



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

Certification Number: CA1312
NELAP Certification number: 05233CA
DoD-ELAP Certificate number: ADE-1410

Data Validatable Report

August 13, 2012

Environet, Inc.
650 Iwilei Road, #204
Honolulu, Hawaii 96817

Attn: Max Solmssen

Title: Report of Data: Case 68268

Project: LTM Red Hill/1022-024

Contract #: Prime contract # for DoD: N62742-08-D-1930, CTO HC21

Dear Mr. Solmssen:

Three water samples were received July 20, 2012, in good condition. Written results for the requested analyses are provided on this August 13, 2012.

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, 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/cm
Enclosure
cc: File

Number of pages in this report: 389

**Data Validation Package
for
LTM Red Hill / 1022-024
SDG 68268**

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SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 68268

Project: Red Hill/1022-024

Sample Receipt Information:

The samples were received on July 20, 2012, at 3.0°C and 3.0°C. The samples were assigned Analytical Request Form (ARF) number 68268. The sample numbers and requested analyses were compared to the chain of custody and email communications. The analyses requested was provided by the client. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ES083	AY65166	WATER	07/19/12	07/20/12
ES084	AY65167	WATER	07/19/12	07/20/12
ES086 TRIP BLANK	AY65168	WATER	07/19/12	07/20/12

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

APPL's Laboratory control limits generated in house statistically do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control spike recoveries 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 SIM

Polynuclear Aromatic Hydrocarbons

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to EPA method 8270D using a Hewlett Packard Gas Chromatograph with a mass spectrometer detector in selective ion monitoring mode.

Quality Control/Assurance

Calibrations:

Initial and continuing calibrations were performed according to the method. All calibration criteria were met.

Blanks:

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

Spikes:

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

Sample ES084 was designated by the client for MS/MSD analysis. All spike criteria were met.

Surrogates

Surrogate recoveries are summarized on the forms 2&8. All surrogate recoveries were within the control limits.

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 8270. All method criteria were met.

Summary:

No problem was encountered.

EPA Method 8015B

Total Petroleum Hydrocarbons – Diesel

Sample Preparation:

The water samples were extracted according to EPA method 3510C. The samples were extracted within holding time.

Sample Analysis Information:

The samples were analyzed according to the method using an Agilent Gas Chromatograph with a flame ionization detector.

Quality Control/Accuracy

Calibrations:

Initial and continuing calibrations were performed according to the method. All calibration criteria were met.

Blanks:

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

Spikes:

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

Sample ES084 was designated by the client for MS/MSD analysis. All spike recovery criteria were met.

Surrogates:

The surrogate recoveries are summarized on the form 2 & 8. All surrogate recoveries were within the control limits.

Summary:

No problem was encountered

EPA Method 8260B

Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using a Hewlett Packard Gas Chromatograph with a mass spectrometer detector. The samples were received in unpreserved vials. The vials were analyzed within seven days of collection; all holding times were met. Manual integrations were performed in accordance with APPL's SOP. All injections for gasoline were manually integrated due to the original integration not following the baseline. A summary of the manual integrations on the samples, blank and LCS is included in the QC Summary section of the report. Chromatograms from before and after the manual integrations are enclosed.

Quality Control/Accuracy:

Calibrations:

Initial and continuing calibrations were performed according to the method. All system performance check compounds and calibration check compounds met DoD acceptance criteria. All calibration criteria were met.

Blanks:

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

Spikes:

A Laboratory Control Spike (LCS) was used for quality assurance. A second-source standard was used for the LCS. All LCS acceptance criteria were met.

Sample ES084 was designated by the client for MS/MSD analysis. Four compounds recovered outside their control limits: 1,1,2,2-Tetrachloroethane recovered below 65% at 1.7% and 1.9%, Gasoline below 75% at 72.7% in the MS, Methylene chloride above 140% at 169% and 166%, and Trichloroethene above 125% at 199% and 204%. All other MS/MSD recoveries were acceptable.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogate recoveries were within the acceptance limits.

Tuning:

The instrument was tuned using BFB. 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:

The gasoline recoveries in the SS, CCV, and LCS were above their respective upper recovery limits because the initial calibration curve was made without the injection of surrogate. The samples could not be re-injected within holding time. The samples were re-injected outside of holding time with an initial calibration curve that contained surrogate and with acceptable SS, CCV, and LCS recoveries. Gasoline was not detected in the initial injections nor in the re-injections. No other problem was encountered. The data generated are acceptable.

EPA Method 6020

Dissolved Lead

Digestion Information:

The water samples were digested according to EPA method 3015. All holding times were met.

Analysis Information:

Samples:

The samples were analyzed for dissolved lead according to EPA method 6020 using an Agilent 7500CX ICP-MS.

Calibrations:

The initial and continuing calibrations were analyzed according to the DoD QSM. The initial calibration verification is prepared from a second source standard.

Blanks:

No metal was detected at or above one-half the LOQ in the method blank.

Spikes:

Laboratory Control Spike (LCS), Matrix Spikes (MS/MSD), Post-Digestion Spike (PDS), and Dilution Test (DT) were used for quality assurance. All LCS recoveries were within the acceptance limits.

Sample ES084 was designated by the laboratory for QC analysis. All acceptance criteria were met in the MS/MSD, PDS, and DT.

Summary:

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

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 - explain
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.
Y	Percent difference between primary and confirmation column > 40%

**CHAIN OF CUSTODY,
ARF, CRF, AND
CLIENT COMMUNICATION**

APPL - Analysis Request Form

68268

Client: Environet, Inc.
 Address: 650 Iwilei Rd, #204
Honolulu, HI 96817
 Attn: Max Solmssen
 Phone: 808-833-2225 Fax: 808-833-2231
 Job: LTM Red Hill / 1022-024
 PO #: 1022-024
 Chain of Custody (Y/N): Y # 36498
 RAD Screen (Y/N): Y pH (Y/N): Y
 Turn Around Type: 2 WEEKS

Received by: TBV 
 Date Received: 07/20/12 Time: 11:30
 Delivered by: FED EX
 Shuttle Custody Seals (Y/N): Y Time Zone: -10
 Chest Temp(s): 3,3.0°C
 Color: VOA,M-PURPNK,O-ORNGR
 Samples Chilled until Placed in Refrig/Freezer: Y
 Project Manager: Cynthia Clark
 QC Report Type: DVP4/ADR DOD/HI ✓
 Due Date: 08/03/12

Comments:

14 day TAT for Form 1s & 21 day TAT for full package; JP
 prelims to OSDas@, MSolmssen@ & VDupra@environetinc.com
 1 pdf on CD or FTP (no hard copy), possible hard copy to LDC
 Guidance: DOD QSM, DoD Forms, J flag to DL, U flag at LOD JP
 EDD ADR A1/A3 (ADR 8.3a unchecked) to OSDas@ VDupra@ & MSolmssen@environetinc.com
 metals 6020: report Lead with 0.5ug/L RL
 TPH-Diesel only; VOCs: include gasoline by 8260B
 No analysis was requested on COC; Extra volume for ES084 - is it for MS/MSD

Sample Distribution:Charges:Invoice To:GC: 2-\$SIMHC12W, 2-\$TPETD2Extractions: 2- SEP004S, 2- SEP011VOA: 3-\$86RHBFMetals: 2-\$602D(Pb)Other: 2- M3015same

Client ID	APPL ID	Sampled	Analyses Requested
1. ES083	AY65166W 	07/19/12 11:30	\$602D(Pb), \$86RHBF, \$SIMHC12W, \$TPETD2 -- Unpreserved VOA
2. ES084	AY65167W MS/MSD 	07/19/12 13:00	\$602D(Pb), \$86RHBF, \$SIMHC12W, \$TPETD2 -- Unpreserved VOA
3. ES086 TRIP BLANK	AY65168W 	07/19/12 08:00	\$86RHBF -- Unpreserved VOA

APPL Sample Receipt Form

ARF# 68268

Sample	Container Type	Count	pH
AY65166	⁶ PL 500mL - HNO3	1	1.7
	¹⁵ VOAs - NP	3	NA
	¹⁷ Amber Liter	4	NA
AY65167	⁶ PL 500mL - HNO3	2	1.7
	¹⁵ VOAs - NP	6	NA
	¹⁷ Amber Liter	8	NA
AY65168	¹⁵ VOAs - NP	3	NA

Sample	Container Type	Count	pH
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APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 36498

Report to: **PLEASE PRINT**

Company Name: Environet, Inc. Phone: 808-833-2225
Address: 1650 Isabella Rd, Suite 209 Fax: _____
Honolulu, HI 96817

Invoice to: *A-C* PLEASE PRINT

Company Name: Environet, Inc. Phone: 808-833-2225
Address: Ce 501 Wilcox, Suite 204 Fax: _____
Honolulu, HI 96817

Project Name/Number Red Hill/1022-024	Sampler (Print) Max Solmssen						Analysis Requested/Method Number				Date Shipped: 7/19/12		
Purchase Order Number	Sampler (Signature) Max L. Sol				No. of Containers	Matrix							Carrier: FEDEX
Sample Identification	Location	Date Collected	Time Collected	Time Zone		Aq	Sed.	Soil	TPH-D ₄₀ (8260B)	VOCs(8260B)	TPH-D ₄₀ (8260B)	PAHs(8270CSIM)	Lead #6020
ES083	Red Hill	7/19/12	1130	HT	8 X								
ES084 ms/msD			1300		16								
ES086 trip Blank			800		3								
Shuttle Temperature:	Turnaround Requested: Check one <input checked="" type="checkbox"/> Standard 2-3 wk <input type="checkbox"/> One week <input type="checkbox"/> 24/48 Hrs. <input type="checkbox"/> Other				Sample Disposal: <input type="checkbox"/> Return to client <input checked="" type="checkbox"/> Disposal by Lab (30-day retention)								
Relinquished by sampler: ms	Date 7/19/12	Time 14:20	Received by:		Relinquished by:		Date	Time	Received by:				
Relinquished by:	Date	Time	Received by:		Relinquished by:		Date 7/20/12	Time 1130	Received at lab by:				

COOLER RECEIPT FORM

- 1) Project: Red Hill / 1022-024 Date Received: 7/20/12
- 2) Coolers: Number of Coolers: 2
- 3) YES NO Were coolers and samples screened for radioactivity?
- 4) YES NO Were custody seals on outside of cooler? How many? _____ Date on seal? _____
- 5) Name on seal? _____
- 6) YES NO NA Were custody seals unbroken and intact at the time of arrival?
- 7) YES NO Did the cooler come with a shipping slip (air bill, etc.)? Carrier name: Fed Ex
- 8) Shipping slip numbers: 1) X744124331732 3) _____
- 9) YES NO NA Was the shipping slip scanned into the database?
- 10) YES NO NA If cooler belongs to APPL, has it been logged into the ice chest database?
- 11) Describe type of packing in cooler (bubble wrap, popcorn, type of ice, etc.): Bubble Bag wet ice
- 12) YES NO NA For hand delivered samples was sufficient ice present to start the cooling process?
- 13) YES NO Was a temperature blank included in the cooler?
- 14) Serial number of certified NIST thermometer used: A39267 Correction factor: 0
- 15) Cooler temp(s): 1) 3.0 2) 3.0 3) _____ 4) _____ 5) _____ 6) _____ 7) _____ 8) _____

Chain of custody:

- 16) YES NO Was a chain of custody received?
- 17) YES NO Were the custody papers signed in the appropriate places?
- 18) YES NO Was the project identifiable from custody papers?
- 19) YES NO Did the chain of custody include date and time of sampling?
- 20) YES NO Is location where sample was taken listed on the chain of custody?

Sample Labels:

- 21) YES NO Were container labels in good condition?
- 22) YES NO Was the client ID on the label?
- 23) YES NO Was the date of sampling on the label?
- 24) YES NO Was the time of sampling on the label?
- 25) YES NO Did all container labels agree with custody papers?

Sample Containers:

- 26) YES NO Were all containers sealed in separate bags?
- 27) YES NO Did all containers arrive unbroken?
- 28) YES NO Was there any leakage from samples?
- 29) YES NO Were any of the lids cracked or broken?
- 30) YES NO Were correct containers used for the tests indicated?
- 31) YES NO Was a sufficient amount of sample sent for tests indicated?
- 32) YES NO NA Were bubbles present in volatile samples? If yes, the following were received with air bubbles:
Larger than a pea: _____
Smaller than a pea: Ay 65167 WDS - 6116

Preservation & Hold time:

- 33) YES NO NA Was a sufficient amount of holding time remaining to analyze the samples?
- 34) YES NO NA Do the sample containers contain the same preservative as what is stated on the COC?
- 35) YES NO NA Was the pH taken of all non-VOA preserved samples and written on the sample container?
- 36) YES NO NA Was the pH of acid preserved non-VOA samples < 2 & sodium hydroxide preserved samples > 12?
- 37) YES NO NA Unpreserved VOA Vials received? _____
- 38) YES NO NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF? _____

Lab notified if pH was not adequate:

Deficiencies: No analysis were marked on C.O.C. and the answer was included in the Sample ID.Signature of personnel receiving samples: [Signature]Second reviewer: [Signature]Signature of project manager notified: ReneeDate and Time of notification: 9-23-12

Name of client notified: _____

Date and Time of notification: _____

Information given to client: _____

by whom (Initials): _____

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons

APPL, INC.

**EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary**

Method Blank
EPA 8270D SIM

Blank Name/QCG: **120725W-65167 - 169430**
 Batch ID: #SIMHC-120725A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	SURROGATE: 2-FLUORBIPHENY	73.2	50-110			%	07/25/12	07/25/12
BLANK	SURROGATE: NITROBENZENE-	71.0	40-110			%	07/25/12	07/25/12
BLANK	SURROGATE: TERPHENYL-D14 (112	50-135			%	07/25/12	07/25/12

Quant Method:SIMB.M
Run #:0725L003
Instrument:Linus
Sequence:L120613
Initials:LF

Printed: 07/27/12 12:14:35 PM
 GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68268

Case No: 68268

Date Analyzed: 07/25/12

Matrix: WATER

Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120725A-BLK	Blank	50-110	73.2		40-110	71.0	
120725A-LCS	Lab Control Spike	50-110	63.5		40-110	69.5	
AY65166	ES083	50-110	63.6		40-110	68.8	
AY65167-MS	Matrix Spike	50-110	64.7		40-110	67.4	
AY65167-MSD	Matrix SpikeD	50-110	64.2		40-110	70.0	
AY65167	ES084	50-110	54.0		40-110	55.6	

Comments: Batch: #SIMHC-120725A

Printed: 07/27/12 12:14:44 PM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68268

Case No: 68268

Date Analyzed: 07/25/12

Matrix: WATER

Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
120725A-BLK	Blank	50-135	112				
120725A-LCS	Lab Control Spike	50-135	99.5				
AY65166	ES083	50-135	111				
AY65167-MS	Matrix Spike	50-135	112				
AY65167-MSD	Matrix SpikeD	50-135	112				
AY65167	ES084	50-135	95.9				

Comments: Batch: #SIMHC-120725A

Printed: 07/27/12 12:14:44 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: 120725W-65167 LCS - 169430

Batch ID: #SIMHC-120725A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK %	Recovery
	ug/L	ug/L	Recovery	Limits
1-METHYLNAPHTHALENE	4.00	2.33	58.3	45-105
2-METHYLNAPHTHALENE	4.00	2.25	56.3	45-105
ACENAPHTHENE	4.00	2.54	63.5	45-110
ACENAPHTHYLENE	4.00	2.40	60.0	50-105
ANTHRACENE	4.00	2.54	63.5	55-110
BENZO(A)ANTHRACENE	4.00	2.31	57.8	55-110
BENZO(A)PYRENE	4.00	2.41	60.3	55-110
BENZO(B)FLUORANTHENE	4.00	2.65	66.3	45-120
BENZO(GHI)PERYLENE	4.00	2.48	62.0	40-125
BENZO(K)FLUORANTHENE	4.00	2.59	64.8	45-125
CHRYSENE	4.00	2.65	66.3	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.41	60.3	40-125
FLUORANTHENE	4.00	2.72	68.0	55-115
FLUORENE	4.00	2.66	66.5	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.22	55.5	45-125
NAPHTHALENE	4.00	2.27	56.8	40-100
PHENANTHRENE	4.00	2.61	65.3	50-115
PYRENE	4.00	2.56	64.0	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.27	63.5	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.39	69.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.99	99.5	50-135

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	SIMB.M
Extraction Date :	07/25/12
Analysis Date :	07/25/12
Instrument :	Linus
Run :	0725L004
Initials :	LF

Printed: 07/27/12 12:14:49 PM
 APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D SIM

APPL ID: 120725W-65167 MS - 169430

APPL Inc.

Batch ID: #SIMHC-120725A

908 North Temperance Avenue

Sample ID: AY65167

Clovis, CA 93611

Client ID: ES084

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
	ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Limits	%	Limits
1-METHYLNAPHTHALENE	3.81	ND	2.52	2.58	66.1	67.7	45-105	2.4	25
2-METHYLNAPHTHALENE	3.81	ND	2.46	2.44	64.6	64.0	45-105	0.82	25
ACENAPHTHENE	3.81	ND	2.78	2.87	73.0	75.3	45-110	3.2	25
ACENAPHTHYLENE	3.81	ND	2.87	2.85	75.3	74.8	50-105	0.70	25
ANTHRACENE	3.81	ND	2.94	2.99	77.2	78.5	55-110	1.7	25
BENZO(A)ANTHRACENE	3.81	ND	2.41	2.39	63.3	62.7	55-110	0.83	25
BENZO(A)PYRENE	3.81	ND	2.46	2.37	64.6	62.2	55-110	3.7	25
BENZO(B)FLUORANTHENE	3.81	ND	2.41	2.32	63.3	60.9	45-120	3.8	25
BENZO(GHI)PERYLENE	3.81	ND	2.61	2.55	68.5	66.9	40-125	2.3	25
BENZO(K)FLUORANTHENE	3.81	ND	3.00	2.84	78.7	74.5	45-125	5.5	25
CHRYSENE	3.81	ND	2.90	2.87	76.1	75.3	55-110	1.0	25
DIBENZ(A,H)ANTHRACENE	3.81	ND	2.60	2.58	68.2	67.7	40-125	0.77	25
FLUORANTHENE	3.81	ND	2.98	3.06	78.2	80.3	55-115	2.6	25
FLUORENE	3.81	ND	3.09	3.11	81.1	81.6	50-110	0.65	25
INDENO(1,2,3-CD)PYRENE	3.81	ND	2.36	2.28	61.9	59.8	45-125	3.4	25
NAPHTHALENE	3.81	ND	2.59	2.58	68.0	67.7	40-100	0.39	25
PHENANTHRENE	3.81	ND	3.08	3.11	80.8	81.6	50-115	0.97	25
PYRENE	3.81	ND	2.89	2.87	75.9	75.3	50-130	0.69	25
SURROGATE: 2-FLUORBIPHENYL (S)	1.90	NA	1.23	1.22	64.7	64.2	50-110		
SURROGATE: NITROBENZENE-D5 (S)	1.90	NA	1.28	1.33	67.4	70.0	40-110		
SURROGATE: TERPHENYL-D14 (S)	1.90	NA	2.12	2.13	112	112	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	SIMB.M	SIMB.M
Extraction Date :	07/25/12	07/25/12
Analysis Date :	07/25/12	07/25/12
Instrument :	Linus	Linus
Run :	0725L006	0725L007
Initials :	LF	

Printed: 07/27/12 12:14:51 PM

APPL MSD SCII

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc.

SDG No: 68268

Case No: 68268

Date Analyzed: 07/25/12

Matrix: WATER

Instrument: Linus

Blank ID: 120725A-BLK

Time Analyzed: 1857

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120725A-BLK	Blank	0725L003	07/25/12 1857
120725A-LCS	Lab Control Spike	0725L004	07/25/12 1923
AY65166	ES083	0725L005	07/25/12 1949
120725A-MS	Matrix Spike	0725L006	07/25/12 2015
120725A-MSD	Matrix SpikeD	0725L007	07/25/12 2041
AY65167	ES084	0725L008	07/25/12 2107

Comments: Batch: #SIMHC-120725A

Printed: 07/27/12 12:14:53 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 68268
Matrix: Water
ID: SVTUNE 2-28-12

SDG No: 68268
Date Analyzed: 07/25/12
Instrument: Linus
Time Analyzed: 18:12

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	120725A BLK 1/1000	0725L003.D 07/25/12 18:57
2	Lab Control Spike	120725A LCS-1 1/1000	0725L004.D 07/25/12 19:23
3	ES083	AY65166W07 1/1050	0725L005.D 07/25/12 19:49
4	Matrix Spike	AY65167W10 MS-1 1/10	0725L006.D 07/25/12 20:15
5	Matrix Spike Dup	AY65167W13 MSD-1 1/1	0725L007.D 07/25/12 20:41
6	ES084	AY65167W09 1/1000	0725L008.D 07/25/12 21:07
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e

51	29.95 - 60% of mass 198	53.9
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	54.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.3
275	10 - 30% of mass 198	22.2
365	1 - 100% of mass 198	2.9
441	0.01 - 100% of mass 443	77.5
442	40 - 150% of mass 198	72.0
443	17 - 23% of mass 442	20.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>APPL Inc.</u>	Contract: <u>Review</u>
Lab Code: _____	SDG No.: <u>68268</u>
Lab File ID (Standard): <u>0613L007.D</u>	Date Analyzed: <u>06/13/12</u>
Instrument ID: <u>Linus</u>	Time Analyzed: <u>15:33</u>
GC Column: _____	ID: _____ Heated Purge: (Y/N) _____

		Naphthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD		2713	6.09	1189	8.10	2090	9.82
UPPER LIMIT		5426	6.59	2378	8.60	4180	10.32
LOWER LIMIT		1357	5.59	595	7.60	1045	9.32
SAMPLE							
NO.							
01	120725A BLK 1/1000	2466	6.08	1141	8.08	2211	9.82
02	120725A LCS-1 1/1000	2533	6.08	1174	8.08	2346	9.82
03	AY65166W07 1/1050	2664	6.08	1300	8.08	2321	9.82
04	AY65167W10 MS-1 1/10	2599	6.08	1231	8.08	2370	9.81
05	AY65167W13 MSD-1 1/	2688	6.08	1301	8.08	2439	9.81
06	AY65167W09 1/1000	2692	6.08	1243	8.08	2404	9.82
07							
08							
09							
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.: 68268

Lab File ID (Standard): 0613L007.D

Date Analyzed: 06/13/12

Instrument ID: Linus

Time Analyzed: 15:33

GC Column: _____

ID: _____ Heated Purge: (Y/N)

Chrysene-D12(IS)		Perylene-D12(IS)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12 HOUR STD	2430	12.91	2133	14.52			
UPPER LIMIT	4860	13.41	4266	15.02			
LOWER LIMIT	1215	12.41	1067	14.02			
SAMPLE NO.							
01 120725A BLK 1/1000	2672	12.91	2109	14.53			
02 120725A LCS-1 1/1000	2948	12.90	2233	14.52			
03 AY65166W07 1/1050	2815	12.91	2195	14.54			
04 AY65167W10 MS-1 1/10	2864	12.90	2186	14.52			
05 AY65167W13 MSD-1 1/	3020	12.90	2405	14.52			
06 AY65167W09 1/1000	2934	12.91	2291	14.54			
07							
08							
09							
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 8270
Polynuclear Aromatic Hydrocarbons
Sample Data**

APPL, INC.

EPA 8270D SIM

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES083
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65166
QCG: #SIMHC-120725A-169430

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	63.6	50-110			%	07/25/12	07/25/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	68.8	40-110			%	07/25/12	07/25/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	111	50-135			%	07/25/12	07/25/12

Quant Method: SIMB.M
Run #: 0725L005
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 12:14:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L005.D Vial: 5
 Acq On : 25 Jul 12 19:49 Operator: LF
 Sample : AY65166W07 1/1050 Inst : Linus
 Misc : Multiplr: 0.95

Quant Time: Jul 27 8:24 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	6.08	136	2664	2.50000	ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1300	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2321	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2815	2.50000	ppb	0.01
22) Perylene-D12(IS)	14.54	264	2195	2.50000	ppb	0.00

System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	685	1.30955	ppb	-0.01
Spiked Amount	1.905		Recovery	=	68.775%	
7) Surrogate Recovery (FBP)	7.32	172	1548	1.21139	ppb	-0.05
Spiked Amount	1.905		Recovery	=	63.578%	
18) Surrogate Recovery (TPH)	11.69	244	3120	2.10997	ppb	-0.05
Spiked Amount	1.905		Recovery	=	110.775%	

Target Compounds		Qvalue
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Quantitation Report

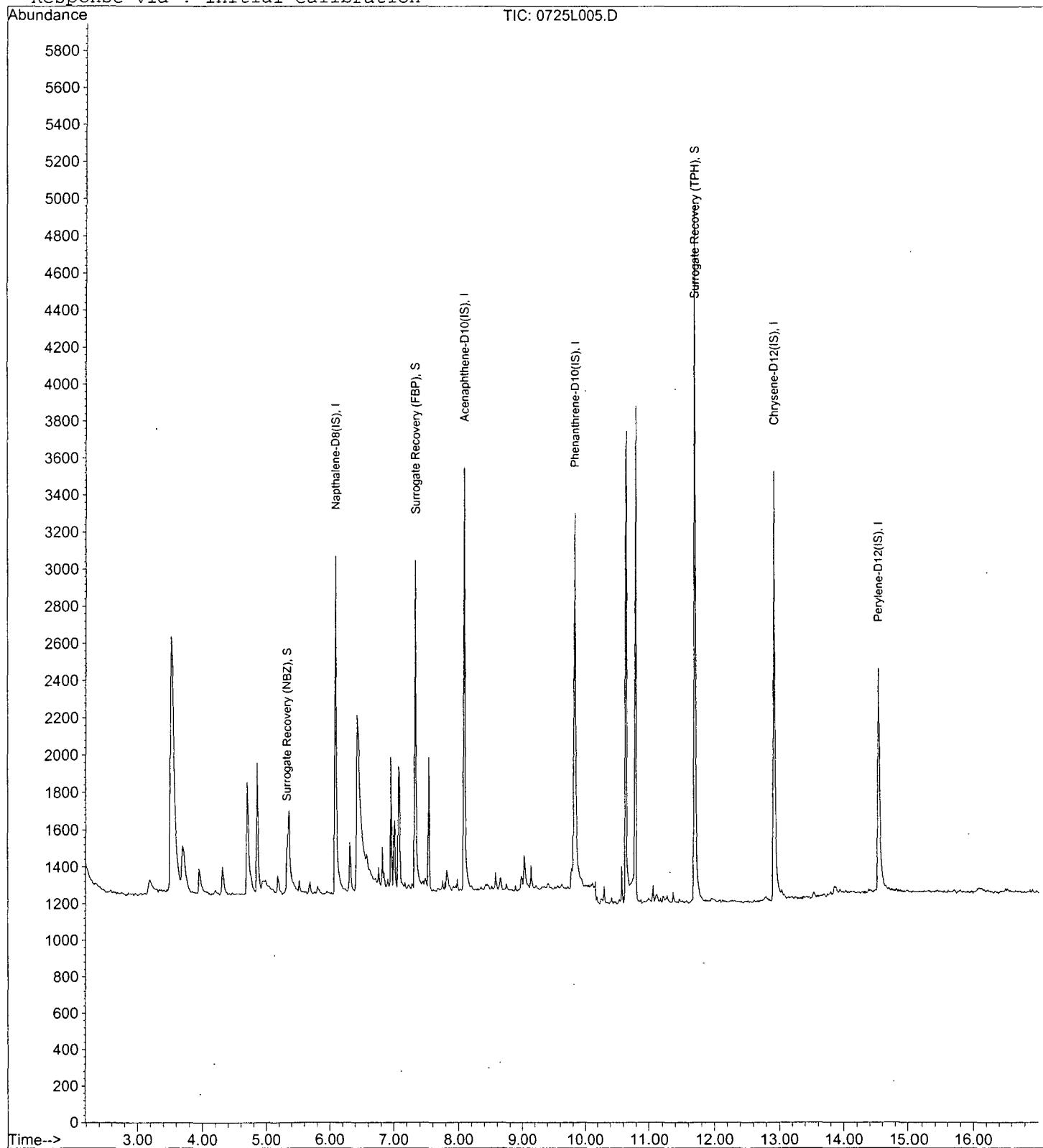
Data File : M:\LINUS\DATA\L120613\0725L005.D
 Acq On : 25 Jul 12 19:49
 Sample : AY65166W07 1/1050
 Misc :

Vial: 5
 Operator: LF
 Inst : Linus
 Multiplr: 0.95

Quant Time: Jul 27 8:24 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



EPA 8270D SIM

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES084
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65167
QCG: #SIMHC-120725A-169430

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	54.0	50-110			%	07/25/12	07/25/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	55.6	40-110			%	07/25/12	07/25/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	95.9	50-135			%	07/25/12	07/25/12

Quant Method: SIMB.M
Run #: 0725L008
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 12:14:57 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L008.D Vial: 8
 Acq On : 25 Jul 12 21:07 Operator: LF
 Sample : AY65167W09 1/1000 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Jul 27 8:26 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8 (IS)	6.08	136	2692	2.50000	ppb	-0.04
6) Acenaphthene-D10 (IS)	8.08	164	1243	2.50000	ppb	-0.05
12) Phenanthrene-D10 (IS)	9.82	188	2404	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.91	240	2934	2.50000	ppb	0.01
22) Perylene-D12 (IS)	14.53	264	2291	2.50000	ppb	0.00

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.33	82	560	1.11242	ppb	0.00
Spiked Amount	2.000		Recovery	=	55.600%	
7) Surrogate Recovery (FBP)	7.32	172	1256	1.07935	ppb	-0.05
Spiked Amount	2.000		Recovery	=	53.950%	
18) Surrogate Recovery (TPH)	11.69	244	2814	1.91714	ppb	-0.05
Spiked Amount	2.000		Recovery	=	95.850%	

Target Compounds Qvalue

Quantitation Report

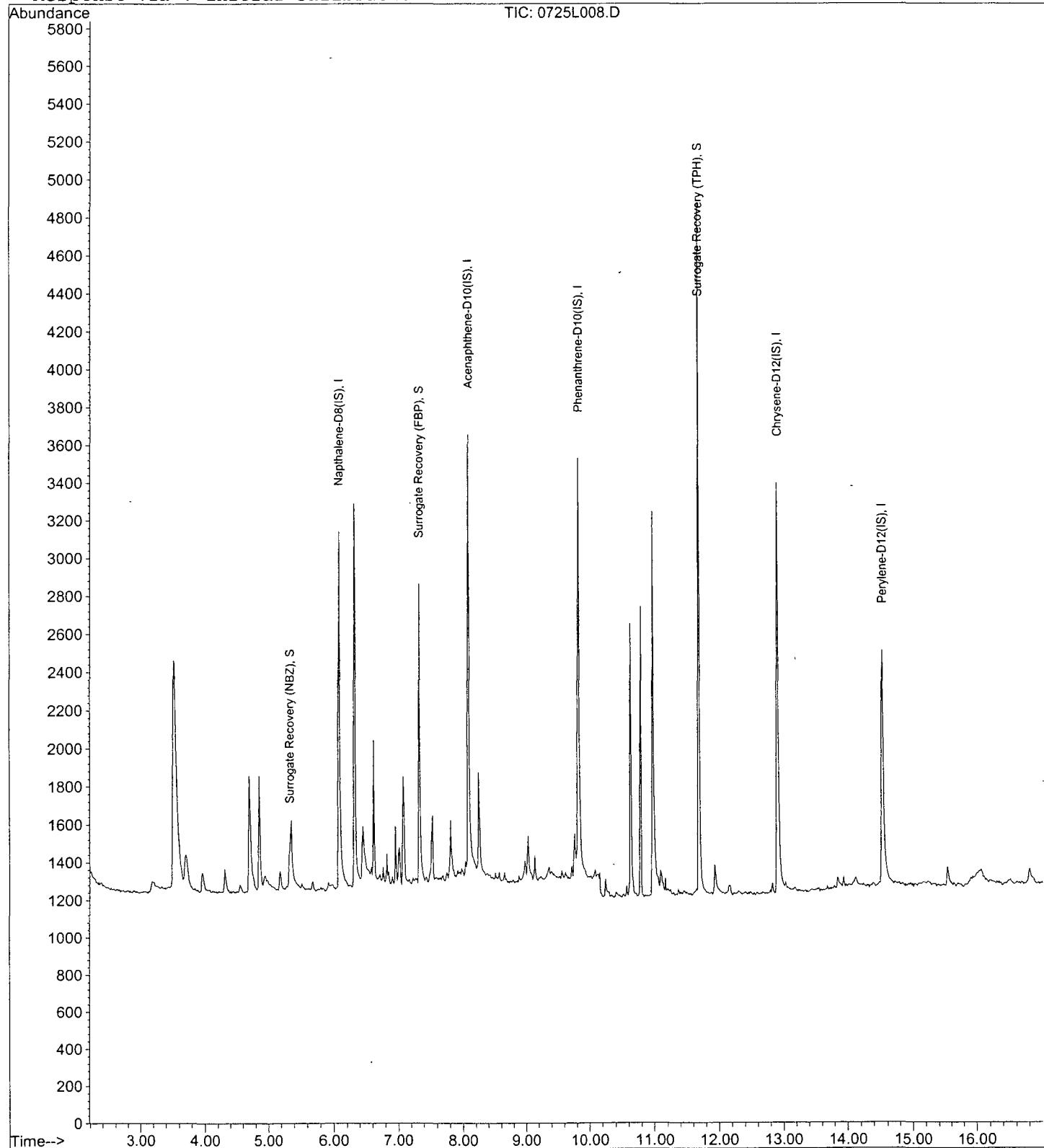
Data File : M:\LINUS\DATA\L120613\0725L008.D
 Acq On : 25 Jul 12 21:07
 Sample : AY65167W09 1/1000
 Misc :

Vial: 8
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jul 27 8:26 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



**EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Calibration Data**

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No:

Matrix:

SDG No: *68268*

Initial Cal. Date: 06/13/12

Instrument: Linus

Initials: _____

0613L003.D 0613L004.D 0613L005.D 0613L006.D 0613L007.D 0613L008.D 0613L009.D 0613L010.D

	Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	
1	I Naphthalene-D8(IS)													
2	S Surrogate Recovery (NBZ)	0.4582	0.4160	0.5318	0.4779	0.4460	0.4748	0.4769	0.4584			0.47	7.1	S
3	TM Naphthalene	1.842	1.750	1.792	1.659	1.423	1.727	1.409	1.279			1.6	13	TM
4	TM 2-Methylnaphthalene	1.241	1.076	1.116	1.120	0.9307	1.112	0.9262	0.8257			1.0	13	TM
5	TM 1-Methylnaphthalene	1.126	1.172	1.203	1.088	0.8644	1.036	0.8585				1.0	13	TM
6	I Acenaphthene-D10(IS)													
7	S Surrogate Recovery (FBP)	2.582	2.805	2.664	2.529	2.150	2.143	1.969	1.882			2.3	15	S
8	TM 1,1'-Biphenyl	2.787	2.890	2.770	2.823	2.494	2.718	2.250	2.042			2.6	12	TM
9	TM Acenaphthylene	3.955	4.033	3.713	3.520	3.060	3.526	2.830	2.701			3.4	15	TM
10	*TM Acenaphthene	2.090	2.180	2.070	2.027	1.756	1.959	1.627	1.454			1.9	13	*TM
11	TM Fluorene	2.398	2.371	2.439	2.352	2.050	2.300	1.873	1.659			2.2	13	TM
12	I Phenanthrene-D10(IS)													
13	TM Phenanthrene	2.047	1.950	2.033	1.897	1.652	1.874	1.503	1.377			1.8	14	TM
14	TM Anthracene	2.130	1.841	1.997	1.890	1.692	1.793	1.496	1.348			1.8	14	TM
15	*TM Fluoranthene	3.076	2.754	2.876	2.744	2.354	2.691	2.122	2.002			2.6	15	*TM
16	I Chrysene-D12(IS)													
17	TM Pyrene	2.479	2.491	2.445	2.361	2.151	2.307	1.879	1.969			2.3	10	TM
18	S Surrogate Recovery (TPH)	1.440	1.456	1.389	1.283	1.203	1.197	0.9916	1.046			1.3	14	S
19	TM Benz (a) anthracene	2.260	2.204	2.209	2.058	1.786	1.987	1.662	1.724			2.0	12	TM
20	TM Chrysene	2.088	2.135	2.151	2.031	1.970	1.967	1.407	1.602			1.9	14	TM
21	TM Indeno (1,2,3-cd) pyrene	2.365	2.214	2.159	2.037	1.899	2.069	1.653	1.810			2.0	11	TM
22	I Perylene-D12(IS)													
23	TM Benzo (b) fluoranthene	2.382	2.407	2.462	2.408	1.885	2.105	2.227	1.721			2.2	12	TM
24	TM Benzo (k) fluoranthene	2.745	2.558	2.205	2.115	2.223	2.494	1.828	1.795			2.2	15	TM
25	*TM Benzo (a) pyrene	2.358	2.547	2.297	2.164	1.908	2.189	1.901	1.547			2.1	15	*TM
26	TM Dibenz (a,h) anthracene	2.206	2.196	2.054	1.889	1.755	1.968	1.762	1.529			1.9	12	TM
27	TM Benzo (g,h,i) perylene	2.288	2.284	2.189	1.980	1.781	2.022	1.834	1.643			2.0	12	TM
28														
29														
30														
31														
32														
33														
34														
35														

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L003.D Vial: 3
 Acq On : 13 Jun 12 13:51 Operator: LF
 Sample : 0.1ug/ml PAH 06-13-12 Inst : Linus
 Misc :

Quant Time: Jun 13 16:10 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 13:28:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	6.09	136	2619	2.50000	ppb	-0.02
6) Acenaphthene-D10 (IS)	8.10	164	1220	2.50000	ppb	-0.04
12) Phenanthrene-D10 (IS)	9.83	188	2113	2.50000	ppb	-0.02
16) Chrysene-D12 (IS)	12.91	240	2622	2.50000	ppb	-0.01
22) Perylene-D12 (IS)	14.52	264	2131	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.35	82	48	0.18668	ppb	0.01
Spiked Amount 2.000			Recovery =	9.350%		
7) Surrogate Recovery (FBP)	7.34	172	126	0.16296	ppb	-0.04
Spiked Amount 2.000			Recovery =	8.150%		
18) Surrogate Recovery (TPH)	11.70	244	151	0.18456	ppb	-0.03
Spiked Amount 2.000			Recovery =	9.250%		
Target Compounds						
3) Naphthalene	6.12	128	193	0.12913	ppb	97
4) 2-Methylnaphthalene	6.91	142	130	0.14464	ppb	90
5) 1-Methylnaphthalene	7.01	142	118	0.14074	ppb	84
8) 1,1'-Biphenyl	7.46	154	136	0.14114	ppb	# 86
9) Acenaphthylene	7.94	152	193	0.16464	ppb	99
10) Acenaphthene	8.13	154	102	0.14944	ppb	84
11) Fluorene	8.75	166	117	0.14146	ppb	95
13) Phenanthrene	9.86	178	173	0.13796	ppb	99
14) Anthracene	9.92	178	180	0.15900	ppb	94
15) Fluoranthene	11.24	202	260	0.16914	ppb	97
17) Pyrene	11.50	202	260	0.17208	ppb	95
19) Benz (a) anthracene	12.90	228	237	0.18310	ppb	98
20) Chrysene	12.94	228	219	0.16763	ppb	# 88
21) Indeno (1,2,3-cd) pyrene	16.02	276	248	0.09203	ppb	# 76
23) Benzo (b) fluoranthene	14.09	252	203	0.15062	ppb	# 83
24) Benzo (k) fluoranthene	14.11	252	234	0.20915	ppb	# 92
25) Benzo (a) pyrene	14.46	252	201	0.16795	ppb	# 93
26) Dibenz (a,h) anthracene	16.03	278	188	0.15446	ppb	# 76
27) Benzo (g,h,i) perylene	16.45	276	195	0.05934	ppb	90

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

0613L003.D SIMB.M Thu Jul 05 14:10:44 2012

Quantitation Report

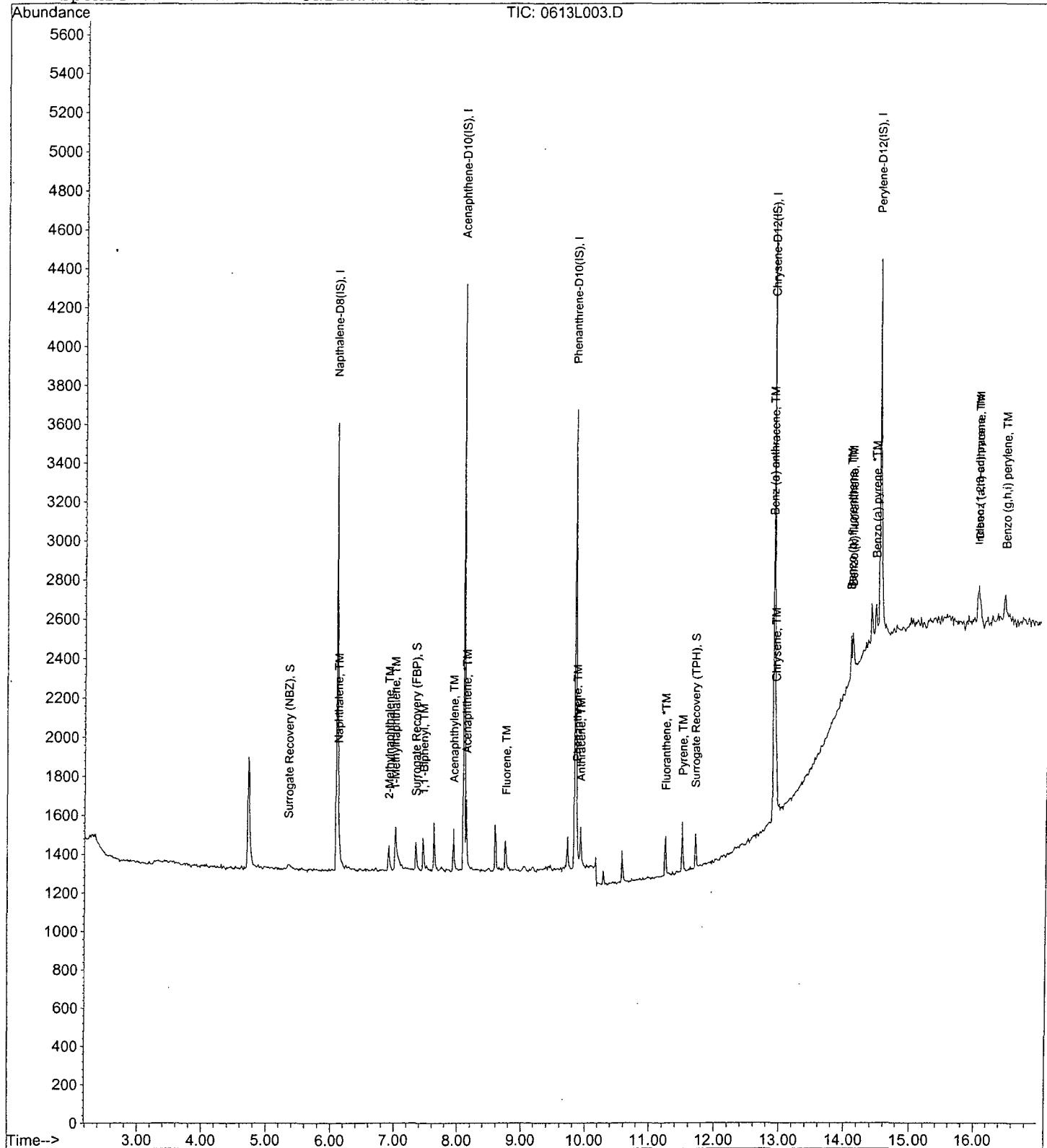
Data File : M:\LINUS\DATA\L120613\0613L003.D
 Acq On : 13 Jun 12 13:51
 Sample : 0.1ug/ml PAH 06-13-12
 Misc :

Vial: 3
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 16:10 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L004.D Vial: 4
 Acq On : 13 Jun 12 14:16 Operator: LF
 Sample : 0.2ug/ml PAH Inst : Linus
 Misc :

Quant Time: Jun 13 16:10 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8 (IS)	6.09	136	2614	2.50000	ppb	-0.02
6) Acenaphthene-D10 (IS)	8.10	164	1181	2.50000	ppb	-0.04
12) Phenanthrene-D10 (IS)	9.83	188	2179	2.50000	ppb	-0.02
16) Chrysene-D12 (IS)	12.91	240	2524	2.50000	ppb	-0.01
22) Perylene-D12 (IS)	14.52	264	2140	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.33	82	87	0.19035	ppb	0.00
Spiked Amount 2.000			Recovery =	9.500%		
7) Surrogate Recovery (FBP)	7.34	172	265	0.20827	ppb	-0.04
Spiked Amount 2.000			Recovery =	10.400%		
18) Surrogate Recovery (TPH)	11.70	244	294	0.20112	ppb	-0.03
Spiked Amount 2.000			Recovery =	10.050%		
Target Compounds						
3) Naphthalene	6.12	128	366	0.19487	ppb	98
4) 2-Methylnaphthalene	6.91	142	225	0.18576	ppb	98
5) 1-Methylnaphthalene	7.01	142	245	0.20393	ppb	86
8) 1,1'-Biphenyl	7.45	154	273	0.20362	ppb	98
9) Acenaphthylene	7.94	152	381	0.20195	ppb	99
10) Acenaphthene	8.13	154	206	0.20422	ppb	91
11) Fluorene	8.75	166	224	0.19888	ppb	96
13) Phenanthrene	9.86	178	340	0.19518	ppb	97
14) Anthracene	9.92	178	321	0.18548	ppb	96
15) Fluoranthene	11.24	202	480	0.18893	ppb	# 97
17) Pyrene	11.50	202	503	0.20049	ppb	91
19) Benz (a) anthracene	12.90	228	445	0.19750	ppb	98
20) Chrysene	12.94	228	431	0.20220	ppb	# 92
21) Indeno (1,2,3-cd) pyrene	16.01	276	447	0.19341	ppb	# 87
23) Benzo (b) fluoranthene	14.09	252	412	0.20307	ppb	# 83
24) Benzo (k) fluoranthene	14.11	252	438	0.19501	ppb	# 92
25) Benzo (a) pyrene	14.46	252	436	0.20968	ppb	99
26) Dibenz (a,h) anthracene	16.03	278	376	0.20161	ppb	# 93
27) Benzo (g,h,i) perylene	16.44	276	391	0.17158	ppb	89

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

0613L004.D SIMB.M Thu Jul 05 14:10:47 2012

Quantitation Report

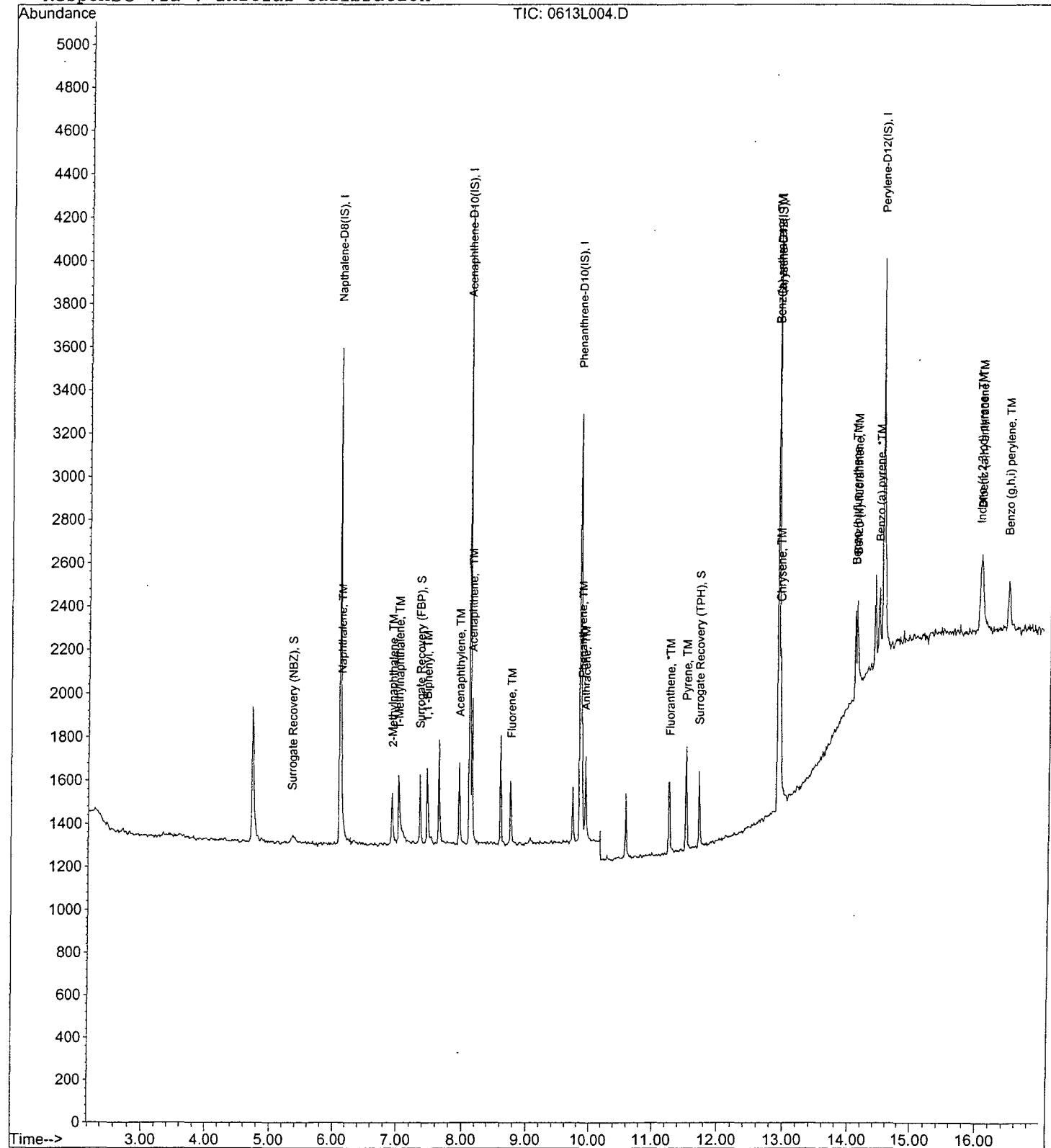
Data File : M:\LINUS\DATA\L120613\0613L004.D
 Acq On : 13 Jun 12 14:16
 Sample : 0.2ug/ml PAH
 Misc :

Vial: 4
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 16:10 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L005.D Vial: 5
 Acq On : 13 Jun 12 14:41 Operator: LF
 Sample : 0.5ug/ml PAH Inst : Linus
 Misc :

Quant Time: Jun 13 15:40 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8 (IS)	6.09	136	2576	2.50000	ppb	-0.02
6) Acenaphthene-D10 (IS)	8.10	164	1220	2.50000	ppb	-0.04
12) Phenanthrene-D10 (IS)	9.83	188	2083	2.50000	ppb	-0.02
16) Chrysene-D12 (IS)	12.91	240	2571	2.50000	ppb	-0.01
22) Perylene-D12 (IS)	14.52	264	2220	2.50000	ppb	-0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.33	82	274	0.60835	ppb	0.00
Spiked Amount	2.000		Recovery	=	30.400%	
7) Surrogate Recovery (FBP)	7.34	172	650	0.49453	ppb	-0.04
Spiked Amount	2.000		Recovery	=	24.750%	
18) Surrogate Recovery (TPH)	11.70	244	714	0.47952	ppb	-0.03
Spiked Amount	2.000		Recovery	=	24.000%	

Target Compounds

				Qvalue		
3) Naphthalene	6.12	128	923	0.49869	ppb	100
4) 2-Methylnaphthalene	6.90	142	575	0.48172	ppb	100
5) 1-Methylnaphthalene	7.01	142	620	0.52369	ppb	94
8) 1,1'-Biphenyl	7.44	154	676	0.48807	ppb	# 94
9) Acenaphthylene	7.94	152	906	0.46486	ppb	99
10) Acenaphthene	8.13	154	505	0.48464	ppb	91
11) Fluorene	8.74	166	595	0.51139	ppb	99
13) Phenanthrene	9.86	178	847	0.50863	ppb	98
14) Anthracene	9.92	178	832	0.50291	ppb	96
15) Fluoranthene	11.23	202	1198	0.49327	ppb	# 86
17) Pyrene	11.50	202	1257	0.49186	ppb	# 89
19) Benz (a) anthracene	12.90	228	1136	0.49495	ppb	98
20) Chrysene	12.94	228	1106	0.50938	ppb	# 93
21) Indeno (1,2,3-cd) pyrene	16.00	276	1110	0.47150	ppb	# 92
23) Benzo (b) fluoranthene	14.08	252	1093	0.51930	ppb	# 90
24) Benzo (k) fluoranthene	14.11	252	979	0.42017	ppb	# 95
25) Benzo (a) pyrene	14.45	252	1020	0.47286	ppb	# 95
26) Dibenz (a,h) anthracene	16.03	278	912	0.47138	ppb	# 95
27) Benzo (g,h,i) perylene	16.44	276	972	0.41115	ppb	93

(#) = qualifier out of range (m) = manual integration
 0613L005.D SIMB.M Thu Jul 05 14:10:50 2012

Quantitation Report

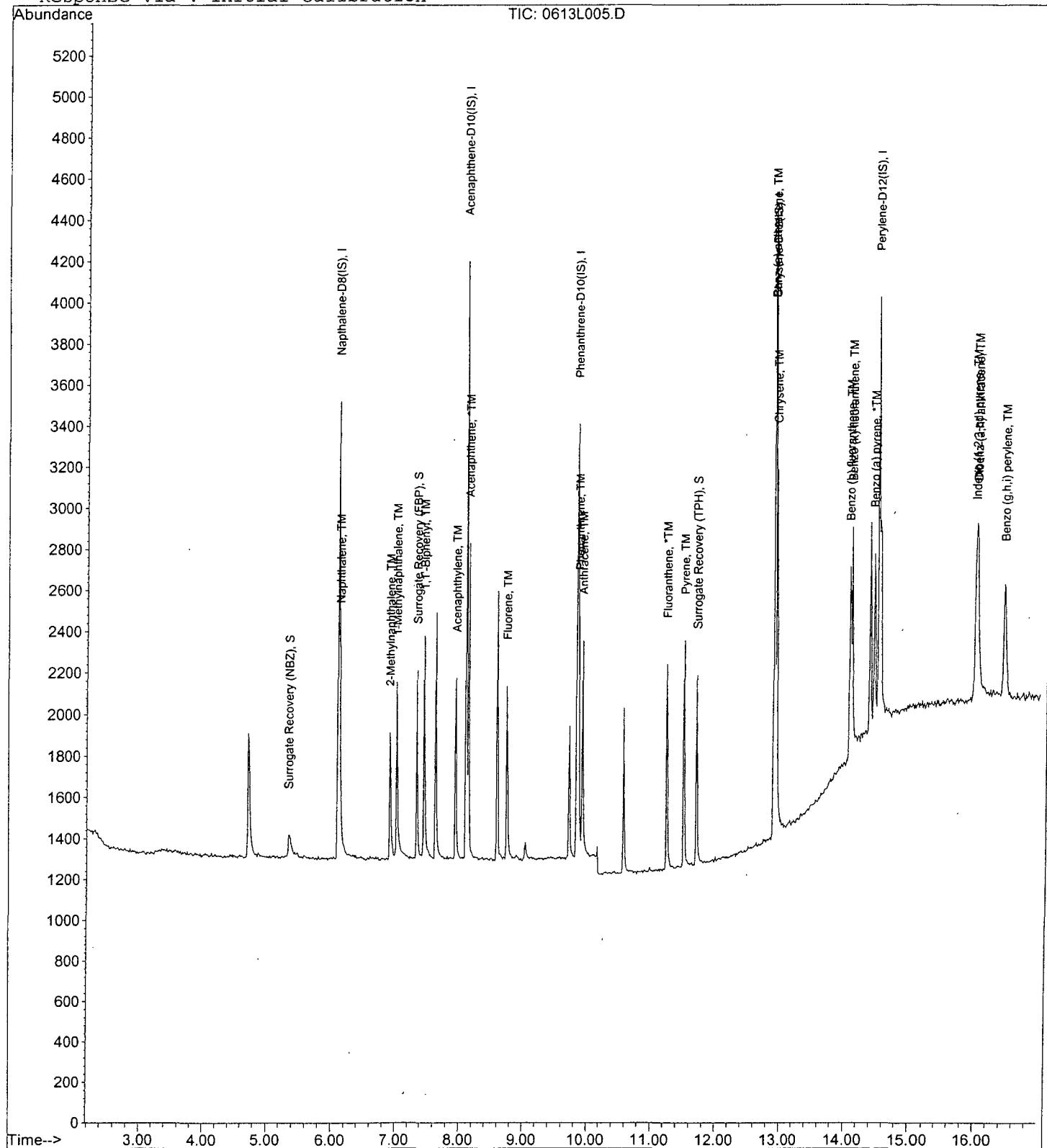
Data File : M:\LINUS\DATA\L120613\0613L005.D
 Acq On : 13 Jun 12 14:41
 Sample : 0.5ug/ml PAH
 Misc :

Vial: 5
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 15:40 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L006.D Vial: 6
 Acq On : 13 Jun 12 15:07 Operator: LF
 Sample : 1.0ug/ml PAH Inst : Linus
 Misc :

Quant Time: Jun 13 15:40 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	6.09	136	2621	2.50000	ppb	-0.02
6) Acenaphthene-D10(IS)	8.10	164	1201	2.50000	ppb	-0.04
12) Phenanthrene-D10(IS)	9.83	188	2124	2.50000	ppb	-0.02
16) Chrysene-D12(IS)	12.91	240	2585	2.50000	ppb	-0.01
22) Perylene-D12(IS)	14.52	264	2229	2.50000	ppb	-0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.33	82	501	1.01960	ppb	0.00
Spiked Amount	2.000		Recovery	=	51.000%	
7) Surrogate Recovery (FBP)	7.34	172	1215	0.94245	ppb	-0.04
Spiked Amount	2.000		Recovery	=	47.100%	
18) Surrogate Recovery (TPH)	11.70	244	1327	0.89865	ppb	-0.03
Spiked Amount	2.000		Recovery	=	44.950%	

Target Compounds

				Qvalue
3) Naphthalene	6.12	128	1739	0.92424 ppb 99
4) 2-Methylnaphthalene	6.90	142	1174	0.97858 ppb 98
5) 1-Methylnaphthalene	7.01	142	1141	0.93248 ppb 94
8) 1,1'-Biphenyl	7.45	154	1356	1.00249 ppb # 91
9) Acenaphthylene	7.94	152	1691	0.90251 ppb 99
10) Acenaphthene	8.13	154	974	0.95935 ppb 89
11) Fluorene	8.74	166	1130	0.97914 ppb 98
13) Phenanthrene	9.86	178	1612	0.94390 ppb 99
14) Anthracene	9.92	178	1606	0.95018 ppb 98
15) Fluoranthene	11.23	202	2331	0.94550 ppb # 88
17) Pyrene	11.50	202	2441	0.95516 ppb # 88
19) Benzo (a) anthracene	12.90	228	2128	0.92526 ppb 97
20) Chrysene	12.94	228	2100	0.95596 ppb # 94
21) Indeno (1,2,3-cd) pyrene	15.99	276	2106	0.90696 ppb # 82
23) Benzo (b) fluoranthene	14.08	252	2147	1.00305 ppb # 88
24) Benzo (k) fluoranthene	14.11	252	1886	0.85148 ppb # 94
25) Benzo (a) pyrene	14.45	252	1929	0.90706 ppb # 95
26) Dibenz (a,h) anthracene	16.03	278	1684	0.88374 ppb 97
27) Benzo (g,h,i) perylene	16.44	276	1765	0.79039 ppb 95

(#) = qualifier out of range (m) = manual integration
 0613L006.D SIMB.M Thu Jul 05 14:10:52 2012

Quantitation Report

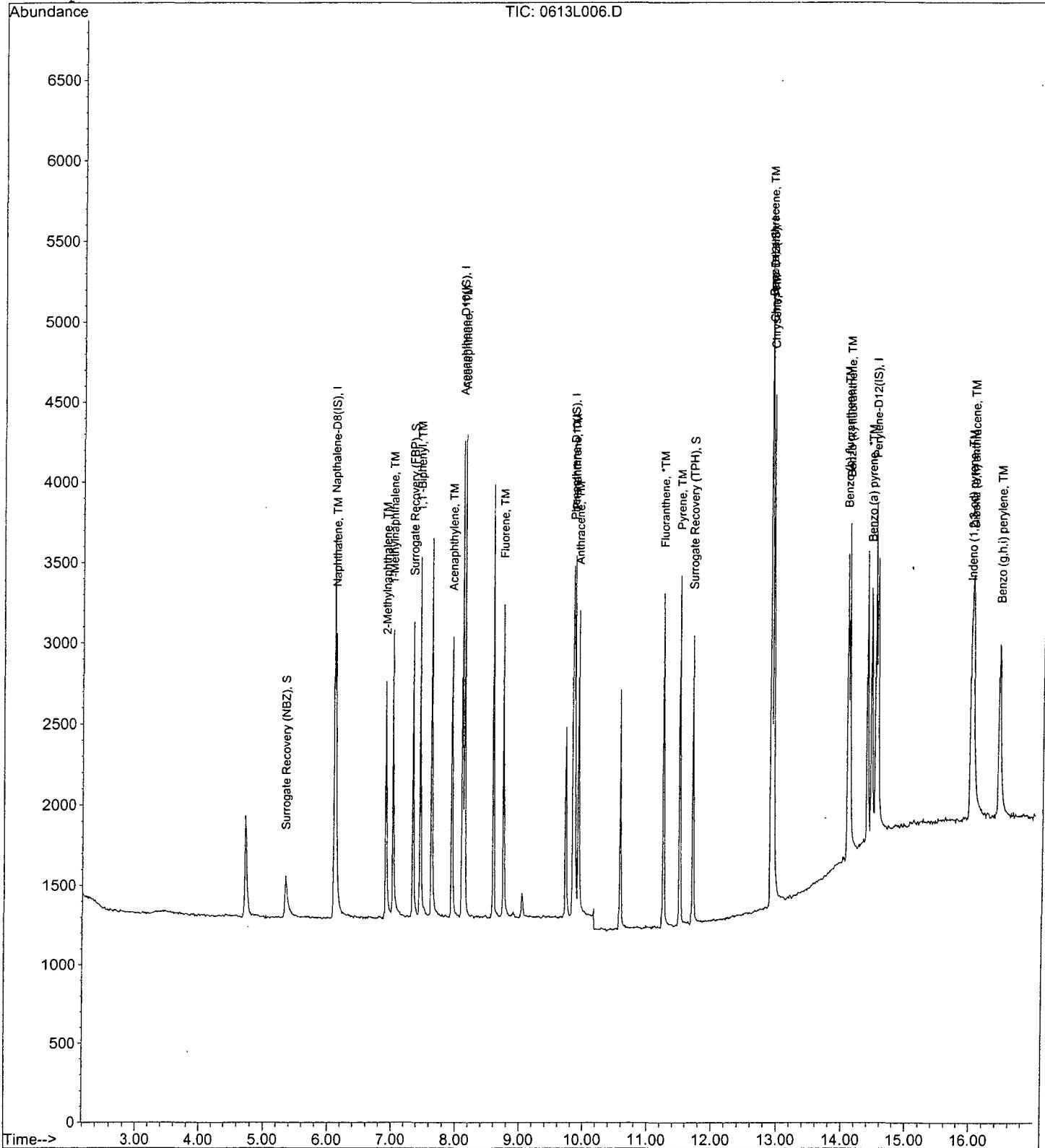
Data File : M:\LINUS\DATA\L120613\0613L006.D
 Acq On : 13 Jun 12 15:07
 Sample : 1.0ug/ml PAH
 Misc :

Vial: 6
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 15:40 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L007.D Vial: 7
 Acq On : 13 Jun 12 15:33 Operator: LF
 Sample : 5.0ug/ml PAH Inst : Linus
 Misc :

Quant Time: Jun 13 16:08 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	6.09	136	2713	2.50000	ppb	-0.02
6) Acenaphthene-D10 (IS)	8.10	164	1189	2.50000	ppb	-0.04
12) Phenanthrene-D10 (IS)	9.82	188	2090	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.91	240	2430	2.50000	ppb	-0.01
22) Perylene-D12 (IS)	14.52	264	2133	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	2420	4.73481	ppb	-0.01
Spiked Amount 2.000			Recovery	= 236.750%		
7) Surrogate Recovery (FBP)	7.34	172	5112	4.06377	ppb	-0.04
Spiked Amount 2.000			Recovery	= 203.200%		
18) Surrogate Recovery (TPH)	11.70	244	5848	4.32241	ppb	-0.03
Spiked Amount 2.000			Recovery	= 216.100%		
Target Compounds						
3) Naphthalene	6.12	128	7720	4.04041	ppb	100
4) 2-Methylnaphthalene	6.90	142	5050	4.08854	ppb	95
5) 1-Methylnaphthalene	7.01	142	4690	3.76651	ppb	93
8) 1,1'-Biphenyl	7.45	154	5931	4.42630	ppb	# 89
9) Acenaphthylene	7.93	152	7276	4.02049	ppb	97
10) Acenaphthene	8.13	154	4176	4.19734	ppb	93
11) Fluorene	8.74	166	4875	4.28917	ppb	98
13) Phenanthrene	9.86	178	6907	4.16861	ppb	99
14) Anthracene	9.92	178	7071	4.30520	ppb	98
15) Fluoranthene	11.23	202	9839	4.11183	ppb	95
17) Pyrene	11.49	202	10454	4.40089	ppb	# 90
19) Benz (a) anthracene	12.90	228	8681	4.09173	ppb	96
20) Chrysene	12.94	228	9575	4.68837	ppb	# 96
21) Indeno (1,2,3-cd) pyrene	15.99	276	9227	4.32779	ppb	# 88
23) Benzo (b) fluoranthene	14.08	252	8043	3.92370	ppb	# 84
24) Benzo (k) fluoranthene	14.12	252	9483	4.64656	ppb	# 92
25) Benzo (a) pyrene	14.45	252	8141	4.09554	ppb	98
26) Dibenz (a,h) anthracene	16.02	278	7487	4.22884	ppb	# 91
27) Benzo (g,h,i) perylene	16.43	276	7598	3.75225	ppb	96

(#) = qualifier out of range (m) = manual integration
 0613L007.D SIMB.M Thu Jul 05 14:10:55 2012

Quantitation Report

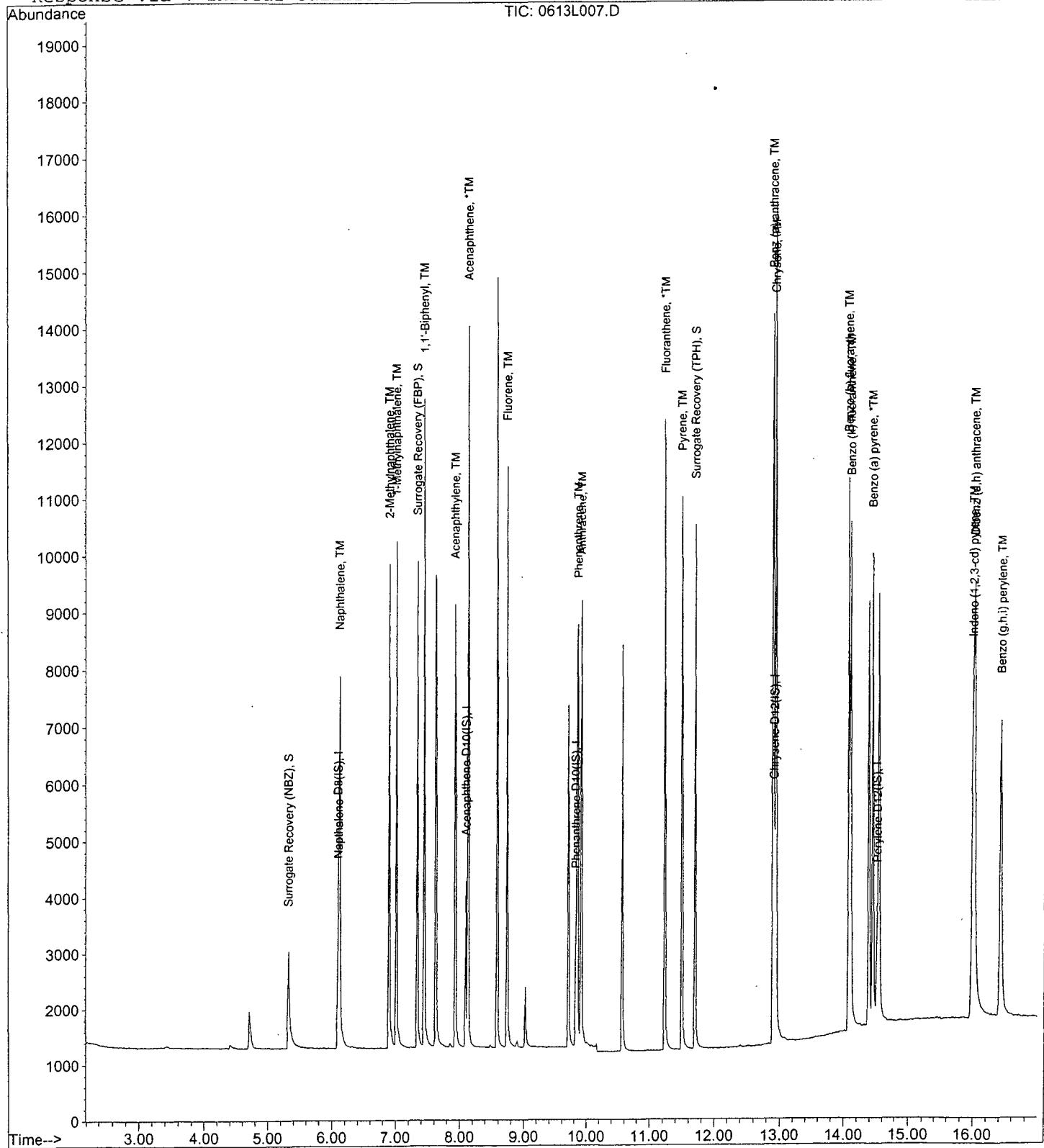
Data File : M:\LINUS\DATA\L120613\0613L007.D
 Acq On : 13 Jun 12 15:33
 Sample : 5.0ug/ml PAH
 Misc :

Vial: 7
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 16:08 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L008.D
 Acq On : 13 Jun 12 15:59
 Sample : 10ug/ml PAH
 Misc :

Vial: 8
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 17:35 2012

Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	6.09	136	2467	2.50000	ppb	-0.02
6) Acenaphthene-D10 (IS)	8.10	164	1136	2.50000	ppb	-0.04
12) Phenanthrene-D10 (IS)	9.82	188	2001	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.90	240	2373	2.50000	ppb	-0.02
22) Perylene-D12 (IS)	14.52	264	2033	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.31	82	4685	10.18847	ppb	-0.02
Spiked Amount 2.000			Recovery	= 509.400%		
7) Surrogate Recovery (FBP)	7.34	172	9738	8.41759	ppb	-0.04
Spiked Amount 2.000			Recovery	= 420.900%		
18) Surrogate Recovery (TPH)	11.70	244	11363	8.84002	ppb	-0.03
Spiked Amount 2.000			Recovery	= 442.000%		
Target Compounds						
3) Naphthalene	6.12	128	17040	10.19897	ppb	99
4) 2-Methylnaphthalene	6.90	142	10976	10.14218	ppb	94
5) 1-Methylnaphthalene	7.01	142	10222	9.49636	ppb	94
8) 1,1'-Biphenyl	7.45	154	12349	9.87257	ppb	# 88
9) Acenaphthylene	7.93	152	16024	9.64536	ppb	98
10) Acenaphthene	8.13	154	8901	9.67450	ppb	93
11) Fluorene	8.74	166	10449	9.90386	ppb	97
13) Phenanthrene	9.86	178	14996	9.77834	ppb	99
14) Anthracene	9.92	178	14348	9.38520	ppb	99
15) Fluoranthene	11.23	202	21536	9.74671	ppb	99
17) Pyrene	11.49	202	21902	9.67353	ppb	92
19) Benzo (a) anthracene	12.89	228	18864	9.44825	ppb	97
20) Chrysene	12.94	228	18670	9.47946	ppb	# 96
21) Indeno (1,2,3-cd) pyrene	15.99	276	19639	9.69329	ppb	# 90
23) Benzo (b) fluoranthene	14.08	252	17117	9.11749	ppb	# 86
24) Benzo (k) fluoranthene	14.12	252	20282	10.52648	ppb	# 92
25) Benzo (a) pyrene	14.45	252	17798	9.70662	ppb	99
26) Dibenz (a,h) anthracene	16.02	278	16005	9.74367	ppb	# 94
27) Benzo (g,h,i) perylene	16.43	276	16439	9.60673	ppb	97

(#) = qualifier out of range (m) = manual integration
 0613L008.D SIMB.M Thu Jul 05 14:10:58 2012

Quantitation Report

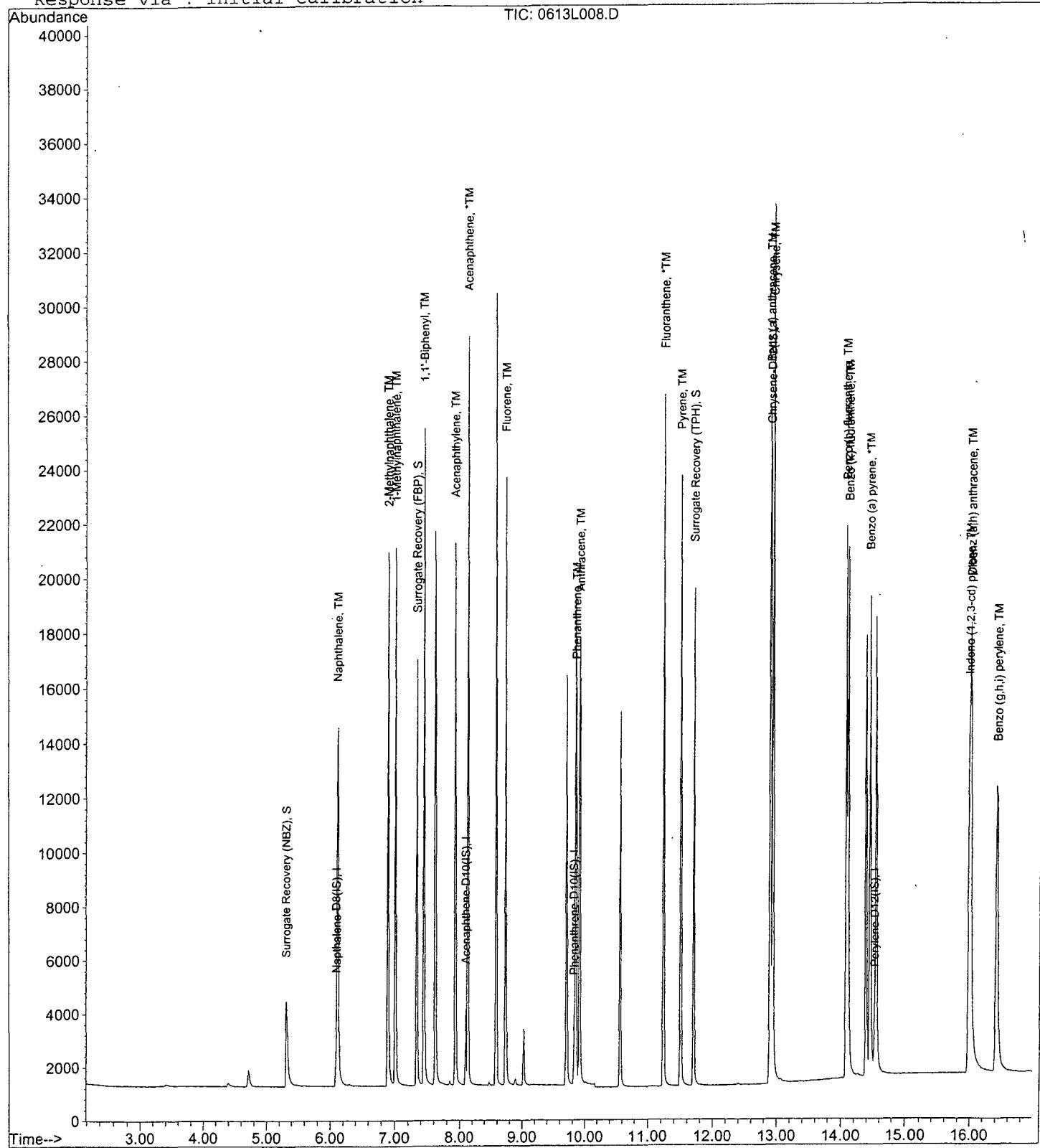
Data File : M:\LINUS\DATA\L120613\0613L008.D
 Acq On : 13 Jun 12 15:59
 Sample : 10ug/ml PAH
 Misc :

Vial: 8
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 17:35 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L009.D Vial: 9
 Acq On : 13 Jun 12 16:25 Operator: LF
 Sample : 50ug/ml PAH Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Jun 13 17:37 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	6.09	136	2323	2.50000	ppb	-0.02
6) Acenaphthene-D10(IS)	8.10	164	1076	2.50000	ppb	-0.04
12) Phenanthrene-D10(IS)	9.82	188	1906	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2336	2.50000	ppb	-0.01
22) Perylene-D12(IS)	14.52	264	1770	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.31	82	22158	51.01380	ppb	-0.02
Spiked Amount 2.000			Recovery	= 2550.700%		
7) Surrogate Recovery (FBP)	7.34	172	42363	39.70801	ppb	-0.04
Spiked Amount 2.000			Recovery	= 1985.400%		
18) Surrogate Recovery (TPH)	11.70	244	46329	37.33504	ppb	-0.03
Spiked Amount 2.000			Recovery	= 1866.750%		
Target Compounds						
3) Naphthalene	6.11	128	65485	41.48686	ppb	98
4) 2-Methylnaphthalene	6.90	142	43032	42.12800	ppb	92
5) 1-Methylnaphthalene	7.01	142	39886	39.68464	ppb	95
8) 1,1'-Biphenyl	7.45	154	48419	40.95469	ppb	# 87
9) Acenaphthylene	7.93	152	60904	38.93445	ppb	97
10) Acenaphthene	8.13	154	35017	40.40146	ppb	92
11) Fluorene	8.74	166	40304	40.39620	ppb	97
13) Phenanthrene	9.86	178	57308	39.37645	ppb	98
14) Anthracene	9.92	178	57012	39.55630	ppb	99
15) Fluoranthene	11.23	202	80905	38.60379	ppb	# 91
17) Pyrene	11.50	202	87777	39.59828	ppb	# 83
19) Benz (a) anthracene	12.90	228	77651	39.87510	ppb	99
20) Chrysene	12.94	228	65735	34.20150	ppb	# 92
21) Indeno (1,2,3-cd) pyrene	15.99	276	77220	38.91637	ppb	# 80
23) Benzo (b) fluoranthene	14.09	252	78843	48.95647	ppb	# 80
24) Benzo (k) fluoranthene	14.12	252	64724	38.24790	ppb	94
25) Benzo (a) pyrene	14.45	252	67281	42.35279	ppb	# 96
26) Dibenz (a,h) anthracene	16.03	278	62359	43.79148	ppb	97
27) Benzo (g,h,i) perylene	16.44	276	64939	43.87588	ppb	99

(#) = qualifier out of range (m) = manual integration
 0613L009.D SIMB.M Thu Jul 05 14:11:01 2012

Quantitation Report

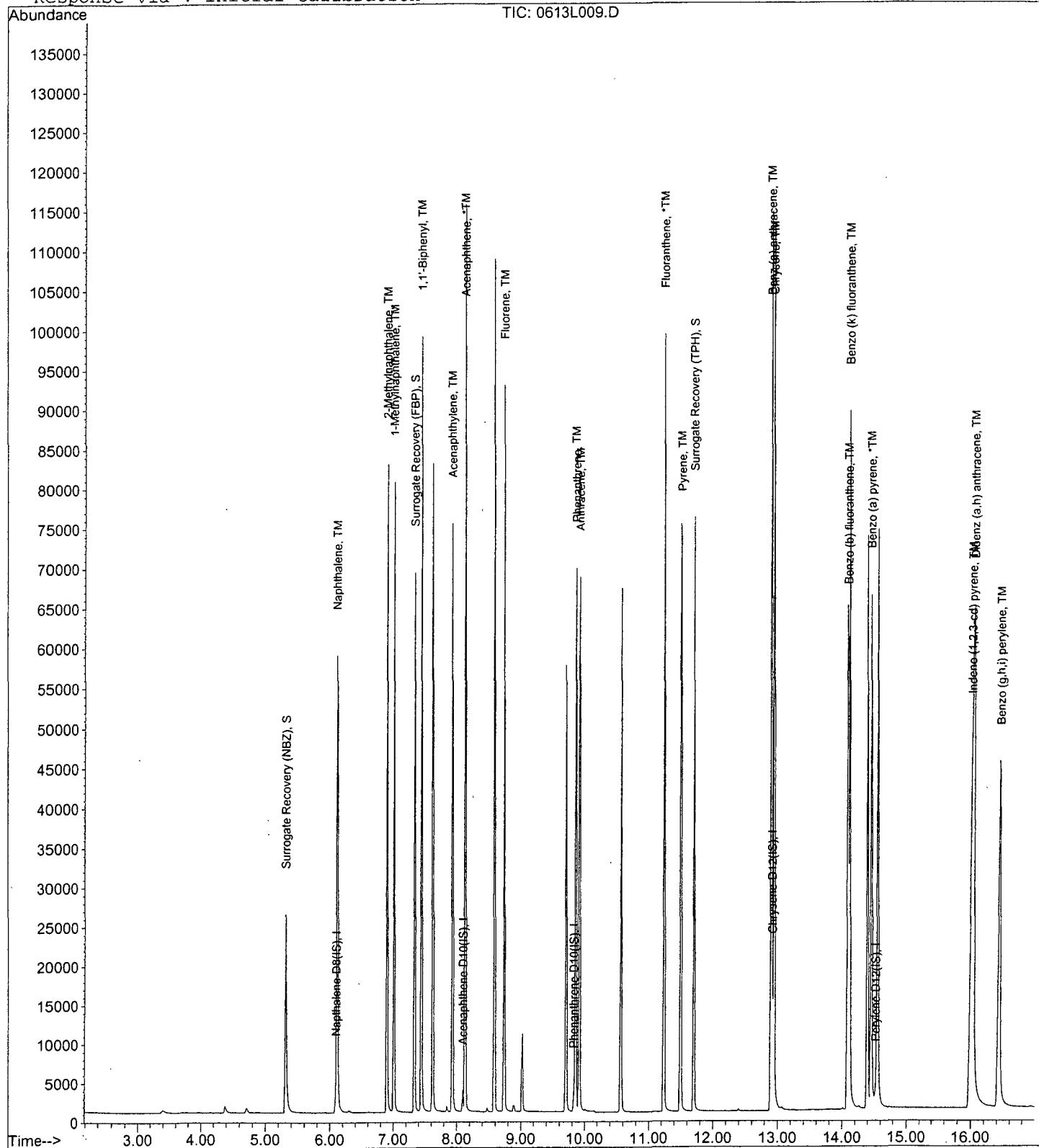
Data File : M:\LINUS\DATA\L120613\0613L009.D
 Acq On : 13 Jun 12 16:25
 Sample : 50ug/ml PAH
 Misc :

Vial: 9
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 17:37 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L010.D Vial: 10
 Acq On : 13 Jun 12 16:51 Operator: LF
 Sample : 100ug/ml PAH Inst : Linus
 Misc :

Quant Time: Jun 13 17:37 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 14:51:32 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	6.09	136	2546	2.50000	ppb	-0.02
6) Acenaphthene-D10 (IS)	8.10	164	1146	2.50000	ppb	-0.04
12) Phenanthrene-D10 (IS)	9.82	188	2043	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.91	240	2154	2.50000	ppb	-0.01
22) Perylene-D12 (IS)	14.52	264	2023	2.50000	ppb	-0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.31	82	46683	97.78012	ppb	-0.02
Spiked Amount	2.000		Recovery	= 4889.000%		
7) Surrogate Recovery (FBP)	7.34	172	86281	78.23418	ppb	-0.04
Spiked Amount	2.000		Recovery	= 3911.700%		
18) Surrogate Recovery (TPH)	11.70	244	90106	81.70547	ppb	-0.03
Spiked Amount	2.000		Recovery	= 4085.250%		

Target Compounds

					Qvalue
3) Naphthalene	6.12	128	130271	77.17939	ppb
4) 2-Methylnaphthalene	6.90	142	84094	76.84481	ppb
5) 1-Methylnaphthalene	7.01	142	77537	72.52602	ppb
8) 1,1'-Biphenyl	7.45	154	93605	76.31079	ppb
9) Acenaphthylene	7.94	152	123810	76.74039	ppb
10) Acenaphthene	8.13	154	66674	74.26410	ppb
11) Fluorene	8.74	166	76061	73.59790	ppb
13) Phenanthrene	9.86	178	112505	74.37620	ppb
14) Anthracene	9.92	178	110199	73.52547	ppb
15) Fluoranthene	11.23	202	163589	75.27303	ppb
17) Pyrene	11.50	202	169609	85.52128	ppb
19) Benz (a) anthracene	12.90	228	148541	85.18770	ppb
20) Chrysene	12.95	228	138030	81.56593	ppb
21) Indeno (1,2,3-cd) pyrene	16.02	276	155909	87.99871	ppb
23) Benzo (b) fluoranthene	14.09	252	139278	76.65546	ppb
24) Benzo (k) fluoranthene	14.13	252	145240	79.13503	ppb
25) Benzo (a) pyrene	14.47	252	125203	71.12137	ppb
26) Dibenz (a,h) anthracene	16.04	278	123729	78.09989	ppb
27) Benzo (g,h,i) perylene	16.45	276	132960	80.72903	ppb

Quantitation Report

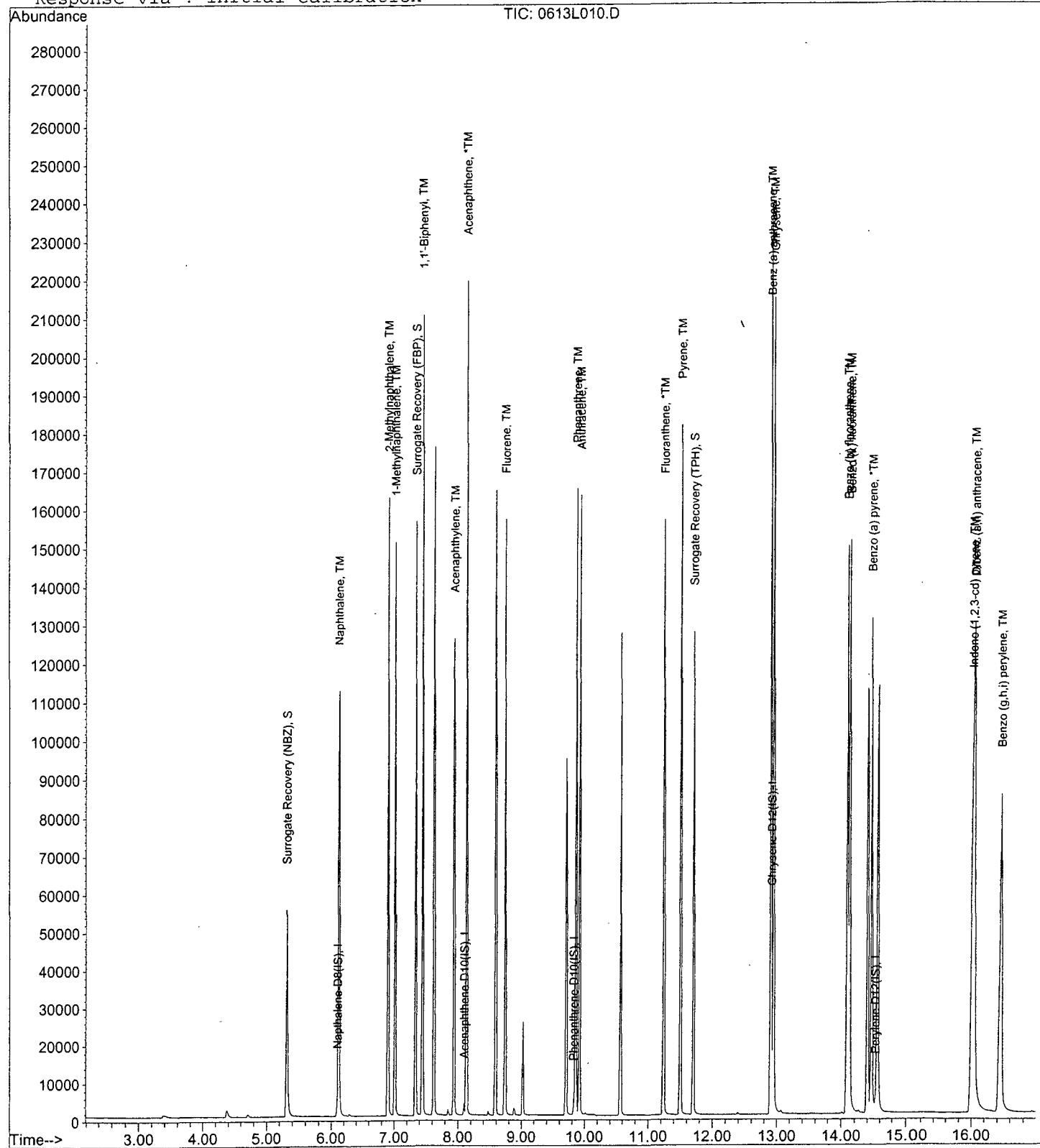
Data File : M:\LINUS\DATA\L120613\0613L010.D
 Acq On : 13 Jun 12 16:51
 Sample : 100ug/ml PAH
 Misc :

Vial: 10
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 17:37 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



EPA 8270C SIM

Form 7
Second Source CalibrationLab Name: APPL, Inc.
Case No:
Matrix:SDG No: 6968
Date Analyzed: 06/13/12
Instrument: Linus
Initial Cal. Date: 06/13/12
Data File: 0613L011.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Naphthalene-D8(IS)	ISTD			I
2	TM	Naphthalene	1.610	1.637	1.7	TM
3	TM	2-Methylnaphthalene	1.043	1.049	0.54	TM
4	TM	1-Methylnaphthalene	1.050	1.039	1.1	TM
5	I	Acenaphthene-D10(IS)	ISTD			I
6	TM	1,1'-Biphenyl	2.597	2.752	6.0	TM
7	TM	Acenaphthylene	3.417	3.382	1.0	TM
8	*TM	Acenaphthene	1.896	1.964	3.6	*TM
9	TM	Fluorene	2.180	2.312	6.0	TM
10	I	Phenanthrene-D10(IS)	ISTD			I
11	TM	Phenanthrene	1.792	1.916	6.9	TM
12	TM	Anthracene	1.773	1.884	6.2	TM
13	*TM	Fluoranthene	2.577	2.638	2.4	*TM
14	I	Chrysene-D12(IS)	ISTD			I
15	TM	Pyrene	2.260	2.408	6.6	TM
16	TM	Benz (a) anthracene	1.986	2.024	1.9	TM
17	TM	Chrysene	1.919	2.238	17	TM
18	TM	Indeno (1,2,3-cd) pyrene	2.025	2.112	4.3	TM
19	I	Perylene-D12(IS)	ISTD			I
20	TM	Benzo (b) fluoranthene	2.200	2.149	2.3	TM
21	TM	Benzo (k) fluoranthene	2.246	2.481	11	TM
22	*TM	Benzo (a) pyrene	2.114	2.200	4.1	*TM
23	TM	Dibenz (a,h) anthracene	1.920	2.027	5.6	TM
24	TM	Benzo (g,h,i) perylene	2.003	2.072	3.5	TM
25						
26						
27						
28						
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30						
31						
32						
33						
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35						
36						
37						
38						
39						
40						

Average

4.8

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L011.D Vial: 11
 Acq On : 13 Jun 12 17:17 Operator: LF
 Sample : 5.0ug/ml SS PAH 06-13-12 Inst : Linus
 Misc :

Quant Time: Jun 13 17:38 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	6.09	136	2569	2.50000	ppb	-0.02
6) Acenaphthene-D10(IS)	8.10	164	1144	2.50000	ppb	-0.04
12) Phenanthrene-D10(IS)	9.82	188	1967	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.90	240	2262	2.50000	ppb	-0.02
22) Perylene-D12(IS)	14.52	264	1992	2.50000	ppb	-0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	0.00	82	Od	0.00000	ppb
Spiked Amount	2.000		Recovery	=	0.000%
7) Surrogate Recovery (FBP)	0.00	172	Od	0.00000	ppb
Spiked Amount	2.000		Recovery	=	0.000%
18) Surrogate Recovery (TPH)	0.00	244	Od	0.00000	ppb
Spiked Amount	2.000		Recovery	=	0.000%

Target Compounds

				QValue
3) Naphthalene	6.12	128	8410	5.08291 ppb 100
4) 2-Methylnaphthalene	6.90	142	5390	5.02676 ppb 95
5) 1-Methylnaphthalene	7.01	142	5336	4.94647 ppb 94
8) 1,1'-Biphenyl	7.45	154	6296	5.29864 ppb # 88
9) Acenaphthylene	7.93	152	7739	4.94910 ppb 97
10) Acenaphthene	8.13	154	4494	5.18102 ppb 93
11) Fluorene	8.74	166	5289	5.30164 ppb 98
13) Phenanthrene	9.86	178	7536	5.34571 ppb 99
14) Anthracene	9.92	178	7411	5.31149 ppb 98
15) Fluoranthene	11.23	202	10378	5.11798 ppb 96
17) Pyrene	11.49	202	10896	5.32816 ppb # 90
19) Benz (a) anthracene	12.90	228	9158	5.09566 ppb 96
20) Chrysene	12.94	228	10125	5.83187 ppb # 96
21) Indeno (1,2,3-cd) pyrene	15.99	276	9556	5.21433 ppb # 91
23) Benzo (b) fluoranthene	14.08	252	8563	4.88587 ppb # 84
24) Benzo (k) fluoranthene	14.12	252	9886	5.52530 ppb # 92
25) Benzo (a) pyrene	14.45	252	8766	5.20450 ppb 98
26) Dibenz (a,h) anthracene	16.02	278	8077	5.28014 ppb 95
27) Benzo (g,h,i) perylene	16.43	276	8254	5.17286 ppb 97

Quantitation Report

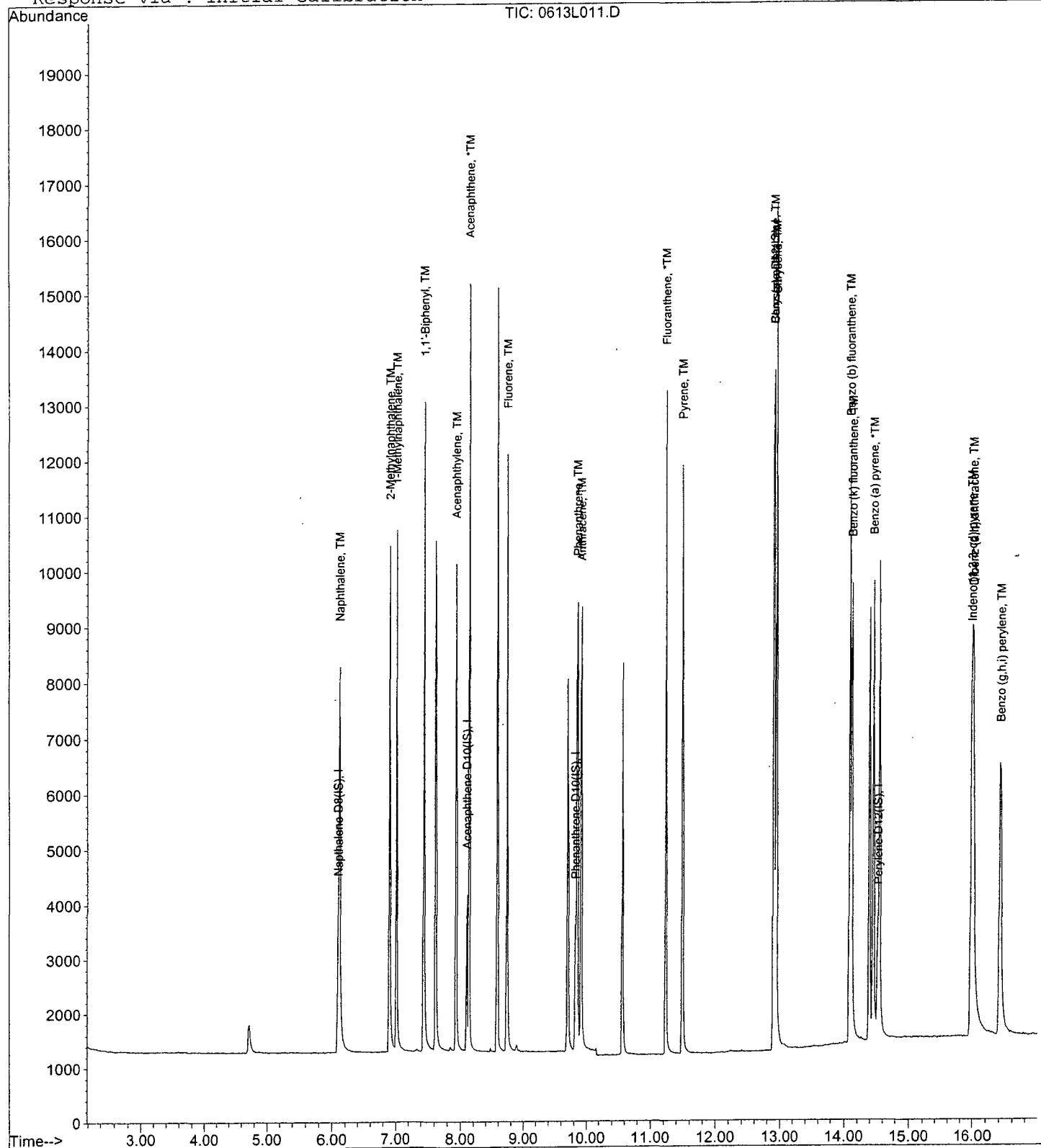
Data File : M:\LINUS\DATA\L120613\0613L011.D
 Acq On : 13 Jun 12 17:17
 Sample : 5.0ug/ml SS PAH 06-13-12
 Misc :

Vial: 11
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jun 13 17:38 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jun 13 17:38:06 2012
 Response via : Initial Calibration



EPA 8270C SIM

Form 7
Continuing Calibration

Lab Name: APPL, Inc.

SDG No: 68268

Case No:

Date Analyzed: 07/25/12

Matrix:

Instrument: Linus

Initial Cal. Date: 06/13/12

Data File: 0725L002.D

	Compound	MEAN	CCRF	%D	%Drift
1 I	Naphthalene-D8(IS)	ISTD			I
2 S	Surrogate Recovery (NBZ)	0.4675	0.5118	9.5	S
3 TM	Naphthalene	1.610	1.911	19	TM
4 TM	2-Methylnaphthalene	1.043	1.175	13	TM
5 TM	1-Methylnaphthalene	1.050	1.211	15	TM
6 I	Acenaphthene-D10(IS)	ISTD			I
7 S	Surrogate Recovery (FBP)	2.340	2.780	19	S
8 TM	1,1'-Biphenyl	2.597	3.072	18	TM
9 TM	Acenaphthylene	3.417	3.974	16	TM
10 *TM	Acenaphthene	1.896	2.203	16	*TM
11 TM	Fluorene	2.180	2.582	18	TM
12 I	Phenanthrene-D10(IS)	ISTD			I
13 TM	Phenanthrene	1.792	2.084	16	TM
14 TM	Anthracene	1.773	2.065	16	TM
15 *TM	Fluoranthene	2.577	2.914	13	*TM
16 I	Chrysene-D12(IS)	ISTD			I
17 TM	Pyrene	2.260	2.386	5.6	TM
18 S	Surrogate Recovery (TPH)	1.251	1.390	11	S
19 TM	Benz (a) anthracene	1.986	1.812	8.8	TM
20 TM	Chrysene	1.919	2.072	8.0	TM
21 TM	Indeno (1,2,3-cd) pyrene	2.025	1.789	12	TM
22 I	Perylene-D12(IS)	ISTD			I
23 TM	Benzo (b) fluoranthene	2.200	2.001	9.0	TM
24 TM	Benzo (k) fluoranthene	2.246	2.411	7.4	TM
25 *TM	Benzo (a) pyrene	2.114	2.010	4.9	*TM
26 TM	Dibenz (a,h) anthracene	1.920	1.773	7.7	TM
27 TM	Benzo (g,h,i) perylene	2.003	1.853	7.5	TM
28					
29					
30					
31					
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35					
36					
37					
38					
39					
40					

Average

12.3

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L002.D Vial: 2
 Acq On : 25 Jul 12 18:31 Operator: LF
 Sample : 5.0ug/ml PAH 06-13-12 Inst : Linus
 Misc :

Quant Time: Jul 27 8:19 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2501	2.50000	ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1116	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.81	188	1962	2.50000	ppb	-0.05
16) Chrysene-D12(IS)	12.90	240	2496	2.50000	ppb	0.00
22) Perylene-D12(IS)	14.52	264	2012	2.50000	ppb	-0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.32	82	2560	5.47373	ppb	-0.01
Spiked Amount 2.000			Recovery	= 273.700%		
7) Surrogate Recovery (FBP)	7.32	172	6206	5.94009	ppb	-0.05
Spiked Amount 2.000			Recovery	= 297.000%		
18) Surrogate Recovery (TPH)	11.69	244	6938	5.55622	ppb	-0.05
Spiked Amount 2.000			Recovery	= 277.800%		

Target Compounds

				Qvalue	
3) Naphthalene	6.09	128	9558	5.93382	ppb
4) 2-Methylnaphthalene	6.89	142	5878	5.63092	ppb
5) 1-Methylnaphthalene	7.00	142	6058	5.76845	ppb
8) 1,1'-Biphenyl	7.43	154	6857	5.91556	ppb
9) Acenaphthylene	7.92	152	8870	5.81469	ppb
10) Acenaphthene	8.12	154	4918	5.81209	ppb
11) Fluorene	8.72	166	5764	5.92274	ppb
13) Phenanthrene	9.85	178	8177	5.81518	ppb
14) Anthracene	9.91	178	8103	5.82225	ppb
15) Fluoranthene	11.22	202	11435	5.65361	ppb
17) Pyrene	11.49	202	11913	5.27934	ppb
19) Benz (a) anthracene	12.89	228	9044	4.56046	ppb
20) Chrysene	12.94	228	10343	5.39893	ppb
21) Indeno (1,2,3-cd) pyrene	16.02	276	8931	4.41642	ppb
23) Benzo (b) fluoranthene	14.08	252	8054	4.54976	ppb
24) Benzo (k) fluoranthene	14.11	252	9701	5.36801	ppb
25) Benzo (a) pyrene	14.45	252	8090	4.75550	ppb
26) Dibenz (a,h) anthracene	16.03	278	7133	4.61667	ppb
27) Benzo (g,h,i) perylene	16.45	276	7456	4.62630	ppb

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

0725L002.D SIMB.M Fri Jul 27 09:13:04 2012

Quantitation Report

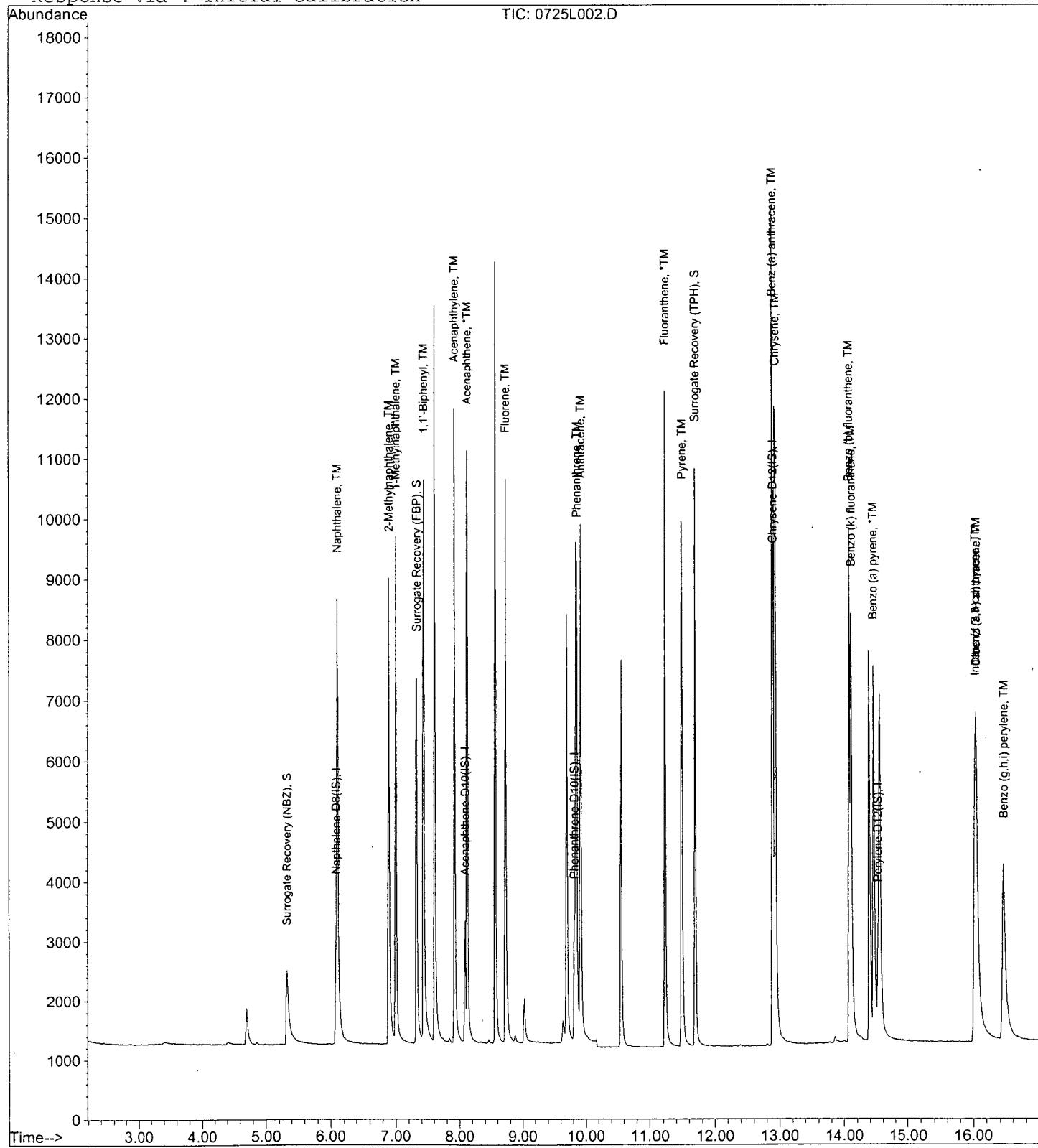
Data File : M:\LINUS\DATA\L120613\0725L002.D
 Acq On : 25 Jul 12 18:31
 Sample : 5.0ug/ml PAH 06-13-12
 Misc :

Vial: 2
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jul 27 8:19 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



**EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Raw Data**

APPL, INC.

Method Blank
EPA 8270D SIM

Blank Name/QCG: 120725W-65167 - 169430
 Batch ID: #SIMHC-120725A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	SURROGATE: 2-FLUORBIPHENY	73.2	50-110			%	07/25/12	07/25/12
BLANK	SURROGATE: NITROBENZENE-	71.0	40-110			%	07/25/12	07/25/12
BLANK	SURROGATE: TERPHENYL-D14 (112	50-135			%	07/25/12	07/25/12

Quant Method:SIMB.M
 Run #:0725L003
 Instrument:Linus
 Sequence:L120613
 Initials:LF

Printed: 07/27/12 12:15:00 PM
 GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L003.D Vial: 3
 Acq On : 25 Jul 12 18:57 Operator: LF
 Sample : 120725A BLK 1/1000 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Jul 27 8:20 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	6.08	136	2466	2.50000	ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1141	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2211	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2672	2.50000	ppb	0.01
22) Perylene-D12(IS)	14.53	264	2109	2.50000	ppb	0.00

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.32	82	655	1.42038	ppb	-0.01
Spiked Amount	2.000		Recovery	=	71.000%	
7) Surrogate Recovery (FBP)	7.32	172	1563	1.46325	ppb	-0.05
Spiked Amount	2.000		Recovery	=	73.150%	
18) Surrogate Recovery (TPH)	11.69	244	2997	2.24202	ppb	-0.05
Spiked Amount	2.000		Recovery	=	112.100%	

Target Compounds Qvalue

Quantitation Report

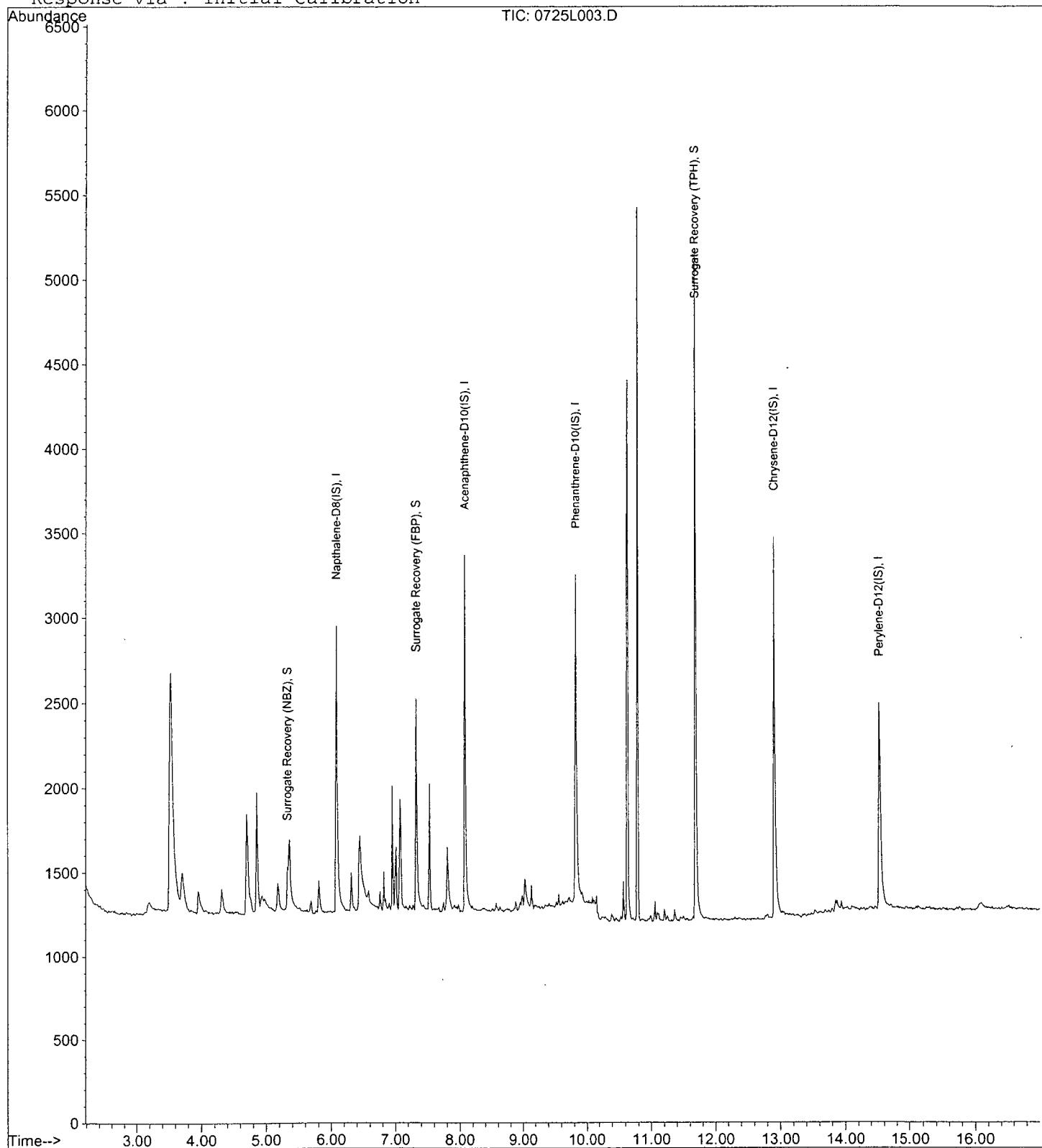
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 Acq On : 25 Jul 12 18:57
 Sample : 120725A BLK 1/1000
 Misc :

Vial: 3
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jul 27 8:20 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **120725W-65167 LCS - 169430**

Batch ID: #SIMHC-120725A

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	ug/L	ug/L	Recovery	Limits
1-METHYLNAPHTHALENE	4.00	2.33	58.3	45-105
2-METHYLNAPHTHALENE	4.00	2.25	56.3	45-105
ACENAPHTHENE	4.00	2.54	63.5	45-110
ACENAPHTHYLENE	4.00	2.40	60.0	50-105
ANTHRACENE	4.00	2.54	63.5	55-110
BENZO(A)ANTHRACENE	4.00	2.31	57.8	55-110
BENZO(A)PYRENE	4.00	2.41	60.3	55-110
BENZO(B)FLUORANTHENE	4.00	2.65	66.3	45-120
BENZO(GHI)PERYLENE	4.00	2.48	62.0	40-125
BENZO(K)FLUORANTHENE	4.00	2.59	64.8	45-125
CHRYSENE	4.00	2.65	66.3	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.41	60.3	40-125
FLUORANTHENE	4.00	2.72	68.0	55-115
FLUORENE	4.00	2.66	66.5	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.22	55.5	45-125
NAPHTHALENE	4.00	2.27	56.8	40-100
PHENANTHRENE	4.00	2.61	65.3	50-115
PYRENE	4.00	2.56	64.0	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.27	63.5	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.39	69.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.99	99.5	50-135

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	SIMB.M
Extraction Date :	07/25/12
Analysis Date :	07/25/12
Instrument :	Linus
Run :	0725L004
Initials :	LF

Printed: 07/27/12 12:15:01 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L004.D Vial: 4
 Acq On : 25 Jul 12 19:23 Operator: LF
 Sample : 120725A LCS-1 1/1000 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Jul 27 8:24 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	6.08	136	2533 ✓	2.50000	ppb ✓	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1174	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2346	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.90	240	2948	2.50000	ppb	0.00
22) Perylene-D12(IS)	14.52	264	2233	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	659	1.39126	ppb	-0.01
Spiked Amount 2.000			Recovery	= 69.550%		
7) Surrogate Recovery (FBP)	7.32	172	1394	1.26835	ppb	-0.05
Spiked Amount 2.000			Recovery	= 63.400%		
18) Surrogate Recovery (TPH)	11.69	244	2933	1.98872	ppb	-0.05
Spiked Amount 2.000			Recovery	= 99.450%		
Target Compounds						
3) Naphthalene	6.11	128	3703 ✓	2.26986	ppb	100
4) 2-Methylnaphthalene	6.89	142	2376	2.24737	ppb	94
5) 1-Methylnaphthalene	7.00	142	2475	2.32693	ppb	97
8) 1,1'-Biphenyl	7.43	154	2717	2.22817	ppb	90
9) Acenaphthylene	7.92	152	3849	2.39854	ppb	97
10) Acenaphthene	8.12	154	2259	2.53779	ppb	93
11) Fluorene	8.72	166	2727	2.66367	ppb	98
13) Phenanthrene	9.85	178	4389	2.61039	ppb	99
14) Anthracene	9.91	178	4226	2.53948	ppb	97
15) Fluoranthene	11.22	202	6569	2.71619	ppb	# 82
17) Pyrene	11.49	202	6814	2.55669	ppb	93
19) Benz (a) anthracene	12.89	228	5411	2.31016	ppb	95
20) Chrysene	12.94	228	6005	2.65394	ppb	# 96
21) Indeno (1,2,3-cd) pyrene	16.03	276	5297	2.21778	ppb	70
23) Benzo (b) fluoranthene	14.08	252	5215	2.65443	ppb	# 88
24) Benzo (k) fluoranthene	14.12	252	5193	2.58913	ppb	95
25) Benzo (a) pyrene	14.47	252	4549	2.40937	ppb	99
26) Dibenz (a,h) anthracene	16.04	278	4140	2.41433	ppb	88
27) Benzo (g,h,i) perylene	16.46	276	4436	2.48004	ppb	90

*3703 + 2.5
2533 + 1.610 = 2.27
UFSL0112*

Quantitation Report

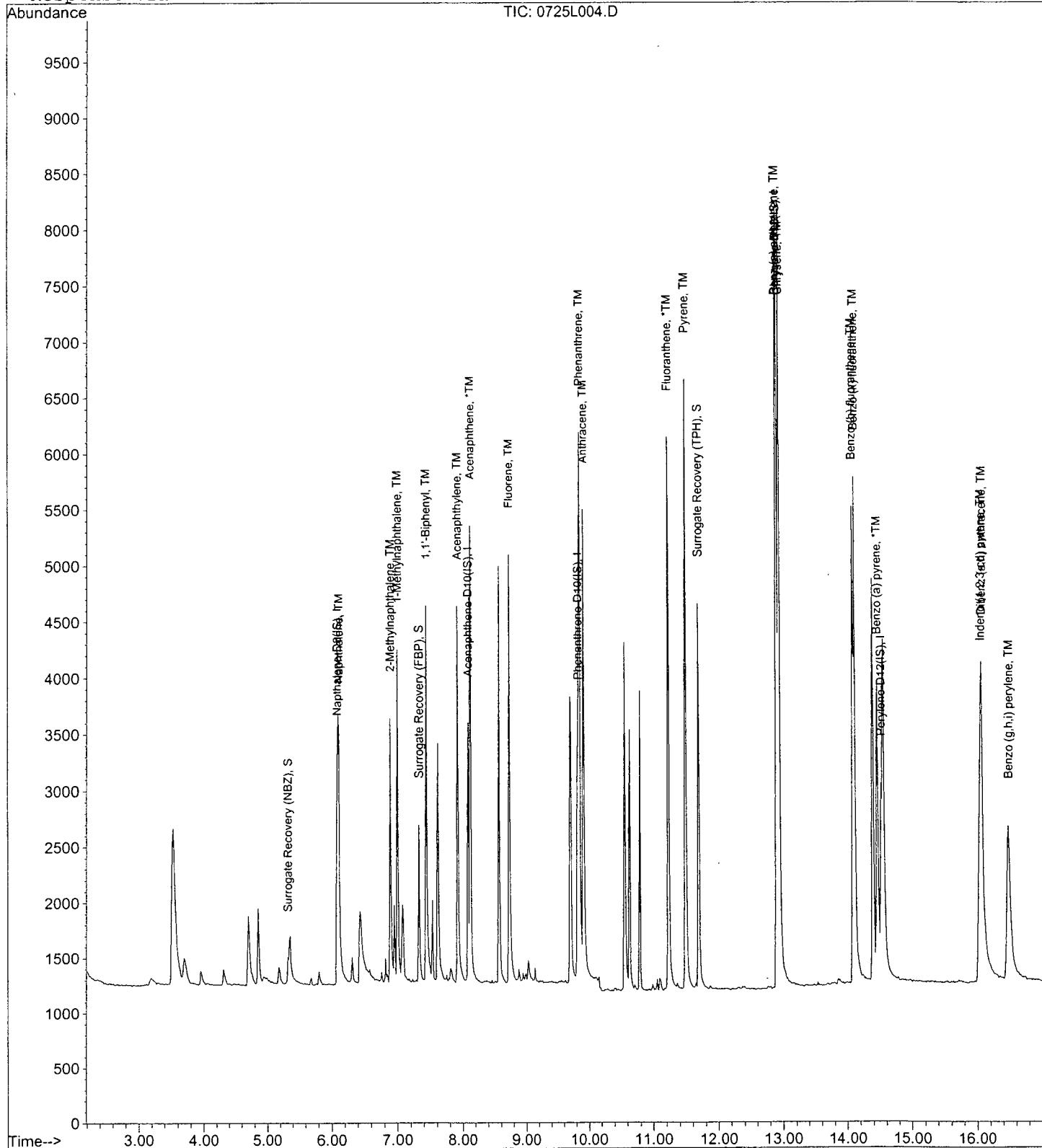
Data File : M:\LINUS\DATA\L120613\0725L004.D
 Acq On : 25 Jul 12 19:23
 Sample : 120725A LCS-1 1/1000
 Misc :

Vial: 4
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Quant Time: Jul 27 8:24 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: 120725W-65167 MS - 169430

APPL Inc.

