRI...	0.000	0.000	0	0	N.D.	NT N.D. d
5) TM	1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM	NITROBENZENE	0.000	0.000	0	0	N.D.	NT N.D. d
7) TM	2,4,6-TRI...	0.000	0.000	0	0	N.D.	NT N.D. d
8) TM	NITROGLYC...	0.000	12.031	0	573	N.D. d	LDL NoCal
9) TM	TETRYL	12.053	0.000	672	0	NoCal	LDL N.D. d
10) TM	2,6-DINIT...	0.000	0.000	0	0	N.D.	N.D.
11) TM	2,4-DINIT...	0.000	0.000	0	0	N.D.	N.D.
12) TM	2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
13) TM	4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
14) TM	3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
15) TM	3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM	4-AMINO-2...	0.000	0.000	0	0	N.D.	N.D.
17) TM	2-AMINO-4...	0.000	0.000	0	0	N.D.	N.D.
18) TM	PETN	0.000	0.000	0	0	N.D. d	NT N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

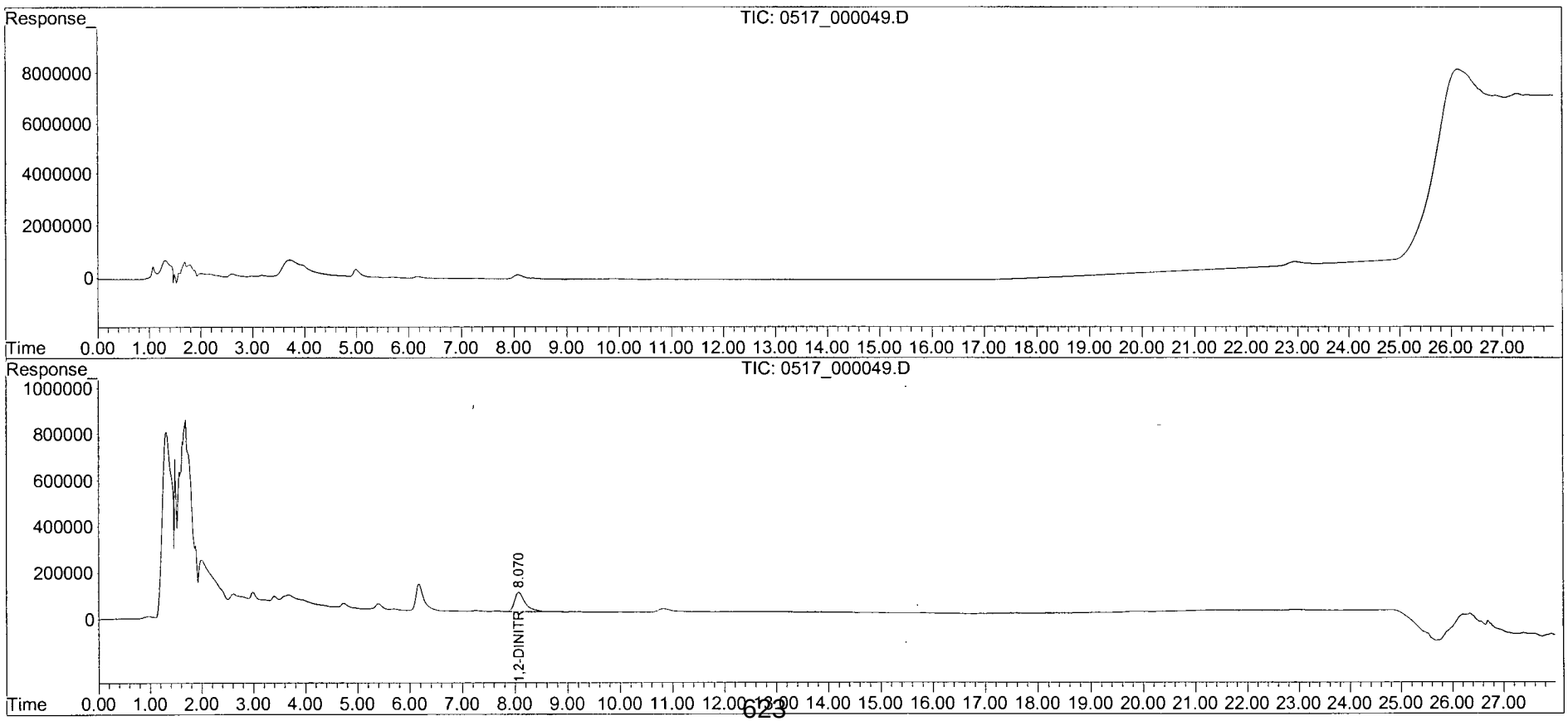
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\STATLER\CHEM32\1\DATA\150517\150517\
Data File : 0517_000049.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 22:48:46
Operator : MP
Sample : 150515ABLKW 0.016 DF 05/15/15
Misc : Water
ALS Vial : 4355 Sample Multiplier: 0.016

Integration File signal 1: STE2_Signal_1.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 19 07:51:42 2015
Quant Method : Z:\STATLER\CHEM32\1\DATA\150517\150517\STE2_150517.M
Quant Title : 8330 A + B - Statler
QLast Update : Mon May 18 13:38:19 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : Acclaim E2 150x3. Signal #2 Info : Acclaim E2 150x3.0mm 3.0-micron



Laboratory Control Spike Recovery
EPA 8330B WATER

APPL ID: **150515W-16287 LCS - 197118**
Batch ID: #83BJU-150515A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2,4-DINITROTOLUENE	8.00	7.14	89.3	60-135
2,6-DINITROTOLUENE	8.00	7.12	89.0	60-135
HMX	8.00	7.74	96.8	80-115
NITROGLYCERIN	8.00	7.43	92.9	70-130
RDX	8.00	7.16	89.5	50-160
TETRYL	8.00	7.43	92.9	20-175
SURROGATE: 1,2-DINITROBENZENE (S	8.00	7.22	90.3	70-130

Comments: _____

Primary	SPK
Quant Method :	W150517.M
Extraction Date :	05/15/15
Analysis Date :	05/18/15
Instrument :	Waldorf
Run :	0517_000030
Initials :	MP

Printed: 05/19/15 10:03:46 AM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000030.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:46:27
Operator : MP
Sample : 150515ALCS-1 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8448 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:47:59 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.550	0	6149750	N.D.	7.221	#
	Spiked Amount 1.000			Recovery	=	0.00%	722.10%	
	Target Compounds							
1)	TM HMX	0.000	0.917	0	12734886	N.D.	7.742	#
2)	TM RDX	0.000	1.728	0	7833621	N.D.	7.157	#
3)	TM 1,3,5-TRI...	0.000	2.816	0	14044757	N.D.	7.104	#
5)	TM 1,3-DINIT...	0.000	3.716	0	13285251	N.D.	7.034	#
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
7)	TM NITROBENZENE	0.000	5.047	0	6078692	N.D.	7.033	#
8)	TM NITROGLYC...	6.020	6.014	2586672	75644	7.426	NoCal	#
9)	TM TETRYL	6.404	6.404	7763064	4865215	NoCal	7.427	#
10)	TM 2,4,6-TRI...	6.881	6.881	7728912	5988277	NoCal	7.339	#
11)	TM 2-AMINO-4...	7.130	7.130	8205746	5446983	NoCal	7.024	#
12)	TM 4-AMINO-2...	7.475	7.476	6929355	3727682	NoCal	6.558	#
13)	TM 2,4-DINIT...	8.586	8.586	4132005	5652256	NoCal	7.139	#
14)	TM 2,6-DINIT...	8.947	8.946	4331453	3139990	NoCal	7.123	#
15)	TM 2-NITROTO...	0.000	12.303	0	2074921	N.D.	6.710	#
16)	TM 4-NITROTO...	0.000	12.900	0	2081162	N.D.	6.730	#
17)	TM 3-NITROTO...	0.000	13.787	0	2513087	N.D.	6.838	#
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.	

NP

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Algorithm Check
HMX

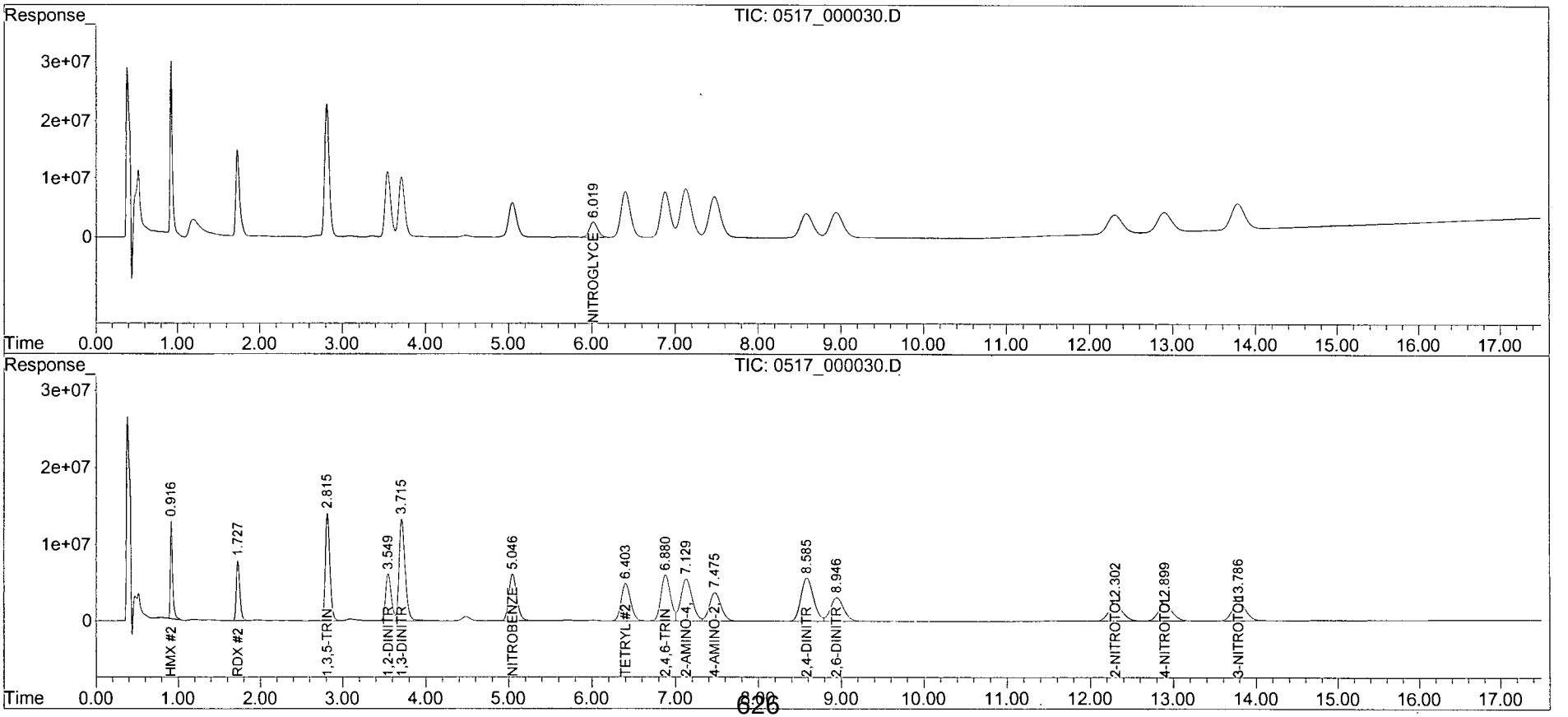
$\frac{12734886}{658.0\ (V_0)} \times 0.016 = 7.7416$ ✓ NP 05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000030.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 04:46:27
Operator : MP
Sample : 150515ALCS-1 0.016 DF 05/15/15
Misc : Water
ALS Vial : 8448 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:47:59 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Matrix Spike Recoveries

EPA 8330B WATER

APPL ID: **150515W-16287 MS - 197118**
Batch ID: #83BJU-150515A
Sample ID: AZ16287
Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4-DINITROTOLUENE	8.00	ND	7.08	7.10	88.5	88.8	60-135	0.28	20
2,6-DINITROTOLUENE	8.00	ND	7.11	7.12	88.9	89.0	60-135	0.14	20
HMX	8.00	ND	7.72	8.05	96.5	101	80-115	4.2	20
NITROGLYCERIN	8.00	ND	7.72	7.64	96.5	95.5	70-130	1.0	20
RDX	8.00	ND	7.20	7.06	90.0	88.3	50-160	2.0	20
TETRYL	8.00	ND	7.59	7.51	94.9	93.9	20-175	1.1	20
SURROGATE: 1,2-DINITROBENZENE (S)	8.00	NA	7.14	7.14	89.3	89.3	70-130		

Comments: _____

Primary	SPK	DUP
Quant Method :	W150517.M	W150517.M
Extraction Date :	05/15/15	05/15/15
Analysis Date :	05/18/15	05/18/15
Instrument :	Waldorf	Waldorf
Run :	0517_000031	0517_000032
Initials :	MP	

Printed: 05/19/15 10:03:42 AM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000031.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 05:23:57
Operator : MP
Sample : AZ16287W26_MS-1 0.017 DF 05/15/15
Misc : Water
ALS Vial : 8449 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:48:02 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.542	0	6077511	N.D.	7.136	#
	Spiked Amount 1.000			Recovery	=	0.00%	713.60%	
	Target Compounds							
1)	TM HMX	0.000	0.915	0	12702293	N.D.	7.722	#
2)	TM RDX	0.000	1.725	0	7875792	N.D.	7.195	#
3)	TM 1,3,5-TRI...	0.000	2.812	0	14047544	N.D.	7.105	#
5)	TM 1,3-DINIT...	0.000	3.710	0	13195434	N.D.	6.986	#
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
7)	TM NITROBENZENE	0.000	5.039	0	6041636	N.D.	6.990	#
8)	TM NITROGLYC...	6.014	6.010	2688452	70284	7.719	NoCal	#
9)	TM TETRYL	6.393	6.393	8011684	4973230	NoCal	7.592	#
10)	TM 2,4,6-TRI...	6.872	6.872	7703592	5950206	NoCal	7.293	#
11)	TM 2-AMINO-4...	7.115	7.115	8093775	5345640	NoCal	6.893	#
12)	TM 4-AMINO-2...	7.459	7.459	6801642	3637121	NoCal	6.399	#
13)	TM 2,4-DINIT...	8.569	8.569	4118587	5604717	NoCal	7.079	#
14)	TM 2,6-DINIT...	8.929	8.928	4340309	3132276	NoCal	7.106	#
15)	TM 2-NITROTO...	0.000	12.283	0	2054800	N.D.	6.645	#
16)	TM 4-NITROTO...	0.000	12.881	0	2052433	N.D.	6.637	#
17)	TM 3-NITROTO...	0.000	13.769	0	2471178	N.D.	6.724	#
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

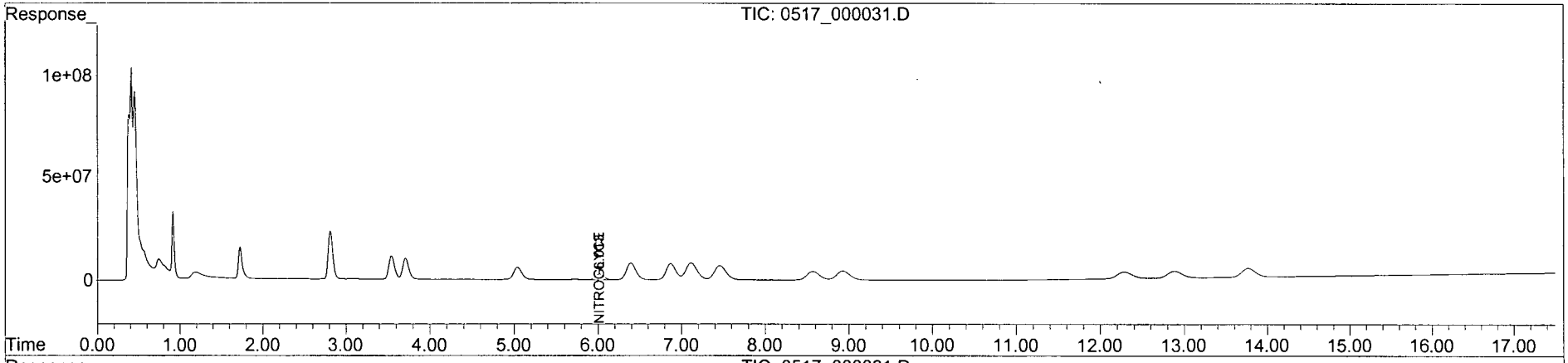
MP
05-19-15

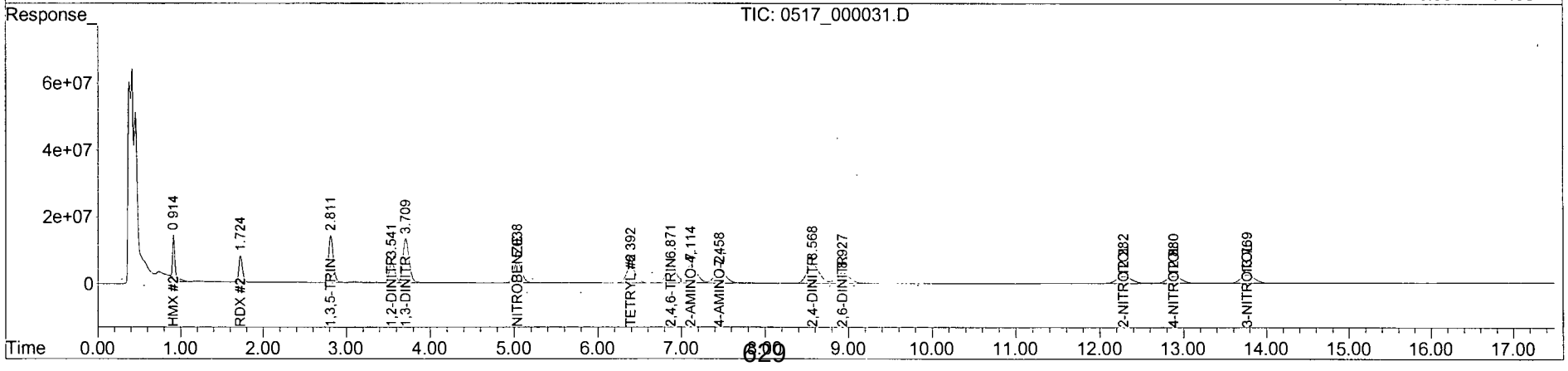
Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000031.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 05:23:57
Operator : MP
Sample : AZ16287W26_MS-1 0.017 DF 05/15/15
Misc : Water
ALS Vial : 8449 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:48:02 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron





Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000032.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 06:01:27
Operator : MP
Sample : AZ16287W27_MSD-1 0.017 DF 05/15/15
Misc : Water
ALS Vial : 8450 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:48:05 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.541	0	6083714	N.D.	7.143	#
	Spiked Amount 1.000			Recovery	=	0.00%	714.30%	
	Target Compounds							
1)	TM HMX	0.000	0.914	0	13245666	N.D.	8.052	#
2)	TM RDX	0.000	1.724	0	7729922	N.D.	7.062	#
3)	TM 1,3,5-TRI...	0.000	2.812	0	13840332	N.D.	7.001	#
5)	TM 1,3-DINIT...	0.000	3.708	0	13207880	N.D.	6.993	#
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.	
7)	TM NITROBENZENE	0.000	5.036	0	6091521	N.D.	7.048	#
8)	TM NITROGLYC...	6.013	6.010	2660136	65637	7.637	NoCal	#
9)	TM TETRYL	6.388	6.388	7929169	4922125	NoCal	7.514	#
10)	TM 2,4,6-TRI...	6.869	6.869	7629379	5895817	NoCal	7.226	#
11)	TM 2-AMINO-4...	7.106	7.106	8013973	5299290	NoCal	6.834	#
12)	TM 4-AMINO-2...	7.450	7.450	6729827	3603379	NoCal	6.340	#
13)	TM 2,4-DINIT...	8.564	8.565	4130158	5620778	NoCal	7.099	#
14)	TM 2,6-DINIT...	8.923	8.923	4355478	3140482	NoCal	7.125	#
15)	TM 2-NITROTO...	0.000	12.270	0	2082083	N.D.	6.733	#
16)	TM 4-NITROTO...	0.000	12.867	0	2077887	N.D.	6.719	#
17)	TM 3-NITROTO...	0.000	13.753	0	2510047	N.D.	6.830	#
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

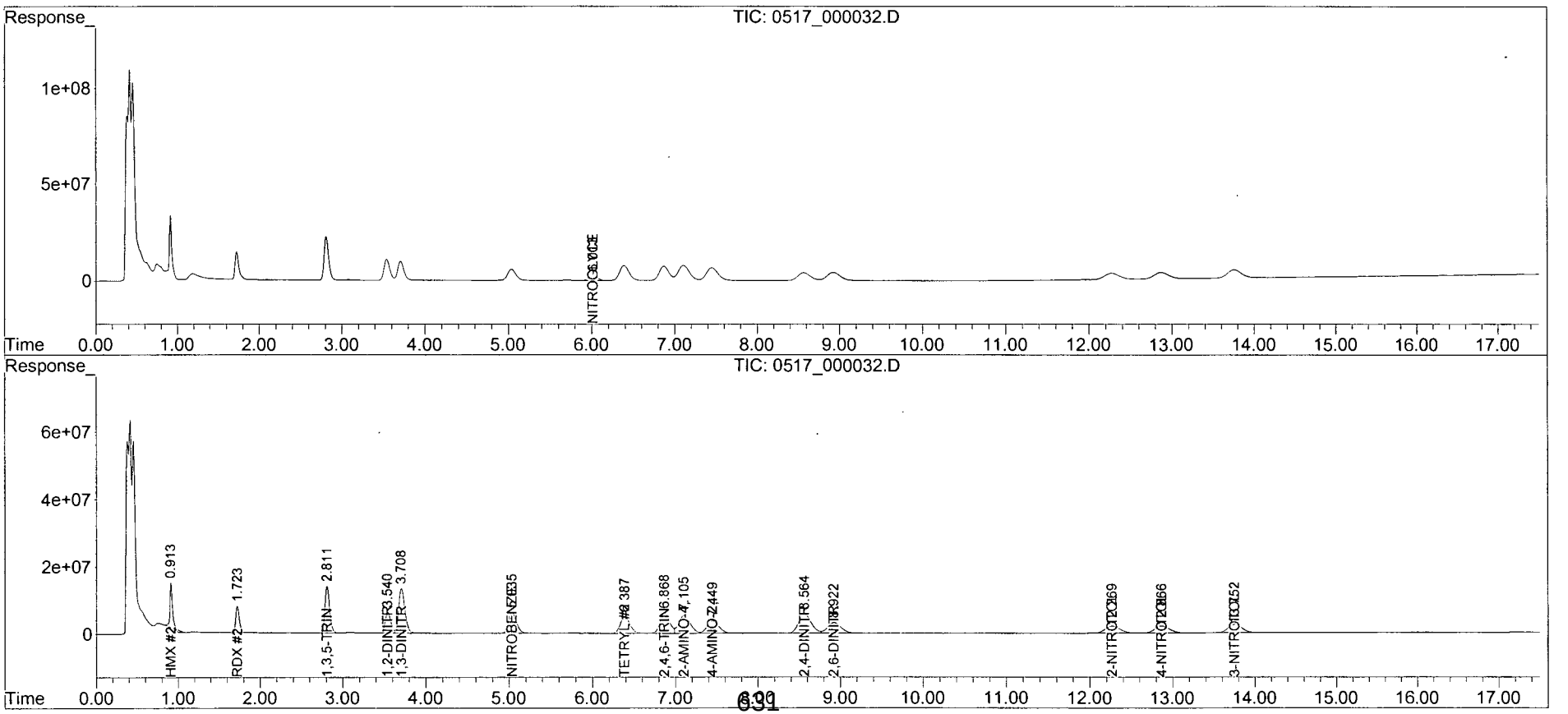
MP
05-19-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150517\150517\
Data File : 0517_000032.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 18-May-2015, 06:01:27
Operator : MP
Sample : AZ16287W27_MSD-1 0.017 DF 05/15/15
Misc : Water
ALS Vial : 8450 Sample Multiplier: 0.016

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: May 18 09:48:05 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150517\150517\W150517.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Mon May 18 09:47:14 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Method 8330 - Explosives
Lot #: 211111132-01 - 32480
Rec: 6/13/13 MFR exp. 6/6/15

CERTIFICATE OF ANALYSIS

CATALOG NO: M-8330-R
DESCRIPTION: Method 8330 - Explosives by HPLC
LOT: 211111132-01

SOLVENT:		Ratio
	Methanol	50
	Acetonitrile	50

Refer to the MSDS for additional safety information

EXPIRATION: Jun 6 , 2015
DATE CERTIFIED: Jun 6, 2013
SAMPLE SIZE: 1 mL
STORAGE CONDITION: Freeze (<-10° C)
HAZARDS: HIGHLY FLAMMABLE

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	Cas Number	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
2-Amino-4,6-dinitrotoluene	35572-78-2	100	1000	1000
4-Amino-2,6-dinitrotoluene	19406-51-0	100	1001	1001
1,3-Dinitrobenzene	99-65-0	100	1001	1001
2,4-Dinitrotoluene	121-14-2	100	1001	1001
2,6-Dinitrotoluene	606-20-2	100	1001	1001
HMX	2691-41-0	98.9	1008	997
RDX	121-82-4	98.6	1002	988
Nitrobenzene	98-95-3	99.8	1005	1003
2-Nitrotoluene	88-72-2	99.0	1002	992
3-Nitrotoluene	99-08-1	98.7	1003	990
4-Nitrotoluene	99-99-0	99.2	1003	995
Tetryl	479-45-8	99.6	1003	999
TNT	118-96-7	100	1003	1003
1,3,5-Trinitrobenzene	99-35-4	100	1001	1001

14 Components

1. All weights are traceable through NIST, Test No. 822-275972-11
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.
3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

Certified by: R. Cooper
Russ Cooper, QC Manager

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Nitroglycerin
Lot #: 213031341 - 32484
Rec: 6/13/13 MFR exp. 5/9/15

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-1-10X
Description: Nitroglycerin

Lot: 213031341

Solvent:	Ratio
Ethanol	97
Methanol	3

Date Certified: May 9, 2013
Expiration: May 9, 2015
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

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

AccuStandard follows U.S. conventions in reporting numerical values on both certificates and labels:

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

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

For use in routine laboratory analysis.

See reverse side for additional information
Refer to the MSDS for additional safety information

Certified by: R. Cooper
Russ Cooper, QC Manager

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

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

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

PETN
Lot #: 213081209 - 33135
Rec: 11/18/13 MFR exp. 8/14/15

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-2-10X
Description: PETN

Lot: 213081209
Solvent: Methanol

Date Certified: Aug 14, 2013
Expiration: Aug 14, 2015
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
PETN	78-11-5	99.7	1002	999

AccuStandard follows U.S. conventions in reporting numerical values on both certificates and labels:

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

1. All weights are traceable through NIST, Test No822-276872-11
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.
3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

See reverse side for additional information
Refer to the MSDS for additional safety information

Certified by: R. Cooper
Russ Cooper, QC Manager

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

OR-ORG/NO-001
Rev. 7/11

3,5-Dinitroaniline
Lot #: 199709 - 32133
Rec: 3/7/13 MFR exp. 11/21/15

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ACCREDITED

ISO 17025 Accredited Chemical Testing Lab
Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Rev 0 **Page 1**

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
010612-04	199709	≤ -10 Degrees C	Acetonitrile	21-Nov-2015	3,5-Dinitroaniline (3,5-DNA) Solution, 1000 mg/L, 1 ml

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration, mg/L
3,5-dinitroaniline	618-87-1	97	612.1.1P	1010 +/- 15.75

Certified By: Elizabeth Ford

Elizabeth Ford

All weights are traceable through N. I. S. T. Test No. 822/264157-00. Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Absolute Standards, Inc.
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Analytical Reference Material ARM

ISO 9001 QS Registered
ISO 17025-2005-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Lot #

Part Number: 79080 **Solvent(s):** 021310JC Acetonitrile

Lot Number: 112310

Description: Tetryl
[Methyl-2,4,6-trinitrophenylnitramine]

Expiration Date: 112315

Storage: 0 °C

Nominal Concentration (µg/mL): 1000

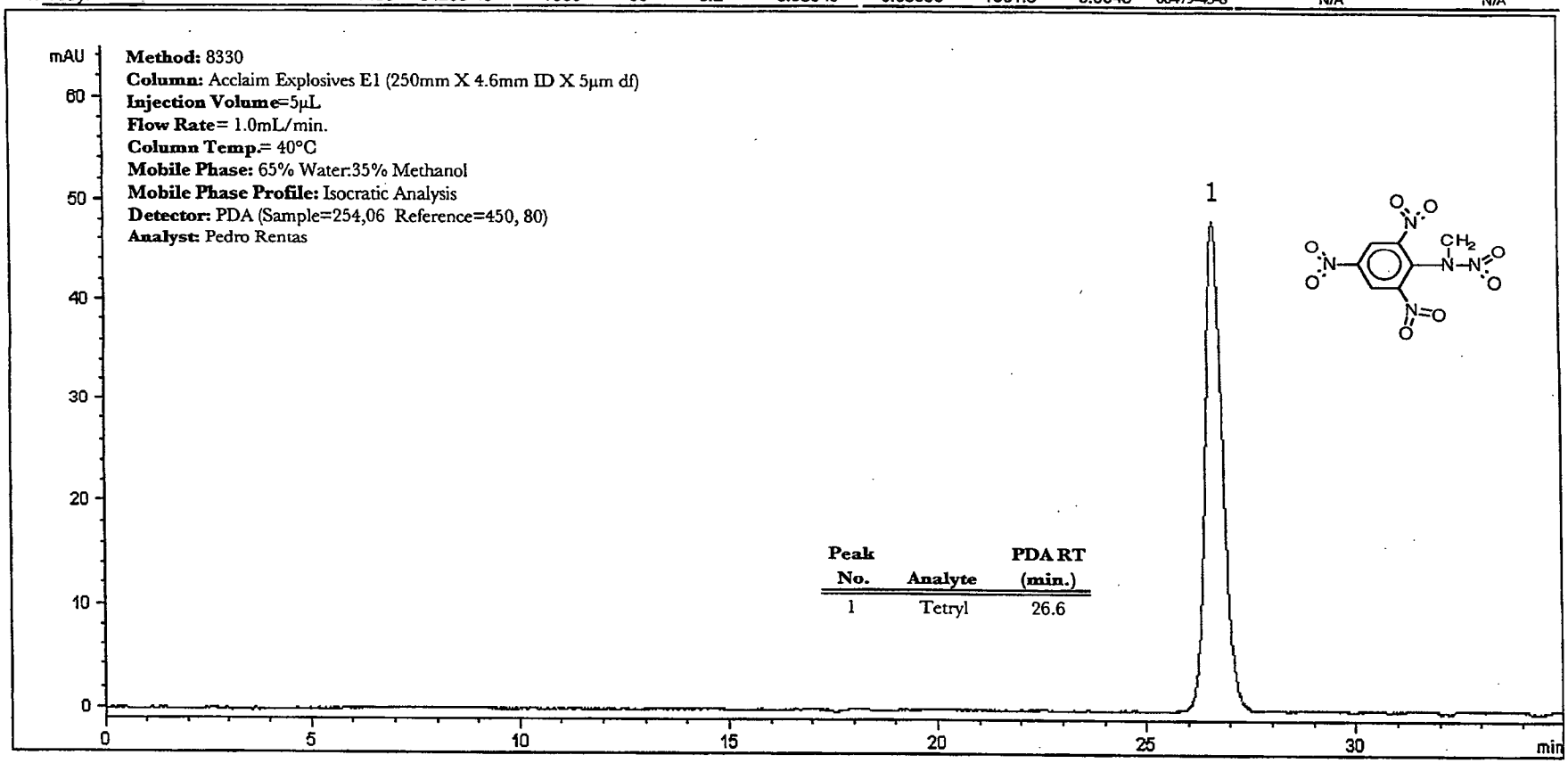
5E-05 Balance Uncertainty

Weight(s) shown below were combined and diluted to (mL): 50.0 0.002 Flask Uncertainty

		112310
Formulated By:	Vincent K. Criscio, Jr.	DATE
		112310
Reviewed By:	Pedro L. Rentas	DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty ± Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Tetryl	1430	34268-43	1000	99	0.2	0.05049	0.05058	1001.8	0.0045	00479-45-8	N/A	N/A



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Analytical Reference Material ARM

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Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 79250
Lot Number: 071409
Description: Pentaerythritol tetranitrate [PETN]
Expiration Date: 071414
Storage: 0 °C
Nominal Concentration (µg/mL): 1000

Solvent(s): Lot # J087 Acetonitrile

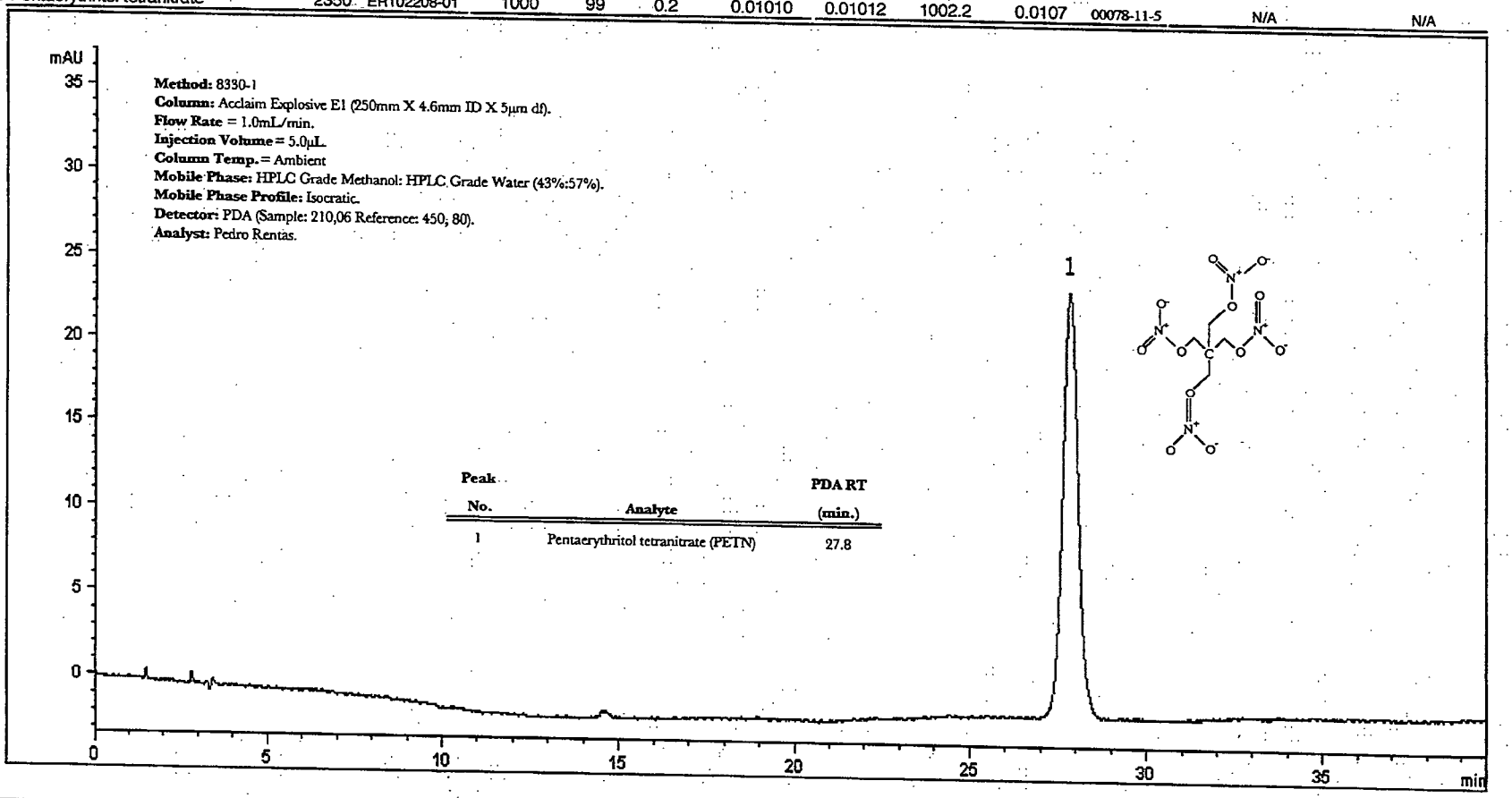
Weight(s) shown below were combined and diluted to (mL): 10.0 0.002 Flask Uncertainty 5E-05

Formulated By: Vincent K. Criscio, Jr. 071409 DATE

Reviewed By: Pedro L. Rentas 071409 DATE

MSDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	*Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Pentaerythritol tetranitrate	2350	ER102208-01	1000	99	0.2	0.01010	0.01012	1002.2	0.0107	00078-11-5	N/A	N/A



PETN
Lot #: 071409 - 30126
Rec: 12/20/11 MFR exp. 07/14/14

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Analytical Reference Material ARM

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CERTIFIED WEIGHT REPORT

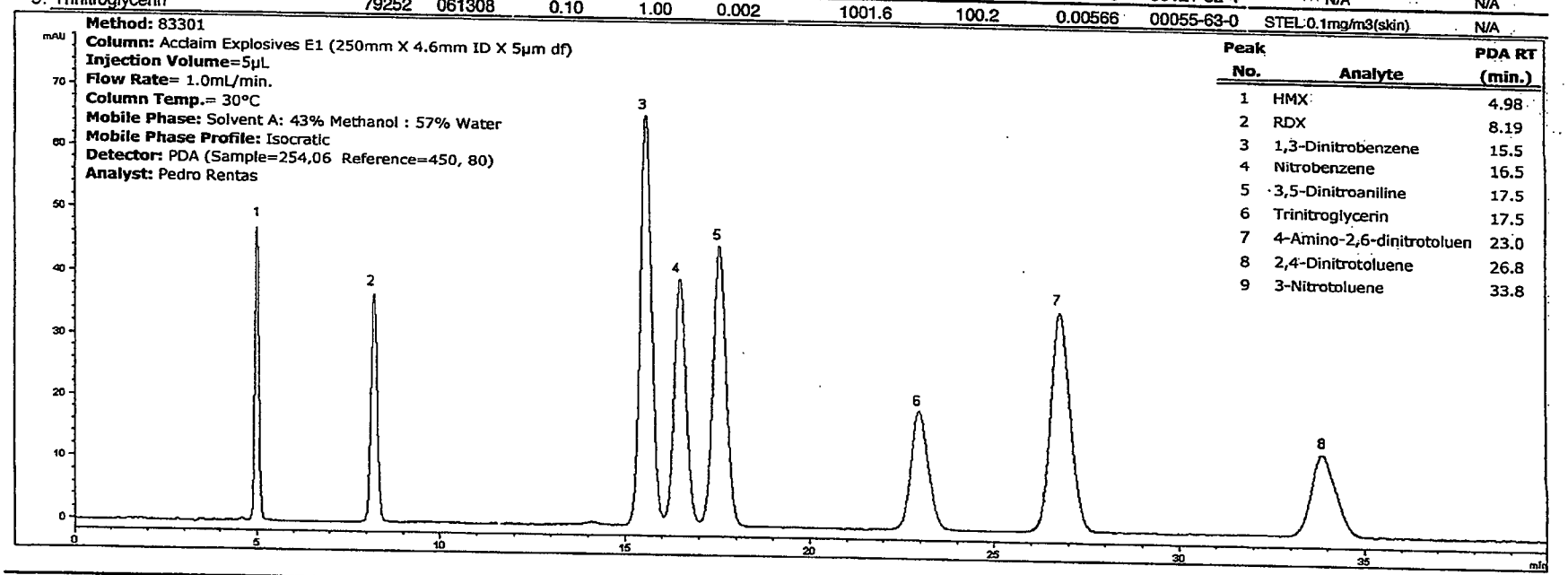
Part Number: 95093
Lot Number: 121311
Description: 8330 Mix A
9 components
Expiration Date: 121314
Storage: 0 °C
Nominal Concentration (µg/mL): 100

Lot # 120711 **Solvent(s):** Acetonitrile

5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to: 10.0 0.005 Flask Uncertainty

Formulated By:	Justin Dippold	121311 DATE
Reviewed By:	Pedro L. Rentas	121311 DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette	Initial Conc.(ug/mL)	Final Conc.(ug/mL)	Expanded Uncertainty (+/-)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 4-Amino-2,6-dinitrotoluene	79070	032511	0.10	1.00	0.002	1002.6	100.3	0.00417	19406-51-0	N/A	N/A
2. 3,5-Dinitroaniline	71772	070811	0.10	1.00	0.002	1004.5	100.5	0.00565	00618-87-1	N/A	N/A
3. 1,3-Dinitrobenzene	79071	100711	0.10	1.00	0.002	1005.9	100.7	0.00572	00099-65-0	1mg/m3/8H (skin)	orl-rat 83mg/kg
4. 2,4-Dinitrotoluene	79072	110510	0.10	1.00	0.002	1001.0	100.2	0.00424	00121-14-2	1.5mg/m3/8H (skin)	orl-rat 268mg/kg
5. HMX	79074	070108	0.10	1.00	0.002	1000.9	100.2	0.00451	02691-41-0	N/A	N/A
6. Nitrobenzene	79075	082509	0.10	1.00	0.002	1002.9	100.4	0.00417	00098-95-3	1 ppm (5mg/m3/8H)(skin)	orl-rat 780mg/kg
7. 3-Nitrotoluene	79077	110510	0.10	1.00	0.002	1004.0	100.5	0.00416	00099-08-1	2 ppm (11mg/m3/8H)(skin)	orl-rat 1072mg/kg
8. RDX	79079	111408	0.10	1.00	0.002	1001.9	100.3	0.00566	00121-82-4	N/A	N/A
9. Trinitroglycerin	79252	061308	0.10	1.00	0.002	1001.6	100.2	0.00566	00055-63-0	STEL 0.1mg/m3(skin)	N/A



Peak No.	Analyte	PDA RT (min.)
1	HMX	4.98
2	RDX	8.19
3	1,3-Dinitrobenzene	15.5
4	Nitrobenzene	16.5
5	3,5-Dinitroaniline	17.5
6	Trinitroglycerin	17.5
7	4-Amino-2,6-dinitrotoluen	23.0
8	2,4-Dinitrotoluene	26.8
9	3-Nitrotoluene	33.8

8330 Mix A
Lot #: 121311 - 30132
Rec: 12/20/11 MFR exp. 12/13/14

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Analytic... teference Material ARM

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CERTIFIED WEIGHT REPORT

		Lot #	Solvent(s):
Part Number:	95094	120711	Acetonitrile
Lot Number:	051412		
Description:	8330 Mix B 8 components		
Expiration Date:	051415		

Storage: 0 °C

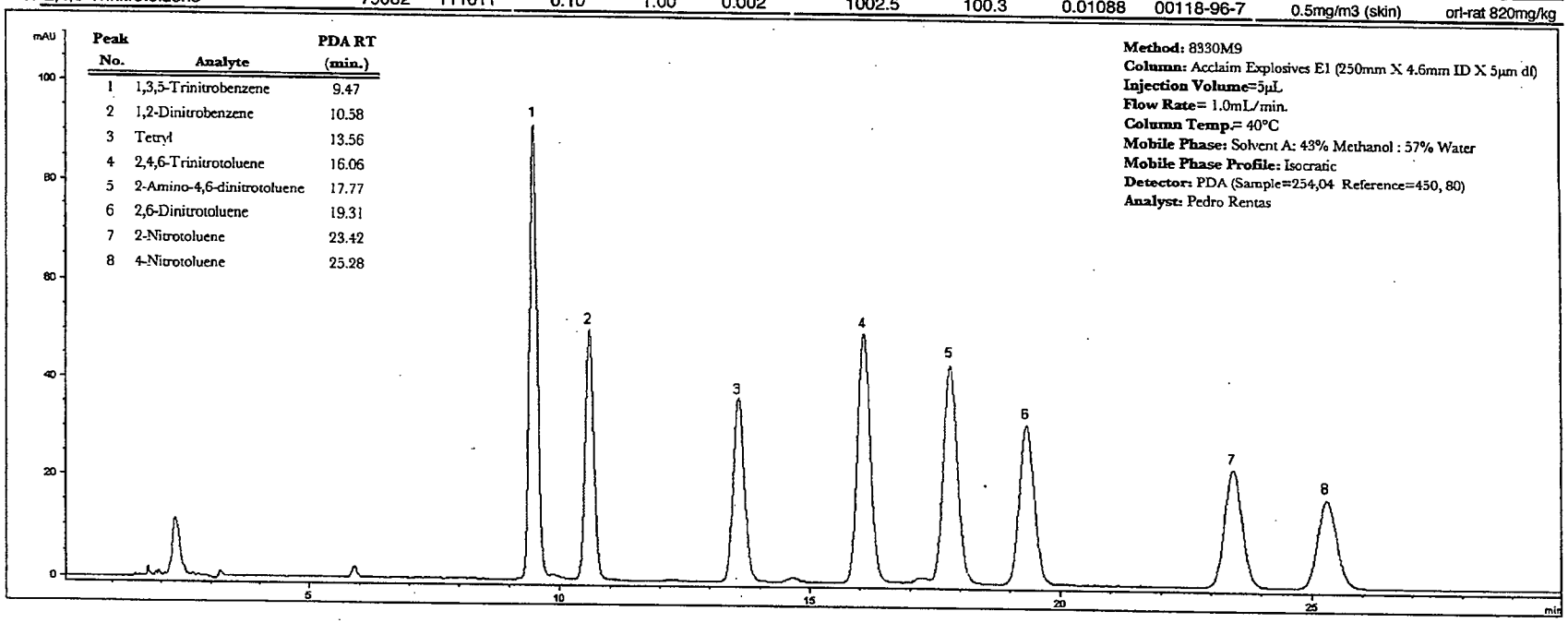
Nominal Concentration (µg/mL): 100

5E-05 Balance Uncertainty

Volume(s) shown below were combined and diluted to: 10.0 0.005 Flask Uncertainty

Gabriel Helland	051412
Formulated By: Gabriel Helland	DATE
Pedro Rentas	051412
Reviewed By: Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette	Initial Conc.(ug/mL)	Final Conc.(ug/mL)	Expanded Uncertainty (+/-) (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Amino-4,6-dinitrotoluene	79069	032511	0.10	1.00	0.002	1001.9	100.3	0.00416	35572-78-2	N/A	N/A
2. 1,2-Dinitrobenzene	79404	021712	0.10	1.00	0.002	1002.1	100.3	0.00566	00528-29-0	1mg/m3/8H (skin)	N/A
3. 2,6-Dinitrotoluene	79073	110510	0.10	1.00	0.002	1003.2	100.4	0.00416	00606-20-2	1.5mg/m3/8H (skin)	orl-rat 177mg/kg
4. 2-Nitrotoluene	79076	110510	0.10	1.00	0.002	1002.5	100.3	0.00416	00088-72-2	2 ppm (11mg/m3/8H)(skin)	orl-rat 891mg/kg
5. 4-Nitrotoluene	79078	110510	0.10	1.00	0.002	1004.0	100.5	0.00416	00099-99-0	2 ppm (11mg/m3/8H)(skin)	orl-rat 1960mg/kg
6. Tetryl	79080	112310	0.10	1.00	0.002	1001.8	100.2	0.00450	00479-45-8	N/A	N/A
7. 1,3,5-Trinitrobenzene	79081	011612	0.10	1.00	0.002	1004.5	100.5	0.00416	00099-35-4	N/A	N/A
8. 2,4,6-Trinitrotoluene	79082	111011	0.10	1.00	0.002	1002.5	100.3	0.01088	00118-96-7	0.5mg/m3 (skin)	orl-rat 820mg/kg



Peak No.	Analyte	PDA RT (min.)
1	1,3,5-Trinitrobenzene	9.47
2	1,2-Dinitrobenzene	10.58
3	Tetryl	13.56
4	2,4,6-Trinitrotoluene	16.06
5	2-Amino-4,6-dinitrotoluene	17.77
6	2,6-Dinitrotoluene	19.31
7	2-Nitrotoluene	23.42
8	4-Nitrotoluene	25.28

Method: 8330M9
Column: Acclaim Explosives E1 (250mm X 4.6mm ID X 5µm dl)
Injection Volume=5µL
Flow Rate= 1.0mL/min.
Column Temp.= 40°C
Mobile Phase: Solvent A: 43% Methanol : 57% Water
Mobile Phase Profile: Isocratic
Detector: PDA (Sample=254,04 Reference=450, 80)
Analyst: Pedro Rentas

8330 Mix B
Lot #: 051412 - 30759
Rec: 5/16/12 MFR exp. 05/14/15

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1,2-Dinitrobenzene
Lot #: 216681 - 33116
Rec: 11/15/13 MFR exp. 10/25/16

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Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Rev 0 **Page 1**

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
010086-01	216681	<10 Degrees C	Acetonitrile	25-Oct-2016	1,2-Dinitrobenzene Solution, 1,000 mg/L, 1 mL

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
1,2-dinitrobenzene	528-29-0	100	86.7.1P	1005 +/- 4.58	mg/L

Certified By: Kimberly A King
Kimberly King

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Pentaerythritol tetranitrate Solution

CONCENTRATION	1000ug/ml In Acetonitrile
CATALOG NUMBER	S-12837A4-5ML
LOT NUMBER	2416400
DATE CERTIFIED	02/04/14
EXPIRATION DATE	02/28/15
STORAGE	Room Temperature
HANDLING	See MSDS.
INTENDED USE	For laboratory use only.

