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

Data Validatable Report

August 10, 2012

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

Attn: Max Solmssen

Title: Report of Data: Case 68248

Project: LTM Red Hill/1022-024

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

Dear Mr. Solmssen:

Four water samples were received July 18, 2012, in good condition. Written results for the requested analyses are provided on this August 10, 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: 361

Data Validation Package
for
LTM Red Hill / 1022-024
SDG 68248

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SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 68248

Project: Red Hill/1022-024

Sample Receipt Information:

The samples were received on July 18, 2012, at 2.0°C and 2.0°C. The samples were assigned Analytical Request Form (ARF) number 68248. The sample numbers and requested analyses were compared to the chain of custody. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ES077	AY65041	WATER	07/17/12	07/18/12
ES078 TRIP BLANK	AY65042	WATER	07/17/12	07/18/12
ES079	AY65043	WATER	07/17/12	07/18/12
ES080	AY65044	WATER	07/17/12	07/18/12

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.

No sample was designated by the client for MS/MSD analysis.

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/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 acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

The surrogate recoveries are summarized on the form 2 & 8. . For the method blank, Ortho-Terphenyl recovered below the 57% lower control limit at 48.6%. The Octacosane surrogate was acceptable. All other surrogate recoveries were within the control limits.

Summary:

No other 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. All holding times were met. The samples were received in unpreserved vials. The vials were analyzed within seven days of collection. 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/Assurance:

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 except for CCV 0724T09.D, which recovered gasoline above the 120% upper control limit at 137%.

Blanks:

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

Spikes:

A lab control spike (LCS) was used for quality assurance. A second source standard was used for the LCS. Gasoline recovered above the 125% upper control limit at 140%. All other LCS acceptance criteria were met.

No sample was designated by the client for MS/MSD analysis.

Surrogates:

Surrogate recoveries are summarized on 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 ES080 was selected 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

68248

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 # 36499
 RAD Screen (Y/N): Y pH (Y/N): N
 Turn Around Type: 2 WEEKS

Received by: TBV 
 Date Received: 07/18/12 Time: 11:10
 Delivered by: FED EX
 Shuttle Custody Seals (Y/N): Y Time Zone: -10
 Chest Temp(s): 2.0,2.0°C
 Color: VOA, I-PRPRED,Q-ORYW
 Samples Chilled until Placed in Refrig/Freezer: Y
 Project Manager: Cynthia Clark
 QC Report Type: DVP4/ADRDOD/HI *JF*
 Due Date: 08/01/12

Comments:

14 day TAT for Form 1s & 21 day TAT for full package;
 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 *JF*
 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

Sample Distribution:

GC: 3-~~SSIMHC12W~~, 3-~~STPETD2~~
Extractions: 3- SEP004S, 3- SEP011
VOA: 4-~~\$86RHBFB~~
Metals: 3-~~\$602D(Pb)~~
Other: 3- M3015

Charges:

Invoice To:

same

Client ID	APPL ID	Sampled	Analyses Requested
1. ES077	AY65041W 	07/17/12 09:15	\$602D(Pb), \$86RHBFB, \$SIMHC12W, \$TPETD2 -- Unpreserved VOA
2. ES078 TRIP BLANK	AY65042W 	07/17/12 07:00	\$86RHBFB -- Unpreserved VOA
3. ES079	AY65043W 	07/17/12 11:45	\$602D(Pb), \$86RHBFB, \$SIMHC12W, \$TPETD2 -- Unpreserved VOA
4. ES080	AY65044W 	07/17/12 08:00	\$602D(Pb), \$86RHBFB, \$SIMHC12W, \$TPETD2 -- Unpreserved VOA

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

68248

APPL Sample Receipt Form

ARF# 68248

Sample	Container Type	Count	pH
AY65041	⁶ PL 500mL - HNO3	1	1.7
	¹⁵ VOAs - NP	3	NA
	¹⁷ Amber Liter	4	NA
AY65042	¹⁵ VOAs - NP	3	NA
AY65043	⁶ PL 500mL - HNO3	1	1.7
	¹⁵ VOAs - NP	3	NA
	¹⁷ Amber Liter	4	NA
AY65044	⁶ PL 500mL - HNO3	1	1.7
	¹⁵ VOAs - NP	3	NA
	¹⁷ Amber Liter	4	NA

Sample Container Type Count pH



APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

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

CHAIN OF CUSTODY RECORD

62242 2.0, 2.0

C.O.C. 36499

Report to: PLEASE PRINT	Invoice to: A.P. PLEASE PRINT
Company Name: <u>Environet, Inc.</u> Phone: <u>808-833-2225</u>	Company Name: <u>Environet, Inc.</u> Phone: <u>808-833-2225</u>
Address: <u>650 Iwilei Road, Suite 204</u> <u>Honolulu, HI 96817</u>	Address: <u>650 Iwilei Road, Suite 204</u> <u>Honolulu, HI 96817</u>
Fax: <u>808-833-2231</u>	Fax: <u>808-833-2231</u>
Attn: <u>Max Solmsen (msolmsen@environetinc.com)</u>	Attn: <u>A.P.</u>

Project Name/Number	Sampler (Print)	Analysis Requested/Method Number					Date Shipped: 7/17/12			
		TPH-660 (8260B)	VOCs (8260B)	TPH-960 (8015B)	PAHs (8270 51M)	Lead* (6020)				
Purchase Order Number	Sampler (Signature)	No. of Containers	Matrix			Carrier: Fed Ex				
Sample Identification	Location		Aq	Sed.	Soil		Waybill No.: 876412435265			
	Date Collected	Time Collected	Time Zone			Comments: * lead				
Red Hill / 1022024	Max Solmsen					Samples have been field-filtered.				
ES077	Red Hill	7/17/12	915 HI	8	X		X	X	X	X
ES078 trip blank	↓	↓	7:00	3	↓		↓	↓	↓	↓
ES079	↓	↓	1145	8	↓		↓	↓	↓	↓
ES080	↓	↓	800	8	↓	↓	↓	↓	↓	

Shuttle Temperature:	<input checked="" type="checkbox"/> Standard 2-3wk <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: <u>MS</u>	Date: 7/17/12	Time: 13:40	Received by:	Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date: 7/18/12	Time: 1110	Received at lab by:

COOLER RECEIPT FORM

- 1) Project: RED HILL / 1022-024 Date Received: 7/18/12
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) MASTER 2) 8764 1243 3265 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, in 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) 2.0 C 2) 2.0 C 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:

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:

Signature of personnel receiving samples:
Signature of project manager notified:
Name of client notified:
Information given to client:
by whom (Initials):

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary

Method Blank EPA 8270D SIM

Blank Name/QCG: **120723W-65144 - 169459**
Batch ID: #SIMHC-120723A

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	07/23/12	07/24/12
BLANK	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
BLANK	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
BLANK	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
BLANK	SURROGATE: 2-FLUORBIPHENY	56.8	50-110			%	07/23/12	07/24/12
BLANK	SURROGATE: NITROBENZENE-	51.8	40-110			%	07/23/12	07/24/12
BLANK	SURROGATE: TERPHENYL-D14 (59.6	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L003
Instrument: Linus
Sequence: L120613
Initials: LF

Printed: 07/27/12 5:33:46 PM
GC SC-Blank-REG MDLs

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 68248
 Matrix: WATER

SDG No: 68248
 Date Analyzed: 07/24/12
 Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120723A-BLK	Blank	50-110	56.8		40-110	51.8	
120723A-LCS	Lab Control Spike	50-110	63.0		40-110	74.5	
AY65041	ES077	50-110	61.2		40-110	54.6	
AY65043	ES079	50-110	58.5		40-110	65.8	
AY65044	ES080	50-110	63.9		40-110	74.8	

Comments: Batch: #SIMHC-120723A

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 68248
 Matrix: WATER

SDG No: 68248
 Date Analyzed: 07/24/12
 Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
120723A-BLK	Blank	50-135	59.6				
120723A-LCS	Lab Control Spike	50-135	58.0				
AY65041	ES077	50-135	61.9				
AY65043	ES079	50-135	58.1				
AY65044	ES080	50-135	58.9				

Comments: Batch: #SIMHC-120723A

Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: 120723W-65144 LCS - 169459
 Batch ID: #SIMHC-120723A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	4.00	2.22	55.5	45-105
2-METHYLNAPHTHALENE	4.00	2.18	54.5	45-105
ACENAPHTHENE	4.00	2.18	54.5	45-110
ACENAPHTHYLENE	4.00	2.33	58.3	50-105
ANTHRACENE	4.00	2.39	59.8	55-110
BENZO(A)ANTHRACENE	4.00	2.21	55.3	55-110
BENZO(A)PYRENE	4.00	2.24	56.0	55-110
BENZO(B)FLUORANTHENE	4.00	2.23	55.8	45-120
BENZO(GHI)PERYLENE	4.00	2.46	61.5	40-125
BENZO(K)FLUORANTHENE	4.00	2.57	64.3	45-125
CHRYSENE	4.00	2.67	66.8	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.29	57.3	40-125
FLUORANTHENE	4.00	3.03	75.8	55-115
FLUORENE	4.00	2.75	68.8	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.25	56.3	45-125
NAPHTHALENE	4.00	2.15	53.8	40-100
PHENANTHRENE	4.00	2.78	69.5	50-115
PYRENE	4.00	2.45	61.3	50-130

SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.26	63.0	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.49	74.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.16	58.0	50-135

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	SIMB.M
Extraction Date :	07/23/12
Analysis Date :	07/24/12
Instrument :	Linus
Run :	0724L004
Initials :	LF

Printed: 07/27/12 5:33:52 PM
 APPL Standard LCS

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc.

SDG No: 68248

Case No: 68248

Date Analyzed: 07/24/12

Matrix: WATER

Instrument: Linus

Blank ID: 120723A-BLK

Time Analyzed: 1850

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120723A-BLK	Blank	0724L003	07/24/12 1850
120723A-LCS	Lab Control Spike	0724L004	07/24/12 1916
AY65041	ES077	0724L005	07/24/12 1942
AY65043	ES079	0724L006	07/24/12 2007
AY65044	ES080	0724L007	07/24/12 2034

Comments: Batch: #SIMHC-120723A

Printed: 07/27/12 5:33:54 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
 Case No: 68248
 Matrix: Water
 ID: SVTUNE 2-28-12

SDG No: 68248
 Date Analyzed: 07/24/12
 Instrument: Linus
 Time Analyzed: 18:05

Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1	Blank	120723A BLK 1/1000	0724L003.D	07/24/12 18:50
2	Lab Control Spike	120723A LCS-1 1/1000	0724L004.D	07/24/12 19:16
3	ES077	AY65041W07 1/1050	0724L005.D	07/24/12 19:42
4	ES079	AY65043W05 1/1060	0724L006.D	07/24/12 20:07
5	ES080	AY65044W04 1/1060	0724L007.D	07/24/12 20:34
6				
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	56.9
68	0 - 2.05% of mass 69	0.1
70	0 - 2% of mass 69	0.8
127	40 - 60% of mass 198	54.7
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.1
275	10 - 30% of mass 198	23.7
365	1 - 100% of mass 198	3.1
441	0.01 - 100% of mass 443	76.8
442	40 - 150% of mass 198	72.0
443	17 - 23% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review
 Lab Code: _____ SDG No.: 68248
 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) _____

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)			
		AREA	#	RT	#	AREA	#	RT	#
12 HOUR STD		2713		6.09		1189		8.10	
UPPER LIMIT		5426		6.59		2378		8.60	
LOWER LIMIT		1357		5.59		595		7.60	
SAMPLE									
NO.									
01	120723A BLK 1/1000	2273		6.07		1022		8.08	
02	120723A LCS-1 1/1000	2043		6.07		992		8.08	
03	AY65041W07 1/1050	2190		6.08		1069		8.08	
04	AY65043W05 1/1060	2232		6.08		1038		8.08	
05	AY65044W04 1/1060	2216		6.08		1020		8.08	
06									
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.: 68248
 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	120723A BLK 1/1000	2655	12.91	2331	14.54		
02	120723A LCS-1 1/1000	2829	12.90	2395	14.52		
03	AY65041W07 1/1050	2809	12.91	2386	14.54		
04	AY65043W05 1/1060	2675	12.91	2253	14.54		
05	AY65044W04 1/1060	2598	12.91	2213	14.54		
06							
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

EPA 8270D SIM

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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES077

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65041

QCG: #SIMHC-120723A-169459

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	07/23/12	07/24/12
8270D-SIM	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	61.2	50-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	54.6	40-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	61.9	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L005
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 5:33:58 PM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\LINUS\DATA\L120613\0724L005.D Vial: 5
 Acq On : 24 Jul 12 19:42 Operator: LF
 Sample : AY65041W07 1/1050 Inst : Linus
 Misc : Multiplr: 0.95

Quant Time: Jul 27 7:50 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	2190	2.50000	ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1069	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2160	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2809	2.50000	ppb	0.01
22) Perylene-D12(IS)	14.54	264	2386	2.50000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Surrogate Recovery (NBZ)	5.32	82	447	1.03951	ppb	-0.01
Spiked Amount	1.905					
Recovery				=	54.600%	
7) Surrogate Recovery (FBP)	7.32	172	1225	1.16577	ppb	-0.05
Spiked Amount	1.905					
Recovery				=	61.215%	
18) Surrogate Recovery (TPH)	11.69	244	1740	1.17923	ppb	-0.05
Spiked Amount	1.905					
Recovery				=	61.898%	

Target Compounds Qvalue

Quantitation Report

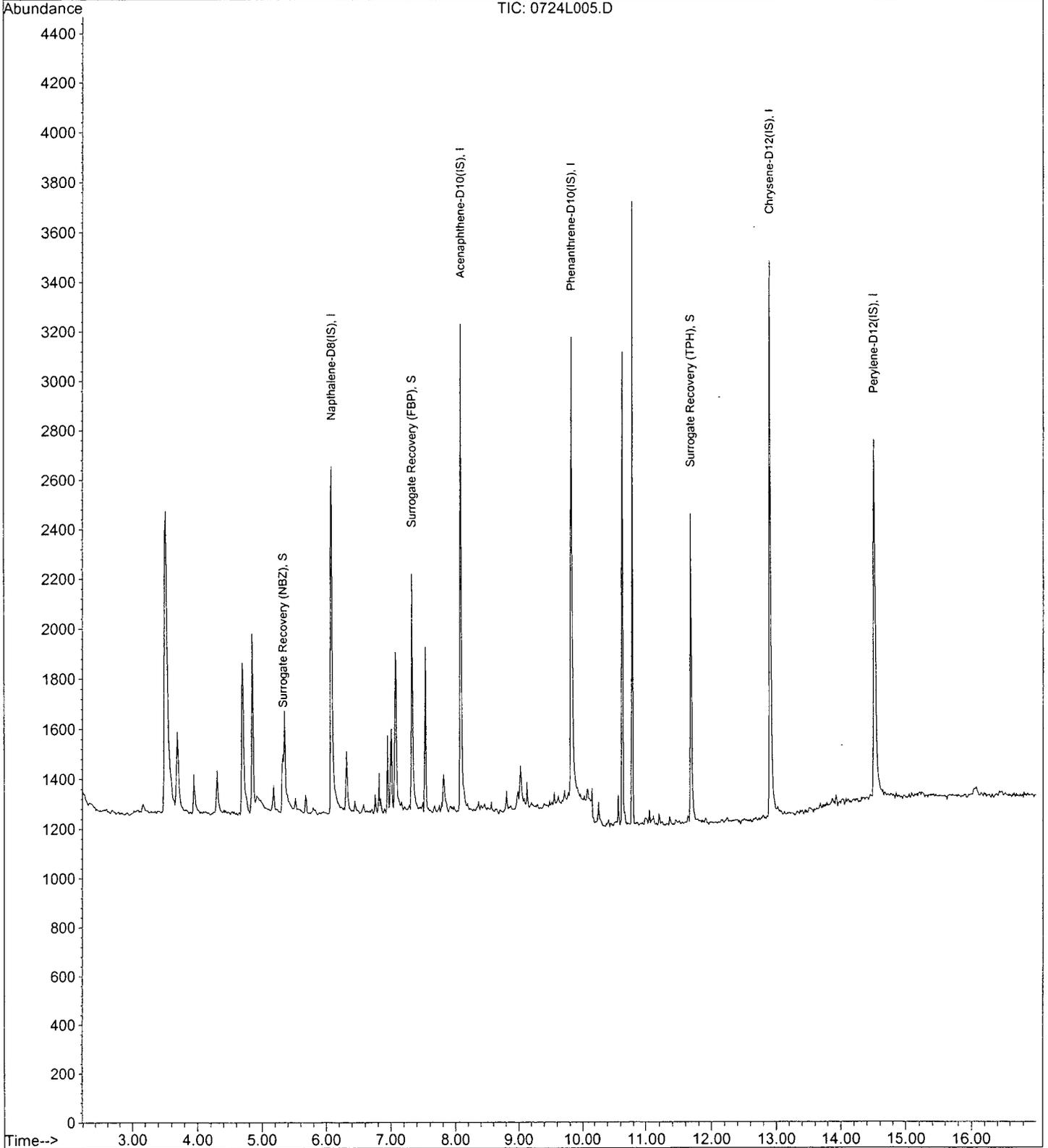
Data File : M:\LINUS\DATA\L120613\0724L005.D
Acq On : 24 Jul 12 19:42
Sample : AY65041W07 1/1050
Misc :

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

Quant Time: Jul 27 7:50 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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES079
Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248
APPL ID: AY65043
QCG: #SIMHC-120723A-169459

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	07/23/12	07/24/12
8270D-SIM	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	58.5	50-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	65.8	40-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	58.1	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L006
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 5:33:58 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L006.D Vial: 6
 Acq On : 24 Jul 12 20:07 Operator: LF
 Sample : AY65043W05 1/1060 Inst : Linus
 Misc : Multiplr: 0.94

Quant Time: Jul 27 7:51 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	2232	2.50000	ppb	-0.04
6) Acenaphthene-D10 (IS)	8.08	164	1038	2.50000	ppb	-0.05
12) Phenanthrene-D10 (IS)	9.82	188	2082	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.91	240	2675	2.50000	ppb	0.01
22) Perylene-D12 (IS)	14.54	264	2253	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	549	1.24088	ppb	-0.01
Spiked Amount	1.887		Recovery	=	65.773%	
7) Surrogate Recovery (FBP)	7.32	172	1136	1.10287	ppb	-0.05
Spiked Amount	1.887		Recovery	=	58.459%	
18) Surrogate Recovery (TPH)	11.69	244	1556	1.09691	ppb	-0.05
Spiked Amount	1.887		Recovery	=	58.141%	

Target Compounds Qvalue

Quantitation Report

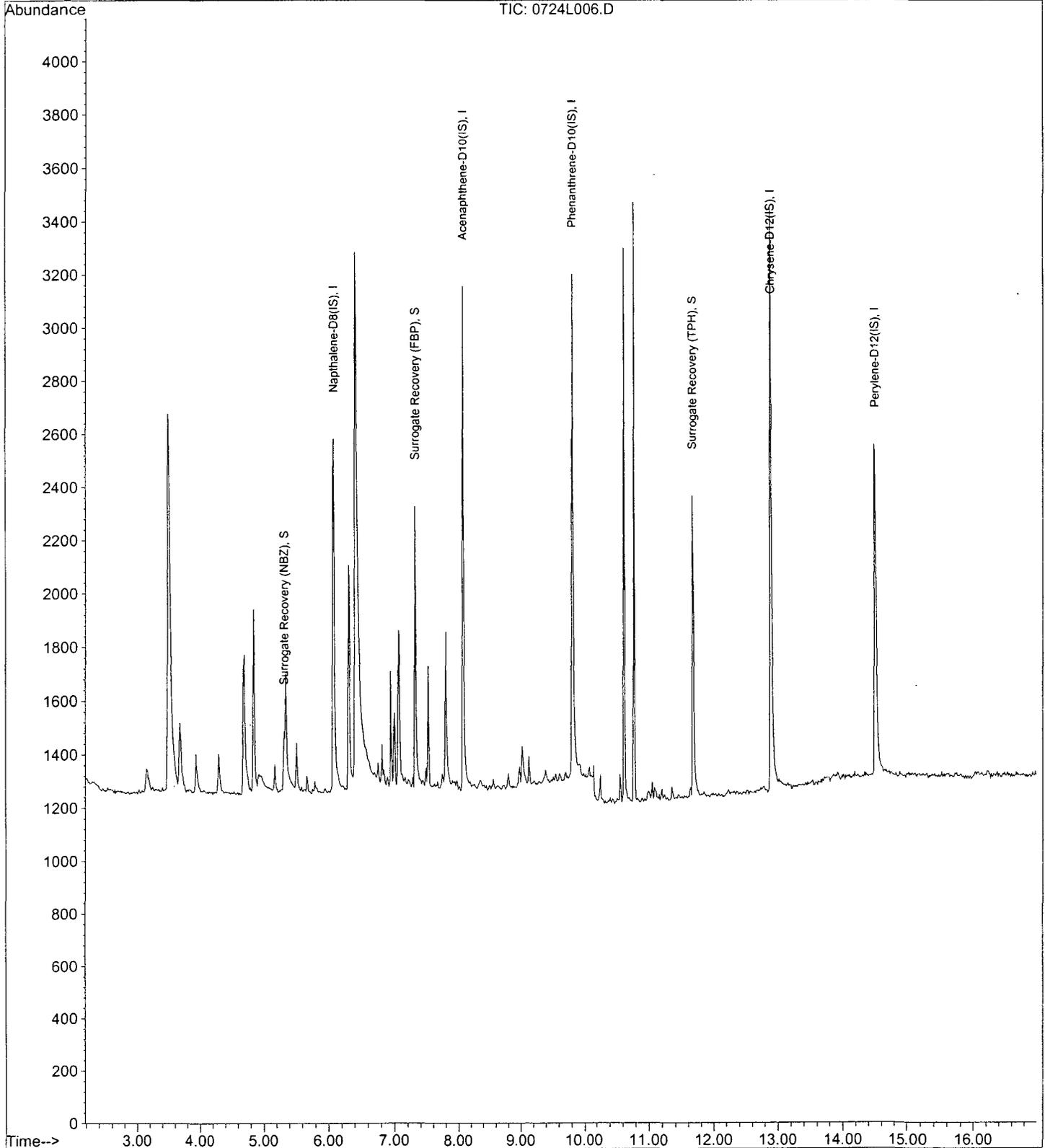
Data File : M:\LINUS\DATA\L120613\0724L006.D
Acq On : 24 Jul 12 20:07
Sample : AY65043W05 1/1060
Misc :

Vial: 6
Operator: LF
Inst : Linus
Multiplr: 0.94

Quant Time: Jul 27 7:51 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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES080

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65044

QCG: #SIMHC-120723A-169459

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	07/23/12	07/24/12
8270D-SIM	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
8270D-SIM	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
8270D-SIM	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	63.9	50-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	74.8	40-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	58.9	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L007
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 5:33:58 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L007.D Vial: 7
 Acq On : 24 Jul 12 20:34 Operator: LF
 Sample : AY65044W04 1/1060 Inst : Linus
 Misc : Multiplr: 0.94

Quant Time: Jul 27 7:52 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	2216	2.50000	ppb	-0.04
6) Acenaphthene-D10 (IS)	8.08	164	1020	2.50000	ppb	-0.05
12) Phenanthrene-D10 (IS)	9.82	188	2138	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.91	240	2598	2.50000	ppb	0.01
22) Perylene-D12 (IS)	14.54	264	2213	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	620	1.41148	ppb	-0.01
Spiked Amount	1.887		Recovery	=	74.783%	
7) Surrogate Recovery (FBP)	7.32	172	1221	1.20630	ppb	-0.05
Spiked Amount	1.887		Recovery	=	63.918%	
18) Surrogate Recovery (TPH)	11.69	244	1530	1.11055	ppb	-0.05
Spiked Amount	1.887		Recovery	=	58.883%	

Target Compounds Qvalue

Quantitation Report

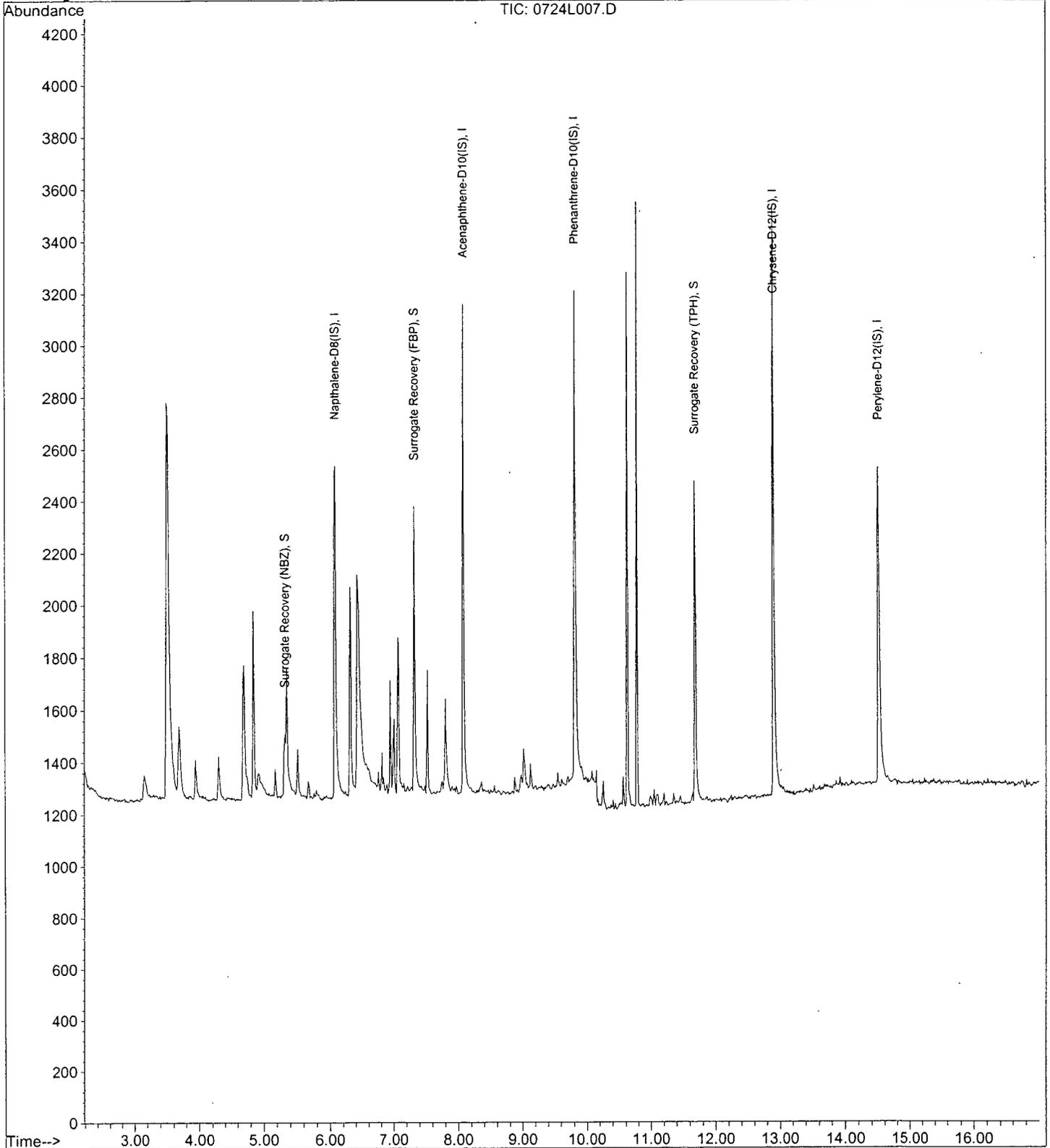
Data File : M:\LINUS\DATA\L120613\0724L007.D
Acq On : 24 Jul 12 20:34
Sample : AY65044W04 1/1060
Misc :

Vial: 7
Operator: LF
Inst : Linus
Multiplr: 0.94

Quant Time: Jul 27 7:52 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: 68248
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														

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 : Multiplr: 1.00

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	R.T.	QIon	Response	Conc	Units	Dev(Min)
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	R.T.	QIon	Response	Conc	Units	Qvalue
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

Quantitation Report

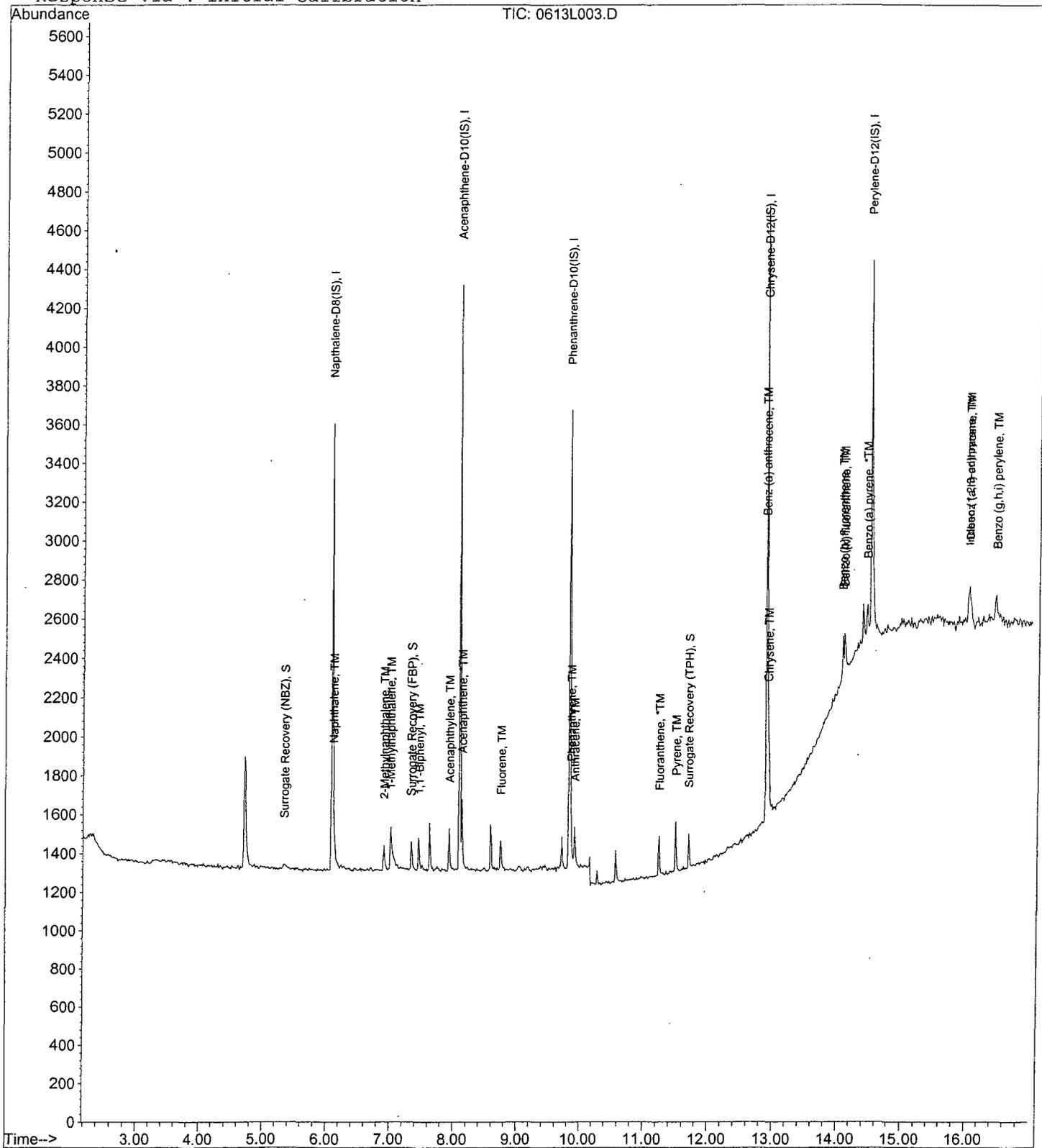
Data File : M:\LINUS\DATA\L120613\0613L003.D
Acq On : 13 Jun 12 13:51
Sample : 0.1ug/ml PAH 06-13-12
Misc :

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



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

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) Napthalene-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

	R.T.	QIon	Response	Conc	Units	Qvalue
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

Quantitation Report

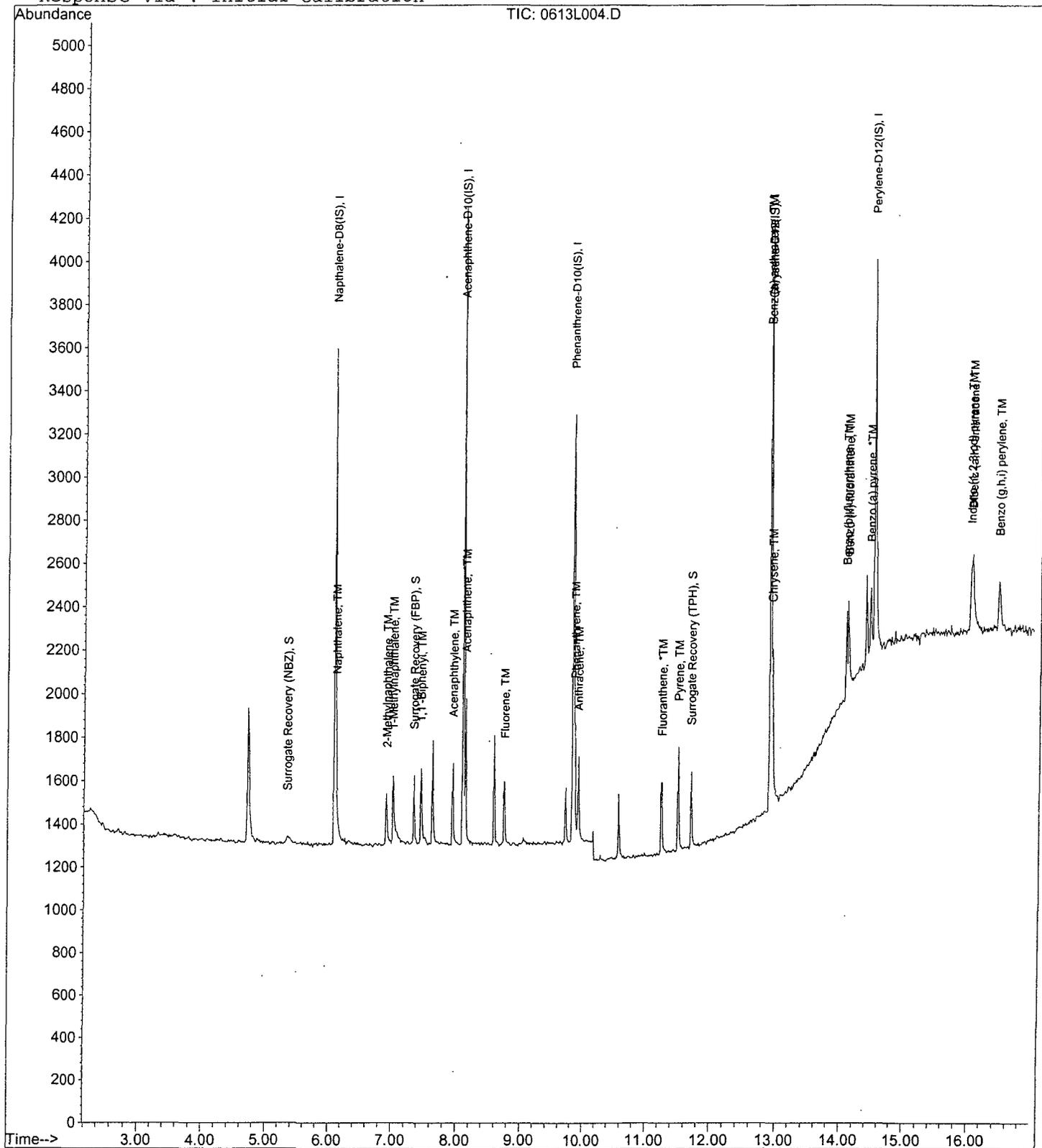
Data File : M:\LINUS\DATA\L120613\0613L004.D
Acq On : 13 Jun 12 14:16
Sample : 0.2ug/ml PAH
Misc :

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



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 : Multiplr: 1.00

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) Napthalene-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	R.T.	QIon	Response	Conc	Units	Dev(Min)
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	R.T.	QIon	Response	Conc	Units	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

Quantitation Report

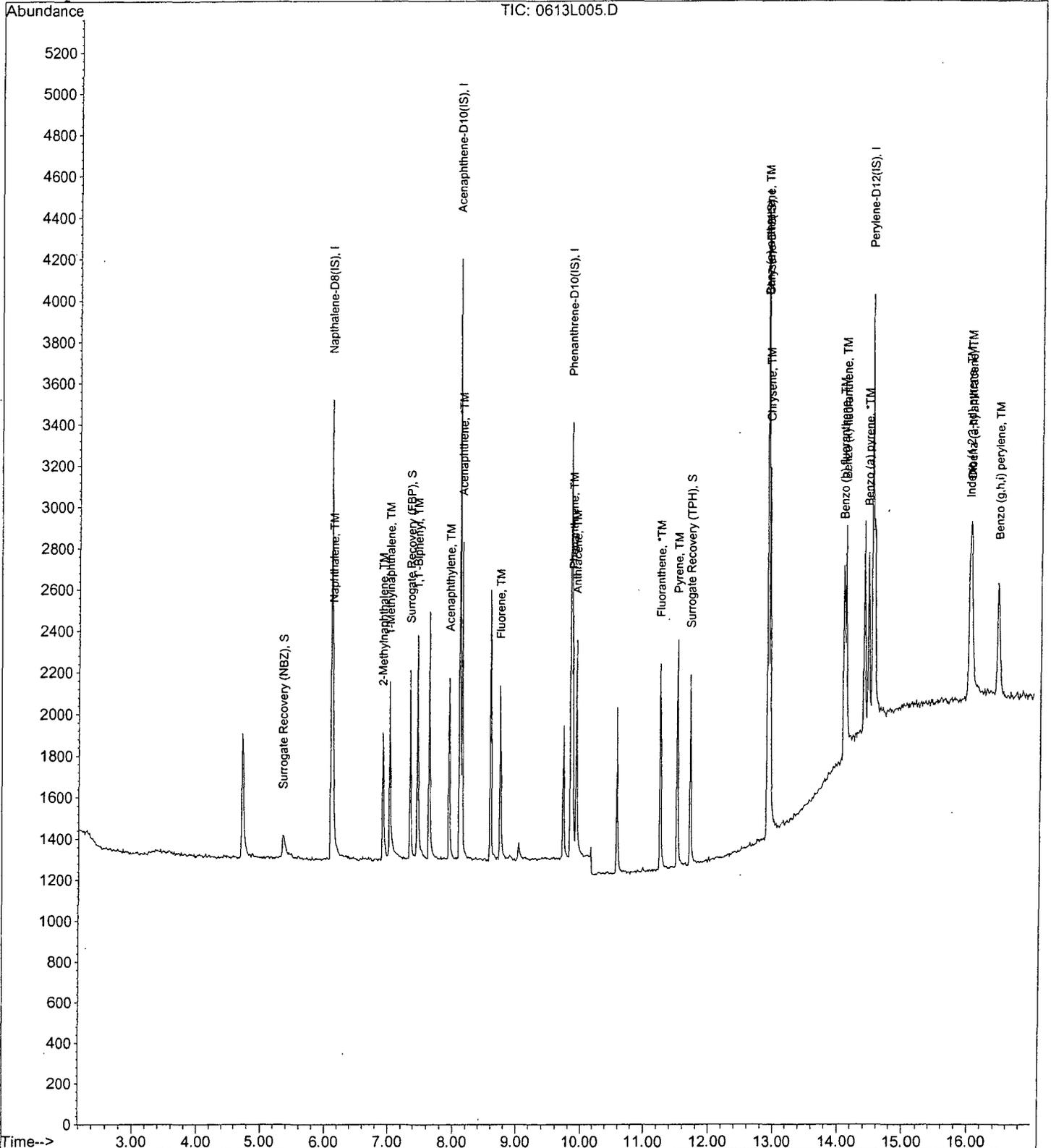
Data File : M:\LINUS\DATA\L120613\0613L005.D
Acq On : 13 Jun 12 14:41
Sample : 0.5ug/ml PAH
Misc :

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



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 : Multiplr: 1.00

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) Napthalene-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	R.T.	QIon	Response	Conc	Units	Dev(Min)
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	R.T.	QIon	Response	Conc	Units	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) Benz (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

Quantitation Report

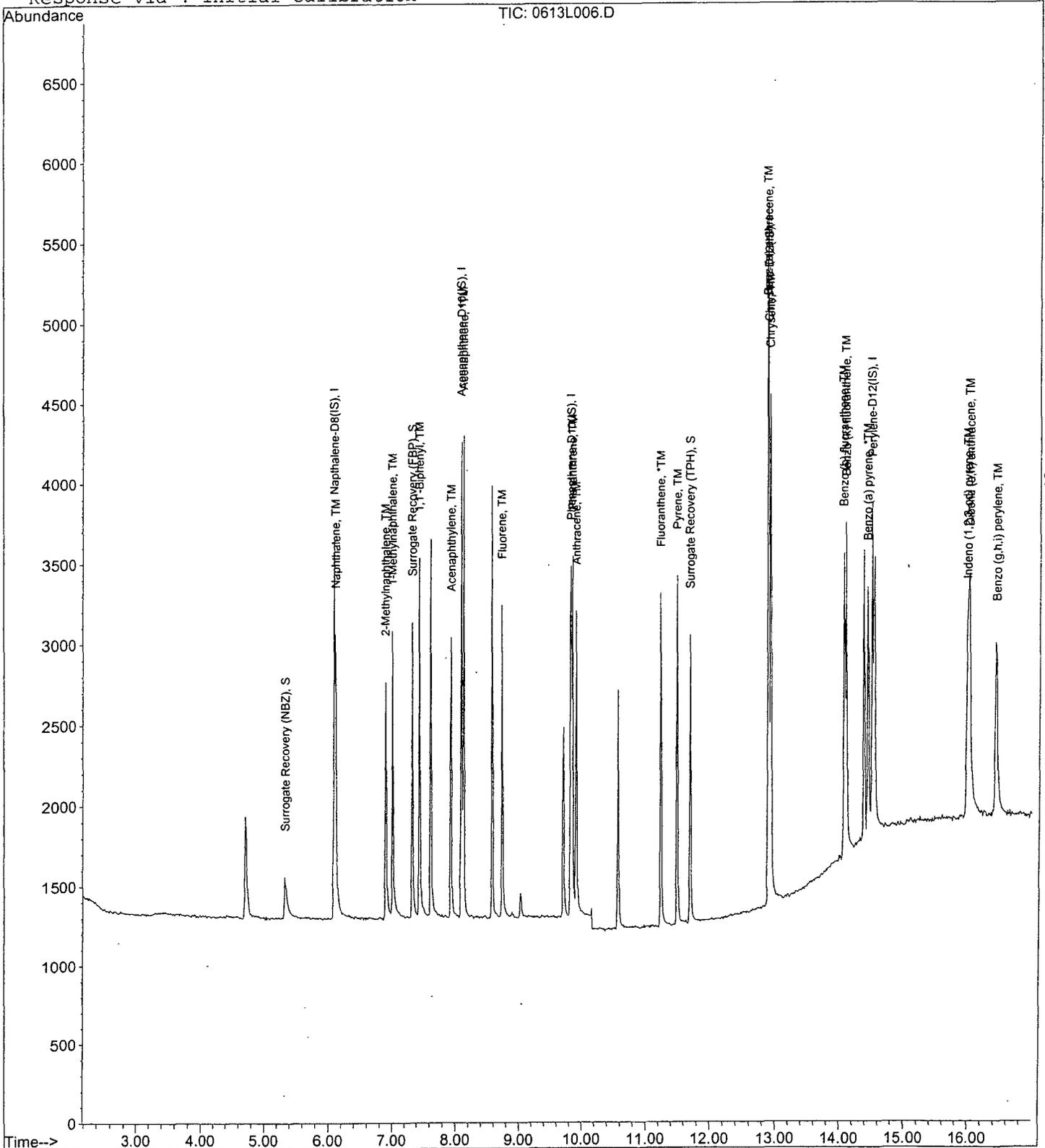
Data File : M:\LINUS\DATA\L120613\0613L006.D
Acq On : 13 Jun 12 15:07
Sample : 1.0ug/ml PAH
Misc :

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



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 : Multiplr: 1.00

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

Quantitation Report

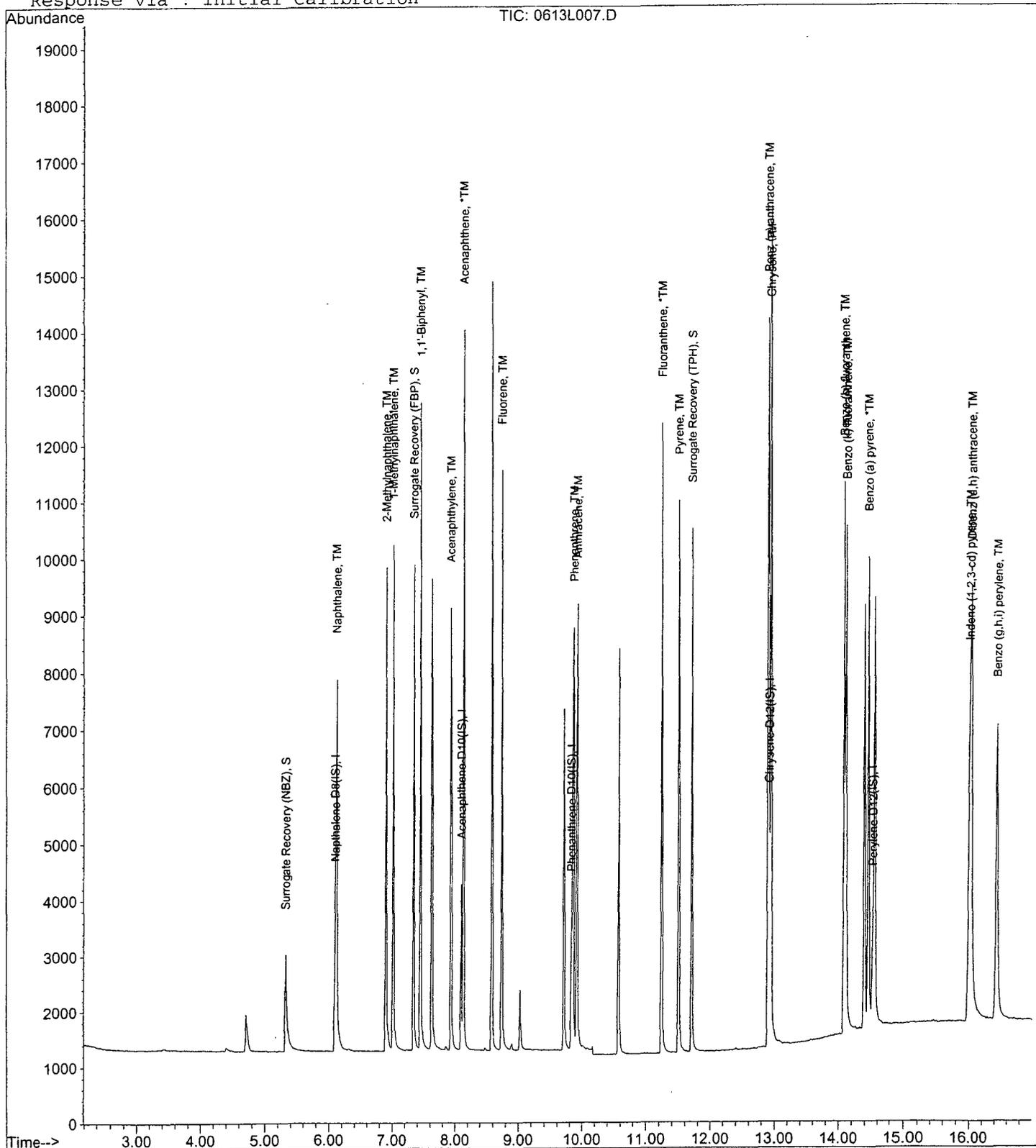
Data File : M:\LINUS\DATA\L120613\0613L007.D
Acq On : 13 Jun 12 15:33
Sample : 5.0ug/ml PAH
Misc :