Batch ID: #SIMHC-120725A

908 North Temperance Avenue

Sample ID: AY65167

Clovis, CA 93611

Client ID: ES084

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
	ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Limits	%	Limits
1-METHYLNAPHTHALENE	3.81	ND	2.52	2.58	66.1	67.7	45-105	2.4	25
2-METHYLNAPHTHALENE	3.81	ND	2.46	2.44	64.6	64.0	45-105	0.82	25
ACENAPHTHENE	3.81	ND	2.78	2.87	73.0	75.3	45-110	3.2	25
ACENAPHTHYLENE	3.81	ND	2.87	2.85	75.3	74.8	50-105	0.70	25
ANTHRACENE	3.81	ND	2.94	2.99	77.2	78.5	55-110	1.7	25
BENZO(A)ANTHRACENE	3.81	ND	2.41	2.39	63.3	62.7	55-110	0.83	25
BENZO(A)PYRENE	3.81	ND	2.46	2.37	64.6	62.2	55-110	3.7	25
BENZO(B)FLUORANTHENE	3.81	ND	2.41	2.32	63.3	60.9	45-120	3.8	25
BENZO(GHI)PERYLENE	3.81	ND	2.61	2.55	68.5	66.9	40-125	2.3	25
BENZO(K)FLUORANTHENE	3.81	ND	3.00	2.84	78.7	74.5	45-125	5.5	25
CHRYSENE	3.81	ND	2.90	2.87	76.1	75.3	55-110	1.0	25
DIBENZ(A,H)ANTHRACENE	3.81	ND	2.60	2.58	68.2	67.7	40-125	0.77	25
FLUORANTHENE	3.81	ND	2.98	3.06	78.2	80.3	55-115	2.6	25
FLUORENE	3.81	ND	3.09	3.11	81.1	81.6	50-110	0.65	25
INDENO(1,2,3-CD)PYRENE	3.81	ND	2.36	2.28	61.9	59.8	45-125	3.4	25
NAPHTHALENE	3.81	ND	2.59	2.58	68.0	67.7	40-100	0.39	25
PHENANTHRENE	3.81	ND	3.08	3.11	80.8	81.6	50-115	0.97	25
PYRENE	3.81	ND	2.89	2.87	75.9	75.3	50-130	0.69	25
SURROGATE: 2-FLUORBIPHENYL (S)	1.90	NA	1.23	1.22	64.7	64.2	50-110		
SURROGATE: NITROBENZENE-D5 (S)	1.90	NA	1.28	1.33	67.4	70.0	40-110		
SURROGATE: TERPHENYL-D14 (S)	1.90	NA	2.12	2.13	112	112	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	SIMB.M	SIMB.M
Extraction Date :	07/25/12	07/25/12
Analysis Date :	07/25/12	07/25/12
Instrument :	Linus	Linus
Run :	0725L006	0725L007
Initials :	LF	

Printed: 07/27/12 12:15:03 PM

APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L006.D Vial: 6
 Acq On : 25 Jul 12 20:15 Operator: LF
 Sample : AY65167W10 MS-1 1/1050 Inst : Linus
 Misc : Multiplr: 0.95

Quant Time: Jul 27 8:25 2012

Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	6.08	136	2599	2.50000	ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1231	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.81	188	2370	2.50000	ppb	-0.05
16) Chrysene-D12(IS)	12.90	240	2864	2.50000	ppb	0.00
22) Perylene-D12(IS)	14.52	264	2186	2.50000	ppb	-0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.32	82	651	1.27568	ppb	-0.01
Spiked Amount	1.905		Recovery	=	66.990%	
7) Surrogate Recovery (FBP)	7.32	172	1490	1.23136	ppb	-0.05
Spiked Amount	1.905		Recovery	=	64.628%	
18) Surrogate Recovery (TPH)	11.69	244	3195	2.12372	ppb	-0.05
Spiked Amount	1.905		Recovery	=	111.510%	

Target Compounds

				Qvalue	
3) Naphthalene	6.09	128	4552	2.58992	ppb
4) 2-Methylnaphthalene	6.89	142	2797	2.45561	ppb
5) 1-Methylnaphthalene	7.00	142	2884	2.51676	ppb
8) 1,1'-Biphenyl	7.43	154	3599	2.68077	ppb
9) Acenaphthylene	7.92	152	5064	2.86624	ppb
10) Acenaphthene	8.11	154	2729	2.78461	ppb
11) Fluorene	8.72	166	3484	3.09096	ppb
13) Phenanthrene	9.83	178	5493	3.07992	ppb
14) Anthracene	9.91	178	5191	2.94074	ppb
15) Fluoranthene	11.22	202	7638	2.97735	ppb
17) Pyrene	11.49	202	7852	2.88816	ppb
19) Benz (a) anthracene	12.89	228	5762	2.41159	ppb
20) Chrysene	12.94	228	6695	2.90064	ppb
21) Indeno (1,2,3-cd) pyrene	16.02	276	5751	2.36046	ppb
23) Benzo (b) fluoranthene	14.08	252	4858	2.40560	ppb
24) Benzo (k) fluoranthene	14.10	252	6186	3.00051	ppb
25) Benzo (a) pyrene	14.45	252	4765	2.45527	ppb
26) Dibenz (a,h) anthracene	16.04	278	4585	2.60126	ppb
27) Benzo (g,h,i) perylene	16.45	276	4791	2.60581	ppb

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

0725L006.D SIMB.M Fri Jul 27 09:13:28 2012

Quantitation Report

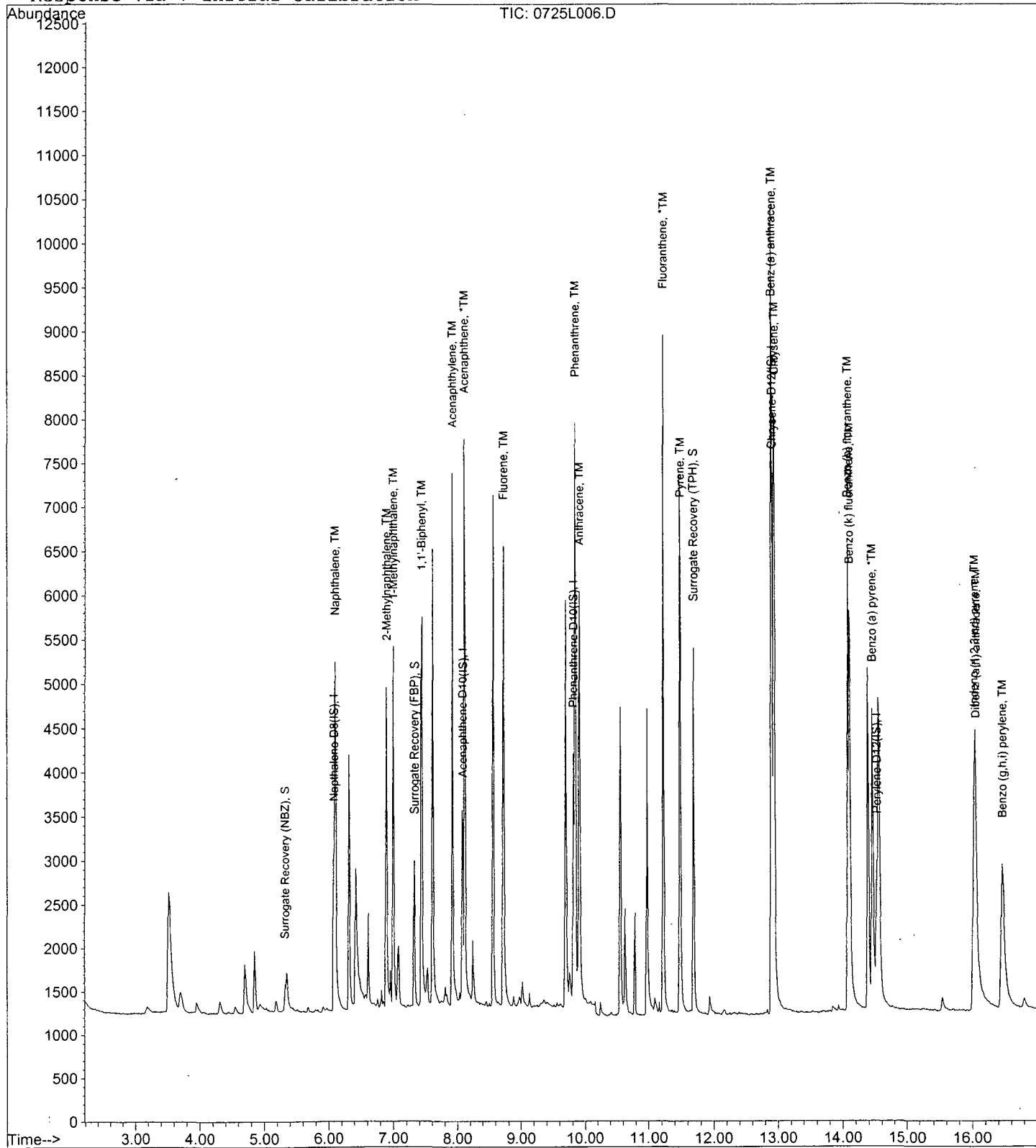
Data File : M:\LINUS\DATA\L120613\0725L006.D
 Acq On : 25 Jul 12 20:15
 Sample : AY65167W10 MS-1 1/1050
 Misc :

Vial: 6
 Operator: LF
 Inst : Linus
 Multiplr: 0.95

Quant Time: Jul 27 8:25 2012

Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L007.D Vial: 7
 Acq On : 25 Jul 12 20:41 Operator: LF
 Sample : AY65167W13 MSD-1 1/1050 Inst : Linus
 Misc : Multiplr: 0.95

Quant Time: Jul 27 8:25 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8 (IS)	6.08	136	2688	2.50000	ppb	-0.04
6) Acenaphthene-D10 (IS)	8.08	164	1301	2.50000	ppb	-0.05
12) Phenanthrene-D10 (IS)	9.81	188	2439	2.50000	ppb	-0.05
16) Chrysene-D12 (IS)	12.90	240	3020	2.50000	ppb	0.00
22) Perylene-D12 (IS)	14.52	264	2405	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	700	1.32628	ppb	-0.01
Spiked Amount 1.905			Recovery =	69.615%		
7) Surrogate Recovery (FBP)	7.32	172	1558	1.21828	ppb	-0.05
Spiked Amount 1.905			Recovery =	63.945%		
18) Surrogate Recovery (TPH)	11.69	244	3379	2.13001	ppb	-0.05
Spiked Amount 1.905			Recovery =	111.825%		
Target Compounds						
3) Naphthalene	6.09	128	4693	2.58174	ppb	99
4) 2-Methylnaphthalene	6.89	142	2872	2.43797	ppb	94
5) 1-Methylnaphthalene	7.00	142	3057	2.57941	ppb	97
8) 1,1'-Biphenyl	7.43	154	3710	2.61477	ppb	# 88
9) Acenaphthylene	7.92	152	5320	2.84913	ppb	98
10) Acenaphthene	8.11	154	2973	2.87036	ppb	# 82
11) Fluorene	8.72	166	3702	3.10765	ppb	97
13) Phenanthrene	9.83	178	5707	3.10939	ppb	96
14) Anthracene	9.91	178	5428	2.98801	ppb	98
15) Fluoranthene	11.22	202	8088	3.06358	ppb	# 92
17) Pyrene	11.49	202	8218	2.86664	ppb	# 88
19) Benz (a) anthracene	12.89	228	6010	2.38545	ppb	98
20) Chrysene	12.94	228	6978	2.86708	ppb	99
21) Indeno (1,2,3-cd) pyrene	16.02	276	5864	2.28251	ppb	73
23) Benzo (b) fluoranthene	14.08	252	5151	2.31842	ppb	# 84
24) Benzo (k) fluoranthene	14.10	252	6436	2.83750	ppb	100
25) Benzo (a) pyrene	14.45	252	5059	2.36938	ppb	98
26) Dibenz (a,h) anthracene	16.03	278	5002	2.57943	ppb	89
27) Benzo (g,h,i) perylene	16.45	276	5161	2.55144	ppb	91

(#) = qualifier out of range (m) = manual integration
 0725L007.D SIMB.M Fri Jul 27 09:13:33 2012

Quantitation Report

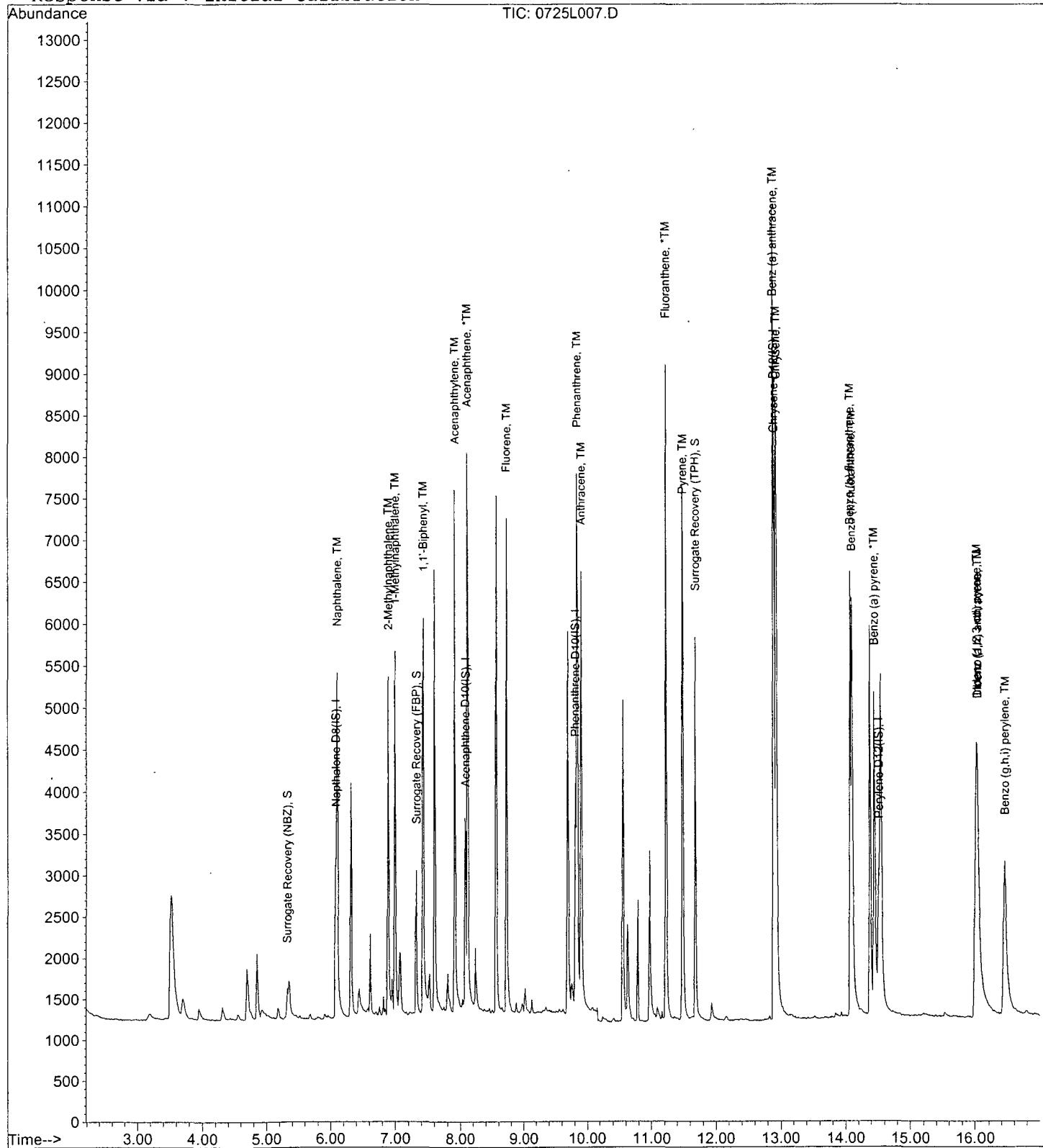
Data File : M:\LINUS\DATA\L120613\0725L007.D
 Acq On : 25 Jul 12 20:41
 Sample : AY65167W13 MSD-1 1/1050
 Misc :

Vial: 7
 Operator: LF
 Inst : Linus
 Multiplr: 0.95

Quant Time: Jul 27 8:25 2012

Quant Results File: SIMB.RES

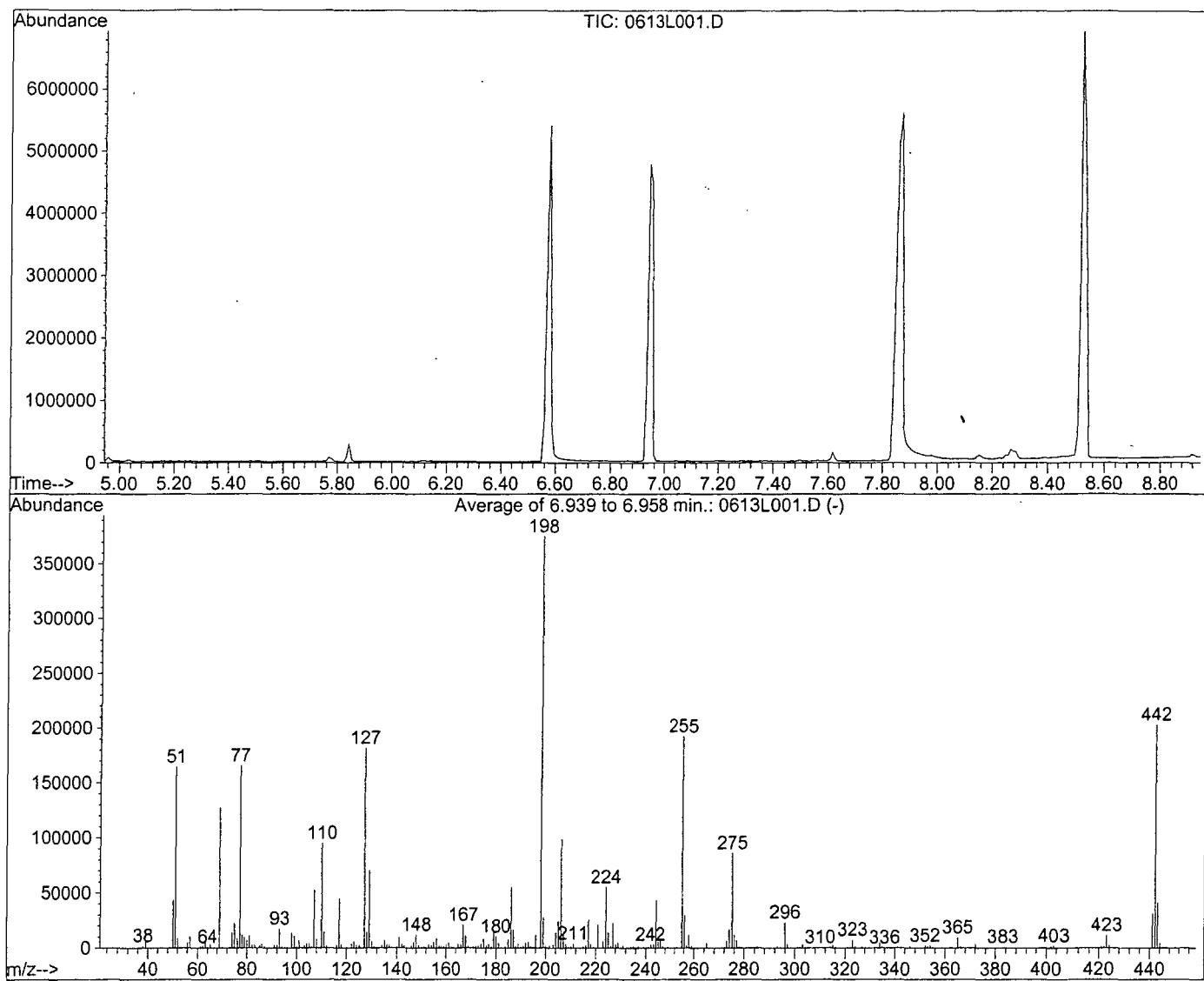
Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Jul 25 18:38:43 2012
 Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L120613\0613L001.D Vial: 1
 Acq On : 13 Jun 12 13:07 Operator: LF
 Sample : SVTUNE 2-28-12 Inst : Linus
 Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C



Spectrum Information: Average of 6.939 to 6.958 min.

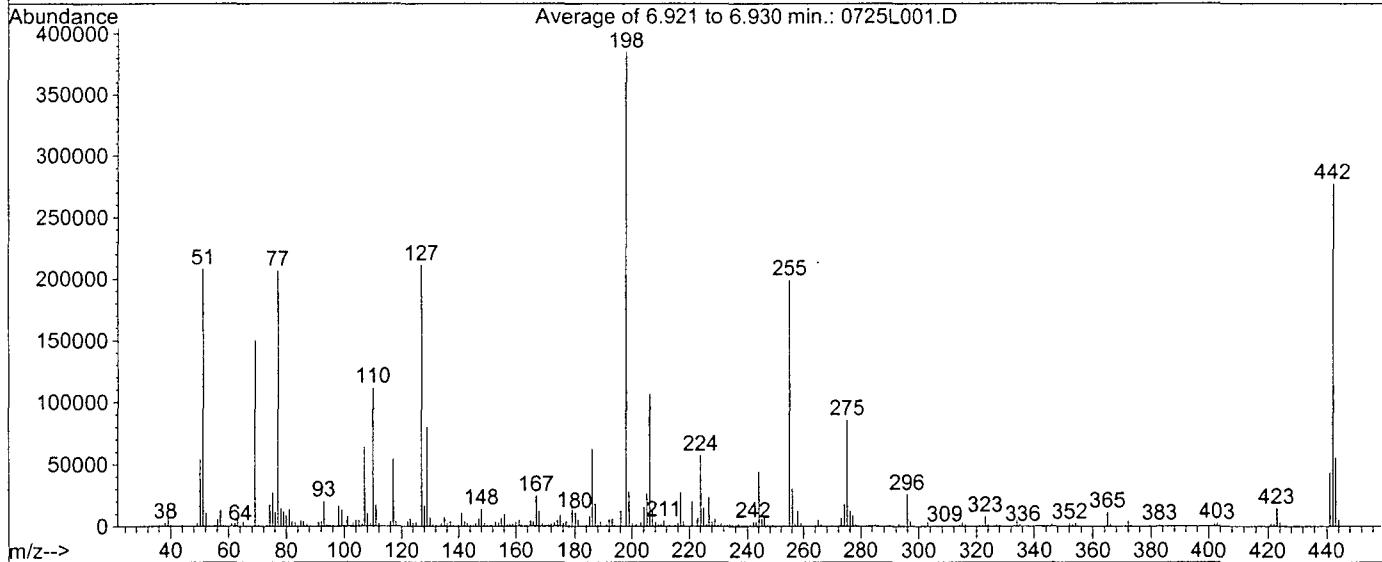
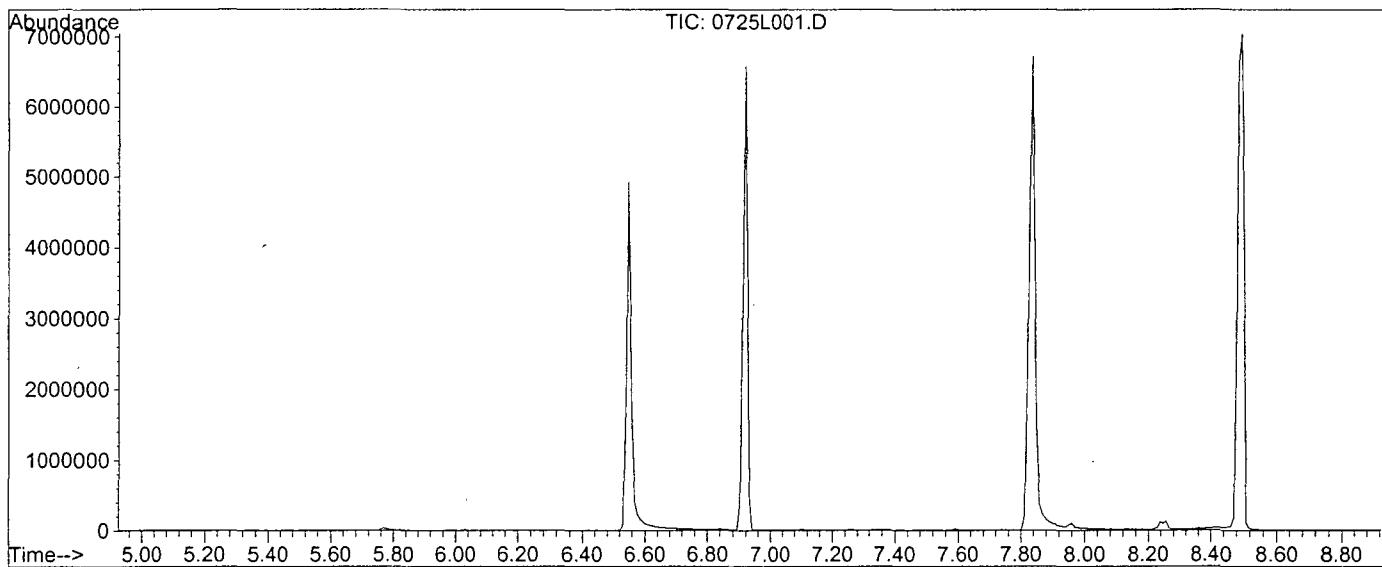
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.8	164628	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	681	PASS
127	198	40	60	48.3	181462	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	375479	PASS
199	198	5	9	7.2	27064	PASS
275	198	10	30	22.8	85713	PASS
365	198	1	100	2.5	9250	PASS
441	443	0.01	100	75.8	30917	PASS
442	198	40	150	53.9	202264	PASS
443	442	17	23	20.2	40782	PASS

DFTPP

Data File : M:\LINUS\DATA\L120613\0725L001.D
 Acq On : 25 Jul 12 18:12
 Sample : SVTUNE 2-28-12
 Misc :

Vial: 1
 Operator: LF
 Inst : Linus
 Multiplr: 1.00

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C



Spectrum Information: Average of 6.921 to 6.930 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	53.9	207646	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	928	PASS
127	198	40	60	54.8	210956	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	384992	PASS
199	198	5	9	7.3	27977	PASS
275	198	10	30	22.2	85462	PASS
365	198	1	100	2.9	11042	PASS
441	443	0.01	100	77.5	42884	PASS
442	198	40	150	72.0	277056	PASS
443	442	17	23	20.0	55324	PASS

GC/MS STANDARD PREPARATION BOOK # J PAGE # 103

Wk 18/11

Part #: 10001 Lot #: 042910 	Laboratory Use Only - See MSDS Exp: 042913 Storage 0 °C CLP Semi-Volatiles Base/Neutrals Mix #1 14 components 2000 ug/mL in methy ABSOLUTE STANDAR
	CLP Semi-Volatiles Base/Neutrals Mix #1 Lot #: 042910 - 28440 <i>in</i> Rec: 3/8/11 MFR exp. 4/29/2013 <i>BT</i>

exp 10/18/12

Wk 18/11

Part #: 10001 Lot #: 042910 	Laboratory Use Only - See MSDS Exp: 042913 Storage 0 °C CLP Semi-Volatiles Base/Neutrals Mix #1 14 components 2000 ug/mL in m ABSOLUT STANDA
	CLP Semi-Volatiles Base/Neutrals Mix #1 Lot #: 042910 - 29085 Rec: 8/4/11 MFR exp. 4/29/13 <i>BT</i>

exp 10/18/12

Wk 18/11

Part #: 10002 Lot #: 073109 	Laboratory Use Only - See MSDS Exp: 073112 Storage 4 °C CLP Semi-Volatiles Base/Neutrals Mix #2 14 components 2000 ug/mL in methyle ABSOLUTE STANDARDS
	CLP Semi-Volatiles Base/Neutrals Mix #2 Lot #: 073109 - 28446 Rec: 3/8/11 MFR exp. 7/31/2012 <i>BT</i>

exp 10/18/12 7/31/12

Wk 18/11

Part #: 10002 Lot #: 073109 	Laboratory Use Only - See MSDS Exp: 073112 Storage 4 °C CLP Semi-Volatiles Base/Neutrals Mix #2 14 components 2000 ug/mL in met ABSOLUTE STANDAF
	CLP Semi-Volatiles Base/Neutrals Mix #2 Lot #: 073109 - 29090 Rec: 8/4/11 MFR exp. 07/31/12 <i>BT</i>

exp 7/31/12

Wk 18/11

Part #: 10004 Lot #: 101509 	Laboratory Use Only - See MSDS Exp: 101514 Storage 4 °C CLP Semi-Volatiles Toxic Substances #1 4 components 2000 ug/mL in methylc ABSOLUTE STANDARD
	CLP Semi-Volatiles Toxic Substances #1 Lot #: 101509 - 28453 <i>in</i> Rec: 3/8/11 MFR exp. 10/15/2011 <i>BT</i>

exp 10/18/12

Wk 18/11

Part #: 10004 Lot #: 101509 	Laboratory Use Only - See MSDS Exp: 101514 Storage 4 °C CLP Semi-Volatiles Toxic Substances #1 4 components 2000 ug/mL in met ABSOLUTE STANDAR
	CLP Semi-Volatiles Toxic Substances #1 Lot #: 101509 - 29095 Rec: 8/4/11 MFR exp. 10/15/14 <i>BT</i>

exp 10/18/12

Wk 18/11

Part #: 10005 Lot #: 061209 	Laboratory Use Only - See MSDS Exp: 061214 Storage 4 °C CLP Semi-Volatiles Toxic Substances #2 8 components 2000 ug/mL in methy ABSOLUTE STANDARD
	CLP Semi-Volatiles Toxic Substances #2 Lot #: 061209 - 28458 <i>in</i> Rec: 3/8/11 MFR exp. 6/12/2014 <i>BT</i>

exp 10/18/12

Wk 18/11

Part #: 10005 Lot #: 121208 	Laboratory Use Only - See MSDS Exp: 121213 Storage 4 °C CLP Semi-Volatiles Toxic Substances #2 8 components 2000 ug/mL in met ABSOLUTE STANDAF
	CLP Semi-Volatiles Toxic Substances #2 Lot #: 121208 - 29100 <i>73</i> Rec: 8/4/11 MFR exp. 12/12/13

exp 10/18/12

GC/MS STANDARD PREPARATION BOOK # 5 PAGE # 112

02/25/13

8270D PAH SIM Solution,
200 mg/L, 1 ml
110780-01
Lot # Storage Expiry
170253 ≤ -10 Degrees C 3/3/13
Solv: Methylene Chloride
3270D PAH SIM
Lot # 170253 - 28476
Rec. 3/10/11 MFR exp 3/3/2013

02/25/13

8270D PAH SIM Solution,
Second Source, 200 mg/L, 1 ml
110780-01-SS
Lot # Storage Expiry
170254 ≤ -10 Degrees C 3/3/13
Solv: Methylene Chloride
8270D PAH SIM (SS)
110780-01-SS
Lot # 170256 - 2849C
Rec. 3/10/11 MFR exp. 3/3/2013

02/25/13

8270 BN:A (200:400)
Surrogate Solution, 1 ml
110004-17
Lot # Storage Expiry
167802 ≤ -10 Degrees C 1/9/13
Solv: Methylene Chloride
8270 BN:A (200:400) Surrogate Solution
Lot # 167802 - 29314
Rec. 8/8/11 MFR exp. 01/09/13

02/25/13

Method 8270 Internal
Standard Solution, 2,000
mg/L, 1 ml
110001-02
Lot # Storage Expiry
167766 ≤ -10 Degrees C 4/20/13
Solv: Methylene Chloride
8270 Internal Standard
Lot #: 167766 - 28151
Rec 1/20/11 MFR exp 04/20/13

02/25/13

PREP DATE:	02-25-12							
SIM Semivolatile Int. Std. Mix	125 ug/ml							
Exp:	08-25-12							
	Conc		Date	CODE:	B			
Supplier	ID #	ug/mL	Lot #	Code	Exp.Date	μL		
O2SI	Int. Std.	2000	167766-26151	02/25/12	02-25-13	100		
EM Science	MeCl2		47186			1500		
						1600		

02/25/13

PREP DATE: 02-25-12													
8270 STM STANDARD CURVE													
Supplier	ID #	Conc	Date	CODE:	0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00	
					μL	μL	μL	μL	μL	μL	μL	μL	
					0	0	0	0	5	5	25	50	
	8270D PAH SIM	200	170253-28478	02/25/12	02-25-13	0	0	0	0	0	0	0	
	5 ug/mL	5				0	0	10	20	0	0	0	
	1 ug/mL	1				10	20	0	0	0	0	0	
	Surrogate Stock	VAR	167802-29314	02/25/12	01-09-13	0	0	0	5	5	25	50	
	EM Science	Methylene Chloride		47186		90	80	90	80	190	90	50	
					Final Vol.	100	100	100	100	200	100	100	

GC/MS STANDARD PREPARATION BOOK # 5 PAGE # 13

VF 2/25/12

PREP DATE:	02-25-12	Conc.	Date	CODE:	
SIM 8270 Second Source (5µg/mL)					
Exp:	03-10-12				
Supplier	ID #	Lot #	µg/mL	Code	Exp. Date
8270D PAH SIM (SS)		170256-28490	200	02/25/12	02-25-13
MeCl2		Lot#47186			5
				Final Volume	195
					200

VF 2/25/12

ULTRA

Lot CH-2137 1 mL
 Exp. 07/31/2013
 Semi-Volatiles GC/MS Tuning Standard
 4 analyte(s) at 1000 µg/mL in dichloromethane
 For Lab Use
 250 Smith St. W. Kingston, RI 02852 USA

Off 2/28/13

VF 2/28/12

PREP DATE:	02-28-12	Conc.	Date	CODE:	B
SV Tune Mix 50ug/ml					
Exp:	02-28-13				
Supplier	ID #	µg/mL	Lot #	Code	Exp. Date
U Scientific	GCM-150	1000	CH-2137	02/28/12	07-31-13
EM Science	MeCl2		47080		
				Final Vol	19000
					20000

VF 2/29/12

Supplier	ID #	µg/mL	Lot #	Date	CODE:	0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
Supplier	ID #	µg/mL	Lot #	Date	CODE:	A	A	C	D	E	F	G	H
8270D PAH SIM	200	170253-28478	02/25/12	02-25-13		0	0	0	0	5	5	25	50
5.0ug/mL	5		02/29/12			0	0	10	20	0	0	0	0
1.0ug/mL	1		02/29/12			10	20	0	0	0	0	0	0
Surrogate Stock	VAR	167802-29314	02/25/12	01-09-13		0	0	0	0	5	5	25	50
EM Science	Methylene Chloride	47186				90	80	90	80	190	90	50	0
				Final Vol.		100	100	100	100	200	100	100	100

VF 2/29/12

Supplier	ID #	µg/mL	Lot #	Date	CODE:	5	10	20	40	50	60	80	100
8270D PAH SIM (SS)		200	170256-28490	02/25/12	02-25-13	5	5	10	20	25	30	40	50
MeCl2			Lot#47186						25	30	40	50	
					Final Volume				50	40	20	0	

VF 3/18/12

Supplier	ID #	µg/mL	Lot #	Date	CODE:	5	10	20	40	50	60	80	100
8270T Stock	200		02/13/12	07-31-12		5	5	10	20	25	30	40	50
Surrogate Stock	VAR	167802-29314	02/25/12	01-09-13		5	5	10	20	25	30	40	50
EM Science	Methylene Chloride	47186				190	90	80	60	50	40	20	0
				Final Vol.		200	100	100	100	100	100	100	100

VF 3/18/12

Supplier	ID #	µg/mL	Lot #	Date	CODE:	50
8270C SS	200		10/11/11	10-11-12		25
EM Science	Methylene Chloride	47186				75
				Final Volume		75

GC/MS STANDARD PREPARATION BOOK # J PAGE # 114

VS 5/1/12

Part #: 10001 Lot #: 042910  CLP Semi-Volatiles Base/Neutrals Mix #1 14 components 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 042913 Storage 0 °C CLP Semi-Volatiles Base/Neutrals Mix #1 Lot #: 042910 - 29081 Rec: 8/4/11 MFR exp. 04/29/13
---	---

exp 4/29/13

VS 5/1/12

Part #: 10002 Lot #: 073109  CLP Semi-Volatiles Base/Neutrals Mix #2 14 components 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 073112 Storage 4 °C CLP Semi-Volatiles Base Neutrals Mix #2 Lot #: 073109 - 29086 Rec: 8/4/11 MFR exp. 07/31/12
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exp 7/3/12

VS 5/1/12

Part #: 10004 Lot #: 101509  CLP Semi-Volatiles Toxic Substances #1 4 components 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 101514 Storage 4 °C CLP Semi-Volatiles Toxic Substances #1 Lot #: 101509 - 29091 Rec: 8/4/11 MFR exp. 10/15/14
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exp 6/15/14

VS 5/1/12

Part #: 10005 Lot #: 121208  CLP Semi-Volatiles Toxic Substances #2 8 components 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 121213 Storage 4 °C CLP Semi-Volatiles Toxic Substances #2 Lot #: 121208 - 29097 Rec: 8/4/11 MFR exp. 12/12/13
---	--

exp 12/12/13

VS 5/1/12

Part #: 10006 Lot #: 071211  CLP Semi-Volatiles - Benzidines 2 components 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 071214 Storage 4 °C CLP Semi-Volatiles - Benzidines Lot #: 071211 - 29102 Rec: 8/4/11 MFR exp. 07/12/14
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exp 7/12/14

VS 5/1/12

Part #: 10007 Lot #: 100909  CLP Semi-Volatiles - PAH Standard 17 components 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 100914 Storage 4 °C CLP Semi-Volatiles - PAH Mix Lot #: 100909 - 29107 Rec: 8/4/11 MFR exp. 10/09/14
---	--

exp 10/9/14

VS 5/1/12

Part #: 10018 Lot #: 062111  EPA Method 8270A - Analytes Mix #8 13 components - PI 2000 ug/mL in meth ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 062116 Storage 4 °C EPA Method 8270A - Analytes Mix #8 Lot #: 062111 - 29112 Rec: 8/4/11 MFR exp. 06/21/16
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exp 6/21/16

VS 5/1/12

Part #: 70023 Lot #: 031611  Atrazine 1000 ug/mL in ac ABSOLUTE STANDAR	Laboratory Use Only - See MSDS Exp: 031616 Storage 4 °C Atrazine Lot #: 031611 - 29117 76 Rec: 8/4/11 MFR exp. 03/16/16
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exp 3/16/16

GC/MS & ENVIRONMENTAL PREPARATION BOOK # J PAGE # 115

WFStk

Part #: 82705 Lot #: 041911	Laboratory Use Only - See MSDS Exp: 041914 Storage 4 °C
EPA Method 8270A **EPA Method 82/0A - MIX #18	
4 components Lot #: 041911-29122	
2000 ug/mL in acet Rec: 8/4/11 MFR exp. 04/19/14	
ABSOLUTE STANDAR	

Exp 4/19/14

WSH112

Part #: 94552 Lot #: 030411	Laboratory Use Only - See MSDS Exp: 030414 Storage 4 °C
Semi-Volatile Standard Semi-Volatile Standard	
11 components Lot #: 030411-29127	
Varied ug/mL in n Rec: 8/4/11 MFR exp. 03/04/14	
ABSOLUTE STANDAR	

Exp 3/4/14

IFSh112

PREP DATE:	05-01-12		Conc.	Date	CODE:	P	
	Supplier	ID #	µg/mL	Lot #	Code	Exp. Date	µL
Absolute	Absolute	10001	2000	042910-29081	05/01/12	04-29-13	1000
Absolute	Absolute	10002	2000	073109-29086	05/01/12	07-31-12	1000
Absolute	Absolute	10004	2000	101509-29091	05/01/12	10-15-14	1000
Absolute	Absolute	10005	2000	121208-29097	05/01/12	12-12-13	1000
Absolute	Absolute	10006	2000	071211-29102	05/01/12	07-12-14	1000
Absolute	Absolute	10007	2000	100909-29107	05/01/12	10-09-14	1000
Absolute	Absolute	10018	2000	062111-29112	05/01/12	06-21-16	1000
Absolute	Absolute	70023	1000	031611-29117	05/01/12	03-16-16	1000
Absolute	Absolute	82705	2000	041911-29122	05/01/12	04-19-14	1000
Absolute	Absolute	94552	2000	030411-29127	05/01/12	03-14-14	1000
					Final Vol.	10000	

WSH112

PREP DATE:	05-04-12		Conc.	Date	5	10	20	40	50	60	80	100
	Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL
8270 Standard Curve	8270T Stock	200	200	05/01/12	07-31-12	5	5	10	20	25	30	40
	Surrogate Stock VAR	167802-29314	200	02/25/12	01-09-13	5	5	10	20	25	30	50
	EM Science Methylene Chloride	47186	200			190	90	80	60	50	40	20
						Final Vol.	200	100	100	100	100	100

WSH112

PREP DATE:	05-04-12		Conc.	Date	CODE:	50	
	Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
8270 Second Source (SS) 50ug/mL	8270C SS	200	200	10/11/11	10-11-12	25	
	EM Science Methylene Chloride	47186	200			75	
						Final Vol.	100

Q32/12

Part #: 10001 Lot #: 042910	Laboratory Use Only - See MSDS Exp: 042913 Storage 0 °C
CLP Semi-Volatiles Base/Neutrals Mix #1 CLP Semi-Volatiles Base/Neutrals Mix #1	
14 components Lot #: 042910-29082	
2000 ug/mL in me Rec: 8/4/11 MFR exp. 04/29/13	
ABSOLUTE STANDAR	

ap4/29/13

K32/12

Part #: 10002 Lot #: 073109	Laboratory Use Only - See MSDS Exp: 073112 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2 CLP Semi-Volatiles Base Neutrals Mix #2	
14 components Lot #: 073109-29087	
2000 ug/mL in me Rec: 8/4/11 MFR exp. 07/31/12	
ABSOLUTE STANDAR	

exp 7/31/12

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	120725A	Extraction Method	SEP004S	Units	mL
Spiked ID 1	SIM Spike 170745-30363			Surrogate ID 1	8270 SIM Surrogate 188684-30653		
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:	07/25/12 12:04		
Spiked ID 8				Ext. End Time:	16:29 7/25/12		
				GC Requires Extract By:	08/03/12 0:00		
				pH1	2	07/25/12 12:04:00 PM	Water Bath Temp Criteria
				pH2	14	07/25/12 1:20:00 PM	76,80 °C
				pH3			

Spiked By: GH

Date 07/25/12

Witnessed By: DRA

Date 07/25/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1 120725A Blk				0.025	1 equip	1000 E-WB5,76	1 2/1		07/25/12 12:04	
2 120725A LCS-1		0.025	1	0.025	1 equip	1000 E-WB5,76	1 2/1		07/25/12 12:04	
3 AY65166	AY65166W07			0.025	1 equip	1050 E-WB5,76	1 2/1		07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
4 AY65167 MS-1	AY65167W10	0.025	1	0.025	1 equip	1050 E-WB5,76	1 2/1		07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
5 AY65167 MSD-1	AY65167W13	0.025	1	0.025	1 equip	1050 E-WB5,76	1 2/1		07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
6 AY65167	AY65167W09			0.025	1 equip	1000 E-WB6,80	1 2/1		07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter -- Amber Liter
7 AY65220	AY65220W04			0.025	1 equip	1000 E-WB6,80	1 2/1		07/25/12 12:04	68284-2 WEEK RUSH -- Amber Liter

DRA 7/25/12

Solvent and Lot#	
MC	EMD52104
Na2SO4	2351C512
10N NaOH	07/06/12
I+1 Acid	06/27/12
A. Na2SO4	06/28/12

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	if
Date	7/25/12
Time	17:00
Refrigerator	100%

	Technician's Initials
Scanned By	GH
Sample Preparation	GH
Extraction	JM
Concentration	IC
Modified	07/25/12 4:11:30 PM

Reviewed By: DRA Date 07/25/12

78

Ext_ID

37067

Injection Log

Directory: M:\LINUS\DATA\L120613\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0613L001.D	1	SVTUNE 2-28-12		13 Jun 12 13:07
2	3	0613L003.D	1	0.1ug/ml PAH	06-13-12	13 Jun 12 13:51
3	4	0613L004.D	1	0.2ug/ml PAH		13 Jun 12 14:16
4	5	0613L005.D	1	0.5ug/ml PAH		13 Jun 12 14:41
5	6	0613L006.D	1	1.0ug/ml PAH		13 Jun 12 15:07
6	7	0613L007.D	1	5.0ug/ml PAH		13 Jun 12 15:33
7	8	0613L008.D	1	10ug/ml PAH		13 Jun 12 15:59
8	9	0613L009.D	1	50ug/ml PAH		13 Jun 12 16:25
9	10	0613L010.D	1	100ug/ml PAH		13 Jun 12 16:51
10	11	0613L011.D	1	5.0ug/ml SS PAH	06-13-12	13 Jun 12 17:17
11	1	0725L001.D	1	SVTUNE 2-28-12		25 Jul 12 18:12
12	2	0725L002.D	1	5.0ug/ml PAH	06-13-12	25 Jul 12 18:31
13	3	0725L003.D	1	120725A BLK	1/1000	25 Jul 12 18:57
14	4	0725L004.D	1	120725A LCS-1	1/1000	25 Jul 12 19:23
15	5	0725L005.D	0.95238	AY65166W07	1/1050	25 Jul 12 19:49
16	6	0725L006.D	0.95238	AY65167W10	MS-1 1/1050	25 Jul 12 20:15
17	7	0725L007.D	0.95238	AY65167W13	MSD-1 1/1050	25 Jul 12 20:41
18	8	0725L008.D	1	AY65167W09	1/1000	25 Jul 12 21:07

EPA 8015B
Total Petroleum Hydrocarbons

EPA 8015B
Total Petroleum Hydrocarbons -
QC Summary

Method Blank
TPH Diesel Water

Blank Name/QCG: **120726W-65167 - 169638**
Batch ID: #TPETD-120726A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
BLANK	SURROGATE: OCTACOSANE (S)	64.4	28-142			%	07/26/12	08/01/12
BLANK	SURROGATE: ORTHO-TERPHEN	78.3	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731039
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 5:56:43 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68268

Case No: 68268

Date Analyzed: 08/01/12

Matrix: WATER

Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726A-BLK	Blank	28-142	64.4		57-132	78.3	
120726A-LCS	Lab Control Spike	28-142	59.4		57-132	89.3	
AY65166	ES083	28-142	63.7		57-132	77.6	
AY65167-MS	Matrix Spike	28-142	46.3		57-132	70.0	
AY65167-MSD	Matrix SpikeD	28-142	64.0		57-132	89.3	
AY65167	ES084	28-142	70.2		57-132	81.9	

Comments: Batch: #TPETD-120726A

Printed: 08/02/12 5:56:26 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
TPH Diesel Water

APPL ID: 120726W-65167 LCS - 169638

Batch ID: #TPETD-120726A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK %	Recovery
	ug/L	ug/L	Recovery	Limits
DIESEL FUEL	2000	1370	68.5	61-143
SURROGATE: OCTACOSANE (S)	150	89.1	59.4	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	57-132

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TPH0719.M
Extraction Date :	07/26/12
Analysis Date :	08/01/12
Instrument :	Apollo
Run :	731040
Initials :	SD

Printed: 08/02/12 5:56:33 PM

APPL Standard LCS

Matrix Spike Recoveries

TPH Diesel Water

APPL ID: 120726W-65167 MS - 169638

Batch ID: #TPETD-120726A

Sample ID: AY65167

Client ID: ES084

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
DIESEL FUEL	2000	ND	1250	1570	62.5	78.5	61-143	22.7	30
SURROGATE: OCTACOSANE (S)	150	NA	69.4	96.0	46.3	64.0	28-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	NA	105	134	70.0	89.3	57-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	TPH0719.M	TPH0719.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	08/01/12	08/01/12
Instrument :	Apollo	Apollo
Run :	731043	731044
Initials :	SD	

Printed: 08/02/12 5:56:30 PM

APPL MSD SCII

EPA 8015B-e

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 68268
Matrix: WATER
Blank ID: 120726A-BLK

SDG No: 68268
Date Analyzed: 08/01/12
Instrument: Apollo
Time Analyzed: 0111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120726A-BLK	Blank	731039	08/01/12 0111
120726A-LCS	Lab Control Spike	731040	08/01/12 0135
AY65166	ES083	731042	08/01/12 0224
120726A-MS	Matrix Spike	731043	08/01/12 0248
120726A-MSD	Matrix SpikeD	731044	08/01/12 0312
AY65167	ES084	731045	08/01/12 0336

Comments: Batch: #TPETD-120726A

EPA 8015B
Total Petroleum Hydrocarbons -

Sample Data

TPH Diesel Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES083
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65166
QCG: #TPETD-120726A-169638

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B- DIESEL FUEL		80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
EPA 8015B- SURROGATE: OCTACOSANE (S)		63.7	28-142			%	07/26/12	08/01/12
EPA 8015B- SURROGATE: ORTHO-TERPHENYL (S)		77.6	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731042
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 5:56:36 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731042.D Vial: 42
Acq On : 8-1-12 2:24:08 Operator: LAC
Sample : AY65166W04 5/1040 Inst : Apollo
Misc : Water Multipllr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
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System Monitoring Compounds

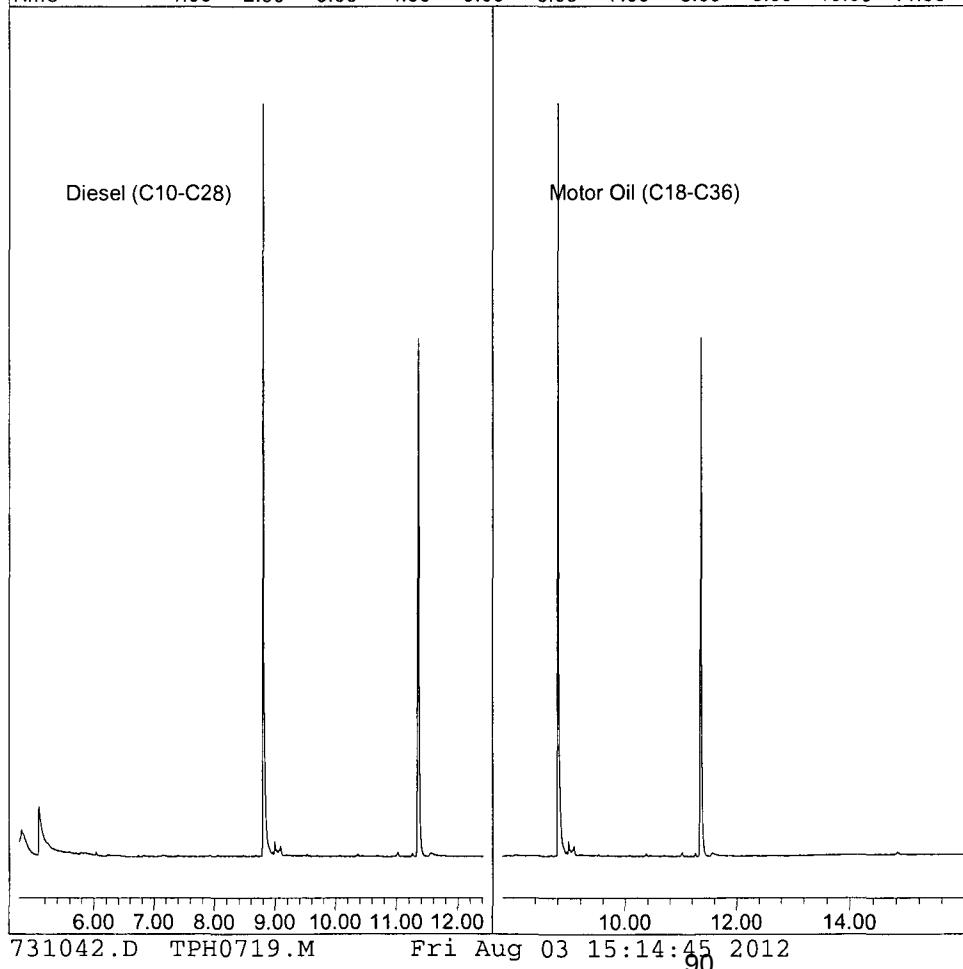
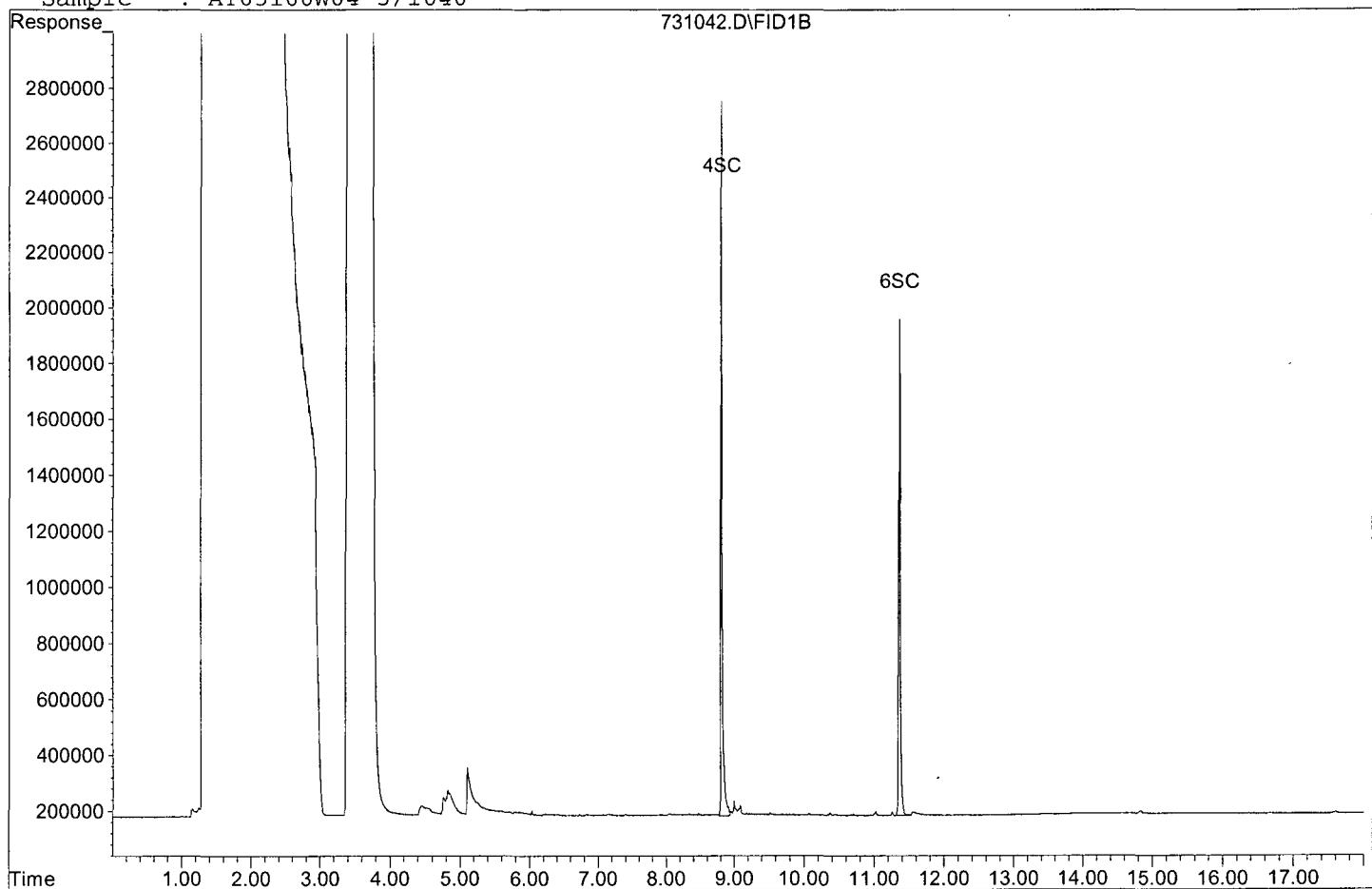
4) SC Ortho-Terphenyl(S)	8.80	32820007	110.896	ppb
Surrogate Spike 142.857		Recovery	=	77.63%
6) SC Octacosane(S)	11.36	28778928	90.928	ppb
Surrogate Spike 142.857		Recovery	=	63.65%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731042.D

Sample : AY65166W04 5/1040



TPH Diesel Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES084
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65167
QCG: #TPETD-120726A-169638

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B- DIESEL FUEL		80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
EPA 8015B- SURROGATE: OCTACOSANE (S)		70.2	28-142			%	07/26/12	08/01/12
EPA 8015B- SURROGATE: ORTHO-TERPHENYL (S)		81.9	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731045
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 5:56:36 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731045.D Vial: 45
Acq On : 8-1-12 3:36:31 Operator: LAC
Sample : AY65167W11 5/1050 Inst : Apollo
Misc : Water Multipllr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:46 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

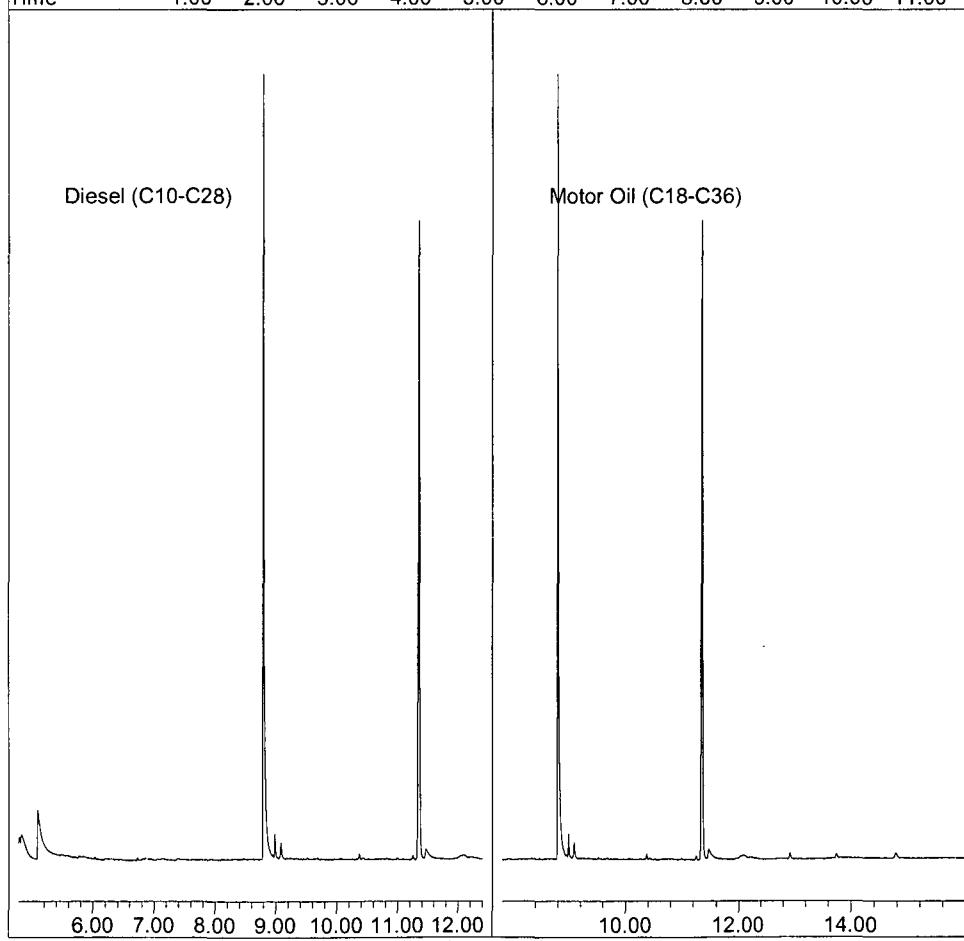
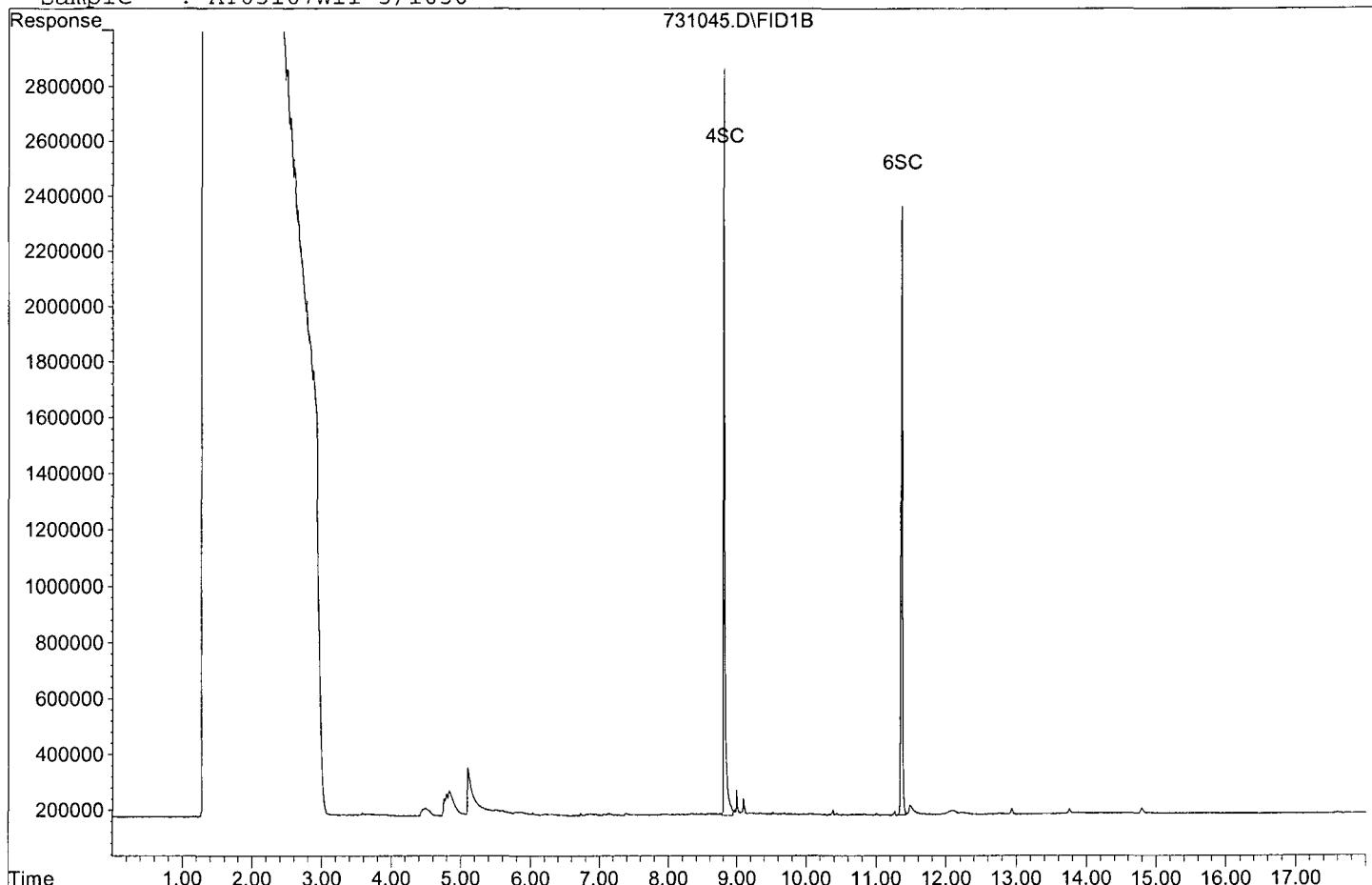
Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.80	34609999	116.945	ppb
Surrogate Spike 142.857		Recovery	=	81.86%
6) SC Octacosane(S)	11.36	31728129	100.246	ppb
Surrogate Spike 142.857		Recovery	=	70.17%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731045.D

Sample : AY65167W11 5/1050



EPA 8015B
Total Petroleum Hydrocarbons -
Calibration Data

TPH Extractables
TPH0719

Form 6
Initial Calibration

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

SDG No: 68268
Initial Cal. Date: 06/22/2012 and 7/19/12
Instrument: Apollo Initials: sd

Surrogate	622004.D	622005.D	622006.D	622007.D	622008.D
DRO	622009.D	622010.D	622011.D	622012.D	622013.D
MO	719003.D	719004.D	719005.D	719006.D	719007.D
					719008.D

	Compound	1	2	3	4	5	6	Avg	%RSD	
1	HATM Diesel (C10-C28)	642703	509920	531557	542684	530047	540036	549491	8.6	HATM
2	HBTM Motor Oil (C18-C36)	415224	409753	447761	467949	423444	430885	432503	5.1	HBTM
3	SC Ortho-Terphenyl(S)	*	700048	705066	717492	699409	701217	704646	1.1	SC
4	SC Octacosane(S)	*	754341	750395	766254	747028	749884	753580	1.0	SC
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33										

* Not Used

0.475552

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622004.D Vial: 4
Acq On : 6-22-12 18:22:29 Operator: LAC
Sample : TCH SURROGATE 100/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

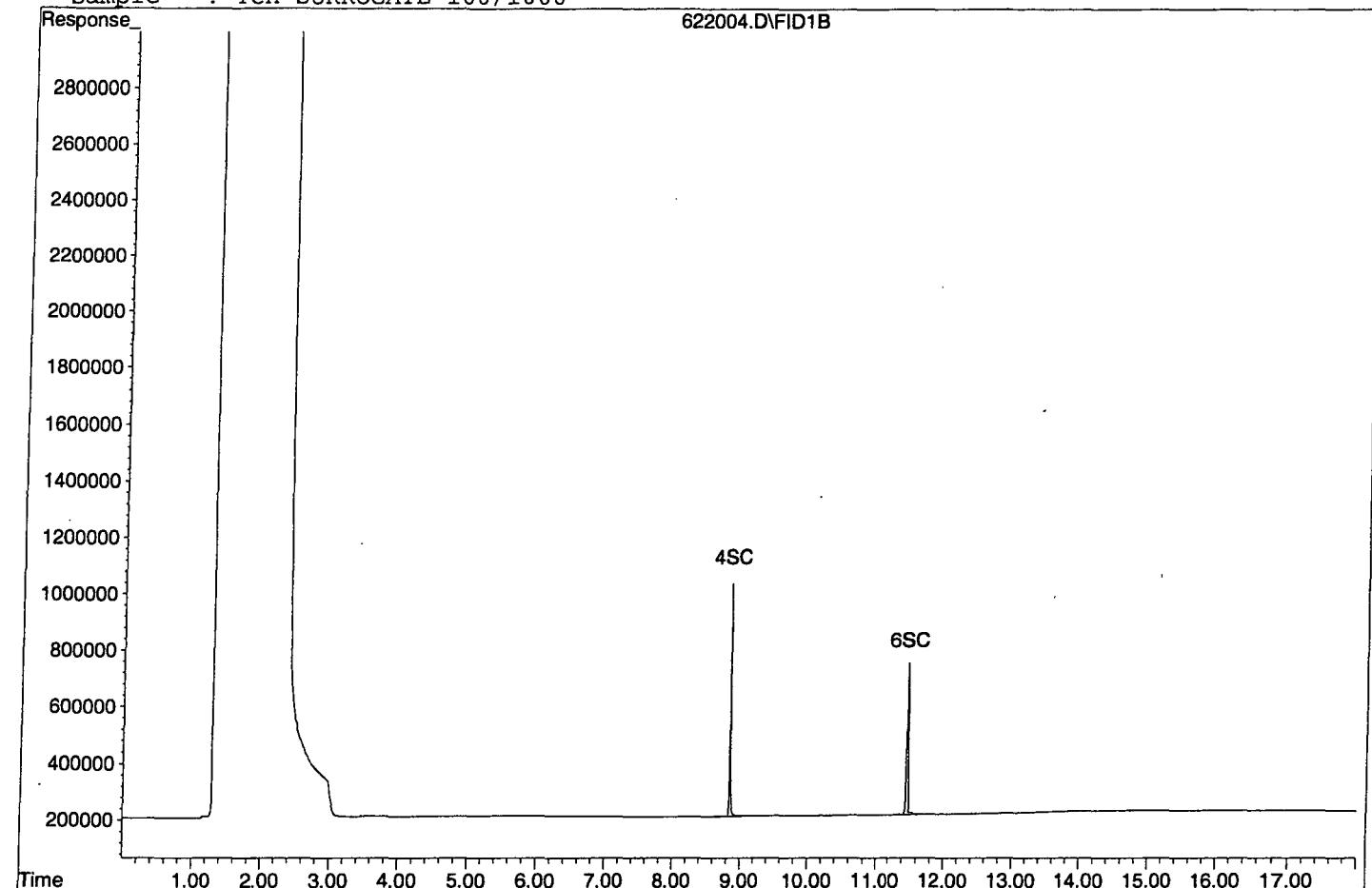
Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	7000476	2.493 ppb
Surrogate Spike 30.000		Recovery	= 8.31%
6) SC Octacosane(S)	11.46	7543411	3.161 ppb
Surrogate Spike 30.000		Recovery	= 10.54%

Target Compounds

Quantitation Report

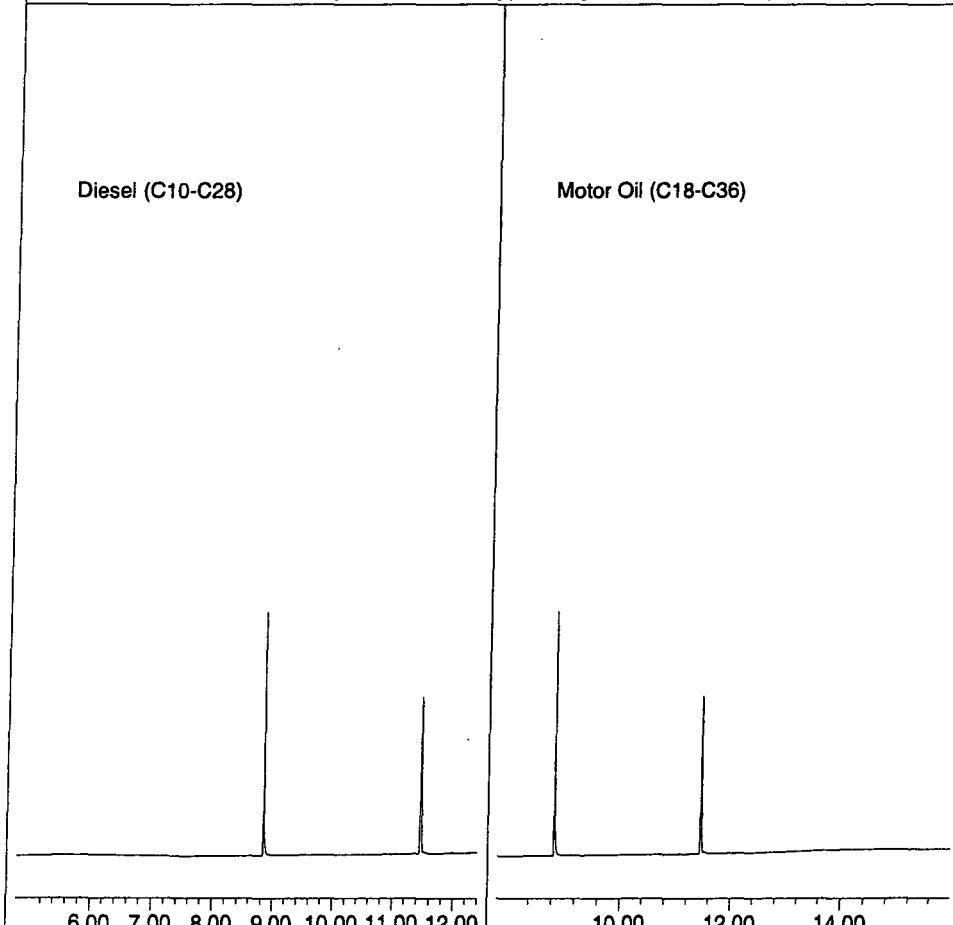
Data File: G:\APOLLO\DATA\120622\622004.D

Sample : TCH SURROGATE 100/1000



Diesel (C10-C28)

Motor Oil (C18-C36)



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622005.D Vial: 5
Acq On : 6-22-12 18:46:55 Operator: LAC
Sample : TCH SURROGATE 400/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

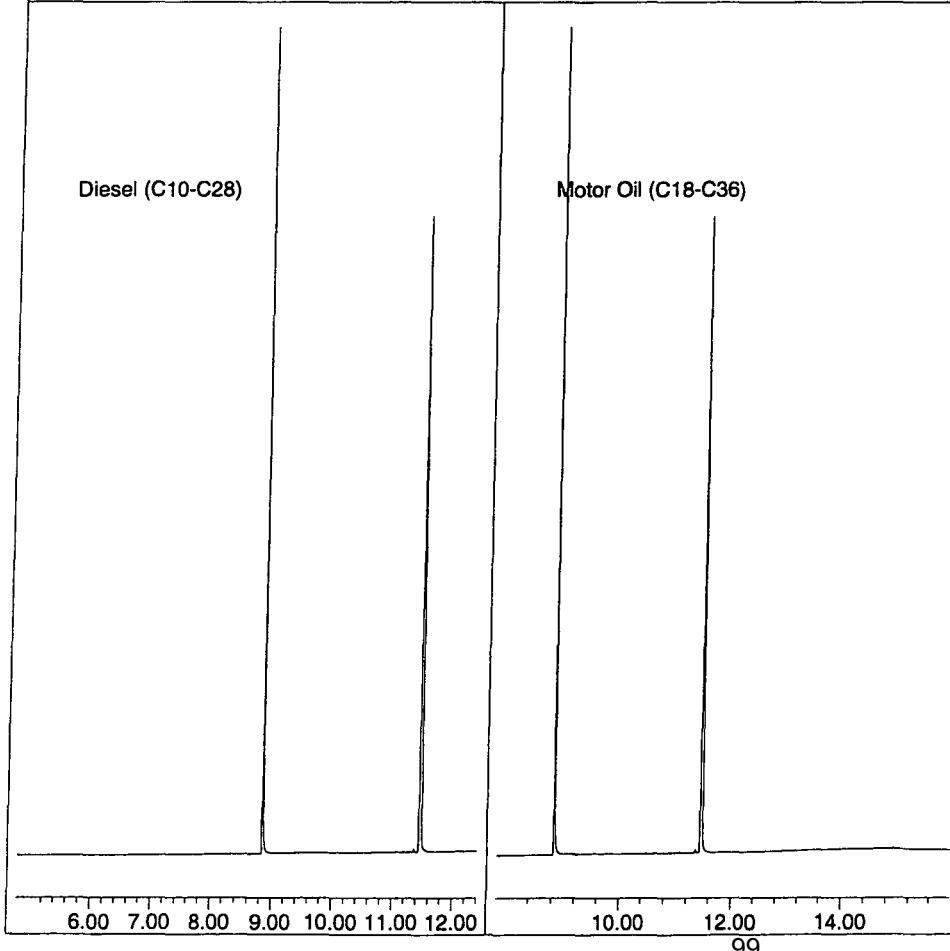
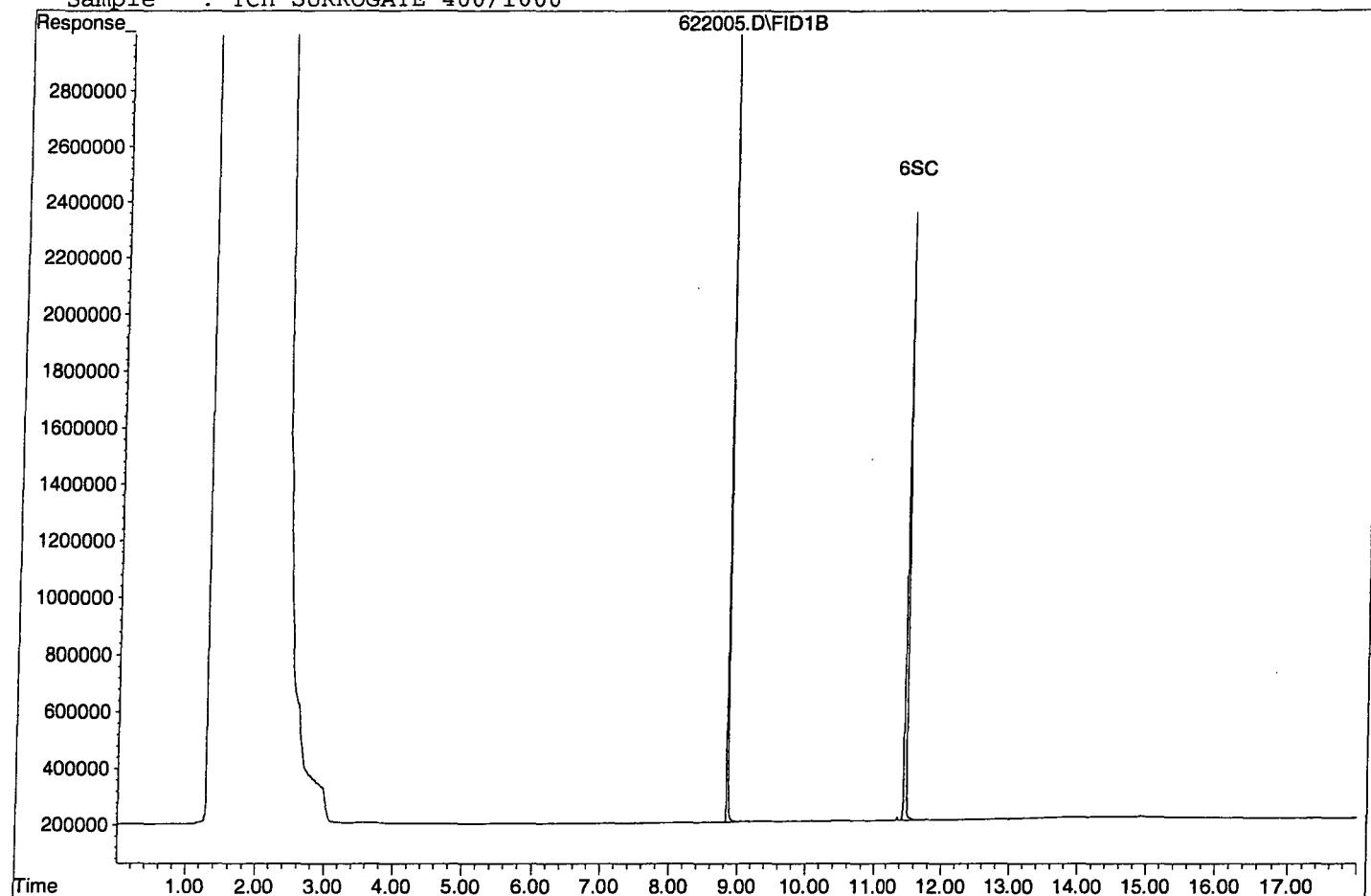
Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	28202647	10.113 ppb
Surrogate Spike 30.000		Recovery	= 33.71%
6) SC Octacosane(S)	11.47	30015782	12.394 ppb
Surrogate Spike 30.000		Recovery	= 41.31%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622005.D

Sample : TCH SURROGATE 400/1000



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622006.D Vial: 6
Acq On : 6-22-12 19:10:46 Operator: LAC
Sample : TCH SURROGATE 600/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

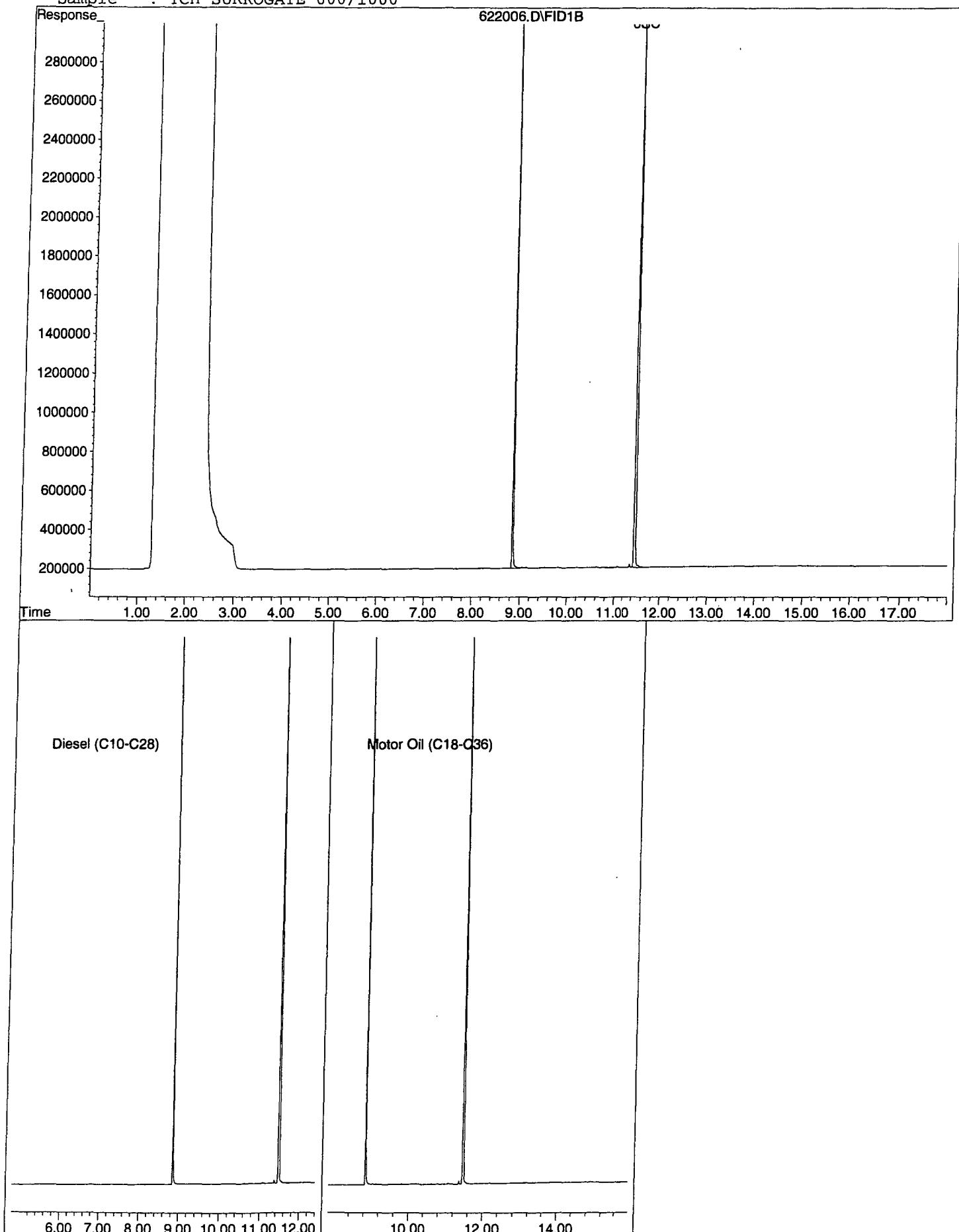
Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	43049549	15.420 ppb
Surrogate Spike 30.000		Recovery	= 51.40%
6) SC Octacosane(S)	11.48	45975259	18.583 ppb
Surrogate Spike 30.000		Recovery	= 61.94%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622006.D

Sample : TCH SURROGATE 600/1000



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622007.D Vial: 7
Acq On : 6-22-12 19:34:47 Operator: LAC
Sample : TCH SURROGATE 800/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

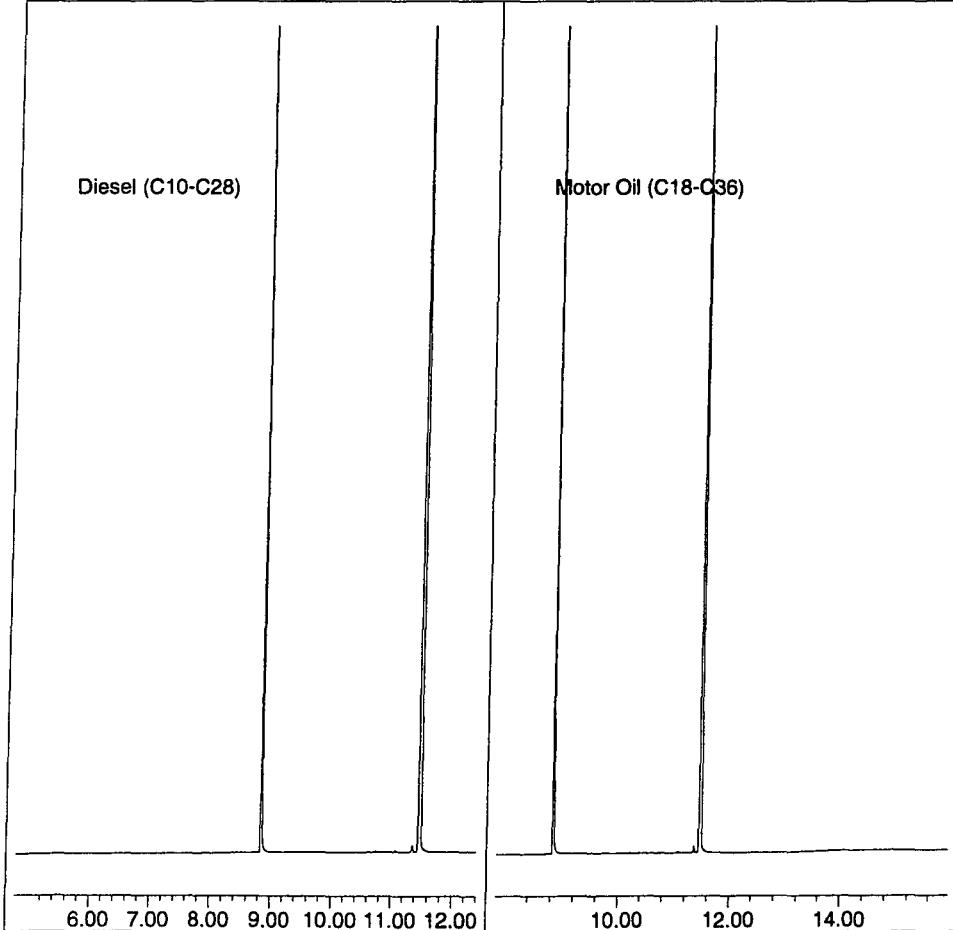
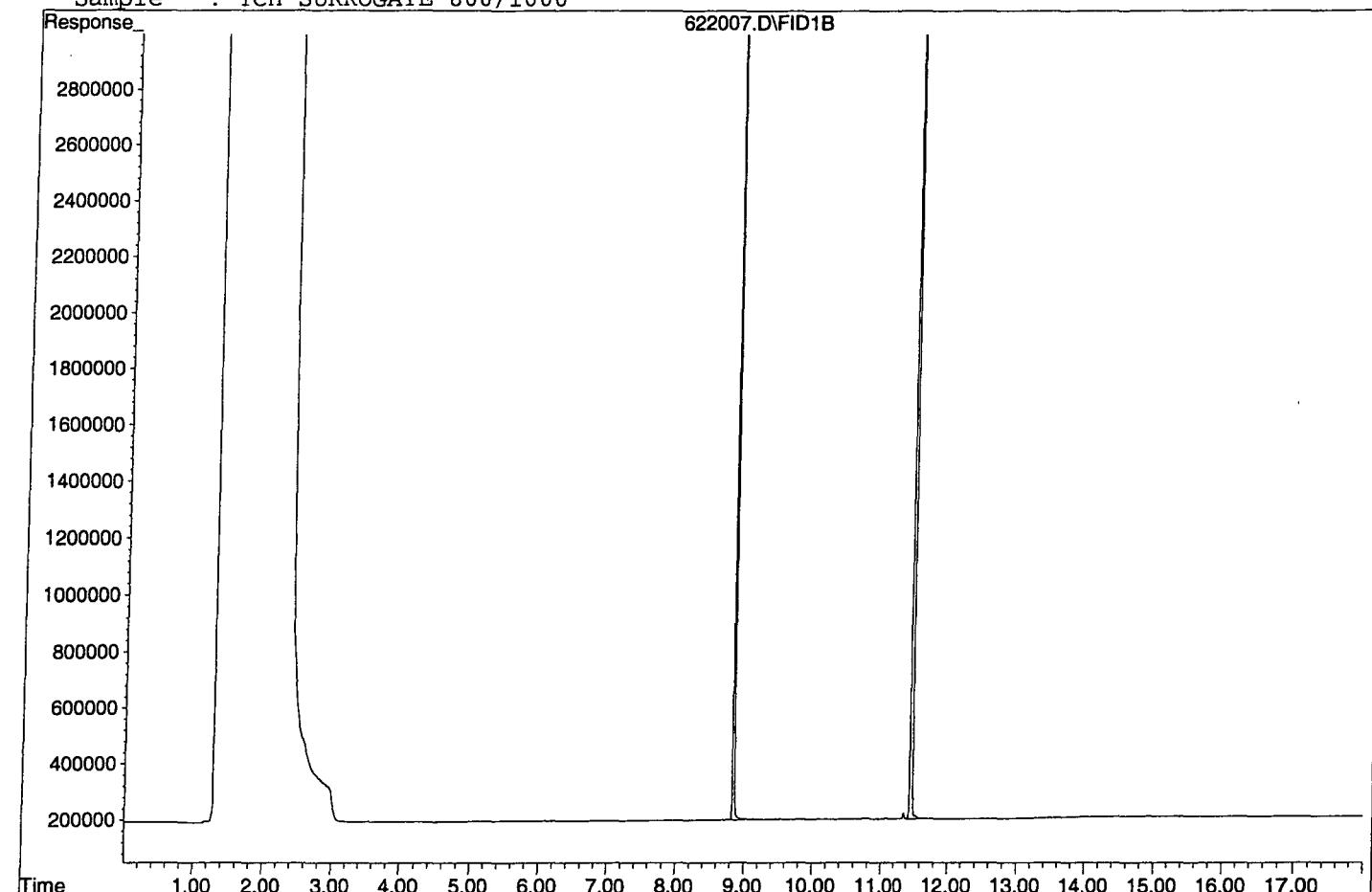
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.85	55952695	19.926	ppb
Surrogate Spike 30.000		Recovery	=	66.42%
6) SC Octacosane(S)	11.48	59762243	23.528	ppb
Surrogate Spike 30.000		Recovery	=	78.43%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622007.D
Sample : TCH SURROGATE 800/1000



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622008.D Vial: 8
Acq On : 6-22-12 19:58:49 Operator: LAC
Sample : TCH SURROGATE 1000/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:39 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.85	70121711	24.864	ppb
Surrogate Spike 30.000		Recovery	=	82.88%
6) SC Octacosane(S)	11.48	74988351	28.844	ppb
Surrogate Spike 30.000		Recovery	=	96.15%

Target Compounds

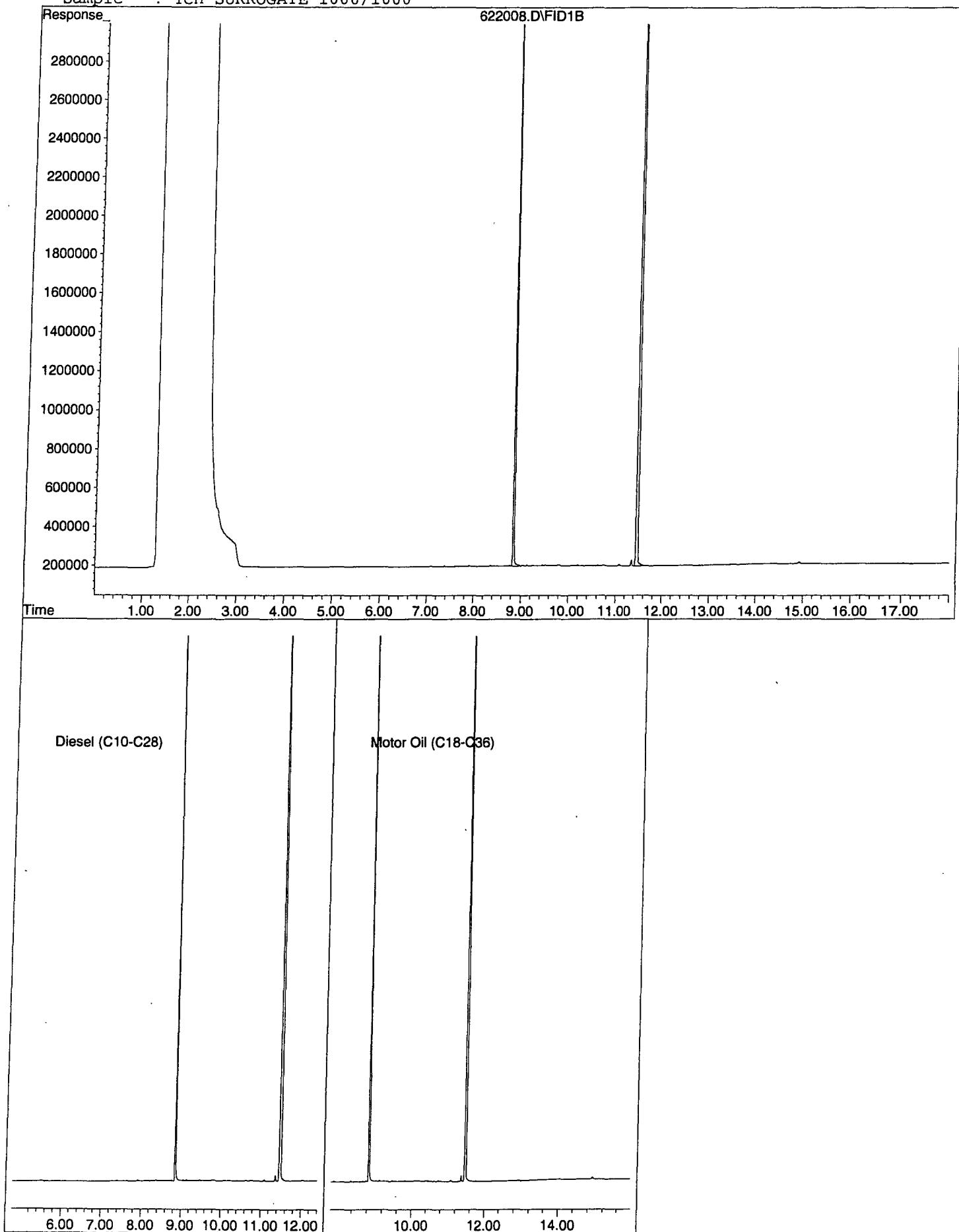
-----104-----

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622008.D

Sample : TCH SURROGATE 1000/1000



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622009.D Vial: 9
Acq On : 6-22-12 20:22:56 Operator: LAC
Sample : DIESEL 10/1000 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:08 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

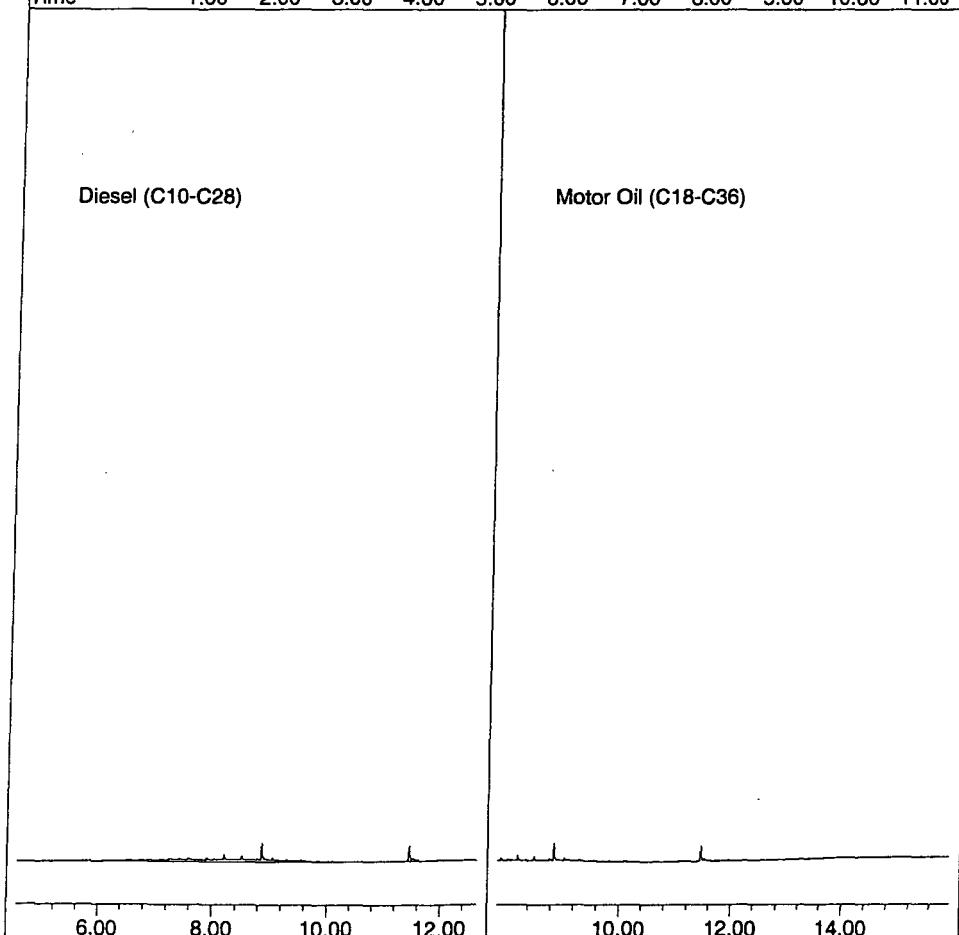
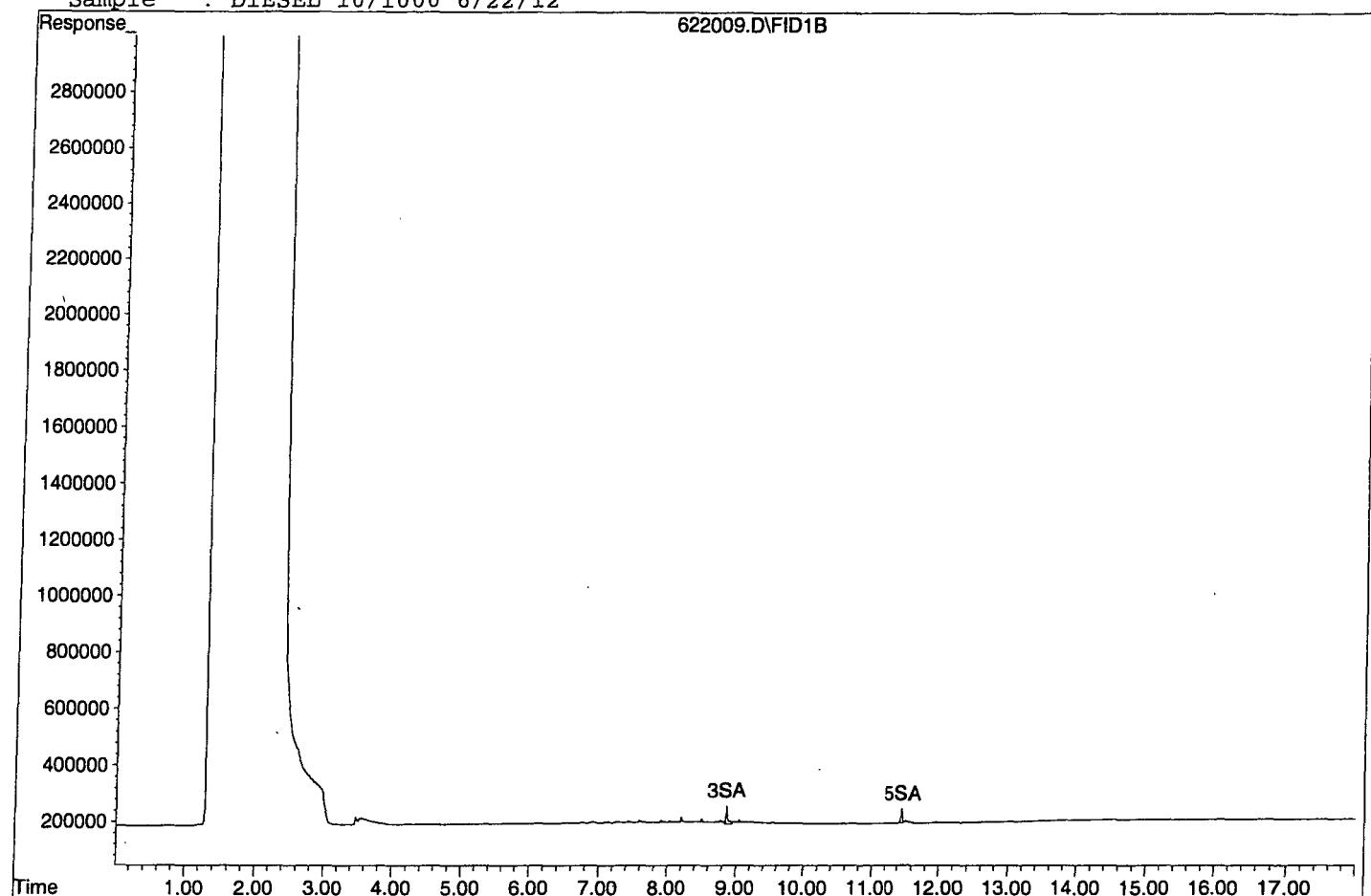
Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
3) SA Not Used(S)	8.85	1100828	0.688 ppb
Surrogate Spike 30.000		Recovery	= 2.29%
5) SA Not Used2(S)	11.46	755848	0.635 ppb
Surrogate Spike 30.000		Recovery	= 2.12%
<hr/>			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	12854065	11.749 ppb

-----106-----

(m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622009.D
Sample : DIESEL 10/1000 6/22/12



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622010.D Vial: 10
Acq On : 6-22-12 20:47:06 Operator: LAC
Sample : DIESEL 100/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

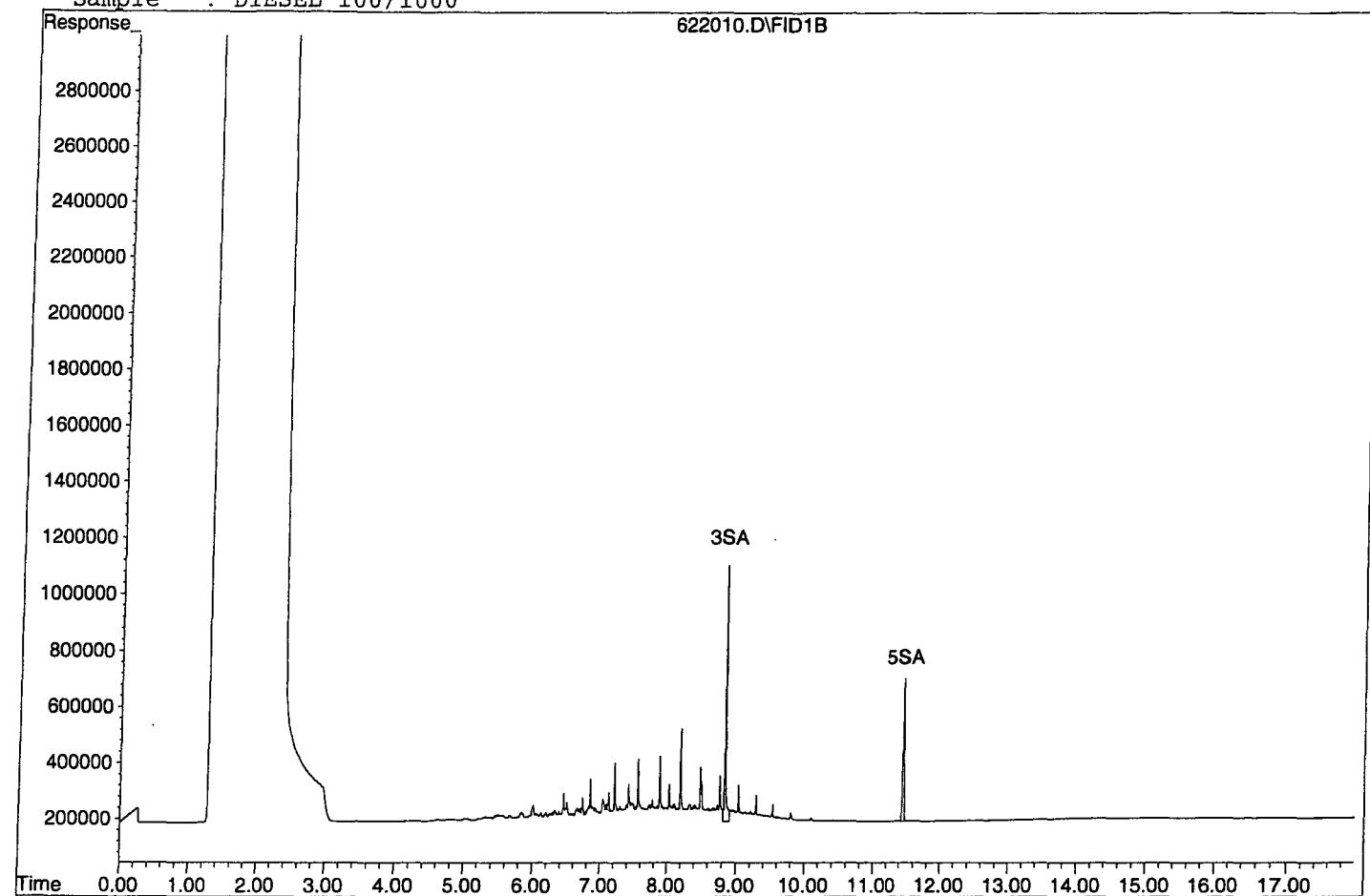
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
3) SA Not Used(S)	8.84	8996588	5.622	ppb
Surrogate Spike 30.000		Recovery	=	18.74%
5) SA Not Used2(S)	11.46	7054012	5.925	ppb
Surrogate Spike 30.000		Recovery	=	19.75%
<hr/>				
Target Compounds				
1) HATM Diesel (C10-C28)	8.60	101984030	93.220	ppb

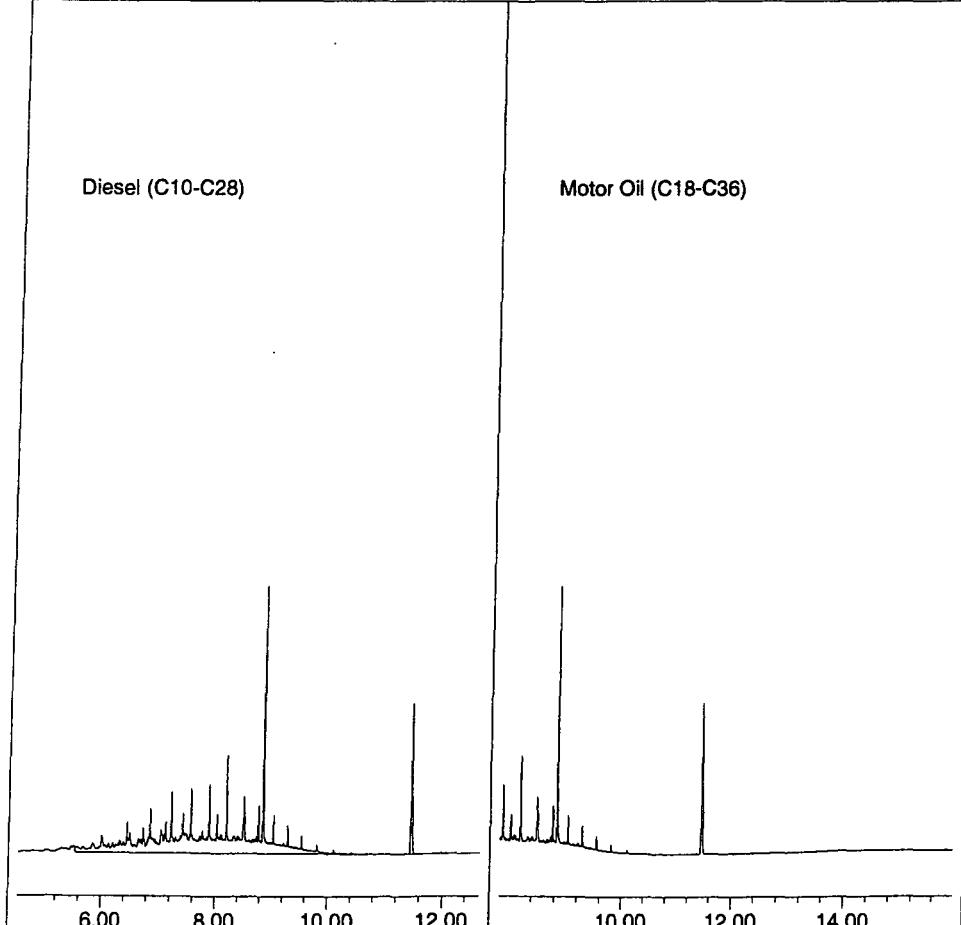
Quantitation Report

Data File: G:\APOLLO\DATA\120622\622010.D
Sample : DIESEL 100/1000



Diesel (C10-C28)

Motor Oil (C18-C36)



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622011.D Vial: 11
Acq On : 6-22-12 21:11:13 Operator: LAC
Sample : DIESEL 400/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

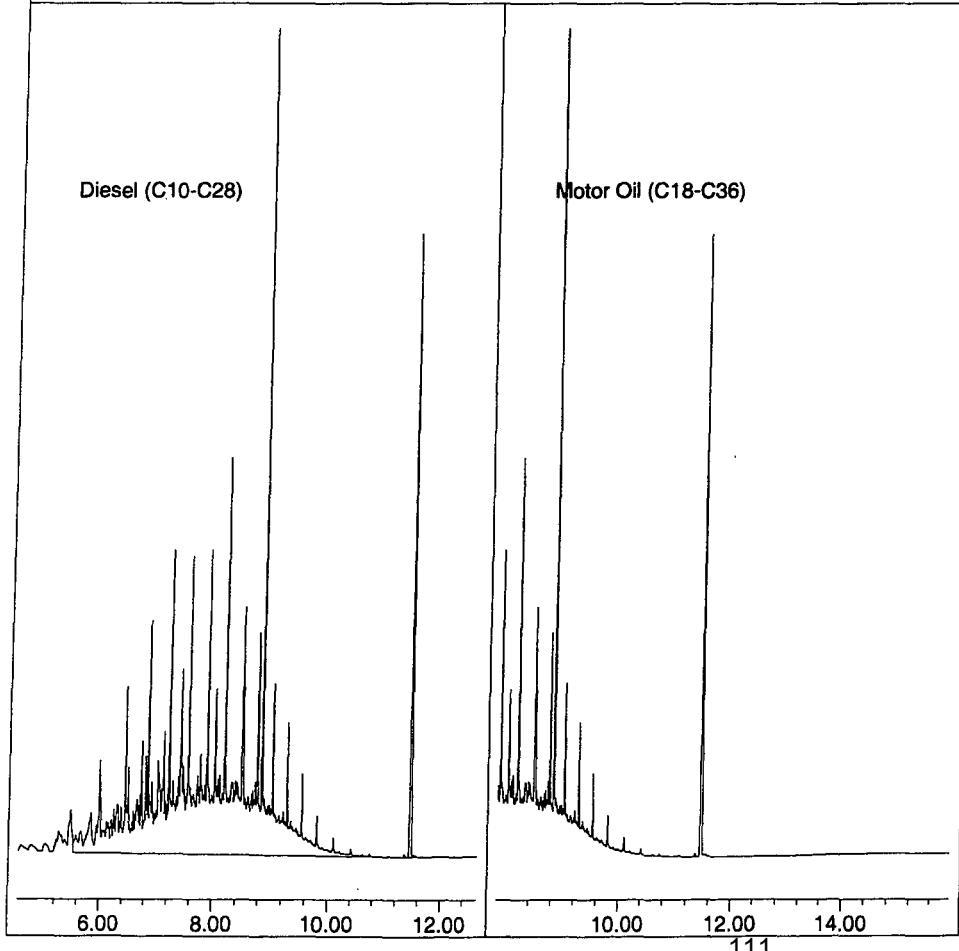
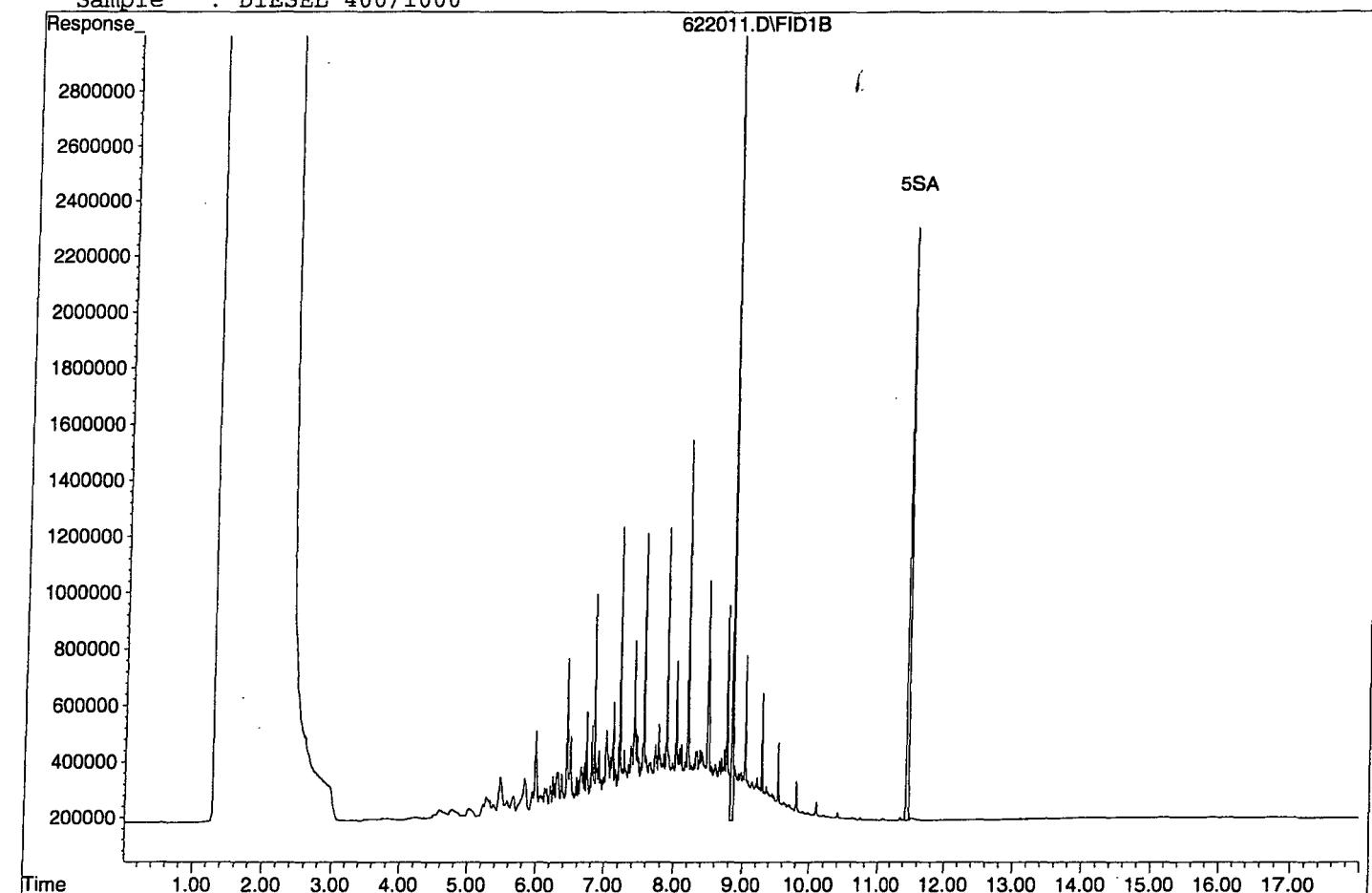
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
3) SA Not Used(S)	8.84	31783742	19.863	ppb
Surrogate Spike 30.000		Recovery	=	66.21%
5) SA Not Used2(S)	11.47	28563798	23.990	ppb
Surrogate Spike 30.000		Recovery	=	79.97%
<hr/>				
Target Compounds				
1) HATM Diesel (C10-C28)	8.60	425245865	388.700	ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622011.D
Sample : DIESEL 400/1000



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622012.D Vial: 12
Acq On : 6-22-12 21:35:18 Operator: LAC
Sample : DIESEL 600/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

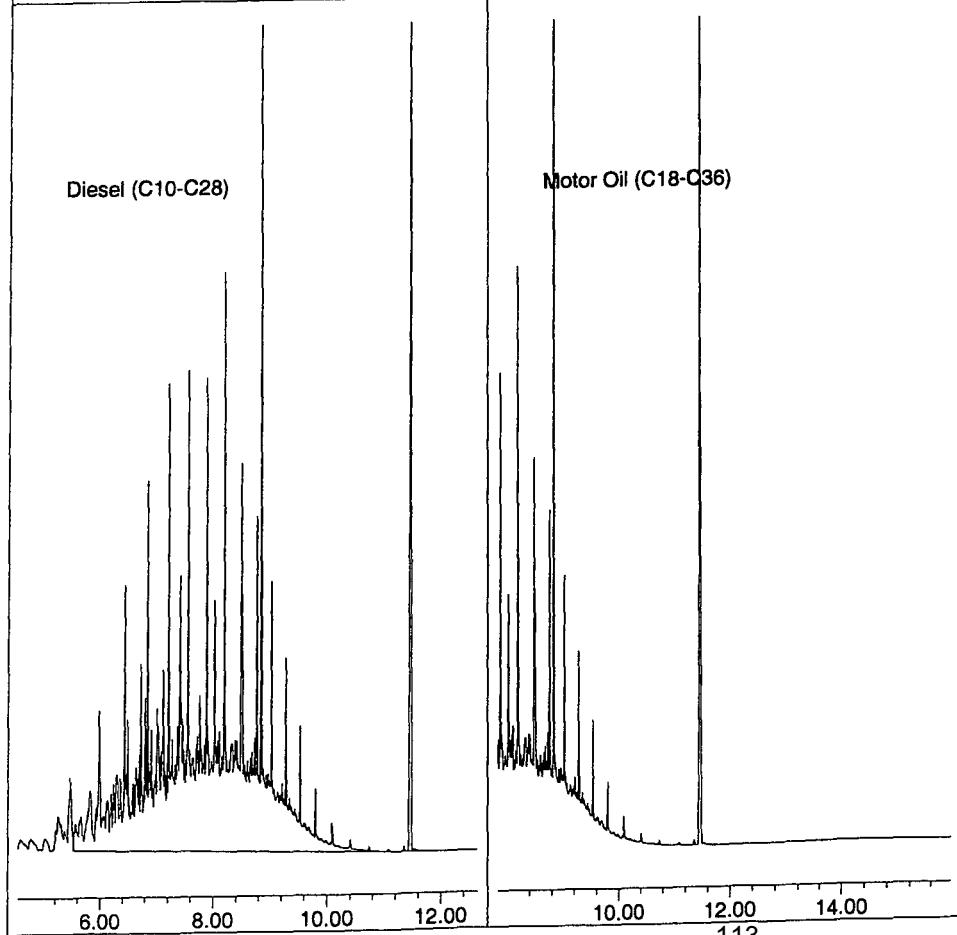
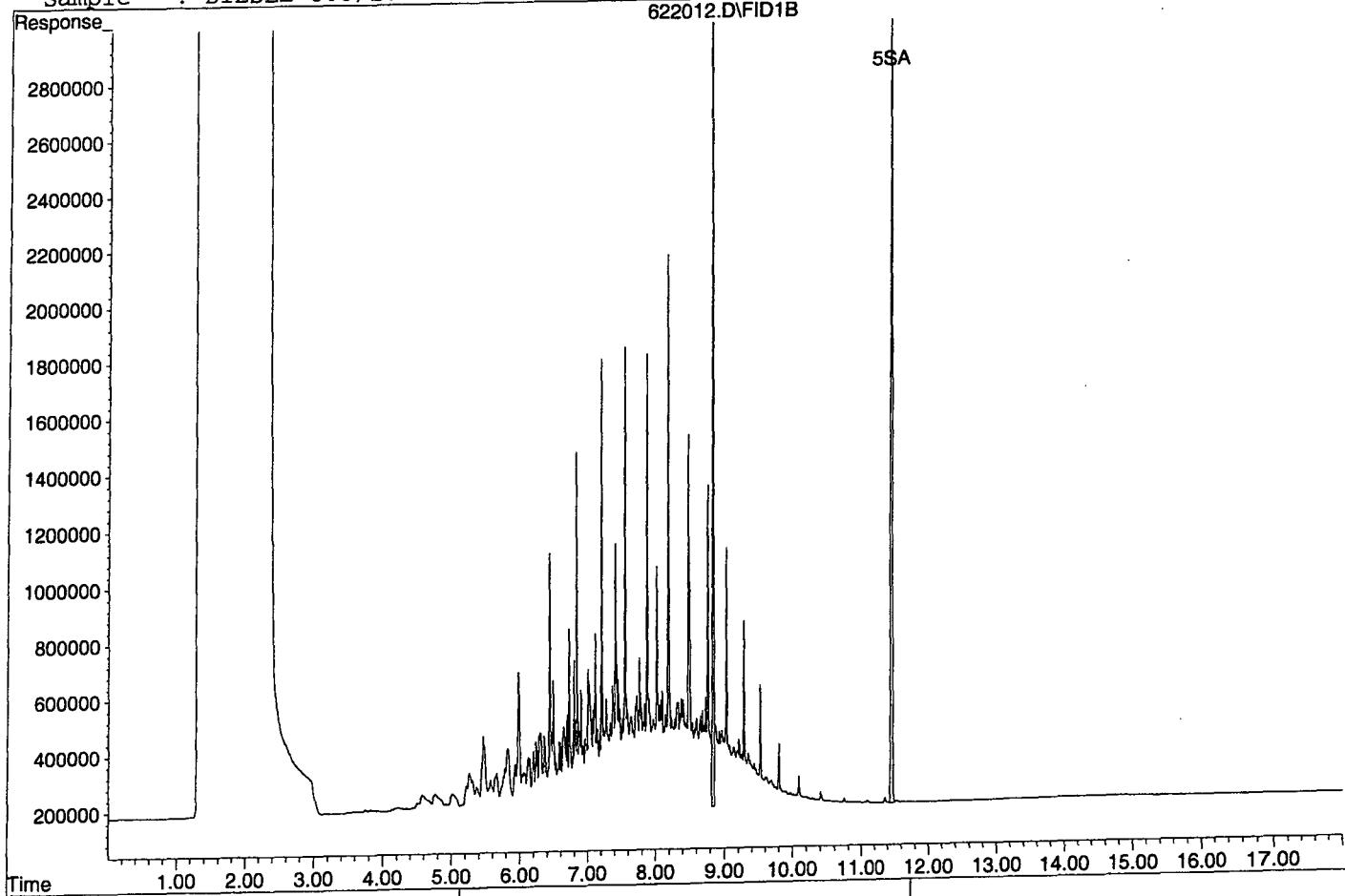
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
3) SA Not Used(S)	8.84	48229746	30.140	ppb
Surrogate Spike 30.000		Recovery	=	100.47%
5) SA Not Used2(S)	11.47	43434321	36.480	ppb
Surrogate Spike 30.000		Recovery	=	121.60%
<hr/>				
Target Compounds				
1) HATM Diesel (C10-C28)	8.60	651220989	595.255	ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622012.D
Sample : DIESEL 600/1000

622012.D\FID1B



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622013.D Vial: 13
Acq On : 6-22-12 21:59:20 Operator: LAC
Sample : DIESEL 800/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

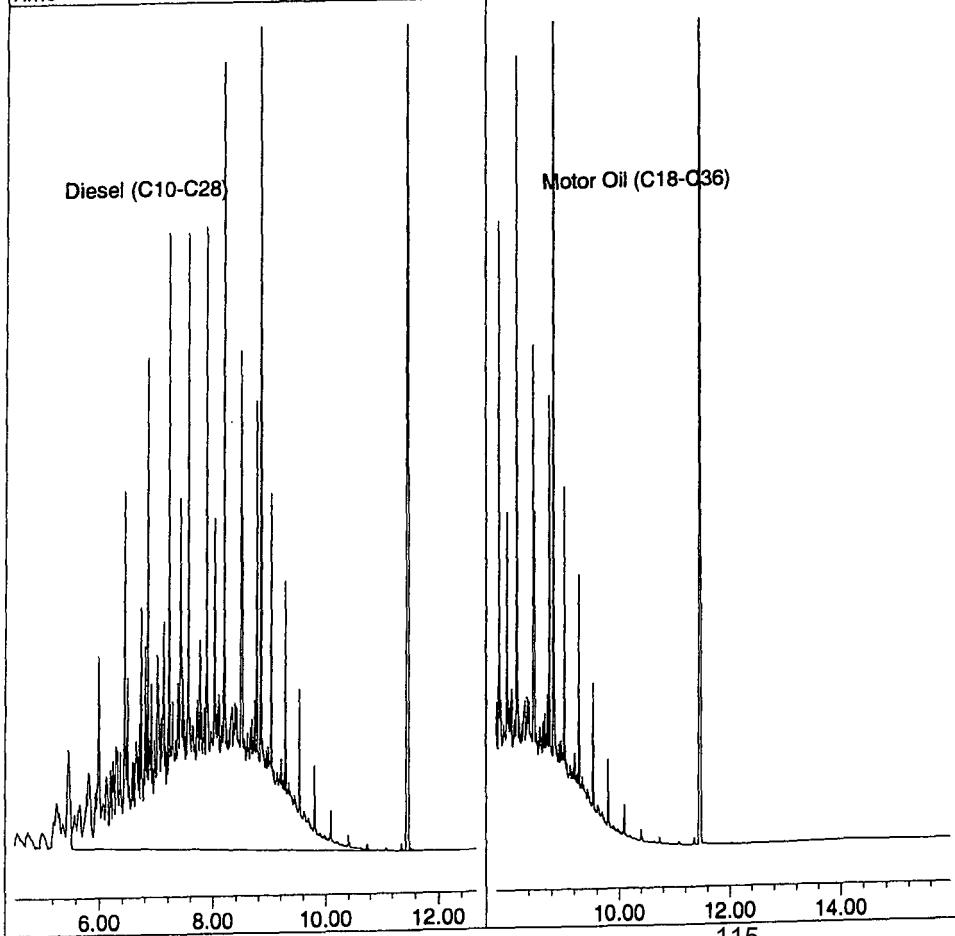
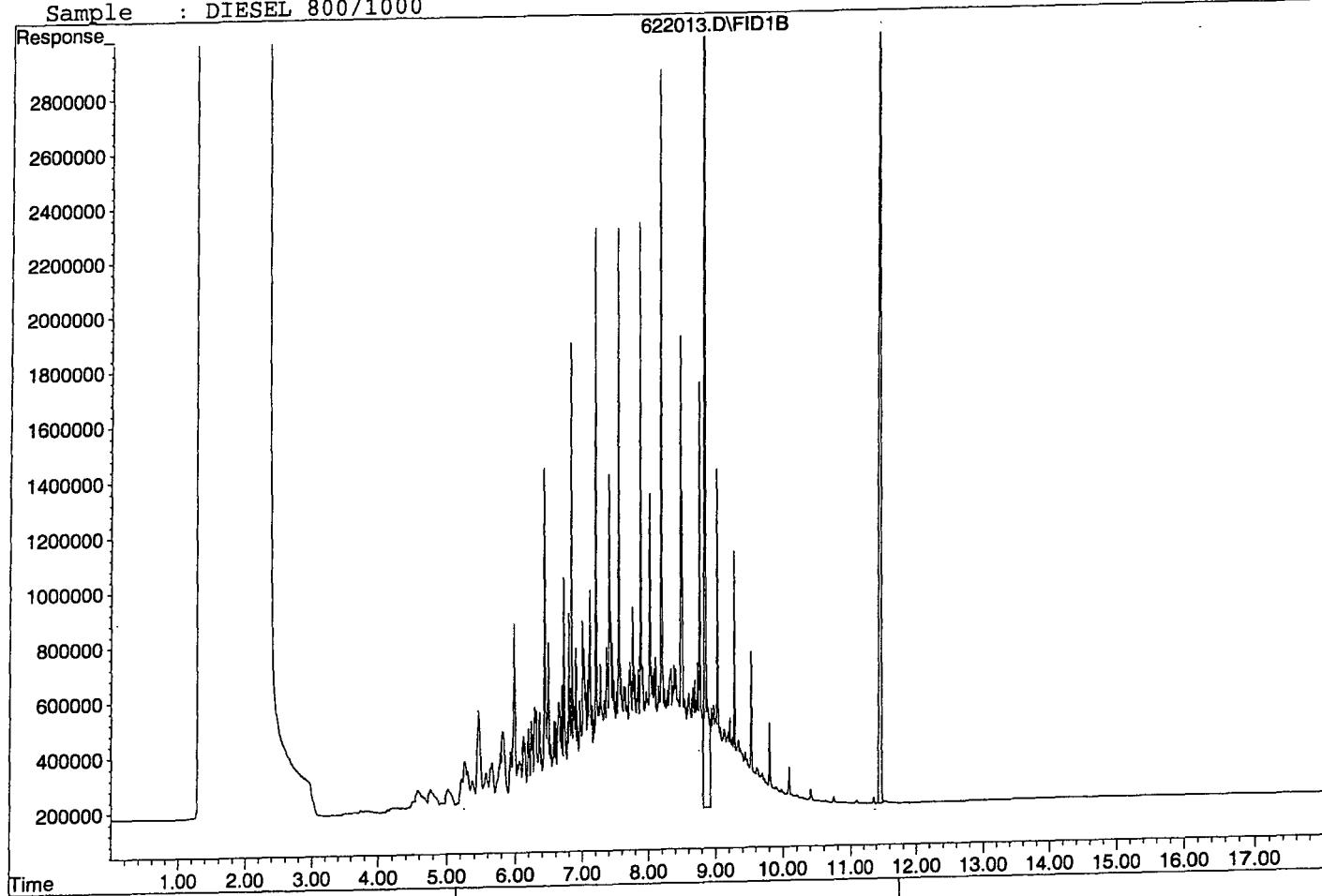
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
3) SA Not Used(S)	8.85	76202842	47.622	ppb
Surrogate Spike 30.000		Recovery	=	158.74%
5) SA Not Used2(S)	11.48	57498014	48.292	ppb
Surrogate Spike 30.000		Recovery	=	160.97%
<hr/>				
Target Compounds				
1) HATM Diesel (C10-C28)	8.60	848074829	775.192	ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622013.D
Sample : DIESEL 800/1000



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622014.D Vial: 14
Acq On : 6-22-12 22:23:21 Operator: LAC
Sample : DIESEL 1000/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

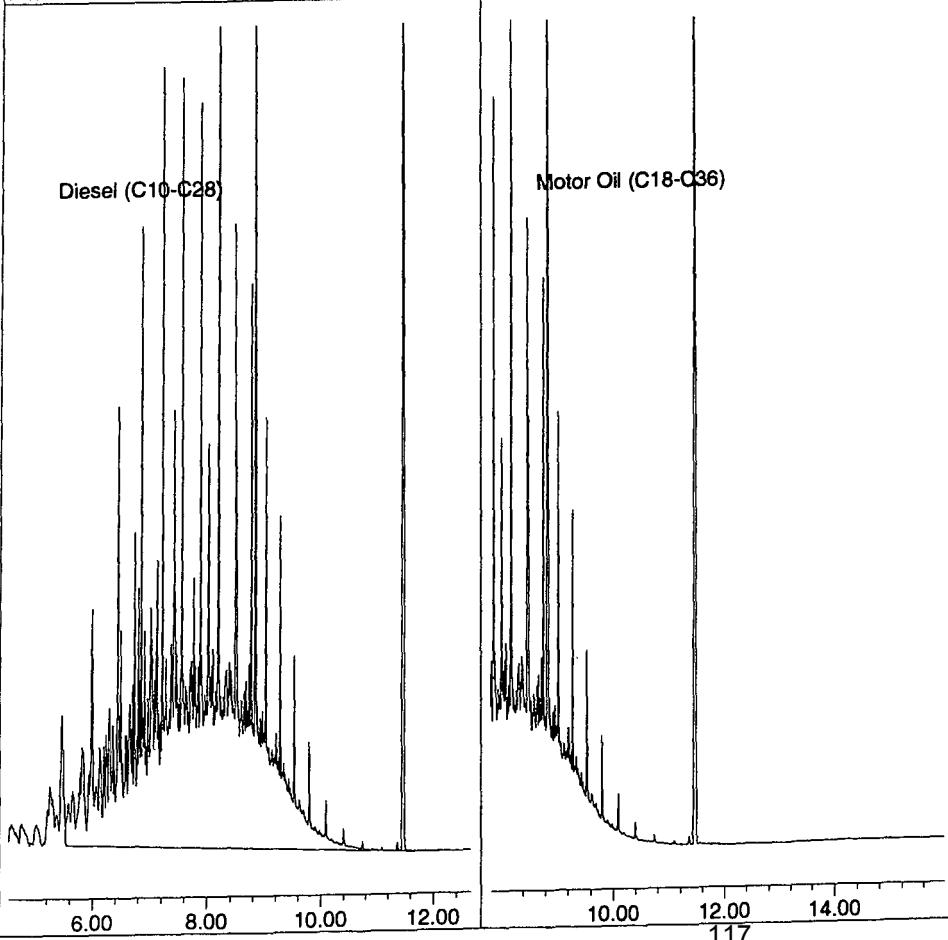
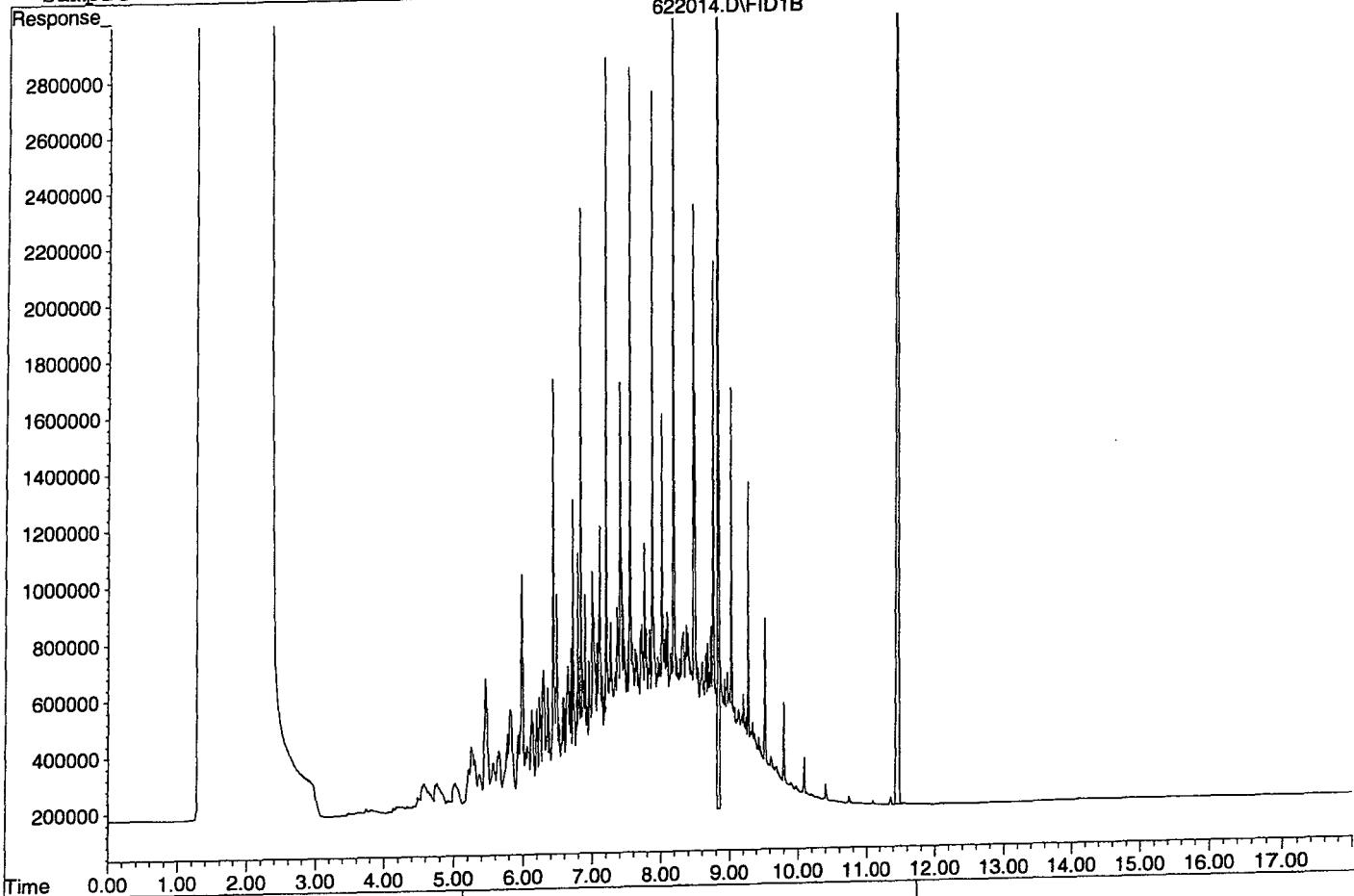
Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
3) SA Not Used(S)	8.85	80954970	50.591 ppb
Surrogate Spike 30.000		Recovery	= 168.64%
5) SA Not Used2(S)	11.48	71709415	60.228 ppb
Surrogate Spike 30.000		Recovery	= 200.76%
<hr/>			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	1080072891	987.252 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622014.D

Sample : DIESEL 1000/1000

622014.D\FID1B



TPH Extractables
TPH622

Form 7
Second Source

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

SDG No: 68268
Date Analyzed: 06/22/12
Instrument: Apollo
Initial Cal. Date: 06/22/12
Data File: 622015.D

	Compound	MEAN	CCRF	%D	%Drift
1	HATM Diesel (C10-C28)	549491	516614	6.0	HATM
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

Average

6.0

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622015.D Vial: 15
Acq On : 6-22-12 22:47:20 Operator: LAC
Sample : DIESEL 2ND SRC 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:28 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
----------	------	----------	------	-------

System Monitoring Compounds

Target Compounds

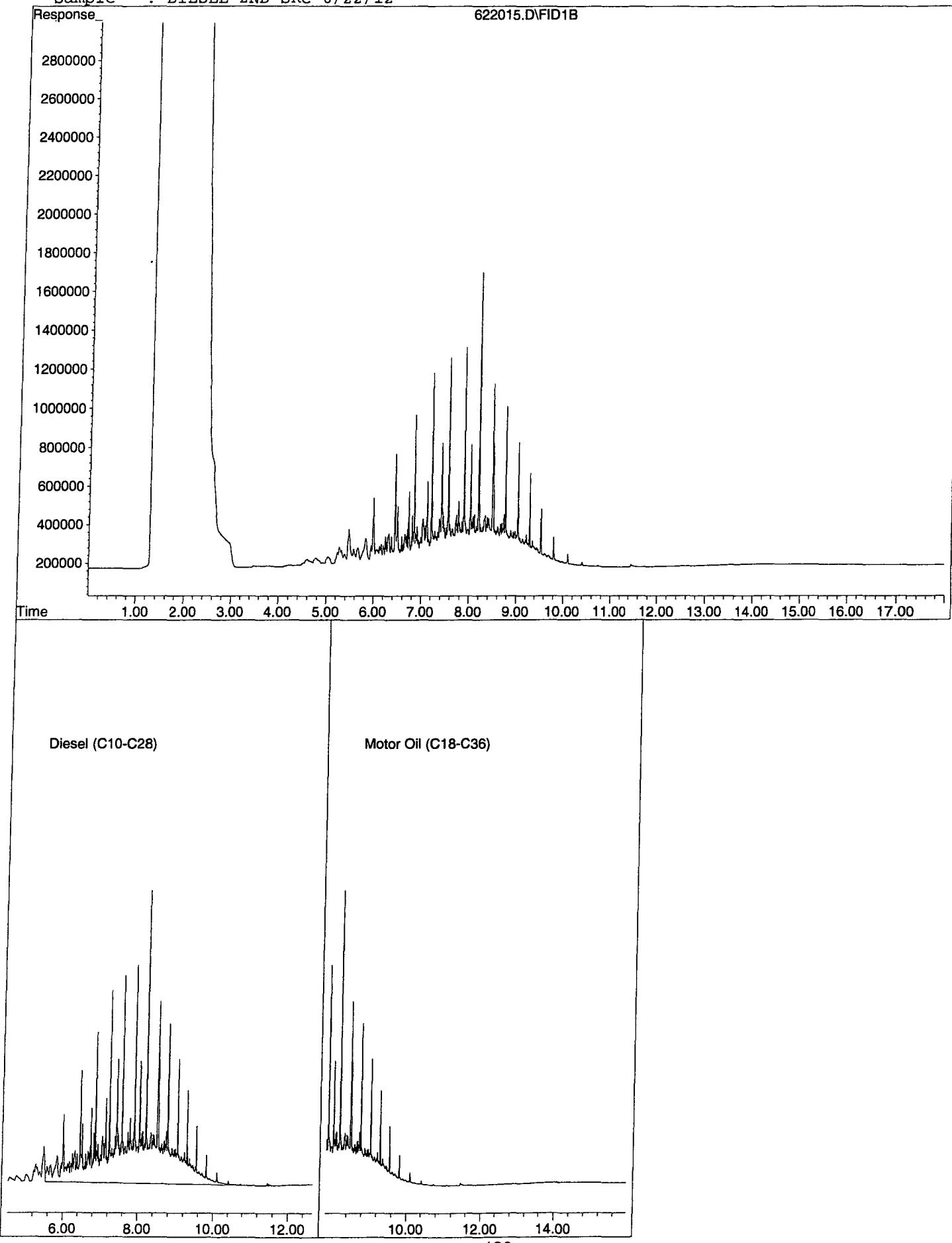
1) HATM Diesel (C10-C28)	8.60	413291584	376.067	ppb
--------------------------	------	-----------	---------	-----

-----119-----

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622015.D

Sample : DIESEL 2ND SRC 6/22/12



TPH Extractables
TPH0719

Form 7
Continuing Calibration

Lab Name: APPL, Inc.