Analytical Test	Value
CONCENTRATION (HPLC)	VERIFIED

Instructions for Use:
Mix/shake solution prior to use. If particles are present, sonicate for homogeneity. If sample is diluted to lower concentrations, Class A volumetric glassware must be used.
Minimum Sample Size- 0.2 uL for Direct Injection.
Chem Service Inc. guarantees the expanded uncertainty of the above analyte to be +/- 2.0% of the certified concentration based on gravimetric preparation. The test results published in this report were obtained using equipment capable of producing results that are traceable to NIST and through NIST to the International System of Units (SI). The reported expanded uncertainty of measurement is stated as the combined standard uncertainty of measurement multiplied by the coverage factor k (k=2) such that the coverage probability corresponds to approximately 95%. For certified reference materials, homogeneity and thermal stability testing are available upon request.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ISO 9001
Certificate Number:31610
ISO/IEC 17025
Accreditation Number:63520
Reference Material Producer
ISO GUIDE 34
Accreditation Number:63520

LCMS Standard Prep Log #103 Page 13

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT#	DATE / INITIALS
Tetryl-ss 1000 ug/ml							8-29-13 MP
Tetryl 1000 ug/ml Absolute Lot #112310-32716							
I broke open the vial and transferred to 6a amber 1.8ml Injection vial →							
Tetryl-ss 1000 ug/ml 08-29-13							
Tetryl-ss 10 ug/ml							
Tetryl-ss 1000 08/29-13	0.10	10.0	10.0	1:1 ACN/MeOH		DG445/52292	08-29-13 MP

WALDORF 08/31/13

8330_CB 1:1 1.0 PPM									MP 8-31-13
8330_MX-A	10.0 ppm	07/01/13	0.10 ml	1.0 mL	1.0 ppm	1:1ACN_DG445/MEOH_52292	08/31/13	MP	
8330_MX-B	10.0 ppm	07/01/13						MP	
8330_CB 1:1 0.1 PPM									
8330_CB 1:1 1.0 PPM	1.0 ppm	08/31/13	0.10 ml	1.0 mL	0.10 ppm	1:1ACN_DG445/MEOH_52292	08/31/13	MP	
8330CB 0.005 PPM									
8330_CB 1:1	0.1 PPM	08/31/13	0.05 ML	1.0 mL	0.005 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330CB 0.010 PPM									
8330_CB 1:1	0.1 PPM	08/31/13	0.10 ML	1.0 mL	0.010 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330CB 0.020 PPM									
8330_CB 1:1	0.1 PPM	08/31/13	0.20 ML	1.0 mL	0.020 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330CB 0.05 PPM									
8330_CB 1:1	1.0 PPM	08/31/13	0.05 ML	1.0 mL	0.05 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330CB 0.10 PPM									
8330_CB 1:1	1.0 PPM	08/31/13	0.10 ML	1.0 mL	0.10 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330CB 0.20 PPM									
8330_CB 1:1	1.0 PPM	08/31/13	0.20 ML	1.0 mL	0.20 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330CB 0.50 PPM									
8330MXA	10.0 PPM	07/01/13	0.05 ML	1.0 mL	0.50 PPM	1 : 1 : 6 ACN : MeOH : MILLIPORE DG445/52292	08/31/13	MP	
8330MXB	10.0 PPM	07/01/13							

LC/MS STANDARD PREP LOG# 103 PAGE# 65

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JH 12-19-13

1668_SS_GC 500 ng/ml 10/30/13:

PCB_CONG_2ND_SOURCE_STOCK 10 ug/ml 05/30/13 took 0.005 ml and added to ~~0.950~~ ml 1668_ICL 100 ng/ml 10/27/13:
0.095 JH

1668_SS_GC 50 ng/ml 10/30/13:

1668_SS_GC 500 ng/ml 10/30/13 took 0.010 ml and added to 0.090 ml 1668_ICL 100 ng/ml 10/27/13

	1,2-DNB Surr 5.0 ug/ml					09-03-13	N
1,2-DNB	1000	10-30-13	0.10	20.0	5.0	1:1 ACN Meoh	12-23-13
	PA_Int Std 0.10 ug/ml						
4-Nitrophenol	10.0	8-15-13	0.20	20	0.10	ACN/ DI509	12-26-13 N
	Ash Std 20 ug/ml						
8321MX29-8	400	11-20-13	0.250	5.0	20	Methanol/	12-26-13 N
8321MX10-4	1000	8-29-13	0.100				
8321MX6-7	1000	9-27-13	0.100				
Isoxaben	1058	10-8-13	0.0945				
8141 Surr	1000	9-5-13	0.100				

8330MXA-SS 100 ug/ml 12-27-13 N

8330MX-A 100 ug/ml Absolute Part #95093 Lot # 121311-30132 I broke open the vial and transferred to an amber 1.8 ml injection vial → 8330MXA_SS 100 ug/ml 12-27-13

LC/MS STANDARD PREP LOG# 103 PAGE 66

066

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL. EN. LOT #	DATE / INITIALS
8330MX-B-SS 100 ug/ml						4 H 12-27-13	12-27-13 HP
8330MX-B 100 ug/ml Absolute Part #9509B, Lot # ~~121311~~ 051412-30759, I broke open the vial and HP 12-27-13 transferred to an amber 1.8ml injection vial → 8330MX-B-SS 100 ug/ml 12-27-13							
Ash std 0.40 DF							
Ash std	20	12-26-13	0.80	2.0	0.40 DF	Methanol/53206	12-30-13 HP
HPLCIS	100	7-12-13	0.020	1	1.0	1	1
Ash std 0.20 DF							
Ash std	20	12-26-13	0.40	2.0	0.20 DF	Methanol/53206	12-30-13 HP
HPLCIS	100	7-12-13	0.020	1	1.0	1	1
Ash std 0.10 DF							
Ash std	20	12-26-13	0.20	2.0	0.10	Methanol/53206	12-30-13 HP
HPLCIS	100	7-12-13	0.020	1	1.0	1	1
Ash std 0.08 DF							
Ash std	20	12-26-13	0.160	2.0	0.08	Methanol/53206	12-30-13 HP
HPLCIS	100	7-12-13	0.020	1	1.0	1	1
(Prepared 2 portions)							
Ash std 0.06 DF							
Ash std	20	12-26-13	0.120	2.0	0.06	Methanol/53206	12-30-13 HP
HPLCIS	100	7-12-13	0.020	1	1.0	1	1
Ash std 0.04 DF							
Ash std	20	12-26-13	0.080	2.0	0.04	Methanol/53206	12-30-13 HP
HPLCIS	100	7-12-13	0.020	1	1.0	1	1

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008 STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CNC	SOL'N LOT #	DATE / INITIALS
1,2-DNB	1000 µg/mL						04-23-14 M

I broke open the vial labeled to the left and transferred to an amber 1.8 mL injection vial → 1,2-DNB 1000 µg/mL 04-23-14

1,2-Dinitrobenzene
Solution, 1,000 mg/L, 1 mL
016886-01
Lot # 216681 | Storage <10 Degrees C | Expiry 10/25/16
Solv: Acetonitrile
RAD only, not human consump. Made in the USA

1,2-Dinitrobenzene
Lot #: 216681 - 33241
Rec: 1/8/14 MFR exp. 10/25/16

1,2-DNB	1000	04-23-14	1.0	10.0	100	1:1 ACN/MeOH	02-19-14	04-23-14

1,2-DNB 100 µg/mL M

MX-8330R 1000 µg/mL M 04-23-14

AccuStandard
M-8330-R
Method 8330 - Explosives by HPLC
1000 µg/mL in MeOH:AcCN (1:1)
Lot: 211111132-01
Exp: Jun 6,2015
14 comps.
HIGHLY FLAMMABLE

Method 8330 - Explosives
Lot #: 211111132-01 - 33138
Rec: 11/18/13 MFR exp. 6/6/15

R LABORATORY USE ONLY
NING: This product contains nicals known to the State of Califor use cancer and birth defects or oth oductive harm.
STORAGE Freeze (<-10° C)
2 Danger

I broke open the vial labeled above and transferred to an amber 1.8 mL injection vial → MX-8330R 1000 µg/mL 04-23-14

MX-8330 100 µg/mL M

MX-8330R	1000	04-23-14	1.0	10.0	100	1:1 ACN/MeOH	02-19-14	04-23-14

1,2-DNB 5.0 µg/mL M

1,2-DNB	100	04-23-14	0.50	10.0	5.0	1:1 ACN/MeOH	02-19-14	04-23-14

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023

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE INITIALS
	8321 TS 0.005 DF						
8321 TS	0.10DF	06-12-14	0.10	2.0	0.005	MeOH/53235	06-12-14 P
HRCFS	100	03-17-14	0.020	1	1.0	1	1
	8321 TS 0.0025 DF						
8321 TS	0.10DF	06-12-14	0.050	2.0	0.0025	MeOH/53235	06-12-14 P
HRCFS	100	03-17-14	0.020	1	1.0	1	1
	1,2-DNB 100 ug/mL						06-12-14 HP

1,2-Dinitrobenzene
Solution, 1,000 mg/L, 1 mL
610886-01
Lot # 216681 Storage <10 Degrees C Expiry 10/25/16
Solv: Acetonitrile
R&D only, not for human consump. Made in the USA

1,2-Dinitrobenzene
Lot #: 216681 - 33233
Rec: 1/8/14 MFR exp. 10/25/16

1,2-Dinitrobenzene
Solution, 1,000 mg/L, 1 mL
610886-01
Lot # 216681 Storage <10 Degrees C Expiry 10/25/16
Solv: Acetonitrile
R&D only, not for human consump. Made in the USA

1,2-Dinitrobenzene
Lot #: 216681 - 33234
Rec: 1/8/14 MFR exp. 10/25/16

I broke open the 2 vials labeled above. I took 1.00ml from each vial and diluted to 20.0ml 1:1 ACN MeOH 02-19-14. I labeled this solution 1,2-DNB 100ug/mL 06-12-14

I combined the remaining balance of HP 06-12-14 the 2 vials above and transferred to one amber 1.8ml injection vial. I labeled this solution 1,2-DNB 1000ug/mL 06-12-14

LCMS STANDARD PREP LOG# 104 Page# 25

025

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE INITIALS

PETN 1000 ug/ml 06-12-14

S-12837A4-5ML Exp 2/28/2015
CHEM SERVICE
PO BOX 599, WEST CHESTER, PA 19381 800-452-9994
Pentaerythritol tetranitrate Solution
Lot: 2416400
Pentaerythritol tetranitrate
Lot #: 2416400 - 33320
Rec: 2/20/14 MFR exp. 2/28/15
1000ug/ml In Acetonitrile
FLAMMABLE-POISON-LACHRYMATOR

I broke open the vial labeled to the left and transferred to an 8ml Amber vial

→ PETN 1000ug/ml 06-12-14

PETN 100 ug/ml

PETN 1000 06-12-14 1.0 10.0 100 1:1 ACN/MeOH 06-12-14 KP

8321MX6-7 500 ug/ml 06-12-14 KP

o2si smart solutions
Custom Pesticide Solution, 6-7, 500 mg/L, 5 x 2 ml
130287-01-05
Made in USA Lot No: 160093 Exp: 6/1/2013
Date Opened:
Storage: </= -10 Degrees C
Custom Pesticide Solution 6-7
Lot #: 160093 - 26674
Rec: 6/7/10 MFR exp. 06/01/13

I broke open the vial labeled above and transferred to an amber 1.8ml injection vial → 8321MX6-7 500 ug/ml (to be QC'd) KP

8321MX6-7 20 ug/ml 06-12-14 KP

8321MX6-7 50.0 06-12-14 0.080 2.0 20 Methanol/53235 K

8321MX6-7 0.02 DF (OLD) KP

8321MX6-7 20 06-12-14 0.040 2.0 0.02 MeOH/53235 06-12-14

MRGFS 100 03-17-14 0.020 1 1.0 1 1

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037

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT#	INITIAL
	Spinosad 100 ug/mL						
Spinosad	1211	04-14-14	0.075	1.0	100	Methanol/53235	HP 07-14-14
	Spinosad 50 ug/mL						
Spinosad	500	07-14-14	0.10	1.0	50	Methanol/53235	HP 07-14-14
	Spinosad 20 ug/mL						HP
Spinosad	200	07-14-14	0.10	1.0	20	Methanol/53235	07-14-14
	Spinosad 10 ug/mL						
Spinosad	100	07-14-14	0.10	1.0	10	Methanol/53235	07-14-14 HP
	Picric Acid spk 2.0 ug/mL						
Picric Acid	100	04-16-14	0.160	8.0	2.0	ACN/DI509	07-15-14 HP
	Picric Acid spk 0.2 ug/mL						
Picric Acid spk	2.0	07-15-14	0.80	8.0	0.2	ACN/DI509	07-15-14 HP
	HPLC-FS 1.0 ug/mL						
HPLC-FS	1000	04-22-14	0.20	200	1.0	MeOH/53235	07-15-14 HP
	HPLC-FS 1000 ug/mL						07-15-14 HP

I broke open the vial labled to the left and transfered to an amber 1.8 ml injection Vial → HPLC-FS 100 ug/mL 07-15-14

Custom 8321 Internal Standard Pesticide Mix, 4-8, 1,000 mg/L, 5 x 1 ml
130285-01-05
Lot# 209160 | Storage ≤ -10 Degrees C | Expiry 5/20/15
Solv: M-t-BE
R&D only, not for sale
Made in the USA

Custom 8321 Internal Std Mix 4-8
Lot #: 209160 - 32460
Rec: 5/29/13 MFR exp. 5/20/15

HPLC-FS	1000	07-15-14	1.0	10.0	100	MeOH/53235	07-15-14 HP
	Tebufenozide 100 ug/mL							HP
Tebufenozide	1000	08-27-13	0.10	1.0	100	1:1 ACN/MeOH	07-01-14
							02-19-14

GCMS STANDARD PREP LOG# 104 Page 45

045

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS
8321V	0.2 ug/mL						
8321V	2.0	08-05-14	0.20	2.0	0.2	MeOH/53235	8-05-14 M
8321V ES	100	7-31-14	0.020	1	1.0	1	1
8321V	0.1 ug/mL						
8321V	2.0	8-5-14	0.10	2.0	0.10	MeOH/53235	8-05-14 M
8321V ES	100	7-31-14	0.020	1	1.0	1	1
MX-8330R	1000 ug/mL						08-06-14 M

AccuStandard®
M-8330-R
Method 8330 - Explosives by HPLC
1000 µg/mL in MeOH:AcN (1:1)
Lot: 211111132-01
Exp: Jun 6,2015
14 comps.
HIGHLY FLAMMABLE

Method 8330 - Explosives
Lot #: 211111132-01 - 33139
Rec: 11/18/13 MFR exp. 6/6/15

ABORATORY USE ONLY
IG: This product contains
is known to the State of Califon
cancer and birth defects or oth
ctive harm.
STORAGE Freeze (<-10° C)
2 Danger

I broke open the V-vl labeled above and transferred to an amber 1.8ml injection V-vl → MX-8330R 1000 ug/mL - 08-06-14

1,2-DNB 1000 ug/mL 08-06-14 M

1,2-Dinitrobenzene
Solution, 1,000 mg/L, 1 mL
010486-01
Lot # 216681 | Storage <10 Degrees C | Expiry 10/25/16
Solv: Acetonitrile
For R&D only, not human consump.
Made in the USA

I broke open the V-vl labeled to the left and transferred to an amber 1.8ml injection V-vl → 1,2-DNB 1000 ug/mL - 08-06-14

1,2-Dinitrobenzene
Lot #: 216681 - 33235
Rec: 1/8/14 MFR exp. 10/25/16

3,5-DNA 1000 ug/mL 08-06-14

3,5-Dinitroaniline (3,5-DNA) Solution, 1000 mg/L, 1 ml
010612-04
Lot # 199709 | Storage ≤-10 Degrees C | Expiry 11/21/15
Solv: Acetonitrile
For R&D only, not human consump.
Made in the USA

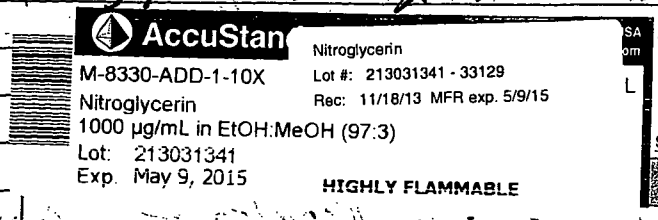
I broke open the V-vl labeled to the left and transferred to an amber 1.8ml injection V-vl → 3,5-DNA 1000 ug/mL - 08-06-14

3,5-Dinitroaniline
Lot #: 199709 - 33122
Rec: 11/15/13 MFR exp. 11/21/15

LC/MS STANDARD PREP LOG# 104 PAGE 46

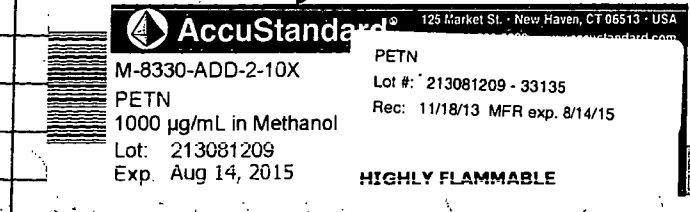
046

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	DATE INITIALS
Nitroglycerin 1000 ug/mL							08-06-14 MP



I broke open the vial labeled above and transferred to an amber 1.8mL injection vial → Nitroglycerin 1000 ug/mL 08-06-14

PETN 1000 ug/mL 08-06-14 MP



I broke open the vial labeled above and transferred to an amber 1.8mL injection vial → PETN 1000 ug/mL 08-06-14

8330 MIX A 10 ug/mL								N
MX-8330	1000	08-06-14	0.20	20	10.0	1:1 ACN/MeOH		08-06-14
1,2-DNB	1000	08-06-14	0.20	"	"	"	07-02-14	"
8330 MIX-B 10 ug/mL								N
Nitroglycerin	1000	8-6-14	0.20	20	10.0	1:1 ACN/MeOH		08-06-14
3,5-DNA	1000	08-06-14	"	"	"	"	07-02-14	"
PETN	1000	08-06-14	"	"	"	"		"

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL. EN. LOT #	DATE INITIALS
PETN_SS 100 ug/ml							
PETN 1000	06-12-14	0.10	1.0	100	1:1 ACN/MEOH 07-02-14		08-06-14
8321 surr 20 ug/ml							
Isoxaben 1024	03-10-14	0.195	10.0	20	MEOH/53235		08-07-14
8141 surr 1000	07-31-14	0.20	⊥	⊥	⊥		⊥
8321TS_spk 1 DF							
8321MX6-7 1000	06-12-14	0.10	5.0	20	MEOH/53235		08-07-14

08-06-14

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	08/06/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	08/06/14
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	08/06/14
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10 0	08/06/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	08/06/14
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	08/06/14
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	08/06/14	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	08/06/14	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	08/06/14	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	08/06/14

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048 STANDARD

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS
							08/06/14 MP
8330MXA_CB 0.50 PPM 8330MXA	10.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 1.0 PPM 8330MXA	10.0	08/06/14	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_CB 2.0 PPM 8330MXA_CB 2.0 PPM	10.0	08/06/14	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	08/06/14	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	08/06/14	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	08/06/14	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	08/06/14	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	08/06/14	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXA_SS 1.0 PPM 8330MXA_SS	100	12/27/13	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	08/06/14
8330MXB_SS 1.0 PPM 8330MXB_SS	100	12/27/13	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	08/06/14
PETN_TET_SS 1.0 PPM PETN_SS TETRYL_SS	100 100	08/06/14 07/01/14	0.01 0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	08/06/14

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT#	DATE INITIALS
8330_CB(1:1) 1.0 PPM							
8330MXA	10.0	08/06/14	0.100	1.0	1.0	1:1 ACN/MEOH	08/06/14
8330MXB	10.0	08/06/14				02/19/14	
8330_CB(1:1) 0.1 PPM							
8330_CB(1:1)	1.0	08/06/14	0.100	1	0.1	1:1 ACN/MEOH	08/06/14
						02/19/14	
8330_CB 0.005 PPM							
8330_CB(1:1)	0.1	08/06/14	0.050	1	0.005	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_CB 0.010 PPM							
8330_CB(1:1)	0.1	08/06/14	0.100	1.00	0.010	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_CB 0.020 PPM							
8330_CB(1:1)	0.1	08/06/14	0.200	1.00	0.020	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_CB 0.050 PPM							
8330_CB(1:1)	1.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_CB 0.10 PPM							
8330_CB(1:1)	1.0	08/06/14	0.100	1.00	0.10	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_CB 0.20 PPM							
8330_CB(1:1)	1.0	08/06/14	0.20	1.00	0.20	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_CB 0.50 PPM							
8330MXA	10.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN	08/06/14
8330MXB	10.0	08/06/14	0.050			MEOH: MILLIPORE	
8330_CB 1.0 PPM							
8330MXA	10.0	08/06/14	0.100	1.00	1.000	1:1:6_ACN	08/06/14
8330MXB	10.0	08/06/14	0.100			MEOH: MILLIPORE	
8330MXA_CB 2.0 PPM							
8330MXA_CB	10.0	08/06/14	0.200	1.00	2.000	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330MXB_CB 2.0 PPM							
8330MXB_CB	10.0	08/06/14	0.200	1.00	2.000	1:1:6_ACN	08/06/14
						MEOH: MILLIPORE	
8330_SS 1.0 PPM							
8330MXA_SS	100	12/27/13	0.010	1.00	1.0	1:1:6_ACN	08/06/14
8330MXB_SS	100	12/27/13	0.010			MEOH: MILLIPORE	
PETN_TET_SS 1.0 PPM							
PETN_SS	100	08/06/14	0.01	1.00	1.0	1:1:6_ACN	08/06/14
TETRYL_SS	100	07/01/14	0.01			MEOH: MILLIPORE	

DATE / INITIALS
6-14
KP

KP
08-06-14

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE/ INITIALS
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	08/06/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	09/05/14
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	09/05/14
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	08/06/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	09/05/14
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	09/05/14
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	08/06/14	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	08/06/14	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	08/06/14	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	08/06/14	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 0.50 PPM 8330MXA	10.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 1.0 PPM 8330MXA	10.0	08/06/14	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_CB 2.0 PPM 8330MXA_CB 2.0 PPM	10.0	08/06/14	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	08/06/14	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	08/06/14	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	08/06/14	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	09/05/14

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SOL'N. 059

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N LOT #	DATE INITIALS
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	08/06/14	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	08/06/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	08/06/14	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	08/06/14	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXA_SS 1.0 PPM 8330MXA_SS	100	12/27/13	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	09/05/14
8330MXB_SS 1.0 PPM 8330MXB_SS	100	12/27/13	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	09/05/14
PETN_TET_SS 1.0 PPM PETN_SS TETRYL_SS	100 100	08/06/14 07/01/14	0.01 0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	09/05/14

09-05-14

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	INITIALS
	CC_Carb sph 2.0 ug/mL						
8321_SS	100	11-03-14	0.200	10.0	2.0	MeOH/54115	12-12-14 MP
	HPLC_IS 1.0 ug/mL						
HPLCIS	100	10-02-14	2.0	200	1.0	MeOH/54115	12-15-14 MP
	HPLCISAQ 1.0 ug/mL				12-16-14		
HPLCIS	100	10-02-14	1.0	100	1.0	Milliporewater	12-16-14 MP
	Carb sph 10 ug/mL						
8321MX29-8	400	09-22-14	0.050	2.0	10	MeOH/54115	12-17-14 MP
	8321_surr 10 ug/mL						
Isoxaben	1024	03-10-14	0.025	3.0	10.0	MeOH/54115	12-17-14 MP
8141 Surr	1000	10-30-14	0.030	1	1	1	1
	8321_surr 20 ug/mL						
Isoxaben	1024	03-10-14	0.195	10.0	20	MeOH/54115	12-17-14 MP
8141 Surr	1000	~~10-30-14~~ 12-03-14 MP 12-17-14	0.200	1	1	1	1
	PETN 100 ug/mL				07-02-14		
PETN	1000	08-06-14	0.50	5.0	100	1:1 ACN/MeOH	12-19-14 MP
	Nitroglycerin 100 ug/mL						
Nitroglycerin	1000	02-25-14	0.50	5.0	100	1:1 ACN/MeOH	12-19-14 MP
	8321_Stock						
8321MX6-7	1000	09-25-14	0.050	10.0	5.0	MeOH/54115	12-22-14 MP
Isoxaben	1024	03-10-14	0.098	1	10	1	1
8141 Surr	1000	12-03-14	0.100	1	1	1	1

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS
83TS/sph/surr 100 DF					HPLCFS 1 ug/ml		
8324TS sp	20	09-25-14	0.10	1.0	10 DF	~~[illegible]~~ HP 12-22-14	12-22-14 HP
8321 Surr	20	12-18-14	0.10	1	1		
83TS sph/surr 10DF		12-22-14	0.10	1.0	100DF	HPLCIS 1 ug/ml	12-22-14 HP

Tetryl SS 1000 ug/ml 12-23-14
Tetryl 1000 ug/ml Absolute Lot 112310-33879, I broke open the vial and transferred to an amber 1.8 ml injection vial → Tetryl SS 1000 ug/ml 12-23-14

1:1 ACN/Meoh 12-23-14 HP
I took 0.250 ml Methanol Lot 54165 and added 0.250 ml Acetonitrile Lot DK902. HP

1,2-DNB 1000 ug/ml 12-23-14
I broke open the vial labeled to the left and transferred to an amber 1.8 ml injection vial → 1,2,DNB 1000 ug/ml 12-23-14

R&D only, not human consump. Made in the USA
1,2-Dinitrobenzene Solution, 1,000 mg/L, 1 mL
010086-01
Lot # 227342 Storage <10 Degrees C Expiry 3/May/2017
Solv: Acetonitrile
1,2-Dinitrobenzene
Lot #: 227342 - 34120
Rec: 10/6/14 MFR exp. 5/3/17

3,5-DNA 1000 ug/ml 12-23-14
I broke open the vial labeled to the left and transferred to an amber 1.8 ml injection vial → 3,5-DNA 1000 ug/ml 12-23-14

R&D only, not human consump. Made in the USA
3,5-Dinitroaniline (3,5-DNA) Solution, 1000 mg/L, 1 ml
010612-04
Lot # 199709 Storage ≤ -10 Degrees C Expiry 11/21/15
Solv: Acetonitrile
3,5-Dinitroaniline
Lot #: 199709 - 33124
Rec: 11/15/13 MFR exp. 11/21/15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIAL
	8370 MX-A 10.0 ug/mL						M
MX-8330A	1000 08-06-14	0.10	10.0	10.0	1:1 ACN/MeOH		12-23-14
1,2-DNB	1000 12-23-14	"	"	"	12-23-14		
	8330 MX-B 10.0 ug/mL						M
Nitroglycerin	1000 08-06-14	0.10	10.0	10.0	1:1 ACN/MeOH		12-23-14
3,5-DNA	1000 12-23-14	"	"	"	12-23-14		"
PETN	1000 06-12-14	"	"	"			"
	Tetryl-ss 100 ug/mL						M
Tetryl-ss	1000 12-23-14	0.10	1.0	10	1:1 ACN/MeOH		12-23-14
					12-27-14		

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	12/23/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	12/23/14
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	12/23/14	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	12/23/14
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	12/23/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	12/23/14
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	12/23/14	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	12/23/14
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	12/23/14	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	12/23/14
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	12/23/14	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	12/23/14
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	12/23/14	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	12/23/14
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	12/23/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	12/23/14
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	12/23/14	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	12/23/14
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	12/23/14	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	12/23/14
8330MXA_CB 0.50 PPM 8330MXA	10.0	12/23/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	12/23/14

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL ENT LOT#	DATE INITIALS
PETN 1000 ug/ml							NP 12-29-14

S-12837A4-5ML Exp 4/30/2015

CH[illegible]
PO BOX 599
Pentaerythritol tetranitrate
Lot #: 2377700 - 34516
Pentaeryth Rec: 12/16/14 MFR exp. 4/30/15

Lot: 2677700

1000ug/ml In Acetonitrile
FLAMMABLE-POISON-LACHRYMATOR

I broke open the vial labeled to the left and transferred to an amber 8ml vial → PETN 1000 ug/ml 12-29-14

	PETN 100 ug/ml						NP
PETN	1000	12-29-14	0.5	5.0	100	1:1 ACN/MeOH 07-2-14	12-29-14
NP 1-6-14	PGDN spike 10 ug/ml						NP
PGDNA	100	10-27-14	0.10	1.0	10.0	1:1 ACN/MeOH 7-2-14	01-06-15
	PGDN spike 1.0 ug/ml						NP
PGDN spk	10	01-06-15	0.10	1.0	1.0	1:1 ACN/MeOH 7-2-14	01-06-15
	Nitroglycerin 100 ug/ml						NP
Nitroglycerin	1000	08-06-14	0.50	5.0	100	1:1 ACN/MeOH 12-23-14	01-06-15
	8330 MXA spk 10 ug/ml						NP
MX-8330 spk	100	09-17-14	0.150	1.5	10.0	1:1 ACN/MeOH 12-23-14	01-06-15
	8330 MXA spk 1.0 ug/ml						NP
8330 MXA spk	10.0	01-06-15	0.150	1.5	1.0	1:1 ACN/MeOH 12-23-14	01-06-15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'VENT LOT #	INITIALS
8321PA_SS 0.10 DF							
Picric Acid_SS	1.0	11-17-14	0.20	2.0	0.10	ACN/DK902	01-15-15
4-Nitrophenol	10	01-13-15	0.020	1	0.10	1	1
MX8330 Sph 100ug/mL							
MX-8330A	1000	08-06-14	0.80	8.0	100	1:1 ACN/MeOH	01-15-15
1,2-DNB	1000	12-23-14	0.80	1	1	12-23-14	
Tetryl_SS 100ug/mL							
Tetryl_SS	1000	12-23-14	0.10	1.0	100	1:1 ACN/MeOH	01-15-15
						12-23-14	

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	12/23/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	01/15/15
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	01/15/15	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	01/15/15
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	12/23/14	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	01/15/15
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	01/15/15	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	01/15/15
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	01/15/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	01/15/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	01/15/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	01/15/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	01/15/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	01/15/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 0.50 PPM 8330MXA	10.0	12/23/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	01/15/15

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS
8330MXA_CB 1.0 PPM 8330MXA	10.0	12/23/14	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_CB 2.0 PPM 8330MXA_CB 2.0 PPM	10.0	12/23/14	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	01/15/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	01/15/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	01/15/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	01/15/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	01/15/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	01/15/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	12/23/14	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	12/23/14	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	12/23/14	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXA_SS 1.0 PPM 8330MXA_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	01/15/15
8330MXB_SS 1.0 PPM 8330MXB_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	01/15/15
PETN_TET_SS 1.0 PPM PETN_SS TETRYL_SS	100 100	08/06/14 01/15/15	0.01 0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	01/15/15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOVENT/LOT	DATE/INITIALS
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	03/12/15
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	03/12/15	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	03/12/15
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	03/12/15
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	03/12/15	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	03/12/15
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	03/12/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	03/12/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	03/12/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	03/12/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	03/12/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	03/12/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 0.50 PPM 8330MXA	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 1.0 PPM 8330MXA	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXA_CB 2.0 PPM 8330MXA_CB 2.0 PPM	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	03/12/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	03/12/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	03/12/15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE INITIALS
8330MXB_CB 0.020 PPM							
8330MXB_CB(1:1)	0.1	03/12/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 0.050 PPM							
8330MXB_CB(1:1)	1.0	03/12/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 0.10 PPM							
8330MXB_CB(1:1)	1.0	03/12/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 0.20 PPM							
8330MXB_CB(1:1)	1.0	03/12/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 0.50 PPM							
8330MXB_CB	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 1.0 PPM							
8330MXB_CB	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_CB 2.0 PPM							
8330MXB_CB	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	03/12/15 03/12/15
8330MXA_SS 1.0 PPM							
8330MXA_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	03/12/15
8330MXB_SS 1.0 PPM							
8330MXB_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	03/12/15
PETN_TET_SS 1.0 PPM							
PETN_SS	100	08/06/14	0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	03/12/15
TETRYL_SS	100	01/15/15	0.01				

PETN_SS 100 08-06-14 the Solution was QC'd on 03-13-15 on Stetler, Data File 0312_D00047.D AP 03-16-15

[redacted]

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT / LOT#	DATE / INITIALS
Scav_spk 30 ug/ml (5ml)							
Hexahydro-135-tris(hydroxyethyl) triazin							
1180	03-18-15	0.127	5.0	30	MeOH/54115	03-19-15	
2,2'-thiodietharol							
1030	03-19-15	0.146					
2-(125-Dithiazinan-5-yl) ethanol							
525	03-11-15	0.286					
Scav spk 3.0 ug/ml 5ml							
Scav spk 30	03-19-15	0.50	5.0	3.0	MeOH/54115	03-19-15	

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	03/17/15
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	03/17/15	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	03/17/15
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 07/02/14	03/17/15
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	03/17/15	0.100	1.0	0.1	1:1 ACN/MEOH 07/02/14	03/17/15
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	03/17/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	03/17/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	03/17/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	03/17/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	03/17/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	03/17/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 0.50 PPM 8330MXA	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/17/15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'N. LOT #	DATE / INITIALS
8330MXA_CB 1.0 PPM 8330MXA	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_CB 2.0 PPM 8330MXA_CB 2.0 PPM	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	03/17/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	03/17/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	03/17/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	03/17/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	03/17/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	03/17/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXA_SS 1.0 PPM 8330MXA_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	03/17/15
8330MXB_SS 1.0 PPM 8330MXB_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	03/17/15
PETN_TET_SS 1.0 PPM PETN_SS TETRYL_SS	100 100	08/06/14 01/15/15	0.01 0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	03/17/15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE/ INITIALS

PER IS 0.005µg/mL 04-20-15: JB

02SI $^{18}O_4$ Perchlorate 100µg/L 04-21-
Lot 1059192-33479 took 0.050mL
and added to 0.950 mL Laboratory
Source DI.H2O.
NOTE: Repeated the above process
four times in order to prepare
2 - 2mL vials that were
full. The above was performed
as dated. JB

8330 MX-A SS 100ng/mL 04-21-15 MP
8330 MixA, 100ng/mL, Absolute
Lot #103014-34464, I broke the vial
open and transferred to an amber
1.8mL injection vial
→ 8330MX-A-SS 100ng/mL 04-21-15

8330MXB-SS 100ng/mL 04-21-15 MP
8330 MixB, 100ng/mL, Absolute
Lot #103014-34467, I broke the vial
open and transferred to an amber
1.8mL injection vial →
8330MX-B-SS 100ng/mL 04-21-15

Tebuconazole SS 100ng/mL 03-05-15 MP
Tebuconazole (SS) 1000 12-22-14 0.10 1.0 100 1:1 ACN/MeOH 04-22-15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT/ LOT #	DATE/ INITIALS

1,2-DNB 1000 ug/mL 04-22-15 MP

I broke open the vial labeled to the left and transferred to an amber 1.8ml injection vial → 1,2-DNB 1000 ug/mL 04-22-15

1,2-Dinitrobenzene Solution, 1,000 mg/L, 1 mL
010086-01
Lot # 227342 Storage <10 Degrees C Expiry 3/May/2017
Solv: Acetonitrile
1,2-Dinitrobenzene
Lot #: 227342 - 34115
Rec: 10/6/14 MFR exp. 5/3/17

1,2-DNB 100 ug/mL 03/05/15

1,2-DNB	1000	04-22-15	1.0	10	100	1:1 ACN/MeOH	14-22-15 MP

Standard prep performed as dated, documented here 04-22-15 MP

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXA_CB(1:1) 1.0 PPM 8330MXA	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 03/05/15	04/21/15
8330MXA_CB(1:1) 0.10 PPM 8330MXA_CB(1:1)	1.0	04/21/15	0.100	1.0	0.1	1:1 ACN/MEOH 03/05/15	04/21/15
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 03/05/15	04/21/15
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	03/17/15	0.100	1.0	0.1	1:1 ACN/MEOH 03/05/15	04/21/15
8330MXA_CB 0.005 PPM 8330MXA_CB(1:1)	0.1	04/21/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 0.010 PPM 8330MXA_CB(1:1)	0.1	04/21/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 0.020 PPM 8330MXA_CB(1:1)	0.1	04/21/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 0.050 PPM 8330MXA_CB(1:1)	1.0	04/21/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 0.10 PPM 8330MXA_CB(1:1)	1.0	04/21/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	04/21/15

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Standard prep performed as dated, Documented here 04-22-15 MP

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE / INITIALS
8330MXA_CB 0.20 PPM 8330MXA_CB(1:1)	1.0	04/21/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 0.50 PPM 8330MXA	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 1.0 PPM 8330MXA	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_CB 2.0 PPM 8330MXA_CB 2.0 PPM	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	04/21/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	04/21/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	04/21/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	04/21/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	04/21/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	04/21/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXA_SS 1.0 PPM 8330MXA_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	04/21/15
8330MXB_SS 1.0 PPM 8330MXB_SS	100	10/01/14	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	04/21/15
PETN_TET_SS 1.0 PPM PETN_SS TETRYL_SS	100 100	08/06/14 04/22/15	0.01 0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	04/22/15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE / INITIALS
Scav Spk 30 ug/mL							
Hexahydro-1,3,5-trishydroxyethyltriazine							HP
1010	04-10-15	0.594	20	30	ACN/DM394		04-23-15
2,2'-Thiodiethanol							
1090	04-10-15	0.550	20				
2-(1,3,5-Dithiazinan-5-yl) ethanol							
1020	04-10-15	0.588					
Scav Surr 30 ug/mL							
1,3,5-Trimethylhexahydro-1,3,5-triazine							HP
1077	04-17-15	0.557	20	30	ACN/DM394		04-23-15
PETN SS 100 ug/mL						3-5-15	
PETN 1000	06-09-14	0.10	1.0	100	1:1 ACN/MeOH		04-28-15 HP
Tetryl SS 100 ug/mL						3-5-15	
Tetryl SS 1000	12-22-14	0.10	1.0	100	1:1 ACN/MeOH		04-28-15 HP
8330mixA-SS 100 ug/mL							04-28-15 HP
8330mix-A 100 ug/mL Absolute lot 103014-34465, I broke open the vial and transferred to an amber 1.5ml injection vial → 8330mix-A SS 100ug/mL 04-28-15							
8330mixB-SS 100 ug/mL							04-28-15 HP
8330mixB 100 ug/mL Absolute lot 103014-34468, I broke open the vial and transferred to an amber 1.5ml injection vial → 8330mixB-SS 100ug/mL 04-28-15							

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STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	INITIALS
PETN_SS	1000 µg/mL							

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA

M-8330-ADD-2-10X
PETN
1000 µg/mL in Methanol
Lot: 214091329
Exp: Sep 18, 2016

PETN
Lot #: 214091329 - 34515
Rec: 12/16/14 MFR exp. 9/18/16

1 comp(s)
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY
H225 H320 H315 H311
H332 H301 P338 P360
P331 P404 P262 P202
P264 P284 P280

Storage: Refrig (0-5° C)
2 Danger

04-28-15 hp

I broke open the vial labeled above and transferred to an amber 1.8 ml injection vial → PETN_SS 1000 µg/mL 4-28-15

PETN_SS 100 µg/mL 3-5-15 hp

PETN_SS	1000	04-28-15	0.10	1.0	100	1:1 ACN/MeOH	4-28-15

Sodess weight Comparison 04-28-15 hp
Balance ID: Mettler AT-200 #5-28448

Tine- S-weight	Balance readings
20 g	20.0000
1 g	1.0002
100 mg	0.1000
20 mg	~~0.0220~~ 0.0020 hp 4-28-15

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STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT/ LOT #	DATE/ INITIALS
Standard Prep performed as Dated, documented here 05-01-15							MP

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXB_CB(1:1) 1.0 PPM 8330MXB	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 03/05/15	04/27/15
8330MXB_CB(1:1) 0.10 PPM 8330MXB_CB(1:1)	1.0	04/27/15	0.100	1.0	0.1	1:1 ACN/MEOH 03/05/15	04/27/15
8330MXB_CB 0.005 PPM 8330MXB_CB(1:1)	0.1	04/27/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 0.010 PPM 8330MXB_CB(1:1)	0.1	04/27/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	04/27/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	04/27/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	04/27/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	04/27/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	04/27/15

LCMS STANDARD PREP LOG# 105 PAGE 49

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE/ INITIALS

Standard Prep performed as Dated, documented here 05-01-15 MP

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOVENT/LOT	DATE/IN.
8330MXA_SS 1.0 PPM							
8330MXA_SS	100	04/28/15	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	04/27/15
8330MXB_SS 1.0 PPM							
8330MXB_SS	100	04/28/15	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	04/27/15
PETN_TET_SS 1.0 PPM							
PETN_SS	100	04/28/15	0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	04/29/15
TETRYL_SS	100	04/28/15	0.01				
8330MXA_CB(1:1) 1.0 PPM							
8330MXA	10.0	03/05/15	0.100	1.0	1.0	1:1 ACN/MEOH 03/05/15	04/28/15
8330MXA_CB(1:1) 0.10 PPM							
8330MXA_CB(1:1)	1.0	04/28/15	0.100	1.0	0.1	1:1 ACN/MEOH 03/05/15	04/28/15
8330MXA_CB 0.005 PPM							
8330MXA_CB(1:1)	0.1	04/28/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 0.010 PPM							
8330MXA_CB(1:1)	0.1	04/28/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 0.020 PPM							
8330MXA_CB(1:1)	0.1	04/28/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 0.050 PPM							
8330MXA_CB(1:1)	1.0	04/28/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 0.10 PPM							
8330MXA_CB(1:1)	1.0	04/28/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 0.20 PPM							
8330MXA_CB(1:1)	1.0	04/28/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 0.50 PPM							
8330MXA	10.0	03/05/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 1.0 PPM							
8330MXA	10.0	03/05/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	04/28/15
8330MXA_CB 2.0 PPM							
8330MXA_CB 2.0 PPM	10.0	03/05/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	04/28/15

MP

_MWE3535

Organic Extraction Worksheet

Method	EPA Method 3535A	Extraction Set	150515A	Extraction Method	MWE3535	Units	mL

Spiked ID 1	8330 100ppm STK 5-5-15 exp 11-5-15		Surrogate ID 1	1,2 DNB SURROGATE 5PPM 4-2-15 EXP 8-2-15	
Spiked ID 2	Nitroglyerin 100ppm 3-31-15 exp 9-30-15		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	05/15/15 10:55	
Spiked ID 8			Ext. End Time:	05/15/15 15:23	
			GC Requires Extract By:		

pH1	2	5/15/15 10:45:00 AM	Water Bath Temp Criteria	
pH2				
pH3				

Spiked By: CFM **Date** 05/15/15 10:50:00 AM **Witnessed By:** DL **Date** 05/15/15 10:50:00 AM

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	150515A Blk				0.100	1 equip	500	2ML	2	05/15/15 10:55	
2	150515A LCS-1		0.040	1-2	NA	NA equip	500	2ML	2	05/15/15 10:55	
3	AZ16235	AZ16235W07			0.100	1 equip	500	2ML	2	05/15/15 10:55	76401
4	AZ16236	AZ16236W07			0.100	1 equip	470	2ML	2	05/15/15 10:55	76401
5	AZ16287 MS-1	AZ16287W26	0.040	1-2	NA	NA equip	470	2ML	2	05/15/15 10:55	76413
6	AZ16287 MSD-1	AZ16287W27	0.040	1-2	NA	NA equip	470	2ML	2	05/15/15 10:55	76413
7	AZ16287	AZ16287W25			0.100	1 equip	500	2ML	2	05/15/15 10:55	76413
8	AZ16288	AZ16288W09			0.100	1 equip	465	2ML	2	05/15/15 10:55	76413
9	AZ16289	AZ16289W09			0.100	1 equip	500	2ML	2	05/15/15 10:55	76413
10	AZ16290	AZ16290W09			0.100	1 equip	500	2ML	2	05/15/15 10:55	76413

NP 05-16-15

olvent and Lot#	
cetonitrile	DM 394
artridge Sorbent Lot	S311-032
rial No	512616
odium Bisulfate	234615
H Strip	HC 431579

Extraction COC Transfer	
Extraction lab employee Initials	CFM
GC analyst's initials	NP
Date	05-15-15
Time	1430
Refrigerator	Brown

	Technician's Initials
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	----------

Modified	05/15/15 2:40:07 PM

Reviewed By: NP **Date** 05-16-15

Injection Log

Directory: Z:\WALDORF\CHEM32\2\DATA\150517\150517

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0	0517_000006.D		8330CB 0.005 PPM 05/17/15		5/17/15 16:26
2	0	0517_000007.D		8330CB 0.010 PPM 05/17/15		5/17/15 16:53
3	0	0517_000008.D		8330CB 0.020 PPM 05/17/15		5/17/15 17:21
4	0	0517_000009.D		8330CB 0.050 PPM 05/17/15		5/17/15 17:48
5	0	0517_000010.D		8330CB 0.10 PPM 05/17/15		5/17/15 18:16
6	0	0517_000011.D		8330CB 0.20 PPM 05/17/15		5/17/15 18:43
7	0	0517_000012.D		8330CB 0.50 PPM 05/17/15		5/17/15 19:11
8	0	0517_000013.D		8330CB 1.0 PPM 05/17/15		5/17/15 19:38
9	0	0517_000014.D		8330MXA 2.0 PPM 05/17/15		5/17/15 20:06
10	0	0517_000015.D		8330MXB 2.0 PPM 05/17/15		5/17/15 20:33
11	0	0517_000016.D		8330_SS 1.0 PPM 05/17/15		5/17/15 21:01
12	0	0517_000017.D		PETN_TETRYL_SS 1.0 PPM 05/17/15		5/17/15 21:28

Injection Log

Directory: Z:\WALDORF\CHEM32\2\DATA\150517\150517

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0	0517_000029.D		8330_CCV-1.0-PPM-05/17/15		5/18/15 4:18
2	0	0517_000030.D	0.016	150515ALCS-1-0.016-DF-05/15/15	Water	5/18/15 4:46
3	0	0517_000031.D	0.016	AZ16287W26_MS-1-0.017-DF-05/15/15	Water	5/18/15 5:23
4	0	0517_000032.D	0.016	AZ16287W27_MSD-1-0.017-DF-05/15/15	Water	5/18/15 6:01
5	0	0517_000033.D	0.016	150515ABLKW-0.016-DF-05/15/15	Water	5/18/15 6:38
6	0	0517_000036.D	0.016	AZ16287W25-0.016-DF-05/15/15	Water	5/18/15 8:31
7	0	0517_000037.D	0.016	AZ16288W09-0.0172-DF-05/15/15	Water	5/18/15 9:09
8	0	0517_000038.D	0.016	AZ16289W09-0.016-DF-05/15/15	Water	5/18/15 9:46
9	0	0517_000039.D	0.016	AZ16290W09-0.016-DF-05/15/15	Water	5/18/15 10:24
10	0	0517_000040.D		8330_CCV-1.0-PPM-05/17/15		5/18/15 11:01

Injection Log

Directory: Z:\STATLER\CHEM32\1\DATA\150517\150517

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0	0517_000004.D		8330MXA_CB 0.005 PPM 05/16/15		5/17/15 17:08
2	0	0517_000005.D		8330MXB_CB 0.005 PPM 05/16/15		5/17/15 17:47
3	0	0517_000006.D		8330MXA_CB 0.010 PPM 05/16/15		5/17/15 18:27
4	0	0517_000007.D		8330MXB_CB 0.010 PPM 05/16/15		5/17/15 19:06
5	0	0517_000008.D		8330MXA_CB 0.020 PPM 05/16/15		5/17/15 19:46
6	0	0517_000009.D		8330MXB_CB 0.020 PPM 05/16/15		5/17/15 20:25
7	0	0517_000010.D		8330MXA_CB 0.050 PPM 05/16/15		5/17/15 21:05
8	0	0517_000011.D		8330MXB_CB 0.050 PPM 05/16/15		5/17/15 21:44
9	0	0517_000012.D		8330MXA_CB 0.10 PPM 05/16/15		5/17/15 22:24
10	0	0517_000013.D		8330MXB_CB 0.10 PPM 05/16/15		5/17/15 23:03
11	0	0517_000014.D		8330MXA_CB 0.20 PPM 05/16/15		5/17/15 23:43
12	0	0517_000015.D		8330MXB_CB 0.20 PPM 05/16/15		5/18/15 0:22
13	0	0517_000016.D		8330MXA_CB 0.50 PPM 05/16/15		5/18/15 1:02
14	0	0517_000017.D		8330MXB_CB 0.50 PPM 05/16/15		5/18/15 1:42
15	0	0517_000018.D		8330MXA_CB 1.0 PPM 05/16/15		5/18/15 2:21
16	0	0517_000019.D		8330MXB_CB 1.0 PPM 05/16/15		5/18/15 3:01
17	0	0517_000020.D		8330MXA_CB 2.0 PPM 05/16/15		5/18/15 3:40
18	0	0517_000021.D		8330MXB_CB 2.0 PPM 05/16/15		5/18/15 4:20
19	0	0517_000028.D		8330MXB_SS 1.0 PPM 05/18/15		5/18/15 8:56
20	0	0517_000029.D		PETN_TETRYL_SS 1.0 PPM 05/18/15		5/18/15 9:36
21	0	0517_000030.D		8330MXA_SS 1.0 PPM 05/18/15		5/18/15 10:15

Injection Log

Directory: Z:\STATLER\CHEM32\1\DATA\150517\150517

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0	0517_000043.D		8330MXA_CCV 1.0 PPM 05/18/15		5/18/15 18:51
2	0	0517_000044.D		8330MXB_CCV 1.0 PPM 05/18/15		5/18/15 19:31
3	0	0517_000049.D	0.016	150515ABLKW 0.016 DF 05/15/15	Water	5/18/15 22:48
4	0	0517_000050.D	0.016	AZ16290W09 0.016 DF 05/15/15	Water	5/18/15 23:28
5	0	0517_000051.D		8330MXA_CCV 1.0 PPM 05/16/15		5/19/15 0:07
6	0	0517_000052.D		8330MXB_CCV 1.0 PPM 05/16/15		5/19/15 0:47

METALS

APPL, INC.

METALS

QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	80.00 U	300.0	80.00	27.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	BORON (B)	40.00 U	50.0	40.00	29.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	LITHIUM (LI)	0.80 U	1.0	0.80	0.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	ZINC (ZN)	20.00 U	150.0	20.00	13.70	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	ALUMINUM (AL) (DI	80.00 U	300.0	80.00	27.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	BORON (B) (DISSO	40.00 U	50.0	40.00	29.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	LITHIUM (LI) (DISSO	0.80 U	1.0	0.80	0.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	ZINC (ZN) (DISSOL	20.00 U	150.0	20.00	13.70	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287

Metals SC-Blank-REG MDLs
Printed: 06/18/15 10:31:33 AM

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL) (DISSOLVED)	2000	1840	92.0	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	BORON (B) (DISSOLVED)	250	239	95.6	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	LITHIUM (LI) (DISSOLVED)	100.0	92.7	92.7	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	ZINC (ZN) (DISSOLVED)	500	468	93.6	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	ALUMINUM (AL)	2000	2020	101	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	BORON (B)	250	246	98.4	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	LITHIUM (LI)	100.0	94.5	94.5	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	ZINC (ZN)	500	480	96.0	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **150526W-16287 MS - 198124**

Sample ID: AZ16287

Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL) (DISS	2000	ND	2140	2140	107	107	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	BORON (B) (DISSOLV	250	75.9	343	343	107	107	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	LITHIUM (LI) (DISSOLV	100.0	0.70	110	110	109	109	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	ZINC (ZN) (DISSOLVE	500	ND	510	506	102	101	0.8	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	ALUMINUM (AL)	2000	28.7	2120	2160	105	107	1.9	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	BORON (B)	250	77.5	345	347	107	108	0.6	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	LITHIUM (LI)	100.0	0.82	110	109	109	108	0.9	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	ZINC (ZN)	500	ND	512	517	102	103	1.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287

Comments: _____

6010C/3010A^

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 06/04/15

Matrix: WATER Instrument: Jules

Blank ID: 150526A2-BLK Time Analyzed: 1700

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150526A2-MSD	Matrix SpikeD	150611A	06/11/15 1450
AZ16288	S67-MW003-051215	150611A	06/11/15 1457
AZ16289	S67-MW002-051215	150611A	06/11/15 1502
AZ16290	S67-MW009-051215	150611A	06/11/15 1510
150526A2-BLK	Blank	150611A	06/04/15 1700
150526A2-LCS	Lab Control Spike	150611A	06/04/15 1707
AZ16287	S67-MW007-051215	150611A	06/11/15 1436
150526A2-MS	Matrix Spike	150611A	06/11/15 1443

Comments: Batch: #61CJU-150526A2

6010C/3010A^

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 06/04/15

Matrix: WATER Instrument: Jules

Blank ID: 150526A3-BLK Time Analyzed: 1712

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150526A3-MSD	Matrix SpikeD	150611A	06/11/15 1552
AZ16288	S67-MW003-051215	150611A	06/11/15 1559
AZ16289	S67-MW002-051215	150611A	06/11/15 1604
AZ16290	S67-MW009-051215	150611A	06/11/15 1612
150526A3-BLK	Blank	150611A	06/04/15 1712
150526A3-LCS	Lab Control Spike	150611A	06/04/15 1719
150526A3-MS	Matrix Spike	150611A	06/11/15 1544
AZ16287	S67-MW007-051215	150611A	06/11/15 1537

Comments: Batch: #61CJU-150526A3

METALS

Sample Data

APPL, INC.

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 76413

Sample ID: S67-MW007-051215

APPL ID: AZ16287

Sample Collection Date: 05/12/15

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	28.7 J	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	77.5	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	0.82 J	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	20.00 U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	80.00 U	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	75.9	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	0.70 J	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	20.00 U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

J = Estimated value.

Printed: 06/18/15 10:32:20 AM

APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 11
Sample ID: AZ16287W34
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 45
Date Collected: 06/11/15 2:36:00 PM
Data Type: Reprocessed on 06/12/15 9:41:05 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W34

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	215122.4	99.33	%	1.169				1.18%
Y Radial	13835.7	98.97	%	1.308				1.32%
Ag 338.289†	-15.0	-0.085	ug/L	0.0643	-0.085	ug/L	0.0643	75.88%
Al 308.215†	41.1	28.66	ug/L	25.824	28.66	ug/L	25.824	90.11%
As 188.979†	142.8	25.80	ug/L	1.238	25.80	ug/L	1.238	4.80%
B 249.677†	2546.4	77.54	ug/L	0.986	77.54	ug/L	0.986	1.27%
Ba 233.527†	5022.6	11.93	ug/L	0.183	11.93	ug/L	0.183	1.53%
Be 313.107†	176.3	0.050	ug/L	0.0045	0.050	ug/L	0.0045	8.96%
Ca 315.887†	365222.5	23430	ug/L	314.21	23430	ug/L	314.21	1.34%
Cd 214.440†	-9.1	0.198	ug/L	0.0205	0.198	ug/L	0.0205	10.38%
Co 228.616†	8.6	-0.029	ug/L	0.0778	-0.029	ug/L	0.0778	268.68%
Cr 267.716†	42.0	0.680	ug/L	0.0866	0.680	ug/L	0.0866	12.75%
Cu 327.393†	666.7	3.433	ug/L	0.1109	3.433	ug/L	0.1109	3.23%
Fe 273.955†	32396.8	424.0	ug/L	3.10	424.0	ug/L	3.10	0.73%
K 766.490†	8514.7	1227	ug/L	13.18	1227	ug/L	13.18	1.07%
Mg 285.213†	53275.2	3297	ug/L	12.79	3297	ug/L	12.79	0.39%
Mn 257.610†	11652.9	141.6	ug/L	0.53	141.6	ug/L	0.53	0.38%
Mo 202.031†	176.2	5.095	ug/L	0.1753	5.095	ug/L	0.1753	3.44%
Na 589.592†	455301.8	63270	ug/L	802.63	63270	ug/L	802.63	1.27%
Ni 231.604†	10.3	0.406	ug/L	0.1577	0.406	ug/L	0.1577	38.81%
P 213.617†	34.5	10.44	ug/L	2.367	10.44	ug/L	2.367	22.67%
Pb 220.353†	-5.3	0.039	ug/L	1.0332	0.039	ug/L	1.0332	>999.9%
Sb 206.836†	0.7	0.099	ug/L	0.7374	0.099	ug/L	0.7374	748.25%
Se 196.026†	-6.3	-2.458	ug/L	2.0195	-2.458	ug/L	2.0195	82.16%
Sn 189.927†	7.0	1.223	ug/L	1.1066	1.223	ug/L	1.1066	90.46%
Sr 421.552†	43814.5	100.8	ug/L	1.16	100.8	ug/L	1.16	1.15%
Ti 337.279†	6.7	0.125	ug/L	0.5758	0.125	ug/L	0.5758	461.21%
Tl 190.801†	4.1	0.867	ug/L	1.6695	0.867	ug/L	1.6695	192.48%
V 292.402†	37.7	0.382	ug/L	0.0562	0.382	ug/L	0.0562	14.72%
Zn 206.200†	-350.0	-1.831	ug/L	0.4906	-1.831	ug/L	0.4906	26.79%
Li 670.784	14218.9	0.823	ug/L	0.0160	0.823	ug/L	0.0160	1.95%

Sequence No.: 19
Sample ID: AZ16287W32 F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 51
Date Collected: 06/11/15 3:37:09 PM
Data Type: Reprocessed on 06/12/15 9:41:14 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W32 F

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	214218.4	98.91	%	0.963				0.97%
Y Radial	14008.5	100.2	%	0.53				0.53%
Ag 338.289†	7.6	0.043	ug/L	0.2936	0.043	ug/L	0.2936	688.36%
Al 308.215†	8.7	3.422	ug/L	3.7084	3.422	ug/L	3.7084	108.37%
As 188.979†	155.2	28.30	ug/L	1.322	28.30	ug/L	1.322	4.67%
B 249.677†	2492.7	75.89	ug/L	0.605	75.89	ug/L	0.605	0.80%
Ba 233.527†	5314.5	12.62	ug/L	0.200	12.62	ug/L	0.200	1.59%
Be 313.107†	111.4	0.032	ug/L	0.0044	0.032	ug/L	0.0044	13.68%
Ca 315.887†	351757.4	22570	ug/L	167.70	22570	ug/L	167.70	0.74%
Cd 214.440†	-2.5	0.204	ug/L	0.0380	0.204	ug/L	0.0380	18.68%
Co 228.616†	3.9	-0.072	ug/L	0.0318	-0.072	ug/L	0.0318	43.97%
Cr 267.716†	32.9	0.554	ug/L	0.0909	0.554	ug/L	0.0909	16.41%
Cu 327.393†	668.1	3.451	ug/L	0.3273	3.451	ug/L	0.3273	9.48%
Fe 273.955†	31333.6	410.1	ug/L	2.22	410.1	ug/L	2.22	0.54%
K 766.490†	8274.5	1196	ug/L	6.74	1196	ug/L	6.74	0.56%
Mg 285.213†	50976.9	3154	ug/L	20.26	3154	ug/L	20.26	0.64%
Mn 257.610†	12922.4	157.0	ug/L	0.96	157.0	ug/L	0.96	0.61%
Mo 202.031†	162.0	4.684	ug/L	0.2769	4.684	ug/L	0.2769	5.91%
Na 589.592†	415143.4	57690	ug/L	409.56	57690	ug/L	409.56	0.71%
Ni 231.604†	4.2	0.276	ug/L	0.0866	0.276	ug/L	0.0866	31.37%
P 213.617†	20.4	6.171	ug/L	0.9754	6.171	ug/L	0.9754	15.81%
Pb 220.353†	-14.7	-1.604	ug/L	1.0939	-1.604	ug/L	1.0939	68.21%
Sb 206.836†	6.0	0.826	ug/L	1.4000	0.826	ug/L	1.4000	169.49%
Se 196.026†	-3.3	-1.495	ug/L	0.9116	-1.495	ug/L	0.9116	60.97%
Sn 189.927†	5.8	1.015	ug/L	0.2617	1.015	ug/L	0.2617	25.77%
Sr 421.552†	41176.6	94.68	ug/L	0.833	94.68	ug/L	0.833	0.88%
Ti 337.279†	13.4	0.317	ug/L	0.4872	0.317	ug/L	0.4872	153.86%
Tl 190.801†	3.6	0.759	ug/L	1.0587	0.759	ug/L	1.0587	139.46%
V 292.402†	42.9	0.435	ug/L	0.0320	0.435	ug/L	0.0320	7.36%
Zn 206.200†	-594.7	-4.482	ug/L	0.2175	-4.482	ug/L	0.2175	4.85%
Li 670.784	12139.9	0.703	ug/L	0.0150	0.703	ug/L	0.0150	2.14%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW003-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16288

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	443	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	73.5	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	11.4	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	774	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	370	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	76.2	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	10.9	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	759	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

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APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 14
Sample ID: AZ16288W11
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 48
Date Collected: 06/11/15 2:57:25 PM
Data Type: Reprocessed on 06/12/15 9:41:08 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16288W11

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	221289.1	102.2	%	0.43				0.42%
Y Radial	14108.1	100.9	%	0.28				0.28%
Ag 338.289†	23.9	0.135	ug/L	0.2055	0.135	ug/L	0.2055	152.46%
Al 308.215†	569.4	442.6	ug/L	8.07	442.6	ug/L	8.07	1.82%
As 188.979†	47.6	4.703	ug/L	1.0419	4.703	ug/L	1.0419	22.15%
B 249.677†	2451.9	73.46	ug/L	0.693	73.46	ug/L	0.693	0.94%
Ba 233.527†	25840.8	61.44	ug/L	0.333	61.44	ug/L	0.333	0.54%
Be 313.107†	1312.9	0.376	ug/L	0.0048	0.376	ug/L	0.0048	1.27%
Ca 315.887†	688626.9	44190	ug/L	123.15	44190	ug/L	123.15	0.28%
Cd 214.440†	395.2	1.630	ug/L	0.0144	1.630	ug/L	0.0144	0.89%
Co 228.616†	706.4	7.067	ug/L	0.0472	7.067	ug/L	0.0472	0.67%
Cr 267.716†	39.7	0.737	ug/L	0.0335	0.737	ug/L	0.0335	4.54%
Cu 327.393†	1429.8	7.479	ug/L	0.1583	7.479	ug/L	0.1583	2.12%
Fe 273.955†	9669.7	125.3	ug/L	0.65	125.3	ug/L	0.65	0.52%
K 766.490†	19705.3	2950	ug/L	9.92	2950	ug/L	9.92	0.34%
Mg 285.213†	116264.9	7194	ug/L	15.20	7194	ug/L	15.20	0.21%
Mn 257.610†	30683.8	372.6	ug/L	1.34	372.6	ug/L	1.34	0.36%
Mo 202.031†	29.1	0.897	ug/L	0.2350	0.897	ug/L	0.2350	26.20%
Na 589.592†	172649.2	23990	ug/L	32.81	23990	ug/L	32.81	0.14%
Ni 231.604†	658.8	13.71	ug/L	0.042	13.71	ug/L	0.042	0.30%
P 213.617†	247.9	75.12	ug/L	1.403	75.12	ug/L	1.403	1.87%
Pb 220.353†	-10.9	-0.352	ug/L	0.5411	-0.352	ug/L	0.5411	153.70%
Sb 206.836†	0.2	0.031	ug/L	1.0937	0.031	ug/L	1.0937	>999.9%
Se 196.026†	-8.3	-3.863	ug/L	0.2237	-3.863	ug/L	0.2237	5.79%
Sn 189.927†	-7.9	-1.379	ug/L	0.1308	-1.379	ug/L	0.1308	9.48%
Sr 421.552†	125664.8	289.9	ug/L	0.28	289.9	ug/L	0.28	0.10%
Ti 337.279†	54.0	1.372	ug/L	0.5635	1.372	ug/L	0.5635	41.06%
Tl 190.801†	-4.6	-0.965	ug/L	1.6555	-0.965	ug/L	1.6555	171.61%
V 292.402†	98.4	0.998	ug/L	0.0304	0.998	ug/L	0.0304	3.04%
Zn 206.200†	75296.3	774.0	ug/L	3.33	774.0	ug/L	3.33	0.43%
Li 670.784	195976.5	11.35	ug/L	0.006	11.35	ug/L	0.006	0.05%

Sequence No.: 22
Sample ID: AZ16288W12 F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 54
Date Collected: 06/11/15 3:59:18 PM
Data Type: Reprocessed on 06/12/15 9:41:18 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16288W12 F

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	219439.0	101.3	%	0.61				0.61%
Y Radial	13905.9	99.48	%	1.121				1.13%
Ag 338.289†	41.2	0.232	ug/L	0.1821	0.232	ug/L	0.1821	78.38%
Al 308.215†	476.8	370.0	ug/L	5.96	370.0	ug/L	5.96	1.61%
As 188.979†	48.0	4.573	ug/L	0.9008	4.573	ug/L	0.9008	19.70%
B 249.677†	2550.4	76.18	ug/L	0.535	76.18	ug/L	0.535	0.70%
Ba 233.527†	26572.2	63.19	ug/L	0.286	63.19	ug/L	0.286	0.45%
Be 313.107†	1341.3	0.384	ug/L	0.0047	0.384	ug/L	0.0047	1.22%
Ca 315.887†	717017.3	46010	ug/L	402.61	46010	ug/L	402.61	0.87%
Cd 214.440†	390.4	1.627	ug/L	0.0721	1.627	ug/L	0.0721	4.43%
Co 228.616†	698.9	6.988	ug/L	0.0507	6.988	ug/L	0.0507	0.73%
Cr 267.716†	38.4	0.742	ug/L	0.0792	0.742	ug/L	0.0792	10.66%
Cu 327.393†	1270.7	6.636	ug/L	0.1998	6.636	ug/L	0.1998	3.01%
Fe 273.955†	2827.1	35.61	ug/L	0.264	35.61	ug/L	0.264	0.74%
K 766.490†	20413.7	3057	ug/L	30.89	3057	ug/L	30.89	1.01%
Mg 285.213†	120791.5	7474	ug/L	74.42	7474	ug/L	74.42	1.00%
Mn 257.610†	30563.3	371.1	ug/L	0.77	371.1	ug/L	0.77	0.21%
Mo 202.031†	26.1	0.804	ug/L	0.2138	0.804	ug/L	0.2138	26.61%
Na 589.592†	172831.9	24010	ug/L	195.28	24010	ug/L	195.28	0.81%
Ni 231.604†	667.7	13.91	ug/L	0.150	13.91	ug/L	0.150	1.08%
P 213.617†	212.9	64.53	ug/L	0.503	64.53	ug/L	0.503	0.78%
Pb 220.353†	-22.3	-2.230	ug/L	0.6737	-2.230	ug/L	0.6737	30.21%
Sb 206.836†	1.0	0.132	ug/L	0.7108	0.132	ug/L	0.7108	538.70%
Se 196.026†	-3.5	-2.416	ug/L	3.6832	-2.416	ug/L	3.6832	152.48%
Sn 189.927†	-5.4	-0.954	ug/L	0.2456	-0.954	ug/L	0.2456	25.73%
Sr 421.552†	124307.1	286.7	ug/L	2.36	286.7	ug/L	2.36	0.82%
Ti 337.279†	26.2	0.583	ug/L	0.0926	0.583	ug/L	0.0926	15.89%
Tl 190.801†	-0.3	-0.068	ug/L	1.7160	-0.068	ug/L	1.7160	>999.9%
V 292.402†	94.5	0.958	ug/L	0.0521	0.958	ug/L	0.0521	5.43%
Zn 206.200†	73817.8	758.9	ug/L	5.70	758.9	ug/L	5.70	0.75%
Li 670.784	188591.8	10.92	ug/L	0.027	10.92	ug/L	0.027	0.25%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW002-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16289

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	80.00 U	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	53.4	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	11.1	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	20.00 U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	82.0 J	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	54.9	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	11.6	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	20.00 U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

J = Estimated value.