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



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) Napthalene-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

	R.T.	QIon	Response	Conc	Units	Qvalue
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) Benz (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

Quantitation Report

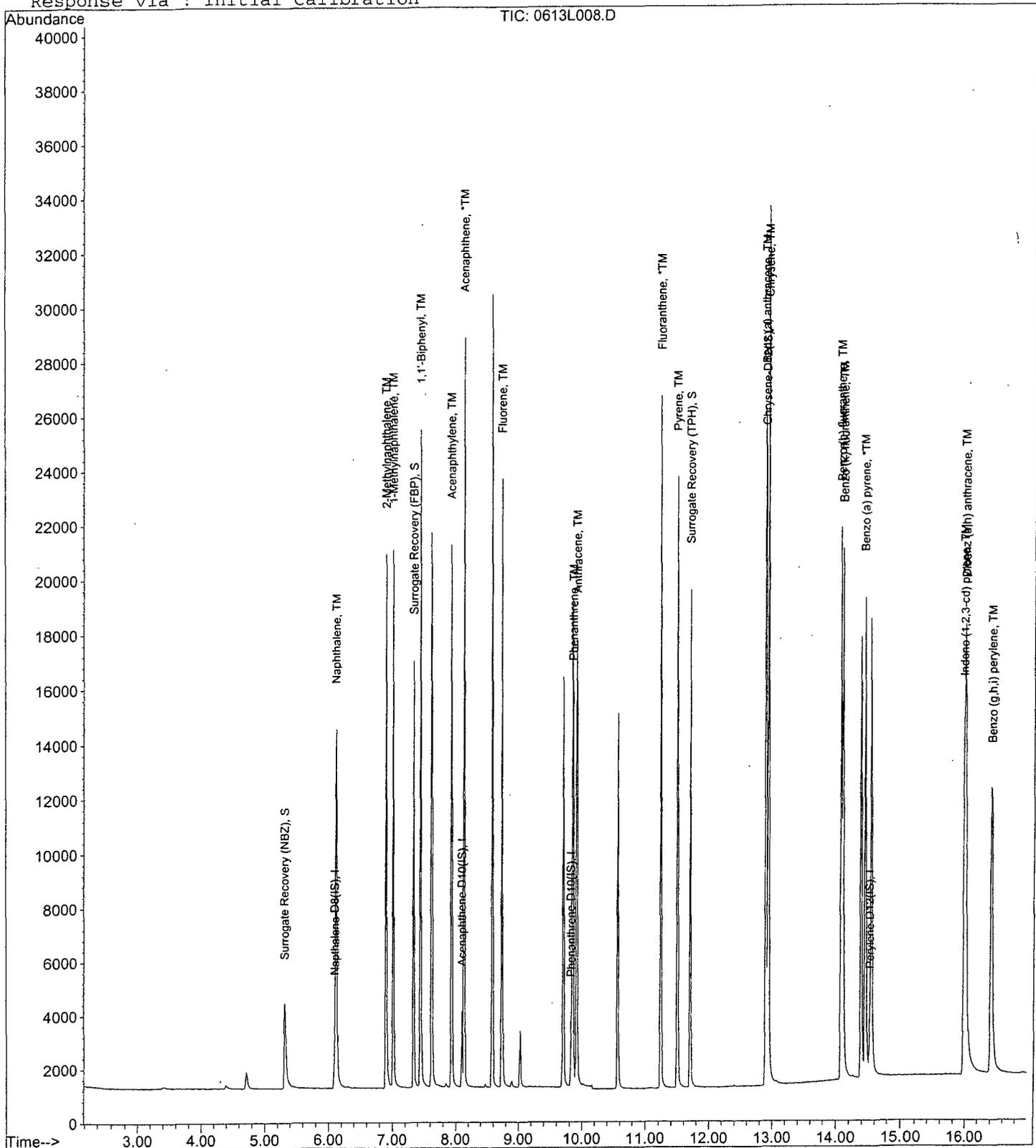
Data File : M:\LINUS\DATA\L120613\0613L008.D
Acq On : 13 Jun 12 15:59
Sample : 10ug/ml PAH
Misc :

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



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) Napthalene-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

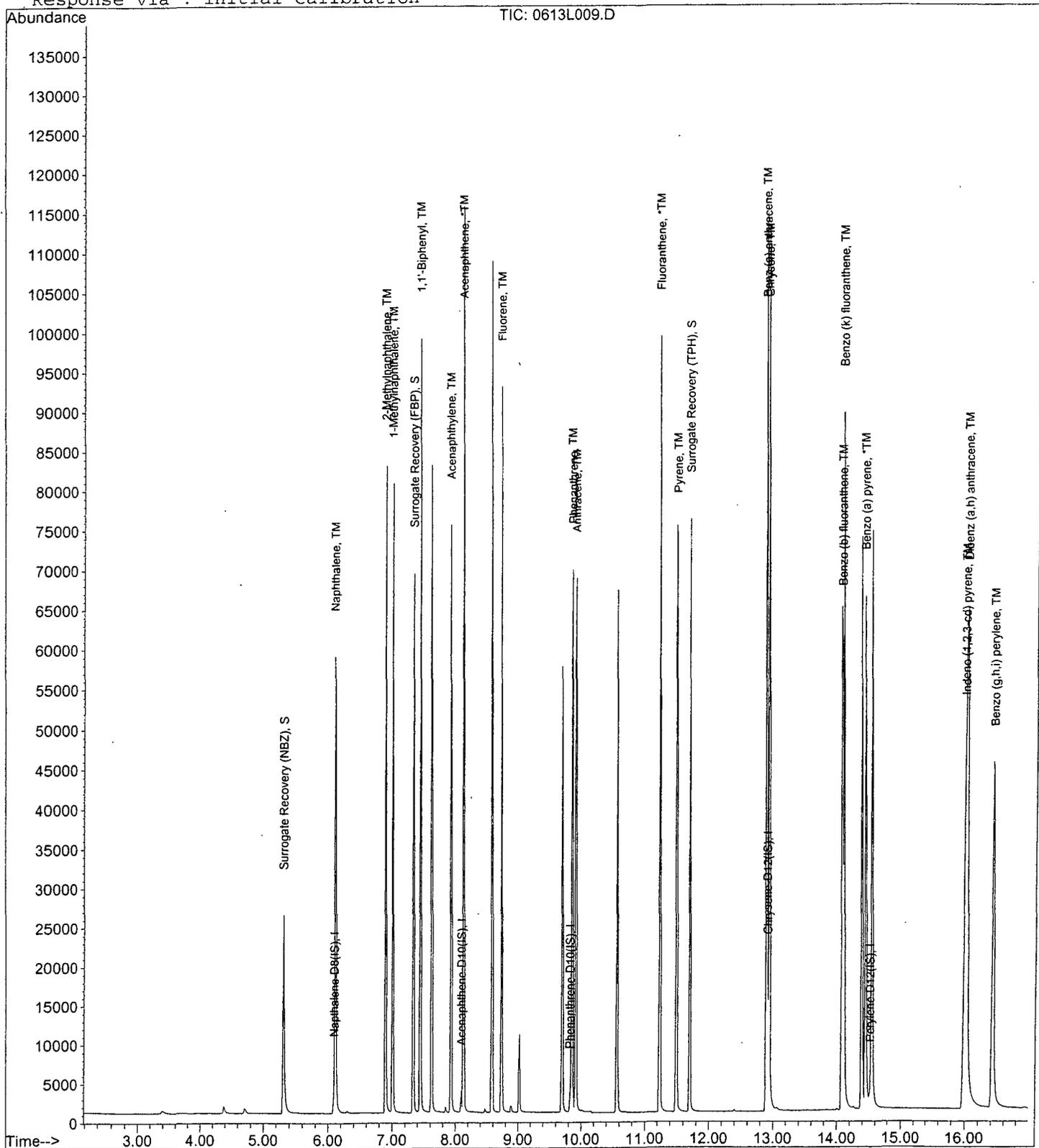
Data File : M:\LINUS\DATA\L120613\0613L009.D
Acq On : 13 Jun 12 16:25
Sample : 50ug/ml PAH
Misc :

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



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

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) Napthalene-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						
3) Naphthalene	6.12	128	130271	77.17939	ppb	99
4) 2-Methylnaphthalene	6.90	142	84094	76.84481	ppb	94
5) 1-Methylnaphthalene	7.01	142	77537	72.52602	ppb	94
8) 1,1'-Biphenyl	7.45	154	93605	76.31079	ppb #	91
9) Acenaphthylene	7.94	152	123810	76.74039	ppb	99
10) Acenaphthene	8.13	154	66674	74.26410	ppb	89
11) Fluorene	8.74	166	76061	73.59790	ppb	99
13) Phenanthrene	9.86	178	112505	74.37620	ppb	97
14) Anthracene	9.92	178	110199	73.52547	ppb	97
15) Fluoranthene	11.23	202	163589	75.27303	ppb #	83
17) Pyrene	11.50	202	169609	85.52128	ppb #	90
19) Benz (a) anthracene	12.90	228	148541	85.18770	ppb	98
20) Chrysene	12.95	228	138030	81.56593	ppb	97
21) Indeno (1,2,3-cd) pyrene	16.02	276	155909	87.99871	ppb #	87
23) Benzo (b) fluoranthene	14.09	252	139278	76.65546	ppb #	85
24) Benzo (k) fluoranthene	14.13	252	145240	79.13503	ppb	89
25) Benzo (a) pyrene	14.47	252	125203	71.12137	ppb	96
26) Dibenz (a,h) anthracene	16.04	278	123729	78.09989	ppb #	94
27) Benzo (g,h,i) perylene	16.45	276	132960	80.72903	ppb #	89

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

Quantitation Report

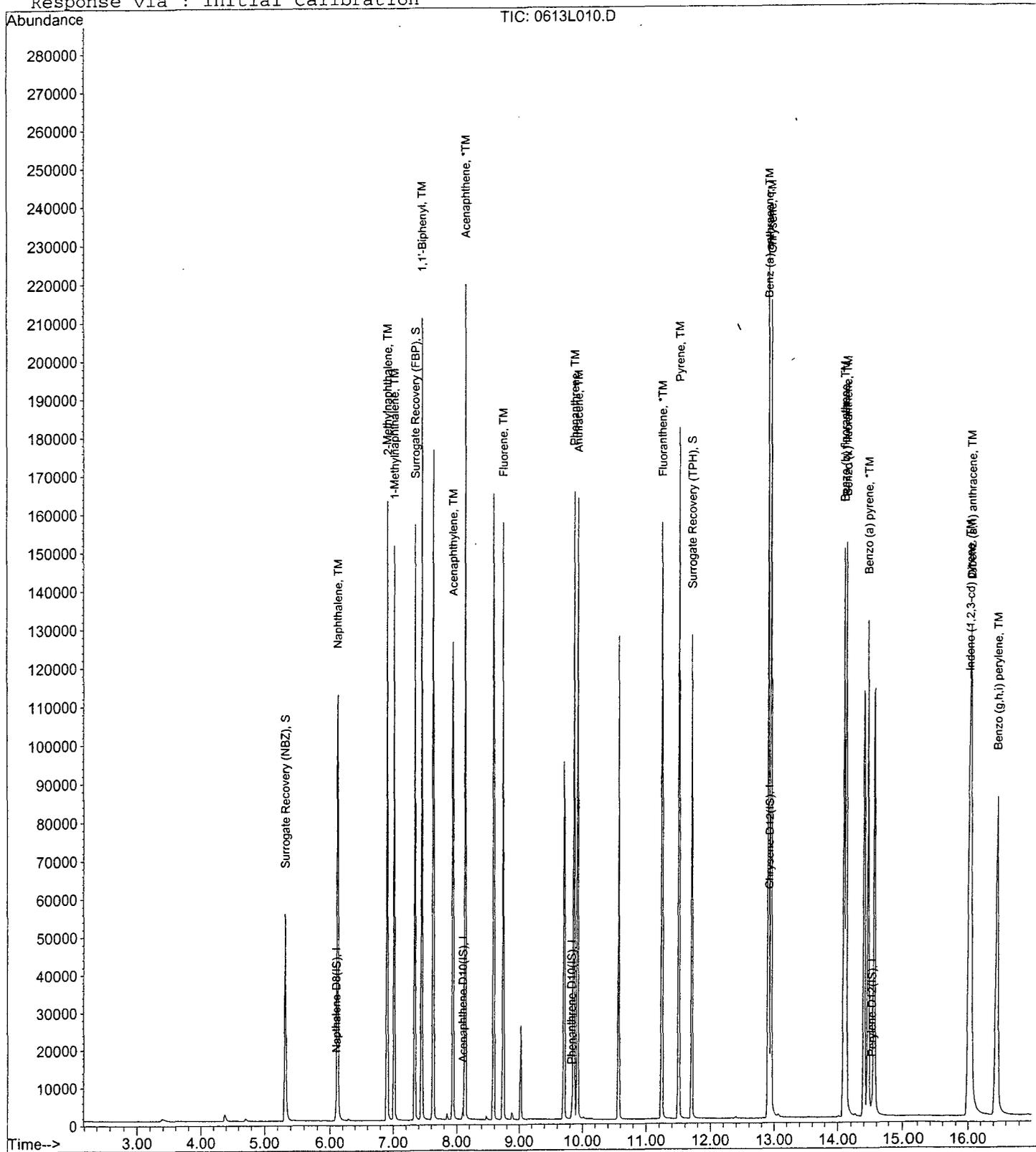
Data File : M:\LINUS\DATA\L120613\0613L010.D
Acq On : 13 Jun 12 16:51
Sample : 100ug/ml PAH
Misc :

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 Calibration

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

SDG No: 69248
 Date Analyzed: 06/13/12
 Instrument: Linus
 Initial Cal. Date: 06/13/12
 Data File: 0613L011.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Napthalene-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
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40						

Average

4.8

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 : Multiplr: 1.00

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	0d	0.00000	ppb	
Spiked Amount	2.000		Recovery	=	0.000%	
7) Surrogate Recovery (FBP)	0.00	172	0d	0.00000	ppb	
Spiked Amount	2.000		Recovery	=	0.000%	
18) Surrogate Recovery (TPH)	0.00	244	0d	0.00000	ppb	
Spiked Amount	2.000		Recovery	=	0.000%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	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	5.20460	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

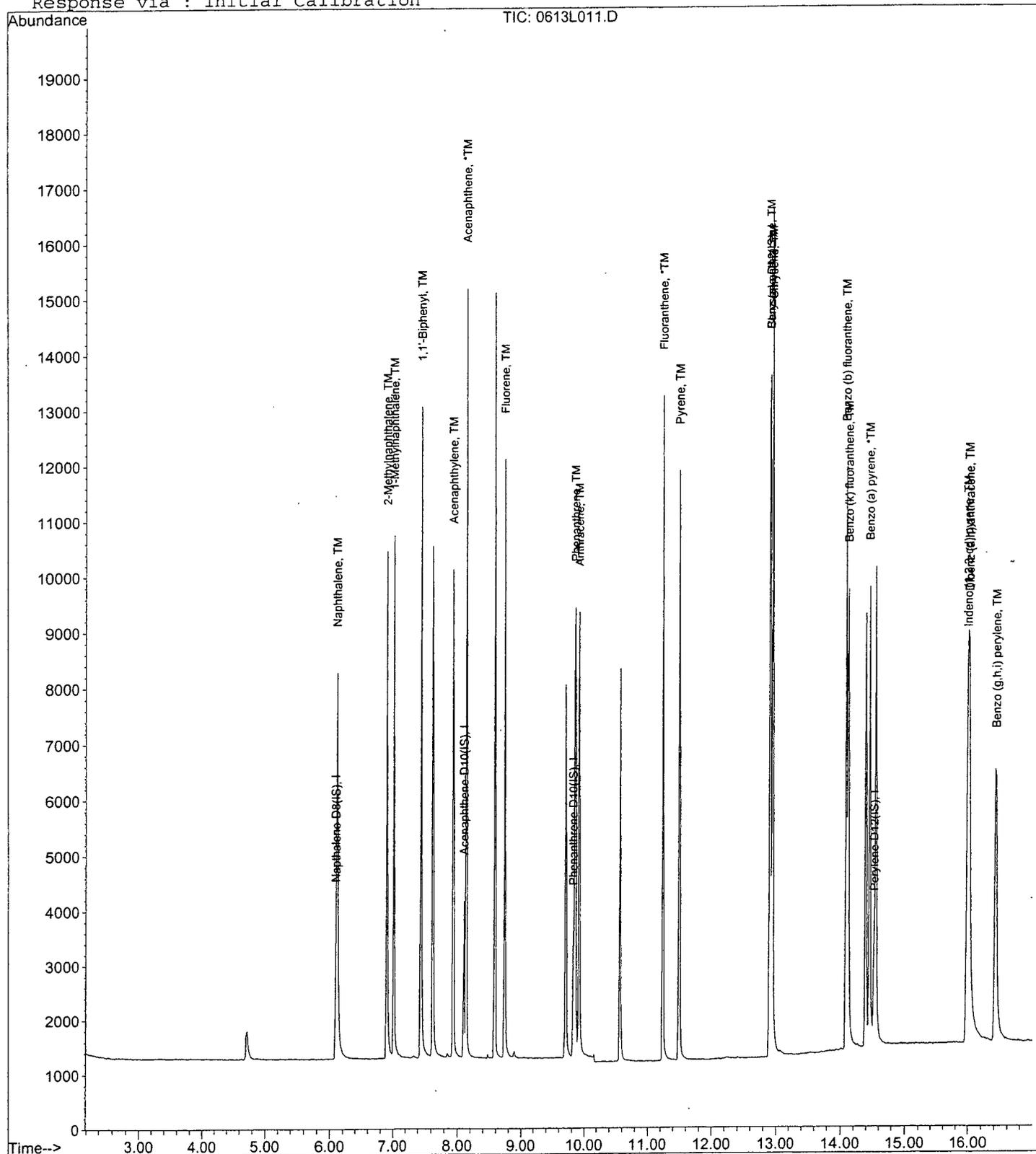
Data File : M:\LINUS\DATA\L120613\0613L011.D
Acq On : 13 Jun 12 17:17
Sample : 5.0ug/ml SS PAH 06-13-12
Misc :

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.
 Case No: _____
 Matrix: _____

SDG No: 60818
 Date Analyzed: 07/24/12
 Instrument: Linus
 Initial Cal. Date: 06/13/12
 Data File: 0724L002.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Napthalene-D8(IS)	ISTD			I
2	S	Surrogate Recovery (NBZ)	0.4675	0.4917	5.2	S
3	TM	Naphthalene	1.610	1.635	1.6	TM
4	TM	2-Methylnaphthalene	1.043	1.021	2.1	TM
5	TM	1-Methylnaphthalene	1.050	1.009	3.8	TM
6	I	Acenaphthene-D10(IS)	ISTD			I
7	S	Surrogate Recovery (FBP)	2.340	2.514	7.4	S
8	TM	1,1'-Biphenyl	2.597	2.910	12	TM
9	TM	Acenaphthylene	3.417	3.777	11	TM
10	*TM	Acenaphthene	1.896	2.038	7.5	*TM
11	TM	Fluorene	2.180	2.387	9.5	TM
12	I	Phenanthrene-D10(IS)	ISTD			I
13	TM	Phenanthrene	1.792	2.108	18	TM
14	TM	Anthracene	1.773	2.054	16	TM
15	*TM	Fluoranthene	2.577	2.968	15	*TM
16	I	Chrysene-D12(IS)	ISTD			I
17	TM	Pyrene	2.260	2.410	6.6	TM
18	S	Surrogate Recovery (TPH)	1.251	1.410	13	S
19	TM	Benz (a) anthracene	1.986	1.933	2.7	TM
20	TM	Chrysene	1.919	1.988	3.6	TM
21	TM	Indeno (1,2,3-cd) pyrene	2.025	1.648	19	TM
22	I	Perylene-D12(IS)	ISTD			I
23	TM	Benzo (b) fluoranthene	2.200	2.040	7.3	TM
24	TM	Benzo (k) fluoranthene	2.246	2.293	2.1	TM
25	*TM	Benzo (a) pyrene	2.114	1.964	7.1	*TM
26	TM	Dibenz (a,h) anthracene	1.920	1.569	18	TM
27	TM	Benzo (g,h,i) perylene	2.003	1.675	16	TM
28						
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Average

9.3

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L002.D Vial: 2
 Acq On : 24 Jul 12 18:24 Operator: LF
 Sample : 5.0ug/ml PAH 06-13-12 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Jul 27 7:44 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Fri Jul 13 13:02:51 2012
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8 (IS)	6.07	136	2955	2.50000	ppb	-0.05
6) Acenaphthene-D10 (IS)	8.08	164	1209	2.50000	ppb	-0.05
12) Phenanthrene-D10 (IS)	9.81	188	1981	2.50000	ppb	-0.05
16) Chrysene-D12 (IS)	12.90	240	2531	2.50000	ppb	0.00
22) Perylene-D12 (IS)	14.52	264	2136	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.30	82	2906	5.25890	ppb	-0.04
Spiked Amount	2.000		Recovery	=	262.950%	
7) Surrogate Recovery (FBP)	7.31	172	6080	5.37184	ppb	-0.06
Spiked Amount	2.000		Recovery	=	268.600%	
18) Surrogate Recovery (TPH)	11.69	244	7139	5.63813	ppb	-0.05
Spiked Amount	2.000		Recovery	=	281.900%	
Target Compounds						
3) Napthalene	6.09	128	9664	5.07785	ppb	99
4) 2-Methylnapthalene	6.89	142	6037	4.89471	ppb	90
5) 1-Methylnapthalene	7.00	142	5966	4.80805	ppb	97
8) 1,1'-Biphenyl	7.43	154	7037	5.60386	ppb #	86
9) Acenaphthylene	7.92	152	9132	5.52595	ppb	99
10) Acenaphthene	8.12	154	4929	5.37700	ppb	96
11) Fluorene	8.72	166	5771	5.47378	ppb	96
13) Phenanthrene	9.83	178	8351	5.88197	ppb	96
14) Anthracene	9.91	178	8138	5.79131	ppb	98
15) Fluoranthene	11.22	202	11760	5.75853	ppb	96
17) Pyrene	11.48	202	12200	5.33176	ppb #	88
19) Benz (a) anthracene	12.89	228	9785	4.86588	ppb	99
20) Chrysene	12.92	228	10065	5.18116	ppb #	93
21) Indeno (1,2,3-cd) pyrene	16.01	276	8340	4.06714	ppb #	79
23) Benzo (b) fluoranthene	14.08	252	8713	4.63630	ppb #	83
24) Benzo (k) fluoranthene	14.10	252	9795	5.10538	ppb	98
25) Benzo (a) pyrene	14.45	252	8389	4.64499	ppb	99
26) Dibenz (a,h) anthracene	16.03	278	6703	4.08651	ppb #	94
27) Benzo (g,h,i) perylene	16.45	276	7156	4.18239	ppb	94

Quantitation Report

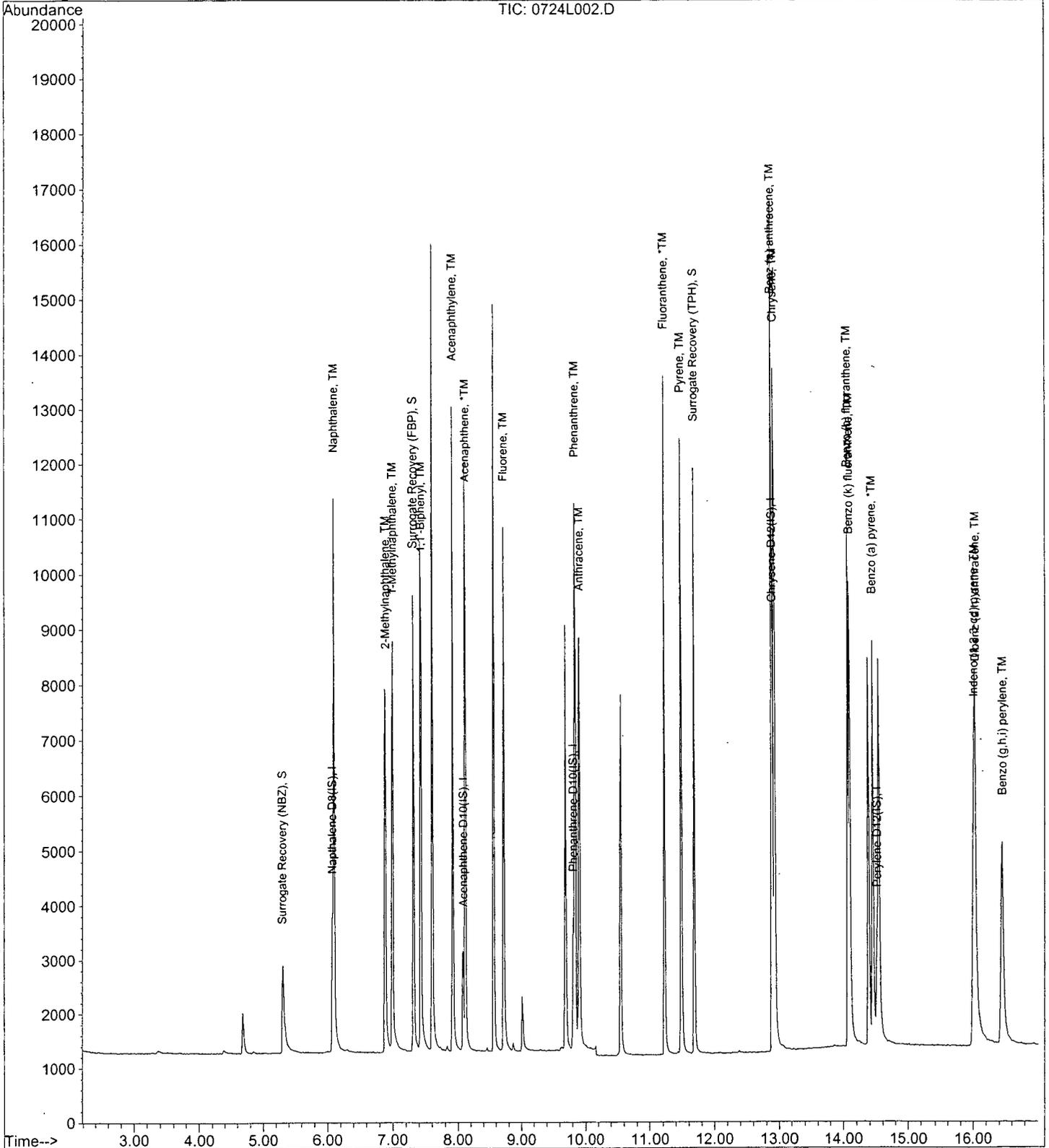
Data File : M:\LINUS\DATA\L120613\0724L002.D
Acq On : 24 Jul 12 18:24
Sample : 5.0ug/ml PAH 06-13-12
Misc :

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

Quant Time: Jul 27 7:44 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

Method Blank EPA 8270D SIM

Blank Name/QCG: 120723W-65144 - 169459
Batch ID: #SIMHC-120723A

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	07/23/12	07/24/12
BLANK	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
BLANK	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
BLANK	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
BLANK	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/23/12	07/24/12
BLANK	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/23/12	07/24/12
BLANK	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/23/12	07/24/12
BLANK	SURROGATE: 2-FLUORBIPHENY	56.8	50-110			%	07/23/12	07/24/12
BLANK	SURROGATE: NITROBENZENE-	51.8	40-110			%	07/23/12	07/24/12
BLANK	SURROGATE: TERPHENYL-D14 (59.6	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L003
Instrument: Linus
Sequence: L120613
Initials: LF

Printed: 07/27/12 5:34:01 PM
GC SC-Blank-REG MDLs

Data File : M:\LINUS\DATA\L120613\0724L003.D Vial: 3
 Acq On : 24 Jul 12 18:50 Operator: LF
 Sample : 120723A BLK 1/1000 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Jul 27 7:45 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)	6.07	136	2273	2.50000	ppb	-0.05
6) Acenaphthene-D10(IS)	8.08	164	1022	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2049	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2655	2.50000	ppb	0.01
22) Perylene-D12(IS)	14.54	264	2331	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	440	1.03517	ppb	-0.01
Spiked Amount	2.000		Recovery	=	51.750%	
7) Surrogate Recovery (FBP)	7.32	172	1086	1.13508	ppb	-0.05
Spiked Amount	2.000		Recovery	=	56.750%	
18) Surrogate Recovery (TPH)	11.69	244	1583	1.19181	ppb	-0.05
Spiked Amount	2.000		Recovery	=	59.600%	

Target Compounds Qvalue

Quantitation Report

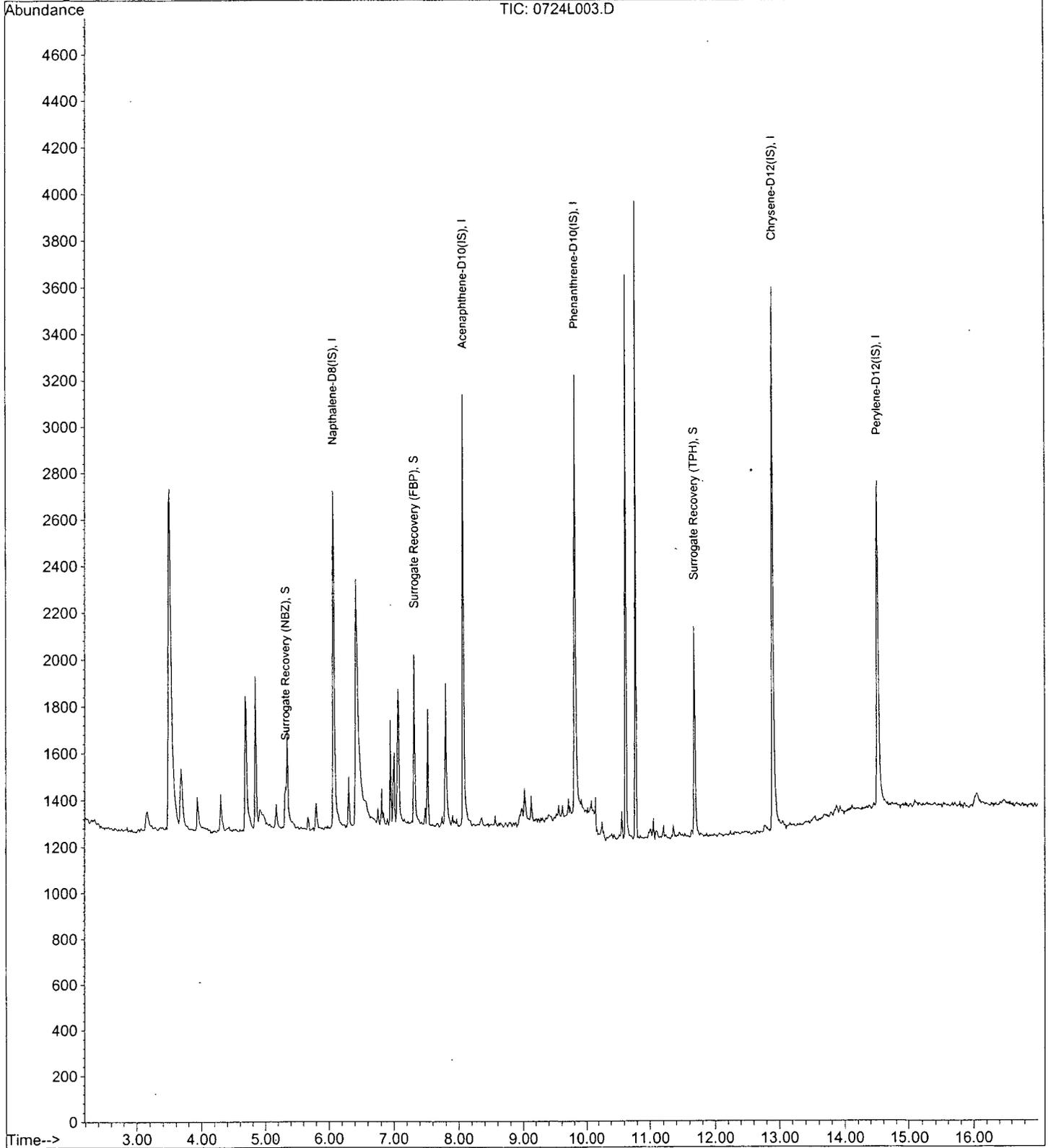
Data File : M:\LINUS\DATA\L120613\0724L003.D
Acq On : 24 Jul 12 18:50
Sample : 120723A BLK 1/1000
Misc :

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

Quant Time: Jul 27 7:45 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: 120723W-65144 LCS - 169459
 Batch ID: #SIMHC-120723A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	4.00	2.22	55.5	45-105
2-METHYLNAPHTHALENE	4.00	2.18	54.5	45-105
ACENAPHTHENE	4.00	2.18	54.5	45-110
ACENAPHTHYLENE	4.00	2.33	58.3	50-105
ANTHRACENE	4.00	2.39	59.8	55-110
BENZO(A)ANTHRACENE	4.00	2.21	55.3	55-110
BENZO(A)PYRENE	4.00	2.24	56.0	55-110
BENZO(B)FLUORANTHENE	4.00	2.23	55.8	45-120
BENZO(GHI)PERYLENE	4.00	2.46	61.5	40-125
BENZO(K)FLUORANTHENE	4.00	2.57	64.3	45-125
CHRYSENE	4.00	2.67	66.8	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.29	57.3	40-125
FLUORANTHENE	4.00	3.03	75.8	55-115
FLUORENE	4.00	2.75	68.8	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.25	56.3	45-125
NAPHTHALENE	4.00	2.15	53.8	40-100
PHENANTHRENE	4.00	2.78	69.5	50-115
PYRENE	4.00	2.45	61.3	50-130

SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.26	63.0	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.49	74.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.16	58.0	50-135

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	SIMB.M
Extraction Date :	07/23/12
Analysis Date :	07/24/12
Instrument :	Linus
Run :	0724L004
Initials :	LF

Printed: 07/27/12 5:34:02 PM
 APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L004.D
 Acq On : 24 Jul 12 19:16
 Sample : 120723A LCS-1 1/1000
 Misc :

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

Quant Time: Jul 27 7:48 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)	6.07	136	2043	2.50000	ppb	-0.05
6) Acenaphthene-D10 (IS)	8.08	164	992	2.50000	ppb	-0.05
12) Phenanthrene-D10 (IS)	9.82	188	1998	2.50000	ppb	-0.04
16) Chrysene-D12 (IS)	12.90	240	2829	2.50000	ppb	0.00
22) Perylene-D12 (IS)	14.52	264	2395	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.31	82	570	1.49198	ppb	-0.02
Spiked Amount	2.000		Recovery	=	74.600%	
7) Surrogate Recovery (FBP)	7.32	172	1171	1.26093	ppb	-0.05
Spiked Amount	2.000		Recovery	=	63.050%	
18) Surrogate Recovery (TPH)	11.69	244	1642	1.16019	ppb	-0.05
Spiked Amount	2.000		Recovery	=	58.000%	
Target Compounds						
						Qvalue
3) Naphthalene	6.09	128	2835	2.15459	ppb	99
4) 2-Methylnaphthalene	6.89	142	1857	2.17775	ppb	91
5) 1-Methylnaphthalene	7.00	142	1904	2.21943	ppb	97
8) 1,1'-Biphenyl	7.43	154	2358	2.28854	ppb	89
9) Acenaphthylene	7.92	152	3161	2.33120	ppb	97
10) Acenaphthene	8.12	154	1637	2.17643	ppb	97
11) Fluorene	8.72	166	2378	2.74892	ppb	99
13) Phenanthrene	9.85	178	3979	2.77873	ppb	99
14) Anthracene	9.91	178	3390	2.39193	ppb	99
15) Fluoranthene	11.22	202	6232	3.02567	ppb	# 90
17) Pyrene	11.49	202	6273	2.45271	ppb	# 90
19) Benz (a) anthracene	12.89	228	4978	2.21470	ppb	97
20) Chrysene	12.94	228	5791	2.66702	ppb	99
21) Indeno (1,2,3-cd) pyrene	16.02	276	5164	2.25304	ppb	79
23) Benzo (b) fluoranthene	14.08	252	4702	2.23142	ppb	84
24) Benzo (k) fluoranthene	14.12	252	5525	2.56833	ppb	# 93
25) Benzo (a) pyrene	14.45	252	4531	2.23751	ppb	97
26) Dibenz (a,h) anthracene	16.03	278	4217	2.29289	ppb	90
27) Benzo (g,h,i) perylene	16.45	276	4720	2.46032	ppb	92

$\frac{2835 \times 2.5}{2043 \times 1.610} = 2.15$
 LF 8/10/12

Quantitation Report

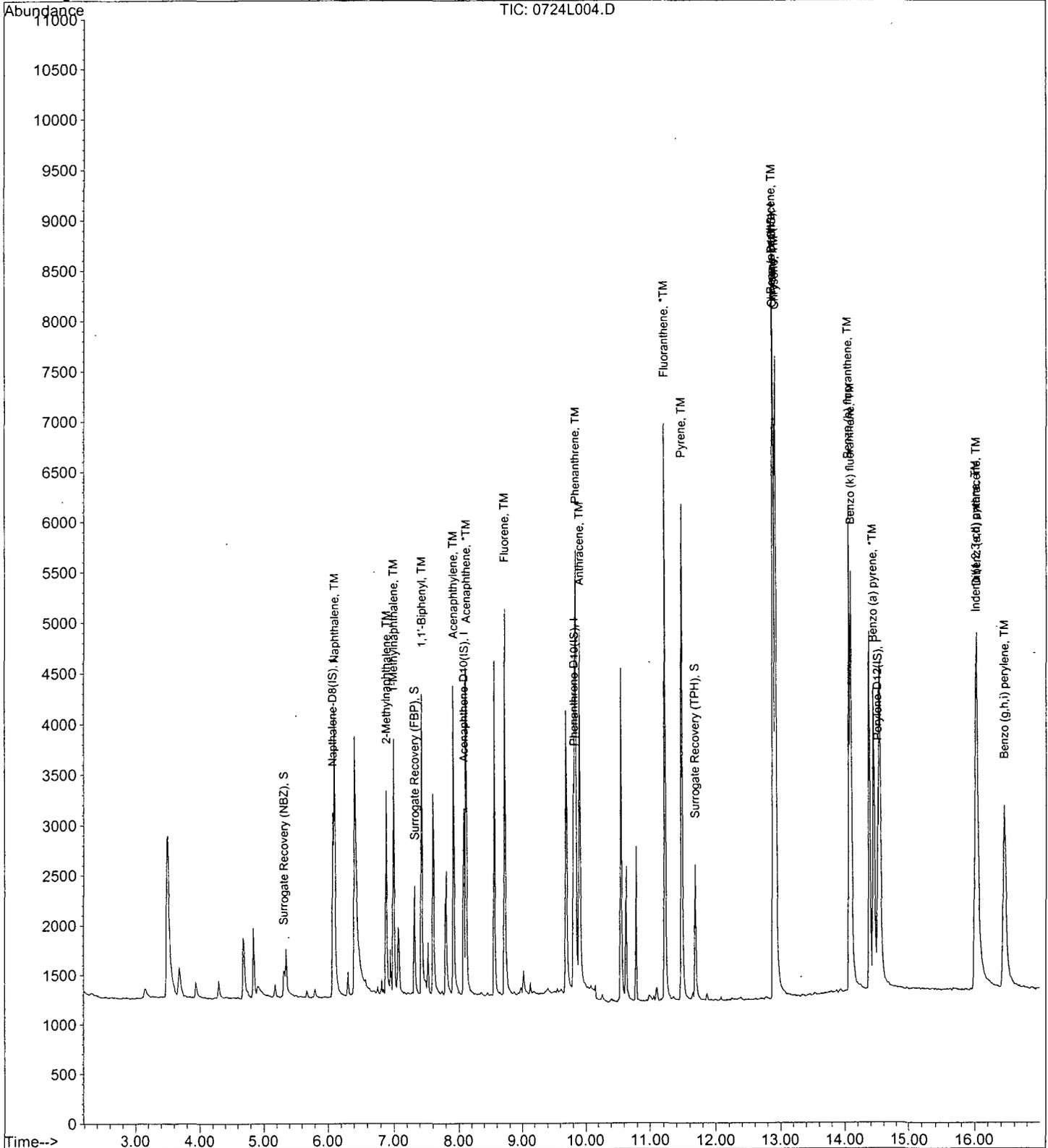
Data File : M:\LINUS\DATA\L120613\0724L004.D
Acq On : 24 Jul 12 19:16
Sample : 120723A LCS-1 1/1000
Misc :

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

Quant Time: Jul 27 7:48 2012

Quant Results File: SIMB.RES

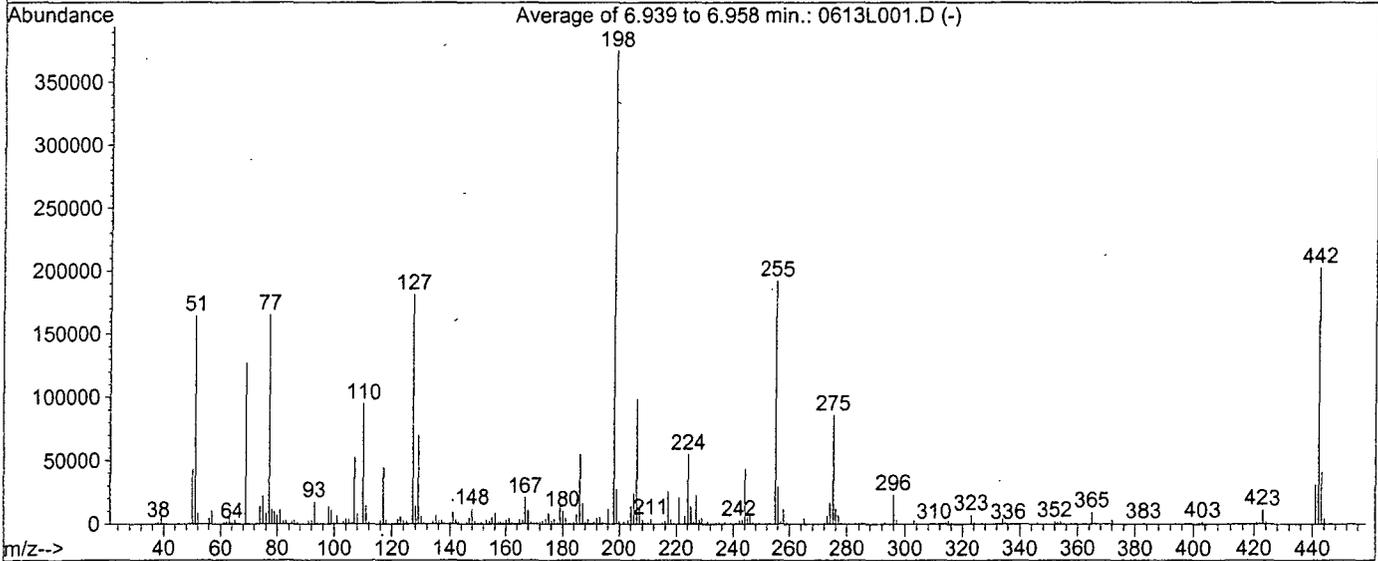
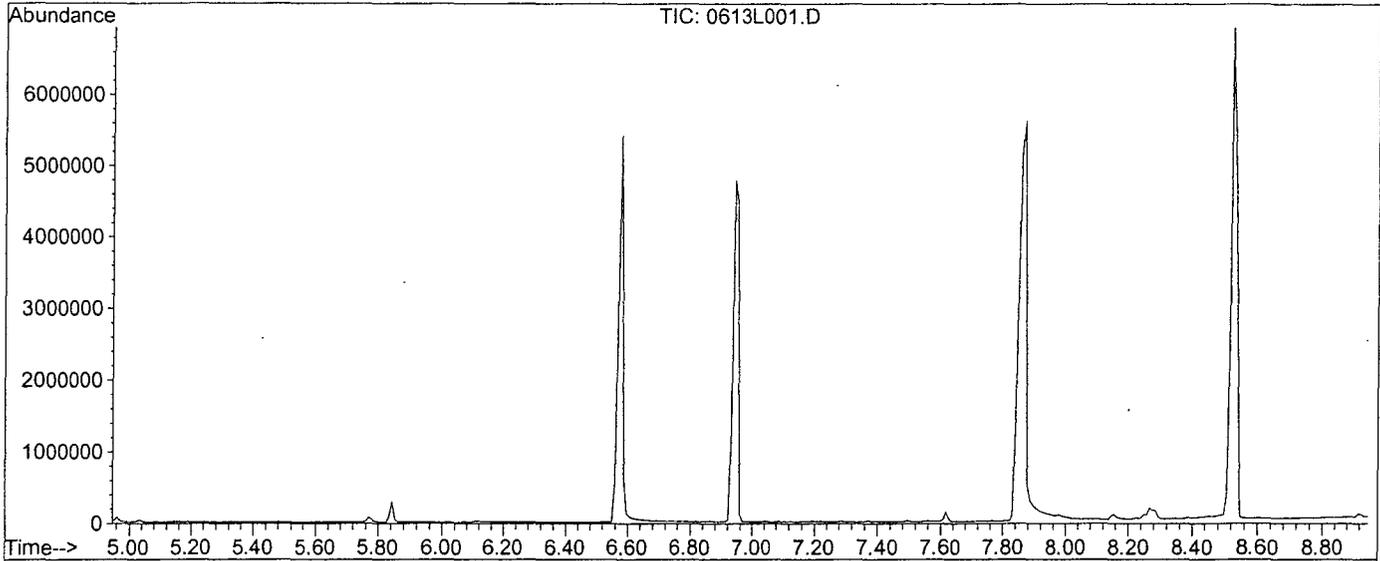
Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L120613\0613L001.D
 Acq On : 13 Jun 12 13:07
 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 6.939 to 6.958 min.