SDG No: 68268

Case No:

Date Analyzed: 07/31/12

Matrix:

Instrument: Apollo

Initial Cal. Date: 07/31/12

Data File: 731032.D, 033.d

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C28)	549491	522051	5.0	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	356513	18	HBTM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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19							
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22							
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24							
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26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Average

11.5

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731032.D Vial: 32
Acq On : 7-31-12 22:20:07 Operator: LAC
Sample : DIESEL 400ppm 7/30/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:35 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

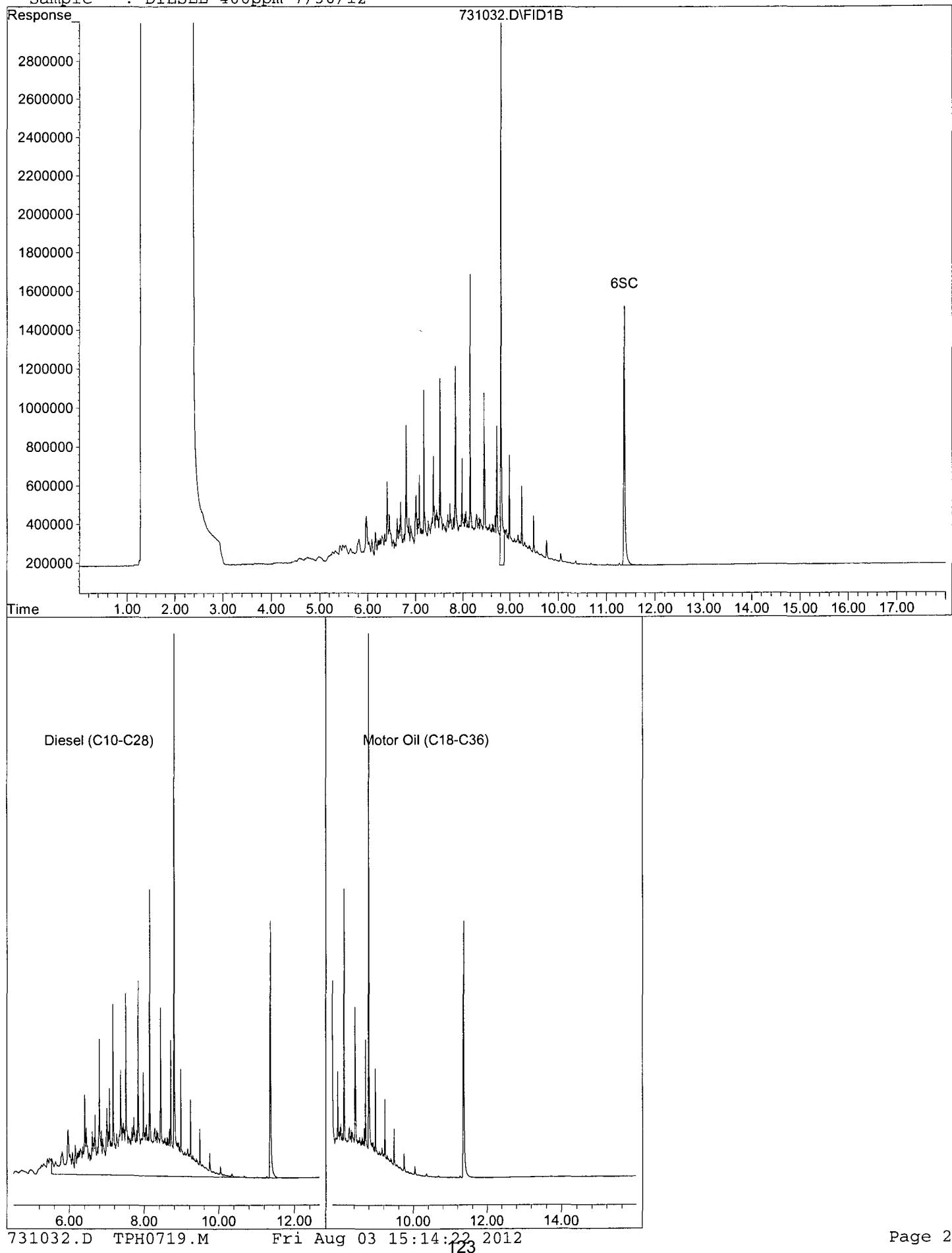
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	36556809	25.940 ppb
Surrogate Spike 30.000		Recovery	= 86.47%
6) SC Octacosane(S)	11.36	23773019	15.773 ppb
Surrogate Spike 30.000		Recovery	= 52.58%
<hr/>			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	417641191	380.025 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731032.D

Sample : DIESEL 400ppm 7/30/12



TPH Extractables
TPH0719

Form 7
Continuing Calibration

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

SDG No: 68268
Date Analyzed: 08/01/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731047.D, 048.d

		Compound	MEAN	CCRF	%D	%Drift
1	HATM	Diesel (C10-C28)	549491	522769	4.9	HATM
2	HBTM	Motor Oil (C18-C36)	432503	396846	8.2	HBTM
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
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31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
Average					6.6	

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731047.D Vial: 47
Acq On : 8-1-12 4:24:28 Operator: LAC
Sample : DIESEL 400ppm 7/31/12 Inst : Apollo
Misc : Water Multipllr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:36 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

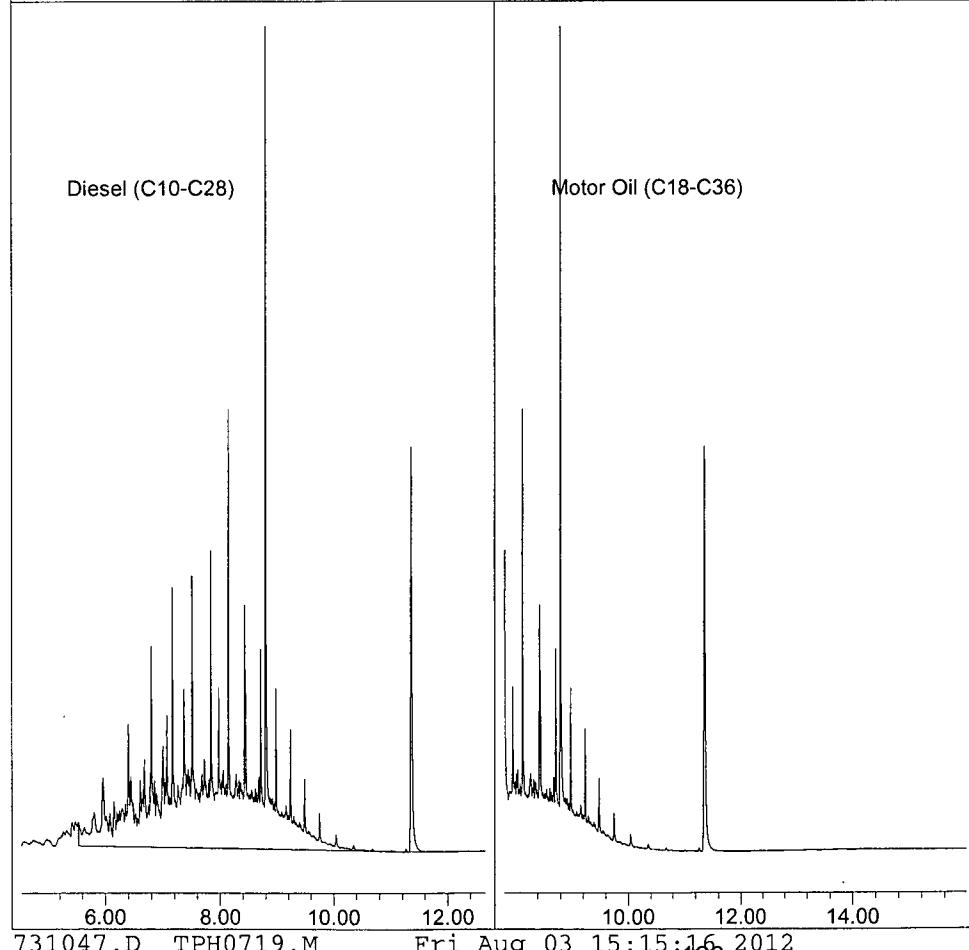
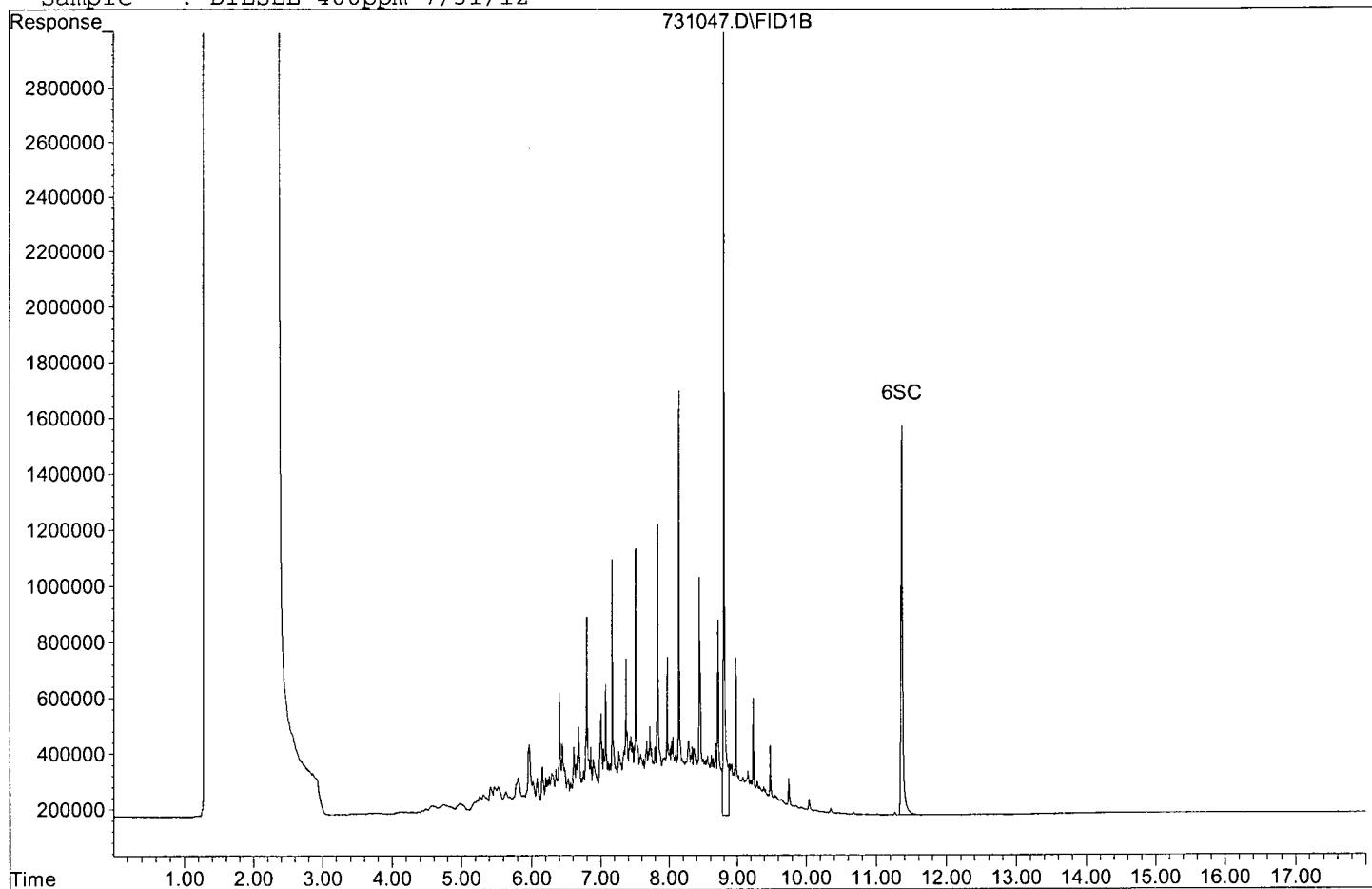
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.80	36659238	26.013	ppb
Surrogate Spike 30.000		Recovery	=	86.71%
6) SC Octacosane(S)	11.36	24520491	16.269	ppb
Surrogate Spike 30.000		Recovery	=	54.23%
<hr/>				
Target Compounds				
1) HATM Diesel (C10-C28)	8.60	418214967	380.547	ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731047.D

Sample : DIESEL 400ppm 7/31/12



EPA 8015B
Total Petroleum Hydrocarbons -
Raw Data

Method Blank
TPH Diesel Water

Blank Name/QCG: **120726W-65167 - 169638**
Batch ID: #TPETD-120726A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
BLANK	SURROGATE: OCTACOSANE (S)	64.4	28-142			%	07/26/12	08/01/12
BLANK	SURROGATE: ORTHO-TERPHEN	78.3	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731039
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 5:56:43 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731039.D Vial: 39
Acq On : 8-1-12 1:11:25 Operator: LAC
Sample : 120726A BLK 5/1000 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

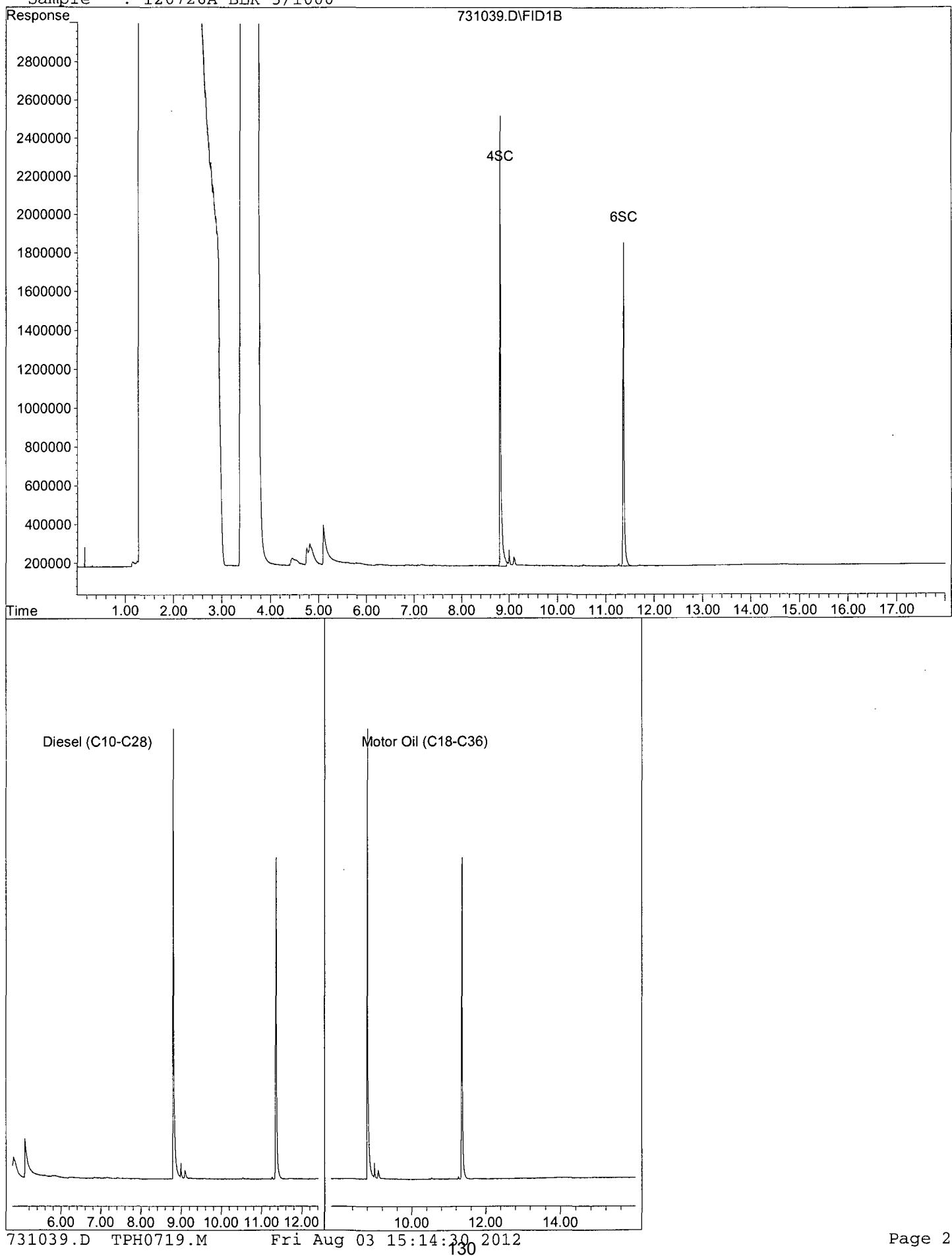
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.80	33091847	111.815	ppb
Surrogate Spike 142.857		Recovery	=	78.27%
6) SC Octacosane(S)	11.36	29130667	92.039	ppb
Surrogate Spike 142.857		Recovery	=	64.43%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731039.D
Sample : 120726A_BLK 5/1000



Laboratory Control Spike Recovery
TPH Diesel Water

APPL ID: 120726W-65167 LCS - 169638

Batch ID: #TPETD-120726A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK %	Recovery
	ug/L	ug/L	Recovery	Limits
DIESEL FUEL	2000	1370	68.5	61-143
SURROGATE: OCTACOSANE (S)	150	89.1	59.4	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	57-132

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TPH0719.M
Extraction Date :	07/26/12
Analysis Date :	08/01/12
Instrument :	Apollo
Run :	731040
Initials :	SD

Printed: 08/02/12 5:56:33 PM

APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731040.D Vial: 40
Acq On : 8-1-12 1:35:46 Operator: LAC
Sample : 120726A LCS-1 5/1000 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

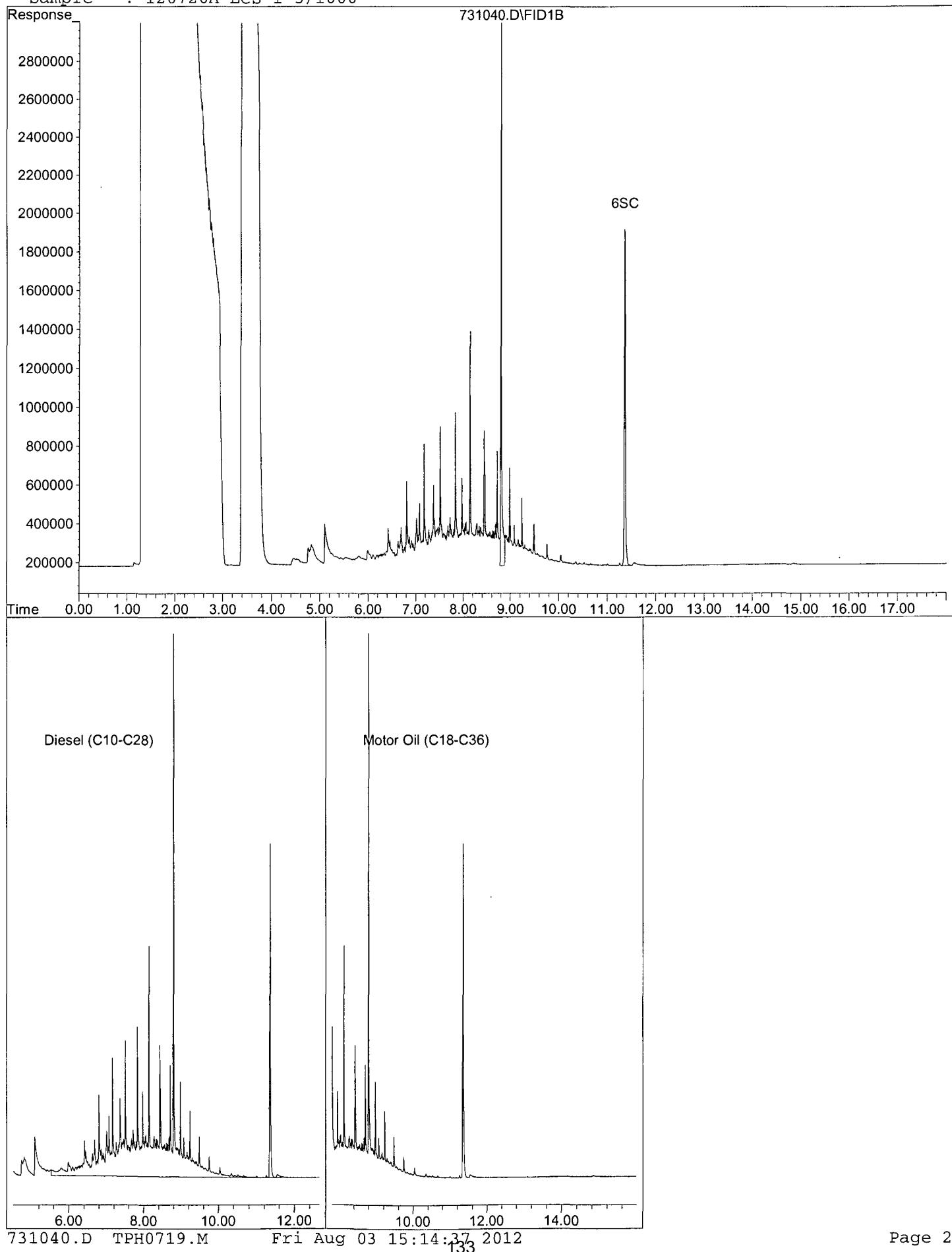
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	39608240	133.833 ppb
Surrogate Spike 142.857		Recovery	= 93.68%
6) SC Octacosane(S)	11.36	28208107	89.124 ppb
Surrogate Spike 142.857		Recovery	= 62.39%
<hr/>			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	315722567	1368.028 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731040.D
Sample : 120726A LCS-1 5/1000



Matrix Spike Recoveries

TPH Diesel Water

APPL ID: 120726W-65167 MS - 169638

APPL Inc.

Batch ID: #TPETD-120726A

908 North Temperance Avenue

Sample ID: AY65167

Clovis, CA 93611

Client ID: ES084

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
DIESEL FUEL	2000	ND	1250	1570	62.5	78.5	61-143	22.7	30
SURROGATE: OCTACOSANE (S)	150	NA	69.4	96.0	46.3	64.0	28-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	NA	105	134	70.0	89.3	57-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	TPH0719.M	TPH0719.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	08/01/12	08/01/12
Instrument :	Apollo	Apollo
Run :	731043	731044
Initials :	SD	

Printed: 08/02/12 5:56:31 PM

APPL MSD SCI

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731043.D Vial: 43
Acq On : 8-1-12 2:48:20 Operator: LAC
Sample : AY65167W14 MS-1 5/1070 Inst : Apollo
Misc : Water Multipllr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

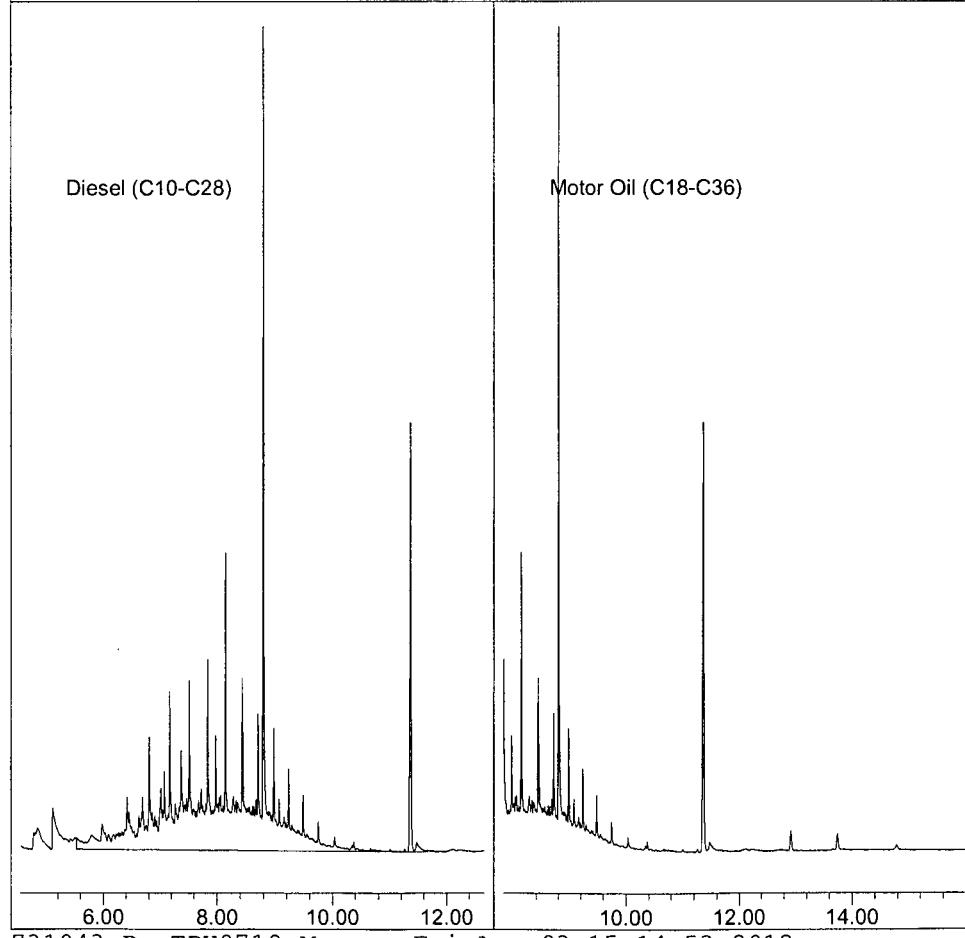
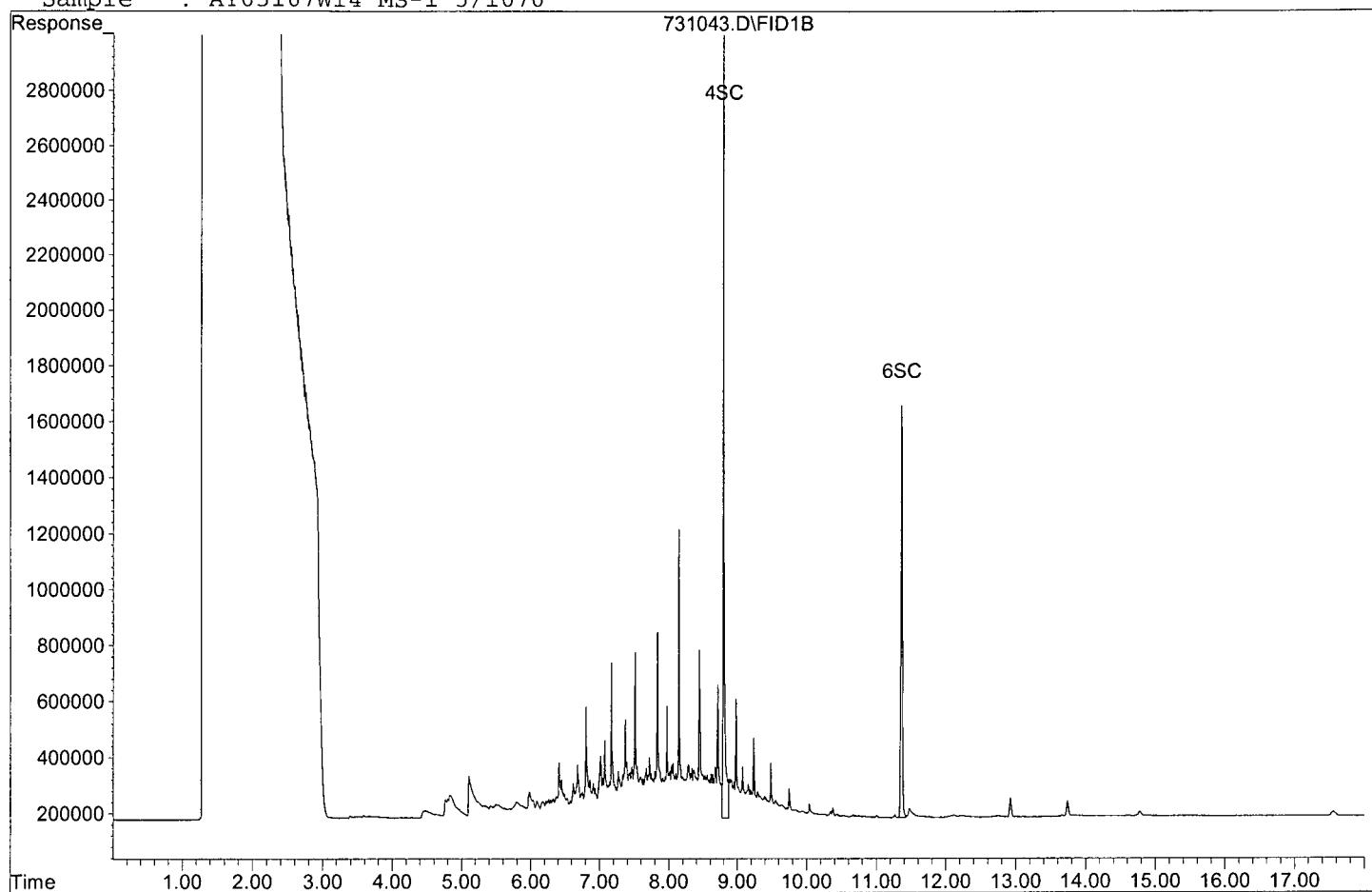
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
4) SC Ortho-Terphenyl(S)	8.80	31129928	105.186	ppb
Surrogate Spike 142.857		Recovery	=	73.63%
6) SC Octacosane(S)	11.36	21975645	69.432	ppb
Surrogate Spike 142.857		Recovery	=	48.60%
<hr/>				
Target Compounds				
1) HATM Diesel (C10-C28)	8.60	289124170	1252.777	ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731043.D
Sample : AY65167W14 MS-1 5/1070



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731044.D Vial: 44
Acq On : 8-1-12 3:12:24 Operator: LAC
Sample : AY65167W12 MSD-1 5/1070 Inst : Apollo
Misc : Water Multipllr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

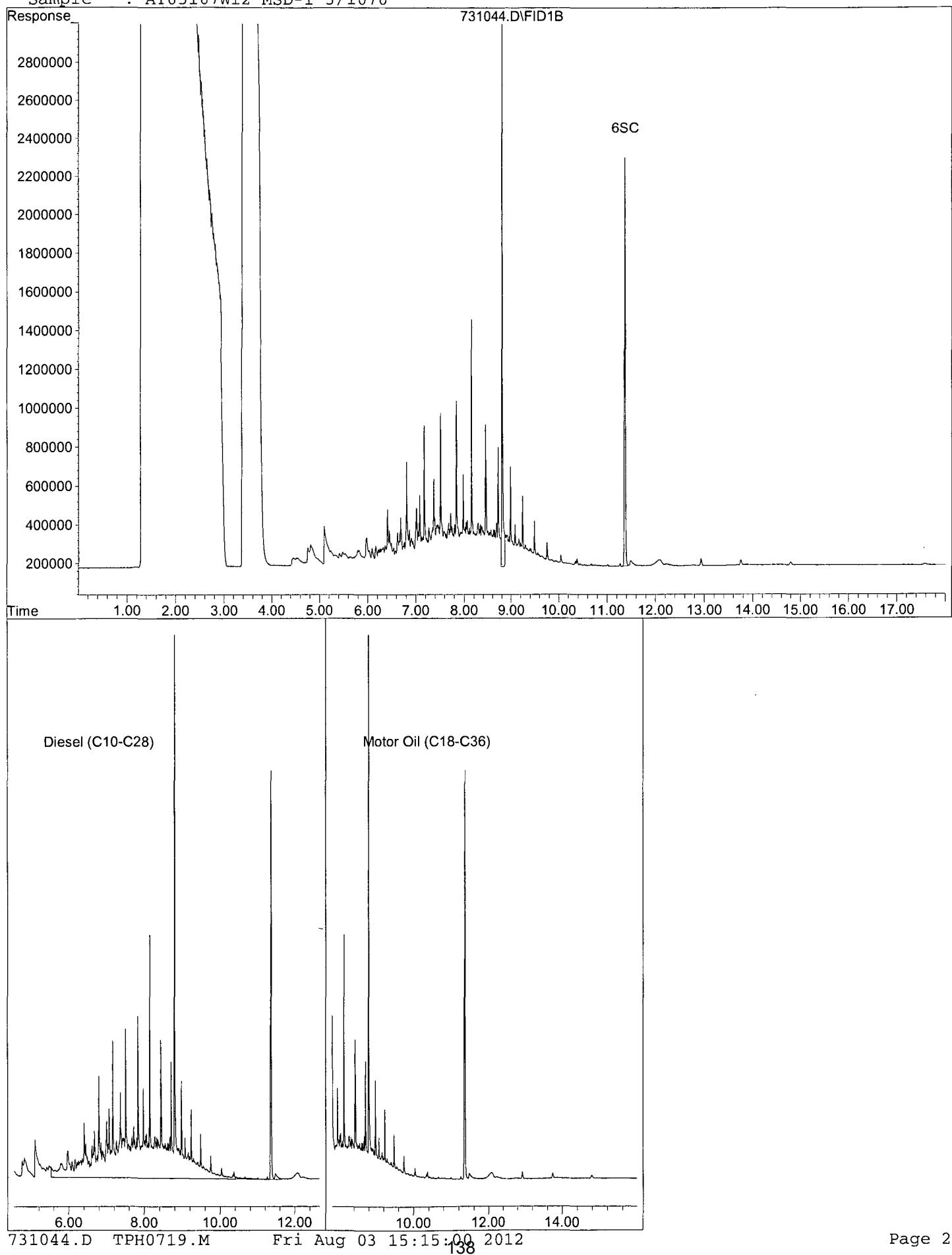
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
<hr/>			
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	39607763	133.832 ppb
Surrogate Spike 142.857		Recovery	= 93.68%
6) SC Octacosane(S)	11.36	30390406	96.019 ppb
Surrogate Spike 142.857		Recovery	= 67.21%
<hr/>			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	361491853	1566.347 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731044.D
Sample : AY65167W12 MSD-1 5/1070



STANDARD	CONC ICMS STANDARD PREP LUG	DATE STANDARD PREP LUG	ALIQUOT VOLUME	FINAL CONC	FINAL VOL	SOLVENT	LOT#	INITIALS
STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL CONC	FINAL VOL	SOLVENT	LOT#	INITIALS
							005	
AR1016	1000 mg/L	02SI	1250 mL	25mL	50 mg/L	Acetone	CM	
AR1260	Aroclor 1016 + 1260 Solution, 1,000 mg/L, 1 ml			1			#022912B	6-21-12
	Lot # 130011-03 Storage 163759 Ambient Expiry 9/14/13 Solv: Hazardous			163759 op. 2-14-12				ex. 9-21-12
	Aroclor 1016 + 1260 Op. 6-21-12 Lot #: 163759 - 29969 ex. 6-21-13 Rec: 11/10/11 MFR exp. 09/14/13 CM 6-21-12			6-21-12 ex. 2-14-13				

OCL Soil Surrogate

DECA	5,000 mg/L	02SI	1mL	250mL	20 mg/L	Acetone	CM	
DBC	Pesticide Surrogate Solution, 5,000 mg/L, 1 ml						#022912B	6-21-12
TCMX	Cat. No: 130070-02 Lot No: 154164							ex. 9-21-12
	Storage: <= Ambient Solvent: Tol.Hex. 1:1 ption For Research Use Only Opened: 6-21-12 ex. 6-21-13							
	Lot #: 154164 - 29418 Rec: 8/26/11 MFR exp. 12/19/12 CM 6-21-12							

DIESEL CAL STD.

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#	CM
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#183767-30909 OP:6/22/12 EXP:6/22/13	1mL		1000ug/mL	MC LOT# 51306	6-22-12
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#183766-30661 OP:3/5/12EXP:3/5/13	4160 μL	50mL	50ug/mL		ex. 12-22-12
		Diesel Fuel #2 Composite 50,000 mg/L, 1 ml					
		011598-03 Lot#: 183767 Storage: -10 Degrees C Expiry: 2/1/16 Solv: Methylene Chloride					
		Diesel Fuel #2 Composite Op. 6-22-12 Lot #: 183767 - 30909 ex. 6-22-13 Rec: 5/30/12 MFR exp. 02/11/16 CM 6-22-12					

STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#167769-29398 OP:6/22/12 EXP:6/22/13	200μL	10mL	1000ug/mL	MC #51306

CM 6-22-12

QMS STANDARD PREP LOG#

006
STANDARD

INITIAL CONC	SOURCE DATE	FINAL ALIQUOT	FINAL VOLUME	SOLVENT	DATE
--------------	-------------	---------------	--------------	---------	------

MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	Motor Oil Composite 50,000 mg/L, 1 mL 116390-02 Storage: Exp. 1/10/15 ≤ -10 Degrees C. Lot #: 183768	1mL	50mL	1000ug/mL	MC LOT# 51306

CM
6-22-12
ex. 6-22-12

Radiant, Inc., Houston, TX
Radiant, Inc., Houston, TX
Solv: Methylene Chloride
Motor oil composite op. 6-22-12
Lot #: 183768 - 30232 CM 6-22-13 CM
Rec: 1/10/12 MFR exp. 01/08/15
CM 6-22-12

THC SURR CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT LOT#
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#183766-30661 OP:6/12/12 EXP:6/12/13	834 μL	10mL	50ug/mL	MC LOT# 51306

CM
6-22-12
ex. 6-22-12

TCH SURROGATE CURVE								
STD	[μg/mL]	LOT #	DATE	EXP. DATE	μL	μL	μL	μL
THC SURR	50		06/22/12	12/22/12	50	100	400	600 800 1000
MC		51306			950	900	600	400 200 NA
					Final VOL.	1000	1000	1,000 1000 1000 1000

CM
6-22-12
ex. 6-22-12

DIESEL CURVE								
STD	[μg/mL]	LOT #	DATE	EXP. DATE	μL	μL	μL	μL
DIESEL	1000		06/22/12	12/22/12	10	100	400	600 800 1000
MC		51306			990	900	600	400 200 NA
					Final VOL.	1000	1000	1,000 1000 1000 1000

ex. 6-22-12

MOTOR OIL CURVE								
STD	[μg/mL]	LOT #	DATE	EXP. DATE	μL	μL	μL	μL
MOTOR OIL	1000		06/22/12	12/22/12	50	100	400	600 800 1000
MC		51306			950	900	600	400 200 NA
					Final VOL.	1000	1000	1,000 1000 1000 1000

DIESEL 2ND SOURCE						
STD	Init. Conc	Source	Aliquot	Final Vol.	Final Conc.	Solvent
DIESEL 2ND SRC	1000μg/ml	O2SI	400μL	1 mL	400 μg/mL	MC
	Prep:	06/22/12				51306
	Exp:	12/22/12				

CM 6-22-12

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALIQUOT	FINAL VOLUME	SOLVENT	DATE?	LOT#	INITIALS
MOTOR OIL STD	2000 ug/mL	O250 07-21-12	250 uL	1 mL	500 ug/mL	NC	CML	
		M.O. STD					# 51306	7-31-12
		Prep. 7-19-12		ex. 1-19-13				ex. 1-19-13
DIESEL STD	1000 ug/mL	Diesel STD prep. 6-22-12	400 uL	1 mL	400 ug/mL	NC	CML	
							# 51306	7-31-12
								ex. 1-19-13

OCL

Second
Source

OCL Second Source					
Compounds	Conc in mix	Conc in stock	Aliquot	Source stock	Final Vol
a-BHC	.10 ug/mL	100 ug/mL	100 250 uL	OCL 2nd Src Stk	10 mL
b-BHC				Prep:	06/23/11
d-BHC				Exp:	06/23/12
g-BHC				Prep:	# 001909B
aldrin				12/12/12	082610B
heptachlor					LH 8/3/12
heptachlor-epoxide isomer B					
a-chlordane					
g-chlordane					
pp-DDD					
pp-DDE					
pp-DDT					
dieleadrin					
endrin					
endrin aldehyde					
endrin ketone					
endosulfan I					
endosulfan II					
endosulfan sulfate					
methoxychlor					

LH

8/1/12

Exp: 12/12/12

OCL

Curve

OCL CALIBRATION CURVE					
Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.
Various	1A: 0.0025 ug/ml	10 ug/ml	2.5 uL	OCL Stock	10 mL
Analytes	1 - 0.005 ug/ml	10 ug/ml	5 uL	prep: 2/13/12	10 mL
	2 - 0.050 ug/ml	10 ug/ml	250 uL	exp: 11/24/12	50 mL
	3 - 0.100 ug/ml	10 ug/ml	500 uL	prep: 7/30/12	50 mL
	4 - 0.150 ug/ml	10 ug/ml	375 uL	7/30/13	25 mL
	5 - 0.200 ug/ml	10 ug/ml	200 uL	LH 8/3/12	10 mL
	6 - 0.250 ug/ml	10 ug/ml	250 uL		10 mL
	1B - 0.001 ug/mL	0.005 ug/mL	1000 uL	Lvl 1	5 mL
				prep: 2/4/12	8/1/12
Solvent:	Hexane	Lot: 040741A	LH 8/3/12	exp: 8/4/12	2/1/13
					LH 8/3/12

LH

8/1/12

Exp: 2/1/13

020
STANDARD

INITIAL CONC	SOURCE DATE	FINAL ALIQUOT VOLUME	FINAL CONC	SOLVENTS	DATE / LOT#	INITIAL
--------------	-------------	----------------------	------------	----------	----------------	---------

AR 1248 CALIBRATION CURVE

AR1248

Prep: 3/26/12
Exp: 9/26/127/18/12
DR

LEVELS ID	initial conc.	final conc. (ug/ml)	Aliquot (uL)	Solvent	Final Vol. Solvent (ml)
LEVEL 10	1ug/ml	0.010	10 μ L		1.0
LEVEL 50		0.050	50 μ L	HEXANE	1.0
LEVEL 100		0.100	100 μ L	EM SCIENCE	1.0
LEVEL 250		0.250	250 μ L	LOT #082612B	1.0
LEVEL 1000		1.000	1000 μ L		1.0

Diesel Spike

DR

Diesel Fuel #2 Composite,
50,000 mg/L, 1 ml

Made in the USA

Lot # 011598-03
183767 Storage Expiry
≤ -10 Degrees C 2/11/16

Solv: Methylene Chloride

Diesel Fuel #2 Composite
Lot #: 183767 - 30901
Rec: 5/30/12 MFR exp. 02/11/16

7/18/12

OP: 7/18/12
EK: 7/18/13

INITIAL SOURCE FINAL FINAL SOLVENTS DATE /
CONC DATE ALIQUOT VOLUME CONC LOTS INITIALS

015

STANDARD

DATE /
INITIALS

CMY	O-Terphenyl	600 mg/L	02SE	NA	25mL	600 mg/mL	NA	CMY
7-6-12	Octacosane		CAT: 110346-05					7-9-12
7-7-12			LOT: 188683-30664 thru 668					ex. 7-8-12
			Op. 7-9-12					
			Ex. 7-9-13					

CMY

7-6-12

MSE002 Surrogate

ex. 7-28-12	13-DBP	100 µg/mL	1,3 DBP STK	35 µL	10 mL	Method	CMY
			pre. 5-14-12			0.35 µg/mL	7-9-12
			ex. 5-17-13				ex. 10-9-12

OP FAMPHUR CURVE												
PREP:	07/09/12	EXP:	07/28/12			1A	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL						
VWR	OP/FAMPHUR S	5		07/09/12	07/28/12	2	10	50	200	500	700	1000
	Hexane		0826108			998	990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000	1000
OP 2ND SRC		[µg/mL]										
PREP:	07/09/12	5		DATE	EXP. DATE	500						
EXP:	09/23/12	Hexane Lo	0826108	05/11/12	09/23/12	1000						

CMY

7-9-12

ex. 7-28-12

OPC CURVE												
PREP DATE:	07/09/12					1	2	3	4	5	6	
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
OPC STD	5			06/19/12	10/06/12	10	50	200	500	700	1000	
Hexane		0826108				990	950	800	500	300	NA	
					Final VOL.	1000	1000	1000	1000	1000	1000	

CMY

7-9-12

ex. 10-6-12

CMY 7-9-12

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120726A	Extraction Method	SEP011	Units	mL
Spiked ID 1	Diesel Ampule 183767-30901		Surrogate ID 1	THC Surrogate 183766-30665			
Spiked ID 2	Motor Oil Ampule 183768-30234		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:	07/26/12 15:45			
Spiked ID 8			Ext. End Time:	07/27/12 10:36			
			GC Requires Extract By:	08/03/12 0:00			
			pH1				Water Bath Temp Criteria 78,76,80 °
			pH2				
			pH3				

Spiked By: DL

Date 07/26/12

Witnessed By: JM

Date 07/26/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1 120726A Blk				0.250	1	1000	5	7	07/26/12 15:45	
					equip	E-WB7,78				
2 120726A LCS-1		0.040	1	0.250	1	1000	5	7	07/26/12 15:45	
					equip	E-WB7,78				
3 120726A LCS-2		0.040	2	0.250	1	1000	5	7	07/26/12 15:45	
					equip	E-WB7,78				
4 AY65166	AY65166W04			0.250	1	1040	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
5 AY65167 MS-1	AY65167W14	0.040	1	0.250	1	1070	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
6 AY65167 MSD-1	AY65167W12	0.040	1	0.250	1	1070	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
7 AY65167	AY65167W11			0.250	1	1050	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
8 AY65211	AY65211W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
9 AY65212	AY65212W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
10 AY65213	AY65213W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
1 AY65214	AY65214W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
2 AY65215	AY65215W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
3 AY65216	AY65216W05			0.250	1	1070	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				

vent and Lot#	EMD52104
SO4	2351C512

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	LH
Date	7/30/12
Time	1200
Refrigerator	Hobart

Scanned By	JM
Sample Preparation	JM
Extraction	JM/GH
Concentration	IC
Modified	07/27/12 10:47:48 AM

Reviewed By: DRA

Date 07/27/12

Ext_ID 144
37076

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120726A	Extraction Method	SEP011	Units	mL
Spiked ID 1	Diesel Ampule 183767-30901		Surrogate ID 1	THC Surrogate 183766-30665			
Spiked ID 2	Motor Oil Ampule 183768-30234		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:	07/26/12 15:45			
Spiked ID 8			Ext. End Time:	07/27/12 10:36			
			GC Requires Extract By:	08/03/12 0:00			
		pH1				Water Bath Temp Criteria	78,76,80 °
		pH2					
		pH3					

Spiked By: DL

Date 07/26/12

Witnessed By: JM

Date 07/26/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
14AY65217	AY65217W04			0.250	1 equip E-WB5,76	1050	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
15AY65218	AY65218W04			0.250	1 equip E-WB6,80	1070	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
16AY65220	AY65220W07			0.250	1 equip E-WB6,80	1040	5	7	07/26/12 15:45	68284-2 WEEK RUSH -- Amber Liter
17AY65277	AY65277W03			0.250	1 equip E-WB6,80	1070	5	7	07/26/12 15:45	68296-2 WEEK RUSH -- Amber Liter
18AY65278	AY65278W03			0.250	1 equip E-WB6,80	1070	5	7	07/26/12 15:45	68296-2 WEEK RUSH -- Amber Liter
19AY65395	AY65395W01			0.250	1 equip E-WB5,76	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
20AY65399	AY65399W01			0.250	1 equip E-WB5,76	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
21AY65402	AY65402W01			0.250	1 equip E-WB5,76	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
22AY65416	AY65416W01			0.250	1 equip E-WB5,76	1070	5	7	07/26/12 15:45	68300 -- Amber Liter

DRA 7/27/12

Solvent and Lot#	
IC	EMD52104
a2SO4	2351CS12

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	
Date	
Time	
Refrigerator	

Scanned By	JM
Sample Preparation	JM
Extraction	JM/GH
Concentration	IC
Modified	07/27/12 10:47:48 AM

Reviewed By: DRA Date 07/27/12

Ext_ID 145076

Injection Log

Directory: G:\APOLLO\DATA\120622\

Line	Vial	FileName	Multiplier	SampleName,	Misc Info	Injected
1	4	622004.D	1	TCH SURROGATE 100/1000	Mix(c)	6-22-12 18:22:29
2	5	622005.D	1	TCH SURROGATE 400/1000	Mix(c)	6-22-12 18:46:55
3	6	622006.D	1	TCH SURROGATE 600/1000	Mix(c)	6-22-12 19:10:46
4	7	622007.D	1	TCH SURROGATE 800/1000	Mix(c)	6-22-12 19:34:47
5	8	622008.D	1	TCH SURROGATE 1000/1000	Mix(c)	6-22-12 19:58:49
6	9	622009.D	1	DIESEL 10/1000 6/22/12	Mix(A)	6-22-12 20:22:56
7	10	622010.D	1	DIESEL 100/1000	Mix(A)	6-22-12 20:47:06
8	11	622011.D	1	DIESEL 400/1000	Mix(A)	6-22-12 21:11:13
9	12	622012.D	1	DIESEL 600/1000	Mix(A)	6-22-12 21:35:18
10	13	622013.D	1	DIESEL 800/1000	Mix(A)	6-22-12 21:59:20
11	14	622014.D	1	DIESEL 1000/1000	Mix(A)	6-22-12 22:23:21
12	15	622015.D	1	DIESEL 2ND SRC 6/22/12	Mix(A)	6-22-12 22:47:20
13	32	731032.D	1	DIESEL 400ppm 7/30/12	Mix(A)	7-31-12 22:20:07
14	39	731039.D	4.7619	120726A BLK 5/1000	Water	8-1-12 1:11:25
15	40	731040.D	4.7619	120726A LCS-1 5/1000	Water	8-1-12 1:35:46
16	42	731042.D	4.7619	AY65166W04 5/1040	Water	8-1-12 2:24:08
17	43	731043.D	4.7619	AY65167W14 MS-1 5/1070	Water	8-1-12 2:48:20
18	44	731044.D	4.7619	AY65167W12 MSD-1 5/1070	Water	8-1-12 3:12:24
19	45	731045.D	4.7619	AY65167W11 5/1050	Water	8-1-12 3:36:31
20	47	731047.D	1	DIESEL 400ppm 7/31/12	Water	8-1-12 4:24:28

EPA METHOD 8260B
Volatile Organic Compounds



**EPA METHOD 8260B
Volatile Organic Compounds
QC Summary**

APPL, INC.

Method Blank
EPA 8260B VOCs + Gas Water

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:45 AM
GC SC-Blank-REG MDLs

Method Blank
EPA 8260B VOCs + Gas Water

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/26/12	07/26/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/26/12	07/26/12
BLANK	SURROGATE: DIBROMOFLUOR	102	85-115			%	07/26/12	07/26/12
BLANK	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:45 AM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68268

Case No: 68268

Date Analyzed: 07/26/12

Matrix: WATER

Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726AT-LCS	Lab Control Spike	70-120	102		75-120	104	
120726AT-BLK	Blank	70-120	102		75-120	101	
AY65168	ES086 TRIP BLANK	70-120	101		75-120	98.6	
AY65166	ES083	70-120	104		75-120	102	
AY65167	ES084	70-120	101		75-120	98.9	
AY65167-MS	Matrix Spike	70-120	99.0		75-120	102	
AY65167-MSD	Matrix SpikeD	70-120	102		75-120	106	

Comments: Batch: #86RHB-120726AT

Printed: 07/27/12 2:32:09 PM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68268

Case No: 68268

Date Analyzed: 07/26/12

Matrix: WATER

Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726AT-LCS	Lab Control Spike	85-115	102		85-120	99.6	
120726AT-BLK	Blank	85-115	102		85-120	101	
AY65168	ES086 TRIP BLANK	85-115	101		85-120	99.7	
AY65166	ES083	85-115	103		85-120	102	
AY65167	ES084	85-115	90.9		85-120	99.6	
AY65167-MS	Matrix Spike	85-115	91.9		85-120	98.0	
AY65167-MSD	Matrix SpikeD	85-115	94.7		85-120	102	

Comments: Batch: #86RHB-120726AT

Printed: 07/27/12 2:32:09 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: 120726W-65167 LCS - 169444

APPL Inc.

Batch ID: #86RHB-120726AT

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.3	103	80-130
1,1,1-TRICHLOROETHANE	10.00	9.87	98.7	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.84	98.4	65-130
1,1,2-TRICHLOROETHANE	10.00	9.86	98.6	75-125
1,1-DICHLOROETHANE	10.00	10.4	104	70-135
1,1-DICHLOROETHENE	10.00	9.96	99.6	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	10.4	104	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.8	108	50-130
1,2-DIBROMOETHANE	10.00	9.82	98.2	70-130
1,2-DICHLOROBENZENE	10.00	9.95	99.5	70-120
1,2-DICHLOROETHANE	10.00	9.83	98.3	70-130
1,2-DICHLOROPROPANE	10.00	10.0	100	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	20.3	102	70-130
1,4-DICHLOROBENZENE	10.00	9.71	97.1	75-125
2-BUTANONE	10.00	9.66	96.6	30-150
4-METHYL-2-PENTANONE	10.00	9.27	92.7	60-135
ACETONE	10.00	10.9	109	40-140
BENZENE	10.00	9.55	95.5	80-120
BROMODICHLOROMETHANE	10.00	10.1	101	75-120
BROMOFORM	10.00	10.2	102	70-130
BROMOMETHANE	10.00	9.13	91.3	30-145
CARBON TETRACHLORIDE	10.00	10.3	103	65-140
CHLOROBENZENE	10.00	10.1	101	80-120
CHLORODIBROMOMETHANE	10.00	10.2	102	60-135
CHLOROETHANE	10.00	9.65	96.5	60-135
CHLOROFORM	10.00	9.96	99.6	65-135
CHLOROMETHANE	10.00	8.45	84.5	40-125
CIS-1,2-DICHLOROETHENE	10.00	10.3	103	70-125
ETHYLBENZENE	10.00	10.3	103	75-125

Comments: _____

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 9:57:35 AM
 APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: 120726W-65167 LCS - 169444

APPL Inc.

Batch ID: #86RHB-120726AT

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery
	ug/L	ug/L		Limits
GASOLINE	300	285	95.0	75-125
HEXACHLOROBUTADIENE	10.00	10.4	104	50-140
METHYL TERT-BUTYL ETHER	10.00	9.83	98.3	65-125
METHYLENE CHLORIDE	10.00	9.48	94.8	55-140
STYRENE	10.00	10.6	106	65-135
TETRACHLOROETHENE	10.00	10.3	103	45-150
TOLUENE	10.00	10.2	102	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.17	91.7	60-140
TRICHLOROETHENE	10.00	9.73	97.3	70-125
VINYL CHLORIDE	10.00	9.58	95.8	50-145
XYLEMES (TOTAL)	30.0	31.5	105	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	34.2	102	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.7	104	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	32.5	102	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	37.2	99.6	85-120

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 9:57:35 AM
 APPL Standard LCS

Matrix Spike Recoveries
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**

Batch ID: #86RHB-120726AT

Sample ID: AY65167

Client ID: ES084

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK %	DUP %	Recovery	RPD	RPD
	ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Limits	%	Limits
1,1,1,2-TETRACHLOROETHANE	10.00	ND	8.86	8.94	88.6	89.4	80-130	0.90	30
1,1,1-TRICHLOROETHANE	10.00	ND	9.23	9.27	92.3	92.7	65-130	0.43	30
1,1,2,2-TETRACHLOROETHANE	10.00	ND	0.166	0.187	1.7 #	1.9 #	65-130	11.9	30
1,1,2-TRICHLOROETHANE	10.00	ND	8.01	7.73	80.1	77.3	75-125	3.6	30
1,1-DICHLOROETHANE	10.00	ND	9.08	9.10	90.8	91.0	70-135	0.22	30
1,1-DICHLOROETHENE	10.00	ND	10.2	10.9	102	109	70-130	6.6	30
1,2,3-TRICHLOROPROPANE	10.00	ND	9.19	9.10	91.9	91.0	75-125	0.98	30
1,2,4-TRICHLOROBENZENE	10.00	ND	8.39	8.99	83.9	89.9	65-135	6.9	30
1,2-DIBROMO-3-CHLOROPROPANE	10.00	ND	8.85	8.68	88.5	86.8	50-130	1.9	30
1,2-DIBROMOETHANE	10.00	ND	8.76	8.86	87.6	88.6	70-130	1.1	30
1,2-DICHLOROBENZENE	10.00	ND	8.93	8.73	89.3	87.3	70-120	2.3	30
1,2-DICHLOROETHANE	10.00	ND	9.08	8.87	90.8	88.7	70-130	2.3	30
1,2-DICHLOROPROPANE	10.00	ND	8.93	8.87	89.3	88.7	75-125	0.67	30
1,3-DICHLOROBENZENE	10.00	ND	9.16	9.08	91.6	90.8	75-125	0.88	30
1,3-DICHLOROPROPENE, TOTAL	20.0	ND	17.0	17.5	85.0	87.5	70-130	2.9	30
1,4-DICHLOROBENZENE	10.00	ND	8.83	8.79	88.3	87.9	75-125	0.45	30
2-BUTANONE	10.00	1.0	10.4	9.60	94.0	86.0	30-150	8.0	30
4-METHYL-2-PENTANONE	10.00	ND	9.17	8.73	91.7	87.3	60-135	4.9	30
ACETONE	10.00	2.3	13.0	12.4	107	101	40-140	4.7	30
BENZENE	10.00	1.3	9.60	9.78	83.0	84.8	80-120	1.9	30
BROMODICHLOROMETHANE	10.00	ND	8.67	8.77	86.7	87.7	75-120	1.1	30
BROMOFORM	10.00	ND	8.94	9.04	89.4	90.4	70-130	1.1	30
BROMOMETHANE	10.00	ND	7.72	7.73	77.2	77.3	30-145	0.13	30
CARBON TETRACHLORIDE	10.00	ND	9.21	9.49	92.1	94.9	65-140	3.0	30
CHLOROBENZENE	10.00	ND	8.74	9.06	87.4	90.6	80-120	3.6	30
CHLORODIBROMOMETHANE	10.00	ND	8.76	8.74	87.6	87.4	60-135	0.23	30
CHLOROETHANE	10.00	ND	7.80	7.99	78.0	79.9	60-135	2.4	30
CHLOROFORM	10.00	ND	9.01	8.83	90.1	88.3	65-135	2.0	30
CHLOROMETHANE	10.00	ND	6.87	7.14	68.7	71.4	40-125	3.9	30
CIS-1,2-DICHLOROETHENE	10.00	ND	9.00	8.94	90.0	89.4	70-125	0.67	30

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Printed: 07/31/12 9:57:19 AM
 APPL MSD SCII

Matrix Spike Recoveries
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**

APPL Inc.

Batch ID: #86RHB-120726AT

908 North Temperance Avenue

Sample ID: AY65167

Clovis, CA 93611

Client ID: ES084

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK %	DUP %	Recovery	RPD	RPD
	ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Limits	%	Limits
ETHYLBENZENE	10.00	ND	8.96	8.99	89.6	89.9	75-125	0.33	30
GASOLINE	300	ND	218	232	72.7 #	77.3	75-125	6.2	30
HEXACHLOROBUTADIENE	10.00	ND	8.83	8.95	88.3	89.5	50-140	1.3	30
METHYL TERT-BUTYL ETHER	10.00	ND	8.73	8.72	87.3	87.2	65-125	0.11	30
METHYLENE CHLORIDE	10.00	ND	16.9	16.6	169 #	166 #	55-140	1.8	30
STYRENE	10.00	ND	9.10	9.30	91.0	93.0	65-135	2.2	30
TETRACHLOROETHENE	10.00	ND	8.89	9.25	88.9	92.5	45-150	4.0	30
TOLUENE	10.00	ND	9.09	9.15	90.9	91.5	75-120	0.66	30
TRANS-1,2-DICHLOROETHENE	10.00	ND	8.18	8.46	81.8	84.6	60-140	3.4	30
TRICHLOROETHENE	10.00	ND	19.9	20.4	199 #	204 #	70-125	2.5	30
VINYL CHLORIDE	10.00	ND	8.27	8.25	82.7	82.5	50-145	0.24	30
XYLENES (TOTAL)	30.0	ND	27.1	28.0	90.3	93.3	80-120	3.3	30
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	NA	33.3	34.2	99.0	102	70-120		
SURROGATE: 4-BROMOFLUOROBENZE	29.5	NA	30.0	31.2	102	106	75-120		
SURROGATE: DIBROMOFLUOROMETH	31.9	NA	29.3	30.2	91.9	94.7	85-115		
SURROGATE: TOLUENE-D8 (S)	37.3	NA	36.6	38.0	98.0	102	85-120		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Printed: 07/31/12 9:57:19 AM

APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 68268
Matrix: WATER
Blank ID: 120726AT-BLK

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Time Analyzed: 1400

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120726AT-LCS	Lab Control Spike	0726T05	07/26/12 1113
120726AT-BLK	Blank	0726T11	07/26/12 1400
AY65168	ES086 TRIP BLANK	0726T12	07/26/12 1427
AY65166	ES083	0726T18	07/26/12 1714
AY65167	ES084	0726T20	07/26/12 1809
120726AT-MS	Matrix Spike	0726T21	07/26/12 1837
120726AT-MSD	Matrix SpikeD	0726T22	07/26/12 1904

Comments: Batch: #86RHB-120726AT

Form 5
Tune Summary

Lab Name: APPL Inc.
 Case No: 0726T01.D
 Matrix: Water
 ID: 5-ng BFB Std 07-16-12B

SDG No: 68268
 Date Analyzed: 07/26/12
 Instrument: Thor
 Time Analyzed: 9:22

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	10ug/L Vol Std 07-26	0726T04.D	07/26/12 10:46
2	Lab Control Spike	0726T05.D	07/26/12 11:13
3	Blank	0726T11.D	07/26/12 14:00
4	ES086 TRIP BLANK	0726T12.D	07/26/12 14:27
5	ES083	0726T18.D	07/26/12 17:14
6	ES084	0726T20.D	07/26/12 18:09
7	AY65167W234 MS-1WT	0726T21.D	07/26/12 18:37
8	AY65167W234 MSD-1WT	0726T22.D	07/26/12 19:04
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e

50	14.9 - 40% of mass 95	17.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.4
174	50 - 100.49% of mass 95	97.3
175	5 - 9% of mass 174	7.9
176	95 - 101.49% of mass 174	97.8
177	5 - 9% of mass 176	6.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0726T01.D
Matrix: Water
ID: 5-ng BFB Std 07-16-12B

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Time Analyzed: 9:22

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	CCV gas 300ug/L	0726T06.D	07/26/12 11:41
2	Lab Control Spike	0726T07.D	07/26/12 12:09
3	Blank	0726T11.D	07/26/12 14:00
4	ES086 TRIP BLANK	0726T12.D	07/26/12 14:27
5	ES083	0726T18.D	07/26/12 17:14
6	ES084	0726T20.D	07/26/12 18:09
7	AY65167W456 MS-1SS G	0726T23.D	07/26/12 19:32
8	AY65167W456 MSD-1WT	0726T24.D	07/26/12 20:00
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e		
50	15 - 40% of mass 95	17.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.4
174	50 - 100% of mass 95	97.3
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	97.8
177	5 - 9% of mass 176	6.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review
 Lab Code: SDG No.: 68268
 Lab File ID (Standard): 0719T10.D Date Analyzed: 07/19/12
 Instrument ID: Thor Time Analyzed: 13:20
 GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)	Chlorobenzene-D5 (IS)	1,4-Dichlorobenzene-D (IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	461760	6.74	382656	9.88	222464	12.20
	UPPER LIMIT	923520	7.24	765312	10.38	444928	12.70
	LOWER LIMIT	230880	6.24	191328	9.38	111232	11.70
	SAMPLE NO.						
01	120719A LCS-1WT (SS)	459584	6.73	371008	9.87	216768	12.20
02	10ug/L Vol Std 07-26-12	398336	6.73	321152	9.87	193728	12.20
03	120726A LCS-1WT	396608	6.73	324736	9.88	196096	12.20
04	120726A BLK-1WT	393664	6.73	315392	9.88	183424	12.20
05	AY65168W01	393024	6.73	316800	9.87	179392	12.20
06	AY65166W01	397440	6.73	321408	9.87	187456	12.20
07	AY65167W01	379712	6.73	308224	9.87	174144	12.20
08	AY65167W234 MS-1WT	398656	6.73	326336	9.87	192128	12.20
09	AY65167W234 MSD-1WT	396608	6.73	320064	9.87	192576	12.20
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.: 68268

Lab File ID (Standard): 0725T07.D

Date Analyzed: 07/25/12

Instrument ID: Thor

Time Analyzed: 12:13

GC Column: _____

ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	782981	6.73	897407	9.87	996199	12.20
	UPPER LIMIT	1565962	7.23	1794814	10.37	1992398	12.70
	LOWER LIMIT	391491	6.23	448704	9.37	498100	11.70
	SAMPLE						
	NO.						
01	LCS gas 300ug/L (SS)	788179	6.73	879850	9.88	1024200	12.20
02	CCV gas 300ug/L	818998	6.73	915509	9.87	1060500	12.20
03	LCS gas 300ug/L	811874	6.72	928441	9.87	1044820	12.20
04	120726A BLK-1WT	814291	6.73	903930	9.88	1008830	12.20
05	AY65168W01	808117	6.73	915058	9.87	1004710	12.20
06	AY65166W01	812071	6.73	926183	9.87	1029510	12.20
07	AY65167W01	780142	6.73	881065	9.87	965055	12.20
08	AY65167W456 MS-1SS GAS	842116	6.73	935797	9.88	1070500	12.20
09	AY65167W456 MSD-1WT GAS	794771	6.73	901502	9.87	995139	12.20
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.

Manual Integration Summary

ARF: 68268

APPL ID	Client ID	Method	Analyte	Type	Comment
AY65166	ES083	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65167	Blank	EPA 8260B	GASOLINE	Blank	(MI1) Integration does not follow baseline.
AY65167	LCS	EPA 8260B	GASOLINE	LCS	(MI1) Integration does not follow baseline.
AY65167	MS	EPA 8260B	GASOLINE	MS	(MI1) Integration does not follow baseline.
AY65167	MSD	EPA 8260B	GASOLINE	MSD	(MI1) Integration does not follow baseline.
AY65167	ES084	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65168	ES086 TRIP BLANK	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.

**EPA METHOD 8260B
Volatile Organic Compounds
Sample Data**

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES083
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65166
QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T18
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLS

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES083
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65166
QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLEMES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZENE	102	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMETANE	103	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	85-120			%	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T18
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
 Acq On : 26 Jul 12 17:14 Operator: DG,RS,HW,ARS,SV
 Sample : AY65166W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 9:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcc Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	397440	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	321408	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	187456	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.94	111	204048	32.80825	ppb	0.00
Spiked Amount	31.881		Recovery	=	102.907%	
36) 1,2-DCA-D4(S)	6.33	65	202448	35.02564	ppb	0.00
Spiked Amount	33.647		Recovery	=	104.099%	
56) Toluene-D8(S)	8.43	98	721528	37.97251	ppb	0.00
Spiked Amount	37.345		Recovery	=	101.682%	
64) 4-Bromofluorobenzene(S)	11.05	95	269449	29.98532	ppb	0.00
Spiked Amount	29.515		Recovery	=	101.591%	

Target Compounds	Qvalue
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Quantitation Report

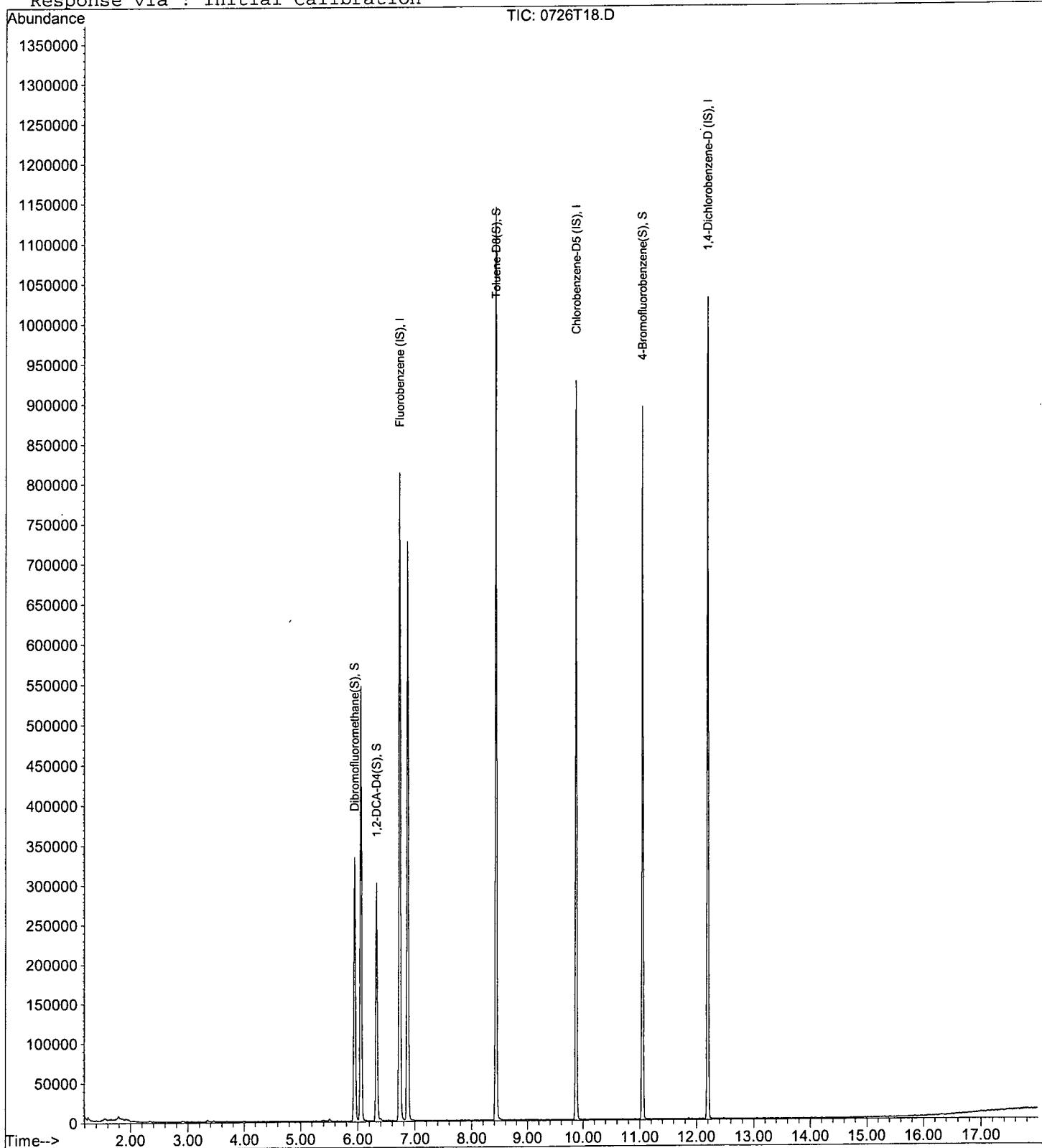
Data File : M:\THOR\DATA\T120725\0726T18.D
 Acq On : 26 Jul 12 17:14
 Sample : AY65166W01
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 43
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 9:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
 Acq On : 26 Jul 12 17:14 Operator: DG,RS,HW,ARS,SV
 Sample : AY65166W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:39 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	812071	25.00000	ppb	0.00
3) Chlororobenzene-D5 (IS)	9.87	TIC	926183	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1029507	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds			Qvalue
2) Gasoline	8.43	TIC 10444534m	16.54357 ppb ND 100

No gasoline pattern detected.
ARS 7/27/12

Quantitation Report

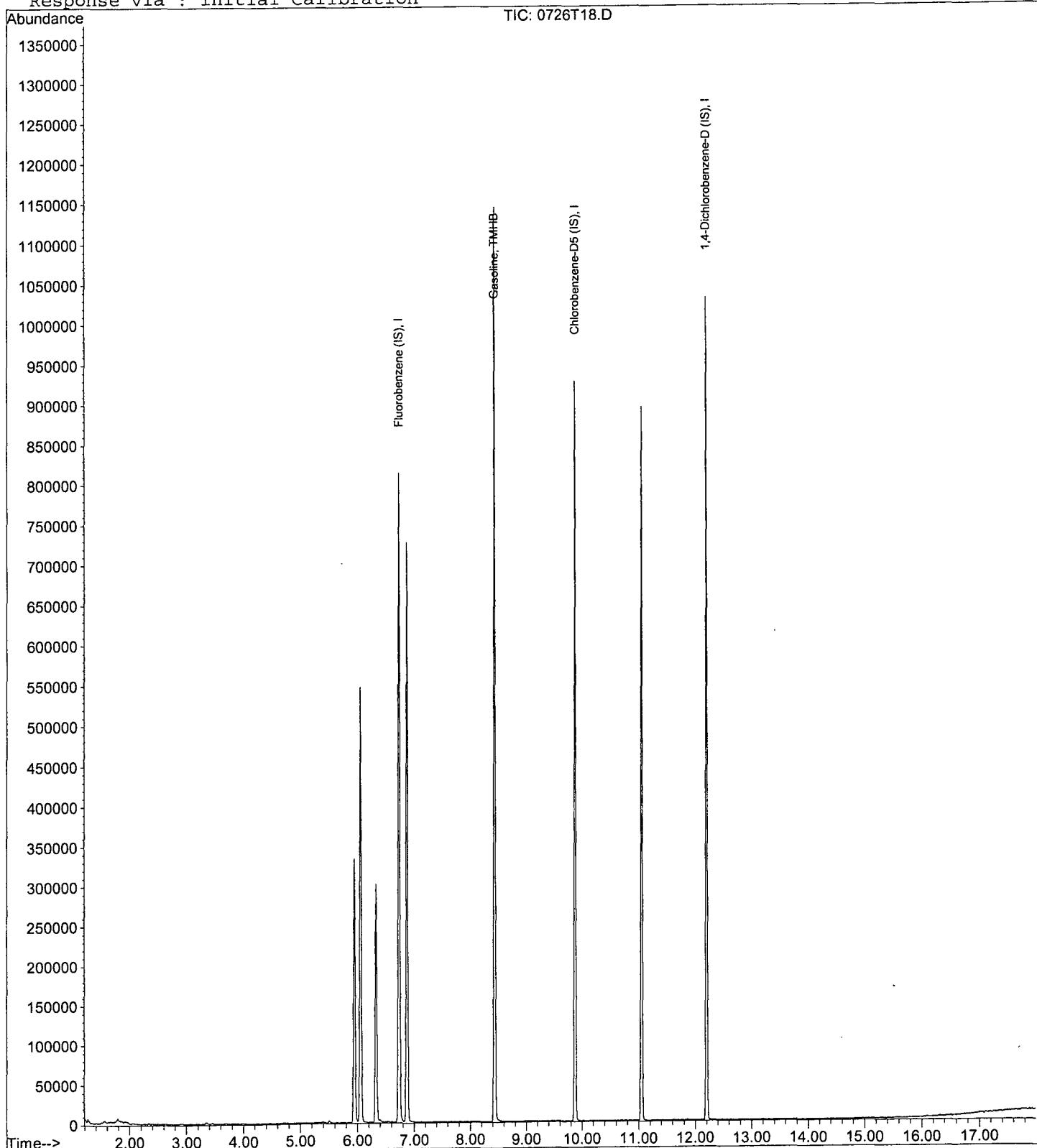
Data File : M:\THOR\DATA\T120725\0726T18.D
 Acq On : 26 Jul 12 17:14
 Sample : AY65166W01
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 43
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 7:39 2012

Quant Results File: TGAS.RES

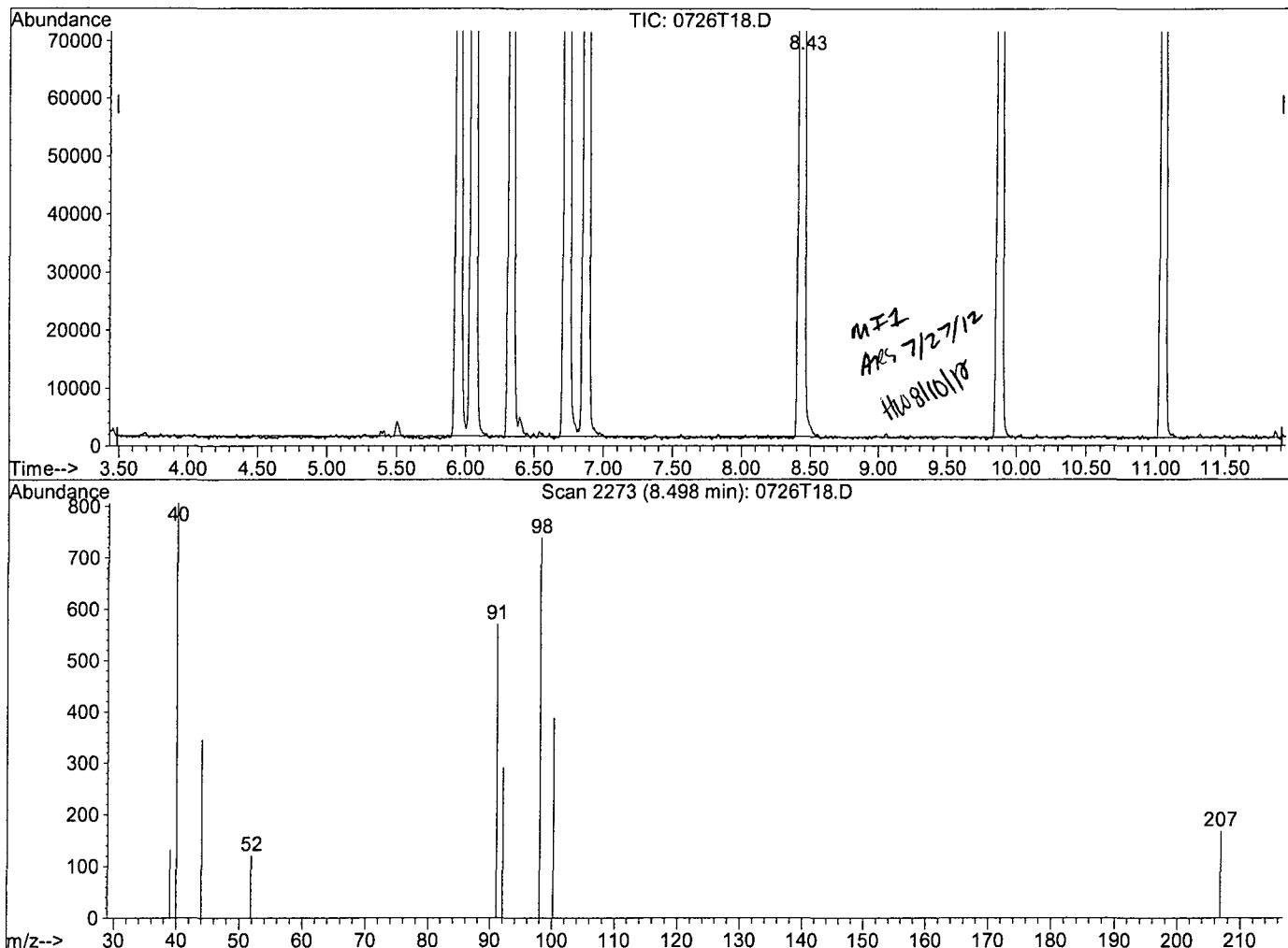
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
 Acq On : 26 Jul 12 17:14 Operator: DG, RS, HW, ARS, SV
 Sample : AY65166W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 27 7:39 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T18.D

(2) Gasoline (TMHB)

8.50min -54.6082ppb m

response 7926606

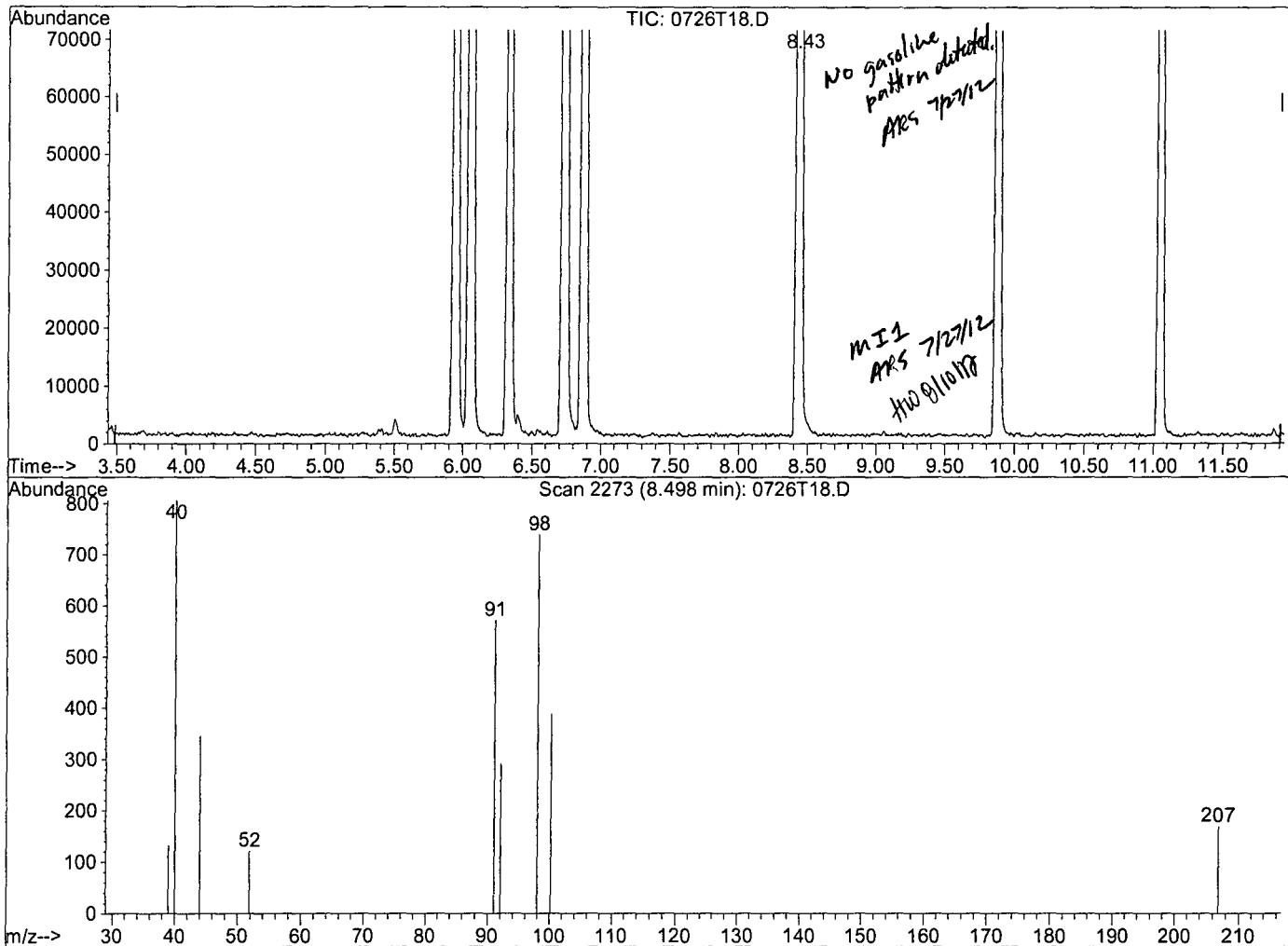
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.24#
0.00	0.00	3.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T18.D
 Acq On : 26 Jul 12 17:14
 Sample : AY65166W01
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 27 7:39 2012

Vial: 43
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multipllr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T18.D		
(2) Gasoline (TMHB)		
8.43min 16.5436ppb m		
response 10444534		
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.94#
0.00	0.00	2.80#
0.00	0.00	0.00

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES084

APPL ID: AY65167

Sample Collection Date: 07/19/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.0 J	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	2.3 J	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	1.3	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

J = Estimated value.

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T20
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLS

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES084
Sample Collection Date: 07/19/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68268
APPL ID: AY65167
QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLEMES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZENE	98.9	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMETANE	90.9	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.6	85-120			%	07/26/12	07/26/12

J = Estimated value.

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T20
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLS

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
 Acq On : 26 Jul 12 18:09 Operator: DG,RS,HW,ARS,SV
 Sample : AY65167W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 9:07 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	379712	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	308224	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	174144	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.94	111	172228	28.98489	ppb	0.00
Spiked Amount	31.881		Recovery	=	90.916%	
36) 1,2-DCA-D4(S)	6.32	65	187901	34.02663	ppb	0.00
Spiked Amount	33.647		Recovery	=	101.130%	
56) Toluene-D8(S)	8.43	98	677549	37.18322	ppb	0.00
Spiked Amount	37.345		Recovery	=	99.566%	
64) 4-Bromofluorobenzene(S)	11.05	95	251520	29.18736	ppb	0.00
Spiked Amount	29.515		Recovery	=	98.888%	

Target Compounds

				Ovalue		
11) Acetone	2.87	43	4341	2.27562	ppb	5
26) MEK (2-Butanone)	5.38	43	1287	1.00886	ppb	5
40) Benzene	6.39	78	22262	1.30627	ppb	98

ARS 7/27/12

Quantitation Report

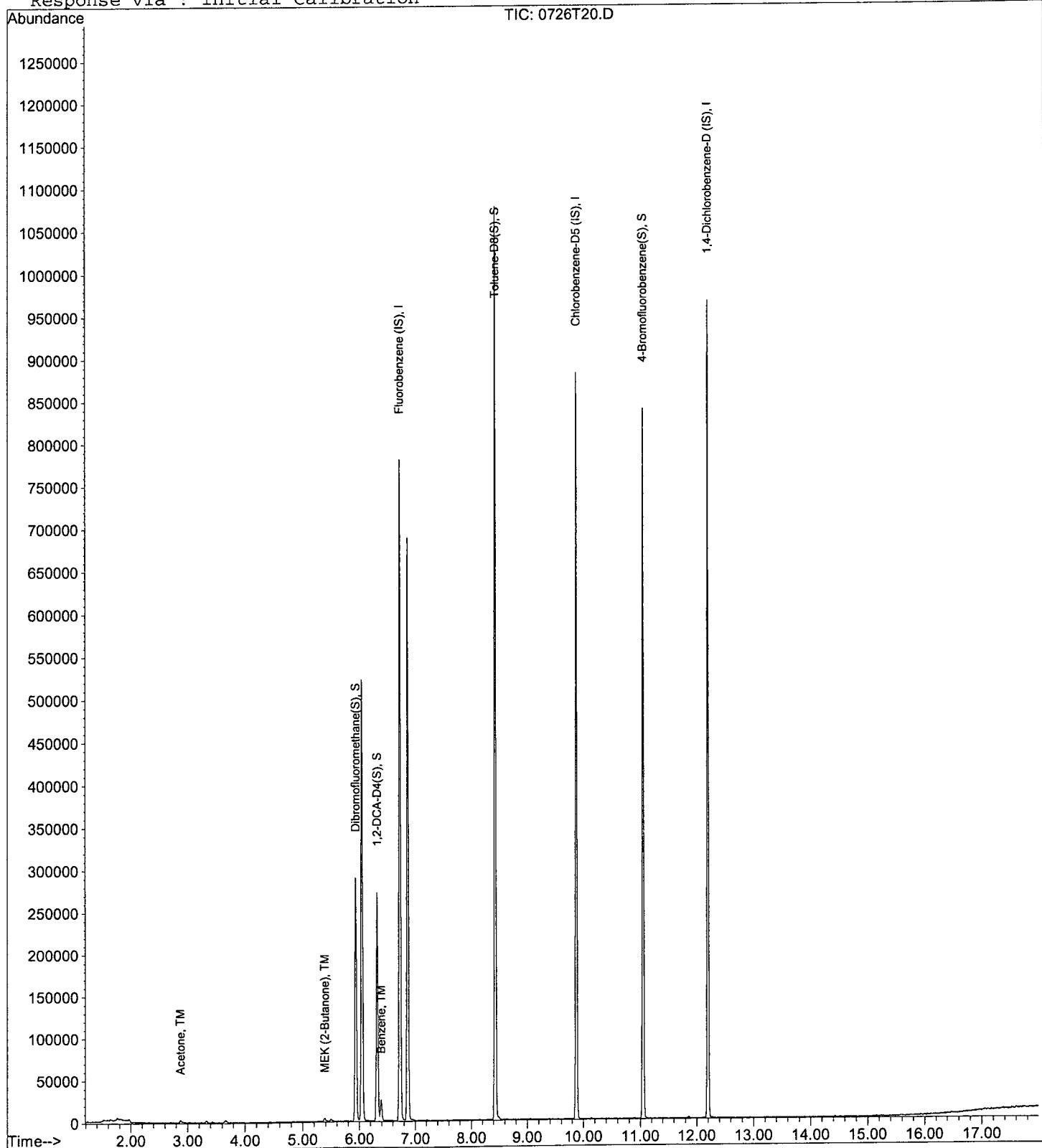
Data File : M:\THOR\DATA\T120725\0726T20.D
 Acq On : 26 Jul 12 18:09
 Sample : AY65167W01
 Misc : 10ml w/5ul of IS&S: 06-7-12

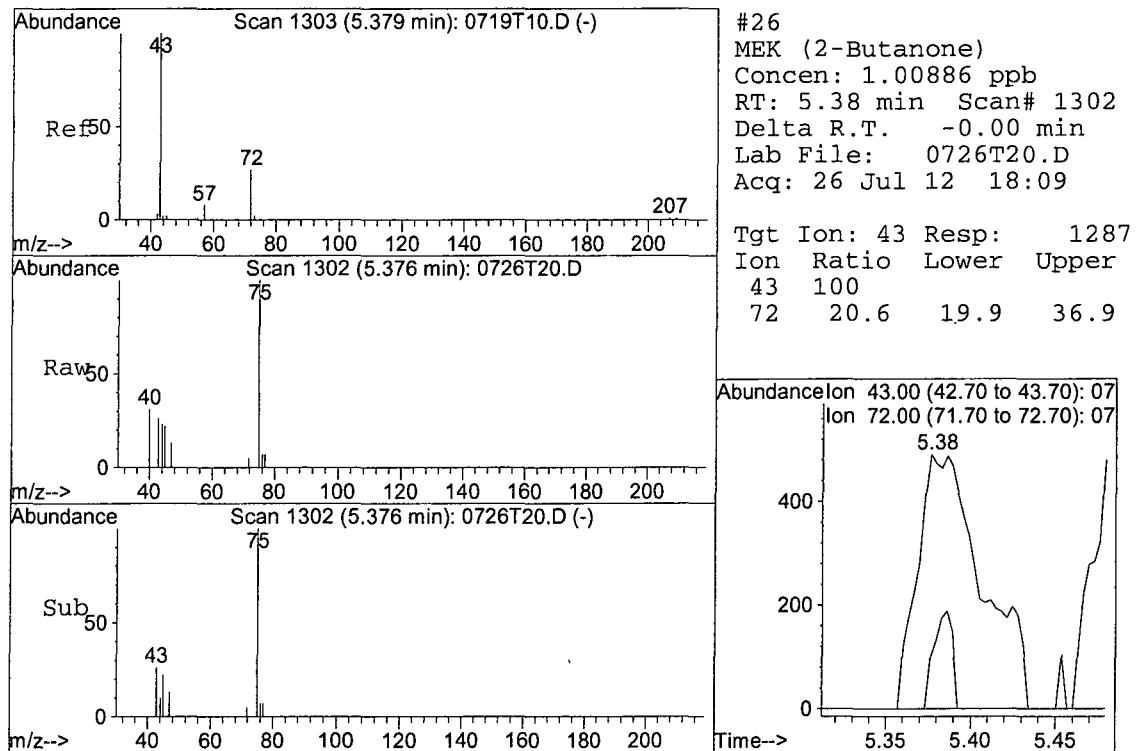
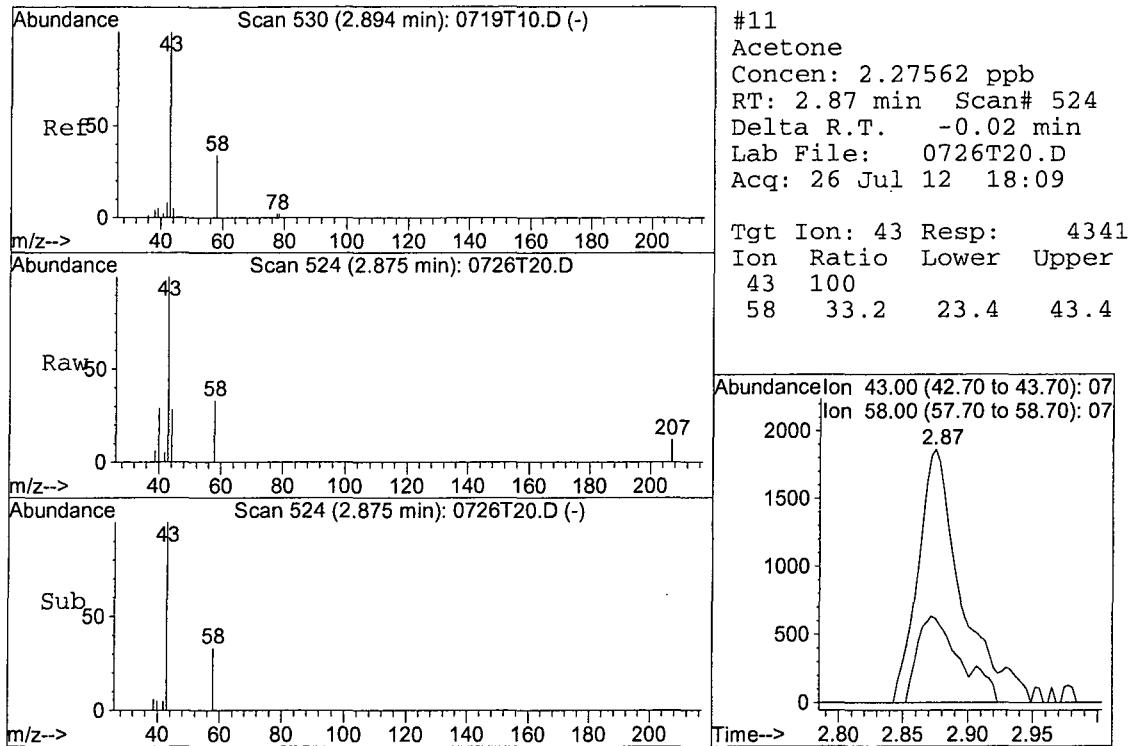
Vial: 45
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

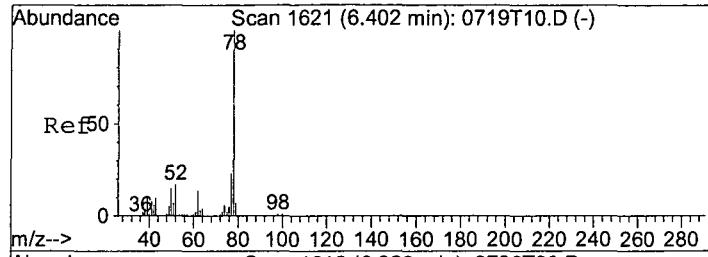
Quant Time: Jul 27 9:07 2012

Quant Results File: TALLW.RES

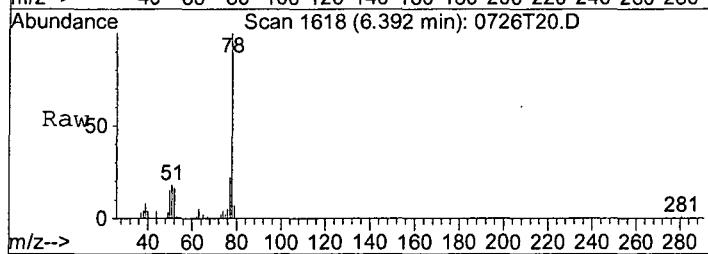
Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



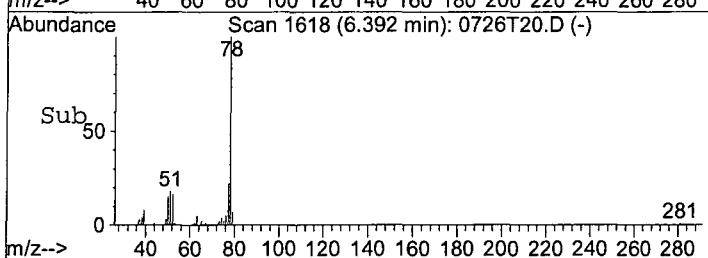




#40
Benzene
Concen: 1.30627 ppb
RT: 6.39 min Scan# 1618
Delta R.T. -0.01 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

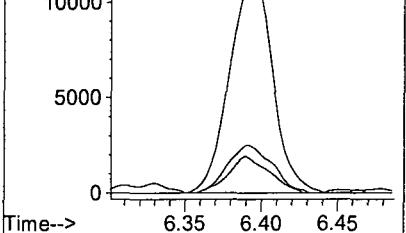


Tgt Ion: 78 Resp: 22262
Ion Ratio Lower Upper
78 100
77 21.7 15.9 29.5
52 15.7 11.6 21.6



Abundance

celon 78.00 (77.70 to 78.70): 07
15000 ion 77.00 (76.70 to 77.70): 07
ion 52.00 (51.70 to 52.70): 07



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
 Acq On : 26 Jul 12 18:09 Operator: DG, RS, HW, ARS, SV
 Sample : AY65167W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:41 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	780142	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	881065	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	965055	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	QValue
2) Gasoline	ND 100

No gasoline pattern detected.

ARS 7/27/12

Quantitation Report

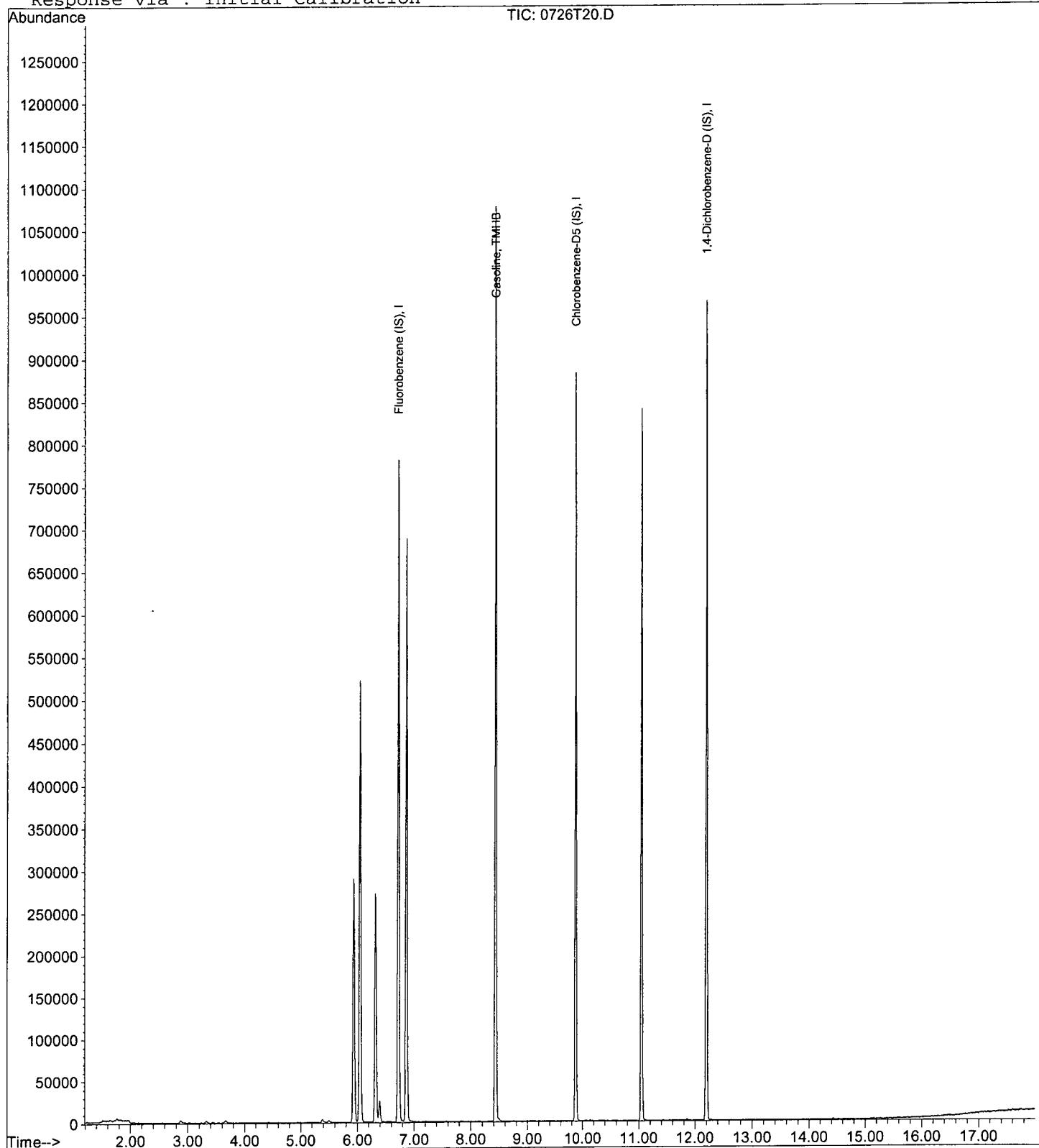
Data File : M:\THOR\DATA\T120725\0726T20.D
Acq On : 26 Jul 12 18:09
Sample : AY65167W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 45
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 7:41 2012

Quant Results File: TGAS.RES

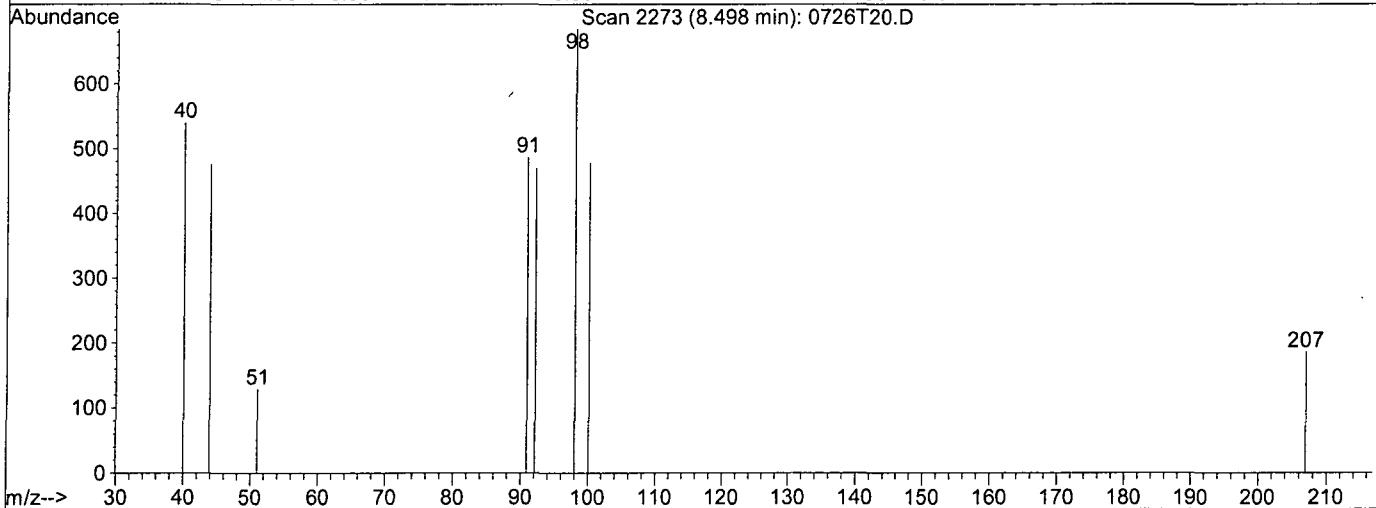
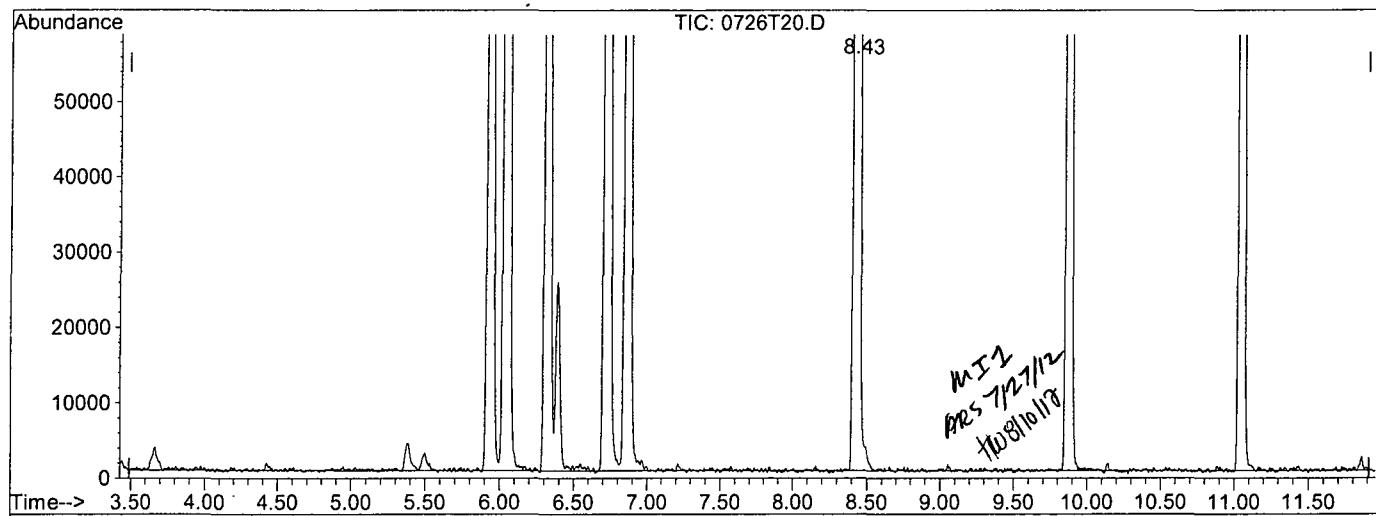
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
 Acq On : 26 Jul 12 18:09 Operator: DG, RS, HW, ARS, SV
 Sample : AY65167W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 27 7:41 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T20.D

(2) Gasoline (TMHB)

8.50min -58.8841ppb m

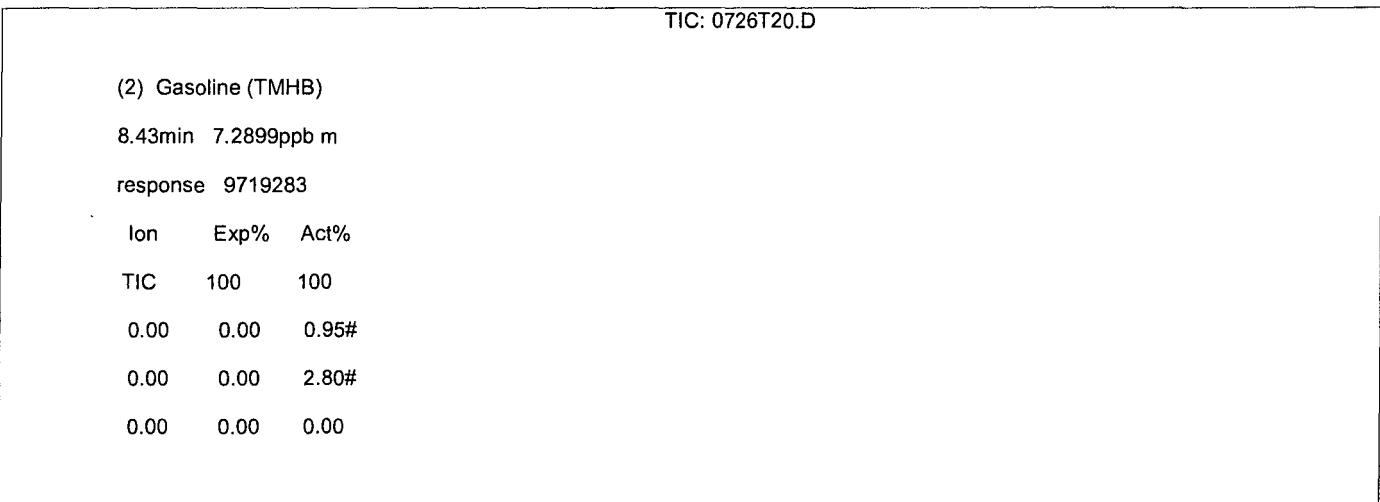
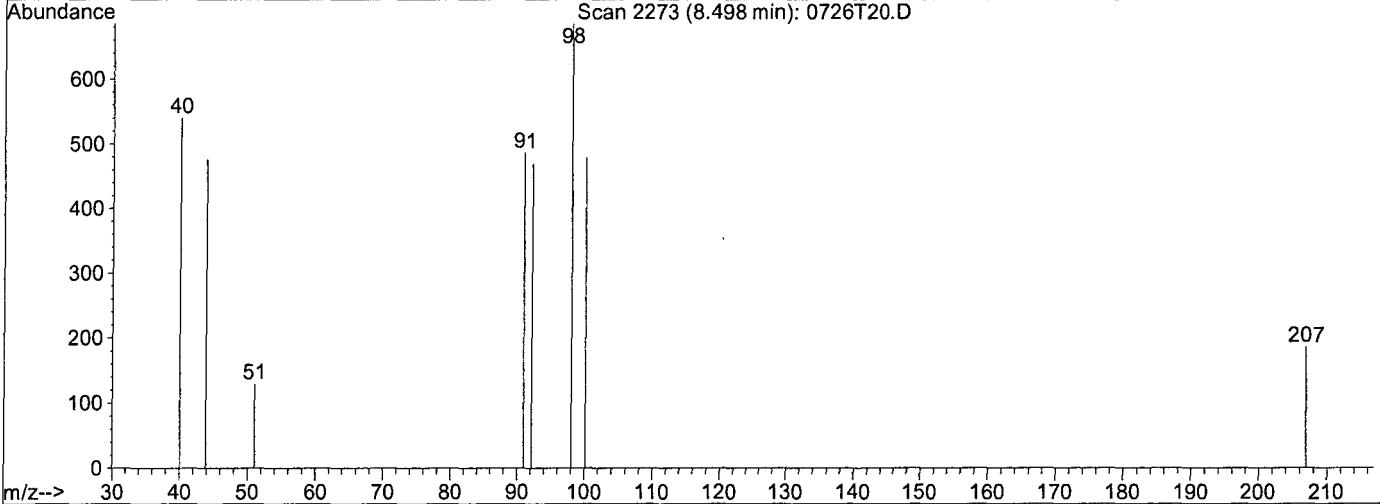
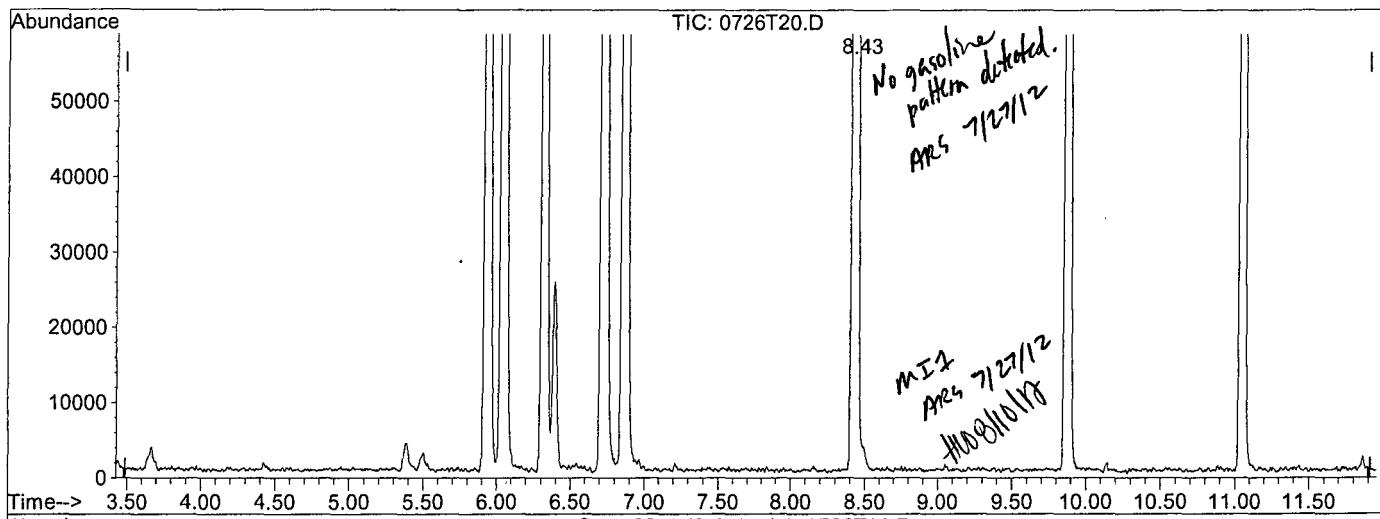
response 7469581

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.23#
0.00	0.00	3.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
 Acq On : 26 Jul 12 18:09 Operator: DG, RS, HW, ARS, SV
 Sample : AY65167W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multipllr: 1.00
 Quant Time: Jul 27 7:41 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES086 TRIP BLANK

APPL ID: AY65168

Sample Collection Date: 07/19/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T12
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES086 TRIP BLANK
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65168
QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLEMES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZENE	98.6	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMETANE	101	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.7	85-120			%	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T12
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLS

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
 Acq On : 26 Jul 12 14:27 Operator: DG,RS,HW,ARS,SV
 Sample : AY65168W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:56 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	393024	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	316800	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	179392	25.00000	ppb	0.00

System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	198118	32.21270	ppb	0.00
Spiked Amount	31.881		Recovery	=	101.041%	
36) 1,2-DCA-D4 (S)	6.33	65	194410	34.01290	ppb	0.00
Spiked Amount	33.647		Recovery	=	101.089%	
56) Toluene-D8 (S)	8.43	98	697404	37.23677	ppb	0.00
Spiked Amount	37.345		Recovery	=	99.711%	
64) 4-Bromofluorobenzene(S)	11.05	95	257881	29.11541	ppb	0.00
Spiked Amount	29.515		Recovery	=	98.644%	

Target Compounds	Qvalue
------------------	--------

Quantitation Report

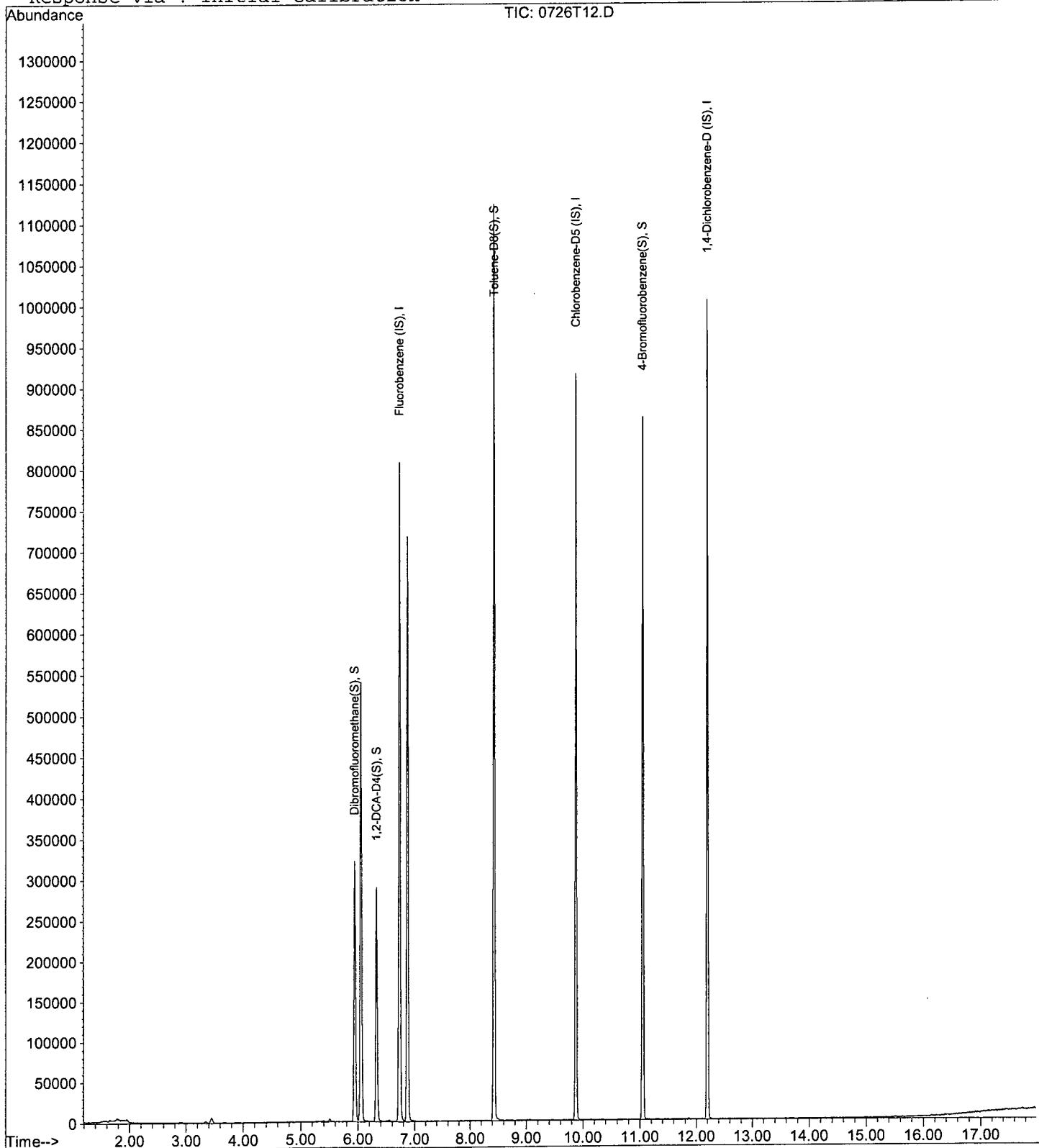
Data File : M:\THOR\DATA\T120725\0726T12.D
 Acq On : 26 Jul 12 14:27
 Sample : AY65168W01
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 37
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 8:56 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
 Acq On : 26 Jul 12 14:27 Operator: DG, RS, HW, ARS, SV
 Sample : AY65168W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 15:17 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	808117	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	915058	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1004713	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	ND 100

No gasoline pattern detected.