Printed: 06/18/15 10:32:20 AM

APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 15
Sample ID: AZ16289W12
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 49
Date Collected: 06/11/15 3:02:58 PM
Data Type: Reprocessed on 06/12/15 9:41:10 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16289W12

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	217599.2	100.5	%	0.36				0.36%
Y Radial	14025.7	100.3	%	0.60				0.59%
Ag 338.289†	80.0	0.451	ug/L	0.0981	0.451	ug/L	0.0981	21.75%
Al 308.215†	19.4	10.93	ug/L	2.907	10.93	ug/L	2.907	26.61%
As 188.979†	92.5	8.692	ug/L	1.5054	8.692	ug/L	1.5054	17.32%
B 249.677†	1818.2	53.41	ug/L	0.157	53.41	ug/L	0.157	0.29%
Ba 233.527†	22275.3	52.95	ug/L	0.106	52.95	ug/L	0.106	0.20%
Be 313.107†	65.5	0.019	ug/L	0.0055	0.019	ug/L	0.0055	29.41%
Ca 315.887†	1362012.0	87410	ug/L	539.24	87410	ug/L	539.24	0.62%
Cd 214.440†	35.5	0.517	ug/L	0.0133	0.517	ug/L	0.0133	2.57%
Co 228.616†	-18.3	-0.463	ug/L	0.0646	-0.463	ug/L	0.0646	13.93%
Cr 267.716†	40.6	1.486	ug/L	0.1497	1.486	ug/L	0.1497	10.07%
Cu 327.393†	1194.8	6.560	ug/L	0.0100	6.560	ug/L	0.0100	0.15%
Fe 273.955†	2000.3	23.80	ug/L	0.285	23.80	ug/L	0.285	1.20%
K 766.490†	24030.6	3617	ug/L	16.54	3617	ug/L	16.54	0.46%
Mg 285.213†	148758.8	9204	ug/L	50.61	9204	ug/L	50.61	0.55%
Mn 257.610†	696.3	8.086	ug/L	0.0497	8.086	ug/L	0.0497	0.61%
Mo 202.031†	78.0	2.047	ug/L	0.1104	2.047	ug/L	0.1104	5.39%
Na 589.592†	18199.0	2523	ug/L	17.94	2523	ug/L	17.94	0.71%
Ni 231.604†	9.6	1.223	ug/L	0.1443	1.223	ug/L	0.1443	11.80%
P 213.617†	139.0	42.12	ug/L	0.650	42.12	ug/L	0.650	1.54%
Pb 220.353†	-31.1	-2.632	ug/L	0.4505	-2.632	ug/L	0.4505	17.12%
Sb 206.836†	1.3	0.176	ug/L	0.2576	0.176	ug/L	0.2576	145.99%
Se 196.026†	-12.5	-6.346	ug/L	1.2173	-6.346	ug/L	1.2173	19.18%
Sn 189.927†	0.2	0.031	ug/L	0.7393	0.031	ug/L	0.7393	>999.9%
Sr 421.552†	189101.2	435.5	ug/L	3.68	435.5	ug/L	3.68	0.85%
Ti 337.279†	24.4	0.477	ug/L	0.3407	0.477	ug/L	0.3407	71.43%
Tl 190.801†	0.6	0.118	ug/L	0.8315	0.118	ug/L	0.8315	706.94%
V 292.402†	207.4	2.103	ug/L	0.0577	2.103	ug/L	0.0577	2.74%
Zn 206.200†	-144.3	0.763	ug/L	0.1225	0.763	ug/L	0.1225	16.05%
Li 670.784	192031.1	11.12	ug/L	0.049	11.12	ug/L	0.049	0.44%

Sequence No.: 23
Sample ID: AZ16289W11 F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 55
Date Collected: 06/11/15 4:04:49 PM
Data Type: Reprocessed on 06/12/15 9:41:19 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16289W11 F

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	214755.9	99.16	%	0.891				0.90%
Y Radial	13974.4	99.97	%	0.500				0.50%
Ag 338.289†	93.1	0.525	ug/L	0.2376	0.525	ug/L	0.2376	45.26%
Al 308.215†	110.1	81.97	ug/L	3.660	81.97	ug/L	3.660	4.47%
As 188.979†	97.1	9.438	ug/L	1.5521	9.438	ug/L	1.5521	16.45%
B 249.677†	1859.1	54.85	ug/L	0.466	54.85	ug/L	0.466	0.85%
Ba 233.527†	23386.9	55.59	ug/L	0.518	55.59	ug/L	0.518	0.93%
Be 313.107†	132.7	0.038	ug/L	0.0060	0.038	ug/L	0.0060	15.81%
Ca 315.887†	1385503.3	88920	ug/L	346.73	88920	ug/L	346.73	0.39%
Cd 214.440†	32.3	0.508	ug/L	0.0475	0.508	ug/L	0.0475	9.35%
Co 228.616†	-22.4	-0.516	ug/L	0.1200	-0.516	ug/L	0.1200	23.27%
Cr 267.716†	41.4	1.513	ug/L	0.0144	1.513	ug/L	0.0144	0.95%
Cu 327.393†	1024.8	5.650	ug/L	0.1483	5.650	ug/L	0.1483	2.63%
Fe 273.955†	9286.1	119.2	ug/L	1.41	119.2	ug/L	1.41	1.18%
K 766.490†	24530.1	3692	ug/L	12.57	3692	ug/L	12.57	0.34%
Mg 285.213†	151295.0	9361	ug/L	38.56	9361	ug/L	38.56	0.41%
Mn 257.610†	741.9	8.634	ug/L	0.1718	8.634	ug/L	0.1718	1.99%
Mo 202.031†	73.0	1.903	ug/L	0.1063	1.903	ug/L	0.1063	5.58%
Na 589.592†	19681.2	2729	ug/L	13.56	2729	ug/L	13.56	0.50%
Ni 231.604†	13.6	1.323	ug/L	0.2904	1.323	ug/L	0.2904	21.95%
P 213.617†	170.3	51.60	ug/L	0.818	51.60	ug/L	0.818	1.58%
Pb 220.353†	-32.1	-2.756	ug/L	0.2859	-2.756	ug/L	0.2859	10.37%
Sb 206.836†	0.4	0.052	ug/L	0.8050	0.052	ug/L	0.8050	>999.9%
Se 196.026†	-3.5	-3.471	ug/L	1.1613	-3.471	ug/L	1.1613	33.45%
Sn 189.927†	0.8	0.133	ug/L	1.1746	0.133	ug/L	1.1746	880.62%
Sr 421.552†	189649.8	436.7	ug/L	2.68	436.7	ug/L	2.68	0.61%
Ti 337.279†	60.4	1.490	ug/L	0.0954	1.490	ug/L	0.0954	6.40%
Tl 190.801†	0.9	0.190	ug/L	0.6089	0.190	ug/L	0.6089	320.32%
V 292.402†	236.1	2.395	ug/L	0.0414	2.395	ug/L	0.0414	1.73%
Zn 206.200†	47.4	2.767	ug/L	0.1240	2.767	ug/L	0.1240	4.48%
Li 670.784	199712.9	11.57	ug/L	0.160	11.57	ug/L	0.160	1.38%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-MW009-051215
Sample Collection Date: 05/12/15

ARF: 76413
APPL ID: AZ16290

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	ALUMINUM (AL)	115 J	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B)	224	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI)	3.2	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN)	20.00 U	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15
6010C/3010A	ALUMINUM (AL) (DISSOLVE	80.00 U	300.0	80.00	27.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	BORON (B) (DISSOLVED)	228	50.0	40.00	29.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	LITHIUM (LI) (DISSOLVED)	4.9	1.0	0.80	0.40	ug/L	1	05/26/15	06/11/15
6010C/3010A	ZINC (ZN) (DISSOLVED)	18.3 J	150.0	20.00	13.70	ug/L	1	05/26/15	06/11/15

J = Estimated value.

Printed: 06/18/15 10:32:20 AM
APPL-F1-SC-NoMC-REG MDLs

Sequence No.: 16
Sample ID: AZ16290W12
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 50
Date Collected: 06/11/15 3:10:47 PM
Data Type: Reprocessed on 06/12/15 9:41:11 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16290W12

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	206067.5	95.15	%	0.996				1.05%
Y Radial	13471.9	96.37	%	0.543				0.56%
Ag 338.289†	53.2	0.300	ug/L	0.0779	0.300	ug/L	0.0779	25.95%
Al 308.215†	152.5	114.6	ug/L	13.40	114.6	ug/L	13.40	11.70%
As 188.979†	1.1	1.474	ug/L	0.9165	1.474	ug/L	0.9165	62.17%
B 249.677†	6793.2	223.8	ug/L	1.10	223.8	ug/L	1.10	0.49%
Ba 233.527†	2481.9	5.511	ug/L	0.0763	5.511	ug/L	0.0763	1.39%
Be 313.107†	251.1	0.072	ug/L	0.0122	0.072	ug/L	0.0122	17.04%
Ca 315.887†	64369.1	4120	ug/L	17.44	4120	ug/L	17.44	0.42%
Cd 214.440†	79.6	0.108	ug/L	0.0268	0.108	ug/L	0.0268	24.83%
Co 228.616†	65.4	0.356	ug/L	0.0785	0.356	ug/L	0.0785	22.09%
Cr 267.716†	65.6	0.737	ug/L	0.1095	0.737	ug/L	0.1095	14.85%
Cu 327.393†	696.5	3.074	ug/L	0.2598	3.074	ug/L	0.2598	8.45%
Fe 273.955†	576657.4	7556	ug/L	17.07	7556	ug/L	17.07	0.23%
K 766.490†	25237.4	3686	ug/L	36.02	3686	ug/L	36.02	0.98%
Mg 285.213†	25542.8	1587	ug/L	2.94	1587	ug/L	2.94	0.19%
Mn 257.610†	7147.8	87.08	ug/L	0.535	87.08	ug/L	0.535	0.61%
Mo 202.031†	-14.3	-0.173	ug/L	0.0125	-0.173	ug/L	0.0125	7.23%
Na 589.592†	979665.5	136100	ug/L	908.26	136100	ug/L	908.26	0.67%
Ni 231.604†	34.0	0.736	ug/L	0.1210	0.736	ug/L	0.1210	16.42%
P 213.617†	0.1	0.023	ug/L	1.3822	0.023	ug/L	1.3822	>999.9%
Pb 220.353†	62.8	9.999	ug/L	0.5536	9.999	ug/L	0.5536	5.54%
Sb 206.836†	3.0	0.405	ug/L	0.7363	0.405	ug/L	0.7363	181.84%
Se 196.026†	10.2	6.169	ug/L	2.0403	6.169	ug/L	2.0403	33.07%
Sn 189.927†	-4.2	-0.735	ug/L	0.2680	-0.735	ug/L	0.2680	36.48%
Sr 421.552†	5400.6	12.33	ug/L	0.038	12.33	ug/L	0.038	0.31%
Ti 337.279†	124.9	3.480	ug/L	0.9031	3.480	ug/L	0.9031	25.95%
Tl 190.801†	-2.1	-0.434	ug/L	0.8620	-0.434	ug/L	0.8620	198.79%
V 292.402†	36.8	0.374	ug/L	0.0342	0.374	ug/L	0.0342	9.14%
Zn 206.200†	-88.2	1.534	ug/L	0.3443	1.534	ug/L	0.3443	22.44%
Li 670.784	55740.2	3.228	ug/L	0.0062	3.228	ug/L	0.0062	0.19%

Sequence No.: 24
Sample ID: AZ16290W11 F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 56
Date Collected: 06/11/15 4:12:35 PM
Data Type: Reprocessed on 06/12/15 9:41:20 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16290W11 F

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	211886.4	97.84	%	0.453				0.46%
Y Radial	14169.6	101.4	%	1.36				1.34%
Ag 338.289†	45.0	0.254	ug/L	0.3249	0.254	ug/L	0.3249	127.97%
Al 308.215†	33.1	19.46	ug/L	12.538	19.46	ug/L	12.538	64.43%
As 188.979†	-6.3	4.449	ug/L	1.3172	4.449	ug/L	1.3172	29.61%
B 249.677†	3631.3	227.5	ug/L	1.59	227.5	ug/L	1.59	0.70%
Ba 233.527†	3516.6	5.731	ug/L	0.0243	5.731	ug/L	0.0243	0.42%
Be 313.107†	323.7	0.093	ug/L	0.0033	0.093	ug/L	0.0033	3.58%
Ca 315.887†	226661.7	14540	ug/L	223.25	14540	ug/L	223.25	1.54%
Cd 214.440†	573.6	-0.801	ug/L	0.0902	-0.801	ug/L	0.0902	11.26%
Co 228.616†	539.6	4.205	ug/L	0.0619	4.205	ug/L	0.0619	1.47%
Cr 267.716†	35.5	-0.088	ug/L	0.1137	-0.088	ug/L	0.1137	128.55%
Cu 327.393†	102.7	-2.087	ug/L	0.1354	-2.087	ug/L	0.1354	6.49%
Fe 273.955†	3636586.7	47650	ug/L	419.38	47650	ug/L	419.38	0.88%
K 766.490†	26074.6	3795	ug/L	63.02	3795	ug/L	63.02	1.66%
Mg 285.213†	135120.8	8399	ug/L	129.42	8399	ug/L	129.42	1.54%
Mn 257.610†	54639.1	664.1	ug/L	10.76	664.1	ug/L	10.76	1.62%
Mo 202.031†	-58.4	-0.710	ug/L	0.4292	-0.710	ug/L	0.4292	60.47%
Na 589.592†	921077.4	128000	ug/L	2264.45	128000	ug/L	2264.45	1.77%
Ni 231.604†	149.7	3.878	ug/L	0.1689	3.878	ug/L	0.1689	4.36%
P 213.617†	-63.9	-19.36	ug/L	1.936	-19.36	ug/L	1.936	10.00%
Pb 220.353†	-5.5	-8.689	ug/L	0.7143	-8.689	ug/L	0.7143	8.22%
Sb 206.836†	-1.6	-0.215	ug/L	0.6878	-0.215	ug/L	0.6878	320.18%
Se 196.026†	-33.3	7.180	ug/L	1.4138	7.180	ug/L	1.4138	19.69%
Sn 189.927†	-13.2	-2.318	ug/L	0.1911	-2.318	ug/L	0.1911	8.24%
Sr 421.552†	19359.7	44.29	ug/L	0.928	44.29	ug/L	0.928	2.10%
Ti 337.279†	37.7	0.833	ug/L	0.1842	0.833	ug/L	0.1842	22.11%
Tl 190.801†	-7.9	-1.656	ug/L	1.2597	-1.656	ug/L	1.2597	76.08%
V 292.402†	12.9	0.131	ug/L	0.0844	0.131	ug/L	0.0844	64.70%
Zn 206.200†	1753.9	18.26	ug/L	0.187	18.26	ug/L	0.187	1.03%
Li 670.784	83996.4	4.864	ug/L	0.0311	4.864	ug/L	0.0311	0.64%

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 76413 SDG: 76413
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 06/04/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 16:00	%R(1)	True CCV1	Found 16:49	%R(1)	True CCV2	Found 17:37	%R(1)	
Aluminum (Al)	12500	11640	93.1	10000	9995	100	7500	6951	92.7	P
Boron (B)	500	501.7	100	500	539.1	108	375	396.5	106	P
Lithium (Li)	250	251.8	101	250	246	98.4	187.5	192.4	103	P
Zinc (Zn)	500	494.9	99.0	500	507.7	102	375	378.4	101	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 76413 SDG: 76413
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 06/11/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:58	%R(1)	True CCV1	Found 14:23	%R(1)	True CCV2	Found 15:25	%R(1)	
Aluminum (Al)	12500	11940	95.5	10000	10150	102	7500	7563	101	P
Boron (B)	500	498.3	99.7	500	526	105	375	411.1	110	P
Lithium (Li)	250	269.6	108	250	244.1	97.6	187.5	175	93.3	P
Zinc (Zn)	500	494.7	98.9	500	517	103	375	386.4	103	P

(1) Control Limits: Metals 90-110

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No: 76413 SDG: 76413

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 06/11/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:58	%R(1)	True CCV1	Found 16:20	%R(1)	True CCV2	Found 16:50	%R(1)	
Aluminum (Al)	12500	11940	95.5	10000	10330	103	7500	7434	99.1	P
Boron (B)	500	498.3	99.7	500	531.1	106	375	406.8	108	P
Lithium (Li)	250	269.6	108	250	245.5	98.2	187.5	178.9	95.4	P
Zinc (Zn)	500	494.7	98.9	500	514.9	103	375	378.5	101	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 06/04/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	16:14		16:54		17:57				17:00		
Aluminum (Al)	300.00	U	300.00	U	300.00	U			300.00	U	P
Boron (B)	50.00	U	50.00	U	50.00	U			50.00	U	P
Lithium (Li)	.41	J	.42	J	.41	J			1.00	U	P
Zinc (Zn)	150.00	U	150.00	U	150.00	U			150.00	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 06/04/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	16:14		16:54		17:57				17:12		
Aluminum (Al)	300.00	U	300.00	U	300.00	U			300.00	U	P
Boron (B)	50.00	U	50.00	U	50.00	U			50.00	U	P
Lithium (Li)	.41	J	.42	J	.41	J			1.00	U	P
Zinc (Zn)	150.00	U	150.00	U	150.00	U			150.00	U	P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 06/11/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	14:04		14:29		15:30		16:29				
Aluminum (Al)	300.00	U	300.00	U	300.00	U	300.00	U			P
Boron (B)	50.00	U	50.00	U	50.00	U	50.00	U			P
Lithium (Li)	.44	J	.45	J	1.00	U	.43	J			P
Zinc (Zn)	150.00	U	150.00	U	150.00	U	150.00	U			P

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 06/11/15

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	14:04		16:59								
Aluminum (Al)	300.00	U	300.00	U							P
Boron (B)	50.00	U	50.00	U							P
Lithium (Li)	.44	J	1.00	U							P
Zinc (Zn)	150.00	U	150.00	U							P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No.: 76413 SDG: 76413
ICP ID Number: Jules ICS Source: Environmental Express

Analysis Date: 06/04/15 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 16:27	Sol AB 16:39	%R(1)
Aluminum (Al)	100000	100000	92880	90030	90.0
Boron (B)			6.758	7.337	
Calcium (Ca)	100000	100000	97090	93240	93.2
Iron (Fe)	100000	100000	91930	92500	92.5
Lithium (Li)		0	0.348	0.197	
Magnesium (Mg)	100000	100000	93510	89470	89.5
Zinc (Zn)		500	-2.622	454.7	90.9

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

ICP ID Number: Jules ICS Source: Environmental Express

Analysis Date: 06/11/15 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 14:10	Sol AB 14:17	%R(1)
Aluminum (Al)	100000	100000	101600	102700	103
Boron (B)			-3.89	-7.221	
Calcium (Ca)	100000	100000	103800	104100	104
Iron (Fe)	100000	100000	97480	102700	103
Lithium (Li)		0	0.93	0.832	
Magnesium (Mg)	100000	100000	100100	99950	100
Zinc (Zn)		500	-2.105	536	107

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-MW007-051215

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Analysis Date: 06/11/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum (Al)	75-125	2014		28.66		2000.000	99.3		
Boron (B)	75-125	311.2		77.54		250.000	93.5		
Lithium (Li)	75-125	105		0.823		100.000	104		
Zinc (Zn)	75-125	448.9		-1.831		500.000	89.8		

Comments:

06/11/15 14:36 AZ16287W34

06/11/15 16:36 AZ16287W34-A

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-MW007-051215

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Analysis Date: 06/11/15 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum (Al)	75-125	1832		3.422		2000.000	91.4		
Boron (B)	75-125	303.9		75.89		250.000	91.2		
Lithium (Li)	75-125	103.1		0.703		100.000	102		
Zinc (Zn)	75-125	441.8		-4.482		500.000	88.4		

Comments:

06/11/15 15:37 AZ16287W32 F

06/11/15 16:43 AZ16287W32-A F

Sequence No.: 27
Sample ID: AZ16287W34-A
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 57
Date Collected: 06/11/15 4:36:06 PM
Data Type: Reprocessed on 06/12/15 9:41:24 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W34-A

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	212631.2	98.18	%	0.541				0.55%
Y Radial	13036.8	93.26	%	6.080				6.52%
Ag 338.289†	16868.3	95.13	ug/L	0.876	95.13	ug/L	0.876	0.92%
Al 308.215†	2558.1	2014	ug/L	124.76	2014	ug/L	124.76	6.19%
As 188.979†	1155.7	220.5	ug/L	1.24	220.5	ug/L	1.24	0.56%
B 249.677†	10259.3	311.2	ug/L	3.12	311.2	ug/L	3.12	1.00%
Ba 233.527†	101437.8	241.3	ug/L	0.80	241.3	ug/L	0.80	0.33%
Be 313.107†	163283.1	46.70	ug/L	0.097	46.70	ug/L	0.097	0.21%
Ca 315.887†	749783.2	48110	ug/L	2946.44	48110	ug/L	2946.44	6.12%
Cd 214.440†	13427.0	46.64	ug/L	0.457	46.64	ug/L	0.457	0.98%
Co 228.616†	22913.6	234.8	ug/L	1.99	234.8	ug/L	1.99	0.85%
Cr 267.716†	19998.6	241.6	ug/L	2.12	241.6	ug/L	2.12	0.88%
Cu 327.393†	43937.8	235.2	ug/L	0.64	235.2	ug/L	0.64	0.27%
Fe 273.955†	100548.3	1296	ug/L	3.16	1296	ug/L	3.16	0.24%
K 766.490†	40090.2	5972	ug/L	367.49	5972	ug/L	367.49	6.15%
Mg 285.213†	438958.1	27160	ug/L	1657.09	27160	ug/L	1657.09	6.10%
Mn 257.610†	32130.4	389.5	ug/L	26.97	389.5	ug/L	26.97	6.92%
Mo 202.031†	8018.2	231.0	ug/L	1.38	231.0	ug/L	1.38	0.60%
Na 589.592†	621207.6	86310	ug/L	5340.99	86310	ug/L	5340.99	6.19%
Ni 231.604†	10858.5	219.4	ug/L	1.49	219.4	ug/L	1.49	0.68%
P 213.617†	6168.9	1870	ug/L	23.89	1870	ug/L	23.89	1.28%
Pb 220.353†	1357.8	231.9	ug/L	1.61	231.9	ug/L	1.61	0.69%
Sb 206.836†	1494.4	204.4	ug/L	1.19	204.4	ug/L	1.19	0.58%
Se 196.026†	690.3	218.3	ug/L	2.56	218.3	ug/L	2.56	1.17%
Sn 189.927†	1280.6	224.5	ug/L	2.22	224.5	ug/L	2.22	0.99%
Sr 421.552†	139656.2	322.2	ug/L	19.59	322.2	ug/L	19.59	6.08%
Ti 337.279†	8888.6	250.6	ug/L	17.05	250.6	ug/L	17.05	6.80%
Tl 190.801†	1170.0	246.1	ug/L	2.00	246.1	ug/L	2.00	0.81%
V 292.402†	25585.7	259.5	ug/L	2.33	259.5	ug/L	2.33	0.90%
Zn 206.200†	43159.2	448.9	ug/L	1.48	448.9	ug/L	1.48	0.33%
Li 670.784	1812797.6	105.0	ug/L	0.47	105.0	ug/L	0.47	0.44%

Sequence No.: 28
Sample ID: AZ16287W32-A F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 58
Date Collected: 06/11/15 4:43:22 PM
Data Type: Reprocessed on 06/12/15 9:41:25 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W32-A F

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	215521.0	99.52	%	0.934				0.94%
Y Radial	14115.2	101.0	%	0.45				0.44%
Ag 338.289†	16663.5	93.97	ug/L	0.953	93.97	ug/L	0.953	1.01%
Al 308.215†	2325.6	1832	ug/L	18.49	1832	ug/L	18.49	1.01%
As 188.979†	1174.4	224.6	ug/L	2.64	224.6	ug/L	2.64	1.17%
B 249.677†	10014.3	303.9	ug/L	4.47	303.9	ug/L	4.47	1.47%
Ba 233.527†	100241.0	238.5	ug/L	0.35	238.5	ug/L	0.35	0.15%
Be 313.107†	160926.4	46.03	ug/L	0.138	46.03	ug/L	0.138	0.30%
Ca 315.887†	686896.6	44080	ug/L	301.85	44080	ug/L	301.85	0.68%
Cd 214.440†	13162.5	45.68	ug/L	0.520	45.68	ug/L	0.520	1.14%
Co 228.616†	22532.8	230.9	ug/L	2.73	230.9	ug/L	2.73	1.18%
Cr 267.716†	19580.8	236.5	ug/L	2.90	236.5	ug/L	2.90	1.22%
Cu 327.393†	42917.5	229.7	ug/L	0.62	229.7	ug/L	0.62	0.27%
Fe 273.955†	99024.0	1276	ug/L	0.82	1276	ug/L	0.82	0.06%
K 766.490†	36686.3	5466	ug/L	47.36	5466	ug/L	47.36	0.87%
Mg 285.213†	403489.6	24970	ug/L	170.14	24970	ug/L	170.14	0.68%
Mn 257.610†	30675.9	371.9	ug/L	0.62	371.9	ug/L	0.62	0.17%
Mo 202.031†	7891.2	227.4	ug/L	3.02	227.4	ug/L	3.02	1.33%
Na 589.592†	552999.5	76840	ug/L	500.63	76840	ug/L	500.63	0.65%
Ni 231.604†	10680.5	215.8	ug/L	2.77	215.8	ug/L	2.77	1.28%
P 213.617†	6070.7	1840	ug/L	24.82	1840	ug/L	24.82	1.35%
Pb 220.353†	1343.7	229.3	ug/L	2.60	229.3	ug/L	2.60	1.13%
Sb 206.836†	1494.8	204.4	ug/L	2.83	204.4	ug/L	2.83	1.38%
Se 196.026†	685.3	216.8	ug/L	1.93	216.8	ug/L	1.93	0.89%
Sn 189.927†	1259.4	220.7	ug/L	2.74	220.7	ug/L	2.74	1.24%
Sr 421.552†	125911.7	290.5	ug/L	1.95	290.5	ug/L	1.95	0.67%
Ti 337.279†	8078.3	227.7	ug/L	0.93	227.7	ug/L	0.93	0.41%
Tl 190.801†	1151.3	242.1	ug/L	5.38	242.1	ug/L	5.38	2.22%
V 292.402†	25059.8	254.2	ug/L	2.96	254.2	ug/L	2.96	1.17%
Zn 206.200†	42500.1	441.8	ug/L	0.91	441.8	ug/L	0.91	0.21%
Li 670.784	1780218.5	103.1	ug/L	0.36	103.1	ug/L	0.36	0.35%

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 150604A6010
Results Library (original): C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 150604RJS I:JL O:R Date Collected: 06/04/15 3:38:49 PM
Analyst: Data Type: Reprocessed on 06/11/15 4:12:12 PM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time:

Mean Data: CalBlk 150604RJS I:JL O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	275496.1	1224.97	0.44%	100.0	%
Y Radial	18750.6	33.16	0.18%	100.0	%
Ag 338.289†	-258.3	61.21	23.70%	[0.00]	ug/L
Al 308.215†	170.8	8.98	5.26%	[0.00]	ug/L
As 188.979†	-63.3	1.93	3.05%	[0.00]	ug/L
B 249.677†	32.3	4.20	13.02%	[0.00]	ug/L
Ba 233.527†	-209.2	9.27	4.43%	[0.00]	ug/L
Be 313.107†	2424.8	30.17	1.24%	[0.00]	ug/L
Ca 315.887†	-1037.0	8.85	0.85%	[0.00]	ug/L
Cd 214.440†	109.6	5.96	5.43%	[0.00]	ug/L
Co 228.616†	-306.8	5.11	1.66%	[0.00]	ug/L
Cr 267.716†	62.8	1.98	3.16%	[0.00]	ug/L
Cu 327.393†	-1026.4	67.82	6.61%	[0.00]	ug/L
Fe 273.955†	1460.0	60.26	4.13%	[0.00]	ug/L
K 766.490†	-999.1	48.67	4.87%	[0.00]	ug/L
Mg 285.213†	118.2	9.35	7.91%	[0.00]	ug/L
Mn 257.610†	13.0	4.48	34.47%	[0.00]	ug/L
Mo 202.031†	-119.5	10.27	8.59%	[0.00]	ug/L
Na 589.592†	93.7	77.20	82.38%	[0.00]	ug/L
Ni 231.604†	-185.2	6.51	3.52%	[0.00]	ug/L
P 213.617†	42.7	0.92	2.15%	[0.00]	ug/L
Pb 220.353†	38.6	1.50	3.88%	[0.00]	ug/L
Sb 206.836†	34.1	4.91	14.42%	[0.00]	ug/L
Se 196.026†	24.7	1.64	6.65%	[0.00]	ug/L
Sn 189.927†	-1.0	1.89	192.67%	[0.00]	ug/L
Sr 421.552†	-28.5	14.72	51.57%	[0.00]	ug/L
Ti 337.279†	-40.9	14.77	36.13%	[0.00]	ug/L
Tl 190.801†	-46.8	3.80	8.12%	[0.00]	ug/L
V 292.402†	10.7	4.27	39.98%	[0.00]	ug/L
Zn 206.200†	191.9	20.83	10.85%	[0.00]	ug/L
Li 670.784	4367.8	73.21	1.68%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 150604RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 2
Date Collected: 06/04/15 3:43:52 PM
Data Type: Reprocessed on 06/11/15 4:12:14 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 150604RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	275833.6	3748.93	1.36%	100.1	%
Y Radial	19373.4	1280.54	6.61%	103.3	%
Ag 338.289†	1126.8	34.81	3.09%	[0.5]	ug/L
Al 308.215†	354.9	39.77	11.21%	[50]	ug/L
As 188.979†	73.4	4.52	6.15%	[2]	ug/L
B 249.677†	1532.1	27.18	1.77%	[25]	ug/L
Ba 233.527†	6554.8	437.50	6.67%	[1.5]	ug/L
Be 313.107†	45861.3	502.56	1.10%	[1]	ug/L
Ca 315.887†	10029.3	624.26	6.22%	[50]	ug/L
Cd 214.440†	4221.3	52.07	1.23%	[0.25]	ug/L
Co 228.616†	1559.9	18.05	1.16%	[2.5]	ug/L
Cr 267.716†	1253.7	18.20	1.45%	[0.5]	ug/L
Cu 327.393†	2309.4	33.32	1.44%	[2.5]	ug/L
Fe 273.955†	20935.6	199.73	0.95%	[25]	ug/L
K 766.490†	3987.9	285.19	7.15%	[500]	ug/L
Mg 285.213†	10255.3	694.26	6.77%	[25]	ug/L
Mn 257.610†	1203.3	80.28	6.67%	[1]	ug/L
Mo 202.031†	447.1	9.41	2.10%	[1]	ug/L
Na 589.592†	2171.1	113.28	5.22%	[500]	ug/L
Ni 231.604†	749.7	12.12	1.62%	[1]	ug/L
P 213.617†	238.5	9.80	4.11%	[12.5]	ug/L
Pb 220.353†	113.5	2.78	2.45%	[1.5]	ug/L
Sb 206.836†	115.9	6.21	5.36%	[2]	ug/L
Se 196.026†	40.5	7.47	18.44%	[2]	ug/L
Sn 189.927†	76.5	3.30	4.31%	[3]	ug/L
Sr 421.552†	1215.4	40.59	3.34%	[1]	ug/L
Ti 337.279†	550.3	40.88	7.43%	[2.5]	ug/L
Tl 190.801†	114.7	3.81	3.32%	[2]	ug/L
V 292.402†	1666.4	20.09	1.21%	[0.5]	ug/L
Zn 206.200†	2057.6	32.82	1.60%	[25]	ug/L
Li 670.784	60593.2	128.10	0.21%	[5]	ug/L

Sequence No.: 3
Sample ID: STD 2 150604RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 3
Date Collected: 06/04/15 3:48:56 PM
Data Type: Reprocessed on 06/11/15 4:12:15 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 150604RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	259113.9	737.63	0.28%	94.05	%
Y Radial	17931.6	48.90	0.27%	95.63	%
Ag 338.289†	50454.9	52.90	0.10%	[250]	ug/L
Al 308.215†	16263.8	42.58	0.26%	[10000]	ug/L
As 188.979†	3348.9	24.21	0.72%	[500]	ug/L
B 249.677†	22810.5	147.98	0.65%	[500]	ug/L
Ba 233.527†	253131.4	299.14	0.12%	[500]	ug/L
Be 313.107†	2340434.3	4251.74	0.18%	[500]	ug/L
Ca 315.887†	493830.0	1961.33	0.40%	[25000]	ug/L
Cd 214.440†	173101.4	207.13	0.12%	[500]	ug/L
Co 228.616†	65612.7	295.65	0.45%	[500]	ug/L
Cr 267.716†	54127.1	342.75	0.63%	[500]	ug/L
Cu 327.393†	107240.7	214.14	0.20%	[500]	ug/L
Fe 273.955†	990794.0	882.67	0.09%	[10000]	ug/L
K 766.490†	62773.6	91.26	0.15%	[10000]	ug/L
Mg 285.213†	532708.3	2837.24	0.53%	[25000]	ug/L
Mn 257.610†	53381.5	98.07	0.18%	[500]	ug/L
Mo 202.031†	19900.0	92.90	0.47%	[500]	ug/L
Na 589.592†	41713.0	159.03	0.38%	[12500]	ug/L
Ni 231.604†	30585.7	172.48	0.56%	[500]	ug/L
P 213.617†	10710.2	56.41	0.53%	[2500]	ug/L
Pb 220.353†	5125.5	27.61	0.54%	[500]	ug/L
Sb 206.836†	5072.4	15.58	0.31%	[500]	ug/L
Se 196.026†	1711.0	11.85	0.69%	[500]	ug/L
Sn 189.927†	3361.7	12.76	0.38%	[500]	ug/L
Sr 421.552†	54673.4	127.70	0.23%	[500]	ug/L
Ti 337.279†	24123.4	42.32	0.18%	[500]	ug/L
Tl 190.801†	4727.3	45.75	0.97%	[500]	ug/L
V 292.402†	68881.9	184.46	0.27%	[500]	ug/L
Zn 206.200†	57255.6	195.21	0.34%	[500]	ug/L
Li 670.784	4218501.9	16962.65	0.40%	[250]	ug/L

Sequence No.: 4
Sample ID: STD 3 150604RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 4
Date Collected: 06/04/15 3:52:48 PM
Data Type: Reprocessed on 06/11/15 4:12:16 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 150604RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	253219.0	1382.60	0.55%	91.91	%
Y Radial	17656.7	53.79	0.30%	94.17	%
Ag 338.289†	103662.7	199.86	0.19%	[500]	ug/L
Al 308.215†	33831.1	203.83	0.60%	[20000]	ug/L
As 188.979†	6958.7	77.12	1.11%	[1000]	ug/L
B 249.677†	45997.7	90.55	0.20%	[1000]	ug/L
Ba 233.527†	516796.9	419.40	0.08%	[1000]	ug/L
Be 313.107†	4777744.1	7450.66	0.16%	[1000]	ug/L
Ca 315.887†	1011461.6	5736.61	0.57%	[50000]	ug/L
Cd 214.440†	350394.0	477.15	0.14%	[1000]	ug/L
Co 228.616†	126691.4	275.05	0.22%	[1000]	ug/L
Cr 267.716†	105910.8	101.54	0.10%	[1000]	ug/L
Cu 327.393†	221192.9	528.03	0.24%	[1000]	ug/L
Fe 273.955†	2010692.2	2288.70	0.11%	[20000]	ug/L
K 766.490†	131498.6	552.80	0.42%	[20000]	ug/L
Mg 285.213†	1082993.5	6873.26	0.63%	[50000]	ug/L
Mn 257.610†	110285.7	502.28	0.46%	[1000]	ug/L
Mo 202.031†	41368.9	218.21	0.53%	[1000]	ug/L
Na 589.592†	85100.3	437.54	0.51%	[25000]	ug/L
Ni 231.604†	62753.6	336.61	0.54%	[1000]	ug/L
P 213.617†	22282.3	137.52	0.62%	[5000]	ug/L
Pb 220.353†	10385.7	61.13	0.59%	[1000]	ug/L
Sb 206.836†	10436.8	52.33	0.50%	[1000]	ug/L
Se 196.026†	3550.0	48.04	1.35%	[1000]	ug/L
Sn 189.927†	6884.9	36.91	0.54%	[1000]	ug/L
Sr 421.552†	110057.0	822.28	0.75%	[1000]	ug/L
Ti 337.279†	49565.5	238.19	0.48%	[1000]	ug/L
Tl 190.801†	9483.2	85.54	0.90%	[1000]	ug/L
V 292.402†	141534.9	263.91	0.19%	[1000]	ug/L
Zn 206.200†	110402.8	208.78	0.19%	[1000]	ug/L
Li 670.784	9103140.7	34304.68	0.38%	[500]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	206.2	0.00000	0.999904	
Al 308.215	3	Lin Thru 0	0.0	1.679	0.00000	0.999853	
As 188.979	3	Lin Thru 0	0.0	6.907	0.00000	0.999856	
B 249.677	3	Lin Thru 0	0.0	45.93	0.00000	0.999967	
Ba 233.527	3	Lin Thru 0	0.0	514.7	0.00000	0.999916	
Be 313.107	3	Lin Thru 0	0.0	4758	0.00000	0.999937	
Ca 315.887	3	Lin Thru 0	0.0	20.13	0.00000	0.999923	
Cd 214.440	3	Lin Thru 0	0.0	349.6	0.00000	0.999933	
Co 228.616	3	Lin Thru 0	0.0	127.6	0.00000	0.999861	
Cr 267.716	3	Lin Thru 0	0.0	106.4	0.00000	0.999910	
Cu 327.393	3	Lin Thru 0	0.0	219.9	0.00000	0.999900	
Fe 273.955	3	Lin Thru 0	0.0	100.2	0.00000	0.999949	
K 766.490	3	Lin Thru 0	0.0	6.516	0.00000	0.999821	
Mg 285.213	3	Lin Thru 0	0.0	21.59	0.00000	0.999946	
Mn 257.610	3	Lin Thru 0	0.0	109.6	0.00000	0.999878	
Mo 202.031	3	Lin Thru 0	0.0	41.06	0.00000	0.999844	
Na 589.592	3	Lin Thru 0	0.0	3.391	0.00000	0.999956	
Ni 231.604	3	Lin Thru 0	0.0	62.44	0.00000	0.999900	
P 213.617	3	Lin Thru 0	0.0	4.422	0.00000	0.999851	
Pb 220.353	3	Lin Thru 0	0.0	10.36	0.00000	0.999951	
Sb 206.836	3	Lin Thru 0	0.0	10.38	0.00000	0.999903	
Se 196.026	3	Lin Thru 0	0.0	3.524	0.00000	0.999858	

Sn 189.927	3	Lin Thru 0	0.0	6.853	0.00000	0.999929
Sr 421.552	3	Lin Thru 0	0.0	109.9	0.00000	0.999956
Ti 337.279	3	Lin Thru 0	0.0	49.30	0.00000	0.999913
Tl 190.801	3	Lin Thru 0	0.0	9.478	0.00000	0.999958
V 292.402	3	Lin Thru 0	0.0	140.8	0.00000	0.999891
Zn 206.200	3	Lin Thru 0	0.0	111.2	0.00000	0.999874
Li 670.784	3	Lin Thru 0	0.0	17940	0.00000	0.999555

Sequence No.: 5
Sample ID: ICV 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 5
Date Collected: 06/04/15 4:00:54 PM
Data Type: Reprocessed on 06/11/15 4:12:17 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	260618.0	94.60	%	1.833				1.94%
Y Radial	18352.4	97.88	%	0.584				0.60%
Ag 338.289†	49833.7	241.6	ug/L	5.00	241.6	ug/L	5.00	2.07%
QC value within limits for Ag 338.289 Recovery = 96.66%								
Al 308.215†	19501.0	11640	ug/L	31.03	11640	ug/L	31.03	0.27%
QC value within limits for Al 308.215 Recovery = 93.13%								
As 188.979†	3155.8	453.8	ug/L	9.51	453.8	ug/L	9.51	2.10%
QC value within limits for As 188.979 Recovery = 90.77%								
B 249.677†	21176.3	501.7	ug/L	10.19	501.7	ug/L	10.19	2.03%
QC value within limits for B 249.677 Recovery = 100.33%								
Ba 233.527†	251148.5	487.6	ug/L	9.41	487.6	ug/L	9.41	1.93%
QC value within limits for Ba 233.527 Recovery = 97.51%								
Be 313.107†	2301385.4	483.6	ug/L	9.39	483.6	ug/L	9.39	1.94%
QC value within limits for Be 313.107 Recovery = 96.73%								
Ca 315.887†	250408.0	12430	ug/L	42.41	12430	ug/L	42.41	0.34%
QC value within limits for Ca 315.887 Recovery = 99.46%								
Cd 214.440†	172982.8	494.9	ug/L	9.52	494.9	ug/L	9.52	1.92%
QC value within limits for Cd 214.440 Recovery = 98.98%								
Co 228.616†	62148.5	487.0	ug/L	9.25	487.0	ug/L	9.25	1.90%
QC value within limits for Co 228.616 Recovery = 97.41%								
Cr 267.716†	50805.4	477.5	ug/L	9.60	477.5	ug/L	9.60	2.01%
QC value within limits for Cr 267.716 Recovery = 95.51%								
Cu 327.393†	106280.8	484.9	ug/L	9.19	484.9	ug/L	9.19	1.89%
QC value within limits for Cu 327.393 Recovery = 96.97%								
Fe 273.955†	1213071.1	12060	ug/L	236.23	12060	ug/L	236.23	1.96%
QC value within limits for Fe 273.955 Recovery = 96.50%								
K 766.490†	75476.9	11560	ug/L	29.01	11560	ug/L	29.01	0.25%
QC value within limits for K 766.490 Recovery = 92.47%								
Mg 285.213†	264691.6	12270	ug/L	38.50	12270	ug/L	38.50	0.31%
QC value within limits for Mg 285.213 Recovery = 98.16%								
Mn 257.610†	51604.1	471.2	ug/L	2.42	471.2	ug/L	2.42	0.51%
QC value within limits for Mn 257.610 Recovery = 94.24%								
Mo 202.031†	19678.0	479.8	ug/L	9.87	479.8	ug/L	9.87	2.06%
QC value within limits for Mo 202.031 Recovery = 95.97%								
Na 589.592†	39284.7	11570	ug/L	76.10	11570	ug/L	76.10	0.66%
QC value within limits for Na 589.592 Recovery = 92.56%								
Ni 231.604†	31277.7	500.0	ug/L	10.13	500.0	ug/L	10.13	2.03%
QC value within limits for Ni 231.604 Recovery = 100.00%								
P 213.617†	10141.8	2293	ug/L	52.61	2293	ug/L	52.61	2.29%
QC value within limits for P 213.617 Recovery = 91.74%								
Pb 220.353†	5128.7	496.9	ug/L	9.53	496.9	ug/L	9.53	1.92%
QC value within limits for Pb 220.353 Recovery = 99.39%								
Sb 206.836†	4951.7	477.1	ug/L	10.75	477.1	ug/L	10.75	2.25%
QC value within limits for Sb 206.836 Recovery = 95.42%								
Se 196.026†	1682.5	481.1	ug/L	10.91	481.1	ug/L	10.91	2.27%
QC value within limits for Se 196.026 Recovery = 96.22%								
Sn 189.927†	1727.6	252.1	ug/L	6.77	252.1	ug/L	6.77	2.69%
QC value within limits for Sn 189.927 Recovery = 100.84%								
Sr 421.552†	51764.1	470.5	ug/L	1.57	470.5	ug/L	1.57	0.33%
QC value within limits for Sr 421.552 Recovery = 94.09%								
Ti 337.279†	23013.1	466.6	ug/L	2.55	466.6	ug/L	2.55	0.55%
QC value within limits for Ti 337.279 Recovery = 93.32%								
Tl 190.801†	4741.0	500.2	ug/L	10.52	500.2	ug/L	10.52	2.10%
QC value within limits for Tl 190.801 Recovery = 100.05%								
V 292.402†	68087.1	483.6	ug/L	9.29	483.6	ug/L	9.29	1.92%
QC value within limits for V 292.402 Recovery = 96.73%								
Zn 206.200†	54391.8	494.9	ug/L	9.48	494.9	ug/L	9.48	1.91%
QC value within limits for Zn 206.200 Recovery = 98.99%								

Li 670.784	4517840.3	251.8 ug/L	0.91	251.8 ug/L	0.91	0.36%

QC value within limits for Li 670.784 Recovery = 100.74%

All analyte(s) passed QC.

Sequence No.: 6
Sample ID: ICB 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 06/04/15 4:14:41 PM
Data Type: Reprocessed on 06/11/15 4:12:18 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	270761.7	98.28	%	0.127				0.13%
Y Radial	18417.6	98.22	%	0.484				0.49%
Ag 338.289†	59.0	0.286	ug/L	0.2225	0.286	ug/L	0.2225	77.80%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-9.0	-5.368	ug/L	2.2512	-5.368	ug/L	2.2512	41.94%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	5.0	0.716	ug/L	0.4739	0.716	ug/L	0.4739	66.23%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	102.9	2.227	ug/L	0.1094	2.227	ug/L	0.1094	4.91%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.1	0.020	ug/L	0.0201	0.020	ug/L	0.0201	102.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	42.1	0.009	ug/L	0.0033	0.009	ug/L	0.0033	37.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	53.7	2.668	ug/L	1.0089	2.668	ug/L	1.0089	37.82%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-30.7	-0.088	ug/L	0.0538	-0.088	ug/L	0.0538	61.42%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	6.9	0.055	ug/L	0.0319	0.055	ug/L	0.0319	58.23%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-3.1	-0.029	ug/L	0.0236	-0.029	ug/L	0.0236	81.89%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-367.4	-1.671	ug/L	0.0678	-1.671	ug/L	0.0678	4.05%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-423.2	-4.218	ug/L	0.0402	-4.218	ug/L	0.0402	0.95%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-69.3	-10.61	ug/L	17.664	-10.61	ug/L	17.664	166.48%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	19.6	0.903	ug/L	0.3876	0.903	ug/L	0.3876	42.92%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	8.1	0.074	ug/L	0.0705	0.074	ug/L	0.0705	95.25%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	15.0	0.366	ug/L	0.2262	0.366	ug/L	0.2262	61.75%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-101.7	-29.98	ug/L	5.211	-29.98	ug/L	5.211	17.38%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	7.6	0.121	ug/L	0.1840	0.121	ug/L	0.1840	152.27%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-7.8	-1.769	ug/L	0.5459	-1.769	ug/L	0.5459	30.86%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-3.8	-0.365	ug/L	0.3841	-0.365	ug/L	0.3841	105.33%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-11.6	-1.118	ug/L	0.4100	-1.118	ug/L	0.4100	36.67%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-2.4	-0.674	ug/L	0.2509	-0.674	ug/L	0.2509	37.24%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	15.6	2.283	ug/L	0.6444	2.283	ug/L	0.6444	28.22%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	0.4	0.004	ug/L	0.1129	0.004	ug/L	0.1129	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	9.1	0.185	ug/L	0.2052	0.185	ug/L	0.2052	110.77%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	5.7	0.605	ug/L	0.2712	0.605	ug/L	0.2712	44.84%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-4.4	-0.032	ug/L	0.0216	-0.032	ug/L	0.0216	68.60%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-86.3	-0.777	ug/L	0.1308	-0.777	ug/L	0.1308	16.84%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	7450.6	0.415 ug/L	0.0071	0.415 ug/L	0.0071	1.70%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 7
Sample ID: LLICV 150604RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 2
Date Collected: 06/04/15 4:21:00 PM
Data Type: Reprocessed on 06/11/15 4:12:19 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: LLICV 150604RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	275567.8	100.0	%	0.37				0.37%
Y Radial	19114.6	101.9	%	4.91				4.82%
Ag 338.289†	1056.5	5.123	ug/L	0.2335	5.123	ug/L	0.2335	4.56%
QC value greater than the upper limit for Ag 338.289 Recovery = 1024.61%								
Al 308.215†	357.0	213.2	ug/L	10.23	213.2	ug/L	10.23	4.80%
QC value greater than the upper limit for Al 308.215 Recovery = 426.44%								
As 188.979†	75.8	10.88	ug/L	0.581	10.88	ug/L	0.581	5.34%
QC value greater than the upper limit for As 188.979 Recovery = 543.77%								
B 249.677†	1598.7	35.48	ug/L	0.204	35.48	ug/L	0.204	0.57%
QC value greater than the upper limit for B 249.677 Recovery = 141.92%								
Ba 233.527†	6278.0	12.19	ug/L	0.099	12.19	ug/L	0.099	0.81%
QC value greater than the upper limit for Ba 233.527 Recovery = 812.86%								
Be 313.107†	46235.4	9.717	ug/L	0.0228	9.717	ug/L	0.0228	0.23%
QC value greater than the upper limit for Be 313.107 Recovery = 971.66%								
Ca 315.887†	10231.9	508.0	ug/L	21.30	508.0	ug/L	21.30	4.19%
QC value greater than the upper limit for Ca 315.887 Recovery = 1016.04%								
Cd 214.440†	4213.6	12.06	ug/L	0.110	12.06	ug/L	0.110	0.91%
QC value greater than the upper limit for Cd 214.440 Recovery = 4825.60%								
Co 228.616†	1579.2	12.37	ug/L	0.079	12.37	ug/L	0.079	0.64%
QC value greater than the upper limit for Co 228.616 Recovery = 494.99%								
Cr 267.716†	1262.2	11.86	ug/L	0.051	11.86	ug/L	0.051	0.43%
QC value greater than the upper limit for Cr 267.716 Recovery = 2372.86%								
Cu 327.393†	2031.4	9.267	ug/L	0.1665	9.267	ug/L	0.1665	1.80%
QC value greater than the upper limit for Cu 327.393 Recovery = 370.66%								
Fe 273.955†	20580.0	204.3	ug/L	0.42	204.3	ug/L	0.42	0.21%
QC value greater than the upper limit for Fe 273.955 Recovery = 817.32%								
K 766.490†	4068.5	623.5	ug/L	30.70	623.5	ug/L	30.70	4.92%
QC value greater than the upper limit for K 766.490 Recovery = 124.70%								
Mg 285.213†	10516.0	487.2	ug/L	22.67	487.2	ug/L	22.67	4.65%
QC value greater than the upper limit for Mg 285.213 Recovery = 1948.88%								
Mn 257.610†	1239.4	11.30	ug/L	0.549	11.30	ug/L	0.549	4.85%
QC value greater than the upper limit for Mn 257.610 Recovery = 1130.46%								
Mo 202.031†	460.7	11.23	ug/L	0.128	11.23	ug/L	0.128	1.14%
QC value greater than the upper limit for Mo 202.031 Recovery = 224.65%								
Na 589.592†	2146.2	632.2	ug/L	32.51	632.2	ug/L	32.51	5.14%
QC value greater than the upper limit for Na 589.592 Recovery = 126.44%								
Ni 231.604†	756.2	12.09	ug/L	0.118	12.09	ug/L	0.118	0.98%
QC value greater than the upper limit for Ni 231.604 Recovery = 1208.61%								
P 213.617†	227.4	51.41	ug/L	0.750	51.41	ug/L	0.750	1.46%
QC value greater than the upper limit for P 213.617 Recovery = 205.65%								
Pb 220.353†	110.3	10.70	ug/L	0.587	10.70	ug/L	0.587	5.49%
QC value greater than the upper limit for Pb 220.353 Recovery = 713.58%								
Sb 206.836†	109.6	10.56	ug/L	0.873	10.56	ug/L	0.873	8.27%
QC value greater than the upper limit for Sb 206.836 Recovery = 528.05%								
Se 196.026†	39.5	11.26	ug/L	0.956	11.26	ug/L	0.956	8.49%
QC value greater than the upper limit for Se 196.026 Recovery = 563.07%								
Sn 189.927†	84.9	12.39	ug/L	0.335	12.39	ug/L	0.335	2.71%
QC value greater than the upper limit for Sn 189.927 Recovery = 412.87%								
Sr 421.552†	1228.5	11.16	ug/L	0.689	11.16	ug/L	0.689	6.18%
QC value greater than the upper limit for Sr 421.552 Recovery = 1115.75%								
Ti 337.279†	559.9	11.35	ug/L	0.467	11.35	ug/L	0.467	4.12%
QC value greater than the upper limit for Ti 337.279 Recovery = 226.94%								
Tl 190.801†	116.4	12.28	ug/L	0.352	12.28	ug/L	0.352	2.87%
QC value greater than the upper limit for Tl 190.801 Recovery = 306.97%								
V 292.402†	1661.3	11.80	ug/L	0.056	11.80	ug/L	0.056	0.47%
QC value greater than the upper limit for V 292.402 Recovery = 2360.13%								
Zn 206.200†	2053.4	18.64	ug/L	0.074	18.64	ug/L	0.074	0.39%
QC value less than the lower limit for Zn 206.200 Recovery = 74.55%								

Li 670.784	65422.0	3.647 ug/L	0.0106	3.647 ug/L	0.0106	0.29%

QC value less than the lower limit for Li 670.784 Recovery = 72.94%
QC Failed. Continue with analysis.