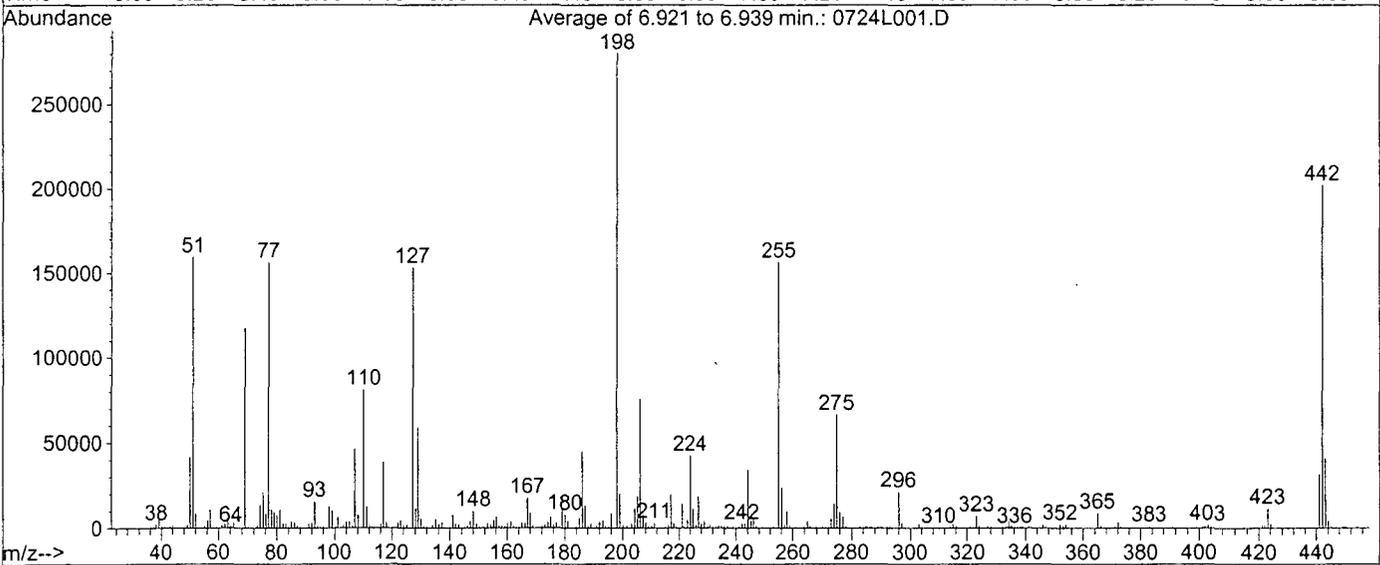
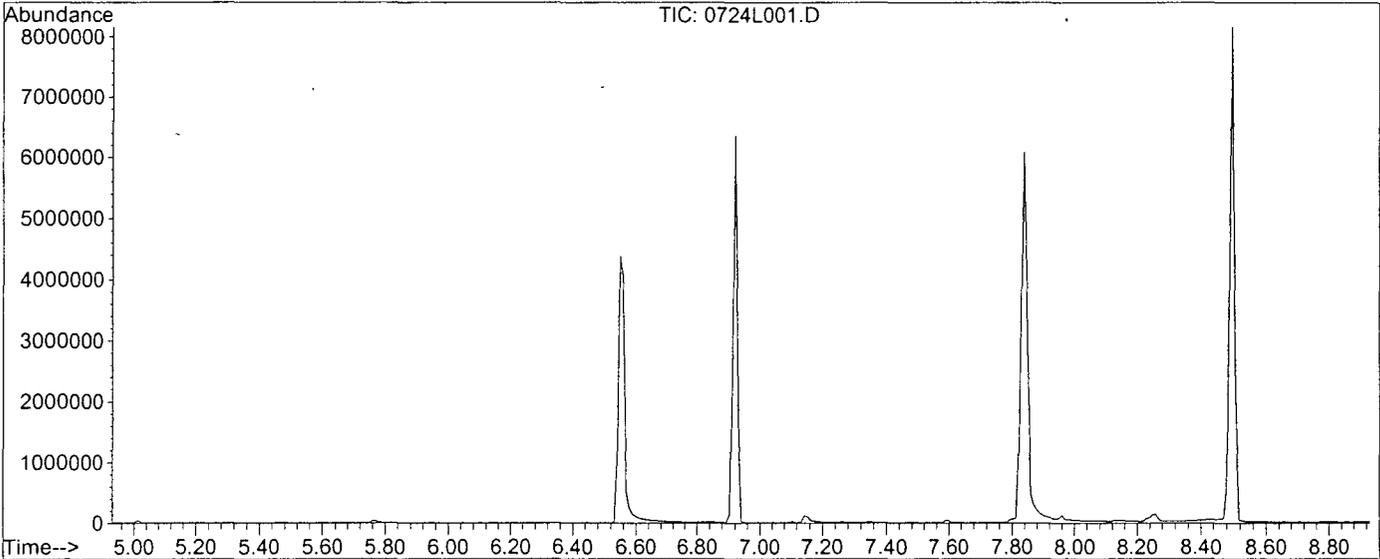
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.8	164628	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	681	PASS
127	198	40	60	48.3	181462	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	375479	PASS
199	198	5	9	7.2	27064	PASS
275	198	10	30	22.8	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\0724L001.D
 Acq On : 24 Jul 12 18:05
 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 6.939 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	56.9	159505	PASS
68	69	0.00	2	0.1	140	PASS
70	69	0.00	2	0.8	952	PASS
127	198	40	60	54.7	153315	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	280338	PASS
199	198	5	9	7.1	20025	PASS
275	198	10	30	23.7	66402	PASS
365	198	1	100	3.1	8553	PASS
441	443	0.01	100	76.8	31366	PASS
442	198	40	150	72.0	201931	PASS
443	442	17	23	20.2	40841	PASS

10/18/12

Part #: 10001 Laboratory Use Only - See MSDS
 Lot #: 042910 Exp: 042913 Storage 0 °C



CLP Semi-Volatiles Base/Neutrals Mix #1
 14 components
 2000 ug/mL in methy

CLP Semi-Volatiles Base/Neutrals Mix #1
 Lot #: 042910 - 28440
 Rec: 3/8/11 MFR exp. 4/29/2013

ABSOLUTE STANDARD

exp 10/18/12

10/18/12

Part #: 10001 Laboratory Use Only - See MSDS
 Lot #: 042910 Exp: 042913 Storage 0 °C



CLP Semi-Volatiles Base/Neutrals Mix #1
 14 components
 2000 ug/mL in m

CLP Semi-Volatiles Base/Neutrals Mix #1
 Lot #: 042910 - 29085
 Rec: 8/4/11 MFR exp. 04/29/13

ABSOLUTE STANDAR

exp 10/18/12

10/18/12

Part #: 10002 Laboratory Use Only - See MSDS
 Lot #: 073109 Exp: 073112 Storage 4 °C



CLP Semi-Volatiles Base/Neutrals Mix #2
 14 components
 2000 ug/mL in methyle

CLP Semi-Volatiles Base/Neutrals Mix #2
 Lot #: 073109 - 28446
 Rec: 3/8/11 MFR exp. 7/31/2012

ABSOLUTE STANDARDS

exp 7/31/12

10/18/12

Part #: 10002 Laboratory Use Only - See MSDS
 Lot #: 073109 Exp: 073112 Storage 4 °C



CLP Semi-Volatiles Base/Neutrals Mix #2
 14 components
 2000 ug/mL in met

CLP Semi-Volatiles Base Neutrals Mix #2
 Lot #: 073109 - 29090
 Rec: 8/4/11 MFR exp. 07/31/12

ABSOLUTE STANDAR

exp 7/31/12

10/18/12

Part #: 10004 Laboratory Use Only - See MSDS
 Lot #: 101509 Exp: 101514 Storage 4 °C



CLP Semi-Volatiles Toxic Substances #1
 4 components
 2000 ug/mL in methyl

CLP Semi-Volatiles Toxic Substances #1
 Lot #: 101509 - 28453
 Rec: 3/8/11 MFR exp. 10/15/2011

ABSOLUTE STANDARD

exp 10/18/12

10/18/12

Part #: 10004 Laboratory Use Only - See MSDS
 Lot #: 101509 Exp: 101514 Storage 4 °C



CLP Semi-Volatiles Toxic Substances #1
 4 components
 2000 ug/mL in met

CLP Semi-Volatiles Toxic Substances #1
 Lot #: 101509 - 29095
 Rec: 8/4/11 MFR exp. 10/15/14

ABSOLUTE STANDAR

exp 10/18/12

10/18/12

Part #: 10005 Laboratory Use Only - See MSDS
 Lot #: 061209 Exp: 061214 Storage 4 °C



CLP Semi-Volatiles Toxic Substances #2
 8 components
 2000 ug/mL in methy

CLP Semi-Volatiles Toxic Substances #2
 Lot #: 061209 - 28458
 Rec: 3/8/11 MFR exp. 6/12/2014

ABSOLUTE STANDARD

exp 10/18/12

10/18/12

Part #: 10005 Laboratory Use Only - See MSDS
 Lot #: 121208 Exp: 121213 Storage 4 °C



CLP Semi-Volatiles Toxic Substances #2
 8 components
 2000 ug/mL in met

CLP Semi-Volatiles Toxic Substances #2
 Lot #: 121208 - 29100
 Rec: 8/4/11 MFR exp. 12/12/13

ABSOLUTE STANDAR

exp 10/18/12

UP 2/25/12

8270D PAH SIM Solution,
200 mg/L, 1 ml
110780-01
Lot # Storage Expiry
170253 5-10 Degrees C 3/3/13
Solv: Methylene Chloride
3270D PAH SIM
Lot # 170253 - 28478
Rec: 3/10/11 MFR exp 3/3/2013

UP 2/25/13

UP 2/25/12

8270D PAH SIM Solution,
Second Source, 200 mg/L, 1 ml
110780-01-88
Lot # Storage Expiry
170256 5-10 Degrees C 3/3/13
Solv: Methylene Chloride
8270D PAH SIM (SS)
Lot #: 170256 - 28490
Rec: 3/10/11 MFR exp 3/3/2013

UP 2/25/13

UP 2/25/12

8270 BN:A (200:400)
Surrogate Solution, 1 ml
110004-17
Lot # Storage Expiry
167802 5-10 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

UP 4/9/13

UP 2/25/12

Method 8270 Internal
Standard Solution, 2,000
mg/L, 1 ml
110001-42
Lot # Storage Expiry
167766 5-10 Degrees C 4/20/13
Solv: Methylene Chloride
8270 Internal Standard
Lot # 167766 - 28151
Rec: 1/20/11 MFR exp. 04/20/13

UP 2/25/13

UP 2/25/12

PREP DATE:	02-25-12					
SIM Semivolatiles Int. Std. Mix 125 ug/ml						
Exp:	08-25-12					
Supplier	ID #	Conc.	Lot #	Date	CODE:	B
O2S	Int. Std.	2000	167766-28151	02/25/12	02-25-13	100
EM Science	MeCl2		47186			1500
						1600

UP 2/25/12

PREP DATE:	02-25-12												
8270 SIM STANDARD CURVE													
		Conc.		Date	CODE:	0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
Supplier	ID #	µg/mL	Lot #	Code	Exp. Date	µL	µL	µL	µL	µL	µL	µL	µL
	8270D PAH SIM	200	170253-28478	02/25/12	02-25-13	0	0	0	0	5	5	25	50
	5 0ug/mL	5		02/25/12		0	0	10	20	0	0	0	0
	1 0ug/mL	1		02/25/12		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

GC/MS STANDARD PREPARATION BOOK # J PAGE # 113

VF 2/27/12

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

W

VF 2/28/12

GCM-160-1
 Lot CH-2137
 Exp: 07/31/2013
 Semi-Volatiles GC/MS Tuning Standard
 4 analyte(s) at 1000 µg/mL in dichloromethane
 250 Smith St. No Kingstown, RI 02852 USA



For Lab Use

off 2/28/13

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

VF

VF 2/28/12

PREP DATE:	02-29-12												
8270 SIM STANDARD CURVE													
		Conc.	Date	CODE:	A	A	C	D	E	F	G	H	
		µg/mL	Lot #	Code	Exp. Date	µL							
Supplier	ID #												
	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

VF 2/29/12

PREP DATE:	02-29-12						
SIM 8270 Second Source (5µg/mL)							
Exp:	03-14-12						
Supplier	ID #	Conc.	Date	CODE:			
	8270D PAH SIM (SS)	µg/mL	Code	Exp. Date	µL		
			200	02/25/12	02-25-13	5	
	MeCl2		Lot#47186			195	
					Final Volume	200	

W

VF 3/18/12

PREP DATE:	03-18-12												
8270 STANDARD CURVE													
		Conc.	Date			5	10	20	40	50	60	80	100
		µg/mL	Lot #	Code	Exp. Date	µL							
Supplier	ID #												
	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

VF 3/18/12

PREP DATE:	03-18-12						
8270 Second Source (SS) 50ug/mL							
						50	
Supplier	ID #	Conc.	Date	CODE:			
	8270C SS	µg/mL	Code	Exp. Date	µL		
		200	10/11/11	10-11-12	25		
EM Science	Methylene Chloride		47186		75		

VF

VF 5/11/12

Part #: 10001 Laboratory Use Only - See MSDS
 Lot #: 042910 Exp: 042913 Storage 0 °C



CLP Semi-Volatiles Base/Neutrals Mix #1
 14 components CLP Semi-Volatiles Base/Neutrals Mix #1
 2000 ug/mL in meth Lot #: 042910 - 29081
 Rec: 8/4/11 MFR exp. 04/29/13

ABSOLUTE STANDARD

Exp 4/29/13

VF 5/11/12

Part #: 10002 Laboratory Use Only - See MSDS
 Lot #: 073109 Exp: 073112 Storage 4 °C



CLP Semi-Volatiles Base/Neutrals Mix #2
 14 components CLP Semi-Volatiles Base Neutrals Mix #2
 2000 ug/mL in meth Lot #: 073109 - 29086
 Rec: 8/4/11 MFR exp. 07/31/12

ABSOLUTE STANDARD

Exp 7/31/12

VF 5/11/12

Part #: 10004 Laboratory Use Only - See MSDS
 Lot #: 101509 Exp: 101514 Storage 4 °C



CLP Semi-Volatiles Toxic Substances #1
 4 components CLP Semi-Volatiles Toxic Substances #1
 2000 ug/mL in meth Lot #: 101509 - 29091
 Rec: 8/4/11 MFR exp. 10/15/14

ABSOLUTE STANDARD

Exp 10/15/14

VF 5/11/12

Part #: 10005 Laboratory Use Only - See MSDS
 Lot #: 121208 Exp: 121213 Storage 4 °C



CLP Semi-Volatiles Toxic Substances #2
 8 components CLP Semi-Volatiles Toxic Substances #2
 2000 ug/mL in meth Lot #: 121208 - 29097
 Rec: 8/4/11 MFR exp. 12/12/13

ABSOLUTE STANDARD

Exp 12/12/13

VF 5/11/12

Part #: 10006 Laboratory Use Only - See MSDS
 Lot #: 071211 Exp: 071214 Storage 4 °C



CLP Semi-Volatiles - Benzidines
 2 components CLP Semi-volatiles - Benzidines
 2000 ug/mL in meth Lot #: 071211 - 29102
 Rec: 8/4/11 MFR exp. 07/12/14

ABSOLUTE STANDARD

Exp 7/12/14

VF 5/11/12

Part #: 10007 Laboratory Use Only - See MSDS
 Lot #: 100909 Exp: 100914 Storage 4 °C



CLP Semi-Volatiles - PAH Standard
 17 components CLP Semi-Volatiles - PAH Mix
 2000 ug/mL in meth Lot #: 100909 - 29107
 Rec: 8/4/11 MFR exp. 10/09/14

ABSOLUTE STANDARD

Exp 10/09/14

VF 5/11/12

Part #: 10018 Laboratory Use Only - See MSDS
 Lot #: 062111 Exp: 062116 Storage 4 °C



EPA Method 8270A - Analytes Mix #8
 13 components - PEPA Method 8270A - Analytes Mix #8
 2000 ug/mL in meth Lot #: 062111 - 29112
 Rec: 8/4/11 MFR exp. 06/21/16

ABSOLUTE STANDARD

Exp 6/21/16

VF 5/11/12

Part #: 70023 Laboratory Use Only - See MSDS
 Lot #: 031611 Exp: 031616 Storage 4 °C



Atrazine
 Atrazine
 1000 ug/mL in acet Lot #: 031611 - 29117 73
 Rec: 8/4/11 MFR exp. 03/16/16

ABSOLUTE STANDARD

Exp 3/16/16

VF 5/11/12

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

exp 4/19/14

VF 5/11/12

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

exp 3/4/14

VF 5/11/12

Supplier	ID #	Conc. $\mu\text{g/mL}$	Lot #	Date Code	Exp. Date	CODE:	P
PREP DATE: 05-01-12							
8270C Stock/Spike Standard							
Exp: 07-31-12							
Absolute	10001	2000	042910-29081	05/01/12	04-29-13	1000	
Absolute	10002	2000	073109-29086	05/01/12	07-31-12	1000	
Absolute	10004	2000	101509-29091	05/01/12	10-15-14	1000	
Absolute	10005	2000	121208-29097	05/01/12	12-12-13	1000	
Absolute	10006	2000	071211-29102	05/01/12	07-12-14	1000	
Absolute	10007	2000	100909-29107	05/01/12	10-09-14	1000	
Absolute	10018	2000	062111-29112	05/01/12	06-21-16	1000	
Absolute	70023	1000	031611-29117	05/01/12	03-16-16	1000	
Absolute	82705	2000	041911-29122	05/01/12	04-19-14	1000	
Absolute	94552	2000	030411-29127	05/01/12	03-14-14	1000	
						Final Vol	10000

VF 5/4/12

Supplier	ID #	Conc. $\mu\text{g/mL}$	Lot #	Date Code	Exp Date	μL							
PREP DATE: 05-04-12													
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
8270T Stock		200		05/01/12	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 5/11/12

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

VF 5/11/12

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

exp 4/29/13

VF 5/11/12

Part #: **10002** Laboratory Use Only - See MSDS
 Lot #: **073109** Exp: **073112** Storage **4 °C**
 **CLP Semi-Volatiles Base/Neutrals Mix #2**
14 components CLP Semi-Volatiles Base Neutrals Mix #2
2000 ug/mL in me Lot #: 073109 - 29097
 Rec: 8/4/11 MFR exp. 07/31/12
ABSOLUTE STANDARD

exp 7/31/12

Organic Extraction Worksheet

Method SIM Separatory Funnel Extra 3510C	Extraction Set 120723A	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:	07/23/12 16:30
Spiked ID 8		Ext. End Time:	07/24/12 15:13
		GC Requires Extract By:	08/01/12 0:00
pH1	2	07/23/12 4:45:00 PM	Water Bath Temp Criteria 78,80,78 °
pH2	14	7/24/12 10:55:00 AM	
pH3			

Spiked By: DL

Date 07/23/12

Witnessed By: JM

Date 07/23/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1 120723A Blk				0.025	1	1000	1	2/1	07/23/12 16:30	
					equip	E-WB7,78				
2 120723A LCS-1		0.025	1	0.025	1	1000	1	2/1	07/23/12 16:30	
					equip	E-WB7,78				
3 AY65041	AY65041W07			0.025	1	1050	1	2/1	07/23/12 16:30	68248-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
4 AY65043	AY65043W05			0.025	1	1060	1	2/1	07/23/12 16:30	68248-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
5 AY65044	AY65044W04			0.025	1	1060	1	2/1	07/23/12 16:30	68248-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
6 AY65112	AY65112W07			0.025	1	1030	1	2/1	07/23/12 16:30	68258-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
7 AY65113	AY65113W06			0.025	1	1050	1	2/1	07/23/12 16:30	68258-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
8 AY65144 MS-1	AY65144W09	0.025	1	0.025	1	1050	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
9 AY65144 MSD-1	AY65144W10	0.025	1	0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
10 AY65144	AY65144W12			0.025	1	1040	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
11 AY65145	AY65145W03			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
12 AY65146	AY65146W07			0.025	1	1050	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
13 AY65147	AY65147W05			0.025	1	1040	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				

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

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	LE
Date	7/24/12
Time	12:00
Refrigerator	ADONT

Technician's Initials	
Scanned By	JM
Sample Preparation	JM
Extraction	JM/DL/GH
Concentration	IC
Modified	07/24/12 3:52:10 PM

Reviewed By: DRA

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Date 07/24/12

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	120723A	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:		07/23/12 16:30			
Spiked ID 8		Ext. End Time:		07/24/12 15:13			
				GC Requires Extract By:		08/01/12 0:00	
		pH1	2	07/23/12 4:45:00 PM	Water Bath Temp Criteria 78,80,78 °		
		pH2	14	7/24/12 10:55:00 AM			
		pH3					

Spiked By: DL

Date 07/23/12

Witnessed By: JM

Date 07/23/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
14 AY65148	AY65148W06			0.025	1	1050 E-WB5,78	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
15 AY65149	AY65149W03			0.025	1	1060 E-WB5,78	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
16 AY65150	AY65150W06			0.025	1	1060 E-WB5,78	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
17 AY65151	AY65151W04			0.025	1	1060 E-WB5,78	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter

DRA 7/24/12

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

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	JK
Date	7/24/12
Time	1700
Refrigerator	Wobart

Technician's Initials	
Scanned By	JM
Sample Preparation	JM
Extraction	JM/DL/GH
Concentration	IC
Modified	07/24/12 3:52:10 PM

Reviewed By: DRA

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Date 07/24/12

Injection Log

Directory: M:\LINUS\DATA\120613\

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	0724L001.D	1	SVTUNE 2-28-12		24 Jul 12 18:05
12	2	0724L002.D	1	5.0ug/ml PAH 06-13-12		24 Jul 12 18:24
13	3	0724L003.D	1	120723A BLK 1/1000		24 Jul 12 18:50
14	4	0724L004.D	1	120723A LCS-1 1/1000		24 Jul 12 19:16
15	5	0724L005.D	0.95238	AY65041W07 1/1050		24 Jul 12 19:42
16	6	0724L006.D	0.9434	AY65043W05 1/1060		24 Jul 12 20:07
17	7	0724L007.D	0.9434	AY65044W04 1/1060		24 Jul 12 20:34

EPA 8015B
Total Petroleum Hydrocarbons

**EPA 8015B
Total Petroleum Hydrocarbons -
QC Summary**

Method Blank
TPH Diesel Water

Blank Name/QCG: **120723W-65041 - 169578**
Batch ID: #TPETD-120723A

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	07/23/12	07/31/12
BLANK	SURROGATE: OCTACOSANE (S)	40.6	28-142			%	07/23/12	07/31/12
BLANK	SURROGATE: ORTHO-TERPHEN	48.6 #	57-132			%	07/23/12	07/31/12

= Recovery (or RPD) is outside QC limits.

Quant Method: TPH0719.M
Run #: 731013
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 6:04:26 PM
GC SC-Blank-REG MDLs

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 68248
 Matrix: WATER

SDG No: 68248
 Date Analyzed: 07/31/12
 Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120723A-BLK	Blank	28-142	40.6		57-132	48.6	#
120723A-LCS	Lab Control Spike	28-142	58.5		57-132	91.3	
AY65041	ES077	28-142	59.7		57-132	70.7	
AY65043	ES079	28-142	59.3		57-132	71.3	
AY65044	ES080	28-142	54.5		57-132	65.1	

Comments: Batch: #TPETD-120723A
= Recovery outside of Control Limits on Sample.

Laboratory Control Spike Recovery

TPH Diesel Water

APPL ID: 120723W-65041 LCS - 169578

Batch ID: #TPETD-120723A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL FUEL	2000	1440	72.0	61-143
LUBE OIL	2000	1400	70.0	61-143
<hr style="border-top: 1px dashed black;"/>				
SURROGATE: OCTACOSANE (S)	150	87.7	58.5	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	137	91.3	57-132
<hr style="border-top: 1px dashed black;"/>				

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TPH0719.M
Extraction Date :	07/23/12
Analysis Date :	07/31/12
Instrument :	Apollo
Run :	731014
Initials :	SD

Printed: 08/02/12 5:59:14 PM

APPL Standard LCS

EPA 8015B-e

Form 4

Blank Summary

Lab Name: APPL, Inc.

SDG No: 68248

Case No: 68248

Date Analyzed: 07/31/12

Matrix: WATER

Instrument: Apollo

Blank ID: 120723A-BLK

Time Analyzed: 1439

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120723A-BLK	Blank	731013	07/31/12 1439
120723A-LCS	Lab Control Spike	731014	07/31/12 1503
AY65041	ES077	731016	07/31/12 1551
AY65043	ES079	731017	07/31/12 1615
AY65044	ES080	731018	07/31/12 1639

Comments: Batch: #TPETD-120723A

**EPA 8015B
Total Petroleum Hydrocarbons -
Sample Data**

TPH Diesel Water

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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES077
Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248
APPL ID: AY65041
QCG: #TPETD-120723A-169578

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	07/23/12	07/31/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	59.7	28-142			%	07/23/12	07/31/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S)	70.7	57-132			%	07/23/12	07/31/12

Quant Method: TPH0719.M
Run #: 731016
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 6:04:25 PM
APPL-F1-SC-NoMC-REG MDLs

Data File : G:\APOLLO\DATA\120731\731016.D Vial: 16
 Acq On : 7-31-12 15:51:47 Operator: LAC
 Sample : AY65041W05 5/1050 Inst : Apollo
 Misc : Water Multiplr: 4.76
 IntFile : events.e
 Quant Time: Aug 1 16:23 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

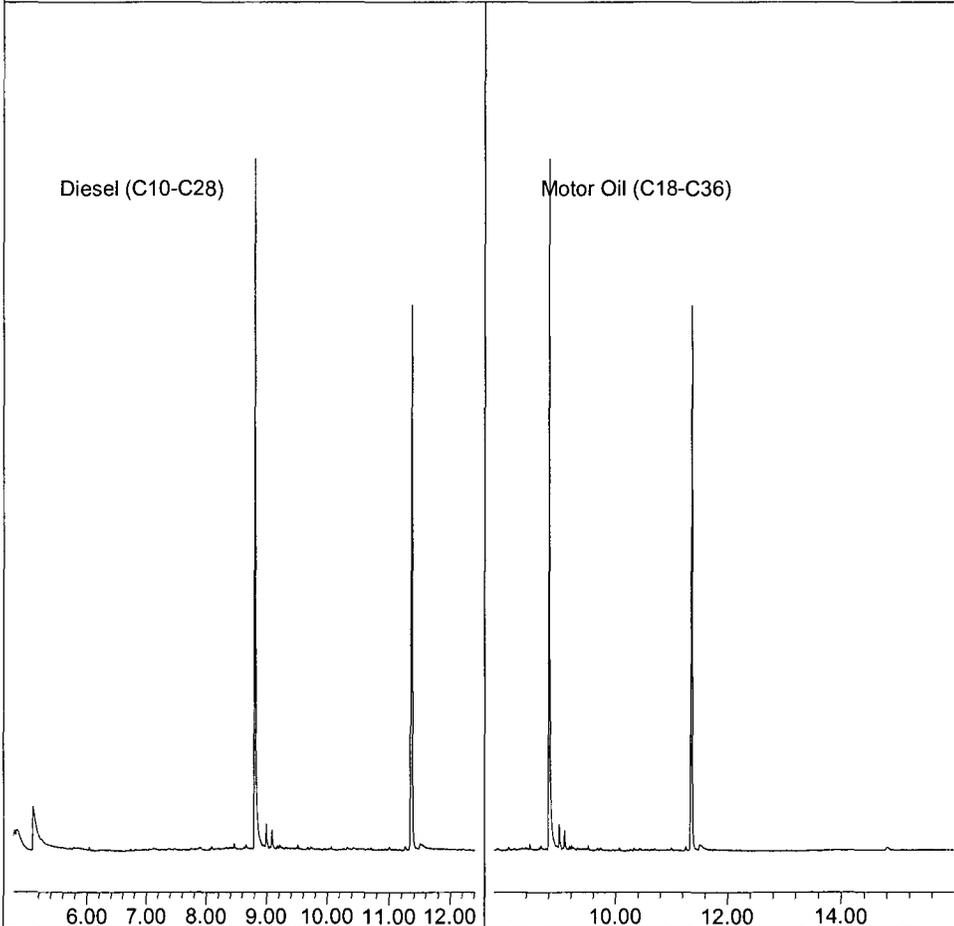
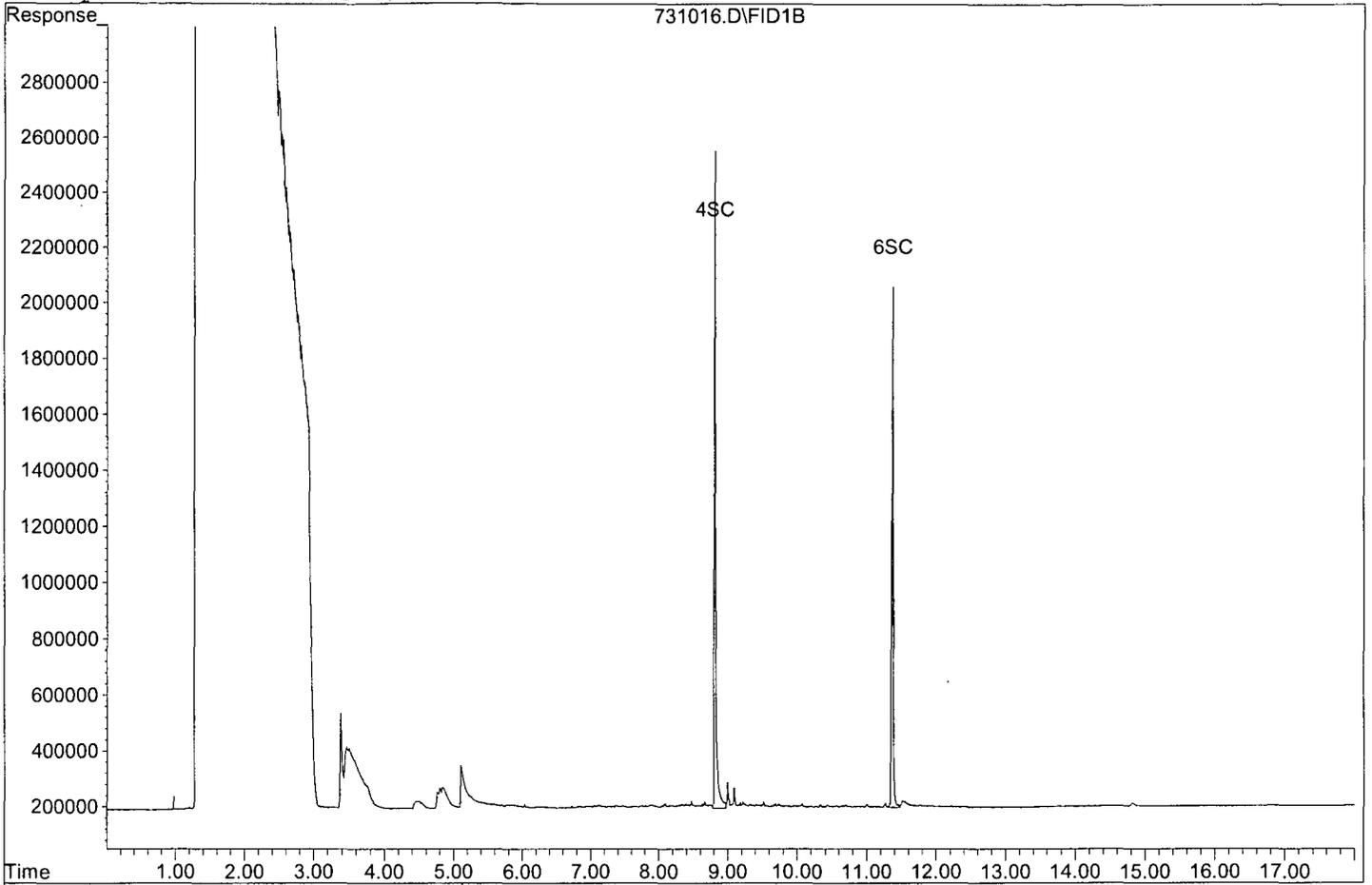
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	29907231	101.054 ppb
Surrogate Spike 142.857		Recovery =	70.74%
6) SC Octacosane(S)	11.37	27008446	85.334 ppb
Surrogate Spike 142.857		Recovery =	59.73%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731016.D

Sample : AY65041W05 5/1050



TPH Diesel Water

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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES079
Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248
APPL ID: AY65043
QCG: #TPETD-120723A-169578

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	07/23/12	07/31/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	59.3	28-142			%	07/23/12	07/31/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S)	71.3	57-132			%	07/23/12	07/31/12

Quant Method: TPH0719.M
Run #: 731017
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 6:04:25 PM
APPL-F1-SC-NoMC-REG MDLs

Data File : G:\APOLLO\DATA\120731\731017.D Vial: 17
 Acq On : 7-31-12 16:15:48 Operator: LAC
 Sample : AY65043W06 5/1050 Inst : Apollo
 Misc : Water Multiplr: 4.76
 IntFile : events.e
 Quant Time: Aug 1 16:23 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

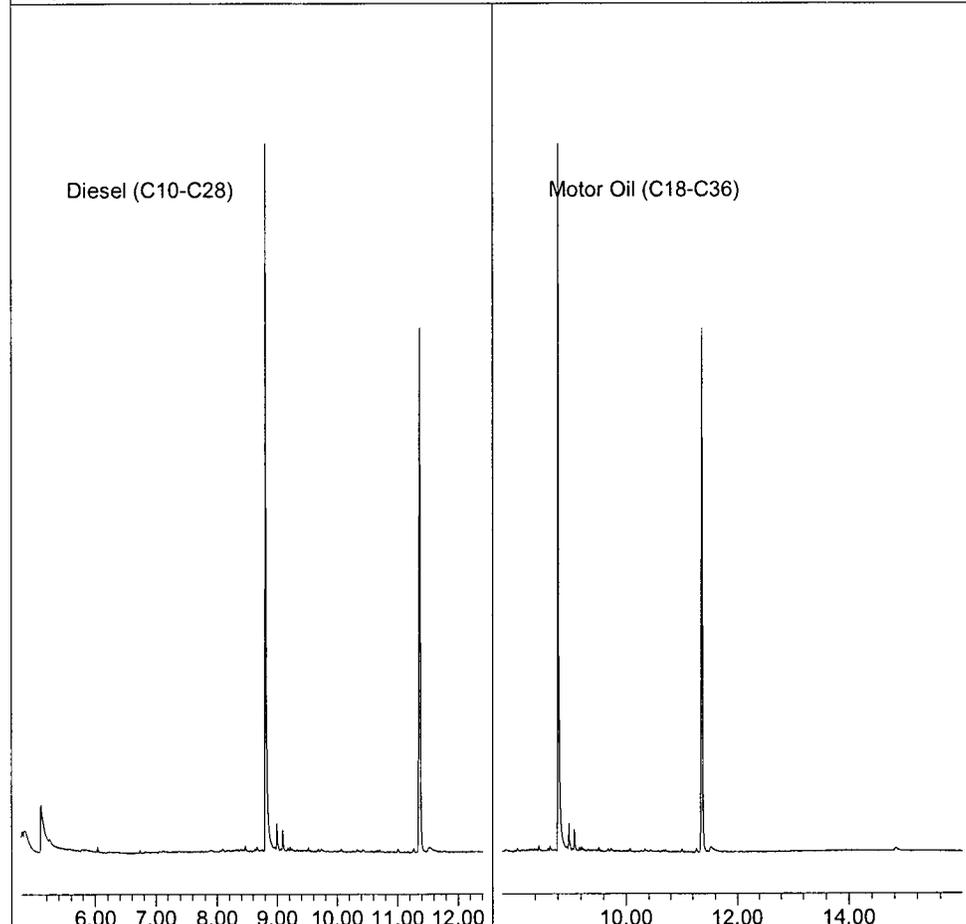
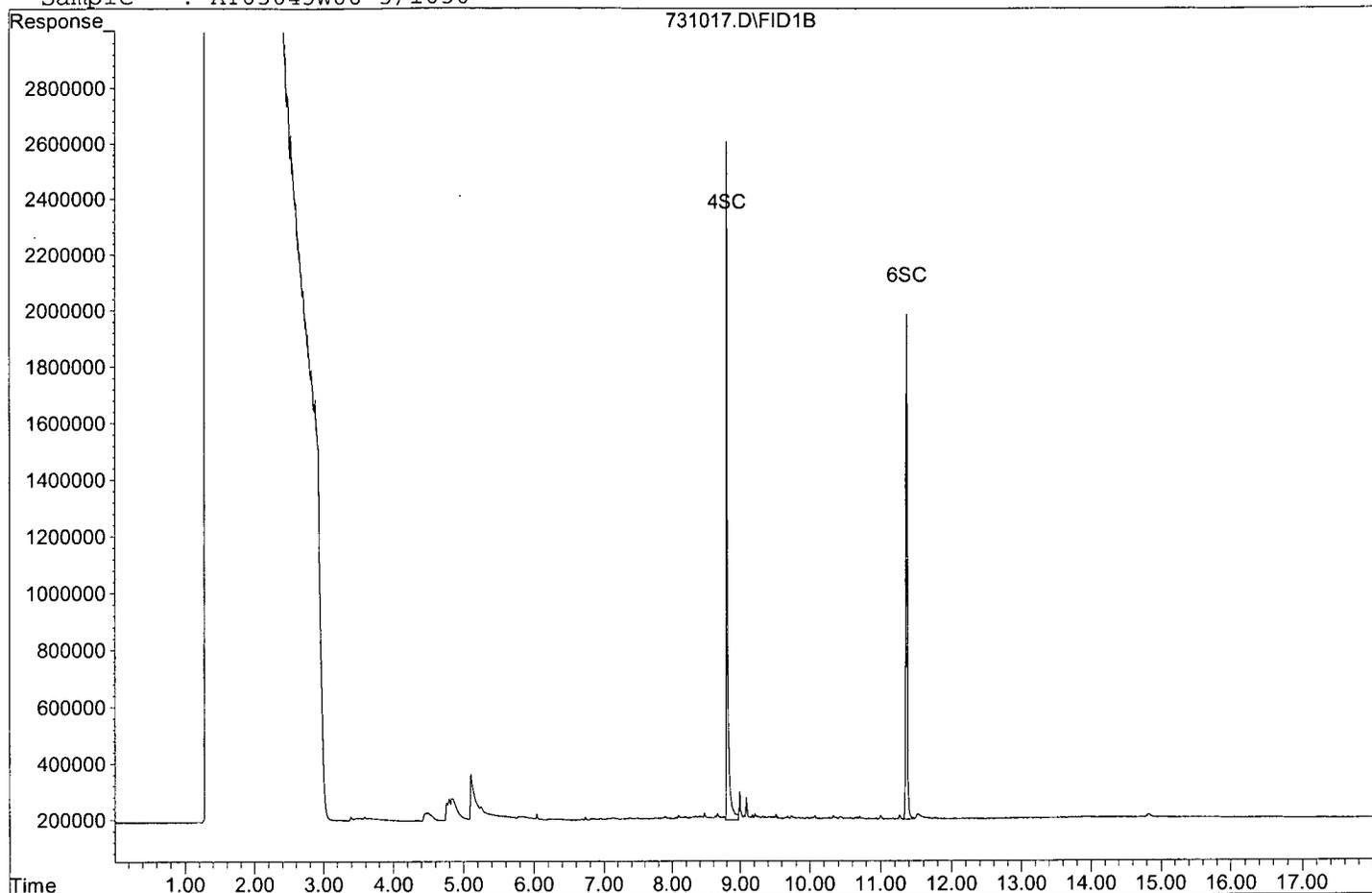
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	30157075	101.899 ppb
Surrogate Spike 142.857		Recovery =	71.33%
6) SC Octacosane(S)	11.37	26810341	84.708 ppb
Surrogate Spike 142.857		Recovery =	59.30%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731017.D

Sample : AY65043W06 5/1050



TPH Diesel Water

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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES080

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65044

QCG: #TPETD-120723A-169578

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	07/23/12	07/31/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	54.5	28-142			%	07/23/12	07/31/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S)	65.1	57-132			%	07/23/12	07/31/12

Quant Method: TPH0719.M
Run #: 731018
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 6:04:25 PM
APPL-F1-SC-NoMC-REG MDLs

Data File : G:\APOLLO\DATA\120731\731018.D Vial: 18
 Acq On : 7-31-12 16:39:36 Operator: LAC
 Sample : AY65044W07 5/1040 Inst : Apollo
 Misc : Water Multiplr: 4.81
 IntFile : events.e
 Quant Time: Aug 1 16:23 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

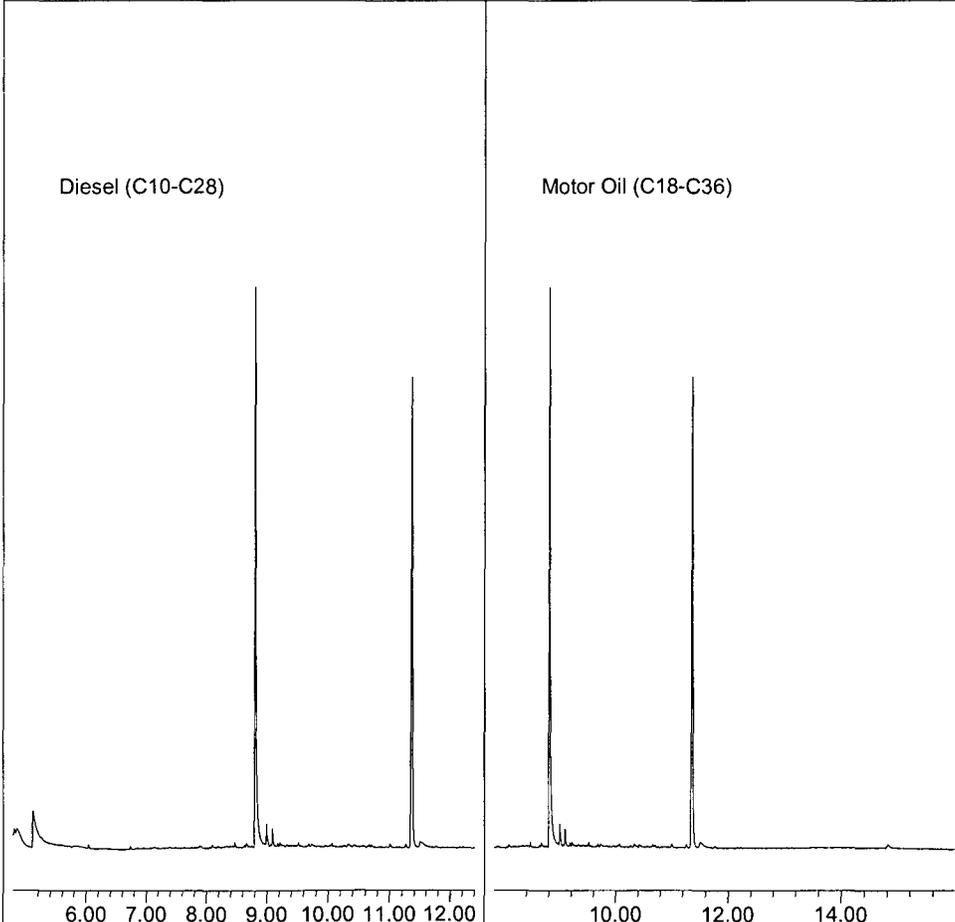
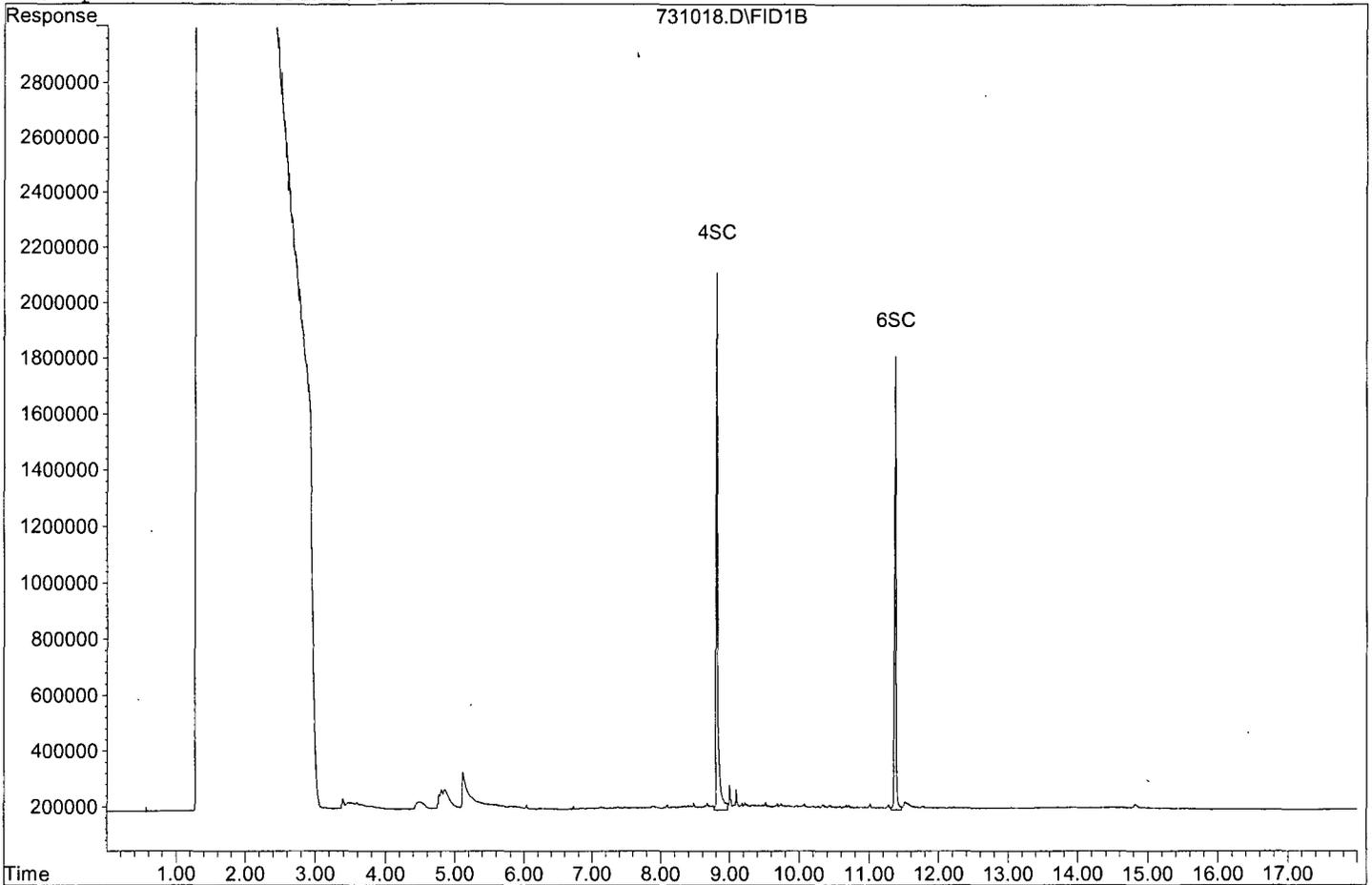
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.81	27521446	93.887 ppb
Surrogate Spike 144.231		Recovery =	65.09%
6) SC Octacosane(S)	11.37	24659973	78.663 ppb
Surrogate Spike 144.231		Recovery =	54.54%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731018.D

Sample : AY65044W07 5/1040



**EPA 8015B
Total Petroleum Hydrocarbons -
Calibration Data**

TPH Extractables
TPH0719

Form 6
Initial Calibration

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

SDG No: 68248
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	622014.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
5										
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33										