ARS-7/26/12

Quantitation Report

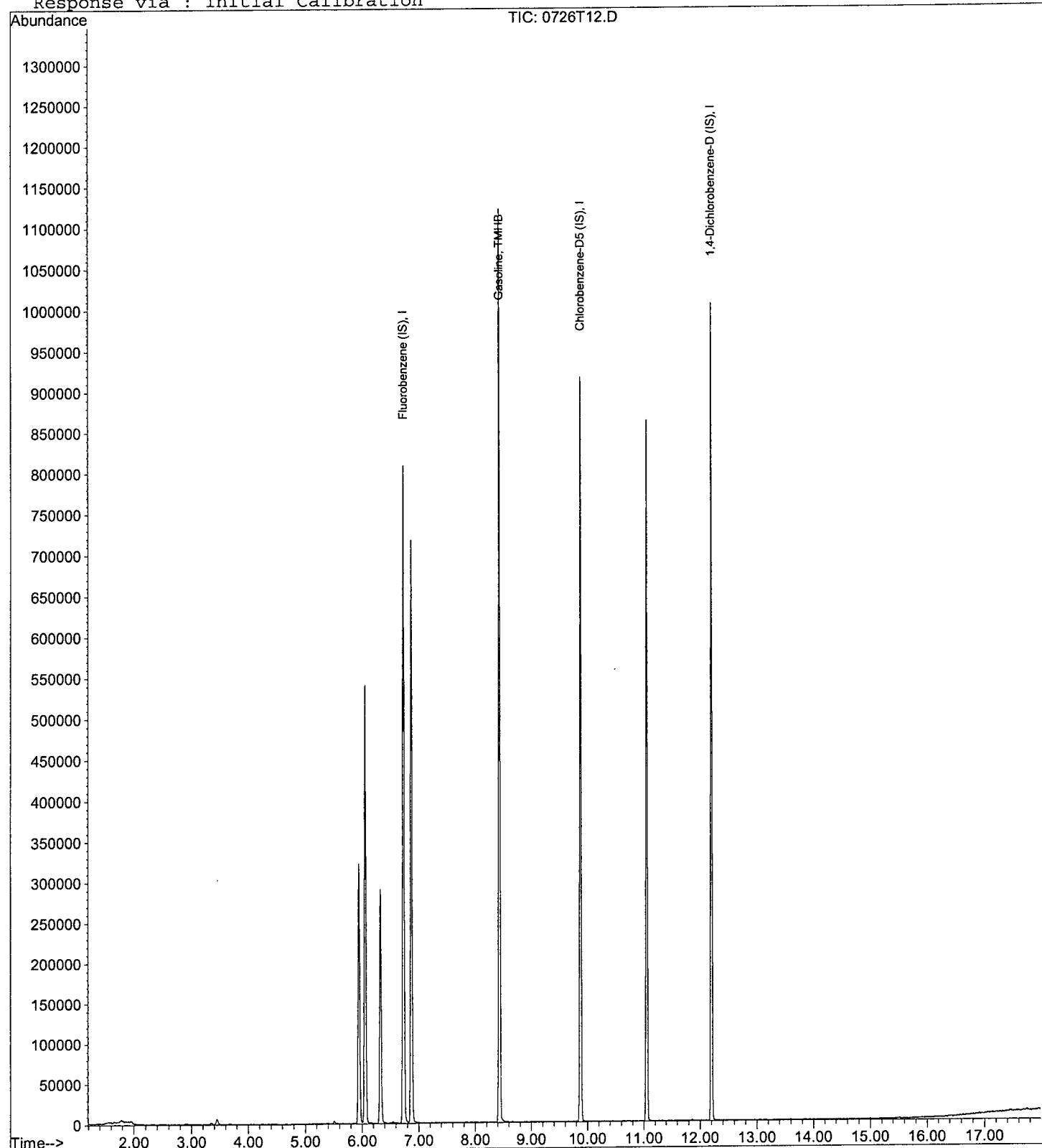
Data File : M:\THOR\DATA\T120725\0726T12.D
Acq On : 26 Jul 12 14:27
Sample : AY65168W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 37
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 15:17 2012

Quant Results File: TGAS.RES

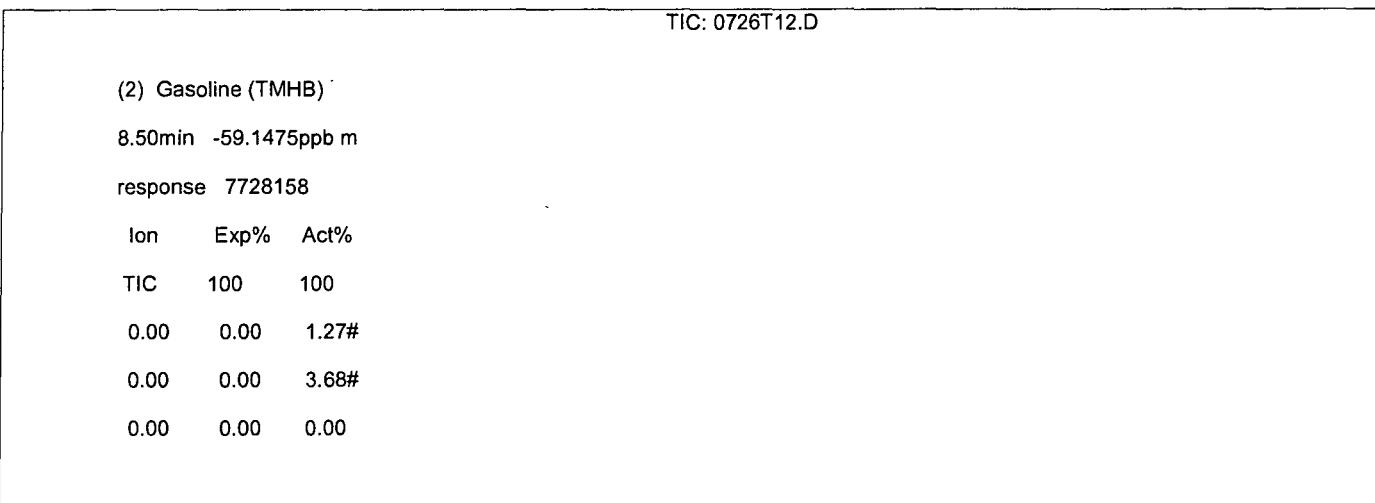
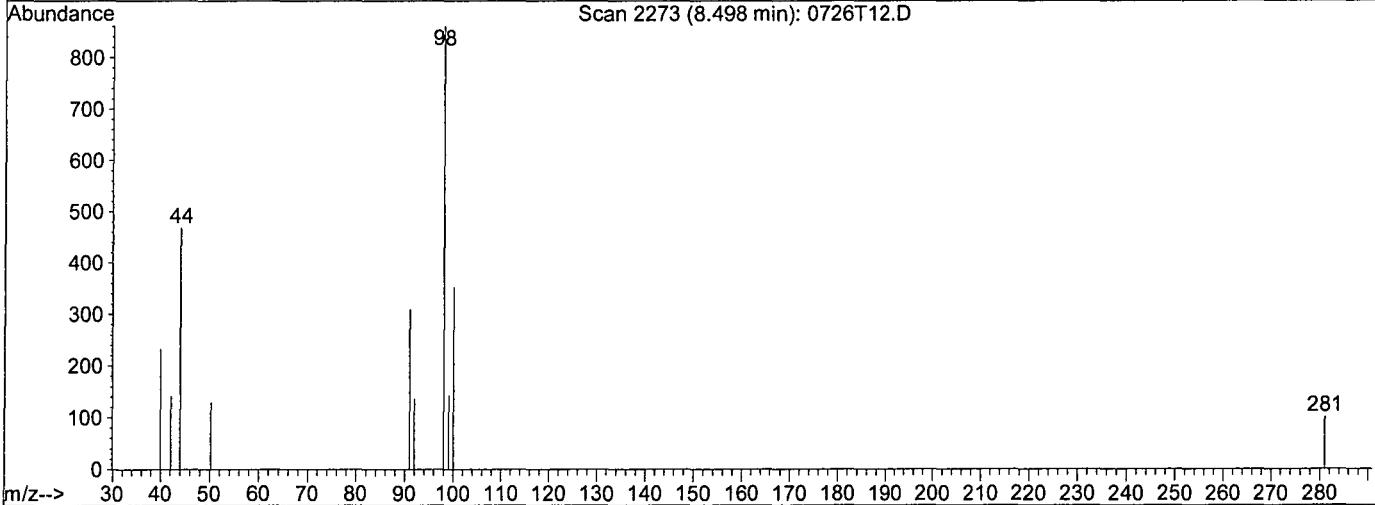
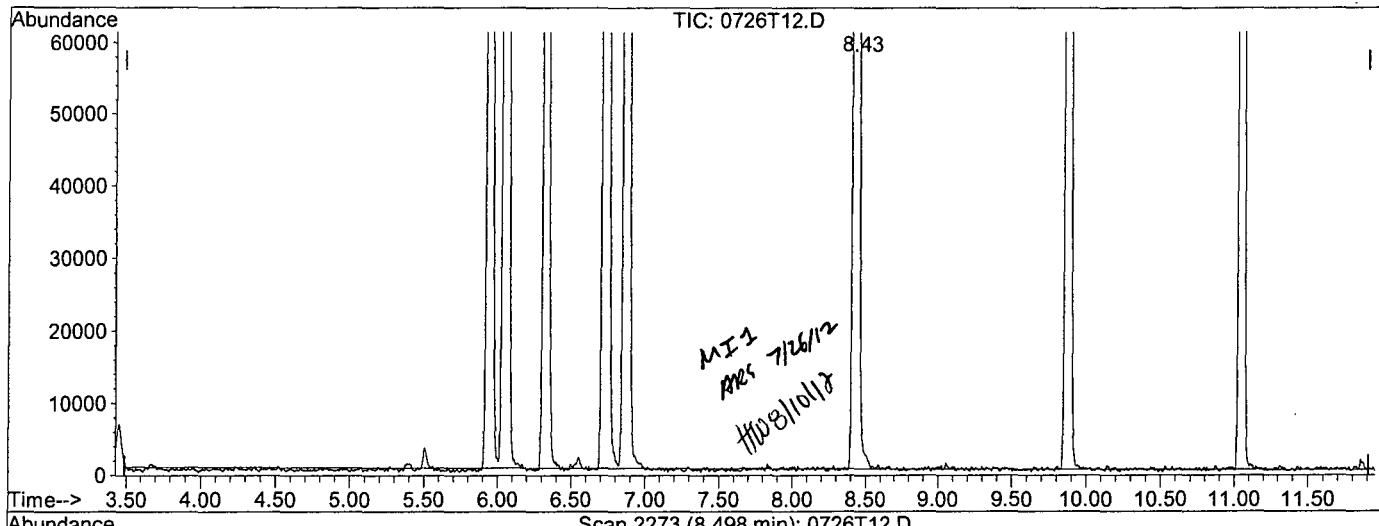
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
 Acq On : 26 Jul 12 14:27 Operator: DG,RS,HW,ARS,SV
 Sample : AY65168W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 26 15:16 2012 Quant Results File: temp.res

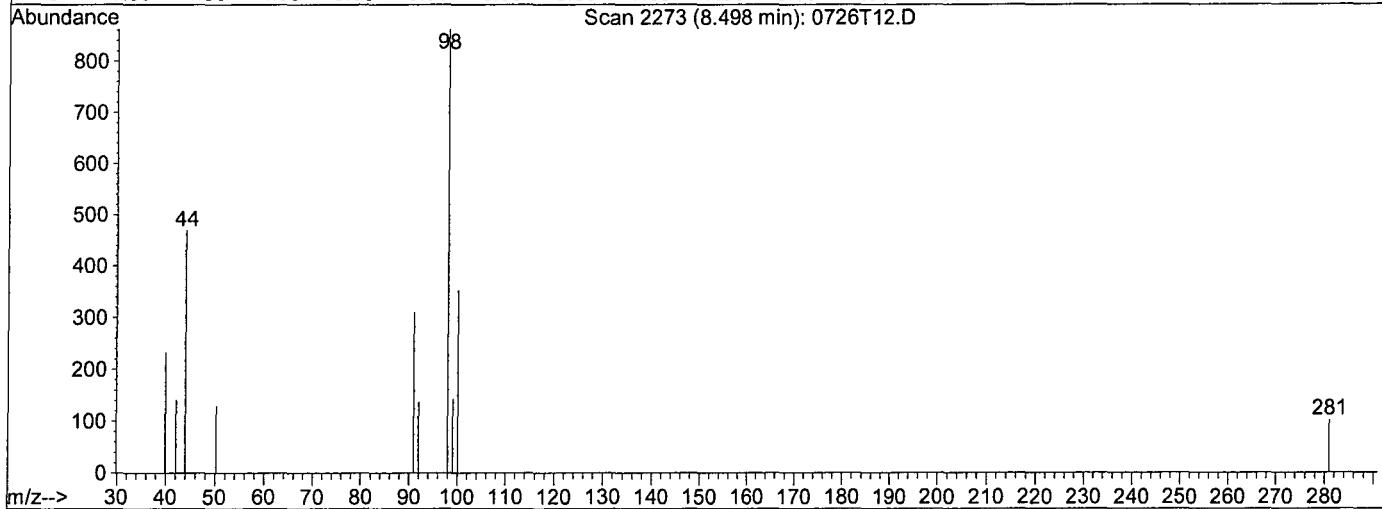
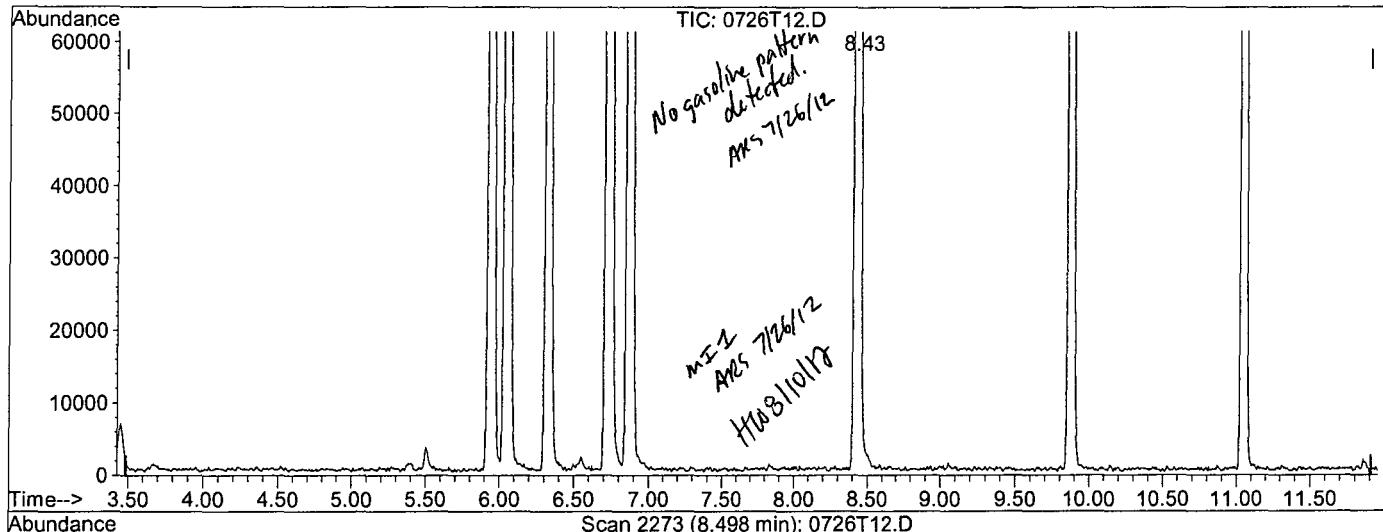
Method : M:\VTHOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
 Acq On : 26 Jul 12 14:27 Operator: DG, RS, HW, ARS, SV
 Sample : AY65168W01 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 26 15:17 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T12.D

(2) Gasoline (TMHB)

8.43min 3.0168ppb m

response 9917322

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.99#
0.00	0.00	2.87#
0.00	0.00	0.00

**EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data**

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No:

Matrix: Water

SDG No: 68268

Initial Cal. Date: 07/19/12

Instrument: Thor (TALLW.M)

Initials:

0719T05.D 0719T06.D 0719T07.D 0719T08.D 0719T09.D 0719T10.D 0719T11.D 0719T12.D 0719T13.D

	Compound	0.3	0.5	1	2	5	10	20	40	100		Avg	%RSD		r2
1	I Fluorobenzene (IS)														
2	TM Dichlorodifluoromethane	0.1200	0.1240	0.1418	0.1356	0.1268	0.1115					0.13	8.6	TM	
3	TML Freon 114	0.1415	0.1046	0.1361	0.1772	0.1673	0.1621	0.1749	0.1896	0.1665		0.16	17	TML	0.997
4	TM**L Chloromethane		0.4629	0.4159	0.3768	0.3605	0.2990	0.3105				0.37	17	TM**L	0.998
5	TM* Vinyl chloride	0.5005	0.4852	0.4531	0.5101	0.5250	0.4769	0.4974	0.4968	0.5019		0.49	4.2	TM*	
6	TM Bromomethane		0.3766	0.3596	0.3226	0.3472	0.3041	0.2931	0.2684	0.2549		0.32	14	TM	
7	TM Chloroethane	0.2747	0.3114	0.2850	0.2613	0.2962	0.2719	0.2859	0.2914	0.2834		0.28	5.1	TM	
8	TMQ Dichlorofluoromethane	0.0090	0.0202	0.0126	0.0164	0.0152	0.0196	0.0254	0.0336	0.0648		0.02	70	TMQ	1.000
9	TM Trichlorofluoromethane		0.0842	0.0966	0.1000	0.1198	0.1100					0.10	13	TM	
10	TMQ Acrolein													TMQ	
11	TML Acetone	0.3965	0.2944	0.1679	0.1468	0.1007	0.0866	0.0926	0.0801	0.0821		0.16	70	TML	0.999
12	TM Freon-113	0.1778	0.1747	0.1931	0.2265	0.2246	0.2168	0.2084	0.2210	0.2060		0.21	9.5	TM	
13	TM* 1,1-DCE	0.3007	0.2729	0.2644	0.2720	0.2744	0.2696	0.2660	0.2835	0.2775		0.28	4.0	TM*	
14	TM t-Butanol		0.0075	0.0074	0.0072	0.0076	0.0077	0.0092	0.0102			0.01	14	TM	
15	TML Methyl Acetate	0.8726	0.6035	0.5101	0.4714	0.2802	0.2330	0.2248	0.2202	0.2132		0.40	57	TML	1.000
16	TM Iodomethane	0.2492	0.2575	0.2660	0.2419	0.2622	0.2432	0.2408	0.2414	0.2418		0.25	4.0	TM	
17	TM Acrylonitrile	0.0874	0.0549	0.0692	0.0728	0.0933	0.0806	0.0840	0.0846	0.0838		0.08	15	TM	
18	TML Methylene chloride	0.3676	0.2647	0.1440	0.1292	0.1165	0.0964	0.0956	0.0949	0.0918		0.16	62	TML	1.000
19	TML Carbon disulfide	0.0466	0.0453	0.0322	0.0318	0.0301	0.0270	0.0292	0.0278	0.0258		0.03	23	TML	0.999
20	TM Methyl t-butyl ether (MtBE)	0.6119	0.5783	0.5229	0.5275	0.5662	0.5222	0.5070	0.4911	0.4631		0.53	8.6	TM	
21	TM Trans-1,2-DCE	0.2297	0.2354	0.1695	0.1842	0.1947	0.1734	0.1779	0.1766	0.1709		0.19	13	TM	
22	TM Diisopropyl Ether	0.1003	0.1361	0.1126	0.1164	0.1317	0.1212	0.1179	0.1198	0.1168		0.12	8.7	TM	
23	TM** 1,1-DCA	0.5526	0.4780	0.4682	0.4954	0.5506	0.5086	0.4958	0.5067	0.4843		0.50	5.9	TM**	
24	TM Vinyl Acetate	0.2861	0.3189	0.2551	0.2716	0.3128	0.2787	0.2776	0.2848	0.2788		0.28	6.9	TM	
25	TM Ethyl tert Butyl Ether	0.7356	0.6599	0.6680	0.6558	0.7593	0.6522	0.6460	0.6381	0.5738		0.67	8.2	TM	
26	TML MEK (2-Butanone)	0.2041	0.1795	0.1594	0.1391	0.1113	0.1135	0.1203	0.1216	0.1272		0.14	23	TML	1.000
27	TM Cis-1,2-DCE	0.3407	0.3327	0.3111	0.3113	0.3441	0.3184	0.3199	0.3183	0.3119		0.32	4.0	TM	
28	TM 2,2-Dichloropropane		0.2047	0.2143	0.2086	0.2158	0.2037	0.1976	0.1966	0.1845		0.20	5.0	TM	
29	TM* Chloroform	0.7181	0.6349	0.6028	0.6230	0.6647	0.6037	0.5996	0.6037	0.5876		0.63	6.6	TM*	
30	TM Bromochloromethane	0.1510	0.1457	0.1513	0.1633	0.1810	0.1595	0.1543	0.1538	0.1561		0.16	6.5	TM	
31	S Dibromofluoromethane(S)	0.5051	0.3961	0.3766	0.3856	0.3635	0.3650	0.3693	0.3784	0.3815		0.39	11	S	
32	TM 1,1,1-TCA	0.4433	0.4047	0.3367	0.3737	0.3876	0.3695	0.3618	0.3671	0.3480		0.38	8.5	TM	
33	TM Cyclohexane	0.1075	0.0984	0.0973	0.1087	0.1023	0.1026	0.0982	0.1080	0.0976		0.10	4.6	TM	
34	TM 1,1-Dichloropropene	0.2952	0.2623	0.2578	0.2666	0.2963	0.2712	0.2714	0.2756	0.2672		0.27	4.9	TM	
35	TM 2,2,4-Trimethylpentane	0.4193	0.3897	0.3643	0.3992	0.4174	0.3920	0.3860	0.4075	0.3655		0.39	5.1	TM	

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No:

Matrix: Water

SDG No: 68768

Initial Cal. Date: 07/19/12

Instrument: Thor (TALLW.M)

Initials:

		Compound	0.3	0.5	1	2	5	10	20	40	100		Avg	%RSD		r ²
36	S	1,2-DCA-D4(S)	0.4628	0.4074	0.3542	0.3471	0.3446	0.3369	0.3408	0.3392	0.3393		0.36	12	S	
37	TM	Carbon Tetrachloride	0.3583	0.3585	0.3356	0.3521	0.3730	0.3393	0.3467	0.3628	0.3533		0.35	3.3	TM	
38	TM	Tert Amyl Methyl Ether	0.8104	0.7185	0.6881	0.6883	0.7716	0.7091	0.6860	0.6745	0.6278		0.71	7.6	TM	
39	TM	1,2-DCA	0.4427	0.3989	0.4073	0.4206	0.4411	0.4013	0.4023	0.3957	0.3873		0.41	4.8	TM	
40	TM	Benzene	1.330	1.229	1.037	1.104	1.170	1.075	1.059	1.066	1.029		1.1	9.1	TM	
41	TM	TCE	0.3220	0.3196	0.3000	0.3036	0.3233	0.2996	0.2973	0.2966	0.2829		0.30	4.5	TM	
42	TM	2-Pentanone	0.2622	0.2195	0.2350	0.2329	0.2443	0.2273	0.2432	0.2426	0.2555		0.24	5.6	TM	
43	TM*	1,2-Dichloropropane	0.3696	0.3784	0.3475	0.3772	0.4017	0.3593	0.3586	0.3516	0.3511		0.37	4.8	TM*	
44	TM	Bromodichloromethane	0.5464	0.5022	0.4808	0.4813	0.5587	0.4945	0.4955	0.4994	0.4996		0.51	5.4	TM	
45	TM	Methyl Cyclohexane	0.2160	0.2253	0.1988	0.2361	0.2203	0.2228	0.2114	0.2222	0.2069		0.22	5.1	TM	
46	TM	Dibromomethane	0.2224	0.1871	0.1941	0.1966	0.2119	0.1946	0.1959	0.1962	0.1934		0.20	5.5	TM	
47	TML	2-Chloroethyl vinyl ether			0.0023	0.0050	0.0079	0.0074	0.0077	0.0064	0.0063		0.01	32	TML	0.998
48	TM	MIBK (methyl isobutyl ketone)	0.1836	0.1952	0.1595	0.1697	0.1709	0.1619	0.1669	0.1687	0.1789		0.17	6.5	TM	
49	TM	1-Bromo-2-chloroethane	0.2615	0.2802	0.2197	0.2499	0.2843	0.2418	0.2534	0.2519	0.2500		0.25	7.6	TM	
50	TM	Cis-1,3-Dichloropropene	0.5288	0.5220	0.4508	0.4775	0.5235	0.4876	0.4899	0.5108	0.5199		0.50	5.3	TM	
51	TM*	Toluene	1.349	1.351	1.277	1.293	1.418	1.314	1.307	1.310	1.296		1.3	3.2	TM*	
52	TM	Trans-1,3-Dichloropropene	0.5060	0.4246	0.3998	0.3819	0.4704	0.4238	0.4402	0.4550	0.4756		0.44	8.8	TM	
53	TM	1,1,2-TCA	0.3231	0.2925	0.2917	0.2877	0.3215	0.2847	0.2839	0.2826	0.2852		0.29	5.4	TM	
54	TM	2-Hexanone	0.2109	0.1986	0.1812	0.1996	0.1958	0.1884	0.1957	0.2026	0.2106		0.20	4.8	TM	
55	I	Chlorobenzene-D5 (IS)														
56	S	Toluene-D8(S)	1.945	1.553	1.390	1.493	1.349	1.331	1.429	1.411	1.401		1.5	13	S	
57	TM	1,2-EDB	0.4293	0.3708	0.3376	0.3631	0.4033	0.3618	0.3677	0.3665	0.3733		0.37	7.1	TM	
58	TM	Tetrachloroethene	0.5273	0.3800	0.4081	0.4402	0.4287	0.4130	0.4140	0.4108	0.3923		0.42	10	TM	
59	TM	1-Chlorohexane		0.4233	0.5404	0.5484	0.5087	0.4910	0.5018	0.5163	0.5060		0.50	7.5	TM	
60	TM	1,1,1,2-Tetrachloroethane	0.5093	0.4750	0.4800	0.4853	0.5228	0.4867	0.5034	0.4895	0.5042		0.50	3.2	TM	
61	TM	m&p-Xylene	0.7775	0.7225	0.7109	0.7529	0.8468	0.7684	0.7958	0.7959	0.7812		0.77	5.3	TM	
62	TM	o-Xylene	0.8379	0.7723	0.6766	0.7783	0.8551	0.8049	0.8293	0.8221	0.8148		0.80	6.6	TM	
63	TM	Styrene	1.301	1.205	1.181	1.300	1.477	1.358	1.464	1.458	1.474		1.4	8.6	TM	
64	S	4-Bromofluorobenzene(S)	0.8941	0.6924	0.6735	0.7021	0.6390	0.6351	0.6830	0.6795	0.6919		0.70	11	S	
65	TM	1,3-Dichloropropane	0.6702	0.6903	0.6119	0.6806	0.6923	0.6397	0.6502	0.6458	0.6339		0.66	4.2	TM	
66	TM	Dibromochloromethane	0.5324	0.4622	0.4816	0.4777	0.5198	0.4771	0.5014	0.4950	0.5058		0.49	4.5	TM	
67	TM**	Chlorobenzene	1.394	1.309	1.286	1.325	1.349	1.240	1.255	1.250	1.223		1.3	4.4	TM**	
68	TM*	Ethylbenzene	2.124	2.073	1.840	2.023	2.142	1.972	2.058	2.044	2.014		2.0	4.4	TM*	
69	TM**	Bromoform	0.3594	0.3044	0.3153	0.3283	0.3636	0.3252	0.3395	0.3493	0.3641		0.34	6.4	TM**	
70	I	1,4-Dichlorobenzene-D (IS)														

MLS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No: _____

Matrix: Water

SDG No: 68268

Initial Cal. Date: 07/19/12

Instrument: Thor (TALLW.M)

Initials: _____

		Compound	0.3	0.5	1	2	5	10	20	40	100		Avg	%RSD		r2
71	TM	Isopropylbenzene	3.467	3.050	3.049	3.087	3.489	3.289	3.342	3.375	3.271		3.3	5.2	TM	
72	TM**	1,1,2,2-Tetrachloroethane	0.8851	0.9679	0.8759	0.9162	0.9988	0.8592	0.8910	0.8858	0.8834		0.91	5.1	TM**	
73	TM	1,2,3-Trichloropropane	0.3011	0.2573	0.2216	0.2692	0.2788	0.2452	0.2476	0.2483	0.2478		0.26	8.9	TM	
74	TM	t-1,4-Dichloro-2-Butene	0.1233	0.1619	0.1587	0.1593	0.1955	0.1733	0.1868	0.1920	0.1997		0.17	14	TM	
75	TM	Bromobenzene	1.091	1.144	1.005	1.075	1.155	1.068	1.071	1.055	1.035		1.1	4.4	TM	
76	TM	n-Propylbenzene	4.174	3.908	3.893	4.133	4.515	4.215	4.378	4.400	4.261		4.2	5.0	TM	
77	TM	4-Ethyltoluene	3.403	3.468	3.298	3.466	3.887	3.743	3.772	3.801	3.689		3.6	5.7	TM	
78	TM	2-Chlorotoluene	3.081	2.980	2.812	2.959	3.223	3.008	3.013	3.014	2.922		3.0	3.7	TM	
79	TM	1,3,5-Trimethylbenzene	2.835	2.688	2.726	2.902	3.286	3.099	3.174	3.182	3.072		3.0	7.2	TM	
80	TM	4-Chlorotoluene	2.900	2.859	2.765	2.855	3.310	3.011	3.062	3.033	2.941		3.0	5.4	TM	
81	TM	Tert-Butylbenzene	2.860	2.656	2.519	2.623	2.937	2.735	2.783	2.826	2.764		2.7	4.7	TM	
82	TM	1,2,4-Trimethylbenzene	3.036	2.836	2.905	2.957	3.327	3.187	3.242	3.250	3.161		3.1	5.6	TM	
83	TM	Sec-Butylbenzene	3.394	3.341	3.380	3.572	4.054	3.748	3.858	3.877	3.756		3.7	6.9	TM	
84	TM	p-Isopropyltoluene	2.818	2.824	2.797	3.020	3.405	3.187	3.271	3.320	3.225		3.1	7.6	TM	
85	TM	Benzyl Chloride	1.053	0.8317	0.9028	0.8503	0.9797	0.8739	0.8908	0.9346	1.011		0.93	8.1	TM	
86	TM	1,3-DCB	2.012	2.075	1.942	2.040	2.212	2.027	2.054	2.010	1.970		2.0	3.8	TM	
87	TM	1,4-DCB	2.332	2.267	2.134	2.043	2.254	2.079	2.072	2.042	1.986		2.1	5.7	TM	
88	TM	n-Butylbenzene	2.593	2.637	2.640	2.648	2.950	2.837	2.897	2.936	2.840		2.8	5.2	TM	
89	TM	1,2-DCB	2.109	2.010	1.946	1.881	2.124	1.970	1.946	1.916	1.874		2.0	4.6	TM	
90	TM	Hexachloroethane	0.6385	0.6103	0.5276	0.5154	0.5816	0.5288	0.5569	0.5673	0.5792		0.57	7.1	TM	
91	TM	1,2-Dibromo-3-chloropropane	0.1427	0.1282	0.1718	0.1498	0.1896	0.1710	0.1873	0.1886	0.2003		0.17	14	TM	
92	TM	1,2,4-Trichlorobenzene	0.9309	0.8325	0.8167	0.8383	0.9761	0.9144	0.9363	0.9319	0.9714		0.91	6.7	TM	
93	TM	Hexachlorobutadiene	0.4199	0.3460	0.4009	0.3612	0.4008	0.3697	0.3737	0.3684	0.3634		0.38	6.3	TM	
94	TM	Naphthalene	2.301	2.300	2.079	2.264	2.715	2.596	2.749	2.843	2.906		2.5	12	TM	
95	TM	1,2,3-Trichlorobenzene	1.232	1.180	1.271	1.218	1.424	1.312	1.335	1.325	1.313		1.3	5.7	TM	
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

ARS 7/27/12

Data File : M:\THOR\DATA\T120719\0719T05.D
 Acq On : 19 Jul 12 11:01
 Sample : 0.3ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.74	96	427072	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	343424	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	202048	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.95	111	5177	0.77464	ppb	0.00
Spiked Amount	29.744		Recovery	=	2.606%	
36) 1,2-DCA-D4 (S)	6.33	65	4744	0.76381	ppb	0.00
Spiked Amount	29.083		Recovery	=	2.627%	
56) Toluene-D8 (S)	8.43	98	16030	0.78954	ppb	0.00
Spiked Amount	30.231		Recovery	=	2.613%	
64) 4-Bromofluorobenzene(S)	11.05	95	7369	0.76748	ppb	0.00
Spiked Amount	28.321		Recovery	=	2.708%	

Target Compounds

				Qvalue		
2) Dichlorodifluoromethane	1.30	85	615	0.27612	ppb	95
3) Freon 114	1.42	85	725	-0.13478	ppb	# 68
4) Chloromethane	1.45	50	2617	0.40957	ppb	87
5) Vinyl chloride	1.56	62	2565	0.30389	ppb	92
6) Bromomethane	1.87	94	2507	0.46469	ppb	98
7) Chloroethane	1.98	64	1408	0.28963	ppb	99
9) Trichlorofluoromethane	2.24	101	407	0.23329	ppb	93
11) Acetone	2.91	43	2032	0.21001	ppb	# 82
12) Freon-113	2.85	101	911	0.25960	ppb	# 62
13) 1,1-DCE	2.82	61	1541	0.32723	ppb	# 78
14) t-Butanol	3.69	59	2213	15.97947	ppb	92
15) Methyl Acetate	3.35	43	4472	-0.20827	ppb	# 84
16) Iodomethane	2.99	142	1277	0.29980	ppb	# 77
17) Acrylonitrile	3.84	52	448	0.33215	ppb	# 42
18) Methylene chloride	3.45	84	1884	0.26546	ppb	79
19) Carbon disulfide	3.07	76	239	-0.34303	ppb	# 65
20) Methyl t-butyl ether (MtBE	3.91	73	3136	0.34491	ppb	# 79
21) Trans-1,2-DCE	3.87	96	1177	0.36216	ppb	# 64
22) Diisopropyl Ether	4.71	59	514	0.25243	ppb	# 40
23) 1,1-DCA	4.51	63	2832	0.32862	ppb	# 79
24) Vinyl Acetate	4.71	87	1466	0.30118	ppb	75
25) Ethyl tert Butyl Ether	5.21	59	3770	0.33165	ppb	100
26) MEK (2-Butanone)	5.40	43	1046	0.82334	ppb	91
27) Cis-1,2-DCE	5.32	96	1746	0.31627	ppb	76
28) 2,2-Dichloropropane	5.32	77	1192	0.74979	ppb	93
29) Chloroform	5.76	83	3680	0.34387	ppb	87
30) Bromochloromethane	5.63	128	774	0.28796	ppb	75
32) 1,1,1-TCA	5.96	97	2272	0.35284	ppb	87
33) Cyclohexane	6.03	41	551	0.31531	ppb	# 6
34) 1,1-Dichloropropene	6.16	75	1513	0.32355	ppb	# 82
35) 2,2,4-Trimethylpentane	6.55	57	2149	0.31975	ppb	81
37) Carbon Tetrachloride	6.16	117	1836	0.30422	ppb	83
38) Tert Amyl Methyl Ether	6.59	73	4153	0.34325	ppb	# 92
39) 1,2-DCA	6.42	62	2269	0.32331	ppb	# 74
40) Benzene	6.40	78	6818	0.35570	ppb	94
41) TCE	7.14	95	1650	0.31670	ppb	90
42) 2-Pantanone	7.36	43	67186	16.36852	ppb	95
43) 1,2-Dichloropropane	7.37	63	1894	0.30283	ppb	# 85
44) Bromodichloromethane	7.68	83	2800	0.32362	ppb	87
45) Methyl Cyclohexane	7.36	83	1107	0.29759	ppb	# 41
46) Dibromomethane	7.50	93	1140	0.33509	ppb	# 65

(#) = qualifier out of range (m) = manual integration
 0719T05.D TALLW.M Fri Jul 20 08:29:28 2012

Data File : M:\THOR\DATA\T120719\0719T05.D
 Acq On : 19 Jul 12 11:01
 Sample : 0.3ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
48) MIBK (methyl isobutyl ket	8.33	43	941	0.31878	ppb	# 95
49) 1-Bromo-2-chloroethane	7.99	63	1340	0.30794	ppb	93
50) Cis-1,3-Dichloropropene	8.15	75	2710	0.31652	ppb	96
51) Toluene	8.50	91	6911	0.30559	ppb	97
52) Trans-1,3-Dichloropropene	8.72	75	2593	0.34348	ppb	94
53) 1,1,2-TCA	8.90	83	1656	0.32887	ppb	92
54) 2-Hexanone	9.18	43	1081	0.31934	ppb	# 88
57) 1,2-EDB	9.40	107	1769	0.34356	ppb	92
58) Tetrachloroethene	9.06	166	2173	0.37324	ppb	90
59) 1-Chlorohexane	9.90	91	3169	0.45728	ppb	98
60) 1,1,1,2-Tetrachloroethane	9.99	131	2099	0.30859	ppb	97
61) m&p-Xylene	10.14	106	6408	0.60392	ppb	98
62) o-Xylene	10.54	106	3453	0.31458	ppb	79
63) Styrene	10.55	104	5361	0.28746	ppb	90
65) 1,3-Dichloropropane	9.07	76	2762	0.30594	ppb	85
66) Dibromochloromethane	9.29	129	2194	0.32279	ppb	80
67) Chlorobenzene	9.91	112	5744	0.32352	ppb	86
68) Ethylbenzene	10.03	91	8755	0.31360	ppb	98
69) Bromoform	10.71	173	1481	0.31823	ppb	97
71) Isopropylbenzene	10.91	105	8406	0.31819	ppb	96
72) 1,1,2,2-Tetrachloroethane	11.19	83	2146	0.29274	ppb	# 84
73) 1,2,3-Trichloropropane	11.22	110	730	0.35086	ppb	# 56
74) t-1,4-Dichloro-2-Butene	11.24	53	299	0.21473	ppb	# 27
75) Bromobenzene	11.19	156	2644	0.30360	ppb	94
76) n-Propylbenzene	11.32	91	10120	0.29752	ppb	93
77) 4-Ethyltoluene	11.43	105	8252	0.28250	ppb	97
78) 2-Chlorotoluene	11.40	91	7471	0.30802	ppb	92
79) 1,3,5-Trimethylbenzene	11.50	105	6874	0.28388	ppb	93
80) 4-Chlorotoluene	11.50	91	7031	0.29285	ppb	85
81) Tert-Butylbenzene	11.82	119	6934	0.31259	ppb	87
82) 1,2,4-Trimethylbenzene	11.86	105	7361	0.29378	ppb	100
83) Sec-Butylbenzene	12.04	105	8228	0.27783	ppb	96
84) p-Isopropyltoluene	12.19	119	6833	0.27307	ppb	# 88
85) Benzyl Chloride	12.36	91	2552	0.34128	ppb	95
86) 1,3-DCB	12.13	146	4878	0.29617	ppb	90
87) 1,4-DCB	12.22	146	5654	0.32779	ppb	98
88) n-Butylbenzene	12.59	91	6287	0.28031	ppb	93
89) 1,2-DCB	12.59	146	5114	0.32036	ppb	94
90) Hexachloroethane	12.86	117	1548	0.33764	ppb	85
91) 1,2-Dibromo-3-chloropropan	13.36	157	346	0.25194	ppb	83
92) 1,2,4-Trichlorobenzene	14.20	180	2257	0.30845	ppb	85
93) Hexachlorobutadiene	14.38	223	1018	0.33304	ppb	93
94) Naphthalene	14.43	128	5580	0.27311	ppb	94
95) 1,2,3-Trichlorobenzene	14.68	180	2988	0.28660	ppb	98

Quantitation Report

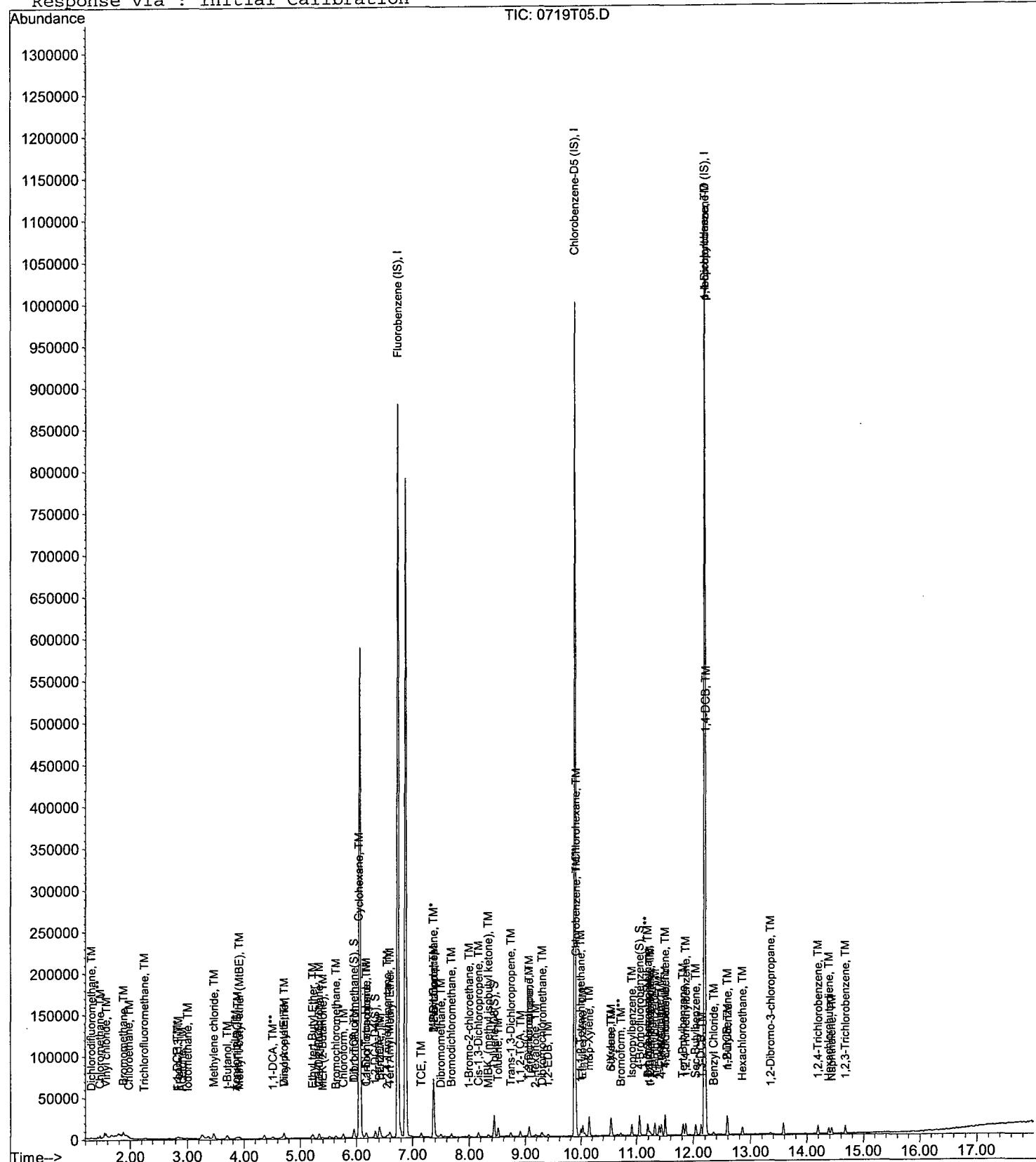
Data File : M:\THOR\DATA\T120719\0719T05.D
Acq On : 19 Jul 12 11:01
Sample : 0.3ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T06.D
 Acq On : 19 Jul 12 11:29
 Sample : 0.5ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	440576	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	363776	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	205952	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane (S)	5.95	111	6980	1.01241	ppb	0.00
Spiked Amount	29.744		Recovery	=	3.402%	
36) 1,2-DCA-D4 (S)	6.33	65	7179	1.12044	ppb	0.00
Spiked Amount	29.083		Recovery	=	3.851%	
56) Toluene-D8 (S)	8.43	98	22596	1.05068	ppb	0.00
Spiked Amount	30.231		Recovery	=	3.477%	
64) 4-Bromofluorobenzene (S)	11.05	95	10075	0.99060	ppb	0.00
Spiked Amount	28.321		Recovery	=	3.499%	

Target Compounds

				Qvalue		
2) Dichlorodifluoromethane	1.30	85	1093	0.47570	ppb	85
3) Freon 114	1.42	85	922	-0.07628	ppb	90
4) Chloromethane	1.45	50	4079	0.61881	ppb	92
5) Vinyl chloride	1.56	62	4275	0.49095	ppb	97
6) Bromomethane	1.87	94	3318	0.59617	ppb	96
7) Chloroethane	1.98	64	2744	0.54714	ppb	97
8) Dichlorofluoromethane	2.18	67	178	0.48209	ppb	# 41
9) Trichlorofluoromethane	2.24	101	742	0.41227	ppb	86
11) Acetone	2.90	43	2594	0.55965	ppb	96
12) Freon-113	2.86	101	1539	0.42512	ppb	# 88
13) 1,1-DCE	2.82	61	2405	0.49505	ppb	96
14) t-Butanol	3.69	59	3316	23.21003	ppb	95
16) Iodomethane	2.98	142	2269	0.51637	ppb	# 76
17) Acrylonitrile	3.82	52	484	0.34784	ppb	# 38
18) Methylene chloride	3.46	84	2332	0.50714	ppb	95
20) Methyl t-butyl ether (MtBE)	3.91	73	5096	0.54331	ppb	# 93
21) Trans-1,2-DCE	3.86	96	2074	0.61860	ppb	# 74
22) Diisopropyl Ether	4.70	59	1199	0.57079	ppb	# 86
23) 1,1-DCA	4.51	63	4212	0.47377	ppb	# 92
24) Vinyl Acetate	4.70	87	2810	0.55961	ppb	62
25) Ethyl tert Butyl Ether	5.21	59	5815	0.49588	ppb	97
26) MEK (2-Butanone)	5.39	43	1582	1.04859	ppb	# 79
27) Cis-1,2-DCE	5.33	96	2932	0.51483	ppb	90
28) 2,2-Dichloropropane	5.32	77	1804	1.09997	ppb	93
29) Chloroform	5.76	83	5594	0.50670	ppb	93
30) Bromochloromethane	5.62	128	1284	0.46305	ppb	86
32) 1,1,1-TCA	5.96	97	3566	0.53682	ppb	84
33) Cyclohexane	6.03	41	867	0.48093	ppb	# 20
34) 1,1-Dichloropropene	6.16	75	2311	0.47905	ppb	# 87
35) 2,2,4-Trimethylpentane	6.55	57	3434	0.49528	ppb	94
37) Carbon Tetrachloride	6.17	117	3159	0.50739	ppb	79
38) Tert Amyl Methyl Ether	6.59	73	6331	0.50723	ppb	# 88
39) 1,2-DCA	6.42	62	3515	0.48550	ppb	# 91
40) Benzene	6.40	78	10831	0.54774	ppb	95
41) TCE	7.14	95	2816	0.52393	ppb	86
42) 2-Pentanone	7.36	43	96700	22.83691	ppb	100
43) 1,2-Dichloropropane	7.37	63	3334	0.51674	ppb	# 85
44) Bromodichloromethane	7.68	83	4425	0.49576	ppb	# 92
45) Methyl Cyclohexane	7.36	83	1985	0.51726	ppb	81
46) Dibromomethane	7.50	93	1649	0.46985	ppb	78
48) MIBK (methyl isobutyl ket	8.33	43	1720	0.56481	ppb	# 91

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

0719T06.D TALLW.M Fri Jul 20 08:29:31 2012

Data File : M:\THOR\DATA\T120719\0719T06.D
 Acq On : 19 Jul 12 11:29
 Sample : 0.5ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49) 1-Bromo-2-chloroethane	7.99	63	2469	0.55000	ppb	98
50) Cis-1,3-Dichloropropene	8.15	75	4600	0.52080	ppb	92
51) Toluene	8.50	91	11904	0.51023	ppb	98
52) Trans-1,3-Dichloropropene	8.72	75	3741	0.48036	ppb	84
53) 1,1,2-TCA	8.90	83	2577	0.49609	ppb	92
54) 2-Hexanone	9.18	43	1750	0.50113	ppb	# 95
57) 1,2-EDB	9.40	107	2698	0.49467	ppb	98
58) Tetrachloroethene	9.05	166	2765	0.44835	ppb	85
59) 1-Chlorohexane	9.90	91	3080	0.41958	ppb	# 69
60) 1,1,1,2-Tetrachloroethane	9.99	131	3456	0.47967	ppb	97
61) m&p-Xylene	10.14	106	10513	0.93536	ppb	95
62) o-Xylene	10.54	106	5619	0.48328	ppb	97
63) Styrene	10.55	104	8769	0.44389	ppb	95
65) 1,3-Dichloropropane	9.07	76	5022	0.52516	ppb	95
66) Dibromochloromethane	9.29	129	3363	0.46710	ppb	98
67) Chlorobenzene	9.91	112	9525	0.50646	ppb	95
68) Ethylbenzene	10.03	91	15081	0.50998	ppb	95
69) Bromoform	10.71	173	2215	0.44932	ppb	80
71) Isopropylbenzene	10.91	105	12562	0.46649	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	3987	0.53357	ppb	83
73) 1,2,3-Trichloropropane	11.23	110	1060	0.49981	ppb	90
74) t-1,4-Dichloro-2-Butene	11.25	53	667	0.46994	ppb	84
75) Bromobenzene	11.20	156	4714	0.53102	ppb	86
76) n-Propylbenzene	11.32	91	16098	0.46430	ppb	98
77) 4-Ethyltoluene	11.43	105	14285	0.47977	ppb	98
78) 2-Chlorotoluene	11.39	91	12273	0.49640	ppb	94
79) 1,3,5-Trimethylbenzene	11.50	105	11071	0.44855	ppb	96
80) 4-Chlorotoluene	11.50	91	11777	0.48124	ppb	99
81) Tert-Butylbenzene	11.82	119	10940	0.48383	ppb	97
82) 1,2,4-Trimethylbenzene	11.86	105	11683	0.45743	ppb	95
83) Sec-Butylbenzene	12.04	105	13762	0.45588	ppb	96
84) p-Isopropyltoluene	12.19	119	11631	0.45600	ppb	98
85) Benzyl Chloride	12.36	91	3426	0.44948	ppb	# 91
86) 1,3-DCB	12.14	146	8549	0.50922	ppb	92
87) 1,4-DCB	12.22	146	9338	0.53111	ppb	93
88) n-Butylbenzene	12.59	91	10860	0.47502	ppb	91
89) 1,2-DCB	12.59	146	8278	0.50874	ppb	90
90) Hexachloroethane	12.86	117	2514	0.53795	ppb	# 49
91) 1,2-Dibromo-3-chloropropan	13.35	157	528	0.37717	ppb	90
92) 1,2,4-Trichlorobenzene	14.20	180	3429	0.45974	ppb	97
93) Hexachlorobutadiene	14.38	223	1425	0.45735	ppb	86
94) Naphthalene	14.43	128	9474	0.45490	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	4860	0.45732	ppb	86

Quantitation Report

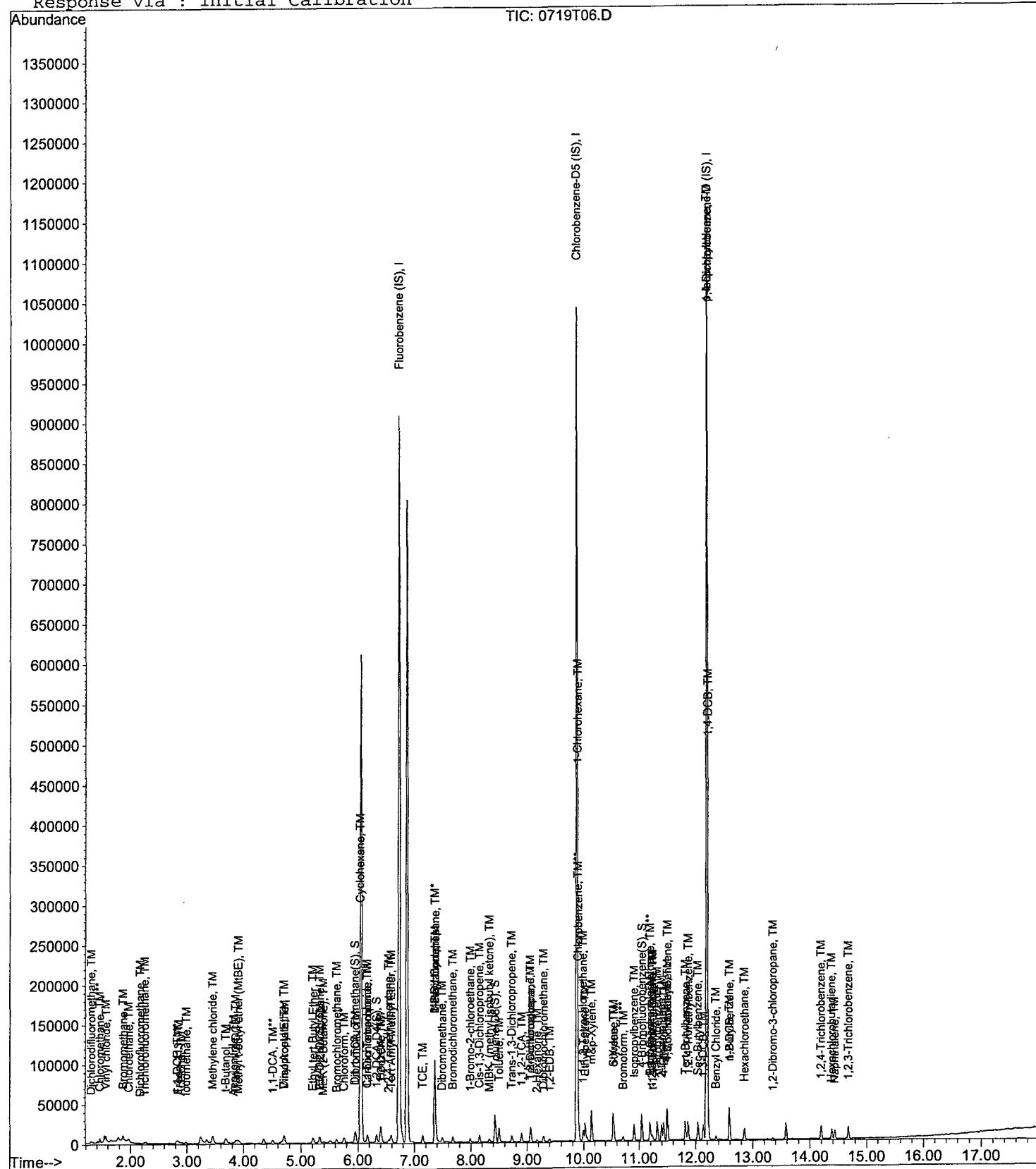
Data File : M:\THOR\DATA\T120719\0719T06.D
 Acq On : 19 Jul 12 11:29
 Sample : 0.5ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 08:28:10 2012
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T07.D
 Acq On : 19 Jul 12 11:57
 Sample : 1.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.74	96	442240	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	361536	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	203840	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane (S)	5.95	111	13324	1.92530	ppb	0.00
Spiked Amount	29.744		Recovery	=	6.472%	
36) 1,2-DCA-D4 (S)	6.33	65	12530	1.94822	ppb	0.00
Spiked Amount	29.083		Recovery	=	6.698%	
56) Toluene-D8 (S)	8.43	98	40197	1.88068	ppb	0.00
Spiked Amount	30.231		Recovery	=	6.222%	
64) 4-Bromofluorobenzene (S)	11.05	95	19479	1.92710	ppb	0.00
Spiked Amount	28.321		Recovery	=	6.804%	

Target Compounds

				Qvalue		
2) Dichlorodifluoromethane	1.31	85	2509	1.08786	ppb	90
3) Freon 114	1.42	85	2408	0.42008	ppb	95
4) Chloromethane	1.45	50	7357	1.11191	ppb	88
5) Vinyl chloride	1.56	62	8016	0.91712	ppb	91
6) Bromomethane	1.87	94	6361	1.13863	ppb	87
7) Chloroethane	1.98	64	5042	1.00157	ppb	95
8) Dichlorofluoromethane	2.18	67	223	0.65944	ppb	# 41
9) Trichlorofluoromethane	2.24	101	1709	0.94597	ppb	98
11) Acetone	2.90	43	2970	0.81592	ppb	89
12) Freon-113	2.86	101	3415	0.93978	ppb	# 73
13) 1,1-DCE	2.83	61	4677	0.95909	ppb	93
14) t-Butanol	3.69	59	6579	45.87583	ppb	98
15) Methyl Acetate	3.35	43	9023	0.97185	ppb	97
16) Iodomethane	2.98	142	4706	1.06694	ppb	95
17) Acrylonitrile	3.83	52	1224	0.87635	ppb	# 55
18) Methylene chloride	3.46	84	2548	0.63556	ppb	95
19) Carbon disulfide	3.07	76	570	0.36158	ppb	# 65
20) Methyl t-butyl ether (MtBE)	3.91	73	9249	0.98236	ppb	# 88
21) Trans-1,2-DCE	3.87	96	2998	0.89083	ppb	94
22) Diisopropyl Ether	4.70	59	1992	0.94474	ppb	97
23) 1,1-DCA	4.51	63	8283	0.92818	ppb	# 90
24) Vinyl Acetate	4.70	87	4513	0.89537	ppb	98
25) Ethyl tert Butyl Ether	5.21	59	11816	1.00382	ppb	97
26) MEK (2-Butanone)	5.39	43	2819	1.59789	ppb	87
27) Cis-1,2-DCE	5.33	96	5504	0.96281	ppb	89
28) 2,2-Dichloropropane	5.32	77	3790	2.30222	ppb	89
29) Chloroform	5.76	83	10664	0.96229	ppb	98
30) Bromochloromethane	5.62	128	2677	0.96179	ppb	97
32) 1,1,1-TCA	5.96	97	5956	0.89324	ppb	87
33) Cyclohexane	6.03	41	1722	0.95160	ppb	# 36
34) 1,1-Dichloropropene	6.17	75	4561	0.94189	ppb	89
35) 2,2,4-Trimethylpentane	6.56	57	6445	0.92606	ppb	83
37) Carbon Tetrachloride	6.16	117	5937	0.95000	ppb	98
38) Tert Amyl Methyl Ether	6.59	73	12173	0.97161	ppb	# 90
39) 1,2-DCA	6.42	62	7205	0.99143	ppb	93
40) Benzene	6.40	78	18340	0.92399	ppb	97
41) TCE	7.15	95	5307	0.98367	ppb	92
42) 2-Pentanone	7.36	43	207854	48.90262	ppb	98
43) 1,2-Dichloropropane	7.37	63	6147	0.94914	ppb	99
44) Bromodichloromethane	7.68	83	8505	0.94929	ppb	94
45) Methyl Cyclohexane	7.36	83	3516	0.91277	ppb	# 49

(#) = qualifier out of range (m) = manual integration
 0719T07.D TALLW.M Fri Jul 20 08:29:33 2012

Data File : M:\THOR\DATA\T120719\0719T07.D
 Acq On : 19 Jul 12 11:57
 Sample : 1.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	3434	0.97477	ppb	85
47) 2-Chloroethyl vinyl ether	8.00	106	40	-0.85622	ppb	100
48) MIBK (methyl isobutyl ket	8.33	43	2821	0.92287	ppb	94
49) 1-Bromo-2-chloroethane	7.99	63	3886	0.86240	ppb	98
50) Cis-1,3-Dichloropropene	8.16	75	7974	0.89940	ppb	98
51) Toluene	8.50	91	22594	0.96478	ppb	99
52) Trans-1,3-Dichloropropene	8.72	75	7072	0.90466	ppb	90
53) 1,1,2-TCA	8.90	83	5160	0.98960	ppb	93
54) 2-Hexanone	9.18	43	3205	0.91433	ppb	# 88
57) 1,2-EDB	9.40	107	4882	0.90064	ppb	93
58) Tetrachloroethene	9.06	166	5902	0.96294	ppb	92
59) 1-Chlorohexane	9.90	91	7815	1.07120	ppb	90
60) 1,1,1,2-Tetrachloroethane	9.99	131	6942	0.96947	ppb	97
61) m&p-Xylene	10.15	106	20562	1.84077	ppb	98
62) o-Xylene	10.54	106	9784	0.84671	ppb	82
63) Styrene	10.55	104	17077	0.86980	ppb	96
65) 1,3-Dichloropropane	9.07	76	8849	0.93108	ppb	100
66) Dibromochloromethane	9.29	129	6965	0.97340	ppb	81
67) Chlorobenzene	9.90	112	18604	0.99534	ppb	97
68) Ethylbenzene	10.03	91	26613	0.90552	ppb	97
69) Bromoform	10.71	173	4560	0.93074	ppb	93
71) Isopropylbenzene	10.91	105	24857	0.93263	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	7142	0.96570	ppb	99
73) 1,2,3-Trichloropropane	11.22	110	1807	0.86086	ppb	97
74) t-1,4-Dichloro-2-Butene	11.25	53	1294	0.92115	ppb	84
75) Bromobenzene	11.19	156	8191	0.93226	ppb	95
76) n-Propylbenzene	11.32	91	31739	0.92491	ppb	98
77) 4-Ethyltoluene	11.43	105	26890	0.91247	ppb	98
78) 2-Chlorotoluene	11.39	91	22924	0.93681	ppb	96
79) 1,3,5-Trimethylbenzene	11.49	105	22226	0.90982	ppb	99
80) 4-Chlorotoluene	11.50	91	22548	0.93091	ppb	98
81) Tert-Butylbenzene	11.82	119	20536	0.91763	ppb	94
82) 1,2,4-Trimethylbenzene	11.86	105	23690	0.93716	ppb	93
83) Sec-Butylbenzene	12.04	105	27557	0.92232	ppb	97
84) p-Isopropyltoluene	12.19	119	22802	0.90322	ppb	99
85) Benzyl Chloride	12.35	91	7361	0.97575	ppb	95
86) 1,3-DCB	12.13	146	15833	0.95287	ppb	97
87) 1,4-DCB	12.22	146	17403	1.00007	ppb	95
88) n-Butylbenzene	12.59	91	21527	0.95135	ppb	90
89) 1,2-DCB	12.59	146	15870	0.98542	ppb	99
90) Hexachloroethane	12.85	117	4302	0.93008	ppb	87
91) 1,2-Dibromo-3-chloropropan	13.35	157	1401	1.01116	ppb	85
92) 1,2,4-Trichlorobenzene	14.20	180	6659	0.90204	ppb	90
93) Hexachlorobutadiene	14.39	223	3269	1.06005	ppb	89
94) Naphthalene	14.43	128	16948	0.82221	ppb	94
95) 1,2,3-Trichlorobenzene	14.68	180	10365	0.98545	ppb	94

Quantitation Report

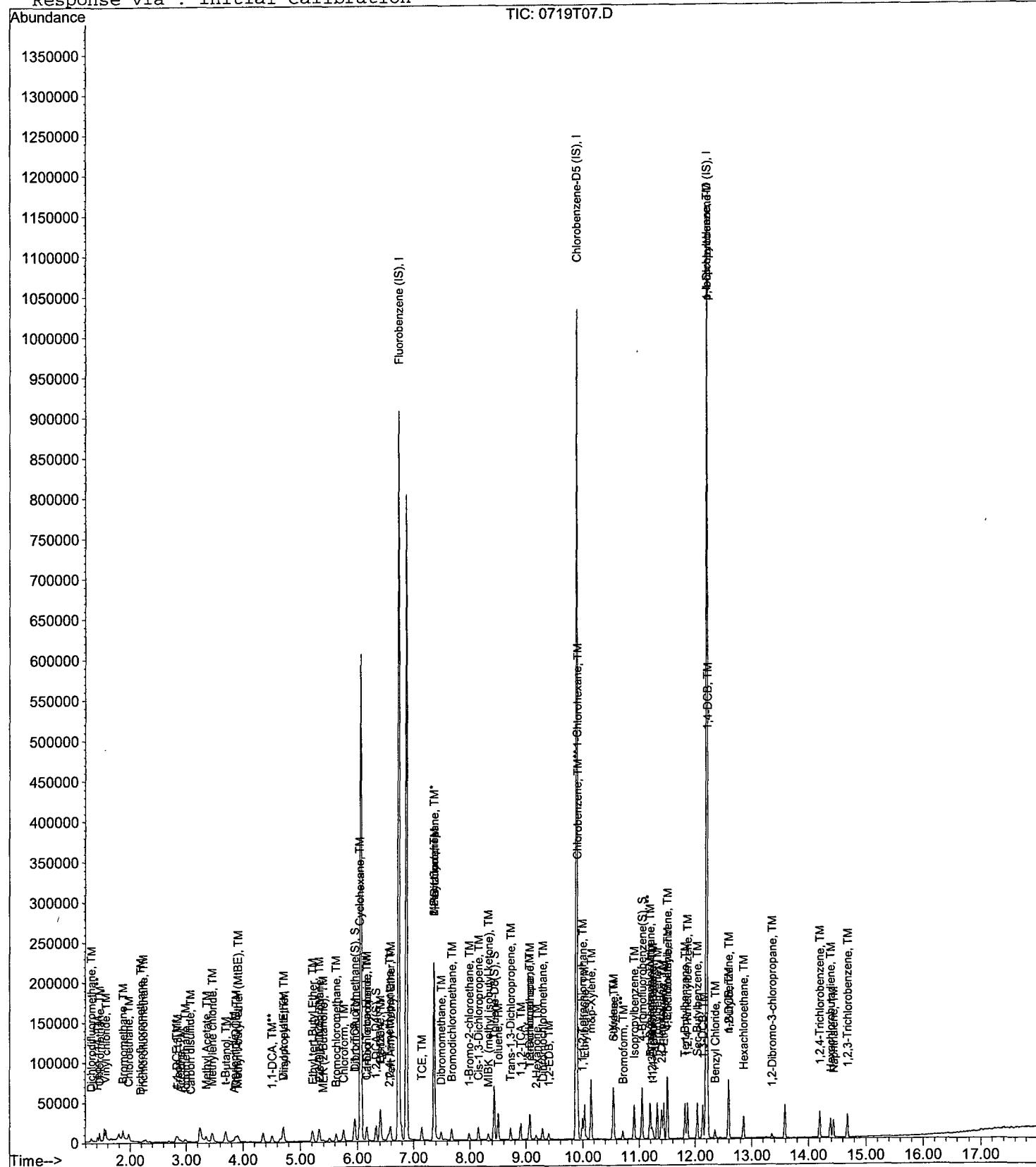
Data File : M:\THOR\DATA\T120719\0719T07.D
 Acq On : 19 Jul 12 11:57
 Sample : 1.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 08:28:10 2012
 Response via : Initial Calibration



Data File : M:\THOR\DATA\T120719\0719T08.D Vial: 8
 Acq On : 19 Jul 12 12:25 Operator: DG, RS, HW, ARS, SV
 Sample : 2.0ug/L Vol Std 07-19-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multipllr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	436352	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	342912	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	204992	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
31) Dibromofluoromethane(S)	5.95	111	26923	3.94284	ppb	0.00
Spiked Amount 29.744			Recovery	=	13.256%	
36) 1,2-DCA-D4(S)	6.33	65	24230	3.81822	ppb	0.00
Spiked Amount 29.083			Recovery	=	13.128%	
56) Toluene-D8(S)	8.43	98	81925	4.04116	ppb	0.00
Spiked Amount 30.231			Recovery	=	13.367%	
64) 4-Bromofluorobenzene(S)	11.05	95	38521	4.01794	ppb	0.00
Spiked Amount 28.321			Recovery	=	14.187%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.30	85	4734	2.08028	ppb	100
3) Freon 114	1.41	85	6187	1.71327	ppb	100
4) Chloromethane	1.45	50	13155	2.01503	ppb	94
5) Vinyl chloride	1.56	62	17805	2.06457	ppb	100
6) Bromomethane	1.87	94	11262	2.04311	ppb	88
7) Chloroethane	1.97	64	9122	1.83649	ppb	94
8) Dichlorofluoromethane	2.18	67	573	2.01540	ppb	91
9) Trichlorofluoromethane	2.24	101	3492	1.95899	ppb	95
11) Acetone	2.90	43	5124	2.37170	ppb	95
12) Freon-113	2.86	101	7906	2.20502	ppb	91
13) 1,1-DCE	2.82	61	9495	1.97338	ppb	91
14) t-Butanol	3.69	59	9378	66.27585	ppb	96
15) Methyl Acetate	3.34	43	16454	3.02813	ppb	94
16) Iodomethane	2.98	142	8446	1.94071	ppb	98
17) Acrylonitrile	3.81	52	2540	1.84311	ppb	82
18) Methylene chloride	3.45	84	4510	1.88941	ppb	93
19) Carbon disulfide	3.06	76	1111	1.57628	ppb	# 87
20) Methyl t-butyl ether (MtBE	3.90	73	18413	1.98209	ppb	93
21) Trans-1,2-DCE	3.86	96	6430	1.93640	ppb	99
22) Diisopropyl Ether	4.70	59	4063	1.95295	ppb	91
23) 1,1-DCA	4.51	63	17292	1.96386	ppb	95
24) Vinyl Acetate	4.70	87	9481	1.90640	ppb	92
25) Ethyl tert Butyl Ether	5.21	59	22892	1.97102	ppb	94
26) MEK (2-Butanone)	5.39	43	4855	2.53560	ppb	91
27) Cis-1,2-DCE	5.33	96	10866	1.92643	ppb	91
28) 2,2-Dichloropropane	5.32	77	7282	4.48311	ppb	100
29) Chloroform	5.76	83	21749	1.98906	ppb	98
30) Bromochloromethane	5.62	128	5699	2.07515	ppb	93
32) 1,1,1-TCA	5.96	97	13045	1.98279	ppb	100
33) Cyclohexane	6.04	41	3794	2.12491	ppb	# 44
34) 1,1-Dichloropropene	6.17	75	9305	1.94750	ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	13935	2.02928	ppb	93
37) Carbon Tetrachloride	6.16	117	12292	1.99343	ppb	89
38) Tert Amyl Methyl Ether	6.59	73	24026	1.94355	ppb	97
39) 1,2-DCA	6.42	62	14684	2.04783	ppb	98
40) Benzene	6.40	78	38526	1.96717	ppb	99
41) TCE	7.14	95	10599	1.99108	ppb	93
42) 2-Pentanone	7.36	43	304878	72.69773	ppb	99
43) 1,2-Dichloropropane	7.37	63	13169	2.06083	ppb	98
44) Bromodichloromethane	7.68	83	16800	1.90044	ppb	95
45) Methyl Cyclohexane	7.36	83	8243	2.16879	ppb	82

(#) = qualifier out of range (m) = manual integration
 0719T08.D TALLW.M Fri Jul 20 08:29:36 2012

Data File : M:\THOR\DATA\T120719\0719T08.D
 Acq On : 19 Jul 12 12:25
 Sample : 2.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	6864	1.97470	ppb	89
47) 2-Chloroethyl vinyl ether	7.99	106	173	0.37233	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	5923	1.96382	ppb	# 93
49) 1-Bromo-2-chloroethane	7.99	63	8723	1.96198	ppb	97
50) Cis-1,3-Dichloropropene	8.15	75	16667	1.90525	ppb	95
51) Toluene	8.50	91	45119	1.95261	ppb	99
52) Trans-1,3-Dichloropropene	8.73	75	13333	1.72859	ppb	98
53) 1,1,2-TCA	8.90	83	10044	1.95226	ppb	94
54) 2-Hexanone	9.18	43	6966	2.01409	ppb	94
57) 1,2-EDB	9.40	107	9962	1.93762	ppb	99
58) Tetrachloroethene	9.06	166	12075	2.07710	ppb	92
59) 1-Chlorohexane	9.90	91	15043	2.17393	ppb	99
60) 1,1,1,2-Tetrachloroethane	9.99	131	13314	1.96031	ppb	97
61) m&p-Xylene	10.14	106	41306	3.89866	ppb	100
62) o-Xylene	10.54	106	21351	1.94808	ppb	92
63) Styrene	10.55	104	35671	1.91554	ppb	97
65) 1,3-Dichloropropane	9.07	76	18670	2.07113	ppb	96
66) Dibromochloromethane	9.29	129	13106	1.93111	ppb	100
67) Chlorobenzene	9.90	112	36362	2.05107	ppb	99
68) Ethylbenzene	10.03	91	55504	1.99112	ppb	95
69) Bromoform	10.71	173	9006	1.93804	ppb	97
71) Isopropylbenzene	10.91	105	50633	1.88907	ppb	99
72) 1,1,2,2-Tetrachloroethane	11.19	83	15025	2.02018	ppb	91
73) 1,2,3-Trichloropropane	11.23	110	4415	2.09150	ppb	94
74) t-1,4-Dichloro-2-Butene	11.24	53	2613	1.84963	ppb	81
75) Bromobenzene	11.19	156	17628	1.99506	ppb	97
76) n-Propylbenzene	11.32	91	67771	1.96381	ppb	98
77) 4-Ethyltoluene	11.43	105	56841	1.91798	ppb	98
78) 2-Chlorotoluene	11.39	91	48533	1.97220	ppb	97
79) 1,3,5-Trimethylbenzene	11.50	105	47598	1.93748	ppb	100
80) 4-Chlorotoluene	11.50	91	46827	1.92242	ppb	99
81) Tert-Butylbenzene	11.82	119	43022	1.91160	ppb	96
82) 1,2,4-Trimethylbenzene	11.86	105	48500	1.90785	ppb	99
83) Sec-Butylbenzene	12.04	105	58577	1.94952	ppb	97
84) p-Isopropyltoluene	12.19	119	49518	1.95046	ppb	98
85) Benzyl Chloride	12.35	91	13945	1.83811	ppb	97
86) 1,3-DCB	12.14	146	33447	2.00162	ppb	99
87) 1,4-DCB	12.22	146	33507	1.91467	ppb	96
88) n-Butylbenzene	12.59	91	43428	1.90843	ppb	97
89) 1,2-DCB	12.59	146	30854	1.90506	ppb	96
90) Hexachloroethane	12.85	117	8452	1.81703	ppb	87
91) 1,2-Dibromo-3-chloropropan	13.35	157	2457	1.76335	ppb	96
92) 1,2,4-Trichlorobenzene	14.19	180	13747	1.85173	ppb	99
93) Hexachlorobutadiene	14.38	223	5924	1.91020	ppb	98
94) Naphthalene	14.43	128	37126	1.79099	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	19978	1.88873	ppb	98

Quantitation Report

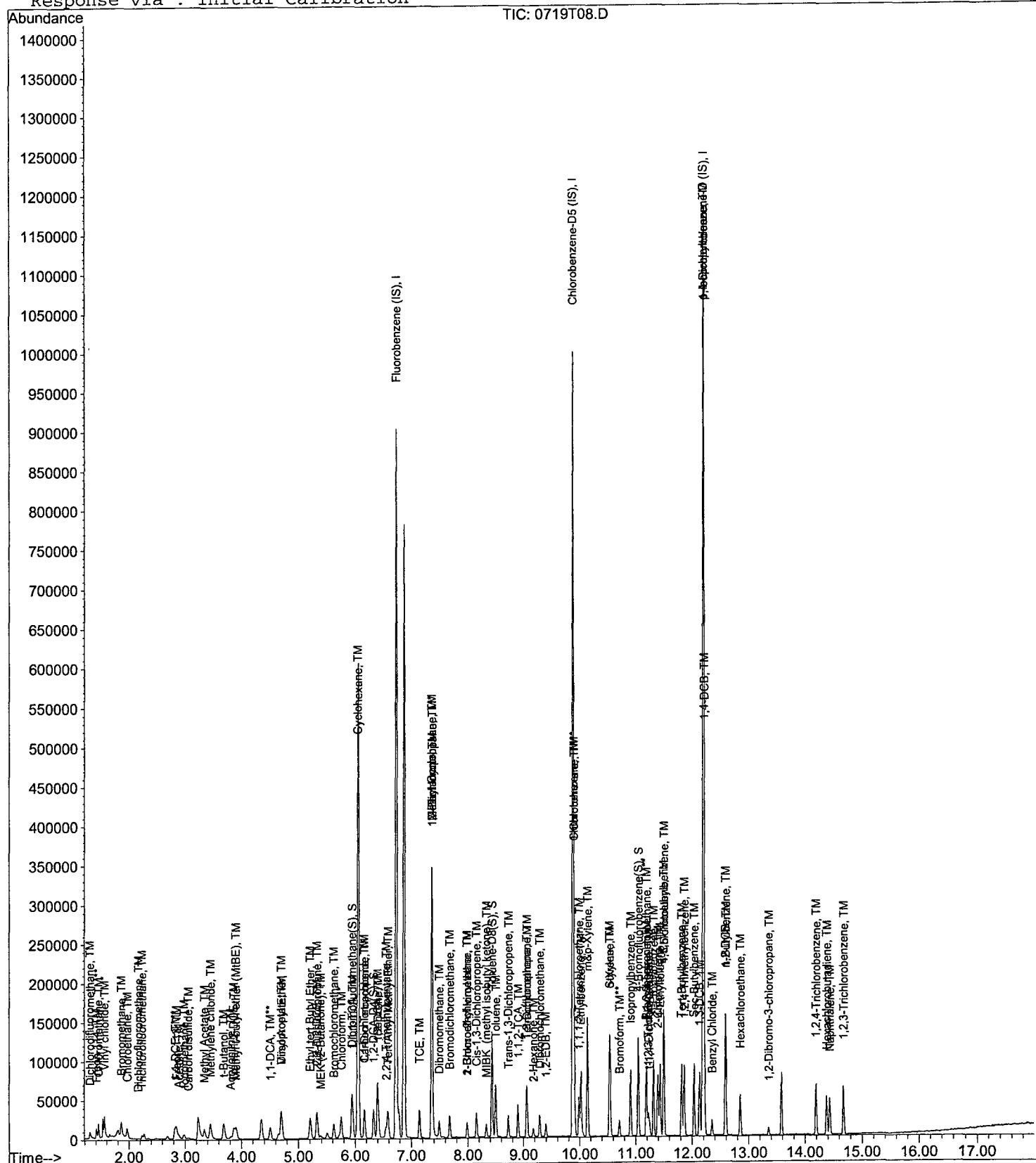
Data File : M:\THOR\DATA\T120719\0719T08.D
Acq On : 19 Jul 12 12:25
Sample : 2.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T09.D
 Acq On : 19 Jul 12 12:53
 Sample : 5.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	435456	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	363264	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	212352	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
31) Dibromofluoromethane(S)	5.95	111	63312	9.29103	ppb	0.00
Spiked Amount 29.744			Recovery	=	31.237%	
36) 1,2-DCA-D4(S)	6.33	65	60027	9.47865	ppb	0.00
Spiked Amount 29.083			Recovery	=	32.593%	
56) Toluene-D8(S)	8.43	98	196082	9.13037	ppb	0.00
Spiked Amount 30.231			Recovery	=	30.201%	
64) 4-Bromofluorobenzene(S)	11.05	95	92855	9.14264	ppb	0.00
Spiked Amount 28.321			Recovery	=	32.283%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.30	85	11045	4.86354	ppb	99
3) Freon 114	1.41	85	14571	4.56836	ppb	98
4) Chloromethane	1.45	50	31396	4.81900	ppb	99
5) Vinyl chloride	1.56	62	45723	5.31271	ppb	98
6) Bromomethane	1.87	94	30238	5.49696	ppb	94
7) Chloroethane	1.97	64	25795	5.20387	ppb	97
8) Dichlorofluoromethane	2.17	67	1323	4.56544	ppb	86
9) Trichlorofluoromethane	2.24	101	10436	5.86657	ppb	95
11) Acetone	2.89	43	8768	4.96901	ppb	95
12) Freon-113	2.85	101	19563	5.46744	ppb	89
13) 1,1-DCE	2.82	61	23901	4.97764	ppb	92
14) t-Butanol	3.68	59	13164	93.22355	ppb	98
15) Methyl Acetate	3.34	43	24407	5.20751	ppb	97
16) Iodomethane	2.98	142	22834	5.25755	ppb	94
17) Acrylonitrile	3.81	52	8122	5.90572	ppb	96
18) Methylene chloride	3.45	84	10146	5.44308	ppb	94
19) Carbon disulfide	3.06	76	2620	4.92947	ppb	96
20) Methyl t-butyl ether (MtBE)	3.90	73	49307	5.31863	ppb	94
21) Trans-1,2-DCE	3.86	96	16955	5.11653	ppb	95
22) Diisopropyl Ether	4.70	59	11471	5.52507	ppb	# 86
23) 1,1-DCA	4.51	63	47950	5.45691	ppb	98
24) Vinyl Acetate	4.70	87	27238	5.48818	ppb	89
25) Ethyl tert Butyl Ether	5.21	59	66131	5.70565	ppb	100
26) MEK (2-Butanone)	5.38	43	9697	4.73433	ppb	96
27) Cis-1,2-DCE	5.32	96	29969	5.32411	ppb	99
28) 2,2-Dichloropropane	5.32	77	18795	11.59481	ppb	95
29) Chloroform	5.75	83	57887	5.30497	ppb	100
30) Bromochloromethane	5.62	128	15767	5.75298	ppb	100
32) 1,1,1-TCA	5.96	97	33756	5.14134	ppb	98
33) Cyclohexane	6.03	41	8909	4.99995	ppb	92
34) 1,1-Dichloropropene	6.17	75	25809	5.41283	ppb	95
35) 2,2,4-Trimethylpentane	6.55	57	36348	5.30407	ppb	98
37) Carbon Tetrachloride	6.16	117	32482	5.27854	ppb	92
38) Tert Amyl Methyl Ether	6.59	73	67201	5.44732	ppb	99
39) 1,2-DCA	6.42	62	38420	5.36908	ppb	99
40) Benzene	6.40	78	101885	5.21303	ppb	99
41) TCE	7.14	95	28157	5.30032	ppb	95
42) 2-Pentanone	7.36	43	425511	101.67128	ppb	99
43) 1,2-Dichloropropane	7.37	63	34984	5.48594	ppb	98
44) Bromodichloromethane	7.68	83	48662	5.51605	ppb	97
45) Methyl Cyclohexane	7.36	83	19188	5.05888	ppb	83

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

0719T09.D TALLW.M Fri Jul 20 08:29:38 2012

Data File : M:\THOR\DATA\T120719\0719T09.D
 Acq On : 19 Jul 12 12:53
 Sample : 5.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	18456	5.32052	ppb	99
47) 2-Chloroethyl vinyl ether	7.98	106	691	5.15121	ppb	100
48) MIBK (methyl isobutyl ketone)	8.33	43	14880	4.94374	ppb	94
49) 1-Bromo-2-chloroethane	7.99	63	24760	5.58047	ppb	100
50) Cis-1,3-Dichloropropene	8.15	75	45589	5.22214	ppb	96
51) Toluene	8.50	91	123530	5.35699	ppb	98
52) Trans-1,3-Dichloropropene	8.72	75	40971	5.32272	ppb	95
53) 1,1,2-TCA	8.90	83	27996	5.45280	ppb	95
54) 2-Hexanone	9.18	43	17051	4.94013	ppb	99
57) 1,2-EDB	9.40	107	29304	5.38033	ppb	97
58) Tetrachloroethene	9.05	166	31143	5.05699	ppb	95
59) 1-Chlorohexane	9.90	91	36955	5.04133	ppb	99
60) 1,1,1,2-Tetrachloroethane	9.99	131	37984	5.27931	ppb	95
61) m,p-Xylene	10.14	106	123042	10.96265	ppb	99
62) o-Xylene	10.54	106	62129	5.35109	ppb	94
63) Styrene	10.55	104	107306	5.43951	ppb	99
65) 1,3-Dichloropropane	9.07	76	50296	5.26692	ppb	99
66) Dibromochloromethane	9.29	129	37767	5.25303	ppb	94
67) Chlorobenzene	9.90	112	98026	5.21957	ppb	97
68) Ethylbenzene	10.03	91	155624	5.26999	ppb	98
69) Bromoform	10.71	173	26416	5.36609	ppb	93
71) Isopropylbenzene	10.91	105	148182	5.33691	ppb	99
72) 1,1,2,2-Tetrachloroethane	11.19	83	42420	5.50589	ppb	98
73) 1,2,3-Trichloropropane	11.23	110	11840	5.41452	ppb	94
74) t-1,4-Dichloro-2-Butene	11.25	53	8302	5.67296	ppb	93
75) Bromobenzene	11.19	156	49040	5.35777	ppb	99
76) n-Propylbenzene	11.32	91	191768	5.36430	ppb	100
77) 4-Ethyltoluene	11.43	105	165084	5.37733	ppb	97
78) 2-Chlorotoluene	11.39	91	136861	5.36875	ppb	100
79) 1,3,5-Trimethylbenzene	11.50	105	139561	5.48395	ppb	99
80) 4-Chlorotoluene	11.50	91	140582	5.57138	ppb	97
81) Tert-Butylbenzene	11.82	119	124728	5.34996	ppb	98
82) 1,2,4-Trimethylbenzene	11.86	105	141302	5.36577	ppb	99
83) Sec-Butylbenzene	12.04	105	172196	5.53229	ppb	99
84) p-Isopropyltoluene	12.19	119	144604	5.49839	ppb	99
85) Benzyl Chloride	12.35	91	41610	5.29458	ppb	97
86) 1,3-DCB	12.13	146	93935	5.42665	ppb	99
87) 1,4-DCB	12.22	146	95715	5.27981	ppb	96
88) n-Butylbenzene	12.59	91	125282	5.31467	ppb	98
89) 1,2-DCB	12.59	146	90224	5.37775	ppb	98
90) Hexachloroethane	12.86	117	24699	5.12581	ppb	98
91) 1,2-Dibromo-3-chloropropan	13.35	157	8054	5.57989	ppb	94
92) 1,2,4-Trichlorobenzene	14.20	180	41456	5.39062	ppb	97
93) Hexachlorobutadiene	14.38	223	17021	5.29823	ppb	85
94) Naphthalene	14.43	128	115311	5.36991	ppb	98
95) 1,2,3-Trichlorobenzene	14.68	180	60463	5.51807	ppb	98

Quantitation Report

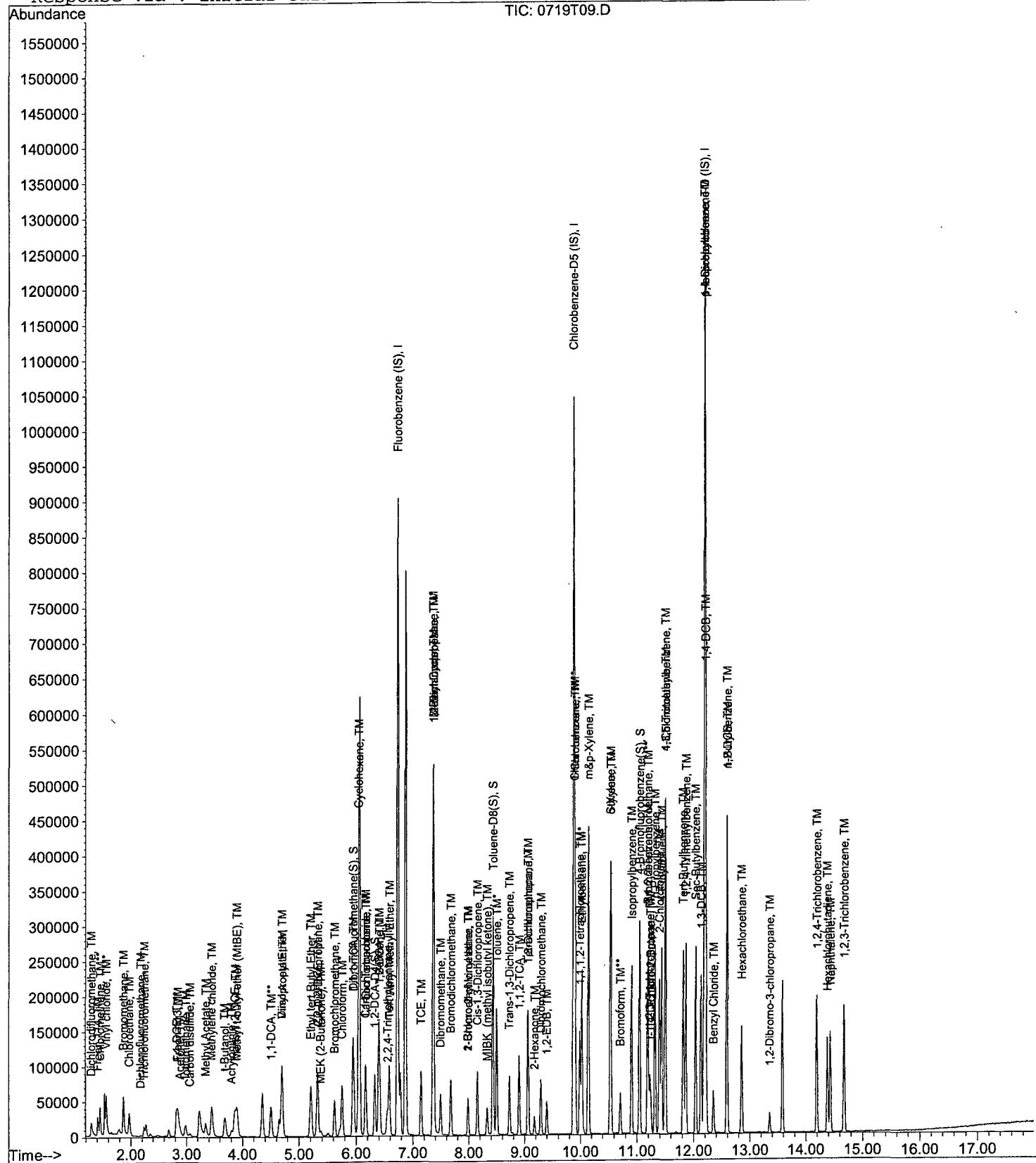
Data File : M:\THOR\DATA\T120719\0719T09.D
 Acq On : 19 Jul 12 12:53
 Sample : 5.0ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 08:28:10 2012
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T10.D
 Acq On : 19 Jul 12 13:20
 Sample : 10ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 10
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.74	96	461760	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	382656	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	222464	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.95	111	168520	23.32155	ppb	0.00
Spiked Amount	29.744		Recovery	=	78.409%	
36) 1,2-DCA-D4(S)	6.33	65	155567	23.16569	ppb	0.00
Spiked Amount	29.083		Recovery	=	79.654%	
56) Toluene-D8(S)	8.43	98	509225	22.50992	ppb	0.00
Spiked Amount	30.231		Recovery	=	74.460%	
64) 4-Bromofluorobenzene(S)	11.05	95	243014	22.71494	ppb	0.00
Spiked Amount	28.321		Recovery	=	80.206%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	1.30	85	20592	8.55092	ppb	100
3) Freon 114	1.41	85	29943	9.21523	ppb	100
4) Chloromethane	1.46	50	55224	7.99352	ppb	100
5) Vinyl chloride	1.57	62	88092	9.65263	ppb	100
6) Bromomethane	1.87	94	56164	9.62843	ppb	100
7) Chloroethane	1.97	64	50219	9.55403	ppb	100
8) Dichlorofluoromethane	2.18	67	3626	10.26166	ppb	100
9) Trichlorofluoromethane	2.24	101	20310	10.76684	ppb	100
11) Acetone	2.89	43	15999	9.46044	ppb	100
12) Freon-113	2.86	101	40039	10.55261	ppb	100
13) 1,1-DCE	2.83	61	49796	9.77980	ppb	100
14) t-Butanol	3.69	59	17712	118.28599	ppb	100
15) Methyl Acetate	3.34	43	43037	9.62218	ppb	100
16) Iodomethane	2.99	142	44928	9.75544	ppb	100
17) Acrylonitrile	3.81	52	14890	10.21016	ppb	100
18) Methylene chloride	3.45	84	17800	9.62295	ppb	100
19) Carbon disulfide	3.07	76	4992	9.56146	ppb	100
20) Methyl t-butyl ether (MtBE)	3.91	73	96445	9.81068	ppb	100
21) Trans-1,2-DCE	3.87	96	32035	9.11655	ppb	100
22) Diisopropyl Ether	4.71	59	22379	10.16494	ppb	100
23) 1,1-DCA	4.51	63	93949	10.08273	ppb	100
24) Vinyl Acetate	4.70	87	51479	9.78163	ppb	100
25) Ethyl tert Butyl Ether	5.21	59	120470	9.80182	ppb	100
26) MEK (2-Butanone)	5.38	43	20960	9.29722	ppb	100
27) Cis-1,2-DCE	5.33	96	58803	9.85150	ppb	100
28) 2,2-Dichloropropane	5.32	77	37619	21.88550	ppb	100
29) Chloroform	5.76	83	111509	9.63695	ppb	100
30) Bromochloromethane	5.62	128	29461	10.13722	ppb	100
32) 1,1,1-TCA	5.96	97	68253	9.80337	ppb	100
33) Cyclohexane	6.03	41	18945	10.02673	ppb	100
34) 1,1-Dichloropropene	6.17	75	50092	9.90716	ppb	100
35) 2,2,4-Trimethylpentane	6.55	57	72402	9.96339	ppb	100
37) Carbon Tetrachloride	6.17	117	62675	9.60491	ppb	100
38) Tert Amyl Methyl Ether	6.59	73	130972	10.01183	ppb	100
39) 1,2-DCA	6.42	62	74124	9.76853	ppb	100
40) Benzene	6.40	78	198603	9.58283	ppb	100
41) TCE	7.15	95	55341	9.82406	ppb	100
42) 2-Pentanone	7.36	43	524739	118.23847	ppb	100
43) 1,2-Dichloropropane	7.37	63	66363	9.81377	ppb	100
44) Bromodichloromethane	7.68	83	91332	9.76313	ppb	100
45) Methyl Cyclohexane	7.36	83	41159	10.23335	ppb	100

(#) = qualifier out of range (m) = manual integration
 0719T10.D TALLW.M Fri Jul 20 08:29:41 2012

Data File : M:\THOR\DATA\T120719\0719T10.D
 Acq On : 19 Jul 12 13:20
 Sample : 10ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 10
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	35941	9.77089	ppb	100
47) 2-Chloroethyl vinyl ether	7.99	106	1370	10.69163	ppb	100
48) MIBK (methyl isobutyl ket	8.33	43	29904	9.36937	ppb	100
49) 1-Bromo-2-chloroethane	7.99	63	44656	9.49135	ppb	100
50) Cis-1,3-Dichloropropene	8.15	75	90066	9.72920	ppb	100
51) Toluene	8.50	91	242745	9.92720	ppb	100
52) Trans-1,3-Dichloropropene	8.73	75	78273	9.58952	ppb	100
53) 1,1,2-TCA	8.90	83	52576	9.65694	ppb	100
54) 2-Hexanone	9.18	43	34789	9.50513	ppb	100
57) 1,2-EDB	9.40	107	55383	9.65321	ppb	100
58) Tetrachloroethene	9.06	166	63218	9.74509	ppb	100
59) 1-Chlorohexane	9.90	91	75160	9.73357	ppb	100
60) 1,1,1,2-Tetrachloroethane	9.99	131	74500	9.82985	ppb	100
61) m&p-Xylene	10.15	106	235221	19.89538	ppb	100
62) o-Xylene	10.54	106	123202	10.07348	ppb	100
63) Styrene	10.55	104	207845	10.00206	ppb	100
65) 1,3-Dichloropropane	9.07	76	97910	9.73339	ppb	100
66) Dibromochloromethane	9.29	129	73026	9.64248	ppb	100
67) Chlorobenzene	9.90	112	189743	9.59121	ppb	100
68) Ethylbenzene	10.03	91	301792	9.70186	ppb	100
69) Bromoform	10.71	173	49779	9.59955	ppb	100
71) Isopropylbenzene	10.91	105	292683	10.06209	ppb	100
72) 1,1,2,2-Tetrachloroethane	11.19	83	76457	9.47264	ppb	100
73) 1,2,3-Trichloropropane	11.23	110	21819	9.52445	ppb	100
74) t-1,4-Dichloro-2-Butene	11.25	53	15421	10.05857	ppb	100
75) Bromobenzene	11.19	156	95023	9.90967	ppb	100
76) n-Propylbenzene	11.32	91	375107	10.01587	ppb	100
77) 4-Ethyltoluene	11.43	105	333095	10.35682	ppb	100
78) 2-Chlorotoluene	11.39	91	267654	10.02222	ppb	100
79) 1,3,5-Trimethylbenzene	11.50	105	275791	10.34442	ppb	100
80) 4-Chlorotoluene	11.50	91	267918	10.13519	ppb	100
81) Tert-Butylbenzene	11.82	119	243344	9.96331	ppb	100
82) 1,2,4-Trimethylbenzene	11.86	105	283593	10.27959	ppb	100
83) Sec-Butylbenzene	12.04	105	333541	10.22887	ppb	100
84) p-Isopropyltoluene	12.19	119	283601	10.29343	ppb	100
85) Benzyl Chloride	12.35	91	77761	9.44478	ppb	100
86) 1,3-DCB	12.13	146	180339	9.94467	ppb	100
87) 1,4-DCB	12.22	146	184984	9.74023	ppb	100
88) n-Butylbenzene	12.59	91	252451	10.22261	ppb	100
89) 1,2-DCB	12.59	146	175322	9.97497	ppb	100
90) Hexachloroethane	12.86	117	47057	9.32190	ppb	100
91) 1,2-Dibromo-3-chloropropan	13.35	157	15219	10.06460	ppb	100
92) 1,2,4-Trichlorobenzene	14.20	180	81368	10.09953	ppb	100
93) Hexachlorobutadiene	14.38	223	32894	9.77369	ppb	100
94) Naphthalene	14.43	128	230968	10.26703	ppb	100
95) 1,2,3-Trichlorobenzene	14.67	180	116755	10.17114	ppb	100

Quantitation Report

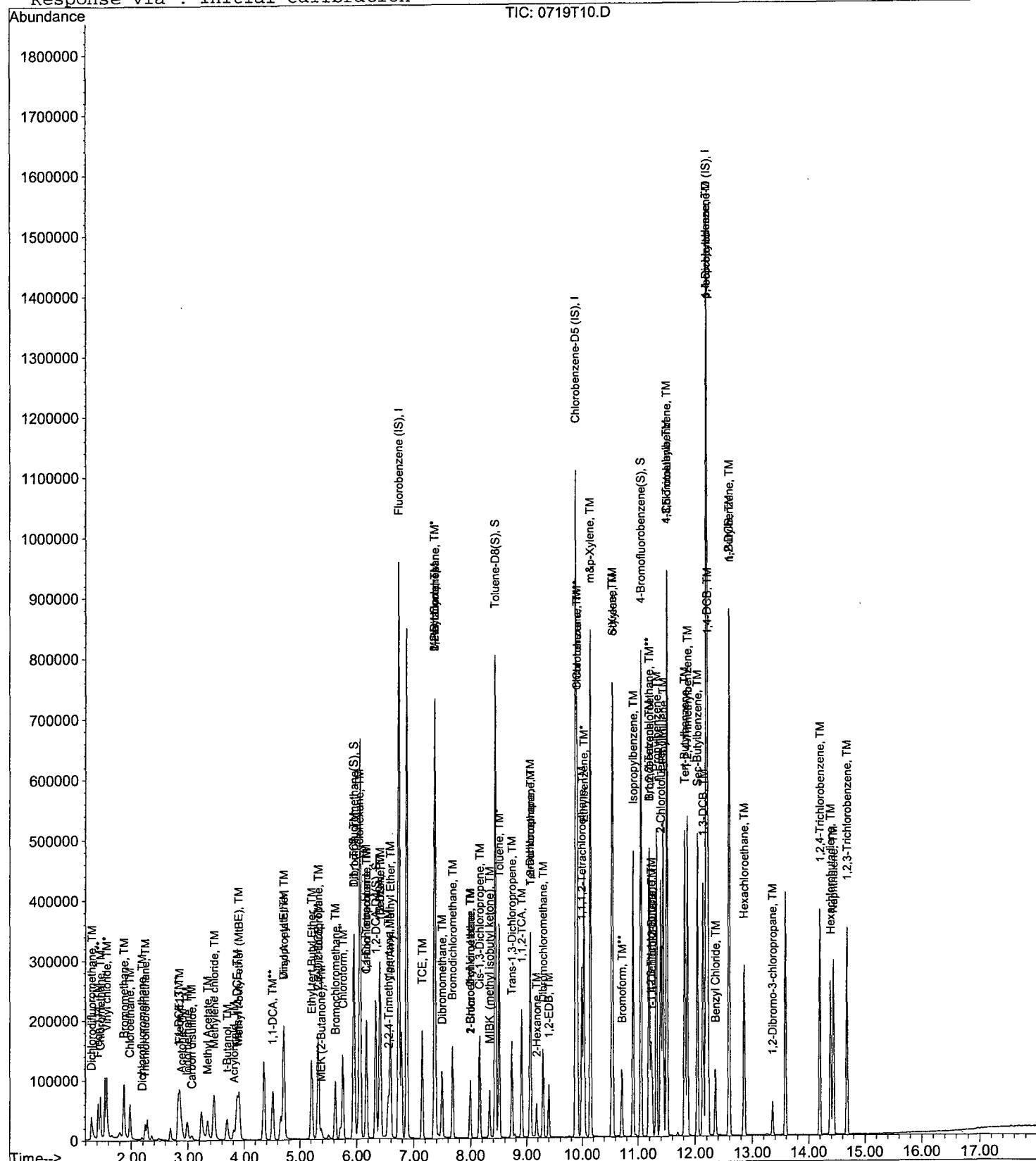
Data File : M:\THOR\DATA\T120719\0719T10.D
Acq On : 19 Jul 12 13:20
Sample : 10ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 10
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T11.D
 Acq On : 19 Jul 12 13:48
 Sample : 20ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 11
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	450944	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	363136	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216512	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.95	111	266433	37.75615	ppb	0.00
Spiked Amount	29.744		Recovery	= 126.937%		
36) 1,2-DCA-D4(S)	6.33	65	245856	37.48887	ppb	0.00
Spiked Amount	29.083		Recovery	= 128.902%		
56) Toluene-D8(S)	8.43	98	830396	38.68020	ppb	0.00
Spiked Amount	30.231		Recovery	= 127.949%		
64) 4-Bromofluorobenzene(S)	11.05	95	396858	39.08900	ppb	0.00
Spiked Amount	28.321		Recovery	= 138.021%		

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.30	85	46664	19.84222	ppb	93
3) Freon 114	1.41	85	63081	20.32626	ppb	89
4) Chloromethane	1.45	50	112002	16.60083	ppb	96
5) Vinyl chloride	1.56	62	179429	20.13240	ppb	98
6) Bromomethane	1.86	94	105711	18.55715	ppb	99
7) Chloroethane	1.97	64	103142	20.09314	ppb	95
8) Dichlorofluoromethane	2.18	67	9181	20.87155	ppb	97
9) Trichlorofluoromethane	2.24	101	47356	25.70675	ppb	96
11) Acetone	2.89	43	33405	21.66341	ppb	94
12) Freon-113	2.85	101	75190	20.29226	ppb	97
13) 1,1-DCE	2.82	61	95955	19.29731	ppb	99
14) t-Butanol	3.69	59	24824	169.75836	ppb	100
15) Methyl Acetate	3.34	43	81096	19.91643	ppb	98
16) Iodomethane	2.98	142	86855	19.31159	ppb	99
17) Acrylonitrile	3.81	52	30307	21.28014	ppb	98
18) Methylene chloride	3.45	84	34488	20.02062	ppb	98
19) Carbon disulfide	3.06	76	10542	21.70326	ppb	# 88
20) Methyl t-butyl ether (MtBE)	3.90	73	182893	19.05066	ppb	99
21) Trans-1,2-DCE	3.87	96	64188	18.70481	ppb	97
22) Diisopropyl Ether	4.70	59	42535	19.78355	ppb	# 88
23) 1,1-DCA	4.51	63	178878	19.65788	ppb	98
24) Vinyl Acetate	4.70	87	100156	19.48731	ppb	96
25) Ethyl tert Butyl Ether	5.21	59	233058	19.41715	ppb	97
26) MEK (2-Butanone)	5.37	43	43408	19.33524	ppb	88
27) Cis-1,2-DCE	5.33	96	115419	19.80041	ppb	97
28) 2,2-Dichloropropane	5.32	77	71286	42.46656	ppb	98
29) Chloroform	5.76	83	216322	19.14362	ppb	99
30) Bromochloromethane	5.62	128	55667	19.61385	ppb	91
32) 1,1,1-TCA	5.96	97	130522	19.19690	ppb	97
33) Cyclohexane	6.03	41	35439	19.20613	ppb	98
34) 1,1-Dichloropropene	6.17	75	97918	19.83066	ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	139234	19.61985	ppb	96
37) Carbon Tetrachloride	6.17	117	125056	19.62444	ppb	99
38) Tert Amyl Methyl Ether	6.59	73	247478	19.37158	ppb	99
39) 1,2-DCA	6.42	62	145135	19.58557	ppb	98
40) Benzene	6.40	78	382065	18.87726	ppb	98
41) TCE	7.14	95	107237	19.49316	ppb	98
42) 2-Pentanone	7.36	43	658133	151.85280	ppb	100
43) 1,2-Dichloropropane	7.37	63	129354	19.58769	ppb	97
44) Bromodichloromethane	7.68	83	178755	19.56672	ppb	98
45) Methyl Cyclohexane	7.36	83	76247	19.41196	ppb	99

(#) = qualifier out of range (m) = manual integration
 0719T11.D TALLW.M Fri Jul 20 08:29:43 2012

Data File : M:\THOR\DATA\T120719\0719T11.D Vial: 11
 Acq On : 19 Jul 12 13:48 Operator: DG, RS, HW, ARS, SV
 Sample : 20ug/L Vol Std 07-19-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	70661	19.67060	ppb	97
47) 2-Chloroethyl vinyl ether	7.99	106	2760	23.35204	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	60201	19.31427	ppb	100
49) 1-Bromo-2-chloroethane	7.99	63	91400	19.89245	ppb	99
50) Cis-1,3-Dichloropropene	8.15	75	176747	19.55069	ppb	99
51) Toluene	8.50	91	471607	19.74924	ppb	98
52) Trans-1,3-Dichloropropene	8.72	75	158806	19.92258	ppb	97
53) 1,1,2-TCA	8.90	83	102413	19.26196	ppb	100
54) 2-Hexanone	9.18	43	70616	19.75664	ppb	98
57) 1,2-EDB	9.40	107	106822	19.61984	ppb	99
58) Tetrachloroethene	9.06	166	120268	19.53595	ppb	97
59) 1-Chlorohexane	9.90	91	145778	19.89376	ppb	99
60) 1,1,1,2-Tetrachloroethane	9.99	131	146253	20.33456	ppb	98
61) m&p-Xylene	10.15	106	462394	41.21236	ppb	99
62) o-Xylene	10.54	106	240916	20.75709	ppb	99
63) Styrene	10.55	104	425446	21.57415	ppb	98
65) 1,3-Dichloropropane	9.07	76	188875	19.78566	ppb	99
66) Dibromochloromethane	9.29	129	145665	20.26776	ppb	100
67) Chlorobenzene	9.90	112	364549	19.41792	ppb	98
68) Ethylbenzene	10.03	91	598003	20.25768	ppb	98
69) Bromoform	10.71	173	98619	20.04032	ppb	96
71) Isopropylbenzene	10.91	105	578914	20.44949	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	154333	19.64672	ppb	98
73) 1,2,3-Trichloropropane	11.23	110	42893	19.23842	ppb	91
74) t-1,4-Dichloro-2-Butene	11.25	53	32354	21.68350	ppb	96
75) Bromobenzene	11.19	156	185530	19.88027	ppb	98
76) n-Propylbenzene	11.32	91	758387	20.80665	ppb	98
77) 4-Ethyltoluene	11.43	105	653339	20.87252	ppb	98
78) 2-Chlorotoluene	11.39	91	521845	20.07749	ppb	100
79) 1,3,5-Trimethylbenzene	11.50	105	549841	21.19049	ppb	98
80) 4-Chlorotoluene	11.50	91	530306	20.61267	ppb	99
81) Tert-Butylbenzene	11.82	119	482018	20.27796	ppb	98
82) 1,2,4-Trimethylbenzene	11.86	105	561538	20.91400	ppb	99
83) Sec-Butylbenzene	12.04	105	668260	21.05726	ppb	99
84) p-Isopropyltoluene	12.19	119	566536	21.12796	ppb	99
85) Benzyl Chloride	12.35	91	154299	19.25622	ppb	98
86) 1,3-DCB	12.14	146	355716	20.15495	ppb	99
87) 1,4-DCB	12.22	146	358848	19.41437	ppb	100
88) n-Butylbenzene	12.59	91	501731	20.87533	ppb	99
89) 1,2-DCB	12.59	146	337069	19.70479	ppb	99
90) Hexachloroethane	12.86	117	96458	19.63343	ppb	96
91) 1,2-Dibromo-3-chloropropan	13.36	157	32448	22.04834	ppb	94
92) 1,2,4-Trichlorobenzene	14.20	180	162176	20.68292	ppb	100
93) Hexachlorobutadiene	14.38	223	64729	19.76145	ppb	95
94) Naphthalene	14.43	128	476108	21.74583	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	231177	20.69267	ppb	99

Quantitation Report

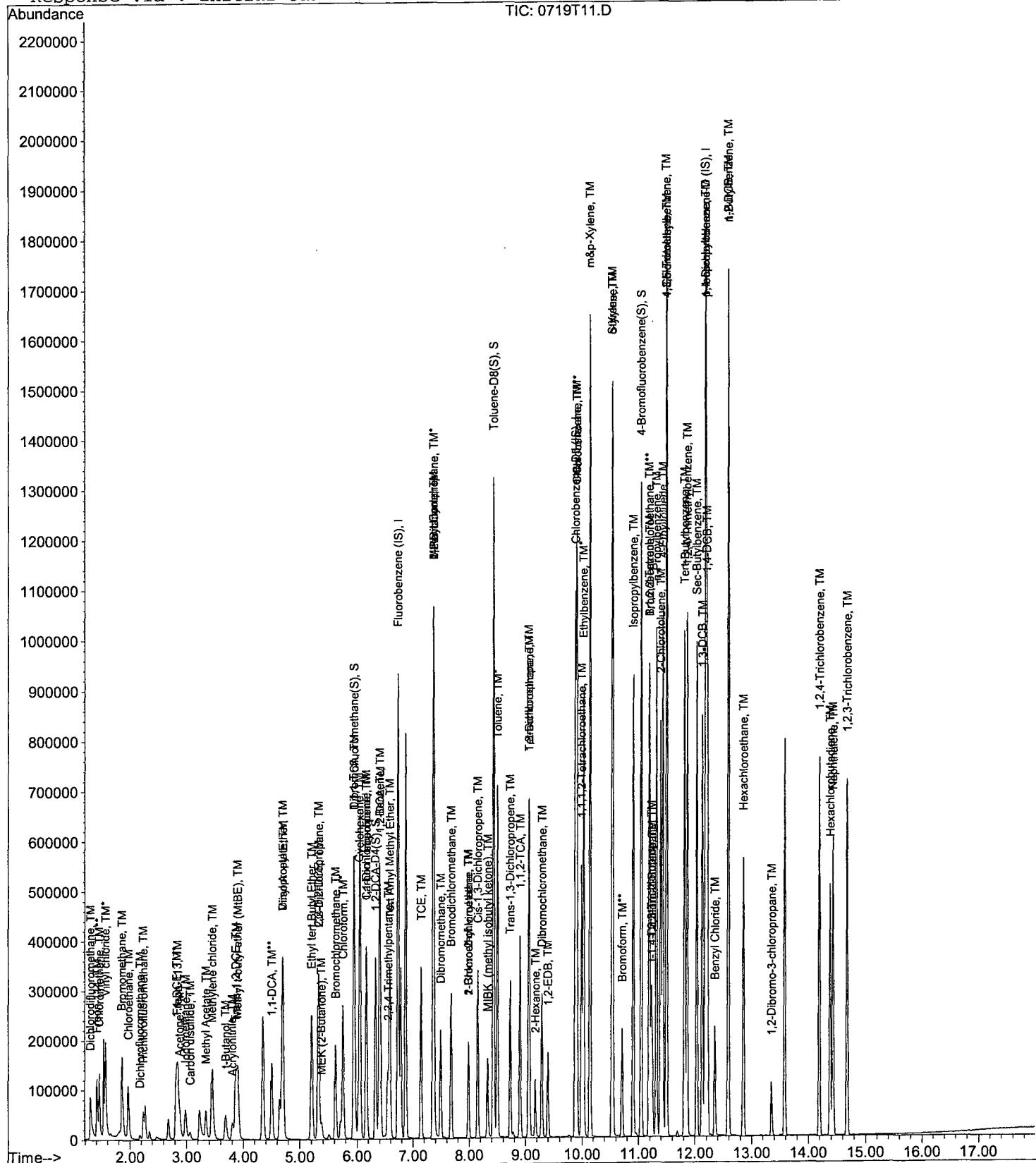
Data File : M:\THOR\DATA\T120719\0719T11.D
 Acq On : 19 Jul 12 13:48
 Sample : 20ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 11
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 08:28:10 2012
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D
 Acq On : 19 Jul 12 14:16
 Sample : 40ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 12
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	450048	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369920	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	219712	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.95	111	544884	77.36909	ppb	0.00
Spiked Amount	29.744		Recovery	= 260.117%		
36) 1,2-DCA-D4(S)	6.33	65	488560	74.64543	ppb	0.00
Spiked Amount	29.083		Recovery	= 256.659%		
56) Toluene-D8(S)	8.43	98	1669961	76.36095	ppb	0.00
Spiked Amount	30.231		Recovery	= 252.593%		
64) 4-Bromofluorobenzene(S)	11.05	95	804405	77.77781	ppb	0.00
Spiked Amount	28.321		Recovery	= 274.630%		

Target Compounds

				Qvalue	
2) Dichlorodifluoromethane	1.30	85	101464	43.22988	ppb
3) Freon 114	1.42	85	136520	44.52891	ppb
4) Chloromethane	1.46	50	282736	41.99030	ppb
5) Vinyl chloride	1.57	62	357763	40.22185	ppb
6) Bromomethane	1.86	94	193264	33.99428	ppb
7) Chloroethane	1.97	64	209796	40.95183	ppb
8) Dichlorofluoromethane	2.18	67	24179	39.62174	ppb
9) Trichlorofluoromethane	2.24	101	112595	61.24281	ppb
11) Acetone	2.89	43	57659	38.38775	ppb
12) Freon-113	2.85	101	159138	43.03364	ppb
13) 1,1-DCE	2.82	61	204122	41.13228	ppb
14) t-Butanol	3.69	59	32184	220.52773	ppb
15) Methyl Acetate	3.34	43	158595	40.42076	ppb
16) Iodomethane	2.98	142	173847	38.73060	ppb
17) Acrylonitrile	3.81	52	60943	42.87649	ppb
18) Methylene chloride	3.45	84	68312	40.66407	ppb
19) Carbon disulfide	3.06	76	20048	42.15606	ppb
20) Methyl t-butyl ether (MtBE)	3.90	73	353652	36.91075	ppb
21) Trans-1,2-DCE	3.87	96	127159	37.12876	ppb
22) Diisopropyl Ether	4.70	59	86276	40.20793	ppb
23) 1,1-DCA	4.51	63	364882	40.17871	ppb
24) Vinyl Acetate	4.70	87	205079	39.98158	ppb
25) Ethyl tert Butyl Ether	5.21	59	459486	38.35814	ppb
26) MEK (2-Butanone)	5.38	43	87533	38.72047	ppb
27) Cis-1,2-DCE	5.33	96	229166	39.39224	ppb
28) 2,2-Dichloropropane	5.32	77	141557	84.49635	ppb
29) Chloroform	5.76	83	434710	38.54666	ppb
30) Bromochloromethane	5.62	128	110740	39.09610	ppb
32) 1,1,1-TCA	5.96	97	264324	38.95361	ppb
33) Cyclohexane	6.04	41	77803	42.24920	ppb
34) 1,1-Dichloropropene	6.17	75	198474	40.27560	ppb
35) 2,2,4-Trimethylpentane	6.55	57	293410	41.42752	ppb
37) Carbon Tetrachloride	6.17	117	261231	41.07535	ppb
38) Tert Amyl Methyl Ether	6.59	73	485700	38.09434	ppb
39) 1,2-DCA	6.42	62	284928	38.52680	ppb
40) Benzene	6.40	78	767359	37.98954	ppb
41) TCE	7.15	95	213589	38.90274	ppb
42) 2-Pentanone	7.36	43	764190	176.67466	ppb
43) 1,2-Dichloropropane	7.37	63	253205	38.41842	ppb
44) Bromodichloromethane	7.68	83	359604	39.44102	ppb
45) Methyl Cyclohexane	7.36	83	159998	40.81549	ppb

(#) = qualifier out of range (m) = manual integration
 0719T12.D TALLW.M Fri Jul 20 08:29:46 2012

Data File : M:\THOR\DATA\T120719\0719T12.D
 Acq On : 19 Jul 12 14:16
 Sample : 40ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 12
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	141296	39.41227	ppb	93
47) 2-Chloroethyl vinyl ether	7.99	106	4618	39.97505	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	121497	39.05746	ppb	99
49) 1-Bromo-2-chloroethane	7.99	63	181376	39.55356	ppb	99
50) Cis-1,3-Dichloropropene	8.15	75	367817	40.76670	ppb	100
51) Toluene	8.50	91	942978	39.56722	ppb	100
52) Trans-1,3-Dichloropropene	8.72	75	327606	41.18075	ppb	97
53) 1,1,2-TCA	8.90	83	203529	38.35620	ppb	97
54) 2-Hexanone	9.18	43	145904	40.90166	ppb	99
57) 1,2-EDB	9.40	107	216913	39.10946	ppb	98
58) Tetrachloroethene	9.06	166	243143	38.77105	ppb	95
59) 1-Chlorohexane	9.90	91	305567	40.93481	ppb	97
60) 1,1,1,2-Tetrachloroethane	9.99	131	289716	39.54248	ppb	95
61) m&p-Xylene	10.15	106	942114	82.42904	ppb	98
62) o-Xylene	10.54	106	486606	41.15663	ppb	98
63) Styrene	10.55	104	862890	42.95425	ppb	100
65) 1,3-Dichloropropane	9.07	76	382242	39.30755	ppb	98
66) Dibromochloromethane	9.29	129	292949	40.01326	ppb	96
67) Chlorobenzene	9.90	112	739958	38.69148	ppb	99
68) Ethylbenzene	10.03	91	1209652	40.22613	ppb	98
69) Bromoform	10.71	173	206749	41.24287	ppb	99
71) Isopropylbenzene	10.91	105	1186391	41.29757	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	311389	39.06275	ppb	100
73) 1,2,3-Trichloropropane	11.23	110	87283	38.57810	ppb	93
74) t-1,4-Dichloro-2-Butene	11.25	53	67511	44.58657	ppb	97
75) Bromobenzene	11.19	156	370849	39.15918	ppb	99
76) n-Propylbenzene	11.32	91	1546930	41.82252	ppb	99
77) 4-Ethyltoluene	11.43	105	1336329	42.07052	ppb	99
78) 2-Chlorotoluene	11.39	91	1059468	40.16835	ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	1118597	42.48207	ppb	99
80) 4-Chlorotoluene	11.50	91	1066136	40.83649	ppb	100
81) Tert-Butylbenzene	11.82	119	993558	41.18911	ppb	99
82) 1,2,4-Trimethylbenzene	11.86	105	1142659	41.93753	ppb	99
83) Sec-Butylbenzene	12.04	105	1362846	42.31861	ppb	100
84) p-Isopropyltoluene	12.19	119	1167081	42.89031	ppb	99
85) Benzyl Chloride	12.35	91	328559	40.40634	ppb	98
86) 1,3-DCB	12.13	146	706591	39.45252	ppb	99
87) 1,4-DCB	12.22	146	717680	38.26236	ppb	100
88) n-Butylbenzene	12.59	91	1032004	42.31282	ppb	99
89) 1,2-DCB	12.59	146	673414	38.79389	ppb	98
90) Hexachloroethane	12.86	117	199424	40.00032	ppb	95
91) 1,2-Dibromo-3-chloropropan	13.35	157	66284	44.38384	ppb	95
92) 1,2,4-Trichlorobenzene	14.20	180	327616	41.17358	ppb	100
93) Hexachlorobutadiene	14.38	223	129523	38.96681	ppb	98
94) Naphthalene	14.43	128	999454	44.98436	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	465877	41.09332	ppb	98

Quantitation Report

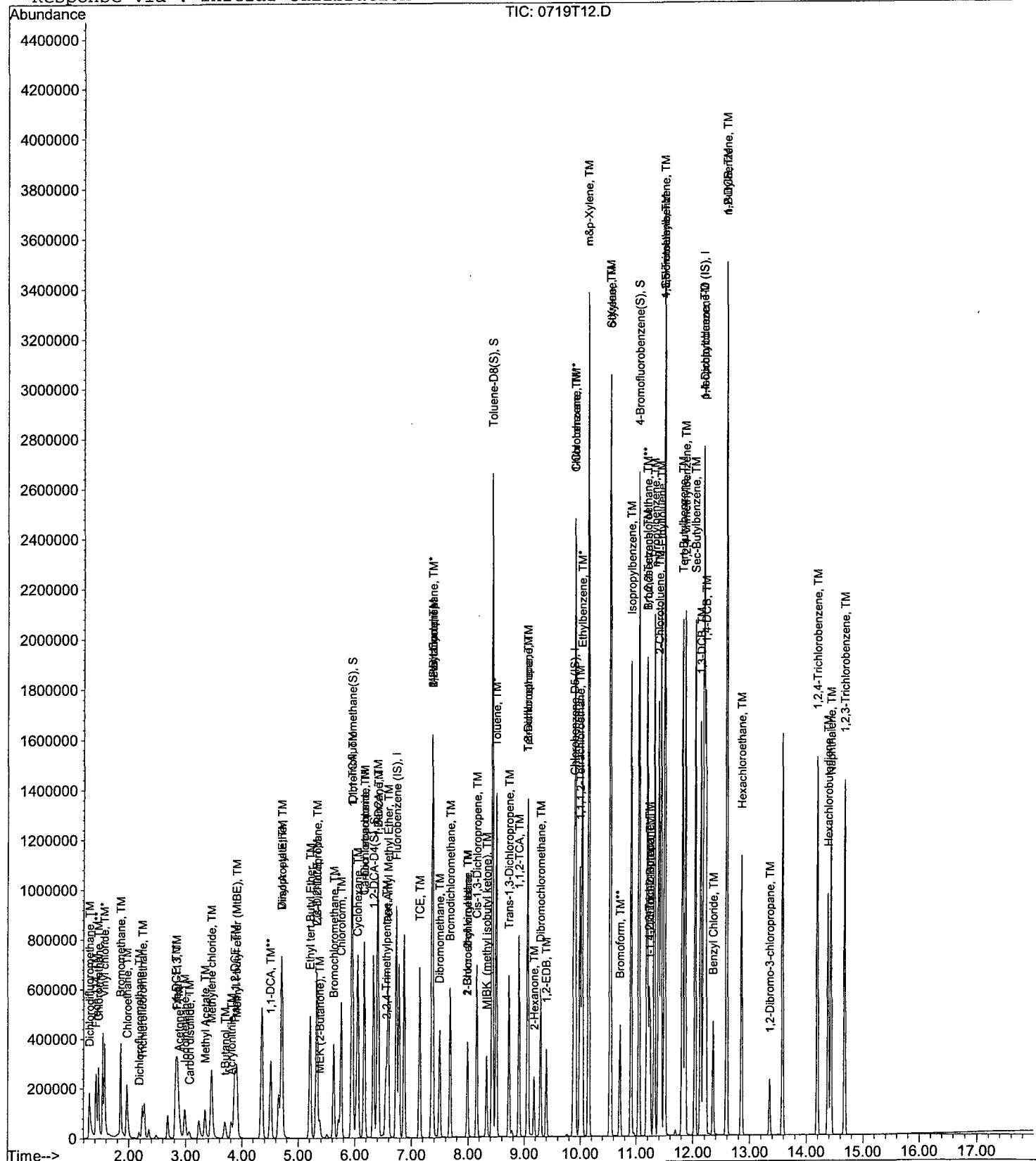
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 Acq On : 19 Jul 12 14:16
 Sample : 40ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 12
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 08:28:10 2012
 Response via : Initial Calibration



Data File : M:\THOR\DATA\T120719\0719T13.D Vial: 13
 Acq On : 19 Jul 12 14:44 Operator: DG,RS,HW,ARS,SV
 Sample : 100ug/L Vol Std 07-19-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	444096	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369984	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	225280	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
31) Dibromofluoromethane(S)	5.94	111	677704	97.51815	ppb	0.00
Spiked Amount 29.744			Recovery	= 327.859%		
36) 1,2-DCA-D4(S)	6.33	65	602641	93.30952	ppb	0.00
Spiked Amount 29.083			Recovery	= 320.837%		
56) Toluene-D8(S)	8.43	98	2073207	94.78345	ppb	0.00
Spiked Amount 30.231			Recovery	= 313.531%		
64) 4-Bromofluorobenzene(S)	11.05	95	1023987	98.99204	ppb	0.00
Spiked Amount 28.321			Recovery	= 349.536%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.29	85	254656	109.95320	ppb	99
3) Freon 114	1.41	85	295808	98.23896	ppb	92
4) Chloromethane	1.45	50	771844	116.16609	ppb	98
5) Vinyl chloride	1.56	62	891545	101.57617	ppb	98
6) Bromomethane	1.85	94	452818	80.71617	ppb	98
7) Chloroethane	1.95	64	503433	99.58633	ppb	94
8) Dichlorofluoromethane	2.18	67	115020	100.01762	ppb	99
9) Trichlorofluoromethane	2.23	101	328219	180.91796	ppb	99
11) Acetone	2.89	43	145827	100.36210	ppb	98
12) Freon-113	2.84	101	365975	100.29230	ppb	97
13) 1,1-DCE	2.81	61	492964	100.66770	ppb	98
14) t-Butanol	3.70	59	53864	374.02770	ppb	99
15) Methyl Acetate	3.33	43	378645	99.85965	ppb	99
16) Iodomethane	2.97	142	429518	96.97290	ppb	97
17) Acrylonitrile	3.80	52	148837	106.11781	ppb	92
18) Methylene chloride	3.45	84	163136	99.75173	ppb	96
19) Carbon disulfide	3.05	76	45848	98.86363	ppb	# 88
20) Methyl t-butyl ether (MtBE)	3.90	73	822710	87.01727	ppb	98
21) Trans-1,2-DCE	3.86	96	303532	89.81519	ppb	95
22) Diisopropyl Ether	4.70	59	207477	97.98816	ppb	93
23) 1,1-DCA	4.50	63	860226	95.99267	ppb	97
24) Vinyl Acetate	4.70	87	495299	97.85616	ppb	96
25) Ethyl tert Butyl Ether	5.21	59	1019255	86.22835	ppb	99
26) MEK (2-Butanone)	5.37	43	225877	100.70732	ppb	92
27) Cis-1,2-DCE	5.32	96	554128	96.52785	ppb	96
28) 2,2-Dichloropropane	5.32	77	327819	198.30000	ppb	99
29) Chloroform	5.75	83	1043860	93.80183	ppb	98
30) Bromochloromethane	5.62	128	277342	99.22624	ppb	93
32) 1,1,1-TCA	5.96	97	618230	92.33007	ppb	94
33) Cyclohexane	6.03	41	173334	95.38672	ppb	97
34) 1,1-Dichloropropene	6.16	75	474643	97.60846	ppb	99
35) 2,2,4-Trimethylpentane	6.55	57	649315	92.90765	ppb	94
37) Carbon Tetrachloride	6.16	117	627649	100.01275	ppb	97
38) Tert Amyl Methyl Ether	6.59	73	1115219	88.64096	ppb	96
39) 1,2-DCA	6.42	62	688055	94.28291	ppb	98
40) Benzene	6.40	78	1827390	91.68086	ppb	99
41) TCE	7.14	95	502537	92.75799	ppb	98
42) 2-Pentanone	7.36	43	907754	212.67824	ppb	98
43) 1,2-Dichloropropane	7.37	63	623762	95.91093	ppb	97
44) Bromodichloromethane	7.68	83	887397	98.63330	ppb	99
45) Methyl Cyclohexane	7.36	83	367578	95.02589	ppb	97