Sequence No.: 8
Sample ID: ICSA 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 6
Date Collected: 06/04/15 4:27:21 PM
Data Type: Reprocessed on 06/11/15 4:12:20 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	255225.8	92.64	%	0.684				0.74%
Y Radial	18032.8	96.17	%	0.555				0.58%
Ag 338.289†	-56.0	-0.272	ug/L	0.1208	-0.272	ug/L	0.1208	44.43%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	155907.0	92880	ug/L	328.56	92880	ug/L	328.56	0.35%
QC value within limits for Al 308.215 Recovery = 92.88%								
As 188.979†	2.0	0.510	ug/L	1.4526	0.510	ug/L	1.4526	284.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-14231.2	6.758	ug/L	0.6564	6.758	ug/L	0.6564	9.71%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	2338.8	-0.645	ug/L	0.0178	-0.645	ug/L	0.0178	2.76%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	111.0	0.023	ug/L	0.0007	0.023	ug/L	0.0007	2.92%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	1954840.7	97090	ug/L	320.54	97090	ug/L	320.54	0.33%
QC value within limits for Ca 315.887 Recovery = 97.09%								
Cd 214.440†	764.0	-1.439	ug/L	0.0465	-1.439	ug/L	0.0465	3.23%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	166.8	-1.390	ug/L	0.0438	-1.390	ug/L	0.0438	3.15%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	58.8	-0.291	ug/L	0.1427	-0.291	ug/L	0.1427	49.07%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-985.0	0.101	ug/L	0.0181	0.101	ug/L	0.0181	17.83%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	9216497.4	91930	ug/L	153.45	91930	ug/L	153.45	0.17%
QC value within limits for Fe 273.955 Recovery = 91.93%								
K 766.490†	147.1	-67.48	ug/L	18.012	-67.48	ug/L	18.012	26.69%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	2017252.4	93510	ug/L	219.45	93510	ug/L	219.45	0.23%
QC value within limits for Mg 285.213 Recovery = 93.51%								
Mn 257.610†	147.8	2.924	ug/L	0.1346	2.924	ug/L	0.1346	4.60%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-60.2	-0.140	ug/L	0.3650	-0.140	ug/L	0.3650	259.95%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-51.8	-26.63	ug/L	11.297	-26.63	ug/L	11.297	42.42%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-88.1	0.862	ug/L	0.1101	0.862	ug/L	0.1101	12.76%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-130.6	-29.54	ug/L	1.877	-29.54	ug/L	1.877	6.35%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-45.5	-0.983	ug/L	0.9603	-0.983	ug/L	0.9603	97.66%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-24.1	-2.318	ug/L	0.5780	-2.318	ug/L	0.5780	24.94%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-136.1	-2.488	ug/L	1.9591	-2.488	ug/L	1.9591	78.74%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	21.2	3.092	ug/L	0.3198	3.092	ug/L	0.3198	10.35%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	30.2	-3.523	ug/L	0.0853	-3.523	ug/L	0.0853	2.42%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	64.8	-0.298	ug/L	0.6224	-0.298	ug/L	0.6224	208.88%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	-36.1	-3.811	ug/L	1.0703	-3.811	ug/L	1.0703	28.08%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	197.1	1.400	ug/L	0.0671	1.400	ug/L	0.0671	4.79%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-221.3	-2.622	ug/L	0.0970	-2.622	ug/L	0.0970	3.70%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	6248.6	0.348 ug/L	0.0079	0.348 ug/L	0.0079	2.26%

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSAB 150604RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 7
Date Collected: 06/04/15 4:39:23 PM
Data Type: Reprocessed on 06/11/15 4:12:22 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 150604RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	254110.9	92.24	%	1.584				1.72%
Y Radial	19411.1	103.5	%	14.54				14.05%
Ag 338.289†	100655.9	488.1	ug/L	7.31	488.1	ug/L	7.31	1.50%
QC value within limits for Ag 338.289 Recovery = 97.62%								
Al 308.215†	151098.9	90030	ug/L	12309.95	90030	ug/L	12309.95	13.67%
QC value within limits for Al 308.215 Recovery = 90.03%								
As 188.979†	1384.9	199.7	ug/L	2.04	199.7	ug/L	2.04	1.02%
QC value less than the lower limit for As 188.979 Recovery = 79.88%								
B 249.677†	-14282.8	7.337	ug/L	2.0950	7.337	ug/L	2.0950	28.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	123186.0	234.3	ug/L	3.59	234.3	ug/L	3.59	1.53%
QC value within limits for Ba 233.527 Recovery = 93.71%								
Be 313.107†	1078122.2	226.6	ug/L	3.51	226.6	ug/L	3.51	1.55%
QC value within limits for Be 313.107 Recovery = 90.63%								
Ca 315.887†	1877432.1	93240	ug/L	12728.86	93240	ug/L	12728.86	13.65%
QC value within limits for Ca 315.887 Recovery = 93.24%								
Cd 214.440†	161267.4	457.8	ug/L	7.54	457.8	ug/L	7.54	1.65%
QC value within limits for Cd 214.440 Recovery = 91.56%								
Co 228.616†	30314.7	235.5	ug/L	3.82	235.5	ug/L	3.82	1.62%
QC value within limits for Co 228.616 Recovery = 94.20%								
Cr 267.716†	25770.2	241.5	ug/L	4.11	241.5	ug/L	4.11	1.70%
QC value within limits for Cr 267.716 Recovery = 96.60%								
Cu 327.393†	52156.1	241.7	ug/L	3.76	241.7	ug/L	3.76	1.56%
QC value within limits for Cu 327.393 Recovery = 96.69%								
Fe 273.955†	9274680.8	92500	ug/L	1324.36	92500	ug/L	1324.36	1.43%
QC value within limits for Fe 273.955 Recovery = 92.50%								
K 766.490†	187.7	-61.86	ug/L	27.012	-61.86	ug/L	27.012	43.67%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1929973.9	89470	ug/L	12143.39	89470	ug/L	12143.39	13.57%
QC value within limits for Mg 285.213 Recovery = 89.47%								
Mn 257.610†	24343.0	223.9	ug/L	31.94	223.9	ug/L	31.94	14.26%
QC value within limits for Mn 257.610 Recovery = 89.58%								
Mo 202.031†	9302.6	228.1	ug/L	3.15	228.1	ug/L	3.15	1.38%
QC value within limits for Mo 202.031 Recovery = 91.25%								
Na 589.592†	-53.4	-27.70	ug/L	19.821	-27.70	ug/L	19.821	71.56%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	28688.5	461.2	ug/L	8.04	461.2	ug/L	8.04	1.74%
QC value within limits for Ni 231.604 Recovery = 92.24%								
P 213.617†	-74.3	-16.81	ug/L	1.125	-16.81	ug/L	1.125	6.69%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	4749.2	461.7	ug/L	8.87	461.7	ug/L	8.87	1.92%
QC value within limits for Pb 220.353 Recovery = 92.35%								
Sb 206.836†	2252.5	217.0	ug/L	3.23	217.0	ug/L	3.23	1.49%
QC value within limits for Sb 206.836 Recovery = 86.81%								
Se 196.026†	707.9	236.6	ug/L	6.34	236.6	ug/L	6.34	2.68%
QC value within limits for Se 196.026 Recovery = 94.66%								
Sn 189.927†	17.1	2.494	ug/L	0.9171	2.494	ug/L	0.9171	36.77%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	31.6	-3.364	ug/L	0.5448	-3.364	ug/L	0.5448	16.20%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	75.2	0.018	ug/L	0.3969	0.018	ug/L	0.3969	>999.9%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	2135.1	225.3	ug/L	3.26	225.3	ug/L	3.26	1.45%
QC value within limits for Tl 190.801 Recovery = 90.11%								
V 292.402†	33340.3	236.8	ug/L	3.77	236.8	ug/L	3.77	1.59%
QC value within limits for V 292.402 Recovery = 94.73%								
Zn 206.200†	50355.2	454.7	ug/L	6.82	454.7	ug/L	6.82	1.50%
QC value within limits for Zn 206.200 Recovery = 90.94%								

Li 670.784	3529.9	0.197 ug/L	0.0083	0.197 ug/L	0.0083	4.22%

QC Failed. Continue with analysis.

Sequence No.: 10
Sample ID: CCV1 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 3
Date Collected: 06/04/15 4:49:21 PM
Data Type: Reprocessed on 06/11/15 4:12:23 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	260438.8	94.53	%	0.498				0.53%
Y Radial	18189.1	97.01	%	0.391				0.40%
Ag 338.289†	51960.2	252.0	ug/L	2.21	252.0	ug/L	2.21	0.88%
QC value within limits for Ag 338.289 Recovery = 100.78%								
Al 308.215†	16737.1	9995	ug/L	43.67	9995	ug/L	43.67	0.44%
QC value within limits for Al 308.215 Recovery = 99.95%								
As 188.979†	3403.7	488.1	ug/L	4.05	488.1	ug/L	4.05	0.83%
QC value within limits for As 188.979 Recovery = 97.63%								
B 249.677†	23228.9	539.1	ug/L	8.31	539.1	ug/L	8.31	1.54%
QC value within limits for B 249.677 Recovery = 107.82%								
Ba 233.527†	257977.2	500.9	ug/L	3.76	500.9	ug/L	3.76	0.75%
QC value within limits for Ba 233.527 Recovery = 100.19%								
Be 313.107†	2383721.1	500.9	ug/L	4.26	500.9	ug/L	4.26	0.85%
QC value within limits for Be 313.107 Recovery = 100.19%								
Ca 315.887†	503815.0	25020	ug/L	194.74	25020	ug/L	194.74	0.78%
QC value within limits for Ca 315.887 Recovery = 100.07%								
Cd 214.440†	175014.0	501.0	ug/L	3.26	501.0	ug/L	3.26	0.65%
QC value within limits for Cd 214.440 Recovery = 100.20%								
Co 228.616†	66294.5	519.5	ug/L	6.24	519.5	ug/L	6.24	1.20%
QC value within limits for Co 228.616 Recovery = 103.90%								
Cr 267.716†	54706.8	514.1	ug/L	6.44	514.1	ug/L	6.44	1.25%
QC value within limits for Cr 267.716 Recovery = 102.83%								
Cu 327.393†	109719.3	500.4	ug/L	4.69	500.4	ug/L	4.69	0.94%
QC value within limits for Cu 327.393 Recovery = 100.08%								
Fe 273.955†	1015983.8	10100	ug/L	75.70	10100	ug/L	75.70	0.75%
QC value within limits for Fe 273.955 Recovery = 100.95%								
K 766.490†	65653.1	10050	ug/L	11.07	10050	ug/L	11.07	0.11%
QC value within limits for K 766.490 Recovery = 100.49%								
Mg 285.213†	549358.6	25450	ug/L	229.97	25450	ug/L	229.97	0.90%
QC value within limits for Mg 285.213 Recovery = 101.82%								
Mn 257.610†	54992.7	501.5	ug/L	1.73	501.5	ug/L	1.73	0.35%
QC value within limits for Mn 257.610 Recovery = 100.29%								
Mo 202.031†	20267.9	494.2	ug/L	6.88	494.2	ug/L	6.88	1.39%
QC value within limits for Mo 202.031 Recovery = 98.83%								
Na 589.592†	46421.0	13680	ug/L	70.18	13680	ug/L	70.18	0.51%
QC value within limits for Na 589.592 Recovery = 109.41%								
Ni 231.604†	31098.4	497.1	ug/L	5.16	497.1	ug/L	5.16	1.04%
QC value within limits for Ni 231.604 Recovery = 99.42%								
P 213.617†	10873.1	2459	ug/L	35.01	2459	ug/L	35.01	1.42%
QC value within limits for P 213.617 Recovery = 98.35%								
Pb 220.353†	5157.7	500.3	ug/L	5.98	500.3	ug/L	5.98	1.19%
QC value within limits for Pb 220.353 Recovery = 100.05%								
Sb 206.836†	5086.6	490.1	ug/L	5.74	490.1	ug/L	5.74	1.17%
QC value within limits for Sb 206.836 Recovery = 98.02%								
Se 196.026†	1770.3	504.8	ug/L	1.13	504.8	ug/L	1.13	0.22%
QC value within limits for Se 196.026 Recovery = 100.95%								
Sn 189.927†	3432.0	500.8	ug/L	4.74	500.8	ug/L	4.74	0.95%
QC value within limits for Sn 189.927 Recovery = 100.16%								
Sr 421.552†	65424.7	594.3	ug/L	4.73	594.3	ug/L	4.73	0.80%
QC value greater than the upper limit for Sr 421.552 Recovery = 118.85%								
Ti 337.279†	24489.5	496.4	ug/L	1.83	496.4	ug/L	1.83	0.37%
QC value within limits for Ti 337.279 Recovery = 99.27%								
Tl 190.801†	4791.2	505.5	ug/L	5.24	505.5	ug/L	5.24	1.04%
QC value within limits for Tl 190.801 Recovery = 101.11%								
V 292.402†	69951.5	496.9	ug/L	4.81	496.9	ug/L	4.81	0.97%
QC value within limits for V 292.402 Recovery = 99.38%								
Zn 206.200†	55688.1	507.7	ug/L	2.41	507.7	ug/L	2.41	0.48%
QC value within limits for Zn 206.200 Recovery = 101.54%								

Li 670.784	4413618.5	246.0 ug/L	1.66	246.0 ug/L	1.66	0.67%

QC value within limits for Li 670.784 Recovery = 98.41%
QC Failed. Continue with analysis.

Sequence No.: 11
Sample ID: CCB 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 06/04/15 4:54:24 PM
Data Type: Reprocessed on 06/11/15 4:12:24 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	270901.9	98.33	%	0.923				0.94%
Y Radial	19365.8	103.3	%	7.07				6.84%
Ag 338.289†	88.4	0.429	ug/L	0.1129	0.429	ug/L	0.1129	26.35%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-21.2	-12.68	ug/L	4.880	-12.68	ug/L	4.880	38.48%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	3.8	0.552	ug/L	0.9398	0.552	ug/L	0.9398	170.32%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	146.1	3.191	ug/L	0.1768	3.191	ug/L	0.1768	5.54%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.9	0.015	ug/L	0.0097	0.015	ug/L	0.0097	65.52%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	248.7	0.052	ug/L	0.0082	0.052	ug/L	0.0082	15.74%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	103.5	5.143	ug/L	2.2947	5.143	ug/L	2.2947	44.61%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-34.5	-0.099	ug/L	0.0394	-0.099	ug/L	0.0394	39.86%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	23.9	0.189	ug/L	0.0761	0.189	ug/L	0.0761	40.21%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-6.4	-0.061	ug/L	0.0169	-0.061	ug/L	0.0169	27.99%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-445.0	-2.023	ug/L	0.2032	-2.023	ug/L	0.2032	10.05%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	262.8	2.632	ug/L	0.2542	2.632	ug/L	0.2542	9.66%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-11.3	-1.696	ug/L	16.0233	-1.696	ug/L	16.0233	944.96%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	33.2	1.542	ug/L	0.5586	1.542	ug/L	0.5586	36.22%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	2.6	0.023	ug/L	0.0589	0.023	ug/L	0.0589	252.39%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	27.4	0.667	ug/L	0.2308	0.667	ug/L	0.2308	34.60%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-111.0	-32.73	ug/L	7.772	-32.73	ug/L	7.772	23.75%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-1.5	-0.024	ug/L	0.0161	-0.024	ug/L	0.0161	67.02%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-9.6	-2.165	ug/L	0.3863	-2.165	ug/L	0.3863	17.84%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-8.0	-0.775	ug/L	0.1650	-0.775	ug/L	0.1650	21.28%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-6.0	-0.575	ug/L	0.4555	-0.575	ug/L	0.4555	79.27%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.6	-0.176	ug/L	1.6102	-0.176	ug/L	1.6102	916.73%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	20.3	2.968	ug/L	0.3662	2.968	ug/L	0.3662	12.34%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	-2.0	-0.019	ug/L	0.0765	-0.019	ug/L	0.0765	409.39%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	11.9	0.241	ug/L	0.1214	0.241	ug/L	0.1214	50.44%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	8.9	0.939	ug/L	0.3772	0.939	ug/L	0.3772	40.18%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-18.1	-0.129	ug/L	0.0702	-0.129	ug/L	0.0702	54.57%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-87.3	-0.786	ug/L	0.0676	-0.786	ug/L	0.0676	8.61%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	7514.0	0.419 ug/L	0.0009	0.419 ug/L	0.0009	0.23%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 18
Sample ID: CCV2 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 8
Date Collected: 06/04/15 5:37:00 PM
Data Type: Reprocessed on 06/11/15 4:12:31 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	265267.1	96.29	%	0.169				0.18%
Y Radial	20257.7	108.0	%	5.36				4.96%
Ag 338.289†	39185.1	190.0	ug/L	0.48	190.0	ug/L	0.48	0.25%
QC value within limits for Ag 338.289 Recovery = 101.34%								
Al 308.215†	11637.1	6951	ug/L	370.25	6951	ug/L	370.25	5.33%
QC value within limits for Al 308.215 Recovery = 92.68%								
As 188.979†	2573.7	369.3	ug/L	0.31	369.3	ug/L	0.31	0.08%
QC value within limits for As 188.979 Recovery = 98.48%								
B 249.677†	17050.5	396.5	ug/L	1.64	396.5	ug/L	1.64	0.41%
QC value within limits for B 249.677 Recovery = 105.72%								
Ba 233.527†	195215.7	379.1	ug/L	0.67	379.1	ug/L	0.67	0.18%
QC value within limits for Ba 233.527 Recovery = 101.08%								
Be 313.107†	1783466.7	374.8	ug/L	0.66	374.8	ug/L	0.66	0.18%
QC value within limits for Be 313.107 Recovery = 99.95%								
Ca 315.887†	345257.8	17140	ug/L	918.23	17140	ug/L	918.23	5.36%
QC value within limits for Ca 315.887 Recovery = 91.44%								
Cd 214.440†	130840.7	374.5	ug/L	0.58	374.5	ug/L	0.58	0.16%
QC value within limits for Cd 214.440 Recovery = 99.87%								
Co 228.616†	48138.8	377.3	ug/L	0.23	377.3	ug/L	0.23	0.06%
QC value within limits for Co 228.616 Recovery = 100.61%								
Cr 267.716†	39638.7	372.5	ug/L	0.62	372.5	ug/L	0.62	0.17%
QC value within limits for Cr 267.716 Recovery = 99.35%								
Cu 327.393†	83625.2	381.3	ug/L	0.27	381.3	ug/L	0.27	0.07%
QC value within limits for Cu 327.393 Recovery = 101.69%								
Fe 273.955†	764812.8	7600	ug/L	7.89	7600	ug/L	7.89	0.10%
QC value within limits for Fe 273.955 Recovery = 101.33%								
K 766.490†	46364.3	7095	ug/L	391.42	7095	ug/L	391.42	5.52%
QC value within limits for K 766.490 Recovery = 94.60%								
Mg 285.213†	380941.7	17650	ug/L	956.28	17650	ug/L	956.28	5.42%
QC value within limits for Mg 285.213 Recovery = 94.14%								
Mn 257.610†	38448.3	350.6	ug/L	18.84	350.6	ug/L	18.84	5.37%
QC value within limits for Mn 257.610 Recovery = 93.50%								
Mo 202.031†	15412.7	375.8	ug/L	1.12	375.8	ug/L	1.12	0.30%
QC value within limits for Mo 202.031 Recovery = 100.21%								
Na 589.592†	37975.8	11190	ug/L	651.47	11190	ug/L	651.47	5.82%
QC value greater than the upper limit for Na 589.592 Recovery = 119.35%								
Ni 231.604†	23800.3	380.5	ug/L	0.74	380.5	ug/L	0.74	0.19%
QC value within limits for Ni 231.604 Recovery = 101.46%								
P 213.617†	8260.0	1868	ug/L	1.35	1868	ug/L	1.35	0.07%
QC value within limits for P 213.617 Recovery = 99.62%								
Pb 220.353†	3930.5	381.1	ug/L	0.54	381.1	ug/L	0.54	0.14%
QC value within limits for Pb 220.353 Recovery = 101.61%								
Sb 206.836†	3909.5	376.7	ug/L	1.39	376.7	ug/L	1.39	0.37%
QC value within limits for Sb 206.836 Recovery = 100.45%								
Se 196.026†	1332.9	380.1	ug/L	2.25	380.1	ug/L	2.25	0.59%
QC value within limits for Se 196.026 Recovery = 101.36%								
Sn 189.927†	2584.8	377.2	ug/L	1.56	377.2	ug/L	1.56	0.41%
QC value within limits for Sn 189.927 Recovery = 100.58%								
Sr 421.552†	59164.9	537.6	ug/L	30.86	537.6	ug/L	30.86	5.74%
QC value greater than the upper limit for Sr 421.552 Recovery = 143.36%								
Ti 337.279†	17256.0	349.8	ug/L	18.33	349.8	ug/L	18.33	5.24%
QC value within limits for Ti 337.279 Recovery = 93.27%								
Tl 190.801†	3675.1	387.8	ug/L	1.95	387.8	ug/L	1.95	0.50%
QC value within limits for Tl 190.801 Recovery = 103.40%								
V 292.402†	52835.6	375.3	ug/L	0.64	375.3	ug/L	0.64	0.17%
QC value within limits for V 292.402 Recovery = 100.08%								
Zn 206.200†	41524.2	378.4	ug/L	0.88	378.4	ug/L	0.88	0.23%
QC value within limits for Zn 206.200 Recovery = 100.90%								

Li 670.784	3451676.2	192.4 ug/L	0.81	192.4 ug/L	0.81	0.42%

QC value within limits for Li 670.784 Recovery = 102.62%
QC Failed. Continue with analysis.

Sequence No.: 19
Sample ID: CCB 150604RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 5
Date Collected: 06/04/15 5:57:09 PM
Data Type: Reprocessed on 06/11/15 4:12:32 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 150604RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	276268.3	100.3	%	0.80				0.80%
Y Radial	19438.8	103.7	%	5.15				4.97%
Ag 338.289†	63.9	0.310	ug/L	0.4039	0.310	ug/L	0.4039	130.40%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	-20.1	-12.00	ug/L	3.178	-12.00	ug/L	3.178	26.49%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	1.3	0.183	ug/L	0.4284	0.183	ug/L	0.4284	233.57%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	134.5	2.922	ug/L	0.4346	2.922	ug/L	0.4346	14.87%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	42.3	0.082	ug/L	0.0204	0.082	ug/L	0.0204	24.92%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	21.1	0.004	ug/L	0.0069	0.004	ug/L	0.0069	154.99%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	220.4	10.95	ug/L	2.315	10.95	ug/L	2.315	21.15%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	-84.9	-0.243	ug/L	0.0171	-0.243	ug/L	0.0171	7.04%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	38.7	0.305	ug/L	0.0628	0.305	ug/L	0.0628	20.60%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-5.0	-0.047	ug/L	0.1699	-0.047	ug/L	0.1699	362.36%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-545.1	-2.479	ug/L	0.0997	-2.479	ug/L	0.0997	4.02%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	-195.2	-1.934	ug/L	0.9117	-1.934	ug/L	0.9117	47.14%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	45.2	6.955	ug/L	14.9563	6.955	ug/L	14.9563	215.03%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	37.9	1.752	ug/L	0.3312	1.752	ug/L	0.3312	18.90%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	9.6	0.088	ug/L	0.0872	0.088	ug/L	0.0872	99.51%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	29.7	0.722	ug/L	0.1127	0.722	ug/L	0.1127	15.60%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-59.1	-17.43	ug/L	9.551	-17.43	ug/L	9.551	54.81%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	17.8	0.284	ug/L	0.0827	0.284	ug/L	0.0827	29.10%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-16.3	-3.693	ug/L	0.5168	-3.693	ug/L	0.5168	14.00%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-8.3	-0.799	ug/L	0.1532	-0.799	ug/L	0.1532	19.19%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-7.2	-0.694	ug/L	0.5079	-0.694	ug/L	0.5079	73.23%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-3.3	-0.937	ug/L	1.8050	-0.937	ug/L	1.8050	192.55%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	19.7	2.879	ug/L	0.1536	2.879	ug/L	0.1536	5.33%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	5.6	0.051	ug/L	0.0350	0.051	ug/L	0.0350	69.05%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	20.7	0.421	ug/L	0.1258	0.421	ug/L	0.1258	29.90%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	5.4	0.569	ug/L	0.6573	0.569	ug/L	0.6573	115.49%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	-23.3	-0.166	ug/L	0.0050	-0.166	ug/L	0.0050	3.00%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-112.2	-1.009	ug/L	0.1112	-1.009	ug/L	0.1112	11.02%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	7420.0	0.414 ug/L	0.0096	0.414 ug/L	0.0096	2.33%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Reprocessing Begun
Logged In Analyst: chemist_metals Technique: ICP Continuous

Results Data Set (original): 150611A6010
Results Library (original): C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb
Results Data Set (reprocessed):
Results Library (reprocessed):

Sequence No.: 1 Autosampler Location: 1
Sample ID: CalBlk 150611RJS I:JL O:R Date Collected: 06/11/15 1:30:40 PM
Analyst: Data Type: Reprocessed on 06/12/15 9:40:52 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time:

Mean Data: CalBlk 150611RJS I:JL O:R

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	216568.6	1784.87	0.82%	100.0	%
Y Radial	13979.1	132.21	0.95%	100.0	%
Ag 338.289†	-95.1	77.86	81.85%	[0.00]	ug/L
Al 308.215†	53.9	6.88	12.77%	[0.00]	ug/L
As 188.979†	-79.4	11.58	14.58%	[0.00]	ug/L
B 249.677†	67.6	8.04	11.88%	[0.00]	ug/L
Ba 233.527†	-0.2	13.96	>999.9%	[0.00]	ug/L
Be 313.107†	1900.0	20.35	1.07%	[0.00]	ug/L
Ca 315.887†	-295.6	7.44	2.52%	[0.00]	ug/L
Cd 214.440†	-467.5	16.52	3.53%	[0.00]	ug/L
Co 228.616†	-199.2	4.26	2.14%	[0.00]	ug/L
Cr 267.716†	10.9	7.88	72.41%	[0.00]	ug/L
Cu 327.393†	-1550.2	3.88	0.25%	[0.00]	ug/L
Fe 273.955†	51.6	14.04	27.22%	[0.00]	ug/L
K 766.490†	-920.1	12.53	1.36%	[0.00]	ug/L
Mg 285.213†	78.3	2.05	2.62%	[0.00]	ug/L
Mn 257.610†	-46.4	4.81	10.36%	[0.00]	ug/L
Mo 202.031†	-47.4	8.88	18.75%	[0.00]	ug/L
Na 589.592†	470.2	58.50	12.44%	[0.00]	ug/L
Ni 231.604†	-159.3	6.46	4.05%	[0.00]	ug/L
P 213.617†	-55.4	7.96	14.36%	[0.00]	ug/L
Pb 220.353†	26.4	3.17	11.99%	[0.00]	ug/L
Sb 206.836†	-14.9	3.05	20.54%	[0.00]	ug/L
Se 196.026†	11.7	7.07	60.49%	[0.00]	ug/L
Sn 189.927†	9.0	4.19	46.50%	[0.00]	ug/L
Sr 421.552†	-77.9	33.73	43.30%	[0.00]	ug/L
Ti 337.279†	-53.2	2.61	4.91%	[0.00]	ug/L
Tl 190.801†	-20.7	8.82	42.62%	[0.00]	ug/L
V 292.402†	-123.3	6.88	5.58%	[0.00]	ug/L
Zn 206.200†	972.4	92.13	9.47%	[0.00]	ug/L
Li 670.784	3644.1	56.95	1.56%	[0.00]	ug/L

Sequence No.: 2
Sample ID: STD 1 150611RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 2
Date Collected: 06/11/15 1:36:53 PM
Data Type: Reprocessed on 06/12/15 9:40:54 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 150611RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	223033.4	1035.26	0.46%	103.0	%
Y Radial	14101.1	123.91	0.88%	100.9	%
Ag 338.289†	948.1	65.70	6.93%	[0.5]	ug/L
Al 308.215†	322.4	6.27	1.94%	[50]	ug/L
As 188.979†	64.2	4.48	6.97%	[2]	ug/L
B 249.677†	1135.1	11.44	1.01%	[25]	ug/L
Ba 233.527†	5055.5	9.75	0.19%	[1.5]	ug/L
Be 313.107†	36456.0	31.05	0.09%	[1]	ug/L
Ca 315.887†	9740.6	88.47	0.91%	[50]	ug/L
Cd 214.440†	3105.8	9.56	0.31%	[0.25]	ug/L
Co 228.616†	1287.4	1.68	0.13%	[2.5]	ug/L
Cr 267.716†	886.8	7.42	0.84%	[0.5]	ug/L
Cu 327.393†	2267.7	12.28	0.54%	[2.5]	ug/L
Fe 273.955†	17292.5	41.52	0.24%	[25]	ug/L
K 766.490†	4635.9	14.19	0.31%	[500]	ug/L
Mg 285.213†	8428.7	77.03	0.91%	[25]	ug/L
Mn 257.610†	1000.8	15.11	1.51%	[1]	ug/L
Mo 202.031†	357.6	4.97	1.39%	[1]	ug/L
Na 589.592†	5262.7	53.63	1.02%	[500]	ug/L
Ni 231.604†	568.8	14.30	2.51%	[1]	ug/L
P 213.617†	199.5	2.36	1.18%	[12.5]	ug/L
Pb 220.353†	62.7	11.49	18.34%	[1.5]	ug/L
Sb 206.836†	82.6	5.33	6.46%	[2]	ug/L
Se 196.026†	34.3	4.53	13.19%	[2]	ug/L
Sn 189.927†	65.9	4.15	6.30%	[3]	ug/L
Sr 421.552†	4567.9	31.56	0.69%	[1]	ug/L
Ti 337.279†	437.9	19.87	4.54%	[2.5]	ug/L
Tl 190.801†	57.6	3.38	5.86%	[2]	ug/L
V 292.402†	1062.7	1.88	0.18%	[0.5]	ug/L
Zn 206.200†	3136.9	6.47	0.21%	[25]	ug/L
Li 670.784	61479.2	204.86	0.33%	[5]	ug/L

Sequence No.: 3
Sample ID: STD 2 150611RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 3
Date Collected: 06/11/15 1:43:07 PM
Data Type: Reprocessed on 06/12/15 9:40:55 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 150611RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	212406.5	1034.74	0.49%	98.08	%
Y Radial	13831.5	67.89	0.49%	98.94	%
Ag 338.289†	44875.2	56.35	0.13%	[250]	ug/L
Al 308.215†	12831.5	127.72	1.00%	[10000]	ug/L
As 188.979†	2567.6	13.96	0.54%	[500]	ug/L
B 249.677†	16684.8	44.64	0.27%	[500]	ug/L
Ba 233.527†	214281.8	265.51	0.12%	[500]	ug/L
Be 313.107†	1781668.9	4628.93	0.26%	[500]	ug/L
Ca 315.887†	399005.7	3385.24	0.85%	[25000]	ug/L
Cd 214.440†	149627.1	135.92	0.09%	[500]	ug/L
Co 228.616†	50001.7	82.67	0.17%	[500]	ug/L
Cr 267.716†	42212.2	79.55	0.19%	[500]	ug/L
Cu 327.393†	94757.2	289.51	0.31%	[500]	ug/L
Fe 273.955†	781205.4	886.44	0.11%	[10000]	ug/L
K 766.490†	66309.9	528.91	0.80%	[10000]	ug/L
Mg 285.213†	414720.7	3475.33	0.84%	[25000]	ug/L
Mn 257.610†	41770.5	354.51	0.85%	[500]	ug/L
Mo 202.031†	17633.7	55.15	0.31%	[500]	ug/L
Na 589.592†	91570.7	706.97	0.77%	[12500]	ug/L
Ni 231.604†	25443.6	88.85	0.35%	[500]	ug/L
P 213.617†	8327.9	21.16	0.25%	[2500]	ug/L
Pb 220.353†	3028.6	9.51	0.31%	[500]	ug/L
Sb 206.836†	3685.5	3.47	0.09%	[500]	ug/L
Se 196.026†	1587.1	8.18	0.52%	[500]	ug/L
Sn 189.927†	2890.1	9.36	0.32%	[500]	ug/L
Sr 421.552†	218363.3	2135.80	0.98%	[500]	ug/L
Ti 337.279†	17950.0	156.51	0.87%	[500]	ug/L
Tl 190.801†	2454.5	9.47	0.39%	[500]	ug/L
V 292.402†	50039.7	100.17	0.20%	[500]	ug/L
Zn 206.200†	49511.0	40.70	0.08%	[500]	ug/L
Li 670.784	4183528.3	16461.16	0.39%	[250]	ug/L

Sequence No.: 4
Sample ID: STD 3 150611RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 4
Date Collected: 06/11/15 1:48:57 PM
Data Type: Reprocessed on 06/12/15 9:40:56 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 150611RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	206332.0	1708.90	0.83%	95.27	%
Y Radial	13557.0	102.89	0.76%	96.98	%
Ag 338.289†	88387.2	303.98	0.34%	[500]	ug/L
Al 308.215†	25472.6	165.90	0.65%	[20000]	ug/L
As 188.979†	5091.0	68.42	1.34%	[1000]	ug/L
B 249.677†	33090.3	2.81	0.01%	[1000]	ug/L
Ba 233.527†	418466.6	1618.37	0.39%	[1000]	ug/L
Be 313.107†	3479331.9	10705.27	0.31%	[1000]	ug/L
Ca 315.887†	774367.9	8493.57	1.10%	[50000]	ug/L
Cd 214.440†	291171.1	980.24	0.34%	[1000]	ug/L
Co 228.616†	96915.1	357.46	0.37%	[1000]	ug/L
Cr 267.716†	82417.8	273.09	0.33%	[1000]	ug/L
Cu 327.393†	186253.2	501.92	0.27%	[1000]	ug/L
Fe 273.955†	1517439.7	5259.32	0.35%	[20000]	ug/L
K 766.490†	132301.3	819.08	0.62%	[20000]	ug/L
Mg 285.213†	802825.6	8672.01	1.08%	[50000]	ug/L
Mn 257.610†	81983.4	453.87	0.55%	[1000]	ug/L
Mo 202.031†	34603.7	348.66	1.01%	[1000]	ug/L
Na 589.592†	179065.3	1888.85	1.05%	[25000]	ug/L
Ni 231.604†	49076.5	535.85	1.09%	[1000]	ug/L
P 213.617†	16458.6	179.44	1.09%	[5000]	ug/L
Pb 220.353†	5895.9	50.31	0.85%	[1000]	ug/L
Sb 206.836†	7298.0	66.61	0.91%	[1000]	ug/L
Se 196.026†	3136.4	49.85	1.59%	[1000]	ug/L
Sn 189.927†	5686.1	50.34	0.89%	[1000]	ug/L
Sr 421.552†	429415.7	5291.89	1.23%	[1000]	ug/L
Ti 337.279†	35291.9	276.43	0.78%	[1000]	ug/L
Tl 190.801†	4716.4	55.80	1.18%	[1000]	ug/L
V 292.402†	98213.9	312.45	0.32%	[1000]	ug/L
Zn 206.200†	97052.6	424.47	0.44%	[1000]	ug/L
Li 670.784	8701200.7	96815.55	1.11%	[500]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	177.3	0.00000	0.999943	
Al 308.215	3	Lin Thru 0	0.0	1.276	0.00000	0.999954	
As 188.979	3	Lin Thru 0	0.0	5.100	0.00000	0.999949	
B 249.677	3	Lin Thru 0	0.0	33.15	0.00000	0.999960	
Ba 233.527	3	Lin Thru 0	0.0	420.5	0.00000	0.999910	
Be 313.107	3	Lin Thru 0	0.0	3496	0.00000	0.999918	
Ca 315.887	3	Lin Thru 0	0.0	15.58	0.00000	0.999873	
Cd 214.440	3	Lin Thru 0	0.0	292.8	0.00000	0.999896	
Co 228.616	3	Lin Thru 0	0.0	97.53	0.00000	0.999874	
Cr 267.716	3	Lin Thru 0	0.0	82.82	0.00000	0.999911	
Cu 327.393	3	Lin Thru 0	0.0	186.9	0.00000	0.999939	
Fe 273.955	3	Lin Thru 0	0.0	76.32	0.00000	0.999890	
K 766.490	3	Lin Thru 0	0.0	6.620	0.00000	0.999959	
Mg 285.213	3	Lin Thru 0	0.0	16.16	0.00000	0.999874	
Mn 257.610	3	Lin Thru 0	0.0	82.30	0.00000	0.999922	
Mo 202.031	3	Lin Thru 0	0.0	34.74	0.00000	0.999936	
Na 589.592	3	Lin Thru 0	0.0	7.196	0.00000	0.999925	
Ni 231.604	3	Lin Thru 0	0.0	49.44	0.00000	0.999849	
P 213.617	3	Lin Thru 0	0.0	3.300	0.00000	0.999952	
Pb 220.353	3	Lin Thru 0	0.0	5.928	0.00000	0.999908	
Sb 206.836	3	Lin Thru 0	0.0	7.313	0.00000	0.999957	
Se 196.026	3	Lin Thru 0	0.0	3.144	0.00000	0.999957	

Sn 189.927	3	Lin Thru 0	0.0	5.705	0.00000	0.999949
Sr 421.552	3	Lin Thru 0	0.0	430.9	0.00000	0.999940
Ti 337.279	3	Lin Thru 0	0.0	35.41	0.00000	0.999937
Tl 190.801	3	Lin Thru 0	0.0	4.755	0.00000	0.999828
V 292.402	3	Lin Thru 0	0.0	98.59	0.00000	0.999929
Zn 206.200	3	Lin Thru 0	0.0	97.46	0.00000	0.999947
Li 670.784	3	Lin Thru 0	0.0	17270	0.00000	0.999877

Sequence No.: 5
Sample ID: ICV 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 5
Date Collected: 06/11/15 1:58:21 PM
Data Type: Reprocessed on 06/12/15 9:40:57 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	211761.7	97.78	%	1.112				1.14%
Y Radial	13673.1	97.81	%	1.552				1.59%
Ag 338.289†	42352.0	238.8	ug/L	3.12	238.8	ug/L	3.12	1.31%
QC value within limits for Ag 338.289 Recovery = 95.54%								
Al 308.215†	15196.9	11940	ug/L	86.04	11940	ug/L	86.04	0.72%
QC value within limits for Al 308.215 Recovery = 95.49%								
As 188.979†	2242.2	436.6	ug/L	4.32	436.6	ug/L	4.32	0.99%
QC value less than the lower limit for As 188.979 Recovery = 87.33%								
B 249.677†	15578.9	498.3	ug/L	4.57	498.3	ug/L	4.57	0.92%
QC value within limits for B 249.677 Recovery = 99.66%								
Ba 233.527†	201024.0	477.7	ug/L	4.54	477.7	ug/L	4.54	0.95%
QC value within limits for Ba 233.527 Recovery = 95.53%								
Be 313.107†	1659820.2	474.8	ug/L	5.52	474.8	ug/L	5.52	1.16%
QC value within limits for Be 313.107 Recovery = 94.95%								
Ca 315.887†	192124.6	12330	ug/L	80.22	12330	ug/L	80.22	0.65%
QC value within limits for Ca 315.887 Recovery = 98.60%								
Cd 214.440†	141507.1	483.4	ug/L	4.68	483.4	ug/L	4.68	0.97%
QC value within limits for Cd 214.440 Recovery = 96.67%								
Co 228.616†	47148.0	483.3	ug/L	4.32	483.3	ug/L	4.32	0.89%
QC value within limits for Co 228.616 Recovery = 96.66%								
Cr 267.716†	39886.7	481.6	ug/L	5.34	481.6	ug/L	5.34	1.11%
QC value within limits for Cr 267.716 Recovery = 96.31%								
Cu 327.393†	91057.6	487.3	ug/L	4.63	487.3	ug/L	4.63	0.95%
QC value within limits for Cu 327.393 Recovery = 97.45%								
Fe 273.955†	924130.3	12070	ug/L	115.29	12070	ug/L	115.29	0.96%
QC value within limits for Fe 273.955 Recovery = 96.57%								
K 766.490†	78297.1	11800	ug/L	97.17	11800	ug/L	97.17	0.82%
QC value within limits for K 766.490 Recovery = 94.42%								
Mg 285.213†	196613.0	12170	ug/L	80.99	12170	ug/L	80.99	0.67%
QC value within limits for Mg 285.213 Recovery = 97.39%								
Mn 257.610†	39322.0	477.5	ug/L	2.83	477.5	ug/L	2.83	0.59%
QC value within limits for Mn 257.610 Recovery = 95.50%								
Mo 202.031†	16262.0	468.7	ug/L	5.56	468.7	ug/L	5.56	1.19%
QC value within limits for Mo 202.031 Recovery = 93.74%								
Na 589.592†	86088.3	11950	ug/L	108.70	11950	ug/L	108.70	0.91%
QC value within limits for Na 589.592 Recovery = 95.58%								
Ni 231.604†	24359.8	491.8	ug/L	6.38	491.8	ug/L	6.38	1.30%
QC value within limits for Ni 231.604 Recovery = 98.36%								
P 213.617†	7844.2	2377	ug/L	26.56	2377	ug/L	26.56	1.12%
QC value within limits for P 213.617 Recovery = 95.09%								
Pb 220.353†	2918.1	494.9	ug/L	4.73	494.9	ug/L	4.73	0.95%
QC value within limits for Pb 220.353 Recovery = 98.97%								
Sb 206.836†	3456.0	472.6	ug/L	6.69	472.6	ug/L	6.69	1.42%
QC value within limits for Sb 206.836 Recovery = 94.52%								
Se 196.026†	1511.5	484.5	ug/L	6.82	484.5	ug/L	6.82	1.41%
QC value within limits for Se 196.026 Recovery = 96.89%								
Sn 189.927†	1385.4	242.8	ug/L	3.32	242.8	ug/L	3.32	1.37%
QC value within limits for Sn 189.927 Recovery = 97.14%								
Sr 421.552†	203707.9	472.3	ug/L	5.80	472.3	ug/L	5.80	1.23%
QC value within limits for Sr 421.552 Recovery = 94.46%								
Ti 337.279†	16863.3	476.0	ug/L	4.14	476.0	ug/L	4.14	0.87%
QC value within limits for Ti 337.279 Recovery = 95.20%								
Tl 190.801†	2370.8	498.6	ug/L	5.97	498.6	ug/L	5.97	1.20%
QC value within limits for Tl 190.801 Recovery = 99.72%								
V 292.402†	46808.7	474.8	ug/L	5.60	474.8	ug/L	5.60	1.18%
QC value within limits for V 292.402 Recovery = 94.96%								
Zn 206.200†	47639.6	494.7	ug/L	5.12	494.7	ug/L	5.12	1.03%
QC value within limits for Zn 206.200 Recovery = 98.94%								

Li 670.784	4655975.0	269.6 ug/L	0.79	269.6 ug/L	0.79	0.29%

QC value within limits for Li 670.784 Recovery = 107.85%
QC Failed. Continue with analysis.

Sequence No.: 6
Sample ID: ICB 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 06/11/15 2:04:05 PM
Data Type: Reprocessed on 06/12/15 9:40:59 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	216262.5	99.86	%	0.648				0.65%
Y Radial	14327.3	102.5	%	4.75				4.64%
Ag 338.289†	14.3	0.081	ug/L	0.5166	0.081	ug/L	0.5166	641.38%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	7.5	5.824	ug/L	5.0053	5.824	ug/L	5.0053	85.94%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	19.8	3.879	ug/L	1.1307	3.879	ug/L	1.1307	29.15%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	117.0	3.533	ug/L	0.3621	3.533	ug/L	0.3621	10.25%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-6.0	-0.015	ug/L	0.0353	-0.015	ug/L	0.0353	239.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	45.7	0.013	ug/L	0.0036	0.013	ug/L	0.0036	27.68%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	7.7	0.494	ug/L	1.3983	0.494	ug/L	1.3983	282.82%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	28.2	0.097	ug/L	0.0169	0.097	ug/L	0.0169	17.42%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	1.5	0.019	ug/L	0.1030	0.019	ug/L	0.1030	530.72%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	4.9	0.059	ug/L	0.0798	0.059	ug/L	0.0798	134.18%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	593.0	3.173	ug/L	0.2692	3.173	ug/L	0.2692	8.49%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	88.0	1.145	ug/L	0.3530	1.145	ug/L	0.3530	30.82%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	80.2	12.11	ug/L	12.150	12.11	ug/L	12.150	100.33%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	2.5	0.155	ug/L	0.7521	0.155	ug/L	0.7521	484.98%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-10.4	-0.127	ug/L	0.0566	-0.127	ug/L	0.0566	44.61%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	40.0	1.152	ug/L	0.4094	1.152	ug/L	0.4094	35.55%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	24.0	3.315	ug/L	5.8497	3.315	ug/L	5.8497	176.44%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	16.7	0.338	ug/L	0.1650	0.338	ug/L	0.1650	48.87%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	3.0	0.924	ug/L	1.5318	0.924	ug/L	1.5318	165.72%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	11.0	1.867	ug/L	0.3022	1.867	ug/L	0.3022	16.19%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	15.8	2.161	ug/L	1.4424	2.161	ug/L	1.4424	66.74%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.2	-0.378	ug/L	0.5801	-0.378	ug/L	0.5801	153.55%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	6.4	1.128	ug/L	0.4501	1.128	ug/L	0.4501	39.92%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	34.6	0.080	ug/L	0.0830	0.080	ug/L	0.0830	103.32%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	-3.3	-0.092	ug/L	0.1827	-0.092	ug/L	0.1827	198.70%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	9.5	1.999	ug/L	0.7772	1.999	ug/L	0.7772	38.88%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	9.3	0.094	ug/L	0.0294	0.094	ug/L	0.0294	31.22%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-316.3	-3.244	ug/L	0.5816	-3.244	ug/L	0.5816	17.93%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	7512.5	0.435 ug/L	0.0167	0.435 ug/L	0.0167	3.84%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 7
Sample ID: ICSA 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 6
Date Collected: 06/11/15 2:10:18 PM
Data Type: Reprocessed on 06/12/15 9:41:00 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	207856.2	95.98	%	1.035				1.08%
Y Radial	13488.8	96.49	%	0.962				1.00%
Ag 338.289†	72.7	0.410	ug/L	0.3418	0.410	ug/L	0.3418	83.31%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	129608.9	101600	ug/L	1223.53	101600	ug/L	1223.53	1.20%
QC value within limits for Al 308.215 Recovery = 101.60%								
As 188.979†	13.9	2.798	ug/L	0.2274	2.798	ug/L	0.2274	8.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-7991.1	-3.890	ug/L	0.6081	-3.890	ug/L	0.6081	15.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1721.9	-1.408	ug/L	0.0380	-1.408	ug/L	0.0380	2.70%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	112.2	0.032	ug/L	0.0038	0.032	ug/L	0.0038	11.83%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	1616726.0	103800	ug/L	1301.79	103800	ug/L	1301.79	1.25%
QC value within limits for Ca 315.887 Recovery = 103.75%								
Cd 214.440†	1055.8	-0.179	ug/L	0.0724	-0.179	ug/L	0.0724	40.50%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	128.9	-1.547	ug/L	0.0376	-1.547	ug/L	0.0376	2.43%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	103.0	0.341	ug/L	0.2200	0.341	ug/L	0.2200	64.49%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	227.5	-5.103	ug/L	0.0630	-5.103	ug/L	0.0630	1.24%
QC value less than the lower limit for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	7440283.1	97480	ug/L	277.73	97480	ug/L	277.73	0.28%
QC value within limits for Fe 273.955 Recovery = 97.48%								
K 766.490†	215.5	-63.95	ug/L	11.539	-63.95	ug/L	11.539	18.04%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1615854.8	100100	ug/L	1239.71	100100	ug/L	1239.71	1.24%
QC value within limits for Mg 285.213 Recovery = 100.05%								
Mn 257.610†	221.6	-0.634	ug/L	0.1555	-0.634	ug/L	0.1555	24.52%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-94.5	-1.317	ug/L	0.1622	-1.317	ug/L	0.1622	12.32%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	167.7	10.93	ug/L	3.244	10.93	ug/L	3.244	29.69%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	-85.5	0.680	ug/L	0.0723	0.680	ug/L	0.0723	10.63%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	-122.9	-37.25	ug/L	2.095	-37.25	ug/L	2.095	5.63%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-79.6	-2.873	ug/L	1.1205	-2.873	ug/L	1.1205	39.00%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-8.6	-1.182	ug/L	0.5721	-1.182	ug/L	0.5721	48.39%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-131.6	-3.467	ug/L	2.5762	-3.467	ug/L	2.5762	74.30%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	21.5	3.764	ug/L	0.6049	3.764	ug/L	0.6049	16.07%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	218.7	-3.550	ug/L	0.0720	-3.550	ug/L	0.0720	2.03%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	34.3	-0.758	ug/L	0.8430	-0.758	ug/L	0.8430	111.28%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	-30.2	-6.342	ug/L	2.3215	-6.342	ug/L	2.3215	36.61%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	44.2	0.449	ug/L	0.1242	0.449	ug/L	0.1242	27.68%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-144.3	-2.105	ug/L	0.7241	-2.105	ug/L	0.7241	34.40%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	16053.9	0.930 ug/L	0.0336	0.930 ug/L	0.0336	3.62%

QC Failed. Continue with analysis.