* Not Used

0.475552

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

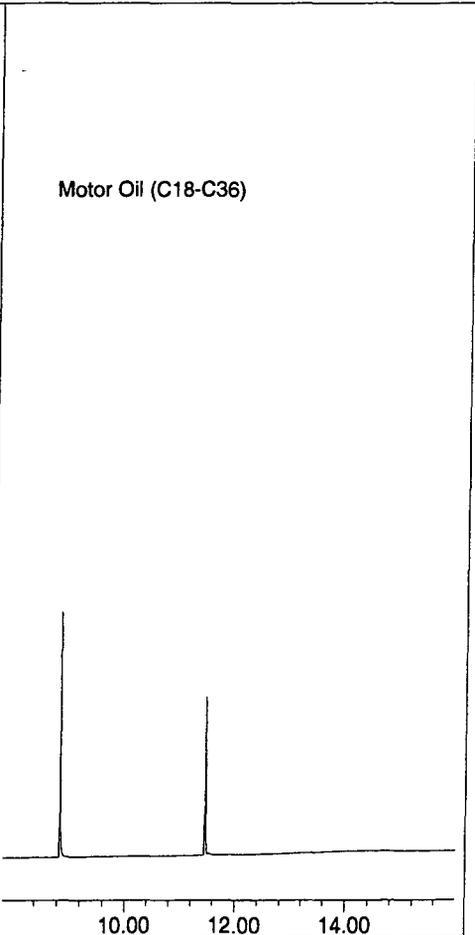
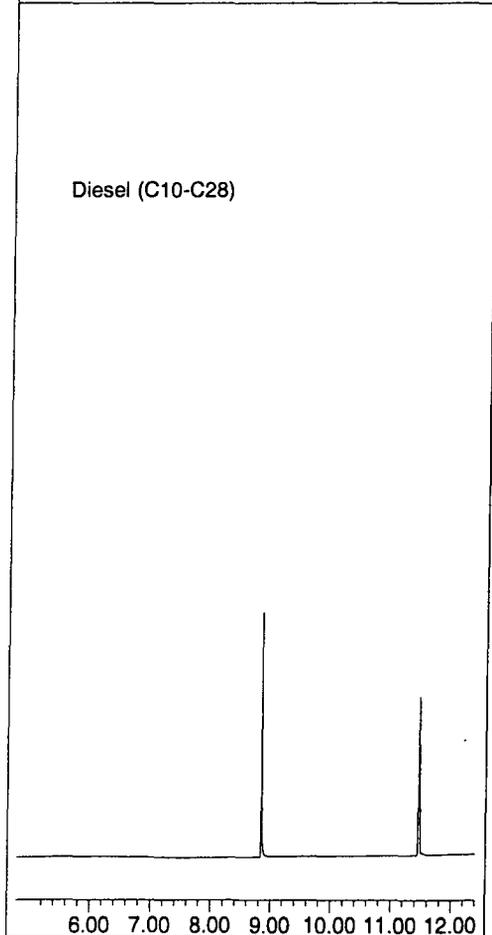
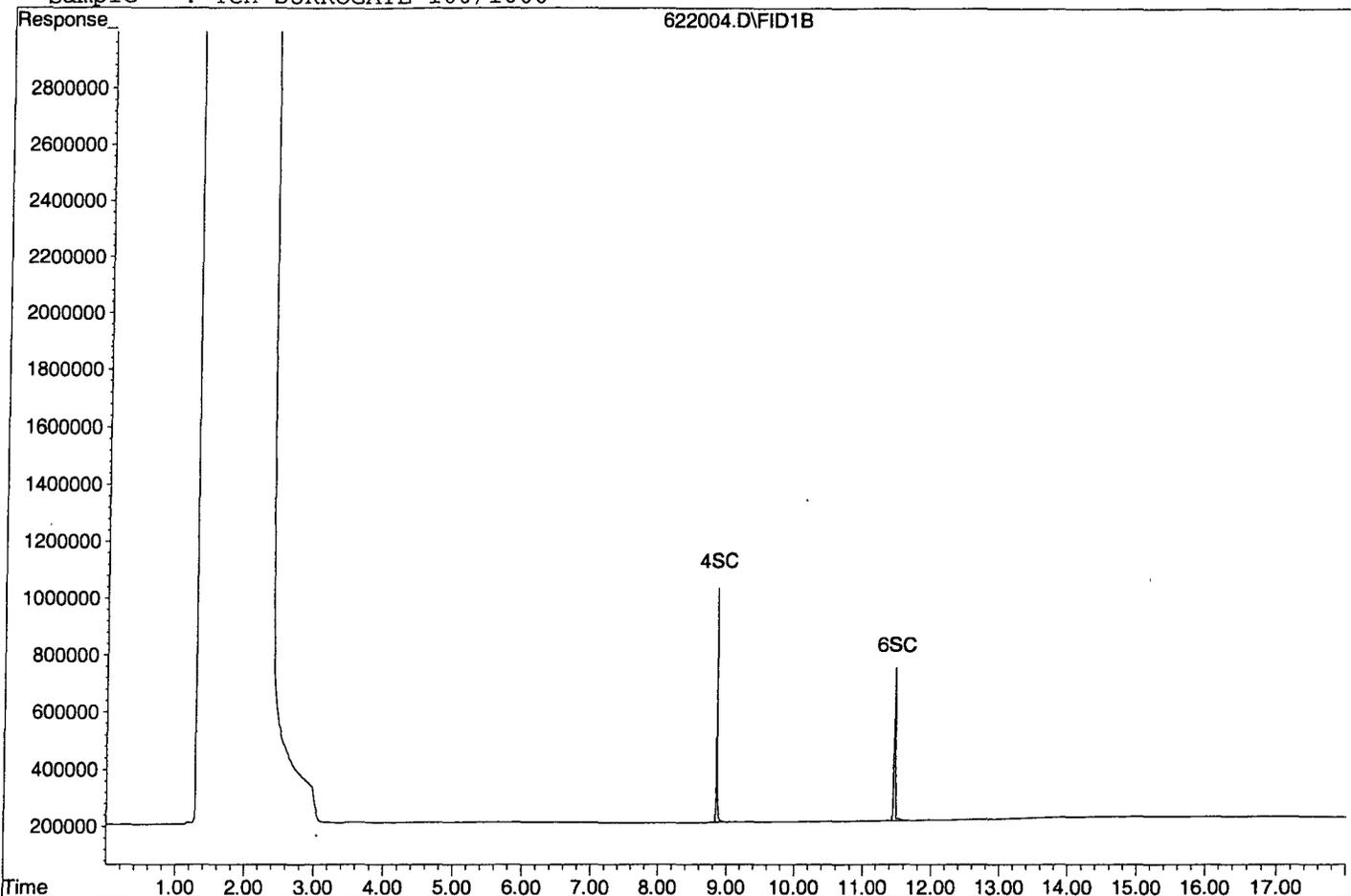
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	7000476	2.493 ppb
Surrogate Spike 30.000		Recovery =	8.31%
6) SC Octacosane(S)	11.46	7543411	3.161 ppb
Surrogate Spike 30.000		Recovery =	10.54%

Target Compounds

Quantitation Report

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

Sample : TCH SURROGATE 100/1000



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

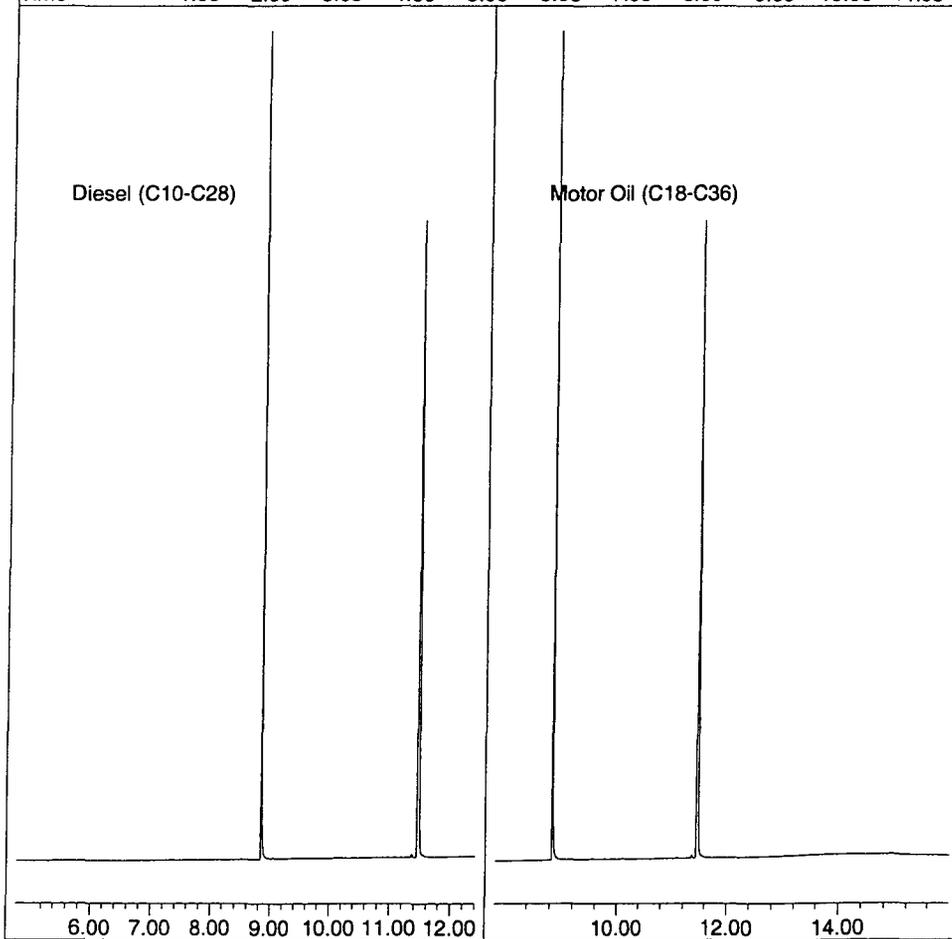
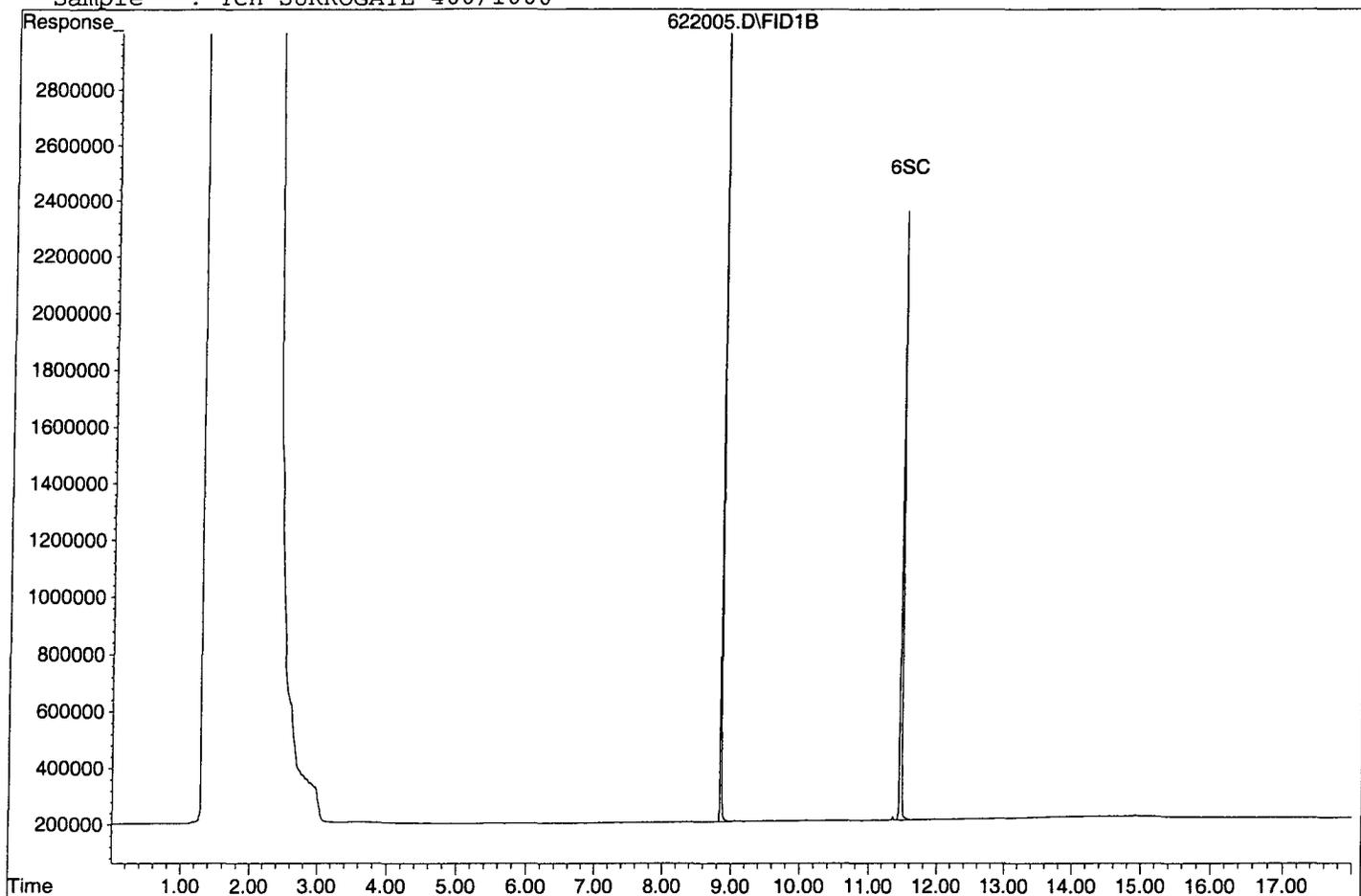
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	28202647	10.113 ppb
Surrogate Spike 30.000		Recovery =	33.71%
6) SC Octacosane(S)	11.47	30015782	12.394 ppb
Surrogate Spike 30.000		Recovery =	41.31%

Target Compounds

Quantitation Report

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

Sample : TCH SURROGATE 400/1000



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

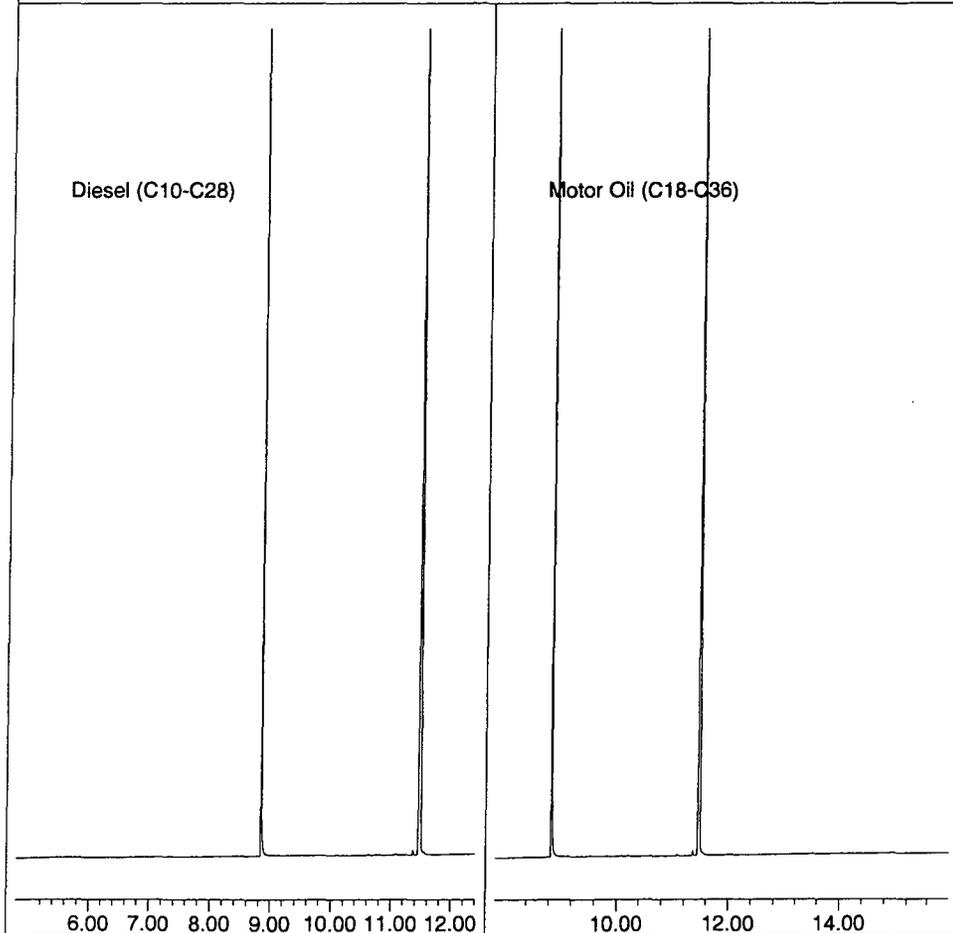
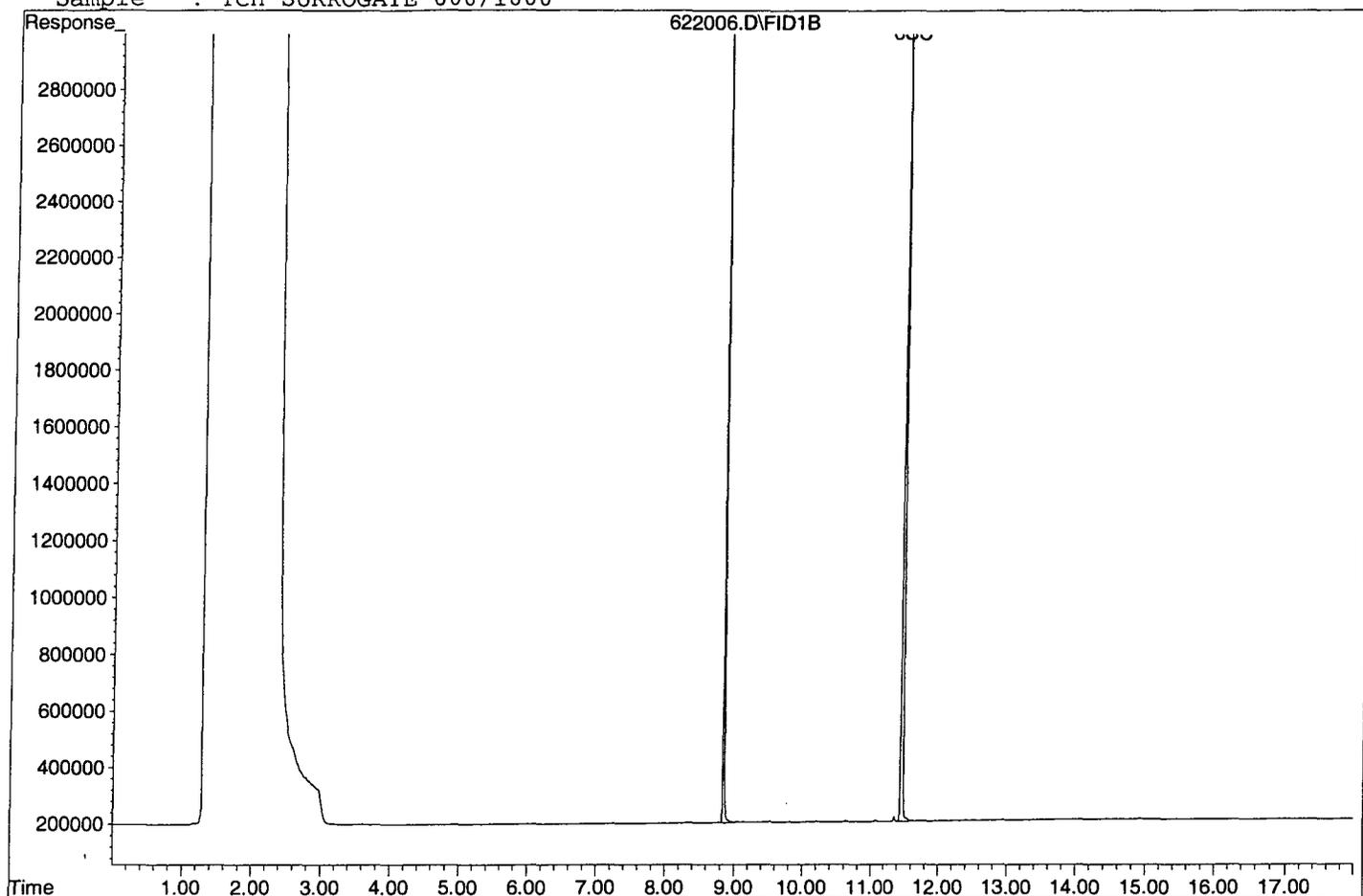
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	43049549	15.420 ppb
Surrogate Spike 30.000		Recovery =	51.40%
6) SC Octacosane(S)	11.48	45975259	18.583 ppb
Surrogate Spike 30.000		Recovery =	61.94%

Target Compounds

Quantitation Report

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

Sample : TCH SURROGATE 600/1000



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

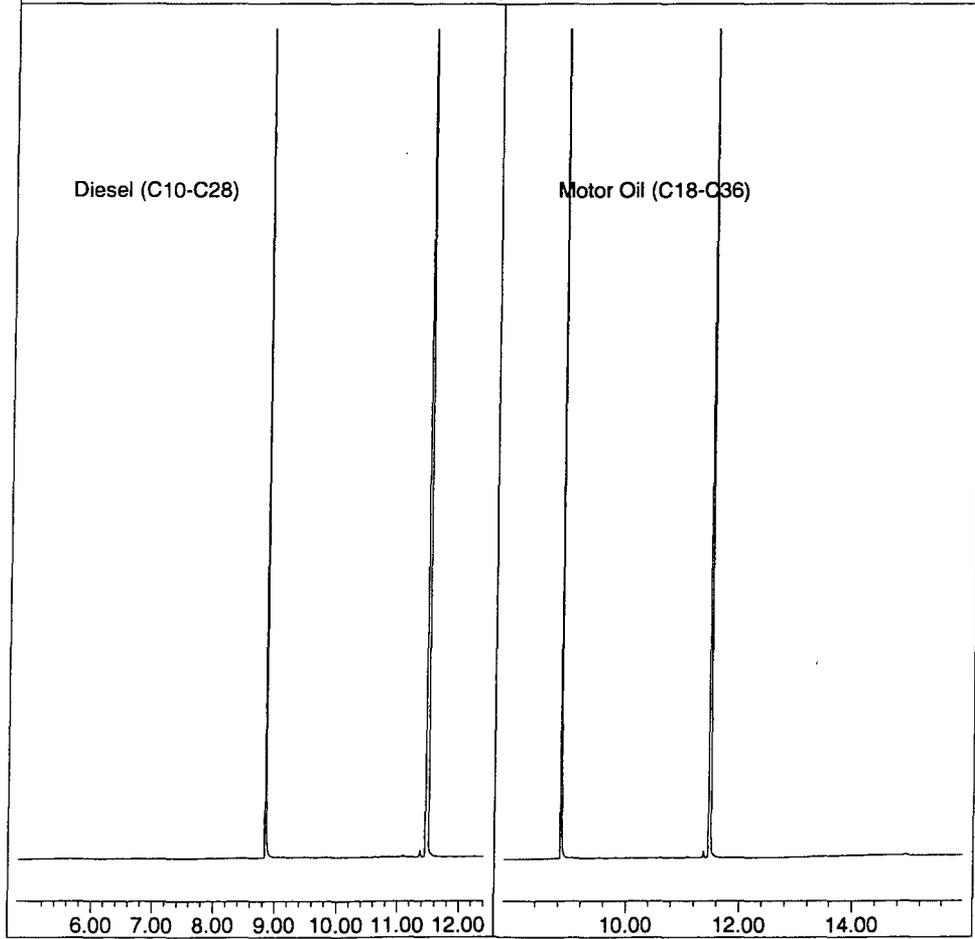
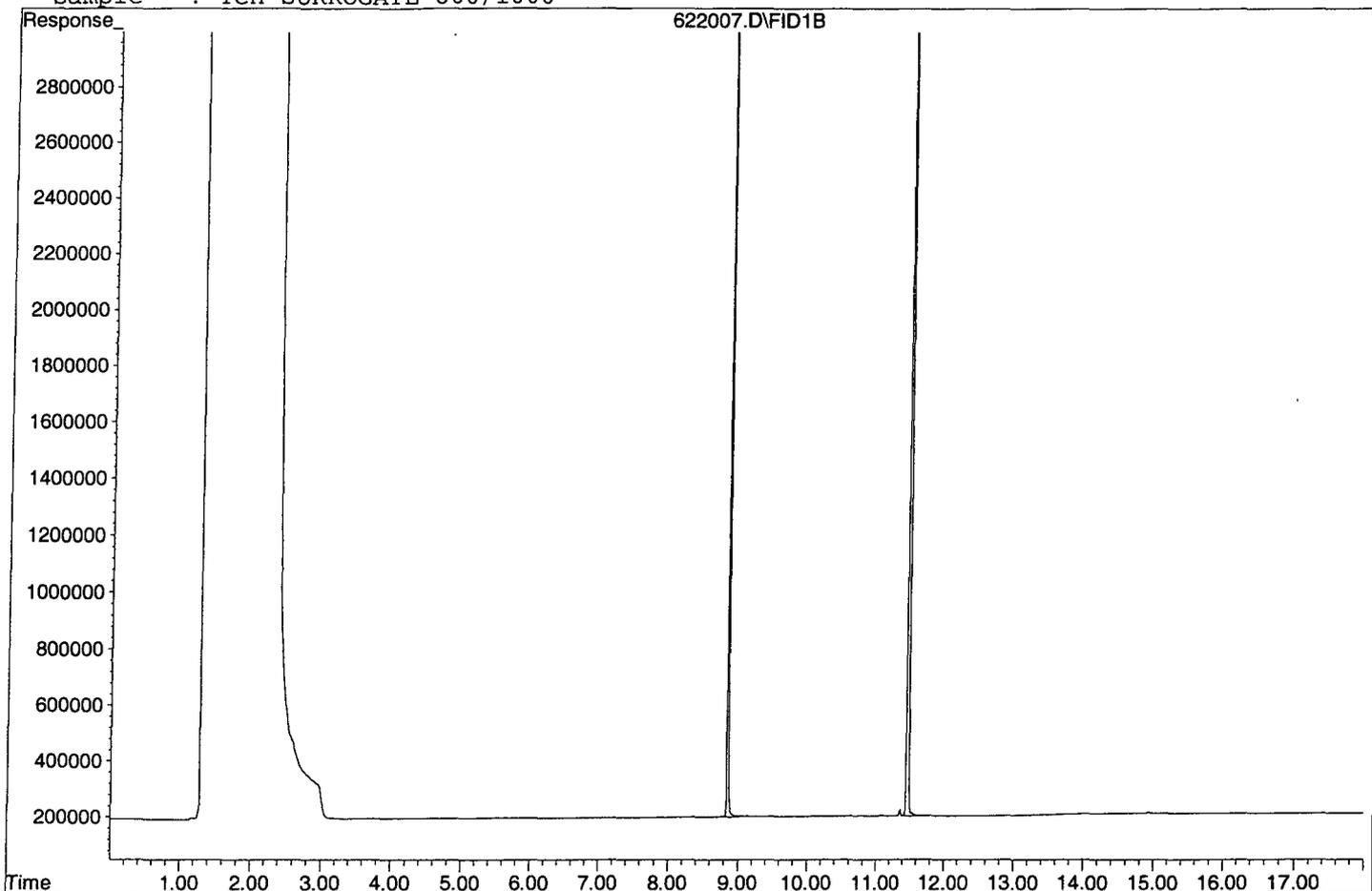
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.85	55952695	19.926 ppb
Surrogate Spike 30.000		Recovery =	66.42%
6) SC Octacosane(S)	11.48	59762243	23.528 ppb
Surrogate Spike 30.000		Recovery =	78.43%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622007.D

Sample : TCH SURROGATE 800/1000



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

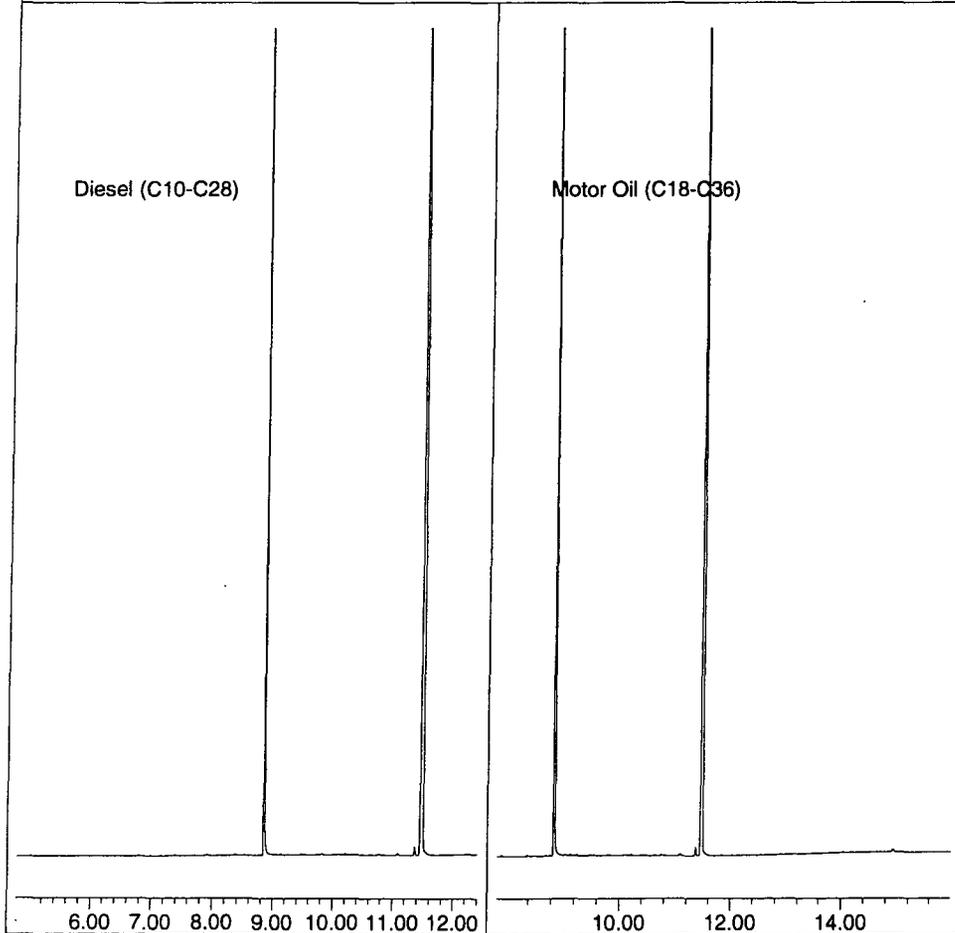
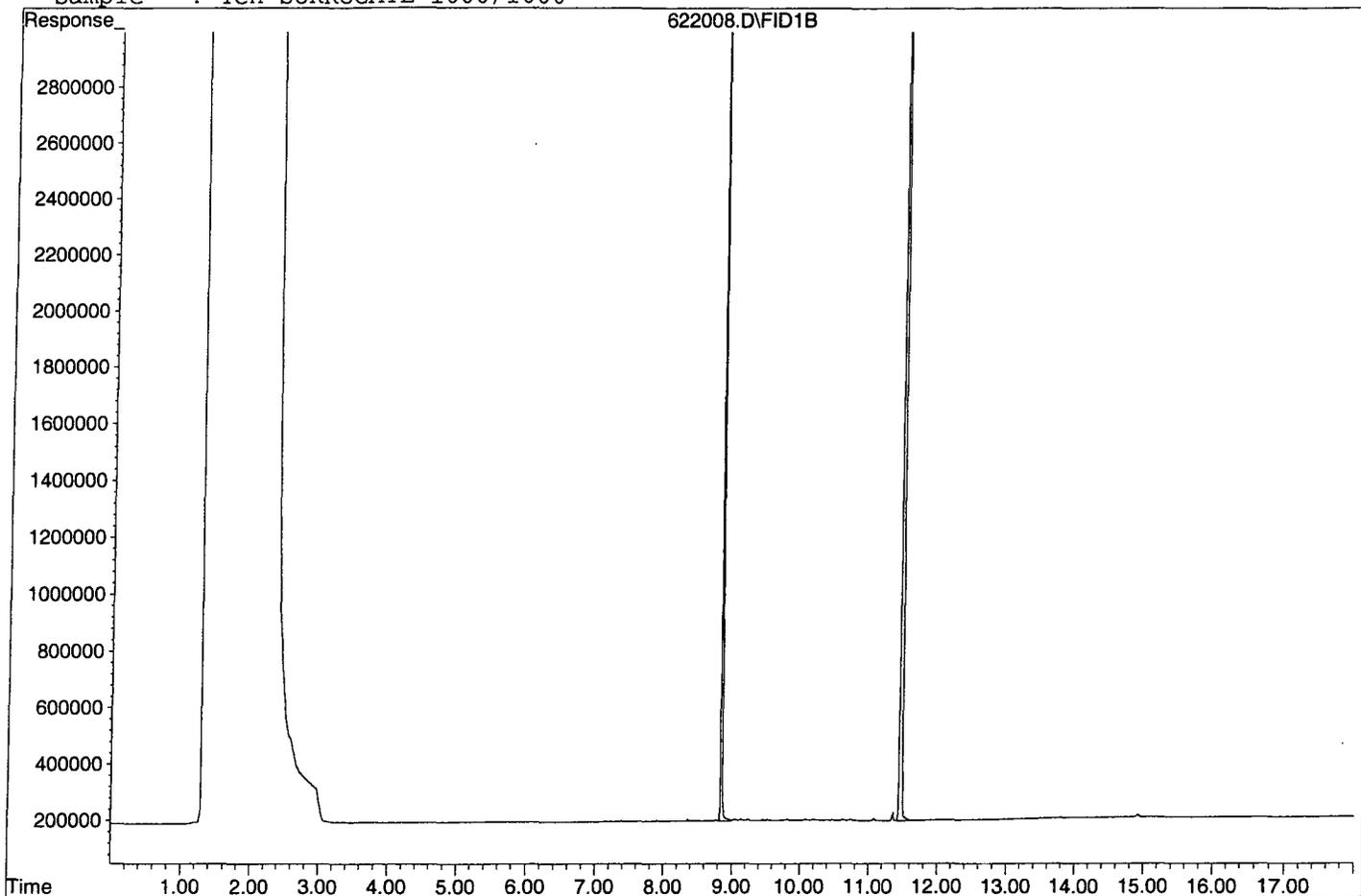
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.85	70121711	24.864 ppb
Surrogate Spike 30.000		Recovery =	82.88%
6) SC Octacosane(S)	11.48	74988351	28.844 ppb
Surrogate Spike 30.000		Recovery =	96.15%

Target Compounds

Quantitation Report

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

Sample : TCH SURROGATE 1000/1000



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

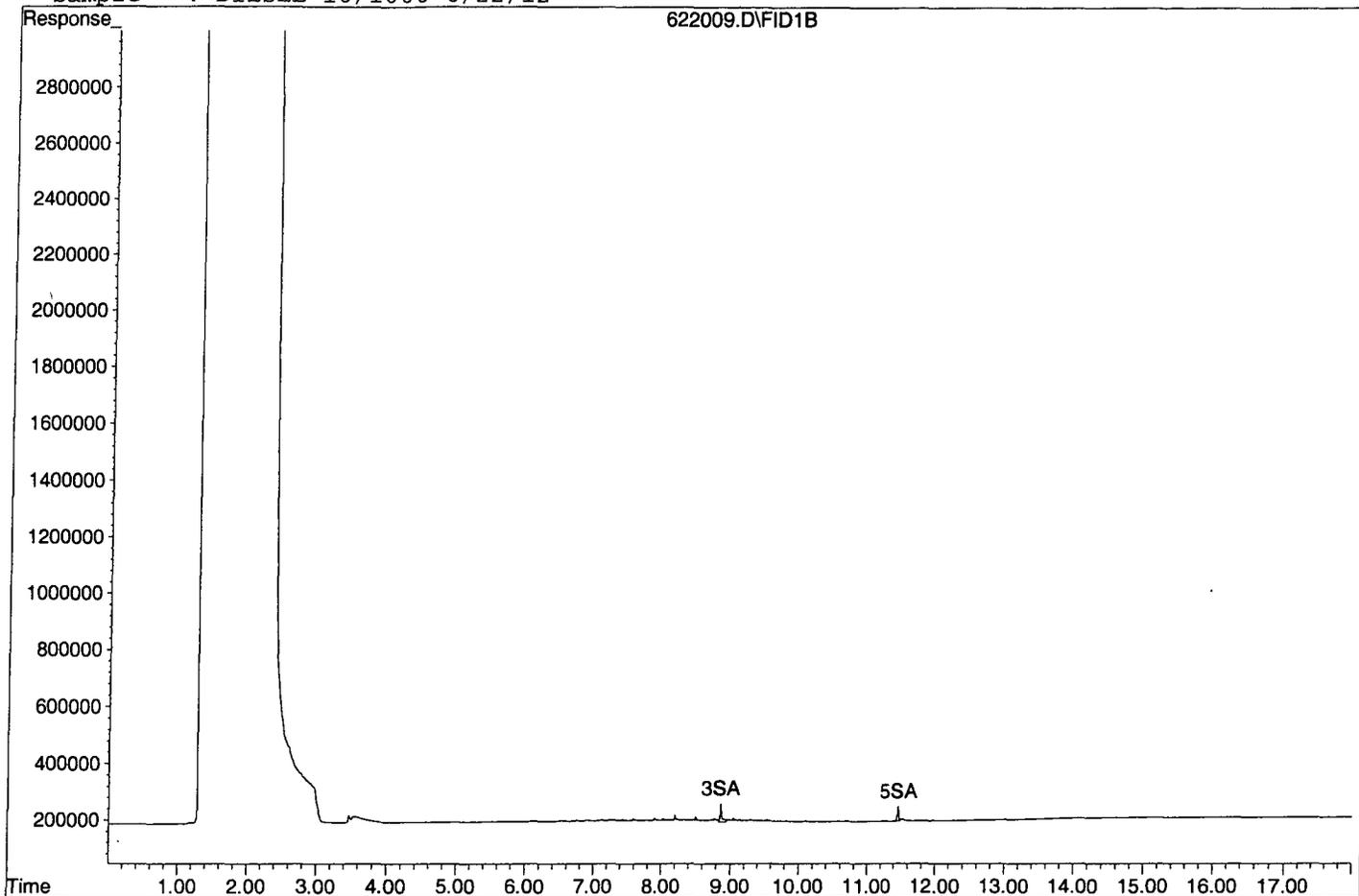
System Monitoring Compounds			
3) SA Not Used(S)	8.85	1100828	0.688 ppb
Surrogate Spike 30.000		Recovery =	2.29%
5) SA Not Used2(S)	11.46	755848	0.635 ppb
Surrogate Spike 30.000		Recovery =	2.12%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	12854065	11.749 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622009.D

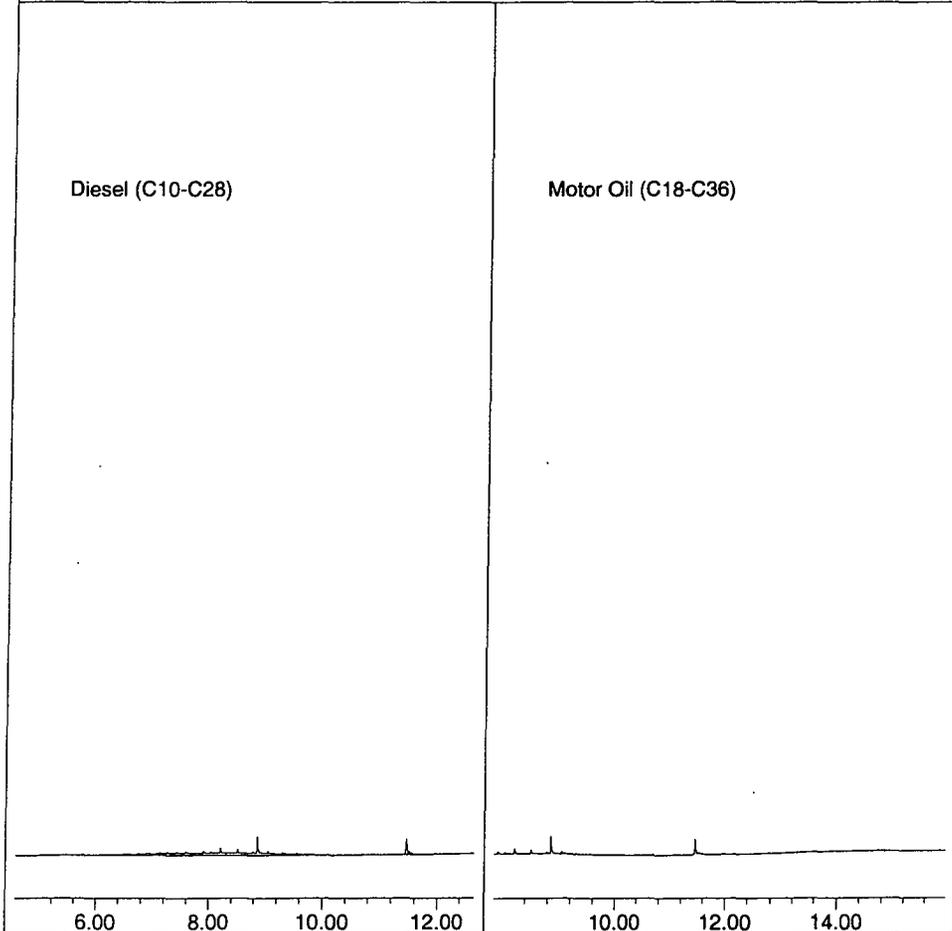
Sample : DIESEL 10/1000 6/22/12

622009.D\FID1B



Diesel (C10-C28)

Motor Oil (C18-C36)



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

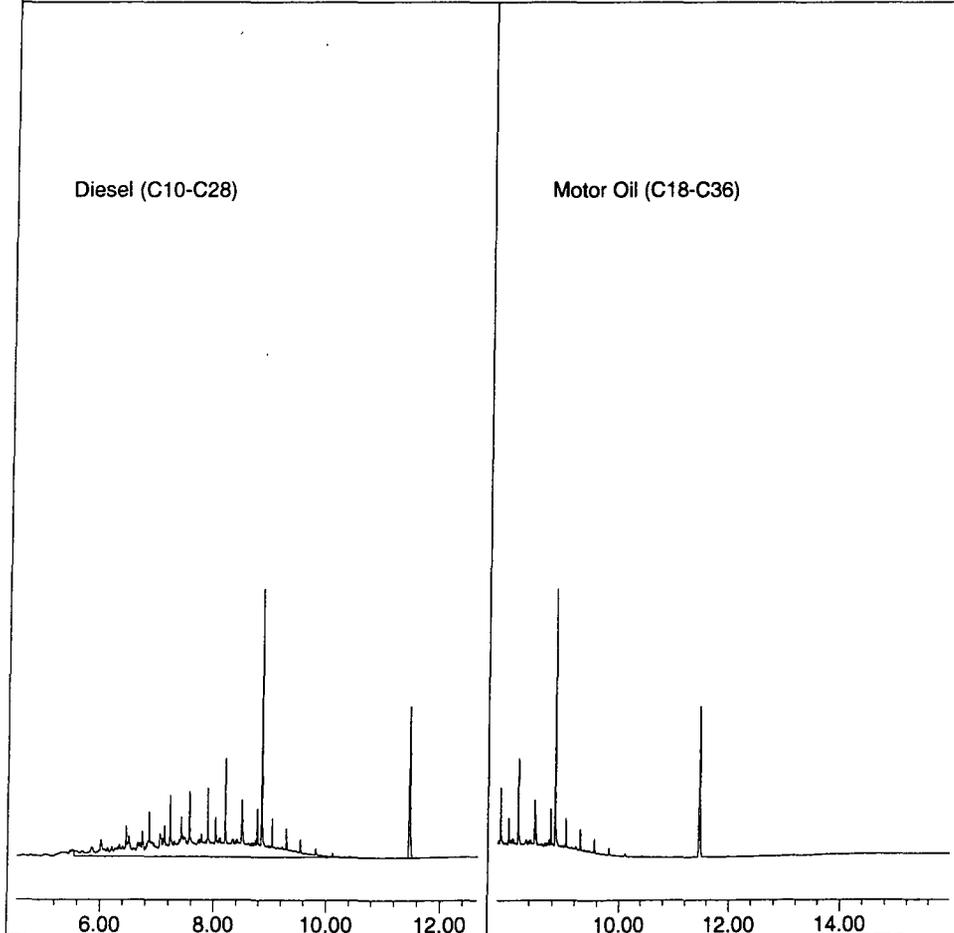
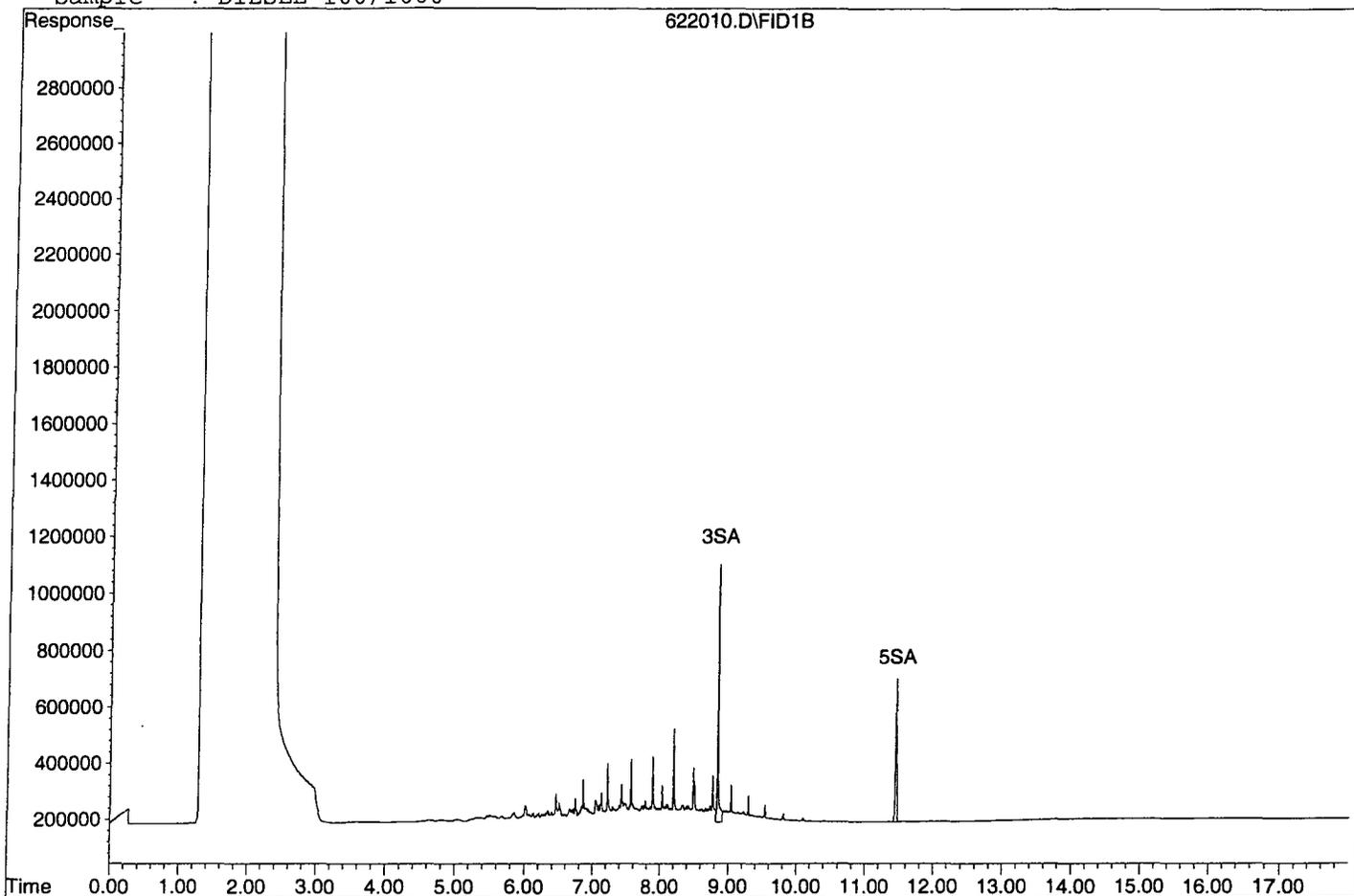
Compound	R.T.	Response	Conc Units

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%
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