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

0719T13.D TALLW.M Fri Jul 20 08:29:48 2012

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T13.D
 Acq On : 19 Jul 12 14:44
 Sample : 100ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 13
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 07:59:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	343569	97.11750	ppb	95
47) 2-Chloroethyl vinyl ether	7.99	106	11121	99.31396	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	317753	103.51662	ppb	98
49) 1-Bromo-2-chloroethane	7.99	63	444096	98.14420	ppb	99
50) Cis-1,3-Dichloropropene	8.15	75	923494	103.72652	ppb	98
51) Toluene	8.50	91	2302514	97.90801	ppb	100
52) Trans-1,3-Dichloropropene	8.72	75	844862	107.62424	ppb	97
53) 1,1,2-TCA	8.90	83	506640	96.75885	ppb	98
54) 2-Hexanone	9.18	43	374170	106.29789	ppb	96
57) 1,2-EDB	9.40	107	552458	99.59106	ppb	98
58) Tetrachloroethene	9.06	166	580637	92.57110	ppb	96
59) 1-Chlorohexane	9.90	91	748840	100.29983	ppb	96
60) 1,1,1,2-Tetrachloroethane	9.99	131	746191	101.82778	ppb	98
61) m,p-Xylene	10.14	106	2312256	202.27283	ppb	97
62) o-Xylene	10.54	106	1205888	101.97512	ppb	97
63) Styrene	10.55	104	2181574	108.57892	ppb	97
65) 1,3-Dichloropropane	9.07	76	938122	96.45434	ppb	100
66) Dibromochloromethane	9.29	129	748578	102.22894	ppb	99
67) Chlorobenzene	9.90	112	1810618	94.65857	ppb	99
68) Ethylbenzene	10.03	91	2980271	99.08969	ppb	98
69) Bromoform	10.71	173	538782	107.45915	ppb	100
71) Isopropylbenzene	10.91	105	2947712	100.07206	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	796018	97.38982	ppb	99
73) 1,2,3-Trichloropropane	11.23	110	223287	96.25110	ppb	93
74) t-1,4-Dichloro-2-Butene	11.25	53	179952	115.90904	ppb	99
75) Bromobenzene	11.19	156	932826	96.06567	ppb	100
76) n-Propylbenzene	11.32	91	3839951	101.25032	ppb	100
77) 4-Ethyltoluene	11.43	105	3324604	102.07879	ppb	99
78) 2-Chlorotoluene	11.40	91	2632771	97.35098	ppb	100
79) 1,3,5-Trimethylbenzene	11.50	105	2768017	102.52551	ppb	98
80) 4-Chlorotoluene	11.50	91	2649819	98.98815	ppb	100
81) Tert-Butylbenzene	11.82	119	2490617	100.69949	ppb	99
82) 1,2,4-Trimethylbenzene	11.86	105	2848266	101.95249	ppb	99
83) Sec-Butylbenzene	12.04	105	3384214	102.48812	ppb	100
84) p-Isopropyltoluene	12.19	119	2906241	104.16479	ppb	99
85) Benzyl Chloride	12.35	91	910665	109.22596	ppb	96
86) 1,3-DCB	12.14	146	1775349	96.67663	ppb	99
87) 1,4-DCB	12.22	146	1789528	93.04875	ppb	100
88) n-Butylbenzene	12.59	91	2558982	102.32670	ppb	99
89) 1,2-DCB	12.59	146	1688312	94.85606	ppb	99
90) Hexachloroethane	12.86	117	521928	102.10049	ppb	95
91) 1,2-Dibromo-3-chloropropan	13.35	157	180474	117.85879	ppb	94
92) 1,2,4-Trichlorobenzene	14.20	180	875328	107.28908	ppb	100
93) Hexachlorobutadiene	14.38	223	327441	96.07540	ppb	95
94) Naphthalene	14.43	128	2618767	114.95471	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	1182785	101.75059	ppb	98

Quantitation Report

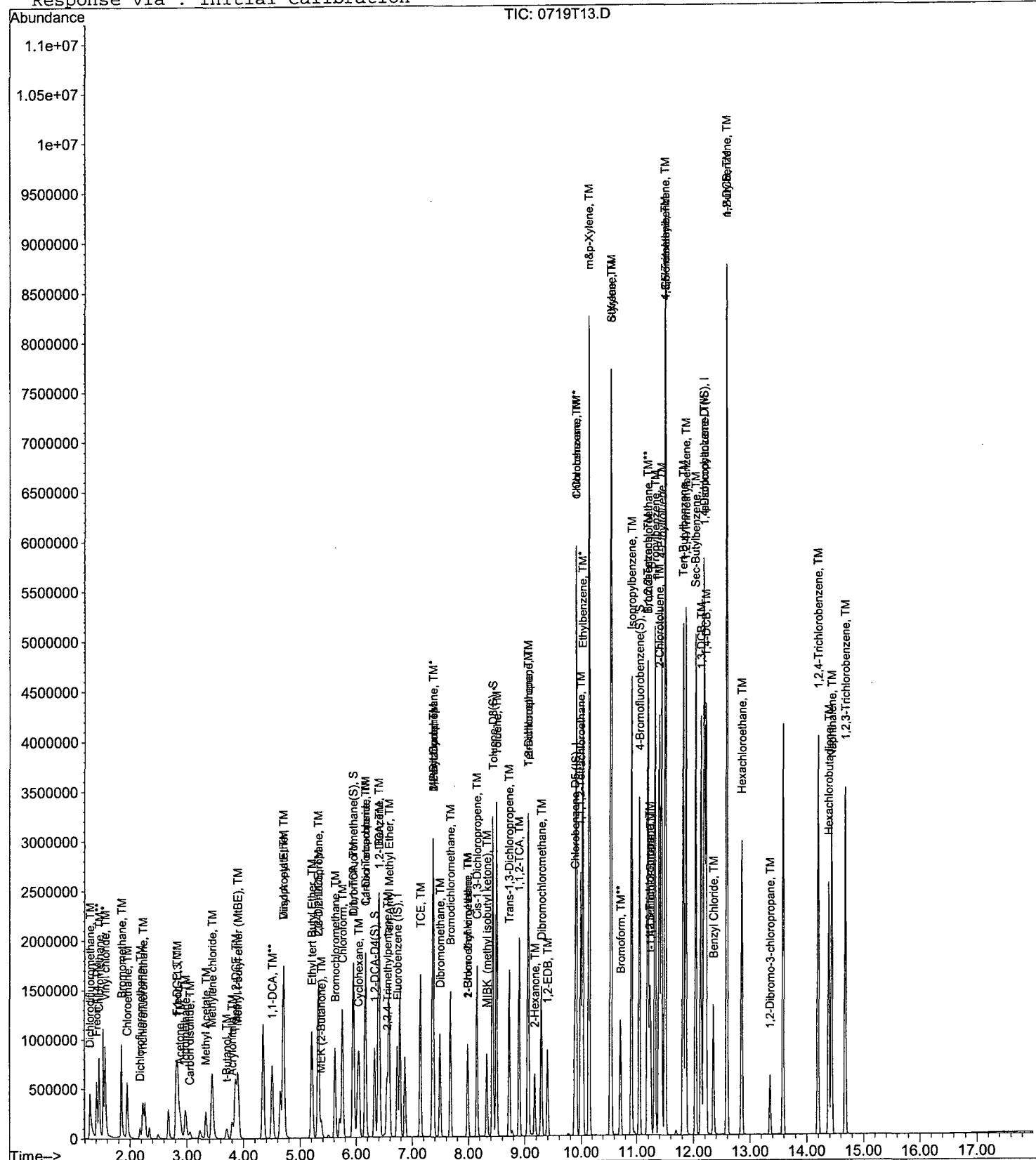
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Sample : 100ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

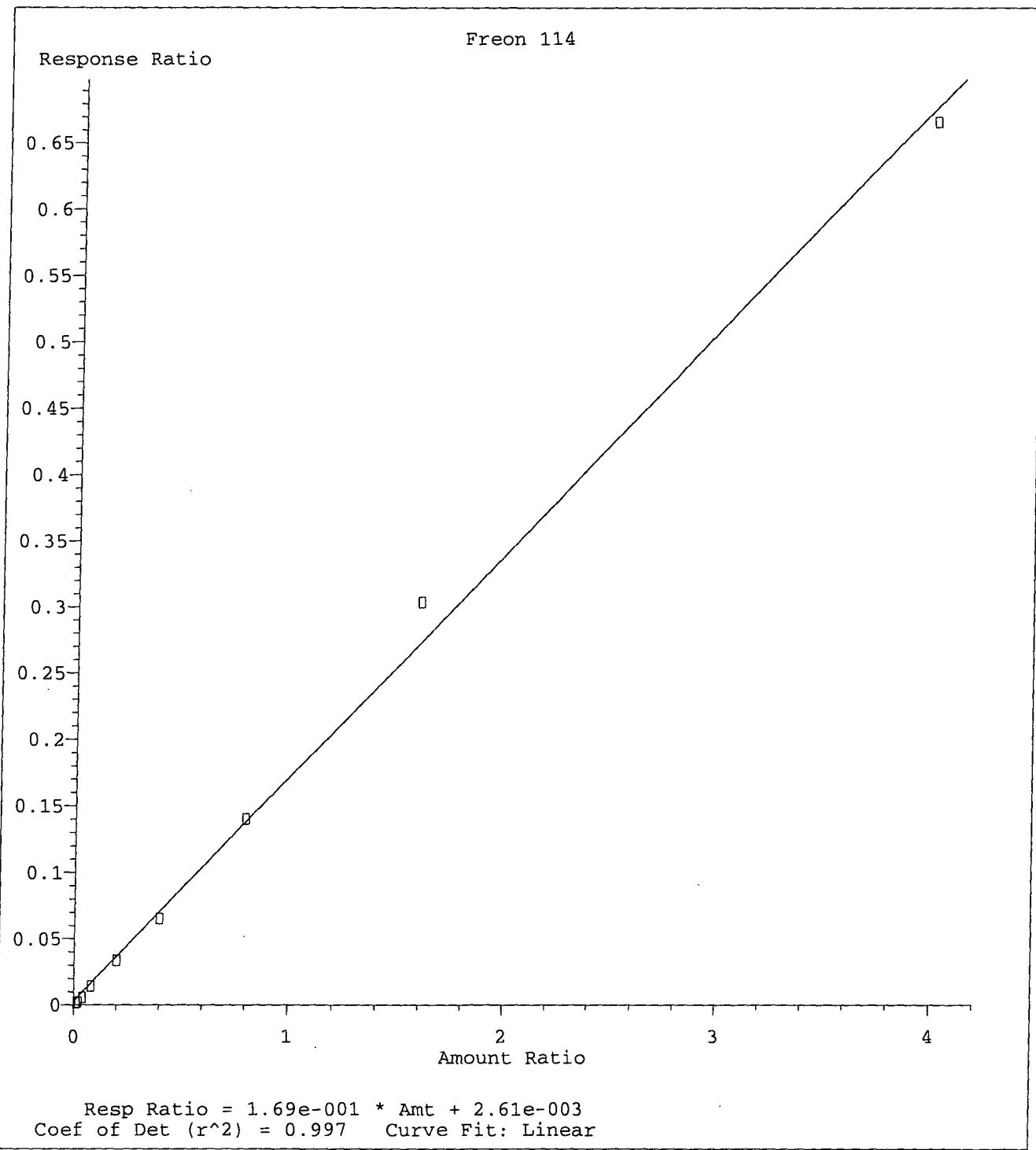
Vial: 13
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

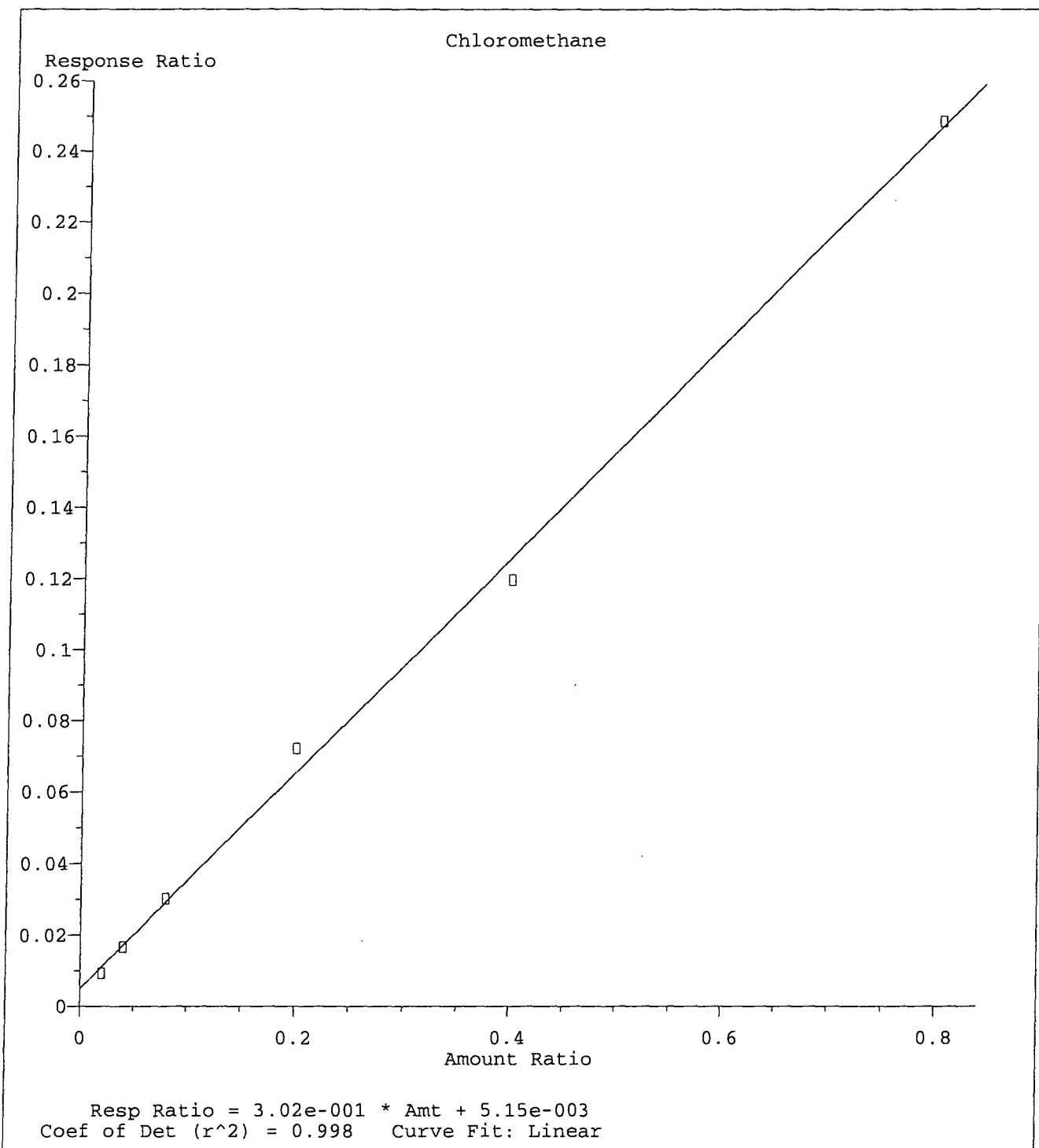
Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration

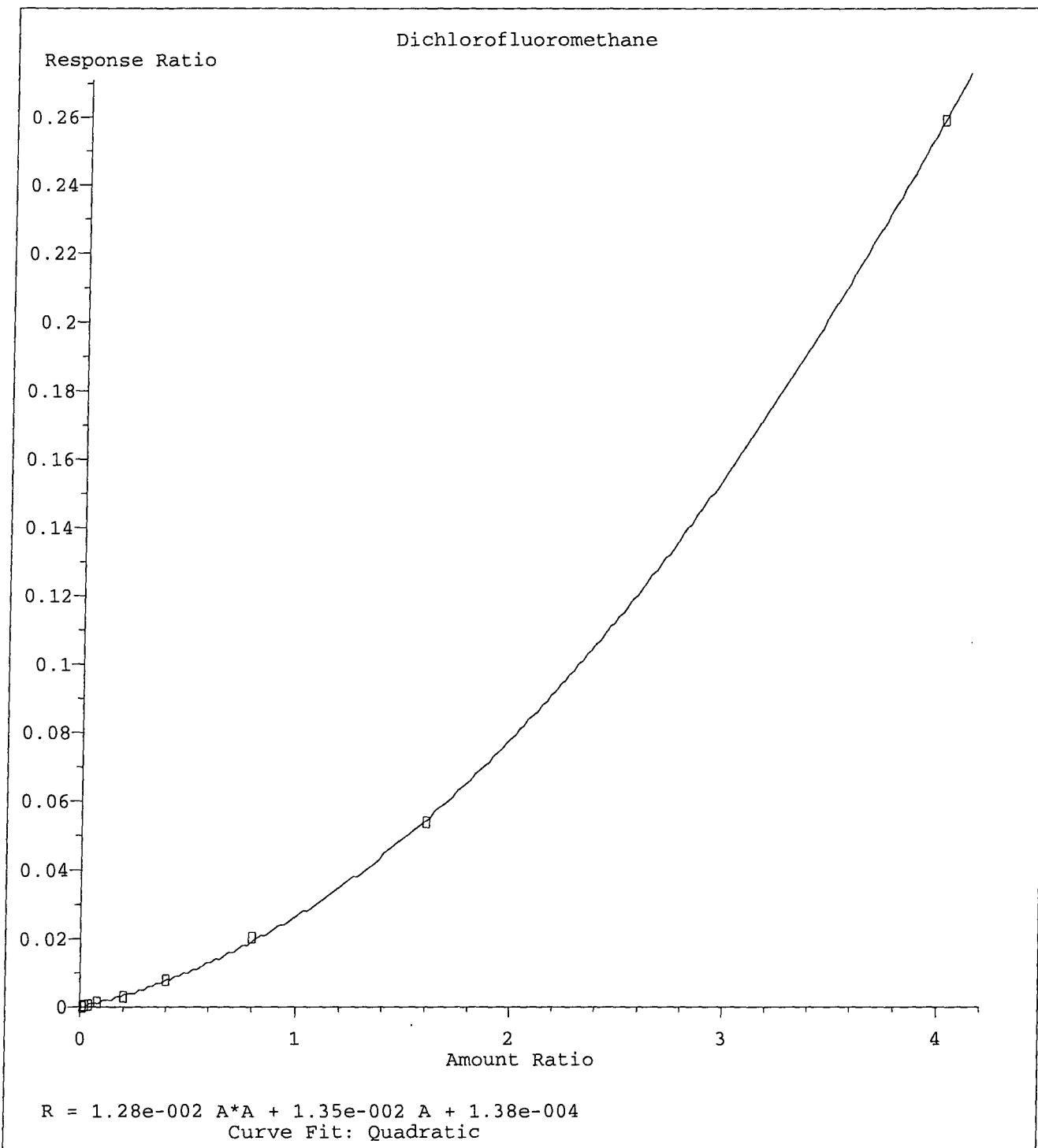




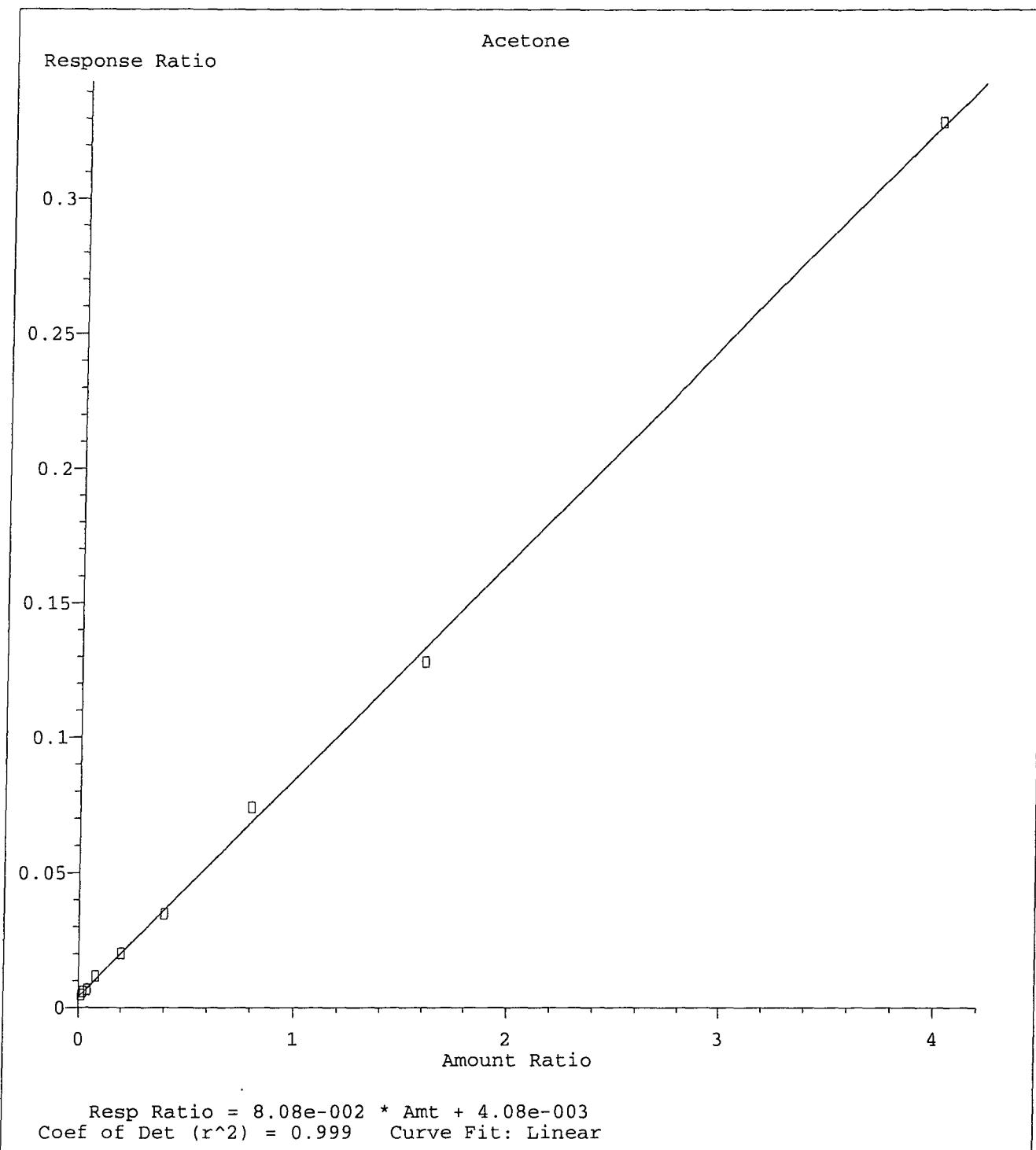
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Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



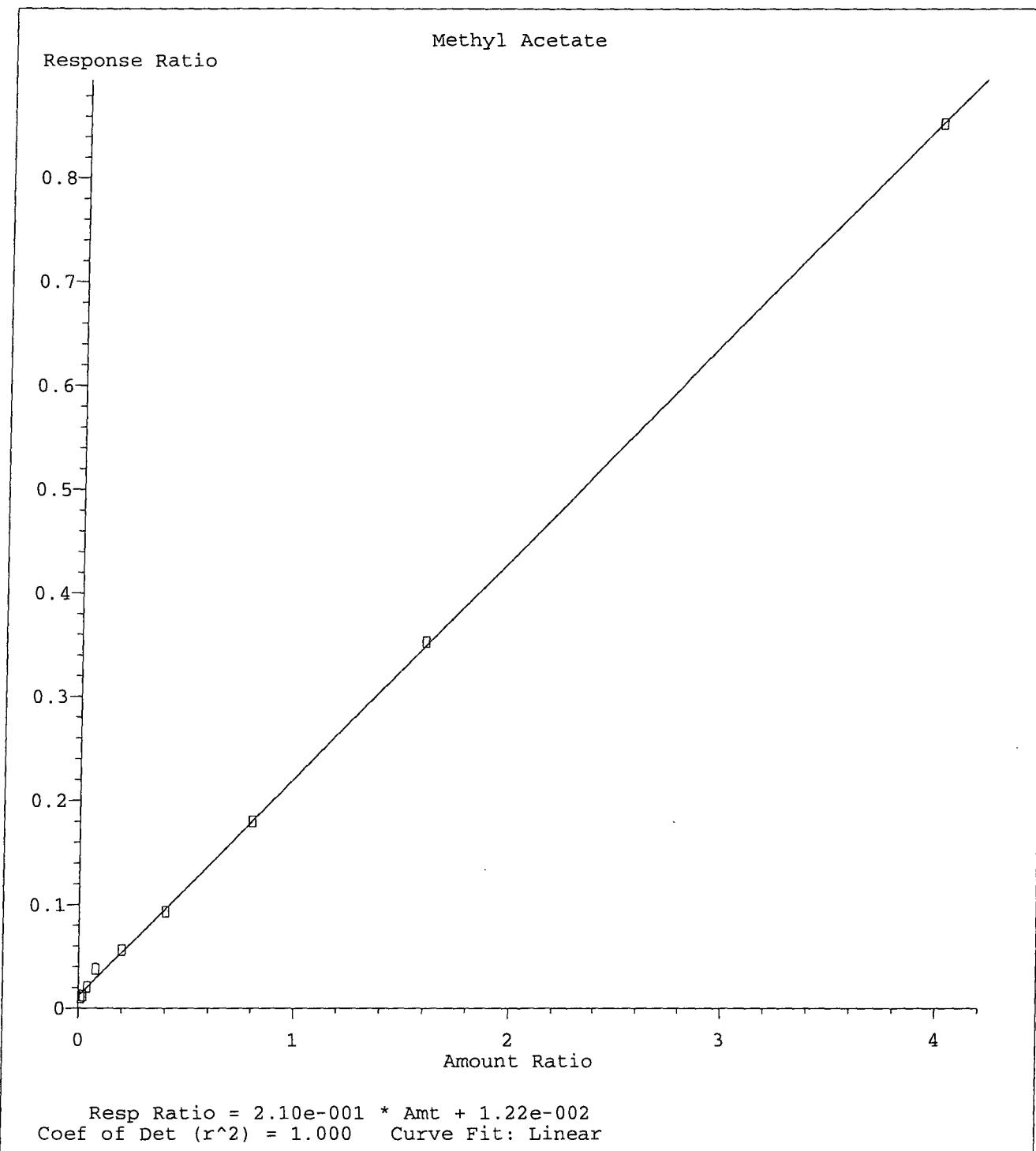
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Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



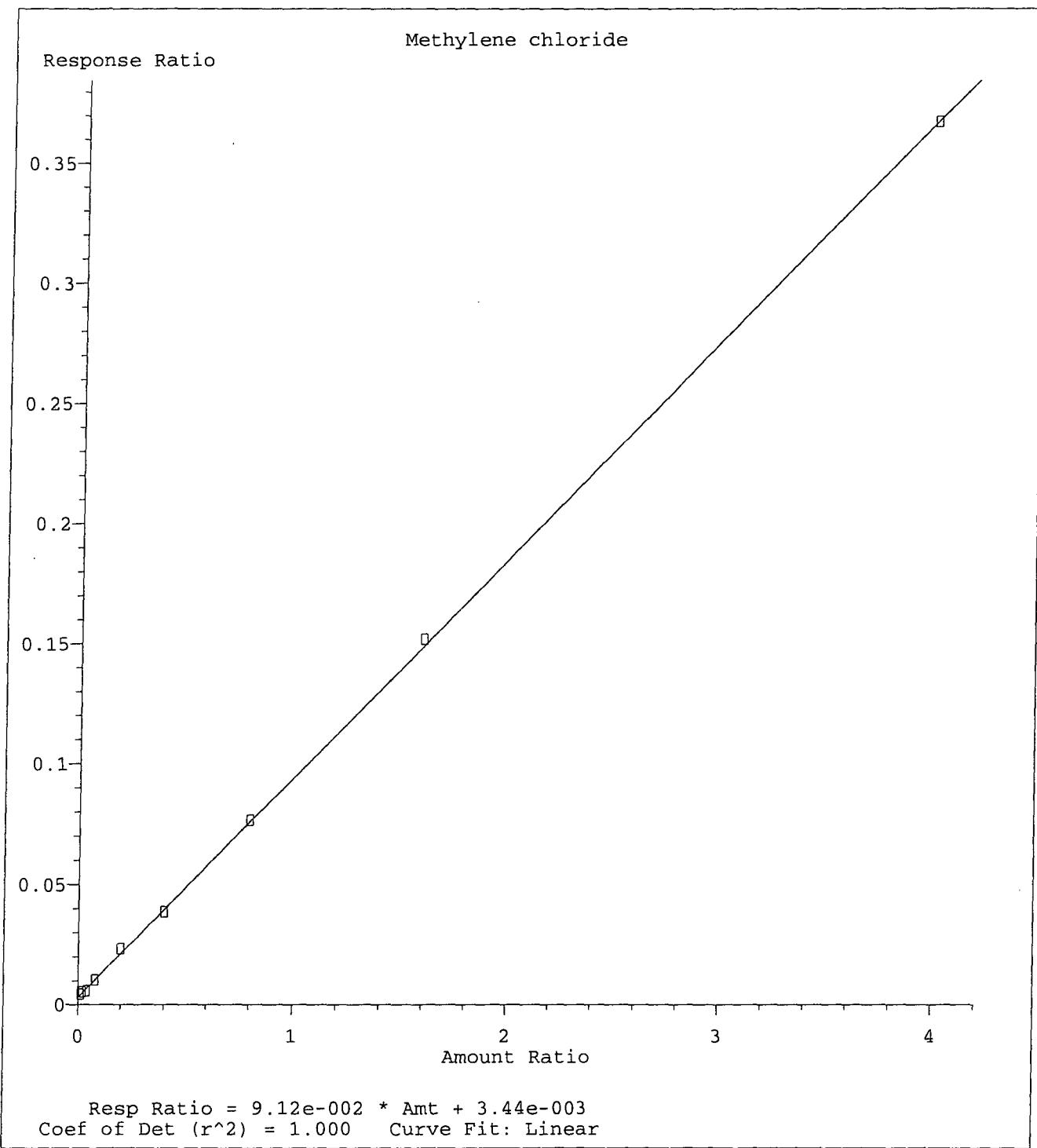
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Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



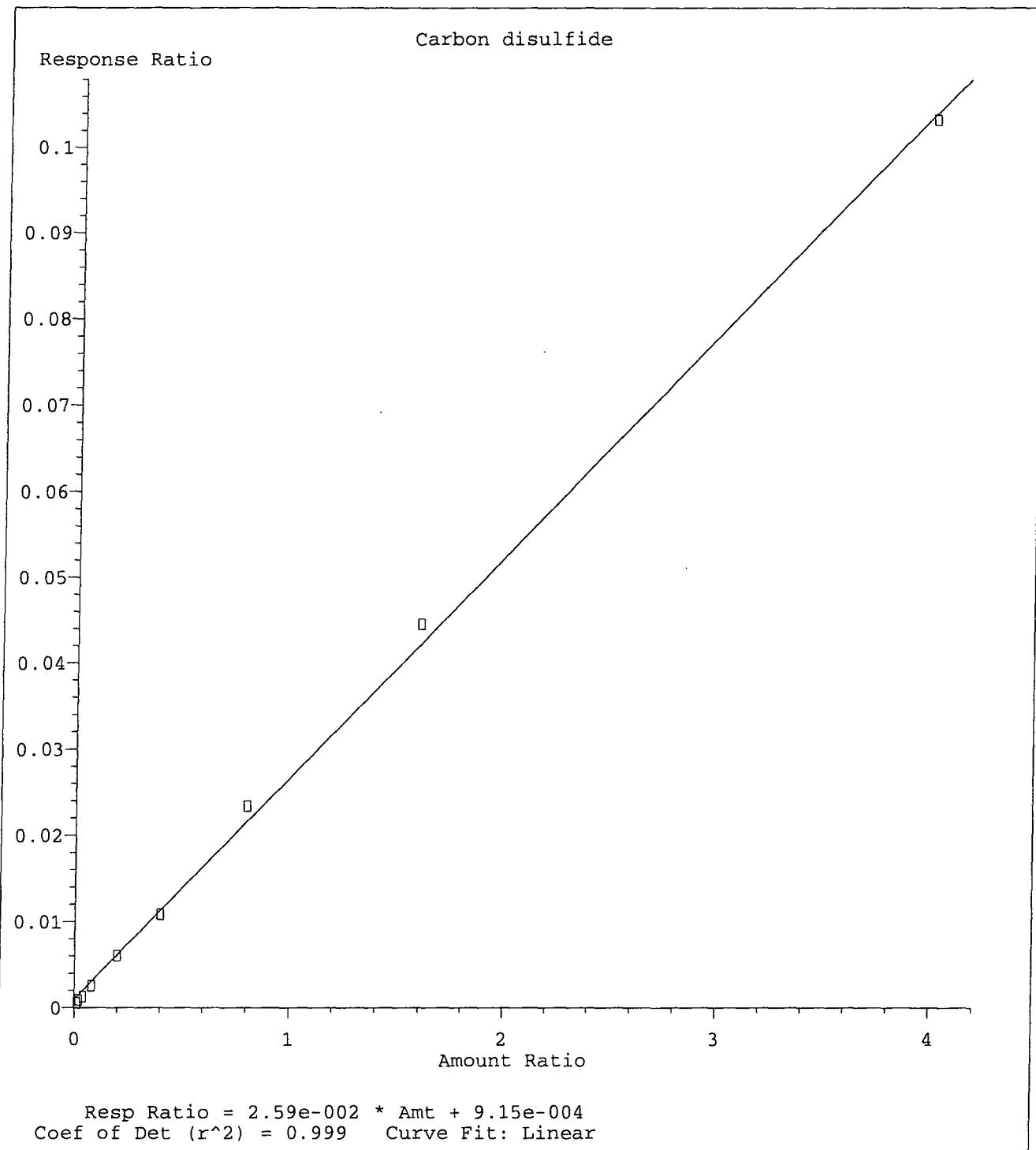
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Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



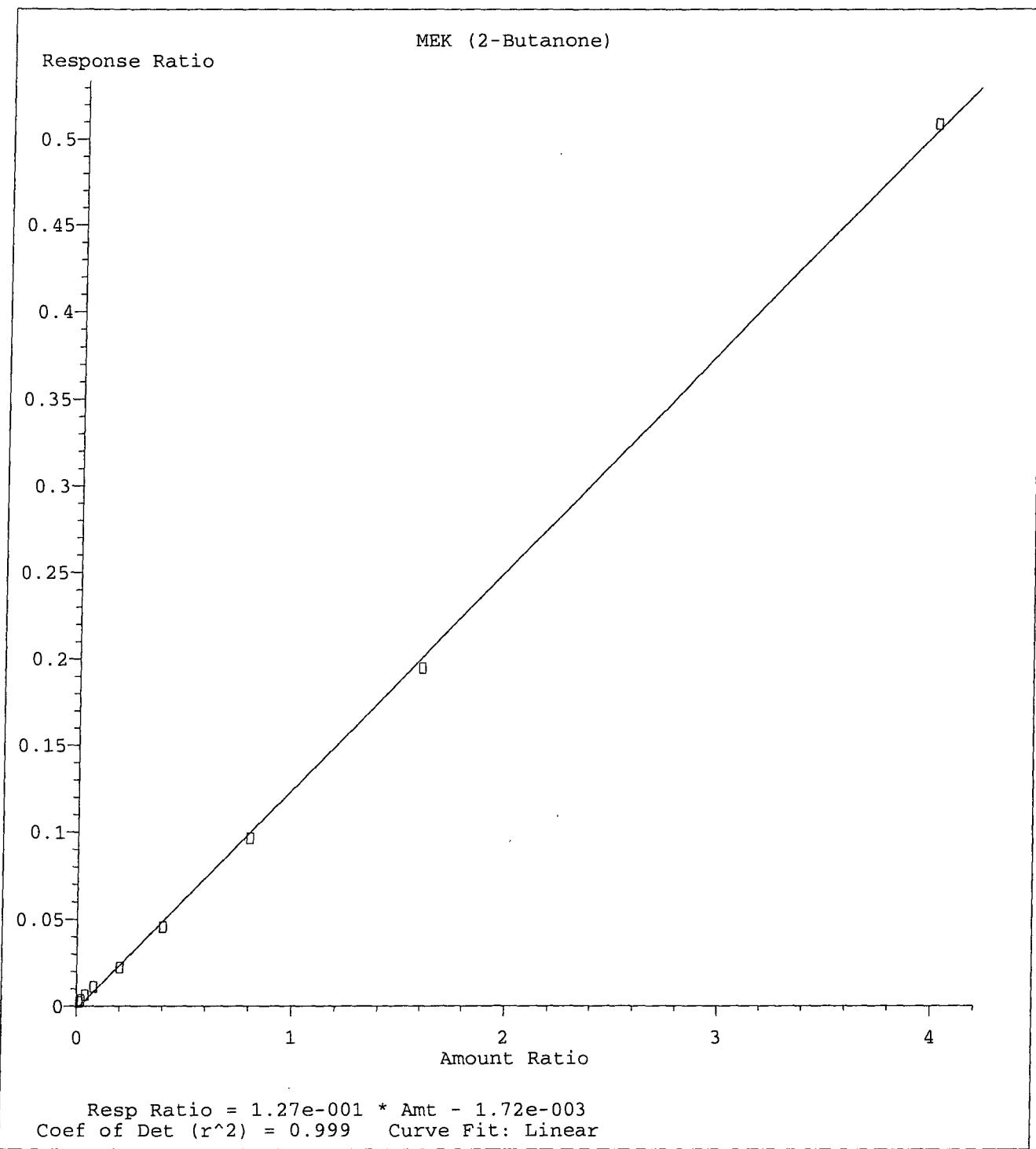
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



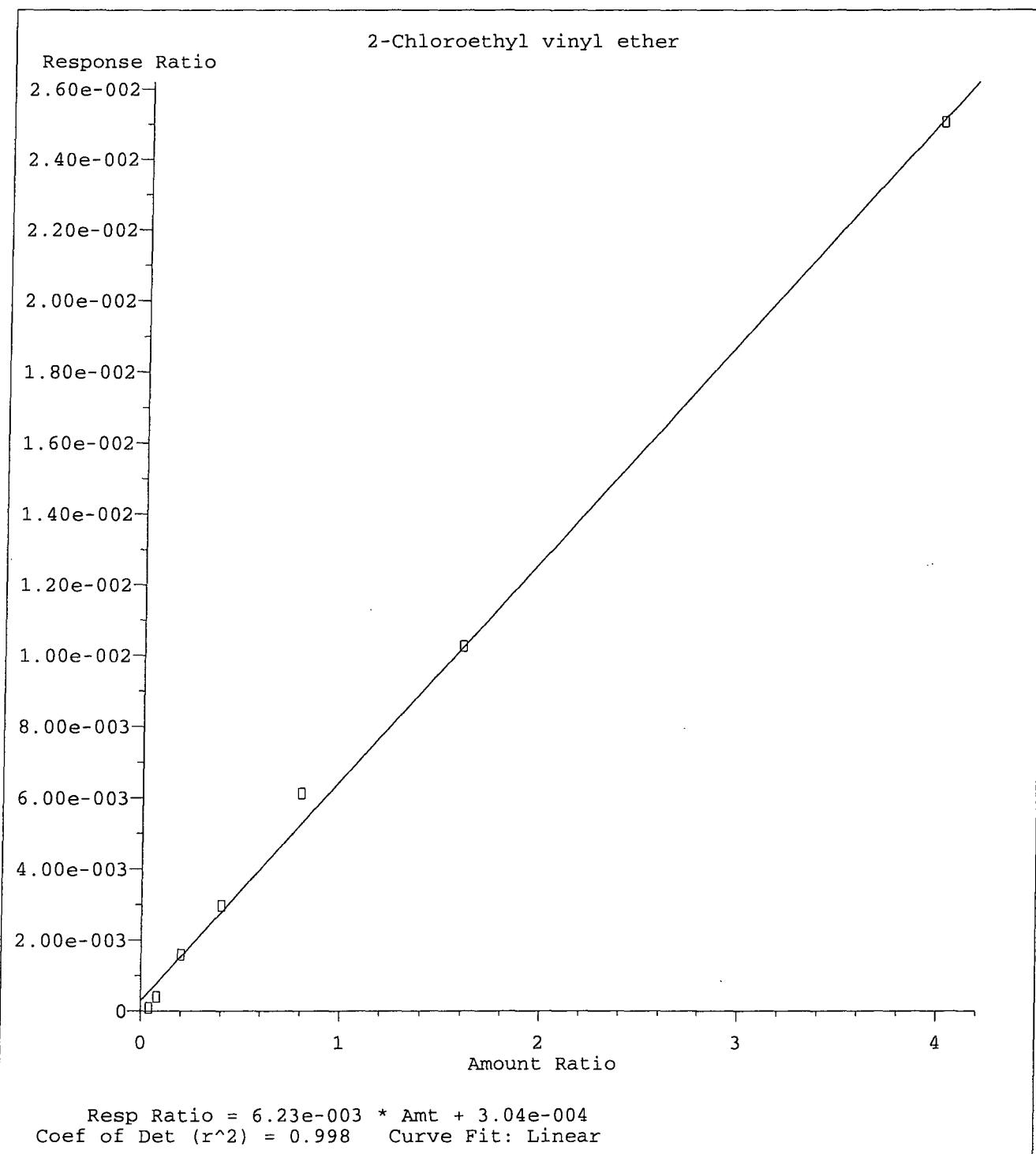
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.

SDG No: 68268

Case No: _____

Date Analyzed: 07/19/12

Matrix: Water

Instrument: Thor

Initial Cal. Date: 07/19/12

Data File: 0719T31.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Fluorobenzene (IS)	ISTD			I
2	TM	Dichlorodifluoromethane	0.1266	0.1014	20	TM
3	TML	Freon 114	0.1578	0.1581	0.22	TML
4	TM**L	Chloromethane	0.3709	0.3090	17	TM**L
5	TM*	Vinyl chloride	0.4941	0.4993	1.1	TM*
6	TM	Bromomethane	0.3158	0.2956	6.4	TM
7	TM	Chloroethane	0.2846	0.2799	1.6	TM
8	TMQ	Dichlorofluoromethane	0.0241	0.0169	30	TMQ
9	TM	Trichlorofluoromethane	0.1021	0.1035	1.3	TM
10	TMQ	Acrolein	0.0000	0.0065	0.00	TMQ
11	TML	Acetone	0.1608	0.1059	34	TML
12	TM	Freon-113	0.2054	0.2048	0.31	TM
13	TM*	1,1-DCE	0.2757	0.2657	3.6	TM*
14	TM	t-Butanol	0.0081	0.0083	2.3	TM
15	TML	Methyl Acetate	0.4032	0.2447	39	TML
16	TM	Iodomethane	0.2493	0.2358	5.4	TM
17	TM	Acrylonitrile	0.0790	0.0808	2.3	TM
18	TML	Methylene chloride	0.1556	0.0948	39	TML
19	TML	Carbon disulfide	0.0329	0.0300	8.9	TML
20	TM	Methyl t-butyl ether (MtBE)	0.5322	0.5046	5.2	TM
21	TM	Trans-1,2-DCE	0.1902	0.1862	2.1	TM
22	TM	Diisopropyl Ether	0.1192	0.1196	0.38	TM
23	TM**	1,1-DCA	0.5045	0.5081	0.73	TM**
24	TM	Vinyl Acetate	0.2849	0.2762	3.1	TM
25	TM	Ethyl tert Butyl Ether	0.6654	0.6504	2.3	TM
26	TML	MEK (2-Butanone)	0.1418	0.1260	11	TML
27	TM	Cis-1,2-DCE	0.3232	0.3228	0.12	TM
28	TM	2,2-Dichloropropane	0.2032	0.1629	20	TM
29	TM*	Chloroform	0.6265	0.6014	4.0	TM*
30	TM	Bromochloromethane	0.1573	0.1601	1.8	TM
31	S	Dibromofluoromethane(S)	0.3912	0.3840	1.8	S
32	TM	1,1,1-TCA	0.3769	0.3627	3.8	TM
33	TM	Cyclohexane	0.1023	0.1023	0.01	TM
34	TM	1,1-Dichloropropene	0.2737	0.2734	0.13	TM
35	TM	2,2,4-Trimethylpentane	0.3934	0.3395	14	TM
36	S	1,2-DCA-D4(S)	0.3636	0.3559	2.1	S
37	TM	Carbon Tetrachloride	0.3533	0.3549	0.46	TM
38	TM	Tert Amyl Methyl Ether	0.7083	0.6971	1.6	TM
39	TM	1,2-DCA	0.4108	0.4011	2.4	TM
40	TM	Benzene	1.122	1.062	5.3	TM

Average

7.6

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68268
 Date Analyzed: 07/19/12
 Instrument: Thor
 Cal. Date: 07/19/12
 Data File: 0719T31.D

		Compound	MEAN	CCRF	%D	%Drift
41	TM	TCE	0.3050	0.3245	6.4	TM
42	TM	2-Pentanone	0.2403	0.2373	1.2	TM
43	TM*	1,2-Dichloropropane	0.3661	0.3693	0.88	TM*
44	TM	Bromodichloromethane	0.5065	0.4847	4.3	TM
45	TM	Methyl Cyclohexane	0.2178	0.2085	4.3	TM
46	TM	Dibromomethane	0.1991	0.1999	0.37	TM
47	TML	2-Chloroethyl vinyl ether	0.0061	0.0063	2.4	TML
48	TM	MIBK (methyl isobutyl ketone)	0.1728	0.1759	1.8	TM
49	TM	1-Bromo-2-chloroethane	0.2547	0.2495	2.1	TM
50	TM	Cis-1,3-Dichloropropene	0.5012	0.4724	5.7	TM
51	TM*	Toluene	1.324	1.341	1.3	TM*
52	TM	Trans-1,3-Dichloropropene	0.4419	0.4104	7.1	TM
53	TM	1,1,2-TCA	0.2948	0.2833	3.9	TM
54	TM	2-Hexanone	0.1982	0.2000	0.95	TM
55	I	Chlorobenzene-D5 (IS)	ISTD			I
56	S	Toluene-D8(S)	1.478	1.447	2.1	S
57	TM	1,2-EDB	0.3748	0.3669	2.1	TM
58	TM	Tetrachloroethene	0.4238	0.4269	0.73	TM
59	TM	1-Chlorohexane	0.5045	0.5027	0.36	TM
60	TM	1,1,1,2-Tetrachloroethane	0.4952	0.4849	2.1	TM
61	TM	m&p-Xylene	0.7724	0.8080	4.6	TM
62	TM	o-Xylene	0.7990	0.8295	3.8	TM
63	TM	Styrene	1.358	1.406	3.5	TM
64	S	4-Bromofluorobenzene(S)	0.6990	0.7156	2.4	S
65	TM	1,3-Dichloropropane	0.6572	0.6637	0.99	TM
66	TM	Dibromochloromethane	0.4948	0.4812	2.7	TM
67	TM**	Chlorobenzene	1.292	1.269	1.8	TM**
68	TM*	Ethylbenzene	2.032	2.056	1.2	TM*
69	TM**	Bromoform	0.3388	0.3286	3.0	TM**
70	I	1,4-Dichlorobenzene-D (IS)	ISTD			I
71	TM	Isopropylbenzene	3.269	3.409	4.3	TM
72	TM**	1,1,2,2-Tetrachloroethane	0.9070	0.8367	7.8	TM**
73	TM	1,2,3-Trichloropropane	0.2574	0.2664	3.5	TM
74	TM	t-1,4-Dichloro-2-Butene	0.1723	0.1823	5.8	TM
75	TM	Bromobenzene	1.078	1.079	0.15	TM
76	TM	n-Propylbenzene	4.209	4.445	5.6	TM
77	TM	4-Ethyltoluene	3.614	3.749	3.7	TM
78	TM	2-Chlorotoluene	3.001	3.080	2.6	TM
79	TM	1,3,5-Trimethylbenzene	2.996	3.186	6.3	TM
80	TM	4-Chlorotoluene	2.971	3.080	3.7	TM

Average

3.1

ARCS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7
Second Source Calibration

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

SDG No: 68268
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T31.D

		Compound	MEAN	CCRF	%D	%Drift
81	TM	Tert-Butylbenzene	2.745	2.818	2.7	TM
82	TM	1,2,4-Trimethylbenzene	3.100	3.213	3.6	TM
83	TM	Sec-Butylbenzene	3.664	3.850	5.1	TM
84	TM	p-Isopropyltoluene	3.096	3.241	4.7	TM
85	TM	Benzyl Chloride	0.9252	0.6126	34	TM
86	TM	1,3-DCB	2.038	2.081	2.1	TM
87	TM	1,4-DCB	2.134	2.096	1.8	TM
88	TM	n-Butylbenzene	2.775	2.837	2.2	TM
89	TM	1,2-DCB	1.975	1.941	1.7	TM
90	TM	Hexachloroethane	0.5673	0.5516	2.8	TM
91	TM	1,2-Dibromo-3-chloropropane	0.1699	0.1722	1.4	TM
92	TM	1,2,4-Trichlorobenzene	0.9054	0.9040	0.15	TM
93	TM	Hexachlorobutadiene	0.3782	0.3490	7.7	TM
94	TM	Naphthalene	2.528	2.684	6.1	TM
95	TM	1,2,3-Trichlorobenzene	1.290	1.318	2.2	TM
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Average

5.2

KYL 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
 Acq On : 19 Jul 12 23:03 Operator: DG, RS, HW, ARS, SV
 Sample : 120719A LCS-1WT (SS) Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.95	111	225058	31.29333	ppb	0.00
Spiked Amount	31.881		Recovery	=	98.155%	
36) 1,2-DCA-D4 (S)	6.33	65	220138	32.93626	ppb	0.00
Spiked Amount	33.647		Recovery	=	97.888%	
56) Toluene-D8 (S)	8.43	98	802051	36.56718	ppb	0.00
Spiked Amount	37.345		Recovery	=	97.917%	
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914	ppb	0.00
Spiked Amount	29.515		Recovery	=	102.384%	

Target Compounds

2) Dichlorodifluoromethane	1.30	85	18648	8.01049	ppb	98
3) Freon 114	1.41	85	29065	8.97783	ppb	92
4) Chloromethane	1.45	50	56808	9.80339	ppb	99
5) Vinyl chloride	1.56	62	91788	10.10524	ppb	99
6) Bromomethane	1.87	94	54346	9.36087	ppb	98
7) Chloroethane	1.97	64	51463	9.83706	ppb	96
8) Dichlorofluoromethane	2.18	67	3106	9.09488	ppb	97
9) Trichlorofluoromethane	2.24	101	19028	10.13498	ppb	100
11) Acetone	2.88	43	19460	11.84185	ppb	98
12) Freon-113	2.85	101	37646	9.96889	ppb	94
13) 1,1-DCE	2.82	61	48838	9.63706	ppb	93
14) t-Butanol	3.69	59	19056	127.86417	ppb	98
15) Methyl Acetate	3.34	43	44993	10.18034	ppb	95
16) Iodomethane	2.98	142	43340	9.45518	ppb	97
17) Acrylonitrile	3.81	52	14853	10.23301	ppb	95
18) Methylene chloride	3.45	84	17424	9.44871	ppb	95
19) Carbon disulfide	3.06	76	5510	10.69990	ppb	# 86
20) Methyl t-butyl ether (MtBE)	3.90	73	92761	9.48061	ppb	98
21) Trans-1,2-DCE	3.87	96	34225	9.78590	ppb	97
22) Diisopropyl Ether	4.70	59	21995	10.03782	ppb	95
23) 1,1-DCA	4.51	63	93412	10.07257	ppb	98
24) Vinyl Acetate	4.70	87	50781	9.69469	ppb	95
25) Ethyl tert Butyl Ether	5.21	59	119561	9.77392	ppb	99
26) MEK (2-Butanone)	5.38	43	23166	10.28682	ppb	95
27) Cis-1,2-DCE	5.32	96	59336	9.98787	ppb	96
28) 2,2-Dichloropropane	5.32	77	29940	8.01402	ppb	99
29) Chloroform	5.75	83	110557	9.59991	ppb	94
30) Bromochloromethane	5.62	128	29433	10.17554	ppb	98
32) 1,1,1-TCA	5.96	97	66682	9.62307	ppb	96
33) Cyclohexane	6.03	41	18804	9.99923	ppb	94
34) 1,1-Dichloropropene	6.17	75	50257	9.98686	ppb	98
35) 2,2,4-Trimethylpentane	6.55	57	62413	8.62945	ppb	97
37) Carbon Tetrachloride	6.16	117	65247	10.04641	ppb	95
38) Tert Amyl Methyl Ether	6.59	73	128152	9.84264	ppb	100
39) 1,2-DCA	6.41	62	73737	9.76354	ppb	99
40) Benzene	6.40	78	195282	9.46720	ppb	97
41) TCE	7.14	95	59649	10.63894	ppb	98
42) 2-Pentanone	7.36	43	545318	123.45728	ppb	100
43) 1,2-Dichloropropane	7.37	63	67896	10.08801	ppb	96

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

0719T31.D TALLW.M Fri Jul 20 10:53:41 2012

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
 Acq On : 19 Jul 12 23:03 Operator: DG, RS, HW, ARS, SV
 Sample : 120719A LCS-1WT (SS) Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Bromodichloromethane	7.68	83	89098	9.56942	ppb	98
45) Methyl Cyclohexane	7.36	83	38326	9.57410	ppb	95
46) Dibromomethane	7.49	93	36747	10.03731	ppb	99
47) 2-Chloroethyl vinyl ether	7.99	106	1154	8.86120	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	32328	10.17680	ppb	97
49) 1-Bromo-2-chloroethane	7.99	63	45864	9.79426	ppb	99
50) <u>Cis-1,3-Dichloropropene</u>	8.15	75	86842	<u>9.42535 ppb</u>		98
51) Toluene	8.50	91	246468	10.12718	ppb	98
52) <u>Trans-1,3-Dichloropropene</u>	8.72	75	75443	<u>9.28657 ppb</u>		98
53) 1,1,2-TCA	8.90	83	52073	9.60983	ppb	98
54) 2-Hexanone	9.18	43	36772	10.09450	ppb	96
57) 1,2-EDB	9.40	107	54442	9.78712	ppb	99
58) Tetrachloroethene	9.06	166	63354	10.07267	ppb	96
59) 1-Chlorohexane	9.90	91	74600	9.96437	ppb	98
60) 1,1,1,2-Tetrachloroethane	9.99	131	71965	9.79349	ppb	96
61) m&p-Xylene	10.14	106	239826	20.92173	ppb	98
62) o-Xylene	10.54	106	123104	10.38148	ppb	98
63) Styrene	10.55	104	208582	10.35266	ppb	98
65) 1,3-Dichloropropane	9.07	76	98494	10.09885	ppb	97
66) Dibromochloromethane	9.29	129	71411	9.72527	ppb	99
67) Chlorobenzene	9.90	112	188318	9.81804	ppb	99
68) Ethylbenzene	10.03	91	305101	10.11617	ppb	99
69) Bromoform	10.71	173	48764	9.69905	ppb	99
71) Isopropylbenzene	10.91	105	295625	10.43029	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	72548	9.22452	ppb	99
73) 1,2,3-Trichloropropane	11.23	110	23096	10.34681	ppb	85
74) t-1,4-Dichloro-2-Butene	11.25	53	15810	10.58327	ppb	89
75) Bromobenzene	11.19	156	93573	10.01488	ppb	99
76) n-Propylbenzene	11.32	91	385440	10.56221	ppb	98
77) 4-Ethyltoluene	11.43	105	325068	10.37283	ppb	98
78) 2-Chlorotoluene	11.39	91	267062	10.26282	ppb	100
79) 1,3,5-Trimethylbenzene	11.50	105	276230	10.63314	ppb	99
80) 4-Chlorotoluene	11.50	91	267095	10.36956	ppb	100
81) Tert-Butylbenzene	11.82	119	244365	10.26802	ppb	99
82) 1,2,4-Trimethylbenzene	11.86	105	278601	10.36400	ppb	99
83) Sec-Butylbenzene	12.04	105	333801	10.50584	ppb	100
84) p-Isopropyltoluene	12.19	119	281061	10.46929	ppb	99
85) Benzyl Chloride	12.35	91	53118	6.62120	ppb	97
86) 1,3-DCB	12.13	146	180466	10.21317	ppb	99
87) 1,4-DCB	12.22	146	181734	9.82055	ppb	99
88) n-Butylbenzene	12.59	91	245949	10.22102	ppb	98
89) 1,2-DCB	12.59	146	168341	9.82946	ppb	97
90) Hexachloroethane	12.86	117	47831	9.72421	ppb	93
91) 1,2-Dibromo-3-chloropropan	13.35	157	14935	10.13631	ppb	95
92) 1,2,4-Trichlorobenzene	14.20	180	78384	9.98480	ppb	100
93) Hexachlorobutadiene	14.38	223	30261	9.22762	ppb	89
94) Naphthalene	14.43	128	232681	10.61496	ppb	98
95) 1,2,3-Trichlorobenzene	14.68	180	114268	10.21606	ppb	99

*MRS 7/27/12**1,3-dichloropropene, total:
18.71192 ppb*

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

0719T31.D TALLW.M Fri Jul 20 10:53:42 2012

Page 2

Quantitation Report

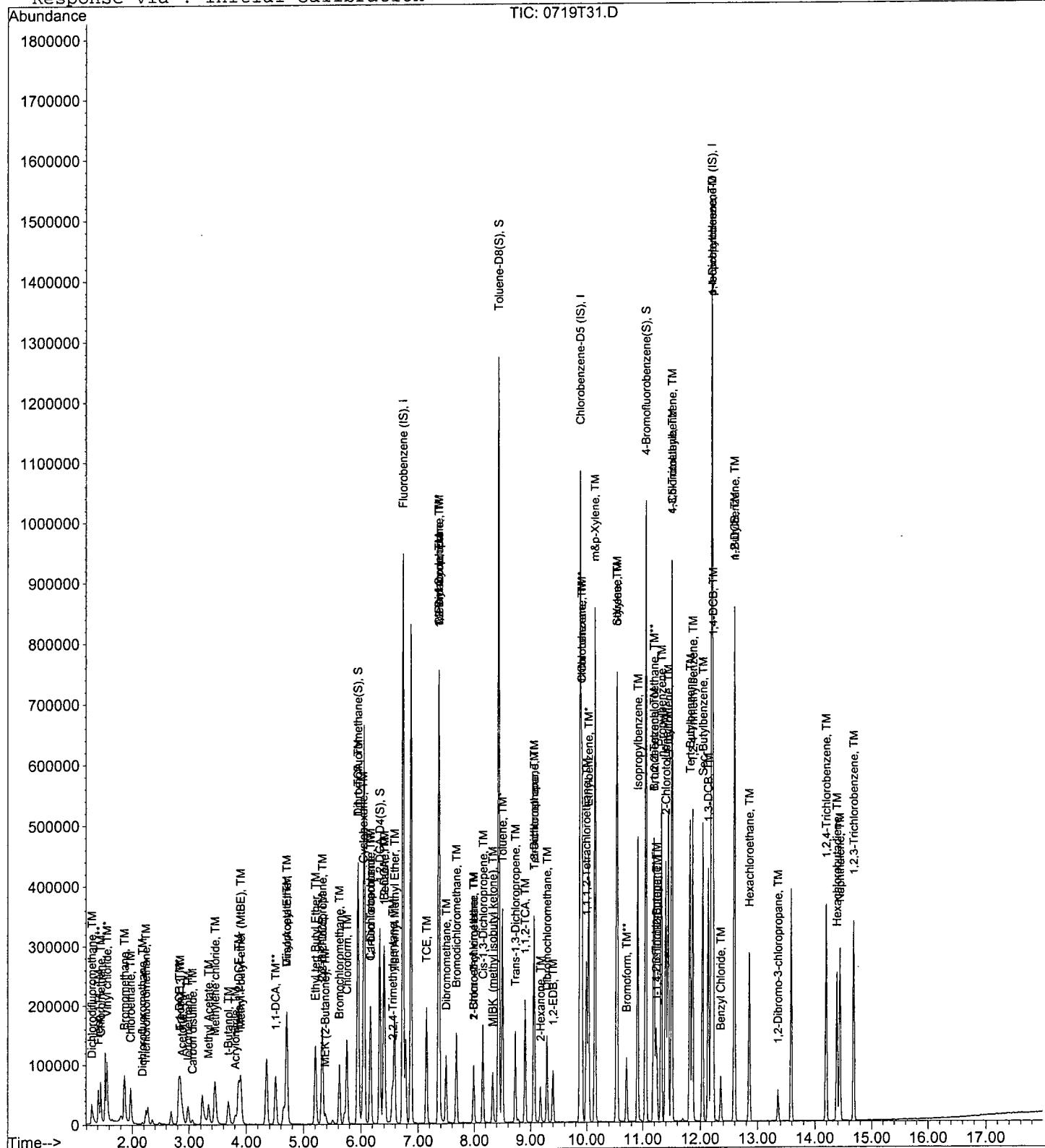
Data File : M:\THOR\DATA\T120719\0719T31.D
Acq On : 19 Jul 12 23:03
Sample : 120719A LCS-1WT (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 31
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 10:45 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7
Continuing Calibration

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

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Fluorobenzene (IS)	ISTD			I
2	TM	Dichlorodifluoromethane	0.1266	0.1292	2.0	TM
3	TML	Freon 114	0.1578	0.1753	11	TML
4	TM**L	Chloromethane	0.3709	0.2583	30	TM**L
5	TM*	Vinyl chloride	0.4941	0.4570	7.5	TM*
6	TM	Bromomethane	0.3158	0.2823	11	TM
7	TM	Chloroethane	0.2846	0.2656	6.7	TM
8	TMQ	Dichlorofluoromethane	0.0241	0.0148	39	TMQ
9	TM	Trichlorofluoromethane	0.1021	0.1190	17	TM
10	TMQ	Acrolein	0.0000	0.0062	0.00	TMQ
11	TML	Acetone	0.1608	0.0985	39	TML
12	TM	Freon-113	0.2054	0.2207	7.4	TM
13	TM*	1,1-DCE	0.2757	0.2691	2.4	TM*
14	TM	t-Butanol	0.0081	0.0081	0.42	TM
15	TML	Methyl Acetate	0.4032	0.2393	41	TML
16	TM	Iodomethane	0.2493	0.2345	6.0	TM
17	TM	Acrylonitrile	0.0790	0.0817	3.4	TM
18	TML	Methylene chloride	0.1556	0.0951	39	TML
19	TML	Carbon disulfide	0.0329	0.0247	25	TML
20	TM	Methyl t-butyl ether (MtBE)	0.5322	0.5090	4.4	TM
21	TM	Trans-1,2-DCE	0.1902	0.1672	12	TM
22	TM	Diisopropyl Ether	0.1192	0.1236	3.7	TM
23	TM**	1,1-DCA	0.5045	0.5046	0.02	TM**
24	TM	Vinyl Acetate	0.2849	0.2831	0.63	TM
25	TM	Ethyl tert Butyl Ether	0.6654	0.6589	0.99	TM
26	TML	MEK (2-Butanone)	0.1418	0.1256	11	TML
27	TM	Cis-1,2-DCE	0.3232	0.3311	2.5	TM
28	TM	2,2-Dichloropropane	0.2032	0.2119	4.3	TM
29	TM*	Chloroform	0.6265	0.6180	1.4	TM*
30	TM	Bromochloromethane	0.1573	0.1556	1.1	TM
31	S	Dibromofluoromethane(S)	0.3912	0.3943	0.80	S
32	TM	1,1,1-TCA	0.3769	0.3716	1.4	TM
33	TM	Cyclohexane	0.1023	0.0939	8.2	TM
34	TM	1,1-Dichloropropene	0.2737	0.2693	1.6	TM
35	TM	2,2,4-Trimethylpentane	0.3934	0.4057	3.1	TM
36	S	1,2-DCA-D4(S)	0.3636	0.3686	1.4	S
37	TM	Carbon Tetrachloride	0.3533	0.3519	0.39	TM
38	TM	Tert Amyl Methyl Ether	0.7083	0.7079	0.06	TM
39	TM	1,2-DCA	0.4108	0.4035	1.8	TM
40	TM	Benzene	1.122	1.042	7.1	TM

Average

9.1

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7
Continuing Calibration

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

SDG No: 64268
Date Analyzed: 07/26/12
Instrument: Thor
Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D	%Drift
41	TM	TCE	0.3050	0.2876	5.7	TM
42	TM	2-Pentanone	0.2403	0.2386	0.71	TM
43	TM*	1,2-Dichloropropane	0.3661	0.3625	0.97	TM*
44	TM	Bromodichloromethane	0.5065	0.5084	0.37	TM
45	TM	Methyl Cyclohexane	0.2178	0.2158	0.89	TM
46	TM	Dibromomethane	0.1991	0.2043	2.6	TM
47	TML	2-Chloroethyl vinyl ether	0.0061	0.0063	2.3	TML
48	TM	MIBK (methyl isobutyl ketone)	0.1728	0.1649	4.6	TM
49	TM	1-Bromo-2-chloroethane	0.2547	0.2586	1.5	TM
50	TM	Cis-1,3-Dichloropropene	0.5012	0.5056	0.88	TM
51	TM*	Toluene	1.324	1.324	0.00	TM*
52	TM	Trans-1,3-Dichloropropene	0.4419	0.4496	1.7	TM
53	TM	1,1,2-TCA	0.2948	0.2925	0.76	TM
54	TM	2-Hexanone	0.1982	0.1994	0.64	TM
55	I	Chlorobenzene-D5 (IS)	ISTD			I
56	S	Toluene-D8(S)	1.478	1.501	1.6	S
57	TM	1,2-EDB	0.3748	0.3856	2.9	TM
58	TM	Tetrachloroethene	0.4238	0.4311	1.7	TM
59	TM	1-Chlorohexane	0.5045	0.5120	1.5	TM
60	TM	1,1,1,2-Tetrachloroethane	0.4952	0.4998	0.94	TM
61	TM	m&p-Xylene	0.7724	0.8035	4.0	TM
62	TM	o-Xylene	0.7990	0.8480	6.1	TM
63	TM	Styrene	1.358	1.420	4.6	TM
64	S	4-Bromofluorobenzene(S)	0.6990	0.7267	4.0	S
65	TM	1,3-Dichloropropane	0.6572	0.6785	3.2	TM
66	TM	Dibromochloromethane	0.4948	0.5142	3.9	TM
67	TM**	Chlorobenzene	1.292	1.310	1.3	TM**
68	TM*	Ethylbenzene	2.032	2.075	2.1	TM*
69	TM**	Bromoform	0.3388	0.3590	6.0	TM**
70	I	1,4-Dichlorobenzene-D (IS)	ISTD			I
71	TM	Isopropylbenzene	3.269	3.309	1.2	TM
72	TM**	1,1,2,2-Tetrachloroethane	0.9070	0.9174	1.1	TM**
73	TM	1,2,3-Trichloropropane	0.2574	0.2596	0.84	TM
74	TM	t-1,4-Dichloro-2-Butene	0.1723	0.2025	18	TM
75	TM	Bromobenzene	1.078	1.068	0.89	TM
76	TM	n-Propylbenzene	4.209	4.343	3.2	TM
77	TM	4-Ethyltoluene	3.614	3.796	5.0	TM
78	TM	2-Chlorotoluene	3.001	3.077	2.5	TM
79	TM	1,3,5-Trimethylbenzene	2.996	3.151	5.2	TM
80	TM	4-Chlorotoluene	2.971	3.044	2.5	TM

Average

2.8

AR5 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7
Continuing Calibration

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

SDG No: 68168
Date Analyzed: 07/26/12
Instrument: Thor
Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D	%Drift
81	TM	Tert-Butylbenzene	2.745	2.792	1.7	TM
82	TM	1,2,4-Trimethylbenzene	3.100	3.240	.4.5	TM
83	TM	Sec-Butylbenzene	3.664	3.916	6.9	TM
84	TM	p-Isopropyltoluene	3.096	3.274	5.7	TM
85	TM	Benzyl Chloride	0.9252	0.9863	6.6	TM
86	TM	1,3-DCB	2.038	2.073	1.7	TM
87	TM	1,4-DCB	2.134	2.138	0.16	TM
88	TM	n-Butylbenzene	2.775	2.924	5.4	TM
89	TM	1,2-DCB	1.975	2.011	1.8	TM
90	TM	Hexachloroethane	0.5673	0.5550	2.2	TM
91	TM	1,2-Dibromo-3-chloropropane	0.1699	0.1892	11	TM
92	TM	1,2,4-Trichlorobenzene	0.9054	0.9093	0.43	TM
93	TM	Hexachlorobutadiene	0.3782	0.3896	3.0	TM
94	TM	Naphthalene	2.528	2.619	3.6	TM
95	TM	1,2,3-Trichlorobenzene	1.290	1.317	2.1	TM
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119						
120						

Average

3.8

ARS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T04.D Vial: 29
 Acq On : 26 Jul 12 10:46 Operator: DG,RS,HW,ARS,SV
 Sample : 10ug/L Vol Std 07-26-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	398336	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	321152	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	193728	25.00000	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	200318	32.13606	ppb	0.00
Spiked Amount 31.881			Recovery	= 100.799%		
36) 1,2-DCA-D4 (S)	6.32	65	197620	34.11344	ppb	0.00
Spiked Amount 33.647			Recovery	= 101.386%		
56) Toluene-D8 (S)	8.43	98	720301	37.93815	ppb	0.00
Spiked Amount 37.345			Recovery	= 101.588%		
64) 4-Bromofluorobenzene(S)	11.05	95	275538	30.68737	ppb	0.00
Spiked Amount 29.515			Recovery	= 103.970%		
Target Compounds						
2) Dichlorodifluoromethane	1.28	85	20584	10.20168	ppb	98
3) Freon 114	1.39	85	27926	9.99425	ppb	88
4) Chloromethane	1.43	50	41158	8.12483	ppb	98
5) Vinyl chloride	1.54	62	72811	9.24853	ppb	99
6) Bromomethane	1.85	94	44988	8.94048	ppb	95
7) Chloroethane	1.95	64	42318	9.33277	ppb	96
8) Dichlorofluoromethane	2.16	67	2357	8.15476	ppb	88
9) Trichlorofluoromethane	2.22	101	18964	11.65401	ppb	95
11) Acetone	2.87	43	15701	10.93625	ppb	95
12) Freon-113	2.83	101	35158	10.74157	ppb	93
13) 1,1-DCE	2.80	61	42874	9.76104	ppb	98
14) t-Butanol	3.67	59	16079	124.47769	ppb	98
15) Methyl Acetate	3.32	43	38136	9.92354	ppb	99
16) Iodomethane	2.96	142	37360	9.40380	ppb	98
17) Acrylonitrile	3.79	52	13014	10.34464	ppb	81
18) Methylene chloride	3.43	84	15151	9.48248	ppb	98
19) Carbon disulfide	3.05	76	3929	8.64622	ppb	# 87
20) Methyl t-butyl ether (MtBE	3.88	73	81107	9.56410	ppb	97
21) Trans-1,2-DCE	3.84	96	26647	8.79065	ppb	89
22) Diisopropyl Ether	4.69	59	19686	10.36546	ppb	91
23) 1,1-DCA	4.49	63	80395	10.00189	ppb	95
24) Vinyl Acetate	4.69	87	45113	9.93687	ppb	95
25) Ethyl tert Butyl Ether	5.19	59	104979	9.90141	ppb	99
26) MEK (2-Butanone)	5.37	43	20005	10.25031	ppb	96
27) Cis-1,2-DCE	5.32	96	52760	10.24648	ppb	91
28) 2,2-Dichloropropane	5.31	77	33764	10.42720	ppb	91
29) Chloroform	5.75	83	98466	9.86467	ppb	97
30) Bromochloromethane	5.61	128	24790	9.88814	ppb	95
32) 1,1,1-TCA	5.95	97	59207	9.85810	ppb	92
33) Cyclohexane	6.03	41	14959	9.17770	ppb	93
34) 1,1-Dichloropropene	6.16	75	42905	9.83684	ppb	97
35) 2,2,4-Trimethylpentane	6.54	57	64643	10.31205	ppb	96
37) Carbon Tetrachloride	6.15	117	56070	9.96085	ppb	92
38) Tert Amyl Methyl Ether	6.58	73	112785	9.99431	ppb	99
39) 1,2-DCA	6.41	62	64294	9.82217	ppb	99
40) Benzene	6.39	78	166002	9.28513	ppb	99
41) TCE	7.14	95	45825	9.43003	ppb	99
42) 2-Pentanone	7.36	43	475166	124.11594	ppb	100
43) 1,2-Dichloropropane	7.37	63	57766	9.90259	ppb	100

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

0726T04.D TALLW.M Fri Jul 27 08:30:29 2012

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T04.D
 Acq On : 26 Jul 12 10:46
 Sample : 10ug/L Vol Std 07-26-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 29
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Bromodichloromethane	7.67	83	80999	10.03720	ppb	98
45) Methyl Cyclohexane	7.35	83	34388	9.91121	ppb	98
46) Dibromomethane	7.49	93	32545	10.25640	ppb	98
47) 2-Chloroethyl vinyl ether	7.98	106	999	8.84903	ppb	100
48) MIBK (methyl isobutyl ket	8.32	43	26280	9.54494	ppb	95
49) 1-Bromo-2-chloroethane	7.98	63	41208	10.15305	ppb	100
50) Cis-1,3-Dichloropropene	8.15	75	80563	10.08832	ppb	98
51) Toluene	8.50	91	210933	9.99972	ppb	100
52) Trans-1,3-Dichloropropene	8.72	75	71643	10.17479	ppb	97
53) 1,1,2-TCA	8.90	83	46611	9.92446	ppb	98
54) 2-Hexanone	9.17	43	31774	10.06364	ppb	94
57) 1,2-EDB	9.40	107	49540	10.28844	ppb	95
58) Tetrachloroethene	9.05	166	55383	10.17231	ppb	96
59) 1-Chlorohexane	9.90	91	65775	10.14949	ppb	97
60) 1,1,1,2-Tetrachloroethane	9.99	131	64208	10.09434	ppb	97
61) m&p-Xylene	10.14	106	206429	20.80390	ppb	100
62) o-Xylene	10.54	106	108934	10.61263	ppb	96
63) Styrene	10.55	104	182400	10.45858	ppb	99
65) 1,3-Dichloropropane	9.06	76	87161	10.32421	ppb	98
66) Dibromochloromethane	9.29	129	66056	10.39253	ppb	100
67) Chlorobenzene	9.90	112	168239	10.13286	ppb	98
68) Ethylbenzene	10.03	91	266504	10.20819	ppb	98
69) Bromoform	10.71	173	46121	10.59745	ppb	99
71) Isopropylbenzene	10.91	105	256398	10.12215	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	71093	10.11458	ppb	99
73) 1,2,3-Trichloropropane	11.23	110	20117	10.08407	ppb	99
74) t-1,4-Dichloro-2-Butene	11.25	53	15689	11.75131	ppb	90
75) Bromobenzene	11.19	156	82758	9.91078	ppb	99
76) n-Propylbenzene	11.32	91	336546	10.31918	ppb	98
77) 4-Ethyltoluene	11.43	105	294163	10.50301	ppb	99
78) 2-Chlorotoluene	11.39	91	238448	10.25301	ppb	98
79) 1,3,5-Trimethylbenzene	11.50	105	244143	10.51569	ppb	100
80) 4-Chlorotoluene	11.50	91	235882	10.24689	ppb	100
81) Tert-Butylbenzene	11.82	119	216392	10.17400	ppb	98
82) 1,2,4-Trimethylbenzene	11.86	105	251104	10.45204	ppb	97
83) Sec-Butylbenzene	12.04	105	303423	10.68549	ppb	100
84) p-Isopropyltoluene	12.19	119	253700	10.57402	ppb	99
85) Benzyl Chloride	12.35	91	76432	10.66038	ppb	97
86) 1,3-DCB	12.13	146	160661	10.17369	ppb	100
87) 1,4-DCB	12.22	146	165656	10.01635	ppb	99
88) n-Butylbenzene	12.59	91	226597	10.53674	ppb	100
89) 1,2-DCB	12.59	146	155808	10.17964	ppb	98
90) Hexachloroethane	12.86	117	43009	9.78378	ppb	93
91) 1,2-Dibromo-3-chloropropan	13.36	157	14662	11.13450	ppb	87
92) 1,2,4-Trichlorobenzene	14.20	180	70464	10.04343	ppb	98
93) Hexachlorobutadiene	14.38	223	30194	10.30220	ppb	86
94) Naphthalene	14.43	128	202923	10.35837	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	102072	10.21099	ppb	97

(#) = qualifier out of range (m) = manual integration
 0726T04.D TALLW.M Fri Jul 27 08:30:31 2012

Quantitation Report

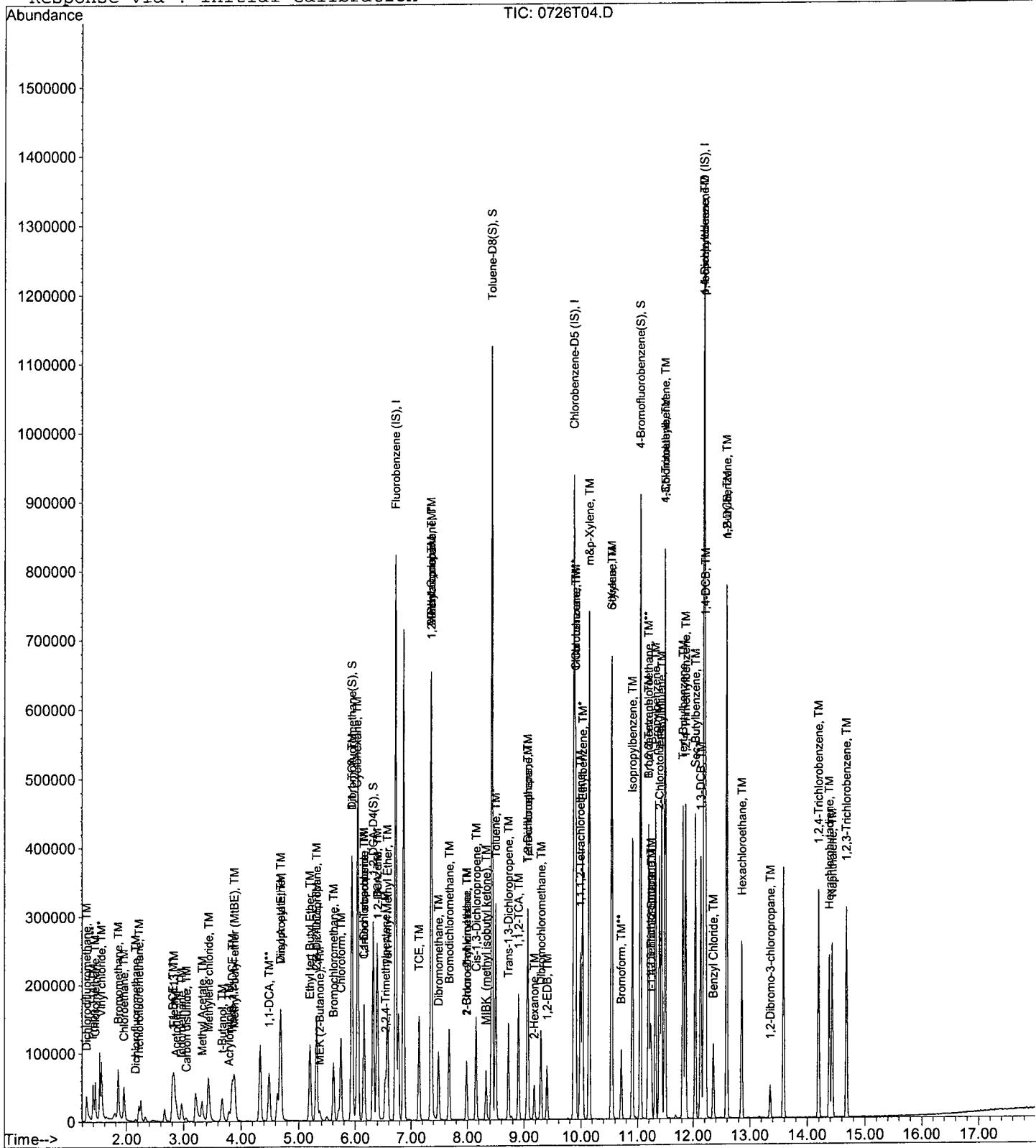
Data File : M:\THOR\DATA\T120725\0726T04.D
 Acq On : 26 Jul 12 10:46
 Sample : 10ug/L Vol Std 07-26-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 29
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No:

Matrix: Water

SDG No: 68268

Initial Cal. Date: 07/25/12

Instrument: Thor (TGAS.M)

Initials: _____

0725T04.D 0725T05.D 0725T06.D 0725T07.D 0725T08.D 0725T09.D 0725T10.D

	Compound	20	50	100	300	600	800	1000			Avg	%RSD		r2
1	I Fluorobenzene (IS)	ISTD												
2	TMHBL Gasoline	16.5	7.205	4.047	2.093	1.605	1.465	1.393			4.9	113	TMHBL	1.000
3	I Chlorobenzene-D5 (IS)	ISTD												
4	I 1,4-Dichlorobenzene-D (IS)	ISTD												
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ARS 7/26/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0725T03.D
 Acq On : 25 Jul 12 10:22
 Sample : VOC MIX MARKER
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 2
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 8:59 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	383424	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	310848	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	187136	25.00000	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	196549	32.75773	ppb	0.00
Spiked Amount	31.881		Recovery	= 102.750%		
36) 1,2-DCA-D4 (S)	6.33	65	189874	34.05104	ppb	0.00
Spiked Amount	33.647		Recovery	= 101.202%		
56) Toluene-D8 (S)	8.43	98	687242	37.39680	ppb	0.00
Spiked Amount	37.345		Recovery	= 100.140%		
64) 4-Bromofluorobenzene(S)	11.05	95	268751	30.92365	ppb	0.00
Spiked Amount	29.515		Recovery	= 104.773%		
Target Compounds						
4) Chloromethane	1.45	50	159	-0.39190	ppb	# 74
6) Bromomethane	1.78	94	376	0.07763	ppb	# 3
11) Acetone	2.90	43	3396	1.47860	ppb	98
14) t-Butanol	3.69	59	126	1.01338	ppb	# 72
15) Methyl Acetate	3.34	43	3113	-0.48779	ppb	93
18) Methylene chloride	3.45	84	326	-0.71073	ppb	84
23) 1,1-DCA	4.34	63	775	0.10017	ppb	# 1
26) MEK (2-Butanone)	5.39	43	1036	0.87321	ppb	# 46
34) 1,1-Dichloropropene	6.05	75	22005	5.24130	ppb	# 48
35) 2,2,4-Trimethylpentane	6.55	57	913	0.15131	ppb	91
37) Carbon Tetrachloride	6.05	117	28709	5.29852	ppb	# 14
38) Tert Amyl Methyl Ether	6.73	73	8830	0.81289	ppb	# 29
39) 1,2-DCA	6.40	62	6268	0.99480	ppb	# 74
40) Benzene	6.40	78	769435	44.71126	ppb	98
48) MIBK (methyl isobutyl ket	8.43	43	1645	0.62070	ppb	# 1
51) Toluene	8.50	91	828486	40.80362	ppb	100
58) Tetrachloroethene	9.06	166	842	0.15978	ppb	84
59) 1-Chlorohexane	10.03	91	895259	142.72325	ppb	# 17
61) m&p-Xylene	10.14	106	710590	73.98703	ppb	98
62) o-Xylene	10.54	106	355718	35.80371	ppb	99
63) Styrene	10.54	104	17860	1.05802	ppb	# 1
68) Ethylbenzene	10.03	91	895459	35.43670	ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	3503	0.15620	ppb	89
81) Tert-Butylbenzene	11.86	119	92293	4.49215	ppb	# 73
82) 1,2,4-Trimethylbenzene	11.86	105	731223	31.50884	ppb	99
83) Sec-Butylbenzene	11.86	105	709314	25.85946	ppb	# 55
94) Naphthalene	14.43	128	598073	31.60454	ppb	99

ARS 7/26/12

Quantitation Report

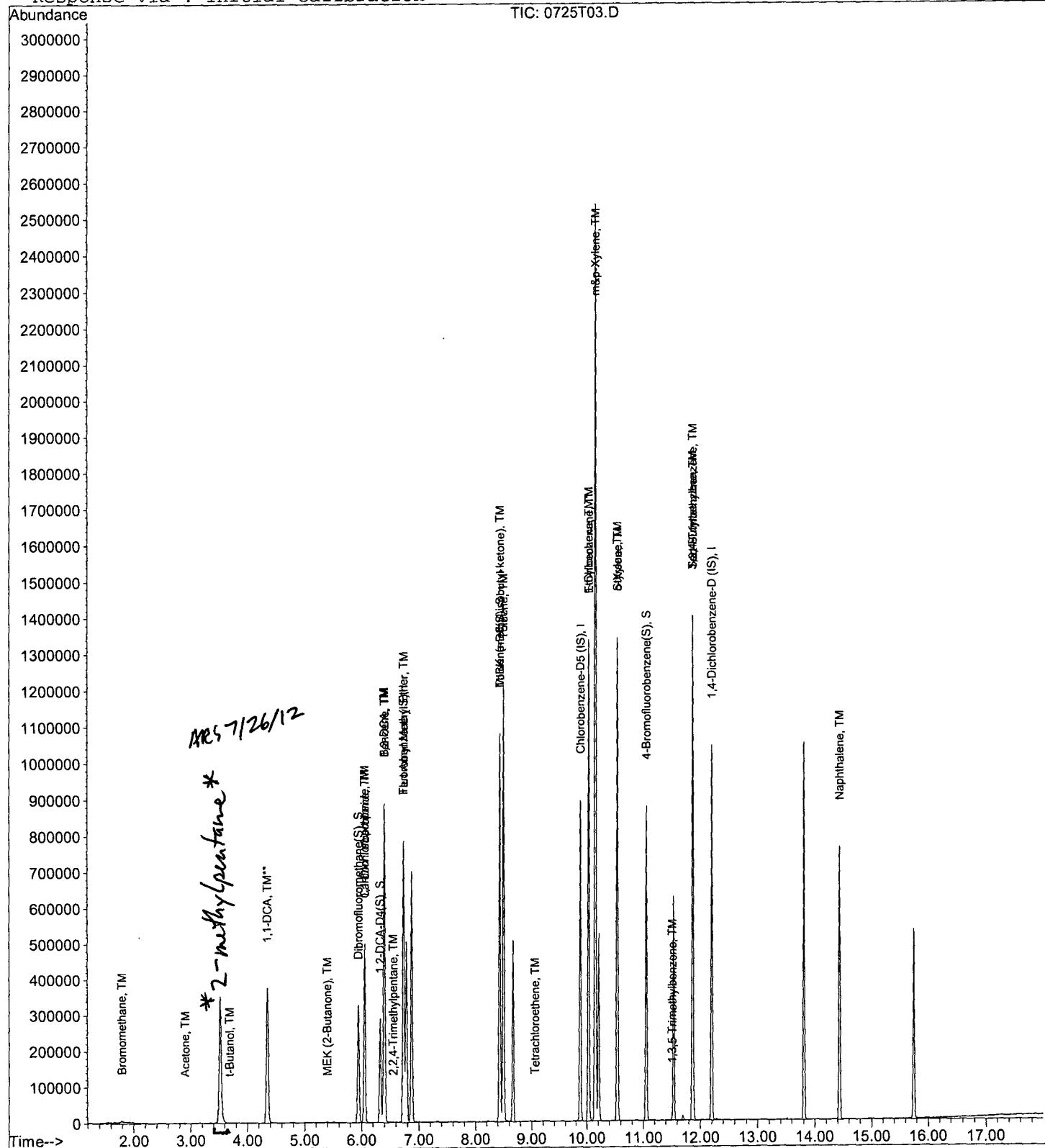
Data File : M:\THOR\DATA\T120725\0725T03.D
 Acq On : 25 Jul 12 10:22
 Sample : VOC MIX MARKER
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 2
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 8:59 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	757122	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	882358	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	975664	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

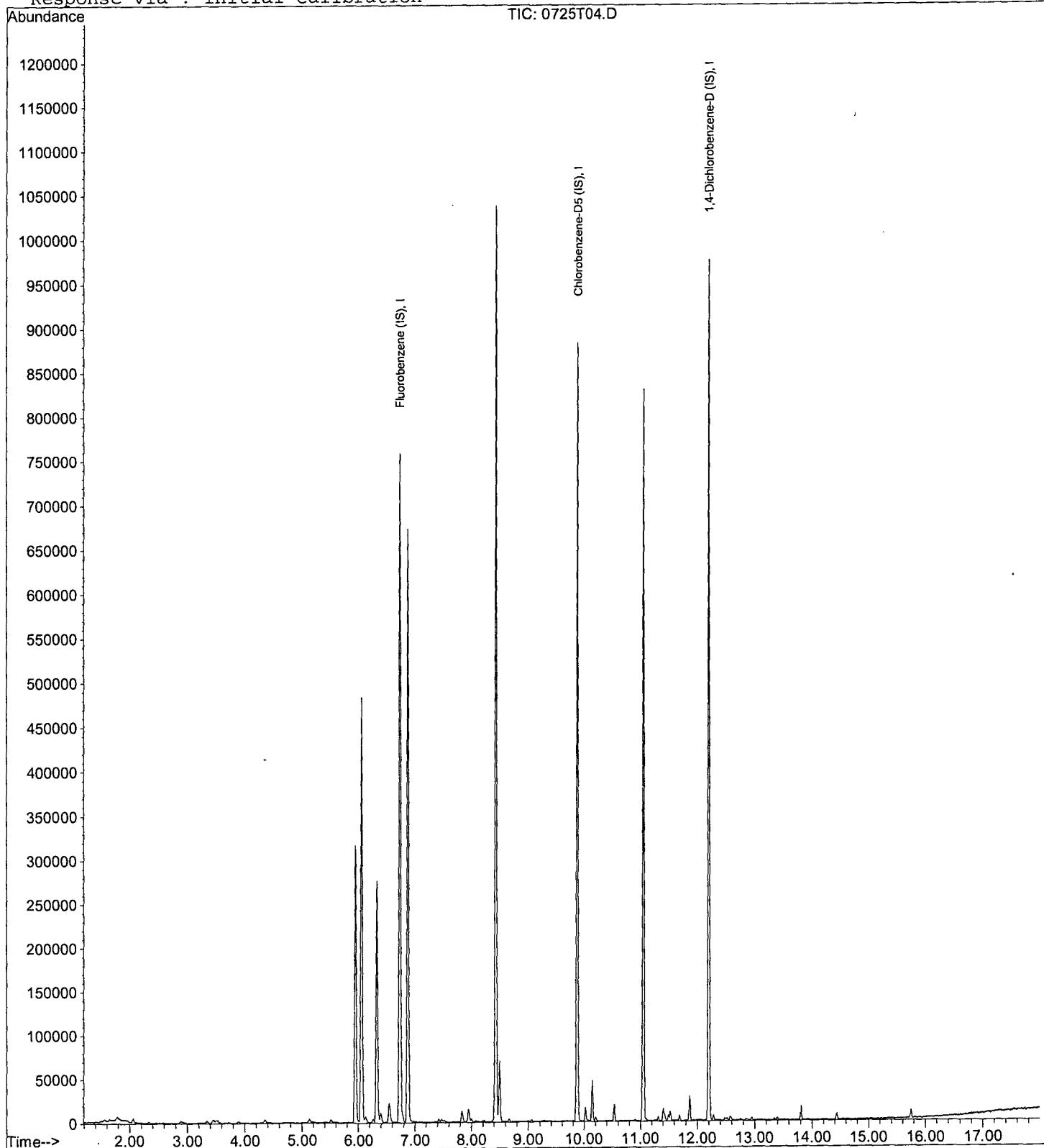
Data File : M:\THOR\DATA\T120725\0725T04.D
Acq On : 25 Jul 12 10:50
Sample : 20ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 3
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:59 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

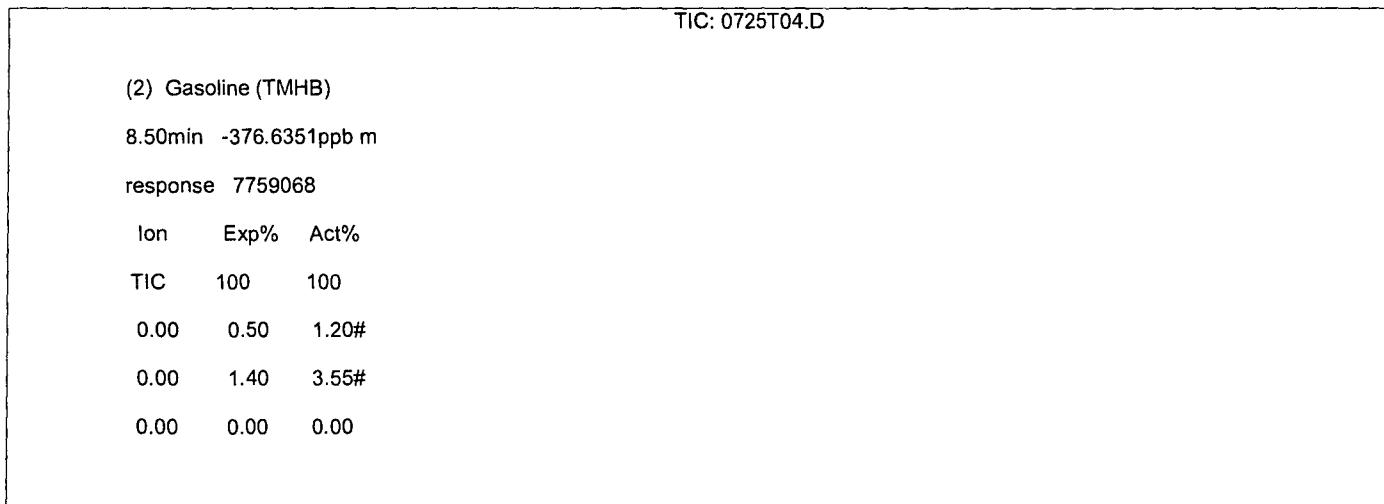
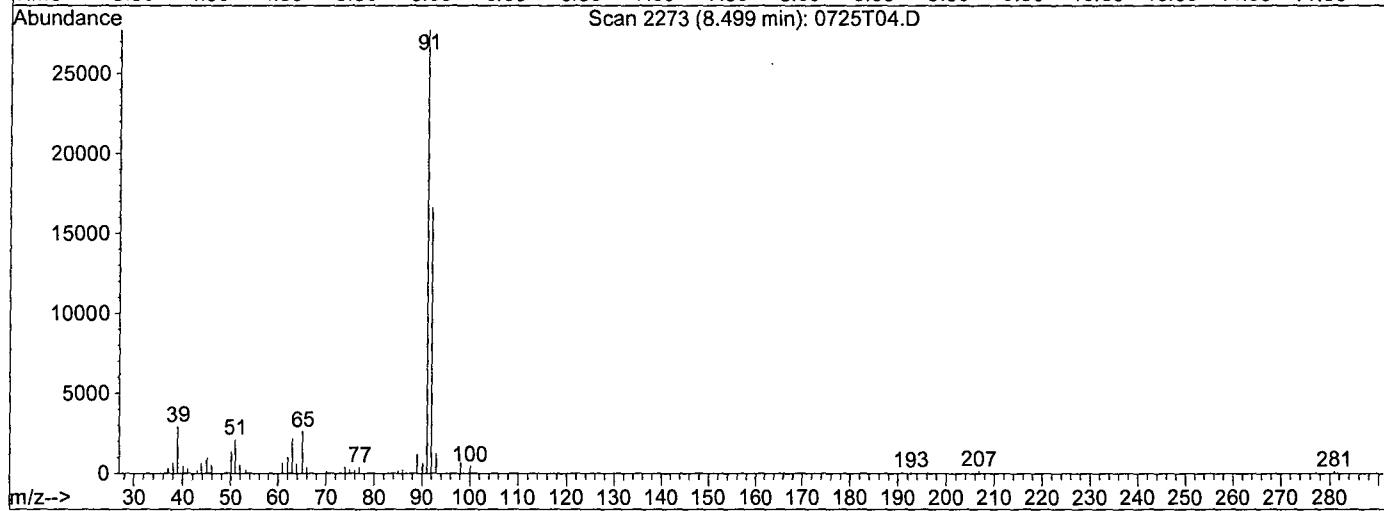
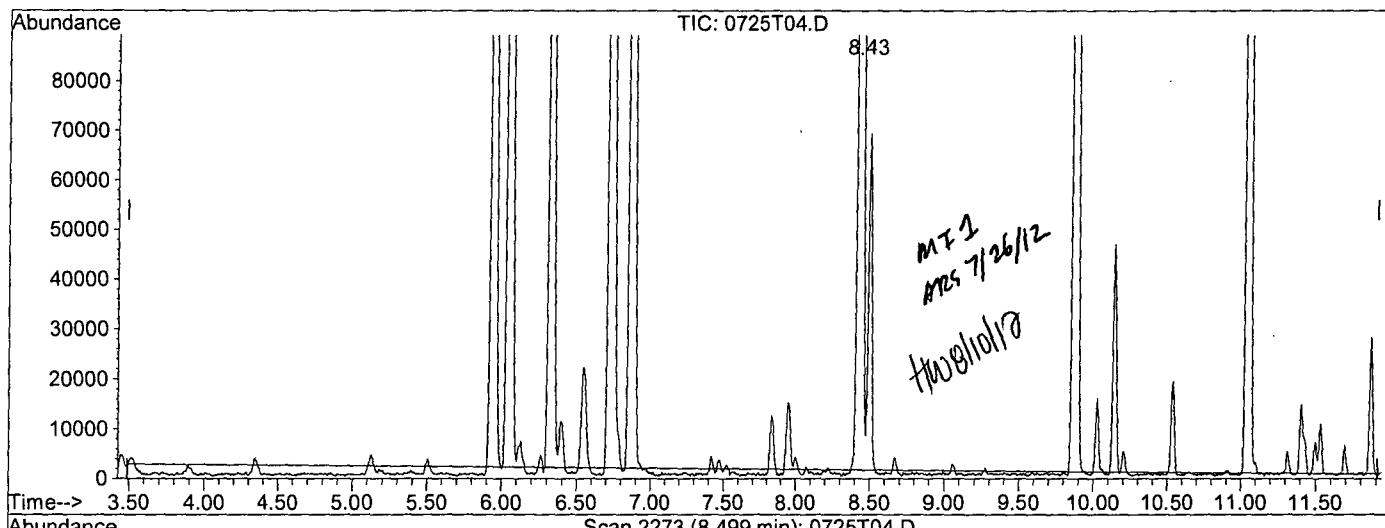


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D
 Acq On : 25 Jul 12 10:50
 Sample : 20ug/L Vol Std 07-25-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:53 2012

Vial: 3
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration

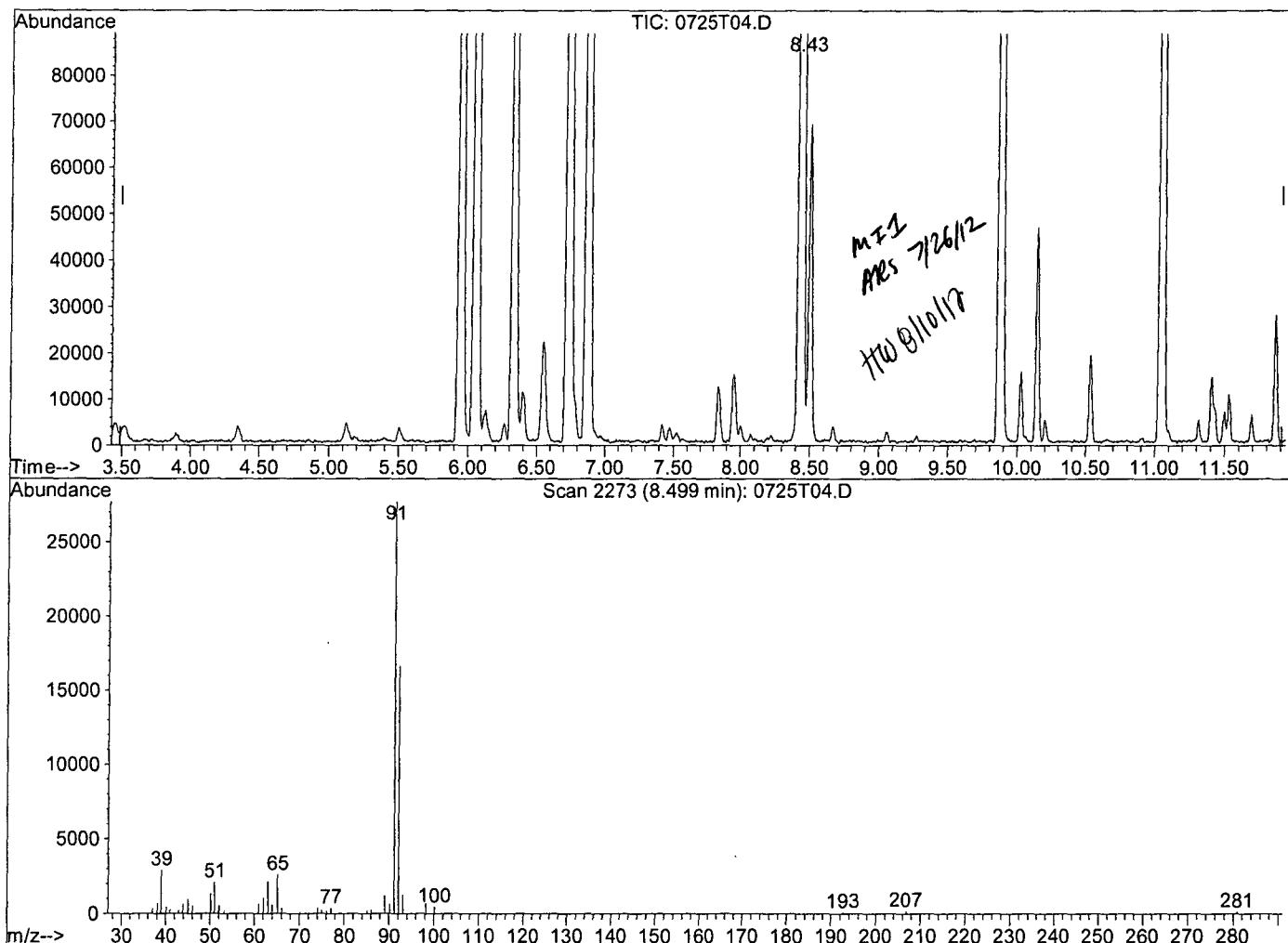


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D
 Acq On : 25 Jul 12 10:50
 Sample : 20ug/L Vol Std 07-25-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:59 2012

Vial: 3
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



(2) Gasoline (TMHB)

8.43min -268.7537ppb m

response 10003915

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.76#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG, RS, HW, ARS, SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	757407	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	877869	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	954185	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

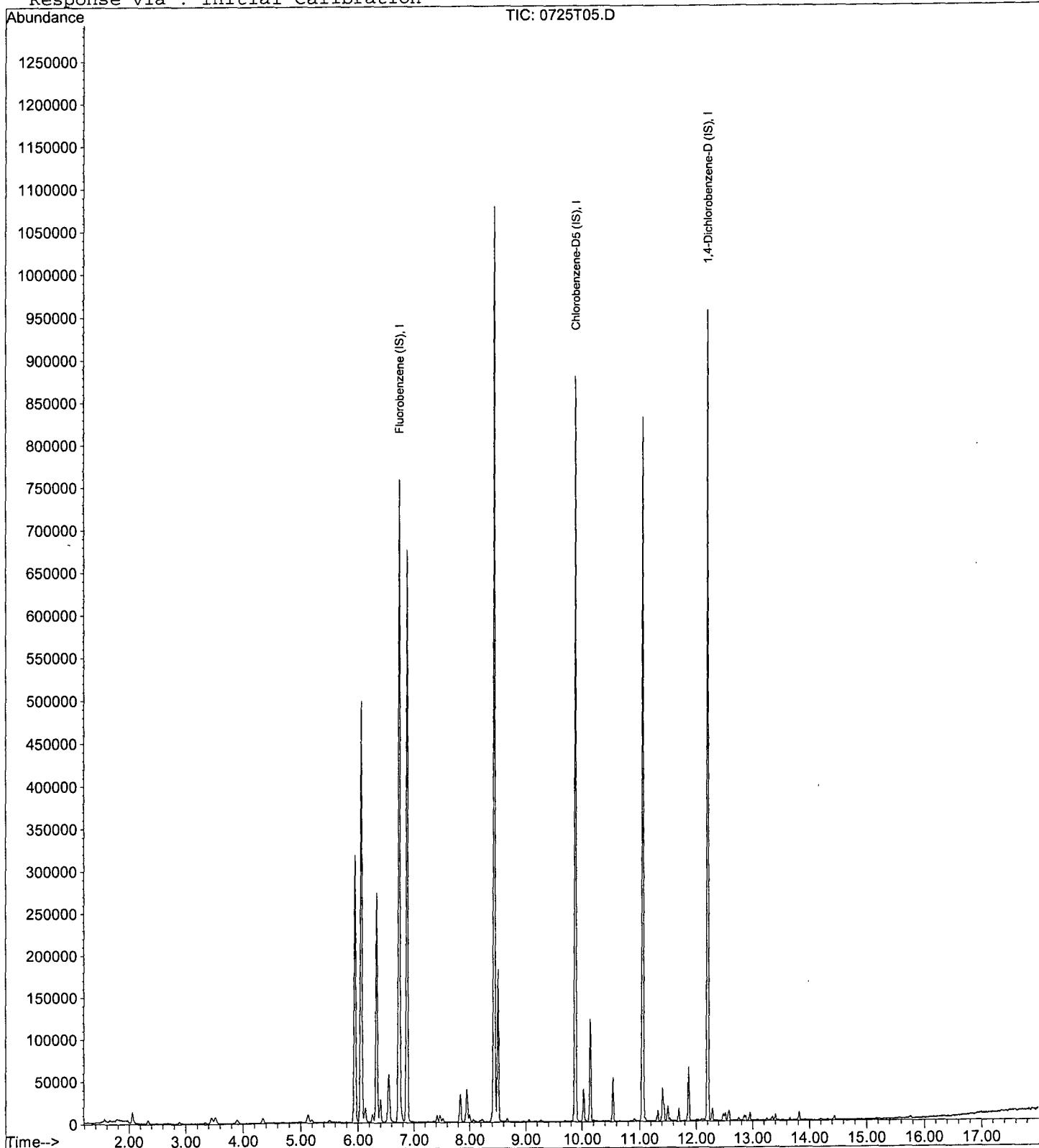
Data File : M:\THOR\DATA\T120725\0725T05.D
Acq On : 25 Jul 12 11:17
Sample : 50ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 4
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:58 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

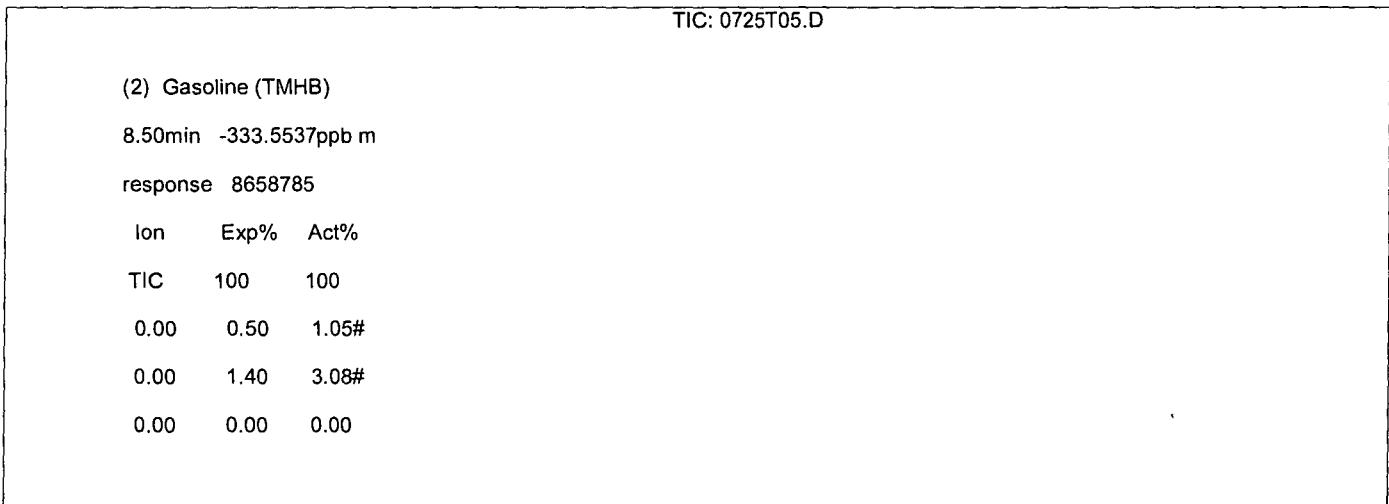
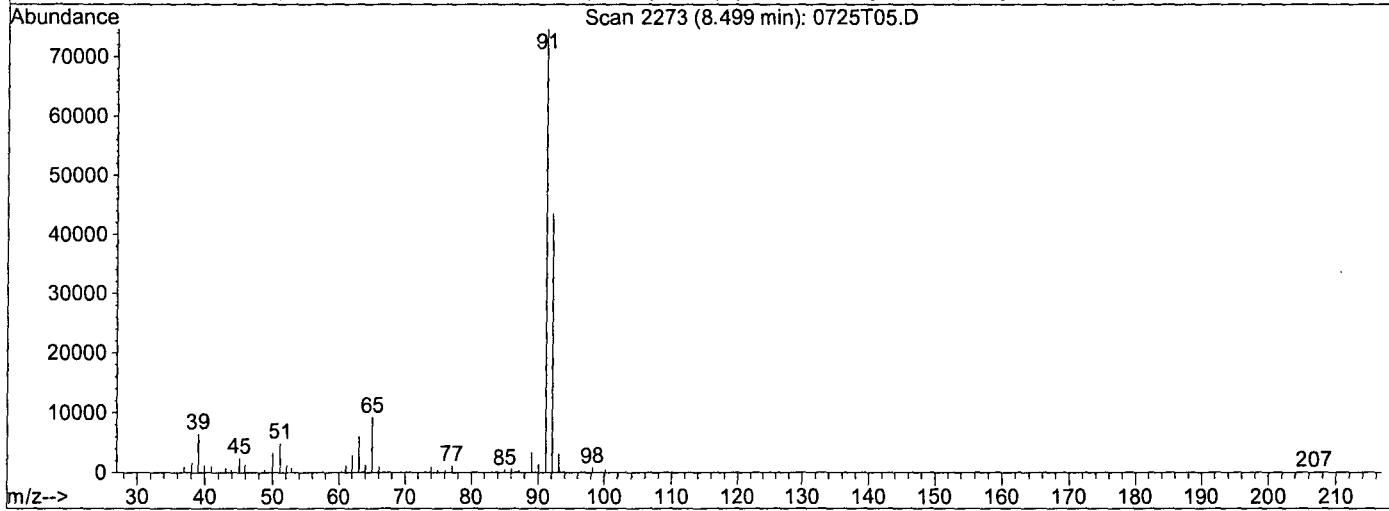
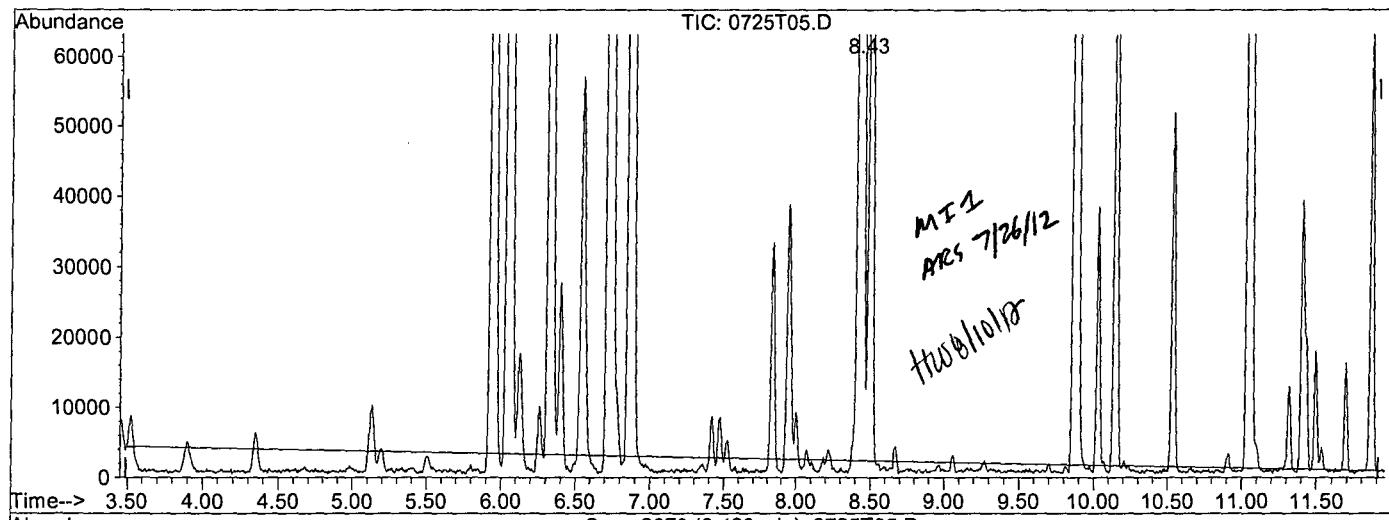


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D
 Acq On : 25 Jul 12 11:17
 Sample : 50ug/L Vol Std 07-25-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:53 2012

Vial: 4
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration

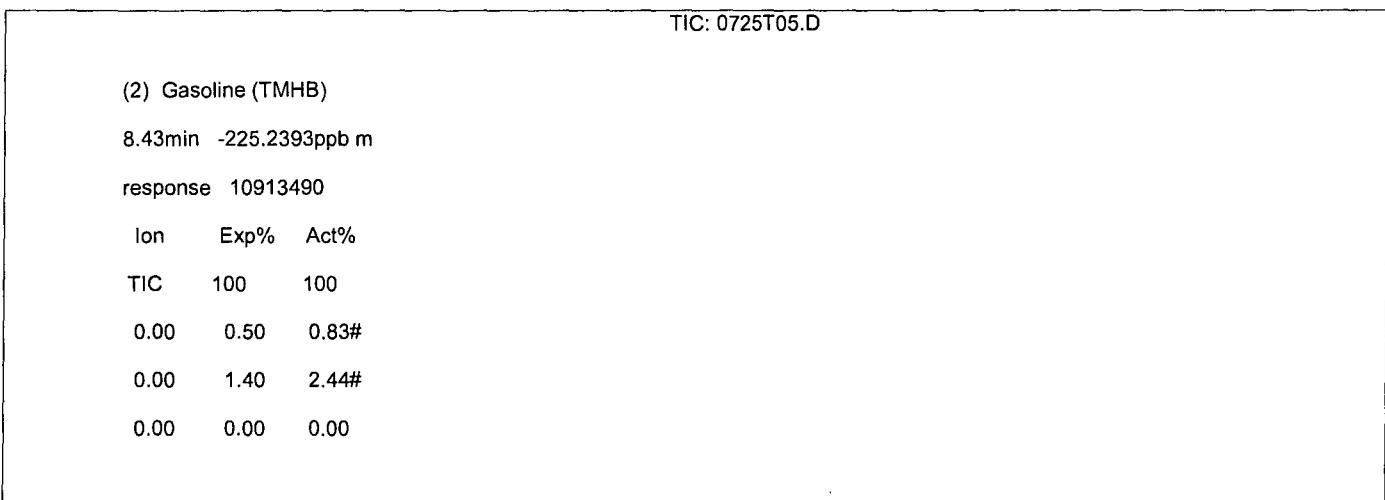
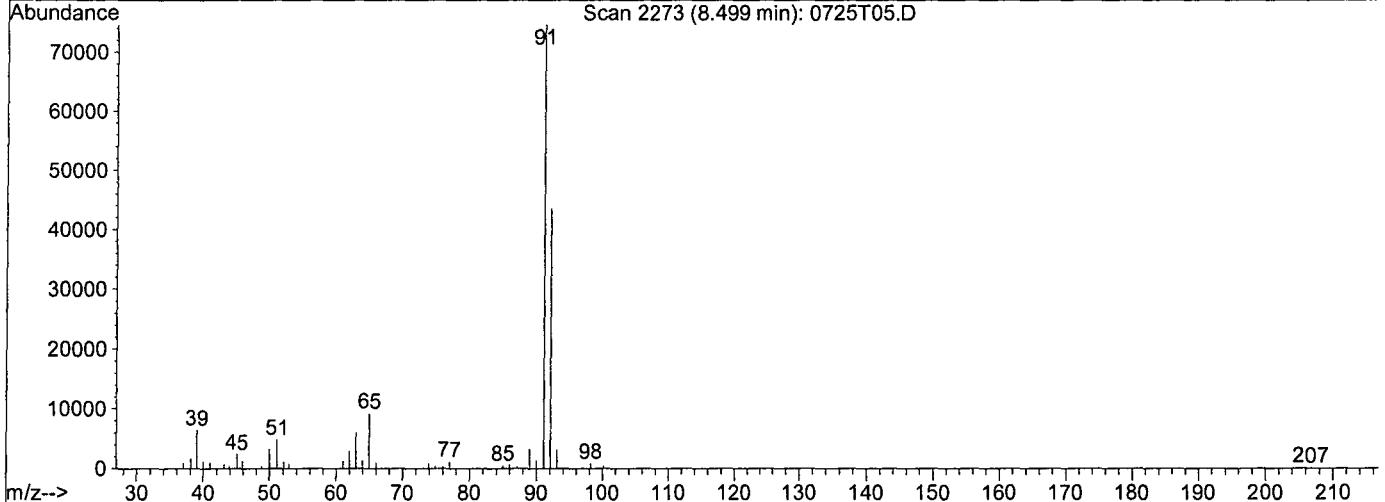
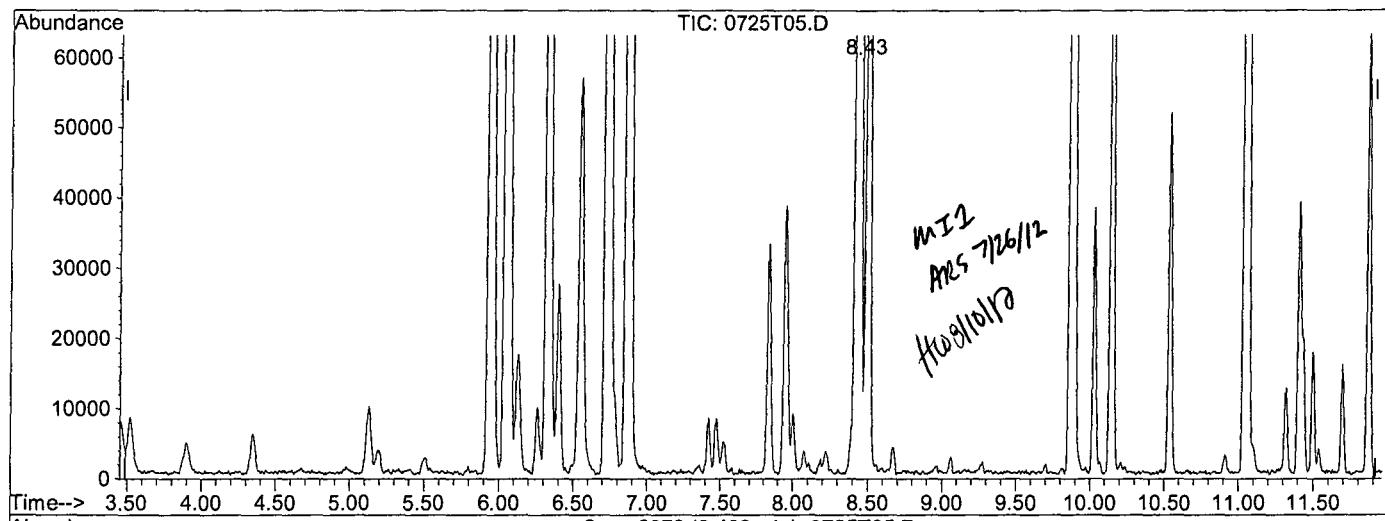


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D
 Acq On : 25 Jul 12 11:17
 Sample : 50ug/L Vol Std 07-25-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:58 2012

Vial: 4
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	774747	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	873528	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	976201	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	QValue
2) Gasoline	100

Quantitation Report

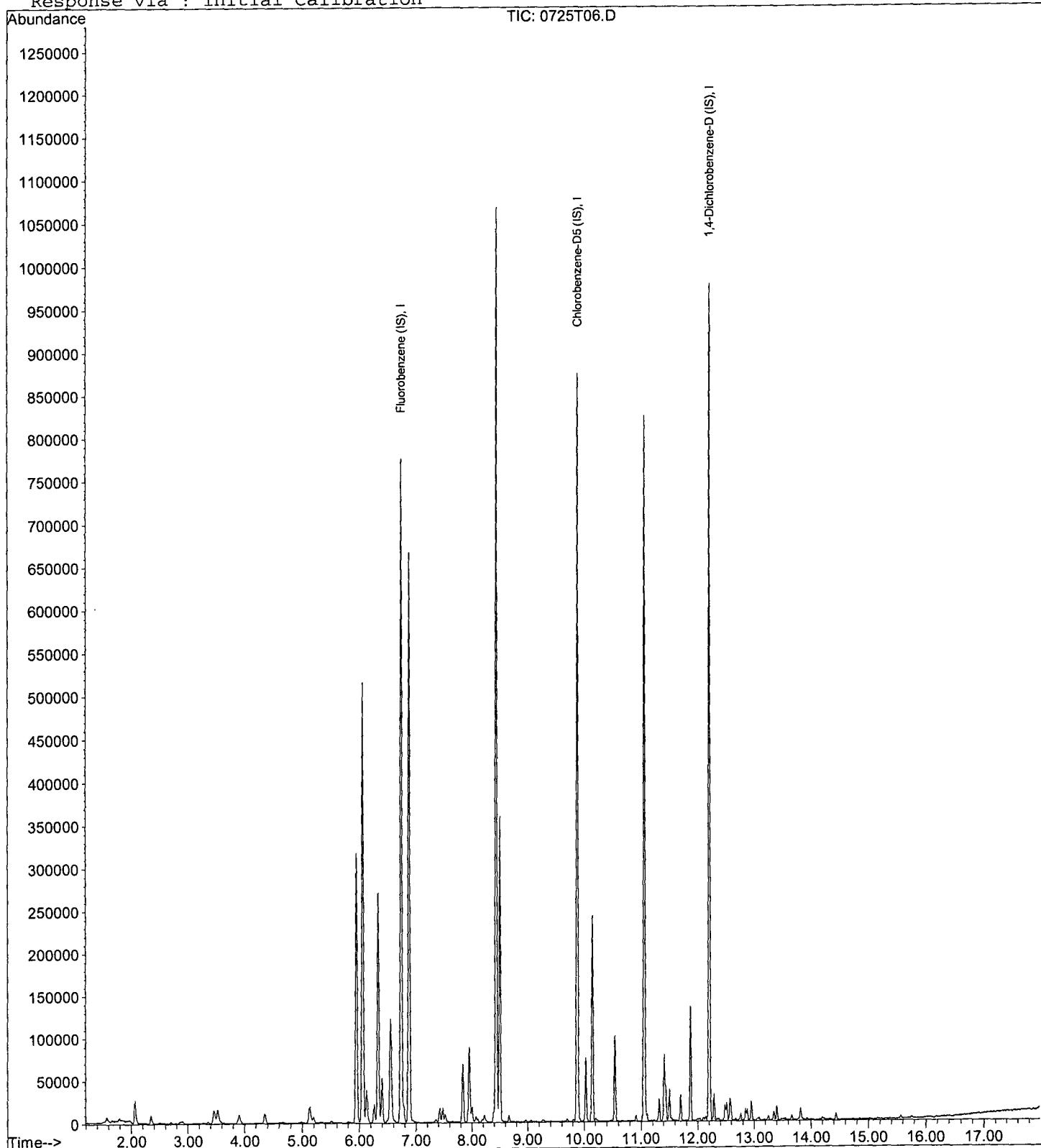
Data File : M:\THOR\DATA\T120725\0725T06.D
Acq On : 25 Jul 12 11:45
Sample : 100ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:58 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

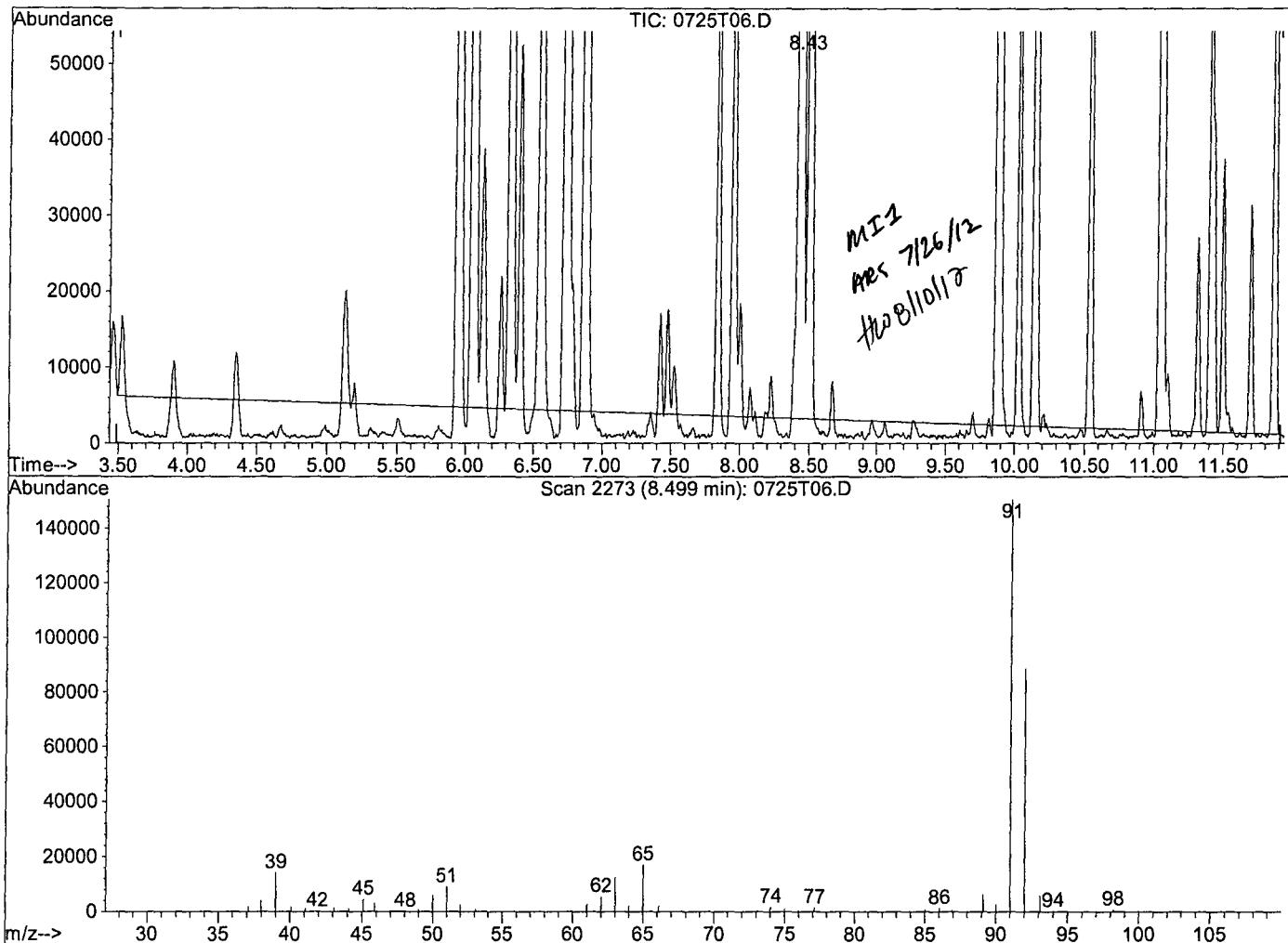


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D
 Acq On : 25 Jul 12 11:45
 Sample : 100ug/L Vol Std 07-25-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:53 2012