Sequence No.: 8
Sample ID: ICSAB 150611RJS I:JL O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 7
Date Collected: 06/11/15 2:17:35 PM
Data Type: Reprocessed on 06/12/15 9:41:01 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 150611RJS I:JL O:RJ

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	201581.1	93.08	%	0.467				0.50%
Y Radial	13574.2	97.10	%	0.492				0.51%
Ag 338.289†	94576.0	533.4	ug/L	2.49	533.4	ug/L	2.49	0.47%
QC value within limits for Ag 338.289 Recovery = 106.67%								
Al 308.215†	131017.4	102700	ug/L	569.62	102700	ug/L	569.62	0.55%
QC value within limits for Al 308.215 Recovery = 102.72%								
As 188.979†	1323.2	258.5	ug/L	1.85	258.5	ug/L	1.85	0.72%
QC value within limits for As 188.979 Recovery = 103.38%								
B 249.677†	-8517.1	-7.221	ug/L	0.2013	-7.221	ug/L	0.2013	2.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	110357.2	256.8	ug/L	1.41	256.8	ug/L	1.41	0.55%
QC value within limits for Ba 233.527 Recovery = 102.73%								
Be 313.107†	915565.8	261.9	ug/L	1.24	261.9	ug/L	1.24	0.47%
QC value within limits for Be 313.107 Recovery = 104.75%								
Ca 315.887†	1622303.5	104100	ug/L	613.84	104100	ug/L	613.84	0.59%
QC value within limits for Ca 315.887 Recovery = 104.11%								
Cd 214.440†	151254.0	512.7	ug/L	2.29	512.7	ug/L	2.29	0.45%
QC value within limits for Cd 214.440 Recovery = 102.54%								
Co 228.616†	25442.1	258.5	ug/L	1.35	258.5	ug/L	1.35	0.52%
QC value within limits for Co 228.616 Recovery = 103.41%								
Cr 267.716†	22051.1	265.4	ug/L	1.58	265.4	ug/L	1.58	0.59%
QC value within limits for Cr 267.716 Recovery = 106.17%								
Cu 327.393†	53769.9	280.9	ug/L	0.97	280.9	ug/L	0.97	0.35%
QC value within limits for Cu 327.393 Recovery = 112.36%								
Fe 273.955†	7843371.2	102700	ug/L	453.68	102700	ug/L	453.68	0.44%
QC value within limits for Fe 273.955 Recovery = 102.74%								
K 766.490†	151.0	-78.76	ug/L	13.027	-78.76	ug/L	13.027	16.54%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	1614009.6	99950	ug/L	591.55	99950	ug/L	591.55	0.59%
QC value within limits for Mg 285.213 Recovery = 99.95%								
Mn 257.610†	21180.4	254.1	ug/L	0.95	254.1	ug/L	0.95	0.37%
QC value within limits for Mn 257.610 Recovery = 101.65%								
Mo 202.031†	8559.8	248.1	ug/L	0.91	248.1	ug/L	0.91	0.37%
QC value within limits for Mo 202.031 Recovery = 99.26%								
Na 589.592†	96.6	-0.082	ug/L	3.9317	-0.082	ug/L	3.9317	>999.9%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	24739.9	502.3	ug/L	0.97	502.3	ug/L	0.97	0.19%
QC value within limits for Ni 231.604 Recovery = 100.46%								
P 213.617†	-259.8	-78.73	ug/L	2.805	-78.73	ug/L	2.805	3.56%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	3014.3	519.2	ug/L	1.69	519.2	ug/L	1.69	0.33%
QC value within limits for Pb 220.353 Recovery = 103.84%								
Sb 206.836†	1910.1	261.2	ug/L	2.09	261.2	ug/L	2.09	0.80%
QC value within limits for Sb 206.836 Recovery = 104.48%								
Se 196.026†	704.6	263.9	ug/L	4.44	263.9	ug/L	4.44	1.68%
QC value within limits for Se 196.026 Recovery = 105.56%								
Sn 189.927†	15.7	2.751	ug/L	1.4324	2.751	ug/L	1.4324	52.06%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	260.8	-3.471	ug/L	0.0462	-3.471	ug/L	0.0462	1.33%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	52.7	-0.199	ug/L	0.7990	-0.199	ug/L	0.7990	401.84%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	1205.9	253.6	ug/L	2.97	253.6	ug/L	2.97	1.17%
QC value within limits for Tl 190.801 Recovery = 101.44%								
V 292.402†	26903.4	272.9	ug/L	1.18	272.9	ug/L	1.18	0.43%
QC value within limits for V 292.402 Recovery = 109.16%								
Zn 206.200†	52034.7	536.0	ug/L	2.52	536.0	ug/L	2.52	0.47%
QC value within limits for Zn 206.200 Recovery = 107.20%								

Li 670.784	14359.2	0.832 ug/L	0.0296	0.832 ug/L	0.0296	3.56%

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: CCV1 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 3
Date Collected: 06/11/15 2:23:57 PM
Data Type: Reprocessed on 06/12/15 9:41:03 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	211564.2	97.69	%	0.516				0.53%
Y Radial	13688.9	97.92	%	0.697				0.71%
Ag 338.289†	45011.1	253.8	ug/L	0.28	253.8	ug/L	0.28	0.11%
QC value within limits for Ag 338.289 Recovery = 101.54%								
Al 308.215†	12920.7	10150	ug/L	82.38	10150	ug/L	82.38	0.81%
QC value within limits for Al 308.215 Recovery = 101.54%								
As 188.979†	2579.0	500.9	ug/L	3.11	500.9	ug/L	3.11	0.62%
QC value within limits for As 188.979 Recovery = 100.17%								
B 249.677†	16656.1	526.0	ug/L	1.79	526.0	ug/L	1.79	0.34%
QC value within limits for B 249.677 Recovery = 105.20%								
Ba 233.527†	215546.8	512.3	ug/L	0.33	512.3	ug/L	0.33	0.07%
QC value within limits for Ba 233.527 Recovery = 102.46%								
Be 313.107†	1799035.9	514.6	ug/L	0.77	514.6	ug/L	0.77	0.15%
QC value within limits for Be 313.107 Recovery = 102.91%								
Ca 315.887†	393928.6	25280	ug/L	365.62	25280	ug/L	365.62	1.45%
QC value within limits for Ca 315.887 Recovery = 101.11%								
Cd 214.440†	150407.3	514.0	ug/L	0.13	514.0	ug/L	0.13	0.03%
QC value within limits for Cd 214.440 Recovery = 102.81%								
Co 228.616†	50410.6	516.8	ug/L	0.52	516.8	ug/L	0.52	0.10%
QC value within limits for Co 228.616 Recovery = 103.37%								
Cr 267.716†	42470.3	512.7	ug/L	0.61	512.7	ug/L	0.61	0.12%
QC value within limits for Cr 267.716 Recovery = 102.54%								
Cu 327.393†	95190.2	509.5	ug/L	0.24	509.5	ug/L	0.24	0.05%
QC value within limits for Cu 327.393 Recovery = 101.89%								
Fe 273.955†	786246.5	10260	ug/L	2.58	10260	ug/L	2.58	0.03%
QC value within limits for Fe 273.955 Recovery = 102.61%								
K 766.490†	65865.7	9925	ug/L	73.13	9925	ug/L	73.13	0.74%
QC value within limits for K 766.490 Recovery = 99.25%								
Mg 285.213†	417500.5	25840	ug/L	234.29	25840	ug/L	234.29	0.91%
QC value within limits for Mg 285.213 Recovery = 103.36%								
Mn 257.610†	42033.7	509.9	ug/L	3.70	509.9	ug/L	3.70	0.73%
QC value within limits for Mn 257.610 Recovery = 101.97%								
Mo 202.031†	17763.0	511.9	ug/L	2.63	511.9	ug/L	2.63	0.51%
QC value within limits for Mo 202.031 Recovery = 102.37%								
Na 589.592†	89076.1	12360	ug/L	113.97	12360	ug/L	113.97	0.92%
QC value within limits for Na 589.592 Recovery = 98.91%								
Ni 231.604†	25593.0	516.7	ug/L	1.97	516.7	ug/L	1.97	0.38%
QC value within limits for Ni 231.604 Recovery = 103.34%								
P 213.617†	8371.2	2537	ug/L	13.52	2537	ug/L	13.52	0.53%
QC value within limits for P 213.617 Recovery = 101.48%								
Pb 220.353†	3090.5	524.4	ug/L	3.65	524.4	ug/L	3.65	0.70%
QC value within limits for Pb 220.353 Recovery = 104.88%								
Sb 206.836†	3717.4	508.4	ug/L	3.34	508.4	ug/L	3.34	0.66%
QC value within limits for Sb 206.836 Recovery = 101.67%								
Se 196.026†	1579.3	504.8	ug/L	3.13	504.8	ug/L	3.13	0.62%
QC value within limits for Se 196.026 Recovery = 100.97%								
Sn 189.927†	2907.5	509.6	ug/L	3.05	509.6	ug/L	3.05	0.60%
QC value within limits for Sn 189.927 Recovery = 101.93%								
Sr 421.552†	209212.1	484.6	ug/L	6.92	484.6	ug/L	6.92	1.43%
QC value within limits for Sr 421.552 Recovery = 96.91%								
Ti 337.279†	17940.3	506.2	ug/L	5.11	506.2	ug/L	5.11	1.01%
QC value within limits for Ti 337.279 Recovery = 101.24%								
Tl 190.801†	2531.4	532.4	ug/L	2.08	532.4	ug/L	2.08	0.39%
QC value within limits for Tl 190.801 Recovery = 106.47%								
V 292.402†	50568.8	512.9	ug/L	0.64	512.9	ug/L	0.64	0.13%
QC value within limits for V 292.402 Recovery = 102.59%								
Zn 206.200†	49712.0	517.0	ug/L	1.19	517.0	ug/L	1.19	0.23%
QC value within limits for Zn 206.200 Recovery = 103.39%								

Li 670.784	4215852.4	244.1 ug/L	0.24	244.1 ug/L	0.24	0.10%

QC value within limits for Li 670.784 Recovery = 97.66%
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCB 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 06/11/15 2:29:47 PM
Data Type: Reprocessed on 06/12/15 9:41:04 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	215640.7	99.57	%	1.125				1.13%
Y Radial	13898.5	99.42	%	0.600				0.60%
Ag 338.289†	32.4	0.183	ug/L	0.4574	0.183	ug/L	0.4574	250.52%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	7.2	5.632	ug/L	8.9362	5.632	ug/L	8.9362	158.67%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	13.5	2.649	ug/L	1.6237	2.649	ug/L	1.6237	61.30%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	96.8	2.938	ug/L	0.3873	2.938	ug/L	0.3873	13.18%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	2.8	0.006	ug/L	0.0463	0.006	ug/L	0.0463	735.37%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	72.3	0.021	ug/L	0.0097	0.021	ug/L	0.0097	47.00%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	0.4	0.025	ug/L	0.1100	0.025	ug/L	0.1100	437.14%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	48.3	0.165	ug/L	0.0337	0.165	ug/L	0.0337	20.43%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	5.3	0.055	ug/L	0.1213	0.055	ug/L	0.1213	220.57%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	8.8	0.107	ug/L	0.0627	0.107	ug/L	0.0627	58.85%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	474.6	2.540	ug/L	0.0313	2.540	ug/L	0.0313	1.23%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	527.7	6.902	ug/L	0.1710	6.902	ug/L	0.1710	2.48%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	-32.7	-4.939	ug/L	15.9593	-4.939	ug/L	15.9593	323.11%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	15.6	0.973	ug/L	0.4085	0.973	ug/L	0.4085	42.00%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-14.2	-0.173	ug/L	0.1186	-0.173	ug/L	0.1186	68.65%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	20.2	0.581	ug/L	0.2033	0.581	ug/L	0.2033	34.99%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	-12.2	-1.690	ug/L	1.7858	-1.690	ug/L	1.7858	105.69%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	17.1	0.345	ug/L	0.0919	0.345	ug/L	0.0919	26.61%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	7.6	2.298	ug/L	1.5775	2.298	ug/L	1.5775	68.64%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	11.3	1.902	ug/L	0.5368	1.902	ug/L	0.5368	28.22%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	15.1	2.065	ug/L	0.5348	2.065	ug/L	0.5348	25.90%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-3.3	-1.047	ug/L	0.5992	-1.047	ug/L	0.5992	57.25%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	7.6	1.326	ug/L	0.1430	1.326	ug/L	0.1430	10.78%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	24.2	0.056	ug/L	0.0409	0.056	ug/L	0.0409	72.71%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	11.2	0.317	ug/L	0.4629	0.317	ug/L	0.4629	145.99%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	6.4	1.355	ug/L	1.4933	1.355	ug/L	1.4933	110.23%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	18.2	0.185	ug/L	0.0533	0.185	ug/L	0.0533	28.85%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-476.4	-4.887	ug/L	0.4166	-4.887	ug/L	0.4166	8.52%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	7744.7	0.448 ug/L	0.0132	0.448 ug/L	0.0132	2.94%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 17
Sample ID: CCV2 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 8
Date Collected: 06/11/15 3:25:05 PM
Data Type: Reprocessed on 06/12/15 9:41:12 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	210609.4	97.25	%	1.383				1.42%
Y Radial	13717.6	98.13	%	0.741				0.76%
Ag 338.289†	33479.3	188.8	ug/L	1.70	188.8	ug/L	1.70	0.90%
QC value within limits for Ag 338.289 Recovery = 100.70%								
Al 308.215†	9623.7	7563	ug/L	9.54	7563	ug/L	9.54	0.13%
QC value within limits for Al 308.215 Recovery = 100.84%								
As 188.979†	1946.5	378.1	ug/L	3.89	378.1	ug/L	3.89	1.03%
QC value within limits for As 188.979 Recovery = 100.82%								
B 249.677†	13048.7	411.1	ug/L	4.86	411.1	ug/L	4.86	1.18%
QC value within limits for B 249.677 Recovery = 109.62%								
Ba 233.527†	160055.5	380.4	ug/L	3.63	380.4	ug/L	3.63	0.95%
QC value within limits for Ba 233.527 Recovery = 101.45%								
Be 313.107†	1355800.3	387.8	ug/L	4.02	387.8	ug/L	4.02	1.04%
QC value within limits for Be 313.107 Recovery = 103.41%								
Ca 315.887†	295339.2	18950	ug/L	51.59	18950	ug/L	51.59	0.27%
QC value within limits for Ca 315.887 Recovery = 101.07%								
Cd 214.440†	112896.5	385.9	ug/L	4.06	385.9	ug/L	4.06	1.05%
QC value within limits for Cd 214.440 Recovery = 102.89%								
Co 228.616†	37473.9	384.2	ug/L	3.79	384.2	ug/L	3.79	0.99%
QC value within limits for Co 228.616 Recovery = 102.45%								
Cr 267.716†	33169.2	400.4	ug/L	5.94	400.4	ug/L	5.94	1.48%
QC value within limits for Cr 267.716 Recovery = 106.78%								
Cu 327.393†	71993.4	385.3	ug/L	3.55	385.3	ug/L	3.55	0.92%
QC value within limits for Cu 327.393 Recovery = 102.75%								
Fe 273.955†	583453.8	7614	ug/L	73.85	7614	ug/L	73.85	0.97%
QC value within limits for Fe 273.955 Recovery = 101.52%								
K 766.490†	48453.1	7301	ug/L	23.70	7301	ug/L	23.70	0.32%
QC value within limits for K 766.490 Recovery = 97.35%								
Mg 285.213†	308232.3	19080	ug/L	51.02	19080	ug/L	51.02	0.27%
QC value within limits for Mg 285.213 Recovery = 101.74%								
Mn 257.610†	31051.9	376.6	ug/L	1.45	376.6	ug/L	1.45	0.39%
QC value within limits for Mn 257.610 Recovery = 100.44%								
Mo 202.031†	13112.3	377.8	ug/L	4.87	377.8	ug/L	4.87	1.29%
QC value within limits for Mo 202.031 Recovery = 100.76%								
Na 589.592†	63899.0	8869	ug/L	20.54	8869	ug/L	20.54	0.23%
QC value within limits for Na 589.592 Recovery = 94.61%								
Ni 231.604†	18999.3	383.6	ug/L	5.33	383.6	ug/L	5.33	1.39%
QC value within limits for Ni 231.604 Recovery = 102.28%								
P 213.617†	6267.6	1899	ug/L	30.88	1899	ug/L	30.88	1.63%
QC value within limits for P 213.617 Recovery = 101.31%								
Pb 220.353†	2385.4	404.7	ug/L	5.29	404.7	ug/L	5.29	1.31%
QC value within limits for Pb 220.353 Recovery = 107.91%								
Sb 206.836†	2834.5	387.6	ug/L	4.97	387.6	ug/L	4.97	1.28%
QC value within limits for Sb 206.836 Recovery = 103.36%								
Se 196.026†	1204.4	384.9	ug/L	6.37	384.9	ug/L	6.37	1.66%
QC value within limits for Se 196.026 Recovery = 102.65%								
Sn 189.927†	2131.2	373.6	ug/L	5.30	373.6	ug/L	5.30	1.42%
QC value within limits for Sn 189.927 Recovery = 99.62%								
Sr 421.552†	147552.5	341.7	ug/L	1.32	341.7	ug/L	1.32	0.39%
QC value within limits for Sr 421.552 Recovery = 91.12%								
Ti 337.279†	13329.9	376.1	ug/L	0.94	376.1	ug/L	0.94	0.25%
QC value within limits for Ti 337.279 Recovery = 100.30%								
Tl 190.801†	2018.2	424.4	ug/L	7.84	424.4	ug/L	7.84	1.85%
QC value greater than the upper limit for Tl 190.801 Recovery = 113.18%								
V 292.402†	37939.8	384.8	ug/L	4.05	384.8	ug/L	4.05	1.05%
QC value within limits for V 292.402 Recovery = 102.62%								
Zn 206.200†	37140.6	386.4	ug/L	4.34	386.4	ug/L	4.34	1.12%
QC value within limits for Zn 206.200 Recovery = 103.05%								

Li 670.784	3021907.8	175.0 ug/L	0.61	175.0 ug/L	0.61	0.35%

QC value within limits for Li 670.784 Recovery = 93.33%
QC Failed. Continue with analysis.

Sequence No.: 18
Sample ID: CCB 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 5
Date Collected: 06/11/15 3:30:52 PM
Data Type: Reprocessed on 06/12/15 9:41:13 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	220689.1	101.9	%	1.00				0.98%
Y Radial	14398.2	103.0	%	0.08				0.08%
Ag 338.289†	-9.4	-0.053	ug/L	0.3950	-0.053	ug/L	0.3950	747.24%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	16.0	12.58	ug/L	7.675	12.58	ug/L	7.675	61.01%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	2.5	0.487	ug/L	0.9818	0.487	ug/L	0.9818	201.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	78.6	2.375	ug/L	0.3716	2.375	ug/L	0.3716	15.64%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	61.7	0.147	ug/L	0.0124	0.147	ug/L	0.0124	8.43%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	69.7	0.020	ug/L	0.0052	0.020	ug/L	0.0052	26.26%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	207.8	13.33	ug/L	0.670	13.33	ug/L	0.670	5.03%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	38.6	0.132	ug/L	0.0273	0.132	ug/L	0.0273	20.64%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	-4.8	-0.049	ug/L	0.0357	-0.049	ug/L	0.0357	72.96%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	3.9	0.047	ug/L	0.0957	0.047	ug/L	0.0957	205.58%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	134.9	0.723	ug/L	0.3518	0.723	ug/L	0.3518	48.67%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	141.8	1.851	ug/L	0.3363	1.851	ug/L	0.3363	18.17%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	24.5	3.688	ug/L	6.1684	3.688	ug/L	6.1684	167.24%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	75.0	4.639	ug/L	0.7711	4.639	ug/L	0.7711	16.62%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	128.1	1.557	ug/L	0.1231	1.557	ug/L	0.1231	7.91%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	5.1	0.146	ug/L	0.2562	0.146	ug/L	0.2562	175.46%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	99.1	13.76	ug/L	2.624	13.76	ug/L	2.624	19.06%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	9.5	0.191	ug/L	0.1333	0.191	ug/L	0.1333	69.77%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	11.5	3.478	ug/L	1.2076	3.478	ug/L	1.2076	34.72%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	3.9	0.664	ug/L	0.6372	0.664	ug/L	0.6372	95.94%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.7	0.236	ug/L	0.3104	0.236	ug/L	0.3104	131.43%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.4	0.769	ug/L	1.6462	0.769	ug/L	1.6462	214.13%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	-0.5	-0.083	ug/L	0.5204	-0.083	ug/L	0.5204	628.91%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	32.5	0.075	ug/L	0.0383	0.075	ug/L	0.0383	51.22%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	8.0	0.225	ug/L	0.3013	0.225	ug/L	0.3013	134.13%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	13.4	2.824	ug/L	0.7120	2.824	ug/L	0.7120	25.21%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	7.9	0.081	ug/L	0.0449	0.081	ug/L	0.0449	55.75%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-791.2	-8.118	ug/L	0.0766	-8.118	ug/L	0.0766	0.94%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	3395.1	0.197 ug/L	0.0117	0.197 ug/L	0.0117	5.96%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25
Sample ID: CCV1 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 3
Date Collected: 06/11/15 4:20:38 PM
Data Type: Reprocessed on 06/12/15 9:41:21 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	214617.3	99.10	%	0.472				0.48%
Y Radial	13950.3	99.79	%	1.647				1.65%
Ag 338.289†	45171.0	254.7	ug/L	1.90	254.7	ug/L	1.90	0.74%
QC value within limits for Ag 338.289 Recovery = 101.90%								
Al 308.215†	13150.2	10330	ug/L	62.51	10330	ug/L	62.51	0.60%
QC value within limits for Al 308.215 Recovery = 103.34%								
As 188.979†	2650.6	514.8	ug/L	5.19	514.8	ug/L	5.19	1.01%
QC value within limits for As 188.979 Recovery = 102.97%								
B 249.677†	16822.7	531.1	ug/L	2.42	531.1	ug/L	2.42	0.46%
QC value within limits for B 249.677 Recovery = 106.22%								
Ba 233.527†	216892.2	515.5	ug/L	3.41	515.5	ug/L	3.41	0.66%
QC value within limits for Ba 233.527 Recovery = 103.10%								
Be 313.107†	1820849.5	520.8	ug/L	3.44	520.8	ug/L	3.44	0.66%
QC value within limits for Be 313.107 Recovery = 104.16%								
Ca 315.887†	398504.6	25570	ug/L	582.93	25570	ug/L	582.93	2.28%
QC value within limits for Ca 315.887 Recovery = 102.28%								
Cd 214.440†	150979.0	516.0	ug/L	2.69	516.0	ug/L	2.69	0.52%
QC value within limits for Cd 214.440 Recovery = 103.20%								
Co 228.616†	50814.5	521.0	ug/L	3.46	521.0	ug/L	3.46	0.67%
QC value within limits for Co 228.616 Recovery = 104.19%								
Cr 267.716†	42639.8	514.7	ug/L	3.37	514.7	ug/L	3.37	0.65%
QC value within limits for Cr 267.716 Recovery = 102.95%								
Cu 327.393†	95615.1	511.8	ug/L	3.30	511.8	ug/L	3.30	0.64%
QC value within limits for Cu 327.393 Recovery = 102.35%								
Fe 273.955†	789478.9	10300	ug/L	60.76	10300	ug/L	60.76	0.59%
QC value within limits for Fe 273.955 Recovery = 103.02%								
K 766.490†	66589.9	10030	ug/L	54.63	10030	ug/L	54.63	0.54%
QC value within limits for K 766.490 Recovery = 100.34%								
Mg 285.213†	422920.1	26170	ug/L	143.57	26170	ug/L	143.57	0.55%
QC value within limits for Mg 285.213 Recovery = 104.70%								
Mn 257.610†	42436.1	514.7	ug/L	2.63	514.7	ug/L	2.63	0.51%
QC value within limits for Mn 257.610 Recovery = 102.95%								
Mo 202.031†	17920.4	516.4	ug/L	2.61	516.4	ug/L	2.61	0.51%
QC value within limits for Mo 202.031 Recovery = 103.28%								
Na 589.592†	88216.8	12240	ug/L	73.61	12240	ug/L	73.61	0.60%
QC value within limits for Na 589.592 Recovery = 97.96%								
Ni 231.604†	25886.0	522.6	ug/L	3.62	522.6	ug/L	3.62	0.69%
QC value within limits for Ni 231.604 Recovery = 104.52%								
P 213.617†	8569.1	2597	ug/L	15.56	2597	ug/L	15.56	0.60%
QC value within limits for P 213.617 Recovery = 103.88%								
Pb 220.353†	3231.1	548.2	ug/L	2.32	548.2	ug/L	2.32	0.42%
QC value within limits for Pb 220.353 Recovery = 109.63%								
Sb 206.836†	3852.3	526.8	ug/L	3.41	526.8	ug/L	3.41	0.65%
QC value within limits for Sb 206.836 Recovery = 105.36%								
Se 196.026†	1609.1	514.3	ug/L	4.23	514.3	ug/L	4.23	0.82%
QC value within limits for Se 196.026 Recovery = 102.86%								
Sn 189.927†	2970.2	520.6	ug/L	3.46	520.6	ug/L	3.46	0.66%
QC value within limits for Sn 189.927 Recovery = 104.12%								
Sr 421.552†	204742.6	474.2	ug/L	11.60	474.2	ug/L	11.60	2.45%
QC value within limits for Sr 421.552 Recovery = 94.84%								
Ti 337.279†	18322.0	517.0	ug/L	3.35	517.0	ug/L	3.35	0.65%
QC value within limits for Ti 337.279 Recovery = 103.40%								
Tl 190.801†	2712.9	570.5	ug/L	3.11	570.5	ug/L	3.11	0.55%
QC value greater than the upper limit for Tl 190.801 Recovery = 114.10%								
V 292.402†	51613.0	523.5	ug/L	3.58	523.5	ug/L	3.58	0.68%
QC value within limits for V 292.402 Recovery = 104.71%								
Zn 206.200†	49503.1	514.9	ug/L	3.00	514.9	ug/L	3.00	0.58%
QC value within limits for Zn 206.200 Recovery = 102.97%								

Li 670.784	4238654.9	245.5 ug/L	1.86	245.5 ug/L	1.86	0.76%

QC value within limits for Li 670.784 Recovery = 98.18%
QC Failed. Continue with analysis.

Sequence No.: 26
Sample ID: CCB 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 06/11/15 4:29:53 PM
Data Type: Reprocessed on 06/12/15 9:41:22 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	221803.8	102.4	%	0.73				0.72%
Y Radial	14328.6	102.5	%	0.70				0.68%
Ag 338.289†	-44.2	-0.249	ug/L	0.3030	-0.249	ug/L	0.3030	121.53%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	16.9	13.24	ug/L	2.972	13.24	ug/L	2.972	22.45%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	7.7	1.519	ug/L	0.9165	1.519	ug/L	0.9165	60.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	49.7	1.507	ug/L	0.3620	1.507	ug/L	0.3620	24.03%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-33.9	-0.081	ug/L	0.0136	-0.081	ug/L	0.0136	16.81%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	52.1	0.015	ug/L	0.0052	0.015	ug/L	0.0052	34.76%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	36.6	2.348	ug/L	0.6480	2.348	ug/L	0.6480	27.60%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	56.2	0.192	ug/L	0.0158	0.192	ug/L	0.0158	8.23%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	1.2	0.013	ug/L	0.1011	0.013	ug/L	0.1011	808.80%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	7.7	0.094	ug/L	0.0721	0.094	ug/L	0.0721	76.86%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	252.7	1.353	ug/L	0.2308	1.353	ug/L	0.2308	17.06%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	210.9	2.754	ug/L	0.2385	2.754	ug/L	0.2385	8.66%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	79.1	11.92	ug/L	4.032	11.92	ug/L	4.032	33.82%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	13.4	0.830	ug/L	0.4993	0.830	ug/L	0.4993	60.19%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	-20.7	-0.251	ug/L	0.0155	-0.251	ug/L	0.0155	6.18%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	3.0	0.087	ug/L	0.0702	0.087	ug/L	0.0702	80.96%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	149.1	20.70	ug/L	4.115	20.70	ug/L	4.115	19.87%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	21.1	0.426	ug/L	0.1547	0.426	ug/L	0.1547	36.32%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	4.1	1.252	ug/L	2.3834	1.252	ug/L	2.3834	190.32%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-0.4	-0.065	ug/L	0.3184	-0.065	ug/L	0.3184	490.47%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	11.5	1.567	ug/L	0.2624	1.567	ug/L	0.2624	16.75%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.4	0.749	ug/L	2.1496	0.749	ug/L	2.1496	287.07%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	3.2	0.560	ug/L	0.2923	0.560	ug/L	0.2923	52.15%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	11.9	0.028	ug/L	0.0276	0.028	ug/L	0.0276	100.16%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	3.4	0.096	ug/L	0.1641	0.096	ug/L	0.1641	170.41%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	4.2	0.873	ug/L	0.7137	0.873	ug/L	0.7137	81.72%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	10.0	0.101	ug/L	0.0616	0.101	ug/L	0.0616	60.92%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-806.4	-8.273	ug/L	0.1435	-8.273	ug/L	0.1435	1.74%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	7481.7	0.433 ug/L	0.0185	0.433 ug/L	0.0185	4.26%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 29
Sample ID: CCV2 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 8
Date Collected: 06/11/15 4:50:30 PM
Data Type: Reprocessed on 06/12/15 9:41:26 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	214012.8	98.82	%	0.561				0.57%
Y Radial	14262.3	102.0	%	0.70				0.68%
Ag 338.289†	33261.7	187.6	ug/L	0.61	187.6	ug/L	0.61	0.33%
QC value within limits for Ag 338.289 Recovery = 100.04%								
Al 308.215†	9459.5	7434	ug/L	13.36	7434	ug/L	13.36	0.18%
QC value within limits for Al 308.215 Recovery = 99.13%								
As 188.979†	1953.8	379.6	ug/L	2.80	379.6	ug/L	2.80	0.74%
QC value within limits for As 188.979 Recovery = 101.23%								
B 249.677†	12912.8	406.8	ug/L	1.43	406.8	ug/L	1.43	0.35%
QC value within limits for B 249.677 Recovery = 108.47%								
Ba 233.527†	158420.8	376.5	ug/L	1.90	376.5	ug/L	1.90	0.50%
QC value within limits for Ba 233.527 Recovery = 100.41%								
Be 313.107†	1345291.5	384.8	ug/L	1.73	384.8	ug/L	1.73	0.45%
QC value within limits for Be 313.107 Recovery = 102.61%								
Ca 315.887†	280888.4	18020	ug/L	300.20	18020	ug/L	300.20	1.67%
QC value within limits for Ca 315.887 Recovery = 96.12%								
Cd 214.440†	111190.5	380.0	ug/L	1.84	380.0	ug/L	1.84	0.49%
QC value within limits for Cd 214.440 Recovery = 101.34%								
Co 228.616†	37212.8	381.5	ug/L	2.66	381.5	ug/L	2.66	0.70%
QC value within limits for Co 228.616 Recovery = 101.74%								
Cr 267.716†	32864.7	396.8	ug/L	2.29	396.8	ug/L	2.29	0.58%
QC value within limits for Cr 267.716 Recovery = 105.80%								
Cu 327.393†	71473.0	382.5	ug/L	1.75	382.5	ug/L	1.75	0.46%
QC value within limits for Cu 327.393 Recovery = 102.01%								
Fe 273.955†	576503.2	7523	ug/L	33.24	7523	ug/L	33.24	0.44%
QC value within limits for Fe 273.955 Recovery = 100.31%								
K 766.490†	46755.4	7045	ug/L	116.84	7045	ug/L	116.84	1.66%
QC value within limits for K 766.490 Recovery = 93.93%								
Mg 285.213†	294850.7	18250	ug/L	312.34	18250	ug/L	312.34	1.71%
QC value within limits for Mg 285.213 Recovery = 97.33%								
Mn 257.610†	30529.2	370.3	ug/L	1.30	370.3	ug/L	1.30	0.35%
QC value within limits for Mn 257.610 Recovery = 98.75%								
Mo 202.031†	12962.3	373.5	ug/L	2.02	373.5	ug/L	2.02	0.54%
QC value within limits for Mo 202.031 Recovery = 99.61%								
Na 589.592†	62092.1	8619	ug/L	156.73	8619	ug/L	156.73	1.82%
QC value within limits for Na 589.592 Recovery = 91.93%								
Ni 231.604†	18820.0	379.9	ug/L	2.61	379.9	ug/L	2.61	0.69%
QC value within limits for Ni 231.604 Recovery = 101.32%								
P 213.617†	6230.4	1888	ug/L	12.49	1888	ug/L	12.49	0.66%
QC value within limits for P 213.617 Recovery = 100.70%								
Pb 220.353†	2378.0	403.4	ug/L	2.07	403.4	ug/L	2.07	0.51%
QC value within limits for Pb 220.353 Recovery = 107.57%								
Sb 206.836†	2834.8	387.7	ug/L	1.90	387.7	ug/L	1.90	0.49%
QC value within limits for Sb 206.836 Recovery = 103.38%								
Se 196.026†	1197.0	382.6	ug/L	1.56	382.6	ug/L	1.56	0.41%
QC value within limits for Se 196.026 Recovery = 102.02%								
Sn 189.927†	2108.7	369.6	ug/L	1.91	369.6	ug/L	1.91	0.52%
QC value within limits for Sn 189.927 Recovery = 98.57%								
Sr 421.552†	145411.3	336.8	ug/L	6.10	336.8	ug/L	6.10	1.81%
QC value within limits for Sr 421.552 Recovery = 89.81%								
Ti 337.279†	13164.0	371.5	ug/L	1.41	371.5	ug/L	1.41	0.38%
QC value within limits for Ti 337.279 Recovery = 99.06%								
Tl 190.801†	2019.2	424.6	ug/L	1.72	424.6	ug/L	1.72	0.40%
QC value greater than the upper limit for Tl 190.801 Recovery = 113.24%								
V 292.402†	37741.3	382.8	ug/L	1.81	382.8	ug/L	1.81	0.47%
QC value within limits for V 292.402 Recovery = 102.09%								
Zn 206.200†	36379.4	378.5	ug/L	1.82	378.5	ug/L	1.82	0.48%
QC value within limits for Zn 206.200 Recovery = 100.94%								

Li 670.784	3089549.4	178.9 ug/L	0.39	178.9 ug/L	0.39	0.22%

QC value within limits for Li 670.784 Recovery = 95.42%
QC Failed. Continue with analysis.

Sequence No.: 30
Sample ID: CCB 150611RJS I:JL O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 5
Date Collected: 06/11/15 4:59:51 PM
Data Type: Reprocessed on 06/12/15 9:41:27 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 150611RJS I:JL O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	225387.9	104.1	%	0.90				0.87%
Y Radial	14316.1	102.4	%	1.13				1.11%
Ag 338.289†	9.0	0.051	ug/L	0.2668	0.051	ug/L	0.2668	525.70%
QC value within limits for Ag 338.289 Recovery = Not calculated								
Al 308.215†	15.2	11.92	ug/L	4.065	11.92	ug/L	4.065	34.10%
QC value within limits for Al 308.215 Recovery = Not calculated								
As 188.979†	8.9	1.737	ug/L	0.2216	1.737	ug/L	0.2216	12.76%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	39.4	1.189	ug/L	0.2230	1.189	ug/L	0.2230	18.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	54.9	0.131	ug/L	0.0147	0.131	ug/L	0.0147	11.30%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	50.9	0.015	ug/L	0.0044	0.015	ug/L	0.0044	30.20%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 315.887†	209.0	13.41	ug/L	0.484	13.41	ug/L	0.484	3.61%
QC value within limits for Ca 315.887 Recovery = Not calculated								
Cd 214.440†	53.4	0.183	ug/L	0.0530	0.183	ug/L	0.0530	29.00%
QC value within limits for Cd 214.440 Recovery = Not calculated								
Co 228.616†	0.7	0.006	ug/L	0.0351	0.006	ug/L	0.0351	571.70%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	15.2	0.183	ug/L	0.1232	0.183	ug/L	0.1232	67.43%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	86.9	0.466	ug/L	0.0695	0.466	ug/L	0.0695	14.91%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 273.955†	74.6	0.970	ug/L	0.0264	0.970	ug/L	0.0264	2.72%
QC value within limits for Fe 273.955 Recovery = Not calculated								
K 766.490†	101.6	15.33	ug/L	8.812	15.33	ug/L	8.812	57.49%
QC value within limits for K 766.490 Recovery = Not calculated								
Mg 285.213†	61.9	3.830	ug/L	0.3906	3.830	ug/L	0.3906	10.20%
QC value within limits for Mg 285.213 Recovery = Not calculated								
Mn 257.610†	125.4	1.524	ug/L	0.0882	1.524	ug/L	0.0882	5.79%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-6.4	-0.185	ug/L	0.1496	-0.185	ug/L	0.1496	80.79%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Na 589.592†	170.5	23.68	ug/L	5.006	23.68	ug/L	5.006	21.14%
QC value within limits for Na 589.592 Recovery = Not calculated								
Ni 231.604†	10.9	0.220	ug/L	0.1429	0.220	ug/L	0.1429	64.92%
QC value within limits for Ni 231.604 Recovery = Not calculated								
P 213.617†	8.4	2.548	ug/L	0.8334	2.548	ug/L	0.8334	32.71%
QC value within limits for P 213.617 Recovery = Not calculated								
Pb 220.353†	-3.7	-0.616	ug/L	0.1143	-0.616	ug/L	0.1143	18.55%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	6.6	0.908	ug/L	0.4894	0.908	ug/L	0.4894	53.87%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	3.4	1.082	ug/L	1.1647	1.082	ug/L	1.1647	107.67%
QC value within limits for Se 196.026 Recovery = Not calculated								
Sn 189.927†	1.0	0.176	ug/L	0.5588	0.176	ug/L	0.5588	318.03%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Sr 421.552†	55.5	0.128	ug/L	0.0314	0.128	ug/L	0.0314	24.45%
QC value within limits for Sr 421.552 Recovery = Not calculated								
Ti 337.279†	10.3	0.289	ug/L	0.2043	0.289	ug/L	0.2043	70.59%
QC value within limits for Ti 337.279 Recovery = Not calculated								
Tl 190.801†	5.0	1.050	ug/L	0.7843	1.050	ug/L	0.7843	74.70%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 292.402†	6.9	0.070	ug/L	0.0312	0.070	ug/L	0.0312	44.25%
QC value within limits for V 292.402 Recovery = Not calculated								
Zn 206.200†	-860.2	-8.823	ug/L	0.0542	-8.823	ug/L	0.0542	0.61%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Li 670.784	4315.9	0.250 ug/L	0.0082	0.250 ug/L	0.0082	3.27%

QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

METALS

Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	80.00 U	300.0	80.00	27.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	BORON (B)	40.00 U	50.0	40.00	29.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	LITHIUM (LI)	0.80 U	1.0	0.80	0.40	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	ZINC (ZN)	20.00 U	150.0	20.00	13.70	ug/L	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
6010C	ALUMINUM (AL) (DI	80.00 U	300.0	80.00	27.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	BORON (B) (DISSOL	40.00 U	50.0	40.00	29.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	LITHIUM (LI) (DISSO	0.80 U	1.0	0.80	0.40	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
6010C	ZINC (ZN) (DISSOLV	20.00 U	150.0	20.00	13.70	ug/L	05/26/15	06/04/15	#61CJU-150526A3-AZ16287

Metals SC-Blank-REG MDLs
Printed: 06/18/15 4:13:07 PM

Sequence No.: 12
Sample ID: 150526A-3010-BLK
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 38
Date Collected: 06/04/15 5:00:40 PM
Data Type: Reprocessed on 06/11/15 4:12:25 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 150526A-3010-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	278393.5	101.1	%	0.37				0.37%
Y Radial	19438.7	103.7	%	5.07				4.89%
Ag 338.289†	91.0	0.441	ug/L	0.4978	0.441	ug/L	0.4978	112.85%
Al 308.215†	-14.1	-8.399	ug/L	6.9071	-8.399	ug/L	6.9071	82.24%
As 188.979†	3.6	0.513	ug/L	0.8375	0.513	ug/L	0.8375	163.32%
B 249.677†	65.7	1.440	ug/L	0.3126	1.440	ug/L	0.3126	21.70%
Ba 233.527†	21.8	0.042	ug/L	0.0106	0.042	ug/L	0.0106	25.14%
Be 313.107†	178.6	0.038	ug/L	0.0079	0.038	ug/L	0.0079	20.93%
Ca 315.887†	383.3	19.04	ug/L	3.393	19.04	ug/L	3.393	17.82%
Cd 214.440†	-17.6	-0.050	ug/L	0.0393	-0.050	ug/L	0.0393	77.94%
Co 228.616†	20.0	0.157	ug/L	0.0479	0.157	ug/L	0.0479	30.52%
Cr 267.716†	14.4	0.136	ug/L	0.0611	0.136	ug/L	0.0611	45.09%
Cu 327.393†	-140.0	-0.636	ug/L	0.2197	-0.636	ug/L	0.2197	34.53%
Fe 273.955†	274.1	2.739	ug/L	0.4789	2.739	ug/L	0.4789	17.49%
K 766.490†	-32.9	-5.041	ug/L	4.4371	-5.041	ug/L	4.4371	88.03%
Mg 285.213†	96.3	4.462	ug/L	0.3583	4.462	ug/L	0.3583	8.03%
Mn 257.610†	8.7	0.080	ug/L	0.0655	0.080	ug/L	0.0655	82.27%
Mo 202.031†	9.4	0.230	ug/L	0.2514	0.230	ug/L	0.2514	109.40%
Na 589.592†	-36.0	-10.60	ug/L	6.893	-10.60	ug/L	6.893	65.03%
Ni 231.604†	10.9	0.174	ug/L	0.0832	0.174	ug/L	0.0832	47.89%
P 213.617†	-9.3	-2.106	ug/L	0.6382	-2.106	ug/L	0.6382	30.30%
Pb 220.353†	-8.4	-0.811	ug/L	0.4994	-0.811	ug/L	0.4994	61.59%
Sb 206.836†	0.7	0.069	ug/L	0.2206	0.069	ug/L	0.2206	319.61%
Se 196.026†	1.9	0.533	ug/L	1.1481	0.533	ug/L	1.1481	215.51%
Sn 189.927†	12.4	1.812	ug/L	0.2582	1.812	ug/L	0.2582	14.25%
Sr 421.552†	-5.0	-0.047	ug/L	0.0743	-0.047	ug/L	0.0743	159.16%
Ti 337.279†	6.9	0.141	ug/L	0.2757	0.141	ug/L	0.2757	195.99%
Tl 190.801†	9.5	1.002	ug/L	0.3727	1.002	ug/L	0.3727	37.20%
V 292.402†	-9.1	-0.065	ug/L	0.0446	-0.065	ug/L	0.0446	68.69%
Zn 206.200†	-119.3	-1.072	ug/L	0.0371	-1.072	ug/L	0.0371	3.46%
Li 670.784	3189.6	0.178	ug/L	0.0053	0.178	ug/L	0.0053	2.97%

Sequence No.: 14
Sample ID: 150526A-3010F-BLK
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 40
Date Collected: 06/04/15 5:12:49 PM
Data Type: Reprocessed on 06/11/15 4:12:27 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 150526A-3010F-BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	277530.9	100.7	%	0.82				0.82%
Y Radial	19340.4	103.1	%	5.30				5.14%
Ag 338.289†	107.8	0.523	ug/L	0.3638	0.523	ug/L	0.3638	69.59%
Al 308.215†	-10.4	-6.173	ug/L	5.9502	-6.173	ug/L	5.9502	96.40%
As 188.979†	-6.9	-1.007	ug/L	1.4936	-1.007	ug/L	1.4936	148.35%
B 249.677†	82.0	1.782	ug/L	0.2967	1.782	ug/L	0.2967	16.64%
Ba 233.527†	16.3	0.032	ug/L	0.0228	0.032	ug/L	0.0228	71.87%
Be 313.107†	166.8	0.035	ug/L	0.0074	0.035	ug/L	0.0074	21.19%
Ca 315.887†	318.1	15.80	ug/L	2.315	15.80	ug/L	2.315	14.65%
Cd 214.440†	-21.1	-0.060	ug/L	0.0289	-0.060	ug/L	0.0289	48.09%
Co 228.616†	13.2	0.102	ug/L	0.0878	0.102	ug/L	0.0878	86.15%
Cr 267.716†	15.9	0.149	ug/L	0.0650	0.149	ug/L	0.0650	43.51%
Cu 327.393†	89.5	0.408	ug/L	0.5700	0.408	ug/L	0.5700	139.57%
Fe 273.955†	-35.9	-0.353	ug/L	0.0400	-0.353	ug/L	0.0400	11.31%
K 766.490†	9.0	1.372	ug/L	8.1305	1.372	ug/L	8.1305	592.80%
Mg 285.213†	82.3	3.812	ug/L	1.0829	3.812	ug/L	1.0829	28.41%
Mn 257.610†	5.7	0.052	ug/L	0.0369	0.052	ug/L	0.0369	71.43%
Mo 202.031†	-1.4	-0.033	ug/L	0.2321	-0.033	ug/L	0.2321	699.78%
Na 589.592†	26.1	7.686	ug/L	13.4672	7.686	ug/L	13.4672	175.22%
Ni 231.604†	-3.9	-0.063	ug/L	0.2339	-0.063	ug/L	0.2339	369.70%
P 213.617†	-10.6	-2.398	ug/L	0.4105	-2.398	ug/L	0.4105	17.11%
Pb 220.353†	-7.3	-0.711	ug/L	0.4561	-0.711	ug/L	0.4561	64.15%
Sb 206.836†	-8.1	-0.784	ug/L	0.5602	-0.784	ug/L	0.5602	71.44%
Se 196.026†	-1.1	-0.305	ug/L	2.0909	-0.305	ug/L	2.0909	685.89%
Sn 189.927†	9.6	1.404	ug/L	0.3188	1.404	ug/L	0.3188	22.70%
Sr 421.552†	-18.2	-0.166	ug/L	0.1051	-0.166	ug/L	0.1051	63.36%
Ti 337.279†	24.8	0.504	ug/L	0.1138	0.504	ug/L	0.1138	22.59%
Tl 190.801†	5.0	0.525	ug/L	0.1087	0.525	ug/L	0.1087	20.70%
V 292.402†	-8.7	-0.062	ug/L	0.0414	-0.062	ug/L	0.0414	66.76%
Zn 206.200†	-48.4	-0.432	ug/L	0.1406	-0.432	ug/L	0.1406	32.51%
Li 670.784	2796.3	0.156	ug/L	0.0063	0.156	ug/L	0.0063	4.03%

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL) (DISSOLVED)	2000	1840	92.0	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	BORON (B) (DISSOLVED)	250	239	95.6	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	LITHIUM (LI) (DISSOLVED)	100.0	92.7	92.7	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	ZINC (ZN) (DISSOLVED)	500	468	93.6	80-120	05/26/15	06/04/15	#61CJU-150526A3-AZ16287
EPA 6010C	ALUMINUM (AL)	2000	2020	101	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	BORON (B)	250	246	98.4	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	LITHIUM (LI)	100.0	94.5	94.5	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287
EPA 6010C	ZINC (ZN)	500	480	96.0	80-120	05/26/15	06/04/15	#61CJU-150526A2-AZ16287

Comments: _____

Sequence No.: 13
Sample ID: 150526A-3010-LCS
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 39
Date Collected: 06/04/15 5:07:02 PM
Data Type: Reprocessed on 06/11/15 4:12:26 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 150526A-3010-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	268312.1	97.39	%	0.331				0.34%
Y Radial	18526.3	98.80	%	0.379				0.38%
Ag 338.289†	19304.8	93.61	ug/L	0.280	93.61	ug/L	0.280	0.30%
Al 308.215†	3365.5	2017	ug/L	18.07	2017	ug/L	18.07	0.90%
As 188.979†	1658.7	236.1	ug/L	0.96	236.1	ug/L	0.96	0.41%
B 249.677†	11209.6	246.4	ug/L	1.81	246.4	ug/L	1.81	0.73%
Ba 233.527†	130422.1	253.5	ug/L	0.52	253.5	ug/L	0.52	0.20%
Be 313.107†	231450.6	48.64	ug/L	0.169	48.64	ug/L	0.169	0.35%
Ca 315.887†	518517.8	25750	ug/L	31.31	25750	ug/L	31.31	0.12%
Cd 214.440†	17080.1	49.45	ug/L	0.250	49.45	ug/L	0.250	0.51%
Co 228.616†	32407.4	254.0	ug/L	1.07	254.0	ug/L	1.07	0.42%
Cr 267.716†	27678.2	260.1	ug/L	1.63	260.1	ug/L	1.63	0.63%
Cu 327.393†	52754.4	240.3	ug/L	1.05	240.3	ug/L	1.05	0.44%
Fe 273.955†	101136.3	987.4	ug/L	2.03	987.4	ug/L	2.03	0.21%
K 766.490†	32403.4	4942	ug/L	19.81	4942	ug/L	19.81	0.40%
Mg 285.213†	541633.2	25090	ug/L	48.15	25090	ug/L	48.15	0.19%
Mn 257.610†	27910.0	253.8	ug/L	0.68	253.8	ug/L	0.68	0.27%
Mo 202.031†	10021.6	244.3	ug/L	1.33	244.3	ug/L	1.33	0.55%
Na 589.592†	97385.5	28710	ug/L	118.10	28710	ug/L	118.10	0.41%
Ni 231.604†	15232.1	243.5	ug/L	1.27	243.5	ug/L	1.27	0.52%
P 213.617†	8586.7	1942	ug/L	9.48	1942	ug/L	9.48	0.49%
Pb 220.353†	2532.5	246.5	ug/L	2.02	246.5	ug/L	2.02	0.82%
Sb 206.836†	2471.2	238.1	ug/L	1.60	238.1	ug/L	1.60	0.67%
Se 196.026†	826.0	233.6	ug/L	1.95	233.6	ug/L	1.95	0.84%
Sn 189.927†	1676.6	244.7	ug/L	1.65	244.7	ug/L	1.65	0.67%
Sr 421.552†	35259.8	319.8	ug/L	2.08	319.8	ug/L	2.08	0.65%
Ti 337.279†	12363.5	250.4	ug/L	1.34	250.4	ug/L	1.34	0.54%
Tl 190.801†	2327.0	245.5	ug/L	0.97	245.5	ug/L	0.97	0.40%
V 292.402†	36812.6	261.5	ug/L	1.11	261.5	ug/L	1.11	0.43%
Zn 206.200†	52829.6	479.7	ug/L	1.80	479.7	ug/L	1.80	0.38%
Li 670.784	1695932.4	94.54	ug/L	0.703	94.54	ug/L	0.703	0.74%

Sequence No.: 15
Sample ID: 150526A-3010F-LCS
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 41
Date Collected: 06/04/15 5:19:11 PM
Data Type: Reprocessed on 06/11/15 4:12:28 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 150526A-3010F-LCS

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	268582.7	97.49	%	0.463				0.47%
Y Radial	19803.5	105.6	%	9.84				9.32%
Ag 338.289†	18818.8	91.25	ug/L	0.585	91.25	ug/L	0.585	0.64%
Al 308.215†	3061.4	1836	ug/L	186.29	1836	ug/L	186.29	10.15%
As 188.979†	1600.7	228.0	ug/L	0.17	228.0	ug/L	0.17	0.07%
B 249.677†	10878.2	239.1	ug/L	0.98	239.1	ug/L	0.98	0.41%
Ba 233.527†	126887.7	246.6	ug/L	1.67	246.6	ug/L	1.67	0.68%
Be 313.107†	225067.1	47.30	ug/L	0.323	47.30	ug/L	0.323	0.68%
Ca 315.887†	470632.2	23370	ug/L	2461.92	23370	ug/L	2461.92	10.53%
Cd 214.440†	16578.4	47.98	ug/L	0.195	47.98	ug/L	0.195	0.41%
Co 228.616†	31439.1	246.4	ug/L	1.03	246.4	ug/L	1.03	0.42%
Cr 267.716†	26830.7	252.2	ug/L	1.01	252.2	ug/L	1.01	0.40%
Cu 327.393†	51602.9	235.0	ug/L	2.06	235.0	ug/L	2.06	0.88%
Fe 273.955†	98025.3	957.0	ug/L	6.78	957.0	ug/L	6.78	0.71%
K 766.490†	29824.3	4549	ug/L	471.90	4549	ug/L	471.90	10.37%
Mg 285.213†	493960.6	22880	ug/L	2418.98	22880	ug/L	2418.98	10.57%
Mn 257.610†	25344.8	230.5	ug/L	22.96	230.5	ug/L	22.96	9.96%
Mo 202.031†	9696.3	236.4	ug/L	0.95	236.4	ug/L	0.95	0.40%
Na 589.592†	90154.6	26580	ug/L	2874.09	26580	ug/L	2874.09	10.81%
Ni 231.604†	14787.7	236.4	ug/L	0.55	236.4	ug/L	0.55	0.23%
P 213.617†	8336.1	1885	ug/L	4.75	1885	ug/L	4.75	0.25%
Pb 220.353†	2462.4	239.6	ug/L	1.78	239.6	ug/L	1.78	0.74%
Sb 206.836†	2399.3	231.2	ug/L	1.46	231.2	ug/L	1.46	0.63%
Se 196.026†	801.0	226.6	ug/L	1.64	226.6	ug/L	1.64	0.72%
Sn 189.927†	1634.6	238.5	ug/L	1.02	238.5	ug/L	1.02	0.43%
Sr 421.552†	32920.1	298.6	ug/L	31.79	298.6	ug/L	31.79	10.65%
Ti 337.279†	11306.9	229.0	ug/L	23.44	229.0	ug/L	23.44	10.23%
Tl 190.801†	2262.1	238.7	ug/L	1.39	238.7	ug/L	1.39	0.58%
V 292.402†	35846.1	254.6	ug/L	1.72	254.6	ug/L	1.72	0.68%
Zn 206.200†	51527.0	467.8	ug/L	3.45	467.8	ug/L	3.45	0.74%
Li 670.784	1663688.8	92.74	ug/L	0.440	92.74	ug/L	0.440	0.47%

Matrix Spike Recoveries

METALS

APPL ID: **150526W-16287 MS - 198124**

Sample ID: AZ16287

Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	ALUMINUM (AL) (DISS	2000	ND	2140	2140	107	107	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	BORON (B) (DISSOLV	250	75.9	343	343	107	107	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	LITHIUM (LI) (DISSOLV	100.0	0.70	110	110	109	109	0.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	ZINC (ZN) (DISSOLVE	500	ND	510	506	102	101	0.8	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198124	AZ16287
EPA 6010C	ALUMINUM (AL)	2000	28.7	2120	2160	105	107	1.9	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	BORON (B)	250	77.5	345	347	107	108	0.6	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	LITHIUM (LI)	100.0	0.82	110	109	109	108	0.9	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287
EPA 6010C	ZINC (ZN)	500	ND	512	517	102	103	1.0	20	80-120	05/26/15	06/11/15	05/26/15	06/11/15	198123	AZ16287

Comments: _____

Sequence No.: 12
Sample ID: AZ16287W34 MS
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 46
Date Collected: 06/11/15 2:43:01 PM
Data Type: Reprocessed on 06/12/15 9:41:06 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W34 MS

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	210159.6	97.04	%	1.109				1.14%
Y Radial	13751.0	98.37	%	0.563				0.57%
Ag 338.289†	18224.3	102.8	ug/L	1.14	102.8	ug/L	1.14	1.11%
Al 308.215†	2693.0	2120	ug/L	3.59	2120	ug/L	3.59	0.17%
As 188.979†	1436.0	275.2	ug/L	2.92	275.2	ug/L	2.92	1.06%
B 249.677†	11376.7	345.2	ug/L	3.29	345.2	ug/L	3.29	0.95%
Ba 233.527†	114120.9	271.5	ug/L	2.65	271.5	ug/L	2.65	0.98%
Be 313.107†	182300.8	52.14	ug/L	0.408	52.14	ug/L	0.408	0.78%
Ca 315.887†	771062.9	49480	ug/L	303.70	49480	ug/L	303.70	0.61%
Cd 214.440†	15123.6	52.47	ug/L	0.583	52.47	ug/L	0.583	1.11%
Co 228.616†	25417.9	260.5	ug/L	3.20	260.5	ug/L	3.20	1.23%
Cr 267.716†	22404.4	270.6	ug/L	2.80	270.6	ug/L	2.80	1.04%
Cu 327.393†	49130.9	262.9	ug/L	2.13	262.9	ug/L	2.13	0.81%
Fe 273.955†	111568.9	1439	ug/L	13.18	1439	ug/L	13.18	0.92%
K 766.490†	41650.2	6205	ug/L	37.41	6205	ug/L	37.41	0.60%
Mg 285.213†	455182.9	28160	ug/L	161.16	28160	ug/L	161.16	0.57%
Mn 257.610†	33371.9	404.5	ug/L	0.33	404.5	ug/L	0.33	0.08%
Mo 202.031†	8834.3	254.5	ug/L	3.06	254.5	ug/L	3.06	1.20%
Na 589.592†	632336.5	87860	ug/L	521.62	87860	ug/L	521.62	0.59%
Ni 231.604†	12190.2	246.3	ug/L	2.89	246.3	ug/L	2.89	1.18%
P 213.617†	6927.6	2099	ug/L	22.65	2099	ug/L	22.65	1.08%
Pb 220.353†	1506.0	257.0	ug/L	1.97	257.0	ug/L	1.97	0.77%
Sb 206.836†	1840.7	251.7	ug/L	3.88	251.7	ug/L	3.88	1.54%
Se 196.026†	775.8	245.5	ug/L	2.88	245.5	ug/L	2.88	1.17%
Sn 189.927†	1398.1	245.1	ug/L	2.82	245.1	ug/L	2.82	1.15%
Sr 421.552†	146967.0	339.2	ug/L	2.23	339.2	ug/L	2.23	0.66%
Ti 337.279†	9109.7	256.8	ug/L	0.84	256.8	ug/L	0.84	0.33%
Tl 190.801†	1219.9	256.6	ug/L	3.12	256.6	ug/L	3.12	1.21%
V 292.402†	26839.0	272.2	ug/L	1.77	272.2	ug/L	1.77	0.65%
Zn 206.200†	49250.2	511.8	ug/L	5.00	511.8	ug/L	5.00	0.98%
Li 670.784	1901337.3	110.1	ug/L	0.12	110.1	ug/L	0.12	0.10%

Sequence No.: 20
Sample ID: AZ16287W32 MS F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 52
Date Collected: 06/11/15 3:44:54 PM
Data Type: Reprocessed on 06/12/15 9:41:16 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W32 MS F

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	209132.6	96.57	%	1.513				1.57%
Y Radial	13434.8	96.11	%	0.369				0.38%
Ag 338.289†	18360.2	103.5	ug/L	1.23	103.5	ug/L	1.23	1.18%
Al 308.215†	2713.8	2137	ug/L	10.29	2137	ug/L	10.29	0.48%
As 188.979†	1469.8	281.8	ug/L	4.51	281.8	ug/L	4.51	1.60%
B 249.677†	11288.1	342.5	ug/L	3.96	342.5	ug/L	3.96	1.15%
Ba 233.527†	115109.5	273.8	ug/L	2.75	273.8	ug/L	2.75	1.00%
Be 313.107†	185221.2	52.98	ug/L	0.583	52.98	ug/L	0.583	1.10%
Ca 315.887†	768575.8	49320	ug/L	442.12	49320	ug/L	442.12	0.90%
Cd 214.440†	15158.0	52.58	ug/L	0.654	52.58	ug/L	0.654	1.24%
Co 228.616†	25592.9	262.3	ug/L	3.49	262.3	ug/L	3.49	1.33%
Cr 267.716†	22498.2	271.7	ug/L	3.74	271.7	ug/L	3.74	1.38%
Cu 327.393†	49562.6	265.3	ug/L	2.61	265.3	ug/L	2.61	0.98%
Fe 273.955†	111004.8	1431	ug/L	12.74	1431	ug/L	12.74	0.89%
K 766.490†	42104.6	6279	ug/L	62.36	6279	ug/L	62.36	0.99%
Mg 285.213†	464381.2	28730	ug/L	274.07	28730	ug/L	274.07	0.95%
Mn 257.610†	34856.3	422.5	ug/L	1.74	422.5	ug/L	1.74	0.41%
Mo 202.031†	8899.8	256.4	ug/L	3.23	256.4	ug/L	3.23	1.26%
Na 589.592†	593312.2	82440	ug/L	719.66	82440	ug/L	719.66	0.87%
Ni 231.604†	12211.5	246.7	ug/L	3.60	246.7	ug/L	3.60	1.46%
P 213.617†	6964.1	2111	ug/L	31.48	2111	ug/L	31.48	1.49%
Pb 220.353†	1540.5	262.8	ug/L	3.09	262.8	ug/L	3.09	1.17%
Sb 206.836†	1866.8	255.3	ug/L	3.60	255.3	ug/L	3.60	1.41%
Se 196.026†	767.1	242.7	ug/L	2.35	242.7	ug/L	2.35	0.97%
Sn 189.927†	1415.8	248.2	ug/L	2.62	248.2	ug/L	2.62	1.05%
Sr 421.552†	141936.9	327.5	ug/L	2.77	327.5	ug/L	2.77	0.85%
Ti 337.279†	9274.4	261.5	ug/L	0.97	261.5	ug/L	0.97	0.37%
Tl 190.801†	1277.2	268.6	ug/L	7.16	268.6	ug/L	7.16	2.67%
V 292.402†	27424.3	278.2	ug/L	3.28	278.2	ug/L	3.28	1.18%
Zn 206.200†	49034.7	509.5	ug/L	4.05	509.5	ug/L	4.05	0.79%
Li 670.784	1890773.6	109.5	ug/L	0.21	109.5	ug/L	0.21	0.19%

Sequence No.: 13
Sample ID: AZ16287W34 MSD
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 47
Date Collected: 06/11/15 2:50:16 PM
Data Type: Reprocessed on 06/12/15 9:41:07 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W34 MSD

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	209621.8	96.79	%	0.865				0.89%
Y Radial,	13527.3	96.77	%	0.558				0.58%
Ag 338.289†	18434.9	104.0	ug/L	1.18	104.0	ug/L	1.18	1.13%
Al 308.215†	2746.5	2162	ug/L	24.07	2162	ug/L	24.07	1.11%
As 188.979†	1454.1	278.7	ug/L	3.82	278.7	ug/L	3.82	1.37%
B 249.677†	11436.1	347.0	ug/L	4.14	347.0	ug/L	4.14	1.19%
Ba 233.527†	115464.3	274.7	ug/L	2.64	274.7	ug/L	2.64	0.96%
Be 313.107†	185461.2	53.05	ug/L	0.506	53.05	ug/L	0.506	0.95%
Ca 315.887†	780497.9	50080	ug/L	545.82	50080	ug/L	545.82	1.09%
Cd 214.440†	15254.9	52.93	ug/L	0.628	52.93	ug/L	0.628	1.19%
Co 228.616†	25685.0	263.2	ug/L	3.51	263.2	ug/L	3.51	1.33%
Cr 267.716†	22601.2	273.0	ug/L	3.50	273.0	ug/L	3.50	1.28%
Cu 327.393†	49899.5	267.1	ug/L	2.32	267.1	ug/L	2.32	0.87%
Fe 273.955†	112386.8	1449	ug/L	12.51	1449	ug/L	12.51	0.86%
K 766.490†	42295.8	6303	ug/L	72.96	6303	ug/L	72.96	1.16%
Mg 285.213†	464845.6	28760	ug/L	338.73	28760	ug/L	338.73	1.18%
Mn 257.610†	33761.7	409.2	ug/L	1.02	409.2	ug/L	1.02	0.25%
Mo 202.031†	8916.8	256.9	ug/L	3.04	256.9	ug/L	3.04	1.18%
Na 589.592†	632092.1	87830	ug/L	1150.51	87830	ug/L	1150.51	1.31%
Ni 231.604†	12276.6	248.0	ug/L	3.27	248.0	ug/L	3.27	1.32%
P 213.617†	6987.3	2118	ug/L	32.33	2118	ug/L	32.33	1.53%
Pb 220.353†	1532.8	261.6	ug/L	3.72	261.6	ug/L	3.72	1.42%
Sb 206.836†	1861.6	254.6	ug/L	2.79	254.6	ug/L	2.79	1.10%
Se 196.026†	779.9	246.8	ug/L	6.13	246.8	ug/L	6.13	2.49%
Sn 189.927†	1409.0	247.0	ug/L	2.34	247.0	ug/L	2.34	0.95%
Sr 421.552†	147923.5	341.4	ug/L	4.78	341.4	ug/L	4.78	1.40%
Ti 337.279†	9295.9	262.1	ug/L	1.46	262.1	ug/L	1.46	0.56%
Tl 190.801†	1241.5	261.1	ug/L	2.38	261.1	ug/L	2.38	0.91%
V 292.402†	27275.5	276.7	ug/L	2.52	276.7	ug/L	2.52	0.91%
Zn 206.200†	49781.3	517.3	ug/L	5.77	517.3	ug/L	5.77	1.12%
Li 670.784	1889454.6	109.4	ug/L	0.45	109.4	ug/L	0.45	0.41%