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

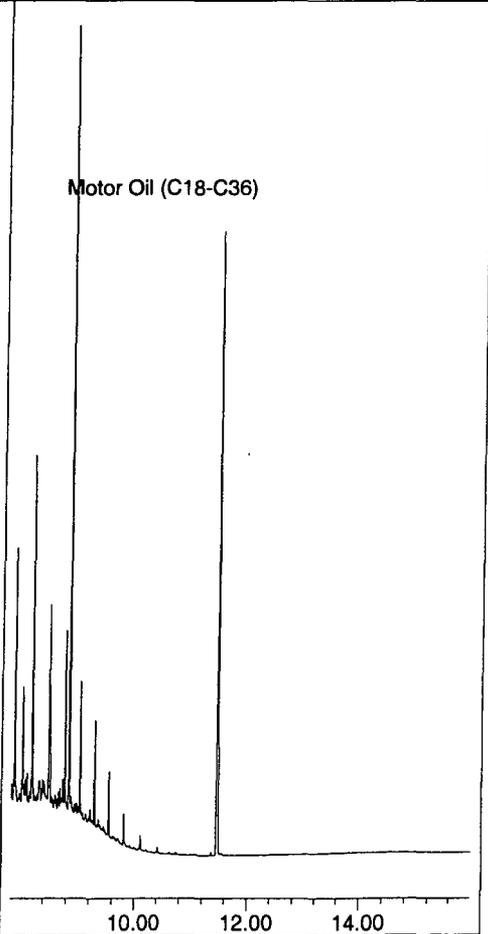
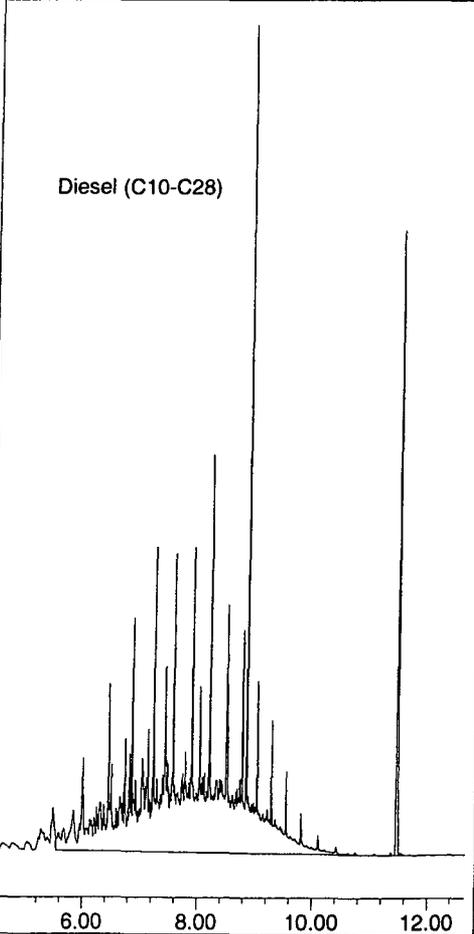
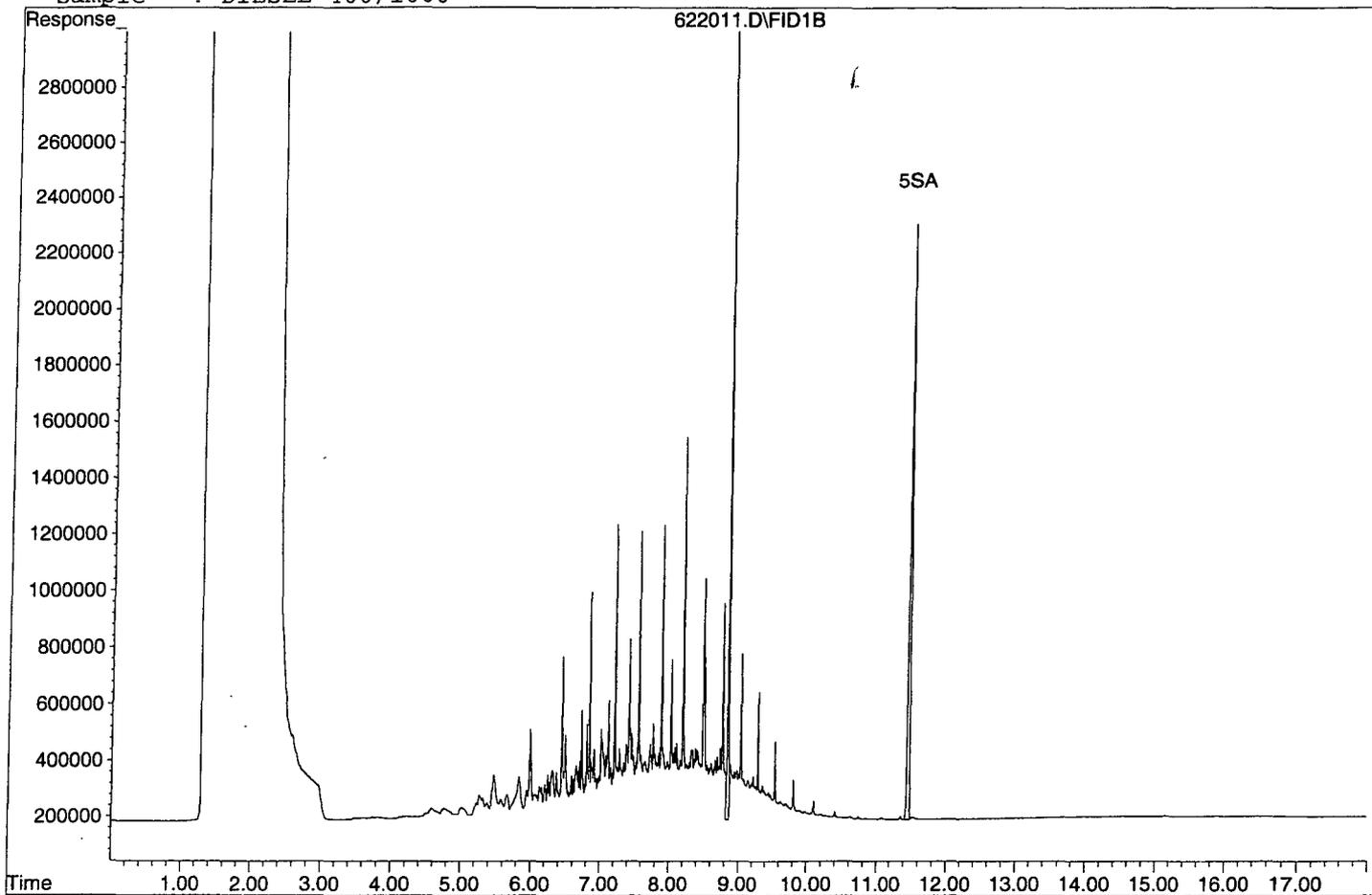
Compound	R.T.	Response	Conc Units

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%
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



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

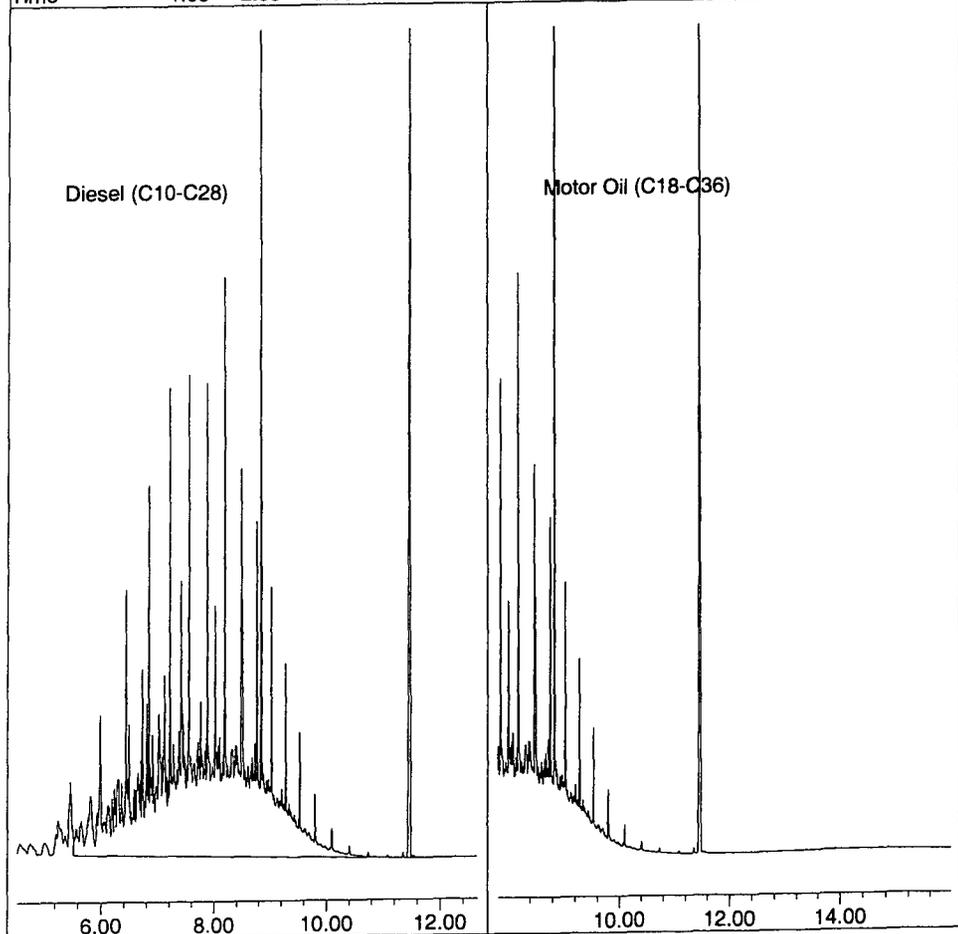
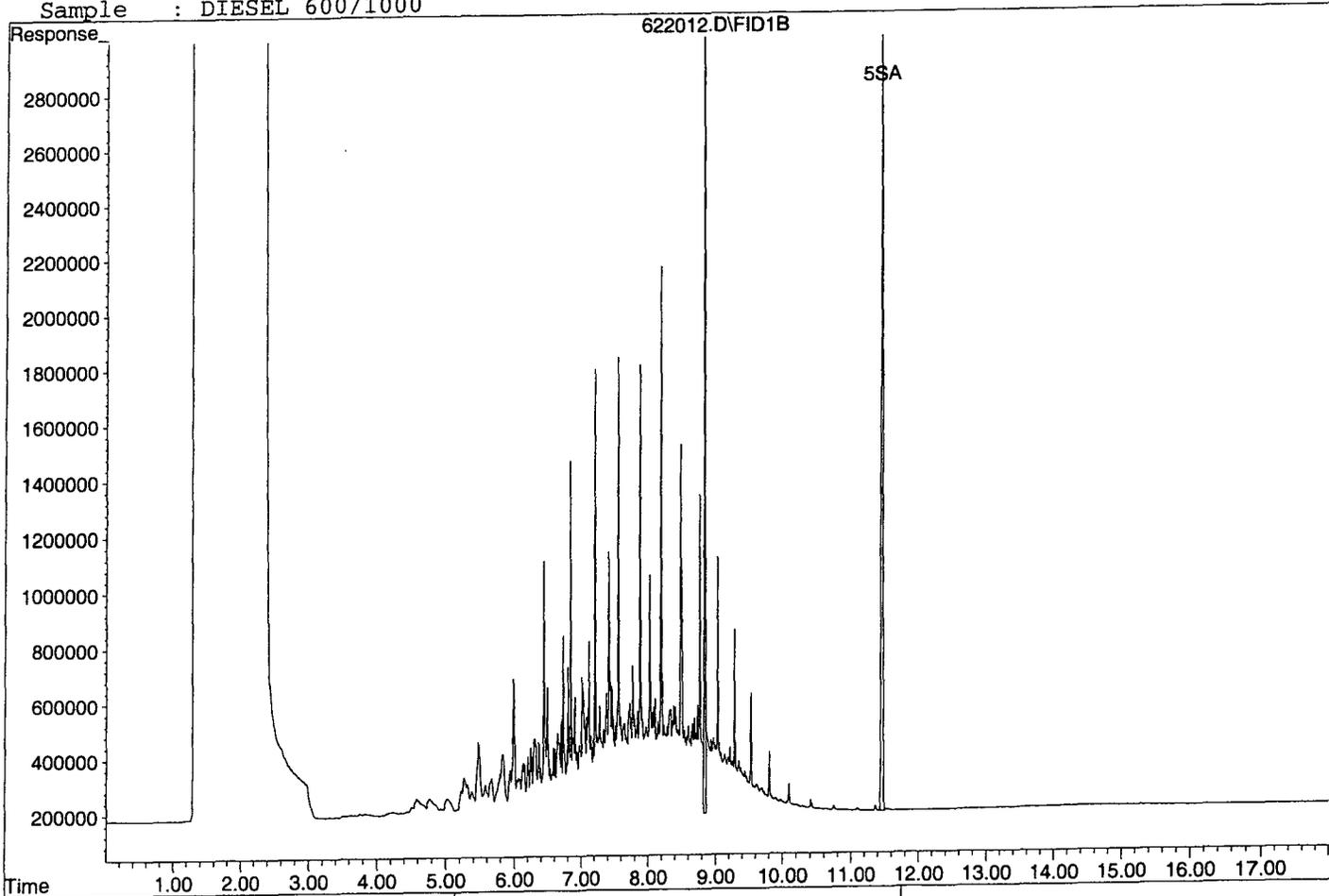
Volume Inj. : 2UL
 Signal Phase : DB-5
 Signal Info : FID02A

Compound	R.T.	Response	Conc Units

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%
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



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

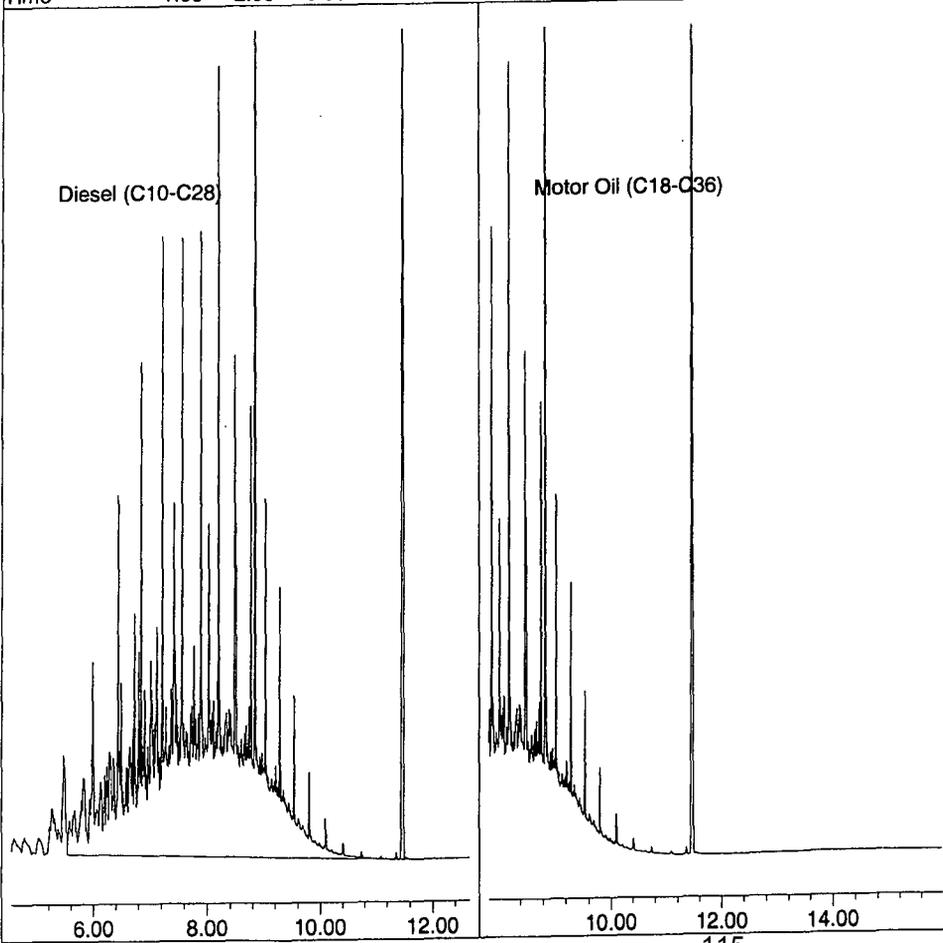
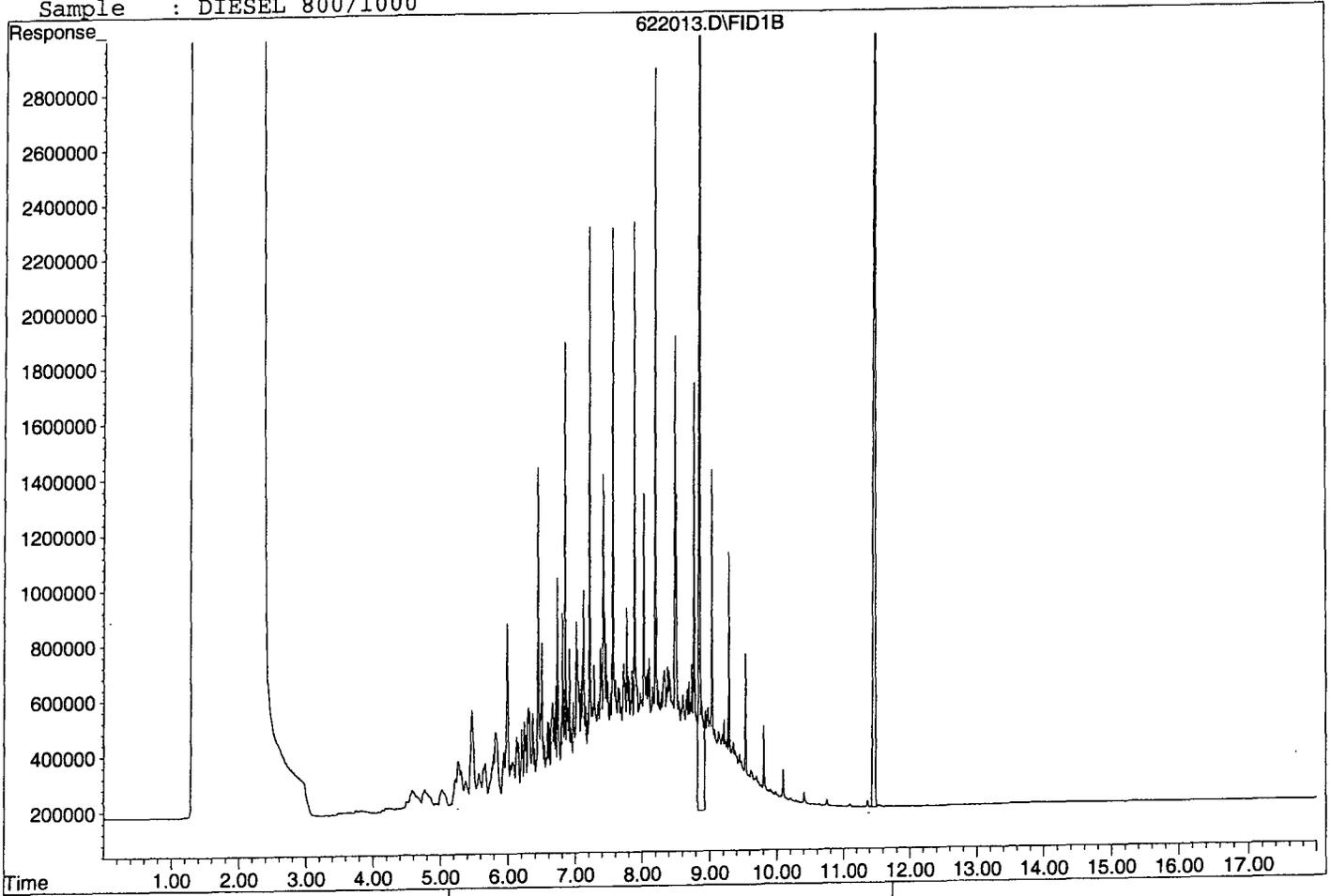
Volume Inj. : 2UL
 Signal Phase : DB-5
 Signal Info : FID02A

Compound	R.T.	Response	Conc Units

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%
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



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

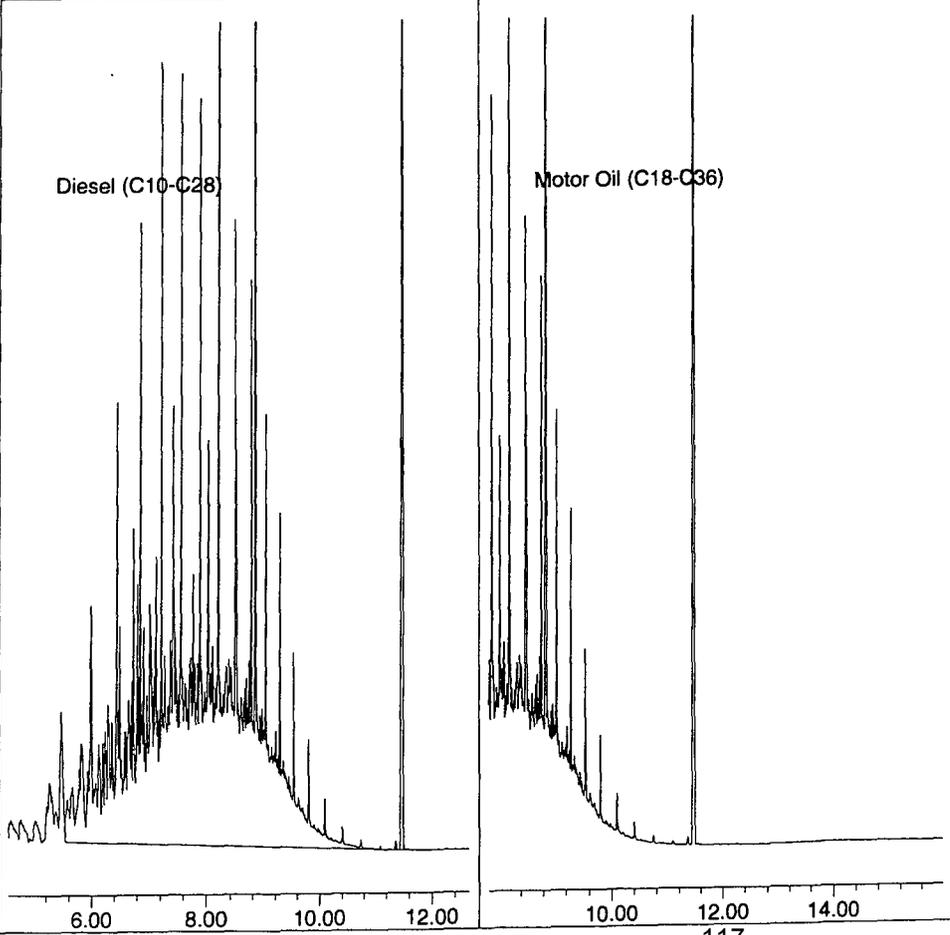
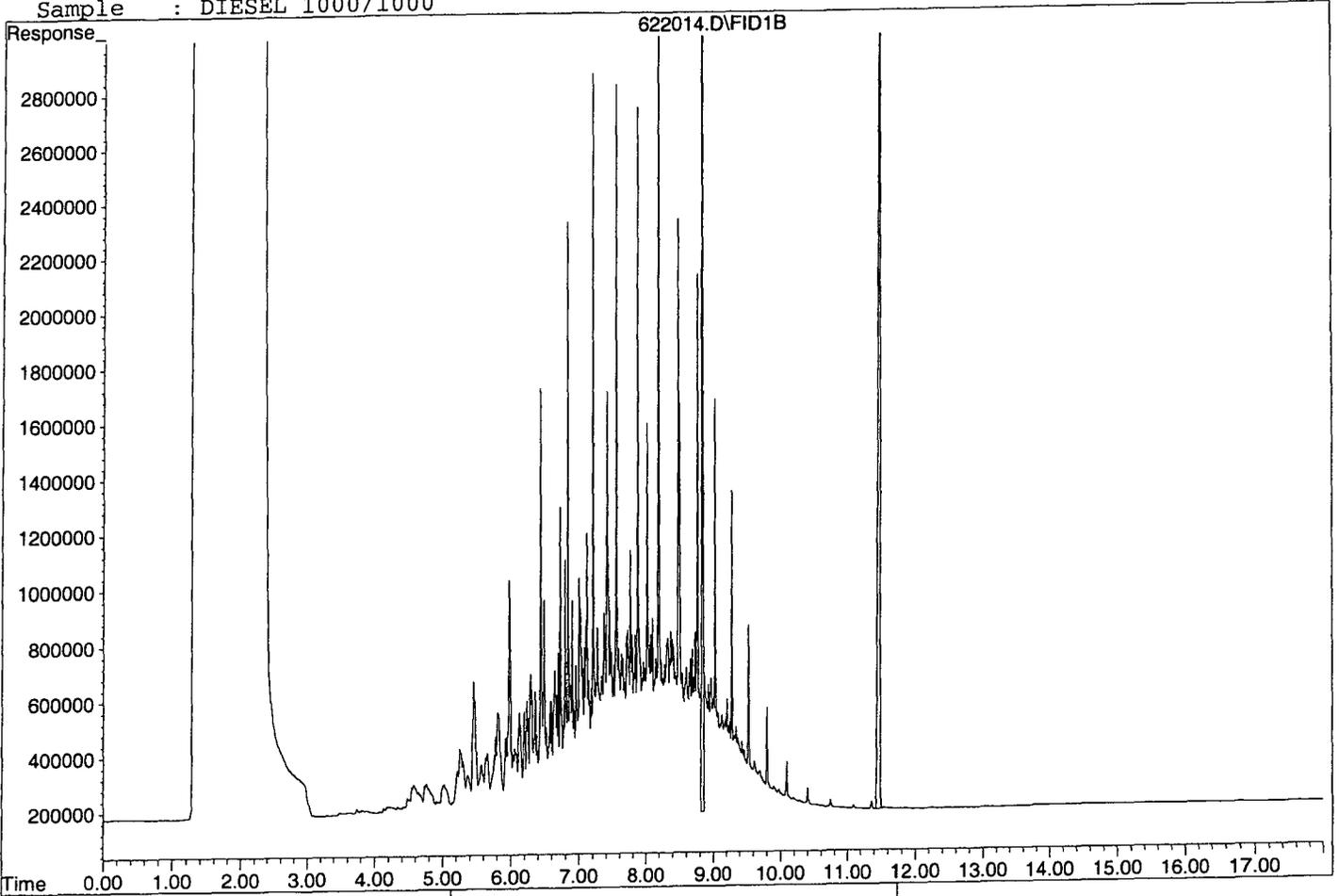
Volume Inj. : 2UL
 Signal Phase : DB-5
 Signal Info : FID02A

Compound	R.T.	Response	Conc Units

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%
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



TPH Extractables
TPH622

Form 7
Second Source

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

SDG No: 68248
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					
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24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40	Average			6.0	

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
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System Monitoring Compounds

Target Compounds

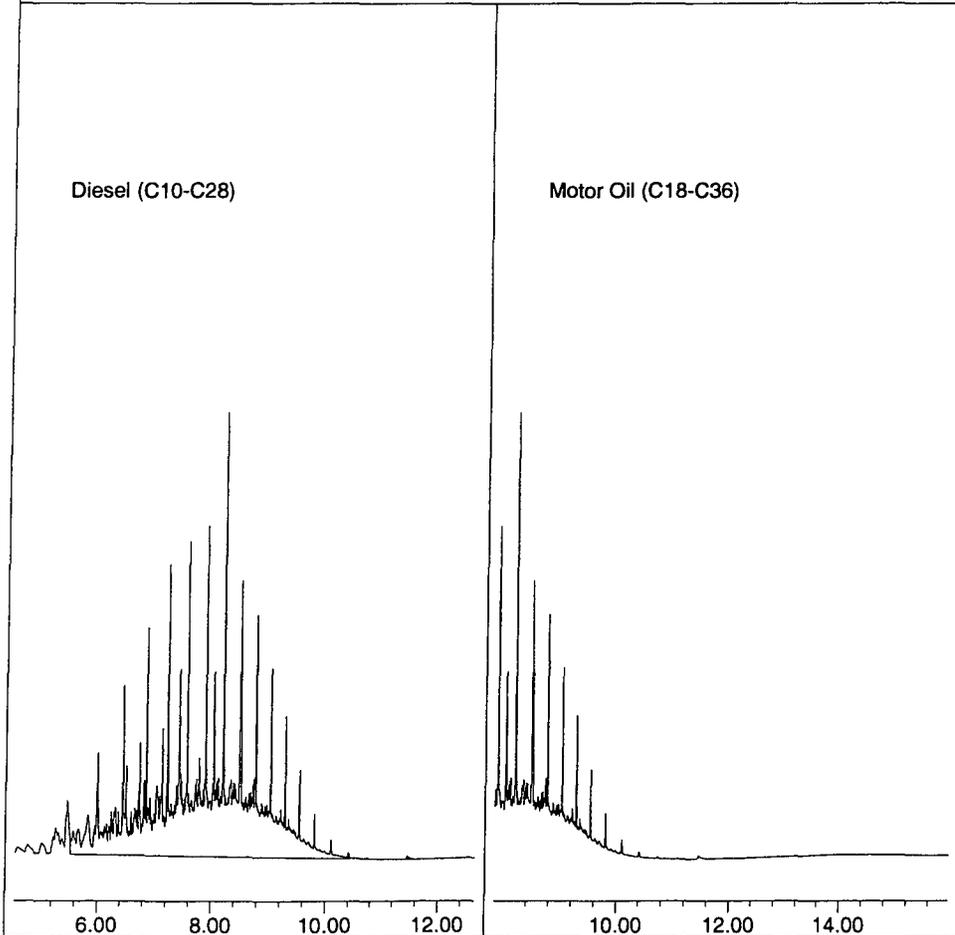
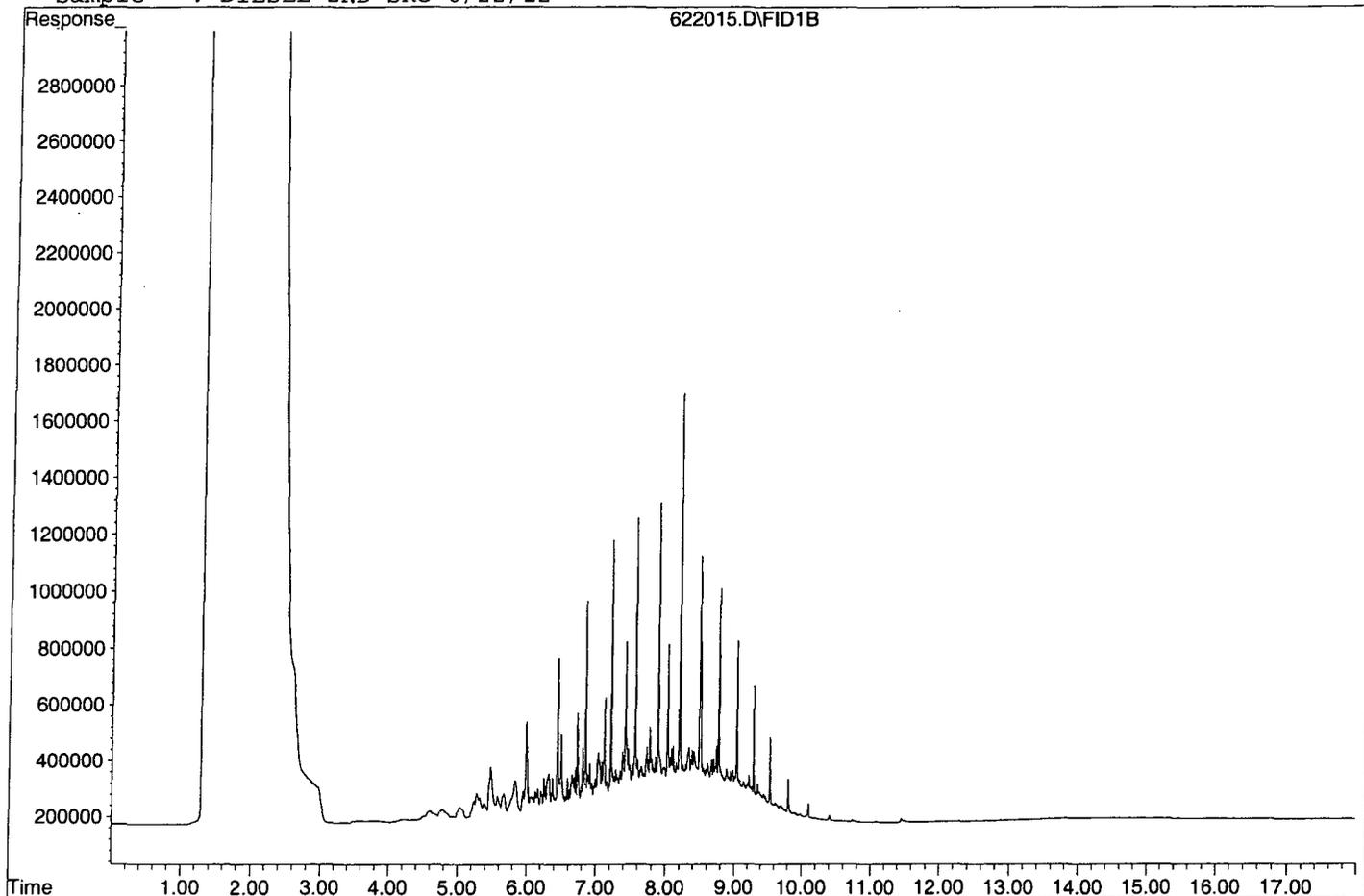
1) HATM Diesel (C10-C28)	8.60	413291584	376.067 ppb
--------------------------	------	-----------	-------------

Quantitation Report

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

Sample : DIESEL 2ND SRC 6/22/12

622015.D\FID1B



120

TPH Extractables
TPH0719

Form 7

Continuing Calibration

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

SDG No: 68248
Date Analyzed: 07/31/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731002.D, 003.d

		Compound	MEAN	CCRF	%D	%Drift
1	HATM	Diesel (C10-C28)	549491	494592	10	HATM
2	HBTM	Motor Oil (C18-C36)	432503	381666	12	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

11.0

Data File : G:\APOLLO\DATA\120731\731002.D Vial: 2
 Acq On : 7-31-12 10:15:07 Operator: LAC
 Sample : DIESEL 400ppm 7/31/12 Inst : Apollo
 Misc : Mix(A) Multiplr: 1.00
 IntFile : events.e
 Quant Time: Aug 2 17:32 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

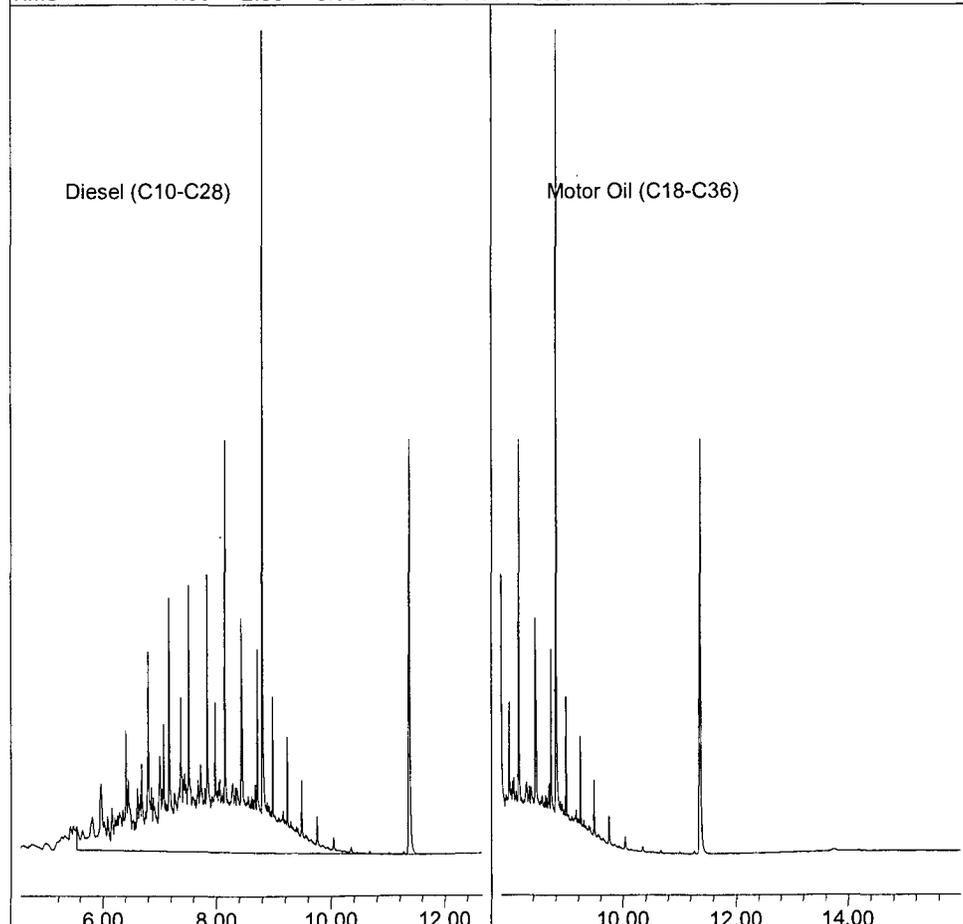
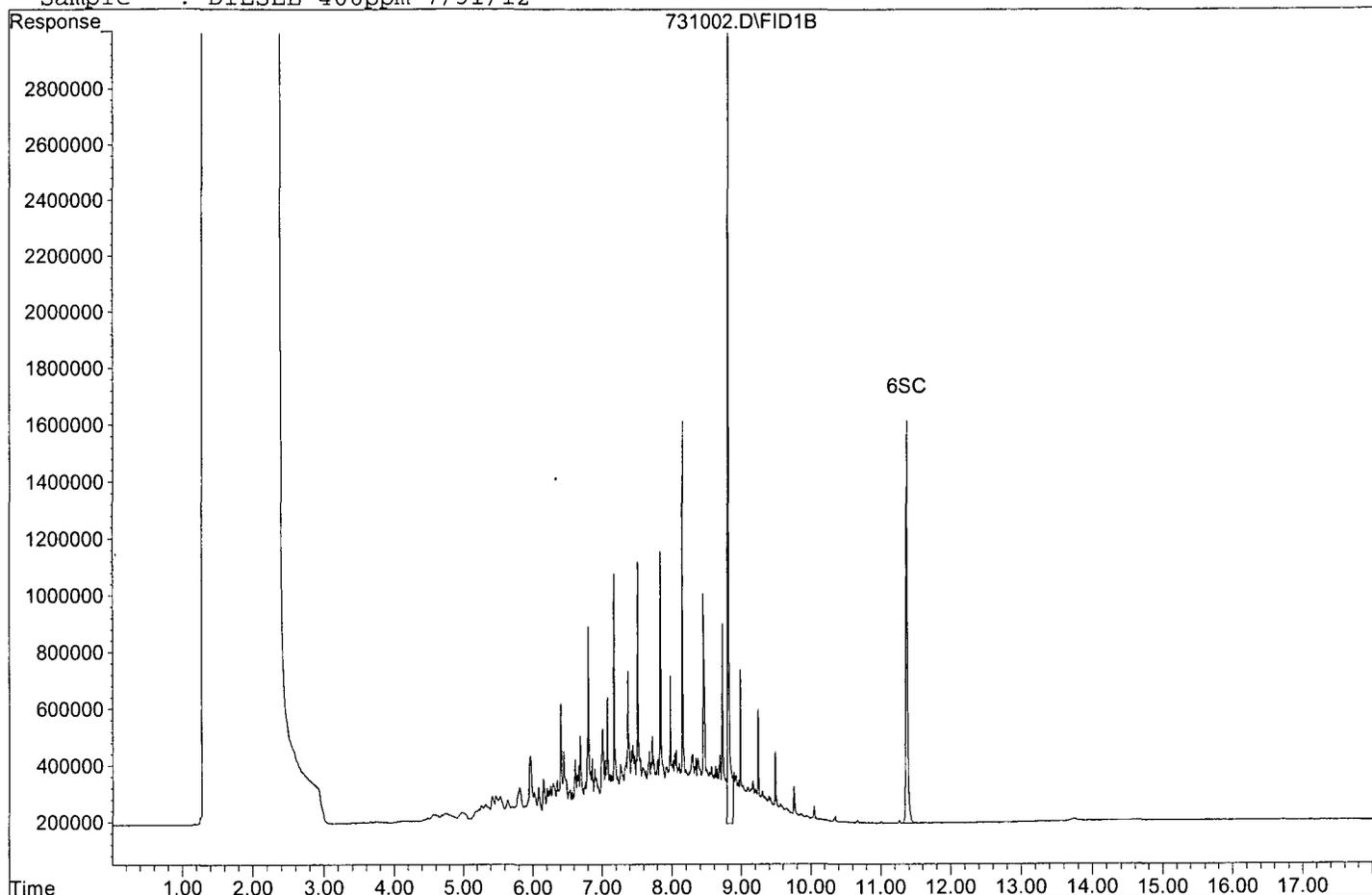
Volume Inj. : 2UL
 Signal Phase : DB-5
 Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	34641855	24.581 ppb
Surrogate Spike 30.000		Recovery =	81.94%
6) SC Octacosane(S)	11.37	23218499	15.405 ppb
Surrogate Spike 30.000		Recovery =	51.35%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	395673584	360.036 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731002.D

Sample : DIESEL 400ppm 7/31/12



TPH Extractables
TPH0719

Form 7

Continuing Calibration

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

SDG No: 68248
Date Analyzed: 07/31/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731020.D, 021.d

		Compound	MEAN	CCRF	%D	%Drift
1	HATM	Diesel (C10-C28)	549491	509123	7.3	HATM
2	HBTM	Motor Oil (C18-C36)	432503	394077	8.9	HBTM
3						
4						
5						
6						
7						
8						
9						
10						
11						
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35						
36						
37						
38						
39						
40						

Average

8.1

Data File : G:\APOLLO\DATA\120731\731020.D Vial: 20
 Acq On : 7-31-12 17:28:05 Operator: LAC
 Sample : DIESEL 400ppm 7/30/12 Inst : Apollo
 Misc : Mix(A) Multiplr: 1.00
 IntFile : events.e
 Quant Time: Aug 2 17:33 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

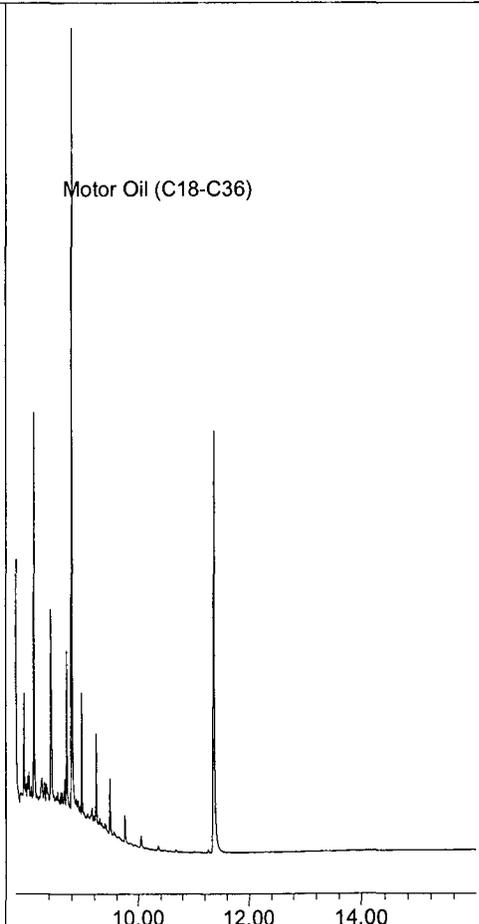
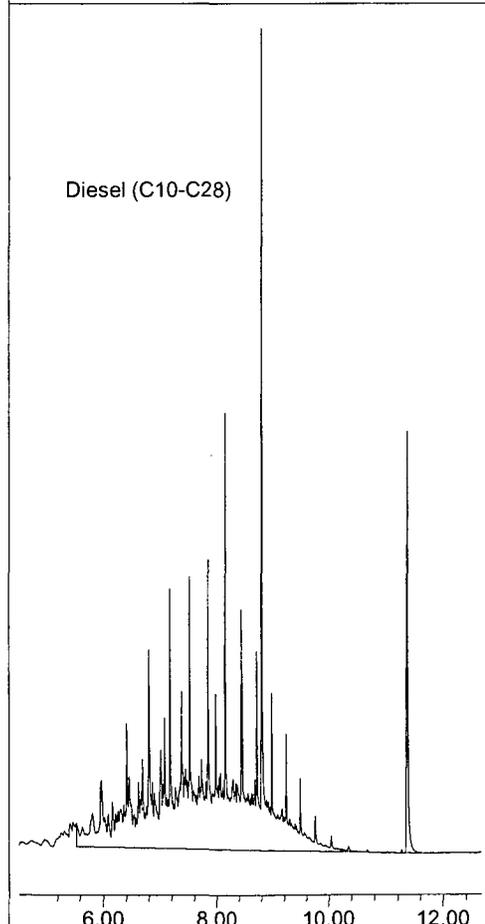
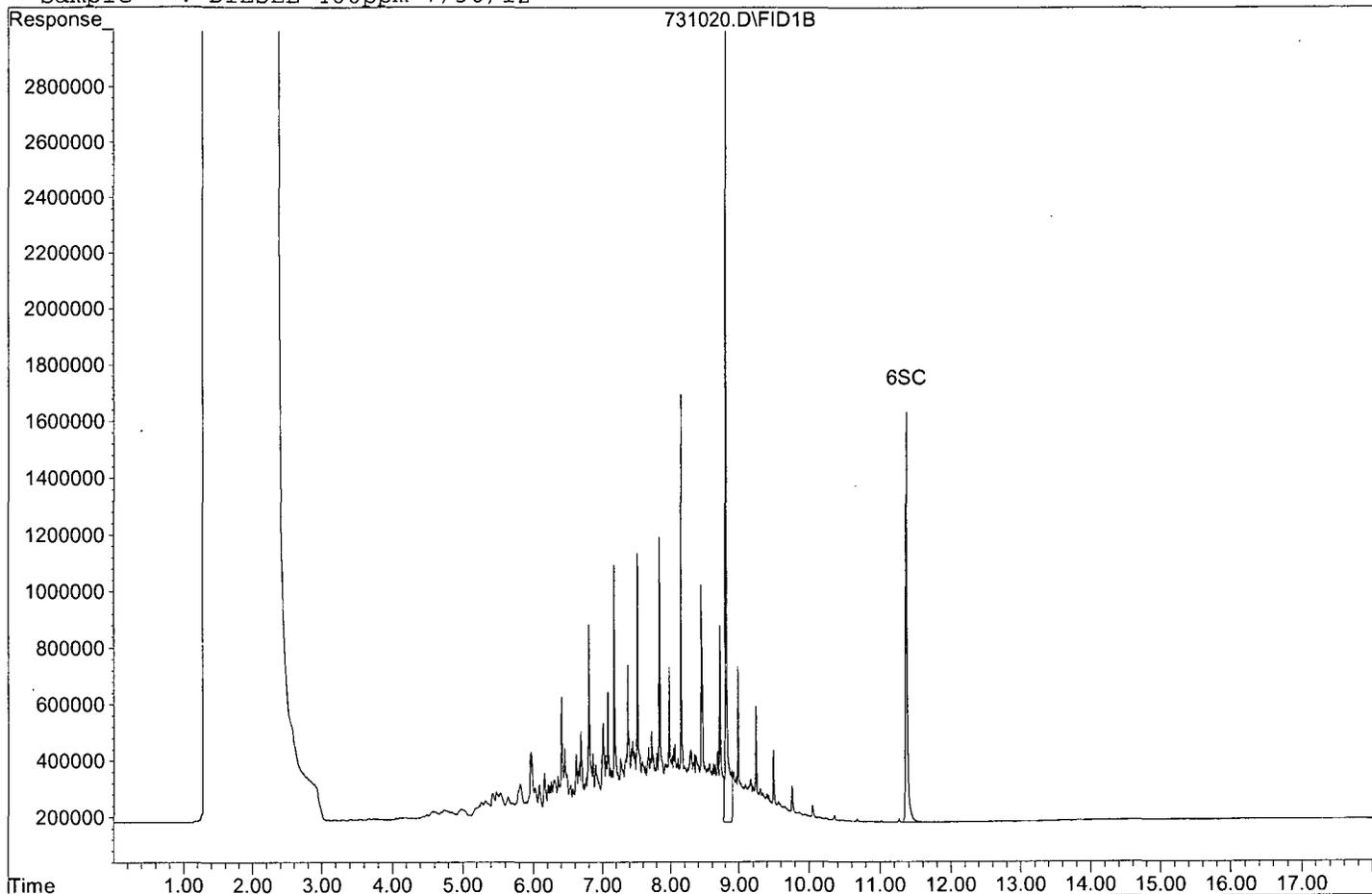
Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	38819888	27.546 ppb
Surrogate Spike 30.000		Recovery =	91.82%
6) SC Octacosane(S)	11.36	23947613	15.889 ppb
Surrogate Spike 30.000		Recovery =	52.96%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	407298733	370.614 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731020.D

Sample : DIESEL 400ppm 7/30/12



EPA 8015B
Total Petroleum Hydrocarbons -
Raw Data

Method Blank

TPH Diesel Water

Blank Name/QCG: **120723W-65041 - 169578**

Batch ID: #TPETD-120723A

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	07/23/12	07/31/12
BLANK	SURROGATE: OCTACOSANE (S)	40.6	28-142			%	07/23/12	07/31/12
BLANK	SURROGATE: ORTHO-TERPHEN	48.6 #	57-132			%	07/23/12	07/31/12

= Recovery (or RPD) is outside QC limits.