Vial: 5
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



(2) Gasoline (TMHB)

8.50min -268.9292ppb m

response 10233059

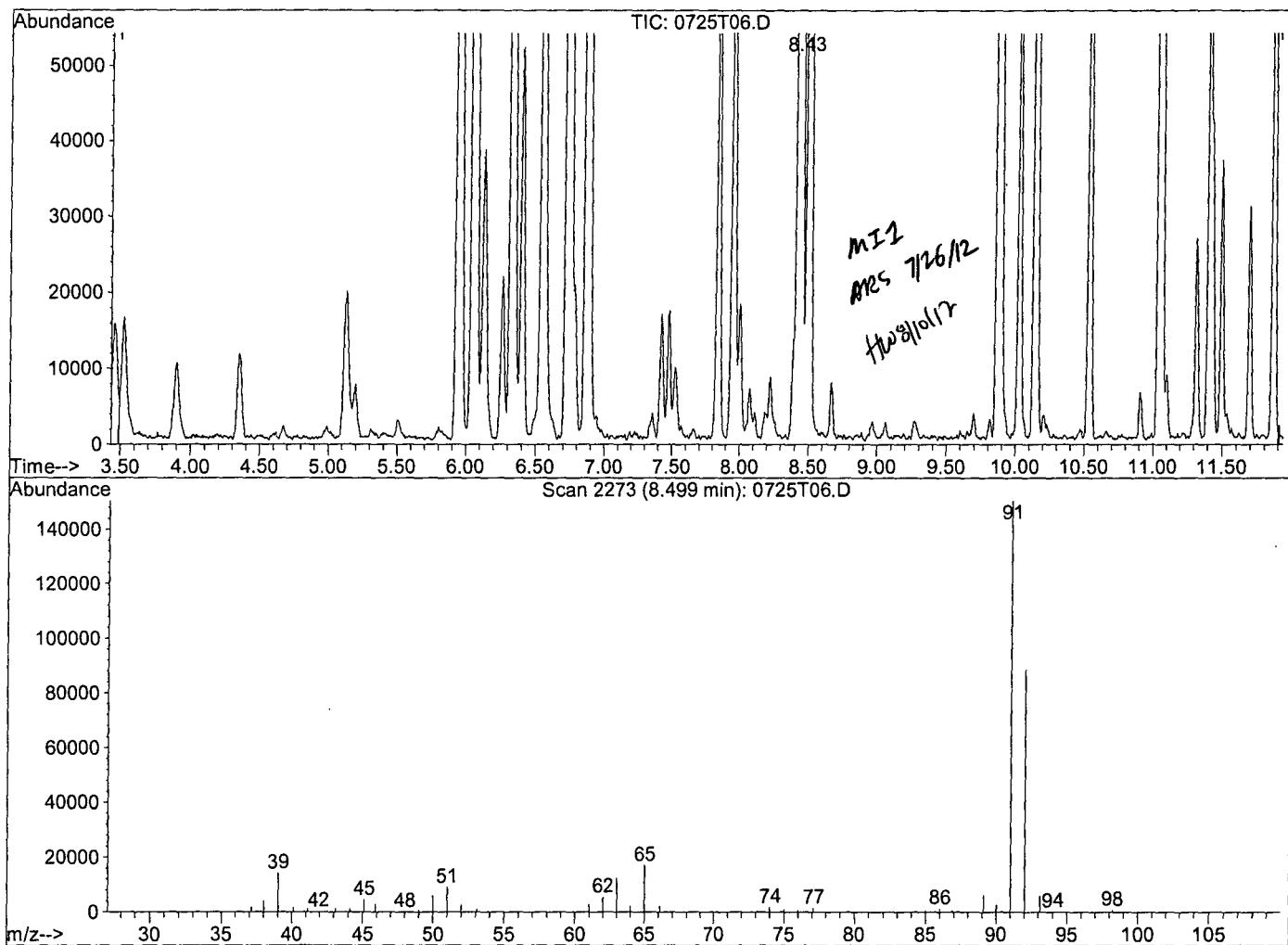
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.66#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D
 Acq On : 25 Jul 12 11:45
 Sample : 100ug/L Vol Std 07-25-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:58 2012

Vial: 5
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



TIC: 0725T06.D		
(2) Gasoline (TMHB)		
8.43min -160.5605ppb m		
response 12540540		
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.76#
0.00	1.40	2.17#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG, RS, HW, ARS, SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcc Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	782981	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	897407	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996199	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

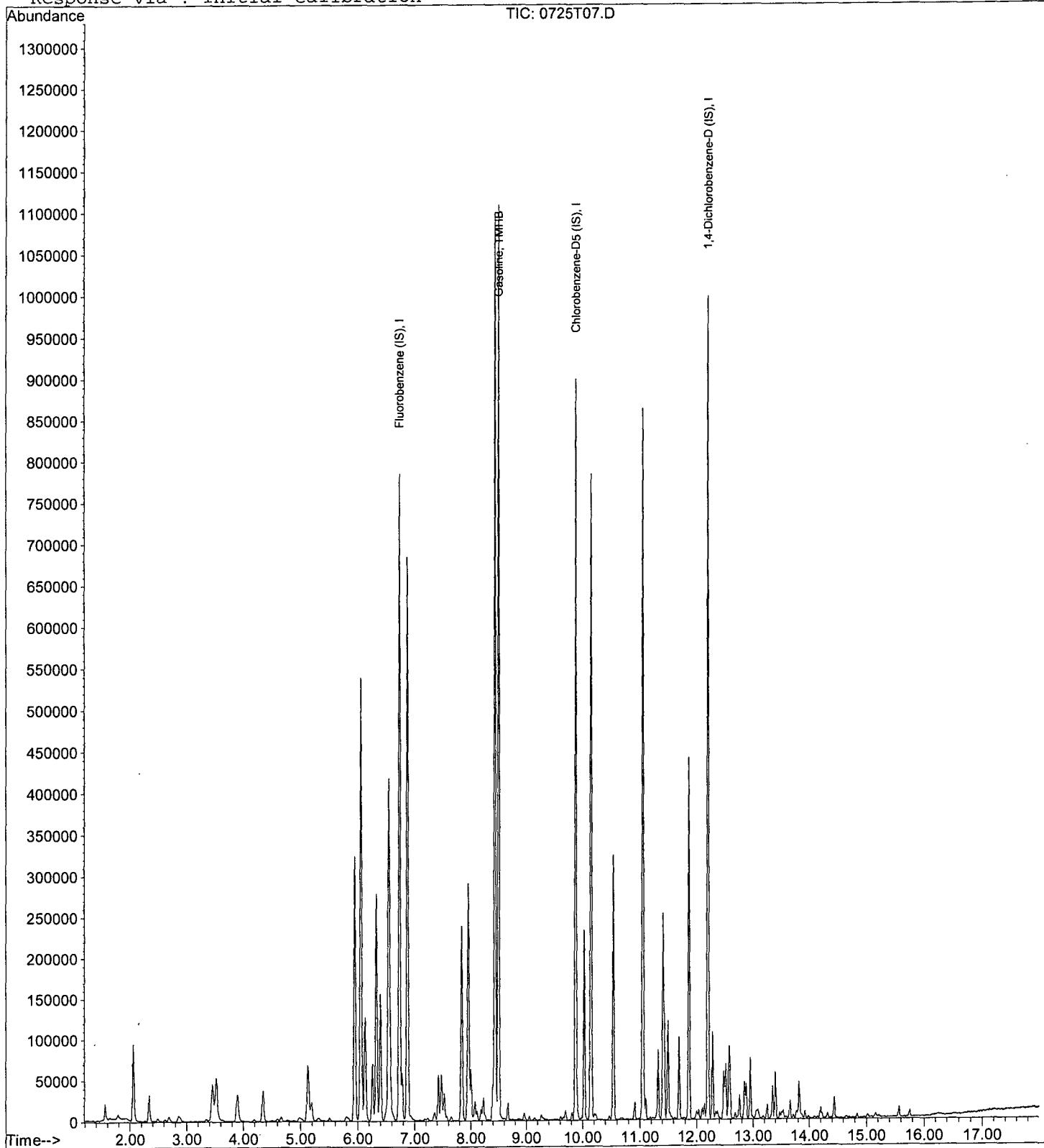
Data File : M:\THOR\DATA\T120725\0725T07.D
Acq On : 25 Jul 12 12:13
Sample : 300ug/L Vol Std 07-25-13
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:50 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

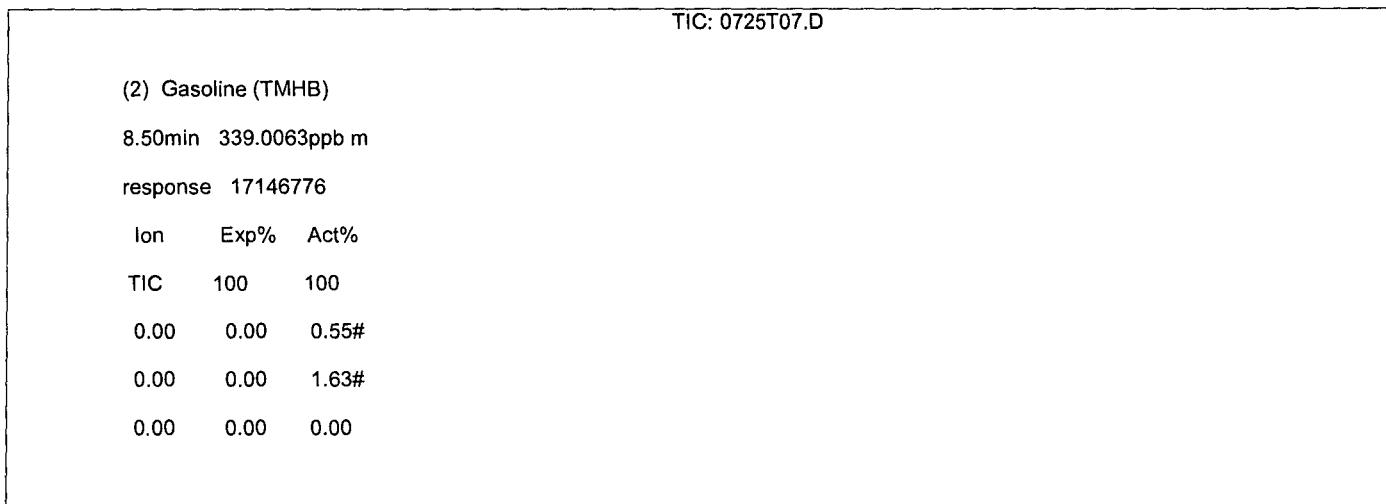
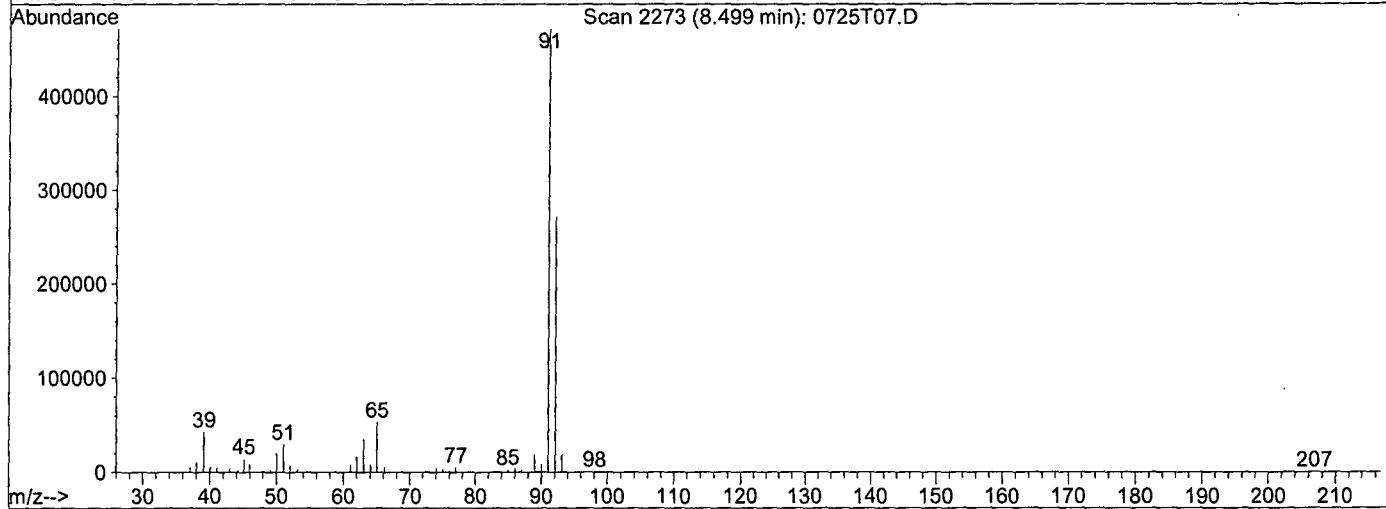
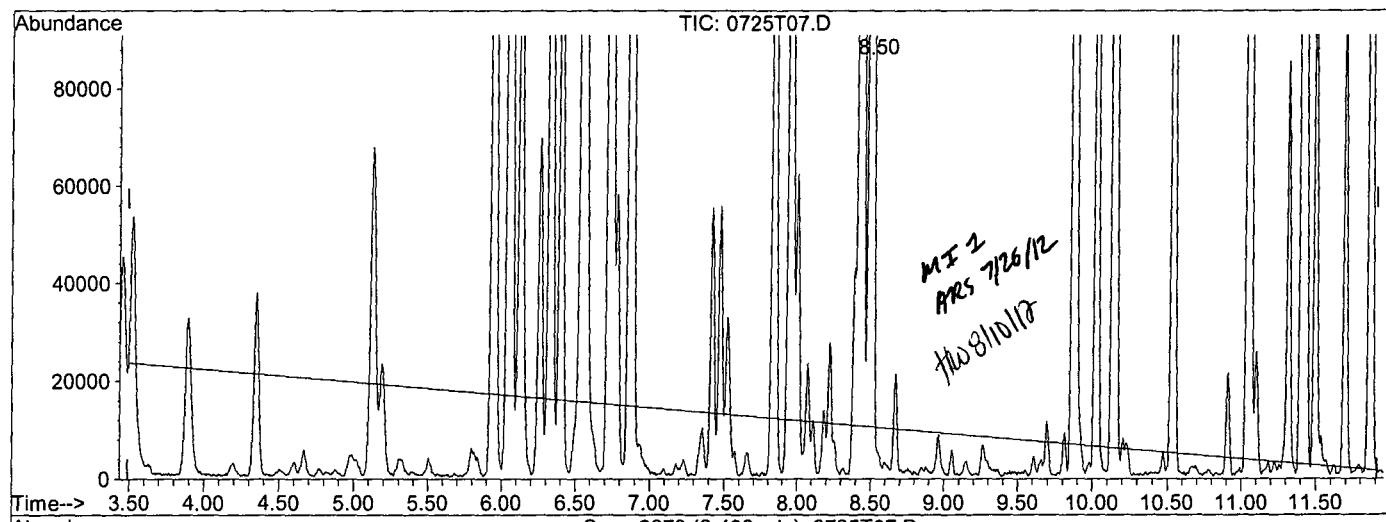


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D
 Acq On : 25 Jul 12 12:13
 Sample : 300ug/L Vol Std 07-25-13
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:49 2012

Vial: 6
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration

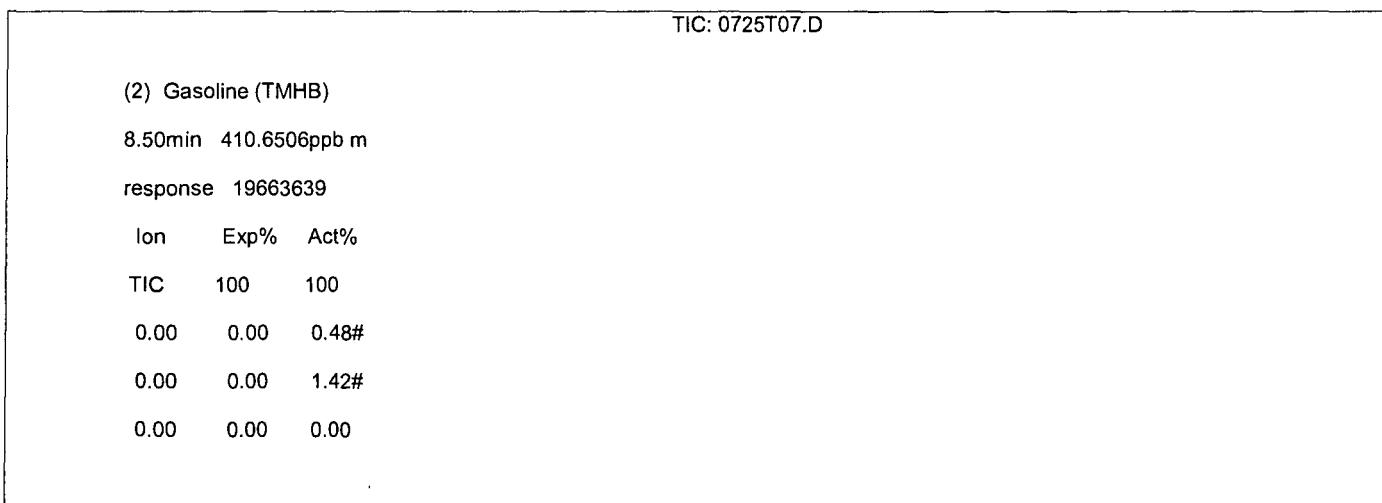
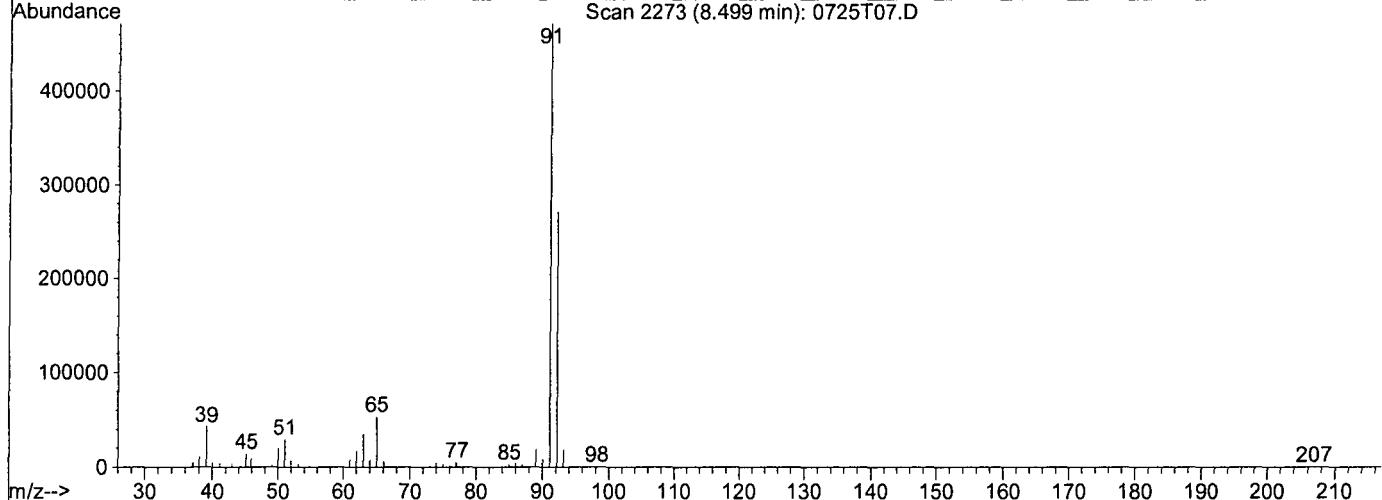
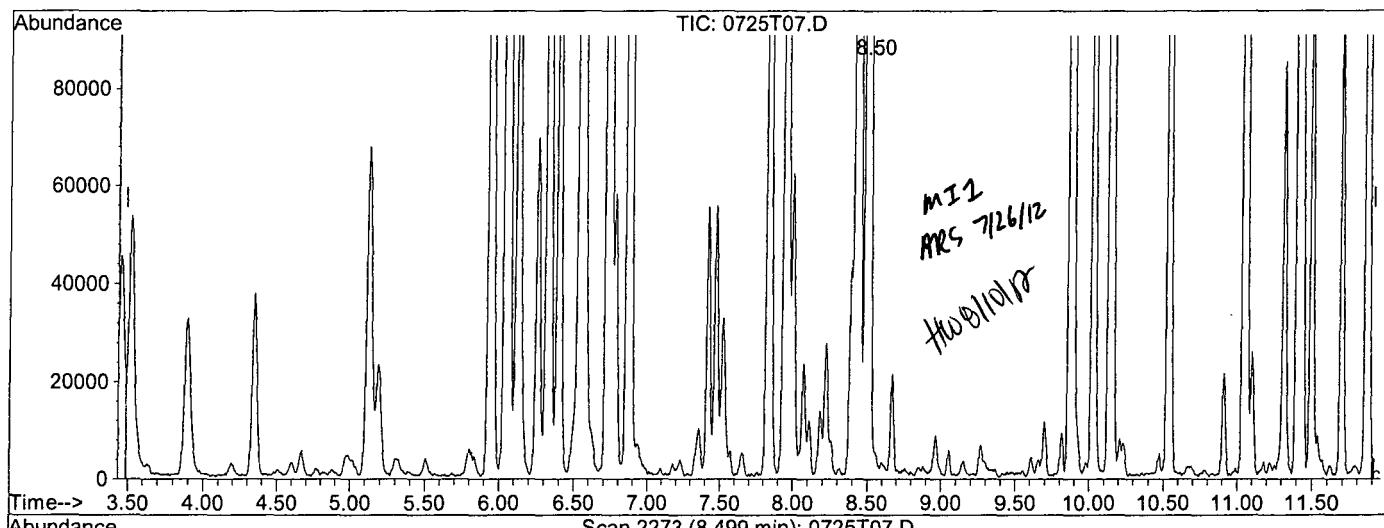


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D
 Acq On : 25 Jul 12 12:13
 Sample : 300ug/L Vol Std 07-25-13
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:50 2012

Vial: 6
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	782399	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	890063	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996015	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

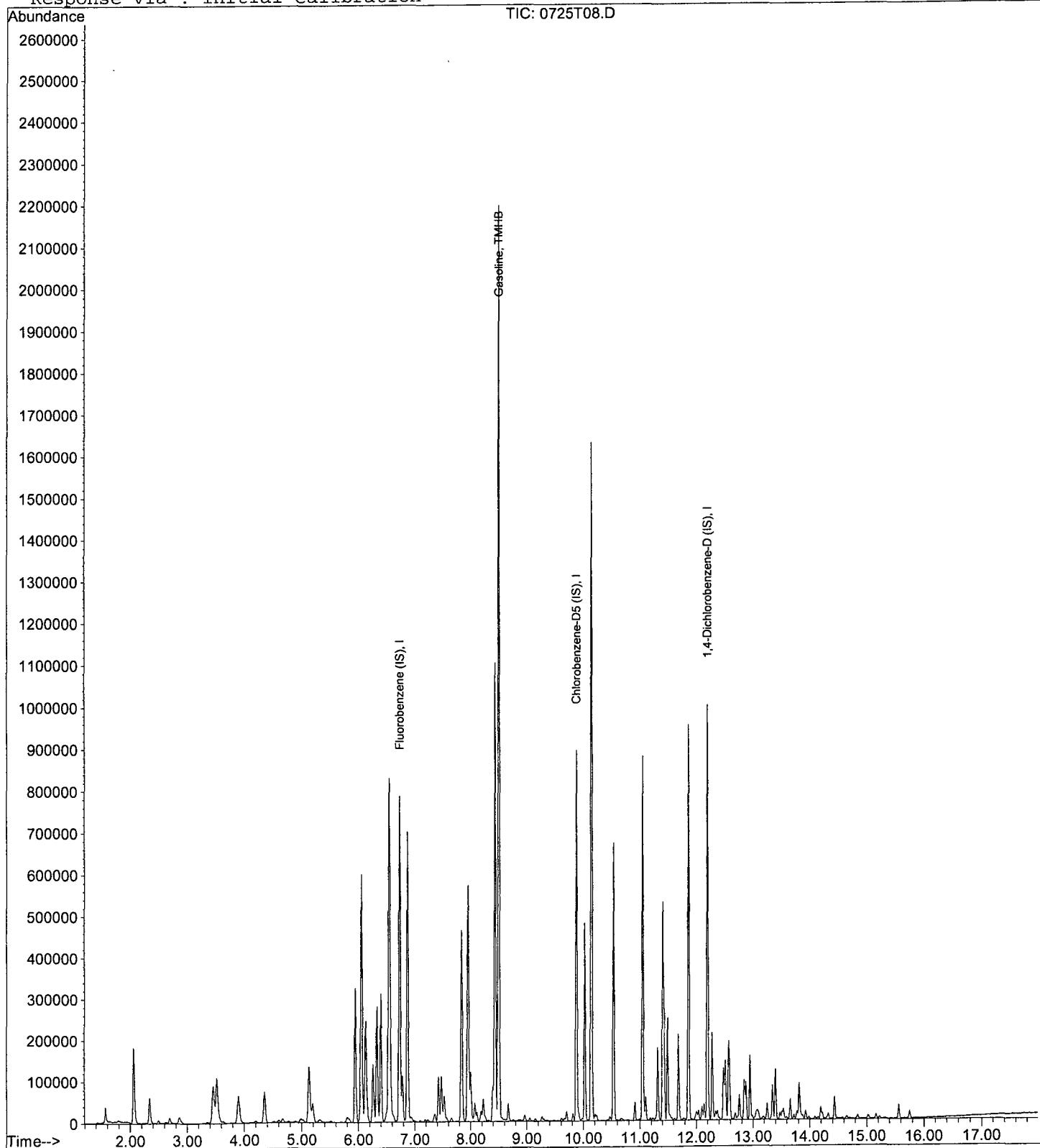
Data File : M:\THOR\DATA\T120725\0725T08.D
 Acq On : 25 Jul 12 12:41
 Sample : 600ug/L Vol Std 07-25-14
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 25 15:56 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration

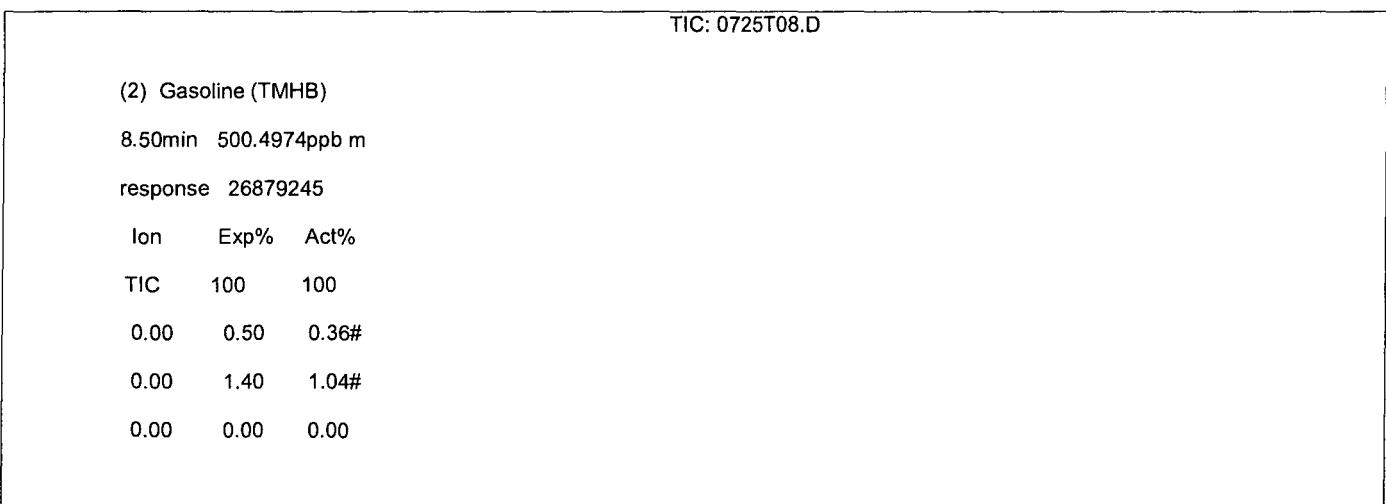
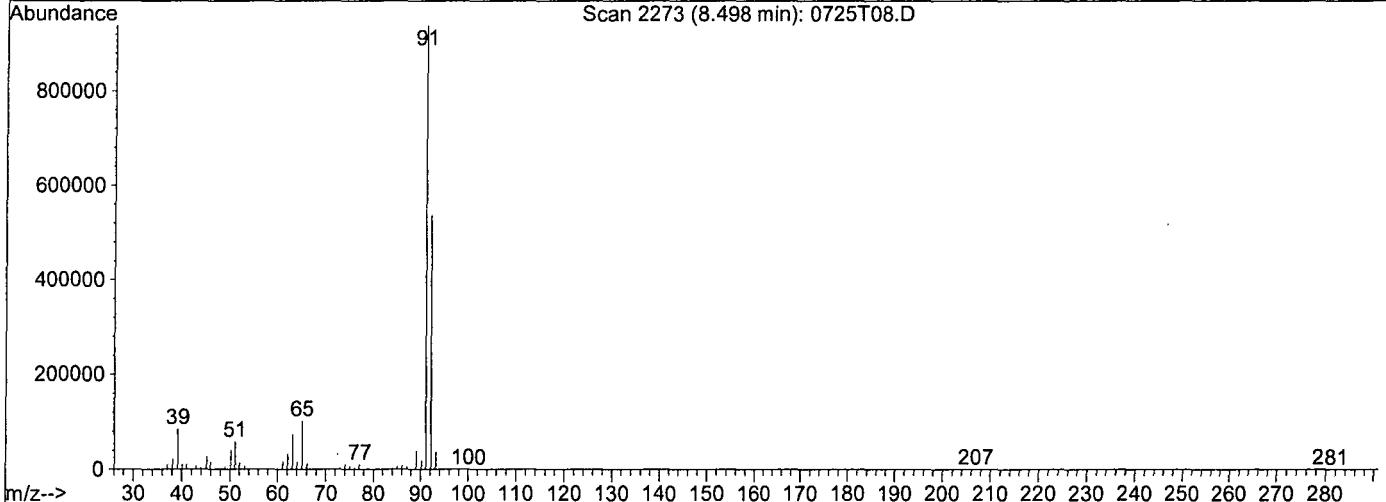
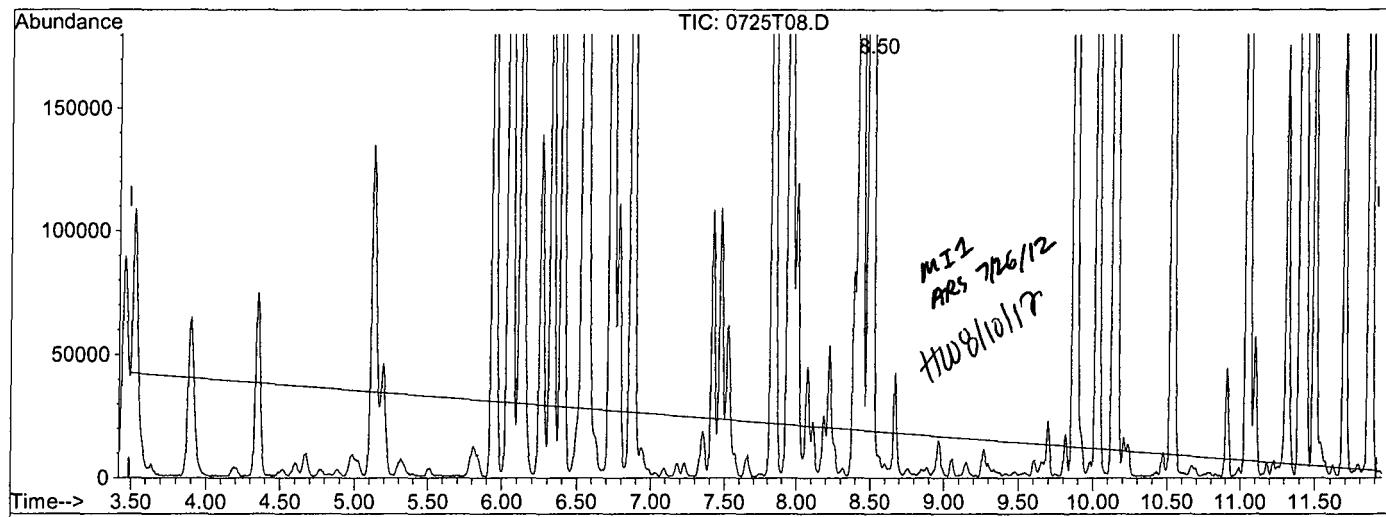


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D
 Acq On : 25 Jul 12 12:41
 Sample : 600ug/L Vol Std 07-25-14
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:53 2012

Vial: 7
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration

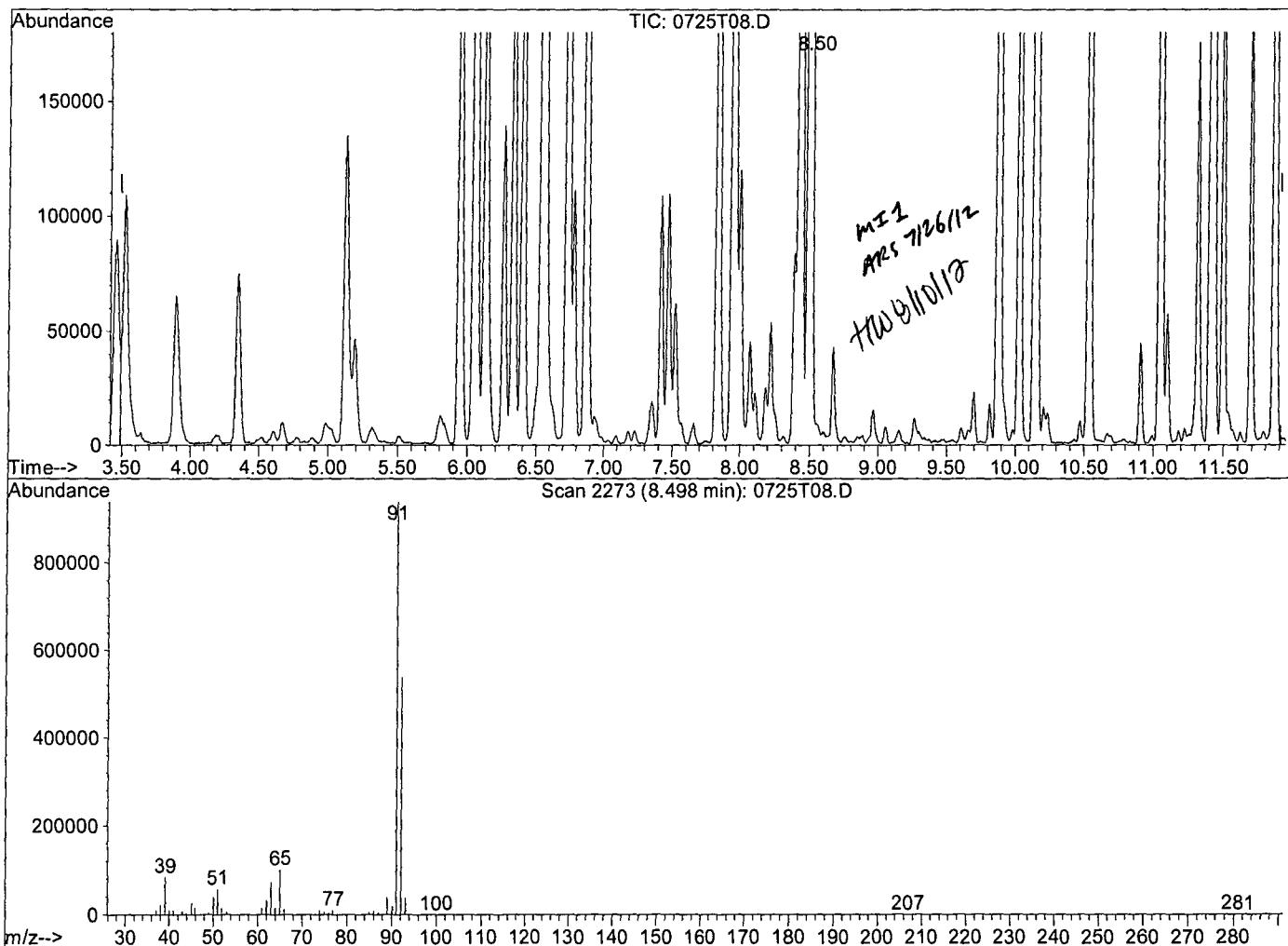


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D
 Acq On : 25 Jul 12 12:41
 Sample : 600ug/L Vol Std 07-25-14
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:56 2012

Vial: 7
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



TIC: 0725T08.D		
(2) Gasoline (TMHB)		
8.50min 652.1946ppb m		
response 30141216		
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.32#
0.00	1.40	0.93#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	788221	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	883861	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1013991	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds		Qvalue
2) Gasoline	8.50 TIC 36946726m	955.99215 ppb 100

Quantitation Report

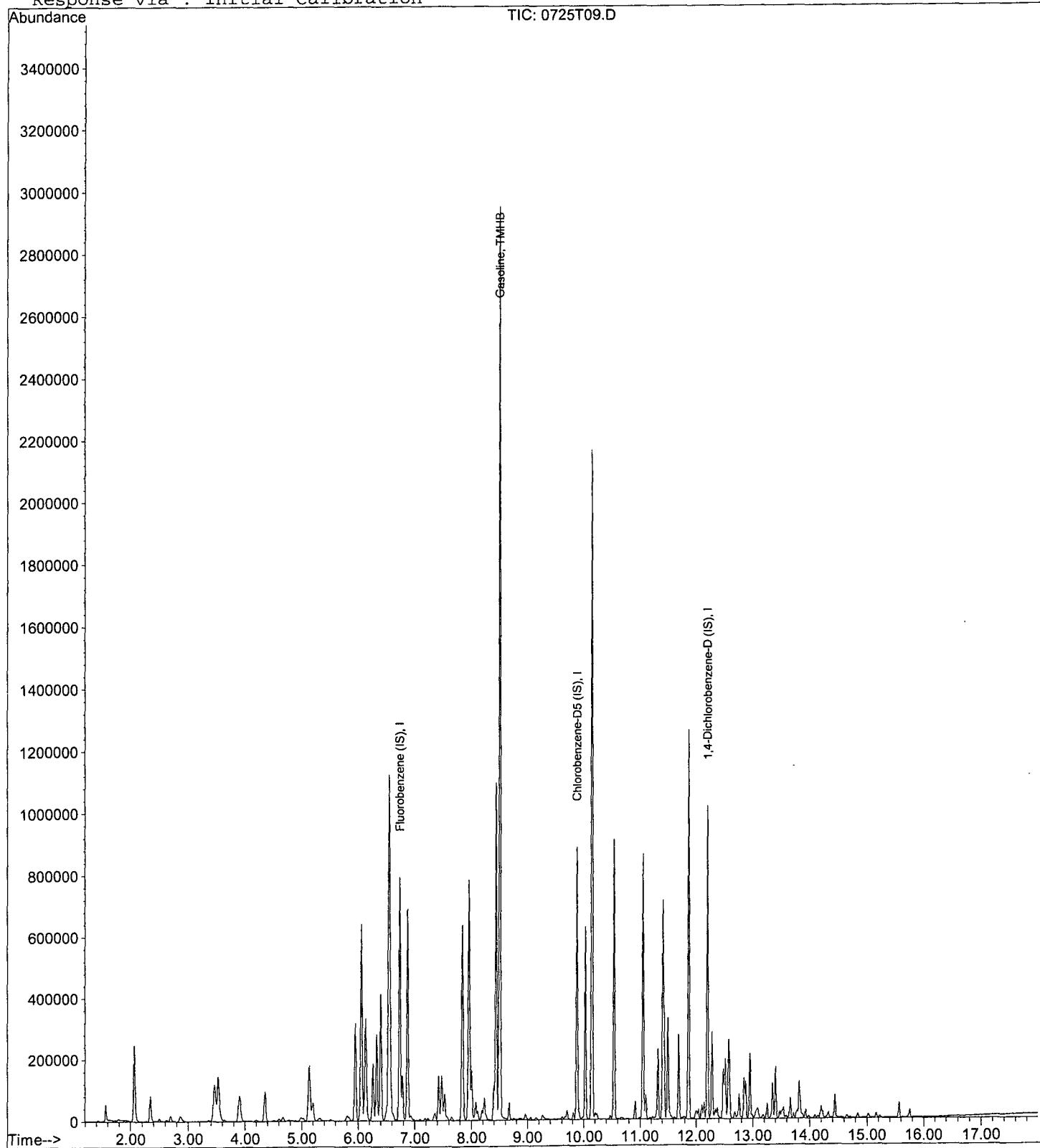
Data File : M:\THOR\DATA\T120725\0725T09.D
Acq On : 25 Jul 12 13:08
Sample : 800ug/L Vol Std 07-25-15
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:55 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

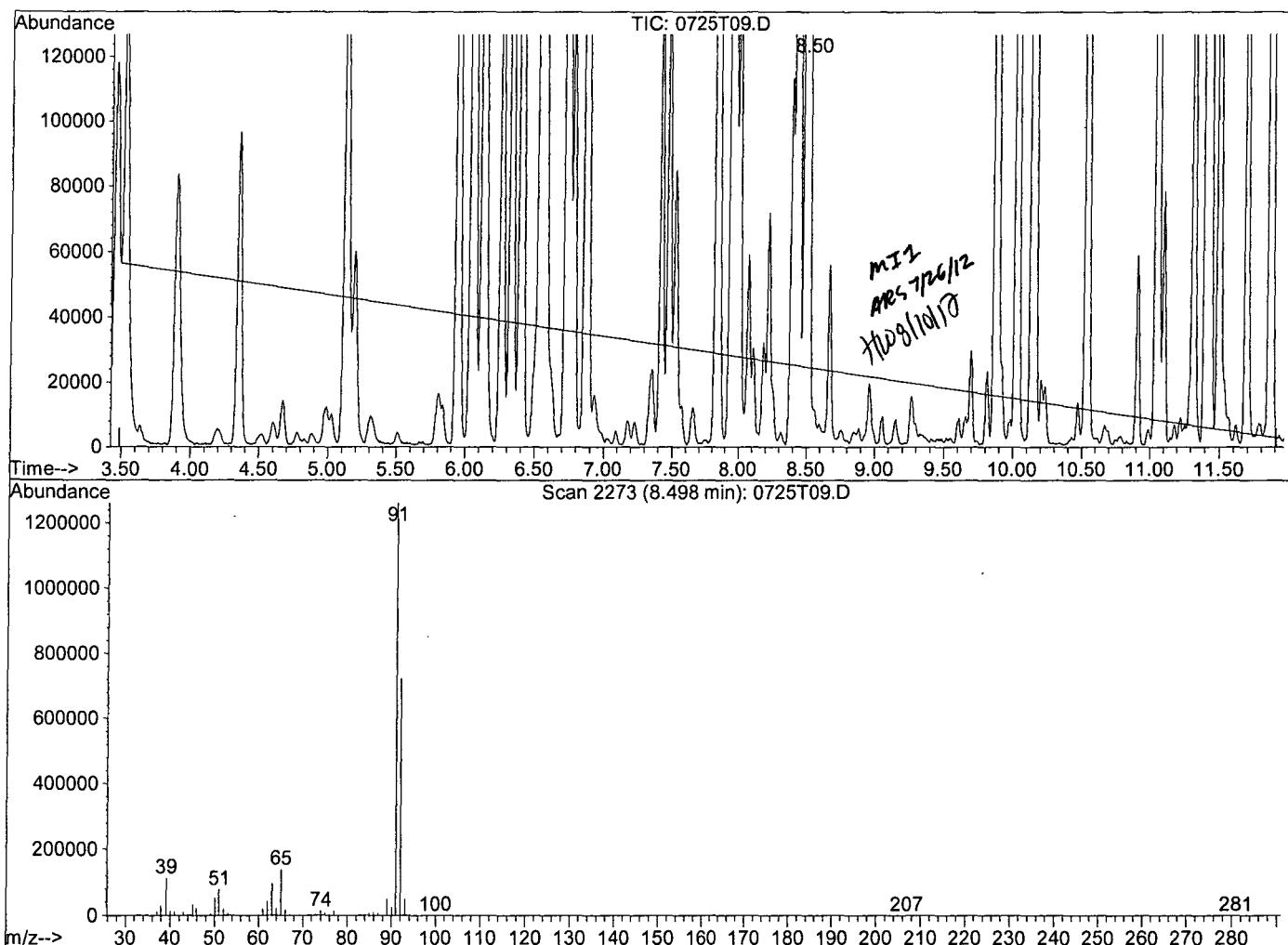


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D
 Acq On : 25 Jul 12 13:08
 Sample : 800ug/L Vol Std 07-25-15
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:53 2012

Vial: 8
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



(2) Gasoline (TMHB)

8.50min 790.6203ppb m

response 33364245

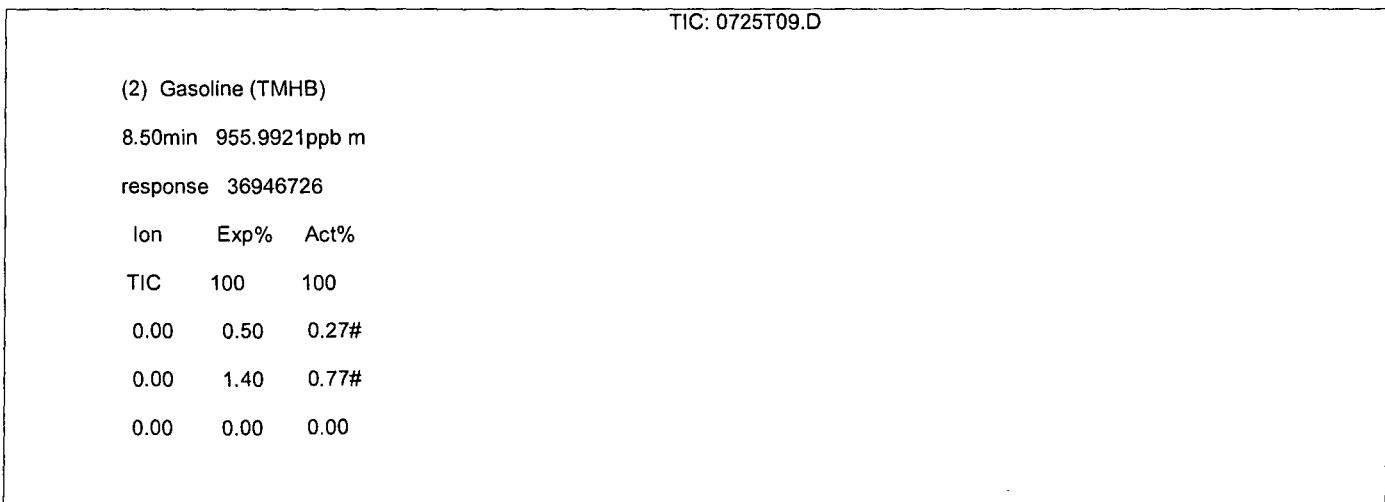
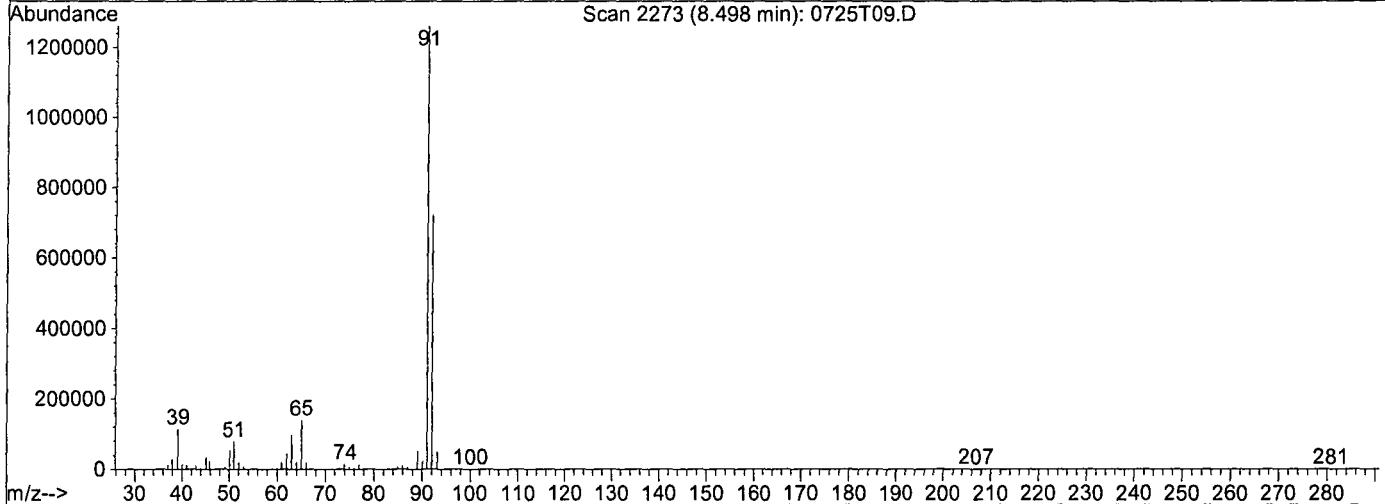
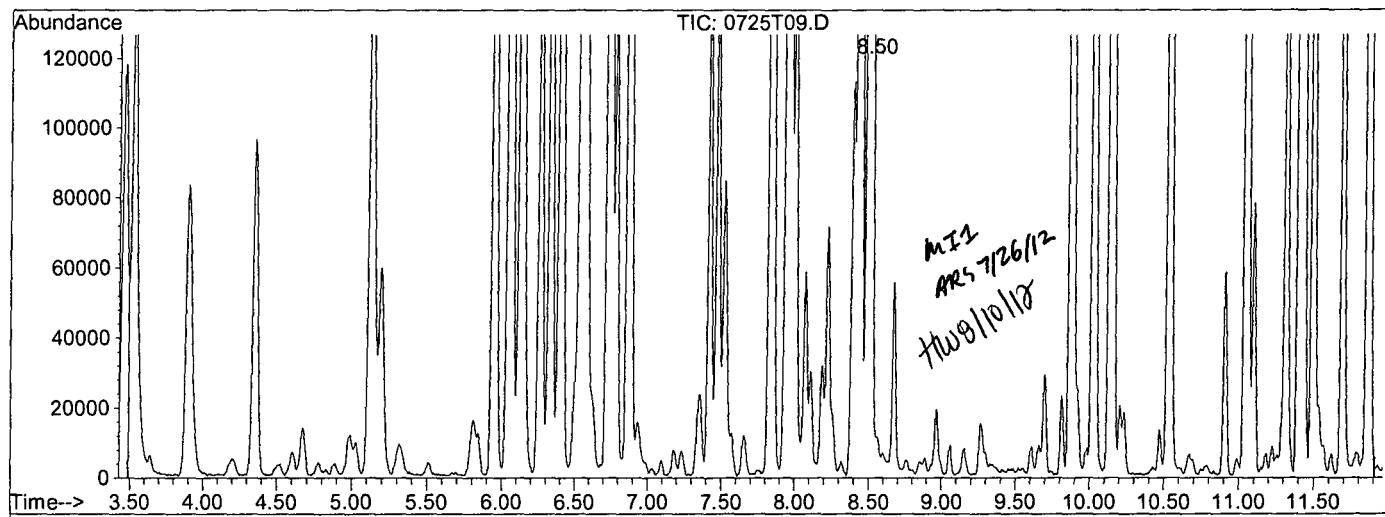
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.30#
0.00	1.40	0.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D
 Acq On : 25 Jul 12 13:08
 Sample : 800ug/L Vol Std 07-25-15
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:55 2012

Vial: 8
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	808332	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	927489	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1069004	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

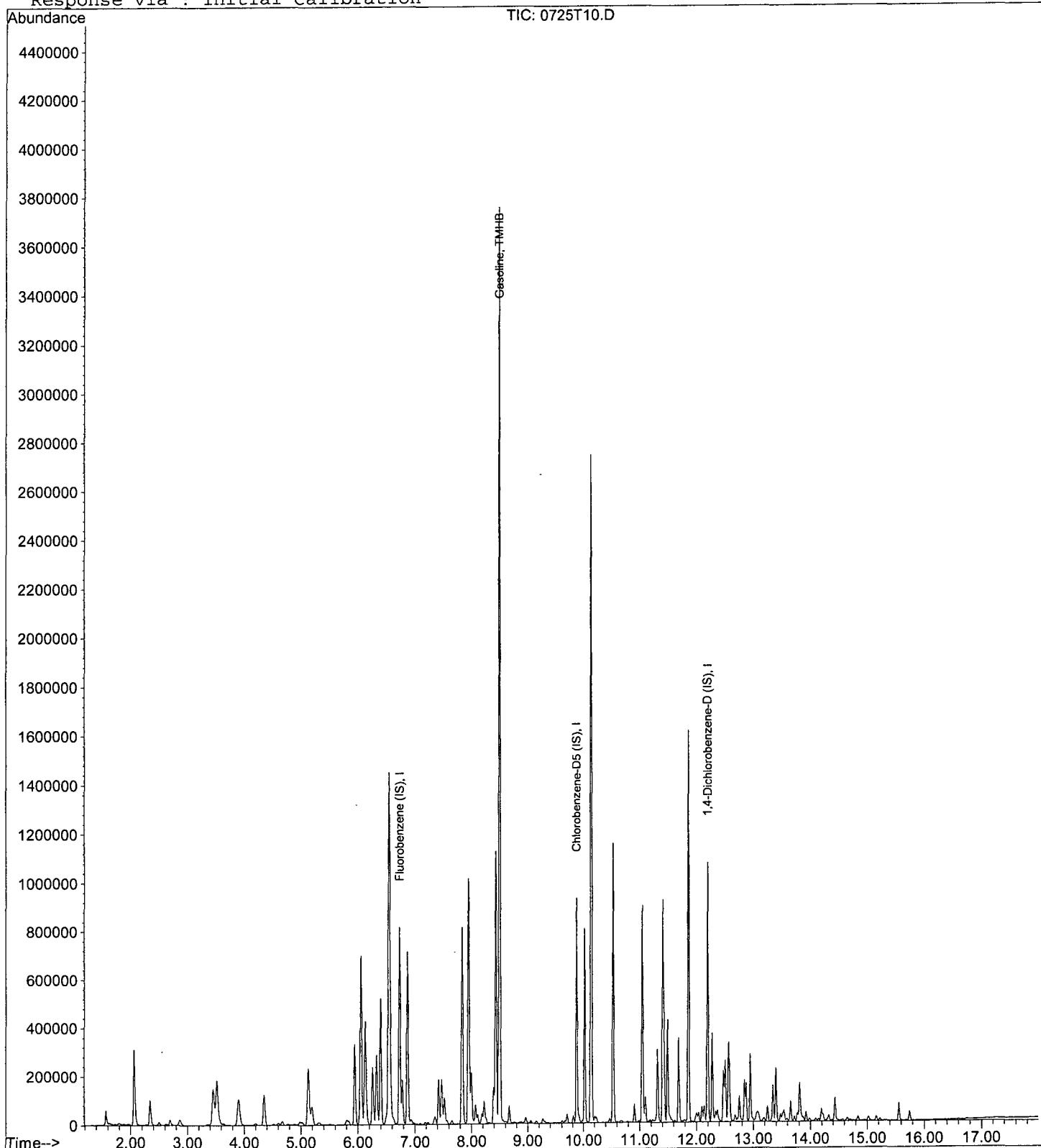
Data File : M:\THOR\DATA\T120725\0725T10.D
Acq On : 25 Jul 12 13:36
Sample : 1000ug/L Vol Std 07-25-16
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 16:00 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

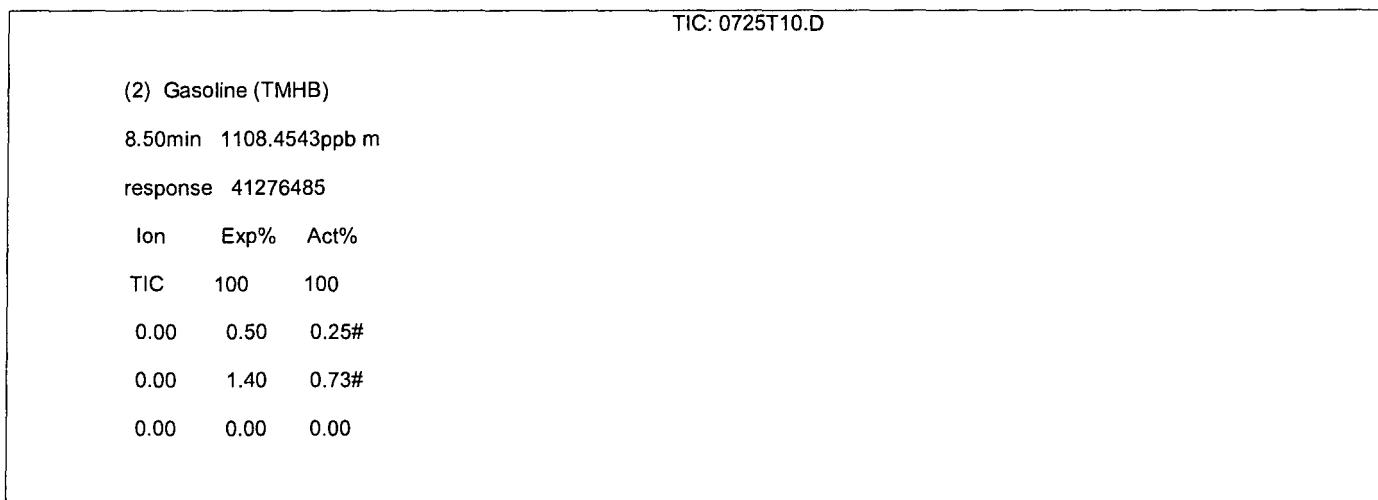
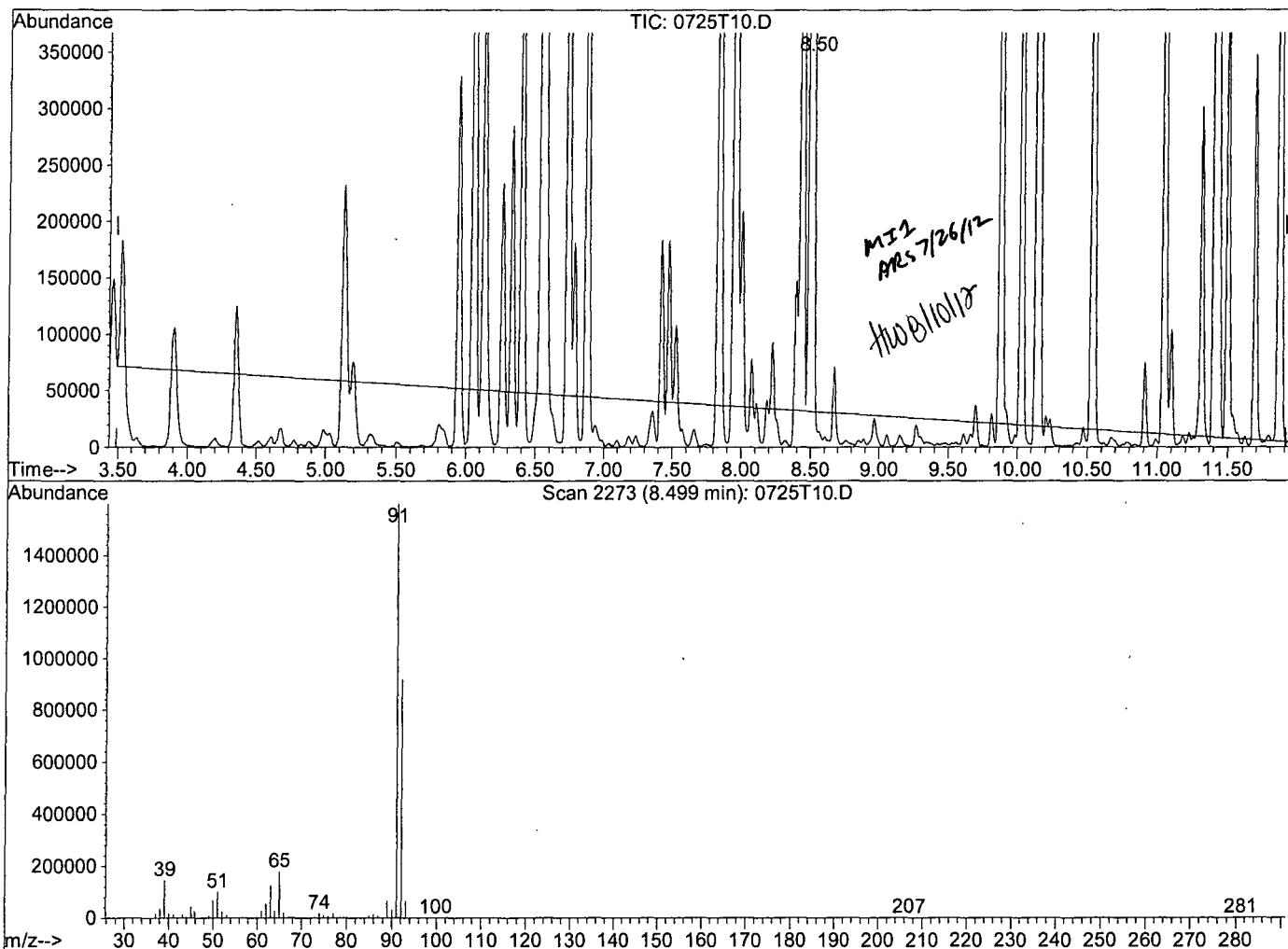


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D
 Acq On : 25 Jul 12 13:36
 Sample : 1000ug/L Vol Std 07-25-16
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 15:53 2012

Vial: 9
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multipllr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration

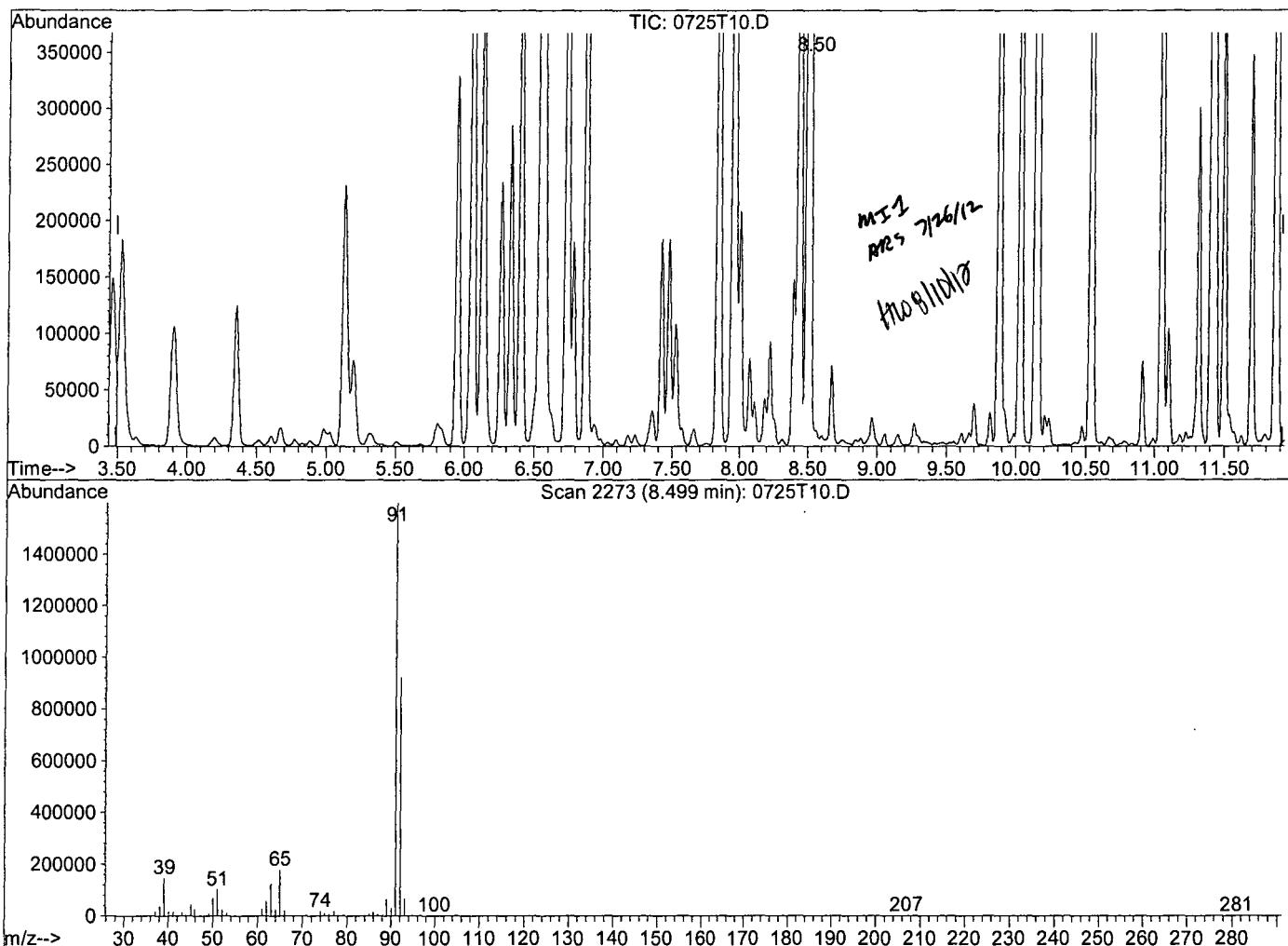


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D
 Acq On : 25 Jul 12 13:36
 Sample : 1000ug/L Vol Std 07-25-16
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 16:00 2012

Vial: 9
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Multiple Level Calibration

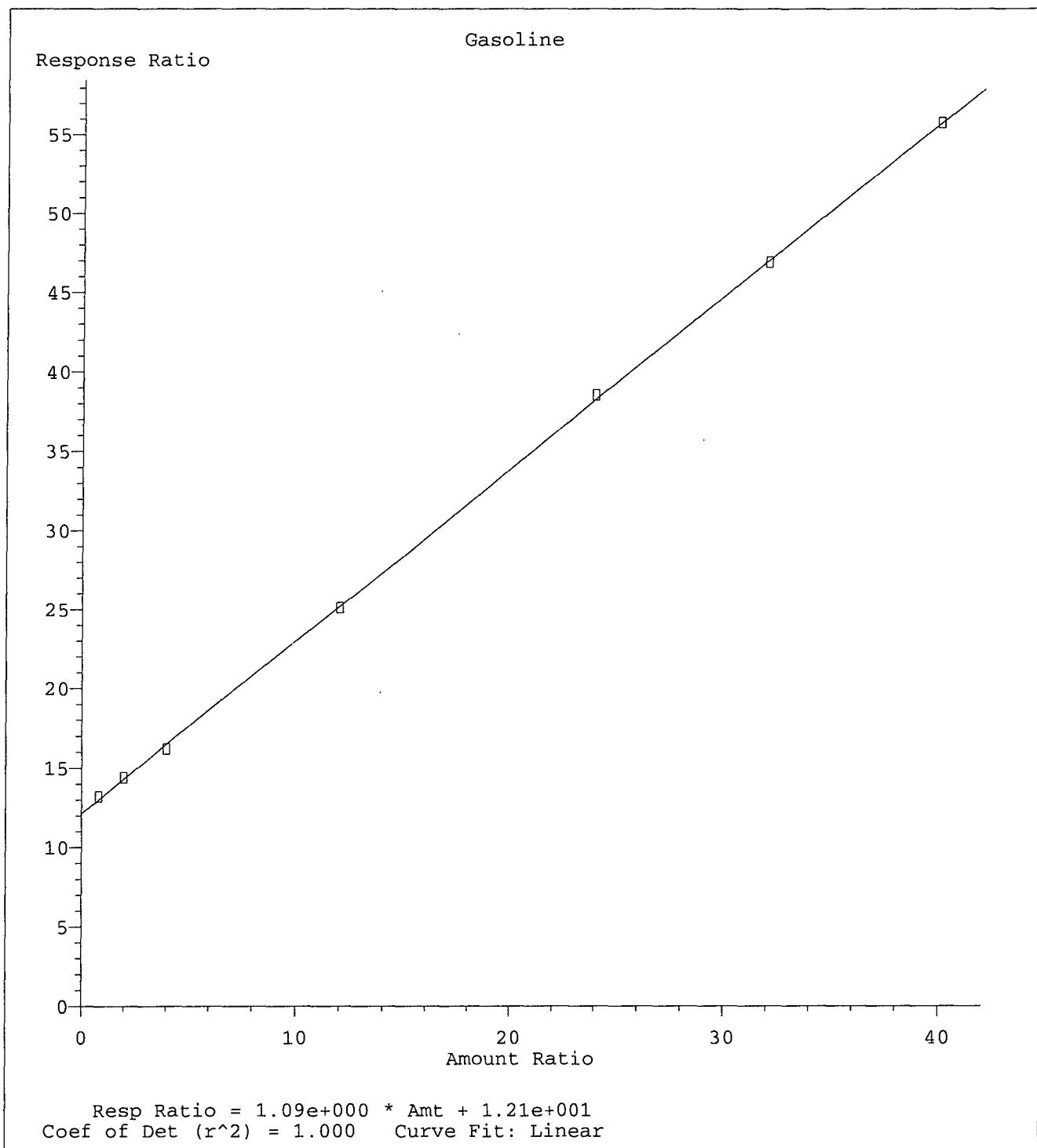


(2) Gasoline (TMHB)

8.50min 1278.3191ppb m

response 45050186

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.23#
0.00	1.40	0.67#
0.00	0.00	0.00



Method Name: M:\THOR\DATA\T120725\TGAS.M
Calibration Table Last Updated: Wed Jul 25 16:07:29 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68268 ARS 8/3/12
Date Analyzed: 07/25/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0725T15.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD				
2	TMHB	Gasoline	4.903	2.065	58	TMHBL	3.3
3	I	Chlorobenzene-D5 (IS)	ISTD				
4	I	1,4-Dichlorobenzene-D (IS)	ISTD				
5							
6							
7							
8							
9							
10							
11							
12							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Average

58.0

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788179	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	879850	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1024196	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

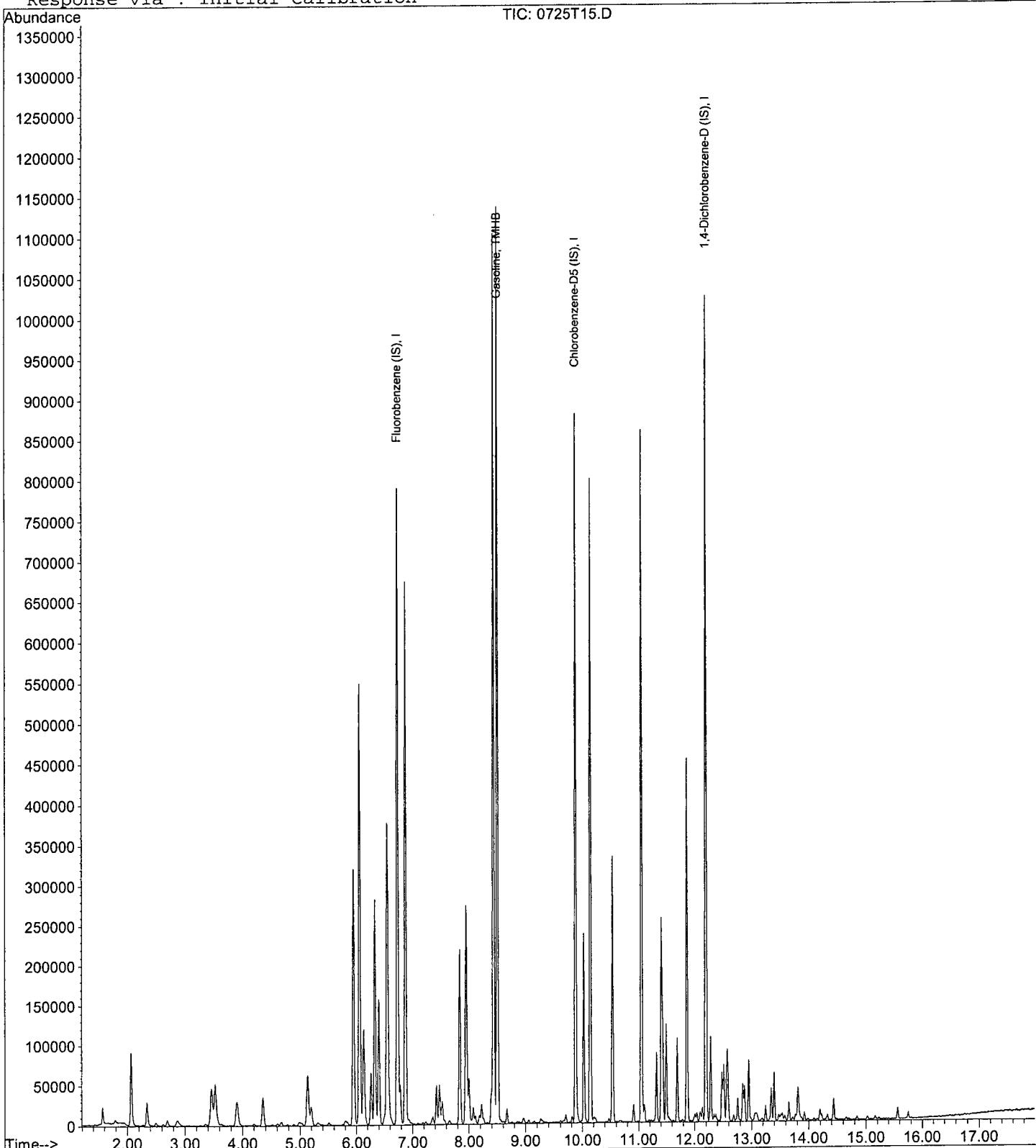
Data File : M:\THOR\DATA\T120725\0725T15.D
 Acq On : 25 Jul 12 15:55
 Sample : LCS gas 300ug/L (SS)
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 14
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 8:23 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration

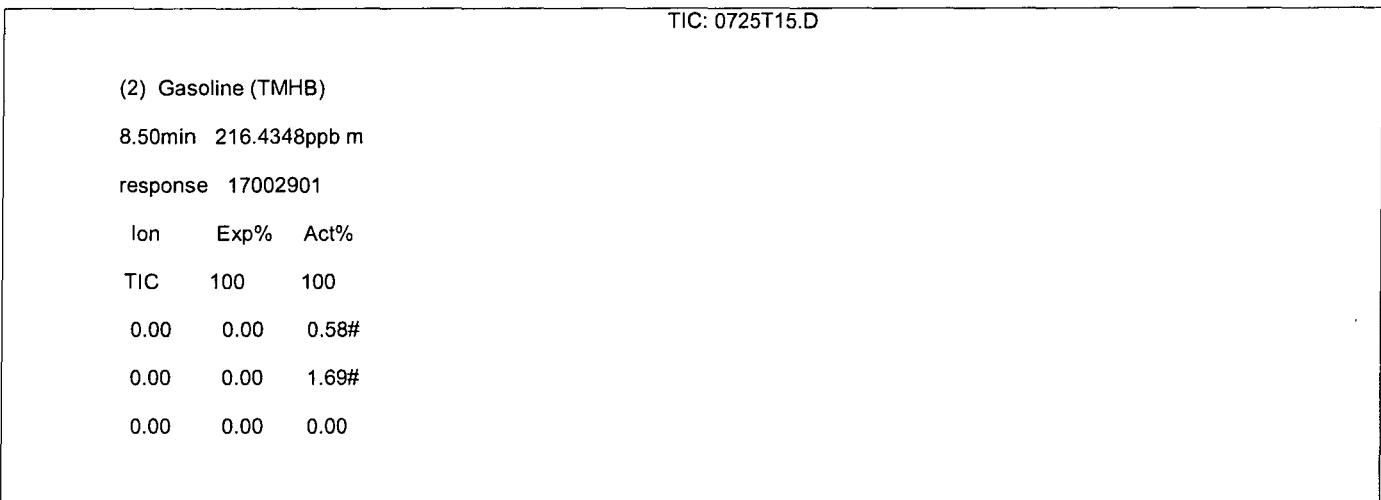
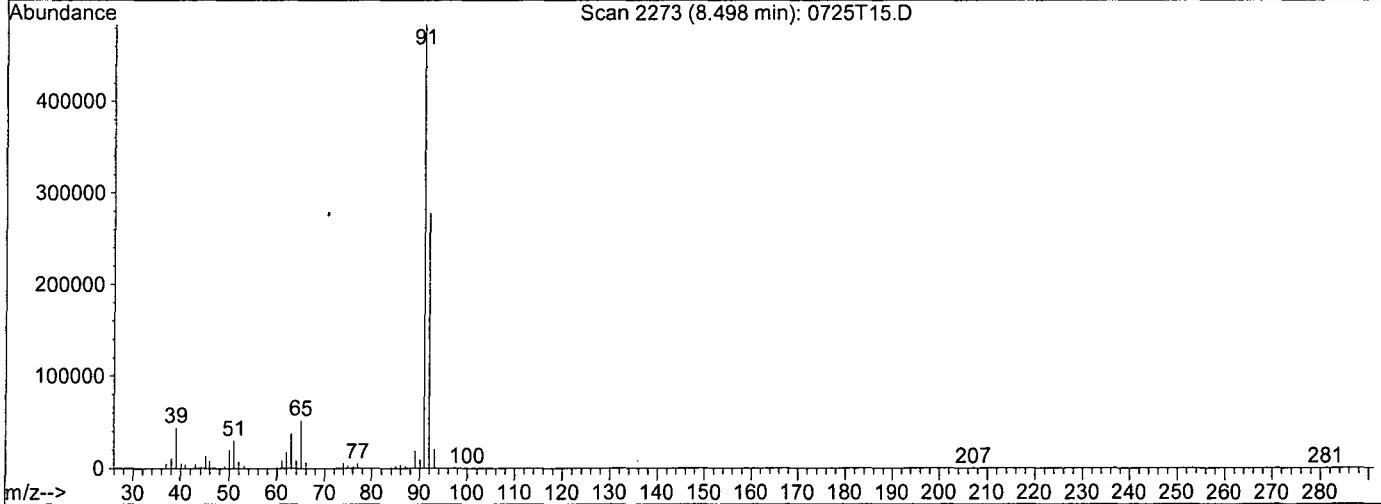
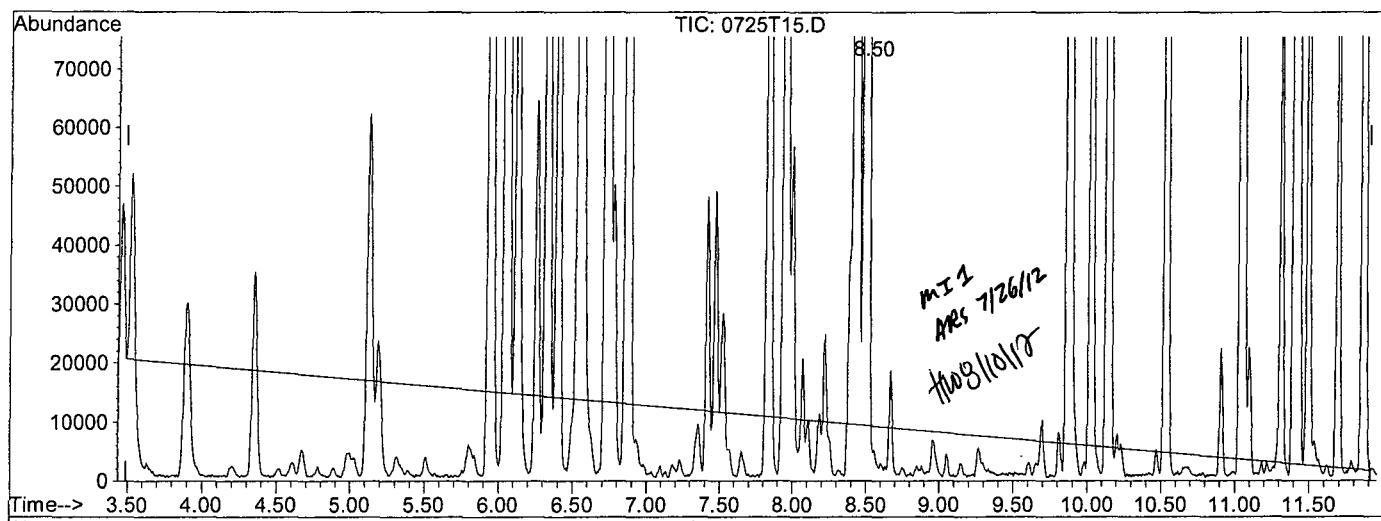


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D
 Acq On : 25 Jul 12 15:55
 Sample : LCS gas 300ug/L (SS)
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 8:23 2012

Vial: 14
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multipllr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration

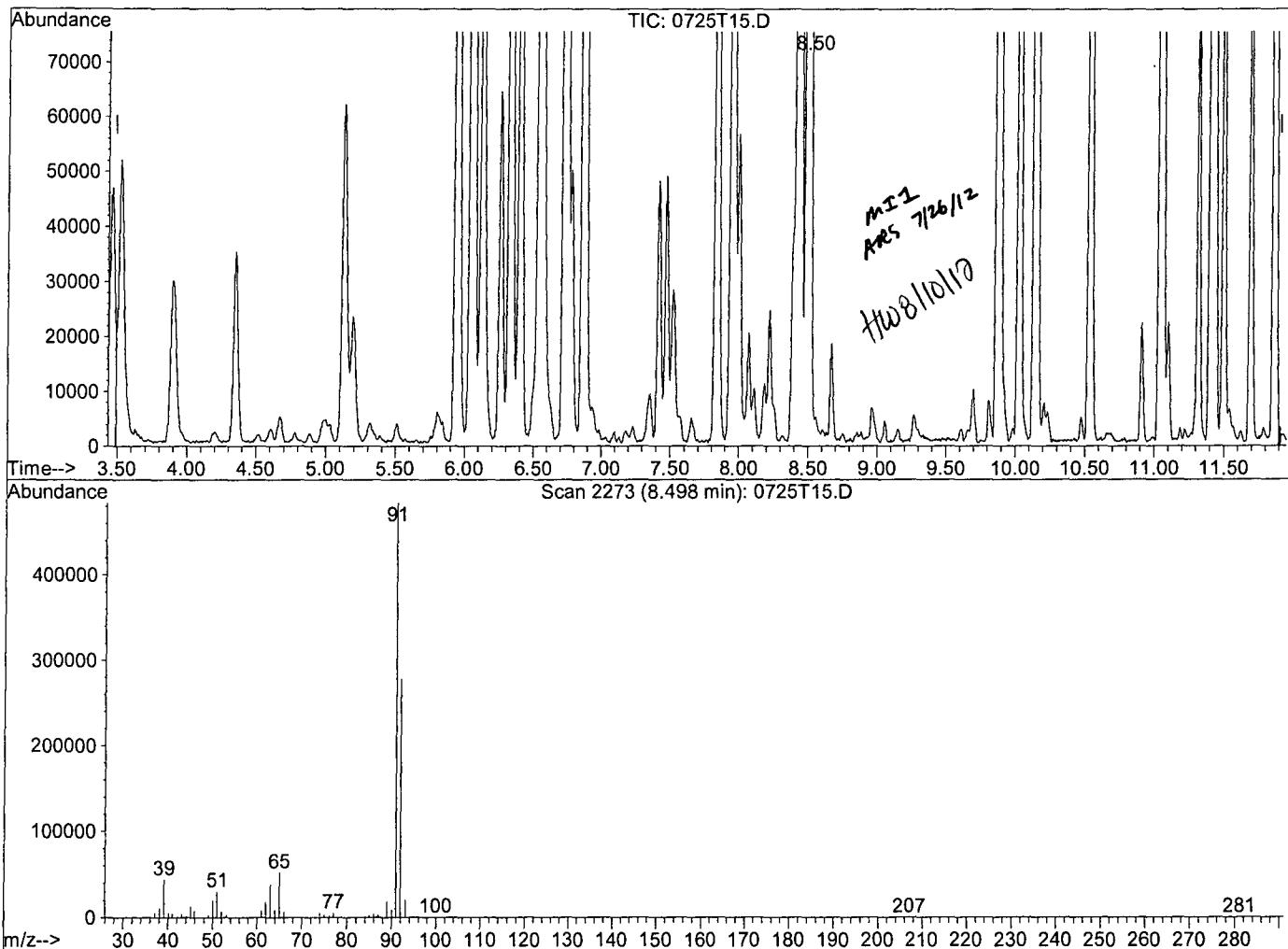


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D
 Acq On : 25 Jul 12 15:55
 Sample : LCS gas 300ug/L (SS)
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 8:23:2012

Vial: 14
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multipllr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



(2) Gasoline (TMHB)

8.50min 290.1640ppb m

response 19535277

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.47#
0.00	0.00	0.00

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7
Continuing Calibration

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

SDG No: 68268 *ARL 413/12*
Date Analyzed: 07/26/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0726T06.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Fluorobenzene (IS)	ISTD			I
2	TMHB	Gasoline	4.903	2.045	58	TMHBL 5.1
3	I	Chlorobenzene-D5 (IS)	ISTD			I
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I
5						
6						
7						
8						
9						
10						
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37						
38						
39						
40						

Average

58.0

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 12:26 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	818998	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	915509	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1060496	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

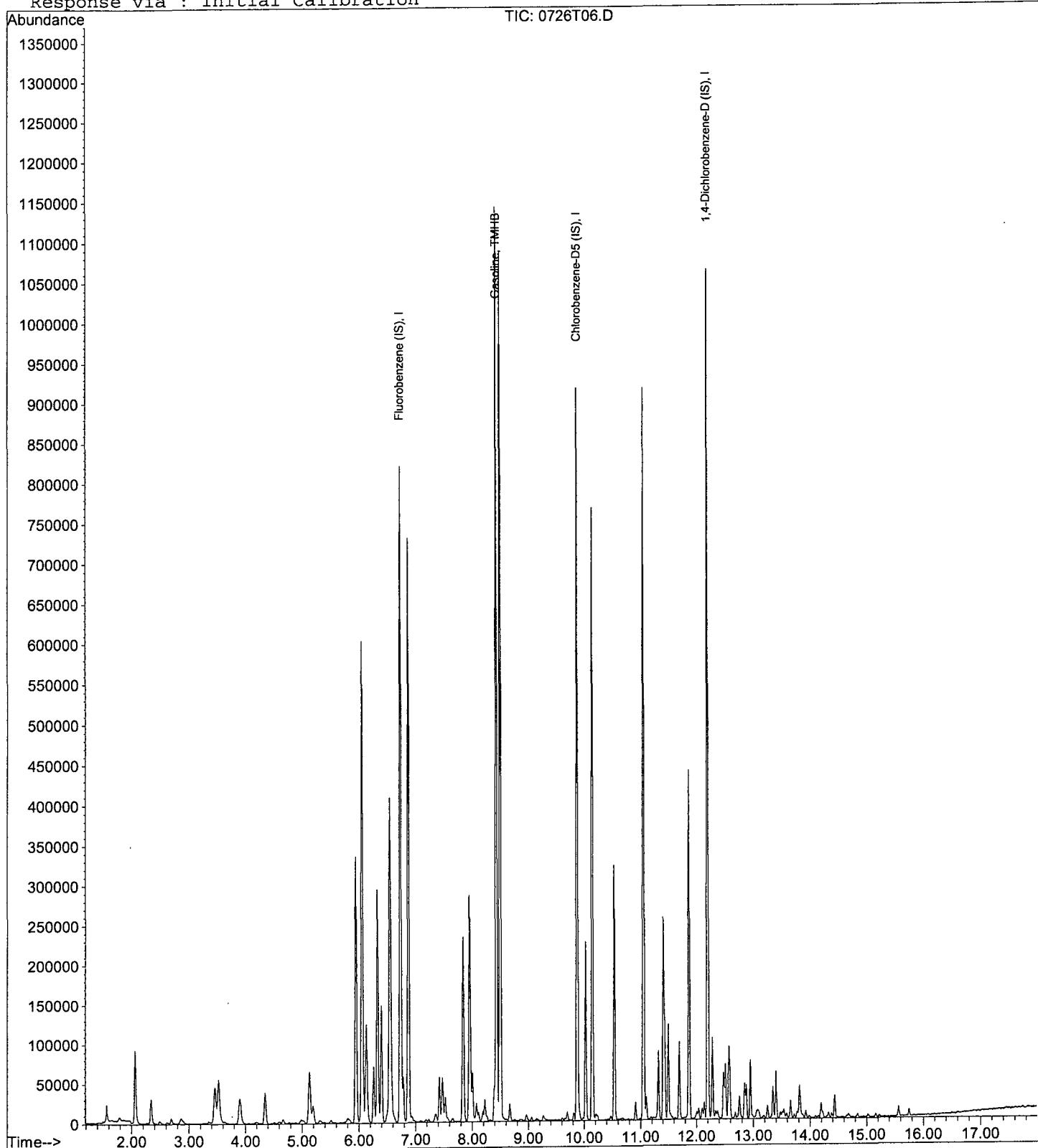
Data File : M:\THOR\DATA\T120725\0726T06.D
 Acq On : 26 Jul 12 11:41
 Sample : CCV gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 31
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 12:26 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration

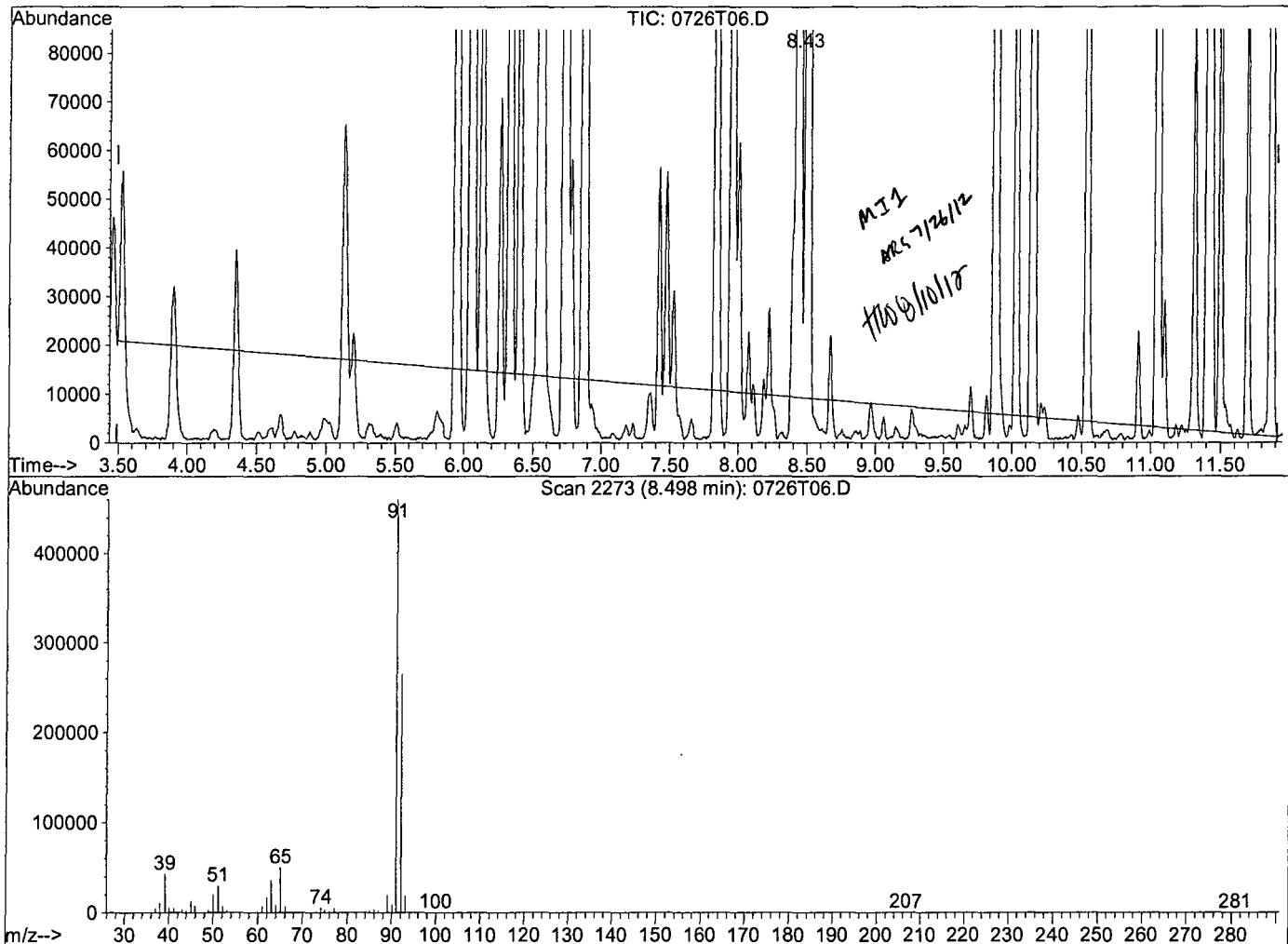


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D
 Acq On : 26 Jul 12 11:41
 Sample : CCV gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 12:26 2012

Vial: 31
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T06.D

(2) Gasoline (TMHB)

8.50min 211.9534ppb m

response 17507801

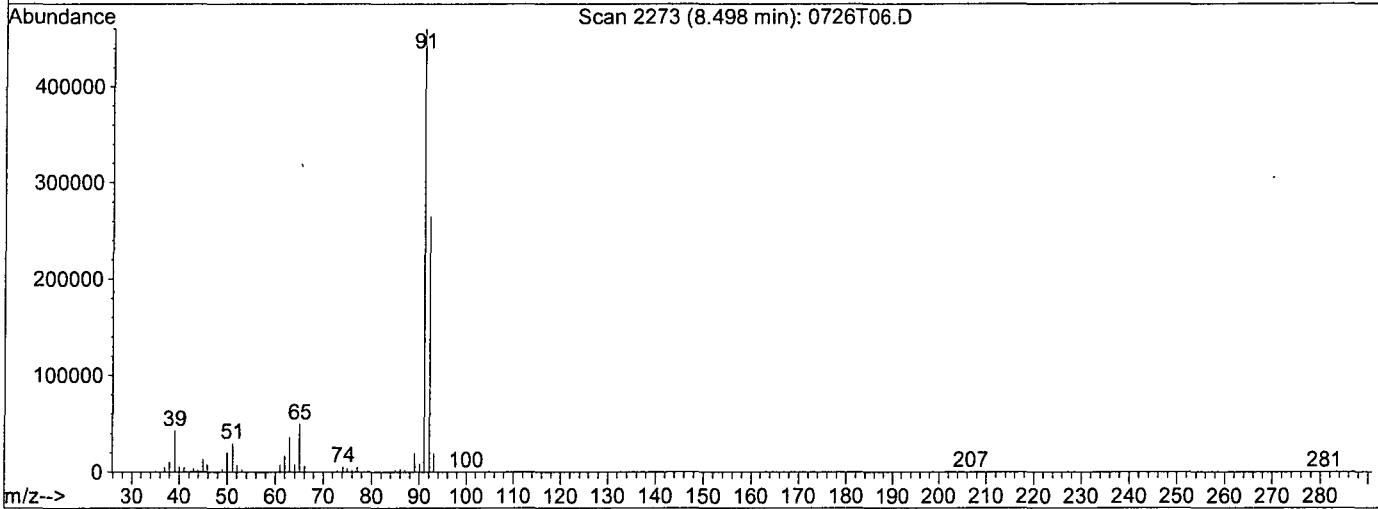
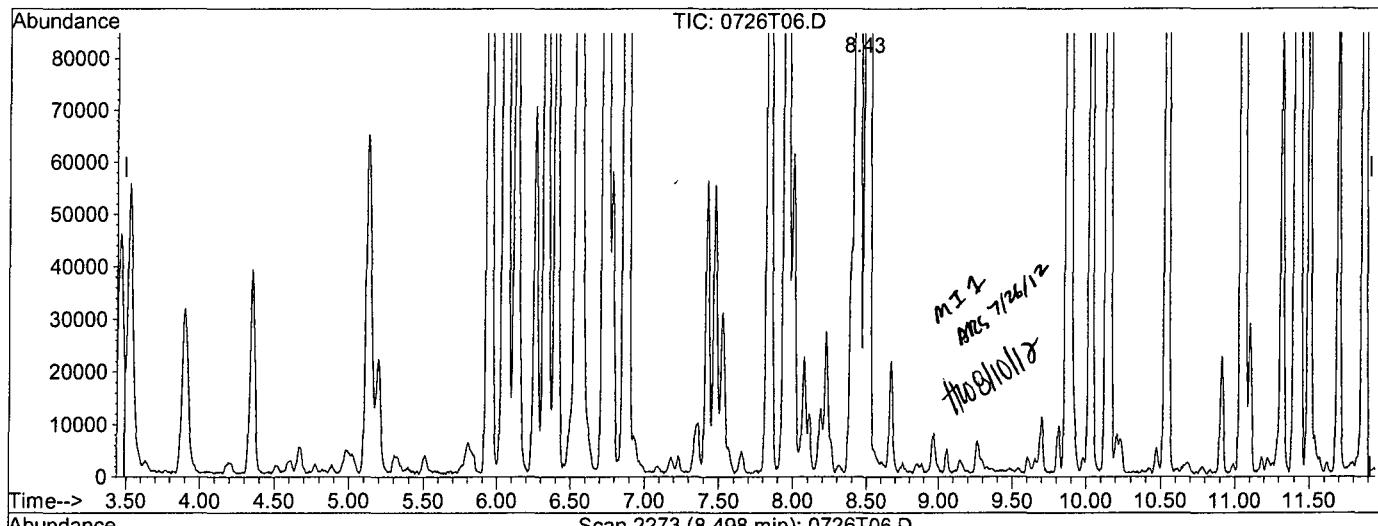
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D
 Acq On : 26 Jul 12 11:41
 Sample : CCV gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 12:26 2012

Vial: 31
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T06.D

(2) Gasoline (TMHB)

8.43min 284.6110ppb m

response 20100949

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.50#
0.00	0.00	1.50#
0.00	0.00	0.00

**EPA METHOD 8260B
Volatile Organic Compounds
Raw Data**

APPL, INC.

Method Blank
EPA 8260B VOCs + Gas Water

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:49 AM
GC SC-Blank-REG MDLs

Method Blank
EPA 8260B VOCs + Gas Water

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/26/12	07/26/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/26/12	07/26/12
BLANK	SURROGATE: DIBROMOFLUOR	102	85-115			%	07/26/12	07/26/12
BLANK	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:49 AM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
 Acq On : 26 Jul 12 14:00 Operator: DG, RS, HW, ARS, SV
 Sample : 120726A BLK-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:30 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	393664	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	315392	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	183424	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.95	111	201268	32.67167	ppb	0.00
Spiked Amount	31.881		Recovery	=	102.480%	
36) 1,2-DCA-D4(S)	6.33	65	195966	34.22939	ppb	0.00
Spiked Amount	33.647		Recovery	=	101.731%	
56) Toluene-D8(S)	8.43	98	700663	37.57779	ppb	0.00
Spiked Amount	37.345		Recovery	=	100.624%	
64) 4-Bromofluorobenzene(S)	11.05	95	263252	29.85450	ppb	0.00
Spiked Amount	29.515		Recovery	=	101.148%	

Target Compounds	Qvalue
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Quantitation Report

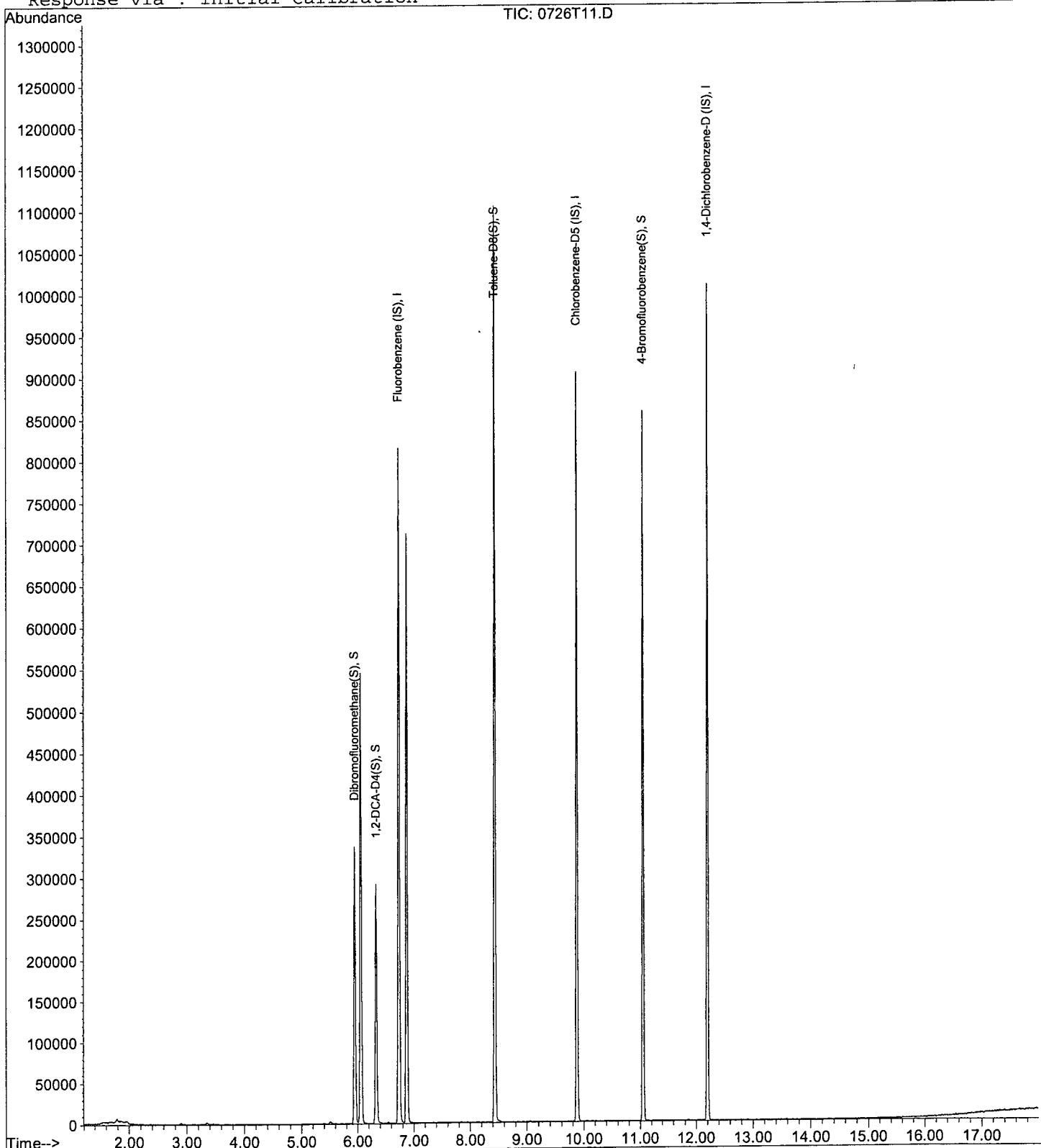
Data File : M:\THOR\DATA\T120725\0726T11.D
Acq On : 26 Jul 12 14:00
Sample : 120726A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 36
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:30 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
 Acq On : 26 Jul 12 14:00 Operator: DG, RS, HW, ARS, SV
 Sample : 120726A BLK-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:19 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	814291	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	903930	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1008826	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds				Qvalue
2) Gasoline	8.43	TIC	9968031m	2.31058 ppb ND 100

No gasoline pattern detected.

ARS 7/26/12

Quantitation Report

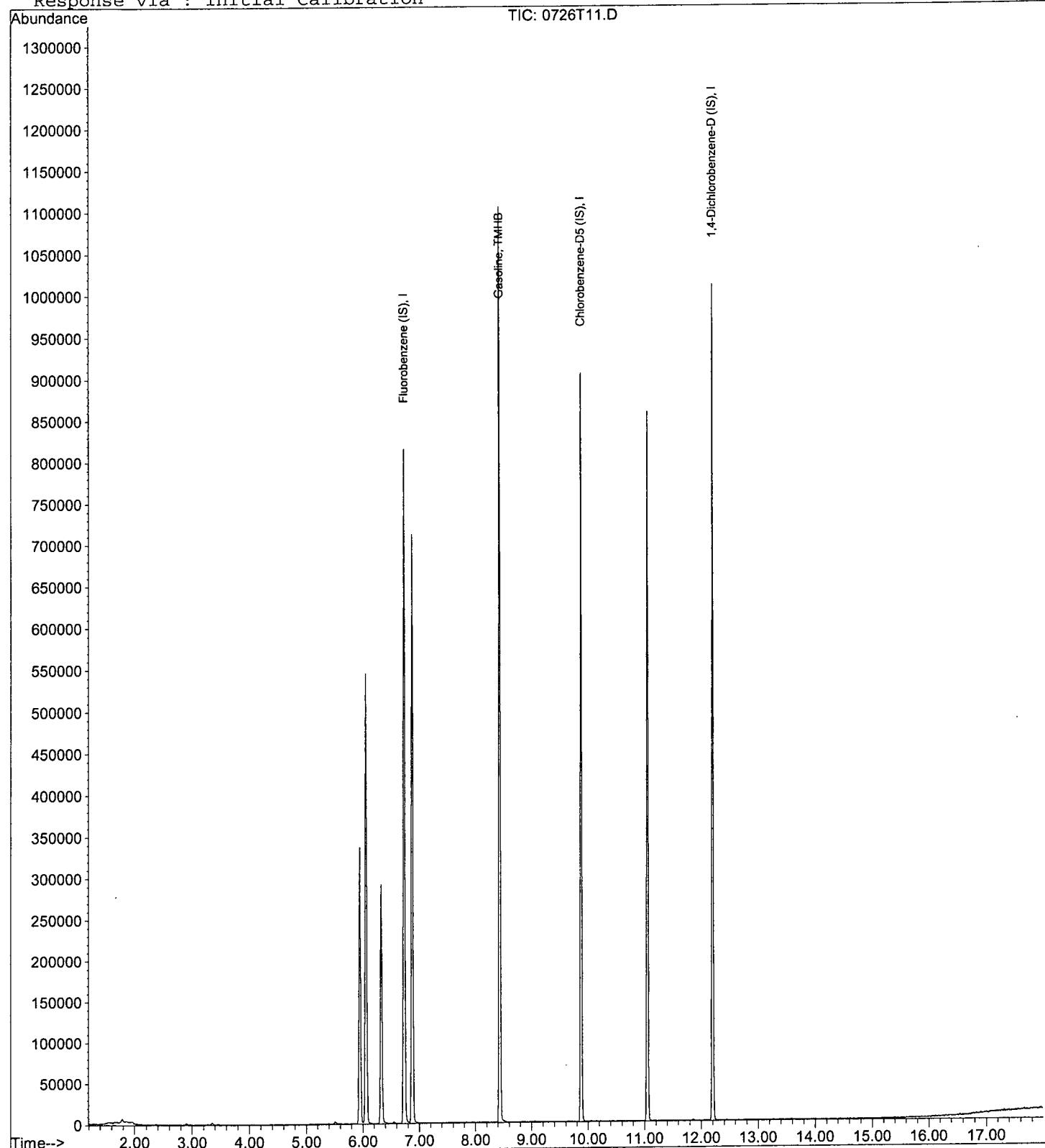
Data File : M:\THOR\DATA\T120725\0726T11.D
 Acq On : 26 Jul 12 14:00
 Sample : 120726A BLK-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 36
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 14:19 2012

Quant Results File: TGAS.RES

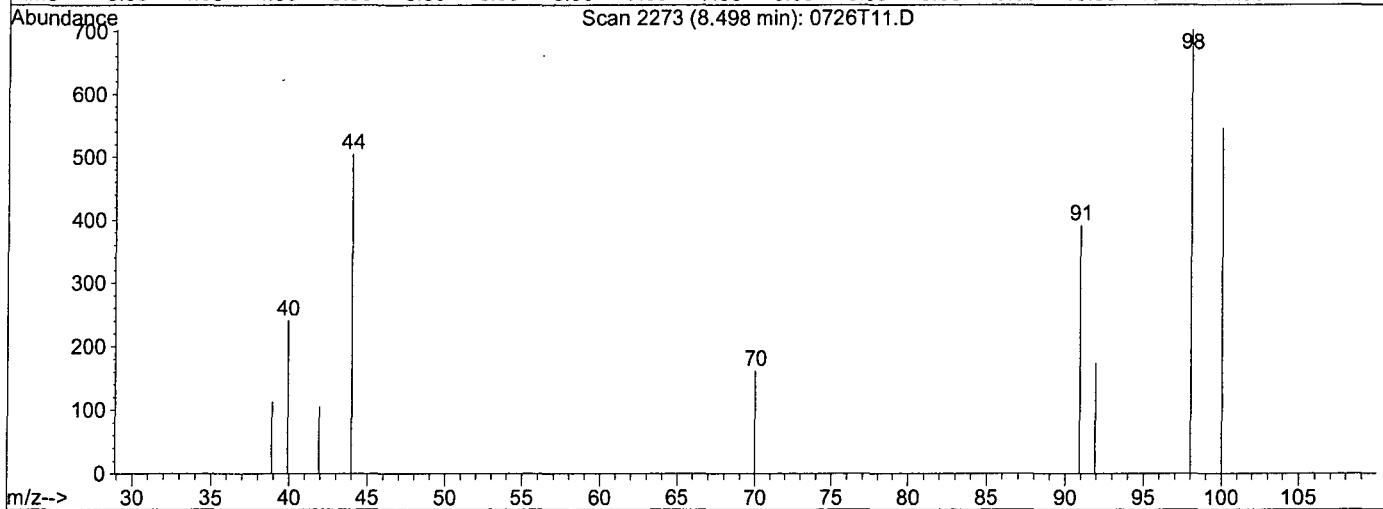
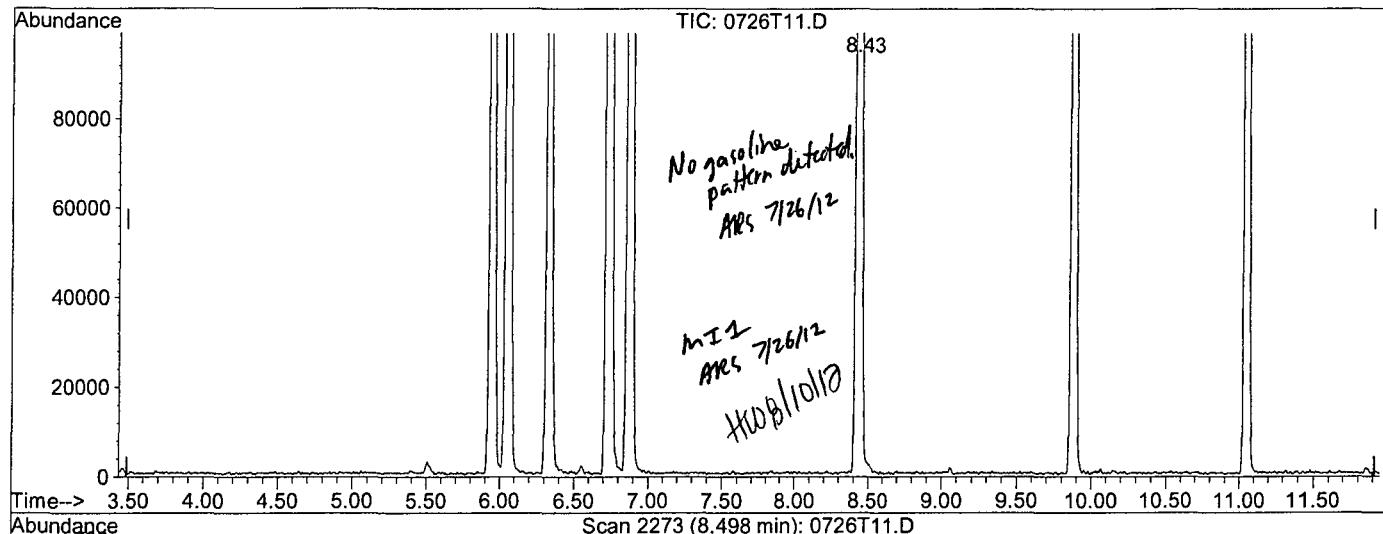
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
 Acq On : 26 Jul 12 14:00 Operator: DG, RS, HW, ARS, SV
 Sample : 120726A BLK-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 26 14:19 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T11.D

(2) Gasoline (TMHB)

8.43min 2.3106ppb m

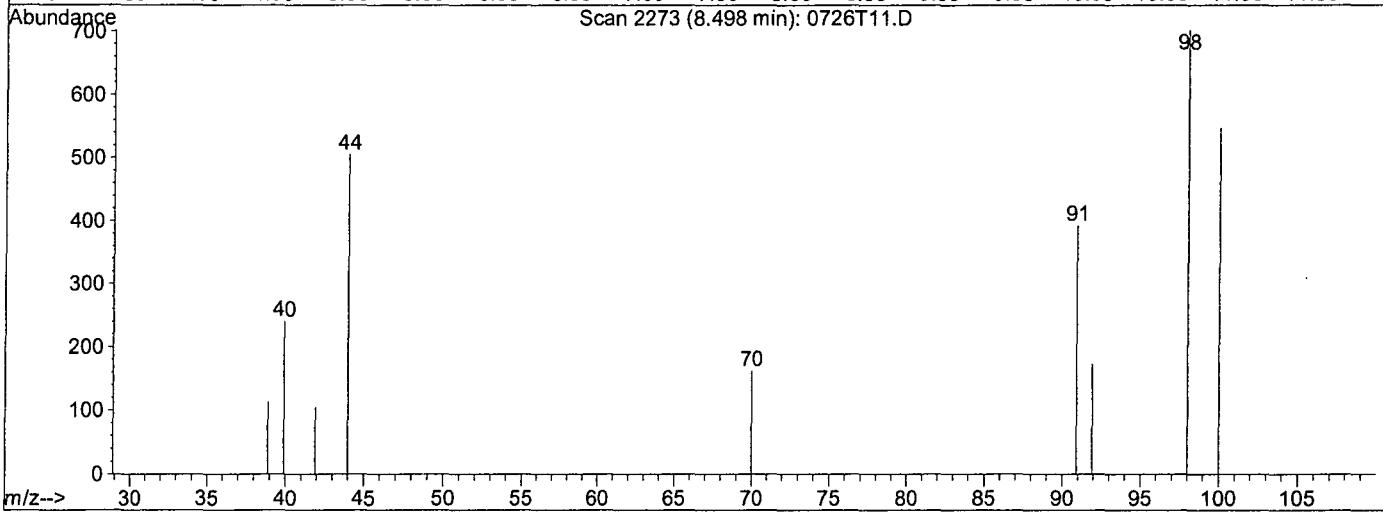
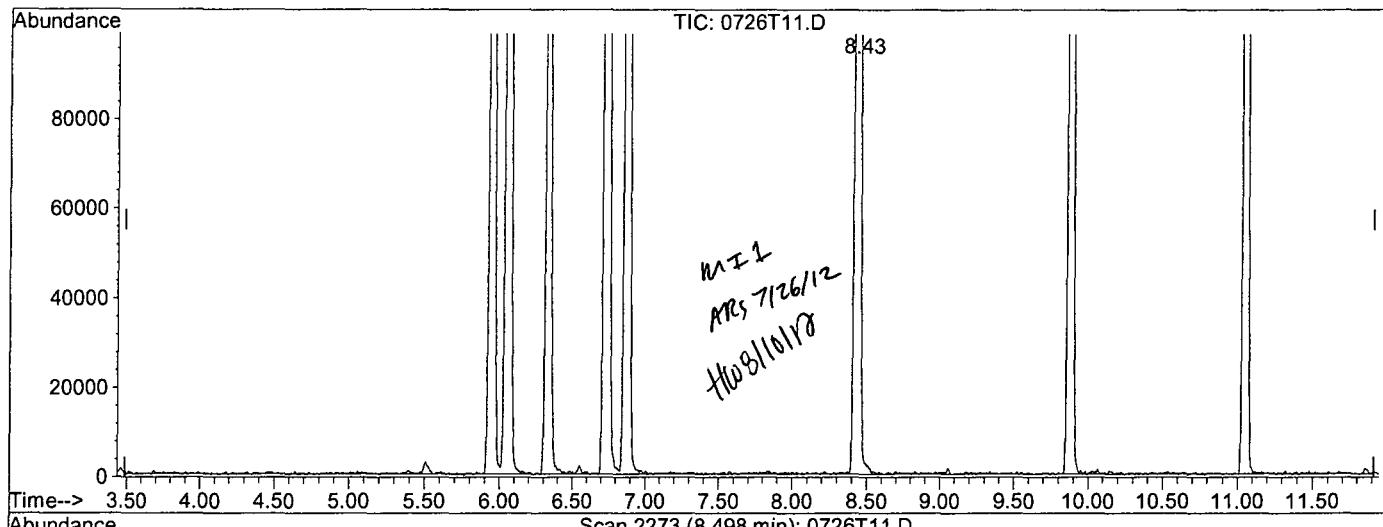
response 9968031

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.99#
0.00	0.00	2.83#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
 Acq On : 26 Jul 12 14:00 Operator: DG, RS, HW, ARS, SV
 Sample : 120726A BLK-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 26 14:19 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T11.D

(2) Gasoline (TMHB)

8.50min -59.4294ppb m

response 7777196

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.26#
0.00	0.00	3.63#
0.00	0.00	0.00

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: 120726W-65167 LCS - 169444

Batch ID: #86RHB-120726AT

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.3	103	80-130
1,1,1-TRICHLOROETHANE	10.00	9.87	98.7	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.84	98.4	65-130
1,1,2-TRICHLOROETHANE	10.00	9.86	98.6	75-125
1,1-DICHLOROETHANE	10.00	10.4	104	70-135
1,1-DICHLOROETHENE	10.00	9.96	99.6	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	10.4	104	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.8	108	50-130
1,2-DIBROMOETHANE	10.00	9.82	98.2	70-130
1,2-DICHLOROBENZENE	10.00	9.95	99.5	70-120
1,2-DICHLOROETHANE	10.00	9.83	98.3	70-130
1,2-DICHLOROPROPANE	10.00	10.0	100	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	20.3	102	70-130
1,4-DICHLOROBENZENE	10.00	9.71	97.1	75-125
2-BUTANONE	10.00	9.66	96.6	30-150
4-METHYL-2-PENTANONE	10.00	9.27	92.7	60-135
ACETONE	10.00	10.9	109	40-140
BENZENE	10.00	9.55	95.5	80-120
BROMODICHLOROMETHANE	10.00	10.1	101	75-120
BROMOFORM	10.00	10.2	102	70-130
BROMOMETHANE	10.00	9.13	91.3	30-145
CARBON TETRACHLORIDE	10.00	10.3	103	65-140
CHLOROBENZENE	10.00	10.1	101	80-120
CHLORODIBROMOMETHANE	10.00	10.2	102	60-135
CHLOROETHANE	10.00	9.65	96.5	60-135
CHLOROFORM	10.00	9.96	99.6	65-135
CHLOROMETHANE	10.00	8.45	84.5	40-125
CIS-1,2-DICHLOROETHENE	10.00	10.3	103	70-125
ETHYLBENZENE	10.00	10.3	103	75-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 9:57:36 AM
 APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: 120726W-65167 LCS - 169444

APPL Inc.