Sequence No.: 21
Sample ID: AZ16287W32 MSD F
Analyst: RJS - Jules
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 53
Date Collected: 06/11/15 3:52:03 PM
Data Type: Reprocessed on 06/12/15 9:41:17 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: AZ16287W32 MSD F

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	212781.9	98.25	%	0.684				0.70%
Y Radial	13732.8	98.24	%	0.816				0.83%
Ag 338.289†	18291.6	103.2	ug/L	0.75	103.2	ug/L	0.75	0.73%
Al 308.215†	2712.2	2136	ug/L	16.34	2136	ug/L	16.34	0.77%
As 188.979†	1476.4	283.1	ug/L	2.36	283.1	ug/L	2.36	0.83%
B 249.677†	11312.4	343.2	ug/L	2.10	343.2	ug/L	2.10	0.61%
Ba 233.527†	114111.3	271.5	ug/L	1.16	271.5	ug/L	1.16	0.43%
Be 313.107†	183526.1	52.49	ug/L	0.262	52.49	ug/L	0.262	0.50%
Ca 315.887†	765032.0	49090	ug/L	632.39	49090	ug/L	632.39	1.29%
Cd 214.440†	15124.7	52.46	ug/L	0.388	52.46	ug/L	0.388	0.74%
Co 228.616†	25485.1	261.2	ug/L	1.88	261.2	ug/L	1.88	0.72%
Cr 267.716†	22381.4	270.3	ug/L	1.75	270.3	ug/L	1.75	0.65%
Cu 327.393†	49016.6	262.3	ug/L	1.31	262.3	ug/L	1.31	0.50%
Fe 273.955†	110584.4	1426	ug/L	4.39	1426	ug/L	4.39	0.31%
K 766.490†	41718.7	6221	ug/L	86.69	6221	ug/L	86.69	1.39%
Mg 285.213†	460127.3	28470	ug/L	399.02	28470	ug/L	399.02	1.40%
Mn 257.610†	34702.9	420.7	ug/L	0.31	420.7	ug/L	0.31	0.07%
Mo 202.031†	8883.3	256.0	ug/L	1.57	256.0	ug/L	1.57	0.61%
Na 589.592†	592016.0	82260	ug/L	1158.06	82260	ug/L	1158.06	1.41%
Ni 231.604†	12161.8	245.7	ug/L	2.13	245.7	ug/L	2.13	0.87%
P 213.617†	6962.0	2110	ug/L	11.14	2110	ug/L	11.14	0.53%
Pb 220.353†	1540.8	262.9	ug/L	1.72	262.9	ug/L	1.72	0.65%
Sb 206.836†	1868.6	255.5	ug/L	1.69	255.5	ug/L	1.69	0.66%
Se 196.026†	767.4	242.8	ug/L	2.60	242.8	ug/L	2.60	1.07%
Sn 189.927†	1414.7	248.0	ug/L	1.41	248.0	ug/L	1.41	0.57%
Sr 421.552†	140478.2	324.1	ug/L	4.73	324.1	ug/L	4.73	1.46%
Ti 337.279†	9222.1	260.0	ug/L	0.26	260.0	ug/L	0.26	0.10%
Tl 190.801†	1265.7	266.2	ug/L	1.52	266.2	ug/L	1.52	0.57%
V 292.402†	27178.2	275.7	ug/L	1.40	275.7	ug/L	1.40	0.51%
Zn 206.200†	48719.0	506.2	ug/L	2.15	506.2	ug/L	2.15	0.43%
Li 670.784	1896565.6	109.8	ug/L	0.83	109.8	ug/L	0.83	0.75%

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4114020	06/04/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	JT BAKER	0000067379	06/04/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0 5 mL	6010 LDL	O2SI	1062903-33879	08/01/15	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0 5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0 5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	Today	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	Today	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 2L 1%HNO3 / 5%HCl				
1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4114020	06/04/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	JT BAKER	0000067379	06/04/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0 5 mL	6010 LDL	ABSOLUTE	1062903-33879	08/01/15	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0 5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0 5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	Today	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER	PREP	EXP
15mL	STD 3	Today	1 week		2mL	Yttrium	O2SI	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4114020	06/11/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	JT BAKER	0000067379	06/11/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0 5 mL	6010 LDL	O2SI	1062903-33879	08/01/15	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0 5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25ml	STD 3	Today	1 week		0 5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25ml	1%HNO3/5%HCl	Today	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15ml	STD 3	Today	1 week		2ml	Yttrium	O2SI	1073310-35027	10/01/16
25ml	1%HNO3/5%HCl	Today	1 week		Prepared in 2L 1%HNO3 / 5%HCl				
1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4114020	06/11/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	JT BAKER	0000067379	06/11/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 ml DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0 5 mL	6010 LDL	ABSOLUTE	1062903-33879	08/01/15	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0 5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0 5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25ml	STD 3	Today	1 week		0 5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25ml	1%HNO3/5%HCl	Today	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER	PREP	EXP
15ml	STD 3	Today	1 week		2ml	Yttrium	O2SI	Today	1 week
25ml	1%HNO3/5%HCl	Today	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 150526A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 1073180-35017		
Spiked ID 2	LCSW LOT# 1073080-35018		
Spiked ID 3	Li 10mg/L Prep 5-26-15		
Spiked ID 4			
Spiked By	NM	Date:	05/26/15 9:17:00 AM
Witnessed By	SJH	Date:	05/26/15 9:17:00 AM

Starting Temp:	96 c
Ending Temp:	96 c
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	05/26/15 14:15

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	150526A Blk				50mL	50mL	05/26/15 9:17	equip: Modblock2 TOTAL
2	150526A LCS		500uL	1+2+3	50mL	50mL	05/26/15 9:17	equip: Modblock2
3	AZ15875	AZ15875W08			50mL	50mL	05/26/15 9:17	equip: Modblock2
4	AZ16235	AZ16235W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
5	AZ16236	AZ16236W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
6	AZ16287	AZ16287W34			50mL	50mL	05/26/15 9:17	equip: Modblock2
7	AZ16287 MS	AZ16287W34	500uL	1+2+3	50mL	50mL	05/26/15 9:17	equip: Modblock2
8	AZ16287 MSD	AZ16287W34	500uL	1+2+3	50mL	50mL	05/26/15 9:17	equip: Modblock2
9	AZ16288	AZ16288W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
10	AZ16289	AZ16289W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
11	AZ16290	AZ16290W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
12	AZ16334	AZ16334W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
13	AZ16335	AZ16335W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
14	AZ16336	AZ16336W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
15	AZ16337	AZ16337W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
16	AZ16338	AZ16338W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
17	AZ16339	AZ16339W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
18	AZ16340	AZ16340W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
19	AZ16341	AZ16341W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
20	AZ16342	AZ16342W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
21	AZ16343	AZ16343W04			50mL	50mL	05/26/15 9:17	equip: Modblock2
22	AZ16403	AZ16403W11			50mL	50mL	05/26/15 9:17	equip: Modblock2

Solvent and Lot#
HNO3 J.T.B 99263 3429
1:1 HCL 1-12-15

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	ROS
Date	5/26/15
Time	1700
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	05/21/15 8:12:25 AM

Reviewed By: ROS **Date:** 5/26/15

Metals Digestion Worksheet

Method Name 3010A Digestion (Field Filter) **Prep Method** M3010F **Set** 150526A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 1073180-35017		
Spiked ID 2	LCSW LOT# 1073080-35018		
Spiked ID 3	Li 10mg/L PREP 5-26-15		
Spiked ID 4			
Spiked By	NM	Date:	05/26/15 9:17:00 AM
Witnessed By	SJH	Date:	05/26/15 9:17:00 AM

Starting Temp:	96 c
Ending Temp:	96 c
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	05/26/15 14:08

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	150526A Blk				50mL	50mL	05/26/15 9:17	equip: Modblock2 DISSOLVE
2	150526A LCS		500uL	1+2+3	50mL	50mL	05/26/15 9:17	equip: Modblock2
3	AZ16235	AZ16235W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
4	AZ16236	AZ16236W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
5	AZ16287	AZ16287W32			50mL	50mL	05/26/15 9:17	equip: Modblock2
6	AZ16287 MS	AZ16287W32	500uL	1+2+3	50mL	50mL	05/26/15 9:17	equip: Modblock2
7	AZ16287 MSD	AZ16287W32	500uL	1+2+3	50mL	50mL	05/26/15 9:17	equip: Modblock2
8	AZ16288	AZ16288W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
9	AZ16289	AZ16289W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
10	AZ16290	AZ16290W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
11	AZ16334	AZ16334W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
12	AZ16335	AZ16335W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
13	AZ16336	AZ16336W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
14	AZ16337	AZ16337W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
15	AZ16338	AZ16338W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
16	AZ16339	AZ16339W11			50mL	50mL	05/26/15 9:17	equip: Modblock2
17	AZ16340	AZ16340W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
18	AZ16341	AZ16341W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
19	AZ16342	AZ16342W12			50mL	50mL	05/26/15 9:17	equip: Modblock2
20	AZ16343	AZ16343W05			50mL	50mL	05/26/15 9:17	equip: Modblock2
21	AZ16403	AZ16403W12			50mL	50mL	05/26/15 9:17	equip: Modblock2

Solvent and Lot#
HNO3 J.T.B 99263 3429
1:1 HCL 1-12-15

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	RDS
Date	6/1/15
Time	1703
Moved to	METALS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	05/21/15 8:29:10 AM

Reviewed By: RDS **Date:** 6/1/15

6010 Injection Log

Directory: K:\ICAP JULES\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	04 Jun 2015	15:38	CalBlk 150604RJS I:JL O:R		150611A6010	1.
2	04 Jun 2015	15:43	STD 1 150604RJS I:JL O:RJ		150611A6010	1.
3	04 Jun 2015	15:48	STD 2 150604RJS I:JL O:RJ		150611A6010	1.
4	04 Jun 2015	15:52	STD 3 150604RJS I:JL O:RJ		150611A6010	1.
5	04 Jun 2015	16:00	ICV 150604RJS I:JL O:RJS		150611A6010	1.
6	04 Jun 2015	16:14	ICB 150604RJS I:JL O:RJS		150611A6010	1.
8	04 Jun 2015	16:27	ICSA 150604RJS I:JL O:RJS		150611A6010	1.
9	04 Jun 2015	16:39	ICSAB 150604RJS I:JL O:RJ		150611A6010	1.
10	04 Jun 2015	16:49	CCV1 150604RJS I:JL O:RJS		150611A6010	1.
11	04 Jun 2015	16:54	CCB 150604RJS I:JL O:RJS		150611A6010	1.
12	04 Jun 2015	17:00	150526A-3010-BLK		150611A6010	1.
13	04 Jun 2015	17:07	150526A-3010-LCS		150611A6010	1.
14	04 Jun 2015	17:12	150526A-3010F-BLK		150611A6010	1.
15	04 Jun 2015	17:19	150526A-3010F-LCS		150611A6010	1.
18	04 Jun 2015	17:37	CCV2 150604RJS I:JL O:RJS		150611A6010	1.
19	04 Jun 2015	17:57	CCB 150604RJS I:JL O:RJS		150611A6010	1.

6010 Injection Log

Directory: K:\ICAP JULES\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
47	11 Jun 2015	13:30	CalBlk 150611RJS I:JL O:R		150611A6010	1.
48	11 Jun 2015	13:36	STD 1 150611RJS I:JL O:RJ		150611A6010	1.
49	11 Jun 2015	13:43	STD 2 150611RJS I:JL O:RJ		150611A6010	1.
50	11 Jun 2015	13:48	STD 3 150611RJS I:JL O:RJ		150611A6010	1.
51	11 Jun 2015	13:58	ICV 150611RJS I:JL O:RJS		150611A6010	1.
52	11 Jun 2015	14:04	ICB 150611RJS I:JL O:RJS		150611A6010	1.
53	11 Jun 2015	14:10	ICSA 150611RJS I:JL O:RJS		150611A6010	1.
54	11 Jun 2015	14:17	ICSAB 150611RJS I:JL O:RJ		150611A6010	1.
55	11 Jun 2015	14:23	CCV1 150611RJS I:JL O:RJS		150611A6010	1.
56	11 Jun 2015	14:29	CCB 150611RJS I:JL O:RJS		150611A6010	1.
57	11 Jun 2015	14:36	AZ16287W34		150611A6010	1.
58	11 Jun 2015	14:43	AZ16287W34 MS		150611A6010	1.
59	11 Jun 2015	14:50	AZ16287W34 MSD		150611A6010	1.
60	11 Jun 2015	14:57	AZ16288W11		150611A6010	1.
61	11 Jun 2015	15:02	AZ16289W12		150611A6010	1.
62	11 Jun 2015	15:10	AZ16290W12		150611A6010	1.
63	11 Jun 2015	15:25	CCV2 150611RJS I:JL O:RJS		150611A6010	1.
64	11 Jun 2015	15:30	CCB 150611RJS I:JL O:RJS		150611A6010	1.
65	11 Jun 2015	15:37	AZ16287W32 F		150611A6010	1.
66	11 Jun 2015	15:44	AZ16287W32 MS F		150611A6010	1.
67	11 Jun 2015	15:52	AZ16287W32 MSD F		150611A6010	1.
68	11 Jun 2015	15:59	AZ16288W12 F		150611A6010	1.
69	11 Jun 2015	16:04	AZ16289W11 F		150611A6010	1.
70	11 Jun 2015	16:12	AZ16290W11 F		150611A6010	1.
71	11 Jun 2015	16:20	CCV1 150611RJS I:JL O:RJS		150611A6010	1.
72	11 Jun 2015	16:29	CCB 150611RJS I:JL O:RJS		150611A6010	1.
73	11 Jun 2015	16:36	AZ16287W34-A		150611A6010	1.
74	11 Jun 2015	16:43	AZ16287W32-A F		150611A6010	1.
75	11 Jun 2015	16:50	CCV2 150611RJS I:JL O:RJS		150611A6010	1.
76	11 Jun 2015	16:59	CCB 150611RJS I:JL O:RJS		150611A6010	1.

INORGANIC ANALYSIS

APPL, INC.

INORGANIC ANALYSIS
QC Summary

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	SULFATE	1.1	1.0	0.20	0.09	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	05/13/15	05/13/15	#300WD-150513B-AZ16287
SW846 90	TOTAL ORGANIC C	0.35 U	0.5	0.35	0.13	mg/L	05/19/15	05/19/15	#906-150519A-AZ16287

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	SULFATE	20.0	19.3	96.5	90-110	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRATE	22.1	22.0	99.5	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRITE	9.98	9.47	94.9	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	SULFATE	20.0	19.1	95.5	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
SW846 906	TOTAL ORGANIC CARBON	10.00	10.8	108	90-110	05/19/15	05/19/15	#906-150519A-AZ16287

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **150513W-16287 MS - 197256**

Sample ID: AZ16287

Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	CHLORIDE	40	65.1	107	107	105	105	0.0	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197256	AZ16287
EPA 300.0	NITRATE	22.1	2.2	22.6	23.8	92.3	97.7	5.2	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
EPA 300.0	NITRITE	9.98	ND	11.4	13.3	114 #	133 #	15.4	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
EPA 300.0	SULFATE	20	6.6	25.5	25.5	94.5	94.5	0.0	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
SW846 906	TOTAL ORGANIC CAR	10.00	0.76	11.9	12.7	111 #	119 #	6.5	20	90-110	05/19/15	05/19/15	05/19/15	05/19/15	197186	AZ16287

= Recovery is outside QC limits.

Comments: _____

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/13/15

Matrix: WATER Instrument: Dionex

Blank ID: 150513A1-BLK Time Analyzed: 0850

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AZ16287	S67-MW007-051215	36	05/13/15 1541
150513A1-MSD	Matrix SpikeD	38	05/13/15 1602
150513A1-MS	Matrix Spike	39	05/13/15 1613
AZ16288	S67-MW003-051215	42	05/13/15 1644
AZ16289	S67-MW002-051215	43	05/13/15 1655
AZ16290	S67-MW009-051215	44	05/13/15 1706
150513A1-BLK	Blank	5	05/13/15 0850
150513A1-LCS	Lab Control Spike	6	05/13/15 0900

Comments: Batch: #300W-150513A1

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/13/15

Matrix: WATER Instrument: Dionex

Blank ID: 150513B-BLK Time Analyzed: 1634

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150513B-BLK	Blank	41	05/13/15 1634
150513B-LCS	Lab Control Spike	45	05/13/15 1716
AZ16287	S67-MW007-051215	49	05/13/15 1759
150513B-MS	Matrix Spike	51	05/13/15 1820
150513B-MSD	Matrix SpikeD	54	05/13/15 1852
AZ16288	S67-MW003-051215	55	05/13/15 1902
AZ16290	S67-MW009-051215	56	05/13/15 1913
AZ16290	S67-MW009-051215	57	05/13/15 1923

Comments: Batch: #300WD-150513B

SW846 9060

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 76413

Case No: 76413 Date Analyzed: 05/19/15

Matrix: WATER Instrument: Tekmar

Blank ID: 150519A-BLK Time Analyzed: 1212

APPL ID.	Client Sample No.	File ID.	Date Analyzed
150519A-MS	Matrix Spike	10	05/19/15 1609
150519A-MSD	Matrix SpikeD	11	05/19/15 1640
AZ16288	S67-MW003-051215	12	05/19/15 1710
AZ16289	S67-MW002-051215	13	05/19/15 1740
AZ16290	S67-MW009-051215	14	05/19/15 1809
150519A-BLK	Blank	2	05/19/15 1212
150519A-LCS	Lab Control Spike	3	05/19/15 1244
AZ16287	S67-MW007-051215	8	05/19/15 1510
150519A-DUP	Duplicate	8	05/19/15 1539

Comments: Batch: #906-150519A

INORGANIC ANALYSIS
Sample Data

APPL, INC.

Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW007-051215

APPL ID: AZ16287

Sample Collection Date: 05/12/15

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	65.1	2.0	0.40	0.16	mg/L	2	05/13/15	05/13/15
EPA 300.0	NITRATE	2.2	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
EPA 300.0	SULFATE	6.6	1.0	0.20	0.09	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	0.76	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

Printed: 06/10/15 1:08:10 PM

APPL-F1-SC-NoMC-REG MDLs

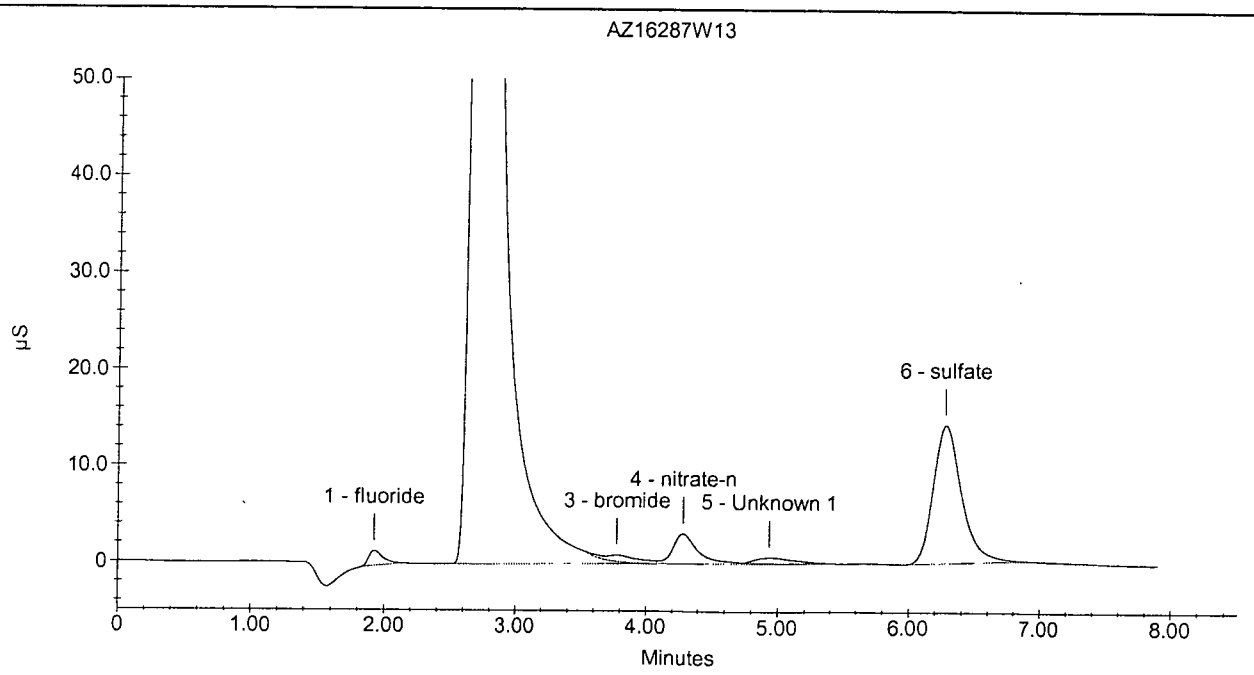
Sample Analysis Report

Sample Name : AZ16287W13
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_036.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 15:41:21
System Operator : jm
Injection Number : 36
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.92	fluoride	0.1979	112034	15313
2	2.71	chloride	72.3451	40178632	4873340
3	3.77	bromide	0.7395	112953	6825
4	4.28	nitrate-n	0.4923	429111	30854
5	4.93	Unknown 1	0.0000	125583	6066
6	6.27	sulfate	6.5533	2142643	143094



APPL, Inc.

Current Date : 5/13/15
Current Time : 15:51:53

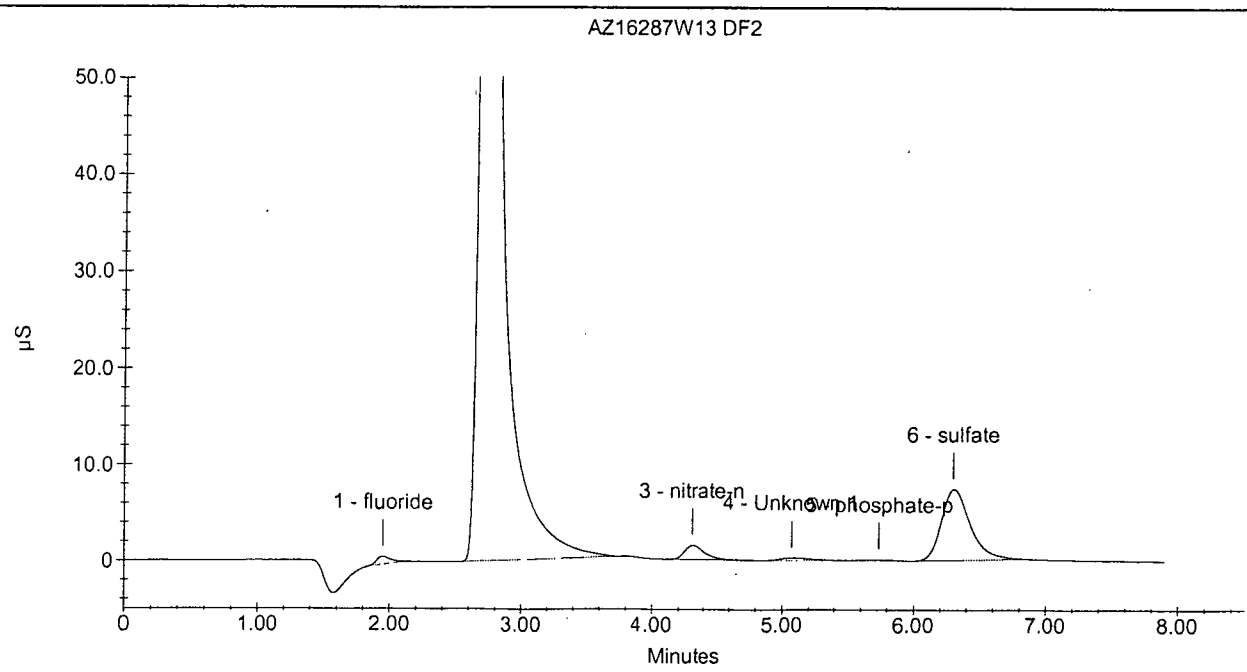
Sample Analysis Report

Sample Name : AZ16287W13 DF2
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_049.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 17:59:11
System Operator : jm
Injection Number : 49
Multiplier : 2.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.95	fluoride	0.2453	58036	8249
2	2.72	chloride	65.0574	17725578	2132870
3	4.31	nitrate-n	0.5894	164412	14423
4	5.07	Unknown 1	0.0000	44422	2703
5	5.73	phosphate-p	-0.3475	11387	799
6	6.29	sulfate	7.7877	1118305	73216



Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW003-051215

Sample Collection Date: 05/12/15

APPL ID: AZ16288

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	SULFATE	146	5.0	1.00	0.45	mg/L	5	05/13/15	05/13/15
EPA 300.0	CHLORIDE	4.4	1.0	0.20	0.08	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRATE	5.4	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	3.7	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

Printed: 06/10/15 1:08:10 PM

APPL-F1-SC-NoMC-REG MDLs

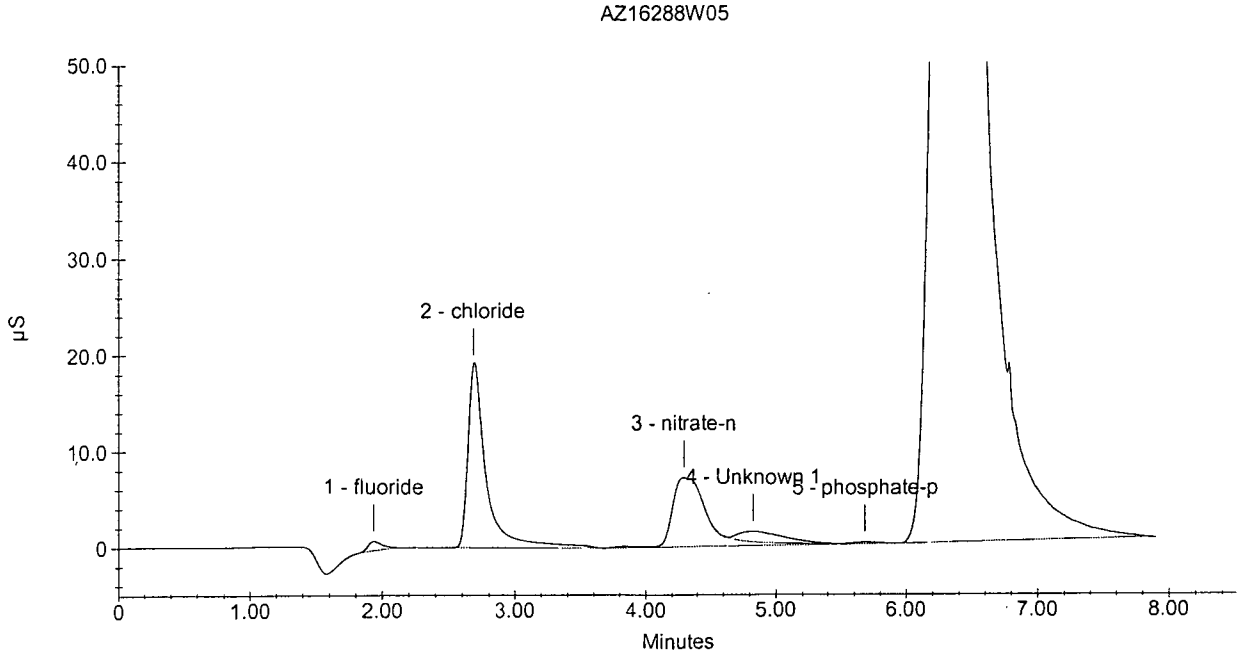
Sample Analysis Report

Sample Name : AZ16288W05
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_042.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 16:44:49
System Operator : jm
Injection Number : 42
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	0.1398	70349	9711
2	2.68	chloride	4.3734	1848421	188558
3	4.29	nitrate-n	1.2220	1406402	71582
4	4.83	Unknown 1	0.0000	265585	10968
5	5.68	phosphate-p	-0.1482	22668	1691
6	6.36	sulfate	174.4204	66799957	4350140



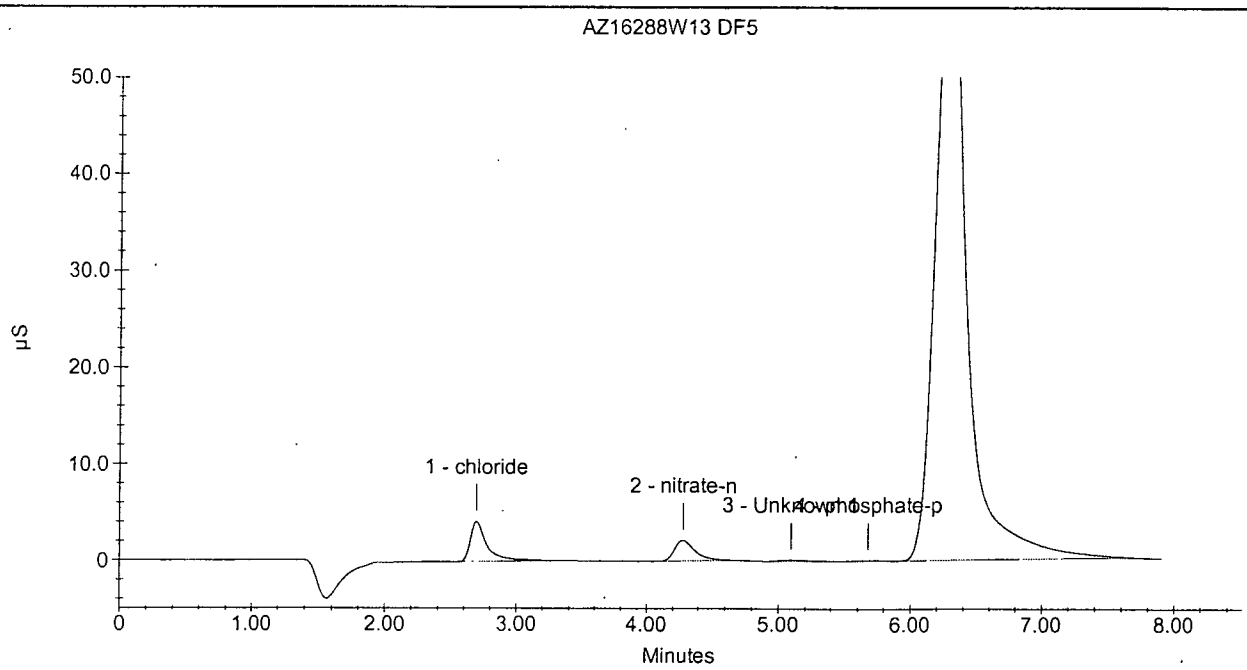
Sample Analysis Report

Sample Name : AZ16288W13 DF5
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_055.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 19:02:39
System Operator : jm
Injection Number : 55
Multiplier : 5.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	2.69	chloride	8.8102	375829	41430
2	4.28	nitrate-n	1.7557	240016	21352
3	5.09	Unknown 1	0.0000	22047	1475
4	5.68	phosphate-p	-0.8687	11385	829
5	6.27	sulfate	146.1179	10874548	684258



Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW002-051215

Sample Collection Date: 05/12/15

APPL ID: AZ16289

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	1.5	1.0	0.20	0.08	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRATE	1.8	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
EPA 300.0	SULFATE	22.3	1.0	0.20	0.09	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	4.6	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

Printed: 06/10/15 1:08:10 PM

APPL-F1-SC-NoMC-REG MDLs

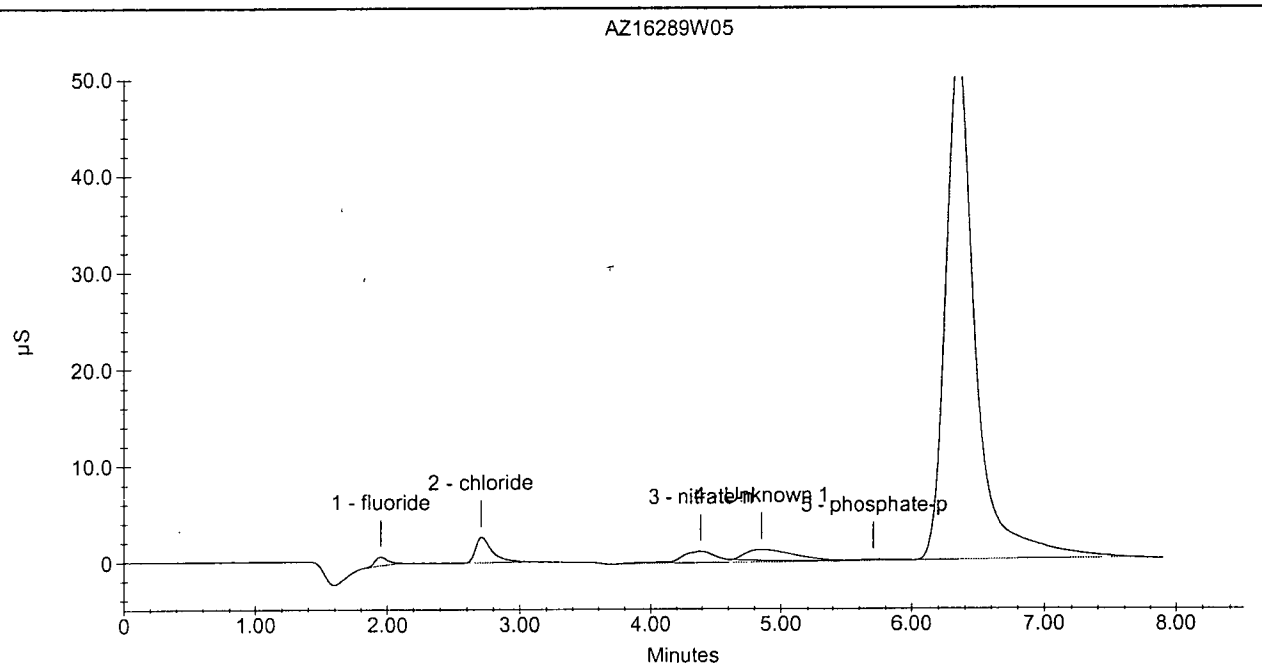
Sample Analysis Report

Sample Name : AZ16289W05
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_043.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 16:55:23
System Operator : jm
Injection Number : 43
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.95	fluoride	0.1282	62001	9092
2	2.71	chloride	1.5168	237525	26539
3	4.39	nitrate-n	0.4067	314380	11759
4	4.85	Unknown 1	0.0000	277630	11239
5	5.71	phosphate-p	-0.1586	18070	1225
6	6.35	sulfate	22.2768	8198858	527504



Wet Lab Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack

Project: CTO JU11 112G02622 NSF Indian Head

Sample ID: S67-MW009-051215

APPL ID: AZ16290

Sample Collection Date: 05/12/15

ARF: 76413

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	SULFATE	58.1	2.0	0.40	0.18	mg/L	2	05/13/15	05/13/15
EPA 300.0	CHLORIDE	134	5.0	1.00	0.40	mg/L	5	05/13/15	05/13/15
EPA 300.0	NITRATE	1.2	0.5	0.18	0.04	mg/L	1	05/13/15	05/13/15
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	1	05/13/15	05/13/15
SW846 9060	TOTAL ORGANIC CARBON	1.4	0.5	0.35	0.13	mg/L	1	05/19/15	05/19/15

Printed: 06/10/15 1:08:10 PM

APPL-F1-SC-NoMC-REG MDLs

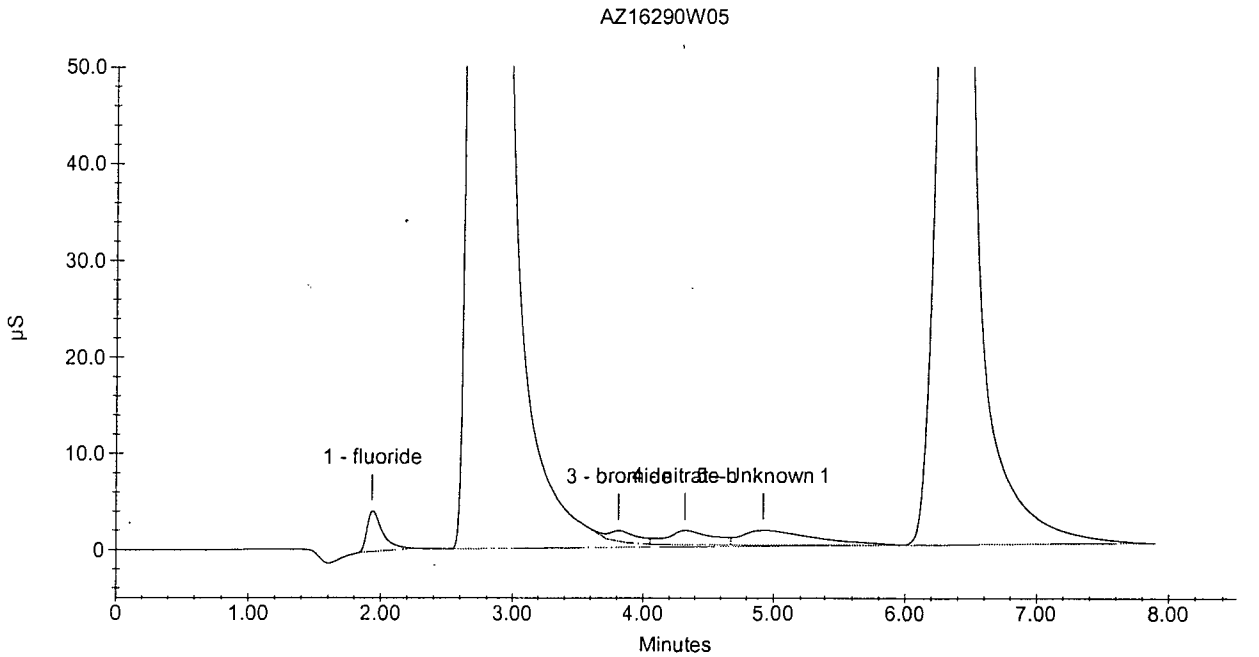
Sample Analysis Report

Sample Name : AZ16290W05
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_044.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 17:06:00
System Operator : jm
Injection Number : 44
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	0.5189	342194	41772
2	2.75	chloride	160.3419	89801261	10241936
3	3.81	bromide	1.0226	172932	11722
4	4.32	nitrate-n	0.4289	344124	14926
5	4.92	Unknown 1	0.0000	576117	15451
6	6.35	sulfate	61.4417	23283995	1527916



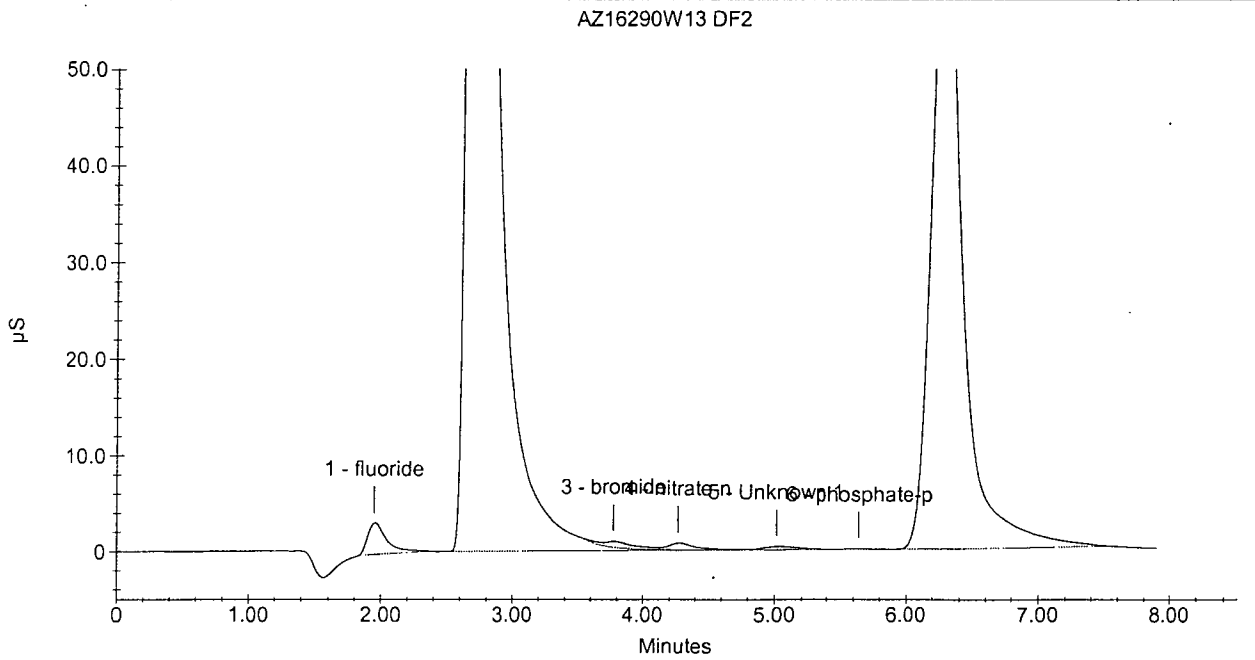
Sample Analysis Report

Sample Name : AZ16290W13 DF2
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_056.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 19:13:12
System Operator : jm
Injection Number : 56
Multiplier : 2.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.95	fluoride	0.9998	328591	32485
2	2.71	chloride	154.1421	42843638	5123458
3	3.77	bromide	1.4039	105003	6574
4	4.27	nitrate-n	0.5068	109128	7032
5	5.01	Unknown 1	0.0000	64379	3479
6	5.64	phosphate-p	-0.3543	9870	713
7	6.28	sulfate	58.1154	10810661	692915



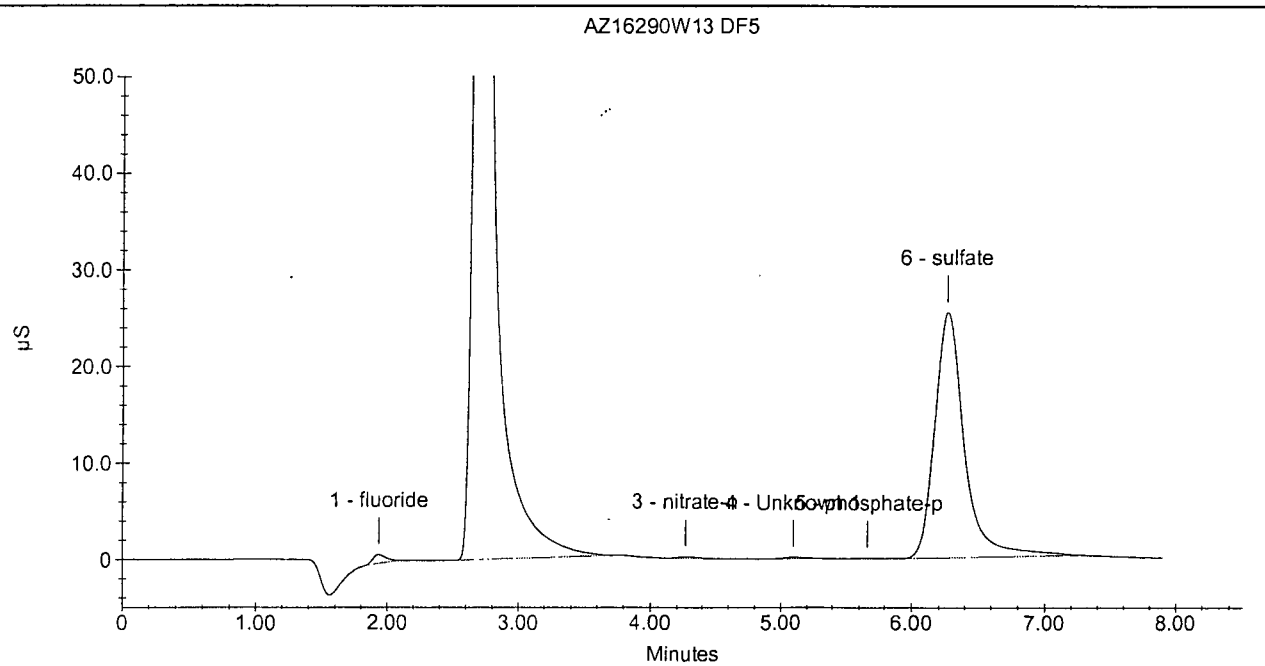
Sample Analysis Report

Sample Name : AZ16290W13 DF5
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_057.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 19:23:52
System Operator : jm
Injection Number : 57
Multiplier : 5.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	0.6538	63867	9254
2	2.69	chloride	134.2109	14518867	1747188
3	4.27	nitrate-n	0.9266	17929	1786
4	5.09	Unknown 1	0.0000	22685	1548
5	5.67	phosphate-p	-0.9097	7763	615
6	6.25	sulfate	56.8420	3997276	253401



INORGANIC ANALYSIS
Calibration Data

APPL, INC.

INORGANIC ANALYSES
AUTO CALIBRATION

Analytical Method: 300/9056

Lab Name: APPL, Inc.

Instrument ID: Dionex

Autocal ID: 150505a

Concentration Units (mg/L or mg/kg): mg/L

Analyte	1	2	3	4	5	6	7
	Autocal 11:21	Autocal 11:32	Autocal 11:43	Autocal 11:53	Autocal 12:04	Autocal 12:15	Autocal 12:26
Bromide	13289	120492	484620	1009394	2485414	3656063	5312484
Chloride	93020	430478	2136859	4658363	12647726	18712590	28275015
Fluoride	ND	57622	321944	747949	1627638	2536232	3565505
Nitrate-N	40653	254027	1101996	2269536	6110953	9060782	13407821
Nitrite-N	12996	133908	545677	1140945	2651301	3843357	5501151
Phosphate-P	90339	171940	572832	1002780	2255377	3183589	4524113
Sulfate	67956	291320	1510375	3203589	8790092	12873665	19278033

Comments:

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract:

ARF No: SDG:

Initial Calibration Source: o2si, ULTRA

Continuing Calibration Source: CPI

Analysis Date: 05/05/15

Analyte	Calibration Verification									M
	True ICV	Found 12:47	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
bromide	12.5	12.3745	99.0							
chloride	20	18.7460	93.7							
fluoride	2.5	2.61193	104							
Nitrate(NO3)-N	5	4.90230	98.0							
Nitrite(NO2)-N	3.04	2.93829	96.7							
phosphate-p	5	5.03432	101							
sulfate	20	19.1007	95.5							

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

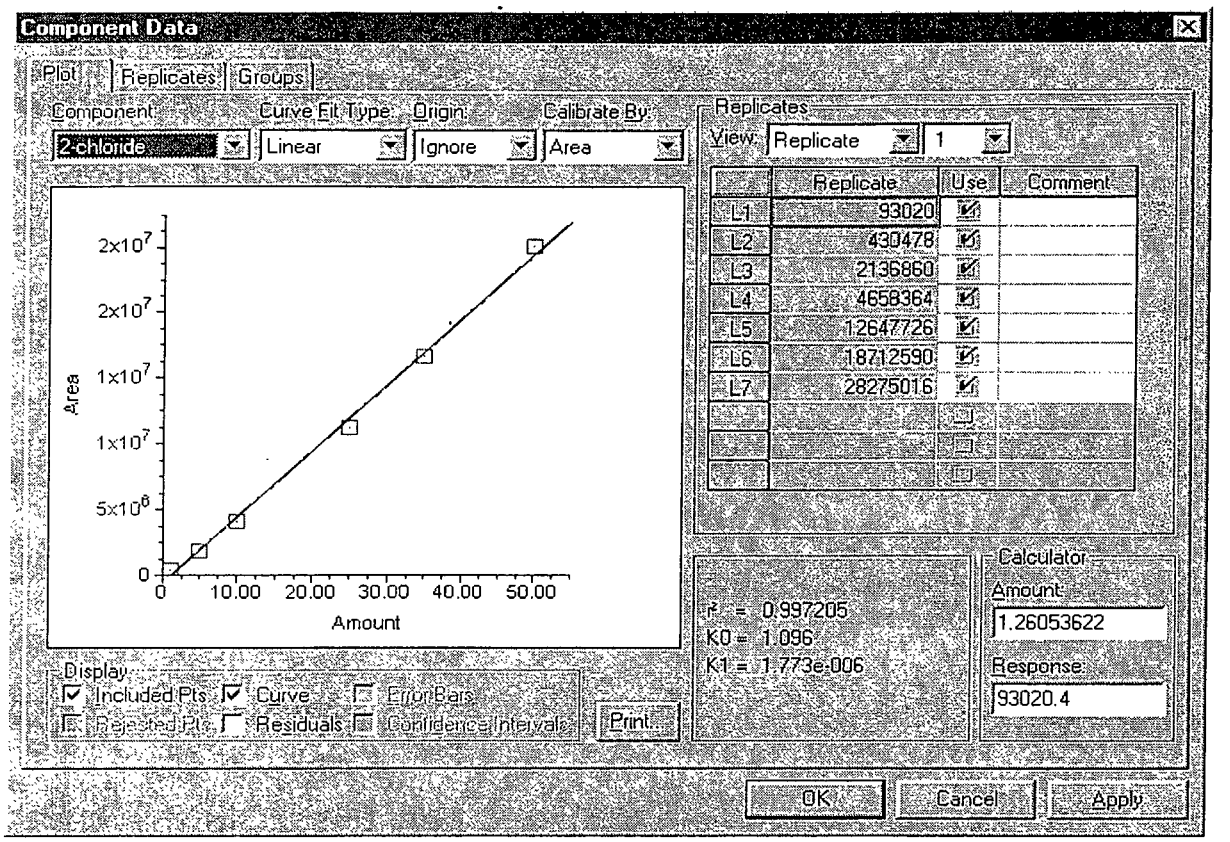
Lab Name: A.P.P.L. INC. Contract:

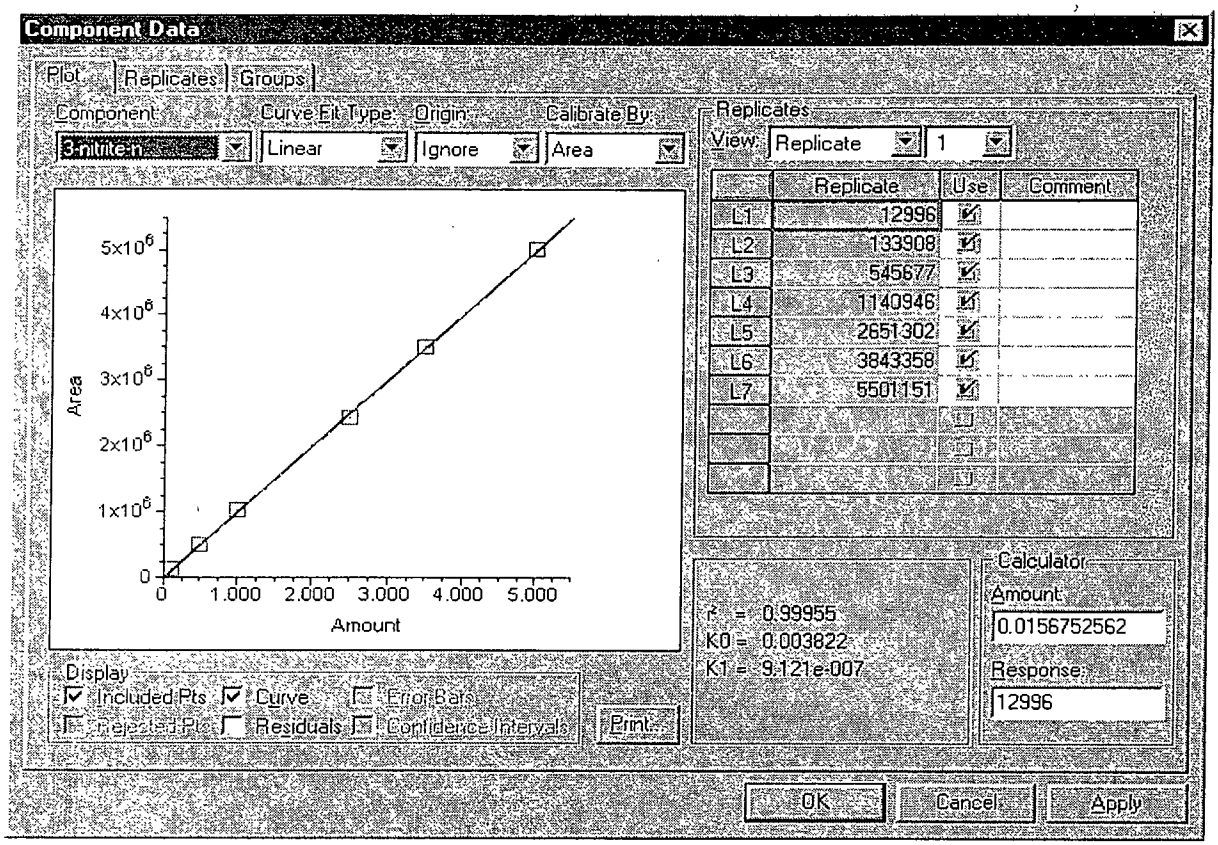
ARF No.: SDG:

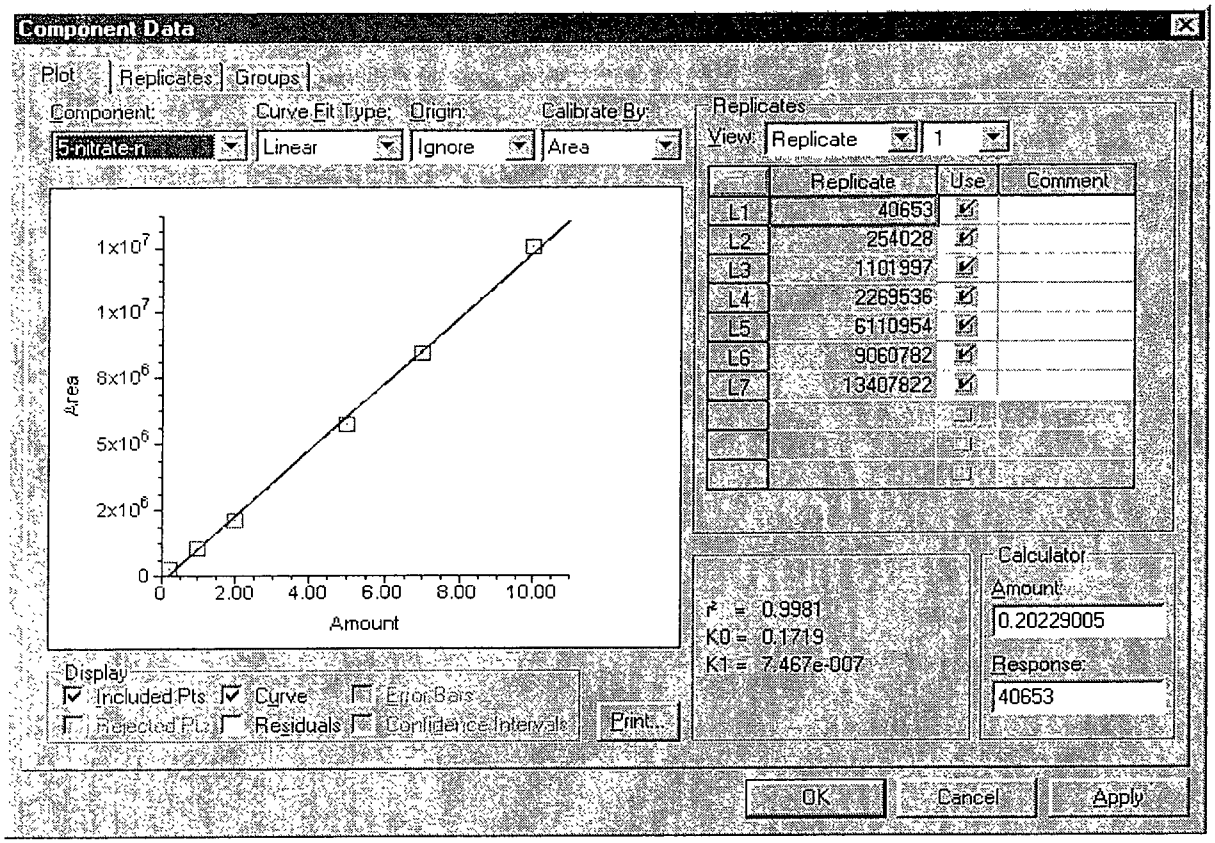
Preparation Blank Matrix (soil/water): water