Quant Method: TPH0719.M
Run #: 731013
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 6:04:27 PM

GC SC-Blank-REG MDLs

Data File : G:\APOLLO\DATA\120731\731013.D Vial: 13
 Acq On : 7-31-12 14:39:54 Operator: LAC
 Sample : 120723A BLK 5/1000 Inst : Apollo
 Misc : Water Multiplr: 5.00
 IntFile : events.e
 Quant Time: Aug 1 15:55 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

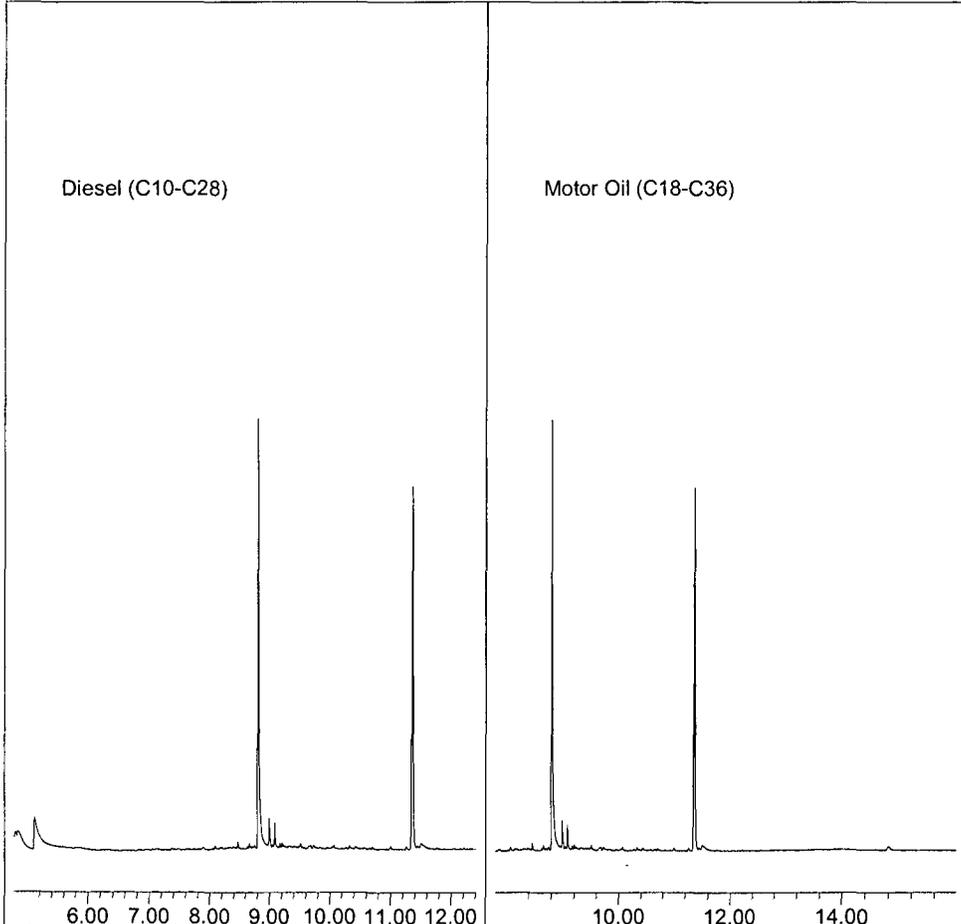
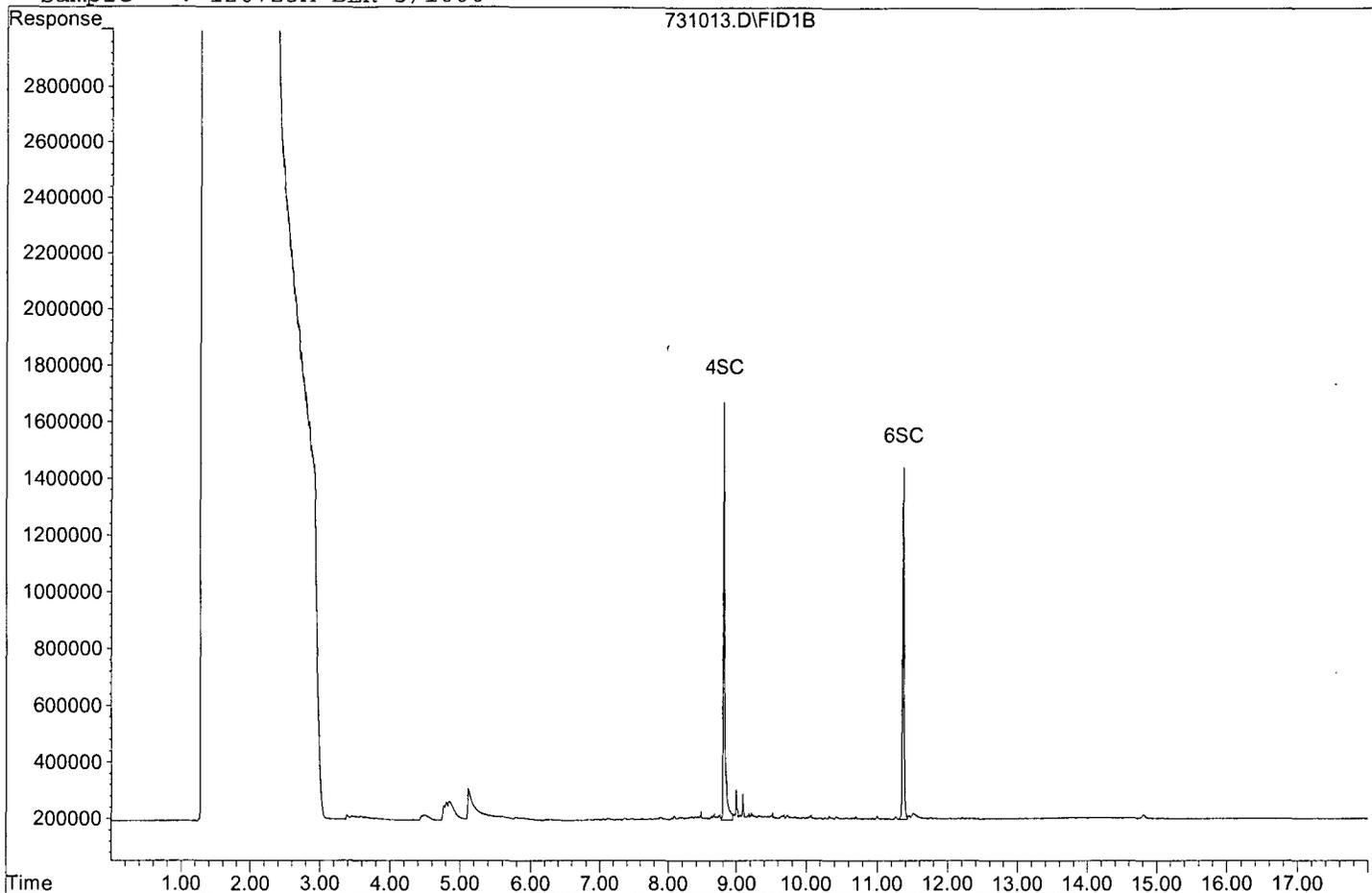
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.81	20557348	72.935 ppb
Surrogate Spike 150.000		Recovery =	48.62%
6) SC Octacosane(S)	11.36	18363331	60.920 ppb
Surrogate Spike 150.000		Recovery =	40.61%

Target Compounds

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731013.D

Sample : 120723A BLK 5/1000



Laboratory Control Spike Recovery

TPH Diesel Water

APPL ID: 120723W-65041 LCS - 169578

Batch ID: #TPETD-120723A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL FUEL	2000	1440	72.0	61-143
LUBE OIL	2000	1400	70.0	61-143
<hr style="border-top: 1px dashed black;"/>				
SURROGATE: OCTACOSANE (S)	150	87.7	58.5	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	137	91.3	57-132

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TPH0719.M
Extraction Date :	07/23/12
Analysis Date :	07/31/12
Instrument :	Apollo
Run :	731014
Initials :	SD

Printed: 08/02/12 5:59:14 PM

APPL Standard LCS

Data File : G:\APOLLO\DATA\120731\731014.D Vial: 14
 Acq On : 7-31-12 15:03:52 Operator: LAC
 Sample : 120723A LCS-1 5/1000 Inst : Apollo
 Misc : Water Multiplr: 5.00
 IntFile : events.e
 Quant Time: Aug 1 15:55 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

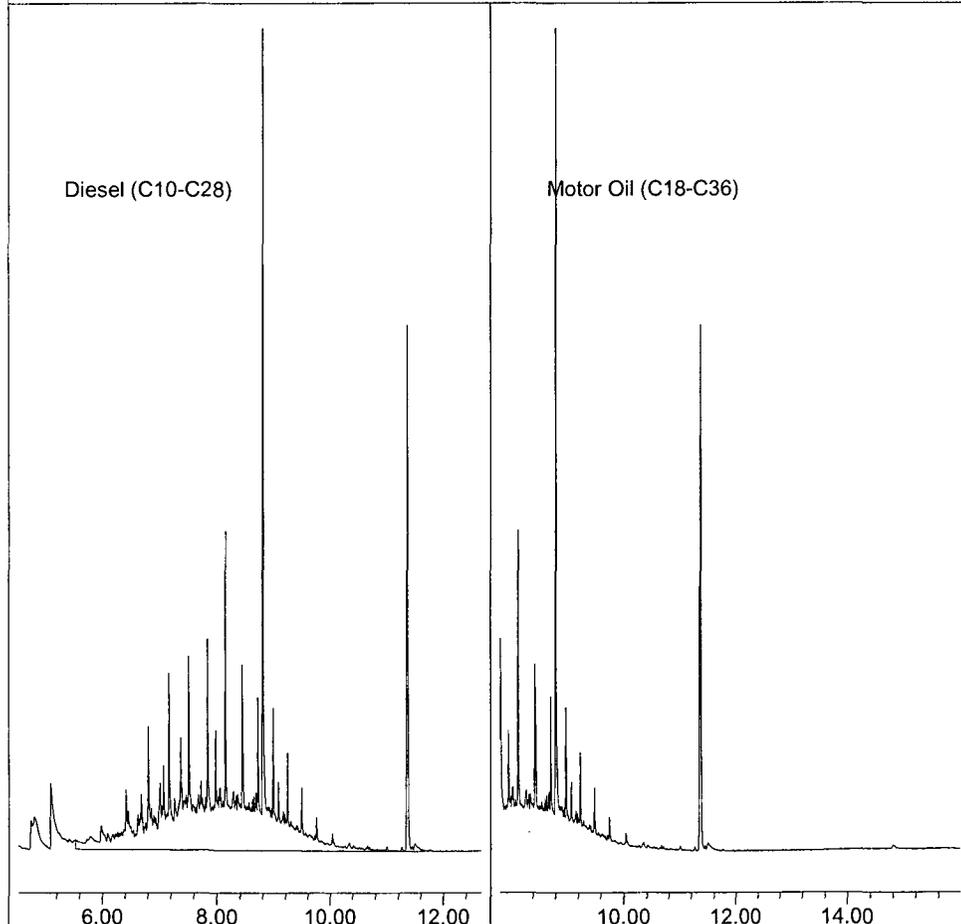
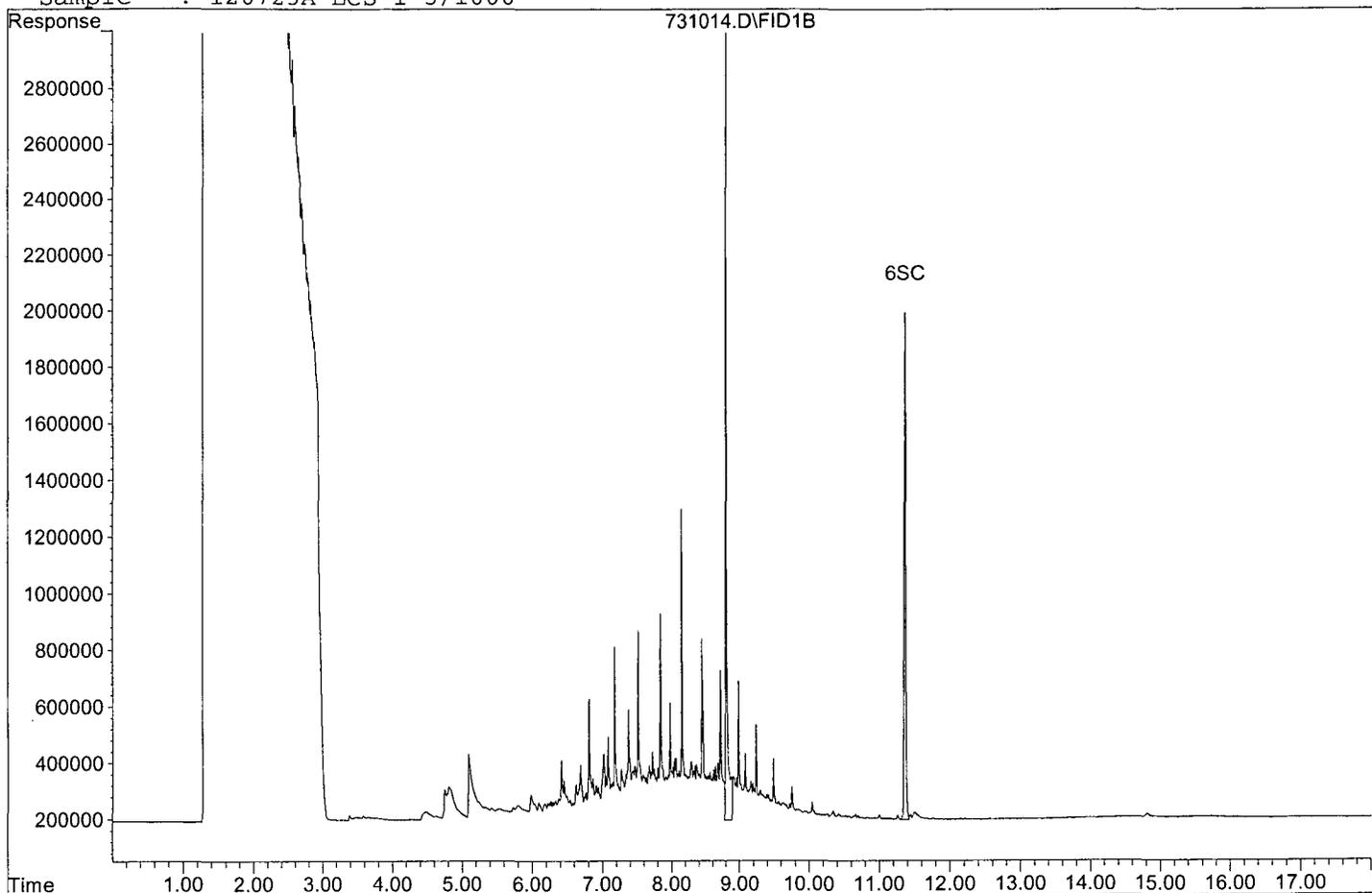
Volume Inj. : 2UL
 Signal Phase : DB-5
 Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	38496498	136.581 ppb
Surrogate Spike 150.000		Recovery =	91.05%
6) SC Octacosane(S)	11.36	26424152	87.662 ppb
Surrogate Spike 150.000		Recovery =	58.44%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	317227952	1443.280 ppb

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731014.D

Sample : 120723A LCS-1 5/1000



STANDARD

CONC DATE ALIQUOT VOLUME CONC LOT# INITIALS

STANDARD INITIAL SOURCE FINAL FINAL SOL. EN. 005
CONC DATE ALIQUOT VOLUME CONC LOT# INITIALS

PCB Soil Spike

AR1016 1000 mg/L 025E 1250 mL 25 mL 50% Acetone CM

AR1260 Aroclor 1016 + 1260 Solution, 1,000 mg/L, 1 ml #022912B 6-21-12

130011-03
Lot# Storage Expiry
163759 < Ambient 9/14/13
Solv: Hexane
Aroclor 1016 + 1260
Lot #: 163759 - 29969
Rec: 11/10/11 MFR exp. 09/14/13
CM 6-21-12

AND LOT: 163759-29971
16355 op. 2-4-12
CM 6-21-12 ex. 2-4-13

ex. 9-21-12

OCL Soil Surrogate

DECA 5,000 mg/L 025E 1 mL 250 mL 20% Acetone CM

DBC

TCMX

Pesticide Surrogate Solution, 5,000 mg/L, 1 ml
Cat. No: 130070-02 Exp: 12/19/2012
Lot No: 154164 Storage: <= Ambient
Pesticide Surr. Soln, 5000mg/L Solvent: Tol.:Hex. 1:1
Lot #: 154164 - 29418 For Research Use Only
Rec: 8/26/11 MFR exp. 12/19/12
CM 6-21-12

#022912B 6-21-12

ex. 9-21-12

DIESEL CAL STD.

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
DIESEL FUEL #2	50,000 ug/mL	O2SI CAT#011598-03 LOT#183767-30909 OP:6/22/12 EXP:6/22/13	1mL	50mL	1000ug/mL	MC LOT# 51306
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#183766-30661 OP:3/5/12EXP:3/5/13	4160 µL		50ug/mL	

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

Diesel Fuel #2 Composite,
50,000 mg/L, 1 ml
011593-03
Lot# Storage Expiry
183767 < -10 Degrees C 2/1/16
Solv: Methylene Chloride

Diesel Fuel #2 Composite sp. 6-22-12
Lot #: 183767 - 30909 ex. 6-22-13
Rec: 5/30/12 MFR exp. 02/11/16
CM 6-22-12

CM 6-22-12

DIESEL SECOND SOURCE

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
ex. 12-22-12

CM 6-22-12

006
STANDARD

INITIAL SOURCE FINAL FINAL SOL. ENV. DATE/ INITIALS
CONC DATE ALIQUOT VOLUME CONC LOT#

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	1mL	50mL	1000ug/mL	MC LOT# 51306

CA 6-22-12
ex. 12-22-12
CA 6-22-12
CA 6-22-12
 Motor oil composite sp. 6-22-12
 Lot #: 183768 - 30232 ca. 6-22-13 *CA*
 Rec: 1/10/12 MFR exp. 01/08/15
CA 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

CA 6-22-12
ex. 12-22-12
CA 6-22-12

TCH SURROGATE CURVE										
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	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

CA 6-22-12
ex. 12-22-12

DIESEL CURVE										
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	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

MOTOR OIL CURVE										
STD	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	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

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				

CA 6-22-12

STANDARD	INITIAL CONC	SOURCE DATE	ALIQ VOLUME	FINAL VOLUME	FINAL CONC	SOL. ENT. LOT#	DATE? INITIALS
MOTOR OIL STD	2000 ^{ug/ml}	M.O. STD 025E prep. 7-19-12	250ul	1ml	500 ^{ug/ml}	MC # 51306	CAH 7-31-12 ex. 1-19-13
MOTOR OIL CCV 500ppm							
DIESEL STD	1000 ^{ug/ml}	Diesel STD prep. 6-22-12	400ul	1ml	400 ^{ug/ml}	MC # 51306	CAH 7-31-12 ex. 1-19-13
DIESEL CCV 400ppm							

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 ug/mL	100 250 ul	OCL 2nd Src Stk	10 25 mL
b-BHC			Prep: 06/23/11		Hexane
d-BHC			Exp: 06/23/12		#001909B
g-BHC			Prep: 7/30/12		082610B
aldrin			12/12/12		
heptachlor					LH 8/3/12
heptachlor-epoxide isomer B					
a-chlordane					
g-chlordane					
pp-DDD					
pp-DDE					
pp-DDT					
dieldrin					
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: 11/2/12	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	7/30/12	25 mL
	5 - 0.200 ug/ml	10 ug/ml	200ul	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	6/1/12
				exp: 8/4/12	2/1/13
Solvent:	Hexane	Lot: 049744A	LH 8/3/12		LH 8/3/12

LH
8/1/12
exp 2/1/13

LC/MS STANDARD PREP LOG#

020
STANDARD

INITIAL SOURCE FINAL FINAL SOLVENT DATE
CONC DATE ALIQUOT VOLUME CONC LOT# INITIALS

AR 1248 CALIBRATION CURVE

AR1248

Prep: 3/26/12

Exp: 9/26/12

7/18/12
DRZ

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

Diesel Spike

F&D only, not human consump
Made in the USA

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

Lot# 011598-03
Storage: -10 Degrees C
Expiry: 2/1/16
Solv: Methylene Chloride

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

DRZ

DRZ
OP: 7/18/12
EX: 7/18/12

STANDARD

INITIAL
GONC

SOURCE
DATE

ALIQOT

FINAL
VOLUME

FINAL
GONC

SOLVENT
LOTS

DATE/
INITIALS

015

DATE/
INITIALS

THC Surrogate (Gave to Extractions)

CM 7-6-12	O-Terphenyl	600 mg/L	025E	N/A	25ml	600 mg/ml	N/A	CM
12-22-12	Octacosane		CAT: 11036-05					7-9-12
			LOT: 18883-30664 thru 668					ex. 7-9-12
			Op. 7-9-12					
			ex. 7-9-13					

CM 7-6-12 ex. 7-28-12	13-DBP	100 mg/ml	1,3 DBP STK	35 ml	10 ml	Methanol	CM
			prep. 5-14-12			0.35 mg/ml	7-9-12
			ex. 5-14-13				ex. 10-9-12

CM
7-6-12
ex. 7-20-12

OP FAMPUR CURVE						IA	1	2	3	4	5	6
PREP:	07/09/12	EXP:	07/28/12									
SUPPLIER	ID#	[µg/ml]	LOT #	DATE	EXP. DATE	µL						
	OP/FAMPUR S	5		07/09/12	07/28/12	2	10	50	200	500	700	1000
VWR	Hexane		082610B			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 Lot	082610B	05/11/12	09/23/12	1000						

CM
7-9-12
ex. 7-28-12

CM 7-9-12

7-12
-12

OPC CURVE						1	2	3	4	5	6
PREP DATE:	07/09/12										
EXP:	10/06/12										
SUPPLIER	ID#	[µg/ml]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL
	OPC STD	5		06/19/12	10/06/12	10	50	200	300	700	1000
	Hexane		082610B			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

CM
7-9-12
ex. 10-6-12

CM 7-9-12

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120723A	Extraction Method	SEP011	Units	mL	
piked ID 1	Diesel Ampule 183767-30901	Surrogate ID 1	THC Surrogate 188683-30667					
piked ID 2	Motor Oil Ampule 183768-30234	Surrogate ID 2						
piked ID 3		Surrogate ID 3						
piked ID 4		Surrogate ID 4						
piked ID 5		Surrogate ID 5						
piked ID 6		Sufficient Vol for Matrix QC:		YES				
piked ID 7		Ext. Start Time:	07/23/12 14:15					
piked ID 8		Ext. End Time:	07/24/12 10:27					
		GC Requires Extract By:	08/01/12 0:00					
		pH1		Water Bath Temp Criteria				78,76,80 °
		pH2						
		pH3						

Spiked By: IC

Date 07/23/12

Witnessed By: JM

Date 07/23/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
120723A Blk				0.250	1	1000	5	7	07/23/12 14:15	
					equip	E-WB7,78				
120723A LCS-1		0.040	1	0.250	1	1000	5	7	07/23/12 14:15	
					equip	E-WB7,78				
120723A LCS-2		0.040	2	0.250	1	1000	5	7	07/23/12 14:15	
					equip	E-WB7,78				
AY65041	AY65041W05			0.250	1	1050	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
AY65043	AY65043W06			0.250	1	1050	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
AY65044	AY65044W07			0.250	1	1040	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
AY65112	AY65112W04			0.250	1	1030	5	7	07/23/12 14:15	68258-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
AY65113	AY65113W05			0.250	1	1030	5	7	07/23/12 14:15	68258-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
AY65144 MS-1	AY65144W15	0.040	1	0.250	1	1000	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB7,78				
AY65144 MSD-1	AY65144W07	0.040	1	0.250	1	1020	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
AY65144 MS-2	AY65144W17	0.040	2	0.250	1	1010	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
AY65144 MSD-2	AY65144W19	0.040	2	0.250	1	1050	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
AY65144	AY65144W05			0.250	1	1010	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				

Lot and Lot#	EMDS2104
4	2351CS12

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

Technician's Initials	
Scanned By	JM
Sample Preparation	JM
Extraction	JM/IC
Concentration	IC
Modified	07/25/12 1:07:07 PM

Reviewed By: DRA

Date 07/25/12

139

Ext_ID

37011

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120723A	Extraction Method	SEP011	Units	mL
Spiked ID 1	Diesel Ampule 183767-30901	Surrogate ID 1	THC Surrogate 188683-30667				
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:		07/23/12 14:15			
Spiked ID 8		Ext. End Time:		07/24/12 10:27			
		GC Requires Extract By:		08/01/12 0:00			
		pH1				Water Bath Temp Criteria 78,76,80 °	
		pH2					
		pH3					

Spiked By: IC

Date 07/23/12

Witnessed By: JM

Date 07/23/12

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
14	AY65145 	AY65145W04		0.250	1	1010	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
15	AY65146 	AY65146W02		0.250	1	1020	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
16	AY65147 	AY65147W02		0.250	1	1060	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
17	AY65148 	AY65148W03		0.250	1	1050	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB5,76				
18	AY65149 	AY65149W04		0.250	1	1050	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
19	AY65150 	AY65150W03		0.250	1	1070	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
20	AY65151 	AY65151W05		0.250	1	1070	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
21	AY65169 	AY65169W01		0.250	1	1050	5	7	07/23/12 14:15	68269-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				
22	AY65170 	AY65170W01		0.250	1	1050	5	7	07/23/12 14:15	68269-2 WEEK RUSH -- Amber Liter
					equip	E-WB6,80				

DRA 7/25/12

Event and Lot#	
	EMD52104
ISO4	2351C512

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

Scanned By	JM
Sample Preparation	JM
Extraction	JM/IC
Concentration	IC
Modified	07/25/12 1:07:07 PM

Reviewed By: DRA

Date 07/25/12

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	2	731002.D	1	DIESEL 400ppm 7/31/12	Mix(A)	7-31-12 10:15:07
14	13	731013.D	5	120723A BLK 5/1000	Water	7-31-12 14:39:54
15	14	731014.D	5	120723A LCS-1 5/1000	Water	7-31-12 15:03:52
16	16	731016.D	4.7619	AY65041W05 5/1050	Water	7-31-12 15:51:47
17	17	731017.D	4.7619	AY65043W06 5/1050	Water	7-31-12 16:15:48
18	18	731018.D	4.80769	AY65044W07 5/1040	Water	7-31-12 16:39:36
19	20	731020.D	1	DIESEL 400ppm 7/30/12	Mix(A)	7-31-12 17:28:05

EPA METHOD 8260B
Volatile Organic Compounds



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

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120719W-65041 - 169331**
 Batch ID: #86RHB-120719AT

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

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	07/20/12	07/20/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/20/12	07/20/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/20/12	07/20/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/20/12	07/20/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/20/12	07/20/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/20/12	07/20/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/20/12	07/20/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/20/12	07/20/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/20/12	07/20/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/20/12	07/20/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/20/12	07/20/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/20/12	07/20/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/20/12	07/20/12

Quant Method: TALLW.M
Run #: 0719T38
Instrument: Thor
Sequence: T120719
Initials: HW

Printed: 07/31/12 9:19:21 AM
 GC SC-Blank-REG MDLs

Method Blank
EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120719W-65041 - 169331**
 Batch ID: #86RHB-120719AT

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

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	07/20/12	07/20/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/20/12	07/20/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/20/12	07/20/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/20/12	07/20/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/20/12	07/20/12
BLANK	SURROGATE: DIBROMOFLUOR	100	85-115			%	07/20/12	07/20/12
BLANK	SURROGATE: TOLUENE-D8 (S)	99.7	85-120			%	07/20/12	07/20/12

Quant Method: TALLW.M
 Run #: 0719T38
 Instrument: Thor
 Sequence: T120719
 Initials: HW

Printed: 07/31/12 9:19:21 AM
 GC SC-Blank-REG MDLs

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68248

Case No: 68248

Date Analyzed: 07/19/12

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
120719AT-LCS	Lab Control Spike	70-120	97.8		75-120	102	
120719AT-BLK	Blank	70-120	102		75-120	101	
AY65042	ES078 TRIP BLANK	70-120	99.9		75-120	97.5	
AY65041	ES077	70-120	100		75-120	99.9	
AY65043	ES079	70-120	100		75-120	99.8	
AY65044	ES080	70-120	101		75-120	99.3	

Comments: Batch: #86RHB-120719AT

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 68248

Case No: 68248

Date Analyzed: 07/19/12

Matrix: WATER

Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120719AT-LCS	Lab Control Spike	85-115	98.2		85-120	98.0	
120719AT-BLK	Blank	85-115	100		85-120	99.7	
AY65042	ES078 TRIP BLANK	85-115	100		85-120	98.8	
AY65041	ES077	85-115	99.0		85-120	101	
AY65043	ES079	85-115	101		85-120	101	
AY65044	ES080	85-115	101		85-120	99.8	

Comments: Batch: #86RHB-120719AT

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: 120719W-65041 LCS - 169331

Batch ID: #86RHB-120719AT

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	9.79	97.9	80-130
1,1,1-TRICHLOROETHANE	10.00	9.62	96.2	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.22	92.2	65-130
1,1,2-TRICHLOROETHANE	10.00	9.61	96.1	75-125
1,1-DICHLOROETHANE	10.00	10.1	101	70-135
1,1-DICHLOROETHENE	10.00	9.64	96.4	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	9.98	99.8	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.1	101	50-130
1,2-DIBROMOETHANE	10.00	9.79	97.9	70-130
1,2-DICHLOROBENZENE	10.00	9.83	98.3	70-120
1,2-DICHLOROETHANE	10.00	9.76	97.6	70-130
1,2-DICHLOROPROPANE	10.00	10.1	101	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	18.7	93.5	70-130
1,4-DICHLOROBENZENE	10.00	9.82	98.2	75-125
2-BUTANONE	10.00	10.3	103	30-150
4-METHYL-2-PENTANONE	10.00	10.2	102	60-135
ACETONE	10.00	11.8	118	40-140
BENZENE	10.00	9.47	94.7	80-120
BROMODICHLOROMETHANE	10.00	9.57	95.7	75-120
BROMOFORM	10.00	9.70	97.0	70-130
BROMOMETHANE	10.00	9.36	93.6	30-145
CARBON TETRACHLORIDE	10.00	10.0	100	65-140
CHLOROBENZENE	10.00	9.82	98.2	80-120
CHLORODIBROMOMETHANE	10.00	9.73	97.3	60-135
CHLOROETHANE	10.00	9.84	98.4	60-135
CHLOROFORM	10.00	9.60	96.0	65-135
CHLOROMETHANE	10.00	9.80	98.0	40-125
CIS-1,2-DICHLOROETHENE	10.00	9.99	99.9	70-125
ETHYLBENZENE	10.00	10.1	101	75-125

= Recovery is outside QC limits.

Comments:

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/19/12
Analysis Date :	07/19/12
Instrument :	Thor
Run :	0719T31
Initials :	HW

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

APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: 120719W-65041 LCS - 169331
 Batch ID: #86RHB-120719AT

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE	300	419	140 #	75-125
HEXACHLOROBUTADIENE	10.00	9.23	92.3	50-140
METHYL TERT-BUTYL ETHER	10.00	9.48	94.8	65-125
METHYLENE CHLORIDE	10.00	9.45	94.5	55-140
STYRENE	10.00	10.4	104	65-135
TETRACHLOROETHENE	10.00	10.1	101	45-150
TOLUENE	10.00	10.1	101	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.79	97.9	60-140
TRICHLOROETHENE	10.00	10.6	106	70-125
VINYL CHLORIDE	10.00	10.1	101	50-145
XYLENES (TOTAL)	30.0	31.3	104	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	32.9	97.8	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.2	102	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	31.3	98.2	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	36.6	98.0	85-120

= Recovery is outside QC limits.

Comments:

<u>Primary</u>	<u>SPK</u>
Quant Method :	TALLW.M
Extraction Date :	07/19/12
Analysis Date :	07/19/12
Instrument :	Thor
Run :	0719T31
Initials :	HW

Printed: 07/31/12 9:19:12 AM
 APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc.

SDG No: 68248

Case No: 68248

Date Analyzed: 07/20/12

Matrix: WATER

Instrument: Thor

Blank ID: 120719AT-BLK

Time Analyzed: 0218

<u>APPL ID.</u>	<u>Client Sample No.</u>	<u>File ID.</u>	<u>Date Analyzed</u>
120719AT-LCS	Lab Control Spike	0719T31	07/19/12 2303
120719AT-BLK	Blank	0719T38	07/20/12 0218
AY65042	ES078 TRIP BLANK	0719T40	07/20/12 0313
AY65041	ES077	0719T43	07/20/12 0436
AY65043	ES079	0719T44	07/20/12 0503
AY65044	ES080	0719T45	07/20/12 0531

Comments: Batch: #86RHB-120719AT

Printed: 07/27/12 2:21:51 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
 Case No: 0719T28.D
 Matrix: Water
 ID: 5ng- BFB Std 07-16-12B

SDG No: 68248
 Date Analyzed: 07/19/12
 Instrument: Thor
 Time Analyzed: 21:40

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 07-19	0719T30.D	07/19/12 22:35
2	Lab Control Spike	120719A LCS-1WT (SS)	0719T31.D	07/19/12 23:03
3	Blank	120719A BLK-1WT	0719T38.D	07/20/12 2:18
4	ES078 TRIP BLANK	AY65042W01	0719T40.D	07/20/12 3:13
5	ES077	AY65041W01	0719T43.D	07/20/12 4:36
6	ES079	AY65043W01	0719T44.D	07/20/12 5:03
7	ES080	AY65044W01	0719T45.D	07/20/12 5:31
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e

50	14.9 - 40% of mass 95	<u>16.9</u>
75	30 - 60% of mass 95	<u>47.3</u>
95	100 - 100% of mass 95	<u>100.0</u>
96	5 - 9% of mass 95	<u>6.8</u>
173	0 - 2% of mass 174	<u>1.0</u>
174	50 - 100.49% of mass 95	<u>95.8</u>
175	5 - 9% of mass 174	<u>7.5</u>
176	95 - 101.49% of mass 174	<u>96.9</u>
177	5 - 9% of mass 176	<u>6.2</u>

Form 5
Tune Summary

Lab Name: APPL Inc.
 Case No: 0724T01T.D
 Matrix: Water
 ID: 5ng- BFB STD 07-16-12B

SDG No: 68248
 Date Analyzed: 07/24/12
 Instrument: Thor
 Time Analyzed: 16:11

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		CCV gas 300ug/L	0724T09.D	07/24/12 19:48
2	Lab Control Spike	LCS gas 300ug/L (SS)	0724T10.D	07/24/12 20:15
3	Blank	120724A BLK-1WT	0724T13.D	07/24/12 21:39
4	ES078 TRIP BLANK	AY65042W02	0724T14.D	07/24/12 22:06
5	ES077	AY65041W02	0724T15.D	07/24/12 22:34
6	ES079	AY65043W02	0724T16.D	07/24/12 23:02
7	ES080	AY65044W02	0724T17.D	07/24/12 23:30
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e

50 15 - 40% of mass 95	<u>16.9</u>
75 30 - 60% of mass 95	<u>47.3</u>
95 100 - 100% of mass 95	<u>100.0</u>
96 5 - 9% of mass 95	<u>6.8</u>
173 0 - 2% of mass 174	<u>0.0</u>
174 50 - 100% of mass 95	<u>98.5</u>
175 5 - 9% of mass 174	<u>7.4</u>
176 95 - 101% of mass 174	<u>95.1</u>
177 5 - 9% of mass 176	<u>6.5</u>

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review
 Lab Code: _____ SDG No.: 68248
 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 10ug/L Vol Std 07-19-12	452736	6.73	376000	9.87	220224	12.20
02 120719A LCS-1WT (SS)	459584	6.73	371008	9.87	216768	12.20
03 120719A BLK-1WT	441792	6.73	355584	9.87	206976	12.20
04 AY65042W01	442624	6.72	362944	9.87	210560	12.20
05 AY65041W01	438144	6.73	347712	9.87	196160	12.20
06 AY65043W01	446848	6.72	361216	9.87	204224	12.20
07 AY65044W01	442624	6.73	361088	9.88	211648	12.20
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.: 68248
 Lab File ID (Standard): 0724T05.D Date Analyzed: 07/24/12
 Instrument ID: Thor Time Analyzed: 17:57
 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	608785	6.73	680507	9.87	762779	12.20	
UPPER LIMIT	1217570	7.23	1361014	10.37	1525558	12.70	
LOWER LIMIT	304393	6.23	340254	9.37	381390	11.70	
SAMPLE NO.							
01	CCV gas 300ug/L	776087	6.73	877174	9.87	1014330	12.20
02	LCS gas 300ug/L (SS)	776734	6.73	880394	9.87	1005630	12.20
03	120724A BLK-1WT	740452	6.73	841778	9.87	916024	12.20
04	AY65042W02	739647	6.73	846857	9.87	923625	12.20
05	AY65041W02	715388	6.73	832454	9.87	906776	12.20
06	AY65043W02	751510	6.73	857518	9.87	946952	12.20
07	AY65044W02	776366	6.73	876186	9.87	969361	12.20
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.

Manual Integration Summary

ARF: 68248

APPL ID	Client ID	Method	Analyte	Type	Comment
AY65041	Blank	EPA 8260B	GASOLINE	Blank	(MI1) Integration does not follow baseline.
AY65041	LCS	EPA 8260B	GASOLINE	LCS	(MI1) Integration does not follow baseline.
AY65041	ES077	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65042	ES078 TRIP BLANK	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65043	ES079	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65044	ES080	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.

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

APPL, INC.

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: ES077

Sample Collection Date: 07/17/12

ARF: 68248

APPL ID: AY65041

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/20/12	07/20/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/20/12	07/20/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/20/12	07/20/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/20/12	07/20/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/20/12	07/20/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/20/12	07/20/12

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 #: 0719T43
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:53 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: ES077

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65041

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/20/12	07/20/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.9	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.0	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/20/12	07/20/12

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 #: 0719T43
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 AM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T43.D
Acq On : 20 Jul 12 4:36
Sample : AY65041W01
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 24 12:14 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	438144	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	347712	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	196160	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
31) Dibromofluoromethane(S)	5.95	111	216402	31.56216	ppb	0.00
Spiked Amount				31.881		
				Recovery =	98.999%	
36) 1,2-DCA-D4(S)	6.33	65	214499	33.66298	ppb	0.00
Spiked Amount				33.647		
				Recovery =	100.048%	
56) Toluene-D8(S)	8.43	98	777272	37.81169	ppb	0.00
Spiked Amount				37.345		
				Recovery =	101.251%	
64) 4-Bromofluorobenzene(S)	11.05	95	286566	29.47771	ppb	0.00
Spiked Amount				29.515		
				Recovery =	99.874%	

Target Compounds Qvalue

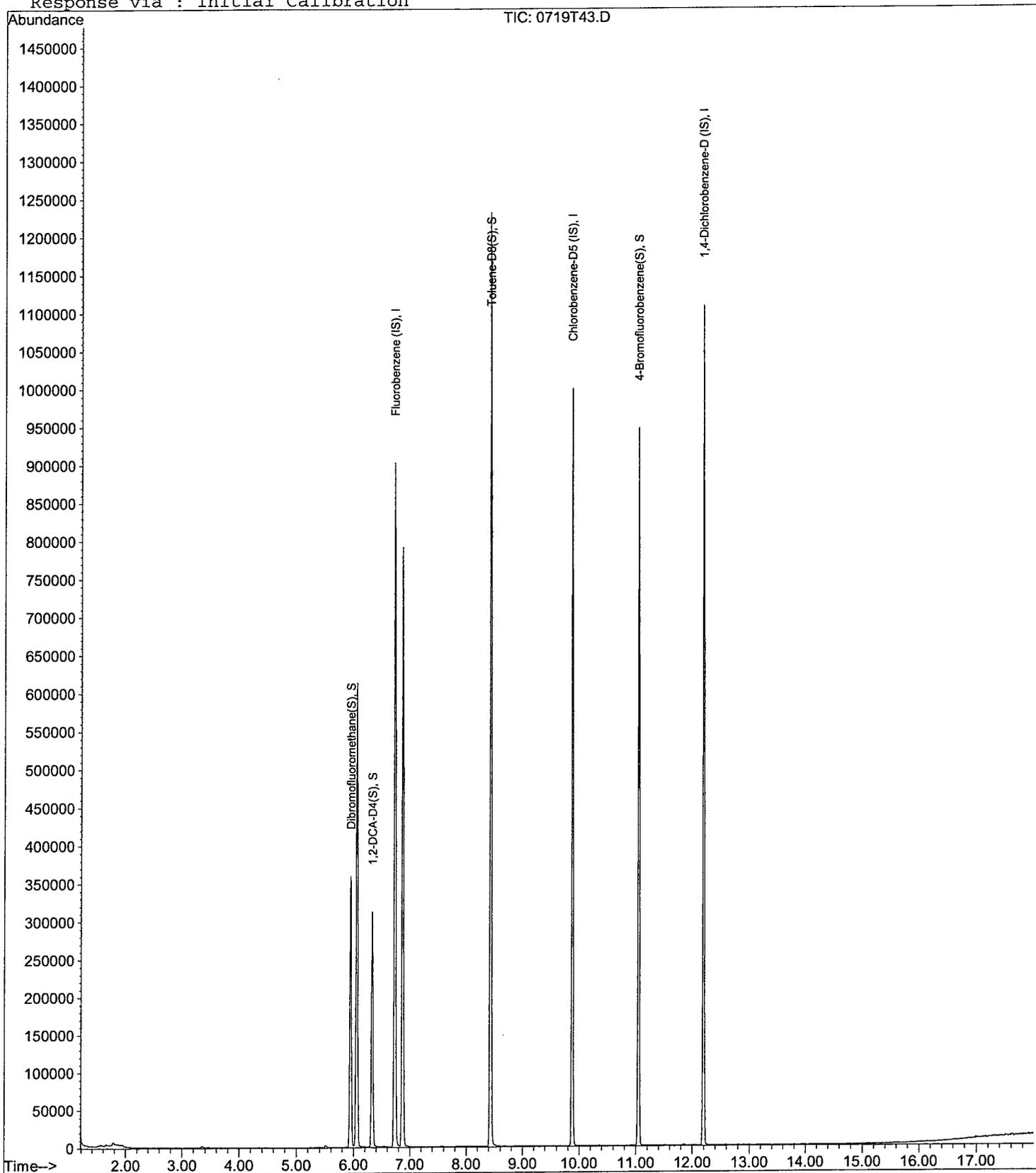
Data File : M:\THOR\DATA\T120719\0719T43.D
Acq On : 20 Jul 12 4:36
Sample : AY65041W01
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 24 12:14 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\T120724\0724T15.D Vial: 14
 Acq On : 24 Jul 12 22:34 Operator: DG,RS,HW,ARS,SV
 Sample : AY65041W02 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:51 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	715388	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	832454	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	906776	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.43	TIC	8901617m	128.24353	ppb	ND 100

No gasoline pattern detected.