Batch ID: #86RHB-120726AT

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	ug/L	ug/L		
GASOLINE	300	285	95.0	75-125
HEXACHLOROBUTADIENE	10.00	10.4	104	50-140
METHYL TERT-BUTYL ETHER	10.00	9.83	98.3	65-125
METHYLENE CHLORIDE	10.00	9.48	94.8	55-140
STYRENE	10.00	10.6	106	65-135
TETRACHLOROETHENE	10.00	10.3	103	45-150
TOLUENE	10.00	10.2	102	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.17	91.7	60-140
TRICHLOROETHENE	10.00	9.73	97.3	70-125
VINYL CHLORIDE	10.00	9.58	95.8	50-145
XYLEMES (TOTAL)	30.0	31.5	105	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	34.2	102	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.7	104	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	32.5	102	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	37.2	99.6	85-120

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 9:57:36 AM
 APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T05.D Vial: 30
 Acq On : 26 Jul 12 11:13 Operator: DG, RS, HW, ARS, SV
 Sample : 120726A LCS-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcc Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	396608	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	324736	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	196096	25.00000	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	201500	32.46653	ppb	0.00
Spiked Amount	31.881		Recovery	= 101.837%		
36) 1,2-DCA-D4 (S)	6.33	65	197251	34.19809	ppb	0.00
Spiked Amount	33.647		Recovery	= 101.638%		
56) Toluene-D8 (S)	8.43	98	713358	37.15779	ppb	0.00
Spiked Amount	37.345		Recovery	= 99.500%		
64) 4-Bromofluorobenzene(S)	11.05	95	278834	30.71171	ppb	0.00
Spiked Amount	29.515		Recovery	= 104.055%		
Target Compounds						
2) Dichlorodifluoromethane	1.30	85	20992	10.44922	ppb	98
3) Freon 114	1.42	85	29813	10.74395	ppb	91
4) Chloromethane	1.45	50	42561	8.45484	ppb	94
5) Vinyl chloride	1.56	62	75106	9.58161	ppb	97
6) Bromomethane	1.87	94	45745	9.13053	ppb	99
7) Chloroethane	1.97	64	43557	9.64787	ppb	94
8) Dichlorofluoromethane	2.18	67	2861	9.58768	ppb	100
9) Trichlorofluoromethane	2.24	101	20255	12.50160	ppb	97
11) Acetone	2.89	43	15637	10.93946	ppb	97
12) Freon-113	2.85	101	35154	10.78714	ppb	98
13) 1,1-DCE	2.82	61	43546	9.95723	ppb	97
14) t-Butanol	3.69	59	16195	125.92197	ppb	99
15) Methyl Acetate	3.34	43	38826	10.17983	ppb	94
16) Iodomethane	2.98	142	38038	9.61617	ppb	96
17) Acrylonitrile	3.81	52	12741	10.17176	ppb	95
18) Methylene chloride	3.46	84	15078	9.47745	ppb	94
19) Carbon disulfide	3.06	76	3982	8.81686	ppb	92
20) Methyl t-butyl ether (MtBE	3.90	73	83011	9.83127	ppb	96
21) Trans-1,2-DCE	3.87	96	27662	9.16525	ppb	97
22) Diisopropyl Ether	4.70	59	19437	10.27894	ppb	96
23) 1,1-DCA	4.51	63	83500	10.43344	ppb	98
24) Vinyl Acetate	4.70	87	45054	9.96711	ppb	98
25) Ethyl tert Butyl Ether	5.21	59	106002	10.04146	ppb	100
26) MEK (2-Butanone)	5.38	43	18731	9.65961	ppb	99
27) Cis-1,2-DCE	5.32	96	52681	10.27571	ppb	93
28) 2,2-Dichloropropane	5.32	77	35907	11.13733	ppb	98
29) Chloroform	5.75	83	98981	9.95947	ppb	100
30) Bromochloromethane	5.62	128	25422	10.18441	ppb	99
32) 1,1,1-TCA	5.96	97	59014	9.86878	ppb	89
33) Cyclohexane	6.03	41	15888	9.79014	ppb	97
34) 1,1-Dichloropropene	6.17	75	43617	10.04365	ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	64733	10.37139	ppb	98
37) Carbon Tetrachloride	6.16	117	57597	10.27670	ppb	88
38) Tert Amyl Methyl Ether	6.59	73	110559	9.83974	ppb	98
39) 1,2-DCA	6.42	62	64059	9.82891	ppb	100
40) Benzene	6.40	78	170080	9.55468	ppb	98
41) TCE	7.14	95	47064	9.72719	ppb	96
42) 2-Pentanone	7.36	43	461551	121.08490	ppb	99
43) 1,2-Dichloropropane	7.37	63	58310	10.03940	ppb	99

(#) = qualifier out of range (m) = manual integration
 0726T05.D TALLW.M Fri Jul 27 08:30:37 2012

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T05.D
 Acq On : 26 Jul 12 11:13
 Sample : 120726A LCS-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 30
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Bromodichloromethane	7.68	83	81334	10.12262	ppb	99
45) Methyl Cyclohexane	7.36	83	33318	9.64466	ppb	91
46) Dibromomethane	7.49	93	31381	9.93266	ppb	95
47) 2-Chloroethyl vinyl ether	7.99	106	1117	10.08733	ppb	100
48) MIBK (methyl isobutyl ket	8.33	43	25400	9.26551	ppb	93
49) 1-Bromo-2-chloroethane	7.99	63	40824	10.10226	ppb	99
50) <u>Cis-1,3-Dichloropropene</u>	8.15	75	81069	<u>10.19591</u>	<u>ppb</u>	99
51) Toluene	8.50	91	213596	10.17008	ppb	99
52) <u>Trans-1,3-Dichloropropene</u>	8.72	75	70666	<u>10.07976</u>	<u>ppb</u>	98
53) 1,1,2-TCA	8.90	83	46088	9.85586	ppb	98
54) 2-Hexanone	9.17	43	29609	9.41878	ppb	98
57) 1,2-EDB	9.40	107	47825	9.82265	ppb	96
58) Tetrachloroethene	9.06	166	56570	10.27565	ppb	95
59) 1-Chlorohexane	9.90	91	66229	10.10676	ppb	97
60) 1,1,1,2-Tetrachloroethane	9.99	131	66238	10.29855	ppb	96
61) m,p-Xylene	10.14	106	209855	20.91575	ppb	100
62) o-Xylene	10.54	106	110351	10.63203	ppb	100
63) Styrene	10.55	104	186966	10.60207	ppb	99
65) 1,3-Dichloropropane	9.07	76	85563	10.02307	ppb	99
66) Dibromochloromethane	9.29	129	65520	10.19444	ppb	95
67) Chlorobenzene	9.90	112	168953	10.06356	ppb	97
68) Ethylbenzene	10.03	91	270842	10.25986	ppb	99
69) Bromoform	10.71	173	44921	10.20780	ppb	100
71) Isopropylbenzene	10.91	105	264298	10.30803	ppb	99
72) 1,1,2,2-Tetrachloroethane	11.19	83	70013	9.84064	ppb	98
73) 1,2,3-Trichloropropane	11.23	110	20752	10.27676	ppb	91
74) t-1,4-Dichloro-2-Butene	11.25	53	15291	11.31489	ppb	100
75) Bromobenzene	11.19	156	84258	9.96856	ppb	97
76) n-Propylbenzene	11.32	91	341856	10.35542	ppb	98
77) 4-Ethyltoluene	11.43	105	298803	10.53985	ppb	100
78) 2-Chlorotoluene	11.39	91	238556	10.13378	ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	244626	10.40926	ppb	97
80) 4-Chlorotoluene	11.50	91	242452	10.40511	ppb	100
81) Tert-Butylbenzene	11.82	119	218794	10.16271	ppb	100
82) 1,2,4-Trimethylbenzene	11.86	105	249589	10.26353	ppb	100
83) Sec-Butylbenzene	12.04	105	304284	10.58641	ppb	100
84) p-Isopropyltoluene	12.19	119	253641	10.44390	ppb	99
85) Benzyl Chloride	12.35	91	74989	10.33282	ppb	97
86) 1,3-DCB	12.13	146	162751	10.18158	ppb	98
87) 1,4-DCB	12.22	146	162560	9.71046	ppb	98
88) n-Butylbenzene	12.59	91	228772	10.50941	ppb	99
89) 1,2-DCB	12.59	146	154217	9.95402	ppb	99
90) Hexachloroethane	12.86	117	43289	9.72856	ppb	98
91) 1,2-Dibromo-3-chloropropan	13.35	157	14451	10.84174	ppb	85
92) 1,2,4-Trichlorobenzene	14.19	180	73672	10.37388	ppb	97
93) Hexachlorobutadiene	14.38	223	30881	10.40937	ppb	97
94) Naphthalene	14.43	128	203098	10.24211	ppb	100
95) 1,2,3-Trichlorobenzene	14.68	180	103520	10.23079	ppb	98

ARS 7/27/12

Quantitation Report

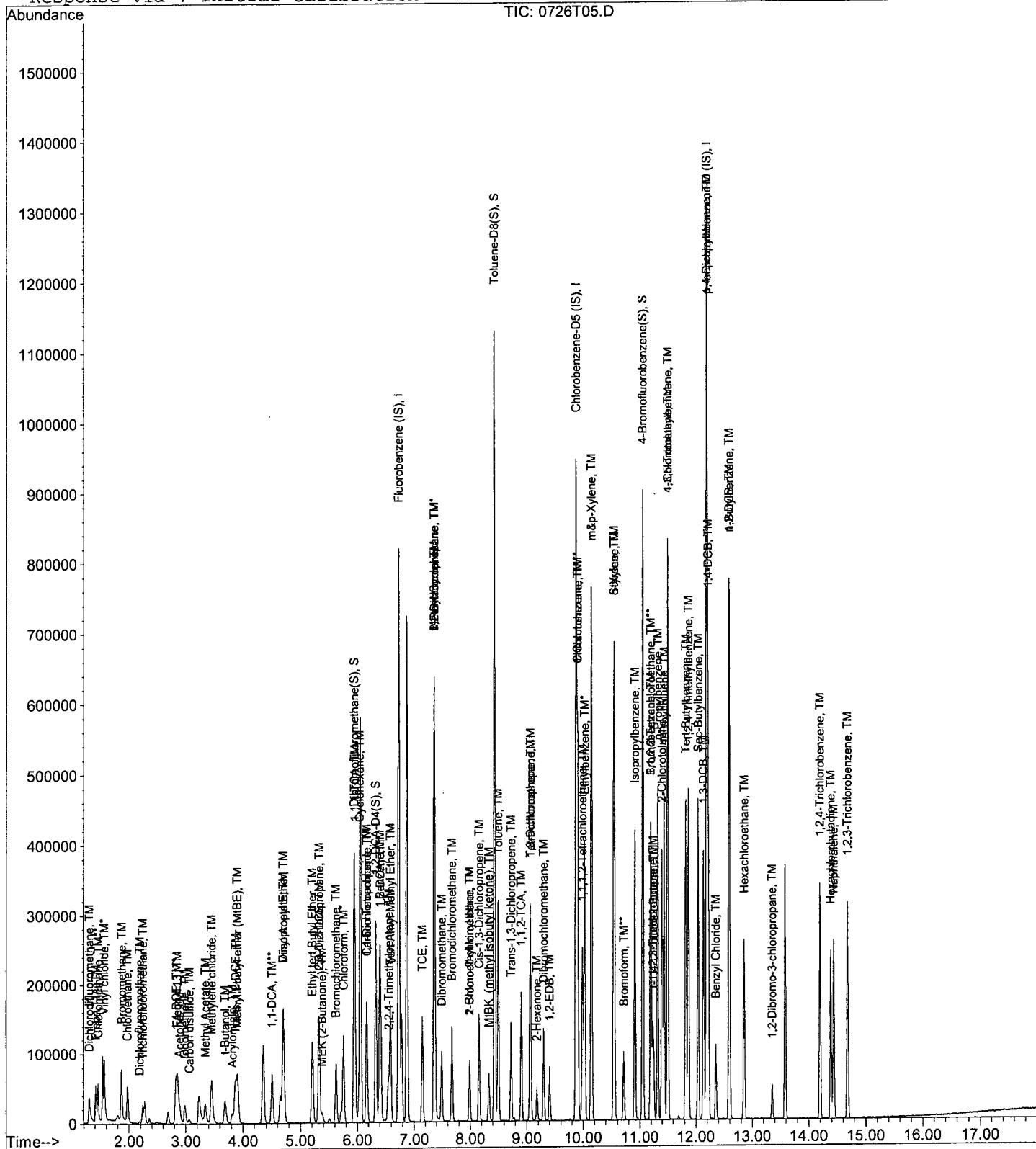
Data File : M:\THOR\DATA\T120725\0726T05.D
 Acq On : 26 Jul 12 11:13
 Sample : 120726A LCS-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 30
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 13:09 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.72	TIC	811874	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	928441	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1044824	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue
2) Gasoline 8.43 TIC 19927273m 284.64410 ppb 100

Quantitation Report

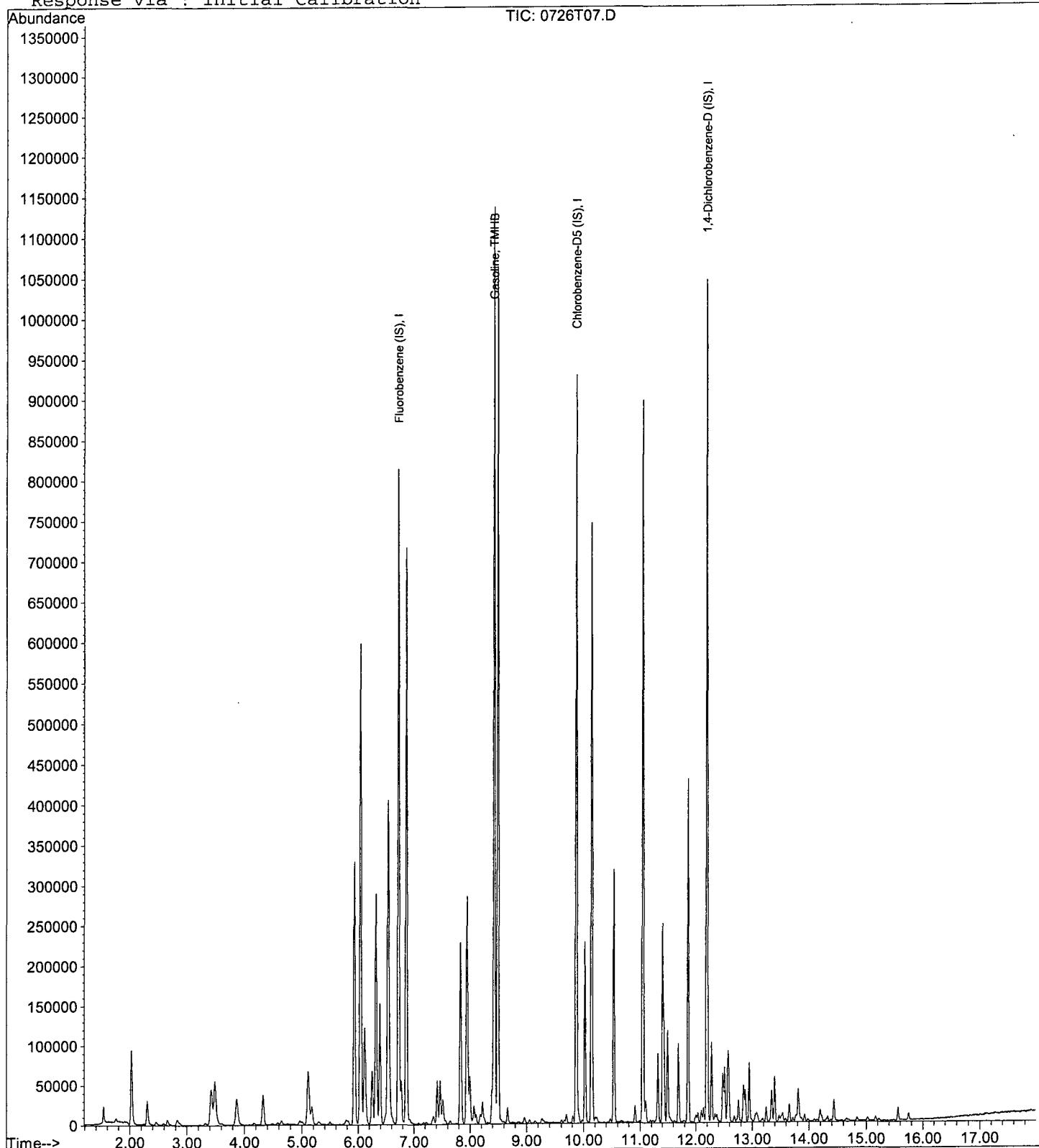
Data File : M:\THOR\DATA\T120725\0726T07.D
Acq On : 26 Jul 12 12:09
Sample : LCS gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 32
Operator: DG, RS, HW, ARS, SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 13:09 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

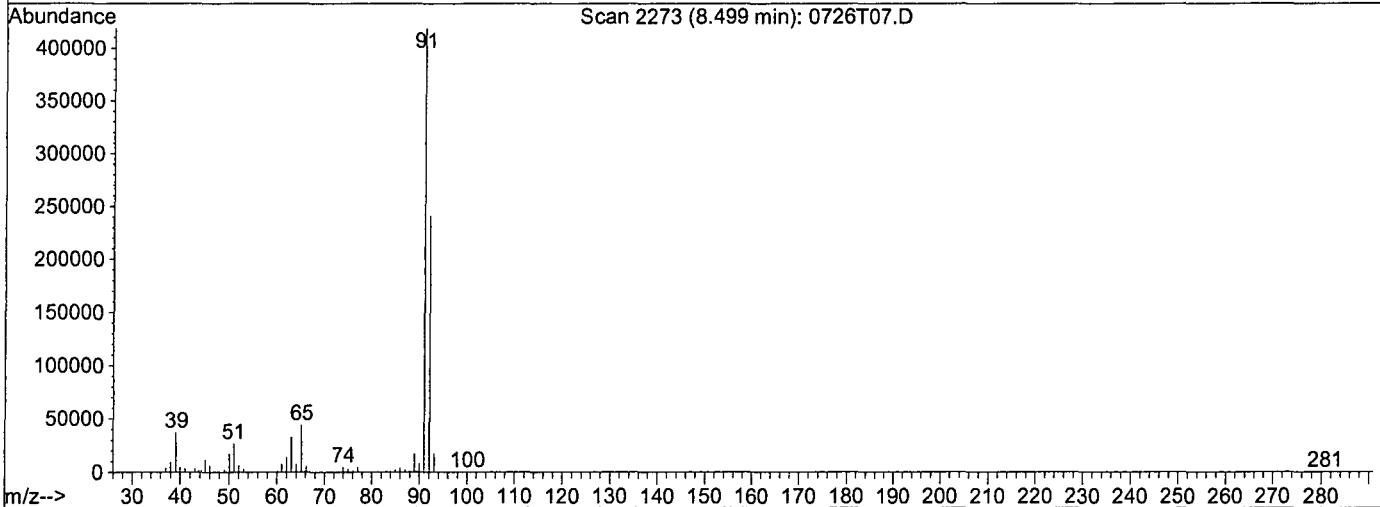
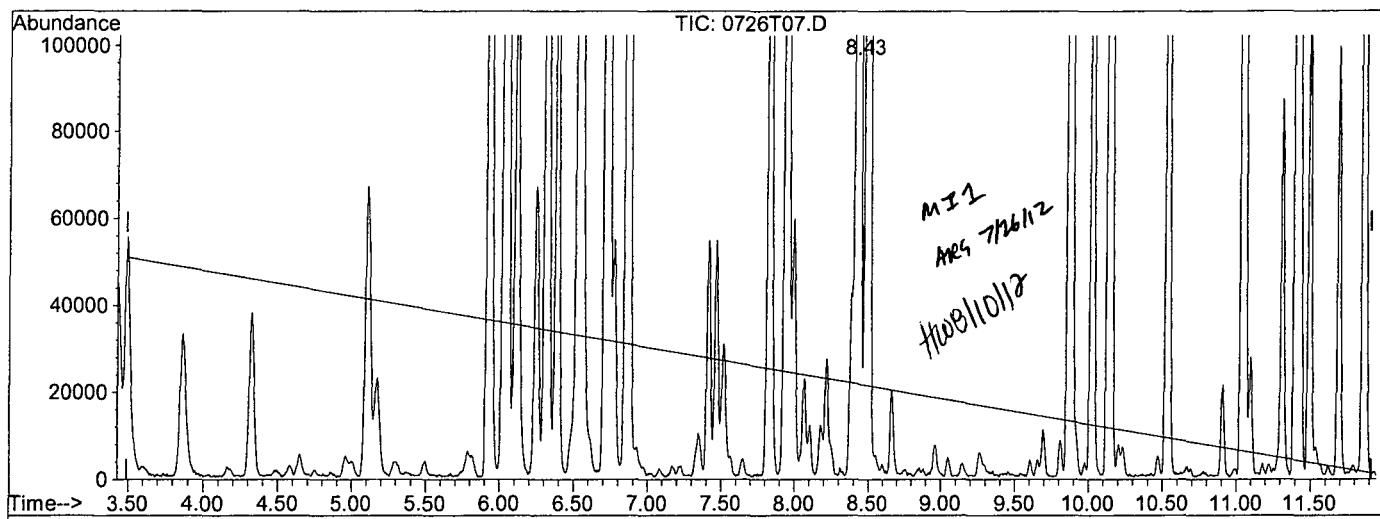


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D
 Acq On : 26 Jul 12 12:09
 Sample : LCS gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 13:09 2012

Vial: 32
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



TIC: 0726T07.D

(2) Gasoline (TMHB)

8.50min 210.7660ppb m

response 17313500

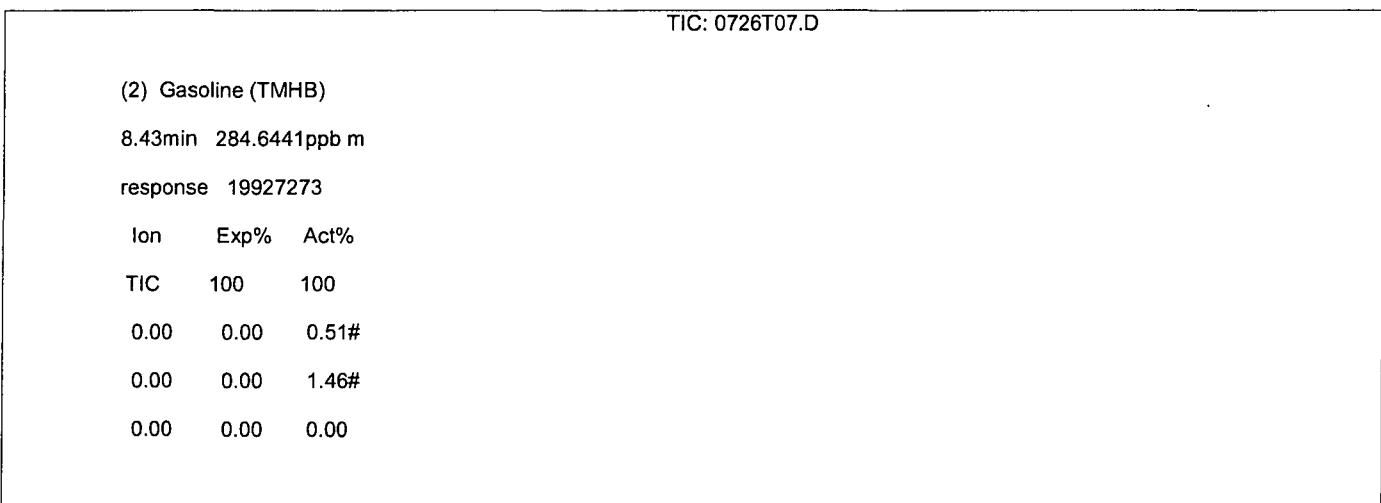
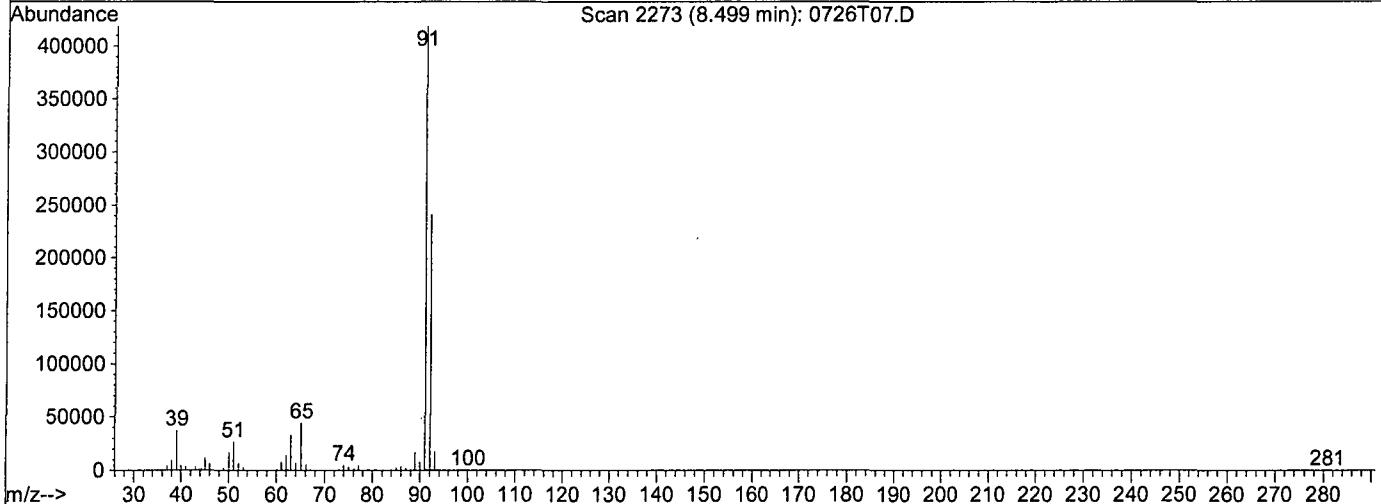
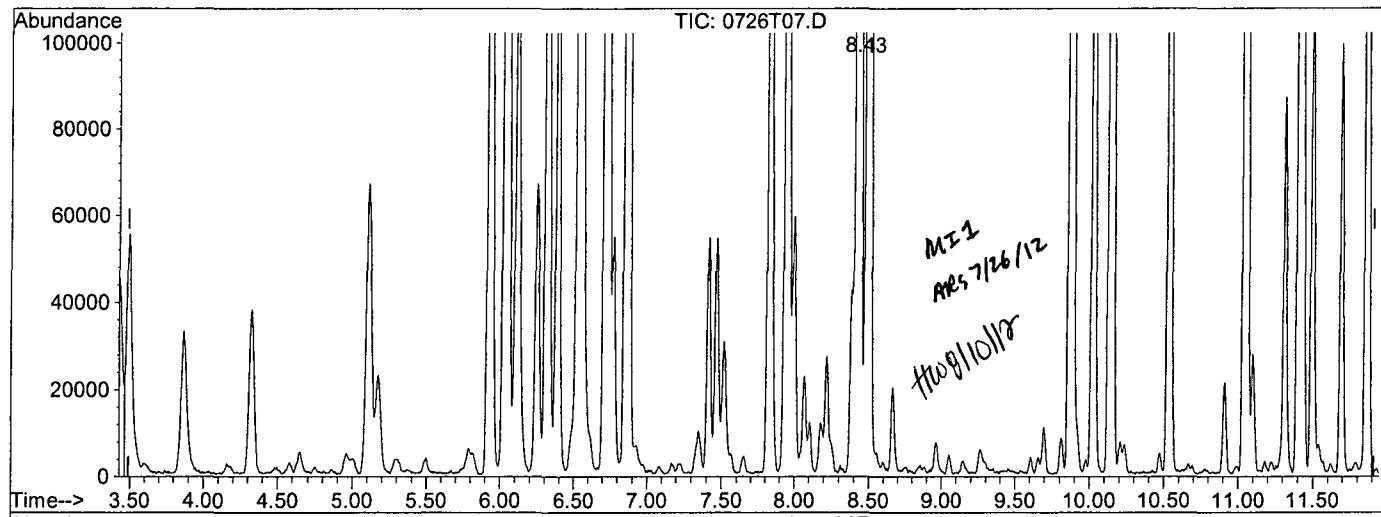
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.68#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D
 Acq On : 26 Jul 12 12:09
 Sample : LCS gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 13:09 2012

Vial: 32
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



Matrix Spike Recoveries
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**

Batch ID: #86RHB-120726AT

Sample ID: AY65167

Client ID: ES084

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
	ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Limits	%	Limits
1,1,1,2-TETRACHLOROETHANE	10.00	ND	8.86	8.94	88.6	89.4	80-130	0.90	30
1,1,1-TRICHLOROETHANE	10.00	ND	9.23	9.27	92.3	92.7	65-130	0.43	30
1,1,2,2-TETRACHLOROETHANE	10.00	ND	0.166	0.187	1.7 #	1.9 #	65-130	11.9	30
1,1,2-TRICHLOROETHANE	10.00	ND	8.01	7.73	80.1	77.3	75-125	3.6	30
1,1-DICHLOROETHANE	10.00	ND	9.08	9.10	90.8	91.0	70-135	0.22	30
1,1-DICHLOROETHENE	10.00	ND	10.2	10.9	102	109	70-130	6.6	30
1,2,3-TRICHLOROPROPANE	10.00	ND	9.19	9.10	91.9	91.0	75-125	0.98	30
1,2,4-TRICHLOROBENZENE	10.00	ND	8.39	8.99	83.9	89.9	65-135	6.9	30
1,2-DIBROMO-3-CHLOROPROPANE	10.00	ND	8.85	8.68	88.5	86.8	50-130	1.9	30
1,2-DIBROMOETHANE	10.00	ND	8.76	8.86	87.6	88.6	70-130	1.1	30
1,2-DICHLOROBENZENE	10.00	ND	8.93	8.73	89.3	87.3	70-120	2.3	30
1,2-DICHLOROETHANE	10.00	ND	9.08	8.87	90.8	88.7	70-130	2.3	30
1,2-DICHLOROPROPANE	10.00	ND	8.93	8.87	89.3	88.7	75-125	0.67	30
1,3-DICHLOROBENZENE	10.00	ND	9.16	9.08	91.6	90.8	75-125	0.88	30
1,3-DICHLOROPROPENE, TOTAL	20.0	ND	17.0	17.5	85.0	87.5	70-130	2.9	30
1,4-DICHLOROBENZENE	10.00	ND	8.83	8.79	88.3	87.9	75-125	0.45	30
2-BUTANONE	10.00	1.0	10.4	9.60	94.0	86.0	30-150	8.0	30
4-METHYL-2-PENTANONE	10.00	ND	9.17	8.73	91.7	87.3	60-135	4.9	30
ACETONE	10.00	2.3	13.0	12.4	107	101	40-140	4.7	30
BENZENE	10.00	1.3	9.60	9.78	83.0	84.8	80-120	1.9	30
BROMODICHLOROMETHANE	10.00	ND	8.67	8.77	86.7	87.7	75-120	1.1	30
BROMOFORM	10.00	ND	8.94	9.04	89.4	90.4	70-130	1.1	30
BROMOMETHANE	10.00	ND	7.72	7.73	77.2	77.3	30-145	0.13	30
CARBON TETRACHLORIDE	10.00	ND	9.21	9.49	92.1	94.9	65-140	3.0	30
CHLOROBENZENE	10.00	ND	8.74	9.06	87.4	90.6	80-120	3.6	30
CHLORODIBROMOMETHANE	10.00	ND	8.76	8.74	87.6	87.4	60-135	0.23	30
CHLOROETHANE	10.00	ND	7.80	7.99	78.0	79.9	60-135	2.4	30
CHLOROFORM	10.00	ND	9.01	8.83	90.1	88.3	65-135	2.0	30
CHLOROMETHANE	10.00	ND	6.87	7.14	68.7	71.4	40-125	3.9	30
CIS-1,2-DICHLOROETHENE	10.00	ND	9.00	8.94	90.0	89.4	70-125	0.67	30

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Printed: 07/31/12 9:57:22 AM

APPL MSD SCII

Matrix Spike Recoveries
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**

APPL Inc.

Batch ID: #86RHB-120726AT

908 North Temperance Avenue

Sample ID: AY65167

Clovis, CA 93611

Client ID: ES084

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK %	DUP %	Recovery	RPD	RPD
	ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Limits	%	Limits
ETHYLBENZENE	10.00	ND	8.96	8.99	89.6	89.9	75-125	0.33	30
GASOLINE	300	ND	218	232	72.7 #	77.3	75-125	6.2	30
HEXACHLOROBUTADIENE	10.00	ND	8.83	8.95	88.3	89.5	50-140	1.3	30
METHYL TERT-BUTYL ETHER	10.00	ND	8.73	8.72	87.3	87.2	65-125	0.11	30
METHYLENE CHLORIDE	10.00	ND	16.9	16.6	169 #	166 #	55-140	1.8	30
STYRENE	10.00	ND	9.10	9.30	91.0	93.0	65-135	2.2	30
TETRACHLOROETHENE	10.00	ND	8.89	9.25	88.9	92.5	45-150	4.0	30
TOLUENE	10.00	ND	9.09	9.15	90.9	91.5	75-120	0.66	30
TRANS-1,2-DICHLOROETHENE	10.00	ND	8.18	8.46	81.8	84.6	60-140	3.4	30
TRICHLOROETHENE	10.00	ND	19.9	20.4	199 #	204 #	70-125	2.5	30
VINYL CHLORIDE	10.00	ND	8.27	8.25	82.7	82.5	50-145	0.24	30
XYLENES (TOTAL)	30.0	ND	27.1	28.0	90.3	93.3	80-120	3.3	30
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	NA	33.3	34.2	99.0	102	70-120		
SURROGATE: 4-BROMOFLUOROBENZE	29.5	NA	30.0	31.2	102	106	75-120		
SURROGATE: DIBROMOFLUOROMETH	31.9	NA	29.3	30.2	91.9	94.7	85-115		
SURROGATE: TOLUENE-D8 (S)	37.3	NA	36.6	38.0	98.0	102	85-120		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Printed: 07/31/12 9:57:22 AM
 APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T21.D Vial: 46
 Acq On : 26 Jul 12 18:37 Operator: DG, RS, HW, ARS, SV
 Sample : AY65167W234 MS-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	398656	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	326336	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	192128	25.00000	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	182918	29.32111	ppb	0.00
Spiked Amount	31.881		Recovery	= 91.970%		
36) 1,2-DCA-D4 (S)	6.33	65	192921	33.27556	ppb	0.00
Spiked Amount	33.647		Recovery	= 98.898%		
56) Toluene-D8 (S)	8.43	98	705319	36.55892	ppb	0.00
Spiked Amount	37.345		Recovery	= 97.896%		
64) 4-Bromofluorobenzene(S)	11.05	95	273381	29.96347	ppb	0.00
Spiked Amount	29.515		Recovery	= 101.517%		
Target Compounds						
2) Dichlorodifluoromethane	1.30	85	17536	8.68408	ppb	97
3) Freon 114	1.41	85	25480	9.07744	ppb	96
4) Chloromethane	1.45	50	35129	6.86637	ppb	95
5) Vinyl chloride	1.56	62	65125	8.26561	ppb	99
6) Bromomethane	1.87	94	38861	7.71666	ppb	95
7) Chloroethane	1.97	64	35403	7.80147	ppb	93
8) Dichlorofluoromethane	2.18	67	2143	7.52700	ppb	84
9) Trichlorofluoromethane	2.24	101	15974	9.80867	ppb	99
11) Acetone	2.89	43	18411	13.03028	ppb	95
12) Freon-113	2.85	101	33134	10.11506	ppb	96
13) 1,1-DCE	2.82	61	45050	10.24822	ppb	95
14) t-Butanol	3.69	59	21048	162.81505	ppb	# 91
16) Iodomethane	2.98	142	34440	8.66185	ppb	95
17) Acrylonitrile	3.80	52	11400	9.05442	ppb	100
18) Methylene chloride	3.45	84	25968	16.91193	ppb	95
19) Carbon disulfide	3.06	76	4266	9.45532	ppb	# 79
20) Methyl t-butyl ether (MtBE	3.90	73	74082	8.72871	ppb	98
21) Trans-1,2-DCE	3.86	96	24817	8.18037	ppb	97
22) Diisopropyl Ether	4.70	59	17110	9.00186	ppb	97
23) 1,1-DCA	4.51	63	73029	9.07819	ppb	98
24) Vinyl Acetate	4.70	87	40310	8.87181	ppb	96
25) Ethyl tert Butyl Ether	5.21	59	92244	8.69329	ppb	99
26) MEK (2-Butanone)	5.38	43	20373	10.42451	ppb	97
27) Cis-1,2-DCE	5.33	96	46374	8.99903	ppb	99
28) 2,2-Dichloropropane	5.32	77	29884	9.22155	ppb	90
29) Chloroform	5.76	83	90023	9.01158	ppb	100
30) Bromochloromethane	5.62	128	22585	9.00139	ppb	99
32) 1,1,1-TCA	5.96	97	55482	9.23047	ppb	92
33) Cyclohexane	6.03	41	14978	9.18198	ppb	97
34) 1,1-Dichloropropene	6.17	75	39674	9.08877	ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	55203	8.79908	ppb	96
37) Carbon Tetrachloride	6.16	117	51904	9.21336	ppb	96
38) Tert Amyl Methyl Ether	6.59	73	99278	8.79034	ppb	99
39) 1,2-DCA	6.42	62	59468	9.07761	ppb	97
40) Benzene	6.40	78	171830	9.60340	ppb	97
41) TCE	7.15	95	96816	19.90714	ppb	97
42) 2-Pentanone	7.36	43	464853	121.32466	ppb	99
43) 1,2-Dichloropropane	7.37	63	52133	8.92977	ppb	99
44) Bromodichloromethane	7.68	83	70010	8.66851	ppb	98

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

0726T21.D TALLW.M Fri Jul 27 08:30:45 2012

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T21.D
 Acq On : 26 Jul 12 18:37
 Sample : AY65167W234 MS-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 46
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
45) Methyl Cyclohexane	7.36	83	31060	8.94484	ppb	98
46) Dibromomethane	7.49	93	28328	8.92027	ppb	98
47) 2-Chloroethyl vinyl ether	7.98	106	701	5.83998	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	25256	9.16566	ppb	96
49) 1-Bromo-2-chloroethane	7.99	63	34448	8.48067	ppb	96
50) <u>Cis-1,3-Dichloropropene</u>	8.15	75	68330	<u>8.54960</u>	<u>ppb</u>	99
51) Toluene	8.50	91	191937	9.09187	ppb	99
52) <u>Trans-1,3-Dichloropropene</u>	8.72	75	59665	<u>8.46686</u>	<u>ppb</u>	99
53) 1,1,2-TCA	8.90	83	37639	8.00770	ppb	97
54) 2-Hexanone	9.18	43	29561	9.35521	ppb	# 95
57) 1,2-EDB	9.40	107	42862	8.76015	ppb	97
58) Tetrachloroethene	9.06	166	49194	8.89203	ppb	95
59) 1-Chlorohexane	9.90	91	60378	9.16870	ppb	96
60) 1,1,1,2-Tetrachloroethane	9.99	131	57245	8.85670	ppb	98
61) m&p-Xylene	10.14	106	180959	17.94733	ppb	96
62) o-Xylene	10.54	106	95951	9.19930	ppb	98
63) Styrene	10.55	104	161355	9.10492	ppb	98
65) 1,3-Dichloropropane	9.07	76	76783	8.95046	ppb	99
66) Dibromochloromethane	9.29	129	56595	8.76260	ppb	100
67) Chlorobenzene	9.90	112	147388	8.73601	ppb	99
68) Ethylbenzene	10.03	91	237757	8.96239	ppb	99
69) Bromoform	10.71	173	39528	8.93826	ppb	94
71) Isopropylbenzene	10.91	105	232129	9.24037	ppb	99
72) 1,1,2,2-Tetrachloroethane	11.23	83	1157	0.16598	ppb	# 93
73) 1,2,3-Trichloropropane	11.23	110	18186	9.19203	ppb	90
74) t-1,4-Dichloro-2-Butene	11.25	53	13285	10.03354	ppb	97
75) Bromobenzene	11.19	156	74947	9.05011	ppb	99
76) n-Propylbenzene	11.32	91	299258	9.25227	ppb	98
77) 4-Ethyltoluene	11.43	105	260680	9.38502	ppb	99
78) 2-Chlorotoluene	11.39	91	209194	9.07002	ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	216102	9.38542	ppb	97
80) 4-Chlorotoluene	11.50	91	208790	9.14553	ppb	96
81) Tert-Butylbenzene	11.82	119	195274	9.25756	ppb	98
82) 1,2,4-Trimethylbenzene	11.86	105	224608	9.42702	ppb	99
83) Sec-Butylbenzene	12.04	105	266434	9.46101	ppb	100
84) p-Isopropyltoluene	12.19	119	223269	9.38317	ppb	99
85) Benzyl Chloride	12.35	91	54043	7.60044	ppb	96
86) 1,3-DCB	12.14	146	143448	9.15934	ppb	98
87) 1,4-DCB	12.22	146	144863	8.83205	ppb	99
88) n-Butylbenzene	12.59	91	195128	9.14899	ppb	98
89) 1,2-DCB	12.59	146	135507	8.92701	ppb	99
90) Hexachloroethane	12.86	117	35328	8.10342	ppb	98
91) 1,2-Dibromo-3-chloropropan	13.35	157	11551	8.84502	ppb	92
92) 1,2,4-Trichlorobenzene	14.20	180	58360	8.38749	ppb	96
93) Hexachlorobutadiene	14.38	223	25671	8.83190	ppb	94
94) Naphthalene	14.43	128	173088	8.90900	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	86721	8.74757	ppb	98

1,3-dichloropropene, total
 17.01646 ppb
 ARS 7/27/12

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

0726T21.D TALLW.M Fri Jul 27 08:30:46 2012

Quantitation Report

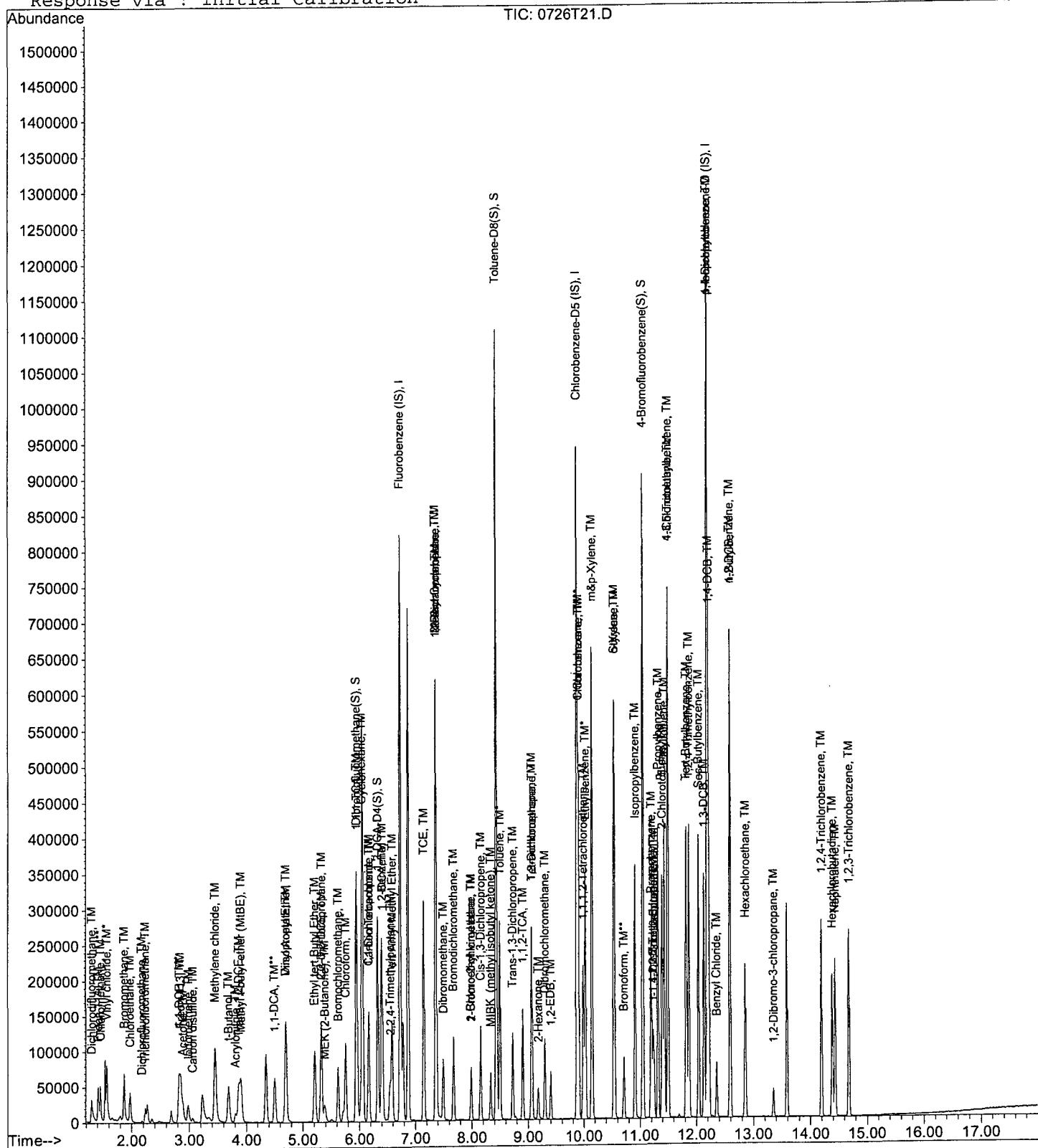
Data File : M:\THOR\DATA\T120725\0726T21.D
 Acq On : 26 Jul 12 18:37
 Sample : AY65167W234 MS-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 46
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T22.D
 Acq On : 26 Jul 12 19:04
 Sample : AY65167W234 MSD-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 47
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	96	396608	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	320064	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	192576	25.00000	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	187193	30.16132	ppb	0.00
Spiked Amount	31.881		Recovery	=	94.604%	
36) 1,2-DCA-D4 (S)	6.33	65	197456	34.23363	ppb	0.00
Spiked Amount	33.647		Recovery	=	101.745%	
56) Toluene-D8 (S)	8.43	98	718385	37.96586	ppb	0.00
Spiked Amount	37.345		Recovery	=	101.663%	
64) 4-Bromofluorobenzene(S)	11.05	95	279160	31.19645	ppb	0.00
Spiked Amount	29.515		Recovery	=	105.694%	
Target Compounds				Value		
2) Dichlorodifluoromethane	1.30	85	19064	9.48952	ppb	95
3) Freon 114	1.41	85	27000	9.69377	ppb	97
4) Chloromethane	1.45	50	36274	7.14295	ppb	98
5) Vinyl chloride	1.56	62	64676	8.25101	ppb	100
6) Bromomethane	1.87	94	38734	7.73116	ppb	96
7) Chloroethane	1.97	64	36068	7.98906	ppb	96
8) Dichlorofluoromethane	2.18	67	2523	8.65639	ppb	96
9) Trichlorofluoromethane	2.24	101	15564	9.60627	ppb	98
11) Acetone	2.89	43	17549	12.43144	ppb	98
12) Freon-113	2.85	101	33440	10.26119	ppb	96
13) 1,1-DCE	2.82	61	47484	10.85769	ppb	98
14) t-Butanol	3.69	59	22496	174.91452	ppb	94
15) Methyl Acetate	3.35	43	5526	0.20308	ppb	91
16) Iodomethane	2.98	142	35121	8.87874	ppb	98
17) Acrylonitrile	3.81	52	11469	9.15626	ppb	98
18) Methylene chloride	3.45	84	25336	16.56732	ppb	95
19) Carbon disulfide	3.06	76	3846	8.48554	ppb	# 81
20) Methyl t-butyl ether (MtBE	3.90	73	73609	8.71776	ppb	97
21) Trans-1,2-DCE	3.86	96	25524	8.45687	ppb	98
22) Diisopropyl Ether	4.70	59	16959	8.96849	ppb	98
23) 1,1-DCA	4.50	63	72794	9.09571	ppb	98
24) Vinyl Acetate	4.70	87	41152	9.10389	ppb	98
25) Ethyl tert Butyl Ether	5.20	59	93379	8.84569	ppb	97
26) MEK (2-Butanone)	5.38	43	18618	9.60339	ppb	99
27) Cis-1,2-DCE	5.32	96	45840	8.94134	ppb	99
28) 2,2-Dichloropropane	5.32	77	30790	9.55018	ppb	99
29) Chloroform	5.75	83	87720	8.82639	ppb	98
30) Bromochloromethane	5.62	128	23036	9.22855	ppb	96
32) 1,1,1-TCA	5.96	97	55433	9.26994	ppb	92
33) Cyclohexane	6.03	41	14895	9.17825	ppb	94
34) 1,1-Dichloropropene	6.17	75	38784	8.93076	ppb	99
35) 2,2,4-Trimethylpentane	6.55	57	56911	9.11817	ppb	96
37) Carbon Tetrachloride	6.16	117	53160	9.48503	ppb	94
38) Tert Amyl Methyl Ether	6.59	73	102062	9.08351	ppb	100
39) 1,2-DCA	6.42	62	57808	8.86979	ppb	99
40) Benzene	6.40	78	174046	9.77748	ppb	97
41) TCE	7.14	95	98523	20.36274	ppb	96
42) 2-Pentanone	7.36	43	465382	122.08994	ppb	99
43) 1,2-Dichloropropane	7.37	63	51522	8.87069	ppb	98

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

0726T22.D TALLW.M Fri Jul 27 08:30:53 2012

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T22.D
 Acq On : 26 Jul 12 19:04
 Sample : AY65167W234 MSD-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 47
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012

Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration
 DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44) Bromodichloromethane	7.68	83	70446	8.76753	ppb	98
45) Methyl Cyclohexane	7.36	83	31626	9.15487	ppb	96
46) Dibromomethane	7.49	93	28593	9.05021	ppb	94
47) 2-Chloroethyl vinyl ether	7.99	106	842	7.30368	ppb	# 100
48) MIBK (methyl isobutyl ket	8.33	43	23928	8.72855	ppb	97
49) 1-Bromo-2-chloroethane	7.99	63	35368	8.75213	ppb	97
50) <u>Cis-1,3-Dichloropropene</u>	8.15	75	69560	<u>8.74844 ppb</u>		98 <i>1,3-dichloropropene, total:</i>
51) Toluene	8.50	91	192260	9.15420	ppb	97
52) <u>Trans-1,3-Dichloropropene</u>	8.72	75	61410	<u>8.75949 ppb</u>		98 <i>17.50793 ppb</i>
53) 1,1,2-TCA	8.90	83	36157	<u>7.73213 ppb</u>		98 <i>ARS 7/27/12</i>
54) 2-Hexanone	9.17	43	28749	9.14521	ppb	96
57) 1,2-EDB	9.40	107	42537	8.86409	ppb	95
58) Tetrachloroethene	9.06	166	50207	9.25297	ppb	97
59) 1-Chlorohexane	9.90	91	59569	9.22311	ppb	99
60) 1,1,1,2-Tetrachloroethane	9.99	131	56655	8.93718	ppb	92
61) m&p-Xylene	10.14	106	184918	18.69937	ppb	99
62) o-Xylene	10.54	106	95435	9.32913	ppb	98
63) Styrene	10.55	104	161642	9.29985	ppb	99
65) 1,3-Dichloropropane	9.07	76	75282	8.94746	ppb	100
66) Dibromochloromethane	9.29	129	55368	8.74061	ppb	96
67) Chlorobenzene	9.90	112	149854	9.05623	ppb	99
68) Ethylbenzene	10.03	91	233843	8.98759	ppb	99
69) Bromoform	10.71	173	39220	9.04241	ppb	100
71) Isopropylbenzene	10.91	105	233391	9.26899	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.23	83	1307	0.18706	ppb	# 88
73) 1,2,3-Trichloropropane	11.23	110	18053	9.10358	ppb	89
74) t-1,4-Dichloro-2-Butene	11.25	53	13395	10.09308	ppb	95
75) Bromobenzene	11.19	156	73314	8.83232	ppb	100
76) n-Propylbenzene	11.32	91	300301	9.26292	ppb	99
77) 4-Ethyltoluene	11.43	105	261025	9.37558	ppb	99
78) 2-Chlorotoluene	11.39	91	210780	9.11753	ppb	99
79) 1,3,5-Trimethylbenzene	11.49	105	217547	9.42620	ppb	97
80) 4-Chlorotoluene	11.50	91	206692	9.03257	ppb	99
81) Tert-Butylbenzene	11.82	119	193301	9.14271	ppb	96
82) 1,2,4-Trimethylbenzene	11.86	105	220243	9.22231	ppb	99
83) Sec-Butylbenzene	12.04	105	274101	9.71062	ppb	99
84) p-Isopropyltoluene	12.19	119	226046	9.47778	ppb	98
85) Benzyl Chloride	12.35	91	54122	7.59384	ppb	97
86) 1,3-DCB	12.13	146	142506	9.07803	ppb	98
87) 1,4-DCB	12.22	146	144567	8.79350	ppb	99
88) n-Butylbenzene	12.59	91	195543	9.14712	ppb	98
89) 1,2-DCB	12.59	146	132851	8.73168	ppb	97
90) Hexachloroethane	12.86	117	36074	8.25528	ppb	97
91) 1,2-Dibromo-3-chloropropan	13.35	157	11362	8.68006	ppb	89
92) 1,2,4-Trichlorobenzene	14.20	180	62712	8.99199	ppb	99
93) Hexachlorobutadiene	14.38	223	26069	8.94796	ppb	96
94) Naphthalene	14.43	128	174325	8.95179	ppb	100
95) 1,2,3-Trichlorobenzene	14.68	180	88935	8.95003	ppb	97

(#) = qualifier out of range (m) = manual integration
 0726T22.D TALLW.M Fri Jul 27 08:30:54 2012

Quantitation Report

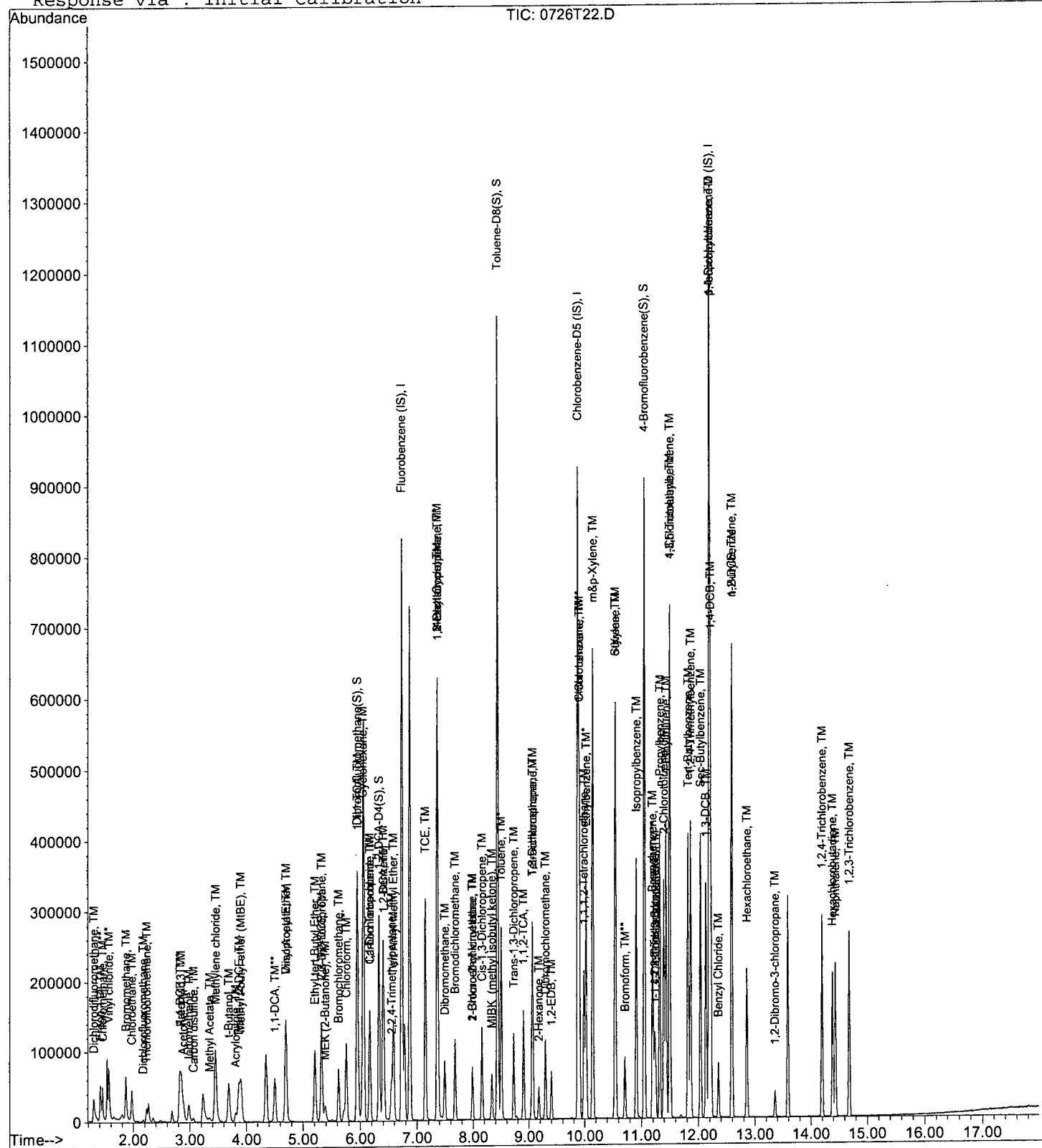
Data File : M:\THOR\DATA\T120725\0726T22.D
 Acq On : 26 Jul 12 19:04
 Sample : AY65167W234 MSD-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 47
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012

Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Fri Jul 20 10:40:23 2012
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T23.D Vial: 48
Acq On : 26 Jul 12 19:32 Operator: DG, RS, HW, ARS, SV
Sample : AY65167W456 MS-1SS GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:42 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	842116	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	935797	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1070499	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

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

0726T23.D TGAS.M Fri Jul 27 07:42:44 2012

Quantitation Report

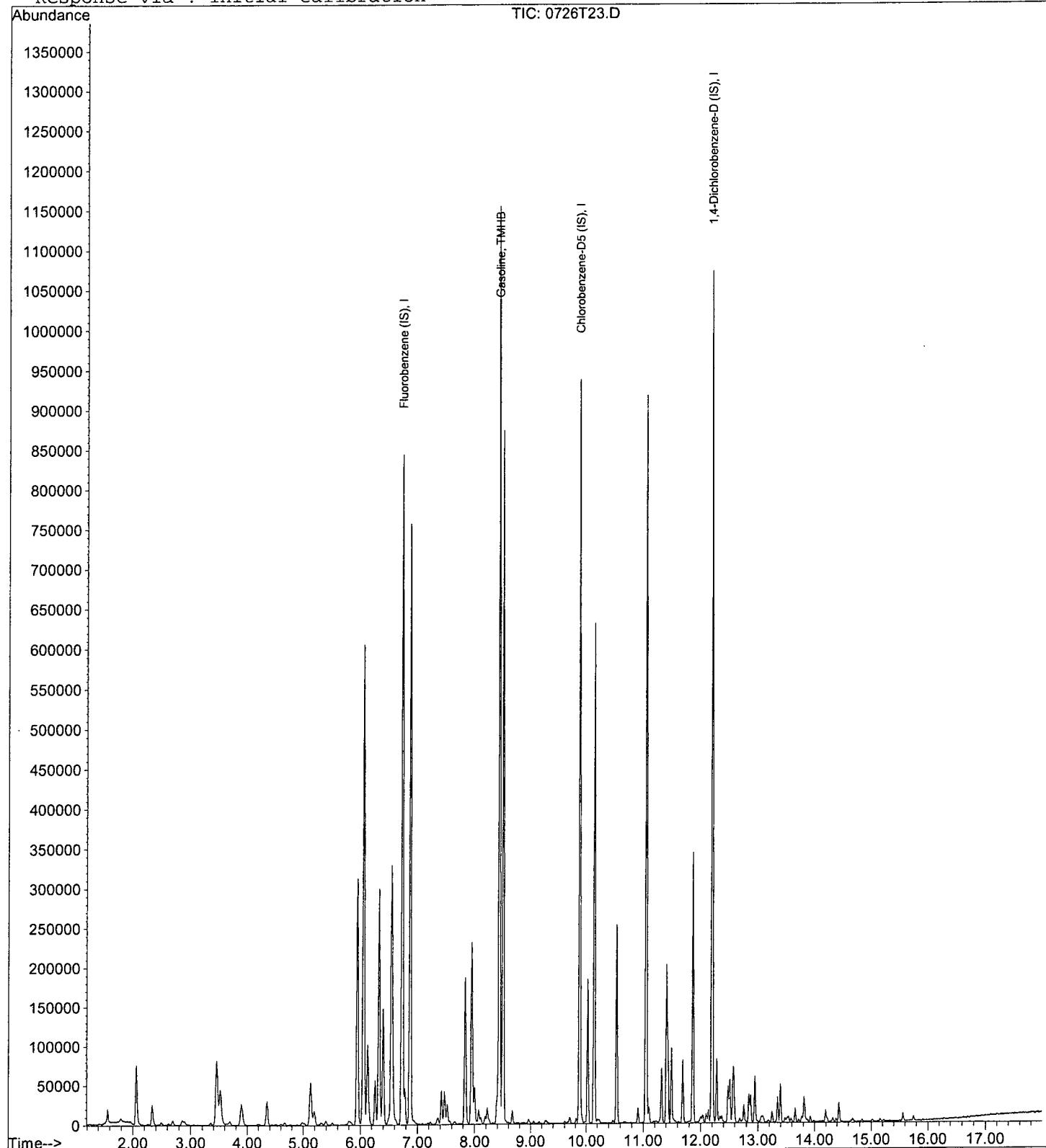
Data File : M:\THOR\DATA\T120725\0726T23.D
 Acq On : 26 Jul 12 19:32
 Sample : AY65167W456 MS-1SS GAS
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 48
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 7:42 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration

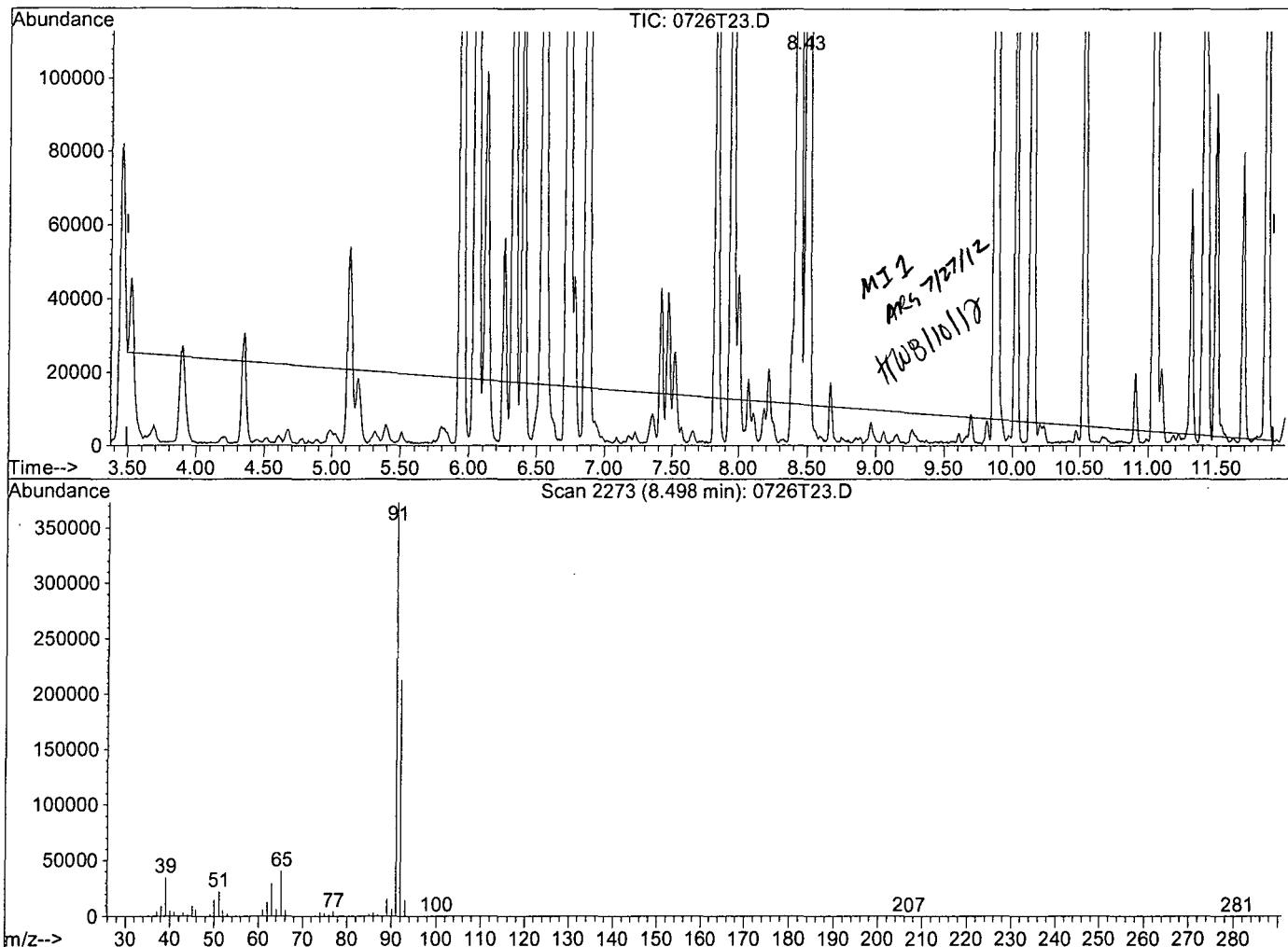


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T23.D
 Acq On : 26 Jul 12 19:32
 Sample : AY65167W456 MS-1SS GAS
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 27 7:41 2012

Vial: 48
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



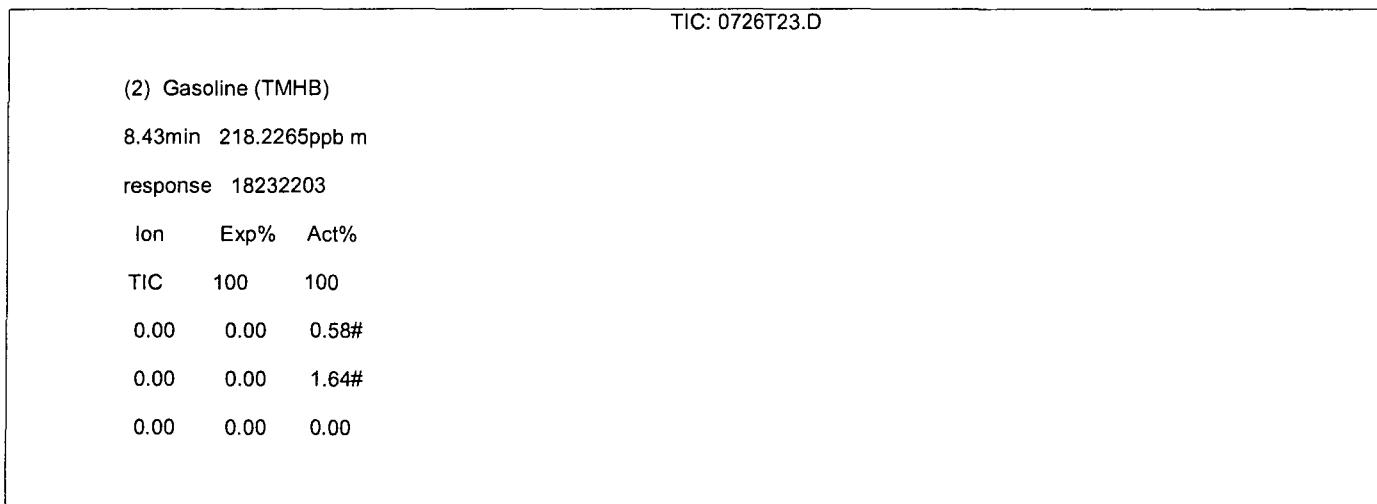
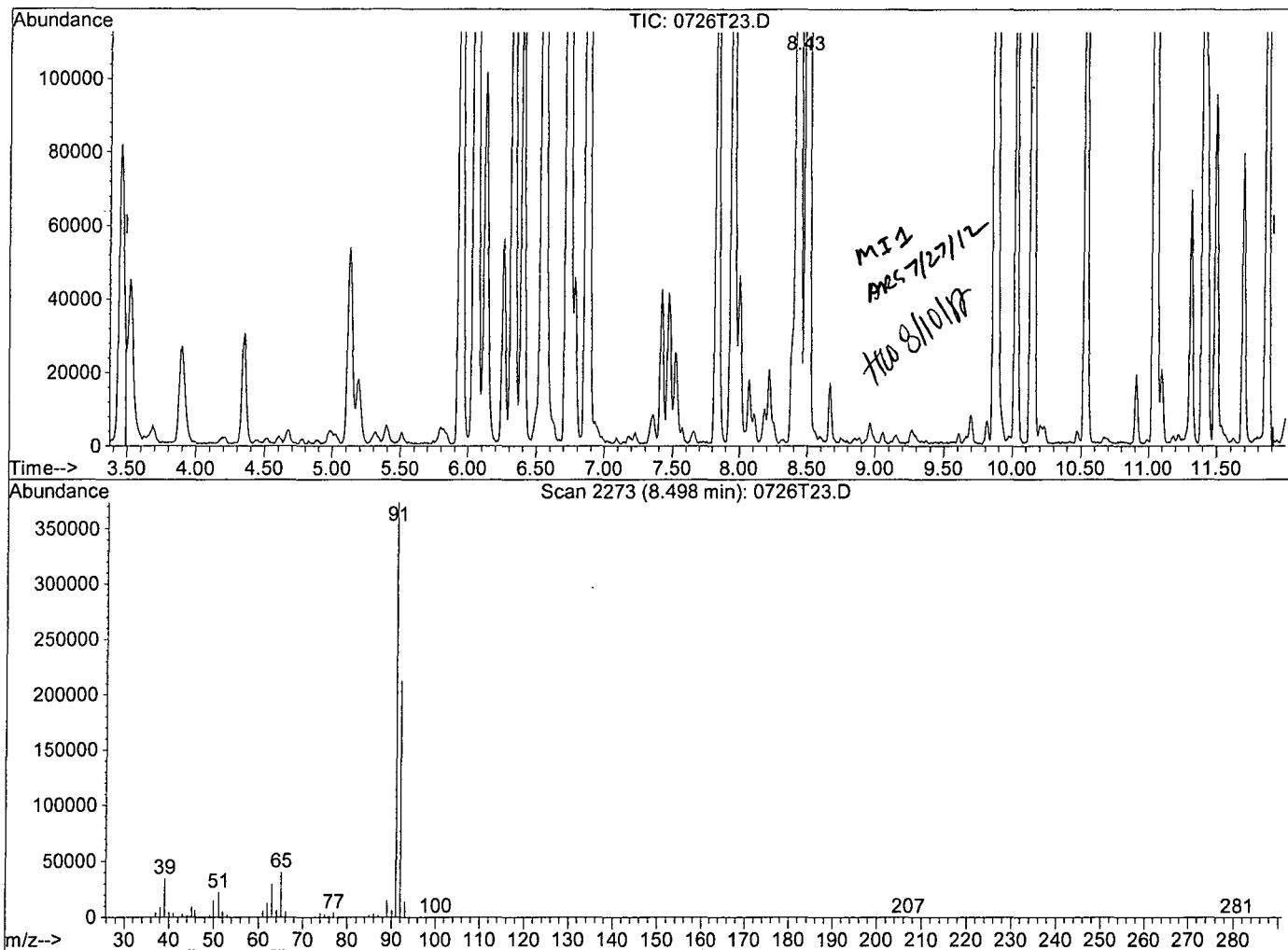
TIC: 0726T23.D		
(2) Gasoline (TMHB)		
8.50min 143.2742ppb m		
response 15481648		
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.68#
0.00	0.00	1.93#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T23.D
 Acq On : 26 Jul 12 19:32
 Sample : AY65167W456 MS-1SS GAS
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 27 7:42 2012

Vial: 48
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T24.D Vial: 49
Acq On : 26 Jul 12 20:00 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MSD-1WT GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:43 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.73	TIC	794771	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	901502	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	995139	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	Qvalue
2) Gasoline	100

Quantitation Report

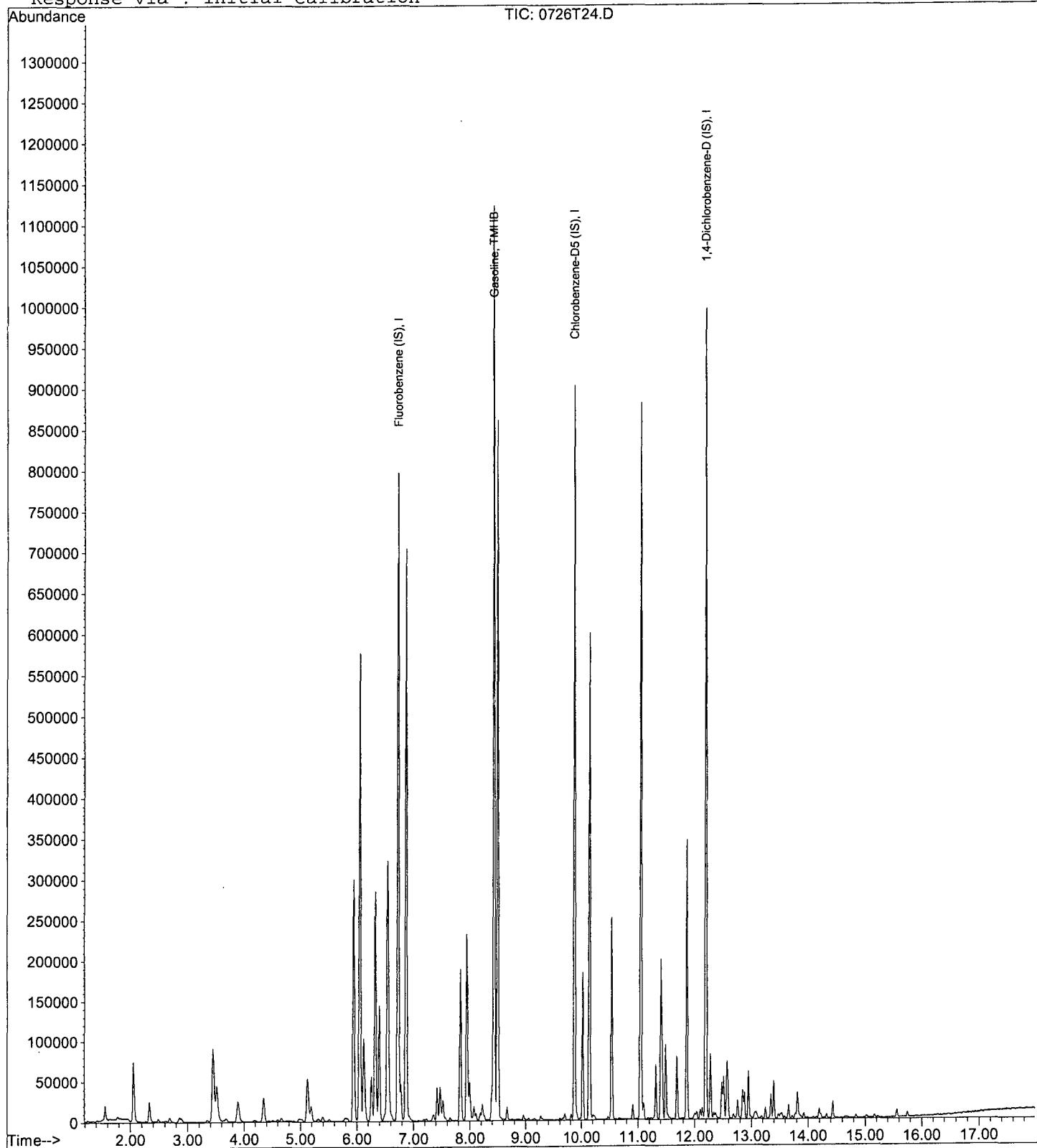
Data File : M:\THOR\DATA\T120725\0726T24.D
 Acq On : 26 Jul 12 20:00
 Sample : AY65167W456 MSD-1WT GAS
 Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 49
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 27 7:43 2012

Quant Results File: TGAS.RES

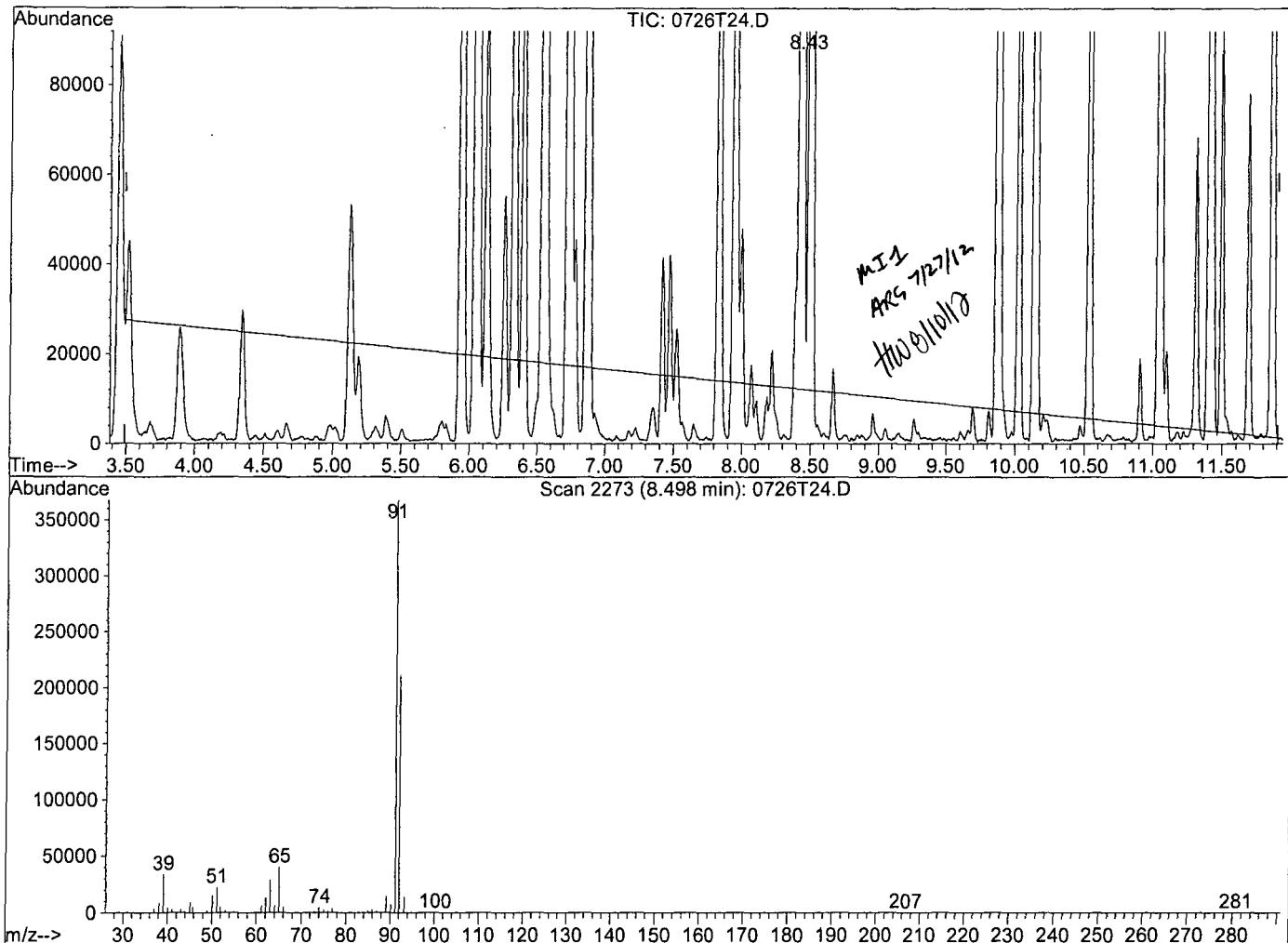
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T24.D Vial: 49
 Acq On : 26 Jul 12 20:00 Operator: DG, RS, HW, ARS, SV
 Sample : AY65167W456 MSD-1WT GAS Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
 Quant Time: Jul 27 7:42 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration



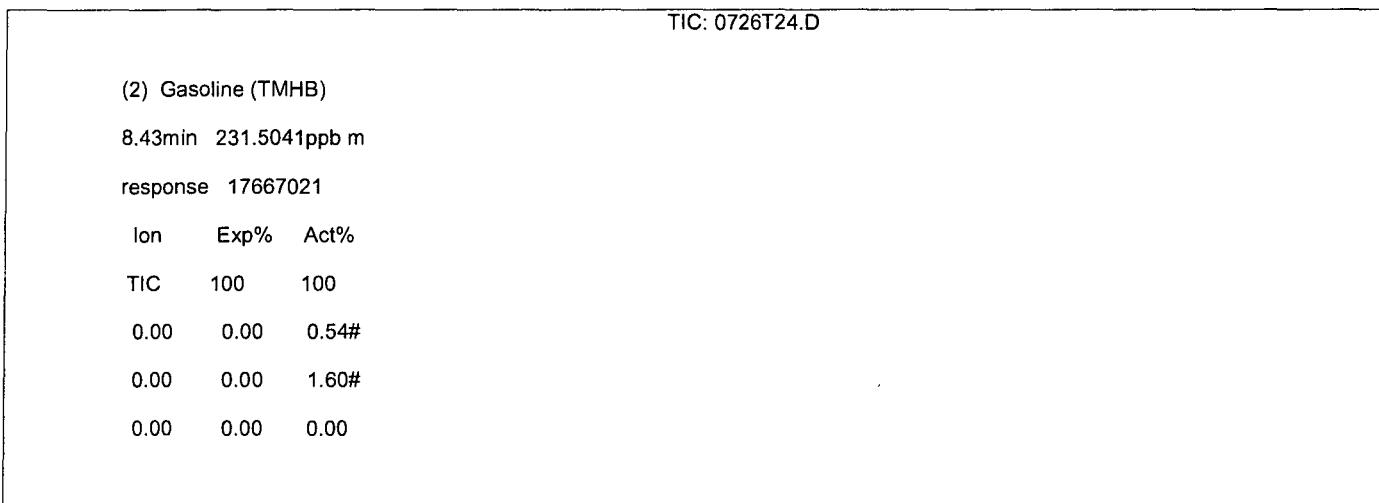
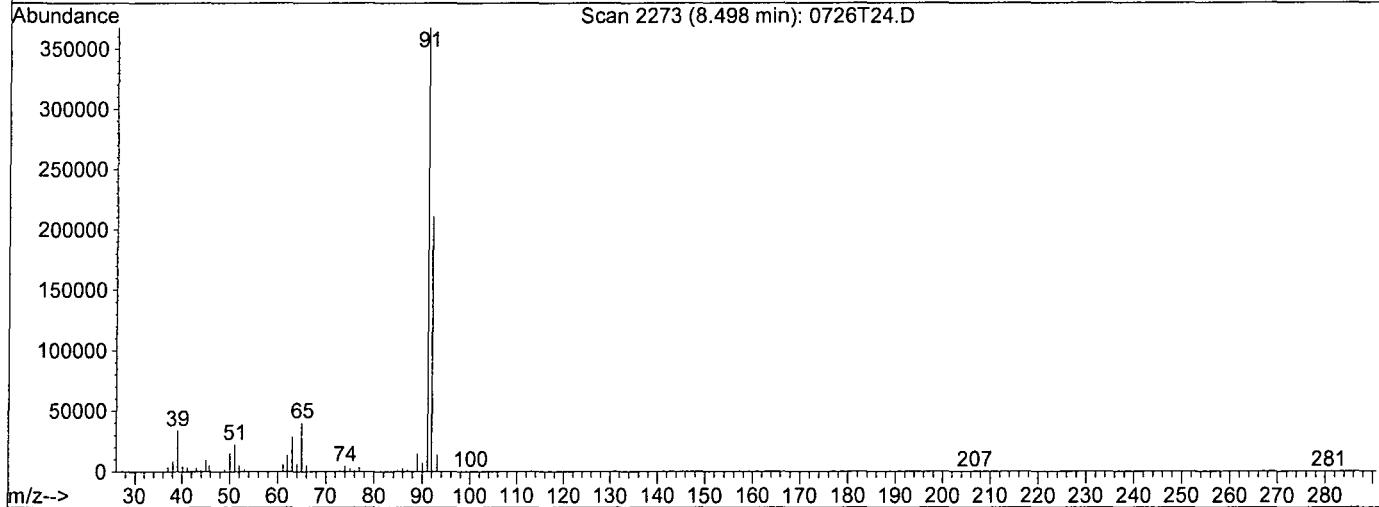
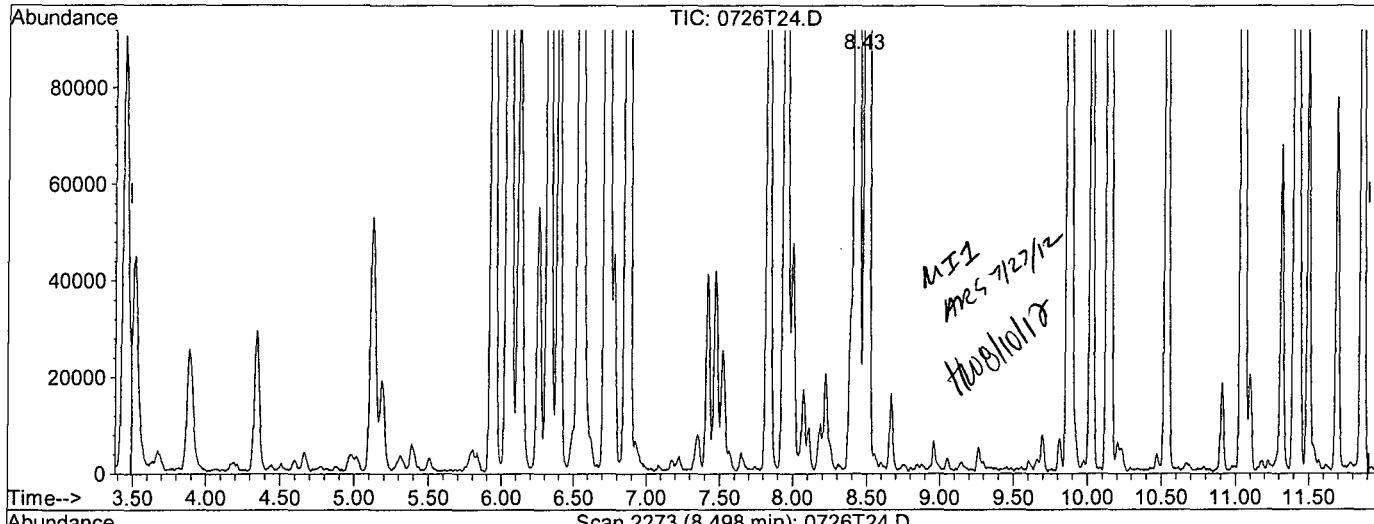
TIC: 0726T24.D		
(2) Gasoline (TMHB)		
8.50min 158.3586ppb m		
response 15133682		
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.63#
0.00	0.00	1.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T24.D
 Acq On : 26 Jul 12 20:00
 Sample : AY65167W456 MSD-1WT GAS
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 27 7:43 2012

Vial: 49
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multipllr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 16:07:29 2012
 Response via : Multiple Level Calibration

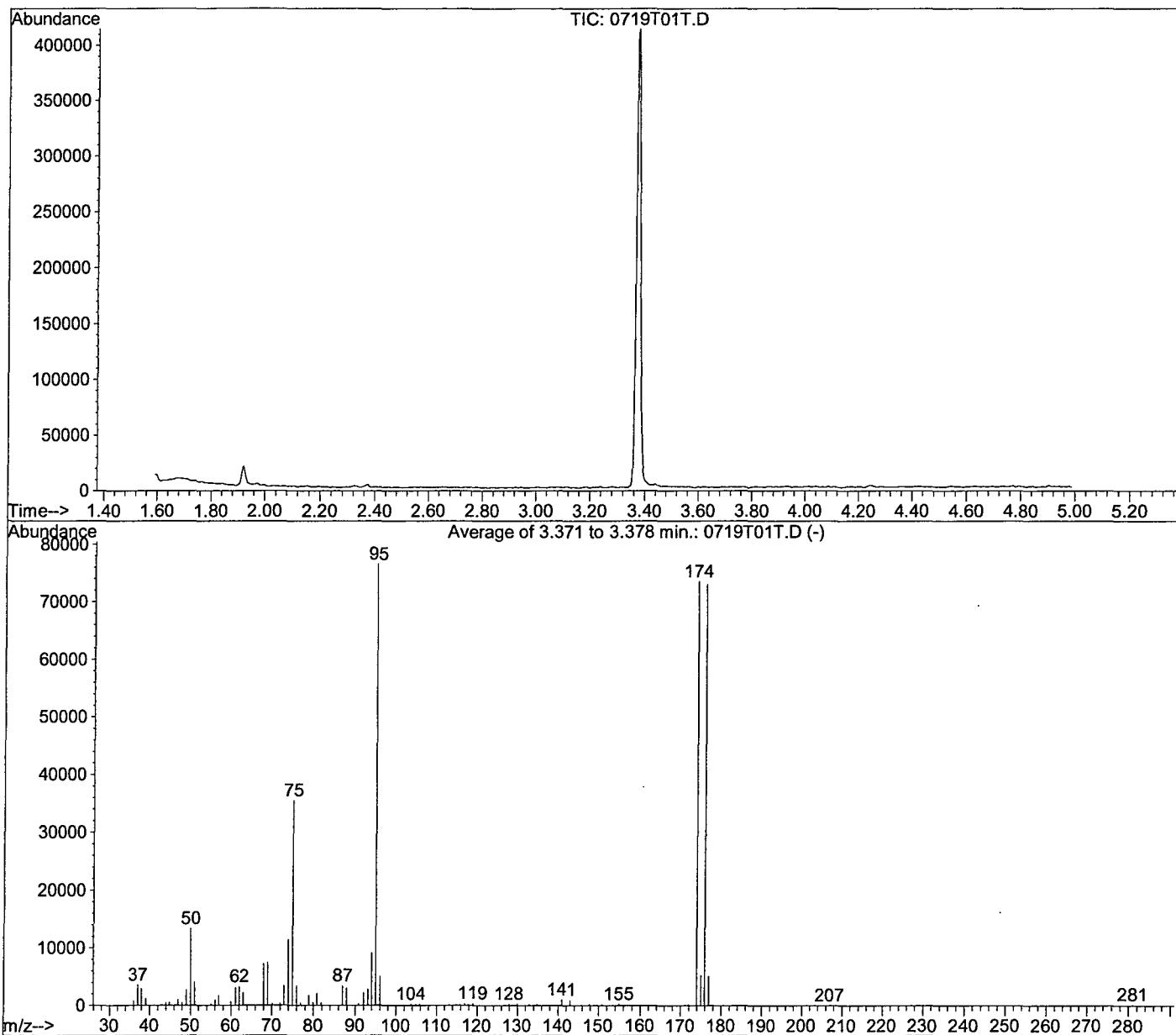


BFB

Data File : M:\THOR\DATA\T120719\0719T01T.D
 Acq On : 19 Jul 12 9:15
 Sample : 5ng- BFB STD 07-16-12B
 Misc : 2ul

Vial: 1
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B



AutoFind: Scans 554, 555, 556; Background Corrected with Scan 544

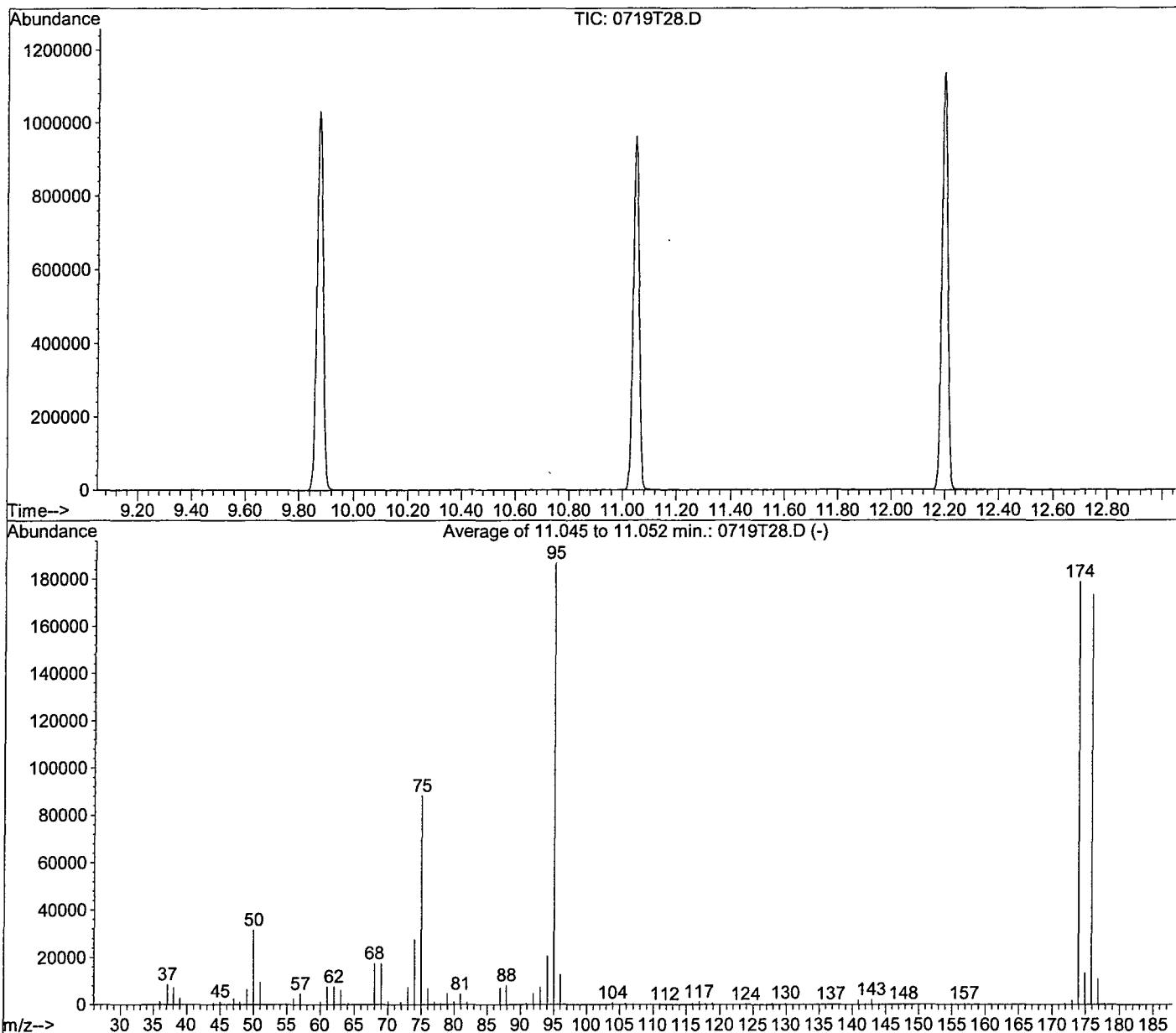
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	13331	PASS
75	95	30	60	46.4	35536	PASS
95	95	100	100	100.0	76600	PASS
96	95	5	9	6.7	5096	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	96.0	73547	PASS
175	174	5	9	7.2	5311	PASS
176	174	95	101	99.3	73019	PASS
177	176	5	9	7.0	5141	PASS

BFB

Data File : M:\THOR\DATA\T120719\0719T28.D
 Acq On : 19 Jul 12 21:40
 Sample : 5ng- BFB Std 07-16-12B
 Misc : 2uL

Vial: 28
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B



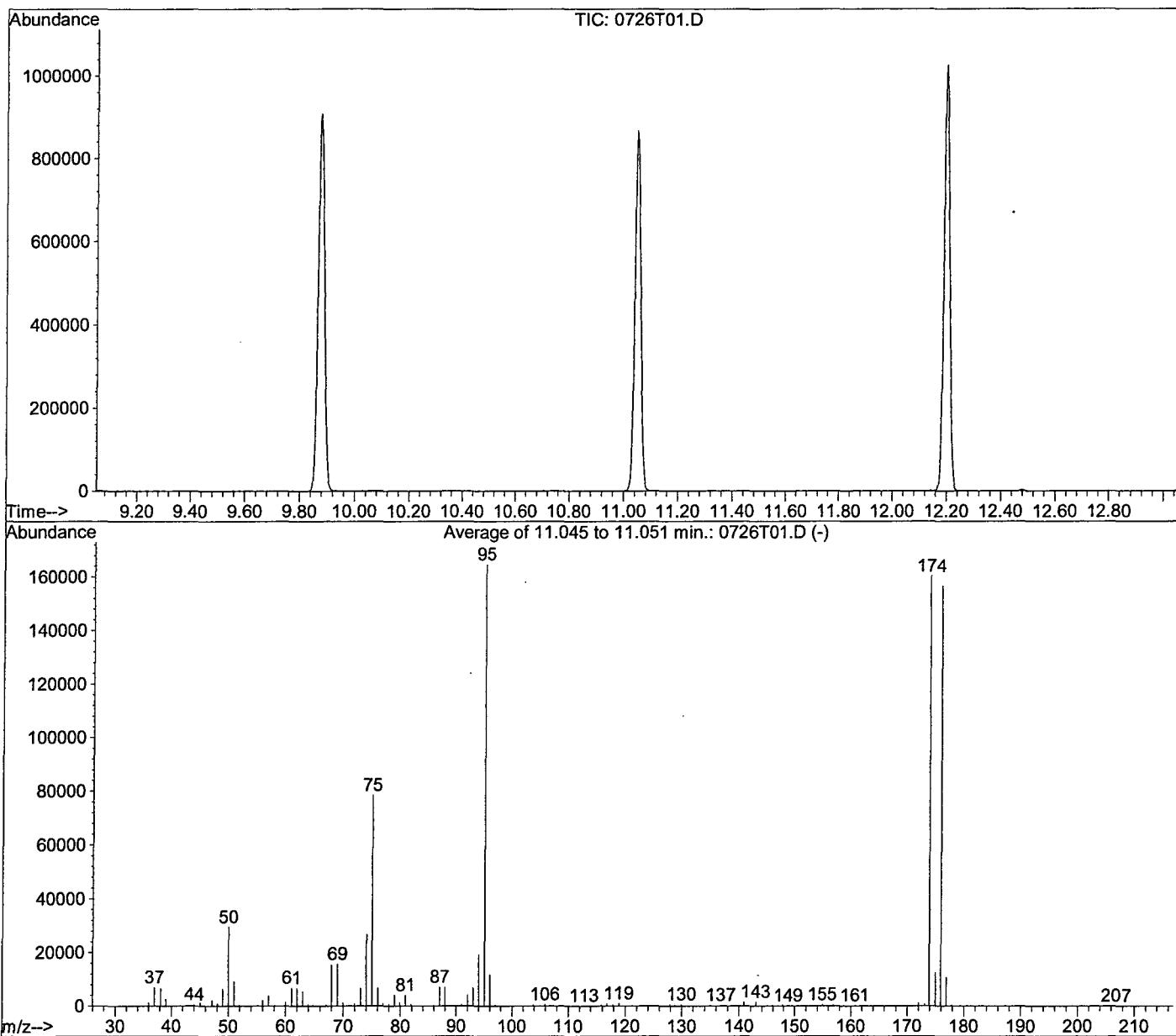
AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	31552	PASS
75	95	30	60	47.3	88245	PASS
95	95	100	100	100.0	186709	PASS
96	95	5	9	6.8	12716	PASS
173	174	0.00	2	1.0	1785	PASS
174	95	50	100	95.8	178816	PASS
175	174	5	9	7.5	13428	PASS
176	174	95	101	96.9	173248	PASS
177	176	5	9	6.2	10814	PASS

Data File : M:\THOR\DATA\T120725\0726T01.D
 Acq On : 26 Jul 12 9:22
 Sample : 5-ng BFB Std 07-16-12B
 Misc : 2uL

Vial: 26
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
 Title : METHOD 8260B



AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

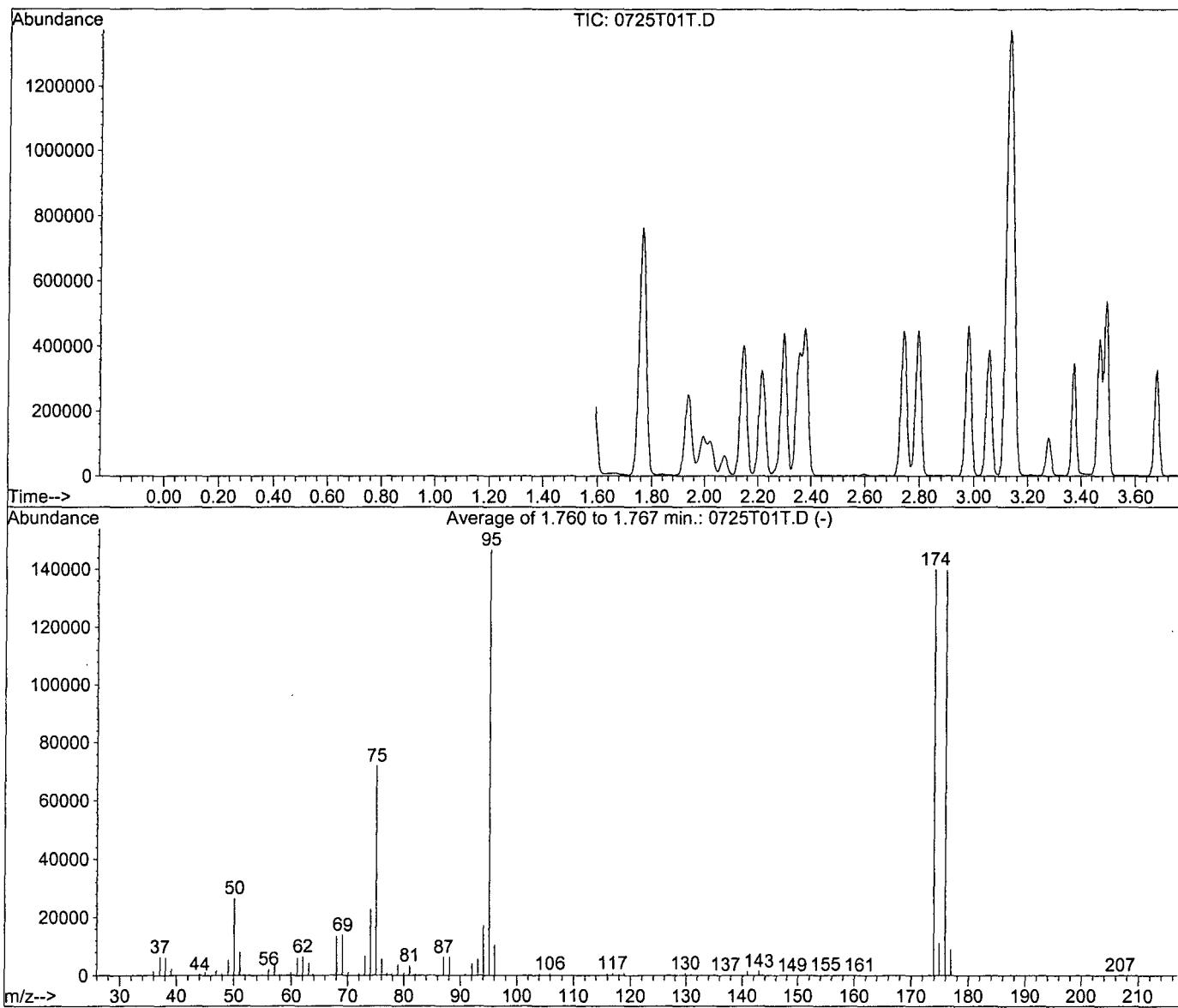
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	29448	PASS
75	95	30	60	47.7	78560	PASS
95	95	100	100	100.0	164757	PASS
96	95	5	9	7.2	11824	PASS
173	174	0.00	2	0.4	693	PASS
174	95	50	100	97.3	160299	PASS
175	174	5	9	7.9	12626	PASS
176	174	95	101	97.8	156715	PASS
177	176	5	9	6.8	10638	PASS

BFB

Data File : M:\THOR\DATA\T120725\0725T01T.D
 Acq On : 25 Jul 12 9:32
 Sample : 5ng- BFB STD 07-16-12B
 Misc : 2ul

Vial: 1
 Operator: DG, RS, HW, ARS, SV
 Inst : Thor
 Multiplr: 1.00

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
 Title : METHOD 8260B



Spectrum Information: Average of 1.760 to 1.767 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	26589	PASS
75	95	30	60	49.1	72077	PASS
95	95	100	100	100.0	146837	PASS
96	95	5	9	7.2	10518	PASS
173	174	0.00	2	0.4	583	PASS
174	95	50	100	95.3	139968	PASS
175	174	5	9	8.0	11175	PASS
176	174	95	101	99.8	139627	PASS
177	176	5	9	6.3	8859	PASS

BFB

Data File : M:\THOR\DATA\T120725\0726T01.D

Acq On : 26 Jul 12 9:22

Sample : 5-ng BFB Std 07-16-12B

Misc : 2uL

Vial: 26

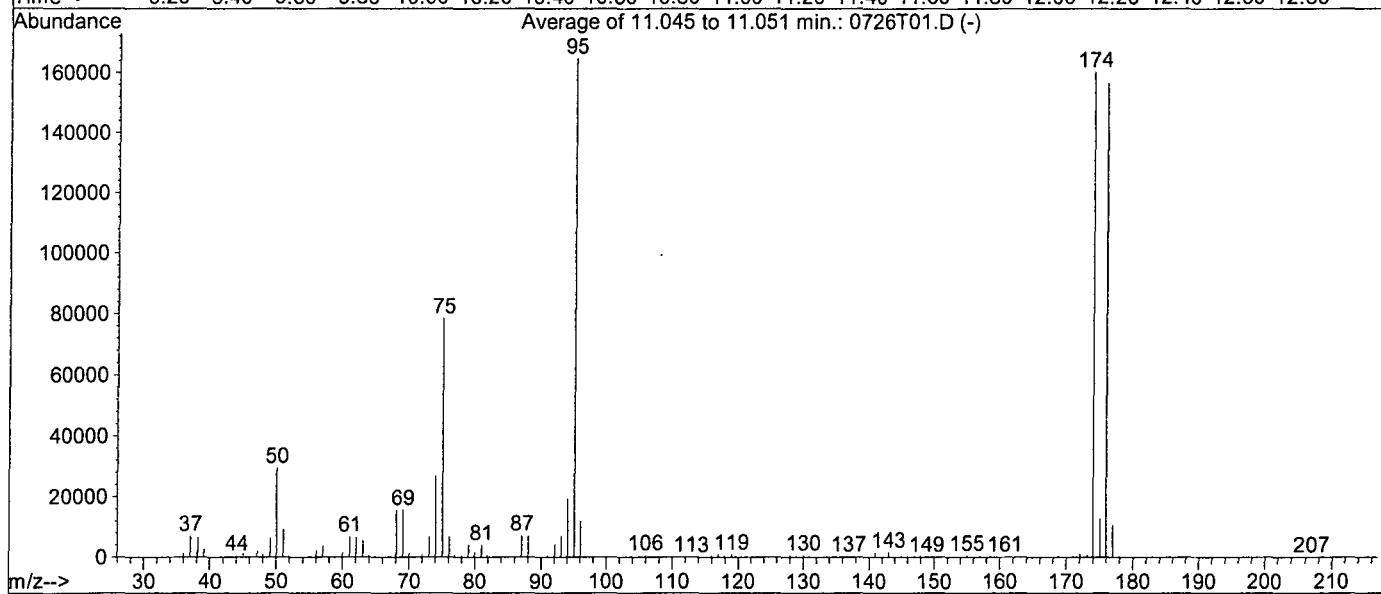
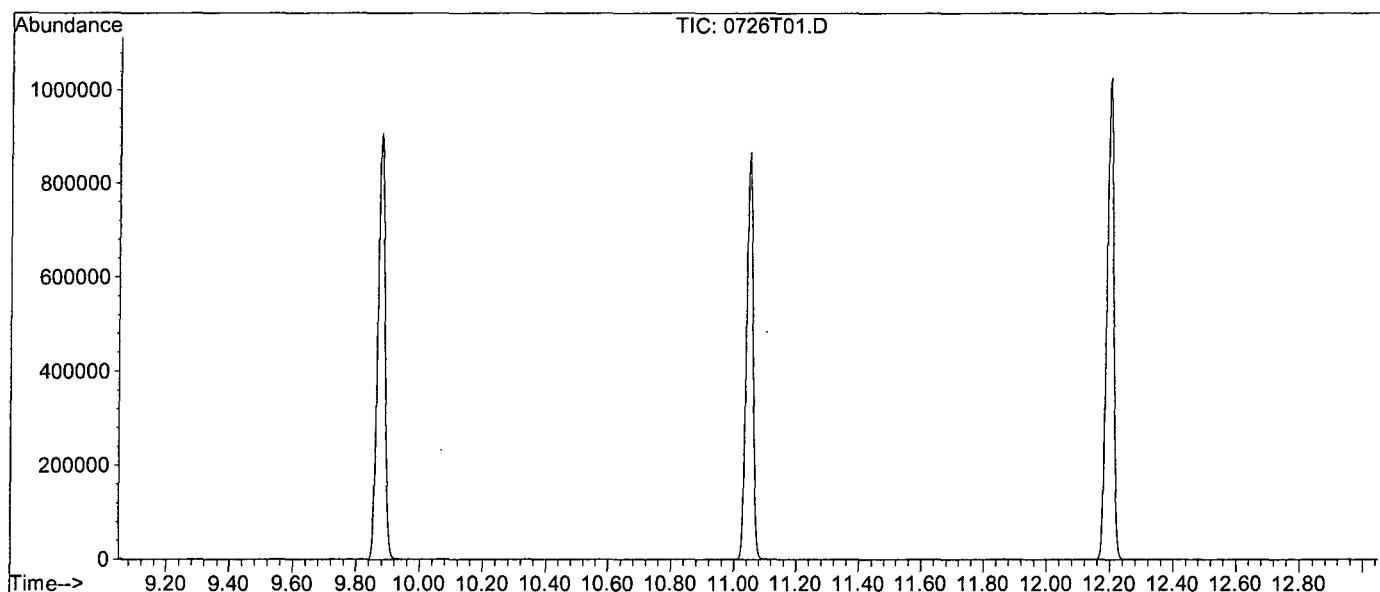
Operator: DG, RS, HW, ARS, SV

Inst : Thor

Multiplr: 1.00

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)

Title : METHOD 8260B



Spectrum Information: Average of 11.045 to 11.051 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	29448	PASS
75	95	30	60	47.7	78560	PASS
95	95	100	100	100.0	164757	PASS
96	95	5	9	7.2	11824	PASS
173	174	0.00	2	0.4	693	PASS
174	95	50	100	97.3	160299	PASS
175	174	5	9	7.9	12626	PASS
176	174	95	101	97.8	156715	PASS
177	176	5	9	6.8	10638	PASS

048

GC/MS STANDARD PREPARATION BOOK # PAGE

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA											
	Expiration Date:	06/09/12	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB	
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	
06-08-12A	2	2	2	n/a	n/a	n/a	n/a	2	n/a	2	n/a
06-08-12B	5	5	5	n/a	n/a	n/a	n/a	5	n/a	5	n/a
06-08-12C	10	10	10	n/a	n/a	n/a	n/a	10	n/a	10	n/a
06-08-12D	20	20	20	n/a	n/a	n/a	n/a	20	n/a	20	n/a
06-08-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	5	n/a
06-08-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10	n/a
06-08-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20	n/a

250µg/mL TBA	Final Vol.
06-02-12AE	w/P&T(120)
Exp:06-09-12	ml
1	1
2	2
3	3
4	4
5	5
6	6
7	7

06-11-12A											
25ug/ml BPB STD				Conc.			Date		EXP:		
EXP:07-11-12				ug/ml		Lot#	CODE		Date		
02SI	020135-03	4-Bromofluorobenzene		2500	163173-29065		05-09-12A	12/11/12		20	
J&T Baker		Purge & Trap MeOH			K14E06-00626		06/11/12	09/28/12		1980	
06-11-12B											
25ug/ml BPB STD				Conc.			Date		EXP:		
EXP:07-11-12				ug/ml		Lot#	CODE		Date		
02SI	020135-03	4-Bromofluorobenzene		2500	163173-29065		05-09-12A	12/11/12		20	
J&T Baker		Purge & Trap MeOH			K14E06-00626		06/11/12	09/28/12		1980	
06-11-12C											
25ug/ml BPB STD				Conc.			Date		EXP:		
EXP:07-11-12				ug/ml		Lot#	CODE		Date		
02SI	020135-03	4-Bromofluorobenzene		2500	163173-29065		05-09-12A	12/11/12		20	
J&T Baker		Purge & Trap MeOH			K14E06-00626		06/11/12	09/28/12		1980	

12
RS12
RS

Volatile Standard Curve Preparation	
Date	Expiration
Conc.	
Code	
µg/L	
06-11-12I	0.3
06-11-12J	0.5
06-11-12K	1
06-11-12L	2
06-11-12M	5
06-11-12N	10
06-11-12O	20
06-11-12P	40
06-11-12Q	100

Method 8260 Internal Standard Solution, 2,000 mg/L, 1 ml
 160202-03
 Lot # 166255 Storage Expiry
 -10 Degrees C. 11/03/12
 Solv: P/T Methanol

Method 8260 Internal Standard
 Lot #: 166255 - 29275
 Rec: 8/5/11 MFR exp. 11/18/12

Fluorobenzene Solution,
 2,000 mg/L, 1 ml
 K10122-02
 Lot # 169170 Storage Expiry
 56 Degrees C. 2/13/14
 Solv: P/T Methanol

Fluorobenzene
 Lot #: 169170 - 28869
 Rec: 5/25/11 MFR exp. 02/13/14

Volatile Standard Curve Preparation	
Date	Expiration
Conc.	
Code	
µg/L	
06-11-12R	2
06-11-12S	5
06-11-12T	10
06-11-12U	20
06-11-12V	50
06-11-12W	100
06-11-12X	200

049

#2	50 μ g/mL Vol Std #12	
	05-02-12AB	
	Exp:05-09-12	
	n/a	
	5	
	10	
	20	
nL TBA Final Vol		
12AE w/P&T H2O		
·09-12 mL		
5		
6		

(6/11/12)
RG

F -

J.D. Dandy, Inc. • USA
Made in the USA

Method 8260B Surrogate
Solution, 2,000 mg/L, 1 ml

Method 8260B Surrogate
Lot # 185763-30467
Rec. 2/20/12 MFR exp. 02/19/15

10

Thor							
06-11-12G							
50ug/ml 8260 Internal Standard			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120302-03	Internal Standard Mix	2000	166255-29275	06-11-12D	12/13/12	375
O2SI	020132-02	Fluorobenzene Standard	2000	169170-28869	06-11-12E	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14250
06-11-12H							
50ug/ml 8260B Surrogate-Thor			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	8260B Surr	Surrogate Standards	2000	178653-30467	06-11-12F	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14625

M-400: Standard Curve Preparation for 10mL Burse (8260 water) THOR

Volatile Standard Curve Preparation for 10ml. Purge (6260 water) - THUR											
	Expiration Date	06/12/12									
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12	
Date	Conc	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB	
Code	µg/L	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	
06-11-12I	0.3	3	n/a	n/a	n/a	3	n/a	n/a	n/a	3	
06-11-12J	0.5	5	10	n/a	n/a	5	n/a	n/a	n/a	5	
06-11-12K	1	10	20	n/a	n/a	10	n/a	n/a	n/a	10	
06-11-12L	2	20	40	n/a	n/a	20	n/a	n/a	n/a	20	
06-11-12M	5	n/a	n/a	5	5	10	n/a	5	5	n/a	
06-11-12N	10	n/a	n/a	10	10	25	n/a	10	10	n/a	
06-11-12O	20	n/a	n/a	20	20	40	n/a	20	20	n/a	
06-11-12P	40	n/a	n/a	40	40	80	n/a	40	40	n/a	
06-11-12Q	100	n/a	n/a	100	100	100	n/a	100	100	n/a	

250 μ g/mL TAPD	Final Vol
06-02-12 AE	w/P&T H ₂ O
Exp 06-09-12	mL
3	50
5	50
10	50
15	50
20	50
25	50
30	50
35	50
40	50

Volatile Standard Curve Preparation for Smt. Purge (8260 soil)-SWEETPEA

Preparation 10 mL Range (200 ppm) SWELTER										
Expiration Date	06/12/12									
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12	
Date	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB	
Conc.	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	
Code										
µg/L										
06-11-12R	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-11-12S	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-11-12T	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-11-12U	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-11-12V	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-11-12W	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-11-12X	200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/mL TBA	Final Vol
06-02-12AE	w/P&T H2O
Exp.06-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA											
#	50µg/mL Vol Std	Expiration Date:		07/12/12		50µg/mL Vol Std #9		50µg/mL Vol Std #7		50µg/mL Vol Std #8	
		Date	Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H
1	5	07-05-12I	2	2	n/a	n/a	n/a	n/a	2	n/a	2
2	5	07-05-12M	5	5	n/a	n/a	n/a	n/a	5	n/a	5
3	10	07-05-12E	10	10	n/a	n/a	n/a	n/a	10	n/a	10
4	20	07-05-12G	20	20	n/a	n/a	n/a	n/a	20	n/a	20
5	50	07-05-12L	n/a	n/a	5	5	n/a	5	n/a	5	5
6	100	07-05-12J	n/a	n/a	10	10	n/a	10	n/a	10	10

250µg/mL TBA	Final Vol
07-05-12N	w/P&T H2O
Exp:07-12-12	mL
1	5
2	5
3	5
4	5
5	5
6	5

CHICO

07-12-12A

50ug/ml 524 Internal Standard w/ Surrogate

Conc.	Date		Exp.	
ug/ml	Lot #	Code	Date	uL
1000	176776-29295	06-07-12A	10/10/12	200
J&T Baker	Purge & Trap MeOH	K14E06-00643	07/09/12	12/22/13

Volatile Standard Curve Preparation for 10mL Purge (524 water)-CHICO

Expiration Date:	07/13/12	50µg/mL Vol Std #9	50µg/mL Vol Std #12	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Vol Std #2	250µg/mL TAPD	Final Vol
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T H2O
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
07-12-12B	0.2	2	2	n/a	n/a	n/a	2	50
07-12-12C	0.5	5	5	n/a	n/a	n/a	5	50
07-12-12D	1	10	10	n/a	n/a	n/a	10	50
07-12-12E	2	20	20	n/a	n/a	n/a	15	50
07-12-12F	5	n/a	n/a	5	5	5	20	50
07-12-12G	10	n/a	n/a	10	10	10	25	50
07-12-12H	20	n/a	n/a	20	20	20	30	50
07-12-12I	40	n/a	n/a	40	40	40	35	50
07-02-12H	100	n/a	n/a	100	100	100	40	50

4-Bromofluorobenzene

Solution, 2,500 mg/L, 1 mL

020135-03

Lot # 163173 Storage Exhibt
163173 ≤ 10 Degrees 8/24/13

Solv: P/T Methanol

4-Bromofluorobenzene

Lot #: 163173 - 29063

Rec: 8/1/11 MFR exp. 08/24/13

07-16-12B	Conc.	Date		EXP:			
25ug/ml BFB STD	ug/ml	Lot#	CODE	Date	uL		
EXP:08-16-12							
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12C	Conc.	Date	EXP:				
25ug/ml BFB STD	ug/ml	Lot#	CODE	Date	uL		
EXP:08-16-12							
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12D	Conc.	Date	EXP:				
25ug/ml BFB STD	ug/ml	Lot#	CODE	Date	uL		
EXP:08-16-12							
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12E	Conc.	Date	EXP:				
25ug/ml BFB STD	ug/ml	Lot#	CODE	Date	uL		
EXP:08-16-12							
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980

072

GC/MS STANDARD PREPARATION BOOK

PAGE 4

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

	Expiration Date:	07/18/12	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #3
Date	Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K	07-05-12N
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12
07-17-12A	2	2	2	n/a	n/a	n/a	n/a	2	n/a	2	n/a
07-17-12B	5	5	5	n/a	n/a	n/a	n/a	5	n/a	5	n/a
07-17-12C	10	10	10	n/a	n/a	n/a	n/a	10	n/a	10	n/a
07-17-12D	20	20	20	n/a	n/a	n/a	n/a	20	n/a	20	n/a
07-17-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	n/a	n/a
07-17-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	n/a	n/a
07-17-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	n/a	n/a

- Thor 524 curve on pg. 74 RS 7/18/12 RS.

9/18/12

A-

Method 8260 Gases, 2,000 mg/L, 2 X 0.6 ml

R&D only, not human consuming.
Made in the USA
Lot # 120016-03
Storage -10 Degrees C Expiry 10/17/14
Solv: P/T Methanol

Method 8260 Gases
Lot #: 180013 - 29760
Rec: 10/24/11 MFR exp. 10/17/14

RS

250µg/mL TGA	Initial Val
07-05-12N	144.64±0.20
Exp:07-12-12	144.64±0.20
1	144.64±0.20
2	144.64±0.20
3	144.64±0.20
4	144.64±0.20
5	144.64±0.20
6	144.64±0.20
7	144.64±0.20

9/18/12
RS

9/18/12

B-

R&D only, not human consuming.
Made in the USA
Lot # 020049-02
Storage -10 Degrees C Expiry 7/31/13
Solv: P/T Methanol

Solutions
Hexachloroethane
Lot #: 176700 - 30724
Rec: 5/9/12 MFR exp. 07/31/13

RS

9/18/12
RS

9/18/12

C-

R&D only, not human consuming.
Made in the USA
Lot # 030223-02
Storage -10 Degrees C Expiry 7/31/13
Solv: P/T Methanol

Solutions
Benzyl Chloride
Lot #: 176701 - 31019
Rec: 6/19/12 MFR exp. 07/31/13

RS

9/18/12
RS

9/18/12

D-

R&D only, not human consuming.
Made in the USA
Lot # 020620-02
Storage -10 Degrees C Expiry 7/30/16
Solv: P/T Methanol

Solutions
n-Hexane Solution
Lot #: 176773 - 31024
Rec: 6/19/12 MFR exp. 07/30/16

RS

9/18/12
RS

GCMS STANDARD PREPARATION

073

E

Heptane Solution, 1000			
mg/L, 1 ml			
S20546-02			
Lot #	Storage	Expiry	
169174	≤ -10 Degrees C	2/18/14	
Solv: P/T Methanol			
Heptane Solution			
Lot #: 169174 - 31039			
Rec: 6/19/12 MFR exp. 02/18/14			

RS

F

VOC Mix 4-3, 2,000 mg/L, 1			
ml			
120166-01			
Lot #	Storage	Expiry	
185760	≤ 6 Degrees C	2/14/14	
Solv: P/T Methanol			
VOC Mix 4-3, 2000mg/L			
Lot #: 185760 - 30739			
Rec: 5/9/12 MFR exp. 02/14/14			

RS

G-

Method 8260 Gases (Second Source), 2,000 mg/L, 2 X 0.6			
ml			
120016-03-03			
Lot #	Storage	Expiry	
187974	≤ -10 Degrees C	4/8/15	
Solv: P/T Methanol			
Method 8260 Gases (SS)			
Lot #: 187974 - 31061			
Rec: 6/19/12 MFR exp. 04/08/15			

RS

07-18-12H								
50ug/ml Vol Work Std #7								
Exp: 07/25/12								
Supplier	ID #	ID	Conc.		Date	Exp.		
02SI	120016-03	Gas Mix	ug/ml	Lot #	Code	Date	u1	
02SI	020049-02	HEXACHLOROETHANE	2000	180013-29760	07-18-12A	07/25/12	100	
02SI	020228-02	Benzyl Chloride	1000	176700-30724	07-18-12B	08/08/12	200	
J&T Brand		Purge & Trap MeOH	1000	176701-31019	07-18-12C	08/08/12	200	
07-18-12I			K14E06-00640		07/18/12	10/08/12	3500	
50ug/ml Vol Work Std #1								
Exp: 07/25/12								
Supplier	ID #	ID	Conc.		Date	Exp.		
02SI	020145-02-02	2-CEVE	ug/ml	Lot #	Code	Date	u1	
J&T Brand		Purge & Trap MeOH	2000	176770-29827	06-19-12D	08/08/12	50	
07-18-12J			K14E06-00640		07/18/12	10/08/12	1950	
50ug/ml Vol Work Std #8								
Exp: 07/25/12								
Supplier	ID #	ID	Conc.		Date	Exp.		
02SI	122039-02	Volatile Mix, 20-29	ug/ml	Lot #	Code	Date	u1	
02SI	120023-03	VOC'S-54 COMP	2000	180114-29786	06-19-12E	08/08/12	100	
02SI	020232-02	Vinyl Acetate	2000	176392-29207	06-19-12F	08/08/12	100	
02SI	020620-02	n-Hexane	1000	189764-30727	06-19-12G	05/13/12	100	
02SI	020546-02	Heptane	1000	176773-31024	07-18-12D	08/08/12	200	
J&T Brand		Purge & Trap MeOH	1000	169174-31039	07-18-12E	08/08/12	200	
07-18-12K			K14E06-00640		07/18/12	10/08/12	3300	
50ug/ml Vol Work Std #2								
Exp: 07/25/12								
Supplier	ID #	ID	Conc.		Date	Exp.		
02SI	121020-05	HSL'S-Ketone Solution	ug/ml	Lot #	Code	Date	u1	
J&T Brand		Purge & Trap MeOH	2000	163375-27145	06-19-12J	08/08/12	100	
			K14E06-00640		07/18/12	10/08/12	3900	

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GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

		07-18-12L	Exp:	07/25/12			
		5ug/ml Vol Work Std #9					
	SOURCES	Lot	APPL Code	APPL Exp Date	ul		
	50ug/ml Vol Work Std #7	07-18-12H	07/25/12	200			
	50ug/ml Vol Work Std #8	07-18-12J	07/25/12	200			
	J&T Brand	06/18/12	10/08/12	1600			
	07-18-12M	Exp:	07/25/12				
	5ug/ml Vol Work Std #10						
	SOURCES	Lot	APPL Code	APPL Exp Date	ul		
	50ug/ml Vol Work Std #1	07-18-12I	07/25/12	200			
	J&T Brand	06/18/12	10/08/12	1800			
	07-18-12N	Exp:	07/25/12				
	5ug/ml Vol Work Std #12						
	SOURCES	Lot	APPL Code	APPL Exp Date	ul		
	50ug/ml Vol Work Std #2	07-18-12K	07/25/12	200			
	J&T Brand	06/18/12	10/08/12	1800			
7/18/12 RS	07-18-12O						
	50ug/ml 8260 Surrogate	Conc.		Date	Exp.		
	Exp: 07/25/12	ug/ml	Lot #	Code	Date		
	O2SI	120002-01	8260B Surr Solution	2000	185763-30471	07-05-12B	08/08/12
	J&T Brand		Purge & Trap MeOH	K14E06-00640	07/18/12	10/08/12	19000
	07-18-12P			Exp: 07/25/12			
	5.0ug/ml 8260 Surrogate	Conc.	Lot	APPL Code	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate	07-18-12O		07/25/12	200	
	J&T Brand		Purge & Trap MeOH		06/18/12	10/08/12	1800
	07-18-12Q						
	250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P	Conc.		Date	Exp.		
	Exp: 07/25/12	ug/ml	Lot #	Code	Date		
	Supplier	ID #					
	O2SI	120166-01	Volatile Mix 4-3	2000	185760-30739	07-18-12F	08/08/12
	O2SI	020229-09	Acrolein	10000	191590-39077	06-19-12L	07/21/12
	J&T Brand		Purge & Trap MeOH	K14E06-00640	07/18/12	10/08/12	3400

07-18-12R							
50ug/ml VOC Std#5							
Exp: 07/25/12		Conc.		Date	Exp.		
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	
O2SI	120016-03-SS	8260 Gases (SS)	2000	187974-31061	07-18-12G	07/25/12	50
O2SI	020145-02-02-S	2-CEVE	2000	181404-30001	06-19-12N	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	19000
07-18-12S							
50ug/ml VOC Std#6							
Exp: 07/25/12		Conc.	ug/ml	Lot #	Code	Date	
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	176822-29269	06-19-12O	08/08/12	50
O2SI	120296-01	Custom 8260 Solution	2000	185766-60426	06-19-12P	08/08/12	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	189765-30729	05-08-12J	08/12/12	50
O2SI	020620-02-SS	n-HEXANE	1000	179199-29616	05-15-12K	08/08/12	100
O2SI	020049-02-SS	HEXAChLORoETHANE	1000	183795-30438	05-15-12L	08/08/12	100
O2SI	020546-02-SS	Heptane (SS)	1000	185762-30448	05-15-12M	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1550
07-18-12T							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P		Conc.		Date	Exp.		
Exp: 07/25/12		ug/ml	Lot #	Code	Date		
Supplier	ID #						
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	163778-29840	06-19-12Q	08/08/12	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	151591-30979	06-19-12R	07/21/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	700

Volatile Standard Curve Preparation for 10mL Purge (524 water)-THOR							
Expiration Date	07/18/12	5ug/mL Vol Std #9	5ug/mL Vol Std #12	50ug/mL Vol Std #7	50ug/mL Vol Std #8	50ug/mL Vol Std #2	250ug/mL TAPD
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N
Code	ug/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12
07-17-12A	0.2	2	2	n/a	n/a	n/a	2
07-17-12B	0.5	5	5	n/a	n/a	n/a	5
07-17-12C	1	10	10	n/a	n/a	n/a	10
07-17-12D	2	20	20	n/a	n/a	n/a	15
07-17-12E	5	n/a	n/a	5	5	20	50
07-17-12F	10	n/a	n/a	10	10	25	50
07-17-12G	40	n/a	n/a	40	40	35	50
07-17-12H	100	n/a	n/a	100	100	40	50

07/19/12A								APPL			
2000ug/ml Gasoline				Conc.				Date		Exp.	
Supplier	ID #			ug/ml		Lot #		Date	Code	Date	uL
Supelco	LB82077	Gasoline		20,000		LB82077-29979		01-26-12A	02/01/14	200	
J&T Brand		Purge & Trap MeOH				K08E01-00640		07/18/12	08/02/13	1800	
07/19/12B								APPL			
2000ug/ml Unleaded Gasoline				Conc.				Date		Exp.	
Supplier	ID #			ug/ml		Lot #		Date	Code	Date	uL
Restek	30205	Unleaded Gasoline		50,000		A081012-29980		01-26-12B	02/01/14	80	
J&T Brand		Purge & Trap MeOH				K08E01-00640		07/18/12	08/02/13	1920	

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Expiration Date:		07/20/12									
Date	Conc.	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	50µg/mL Vol Std #10	50µg/mL Vol Std #11	50µg/mL Vol Std #12	50µg/mL Vol Std #13	
07-18-12L	0.3	0.7-18-12L	0.7-18-12P	0.7-18-12H	0.7-18-12J	0.7-18-12O	0.7-18-12M	0.7-18-12I	0.7-18-12K	0.7-18-12N	
07-19-12L	0.5	0.7-19-12L	0.7-19-12P	0.7-19-12H	0.7-19-12J	0.7-19-12O	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12M	1	0.7-19-12M	0.7-19-12P	0.7-19-12H	0.7-19-12J	0.7-19-12O	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12J	2	0.7-19-12J	0.7-19-12P	0.7-19-12H	0.7-19-12I	0.7-19-12O	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12I	5	0.7-19-12I	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12O	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12O	10	0.7-19-12O	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12O	0.7-19-12K	0.7-19-12N	
07-19-12P	20	0.7-19-12P	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12P	0.7-19-12K	0.7-19-12N	
07-19-12H	40	0.7-19-12H	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12H	0.7-19-12K	0.7-19-12N	
07-19-12G	100	0.7-19-12G	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12G	0.7-19-12K	0.7-19-12N	
07-19-12C	200	0.7-19-12C	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12C	0.7-19-12K	0.7-19-12N	

250µg/mL TAPD Final Vol.

07-18-12Q w/P&T H2O mL

Exp:07-25-12

3 50

5 50

10 50

15 50

20 50

25 50

30 50

35 50

40 50

Volatile Standard Curve Preparation for 100mL Purge (water)-THOR

Expiration Date:		07/20/12												
Date	Conc.	50µg/mL Gasoline		Final Vol										
07-19-12L	20	0.7-19-12A		w/P&T H2O										
07-19-12M	50	0.7-19-12B		mL										
07-19-12N	100	0.7-19-12C												
07-19-12O	200	0.7-19-12D												
07-19-12P	400	0.7-19-12E												
07-19-12R	1000	0.7-19-12F												

250µg/mL TAPD Final Vol.

07-18-12Q w/P&T H2O mL

Exp:07-25-12

1 5

2 5

3 5

4 5

5 5

6 5

7 5

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

Expiration Date:		07/20/12									
Date	Conc.	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	50µg/mL Vol Std #10	50µg/mL Vol Std #11	50µg/mL Vol Std #12	50µg/mL Vol Std #13	
07-18-12L	0.3	0.7-18-12L	0.7-18-12P	0.7-18-12H	0.7-18-12J	0.7-18-12O	0.7-18-12M	0.7-18-12I	0.7-18-12K	0.7-18-12N	
07-19-12L	0.5	0.7-19-12L	0.7-19-12P	0.7-19-12H	0.7-19-12I	0.7-19-12O	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12M	1	0.7-19-12M	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12H	2	0.7-19-12H	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12H	0.7-19-12K	0.7-19-12N	
07-19-12I	5	0.7-19-12I	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12I	0.7-19-12K	0.7-19-12N	
07-19-12O	10	0.7-19-12O	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12O	0.7-19-12K	0.7-19-12N	
07-19-12P	20	0.7-19-12P	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12P	0.7-19-12K	0.7-19-12N	
07-19-12G	50	0.7-19-12G	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12G	0.7-19-12K	0.7-19-12N	
07-19-12S	100	0.7-19-12S	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12S	0.7-19-12K	0.7-19-12N	
07-19-12C	200	0.7-19-12C	0.7-19-12P	0.7-19-12H	n/a	0.7-19-12I	0.7-19-12M	0.7-19-12C	0.7-19-12K	0.7-19-12N	

250µg/mL TBA Final Vol.