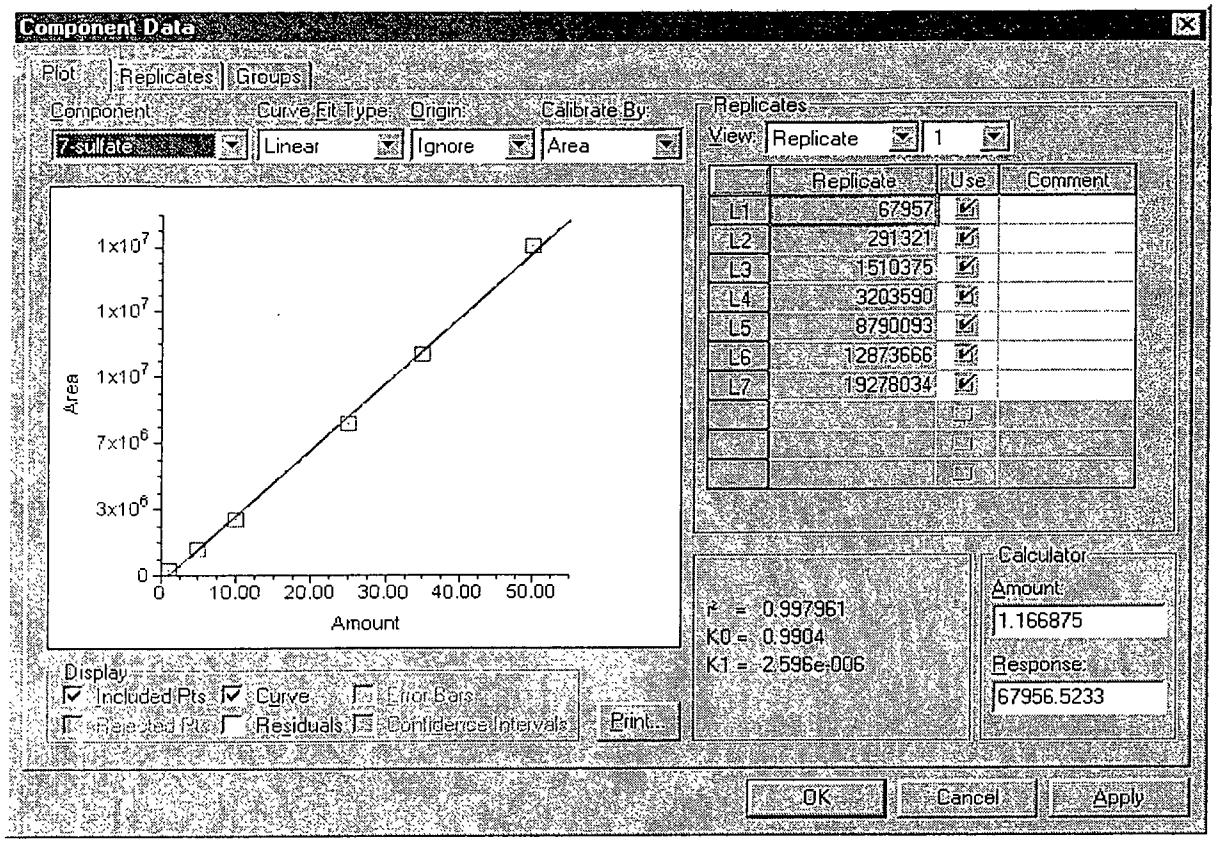
Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 05/05/15 13:08	C		C		C		C		C	
bromide	.500	U									
chloride	1.000	U									
fluoride	1.000	U									
Nitrate(NO3)-N	.200	U									
Nitrite(NO2)-N	.200	U									
phosphate-p	1.000	U									
sulfate	1.000	U									


Component Data
Plot
Replicates
Groups
Component:
2-chloride
Curve Fit Type:
Linear
Origin:
Ignore
Calibrate By:
Area
Area
Amount
Replicates
View:
Replicate
1
Replicate
Use
Comment
L1 93020
L2 430478
L3 2136860
L4 4658364
L5 12647726
L6 18712590
L7 28275016
r² = 0.997205
K0 = 1.096
K1 = 1.773e-006
Calculator
Amount:
1.26053622
Response:
93020.4
Display
Included Pts
Curve
Error Bars
Rejected Pts
Residuals
Confidence Intervals
Print...
OK
Cancel
Apply


Component Data
Plot
Replicates
Groups
Component
Curve Fit Type
Origin
Calibrate By
3-nitrite-n
Linear
Ignore
Area
Area
Amount
5x10^6
4x10^6
3x10^6
2x10^6
1x10^6
0
1.000
2.000
3.000
4.000
5.000
Replicates
View
Replicate
1
Replicate
Use
Comment
L1 12996
L2 133908
L3 545677
L4 1140946
L5 2651302
L6 3843358
L7 5501151
r² = 0.99955
K0 = 0.003822
K1 = 9.121e-007
Calculator
Amount
0.0156752562
Response
12996
Display
Included Pts
Curve
Error Bars
Replicate Pts
Residuals
Confidence Intervals
Print...
OK
Cancel
Apply


Component Data
Plot
Replicates
Groups
Component:
5-nitrate-n
Curve Fit Type:
Linear
Origin:
Ignore
Calibrate By:
Area
1x10^7
1x10^7
8x10^6
5x10^6
2x10^6
0
Area
0
2.00
4.00
6.00
8.00
10.00
Amount
Replicates
View:
Replicate
1
Replicate
Use
Comment
L1 40653
L2 254028
L3 1101997
L4 2269536
L5 6110954
L6 9060782
L7 13407822
r² = 0.9981
K0 = 0.1719
K1 = 7.467e-007
Calculator
Amount:
0.20229005
Response:
40653
Display
Included Pts
Curve
Error Bars
Rejected Pts
Residuals
Confidence Intervals
Print...
OK
Cancel
Apply


Component Data
Plot
Replicates
Groups
Component
7-sulfate
Curve Fit Type:
Linear
Origin:
Ignore
Calibrate By:
Area
Area
Amount
1x10^7
1x10^7
1x10^7
7x10^6
3x10^6
0
0
10.00
20.00
30.00
40.00
50.00
Display
Included Pts
Curve
Error Bars
Rejected Pts
Residuals
Confidence Intervals
Print...
Replicates
View:
Replicate
1
Replicate
Use
Comment
L1 67957
L2 291321
L3 1510375
L4 3203590
L5 8790093
L6 12873666
L7 19278034
r² = 0.997961
K0 = 0.9904
K1 = 2.596e-006
Calculator
Amount:
1.166875
Response:
67956.5233
OK
Cancel
Apply

Calibration Update Report

Sample Name : CAL STD #1 05/05/15
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_018.DXD

Method File Name : ...\anions 150505a.met
Schedule File Name : ...\150505a.sch
Date Time Collected : 5/5/15 11:21:45

Calibration Date : 5/5/15 11:32:07
System Operator : jm
Injection Number : 18

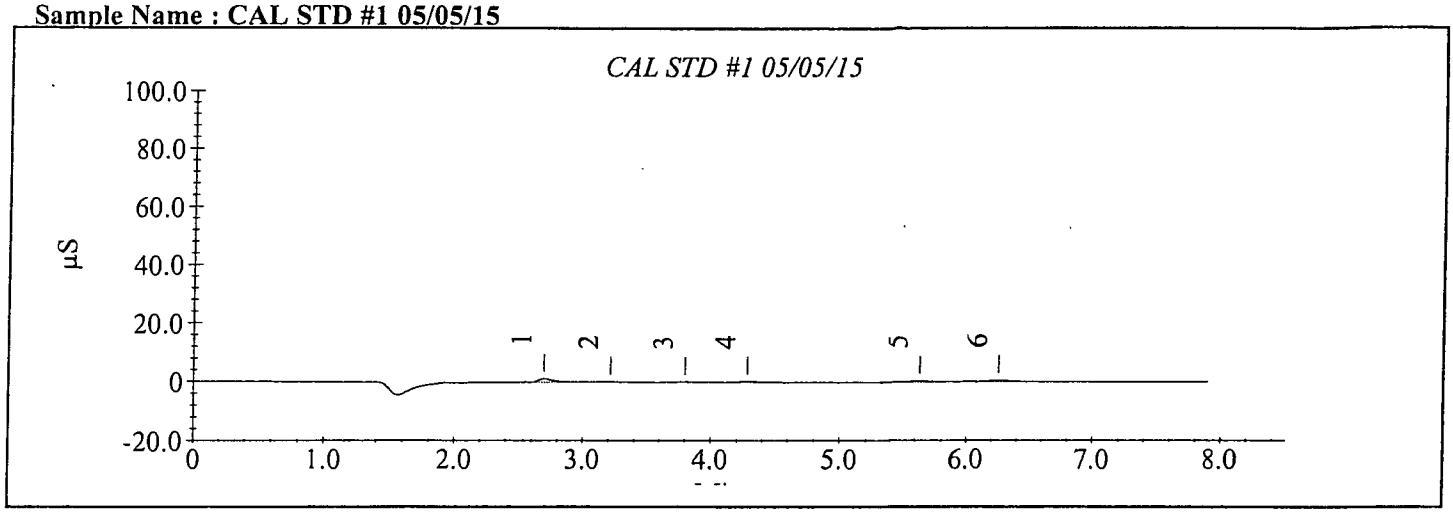
Peak Information : All Components

Peak #	Retention Time	Component Name	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	2.69	chloride	91791	93020	93020
2	3.21	nitrite-n	11886	12996	12996
3	3.80	bromide	19693	13290	13290
4	4.28	nitrate-n	35537	40653	40653
5	5.63	phosphate-p	105069	90339	90339
6	6.25	sulfate	93864	67957	67957

Peak Information : All Components

Peak #	Retention Time	Component Name	Amount (mg/L)	Peak Area	Peak Height	Limit Exceeded
1	2.69	chloride	0.40	93020	11921	-
2	3.21	nitrite-n	0.04	12996	1617	-
3	3.80	bromide	0.20	13290	1597	-
4	4.28	nitrate-n	0.08	40653	3723	-
5	5.63	phosphate-p	0.08	90339	3739	-
6	6.25	sulfate	0.40	67957	4462	-

Sample Name : CAL STD #1 05/05/15



Calibration Update Report

Sample Name : CAL STD #2
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_019.DXD

Method File Name : ...\anions 150505a.met
Schedule File Name : ...\150505a.sch
Date Time Collected : 5/5/15 11:32:26

Calibration Date : 5/5/15 11:42:45
System Operator : jm
Injection Number : 19

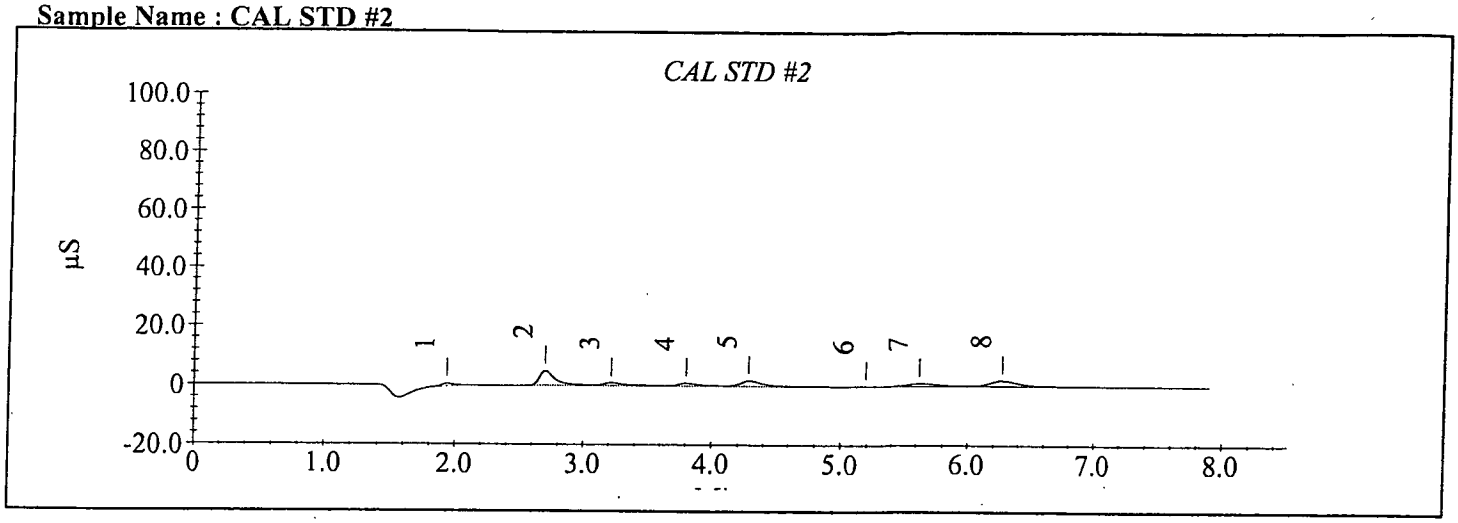
Peak Information : All Components

Peak #	Retention Time	Component Name	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	1.93	fluoride	73173	57622	57622
2	2.69	chloride	452132	430478	430478
3	3.21	nitrite-n	78566	133908	133908
4	3.80	bromide	72889	120492	120492
5	4.28	nitrate-n	238307	254028	254028
7	5.61	phosphate-p	194282	171940	171940
8	6.27	sulfate	274204	291321	291321

Peak Information : All Components

Peak #	Retention Time	Component Name	Amount (mg/L)	Peak Area	Peak Height	Limit Exceeded
1	1.93	fluoride	0.10	57622	8707	
2	2.69	chloride	1.00	430478	49268	
3	3.21	nitrite-n	0.10	133908	10330	
4	3.80	bromide	0.50	120492	9858	
5	4.28	nitrate-n	0.20	254028	18634	
7	5.61	phosphate-p	0.20	171940	9501	
8	6.27	sulfate	1.00	291321	18754	

Sample Name : CAL STD #2



Calibration Update Report

Sample Name : CAL STD #3
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_020.DXD

Method File Name : ...\anions 150505a.met
Schedule File Name : ...\150505a.sch
Date Time Collected : 5/5/15 11:43:12

Calibration Date : 5/5/15 11:53:31
System Operator : jm
Injection Number : 20

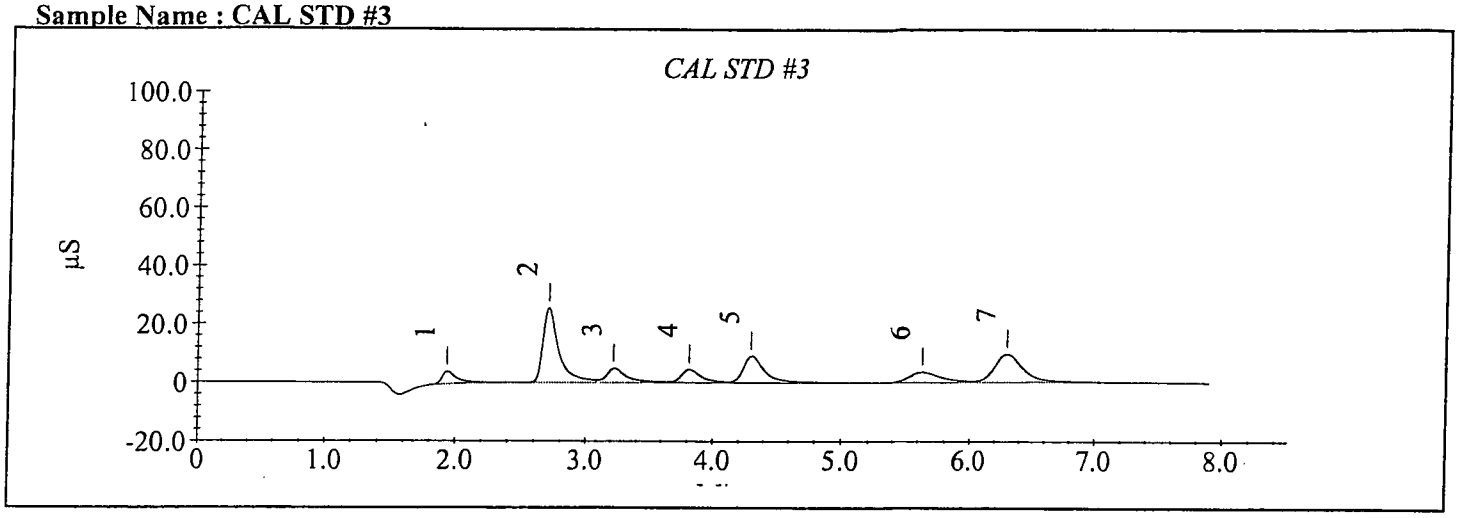
Peak Information : All Components

Peak #	Retention Time	Component Name	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	1.93	fluoride	280660	321944	321944
2	2.71	chloride	2198943	2136860	2136860
3	3.21	nitrite-n	453819	545677	545677
4	3.81	bromide	464626	484621	484621
5	4.29	nitrate-n	1088526	1101997	1101997
6	5.63	phosphate-p	528123	572833	572833
7	6.29	sulfate	1271544	1510375	1510375

Peak Information : All Components

Peak #	Retention Time	Component Name	Amount (mg/L)	Peak Area	Peak Height	Limit Exceeded
1	1.93	fluoride	0.50	321944	42053	
2	2.71	chloride	5.00	2136860	254839	
3	3.21	nitrite-n	0.50	545677	47664	
4	3.81	bromide	2.50	484621	45227	
5	4.29	nitrate-n	1.00	1101997	90440	
6	5.63	phosphate-p	1.00	572833	34464	
7	6.29	sulfate	5.00	1510375	95140	

Sample Name : CAL STD #3



Calibration Update Report

Sample Name : CAL STD #4
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_021.DXD

Method File Name : ...\anions 150505a.met
Schedule File Name : ...\150505a.sch
Date Time Collected : 5/5/15 11:53:55

Calibration Date : 5/5/15 12:04:13
System Operator : jm
Injection Number : 21

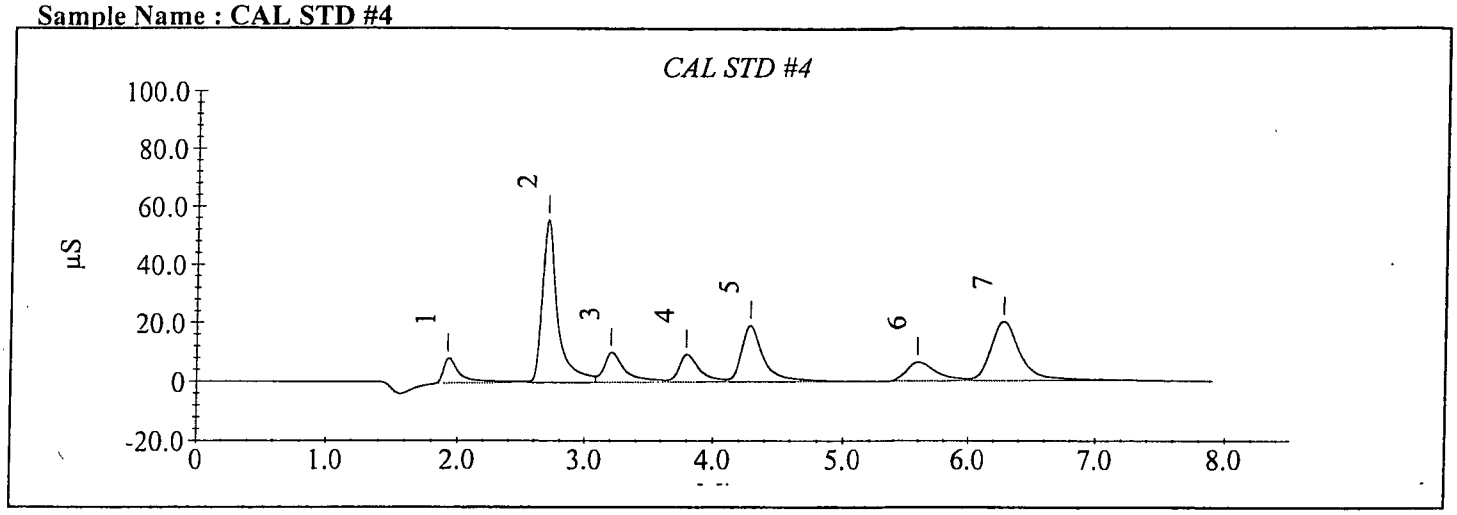
Peak Information : All Components

Peak #	Retention Time	Component Name	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	1.92	fluoride	593192	747950	747950
2	2.69	chloride	4796237	4658364	4658364
3	3.20	nitrite-n	940138	1140946	1140946
4	3.79	bromide	958653	1009395	1009395
5	4.28	nitrate-n	2225829	2269536	2269536
6	5.59	phosphate-p	1031523	1002780	1002780
7	6.27	sulfate	3354593	3203590	3203590

Peak Information : All Components

Peak #	Retention Time	Component Name	Amount (mg/L)	Peak Area	Peak Height	Limit Exceeded
1	1.92	fluoride	1.00	747950	82586	
2	2.69	chloride	10.00	4658364	557102	
3	3.20	nitrite-n	1.00	1140946	99888	
4	3.79	bromide	5.00	1009395	92600	
5	4.28	nitrate-n	2.00	2269536	190548	
6	5.59	phosphate-p	2.00	1002780	62562	
7	6.27	sulfate	10.00	3203590	199608	

Sample Name : CAL STD #4



Calibration Update Report

Sample Name : CAL STD #5
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_022.DXD

Method File Name : ...\anions 150505a.met
Schedule File Name : ...\150505a.sch
Date Time Collected : 5/5/15 12:04:36

Calibration Date : 5/5/15 12:14:59
System Operator : jm
Injection Number : 22

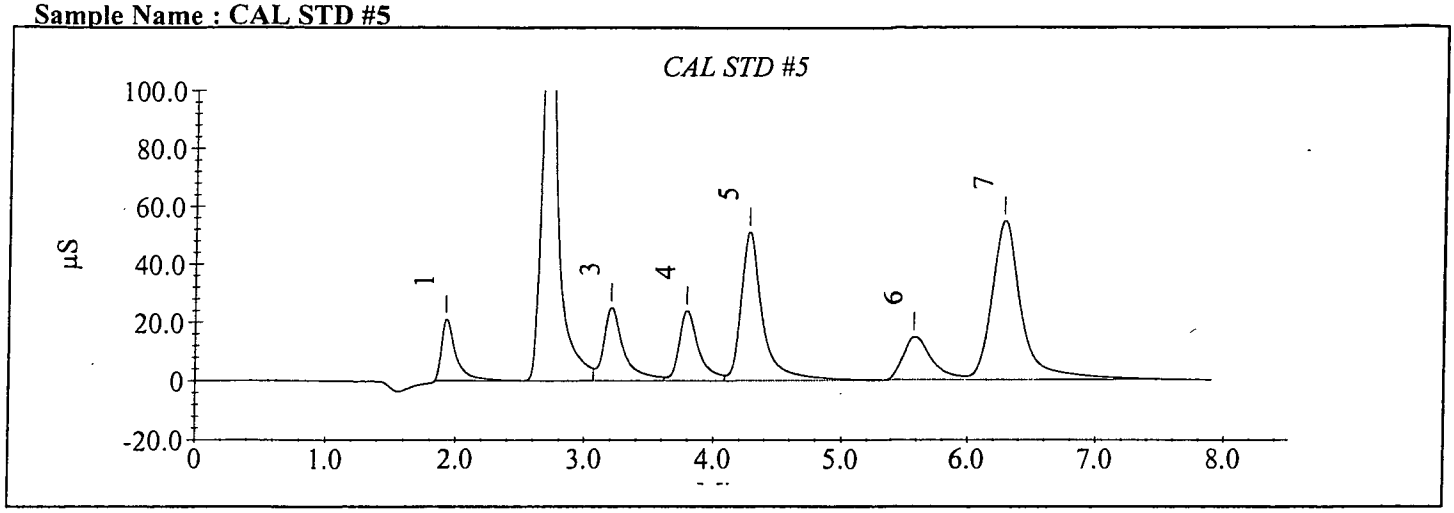
Peak Information : All Components

Peak #	Retention Time	Component Name	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	1.92	fluoride	1904787	1627638	1627638
2	2.69	chloride	13522747	12647726	12647726
3	3.20	nitrite-n	2509115	2651302	2651302
4	3.79	bromide	2764123	2485415	2485415
5	4.27	nitrate-n	5991999	6110954	6110954
6	5.57	phosphate-p	2372157	2255377	2255377
7	6.27	sulfate	8813646	8790093	8790093

Peak Information : All Components

Peak #	Retention Time	Component Name	Amount (mg/L)	Peak Area	Peak Height	Limit Exceeded
1	1.92	fluoride	2.50	1627638	207780	
2	2.69	chloride	25.00	12647726	1600646	
3	3.20	nitrite-n	2.50	2651302	248604	
4	3.79	bromide	12.50	2485415	238146	
5	4.27	nitrate-n	5.00	6110954	509702	
6	5.57	phosphate-p	5.00	2255377	145786	
7	6.27	sulfate	25.00	8790093	542447	

Sample Name : CAL STD #5



Calibration Update Report

Sample Name : CAL STD #6
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_023.DXD

Method File Name : ...\anions 150505a.met
Schedule File Name : ...\150505a.sch
Date Time Collected : 5/5/15 12:15:21

Calibration Date : 5/5/15 12:25:43
System Operator : jm
Injection Number : 23

Peak Information : All Components

Peak #	Retention Time	Component Name	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	1.93	fluoride	2431852	2536233	2536233
2	2.71	chloride	19578080	18712590	18712590
3	3.21	nitrite-n	3488117	3843358	3843358
4	3.80	bromide	3664999	3656064	3656064
5	4.28	nitrate-n	8937590	9060782	9060782
6	5.60	phosphate-p	3304927	3183590	3183590
7	6.31	sulfate	12960247	12873666	12873666

Peak Information : All Components

Peak #	Retention Time	Component Name	Amount (mg/L)	Peak Area	Peak Height	Limit Exceeded
1	1.93	fluoride	3.50	2536233	297967	
2	2.71	chloride	35.00	18712590	2307087	
3	3.21	nitrite-n	3.50	3843358	353005	
4	3.80	bromide	17.50	3656064	344145	
5	4.28	nitrate-n	7.00	9060782	743793	
6	5.60	phosphate-p	7.00	3183590	206418	
7	6.31	sulfate	35.00	12873666	804060	

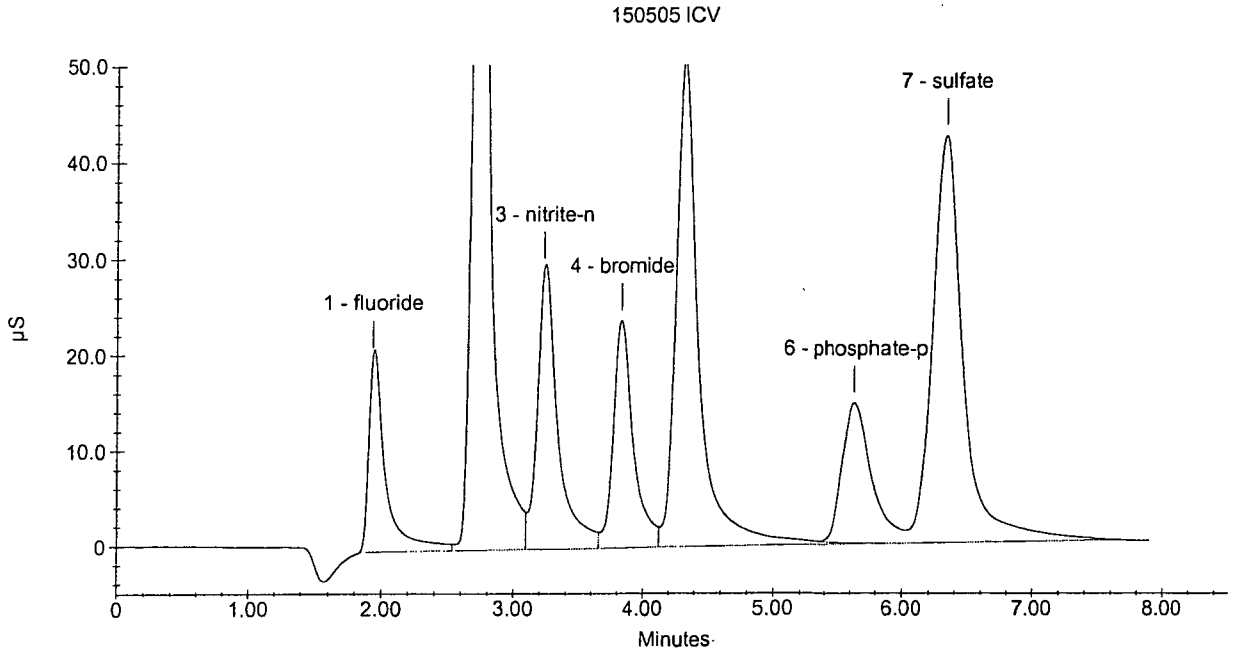
Sample Analysis Report

Sample Name : 150505 ICV
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_026.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/5/15 12:47:20
System Operator : jm
Injection Number : 26
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	2.6119	1843295	203891
2	2.72	chloride	18.7460	9953323	1223515
3	3.23	nitrite-n	2.9383	3217392	291923
4	3.83	bromide	12.3745	2577592	237752
5	4.31	nitrate-n	4.9023	6335418	504691
6	5.63	phosphate-p	5.0343	2315308	146529
7	6.32	sulfate	19.1007	6975524	422940



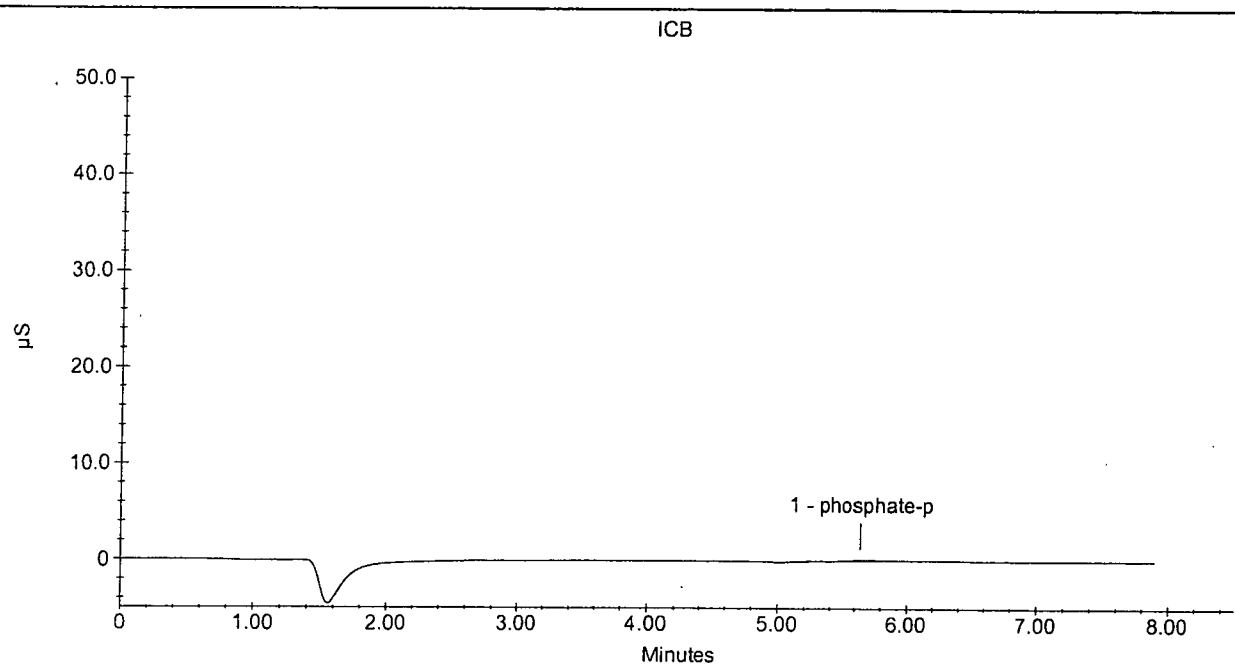
Sample Analysis Report

Sample Name : ICB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150505A\150505a_028.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/5/15 13:08:38
System Operator : jm
Injection Number : 28
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.64	phosphate-p	-0.1252	32840	1298



A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No: 76413 SDG: 76413

Initial Calibration Source: o2si

Continuing Calibration Source: o2si

Analysis Date: 05/13/15

Analyte	Calibration Verification									M
	True CCV1	Found 8:35	%R(1)	True CCV1	Found 12:09	%R(1)	True CCV1	Found 14:16	%R(1)	
chloride	25	23.8581	95.4	25	23.9931	96.0	25	24.0603	96.2	
Nitrate(NO3)	22.1	21.2360	96.1	22.1	21.8621	98.9	22.1	21.5243	97.4	
Nitrite(NO2)	8.211	8.36312	102	8.211	8.37733	102	8.211	8.20792	100	
sulfate	25	23.7264	94.9	25	24.2779	97.1	25	23.8955	95.6	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 76413 SDG: 76413
Initial Calibration Source: o2si
Continuing Calibration Source: o2si
Analysis Date: 05/13/15

Analyte	Calibration Verification									M
	True CCV1	Found 16:23	%R(1)	True CCV1	Found 18:30	%R(1)	True CCV1	Found 19:34	%R(1)	
chloride	25	23.9082	95.6	25	23.6335	94.5	25	23.7323	94.9	
Nitrate(NO3)	22.1	21.4609	97.1	22.1	21.8024	98.7	22.1	21.6902	98.1	
Nitrite(NO2)	8.211	8.26143	.101	8.211	8.45439	103	8.211	8.25101	100	
sulfate	25	24.0898	96.4	25	24.3295	97.3	25	24.5853	98.3	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 05/13/15 08:50	C	CCB 05/13/15 12:19	C	CCB 05/13/15 14:27	C	CCB 05/13/15 16:34	C	CCB 05/13/15 18:41	C	
chloride	1.000	U	1.000	U	1.000	U	1.000	U	1.0000	U	
Nitrate(NO3)	.500	U	.500	U	.500	U	.500	U	.5000	U	
Nitrite(NO2)	.300	U	.300	U	.300	U	.300	U	.3000	U	
sulfate	1.130	*	1.000	U	1.000	U	1.000	U	1.0000	U	*

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 05/13/15 19:45	C		C		C		C		C	
chloride	1.000	U									
Nitrate(NO3)	.500	U									
Nitrite(NO2)	.300	U									
sulfate	1.000	U									

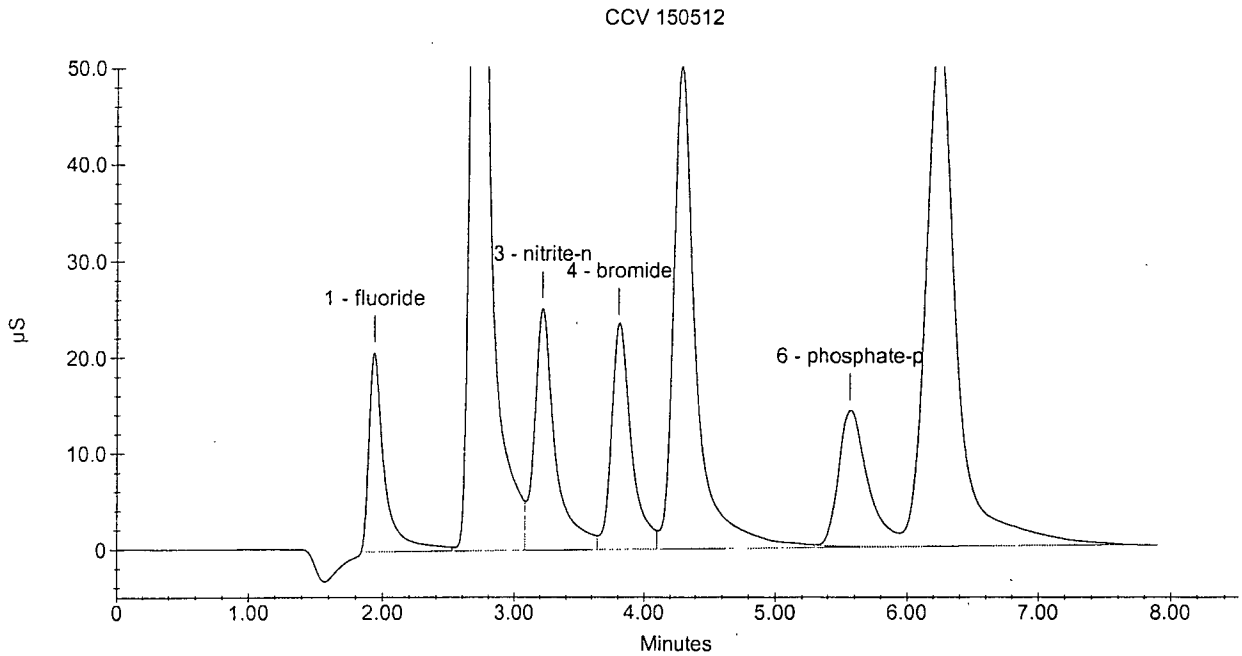
Sample Analysis Report

Sample Name : CCV 150512
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513A_004.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/13/15 08:35:29
System Operator : jm
Injection Number : 4
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	2.4228	1707671	207493
2	2.71	chloride	23.8582	12836156	1615468
3	3.21	nitrite-n	2.5462	2787456	251415
4	3.80	bromide	11.8801	2472862	233066
5	4.28	nitrate-n	4.7952	6191984	497395
6	5.56	phosphate-p	4.7114	2172447	141660
7	6.23	sulfate	23.7264	8757220	534951



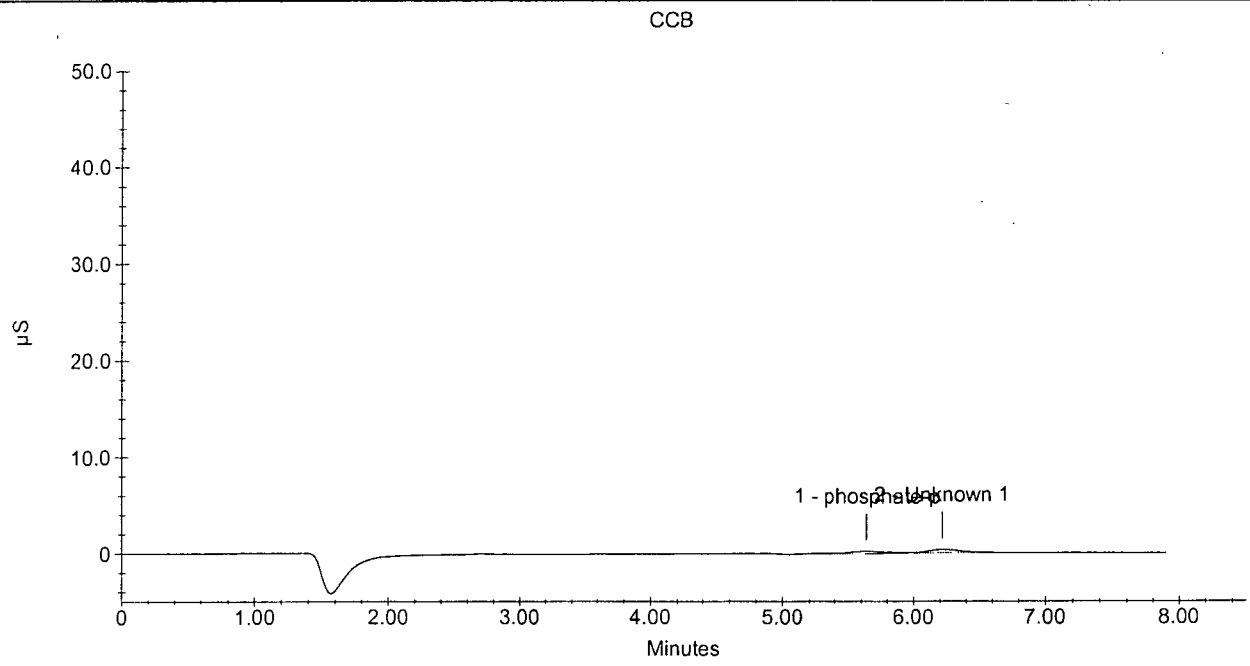
Sample Analysis Report

Sample Name : CCB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_005.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/13/15 08:50:11
System Operator : jm
Injection Number : 5
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.64	phosphate-p	-0.0411	70083	2443
2	6.21	Unknown 1	0.0000	54809	3464



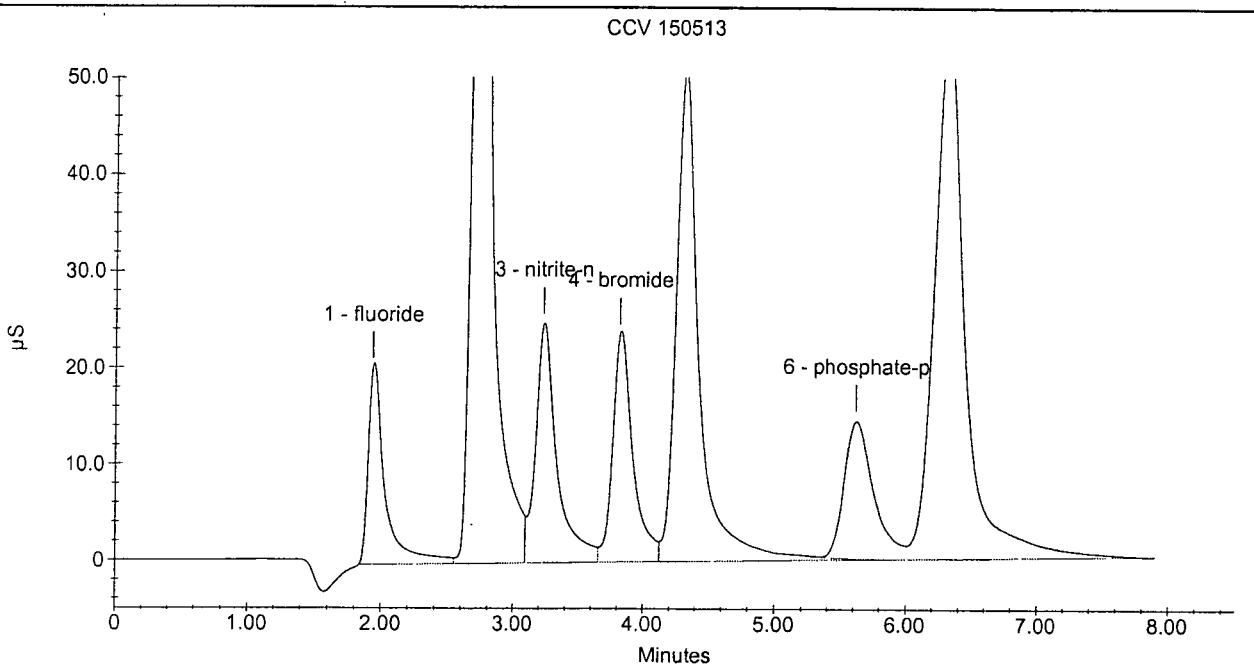
Sample Analysis Report

Sample Name : CCV 150513
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_016.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 12:09:08
System Operator : jm
Injection Number : 16
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	2.5647	1809437	202978
2	2.72	chloride	23.9931	12912248	1598244
3	3.23	nitrite-n	2.5505	2792202	247584
4	3.81	bromide	12.3798	2578702	235826
5	4.31	nitrate-n	4.9366	6381330	507543
6	5.61	phosphate-p	4.8827	2248233	142934
7	6.29	sulfate	24.2780	8969658	541616



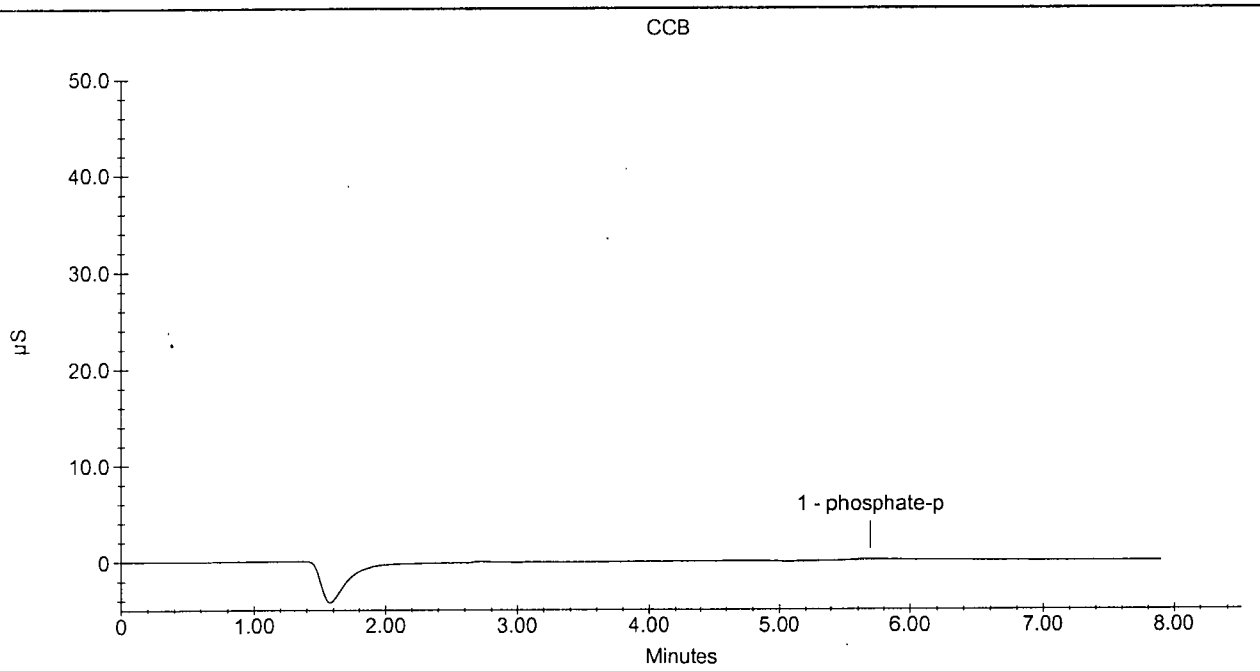
Sample Analysis Report

Sample Name : CCB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_017.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 12:19:51
System Operator : jm
Injection Number : 17
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.69	phosphate-p	-0.1181	36017	1410



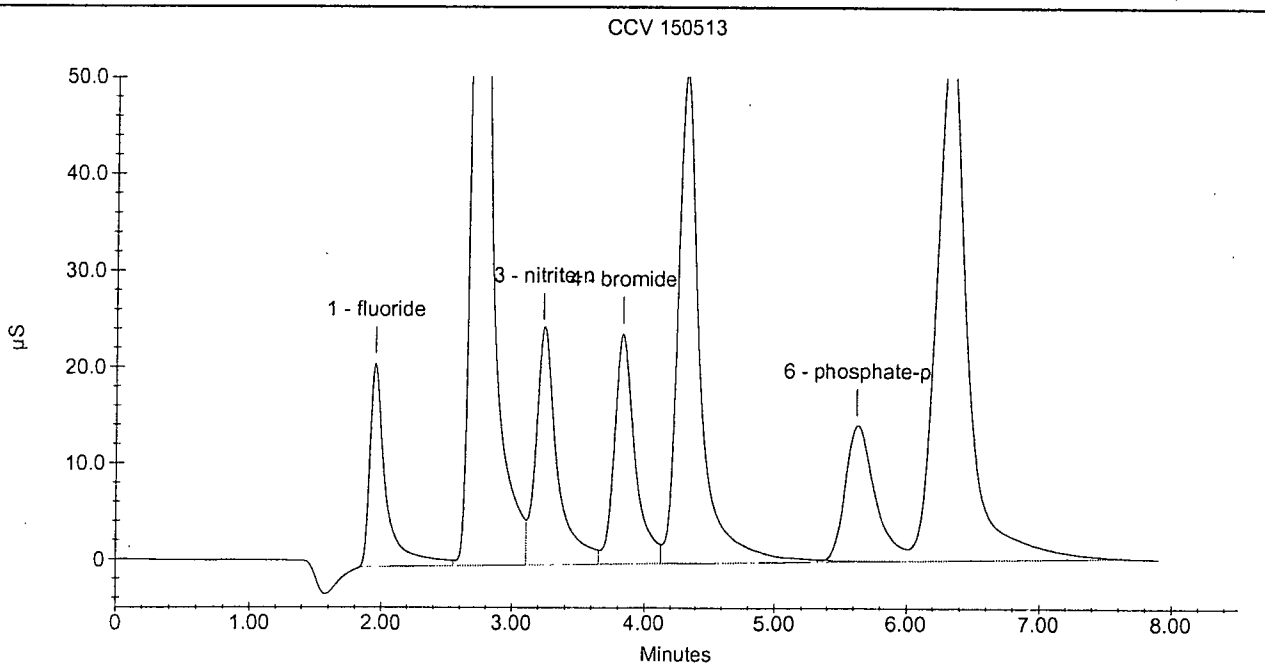
Sample Analysis Report

Sample Name : CCV 150513
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_028.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 14:16:26
System Operator : jm
Injection Number : 28
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.95	fluoride	2.5900	1827580	210936
2	2.72	chloride	24.0604	12950177	1587642
3	3.23	nitrite-n	2.4989	2735651	243852
4	3.83	bromide	12.3015	2562122	239275
5	4.31	nitrate-n	4.8603	6279161	505958
6	5.61	phosphate-p	4.7515	2190185	140541
7	6.31	sulfate	23.8955	8822346	543377



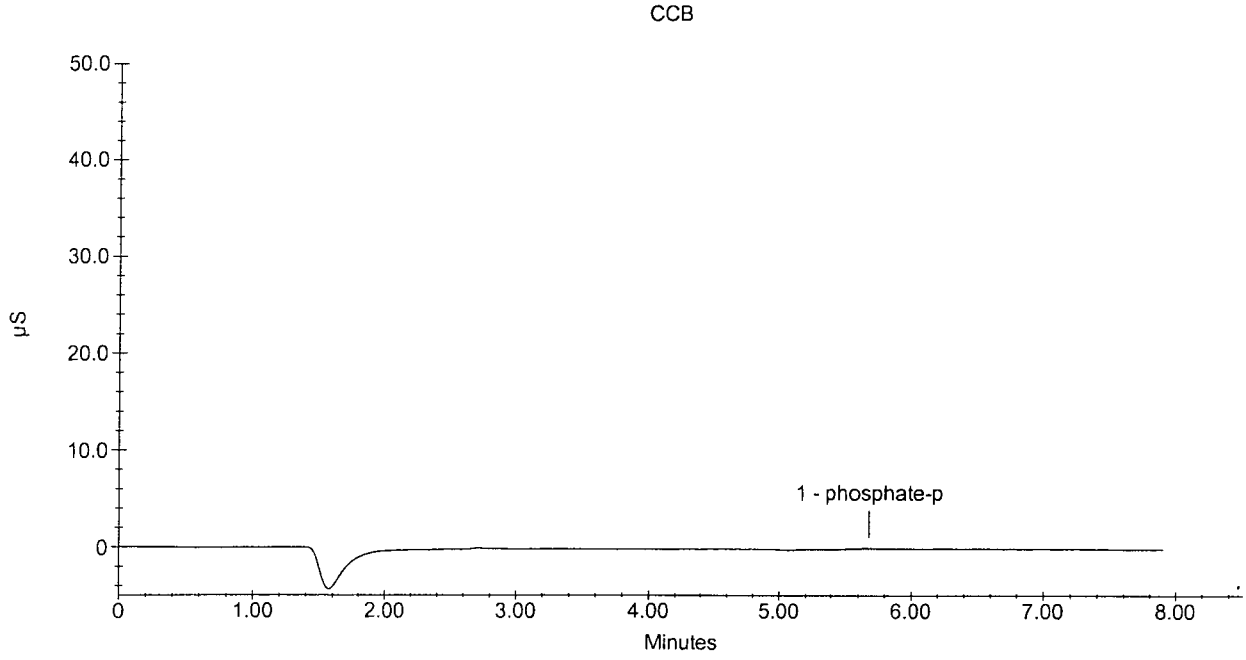
Sample Analysis Report

Sample Name : CCB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_029.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 14:27:09
System Operator : jm
Injection Number : 29
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.68	phosphate-p	-0.0986	44615	1454



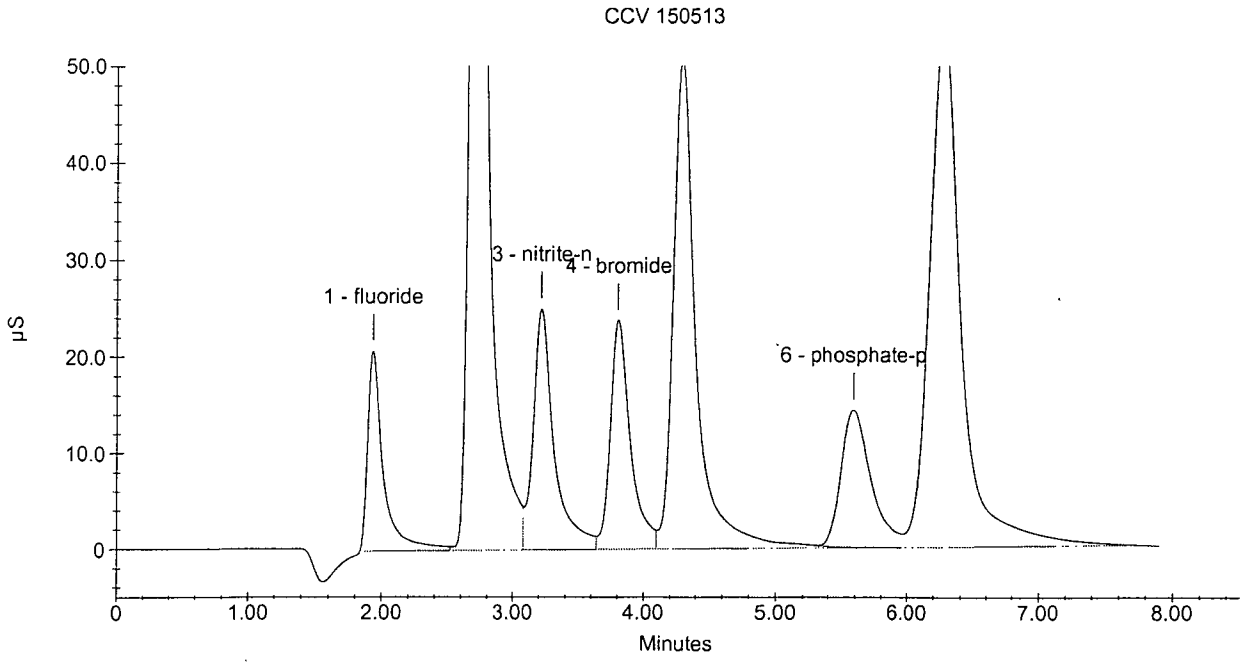
Sample Analysis Report

Sample Name : CCV 150513
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_040.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 16:23:41
System Operator : jm
Injection Number : 40
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	2.4337	1715503	207775
2	2.71	chloride	23.9082	12864362	1599455
3	3.21	nitrite-n	2.5152	2753514	249998
4	3.80	bromide	12.1367	2527219	237495
5	4.28	nitrate-n	4.8460	6260008	505108
6	5.59	phosphate-p	4.8450	2231547	142908
7	6.25	sulfate	24.0898	8897191	539963



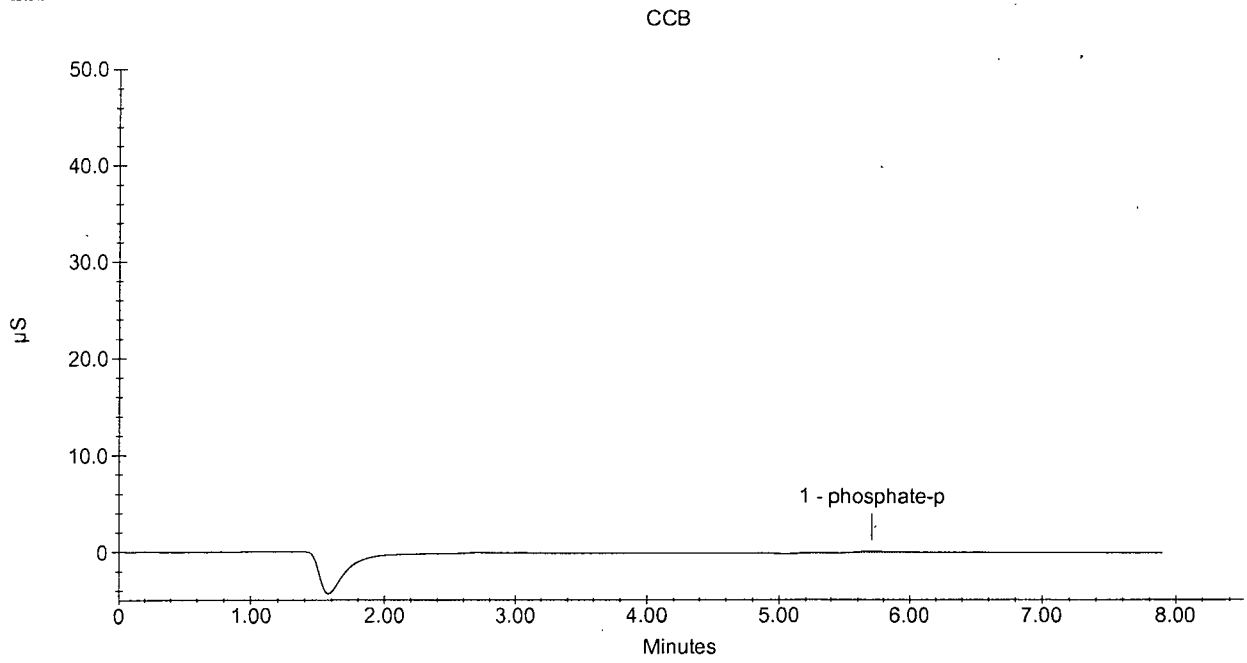
Sample Analysis Report

Sample Name : CCB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_041.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 16:34:20
System Operator : jm
Injection Number : 41
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.71	phosphate-p	-0.0928	47214	1641