ARS 7/26/12

Quantitation Report

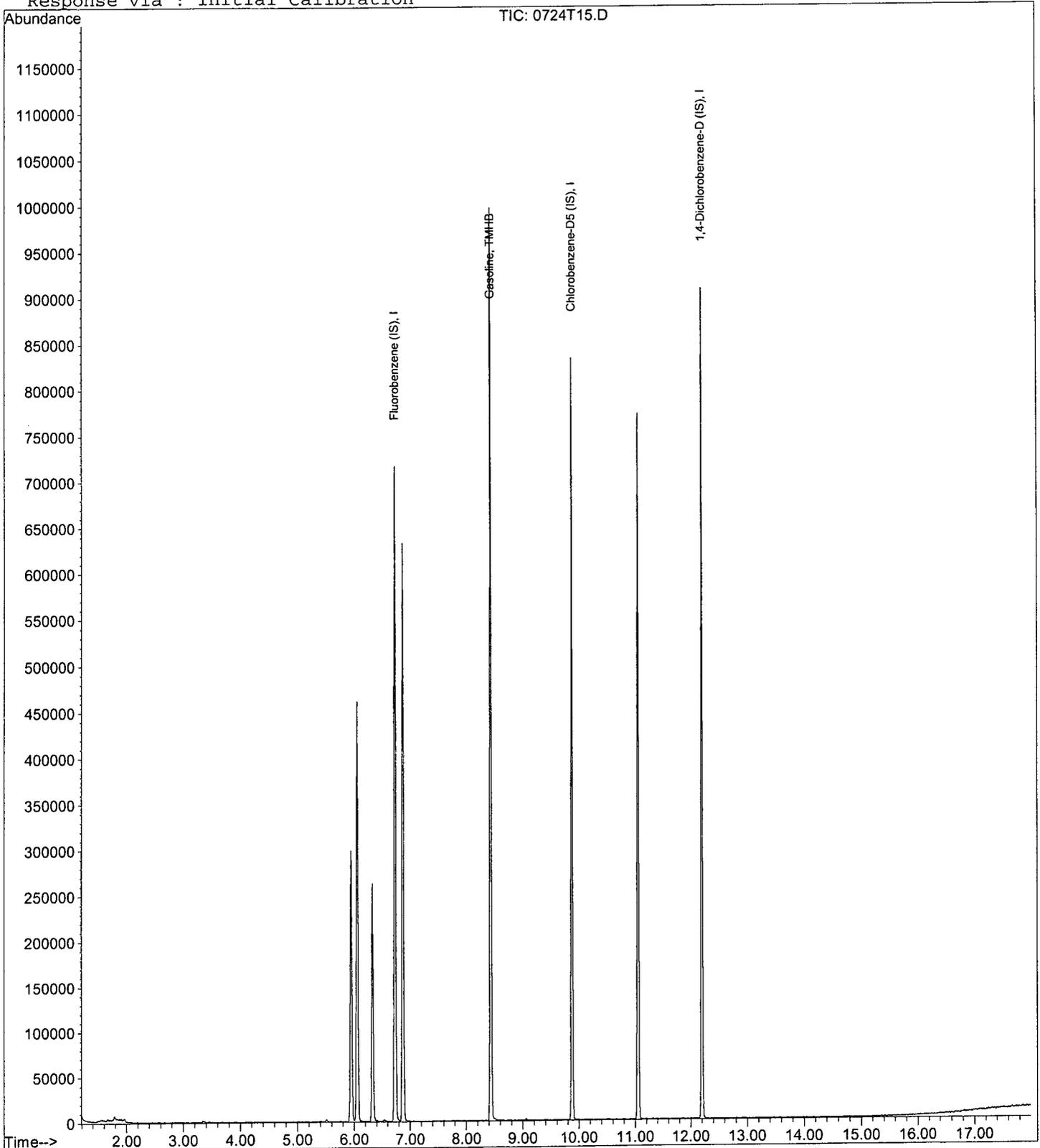
Data File : M:\THOR\DATA\T120724\0724T15.D
Acq On : 24 Jul 12 22:34
Sample : AY65041W02
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 14
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:51 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

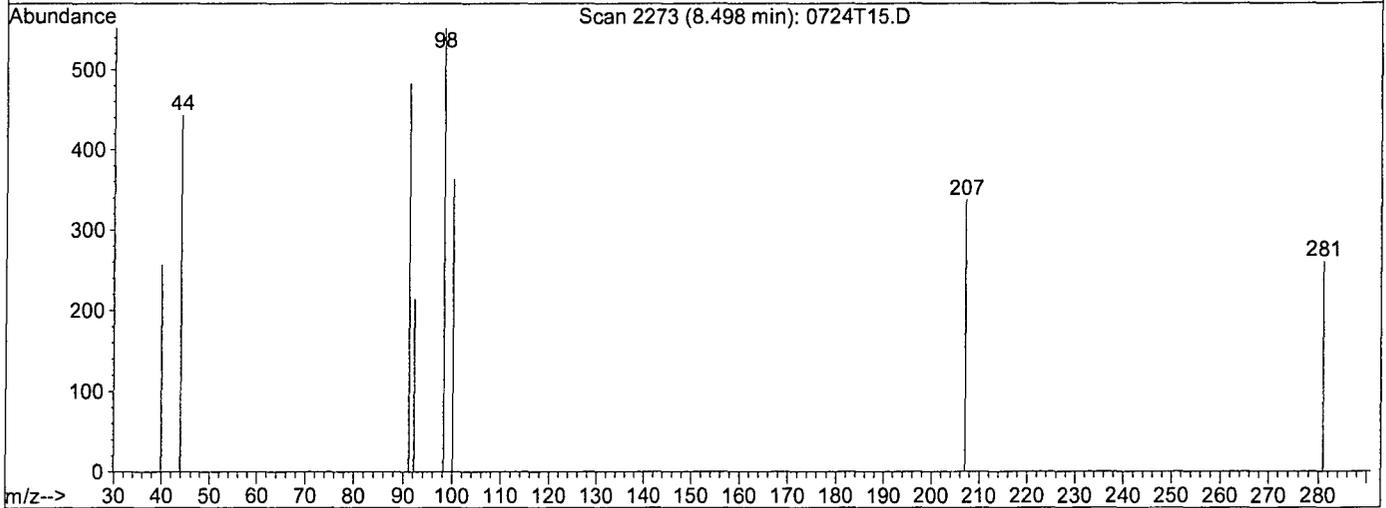
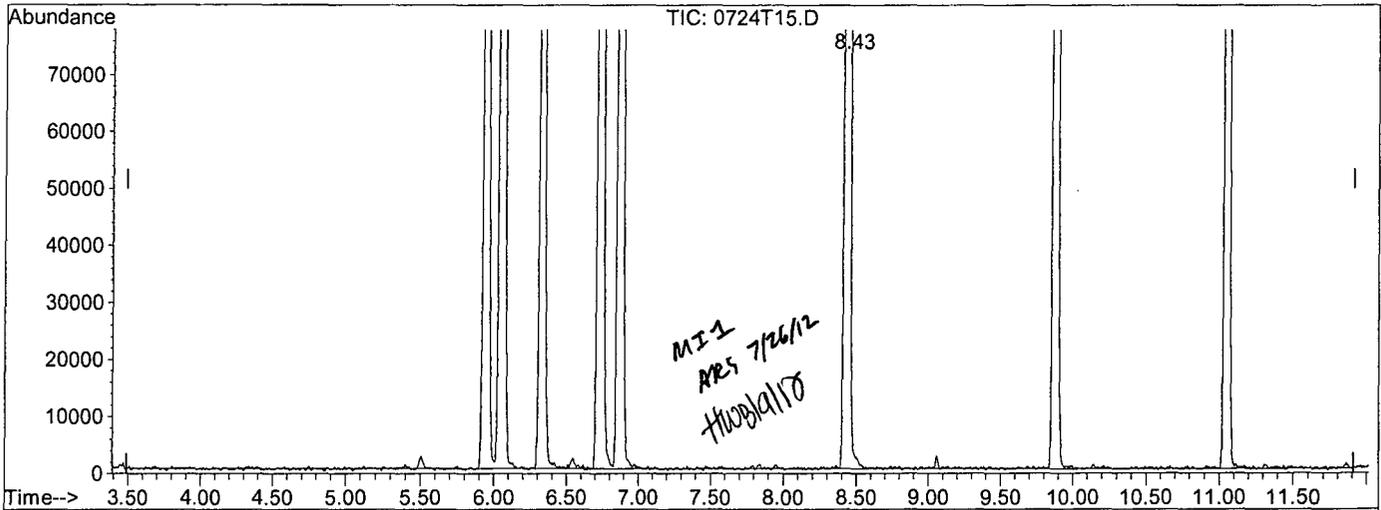


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T15.D
 Acq On : 24 Jul 12 22:34
 Sample : AY65041W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 14
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T15.D

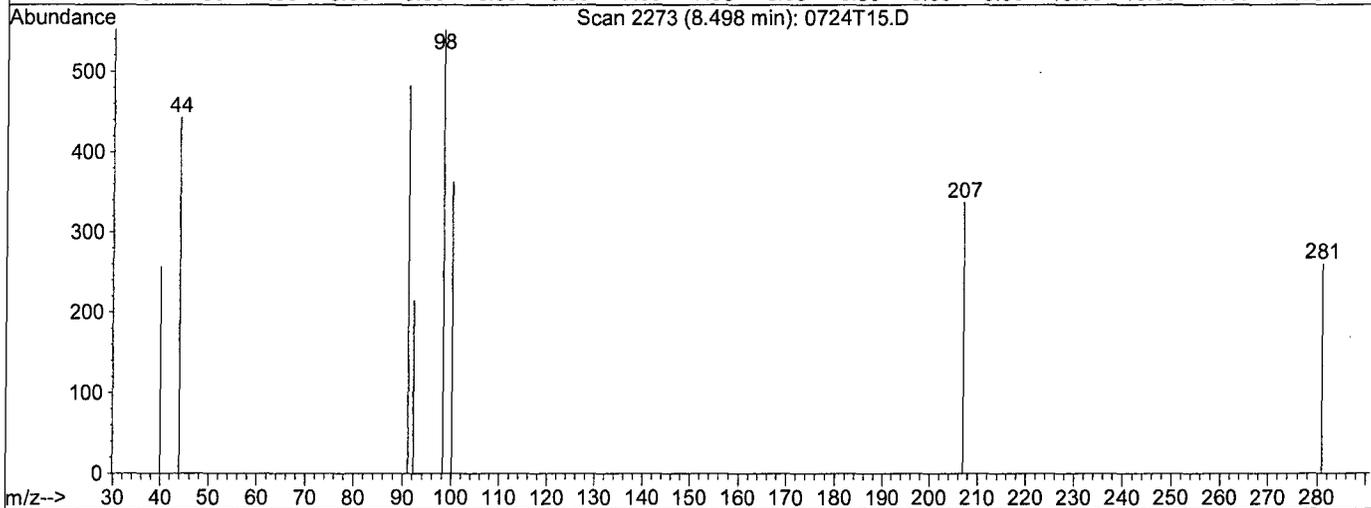
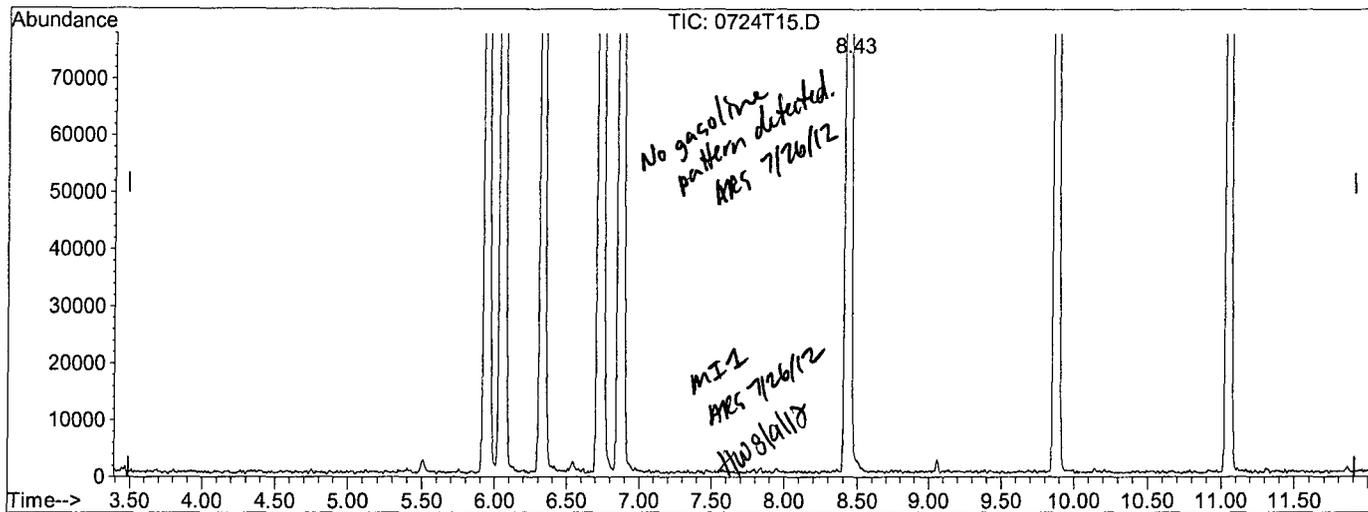
(2) Gasoline (TMHB)		
8.50min	64.7132ppb m	
response	6862466	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.27#
0.00	0.00	3.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T15.D
 Acq On : 24 Jul 12 22:34
 Sample : AY65041W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:51 2012

Vial: 14
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T15.D

(2) Gasoline (TMHB)		
8.43min	128.2435ppb m	
response	8901617	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.98#
0.00	0.00	2.87#
0.00	0.00	0.00

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: ES078 TRIP BLANK

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65042

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/20/12	07/20/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/20/12	07/20/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/20/12	07/20/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/20/12	07/20/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/20/12	07/20/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/20/12	07/20/12

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 #: 0719T40
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 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: ES078 TRIP BLANK

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65042

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/20/12	07/20/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	99.9	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.5	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	100	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.8	85-120			%	07/20/12	07/20/12

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 #: 0719T40
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 AM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T40.D
Acq On : 20 Jul 12 3:13
Sample : AY65042W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 40
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:09 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)	6.72	96	442624	25.00000	ppb	-0.01
55) Chlorobenzene-D5 (IS)	9.87	117	362944	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	210560	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
31) Dibromofluoromethane(S)	5.93	111	220763	31.87231	ppb	-0.02
Spiked Amount				31.881		
				Recovery =	99.971%	
36) 1,2-DCA-D4(S)	6.32	65	216419	33.62053	ppb	-0.02
Spiked Amount				33.647		
				Recovery =	99.924%	
56) Toluene-D8(S)	8.42	98	791579	36.89159	ppb	0.00
Spiked Amount				37.345		
				Recovery =	98.787%	
64) 4-Bromofluorobenzene(S)	11.05	95	292058	28.78182	ppb	0.00
Spiked Amount				29.515		
				Recovery =	97.516%	

Target Compounds

Qvalue

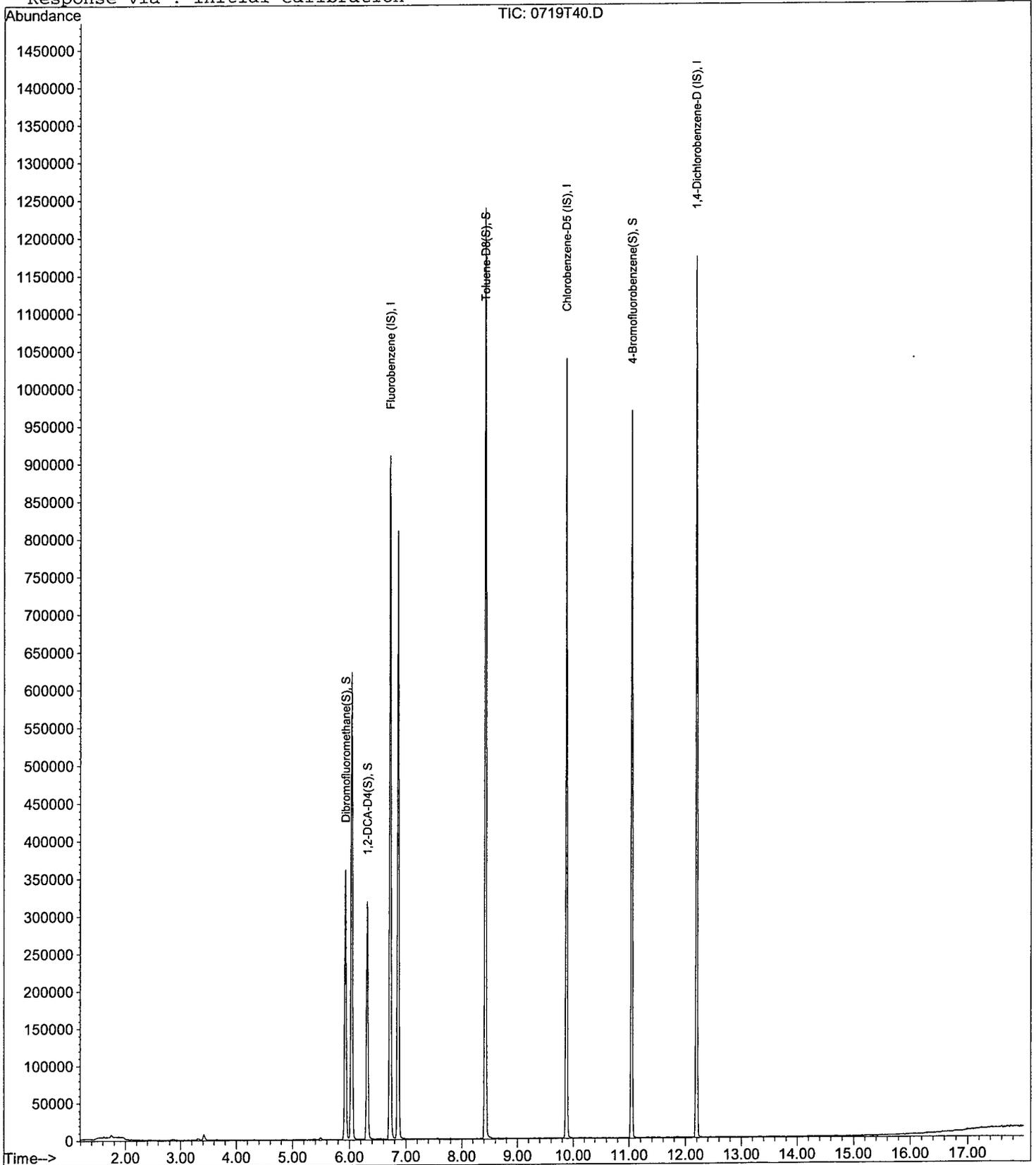
Data File : M:\THOR\DATA\T120719\0719T40.D
Acq On : 20 Jul 12 3:13
Sample : AY65042W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 40
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:09 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\T120724\0724T14.D Vial: 13
 Acq On : 24 Jul 12 22:06 Operator: DG,RS,HW,ARS,SV
 Sample : AY65042W02 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:50 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	739647	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	846857	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	923625	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.43	TIC	9058284m	123.86848	ppb	ND 100

*No gasoline pattern detected.
 ARS 7/26/12*

Quantitation Report

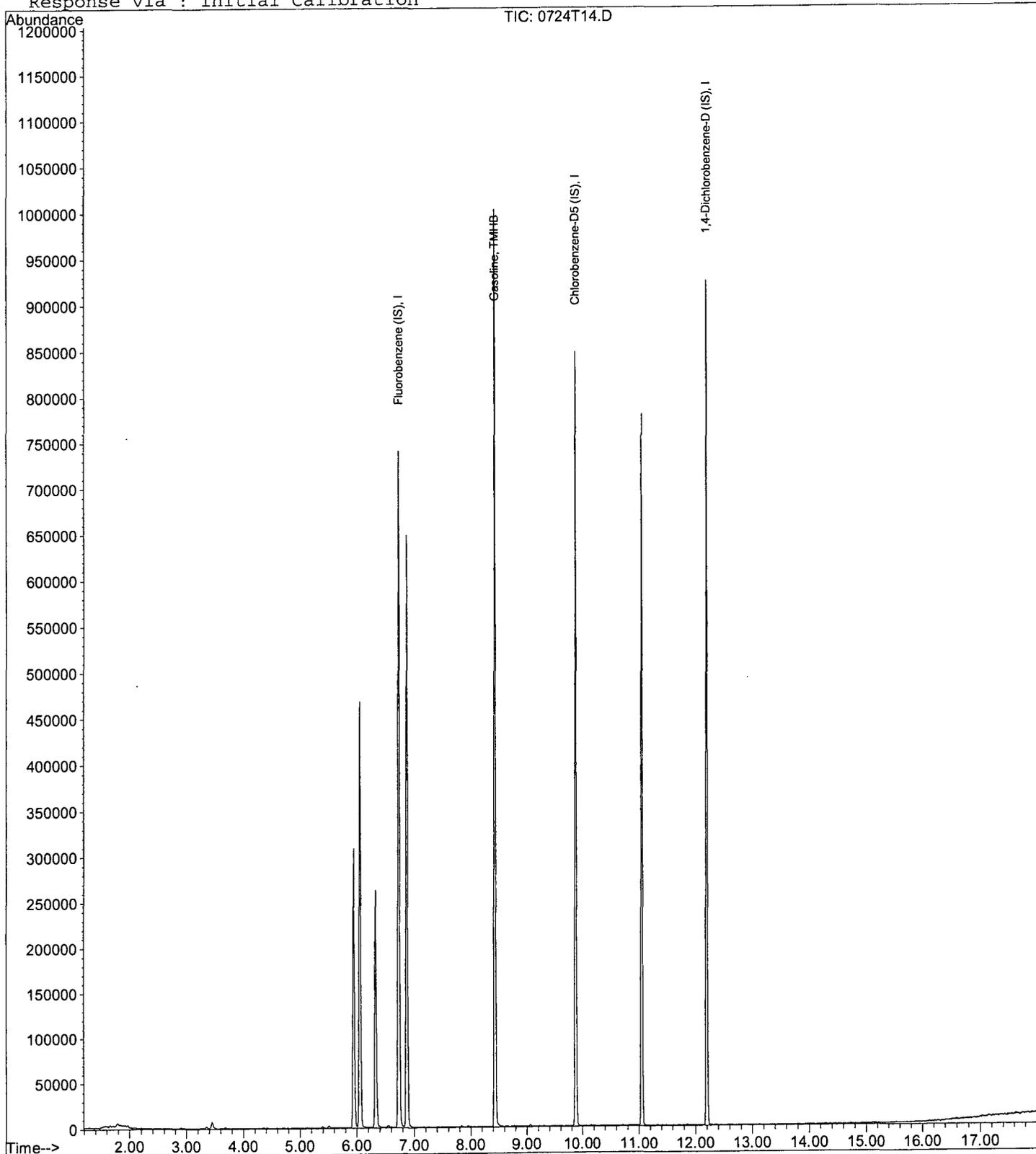
Data File : M:\THOR\DATA\T120724\0724T14.D
Acq On : 24 Jul 12 22:06
Sample : AY65042W02
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 14:50 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

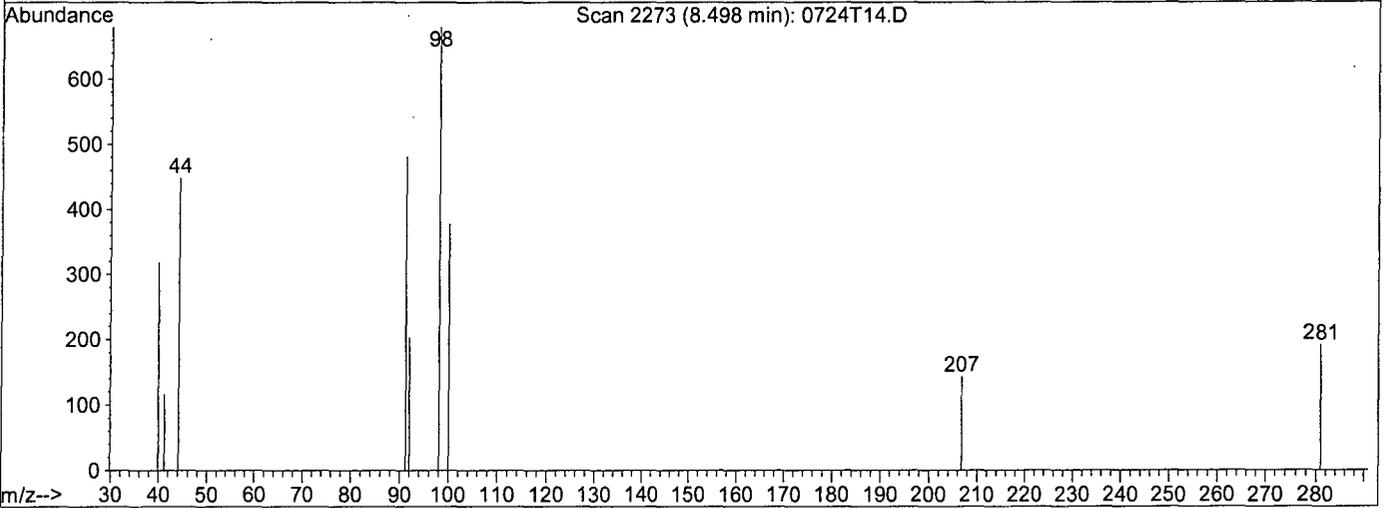
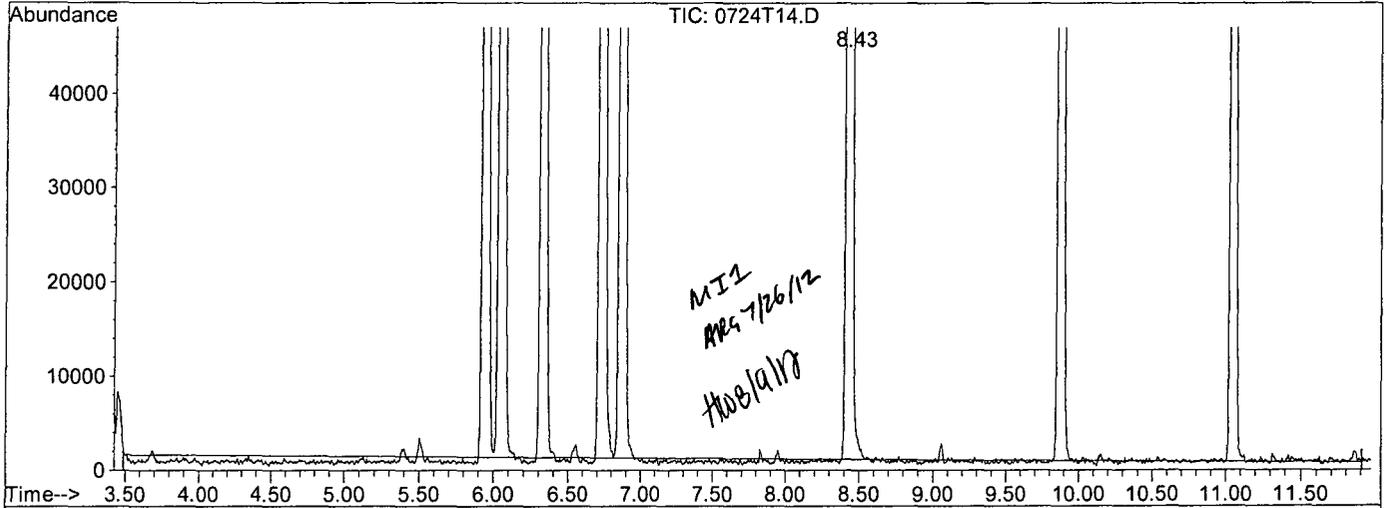


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T14.D
 Acq On : 24 Jul 12 22:06
 Sample : AY65042W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 13
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T14.D

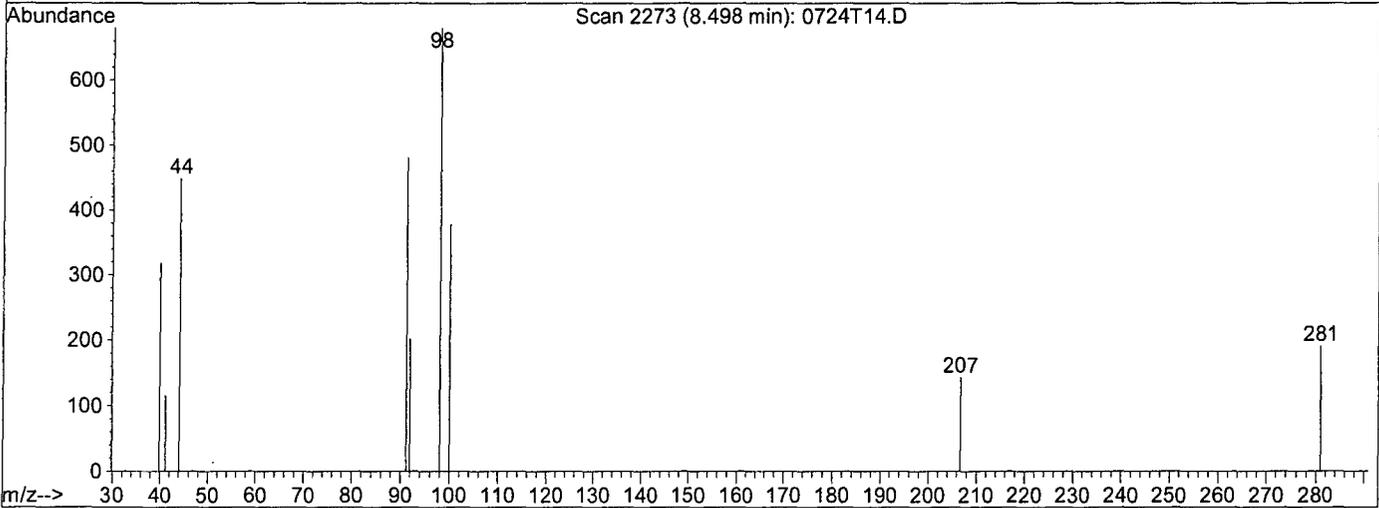
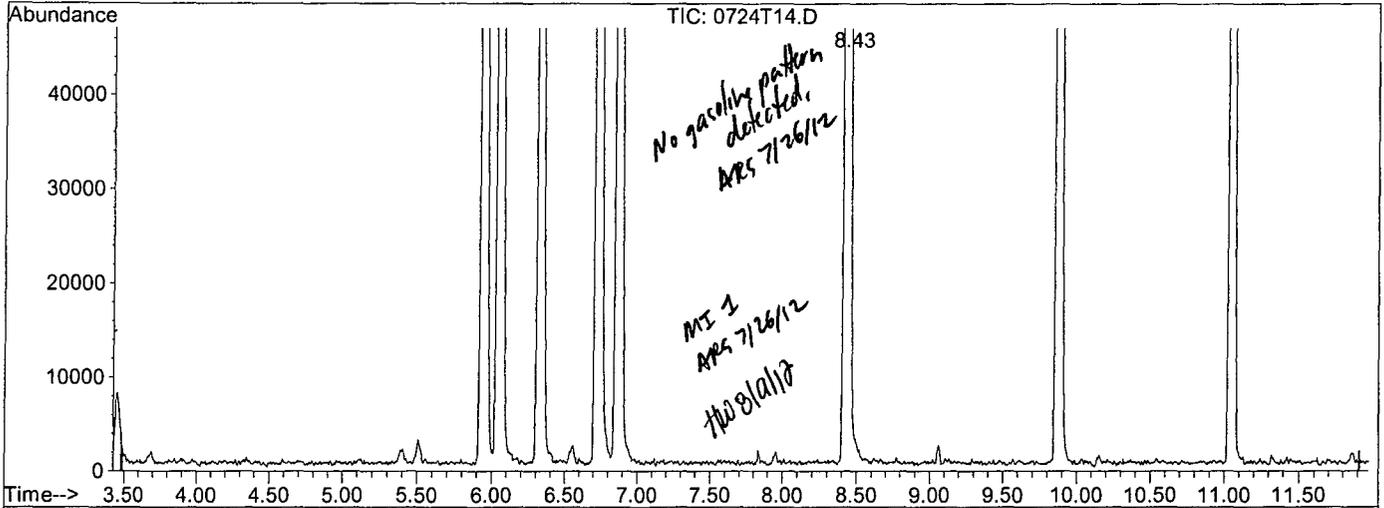
(2) Gasoline (TMHB)		
8.50min	61.2586ppb m	
response	6980528	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.29#
0.00	0.00	3.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T14.D
 Acq On : 24 Jul 12 22:06
 Sample : AY65042W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:50 2012

Vial: 13
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T14.D

(2) Gasoline (TMHB)		
8.43min	123.8685ppb m	
response	9058284	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.00#
0.00	0.00	2.84#
0.00	0.00	0.00

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: ES079

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65043

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/20/12	07/20/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/20/12	07/20/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/20/12	07/20/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/20/12	07/20/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/20/12	07/20/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/20/12	07/20/12

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 #: 0719T44
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 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: ES079

Sample Collection Date: 07/17/12

ARF: 68248

APPL ID: AY65043

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/20/12	07/20/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.8	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/20/12	07/20/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(M1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0719T44
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 AM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T44.D
Acq On : 20 Jul 12 5:03
Sample : AY65043W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 44
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:16 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)	6.72	96	446848	25.00000	ppb	-0.02
55) Chlorobenzene-D5 (IS)	9.87	117	361216	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	204224	25.00000	ppb	0.00

System Monitoring Compounds

31) Dibromofluoromethane(S)	5.93	111	225526	32.25218	ppb	-0.02
Spiked Amount	31.881					
			Recovery	=	101.163%	
36) 1,2-DCA-D4(S)	6.32	65	218859	33.67819	ppb	-0.02
Spiked Amount	33.647					
			Recovery	=	100.093%	
56) Toluene-D8(S)	8.42	98	806688	37.77560	ppb	0.00
Spiked Amount	37.345					
			Recovery	=	101.154%	
64) 4-Bromofluorobenzene(S)	11.05	95	297492	29.45758	ppb	0.00
Spiked Amount	29.515					
			Recovery	=	99.806%	

Target Compounds

Qvalue

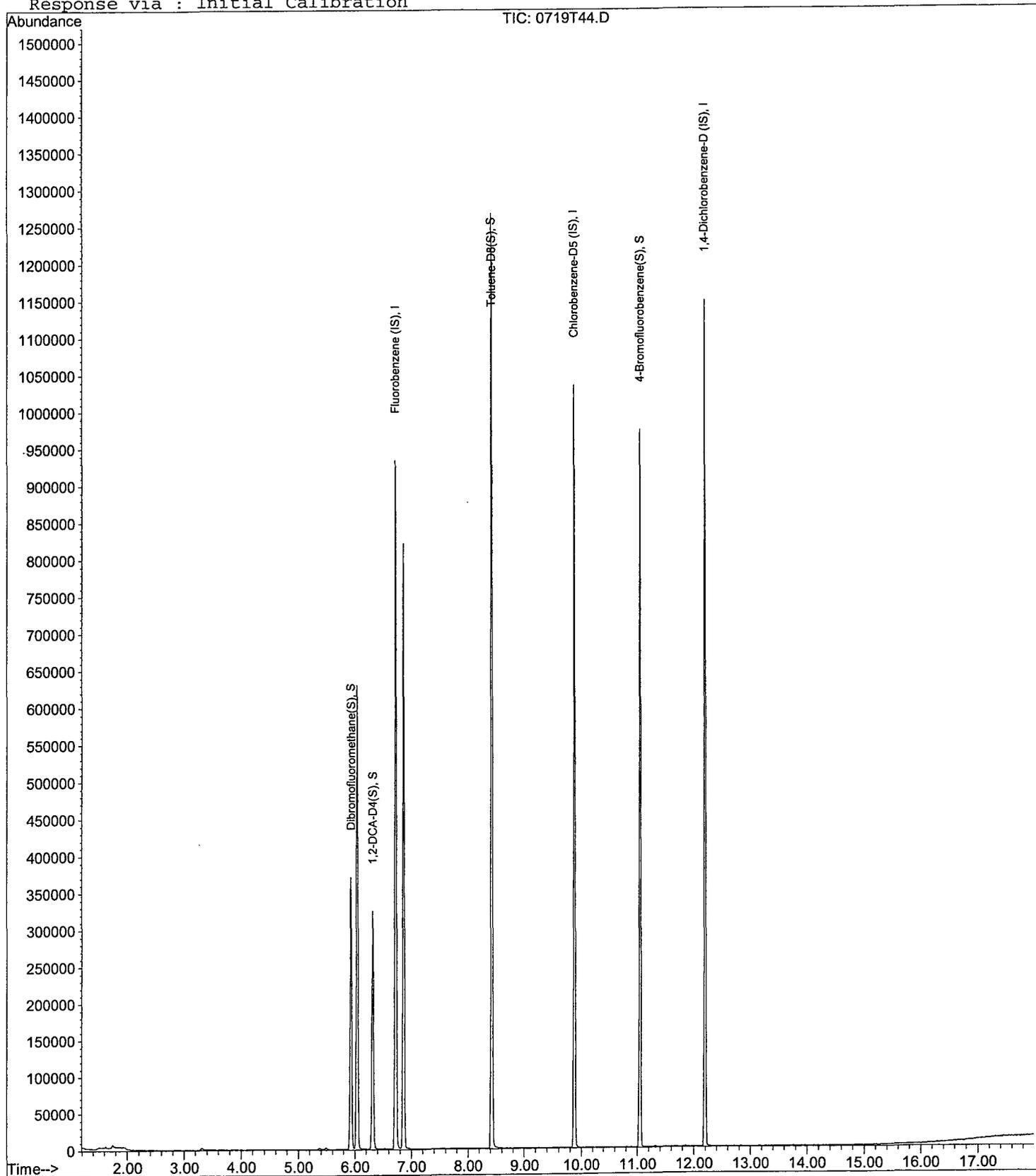
Data File : M:\THOR\DATA\T120719\0719T44.D
Acq On : 20 Jul 12 5:03
Sample : AY65043W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 44
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:16 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\T120724\0724T16.D
Acq On : 24 Jul 12 23:02
Sample : AY65043W02
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 15
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:51 2012

Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	751510	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	857518	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	946952	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.43	TIC	9326019m	127.50012	ppb	<i>NO</i> 100

*No gasoline pattern detected.
ARS 7/26/12*

Quantitation Report

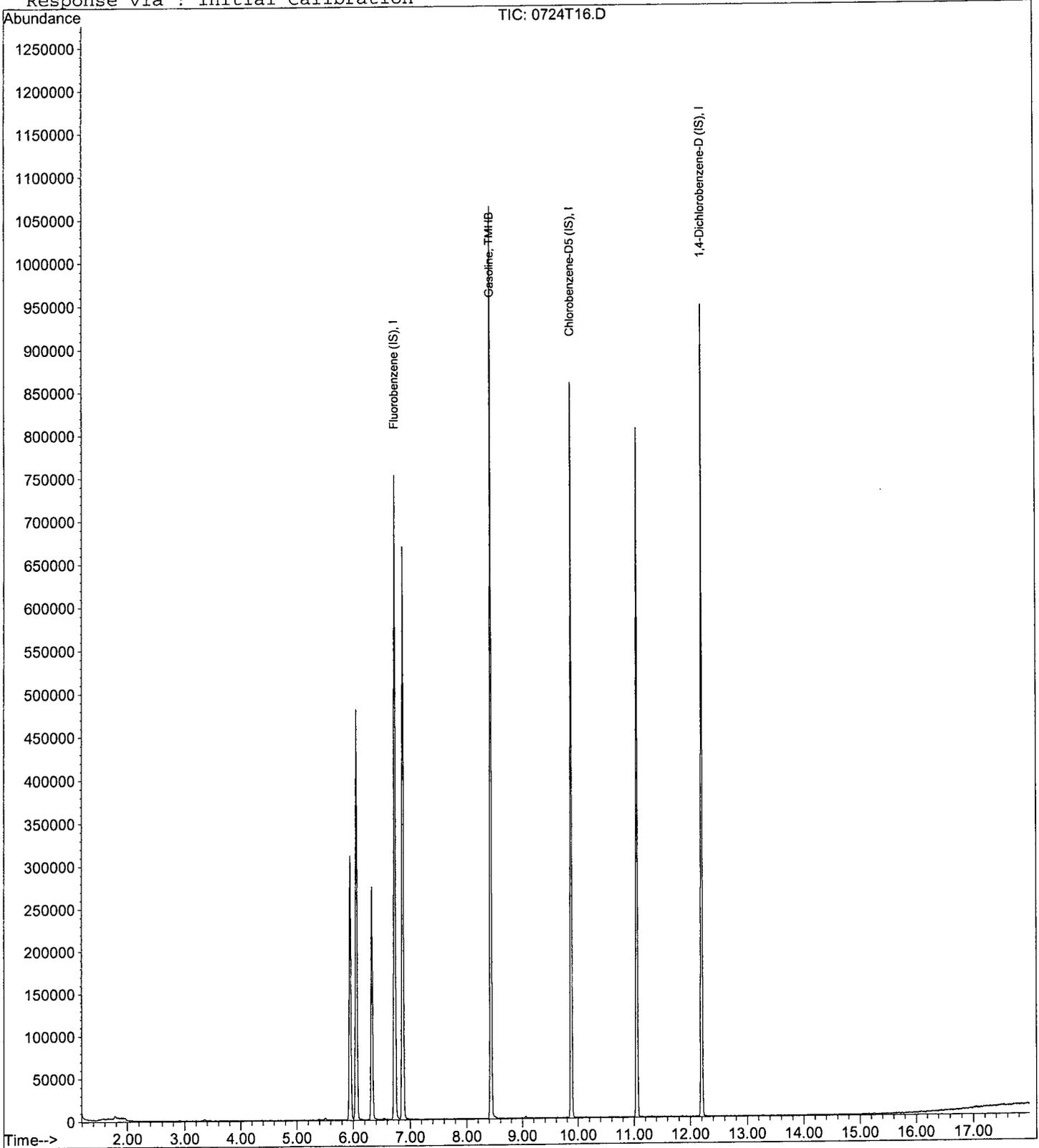
Data File : M:\THOR\DATA\T120724\0724T16.D
Acq On : 24 Jul 12 23:02
Sample : AY65043W02
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 15
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:51 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

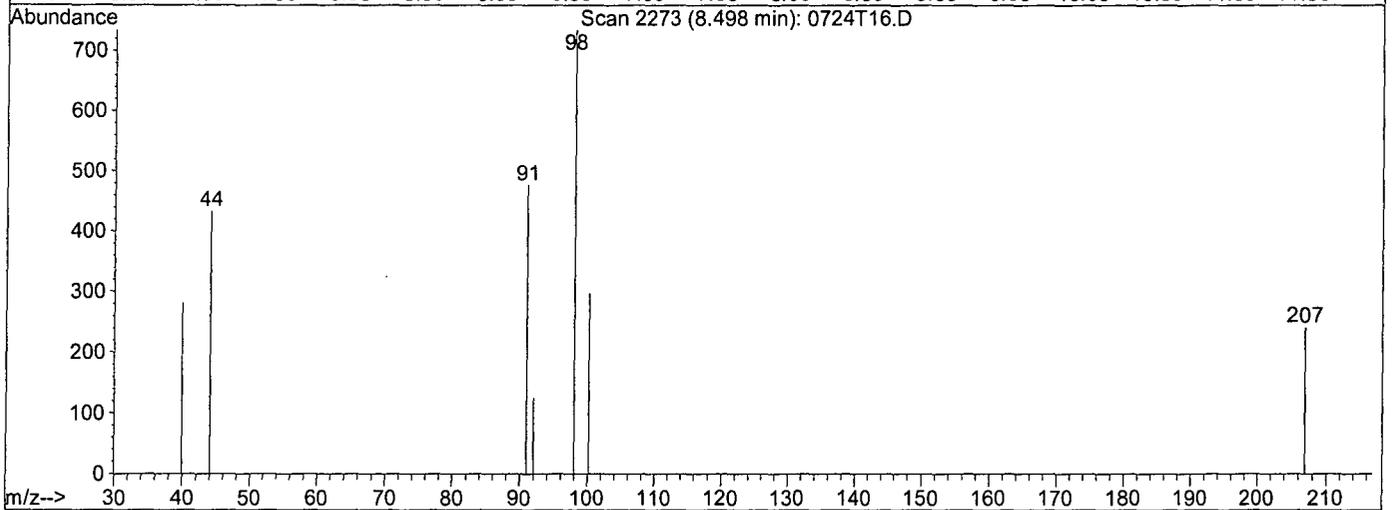
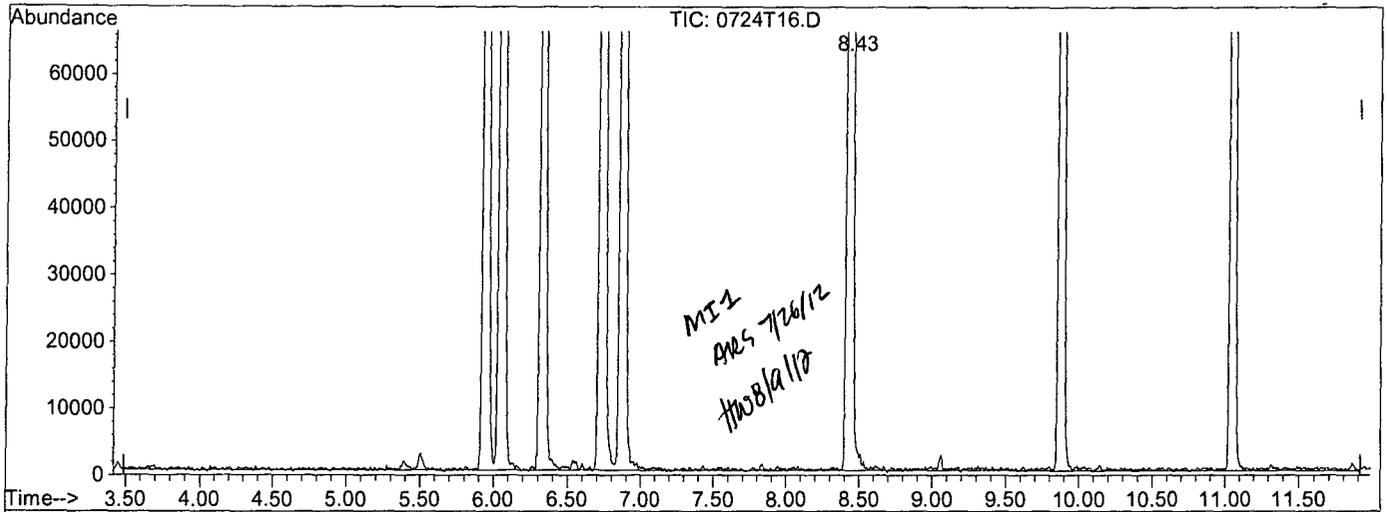


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T16.D
 Acq On : 24 Jul 12 23:02
 Sample : AY65043W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 15
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T16.D

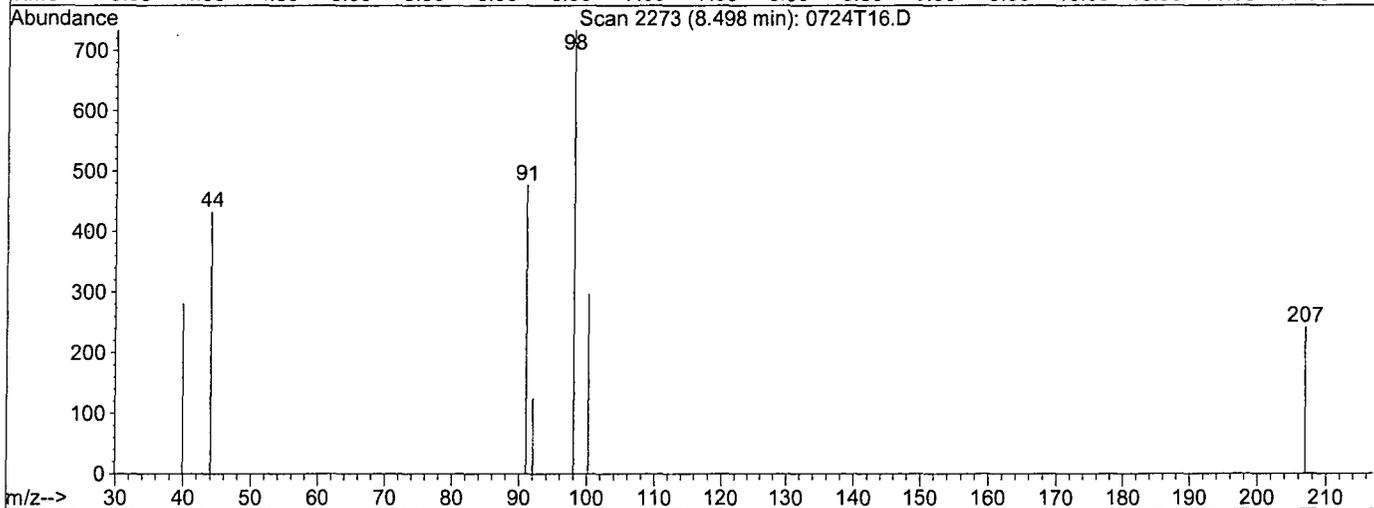
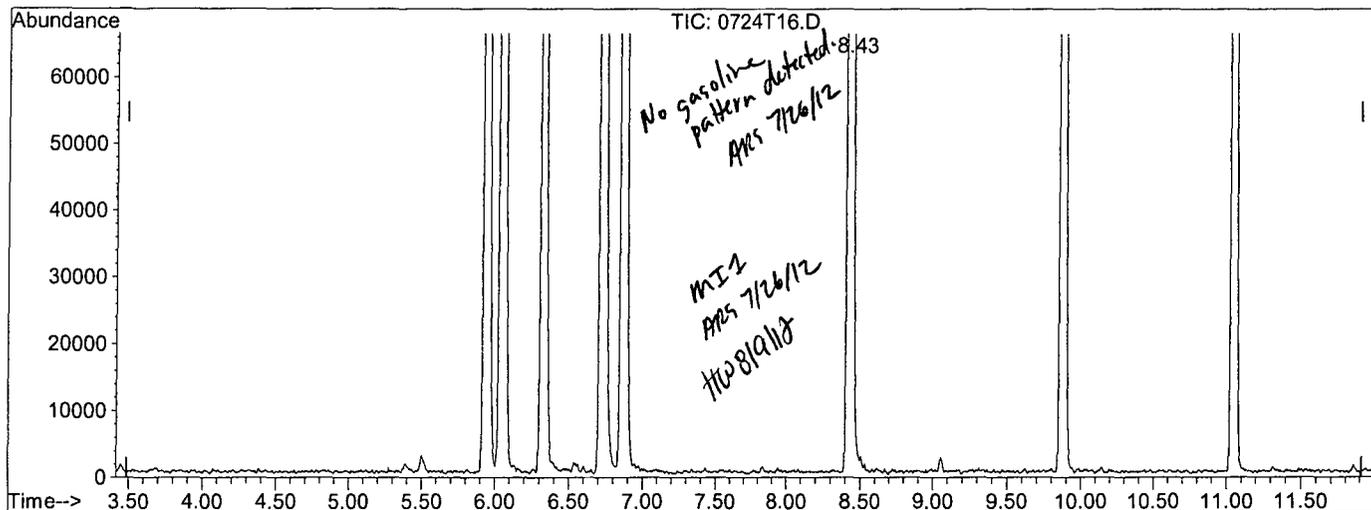
(2) Gasoline (TMHB)		
8.50min	65.4258ppb m	
response	7232998	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.27#
0.00	0.00	3.73#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T16.D
 Acq On : 24 Jul 12 23:02
 Sample : AY65043W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:51 2012

Vial: 15
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T16.D

(2) Gasoline (TMHB)		
8.43min	127.5001ppb m	
response	9326019	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.99#
0.00	0.00	2.90#
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: 68248

Sample ID: ES080

APPL ID: AY65044

Sample Collection Date: 07/17/12

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/20/12	07/20/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/20/12	07/20/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/20/12	07/20/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/20/12	07/20/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/20/12	07/20/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/20/12	07/20/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/20/12	07/20/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/20/12	07/20/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/20/12	07/20/12

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 #: 0719T45
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 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: ES080

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65044

QCG: #86RHB-120719AT-169331

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	07/20/12	07/20/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/20/12	07/20/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/20/12	07/20/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.3	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.8	85-120			%	07/20/12	07/20/12

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

(M1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0719T45
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: HW

Printed: 07/31/12 9:28:54 AM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T45.D
Acq On : 20 Jul 12 5:31
Sample : AY65044W01
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 24 12:17 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	442624	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	361088	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	211648	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
31) Dibromofluoromethane(S)	5.95	111	222267	32.08945	ppb	0.00
Spiked Amount	31.881					
				Recovery	= 100.652%	
36) 1,2-DCA-D4(S)	6.33	65	218632	33.96432	ppb	0.00
Spiked Amount	33.647					
				Recovery	= 100.943%	
56) Toluene-D8(S)	8.43	98	795517	37.26569	ppb	0.00
Spiked Amount	37.345					
				Recovery	= 99.789%	
64) 4-Bromofluorobenzene(S)	11.05	95	295853	29.30567	ppb	0.00
Spiked Amount	29.515					
				Recovery	= 99.291%	