07-18-12Q w/P&T H2O mL

Exp:07-25-12

1 5

2 5

3 5

4 5

5 5

6 5

7 5

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-NEO

Expiration Date:		07/24/12									
Date	Conc.	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	50µg/mL Vol Std #10	50µg/mL Vol Std #11	50µg/mL Vol Std #12	50µg/mL Vol Std #13	
07-23-12L	0.3	0.7-23-12L	0.7-23-12P	0.7-23-12H	0.7-23-12J	0.7-23-12O	0.7-23-12M	0.7-23-12I	0.7-23-12K	0.7-23-12N	
07-23-12M	0.5	0.7-23-12M	0.7-23-12P	0.7-23-12H	0.7-23-12I	0.7-23-12O	0.7-23-12M	0.7-23-12I	0.7-23-12K	0.7-23-12N	
07-23-12H	1	0.7-23-12H	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12H	0.7-23-12K	0.7-23-12N	
07-23-12I	2	0.7-23-12I	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12I	0.7-23-12K	0.7-23-12N	
07-23-12O	5	0.7-23-12O	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12O	0.7-23-12K	0.7-23-12N	
07-23-12P	10	0.7-23-12P	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12P	0.7-23-12K	0.7-23-12N	
07-23-12G	20	0.7-23-12G	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12G	0.7-23-12K	0.7-23-12N	
07-23-12R	40	0.7-23-12R	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12R	0.7-23-12K	0.7-23-12N	
07-23-12H	100	0.7-23-12H	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12H	0.7-23-12K	0.7-23-12N	
07-23-12S	200	0.7-23-12S	0.7-23-12P	0.7-23-12H	n/a	0.7-23-12I	0.7-23-12M	0.7-23-12S	0.7-23-12K	0.7-23-12N	

250µg/mL TAPD Final Vol.

07-18-12Q w/P&T H2O mL

Exp:07-25-12

3 50

5 50

10 50

20 50

076

GC/MS STANDARD PREPARATION BOOK # PAGE

Neo 524							
7/24/12	RS	07-24-12A					
		10ug/mL Neo-524 Internal Standard w/ Surrogate		Conc.		Date	Exp.
				ug/ml	Lot #	Code	Date
		02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A
		J.T.Baker		Purge & Trap MeOH		K08E01-00645	07/20/12

Volatile Standard Curve Preparation for 10mL Purge (524 water)-NEO									
Expiration Date:		07/25/12							
Date	Conc.	5ug/mL Vol Std #9	5ug/mL Vol Std #12	50ug/mL Vol Std #7	50ug/mL Vol Std #8	50ug/mL Vol Std #2	250ug/mL TAPD#2	Final Vol	
Code	µg/L	07-18-12L Exp:07-25-12	07-18-12N Exp:07-25-12	07-18-12H Exp:07-25-12	07-18-12J Exp:07-25-12	07-18-12K Exp:07-25-12	07-18-12O Exp:07-25-12	07-18-12M Exp:07-25-12	07-18-12P Exp:07-25-12
07-24-12B	0.2	2	2	n/a	n/a	n/a	n/a	n/a	2
07-24-12C	0.5	5	5	n/a	n/a	n/a	n/a	n/a	5
07-24-12D	1	10	10	n/a	n/a	n/a	n/a	n/a	10
07-24-12E	2	20	20	n/a	n/a	n/a	n/a	n/a	20
07-24-12F	5	n/a	n/a	5	5	5	5	5	5
07-24-12G	10	n/a	n/a	10	10	10	10	10	10
07-24-12H	40	n/a	n/a	40	40	40	40	40	40

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA									
Expiration Date:		07/25/12							
Date	Conc.	5ug/mL Vol Std #9	5ug/mL Surr	50ug/mL Vol Std #7	50ug/mL Vol Std #8	50ug/mL Surr	5ug/mL Vol Std #10	50ug/mL Vol Std #11	50ug/mL Vol Std #2
Code	µg/L	07-18-12L Exp:07-25-12	07-18-12P Exp:07-25-12	07-18-12H Exp:07-25-12	07-18-12J Exp:07-25-12	07-18-12O Exp:07-25-12	07-18-12M Exp:07-25-12	07-18-12L Exp:07-25-12	07-18-12K Exp:07-25-12
07-24-12I	2	2	2	n/a	n/a	n/a	2	n/a	2
07-24-12J	5	5	5	n/a	n/a	n/a	5	n/a	5
07-24-12K	10	10	10	n/a	n/a	n/a	10	n/a	10
07-24-12L	20	20	20	n/a	n/a	n/a	20	n/a	20
07-24-12M	50	n/a	n/a	5	5	5	n/a	5	5
07-24-12N	100	n/a	n/a	10	10	10	n/a	10	10
07-24-12O	200	n/a	n/a	20	20	20	n/a	20	20

Gasoline Curve Preparation for 100mL Purge (water)-THOR									
Expiration Date:		07/25/12							
Date	Conc.	50ug/mL Gasoline		Final Vol					
Code	µg/L	07-19-12A Exp:01-03-13		w/P&T H2O					
07-24-12P	20	1		100					
07-24-12Q	100	5		100					
07-24-12R	300	15		100					
07-24-12S	600	30		100					
07-24-12T	800	40		100					

Gasoline Curve Preparation for 100mL Purge (water)-THOR									
Expiration Date:		07/26/12							
Date	Conc.	50ug/mL Gasoline		Final Vol					
Code	µg/L	07-19-12A Exp:01-03-13		w/P&T H2O					
07-25-12A	20	1		100					
07-25-12B	50	2.5		100					
07-25-12C	100	5		100					
07-25-12D	300	15		100					
07-25-12E	600	30		100					
07-25-12F	800	40		100					
07-25-12G	1000	50		100					

Custom VOC Mix, 16-4, 100
mg/L, 4 x 1 ml

122725-03-4PAK
Lot # 181120
Storage -10 Degrees C Expiry 11/06/13
Solv: P/T Methanol
Custom VOC Mix 16-4
Lot #: 181120 - 30032
Rec: 11/16/11 MFR exp. 11/06/13

Injection Log

Directory: M:\THOR\DATA\T120719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0719T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/19/2012 09:15
2	5	0719T05.D	1	0.3ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:01
3	6	0719T06.D	1	0.5ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:29
4	7	0719T07.D	1	1.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:57
5	8	0719T08.D	1	2.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:25
6	9	0719T09.D	1	5.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:53
7	10	0719T10.D	1	10ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:20
8	11	0719T11.D	1	20ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:48
9	12	0719T12.D	1	40ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:16
10	13	0719T13.D	1	100ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:44
11	28	0719T28.D	1	5ng- BFB Std 07-16-12B	2uL	07/19/2012 21:40
12	31	0719T31.D	1	120719A LCS-1WT (SS)	10ml w/5ul of IS&S: 06-7	07/19/2012 23:03

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	26	0726T01.D	1	5-ng BFB Std 07-16-12B	2uL	07/26/2012 09:22
2	29	0726T04.D	1	10ug/L Vol Std 07-26-12	10ml w/5ul of IS&S: 06-7	07/26/2012 10:46
3	30	0726T05.D	1	120726A LCS-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 11:13
4	36	0726T11.D	1	120726A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 14:00
5	37	0726T12.D	1	AY65168W01	10ml w/5ul of IS&S: 06-7	07/26/2012 14:27
6	43	0726T18.D	1	AY65166W01	10ml w/5ul of IS&S: 06-7	07/26/2012 17:14
7	45	0726T20.D	1	AY65167W01	10ml w/5ul of IS&S: 06-7	07/26/2012 18:09
8	46	0726T21.D	1	AY65167W234 MS-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 18:37
9	47	0726T22.D	1	AY65167W234 MSD-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 19:04

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0725T01.T.D	1	5ng- BFB STD 07-16-12B	2uL	07/25/2012 09:32
2	2	0725T03.D	1	VOC MIX MARKER	10ml w/5uL of IS&S: 06-7	07/25/2012 10:22
3	3	0725T04.D	1	20ug/L Vol Std 07-25-12	10ml w/5uL of IS&S: 06-7	07/25/2012 10:50
4	4	0725T05.D	1	50ug/L Vol Std 07-25-12	10ml w/5uL of IS&S: 06-7	07/25/2012 11:17
5	5	0725T06.D	1	100ug/L Vol Std 07-25-12	10ml w/5uL of IS&S: 06-7	07/25/2012 11:45
6	6	0725T07.D	1	300ug/L Vol Std 07-25-13	10ml w/5uL of IS&S: 06-7	07/25/2012 12:13
7	7	0725T08.D	1	600ug/L Vol Std 07-25-14	10ml w/5uL of IS&S: 06-7	07/25/2012 12:41
8	8	0725T09.D	1	800ug/L Vol Std 07-25-15	10ml w/5uL of IS&S: 06-7	07/25/2012 13:08
9	9	0725T10.D	1	1000ug/L Vol Std 07-25-16	10ml w/5uL of IS&S: 06-7	07/25/2012 13:36
10	14	0725T15.D	1	LCS gas 300ug/L (SS)	10ml w/5uL of IS&S: 06-7	07/25/2012 15:55
11	26	0726T01.D	1	5-ng BFB Std 07-16-12B	2uL	07/26/2012 09:22
12	31	0726T06.D	1	CCV gas 300ug/L	10ml w/5uL of IS&S: 06-7	07/26/2012 11:41
13	32	0726T07.D	1	LCS gas 300ug/L	10ml w/5uL of IS&S: 06-7	07/26/2012 12:09
14	36	0726T11.D	1	120726A BLK-IWT	10ml w/5uL of IS&S: 06-7	07/26/2012 14:00
15	37	0726T12.D	1	AY65168W01	10ml w/5uL of IS&S: 06-7	07/26/2012 14:27
16	43	0726T18.D	1	AY65166W01	10ml w/5uL of IS&S: 06-7	07/26/2012 17:14
17	45	0726T20.D	1	AY65167W01	10ml w/5uL of IS&S: 06-7	07/26/2012 18:09
18	48	0726T23.D	1	AY65167W456 MS-1SS GAS	10ml w/5uL of IS&S: 06-7	07/26/2012 19:32
19	49	0726T24.D	1	AY65167W456 MSD-IWT GAS	10ml w/5uL of IS&S: 06-7	07/26/2012 20:00

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
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/23/12	07/23/12	#602D-120723A-AY65167

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
6020	LEAD (PB) (DISSOLVED)	50.0	45.5	91.0	80-120	07/23/12	07/23/12	#602D-120723A-AY65167

Comments:

Matrix Spike Recoveries

METALS

APPL ID: 120723W-65167 MS - 169307

APPL Inc.

Sample ID: AY65167

908 North Temperance Avenue

Clovis, CA 93611

Client ID: ES084

Method	Compound Name	Spike Lvl	Matrix Res	SPK Res	DUP Res	SPK %	DUP %	RPD	RPD Recovery	Extract	Analysis	Extract	Analysis	QC	QC	
		ug/L	ug/L	ug/L	ug/L	Recovery	Recovery	Max	Limits	Date-Spk	Date-Spk	Date-Dup	Date-Dup	Group	Sample	
6020	LEAD (PB) (DISSOLVE	50.0	ND	50.4	49.8	101	99.6	1.2	20	80-120	07/23/12	07/23/12	07/23/12	07/23/12	169307	AY65167

Comments: _____

METALS
Sample Data

APPL, INC.

Metals Analysis

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES083
Sample Collection Date: 07/19/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68268
APPL ID: AY65166

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.22U	0.5	0.22	0.11	ug/L	1	07/23/12	07/23/12

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\047SMPL.D\047SMPL.D#
 Date Acquired: Jul 23 2012 04:07 pm
 Operator: NBS
 Sample Name: AY65166W08
 Misc Info: 120723A-3015
 Vial Number: 3304
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 Li	----- ug/l	#VALUE!	-----	0	
9 Be	0.00 ug/l	0.00	79.45	1000	
11 B	50.73 ug/l	56.36	0.26	1000	
23 Na	44310.00 ug/l	49228.41	1.40	25000	>Cal
24 Mg	12690.00 ug/l	14098.59	1.34	50000	
27 Al	75.82 ug/l	84.24	2.35	20000	
39 K	677.80 ug/l	753.04	0.93	20000	
44 Ca	10970.00 ug/l	12187.67	1.43	50000	
47 Ti	6.10 ug/l	6.78	3.84	1000	
51 V	0.14 ug/l	0.15	4.23	1000	
52 Cr	0.48 ug/l	0.53	5.44	1000	
55 Mn	232.80 ug/l	258.64	1.20	1000	
56 Fe	6290.00 ug/l	6988.19	0.85	20000	
59 Co	0.41 ug/l	0.46	1.55	1000	
60 Ni	0.60 ug/l	0.66	4.11	1000	
63 Cu	0.14 ug/l	0.16	6.63	1000	
65 Cu	0.13 ug/l	0.15	8.86	1000	
66 Zn	8.02 ug/l	8.91	0.76	1000	
75 As	0.03 ug/l	0.03	3.93	1000	
78 Se	0.03 ug/l	0.03	49.17	1000	
78 Se	0.72 ug/l	0.80	7.41	1000	
88 Sr	106.10 ug/l	117.88	0.27	1000	
88 Sr	101.40 ug/l	112.66	0.75	1000	
95 Mo	0.24 ug/l	0.26	1.45	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.00 ug/l	0.00	5266.90	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.04 ug/l	0.05	30.86	1000	
118 Sn	0.12 ug/l	0.14	4.35	#####	
118 Sn	0.13 ug/l	0.14	6.39	#####	
118 Sn	0.13 ug/l	0.15	6.09	1000	
121 Sb	0.09 ug/l	0.10	5.02	1000	
137 Ba	2.21 ug/l	2.45	1.48	1000	
205 Tl	0.06 ug/l	0.06	6.91	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.05 ug/l	0.06	6.60	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-51467.41	4.17	41328.95	124.5	70 - 120	IS Fai	
45 Sc	3135856.30	1.36	3008024.30	104.2	70 - 120		
45 Sc	449468.03	1.01	423303.94	106.2	70 - 120		
45 Sc	9494293.00	0.11	8607281.00	110.3	70 - 120		
72 Ge	778365.00	0.32	774468.63	100.5	70 - 120		
72 Ge	286896.78	0.89	282128.91	101.7	70 - 120		
72 Ge	1993621.10	1.09	1882554.90	105.9	70 - 120		
115 In	5489722.50	0.74	5556751.00	98.8	70 - 120		
115 In	2969654.50	0.57	3029632.80	98.0	70 - 120		
115 In	12687977.00	0.60	12097256.00	104.9	70 - 120		
159 Tb	17105158.00	1.69	16269544.00	105.1	70 - 120		
165 Ho	16565370.00	0.77	15819307.00	104.7	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

```
1 :Element Failures      0 :Max. Number of Failures Allowed
1 :ISTD Failures        0 :Max. Number of ISTD Failures Allowed
```

Data Results:

```
Analytes: Fail
ISTD: Fail
```

Metals Analysis

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES084
Sample Collection Date: 07/19/12

ARF: 68268
APPL ID: AY65167

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.22U	0.5	0.22	0.11	ug/L	1	07/23/12	07/23/12

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\048SMPL.D\048SMPL.D#
 Date Acquired: Jul 23 2012 04:14 pm
 Operator: NBS
 Sample Name: AY65167W15
 Misc Info: 120723A-3015
 Vial Number: 3305
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 Li	----- ug/l	#VALUE!	-----	0	
9 Be	0.00 ug/l	0.00	71.91	1000	
11 B	34.42 ug/l	38.24	0.74	1000	
23 Na	280700.00 ug/l	311857.70	2.32	25000	>Cal
24 Mg	180200.00 ug/l	200202.20	2.92	50000	>Cal
27 Al	12.26 ug/l	13.62	5.67	20000	
39 K	6252.00 ug/l	6945.97	2.72	20000	
44 Ca	52860.00 ug/l	58727.46	4.25	50000	>Cal
47 Ti	2.14 ug/l	2.38	4.75	1000	
51 V	0.63 ug/l	0.70	4.85	1000	
52 Cr	8.18 ug/l	9.09	2.07	1000	
55 Mn	0.37 ug/l	0.41	2.79	1000	
56 Fe	7.35 ug/l	8.17	2.98	20000	
59 Co	1.23 ug/l	1.36	2.27	1000	
60 Ni	7.57 ug/l	8.41	1.71	1000	
63 Cu	0.34 ug/l	0.38	4.21	1000	
65 Cu	0.36 ug/l	0.40	5.42	1000	
66 Zn	5.28 ug/l	5.86	3.03	1000	
75 As	0.21 ug/l	0.23	6.18	1000	
78 Se	3.07 ug/l	3.41	1.42	1000	
78 Se	4.22 ug/l	4.69	3.71	1000	
88 Sr	1039.00 ug/l	1154.33	1.50	1000	>Cal
88 Sr	1112.00 ug/l	1235.43	0.11	1000	>Cal
95 Mo	1.37 ug/l	1.52	0.83	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.00 ug/l	0.00	44.05	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.04 ug/l	0.04	17.39	1000	
118 Sn	0.15 ug/l	0.16	15.52	#####	
118 Sn	0.15 ug/l	0.16	23.06	#####	
118 Sn	0.15 ug/l	0.16	34.78	1000	
121 Sb	0.11 ug/l	0.12	5.30	1000	
137 Ba	64.25 ug/l	71.38	0.49	1000	
205 Tl	0.03 ug/l	0.03	4.01	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.00 ug/l	0.00	185.19	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-55937.32	5.70	-41328.95	135.3	70 - 120	IS Fai	
45 Sc	3146550.30	0.38	3008024.30	104.6	70 - 120		
45 Sc	459108.28	2.54	423303.94	108.5	70 - 120		
45 Sc	9546233.00	0.59	8607281.00	110.9	70 - 120		
72 Ge	762266.69	0.55	774468.63	98.4	70 - 120		
72 Ge	279988.94	0.55	282128.91	99.2	70 - 120		
72 Ge	1974646.10	0.37	1882554.90	104.9	70 - 120		
115 In	5266013.50	0.38	5556751.00	94.8	70 - 120		
115 In	2831528.30	1.37	3029632.80	93.5	70 - 120		
115 In	12034210.00	0.16	12097256.00	99.5	70 - 120		
159 Tb	16419015.00	0.29	16269544.00	100.9	70 - 120		
165 Ho	15978333.00	1.08	15819307.00	101.0	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.
ARF No: 68268 SDG: 68268
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 12:05	%R(1)	True CCV1	Found 13:32	%R(1)	
Lead (Pb)	100	99.7	99.7	50	52.39	105	50	51.97	104	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: Environet, Inc.
ARF No: 68268 SDG: 68268
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 15:07	%R(1)	True CCV1	Found 16:40	%R(1)	
Lead (Pb)	100	99.7	99.7	50	51.71	103	50	51.63	103	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: Environet, Inc.
ARF No: 68268 SDG: 68268
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 17:47	%R(1)	True	Found	%R(1)	
Lead (Pb)	100	99.7	99.7	50	50.72	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: Environet, Inc.

ARF No.: 68268

SDG: 68268

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/23/12

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		C	1	C	2	C	3		
Lead (Pb)	.50 U	11:58		12:12		13:45		15:20	12:58

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.Contract: Environet, Inc.ARF No.: 68268SDG: 68268Preparation Blank Matrix (soil/water): waterPreparation Blank Concentration Units (ug/L or mg/kg): ug/LAnalysis Date: 07/23/12

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		C	1	C	2	C	3		
Lead (Pb)	.50 U		.50 U		.50 U			.50 U	P

A.P.P.L. INC.

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC.
ARF No.: 68268
ICP ID Number: Optimus

Contract: Environet, Inc.
SDG: 68268
ICS Source: Environmental Express

Analysis Date: 07/23/12

Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:18	Sol AB 12:25	%R(1)
Lead (Pb)		500	0.4092	437.6	87.5

(1) Control Limits: Metals 80-120

65167_602D_Opti_120723Arev

FORM V - IN

ILM02.0

A.P.P.L. INC.

9

ICP SERIAL DILUTION

CLIENT SAMPLE NO.

ES084

Lab Name: A.P.P.L. INC.
 ARF No.: 68268
 Matrix: water

Contract: Environet, Inc.
 SDG: 68268

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	Serial Dilution Result (S)		%D	Q	M
		C	C			
Lead (Pb)	0.0013332		ND	NA		

Comments:

07/23/12 16:14 AY65167W1507/23/12 17:14 AY65167W15-1/5

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\057SMPL.D\057SMPL.D#
 Date Acquired: Jul 23 2012 05:14 pm
 Operator: NBS
 Sample Name: AY65167W15-1/5
 Misc Info: 120723A-3015
 Vial Number: 3309
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 5.56
 Total Dil Factor: 5.56

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 Li	----- ug/l	#VALUE!	-----	0	
9 Be	0.00 ug/l	0.03	24.33	1000	
11 B	11.82 ug/l	65.67	1.10	1000	
23 Na	58710.00 ug/l	326192.76	0.74	25000	>Cal
24 Mg	37800.00 ug/l	210016.80	0.26	50000	
27 Al	3.56 ug/l	19.77	8.25	20000	
39 K	1408.00 ug/l	7822.85	0.54	20000	
44 Ca	11350.00 ug/l	63060.60	0.83	50000	
47 Ti	0.51 ug/l	2.85	13.44	1000	
51 V	0.17 ug/l	0.93	4.25	1000	
52 Cr	1.78 ug/l	9.91	1.47	1000	
55 Mn	0.51 ug/l	2.86	9.82	1000	
56 Fe	17.17 ug/l	95.40	7.05	20000	
59 Co	0.28 ug/l	1.57	1.61	1000	
60 Ni	1.77 ug/l	9.82	3.44	1000	
63 Cu	0.14 ug/l	0.79	6.19	1000	
65 Cu	0.15 ug/l	0.82	14.12	1000	
66 Zn	1.59 ug/l	8.85	0.40	1000	
75 As	0.16 ug/l	0.90	15.51	1000	
78 Se	0.85 ug/l	4.74	3.99	1000	
78 Se	1.33 ug/l	7.27	16.64	1000	
88 Sr	215.10 ug/l	1195.10	0.63	1000	
88 Sr	224.00 ug/l	1244.54	0.64	1000	
95 Mo	0.33 ug/l	1.84	6.27	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.03 ug/l	0.15	13.39	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.01 ug/l	0.04	203.40	1000	
118 Sn	0.20 ug/l	1.11	4.90	#####	
118 Sn	0.22 ug/l	1.24	6.67	#####	
118 Sn	0.16 ug/l	0.90	6.93	1000	
121 Sb	0.53 ug/l	2.93	3.35	1000	
137 Ba	13.31 ug/l	73.95	0.35	1000	
205 Tl	0.08 ug/l	0.42	5.29	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	-0.02 ug/l	-0.11	5.06	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37074.82	19.02	-41328.95	89.7	70 - 120	IS Fai	
45 Sc	3226942.00	0.98	3008024.30	107.3	70 - 120		
45 Sc	444938.16	0.23	423303.94	105.1	70 - 120		
45 Sc	9721833.00	0.39	8607281.00	112.9	70 - 120		
72 Ge	819775.56	1.04	774468.63	105.9	70 - 120		
72 Ge	292111.56	0.65	282128.91	103.5	70 - 120		
72 Ge	2089239.10	0.41	1882554.90	111.0	70 - 120		
115 In	5791615.50	0.51	5556751.00	104.2	70 - 120		
115 In	3009210.00	0.75	3029632.80	99.3	70 - 120		
115 In	13018047.00	0.95	12097256.00	107.6	70 - 120		
159 Tb	17535648.00	0.81	16269544.00	107.8	70 - 120		
165 Ho	16918122.00	0.82	15819307.00	106.9	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

A.P.P.L. INC.
5B
POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

ES084

Lab Name: A.P.P.L. INC.
ARF No.: 68268

Contract: Environet, Inc.
SDG: 68268

Analysis Date: 07/23/12

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Lead (Pb)	75-125	234.9765	0.0013332	277.500	84.7		

Comments:

07/23/12 16:14 AY65167W15

07/23/12 17:01 AY65167W15-A

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\055SMPL.D\055SMPL.D#
 Date Acquired: Jul 23 2012 05:01 pm
 Operator: NBS
 Sample Name: AY65167W15-A
 Misc Info: 120723A-3015
 Vial Number: 3308
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 Li	----- ug/l	#VALUE!	-----	0	
9 Be	47.32 ug/l	52.57	2.28	1000	
11 B	289.30 ug/l	321.41	2.83	1000	
23 Na	296100.00 ug/l	328967.10	0.58	25000	>Cal
24 Mg	197200.00 ug/l	219089.20	0.84	50000	>Cal
27 Al	1947.00 ug/l	2163.12	0.51	20000	
39 K	10370.00 ug/l	11521.07	0.48	20000	
44 Ca	74230.00 ug/l	82469.53	1.65	50000	>Cal
47 Ti	241.60 ug/l	268.42	0.61	1000	
51 V	242.70 ug/l	269.64	0.72	1000	
52 Cr	238.90 ug/l	265.42	0.47	1000	
55 Mn	231.70 ug/l	257.42	0.42	1000	
56 Fe	906.00 ug/l	1006.57	0.75	20000	
59 Co	201.50 ug/l	223.87	1.12	1000	
60 Ni	219.30 ug/l	243.64	0.73	1000	
63 Cu	206.70 ug/l	229.64	0.24	1000	
65 Cu	206.20 ug/l	229.09	0.61	1000	
66 Zn	463.70 ug/l	515.17	0.56	1000	
75 As	245.80 ug/l	273.08	0.55	1000	
78 Se	223.90 ug/l	248.75	0.68	1000	
78 Se	231.00 ug/l	256.64	0.92	1000	
88 Sr	1251.00 ug/l	1389.86	0.28	1000	>Cal
88 Sr	1329.00 ug/l	1476.52	1.50	1000	>Cal
95 Mo	238.10 ug/l	264.53	1.27	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	79.24 ug/l	88.04	7.22	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	45.69 ug/l	50.76	0.67	1000	
118 Sn	246.10 ug/l	273.42	7.28	#####	
118 Sn	255.00 ug/l	283.31	0.42	#####	
118 Sn	232.00 ug/l	257.75	0.74	1000	
121 Sb	234.70 ug/l	260.75	0.89	1000	
137 Ba	283.30 ug/l	314.75	0.86	1000	
205 Tl	221.10 ug/l	245.64	0.24	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	211.50 ug/l	234.98	0.41	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-54259.83	7.06	7.06	-41328.95	131.3	70 - 120	IS Fai
45 Sc	3088834.30	1.41	3008024.30	102.7	70	- 120	
45 Sc	445216.53	0.42	423303.94	105.2	70	- 120	
45 Sc	9508867.00	1.47	8607281.00	110.5	70	- 120	
72 Ge	742801.56	0.14	774468.63	95.9	70	- 120	
72 Ge	274085.34	0.60	282128.91	97.1	70	- 120	
72 Ge	1971161.60	0.99	1882554.90	104.7	70	- 120	
115 In	5223743.00	1.25	5556751.00	94.0	70	- 120	
115 In	2750701.00	0.54	3029632.80	90.8	70	- 120	
115 In	12222015.00	0.45	12097256.00	101.0	70	- 120	
159 Tb	16760083.00	0.23	16269544.00	103.0	70	- 120	
165 Ho	16320475.00	0.69	15819307.00	103.2	70	- 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\004CAL
 Date Acquired: Jul 23 2012 11:12 am
 Operator: NBS
 Sample Name: Calibration Blank
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:09 am
 Sample Type: CalBlk
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS	Mean	SD	RSD (%)
6 Li	-41328.94	A	2428.00	5.87
7 (Li)	4659754.00	A	18000.00	0.39
9 Be	44.45	P	5.09	11.46
11 B	13122.80	P	299.70	2.28
23 Na	64072.43	P	449.30	0.70
24 Mg	208.90	P	51.68	24.74
27 Al	91.11	P	10.71	11.75
39 K	42023.77	P	406.10	0.97
44 Ca	376.38	P	20.70	5.50
45 Sc	3008024.00	A	6696.00	0.22
45 Sc	423303.91	A	3421.00	0.81
45 Sc	8607281.00	A	46940.00	0.55
47 Ti	1.78	P	1.54	86.62
51 V	48.45	P	8.57	17.69
52 Cr	424.90	P	14.87	3.50
55 Mn	212.89	P	30.82	14.48
56 Fe	3307.53	P	84.69	2.56
59 Co	83.56	P	8.04	9.62
60 Ni	109.34	P	9.33	8.54
63 Cu	295.56	P	2.04	0.69
65 Cu	135.11	P	17.40	12.88
66 Zn	310.23	P	10.10	3.26
72 Ge	774468.63	A	4129.00	0.53
72 Ge	282128.91	A	1085.00	0.38
72 Ge	1882555.00	A	1994.00	0.11
75 As	27.11	P	4.68	17.27
78 Se	22.89	P	3.27	14.30
78 Se	148.78	P	4.86	3.26
88 Sr	168.90	P	24.12	14.28
88 Sr	598.92	P	5.09	0.85
95 Mo	93.34	P	14.53	15.57
106 (Cd)	3.33	P	3.33	99.99
107 Ag	126.67	P	8.82	6.96
108 (Cd)	5.56	P	5.09	91.65
111 Cd	13.08	P	16.84	128.75
115 In	5556751.00	A	25450.00	0.46
115 In	3029633.00	A	2589.00	0.09
115 In	12097260.00	A	3381.00	0.03
118 Sn	187.79	P	62.04	33.04
118 Sn	96.67	P	8.82	9.12
118 Sn	352.24	P	45.38	12.88
121 Sb	131.12	P	15.75	12.01
137 Ba	72.23	P	27.76	38.44
159 Tb	16269540.00	A	108400.00	0.67
165 Ho	15819310.00	A	42930.00	0.27
205 Tl	195.56	P	65.18	33.33
206 (Pb)	530.03	P	72.19	13.62
207 (Pb)	423.36	P	56.67	13.39
208 Pb	1940.13	P	171.40	8.83

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\005CALB.D\005CALB.D#
 Date Acquired: Jul 23 2012 11:18 am
 Operator: NBS
 Sample Name: 120723 Standard 1
 Misc Info:
 Vial Number: 1103
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:16 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-41816.46 A	2968.00	7.10	0.0000
7 (Li)	4828315.00 A	24030.00	0.50	0.0000
9 Be	431.13 P	39.49	9.16	0.0000
11 B	13550.97 P	211.20	1.56	0.0000
23 Na	68743.03 P	482.40	0.70	0.0000
24 Mg	1320.10 P	78.40	5.94	0.0000
27 Al	323.35 P	17.64	5.46	0.0000
39 K	42278.87 P	294.60	0.70	0.0000
44 Ca	453.33 P	18.07	3.99	0.0000
45 Sc	2965625.00 A	8375.00	0.28	0.0000
45 Sc	409348.19 A	5583.00	1.36	0.0000
45 Sc	8658112.00 A	37130.00	0.43	0.0000
47 Ti	16.44 P	2.78	16.88	0.0000
51 V	457.35 P	18.04	3.94	0.0000
52 Cr	881.37 P	20.83	2.36	0.0000
55 Mn	432.46 P	14.69	3.40	0.0000
56 Fe	10304.63 P	194.30	1.89	0.0000
59 Co	556.02 P	39.26	7.06	0.0000
60 Ni	221.78 P	29.82	13.45	0.0000
63 Cu	848.93 P	36.62	4.31	0.0000
65 Cu	429.35 P	5.81	1.35	0.0000
66 Zn	473.79 P	16.88	3.56	0.0000
72 Ge	782088.38 A	7482.00	0.96	0.0000
72 Ge	280806.41 A	3743.00	1.33	0.0000
72 Ge	1881152.00 A	8788.00	0.47	0.0000
75 As	89.00 P	5.24	5.89	0.0000
78 Se	46.89 P	2.87	6.13	0.0000
78 Se	154.67 P	3.71	2.40	0.0000
88 Sr	594.48 P	28.74	4.83	0.0000
88 Sr	4045.16 P	130.50	3.23	0.0000
95 Mo	706.71 P	10.00	1.42	0.0000
106 (Cd)	47.78 P	7.70	16.11	0.0000
107 Ag	994.52 P	69.32	6.97	0.0000
108 (Cd)	28.89 P	10.18	35.24	0.0000
111 Cd	397.49 P	77.04	19.38	0.0000
115 In	5449510.00 A	78530.00	1.44	0.0000
115 In	2939285.00 A	18850.00	0.64	0.0000
115 In	11960780.00 A	79640.00	0.67	0.0000
118 Sn	1004.52 P	97.90	9.75	0.0000
118 Sn	555.59 P	7.70	1.39	0.0000
118 Sn	2132.46 P	102.20	4.79	0.0000
121 Sb	1841.30 P	47.65	2.59	0.0000
137 Ba	583.37 P	41.64	7.14	0.0000
159 Tb	16219180.00 A	173500.00	1.07	0.0000
165 Ho	15690520.00 A	6789.00	0.04	0.0000
205 Tl	3149.38 P	120.10	3.81	0.0000
206 (Pb)	1167.88 P	66.20	5.67	0.0000
207 (Pb)	974.52 P	68.35	7.01	0.0000
208 Pb	4646.06 P	99.59	2.14	0.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC	Range(%)	Flag
6 Li	-41816.47	7.10	-41328.95	101.2	70 -	120	IS Fail
45 Sc	2965624.50	0.28	3008024.30	98.6	70 -	120	
45 Sc	409348.25	1.36	423303.94	96.7	70 -	120	
45 Sc	8658112.00	0.43	8607281.00	100.6	70 -	120	
72 Ge	782088.44	0.96	774468.63	101.0	70 -	120	
72 Ge	280806.38	1.33	282128.91	99.5	70 -	120	
72 Ge	1881152.00	0.47	1882554.90	99.9	70 -	120	
115 In	5449510.50	1.44	5556751.00	98.1	70 -	120	
115 In	2939285.30	0.64	3029632.80	97.0	70 -	120	
115 In	11960782.00	0.67	12097256.00	98.9	70 -	120	
159 Tb	16219185.00	1.07	16269544.00	99.7	70 -	120	
165 Ho	15690520.00	0.04	15819307.00	99.2	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\006CALB.D\006CALB.D#
 Date Acquired: Jul 23 2012 11:25 am
 Operator: NBS
 Sample Name: 120723 Standard 2
 Misc Info:
 Vial Number: 1104
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:22 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-38271.70 A	2707.00	7.07	0.0000
7 (Li)	4793284.00 A	21050.00	0.44	1.0000
9 Be	4235.18 P	94.10	2.22	1.0000
11 B	14857.80 P	552.40	3.72	1.0000
23 Na	75362.73 P	100.00	0.13	1.0000
24 Mg	10653.06 P	135.80	1.27	1.0000
27 Al	1959.08 P	90.10	4.60	1.0000
39 K	48852.40 P	393.50	0.81	1.0000
44 Ca	1103.45 P	35.31	3.20	1.0000
45 Sc	2946623.00 A	16940.00	0.57	0.0000
45 Sc	412843.69 A	2177.00	0.53	0.0000
45 Sc	8594454.00 A	44450.00	0.52	0.0000
47 Ti	96.00 P	12.22	12.73	1.0000
51 V	2942.12 P	46.06	1.57	1.0000
52 Cr	3650.28 P	70.82	1.94	1.0000
55 Mn	2454.02 P	50.72	2.07	1.0000
56 Fe	62723.29 P	271.00	0.43	1.0000
59 Co	4763.95 P	121.10	2.54	1.0000
60 Ni	1299.19 P	41.19	3.17	1.0000
63 Cu	3529.81 P	57.76	1.64	1.0000
65 Cu	1788.58 P	45.70	2.56	1.0000
66 Zn	1012.94 P	61.69	6.09	1.0000
72 Ge	775596.38 A	1679.00	0.22	0.0000
72 Ge	280488.00 A	3782.00	1.35	0.0000
72 Ge	1879230.00 A	21100.00	1.12	0.0000
75 As	564.46 P	12.53	2.22	1.0000
78 Se	248.34 P	9.84	3.96	1.0000
78 Se	213.11 P	13.02	6.11	1.0000
88 Sr	4516.43 P	56.70	1.26	1.0000
88 Sr	32554.49 P	334.70	1.03	1.0000
95 Mo	6087.07 P	193.60	3.18	1.0000
106 (Cd)	324.46 P	6.94	2.14	1.0000
107 Ag	7810.19 P	109.40	1.40	1.0000
108 (Cd)	241.12 P	50.15	20.80	1.0000
111 Cd	3325.03 P	144.20	4.34	1.0000
115 In	5421674.00 A	15610.00	0.29	0.0000
115 In	2910753.00 A	26240.00	0.90	0.0000
115 In	11770410.00 A	19480.00	0.17	0.0000
118 Sn	4565.35 P	94.32	2.07	1.0000
118 Sn	2638.12 P	42.87	1.63	1.0000
118 Sn	9902.71 P	120.40	1.22	1.0000
121 Sb	13280.07 P	116.80	0.88	1.0000
137 Ba	5013.31 P	58.37	1.16	1.0000
159 Tb	16000270.00 A	160400.00	1.00	0.0000
165 Ho	15559700.00 A	126400.00	0.81	0.0000
205 Tl	28171.76 P	356.80	1.27	1.0000
206 (Pb)	9680.50 P	330.70	3.42	1.0000
207 (Pb)	8091.67 P	204.00	2.52	1.0000
208 Pb	38229.67 P	528.20	1.38	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC	Range(%)	Flag
6 Li	-38271.70	7.07	-41328.95	92.6	70 -	120	IS Fail
45 Sc	2946623.30	0.57	3008024.30	98.0	70 -	120	
45 Sc	412843.72	0.53	423303.94	97.5	70 -	120	
45 Sc	8594454.00	0.52	8607281.00	99.9	70 -	120	
72 Ge	775596.38	0.22	774468.63	100.1	70 -	120	
72 Ge	280488.03	1.35	282128.91	99.4	70 -	120	
72 Ge	1879229.80	1.12	1882554.90	99.8	70 -	120	
115 In	5421673.50	0.29	5556751.00	97.6	70 -	120	
115 In	2910753.50	0.90	3029632.80	96.1	70 -	120	
115 In	11770411.00	0.17	12097256.00	97.3	70 -	120	
159 Tb	16000275.00	1.00	16269544.00	98.3	70 -	120	
165 Ho	15559705.00	0.81	15819307.00	98.4	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

-- :Element Failures --- :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\007CALB.D\007CALB.D#
 Date Acquired: Jul 23 2012 11:32 am
 Operator: NBS
 Sample Name: 120723 Standard 3
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:29 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-40141.68 A	5393.00	13.44	0.0000
7 (Li)	4772095.00 A	27750.00	0.58	0.4044
9 Be	208836.70 P	1267.00	0.61	1.0000
11 B	137641.50 P	1350.00	0.98	0.9952
23 Na	561413.63 P	2113.00	0.38	0.8916
24 Mg	524168.31 P	2475.00	0.47	1.0000
27 Al	92849.74 P	461.20	0.50	0.9997
39 K	344469.09 P	2025.00	0.59	0.9939
44 Ca	38040.14 P	664.10	1.75	0.9998
45 Sc	2929570.00 A	29350.00	1.00	0.0000
45 Sc	413552.91 A	3122.00	0.75	0.0000
45 Sc	8628072.00 A	89100.00	1.03	0.0000
47 Ti	4933.33 P	62.99	1.28	0.9984
51 V	135471.50 P	1339.00	0.99	0.9991
52 Cr	158083.50 P	1018.00	0.64	0.9990
55 Mn	112729.30 P	106.60	0.09	1.0000
56 Fe	2648855.00 A	17400.00	0.66	0.9998
59 Co	230427.80 P	180.70	0.08	1.0000
60 Ni	57533.91 P	431.00	0.75	1.0000
63 Cu	155413.50 P	641.40	0.41	0.9973
65 Cu	75685.46 P	891.90	1.18	0.9968
66 Zn	32393.10 P	111.10	0.34	0.9902
72 Ge	768266.81 A	21970.00	2.86	0.0000
72 Ge	277329.91 A	2067.00	0.75	0.0000
72 Ge	1886908.00 A	20910.00	1.11	0.0000
75 As	25744.79 P	105.60	0.41	0.9999
78 Se	10980.96 P	103.00	0.94	1.0000
78 Se	2890.63 P	48.87	1.69	0.9990
88 Sr	209820.50 P	803.00	0.38	1.0000
88 Sr	1454092.00 A	8453.00	0.58	1.0000
95 Mo	293486.50 P	604.00	0.21	1.0000
106 (Cd)	15022.92 P	191.90	1.28	0.9993
107 Ag	377162.50 P	3424.00	0.91	0.9999
108 (Cd)	10984.61 P	170.90	1.56	1.0000
111 Cd	165458.50 P	465.90	0.28	0.9999
115 In	5327447.00 A	55260.00	1.04	0.0000
115 In	2910250.00 A	24200.00	0.83	0.0000
115 In	11944630.00 A	109500.00	0.92	0.0000
118 Sn	198230.09 P	1792.00	0.90	0.9964
118 Sn	115238.30 P	443.30	0.38	0.9969
118 Sn	450003.50 P	3055.00	0.68	0.9966
121 Sb	649268.31 P	6236.00	0.96	0.9996
137 Ba	238687.59 P	2297.00	0.96	1.0000
159 Tb	16069320.00 A	147900.00	0.92	0.0000
165 Ho	15575810.00 A	135900.00	0.87	0.0000
205 Tl	1268132.00 A	1504.00	0.12	1.0000
206 (Pb)	468874.31 P	1209.00	0.26	0.9996
207 (Pb)	395048.69 P	2701.00	0.68	0.9997
208 Pb	1851604.00 P	7982.00	0.43	0.9997

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-40141.69	13.44	-41328.95	97.1	70 -	120 IS Fail
45 Sc	2929570.30	1.00	3008024.30	97.4	70 -	120
45 Sc	413552.91	0.75	423303.94	97.7	70 -	120
45 Sc	8628072.00	1.03	8607281.00	100.2	70 -	120
72 Ge	768266.88	2.86	774468.63	99.2	70 -	120
72 Ge	277329.88	0.75	282128.91	98.3	70 -	120
72 Ge	1886908.30	1.11	1882554.90	100.2	70 -	120
115 In	5327447.00	1.04	5556751.00	95.9	70 -	120
115 In	2910250.50	0.83	3029632.80	96.1	70 -	120
115 In	11944625.00	0.92	12097256.00	98.7	70 -	120
159 Tb	16069324.00	0.92	16269544.00	98.8	70 -	120
165 Ho	15575815.00	0.87	15819307.00	98.5	70 -	120

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\008CALS.D\008CALS.D#
 Date Acquired: Jul 23 2012 11:39 am
 Operator: NBS
 Sample Name: 120723 Standard 4
 Misc Info:
 Vial Number: 1106
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:36 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-38098.84 A	8974.00	23.56	0.0000
7 (Li)	4836046.00 A	91920.00	1.90	0.0872
9 Be	423835.19 P	6357.00	1.50	1.0000
11 B	267890.91 P	3612.00	1.35	1.0000
23 Na	1070874.00 A	4310.00	0.40	1.0000
24 Mg	1031127.00 A	10470.00	1.02	1.0000
27 Al	188079.59 P	454.70	0.24	1.0000
39 K	660046.19 P	3327.00	0.50	1.0000
44 Ca	76449.13 P	280.60	0.37	1.0000
45 Sc	3012870.00 A	36160.00	1.20	0.0000
45 Sc	415503.00 A	2302.00	0.55	0.0000
45 Sc	8724734.00 A	61090.00	0.70	0.0000
47 Ti	10057.35 P	118.60	1.18	1.0000
51 V	274992.41 P	1358.00	0.49	1.0000
52 Cr	318432.59 P	2283.00	0.72	1.0000
55 Mn	229116.20 P	2629.00	1.15	1.0000
56 Fe	5265441.00 A	60300.00	1.15	1.0000
59 Co	463151.41 P	3143.00	0.68	1.0000
60 Ni	115989.80 P	858.10	0.74	1.0000
63 Cu	312560.19 P	284.40	0.09	1.0000
65 Cu	153215.50 P	1440.00	0.94	1.0000
66 Zn	65080.04 P	448.40	0.69	1.0000
72 Ge	784051.63 A	4382.00	0.56	0.0000
72 Ge	278662.41 A	4547.00	1.63	0.0000
72 Ge	1912165.00 A	7636.00	0.40	0.0000
75 As	52232.86 P	125.80	0.24	1.0000
78 Se	22351.78 P	86.89	0.39	1.0000
78 Se	5691.24 P	66.14	1.16	1.0000
88 Sr	432452.91 P	383.60	0.09	1.0000
88 Sr	2910274.00 A	5311.00	0.18	1.0000
95 Mo	594285.13 P	5554.00	0.93	1.0000
106 (Cd)	30253.12 P	587.80	1.94	1.0000
107 Ag	759463.69 P	6407.00	0.84	1.0000
108 (Cd)	22110.18 P	292.70	1.32	1.0000
111 Cd	329599.69 P	1169.00	0.35	1.0000
115 In	5454744.00 A	67430.00	1.24	0.0000
115 In	2935754.00 A	7842.00	0.27	0.0000
115 In	11935970.00 A	72980.00	0.61	0.0000
118 Sn	405178.81 P	4698.00	1.16	1.0000
118 Sn	234336.80 P	592.90	0.25	1.0000
118 Sn	907635.88 P	8976.00	0.99	1.0000
121 Sb	1204220.00 A	13910.00	1.16	1.0000
137 Ba	475384.59 P	3682.00	0.77	1.0000
159 Tb	16151070.00 A	201800.00	1.25	0.0000
165 Ho	15582170.00 A	199800.00	1.28	0.0000
205 Tl	2472780.00 A	25800.00	1.04	1.0000
206 (Pb)	935228.19 P	12790.00	1.37	1.0000
207 (Pb)	786432.88 P	10080.00	1.28	1.0000
208 Pb	3497400.00 A	34560.00	0.99	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC	Range(%)	Flag
6 Li	-38098.85	23.56	-41328.95	92.2	70 -	120	IS Fail
45 Sc	3012869.50	1.20	3008024.30	100.2	70 -	120	
45 Sc	415502.97	0.55	423303.94	98.2	70 -	120	
45 Sc	8724734.00	0.70	8607281.00	101.4	70 -	120	
72 Ge	784051.56	0.56	774468.63	101.2	70 -	120	
72 Ge	278662.41	1.63	282128.91	98.8	70 -	120	
72 Ge	1912165.40	0.40	1882554.90	101.6	70 -	120	
115 In	5454744.00	1.24	5556751.00	98.2	70 -	120	
115 In	2935754.00	0.27	3029632.80	96.9	70 -	120	
115 In	11935967.00	0.61	12097256.00	98.7	70 -	120	
159 Tb	16151070.00	1.25	16269544.00	99.3	70 -	120	
165 Ho	15582175.00	1.28	15819307.00	98.5	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

QCS QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\009_QCS.D\009_QCS.D#
 Date Acquired: Jul 23 2012 11:45 am
 Operator: NBS
 Sample Name: ICV 120723
 Misc Info:
 Vial Number: 1107
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: QCS
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	----- ug/l	-----	100.00	90 - 110	
9 Be	100.60 ug/l	0.64	100.00	90 - 110	
11 B	101.80 ug/l	1.22	100.00	90 - 110	
23 Na	2398.00 ug/l	0.47	2500.00	90 - 110	
24 Mg	2487.00 ug/l	0.77	2500.00	90 - 110	
27 Al	2446.00 ug/l	0.17	2500.00	90 - 110	
39 K	2316.00 ug/l	0.48	2500.00	90 - 110	
44 Ca	2406.00 ug/l	0.84	2500.00	90 - 110	
47 Ti	97.92 ug/l	1.55	100.00	90 - 110	
51 V	101.80 ug/l	0.59	100.00	90 - 110	
52 Cr	101.70 ug/l	0.35	100.00	90 - 110	
55 Mn	101.10 ug/l	0.14	100.00	90 - 110	
56 Fe	2430.00 ug/l	0.38	2500.00	90 - 110	
59 Co	99.14 ug/l	0.73	100.00	90 - 110	
60 Ni	101.20 ug/l	0.59	100.00	90 - 110	
63 Cu	99.40 ug/l	0.49	100.00	90 - 110	
65 Cu	99.41 ug/l	0.52	100.00	90 - 110	
66 Zn	101.50 ug/l	1.04	100.00	90 - 110	
75 As	99.15 ug/l	1.09	100.00	90 - 110	
78 Sé	99.79 ug/l	0.71	100.00	90 - 110	
78 Se	100.20 ug/l	1.67	100.00	90 - 110	
88 Sr	98.23 ug/l	1.15	100.00	90 - 110	
88 Sr	97.55 ug/l	0.36	100.00	90 - 110	
95 Mo	99.68 ug/l	1.27	100.00	90 - 110	
106 (Cd)	----- ug/l	-----	100.00	90 - 110	
107 Ag	51.17 ug/l	1.02	50.00	90 - 110	
108 (Cd)	----- ug/l	-----	100.00	90 - 110	
111 Cd	99.11 ug/l	0.54	100.00	90 - 110	
118 Sn	48.25 ug/l	5.45	50.00	90 - 110	
118 Sn	47.94 ug/l	8.36	50.00	90 - 110	
118 Sn	50.31 ug/l	5.64	50.00	90 - 110	
121 Sb	102.00 ug/l	1.63	100.00	90 - 110	
137 Ba	98.36 ug/l	0.60	100.00	90 - 110	
205 Tl	98.39 ug/l	0.49	100.00	90 - 110	
206 (Pb)	----- ug/l	-----	100.00	90 - 110	
207 (Pb)	----- ug/l	-----	100.00	90 - 110	
208 Pb	99.70 ug/l	0.09	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42030.20	5.53	-41328.95	101.7	70 - 120	IS Fail
45 Sc	3002840.00	1.08	3008024.30	99.8	70 - 120	
45 Sc	417571.03	0.15	423303.94	98.6	70 - 120	
45 Sc	8771717.00	1.09	8607281.00	101.9	70 - 120	
72 Ge	784054.69	1.30	774468.63	101.2	70 - 120	
72 Ge	283383.13	0.95	282128.91	100.4	70 - 120	
72 Ge	1906694.80	0.29	1882554.90	101.3	70 - 120	
115 In	5475908.00	1.09	5556751.00	98.5	70 - 120	
115 In	2925404.50	1.07	3029632.80	96.6	70 - 120	
115 In	12051751.00	0.51	12097256.00	99.6	70 - 120	
159 Tb	16249860.00	0.32	16269544.00	99.9	70 - 120	
165 Ho	15777454.00	0.86	15819307.00	99.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\011_CCB.D\011_CCB.D#
 Date Acquired: Jul 23 2012 11:58 am
 Operator: NBS
 Sample Name: ICB 120723
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCB
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	----- ug/l	-----	#####	
9 Be	0.01 ug/l	62.17	0.12	
11 B	-0.06 ug/l	103.17	15.00	
23 Na	-8.87 ug/l	28.81	77.10	
24 Mg	-0.02 ug/l	266.60	7.50	
27 Al	0.35 ug/l	64.01	3.96	
39 K	2.17 ug/l	108.79	19.20	
44 Ca	-7.98 ug/l	38.97	90.00	
47 Ti	0.00 ug/l	285.52	0.78	
51 V	0.01 ug/l	77.78	0.21	
52 Cr	-0.02 ug/l	56.40	0.12	
55 Mn	-0.01 ug/l	30.35	0.18	
56 Fe	0.09 ug/l	39.91	40.80	
59 Co	0.01 ug/l	50.79	0.09	
60 Ni	0.00 ug/l	335.93	0.48	
63 Cu	-0.02 ug/l	3.48	0.39	
65 Cu	-0.01 ug/l	79.37	0.39	
66 Zn	0.01 ug/l	415.60	6.90	
75 As	0.01 ug/l	79.94	0.27	
78 Se	0.01 ug/l	150.15	0.30	
78 Se	0.08 ug/l	243.02	0.30	
88 Sr	0.00 ug/l	251.58	0.03	
88 Sr	0.00 ug/l	18.53	0.03	
95 Mo	0.05 ug/l	9.94	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	100.46	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.01 ug/l	54.35	0.06	
118 Sn	0.02 ug/l	75.03	#####	
118 Sn	0.02 ug/l	36.24	#####	
118 Sn	0.02 ug/l	34.99	0.30	
121 Sb	0.03 ug/l	9.49	0.03	
137 Ba	0.00 ug/l	110.58	0.12	
205 Tl	0.01 ug/l	34.92	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.01 ug/l	13.26	0.33	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42072.89	9.05	-41328.95	101.8	70 - 120	IS Fai	
45 Sc	3095275.50	0.67	3008024.30	102.9	70 - 120		
45 Sc	425403.59	1.36	423303.94	100.5	70 - 120		
45 Sc	8639370.00	1.70	8607281.00	100.4	70 - 120		
72 Ge	799887.75	0.92	774468.63	103.3	70 - 120		
72 Ge	283411.25	0.73	282128.91	100.5	70 - 120		
72 Ge	1897265.50	1.53	1882554.90	100.8	70 - 120		
115 In	5586231.50	0.97	5556751.00	100.5	70 - 120		
115 In	3015473.30	1.15	3029632.80	99.5	70 - 120		
115 In	12146847.00	1.16	12097256.00	100.4	70 - 120		
159 Tb	16155302.00	0.85	16269544.00	99.3	70 - 120		
165 Ho	15737558.00	0.71	15819307.00	99.5	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\012_CCV.D\012_CCV.D#
 Date Acquired: Jul 23 2012 12:05 pm
 Operator: NBS
 Sample Name: CCV 120723
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCV
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD (%)	Expected	QC Range (%)	Flag
7 (Li)	----- ug/l	-----	50.00	90 - 110	
9 Be	49.60 ug/l	0.79	50.00	90 - 110	
11 B	51.10 ug/l	0.98	50.00	90 - 110	
23 Na	1238.00 ug/l	0.52	1250.00	90 - 110	
24 Mg	2526.00 ug/l	0.49	2500.00	90 - 110	
27 Al	990.40 ug/l	1.09	1000.00	90 - 110	
39 K	995.20 ug/l	0.67	1000.00	90 - 110	
44 Ca	2466.00 ug/l	0.42	2500.00	90 - 110	
47 Ti	48.94 ug/l	2.27	50.00	90 - 110	
51 V	49.00 ug/l	0.21	50.00	90 - 110	
52 Cr	49.04 ug/l	0.15	50.00	90 - 110	
55 Mn	48.94 ug/l	0.22	50.00	90 - 110	
56 Fe	993.80 ug/l	0.50	1000.00	90 - 110	
59 Co	49.21 ug/l	0.92	50.00	90 - 110	
60 Ni	49.66 ug/l	0.93	50.00	90 - 110	
63 Cu	49.23 ug/l	0.47	50.00	90 - 110	
65 Cu	48.96 ug/l	0.26	50.00	90 - 110	
66 Zn	49.71 ug/l	0.73	50.00	90 - 110	
75 As	49.67 ug/l	0.20	50.00	90 - 110	
78 Se	50.01 ug/l	1.21	50.00	90 - 110	
78 Se	49.30 ug/l	1.29	50.00	90 - 110	
88 Sr	50.00 ug/l	0.67	50.00	90 - 110	
88 Sr	49.73 ug/l	0.36	50.00	90 - 110	
95 Mo	49.04 ug/l	0.81	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.88 ug/l	1.17	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	49.56 ug/l	1.10	50.00	90 - 110	
118 Sn	49.77 ug/l	1.17	--- #####	--- #####	
118 Sn	49.48 ug/l	0.73	--- #####	--- #####	
118 Sn	49.50 ug/l	0.78	50.00	90 - 110	
121 Sb	52.78 ug/l	0.89	50.00	90 - 110	
137 Ba	49.50 ug/l	0.92	50.00	90 - 110	
205 Tl	51.14 ug/l	0.85	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	52.39 ug/l	0.44	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD (%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-36962.72	9.13	-41328.95	89.4	70 - 120	IS Fail
45 Sc	3048428.00	0.52	3008024.30	101.3	70 - 120	
45 Sc	425742.41	0.55	423303.94	100.6	70 - 120	
45 Sc	8837992.00	0.79	8607281.00	102.7	70 - 120	
72 Ge	786063.00	1.03	774468.63	101.5	70 - 120	
72 Ge	283188.31	1.08	282128.91	100.4	70 - 120	
72 Ge	1919384.60	0.76	1882554.90	102.0	70 - 120	
115 In	5483121.50	0.63	5556751.00	98.7	70 - 120	
115 In	2961335.00	0.42	3029632.80	97.7	70 - 120	
115 In	12216251.00	0.54	12097256.00	101.0	70 - 120	
159 Tb	16140742.00	0.69	16269544.00	99.2	70 - 120	
165 Ho	15761536.00	0.35	15819307.00	99.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\013_CCB.D\013_CCB.D#
 Date Acquired: Jul 23 2012 12:12 pm
 Operator: NBS
 Sample Name: CCB 120723
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCB
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD (%)	High Limit	Flag
7 (Li)	----- ug/l	-----	#####	
9 Be	0.01 ug/l	28.98	0.12	
11 B	-0.01 ug/l	2028.40	15.00	
23 Na	-9.93 ug/l	20.37	77.10	
24 Mg	0.41 ug/l	44.14	7.50	
27 Al	0.58 ug/l	23.47	3.96	
39 K	2.52 ug/l	104.72	19.20	
44 Ca	-7.69 ug/l	34.34	90.00	
47 Ti	0.02 ug/l	43.51	0.78	
51 V	0.01 ug/l	46.98	0.21	
52 Cr	-0.02 ug/l	32.90	0.12	
55 Mn	-0.01 ug/l	25.20	0.18	
56 Fe	0.13 ug/l	28.25	40.80	
59 Co	0.02 ug/l	14.80	0.09	
60 Ni	-0.01 ug/l	143.54	0.48	
63 Cu	-0.02 ug/l	29.44	0.39	
65 Cu	-0.02 ug/l	45.72	0.39	
66 Zn	0.03 ug/l	109.32	6.90	
75 As	0.00 ug/l	13.81	0.27	
78 Se	0.00 ug/l	1935.10	0.30	
78 Se	0.36 ug/l	43.44	0.30	Fail
88 Sr	0.02 ug/l	61.41	0.03	
88 Sr	0.01 ug/l	24.52	0.03	
95 Mo	0.08 ug/l	10.75	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	33.45	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.01 ug/l	112.87	0.06	
118 Sn	0.08 ug/l	13.90	#####	
118 Sn	0.08 ug/l	11.98	#####	
118 Sn	0.04 ug/l	14.86	0.30	
121 Sb	0.09 ug/l	3.60	0.03	Fail
137 Ba	0.01 ug/l	23.15	0.12	
205 Tl	0.01 ug/l	16.07	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.01 ug/l	14.05	0.33	

ISTD Elements

Element	CPS Mean	RSD (%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-41365.11	4.11	-41328.95	100.1	70 - 120	IS Fail
45 Sc	3109463.00	0.74	3008024.30	103.4	70 - 120	
45 Sc	436584.66	0.71	423303.94	103.1	70 - 120	
45 Sc	8702714.00	0.34	8607281.00	101.1	70 - 120	
72 Ge	794512.25	1.02	774468.63	102.6	70 - 120	
72 Ge	289162.22	1.20	282128.91	102.5	70 - 120	
72 Ge	1910565.90	0.18	1882554.90	101.5	70 - 120	
115 In	5651735.50	0.41	5556751.00	101.7	70 - 120	
115 In	3029258.30	0.13	3029632.80	100.0	70 - 120	
115 In	12209930.00	0.36	12097256.00	100.9	70 - 120	
159 Tb	16410115.00	0.53	16269544.00	100.9	70 - 120	
165 Ho	15792125.00	0.38	15819307.00	99.8	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\014SMPL.D\014SMPL.D#
 Date Acquired: Jul 23 2012 12:18 pm
 Operator: NBS
 Sample Name: ICSA 120723
 Misc Info:
 Vial Number: 2102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.00
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	----- ug/l	#VALUE!	-----	0	
9 Be	0.01 ug/l	0.01	16.22	1000	
11 B	1.24 ug/l	1.24	1.37	1000	
23 Na	89610.00 ug/l	89610.00	0.85	25000	>Cal
24 Mg	89070.00 ug/l	89070.00	0.41	50000	>Cal
27 Al	88750.00 ug/l	88750.00	0.72	20000	>Cal
39 K	87880.00 ug/l	87880.00	0.71	20000	>Cal
44 Ca	92120.00 ug/l	92120.00	0.78	50000	>Cal
47 Ti	1718.00 ug/l	1718.00	0.37	1000	>Cal
51 V	0.10 ug/l	0.10	8.87	1000	
52 Cr	1.58 ug/l	1.58	15.00	1000	
55 Mn	5.76 ug/l	5.76	1.34	1000	
56 Fe	90820.00 ug/l	90820.00	0.70	20000	>Cal
59 Co	1.94 ug/l	1.94	1.83	1000	
60 Ni	1.97 ug/l	1.97	2.48	1000	
63 Cu	0.75 ug/l	0.75	1.21	1000	
65 Cu	0.79 ug/l	0.79	3.08	1000	
66 Zn	1.40 ug/l	1.40	1.13	1000	
75 As	0.28 ug/l	0.28	2.03	1000	
78 Se	0.13 ug/l	0.13	8.50	1000	
78 Se	0.77 ug/l	0.77	9.40	1000	
88 Sr	1.32 ug/l	1.32	5.56	1000	
88 Sr	1.37 ug/l	1.37	1.25	1000	
95 Mo	1875.00 ug/l	1875.00	1.20	1000	>Cal
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.07 ug/l	0.07	5.89	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.88 ug/l	0.88	1.42	1000	
118 Sn	0.21 ug/l	0.21	1.97	#####	
118 Sn	0.22 ug/l	0.22	18.96	#####	
118 Sn	0.23 ug/l	0.23	1.31	1000	
121 Sb	1.18 ug/l	1.18	1.23	1000	
137 Ba	2.58 ug/l	2.58	5.35	1000	
205 Tl	0.08 ug/l	0.08	2.29	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.41 ug/l	0.41	1.41	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37598.05	8.88	4.1328.95	91.0	70 - 120	IS Fai	
45 Sc	3054391.50	0.51	3008024.30	101.5	70 - 120		
45 Sc	436433.34	0.64	423303.94	103.1	70 - 120		
45 Sc	8890298.00	0.21	8607281.00	103.3	70 - 120		
72 Ge	769231.75	0.38	774468.63	99.3	70 - 120		
72 Ge	281075.50	0.23	282128.91	99.6	70 - 120		
72 Ge	1923643.30	0.95	1882554.90	102.2	70 - 120		
115 In	5221821.50	1.14	5556751.00	94.0	70 - 120		
115 In	2776903.00	0.79	3029632.80	91.7	70 - 120		
115 In	11448044.00	0.61	12097256.00	94.6	70 - 120		
159 Tb	16053537.00	0.92	16269544.00	98.7	70 - 120		
165 Ho	15595900.00	0.15	15819307.00	98.6	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

8 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

ICCS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\015ICSB.D\015ICSB.D#
 Date Acquired: Jul 23 2012 12:25 pm
 Acq. Method: 62A0723A.M
 Operator: NBS
 Sample Name: ICSAB 120723
 Misc Info:
 Vial Number: 2103
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal. Update: Jul 23 2012 11:42 am
 Sample Type: ICSAB
 Dilution Factor: 1.00

Data Results:
Analytes: Pass
ISTD: Fail

QC Elements

Element	IS	Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
7 (Li)	---	3	-----	-----	-----	---	-----	-	-
9 Be	45	3	-----	241.10	0.75	250	96.4	80 - 120	-
11 B	45	3	-----	0.86	13.58	---	-----	-	-
23 Na	45	2	90140.00	1.67	---	---	-----	-	-
24 Mg	45	2	89040.00	1.39	---	---	-----	-	-
27 Al	45	2	88440.00	0.98	---	---	-----	-	-
39 K	45	2	88130.00	1.12	---	---	-----	-	-
44 Ca	45	2	91870.00	1.53	---	---	-----	-	-
47 Ti	45	2	1696.00	1.02	2000	84.8	80 - 120	-	-
51 V	45	2	250.80	1.85	250	100.3	80 - 120	-	-
52 Cr	45	2	238.10	1.41	250	95.2	80 - 120	-	-
55 Mn	45	2	243.80	1.56	250	97.5	80 - 120	-	-
56 Fe	45	2	89920.00	1.53	---	---	-----	-	-
59 Co	45	2	212.60	1.90	250	85.0	80 - 120	-	-
60 Ni	45	2	449.60	1.55	500	89.9	80 - 120	-	-
63 Cu	45	2	219.60	1.42	250	87.8	80 - 120	-	-
65 Cu	45	2	219.10	1.07	250	87.6	80 - 120	-	-
66 Zn	115	2	488.00	0.51	500	97.6	80 - 120	-	-
75 As	115	2	263.10	0.67	250	105.2	80 - 120	-	-
78 Se	115	1	254.90	1.16	250	102.0	80 - 120	-	-
78 Se	115	2	253.80	0.63	250	101.5	80 - 120	-	-
88 Sr	115	2	1.28	2.80	---	---	-----	-	-
88 Sr	115	3	1.41	0.61	---	---	-----	-	-
95 Mo	115	3	2133.00	1.20	2000	106.7	80 - 120	-	-
106 (Cd)	---	3	-----	-----	---	---	-----	-	-
107 Ag	115	3	479.00	7.77	500	95.8	80 - 120	-	-
108 (Cd)	---	3	-----	-----	---	---	-----	-	-
111 Cd	115	3	450.60	0.21	500	90.1	80 - 120	-	-
118 Sn	115	1	0.21	7.95	---	---	-----	-	-
118 Sn	115	2	0.22	9.45	---	---	-----	-	-
118 Sn	115	3	0.23	3.94	---	---	-----	-	-
121 Sb	115	3	249.30	1.10	250	99.7	80 - 120	-	-
137 Ba	115	3	241.40	0.52	250	96.6	80 - 120	-	-
205 Tl	159	3	227.20	0.05	250	90.9	80 - 120	-	-
206 (Pb)	---	3	-----	-----	---	---	-----	-	-
207 (Pb)	---	3	-----	-----	---	---	-----	-	-
208 Pb	159	3	437.60	0.77	500	87.5	80 - 120	-	-

ISTD Elements

Element	Tune	CPS	Mean	RSD(%)	Ref	Value	Rec(%)	QC Range(%)	Flag
6 Li	3	-35443	14.51	-	-41329	85.8	70 - 120	IS Fail	
45 Sc	1	3173175	2.09	-	3008024	105.5	70 - 120		
45 Sc	2	445878	1.47	-	423304	105.3	70 - 120		
45 Sc	3	8959869	1.06	-	8607281	104.1	70 - 120		
72 Ge	1	787580	1.18	-	774469	101.7	70 - 120		
72 Ge	2	286166	0.66	-	282129	101.4	70 - 120		
72 Ge	3	1957866	0.62	-	1882555	104.0	70 - 120		
115 In	1	5428667	1.26	-	5556751	97.7	70 - 120		
115 In	2	2857644	0.53	-	3029633	94.3	70 - 120		
115 In	3	11548093	0.63	-	12097256	95.5	70 - 120		
159 Tb	3	15976363	0.50	-	16269544	98.2	70 - 120		
165 Ho	3	15533992	0.96	-	15819307	98.2	70 - 120		

Tune File# 1 c:\icpcchem\1\7500\h2_hmi.u
 Tune File# 2 c:\icpcchem\1\7500\he_hmi.u
 Tune File# 3 c:\icpcchem\1\7500\ng_hmi.u

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\024_CCV.D\024_CCV.D#
 Date Acquired: Jul 23 2012 01:32 pm
 Operator: NBS
 Sample Name: CCV 120723
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCV
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	----- ug/l	-----	50.00	90 - 110	
9 Be	49.44 ug/l	0.67	50.00	90 - 110	
11 B	49.03 ug/l	0.99	50.00	90 - 110	
23 Na	1218.00 ug/l	2.36	1250.00	90 - 110	
24 Mg	2498.00 ug/l	1.95	2500.00	90 - 110	
27 Al	977.70 ug/l	2.12	1000.00	90 - 110	
39 K	985.10 ug/l	2.42	1000.00	90 - 110	
44 Ca	2430.00 ug/l	1.38	2500.00	90 - 110	
47 Ti	47.89 ug/l	1.44	50.00	90 - 110	
51 V	48.79 ug/l	2.43	50.00	90 - 110	
52 Cr	49.04 ug/l	1.97	50.00	90 - 110	
55 Mn	48.80 ug/l	1.39	50.00	90 - 110	
56 Fe	973.20 ug/l	2.18	1000.00	90 - 110	
59 Co	48.59 ug/l	1.75	50.00	90 - 110	
60 Ni	48.69 ug/l	1.92	50.00	90 - 110	
63 Cu	48.38 ug/l	2.01	50.00	90 - 110	
65 Cu	48.32 ug/l	1.36	50.00	90 - 110	
66 Zn	50.19 ug/l	0.70	50.00	90 - 110	
75 As	49.86 ug/l	0.81	50.00	90 - 110	
78 Se	49.64 ug/l	1.15	50.00	90 - 110	
78 Se	50.19 ug/l	1.35	50.00	90 - 110	
88 Sr	50.53 ug/l	0.83	50.00	90 - 110	
88 Sr	50.45 ug/l	0.55	50.00	90 - 110	
95 Mo	50.00 ug/l	0.20	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.84 ug/l	0.45	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	49.60 ug/l	0.95	50.00	90 - 110	
118 Sn	49.74 ug/l	1.06	---	##### - #####	
118 Sn	49.48 ug/l	1.45	---	##### - #####	
118 Sn	49.65 ug/l	0.60	50.00	90 - 110	
121 Sb	53.03 ug/l	0.38	50.00	90 - 110	
137 Ba	49.68 ug/l	1.02	50.00	90 - 110	
205 Tl	50.98 ug/l	0.55	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	51.97 ug/l	0.08	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37208.29	23.54	-41328.95	90.0	70 - 120	IS Fail
45 Sc	3207763.50	0.47	3008024.30	106.6	70 - 120	
45 Sc	451396.47	1.87	423303.94	106.6	70 - 120	
45 Sc	9114044.00	0.70	8607281.00	105.9	70 - 120	
72 Ge	820047.81	0.42	774468.63	105.9	70 - 120	
72 Ge	296744.84	1.32	282128.91	105.2	70 - 120	
72 Ge	1965454.80	0.50	1882554.90	104.4	70 - 120	
115 In	5736711.50	0.79	5556751.00	103.2	70 - 120	
115 In	3076324.30	1.59	3029632.80	101.5	70 - 120	
115 In	12421903.00	0.30	12097256.00	102.7	70 - 120	
159 Tb	16660003.00	0.38	16269544.00	102.4	70 - 120	
165 Ho	16160466.00	0.80	15819307.00	102.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\026_CCB.D\026_CCB.D#
 Date Acquired: Jul 23 2012 01:45 pm
 Operator: NBS
 Sample Name: CCB 120723
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCB
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD (%)	High Limit	Flag
7 (Li)	----- ug/l	-----	#####	
9 Be	0.00 ug/l	68.10	0.12	
11 B	-1.57 ug/l	8.40	15.00	
23 Na	-19.39 ug/l	9.24	77.10	
24 Mg	-0.11 ug/l	32.48	7.50	
27 Al	0.65 ug/l	37.42	3.96	
39 K	-0.55 ug/l	422.51	19.20	
44 Ca	-13.14 ug/l	10.64	90.00	
47 Ti	0.05 ug/l	190.52	0.78	
51 V	0.00 ug/l	97.27	0.21	
52 Cr	-0.06 ug/l	3.59	0.12	
55 Mn	-0.02 ug/l	39.89	0.18	
56 Fe	0.03 ug/l	92.73	40.80	
59 Co	-0.01 ug/l	5.06	0.09	
60 Ni	-0.05 ug/l	20.94	0.48	
63 Cu	-0.03 ug/l	12.14	0.39	
65 Cu	-0.03 ug/l	27.56	0.39	
66 Zn	0.01 ug/l	522.05	6.90	
75 As	0.00 ug/l	201.72	0.27	
78 Se	-0.02 ug/l	28.35	0.30	
78 Se	0.30 ug/l	54.24	0.30	
88 Sr	0.01 ug/l	28.85	0.03	
88 Sr	0.00 ug/l	46.66	0.03	
95 Mo	0.04 ug/l	11.71	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.01 ug/l	25.03	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.00 ug/l	126.59	0.06	
118 Sn	0.02 ug/l	23.26	#####	
118 Sn	0.01 ug/l	84.96	#####	
118 Sn	0.01 ug/l	36.38	0.30	
121 Sb	0.03 ug/l	13.44	0.03	Fail
137 Ba	0.01 ug/l	47.38	0.12	
205 Tl	0.01 ug/l	3.62	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.02 ug/l	7.77	0.33	

ISTD Elements

Element	CPS	Mean	RSD (%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-46601.30	1.93	-41328.95	112.8	70 - 120	IS Fail	
45 Sc	3258366.00	1.08	3008024.30	108.3	70 - 120		
45 Sc	452200.25	0.37	423303.94	106.8	70 - 120		
45 Sc	8993459.00	0.85	8607281.00	104.5	70 - 120		
72 Ge	834886.63	1.35	774468.63	107.8	70 - 120		
72 Ge	300371.97	0.87	282128.91	106.5	70 - 120		
72 Ge	1964668.50	0.86	1882554.90	104.4	70 - 120		
115 In	5902867.00	0.62	5556751.00	106.2	70 - 120		
115 In	3136632.50	0.75	3029632.80	103.5	70 - 120		
115 In	12490374.00	0.82	12097256.00	103.2	70 - 120		
159 Tb	16903932.00	1.12	16269544.00	103.9	70 - 120		
165 Ho	16315825.00	1.13	15819307.00	103.1	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\038_CCV.D\038_CCV.D#
 Date Acquired: Jul 23 2012 03:07 pm
 Operator: NBS
 Sample Name: CCV 120723
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCV
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD (%)	Expected	QC Range (%)	Flag
7 (Li)	----- ug/l	-----	50.00	90 - 110	
9 Be	50.82 ug/l	0.70	50.00	90 - 110	
11 B	60.80 ug/l	0.41	50.00	90 - 110	Fail
23 Na	1289.00 ug/l	0.40	1250.00	90 - 110	
24 Mg	2570.00 ug/l	0.63	2500.00	90 - 110	
27 Al	1010.00 ug/l	0.91	1000.00	90 - 110	
39 K	1010.00 ug/l	0.97	1000.00	90 - 110	
44 Ca	2527.00 ug/l	0.75	2500.00	90 - 110	
47 Ti	48.23 ug/l	2.50	50.00	90 - 110	
51 V	48.21 ug/l	1.09	50.00	90 - 110	
52 Cr	47.74 ug/l	1.05	50.00	90 - 110	
55 Mn	48.54 ug/l	0.37	50.00	90 - 110	
56 Fe	970.00 ug/l	0.78	1000.00	90 - 110	
59 Co	47.62 ug/l	0.81	50.00	90 - 110	
60 Ni	47.79 ug/l	0.59	50.00	90 - 110	
63 Cu	47.35 ug/l	1.79	50.00	90 - 110	
65 Cu	47.08 ug/l	0.91	50.00	90 - 110	
66 Zn	51.38 ug/l	0.35	50.00	90 - 110	
75 As	51.04 ug/l	0.81	50.00	90 - 110	
78 Se	50.77 ug/l	0.44	50.00	90 - 110	
78 Se	51.66 ug/l	0.32	50.00	90 - 110	
88 Sr	51.25 ug/l	1.09	50.00	90 - 110	
88 Sr	50.81 ug/l	1.01	50.00	90 - 110	
95 Mo	50.10 ug/l	0.93	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.99 ug/l	1.82	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	49.92 ug/l	1.71	50.00	90 - 110	
118 Sn	49.95 ug/l	0.31	---	##### - #####	
118 Sn	49.60 ug/l	0.56	---	##### - #####	
118 Sn	50.19 ug/l	1.41	50.00	90 - 110	
121 Sb	53.47 ug/l	2.63	50.00	90 - 110	
137 Ba	49.86 ug/l	1.62	50.00	90 - 110	
205 Tl	50.30 ug/l	0.77	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	51.71 ug/l	0.38	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD (%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-46384.73	10.88	-41328.95	112.2	70 - 120	IS Fail
45 Sc	3148572.80	0.41	3008024.30	104.7	70 - 120	
45 Sc	455889.47	1.12	423303.94	107.7	70 - 120	
45 Sc	9181851.00	0.79	8607281.00	106.7	70 - 120	
72 Ge	809349.19	0.46	774468.63	104.5	70 - 120	
72 Ge	291443.75	0.37	282128.91	103.3	70 - 120	
72 Ge	1986232.80	0.29	1882554.90	105.5	70 - 120	
115 In	5566992.00	0.59	5556751.00	100.2	70 - 120	
115 In	2998159.00	0.95	3029632.80	99.0	70 - 120	
115 In	12443523.00	1.27	12097256.00	102.9	70 - 120	
159 Tb	16734999.00	0.75	16269544.00	102.9	70 - 120	
165 Ho	16223907.00	0.28	15819307.00	102.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\040_CCB.D\040_CCB.D#
 Date Acquired: Jul 23 2012 03:20 pm
 Operator: NBS
 Sample Name: CCB 120723
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCB
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	----- ug/l	-----	#####	
9 Be	0.00 ug/l	628.28	0.12	
11 B	5.64 ug/l	2.47	15.00	
23 Na	6.28 ug/l	27.52	77.10	
24 Mg	0.40 ug/l	37.54	7.50	
27 Al	1.14 ug/l	18.54	3.96	
39 K	8.76 ug/l	45.49	19.20	
44 Ca	-12.54 ug/l	13.15	90.00	
47 Ti	0.02 ug/l	59.79	0.78	
51 V	0.01 ug/l	43.11	0.21	
52 Cr	-0.06 ug/l	3.00	0.12	
55 Mn	-0.03 ug/l	20.84	0.18	
56 Fe	0.03 ug/l	109.87	40.80	
59 Co	-0.01 ug/l	52.61	0.09	
60 Ni	-0.05 ug/l	20.44	0.48	
63 Cu	-0.03 ug/l	13.37	0.39	
65 Cu	-0.02 ug/l	31.00	0.39	
66 Zn	0.05 ug/l	67.78	6.90	
75 As	0.00 ug/l	140.00	0.27	
78 Se	-0.02 ug/l	104.66	0.30	
78 Se	0.46 ug/l	14.69	0.30	Fail
88 Sr	0.02 ug/l	51.01	0.03	
88 Sr	0.01 ug/l	6.84	0.03	
95 Mo	0.03 ug/l	27.08	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	53.78	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.01 ug/l	63.57	0.06	
118 Sn	0.01 ug/l	44.20	#####	
118 Sn	0.02 ug/l	55.29	#####	
118 Sn	0.01 ug/l	8.30	0.30	
121 Sb	0.03 ug/l	16.15	0.03	Fail
137 Ba	0.01 ug/l	76.73	0.12	
205 Tl	0.01 ug/l	6.79	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.02 ug/l	2.57	0.33	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-45872.62	15.67	41328.95	111.0	70 - 120	IS Fail	
45 Sc	3225425.30	0.94	3008024.30	107.2	70 - 120		
45 Sc	455256.84	0.90	423303.94	107.5	70 - 120		
45 Sc	9025179.00	0.84	8607281.00	104.9	70 - 120		
72 Ge	829819.56	0.95	774468.63	107.1	70 - 120		
72 Ge	294491.41	1.41	282128.91	104.4	70 - 120		
72 Ge	1986792.00	0.34	1882554.90	105.5	70 - 120		
115 In	5757836.50	0.31	5556751.00	103.6	70 - 120		
115 In	3079085.80	1.03	3029632.80	101.6	70 - 120		
115 In	12604958.00	0.38	12097256.00	104.2	70 - 120		
159 Tb	16666065.00	1.06	16269544.00	102.4	70 - 120		
165 Ho	16233445.00	0.44	15819307.00	102.6	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\052_CCV.D\052_CCV.D#
 Date Acquired: Jul 23 2012 04:40 pm
 Operator: NBS
 Sample Name: CCV 120723
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCV
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	----- ug/l	-----	50.00	90 - 110	
9 Be	50.78 ug/l	0.72	50.00	90 - 110	
11 B	57.71 ug/l	1.17	50.00	90 - 110	Fail
23 Na	1319.00 ug/l	0.48	1250.00	90 - 110	
24 Mg	2579.00 ug/l	0.37	2500.00	90 - 110	
27 Al	1018.00 ug/l	0.59	1000.00	90 - 110	
39 K	1016.00 ug/l	1.11	1000.00	90 - 110	
44 Ca	2500.00 ug/l	1.56	2500.00	90 - 110	
47 Ti	48.64 ug/l	0.92	50.00	90 - 110	
51 V	48.59 ug/l	0.64	50.00	90 - 110	
52 Cr	48.24 ug/l	0.21	50.00	90 - 110	
55 Mn	48.77 ug/l	0.21	50.00	90 - 110	
56 Fe	972.50 ug/l	0.68	1000.00	90 - 110	
59 Co	47.93 ug/l	0.27	50.00	90 - 110	
60 Ni	47.64 ug/l	0.88	50.00	90 - 110	
63 Cu	47.63 ug/l	0.34	50.00	90 - 110	
65 Cu	47.37 ug/l	1.13	50.00	90 - 110	
66 Zn	50.87 ug/l	0.96	50.00	90 - 110	
75 As	51.03 ug/l	1.07	50.00	90 - 110	
78 Se	49.43 ug/l	2.14	50.00	90 - 110	
78 Se	51.05 ug/l	1.97	50.00	90 - 110	
88 Sr	51.32 ug/l	0.95	50.00	90 - 110	
88 Sr	51.03 ug/l	0.80	50.00	90 - 110	
95 Mo	50.00 ug/l	1.43	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.94 ug/l	0.63	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	50.08 ug/l	1.04	50.00	90 - 110	
118 Sn	49.37 ug/l	0.94	----- ##### - #####		
118 Sn	49.51 ug/l	0.72	----- ##### - #####		
118 Sn	50.14 ug/l	1.28	50.00	90 - 110	
121 Sb	53.35 ug/l	0.58	50.00	90 - 110	
137 Ba	50.27 ug/l	0.22	50.00	90 - 110	
205 Tl	50.82 ug/l	0.84	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	51.63 ug/l	3.23	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-49375.14	10.43	-41328.95	119.5	70 - 120	IS Fail
45 Sc	3197318.50	0.40	3008024.30	106.3	70 - 120	
45 Sc	451381.13	0.89	423303.94	106.6	70 - 120	
45 Sc	9347351.00	0.03	8607281.00	108.6	70 - 120	
72 Ge	807632.94	0.59	774468.63	104.3	70 - 120	
72 Ge	289867.19	0.94	282128.91	102.7	70 - 120	
72 Ge	2018690.80	0.40	1882554.90	107.2	70 - 120	
115 In	5650102.00	1.15	5556751.00	101.7	70 - 120	
115 In	2986436.50	0.46	3029632.80	98.6	70 - 120	
115 In	12552098.00	0.50	12097256.00	103.8	70 - 120	
159 Tb	16845086.00	1.06	16269544.00	103.5	70 - 120	
165 Ho	16324465.00	0.84	15819307.00	103.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\054_CCB.D\054_CCB.D#
 Date Acquired: Jul 23 2012 04:54 pm
 Operator: NBS
 Sample Name: CCB 120723
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCB
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD (%)	High Limit	Flag
7 (Li)	----- ug/l	-----	#####	
9 Be	0.00 ug/l	199.13	0.12	
11 B	4.03 ug/l	4.69	15.00	
23 Na	6.83 ug/l	40.71	77.10	
24 Mg	0.78 ug/l	25.44	7.50	
27 Al	1.32 ug/l	3.80	3.96	
39 K	7.31 ug/l	34.59	19.20	
44 Ca	-13.21 ug/l	3.83	90.00	
47 Ti	0.03 ug/l	27.34	0.78	
51 V	0.01 ug/l	74.03	0.21	
52 Cr	-0.06 ug/l	2.79	0.12	
55 Mn	-0.02 ug/l	32.55	0.18	
56 Fe	0.00 ug/l	259.61	40.80	
59 Co	-0.01 ug/l	28.03	0.09	
60 Ni	-0.04 ug/l	29.06	0.48	
63 Cu	-0.03 ug/l	7.88	0.39	
65 Cu	-0.03 ug/l	5.38	0.39	
66 Zn	0.07 ug/l	56.30	6.90	
75 As	0.00 ug/l	372.43	0.27	
78 Se	-0.01 ug/l	50.33	0.30	
78 Se	0.39 ug/l	11.97	0.30	Fail
88 Sr	0.02 ug/l	27.82	0.03	
88 Sr	0.01 ug/l	13.58	0.03	
95 Mo	0.03 ug/l	3.90	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	163.44	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.01 ug/l	33.83	0.06	
118 Sn	0.01 ug/l	39.76	#####	
118 Sn	0.02 ug/l	95.39	#####	
118 Sn	0.01 ug/l	39.52	0.30	
121 Sb	0.03 ug/l	16.05	0.03	Fail
137 Ba	0.01 ug/l	26.62	0.12	
205 Tl	0.02 ug/l	6.98	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.02 ug/l	5.07	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-55410.57	4.37	41328.95	134.1	70 - 120	IS Fail
45 Sc	3202242.30	1.59	3008024.30	106.5	70 - 120	
45 Sc	466637.09	1.13	423303.94	110.2	70 - 120	
45 Sc	9634003.00	0.67	8607281.00	111.9	70 - 120	
72 Ge	827502.88	0.05	774468.63	106.8	70 - 120	
72 Ge	301976.69	0.47	282128.91	107.0	70 - 120	
72 Ge	2095323.50	0.14	1882554.90	111.3	70 - 120	
115 In	5732833.00	1.43	5556751.00	103.2	70 - 120	
115 In	3129113.00	1.25	3029632.80	103.3	70 - 120	
115 In	13193446.00	0.77	12097256.00	109.1	70 - 120	
159 Tb	17651998.00	0.73	16269544.00	108.5	70 - 120	
165 Ho	17105838.00	0.95	15819307.00	108.1	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\062_CCV.D\062_CCV.D#
 Date Acquired: Jul 23 2012 05:47 pm
 Operator: NBS
 Sample Name: CCV 120723
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCV
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 Li	----- ug/l	-----	50.00	90 - 110	
9 Be	50.92 ug/l	0.67	50.00	90 - 110	
11 B	54.04 ug/l	0.45	50.00	90 - 110	
23 Na	1269.00 ug/l	0.83	1250.00	90 - 110	
24 Mg	2563.00 ug/l	0.36	2500.00	90 - 110	
27 Al	981.20 ug/l	1.26	1000.00	90 - 110	
39 K	1002.00 ug/l	1.68	1000.00	90 - 110	
44 Ca	2461.00 ug/l	2.39	2500.00	90 - 110	
47 Ti	48.59 ug/l	4.35	50.00	90 - 110	
51 V	49.90 ug/l	1.30	50.00	90 - 110	
52 Cr	49.57 ug/l	1.38	50.00	90 - 110	
55 Mn	49.52 ug/l	0.96	50.00	90 - 110	
56 Fe	991.40 ug/l	0.41	1000.00	90 - 110	
59 Co	49.95 ug/l	1.16	50.00	90 - 110	
60 Ni	50.45 ug/l	1.58	50.00	90 - 110	
63 Cu	50.19 ug/l	1.56	50.00	90 - 110	
65 Cu	49.88 ug/l	0.81	50.00	90 - 110	
66 Zn	50.39 ug/l	0.82	50.00	90 - 110	
75 As	50.44 ug/l	1.03	50.00	90 - 110	
78 Se	49.94 ug/l	1.21	50.00	90 - 110	
78 Se	49.87 ug/l	1.74	50.00	90 - 110	
88 Sr	50.18 ug/l	0.42	50.00	90 - 110	
88 Sr	50.73 ug/l	0.76	50.00	90 - 110	
95 Mo	49.73 ug/l	0.32	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.90 ug/l	0.67	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	50.22 ug/l	0.62	50.00	90 - 110	
118 Sn	49.82 ug/l	0.46	----- #####	----- #####	
118 Sn	50.09 ug/l	1.43	----- #####	----- #####	
118 Sn	50.10 ug/l	0.89	50.00	90 - 110	
121 Sb	53.29 ug/l	0.30	50.00	90 - 110	
137 Ba	49.74 ug/l	0.89	50.00	90 - 110	
205 Tl	51.63 ug/l	0.28	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	50.72 ug/l	0.46	50.00	90 - 110	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-4042.45	12.88	-41328.95	98.3	70 - 120	IS Fail	
45 Sc	3216542.00	1.05	3008024.30	106.9	70 - 120		
45 Sc	444238.81	1.07	423303.94	104.9	70 - 120		
45 Sc	9740376.00	0.45	8607281.00	113.2	70 - 120		
72 Ge	833941.75	0.67	774468.63	107.7	70 - 120		
72 Ge	295284.78	0.72	282128.91	104.7	70 - 120		
72 Ge	2112553.50	0.79	1882554.90	112.2	70 - 120		
115 In	5888530.00	0.25	5556751.00	106.0	70 - 120		
115 In	3081768.50	0.46	3029632.80	101.7	70 - 120		
115 In	13309443.00	0.40	12097256.00	110.0	70 - 120		
159 Tb	17715054.00	0.62	16269544.00	108.9	70 - 120		
165 Ho	17254188.00	1.23	15819307.00	109.1	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\064_CCB.D\064_CCB.D#
 Date Acquired: Jul 23 2012 06:00 pm
 Operator: NBS
 Sample Name: CCB 120723
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: CCB
 Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD (%)	High Limit	Flag
7 (Li)	----- ug/l	-----	#####	
9 Be	0.00 ug/l	321.53	0.12	
11 B	2.12 ug/l	6.07	15.00	
23 Na	-7.66 ug/l	41.93	77.10	
24 Mg	-0.02 ug/l	983.32	7.50	
27 Al	1.36 ug/l	55.34	3.96	
39 K	-0.95 ug/l	354.85	19.20	
44 Ca	-13.11 ug/l	2.45	90.00	
47 Ti	0.02 ug/l	60.93	0.78	
51 V	0.01 ug/l	12.62	0.21	
52 Cr	-0.07 ug/l	11.31	0.12	
55 Mn	0.00 ug/l	362.83	0.18	
56 Fe	0.18 ug/l	15.08	40.80	
59 Co	-0.01 ug/l	12.02	0.09	
60 Ni	-0.04 ug/l	27.66	0.48	
63 Cu	-0.03 ug/l	13.27	0.39	
65 Cu	-0.04 ug/l	13.03	0.39	
66 Zn	0.09 ug/l	26.55	6.90	
75 As	0.01 ug/l	59.78	0.27	
78 Se	0.01 ug/l	48.08	0.30	
78 Se	0.26 ug/l	37.28	0.30	
88 Sr	0.01 ug/l	28.76	0.03	
88 Sr	0.01 ug/l	13.00	0.03	
95 Mo	0.03 ug/l	27.43	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	92.61	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.00 ug/l	62.99	0.06	
118 Sn	0.01 ug/l	62.50	#####	
118 Sn	0.03 ug/l	11.73	#####	
118 Sn	0.01 ug/l	57.13	0.30	
121 Sb	0.04 ug/l	1.58	0.03	Fail
137 Ba	0.01 ug/l	60.03	0.12	
205 Tl	0.02 ug/l	49.07	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.03 ug/l	4.20	0.33	

ISTD Elements

Element	CPS	Mean	RSD (%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-48085.53	6.82	-41328.95	116.3	70 - 120	IS Fail	
45 Sc	3293052.00	1.00	3008024.30	109.5	70 - 120		
45 Sc	458308.94	1.18	423303.94	108.3	70 - 120		
45 Sc	9818342.00	0.62	8607281.00	114.1	70 - 120		
72 Ge	837034.63	0.76	774468.63	108.1	70 - 120		
72 Ge	301523.75	0.56	282128.91	106.9	70 - 120		
72 Ge	2134747.00	0.51	1882554.90	113.4	70 - 120		
115 In	5989938.50	0.50	5556751.00	107.8	70 - 120		
115 In	3163820.30	0.53	3029632.80	104.4	70 - 120		
115 In	13474706.00	0.46	12097256.00	111.4	70 - 120		
159 Tb	17918080.00	1.14	16269544.00	110.1	70 - 120		
165 Ho	17493212.00	1.50	15819307.00	110.6	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

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
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/23/12	07/23/12	#602D-120723A-AY65167

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\019SMPL.D\019SMPL.D#
 Date Acquired: Jul 23 2012 12:58 pm
 Operator: NBS
 Sample Name: 120723A-3015-BLK
 Misc Info: 120723A-3015
 Vial Number: 3101
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	----- ug/l	#VALUE!	-----	0	
9 Be	0.00 ug/l	0.00	101.03	1000	
11 B	-0.54 ug/l	-0.60	23.92	1000	
23 Na	-9.48 ug/l	-10.53	24.91	25000	
24 Mg	0.68 ug/l	0.75	15.39	50000	
27 Al	0.72 ug/l	0.80	27.58	20000	
39 K	3.46 ug/l	3.84	104.28	20000	
44 Ca	-9.56 ug/l	-10.62	23.29	50000	
47 Ti	0.11 ug/l	0.13	61.04	1000	
51 V	0.00 ug/l	0.00	187.34	1000	
52 Cr	0.09 ug/l	0.10	2.59	1000	
55 Mn	0.03 ug/l	0.04	24.16	1000	
56 Fe	2.25 ug/l	2.50	6.31	20000	
59 Co	0.25 ug/l	0.28	8.41	1000	
60 Ni	-0.03 ug/l	-0.03	21.25	1000	
63 Cu	0.06 ug/l	0.06	14.62	1000	
65 Cu	0.05 ug/l	0.05	41.40	1000	
66 Zn	0.25 ug/l	0.28	16.07	1000	
75 As	0.01 ug/l	0.01	13.09	1000	
78 Se	0.01 ug/l	0.01	54.14	1000	
78 Se	0.64 ug/l	0.71	8.48	1000	
88 Sr	0.00 ug/l	0.00	164.49	1000	
88 Sr	0.00 ug/l	0.00	197.18	1000	
95 Mo	0.23 ug/l	0.26	3.93	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.82 ug/l	0.91	7.30	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.04 ug/l	0.04	6.12	1000	
118 Sn	0.13 ug/l	0.14	7.71	#####	
118 Sn	0.13 ug/l	0.14	3.28	#####	
118 Sn	0.11 ug/l	0.12	9.34	1000	
121 Sb	0.13 ug/l	0.14	5.45	1000	
137 Ba	0.00 ug/l	0.00	121.47	1000	
205 Tl	0.08 ug/l	0.09	3.11	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	-0.02 ug/l	-0.03	3.12	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-41515.17	17.03	-41328.95	100.5	70 - 120	IS Fai	
45 Sc	3134014.50	1.22	3008024.30	104.2	70 - 120		
45 Sc	431622.16	0.76	423303.94	102.0	70 - 120		
45 Sc	9041910.00	1.00	8607281.00	105.0	70 - 120		
72 Ge	790204.25	0.87	774468.63	102.0	70 - 120		
72 Ge	281787.47	2.04	282128.91	99.9	70 - 120		
72 Ge	1936014.10	0.17	1882554.90	102.8	70 - 120		
115 In	5556259.00	0.49	5556751.00	100.0	70 - 120		
115 In	2981638.30	0.15	3029632.80	98.4	70 - 120		
115 In	12374886.00	0.94	12097256.00	102.3	70 - 120		
159 Tb	16686016.00	0.57	16269544.00	102.6	70 - 120		
165 Ho	16112874.00	0.15	15819307.00	101.9	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes:	Pass
ISTD:	Fail

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
6020	LEAD (PB) (DISSOLVED)	50.0	45.5	91.0	80-120	07/23/12	07/23/12	#602D-120723A-AY65167

Comments:

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\021SMPL.D\021SMPL.D#
 Date Acquired: Jul 23 2012 01:11 pm
 Operator: NBS
 Sample Name: 120723A-3015-LCS
 Misc Info: 120723A-3015
 Vial Number: 3103
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 Li	----- ug/l	#VALUE!	-----	0	
9 Be	7.49 ug/l	8.32	1.00	1000	
11 B	37.46 ug/l	41.62	1.36	1000	
23 Na	3667.00 ug/l	4074.04	1.15	25000	
24 Mg	3760.00 ug/l	4177.36	1.30	50000	
27 Al	307.00 ug/l	341.08	1.70	20000	
39 K	767.90 ug/l	853.14	1.74	20000	
44 Ca	3952.00 ug/l	4390.67	2.20	50000	
47 Ti	47.17 ug/l	52.41	2.99	1000	
51 V	39.18 ug/l	43.53	1.78	1000	
52 Cr	38.95 ug/l	43.27	1.71	1000	
55 Mn	39.16 ug/l	43.51	1.76	1000	
56 Fe	172.60 ug/l	191.76	1.33	20000	
59 Co	38.06 ug/l	42.28	1.55	1000	
60 Ni	38.05 ug/l	42.27	1.84	1000	
63 Cu	37.17 ug/l	41.30	1.89	1000	
65 Cu	37.09 ug/l	41.21	2.15	1000	
66 Zn	75.57 ug/l	83.96	0.44	1000	
75 As	36.26 ug/l	40.28	0.94	1000	
78 Se	33.81 ug/l	37.56	0.78	1000	
78 Se	34.37 ug/l	38.19	1.94	1000	
88 Sr	39.64 ug/l	44.04	0.91	1000	
88 Sr	39.14 ug/l	43.48	1.36	1000	
95 Mo	46.06 ug/l	51.17	1.69	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	17.93 ug/l	19.92	1.04	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	7.41 ug/l	8.23	1.74	1000	
118 Sn	47.18 ug/l	52.42	0.07	#####	
118 Sn	47.95 ug/l	53.27	1.12	#####	
118 Sn	47.76 ug/l	53.06	1.40	1000	
121 Sb	48.00 ug/l	53.33	1.91	1000	
137 Ba	38.21 ug/l	42.45	1.63	1000	
205 Tl	39.51 ug/l	43.90	0.49	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	40.96 ug/l	45.51	1.51	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42417.97	6.61	-41328.95	102.6	70 - 120	IS Fai
45 Sc	3132146.50	0.85	3008024.30	104.1	70 - 120	
45 Sc	438590.66	1.66	423303.94	103.6	70 - 120	
45 Sc	8973542.00	0.43	8607281.00	104.3	70 - 120	
72 Ge	781391.50	0.41	774468.63	100.9	70 - 120	
72 Ge	283396.16	0.60	282128.91	100.4	70 - 120	
72 Ge	1916729.60	0.53	1882554.90	101.8	70 - 120	
115 In	5655188.50	0.79	5556751.00	101.8	70 - 120	
115 In	2993471.00	0.53	3029632.80	98.8	70 - 120	
115 In	12415622.00	1.62	12097256.00	102.6	70 - 120	
159 Tb	16697993.00	0.82	16269544.00	102.6	70 - 120	
165 Ho	16175574.00	0.28	15819307.00	102.3	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
 ISTD: Fail

Matrix Spike Recoveries

METALS

APPL ID: 120723W-65167 MS - 169307

APPL Inc.

Sample ID: AY65167

908 North Temperance Avenue

Clovis, CA 93611

Client ID: ES084

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD Max	RPD Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample	
6020	LEAD (PB) (DISSOLVE	50.0	ND	50.4	49.8	101	99.6	1.2	20	80-120	07/23/12	07/23/12	07/23/12	07/23/12	169307	AY65167

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\049SMPL.D\049SMPL.D#
 Date Acquired: Jul 23 2012 04:20 pm
 Operator: NBS
 Sample Name: AY65167W16 MS
 Misc Info: 120723A-3015
 Vial Number: 3306
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 Li	----- ug/l	#VALUE!	-----	0	
9 Be	8.86 ug/l	9.84	0.70	1000	
11 B	79.70 ug/l	88.55	0.61	1000	
23 Na	283000.00 ug/l	314413.00	1.72	25000	>Cal
24 Mg	168700.00 ug/l	187425.70	1.84	50000	>Cal
27 Al	418.20 ug/l	464.62	1.97	20000	
39 K	7258.00 ug/l	8063.64	0.98	20000	
44 Ca	81770.00 ug/l	90846.47	0.71	50000	>Cal
47 Ti	48.16 ug/l	53.51	0.63	1000	
51 V	47.55 ug/l	52.83	0.53	1000	
52 Cr	55.02 ug/l	61.13	0.75	1000	
55 Mn	44.80 ug/l	49.77	0.80	1000	
56 Fe	200.10 ug/l	222.31	0.54	20000	
59 Co	43.55 ug/l	48.38	0.74	1000	
60 Ni	48.43 ug/l	53.81	1.26	1000	
63 Cu	40.31 ug/l	44.78	0.29	1000	
65 Cu	39.98 ug/l	44.42	1.07	1000	
66 Zn	96.59 ug/l	107.31	0.90	1000	
75 As	47.37 ug/l	52.63	0.88	1000	
78 Se	45.41 ug/l	50.45	0.62	1000	
78 Se	47.91 ug/l	53.23	1.95	1000	
88 Sr	1617.00 ug/l	1796.49	0.61	1000	>Cal
88 Sr	1730.00 ug/l	1922.03	2.08	1000	>Cal
95 Mo	50.17 ug/l	55.74	1.67	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	17.31 ug/l	19.23	1.57	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	8.87 ug/l	9.85	1.03	1000	
118 Sn	48.82 ug/l	54.24	0.40	#####	
118 Sn	48.75 ug/l	54.16	0.19	#####	
118 Sn	48.89 ug/l	54.32	0.77	1000	
121 Sb	50.04 ug/l	55.59	1.23	1000	
137 Ba	130.00 ug/l	144.43	2.25	1000	
205 Tl	43.53 ug/l	48.36	2.01	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	45.37 ug/l	50.41	0.94	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-61358.96	3.34	41328.95	148.5	70 - 120	IS Fai	
45 Sc	3206676.00	1.26	3008024.30	106.6	70 - 120		
45 Sc	460034.59	0.85	423303.94	108.7	70 - 120		
45 Sc	9721317.00	0.41	8607281.00	112.9	70 - 120		
72 Ge	771567.56	1.16	774468.63	99.6	70 - 120		
72 Ge	282708.31	1.19	282128.91	100.2	70 - 120		
72 Ge	2014232.30	0.52	1882554.90	107.0	70 - 120		
115 In	5328178.00	0.37	5556751.00	95.9	70 - 120		
115 In	2843909.50	0.99	3029632.80	93.9	70 - 120		
115 In	12323368.00	1.67	12097256.00	101.9	70 - 120		
159 Tb	16626624.00	1.19	16269544.00	102.2	70 - 120		
165 Ho	16164570.00	0.68	15819307.00	102.2	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\050SMPL.D\050SMPL.D#
 Date Acquired: Jul 23 2012 04:27 pm
 Operator: NBS
 Sample Name: AY65167W16 MSD
 Misc Info: 120723A-3015
 Vial Number: 3307
 Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
 Last Cal Update: Jul 23 2012 11:42 am
 Sample Type: Sample
 Prep Dil Factor: 1.11
 Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	----- ug/l	#VALUE!	-----	0	
9 Be	8.70 ug/l	9.67	1.65	1000	
11 B	80.59 ug/l	89.54	0.34	1000	
23 Na	274100.00 ug/l	304525.10	0.79	25000	>Cal
24 Mg	164700.00 ug/l	182981.70	1.62	50000	>Cal
27 Al	567.00 ug/l	629.94	0.68	20000	
39 K	7083.00 ug/l	7869.21	1.05	20000	
44 Ca	79410.00 ug/l	88224.51	0.98	50000	>Cal
47 Ti	49.91 ug/l	55.45	1.19	1000	
51 V	46.44 ug/l	51.59	0.88	1000	
52 Cr	54.02 ug/l	60.02	0.59	1000	
55 Mn	43.83 ug/l	48.70	0.62	1000	
56 Fe	228.50 ug/l	253.86	0.32	20000	
59 Co	42.29 ug/l	46.98	0.59	1000	
60 Ni	47.42 ug/l	52.68	1.37	1000	
63 Cu	39.56 ug/l	43.95	0.18	1000	
65 Cu	39.00 ug/l	43.33	0.83	1000	
66 Zn	95.84 ug/l	106.48	1.28	1000	
75 As	47.26 ug/l	52.51	0.82	1000	
78 Se	44.98 ug/l	49.97	0.22	1000	
78 Se	47.91 ug/l	53.23	2.40	1000	
88 Sr	1608.00 ug/l	1786.49	0.74	1000	>Cal
88 Sr	1728.00 ug/l	1919.81	1.21	1000	>Cal
95 Mo	49.14 ug/l	54.59	0.50	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	17.05 ug/l	18.94	0.78	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	8.69 ug/l	9.65	0.75	1000	
118 Sn	47.39 ug/l	52.65	1.17	#####	
118 Sn	47.05 ug/l	52.27	0.73	#####	
118 Sn	47.97 ug/l	53.29	0.48	1000	
121 Sb	48.92 ug/l	54.35	0.91	1000	
137 Ba	130.60 ug/l	145.10	0.66	1000	
205 Tl	43.44 ug/l	48.26	1.47	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	44.85 ug/l	49.83	0.81	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-59047.83	3.14	-41328.95	142.9	70 - 120	IS Fai
45 Sc	3231522.30	0.23	3008024.30	107.4	70 - 120	
45 Sc	471627.59	0.53	423303.94	111.4	70 - 120	
45 Sc	9682802.00	0.81	8607281.00	112.5	70 - 120	
72 Ge	783272.31	0.23	774468.63	101.1	70 - 120	
72 Ge	285220.81	1.48	282128.91	101.1	70 - 120	
72 Ge	2002381.10	0.81	1882554.90	106.4	70 - 120	
115 In	5388815.00	0.85	5556751.00	97.0	70 - 120	
115 In	2865976.00	0.98	3029632.80	94.6	70 - 120	
115 In	12228663.00	1.30	12097256.00	101.1	70 - 120	
159 Tb	16562327.00	0.73	16269544.00	101.8	70 - 120	
165 Ho	16049775.00	1.22	15819307.00	101.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

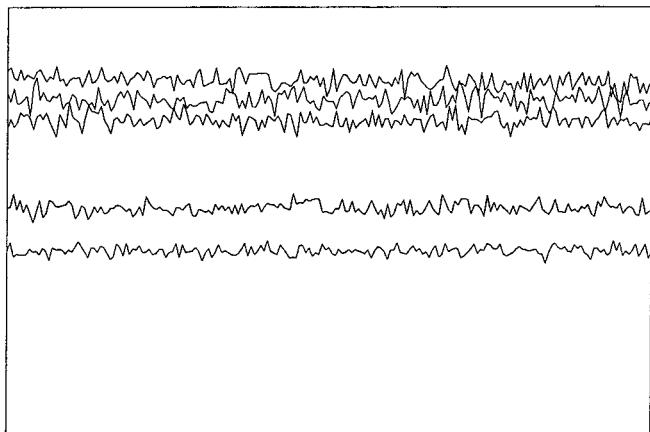
5 :Element Failures 0 :Max. Number of Failures Allowed
 1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

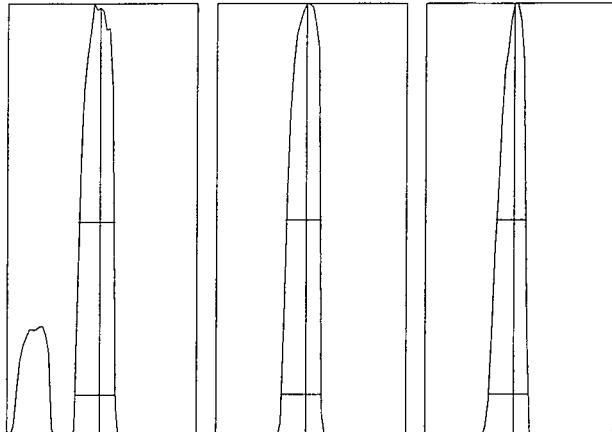
Tune Report

Tune File : NG_HMI.u
Comment : 120723



Integration Time: 0.1000 sec
Sampling Period: 0.7200 sec
n: 200
Oxide: 156/140 0.740%
Doubly Charged: 70/140 0.995%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	16367.0	16532.4	2.08	2.20
89	50,000	37552.0	36668.9	2.15	2.80
205	50,000	26129.0	26508.7	2.48	7.40
156/140	2	0.770%	0.719%	7.34	
70/140	2	0.962%	0.970%	5.65	
140	50,000	38464.0	39095.6	2.26	4.80
59	50,000	21370.0	21531.4	2.38	2.70



m/z: 7 89 205
Height: 16,163 37,021 26,702
Axis: 7.00 88.95 204.95
W-50%: 0.60 0.60 0.50
W-10%: 0.6500 0.6500 0.6500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Tune Report

Tune File : NG_HMI.u
Comment : 120723

Tuning Parameters

==Plasma Condition==

RF Power : 1600 W
RF Matching : 1.7 V
Smpl Depth : 8 mm
Torch-H : 0.2 mm
Torch-V : -0.2 mm
Carrier Gas : 0.5 L/min
Makeup Gas : 0.5 L/min
Optional Gas : --- %
Nebulizer Pump : 0.1 rps
Sample Pump : --- rps
S/C Temp : 2 degC

==Ion Lenses==

Extract 1 : 0 V
Extract 2 : -140 V
Omega Bias-ce : -24 V
Omega Lens-ce : -0.4 V
Cell Entrance : -30 V
QP Focus : 5 V
Cell Exit : -30 V
OctP RF : 180 V
OctP Bias : -6 V

==Q-Pole Parameters==

AMU Gain : 128
AMU Offset : 129
Axis Gain : 0.9999
Axis Offset : -0.05
QP Bias : -3 V

==Detector Parameters==

Discriminator : 8 mV
Analog HV : 1720 V
Pulse HV : 1350 V

==Reaction Cell==

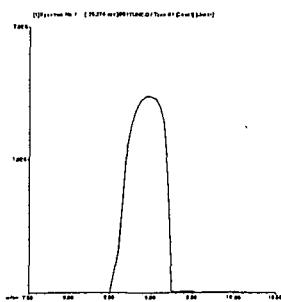
Reaction Mode : OFF
H2 Gas : 0 mL/min He Gas : 0 mL/min Optional Gas : --- %

200.8 QC Tune Report

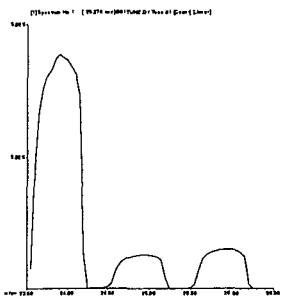
Data File: C:\ICPCHEM\1\DATA\12G23k00.B\001TUNE.D
 Date Acquired: Jul 23 2012 10:53 am
 Acq. Method: TN200_8.M
 Operator: NBS
 Sample Name: 100ppb Tune sol
 Misc Info:
 Vial Number: 1303
 Current Method: C:\ICPCHEM\1\METHODS\TN200_8.M

RSD (%)

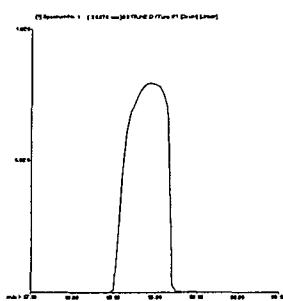
Element	CPS	Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
9 Be	789604	786311	783280	790871	795505	792052	0.90	5.00		
24 Mg	2414013	2388869	2415273	2402944	2433304	2429676	1.48	5.00		
59 Co	4416874	4413714	4443242	4412276	4404885	4410252	0.67	5.00		
115 In	22042886	22072398	22207138	21950680	22067872	21916340	0.77	5.00		
208 Pb	3431875	3417255	3453186	3434662	3446885	3407388	0.70	5.00		



9 Be
Mass Calib.
 Actual: 8.95
 Required: 8.90 - 9.10
 Flag:
Peak Width
 Actual: 0.60
 Required: 0.90
 Flag:



24 Mg
Mass Calib.
 Actual: 23.95
 Required: 23.90 - 24.10
 Flag:
Peak Width
 Actual: 0.60
 Required: 0.80
 Flag:



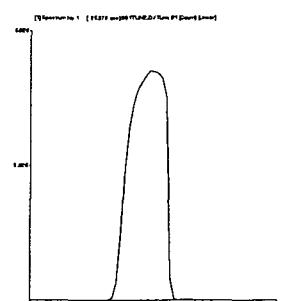
59 Co

Mass Calib.

Actual: 58.95
Required: 58.90 - 59.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:



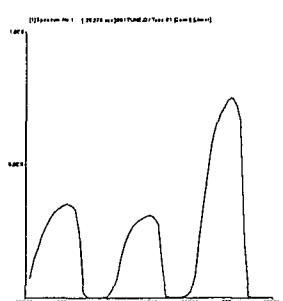
115 In

Mass Calib.

Actual: 115.00
Required: 114.90 - 115.10
Flag:

Peak Width

Actual: 0.55
Required: 0.90
Flag:



208 Pb

Mass Calib.

Actual: 207.95
Required: 207.90 - 208.10
Flag:

Peak Width

Actual: 0.55
Required: 0.80
Flag:

Tune Result: Pass

054 Metals Standards Log Book # 35 Page # 055

SOM 7/16/12
Gold Gold A
(R)

ICP-MS STANDARDS 6020/6020A/3015/3051A					
Today's Date: 07/16/12					
Expires: 07/23/12					
Prep 1% HNO3/1.0%HCL 20 mL HNO3 / 2000 mL DI Water Lot #L08023					07/17/12
20mL HCL / 2000mL DI Water Lot #51305					07/17/12
Expires: 07/23/12					
Internal Standard Mix: Prep 07/12/2012					
Standard 4					
Amount	STD	Manufacturer	Lot #	Standard 2	
50 uL	CCV-A	ABS STDS	012512-30308	07/23/12	
50 uL	CCV-B	ABS STDS	021312-30337	Amount STD	
50 uL	CCV-C	ABS STDS	012512-30307	500 uL Standard 4	
Prepared in 100 mL of 1% HNO3/1.0% HCL					07/17/12
Prepared in 50 mL of 1% HNO3/1.0% HCL					
ICP-MS ICV					
Amount	STD	QCS ICV A	CPI	07/23/12	
50 uL	QCS ICV B	CPI		11C184-30811	
50 uL	QCS ICV C	CPI		11C184-30812	
Prepared in 50 mL of 1% HNO3/1.0% HCL					07/16/12
ICSAB Prep:					
1mL	ICSA	CPI		07/23/12	
0.025mL	INT	O2SI		12E134	
Prepared in 5 mL of 1% HNO3/1.0% HCL					07/16/12
ICP-LDR					
Amount	STD	ABS STDS		07/23/12	
50 uL	CCV-A	ABS STDS		012512-30306	
50 uL	CCV-B	ABS STDS		021312-30337	
50 uL	CCV-C	ABS STDS		012512-30307	
Prepared in 10 mL of 1% HNO3/1.0% HCL					07/16/12

SOM 7/16/12

Ros 7/16/12

Hg WORKING STANDARD

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/16/12.....

SOM 7/17/12
Gold Gold A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A					
Today's Date: 07/17/12					
Expires: 07/24/12					
Prep 1% HNO3/1.0%HCL 20 mL HNO3 / 2000 mL DI Water Lot #L08023					07/17/12
20mL HCL / 2000mL DI Water Lot #51305					07/17/12
Expires: 07/24/12					
Internal Standard Mix: Prep 07/17/2012					
Standard 4					
Amount	STD	Manufacturer	Lot #	Standard 2	
50 uL	CCV-A	ABS STDS	012512-30308	07/24/12	
50 uL	CCV-B	ABS STDS	021312-30337	Amount STD	
50 uL	CCV-C	ABS STDS	012512-30307	500 uL Standard 4	
Prepared in 100 mL of 1% HNO3/1.0% HCL					07/17/12
Prepared in 50 mL of 1% HNO3/1.0% HCL					
ICP-MS ICV					
Amount	STD	QCS ICV A	CPI	07/24/12	
50 uL	QCS ICV B	CPI		11C184-30811	
50 uL	QCS ICV C	CPI		11C184-30812	
Prepared in 50 mL of 1% HNO3/1.0% HCL					07/17/12
ICSAB Prep:					
1mL	ICSA	CPI		07/24/12	
0.025mL	INT	O2SI		12E134	
Prepared in 5 mL of 1% HNO3/1.0% HCL					07/17/12
ICP-LDR					
Amount	STD	ABS STDS		07/24/12	
50 uL	CCV-A	ABS STDS		012512-30306	
50 uL	CCV-B	ABS STDS		021312-30337	
50 uL	CCV-C	ABS STDS		012512-30307	
Prepared in 10 mL of 1% HNO3/1.0% HCL					07/17/12

SOM 7/17/12

Internal Standard Concentration						
Amnt	STD	Element	Vendor	Lot#	Final Conc. In Std	Expires
500uL	1000 ug/mL	Li	CPI	10L079-27839	5000 ug/L	05/10/12
500uL	1000 ug/mL	In	CPI	10L155-28574	5000 ug/L	09/25/12
500uL	1000 ug/mL	Ho	CPI	10A107-28576	5000 ug/L	09/25/12
500uL	1000 ug/mL	Tb	CPI	11B054-28575	5000 ug/L	09/25/12
500uL	1000 ug/mL	Sc	o2si	1024073-28527	5000 ug/L	08/18/12
500uL	1000 ug/mL	Ge	Environmental Express	1116011-29381	5000 ug/L	02/08/13

Prep: 07/17/12 NBS	Prep in -	1%HNO3/1.0%HCL: Lot #L08023/51305	in 100mL
Expires: 08/16/12			

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NBS 07/23/12

NBS 07/23/12

6020/6020A

(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A					07/23/12		
Todays Date:							
Expires:	07/30/12						
Prep 1% HNO3/1.0%HCL							
20 mL HNO3 / 2000 mL DI Water							
Lot #L08023							
20mL HCL / 2000mL DI Water							
Lot #51305							
Expires:	07/30/12						
Internal Standard Mix: Prep 07/17/2012							
Standard 4							
Amount	STD	Manufacturer	Lot #				
50 uL	CCV-A	ABS STD'S	012512-30306				
50 uL	CCV-B	ABS STD'S	021312-30337				
50 uL	CCV-C	ABS STD'S	012512-30307				
Prepared in 100 mL of 1% HNO3/1.0% HCL					07/23/12		
Standard 3	07/30/12						
Amount	STD	Manufacturer	Lot #				
25 uL	CCV-A	ABS STD'S	012512-30306				
25 uL	CCV-B	ABS STD'S	021312-30337				
25 uL	CCV-C	ABS STD'S	012512-30307				
Prepared in 100 mL of 1% HNO3/1.0% HCL					07/23/12		
Intermediate-Sb	07/30/12						
100 uL of Sb STD (CPI 12A011-30288) In 10 mL of 1% HNO3/1.0% HCL							
ICV-Sb	07/30/12						
100 uL of Intermediate-Sb In 10 mL of 1% HNO3/1.0% HCL							
Standard 2	07/30/12						
Amount	STD	Standard 4					
500 uL		Standard 4					
Prepared in 50 mL of 1% HNO3/1.0% HCL					07/23/12		
ICP-MS ICV	07/30/12						
Amount	STD						
50 uL	QCS ICV A	CPI				11C184-30811	
50 uL	QCS ICV B	CPI				11C184-30812	
Prepared in 50 mL of 1% HNO3/1.0% HCL					07/23/12		
ICSA Prep:	07/30/12						
1 mL	ICSA	CPI				12E134	
Prepared in 5 mL of 1% HNO3/1.0% HCL					07/23/12		
ICSAB Prep:	07/30/12						
1mL	ICSA	CPI				12E134	
0.025mL	INT	O2SI				1032370-30265	
Prepared in 5 mL of 1% HNO3/1.0% HCL					07/23/12		
ICP-LDR	07/30/12						
Amount	STD						
50 uL	CCV-A	ABS STD'S				012512-30306	
50 uL	CCV-B	ABS STD'S				021312-30337	
50 uL	CCV-C	ABS STD'S				012512-30307	
Prepared in 10 mL of 1% HNO3/1.0% HCL					07/23/12		

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMT.	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMT.	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCl	EMD	51258	07/13/12	1mL	Al	CPI	11J015-30092	05/28/13
20 mL	HNO3	JT BAKER	L10023	07/12/12	1mL	Ca	CPI	11J031-29989	05/14/13
Prepared in 2000 mL DI Water					1mL	Mg	CPI	11K178-30093	05/28/13
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1030787-30616	05/17/13
AMT.	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 mL 1%HNO3/5%HCl				
0.5 mL	6010 LDL	ABSOLUTE	091409-25205	09/14/12	6010B/6010C ICSAB				
Prepared in 50 mL 1%HNO3/5%HCl					1mL	Al	CPI	11J015-30092	05/28/13
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	11J031-29989	05/14/13
1ML	CCV-A	ABSOLUTE	012512-30306	01/25/15	1mL	Mg	CPI	11K178-30093	05/28/13
1ML	CCV-B	ABSOLUTE	021312-30339	02/13/15	1mL	Fe	O2SI	1030787-30616	05/17/13
1ML	CCV-C	ABSOLUTE	012512-30307	01/25/15	0.5mL	INT SPECIAL MIX	O2SI	1032370-30265	02/01/13
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				
AMT.	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	12C184-30611	09/20/13
25mL	STD 3	Today	1 week		0.5ML	QCS ICV B	CPI	12C184-30612	09/20/13
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 50mL 1%HNO3/5%HCl				
AMT.	STD	PREP DATE	EXP DATE		YITTRIUM INTERNAL STANDARD				
15mL	STD 3	Today	1 week		2.0 mL	Yttrium	O2SI	1035051-30566	09/28/13
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 2000 mL 1%HNO3/5%HCl				

2%HNO3 / 2%HCl BLK					200.7 ICV				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
40 mL	HCl	BDH	51258	07/13/12	0.25ML	QCS ICV A	CPI	12C184-30611	09/20/13
40 mL	HNO3	JT BAKER	L10023	07/12/12	0.25ML	QCS ICV B	CPI	12C184-30612	09/20/13
Prepared in 2000 mL DI Water					Prepared in 50mL 2%HNO3/2%HCl				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	200.7 ICSA				
0.25 mL	200.7 LDL	O2SI	1028857-29667	11/01/12	0.5mL	Al	CPI	11J015-30092	05/28/13
Prepared in 50 mL 2%HNO3/2%HCl					0.5mL	Ca	CPI	11J031-29989	05/14/13
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	200.7 ICV				
0.5 mL	CCV-A	ABSOLUTE	012512-30306	01/25/15	0.5mL	Mg	CPI	11K178-30093	05/28/13
0.5 mL	CCV-B	ABSOLUTE	021312-30339	02/13/15	0.5mL	Fe	O2SI	1030787-30616	05/17/13
0.5 mL	CCV-C	ABSOLUTE	012512-30307	01/25/15	0.5mL	Al	CPI	11J015-30092	05/28/13
Prepared in 100 mL 2%HNO3/2%HCl					0.5mL	Ca	CPI	11J031-29989	05/14/13
AMOUNT	STD	PREP DATE	EXP DATE		0.5mL	Mg	CPI	11K178-30093	05/28/13
25mL	STD 3	TODAY	1 WEEK		0.25mL	INT SPECIAL MIX	O2SI	1030787-30616	05/17/13
25mL	2%HNO3/2%HCl	TODAY	1 WEEK		Prepared in 50 mL 2%HNO3/2%HCl				
CCV2 200.7									
15mL	STD 3	TODAY	1 WEEK						
25mL	2%HNO3/2%HCl	TODAY	1 WEEK						

Metals Digestion Worksheet

Method Name 3015 Digestion

Prep Method M3015

Set 120723A

Units mL

Spikes

Spiked ID 1	LCSW LOT# 1036660-30911		
Spiked ID 2	LCSW LOT# 1036821-30981		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	07/23/12 9:00:00 AM
Witnessed By	LO	Date:	07/23/12 9:00:00 AM

Starting Temp:	20 c
Ending Temp:	170 c
Temperature Type:	Microwave
Sufficient Vol for Matrix QC:	Yes
End Date/Time	07/23/12 10:00

Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1 120723A Blk				45mL	50mL	07/23/12 9:00	equip: Venus
2 120723A LCS		90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
3 AY64692	AY64692W06			45mL	50mL	07/23/12 9:00	equip: Venus
4 AY65112	AY65112W08			45mL	50mL	07/23/12 9:00	equip: Venus
5 AY65113	AY65113W08			45mL	50mL	07/23/12 9:00	equip: Venus
6 AY65144	AY65144W23			45mL	50mL	07/23/12 9:00	equip: Venus
7 AY65144 MS	AY65144W24	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
8 AY65144 MSD	AY65144W24	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
9 AY65145	AY65145W08			45mL	50mL	07/23/12 9:00	equip: Venus
10 AY65146	AY65146W08			45mL	50mL	07/23/12 9:00	equip: Venus
11 AY65147	AY65147W08			45mL	50mL	07/23/12 9:00	equip: Venus
12 AY65148	AY65148W08			45mL	50mL	07/23/12 9:00	equip: Venus
13 AY65149	AY65149W08			45mL	50mL	07/23/12 9:00	equip: Venus
14 AY65150	AY65150W08			45mL	50mL	07/23/12 9:00	equip: Venus
15 AY65151	AY65151W08			45mL	50mL	07/23/12 9:00	equip: Venus
16 AY65166	AY65166W08			45mL	50mL	07/23/12 9:00	equip: Venus
17 AY65167	AY65167W15			45mL	50mL	07/23/12 9:00	equip: Venus
18 AY65167 MS	AY65167W16	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
19 AY65167 MSD	AY65167W16	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus

Solvent and Lot#
HNO3 J.T.B L10023 0229

Sample COC Transfer
Sample prep employee Initials
Analyst's initials
Date
Time
Moved to

Technician's Initials
Scanned By
Sample Preparation
Digestion
Bring up to volume
Modified

Reviewed By: *gj*Date: *7-23-12*

6020/200.8 Injection Log

Directory: K:\ICP-MS Optimus\raw data output csv\

RunID	Injected	Sample Name	Misc Info	FileName	Multiplier
1	23 Jul 2012	11:12	Calibration Blank	120723Arev	1.
2	23 Jul 2012	11:18	120723 Standard 1	120723Arev	1.
3	23 Jul 2012	11:25	120723 Standard 2	120723Arev	1.
4	23 Jul 2012	11:32	120723 Standard 3	120723Arev	1.
5	23 Jul 2012	11:39	120723 Standard 4	120723Arev	1.
6	23 Jul 2012	11:45	ICV 120723	120723Arev	1.
8	23 Jul 2012	11:58	ICB 120723	120723Arev	1.
9	23 Jul 2012	12:05	CCV 120723	120723Arev	1.
10	23 Jul 2012	12:12	CCB 120723	120723Arev	1.
11	23 Jul 2012	12:18	ICSA 120723	120723Arev	1.
12	23 Jul 2012	12:25	ICSAB 120723	120723Arev	1.
13	23 Jul 2012	12:58	120723A-3015-BLK	120723Arev	1.
15	23 Jul 2012	13:11	120723A-3015-LCS	120723Arev	1.
18	23 Jul 2012	13:32	CCV 120723	120723Arev	1.
19	23 Jul 2012	13:45	CCB 120723	120723Arev	1.
30	23 Jul 2012	15:07	CCV 120723	120723Arev	1.
31	23 Jul 2012	15:20	CCB 120723	120723Arev	1.
38	23 Jul 2012	16:07	AY65166W08	120723Arev	1.
39	23 Jul 2012	16:14	AY65167W15	120723Arev	1.
40	23 Jul 2012	16:20	AY65167W16 MS	120723Arev	1.
41	23 Jul 2012	16:27	AY65167W16 MSD	120723Arev	1.
43	23 Jul 2012	16:40	CCV 120723	120723Arev	1.
44	23 Jul 2012	16:54	CCB 120723	120723Arev	1.
45	23 Jul 2012	17:01	AY65167W15-A	120723Arev	1.
47	23 Jul 2012	17:14	AY65167W15-1/5	120723Arev	5.
51	23 Jul 2012	17:47	CCV 120723	120723Arev	1.
52	23 Jul 2012	18:00	CCB 120723	120723Arev	1.