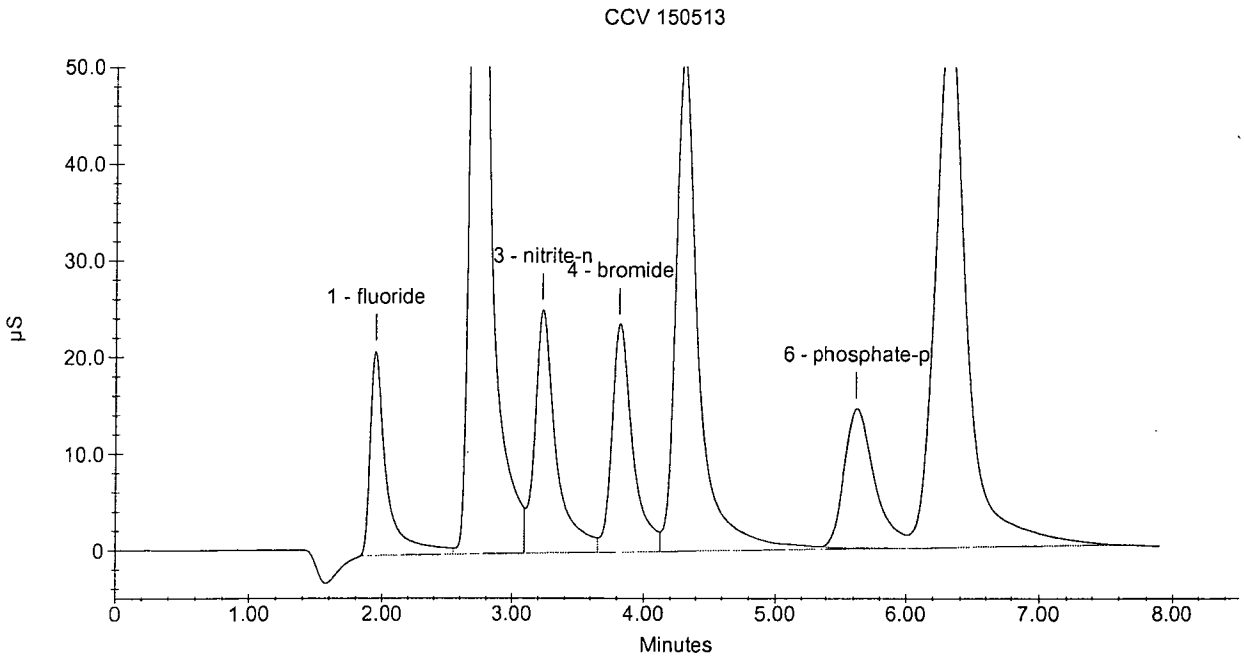
Sample Analysis Report

Sample Name : CCV 150513
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_052.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 18:30:56
System Operator : jm
Injection Number : 52
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.95	fluoride	2.6291	1855608	211626
2	2.72	chloride	23.6335	12709476	1569280
3	3.23	nitrite-n	2.5740	2817925	251439
4	3.81	bromide	12.2515	2551537	235326
5	4.29	nitrate-n	4.9231	6363271	508017
6	5.61	phosphate-p	4.9453	2275931	144145
7	6.31	sulfate	24.3296	8989532	552099



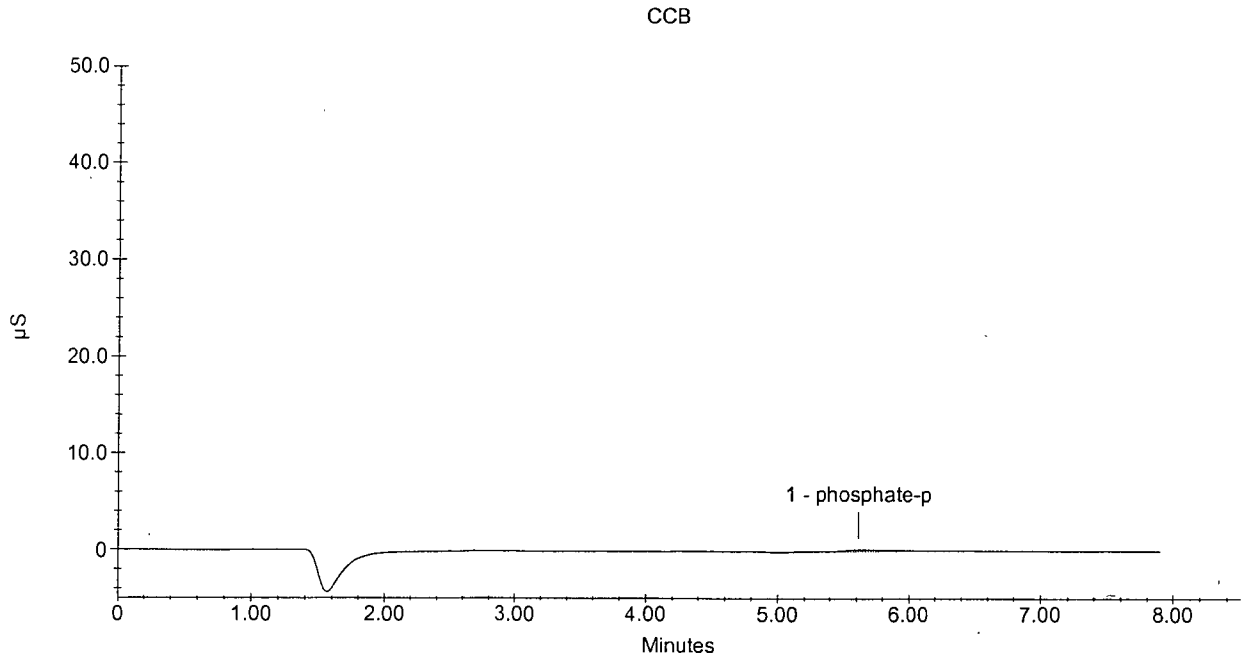
Sample Analysis Report

Sample Name : CCB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_053.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 18:41:38
System Operator : jm
Injection Number : 53
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.61	phosphate-p	-0.0745	55302	1915



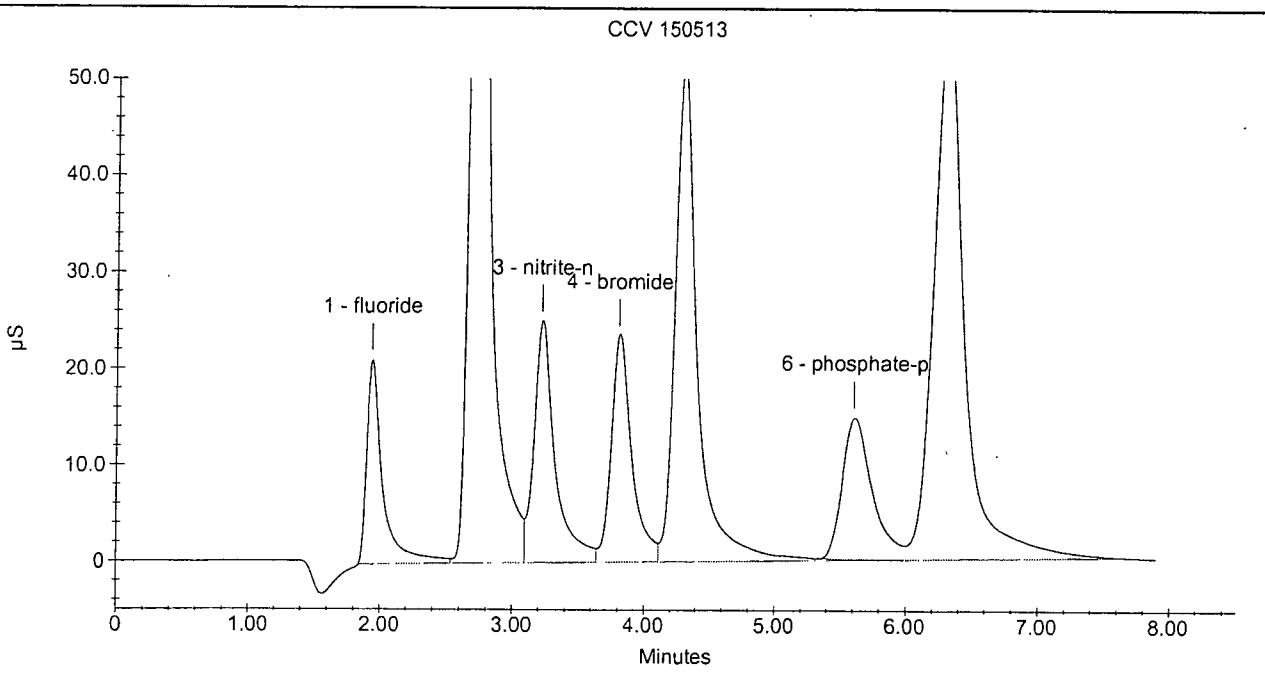
Sample Analysis Report

Sample Name : CCV 150513
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_058.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 19:34:27
System Operator : jm
Injection Number : 58
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	2.5486	1797892	210827
2	2.71	chloride	23.7324	12765201	1569818
3	3.21	nitrite-n	2.5120	2750036	249066
4	3.80	bromide	12.1495	2529929	234055
5	4.28	nitrate-n	4.8978	6329332	507625
6	5.60	phosphate-p	5.0697	2330977	146849
7	6.29	sulfate	24.5853	9088033	555405



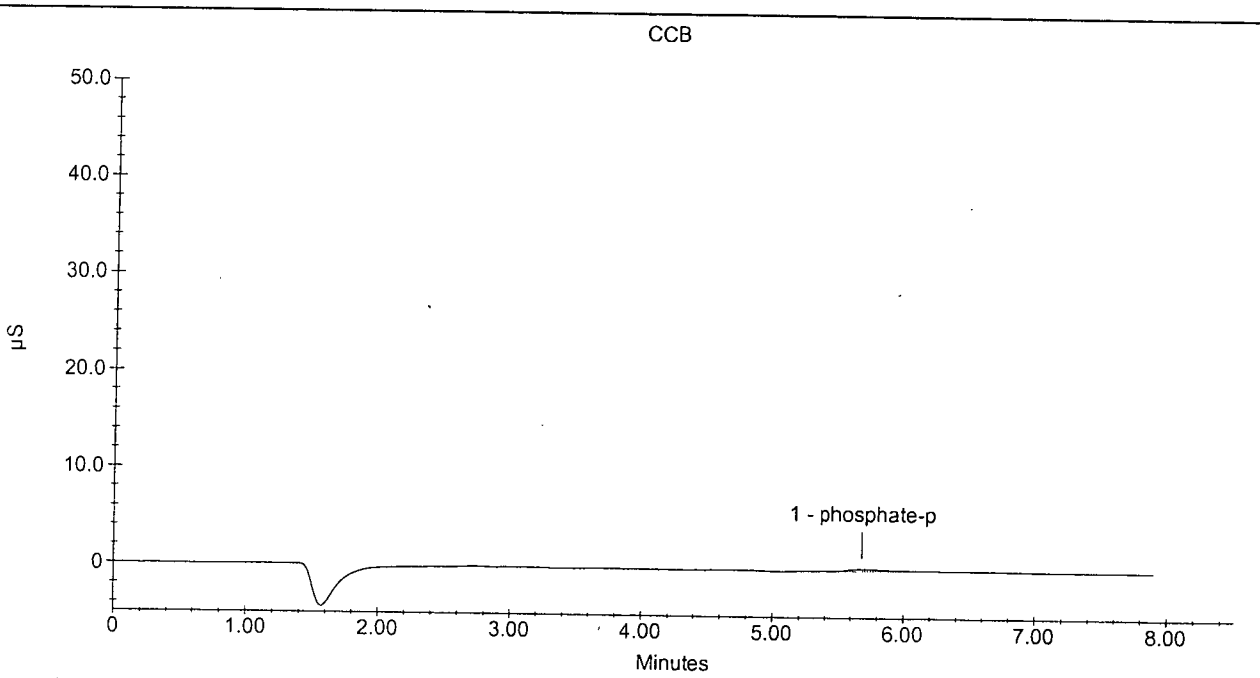
Sample Analysis Report

Sample Name : CCB
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_059.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 19:45:06
System Operator : jm
Injection Number : 59
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	5.68	phosphate-p	-0.0768	54268	2137



APPL, Inc.

Current Date : 5/13/15
Current Time : 19:55:30

Calibration Report Print Date/Time: 2015/04/27 12:34:17

Cal. Curve ID: 150416I9
Created: 2015/04/16 12:27
Calibration Factor (m): 1.188e+05
Y Intercept (b): 25904
r-squared: 0.99942

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI WATER	8722	0.000	-0.145	Low Sample De	2015/04/16 09:39
autocal1	40725	0.250	0.125		2015/04/16 10:06
autocal2	66312	0.500	0.340		2015/04/16 10:33
autocal3	335127	2.500	2.603		2015/04/16 11:00
autocal4	641779	5.000	5.184		2015/04/16 11:28
autocal5	1555011	12.500	12.871		2015/04/16 11:57
autocal6	2968854	25.000	24.772		2015/04/16 12:26

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract:

ARF No: SDG:

Initial Calibration Source: o2si

Continuing Calibration Source: o2si

Analysis Date: 04/16/15

Analyte	Calibration Verification									M
	True ICV	Found 12:55	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
Total Organic Carbon	10	10.9049	109							

(1) Control Limits: 80-120

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract:

ARF No.: SDG:

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 04/16/15 13:20	C		C		C		C		C	
Total Organic Carbon	.500	U									

Detailed Analysis Report Print Date/Time: 2015/04/27 12:35:17

Sample ID: DI WATER
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 09:39
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			9562	50.922	50.984	120
2			8727	50.934	50.971	120
3			9546	50.918	50.969	120
4			7053	50.929	50.933	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 8722 Std Dev: 1179 RSD: 13.52

Sample ID: autocal1
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 10:06
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			34919	50.878	51.076	129
2			39616	50.831	51.030	127
3			45484	50.795	50.995	134
4			42881	50.832	51.031	126

<<<Statistics>>> Mean: 40725 Std Dev: 4555 RSD: 11.18

Sample ID: autocal2
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 10:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			61013	50.938	51.133	128
2			67808	50.903	51.103	127
3			65207	50.935	51.133	126
4			71219	50.953	51.152	128

<<<Statistics>>> Mean: 66312 Std Dev: 4306 RSD: 6.49

Sample ID: autocal3
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 11:00
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			334533	51.110	51.309	142
2			332663	51.210	51.408	142
3			333205	51.237	51.434	139
4			340106	51.219	51.419	137

<<<Statistics>>> Mean: 335127 Std Dev: 3411 RSD: 1.02

Sample ID: autocal4
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 11:28
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			651092	51.356	51.555	152
2			639616	51.518	51.717	146
3			633158	51.552	51.750	142

4	643250	51.563	51.761	140

<<<Statistics>>> Mean: 641779 Std Dev: 7481 RSD: 1.17

Sample ID: autocal5
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT

Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 11:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1564523	51.767	51.966	166
2			1557570	51.983	52.182	158
3			1556986	52.040	52.239	160
4			1540966	52.159	52.358	153

<<<Statistics>>> Mean: 1555011 Std Dev: 9970 RSD: 0.64

Sample ID: autocal6
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT

Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 12:26
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			3001984	52.260	52.457	187
2			2939496	52.837	53.035	159
3			2931188	52.876	53.070	159
4			3002751	52.894	53.089	174

<<<Statistics>>> Mean: 2968855 Std Dev: 38847 RSD: 1.31

Sample ID: ICV
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT

Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 12:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.9311	5.4655	687856	51.466	51.662	161
2	10.6882	5.3441	673429	51.577	51.776	143
3	11.1207	5.5603	699118	51.520	51.718	146
4	10.8796	5.4398	684797	51.451	51.650	158

<<<Statistics>>> Mean: 10.9049 Std Dev: 0.1778 RSD: 1.63

Sample ID: ICB
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT

Mode: TOC
Filename: 04160739
Timestamp: 2015/04/16 13:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.3899	-0.1949	15380	51.046	51.244	105
2	-0.3781	-0.1890	16080	51.038	51.235	104
3	-0.3661	-0.1831	16791	51.044	51.244	105
4	-0.4207	-0.2104	13546	51.076	51.273	102

<<<Statistics>>> Mean: -0.3887 Std Dev: 0.0234 RSD: -6.03

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 76413 SDG: 76413
Initial Calibration Source: o2si
Continuing Calibration Source: o2si
Analysis Date: 05/19/15

Analyte	Calibration Verification									M
	True CCV2	Found 11:47	%R(1)	True CCV1	Found 20:07	%R(1)	True	Found	%R(1)	
Total Organic Carbon	5	5.00117	100	10	11.8947	119				

(1) Control Limits: 80-120

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No.: 76413 SDG: 76413

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 05/19/15 12:12	C	CCB 05/19/15 20:32	C		C		C		C	
Total Organic Carbon	.500	U	.500	U							

INORGANIC ANALYSIS
Raw Data

APPL, INC.

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRITE	0.13 U	0.3	0.13	0.03	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	SULFATE	1.1	1.0	0.20	0.09	mg/L	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	05/13/15	05/13/15	#300WD-150513B-AZ16287
SW846 90	TOTAL ORGANIC C	0.35 U	0.5	0.35	0.13	mg/L	05/19/15	05/19/15	#906-150519A-AZ16287

Wetlab SC-Blank-REG MDLs
Printed: 06/10/15 1:08:15 PM

Laboratory Control Spike Recovery

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/L	SPK Result mg/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	20.0	18.7	93.5	90-110	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	SULFATE	20.0	19.3	96.5	90-110	05/13/15	05/13/15	#300WD-150513B-AZ16287
EPA 300.0	CHLORIDE	20.0	18.6	93.0	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRATE	22.1	22.0	99.5	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	NITRITE	9.98	9.47	94.9	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
EPA 300.0	SULFATE	20.0	19.1	95.5	90-110	05/13/15	05/13/15	#300W-150513A1-AZ16287
SW846 906	TOTAL ORGANIC CARBON	10.00	10.8	108	90-110	05/19/15	05/19/15	#906-150519A-AZ16287

Comments: _____

Matrix Spike Recoveries

WETLAB

APPL ID: **150513W-16287 MS - 197256**

Sample ID: AZ16287

Client ID: S67-MW007-051215

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	CHLORIDE	40	65.1	107	107	105	105	0.0	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197256	AZ16287
EPA 300.0	NITRATE	22.1	2.2	22.6	23.8	92.3	97.7	5.2	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
EPA 300.0	NITRITE	9.98	ND	11.4	13.3	114 #	133 #	15.4	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
EPA 300.0	SULFATE	20	6.6	25.5	25.5	94.5	94.5	0.0	20	90-110	05/13/15	05/13/15	05/13/15	05/13/15	197255	AZ16287
SW846 906	TOTAL ORGANIC CAR	10.00	0.76	11.9	12.7	111 #	119 #	6.5	20	90-110	05/19/15	05/19/15	05/19/15	05/19/15	197186	AZ16287

= Recovery is outside QC limits.

Comments: _____

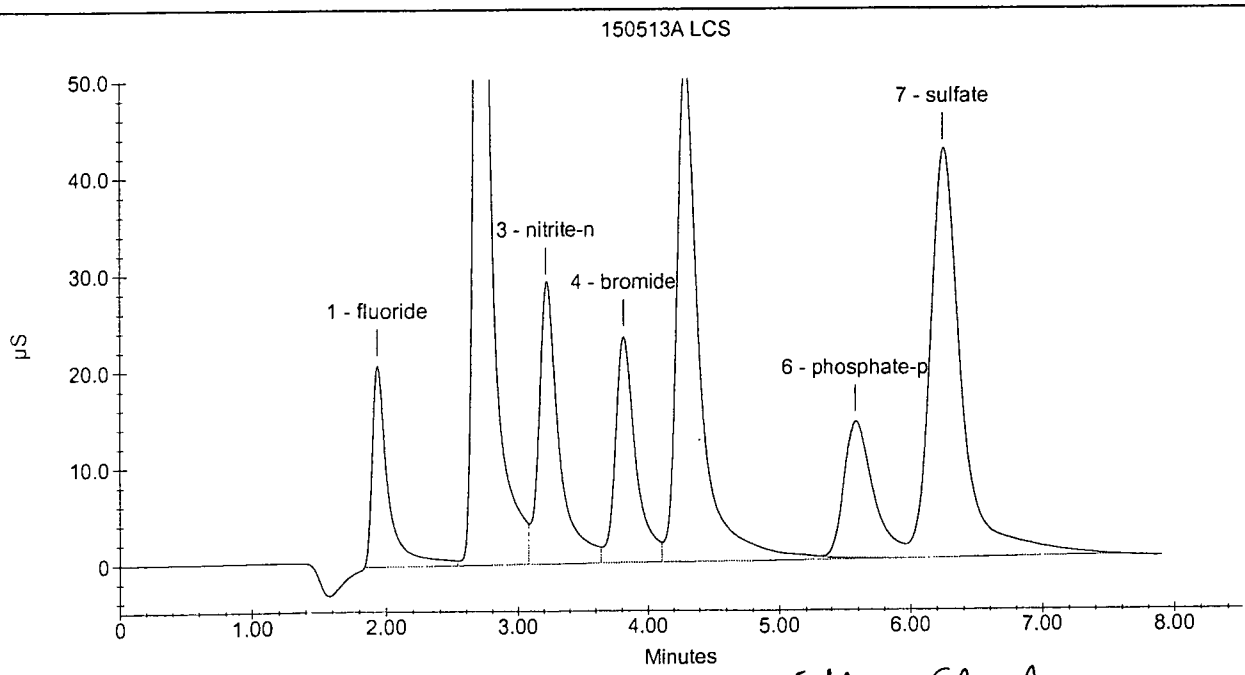
Sample Analysis Report

Sample Name : 150513A LCS
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_006.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/13/15 09:00:47
System Operator : jm
Injection Number : 6
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	2.4790	1747946	208301
2	2.71	chloride	18.5936	9867377	1219614
3	3.21	nitrite-n	2.8844	3158254	289093
4	3.81	bromide	12.0334	2505329	234210
5	4.29	nitrate-n	4.9767	6435019	515858
6	5.57	phosphate-p	4.7722	2199338	141187
7	6.24	sulfate	19.1357	6989021	420959



Algorithm Check

$2.5916 \times 10^{-6}(6989021) + 0.9904 = 19.13$ ✓ MM 5/21/15

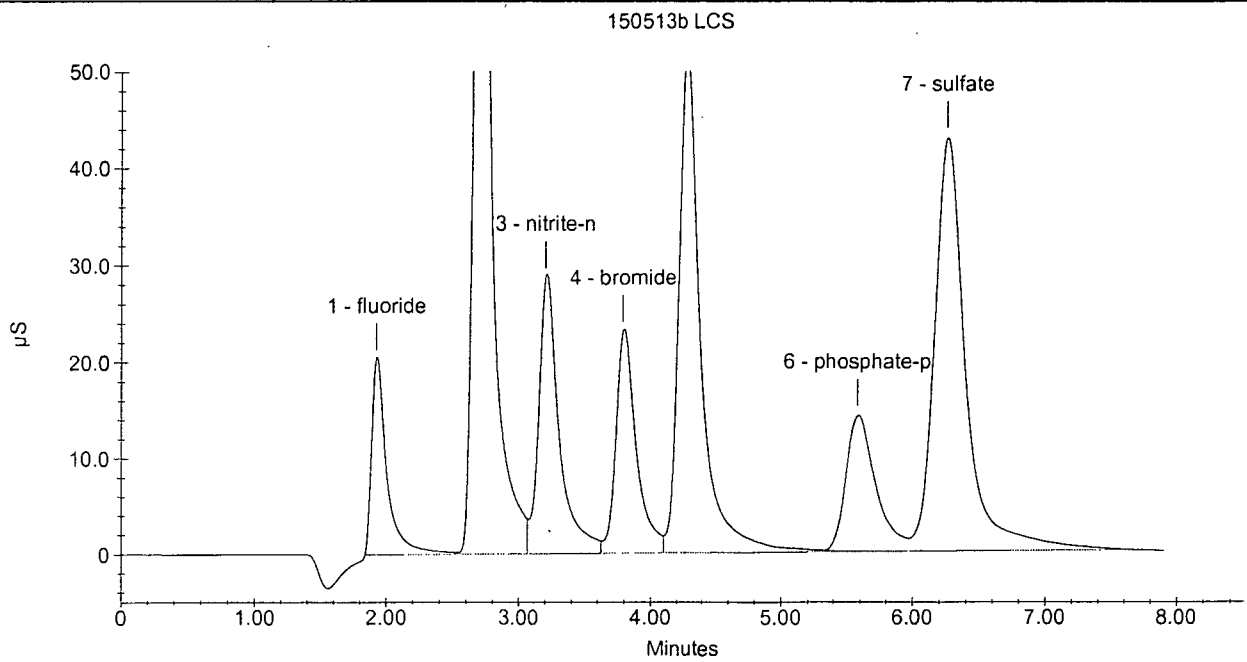
Sample Analysis Report

Sample Name : 150513b LCS
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_045.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 17:16:41
System Operator : jm
Injection Number : 45
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.92	fluoride	2.3233	1636315	201803
2	2.69	chloride	18.7440	9952181	1216075
3	3.20	nitrite-n	2.8069	3073346	285140
4	3.79	bromide	11.8710	2470920	229301
5	4.27	nitrate-n	4.8716	6294346	512426
6	5.57	phosphate-p	4.8086	2215471	140477
7	6.25	sulfate	19.2930	7049573	426451



Algorithm Check

$2.596 \times 10^{-6}(7049573) + 0.9904 = 19.29$ mM ✓

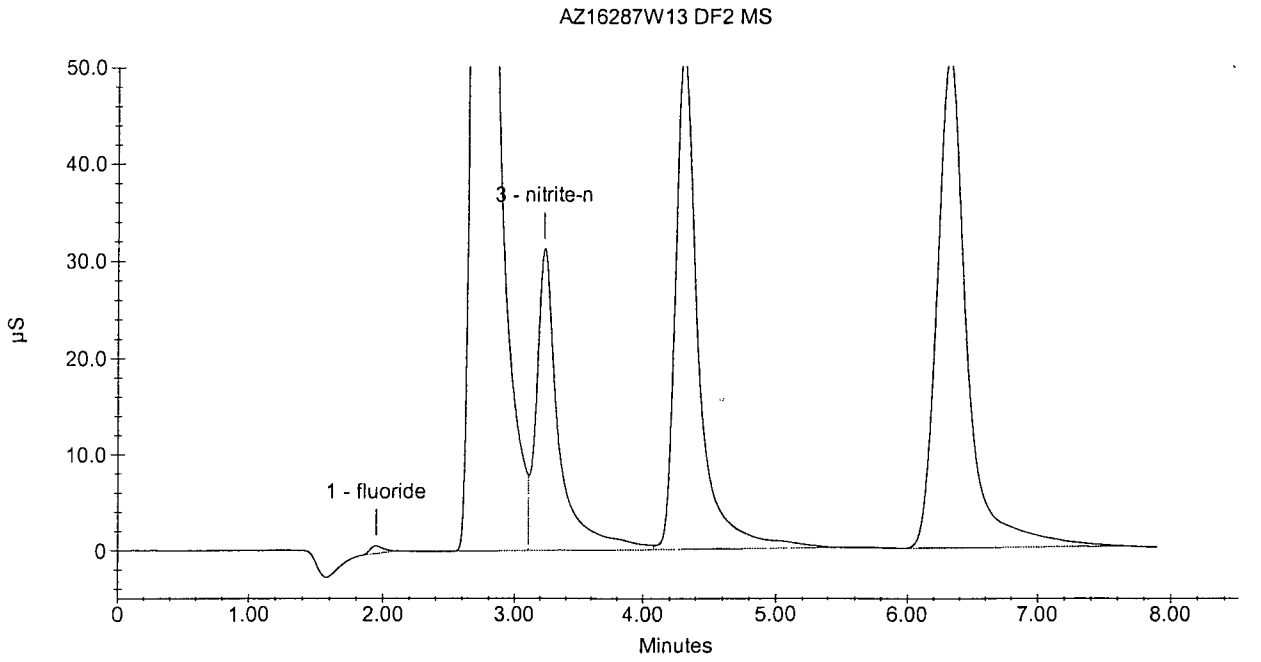
Sample Analysis Report

Sample Name : AZ16287W13 DF2 MS
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_051.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 18:20:24
System Operator : jm
Injection Number : 51
Multiplier : 2.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.95	fluoride	0.2394	55914	7970
2	2.72	chloride	107.4902	29689822	3610023
3	3.23	nitrite-n	6.8180	3733491	310165
4	4.29	nitrate-n	9.7032	6267539	507082
5	6.31	sulfate	43.8547	8064268	505594



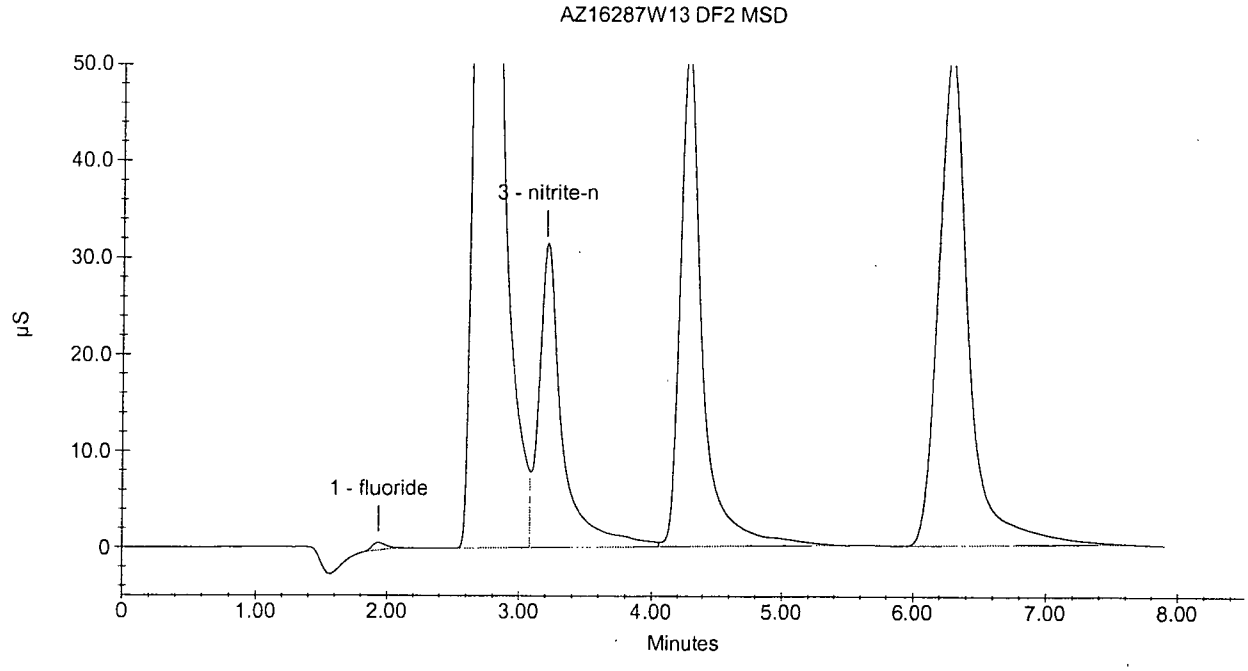
Sample Analysis Report

Sample Name : AZ16287W13 DF2 MSD
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_054.DXD

Method File Name : i:\dionex\d1anions\methods\anions 150505a.met
Date Time Collected : 5/13/15 18:52:06
System Operator : jm
Injection Number : 54
Multiplier : 2.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	0.2362	54798	7867
2	2.71	chloride	107.0599	29568495	3717242
3	3.20	nitrite-n	6.8589	3755900	309710
4	4.27	nitrate-n	9.6676	6243704	512211
5	6.27	sulfate	43.6532	8025457	506453



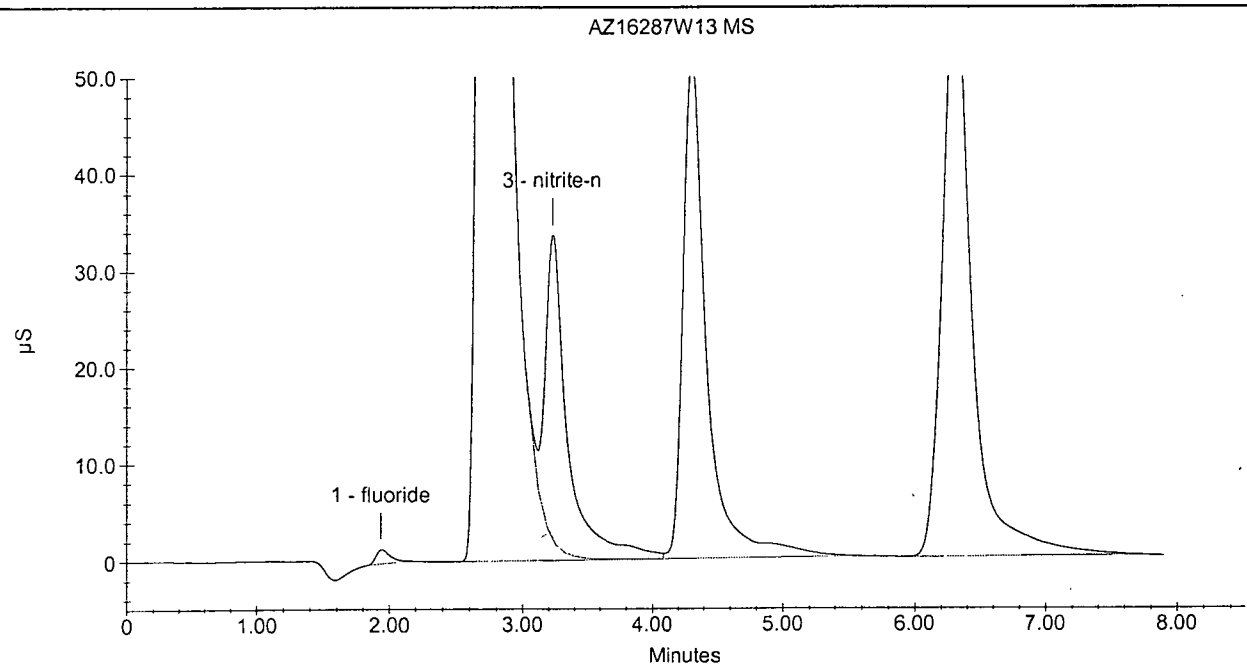
Sample Analysis Report

Sample Name : AZ16287W13 MS
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_039.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/13/15 16:13:06
System Operator : jm
Injection Number : 39
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	0.1944	109494	14494
2	2.73	chloride	91.7249	51107154	6244449
3	3.23	nitrite-n	3.4673	3797360	313292
4	4.29	nitrate-n	5.1050	6606902	513887
5	6.29	sulfate	25.5240	9449574	601402



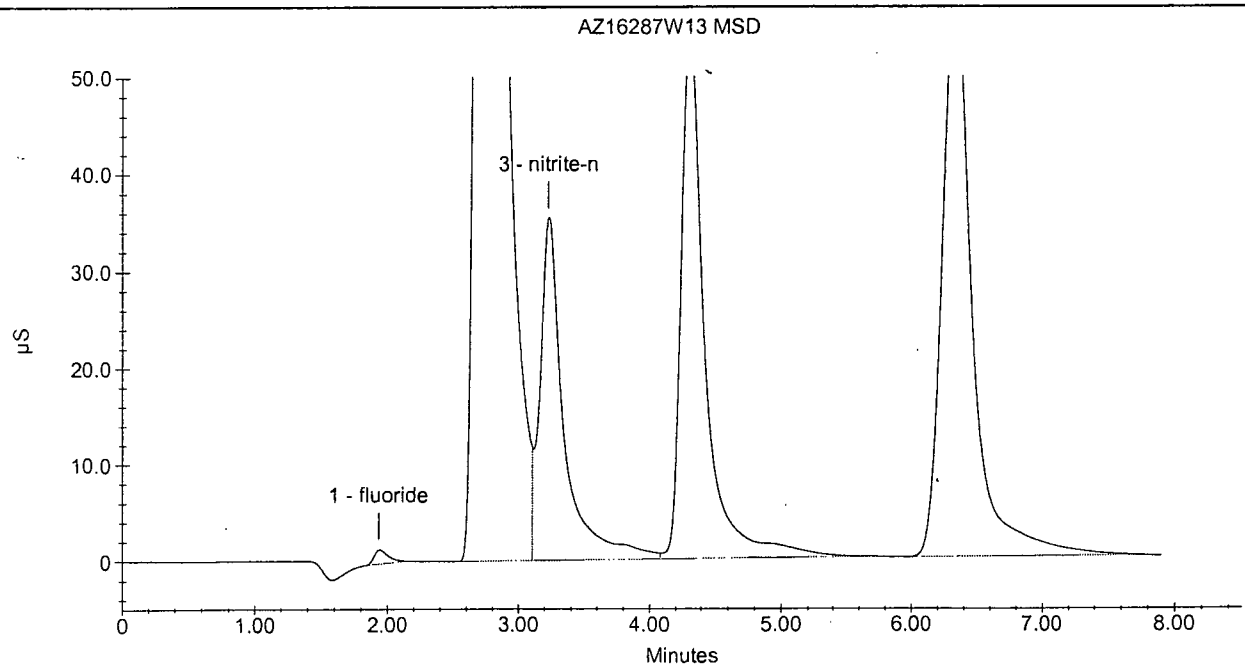
Sample Analysis Report

Sample Name : AZ16287W13 MSD
Data File Name : I:\DIONEX\D1ANIONS\DATA\150513A\150513a_038.DXD

Method File Name : I:\DIONEX\D1ANIONS\METHODS\ANIONS 150505A.met
Date Time Collected : 5/13/15 16:02:33
System Operator : jm
Injection Number : 38
Multiplier : 1.00

Peak Information : All Peaks

Peak Number	Peak Retention Time	Component Name	Component Amount (mg/L)	Peak Area	Peak Height
1	1.93	fluoride	0.1935	108845	14435
2	2.73	chloride	91.4345	50943424	6219532
3	3.23	nitrite-n	4.0584	4445537	352121
4	4.31	nitrate-n	5.3680	6959068	543555
5	6.32	sulfate	25.4584	9424321	598037



Detailed Analysis Report Print Date/Time: 2015/06/10 13:17:16

Sample ID: CCV2 5PPM Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 05190728
Cal. Curve: 150416I9 Timestamp: 2015/05/19 11:47
Operator ID: DT Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.0535	2.5268	338724	54.288	54.487	189
2	4.8669	2.4335	327639	54.359	54.555	211
3	5.0644	2.5322	339368	54.397	54.596	201
4	5.0199	2.5099	336724	54.432	54.631	206

<<<Statistics>>> Mean: 5.0012 Std Dev: 0.0915 RSD: 1.83

Sample ID: CCB Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 05190728
Cal. Curve: 150416I9 Timestamp: 2015/05/19 12:12
Operator ID: DT Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.2975	-0.1488	20863	54.352	54.551	100
2	-0.3575	-0.1788	17300	54.370	54.567	102
3	-0.3374	-0.1687	18496	54.381	54.579	98
4	-0.3072	-0.1536	20289	54.358	54.557	99

<<<Statistics>>> Mean: -0.3249 Std Dev: 0.0276 RSD: -8.49

Algorithm check AD 6.10.15

$\left(\frac{668673 - 38538}{118800}\right) \times 2 = 10.6$

Sample ID: 150519A LCS Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 05190728
Cal. Curve: 150416I9 Timestamp: 2015/05/19 12:44
Operator ID: DT Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.6081 ✓	5.3041	668673	54.628	54.826	209
2	10.9840	5.4920	690997	54.640	54.838	215
3	10.8977	5.4489	685873	54.610	54.809	218
4	10.8259	5.4130	681610	54.757	54.954	209

<<<Statistics>>> Mean: 10.8289 Std Dev: 0.1608 RSD: 1.48

Sample ID: AZ16287W17 Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 05190728
Cal. Curve: 150416I9 Timestamp: 2015/05/19 15:10
Operator ID: DT Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.9598	0.4799	95549	54.632	54.829	156
2	0.7538	0.3769	83313	54.652	54.851	153
3	0.7010	0.3505	80175	54.651	54.849	156
4	0.6258	0.3129	75711	54.677	54.875	152

<<<Statistics>>> Mean: 0.7601 Std Dev: 0.1431 RSD: 18.83

Sample ID: AZ16287W17 MS Mode: TOC
Method: TOC 0 - 20 ppmC Filename: 05190728
Cal. Curve: 150416I9 Timestamp: 2015/05/19 16:09
Operator ID: DT Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.6450	5.8225	730261	54.963	55.162	167
2	11.7774	5.8887	738128	55.181	55.380	170
3	11.8794	5.9397	744189	54.965	55.164	182
4	12.1688	6.0844	761379	54.881	55.080	182

<<<Statistics>>> Mean: 11.8677 Std Dev: 0.2225 RSD: 1.88

Sample ID: AZ16287W17 MSD
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 05190728
Timestamp: 2015/05/19 16:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.7414	6.3707	795389	54.843	55.041	184
2	12.6518	6.3259	790069	54.915	55.113	189
3	12.7273	6.3637	794555	54.978	55.175	184
4	12.6392	6.3196	789318	55.002	55.200	186

<<<Statistics>>> Mean: 12.6899 Std Dev: 0.0519 RSD: 0.41

Sample ID: AZ16288W06
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 05190728
Timestamp: 2015/05/19 17:10
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.8338	1.9169	266270	54.947	55.147	168
2	3.6083	1.8042	252875	54.908	55.107	169
3	3.7432	1.8716	260889	54.925	55.125	176
4	3.6074	1.8037	252820	54.940	55.139	176

<<<Statistics>>> Mean: 3.6982 Std Dev: 0.1107 RSD: 2.99

Sample ID: AZ16289W06
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 05190728
Timestamp: 2015/05/19 17:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.9631	2.4815	333349	55.122	55.321	177
2	4.5702	2.2851	310013	55.119	55.317	182
3	4.6530	2.3265	314928	55.107	55.305	183
4	4.3662	2.1831	297893	55.167	55.365	180

<<<Statistics>>> Mean: 4.6381 Std Dev: 0.2479 RSD: 5.35

Sample ID: AZ16290W06
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 05190728
Timestamp: 2015/05/19 18:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.6274	0.8137	135206	55.157	55.356	159
2	1.3011	0.6506	115825	55.137	55.335	156
3	1.6185	0.8092	134678	55.105	55.303	172
4	1.2402	0.6201	112209	55.173	55.370	158

<<<Statistics>>> Mean: 1.4468 Std Dev: 0.2049 RSD: 14.17

Sample ID: CCV1 10PPM
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT
Mode: TOC
Filename: 05190728
Timestamp: 2015/05/19 20:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.6620	5.8310	731273	56.171	56.370	194
2	11.8685	5.9342	743539	56.166	56.364	194

3	12.2924	6.1462	768721	56.054	56.252	205
4	11.7561	5.8780	736861	56.142	56.341	199

<<<Statistics>>> Mean: 11.8947 Std Dev: 0.2782 RSD: 2.34

Sample ID: CCB
Method: TOC 0 - 20 ppmC
Cal. Curve: 150416I9
Operator ID: DT

Mode: TOC
Filename: 05190728
Timestamp: 2015/05/19 20:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.3570	-0.1785	17329	55.914	56.110	102
2	-0.4159	-0.2080	13831	55.949	56.149	101
3	-0.4115	-0.2057	14097	55.954	56.152	99
4	-0.4100	-0.2050	14183	55.950	56.149	99

<<<Statistics>>> Mean: -0.3986 Std Dev: 0.0278 RSD: -6.99

082

04/30/15mm exp 05/01/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/01/15 mm	Anion Eluent made as per page 22.
05/01/15 mm exp 05/02/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/04/15mm	Anion Eluent made as per page 22.
05/04/15 mm exp 05/05/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/05/15mm exp 05/06/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/05/15 mm exp-	Anion ICAL stock, curve made as per page 47, ICV made as per page 76.
05/06/15 mm	Anion Eluent made as per page 22.
05/06/15mm exp 05/07/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/07/15 mm exp 05/08/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/08/15 mm exp 05/09/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/11/15 mm exp 05/12/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/12/15mm	Anion Eluent made as per page 22.

made as per p. 29

s per p. 29

le as per p. 29

KQ2.

METHOD 300 / 9056		ANION STOCK				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
O2SI	F-	1,000	1037642-31166	01/04/14	0.25	5
O2SI	Cl-	5,000	1045796-32404	11/08/14	0.5	50
O2SI	NO2-N	1,000	1040585-31592	04/26/14	0.25	5
Ultra Scientific	Br-	1,000	L00953-31570	09/30/14	1.25	25
O2SI	NO3-N	1,000	1040587-31591	04/26/14	0.5	10
O2SI	PO4-P	1,000	1040570-31590	04/26/14	0.5	10
Ultra Scientific	SO4	5,000	P00075-30305	02/28/14	0.5	50
Brought up with milipore water to Final Volume of:						50

METHOD 300 / 9056				ANION CAL CURVE						
				ICAL #1	ICAL#2	ICAL#3	ICAL #4	ICAL #5	ICAL #6	ICAL #7
ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL	mL
ANION STOCK	100			0.4	2	10	2	5	7	10
Brought up w/ Milipore Water to final volume of (mL):				100	100	100	10	10	10	na
Final Conc F (mg/L):				0.04	0.1	0.5	1	2.5	3.5	5
Final Conc Cl (mg/L):				0.4	1	5	10	25	35	50
Final Conc NO2-N (mg/L):				0.04	0.1	0.5	1	2.5	3.5	5
Final Conc Br (mg/L):				0.2	0.5	2.5	5	12.5	17.5	25
Final Conc NO3-N (mg/L):				0.08	0.2	1	2	5	7	10
Final Conc PO4-P (mg/L):				0.08	0.2	1	2	5	7	10
Final Conc SO4 (mg/L):				0.4	1	5	10	25	35	50

METHOD 300 / 9056		ANION ICV / LCS				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc (mg/L)
CPI	F-	1,000	12B199-30554	09/30/13	0.125	2.50
CPI	Cl-	1,000	13e314-32692	01/19/15	1.00	20.00
CPI	NO2-N	304	12g112-32702	01/19/15	0.50	3.04
CPI	Br-	1,000	12b205-32027	08/08/14	0.625	12.50
CPI	NO3-N	1,000	13b007-32700	01/19/15	0.25	5.00
CPI	PO4-P	1,000	12g005-32694	01/19/15	0.25	5.00
CPI	SO4	1,000	01/19/15	13e315-32697	1.00	20.00
Brought up with milipore water to Final Volume of:					50	

05/12/15 mm exp 05/13/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/13/15 mm exp 05/14/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/14/15 mm	Anion Eluent made as per page 22.
05/14/15 mm exp 05/15/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/19/15 mm exp 05/20/15	Anion CCV, LCS, MS/MSD made as per page 76.
05/20/15 mm	Anion Eluent made as per page 22.
05/20/15 mm exp 05/21/15	Anion CCV, LCS, MS/MSD made as per page 76.

02/16/15 mm
exp 02/17/15

Anion CCV, LCS, MS/MSD made as per page 48.

02/18/15 mm
exp 02/19/15

METHOD 300 / 9056		CCV				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc. (mg/L)
o2si	F	1,000	1053804-33361	8/21/15	0.125	2.5000
o2si	Cl	5,000	1045796-32404	11/8/14	0.250	25.0000
o2si	NO2-N	1,000	1062905-33877	1/10/16	0.125	2.5000
o2si	N03-N	1,000	1057207-33376	8/30/15	0.250	5.0000
ULTRA	Br	1,000	P00939-33356	10/31/16	0.625	12.5000
ULTRA	SO4	5,000	T00419-33562	5/31/16	0.250	25.0000
o2si	PO4-P	1,000	1049001-32799	1/23/15	0.250	5.0000
					Final Volume:	50

MM. 02/18/15

02/18/15 mm
exp 02/19/15

METHOD 300 / 9056		LCS/LCSD/MS/MSD				
SUPPLIER		mg/L	LOT #	EXP.	mL	Final Conc. (mg/L)
CPI	F	1,000	13G095-33179	5/27/15	0.125	2.5000
CPI	Cl	1,000	14C245-33633	11/22/15	1.000	20.0000
CPI	NO2-N	304	13J007-33359	8/20/15	0.500	3.0400
CPI	N03-N	1,000	13L102-33632	11/22/15	0.250	5.0000
CPI	Br	1,000	13D142-32699	1/19/15	0.625	12.5000
CPI	SO4	1,000	14G042-33802	1/10/16	1.000	20.0000
CPI	PO4-P	1,000	12G005-32695	1/19/15	0.250	5.0000
					Final Volume:	50

MM. 02/18/15

02/19/15 mm
exp 02/20/15

Anion CCV, MS/MSD made as per page 76.

02/19/15 mm

Anion Eluent made as per page 22.

02/20/15 mm
exp 02/21/15

Anion CCV, LCS, MS/MSD made as per page 4876. 2/20/15 MM

02/23/15 mm
exp 02/24/15

Anion CCV, LCS, MS/MSD made as per page 76.

METHOD 5310B/9060	TOC CCVS			CCV1	CCV2
	mg/L	Prep Date	EXP.	mL	mL
TOC INTERMEDIATE 1 STD	100	05/19/15	06/19/15	20	10
Brought up with milipore water to Final Volume of:				200	200
			Final Conc (mg/L):	10	5

METHOD 5310B/9060	TOC ICV/LCS/MS/MSD			ICV/LCS	MS/MSD
	mg/L	Prep Date	EXP.	mL	mL
TOC INTERMEDIATE 2 STD	100	05/19/15	06/19/15	10	10
Brought up with milipore water to Final Volume of:				100	100
			Final Conc (mg/L)	10	10

METHOD 5310B / 9060	MDL STD			
	mg/L	Prep Date	EXP.	LOQ
ICV / LCS	10	05/19/15	06/19/15	10
Brought up with milipore water to Final Volume of:				200
			Final Conc (mg/L):	0.50

METHOD 5310B / 9060	LOD CHECK			
	mg/L	Prep Date	EXP.	LOD
CCV2 5mg/L	5	05/19/15	06/19/15	10
Brought up with milipore water to Final Volume of:				200
			Final Conc (mg/L):	0.25

METHOD 5310B / 9060	LOQ CHECK			
	mg/L	Prep Date	EXP.	LOQ
TOC CCV 1 10mg/L	10	05/19/15	06/19/15	10
Brought up with milipore water to Final Volume of:				100
			Final Conc (mg/L):	1.00

METHOD 5310/9060 TOC CALIBRATION CURVE

ID#	mg/L	Prep Date	EXP. DATE	mL	mL	mL	mL	mL	mL	mL
TOC INTERMEDIATE 1 STD	100	04/16/15	05/17/15	0	0.5	1	5	10	25	50
Brought up with milipore water to Final Volume of:				50	100	100	100	100	100	100
		Final Conc (mg/L):		0	0.5	1.0	5	10	25	50

METHOD 5310B/9060		TOC INTERMEDIATE 1º STD				
SUPPLIER		mg/L	LOT #	open	EXP.	mL
O2SI	Potassium Hydrogen Phthalate	1,000	1072005	04/10/15	09/03/16	10mL
				Brought up with milipore water to Final Volume of:		100mL
				Final Conc (mg/L)		100

METHOD 5310B/9060	TOC CCVS				
	mg/L	Prep Date	EXP.	CCV1	CCV2
TOC INTERMEDIATE 1º STD	100	04/16/15	05/17/15	10	5
Brought up with milipore water to Final Volume of:				100	100
			Final Conc (mg/L)	10	5

METHOD 5310B/9060		TOC INTERMEDIATE 2º STD				
SUPPLIER		mg/L	LOT #	open	EXP.	mL
ULTRA SCI	Potassium Hydrogen Phthalate	1,000	CM-0176	04/10/15	02/28/17	10mL
				Brought up with milipore water to Final Volume of:		100mL
				Final Conc (mg/L)		100

METHOD 5310B/9060	TOC ICV/LCS			
	mg/L	Prep Date	EXP.	ICV/LCS
TOC INTERMEDIATE 2º STD	100	04/16/15	05/17/15	10
Brought up with milipore water to Final Volume of:				100
			Final Conc (mg/L)	10

300/9056 Injection Log

Directory: I:\Dionex\D1Anions\data\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
18	05 May 2015	11:21	CAL STD #1 05/05/15		150505a	1.
19	05 May 2015	11:32	CAL STD #2		150505a	1.
20	05 May 2015	11:43	CAL STD #3		150505a	1.
21	05 May 2015	11:53	CAL STD #4		150505a	1.
22	05 May 2015	12:04	CAL STD #5		150505a	1.
23	05 May 2015	12:15	CAL STD #6		150505a	1.
24	05 May 2015	12:26	CAL STD #7		150505a	1.
26	05 May 2015	12:47	150505 ICV		150505a	1.
28	05 May 2015	13:08	ICB		150505a	1.

300/9056 Injection Log

Directory: I:\Dionex\D1Anions\data\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
4	13 May 2015	08:35	CCV 150512		150513a	1.
5	13 May 2015	08:50	CCB		150513a	1.
6	13 May 2015	09:00	150513A LCS		150513a	1.
16	13 May 2015	12:09	CCV 150513		150513a	1.
17	13 May 2015	12:19	CCB		150513a	1.
28	13 May 2015	14:16	CCV 150513		150513a	1.
29	13 May 2015	14:27	CCB		150513a	1.
36	13 May 2015	15:41	AZ16287W13		150513a	1.
38	13 May 2015	16:02	AZ16287W13 MSD		150513a	1.
39	13 May 2015	16:13	AZ16287W13 MS		150513a	1.
40	13 May 2015	16:23	CCV 150513		150513a	1.
41	13 May 2015	16:34	CCB		150513a	1.
42	13 May 2015	16:44	AZ16288W05		150513a	1.
43	13 May 2015	16:55	AZ16289W05		150513a	1.
44	13 May 2015	17:06	AZ16290W05		150513a	1.
45	13 May 2015	17:16	150513b LCS		150513a	1.
49	13 May 2015	17:59	AZ16287W13 DF2		150513a	2.
51	13 May 2015	18:20	AZ16287W13 DF2 MS		150513a	2.
52	13 May 2015	18:30	CCV 150513		150513a	1.
53	13 May 2015	18:41	CCB		150513a	1.
54	13 May 2015	18:52	AZ16287W13 DF2 MSD		150513a	2.
55	13 May 2015	19:02	AZ16288W13 DF5		150513a	5.
56	13 May 2015	19:13	AZ16290W13 DF2		150513a	2.
57	13 May 2015	19:23	AZ16290W13 DF5		150513a	5.
58	13 May 2015	19:34	CCV 150513		150513a	1.
59	13 May 2015	19:45	CCB		150513a	1.

415/9060 Injection Log

Directory: I:\Tekmar\uploadrun\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	16 Apr 2015	09:39	DI WATER		150416I9-TO	1.
2	16 Apr 2015	10:06	autocal1		150416I9-TO	1.
3	16 Apr 2015	10:33	autocal2		150416I9-TO	1.
4	16 Apr 2015	11:00	autocal3		150416I9-TO	1.
5	16 Apr 2015	11:28	autocal4		150416I9-TO	1.
6	16 Apr 2015	11:57	autocal5		150416I9-TO	1.
7	16 Apr 2015	12:26	autocal6		150416I9-TO	1.
8	16 Apr 2015	12:55	ICV		150416I9-TO	1.
9	16 Apr 2015	13:20	ICB		150416I9-TO	1.

415/9060 Injection Log

Directory: I:\Tekmar\uploadrun\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	19 May 2015	11:47	CCV2 5PPM		150519A9-T	1.
2	19 May 2015	12:12	CCB		150519A9-T	1.
3	19 May 2015	12:44	150519A LCS		150519A9-T	1.
8	19 May 2015	15:10	AZ16287W17		150519A9-T	1.
10	19 May 2015	16:09	AZ16287W17 MS		150519A9-T	1.
11	19 May 2015	16:40	AZ16287W17 MSD		150519A9-T	1.
12	19 May 2015	17:10	AZ16288W06		150519A9-T	1.
13	19 May 2015	17:40	AZ16289W06		150519A9-T	1.
14	19 May 2015	18:09	AZ16290W06		150519A9-T	1.
18	19 May 2015	20:07	CCV1 10PPM		150519A9-T	1.
19	19 May 2015	20:32	CCB		150519A9-T	1.