Target Compounds

Qvalue

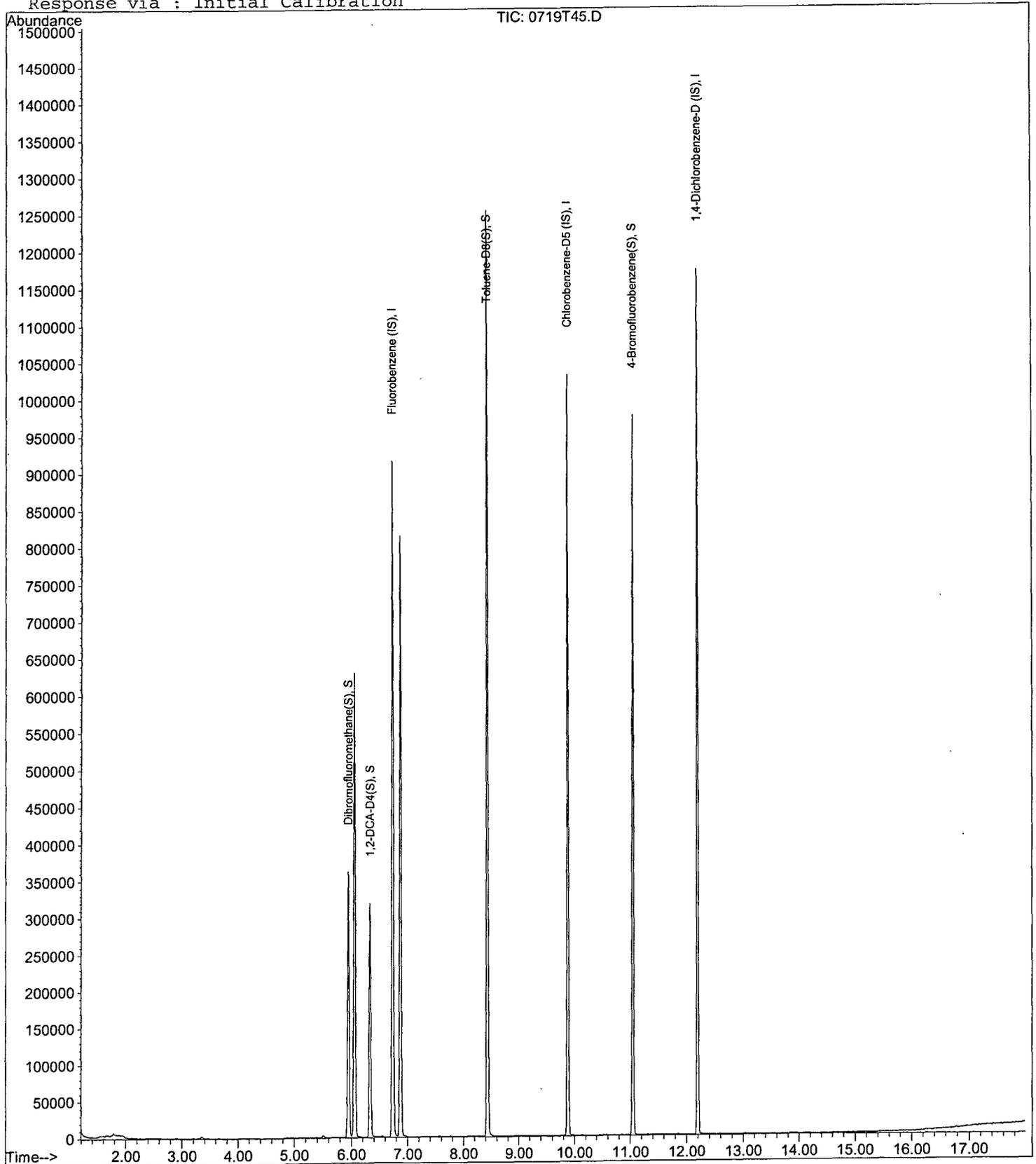
Data File : M:\THOR\DATA\T120719\0719T45.D
Acq On : 20 Jul 12 5:31
Sample : AY65044W01
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 24 12:17 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\T120724\0724T17.D Vial: 16
 Acq On : 24 Jul 12 23:30 Operator: DG,RS,HW,ARS,SV
 Sample : AY65044W02 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:52 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	776366	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	876186	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	969361	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.43	TIC	9462760m	122.57049	ppb	<i>ND</i> 100

*No gasoline pattern detected.
 ARS 7/26/12*

Quantitation Report

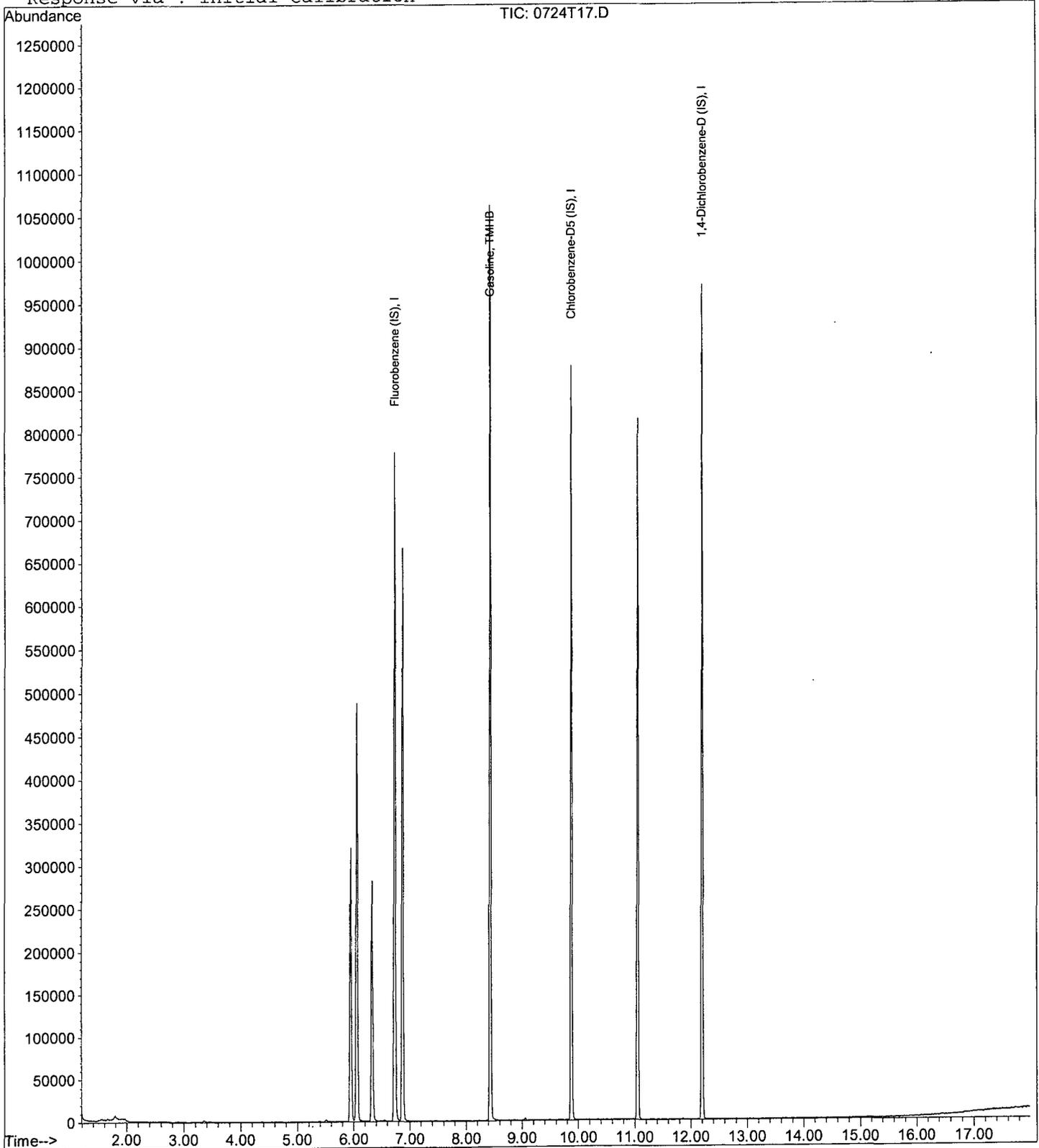
Data File : M:\THOR\DATA\T120724\0724T17.D
Acq On : 24 Jul 12 23:30
Sample : AY65044W02
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 16
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:52 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

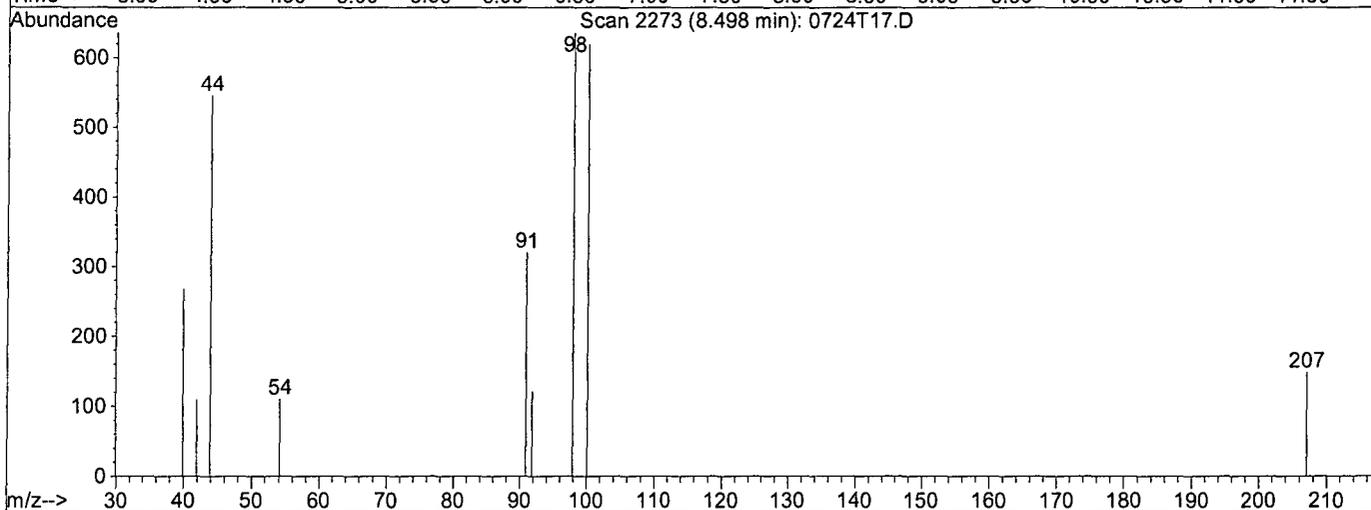
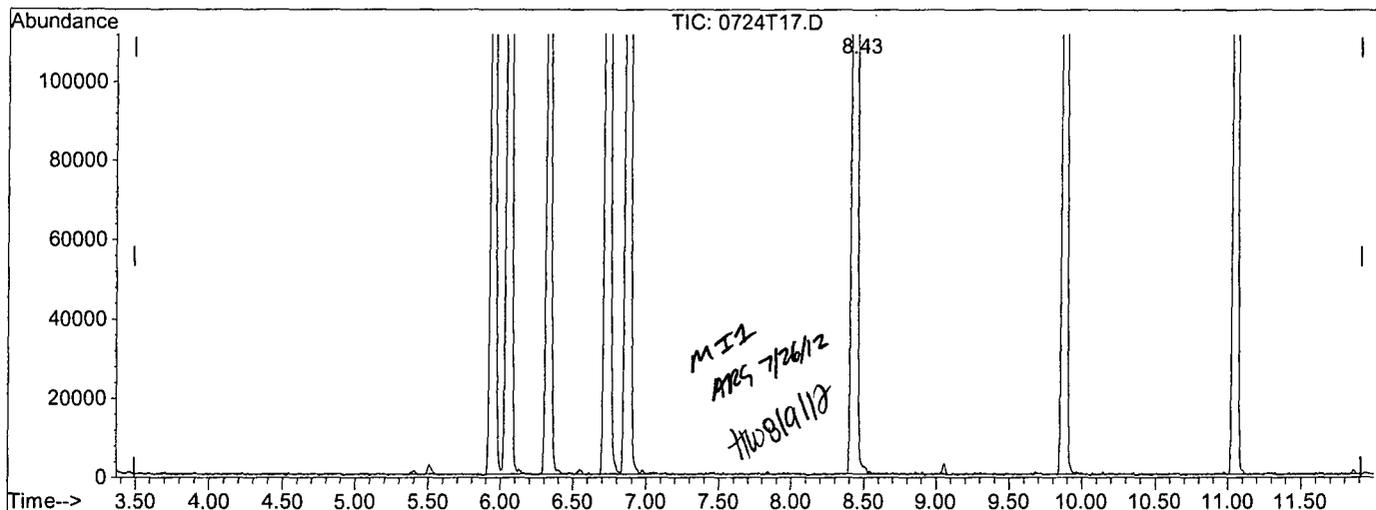


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T17.D
 Acq On : 24 Jul 12 23:30
 Sample : AY65044W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 16
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T17.D

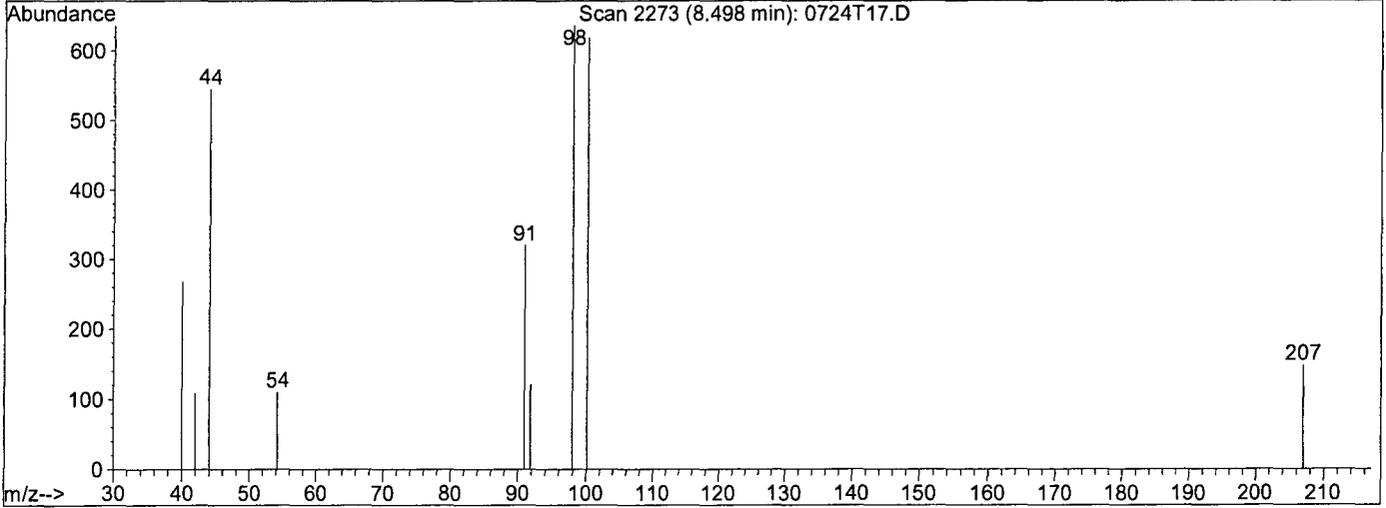
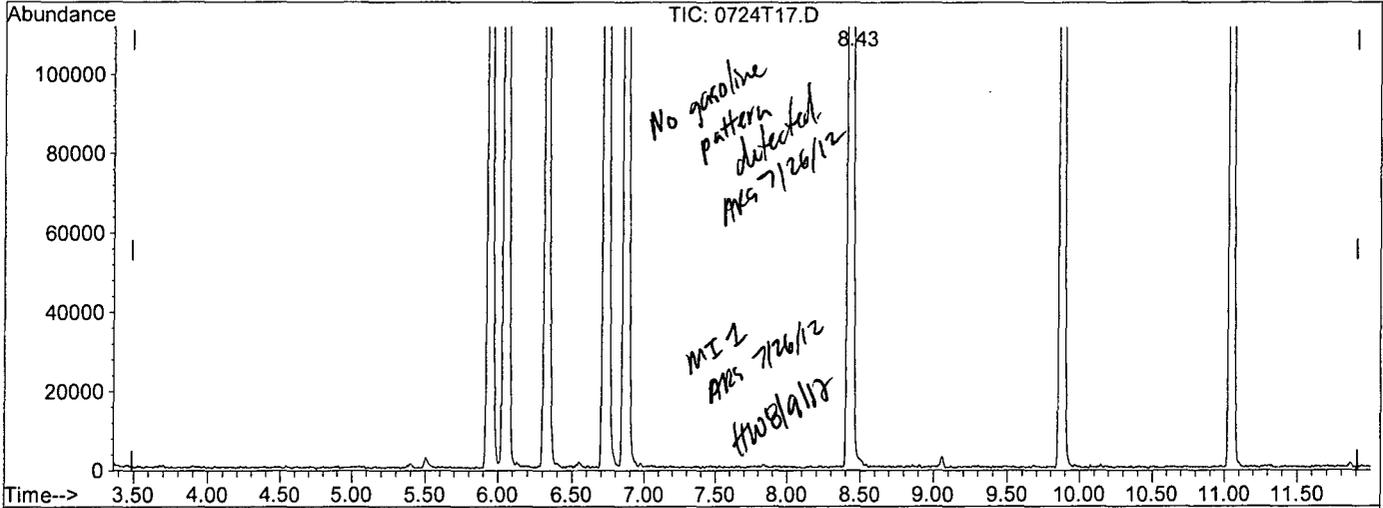
(2) Gasoline (TMHB)		
8.50min	61.1024ppb m	
response	7321628	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.31#
0.00	0.00	3.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T17.D
 Acq On : 24 Jul 12 23:30
 Sample : AY65044W02
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:52 2012

Vial: 16
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T17.D

(2) Gasoline (TMHB)		
8.43min	122.5705ppb m	
response	9462760	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.01#
0.00	0.00	2.88#
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: 68248
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	

NT

PRS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

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

SDG No: 68248
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
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)														

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: 68248
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

	R.T.	QIon	Response	Conc	Units	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-Pentanone	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

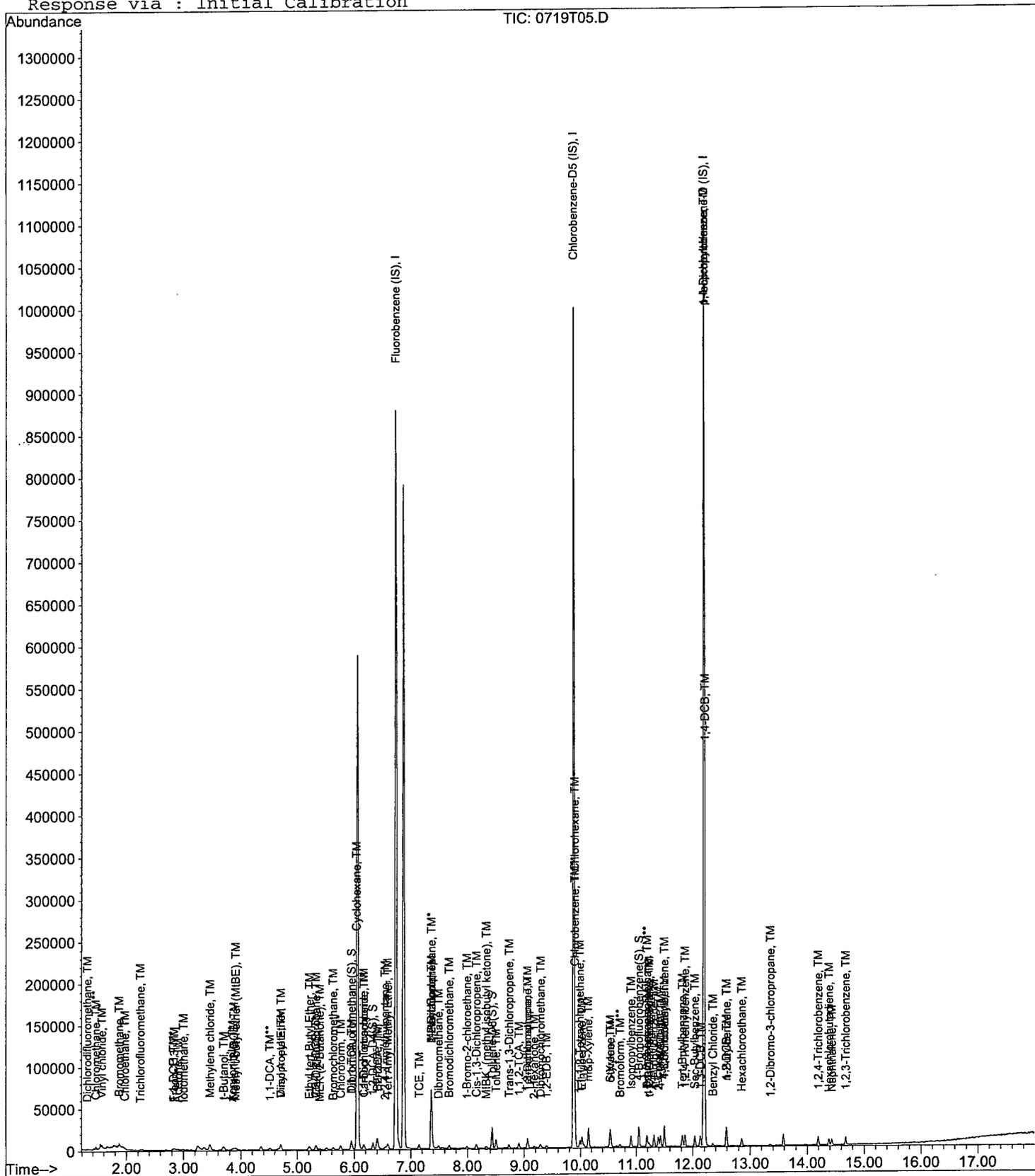
Data File : M:\THOR\DATA\T120719\0719T05.D
Acq On : 19 Jul 12 11:01
Sample : 0.3ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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



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

	R.T.	QIon	Response	Conc	Units	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

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	R.T.	QIon	Response	Conc	Units	Dev(Min)
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	R.T.	QIon	Response	Conc	Units	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 201199

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

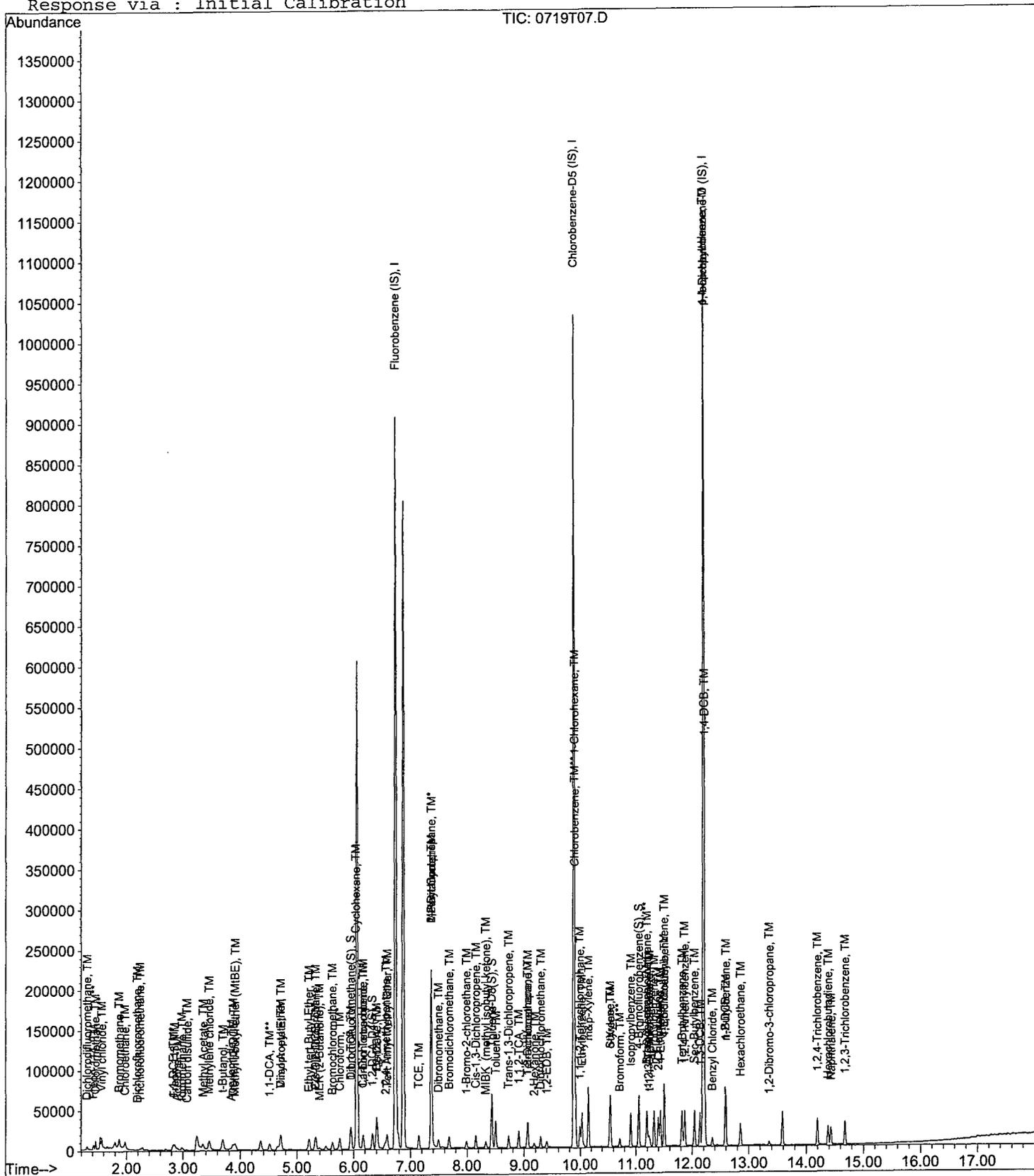
Data File : M:\THOR\DATA\T120719\0719T07.D
Acq On : 19 Jul 12 11:57
Sample : 1.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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



201

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 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	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

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

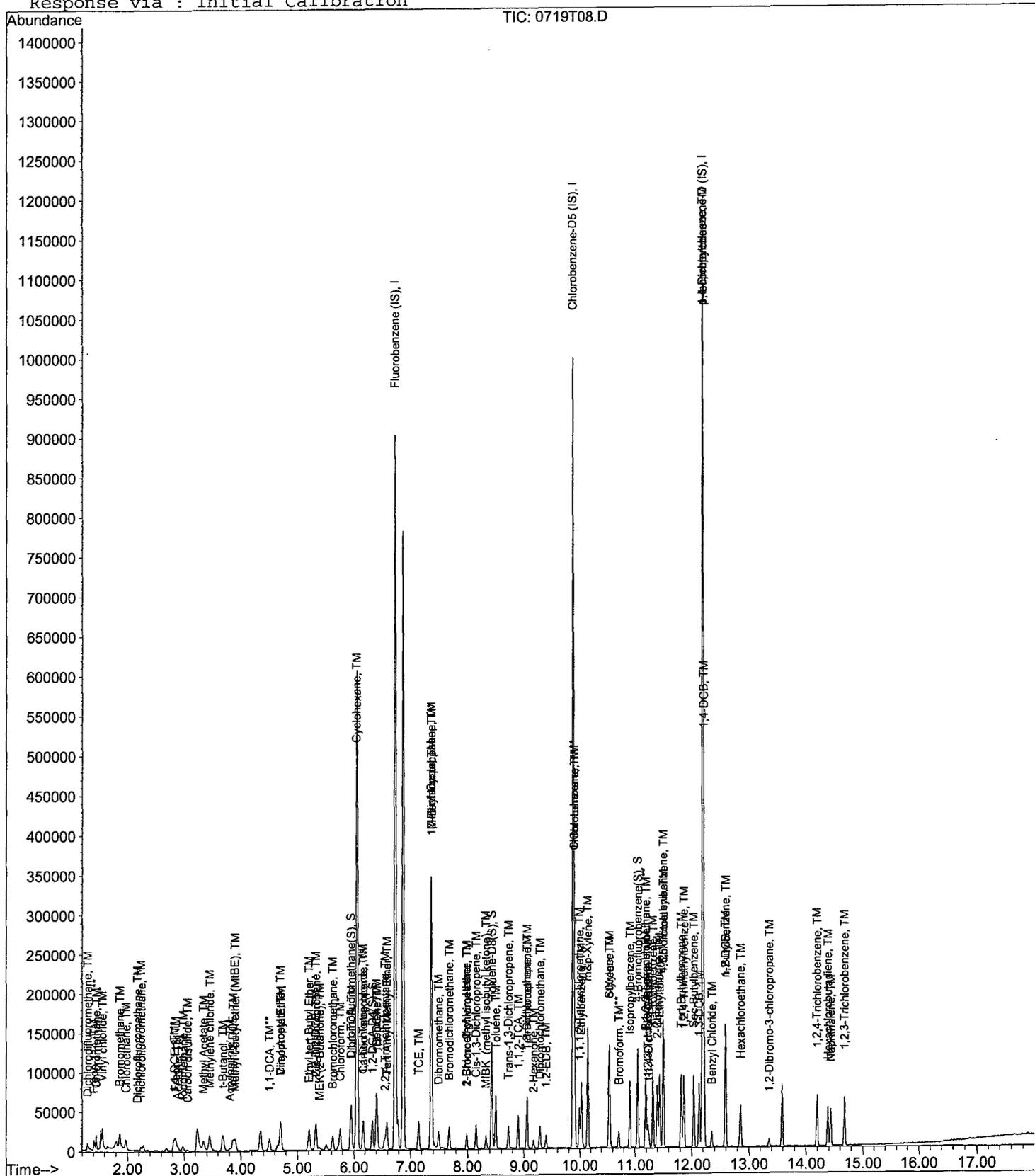
Data File : M:\THOR\DATA\T120719\0719T08.D
Acq On : 19 Jul 12 12:25
Sample : 2.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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



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

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 ket	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

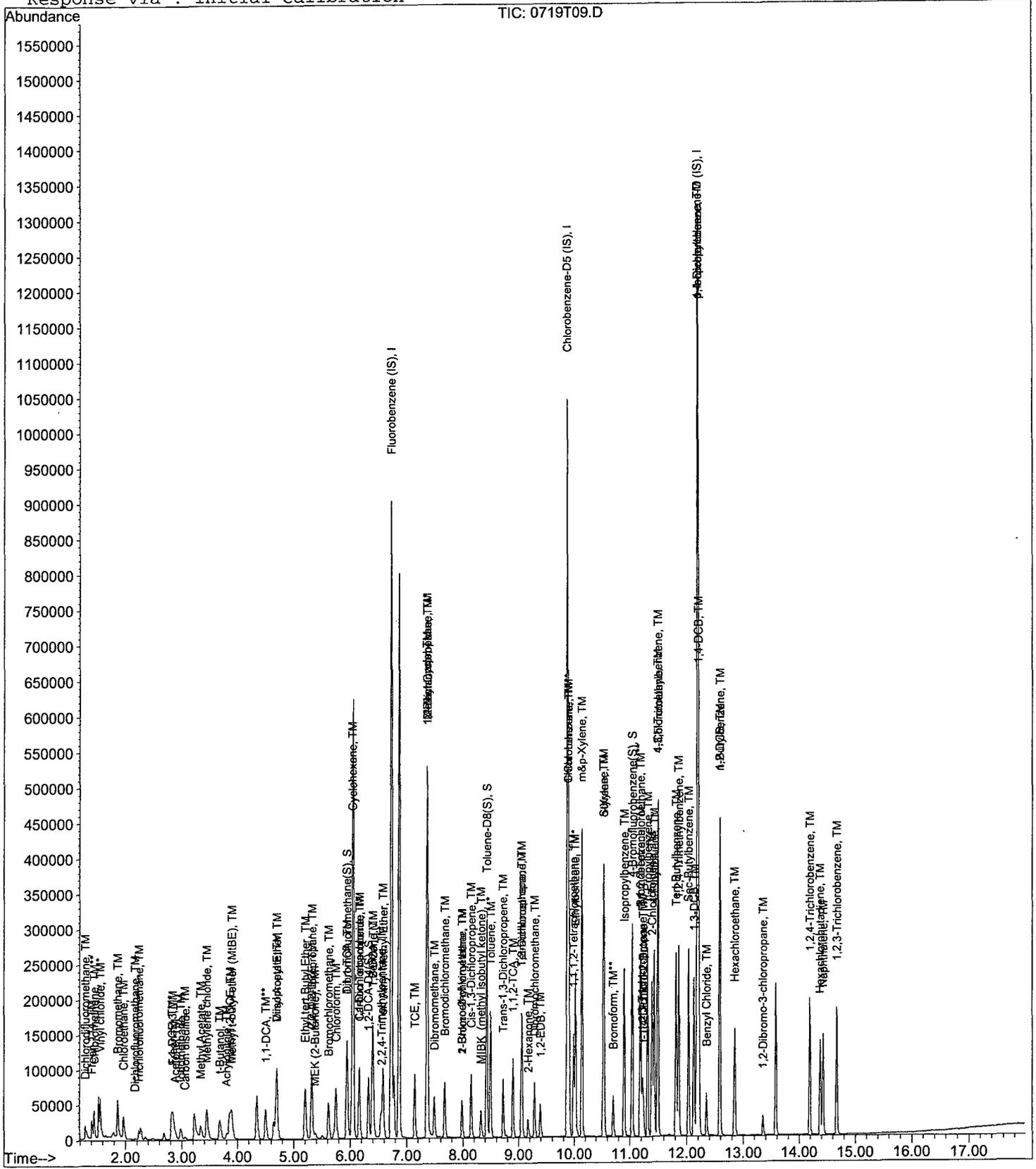
Data File : M:\THOR\DATA\T120719\0719T09.D
Acq On : 19 Jul 12 12:53
Sample : 5.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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



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/Sul 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	R.T.	QIon	Response	Conc	Units	Dev(Min)
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	R.T.	QIon	Response	Conc	Units	Qvalue
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

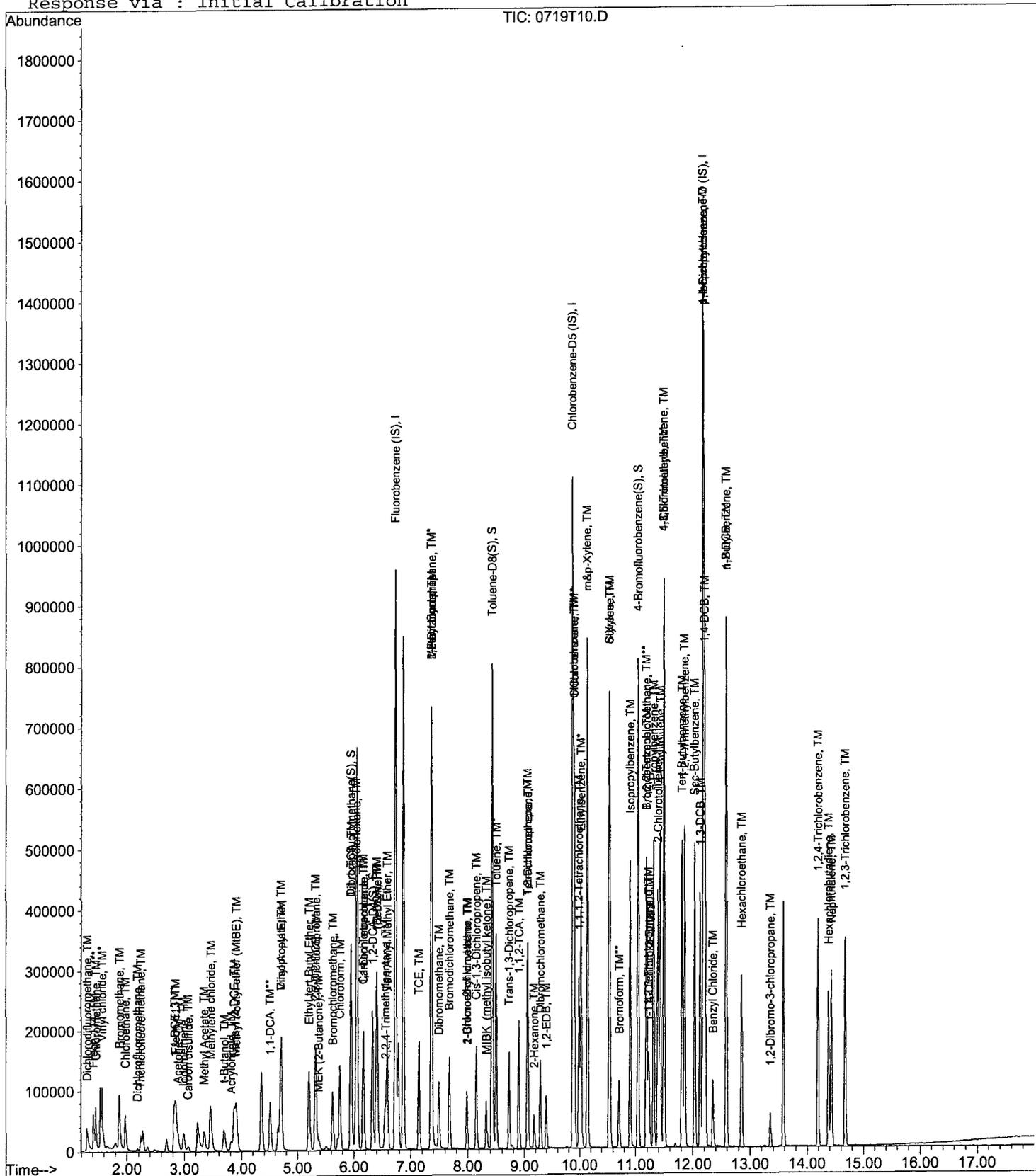
Data File : M:\THOR\DATA\T120719\0719T10.D
Acq On : 19 Jul 12 13:20
Sample : 10ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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



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

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
 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

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

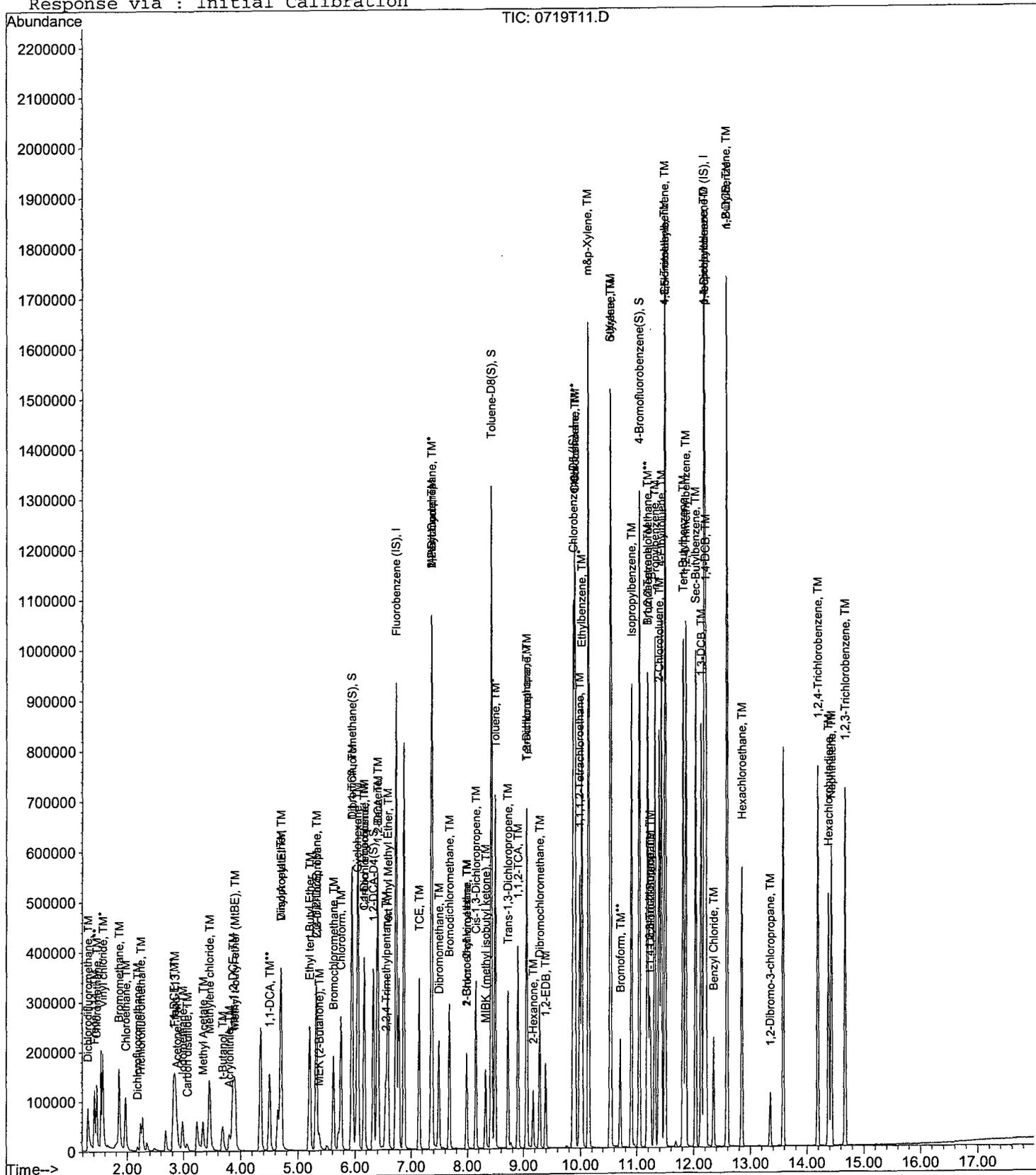
Data File : M:\THOR\DATA\T120719\0719T11.D
Acq On : 19 Jul 12 13:48
Sample : 20ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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



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	R.T.	QIon	Response	Conc	Units	Dev (Min)
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	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.30	85	101464	43.22988	ppb	97
3) Freon 114	1.42	85	136520	44.52891	ppb	88
4) Chloromethane	1.46	50	282736	41.99030	ppb	99
5) Vinyl chloride	1.57	62	357763	40.22185	ppb	100
6) Bromomethane	1.86	94	193264	33.99428	ppb	99
7) Chloroethane	1.97	64	209796	40.95183	ppb	98
8) Dichlorofluoromethane	2.18	67	24179	39.62174	ppb	96
9) Trichlorofluoromethane	2.24	101	112595	61.24281	ppb	99
11) Acetone	2.89	43	57659	38.38775	ppb	99
12) Freon-113	2.85	101	159138	43.03364	ppb	95
13) 1,1-DCE	2.82	61	204122	41.13228	ppb	99
14) t-Butanol	3.69	59	32184	220.52773	ppb	100
15) Methyl Acetate	3.34	43	158595	40.42076	ppb	96
16) Iodomethane	2.98	142	173847	38.73060	ppb	98
17) Acrylonitrile	3.81	52	60943	42.87649	ppb	91
18) Methylene chloride	3.45	84	68312	40.66407	ppb	93
19) Carbon disulfide	3.06	76	20048	42.15606	ppb	# 85
20) Methyl t-butyl ether (MtBE)	3.90	73	353652	36.91075	ppb	98
21) Trans-1,2-DCE	3.87	96	127159	37.12876	ppb	95
22) Diisopropyl Ether	4.70	59	86276	40.20793	ppb	95
23) 1,1-DCA	4.51	63	364882	40.17871	ppb	98
24) Vinyl Acetate	4.70	87	205079	39.98158	ppb	95
25) Ethyl tert Butyl Ether	5.21	59	459486	38.35814	ppb	98
26) MEK (2-Butanone)	5.38	43	87533	38.72047	ppb	94
27) Cis-1,2-DCE	5.33	96	229166	39.39224	ppb	97
28) 2,2-Dichloropropane	5.32	77	141557	84.49635	ppb	96
29) Chloroform	5.76	83	434710	38.54666	ppb	98
30) Bromochloromethane	5.62	128	110740	39.09610	ppb	91
32) 1,1,1-TCA	5.96	97	264324	38.95361	ppb	96
33) Cyclohexane	6.04	41	77803	42.24920	ppb	96
34) 1,1-Dichloropropene	6.17	75	198474	40.27560	ppb	100
35) 2,2,4-Trimethylpentane	6.55	57	293410	41.42752	ppb	94
37) Carbon Tetrachloride	6.17	117	261231	41.07535	ppb	96
38) Tert Amyl Methyl Ether	6.59	73	485700	38.09434	ppb	97
39) 1,2-DCA	6.42	62	284928	38.52680	ppb	99
40) Benzene	6.40	78	767359	37.98954	ppb	99
41) TCE	7.15	95	213589	38.90274	ppb	97
42) 2-Pentanone	7.36	43	764190	176.67466	ppb	98
43) 1,2-Dichloropropane	7.37	63	253205	38.41842	ppb	97
44) Bromodichloromethane	7.68	83	359604	39.44102	ppb	99
45) Methyl Cyclohexane	7.36	83	159998	40.81549	ppb	97

(#) = 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

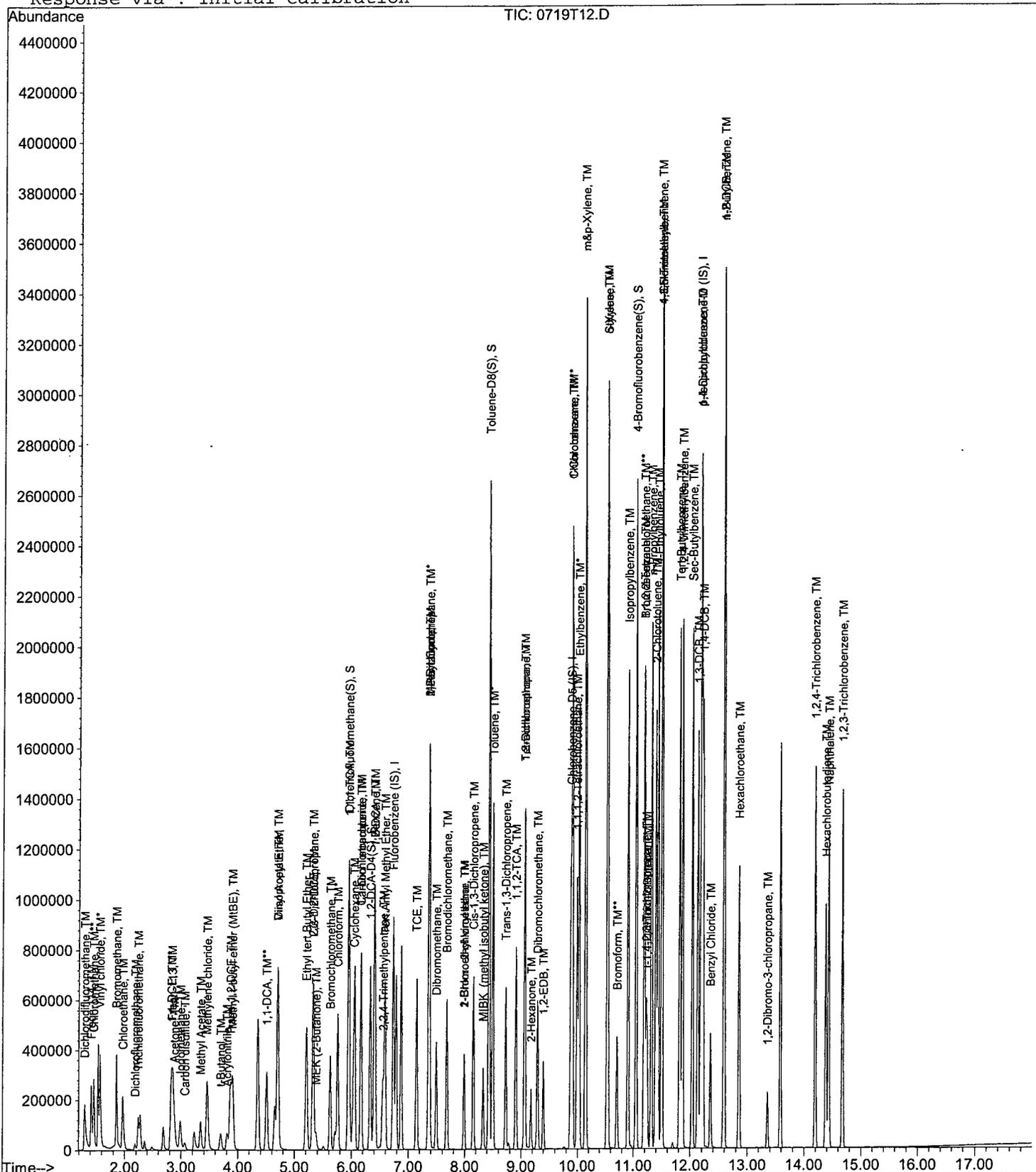
Data File : M:\THOR\DATA\T120719\0719T12.D
Acq On : 19 Jul 12 14:16
Sample : 40ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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

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
 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

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

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	99.08959	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

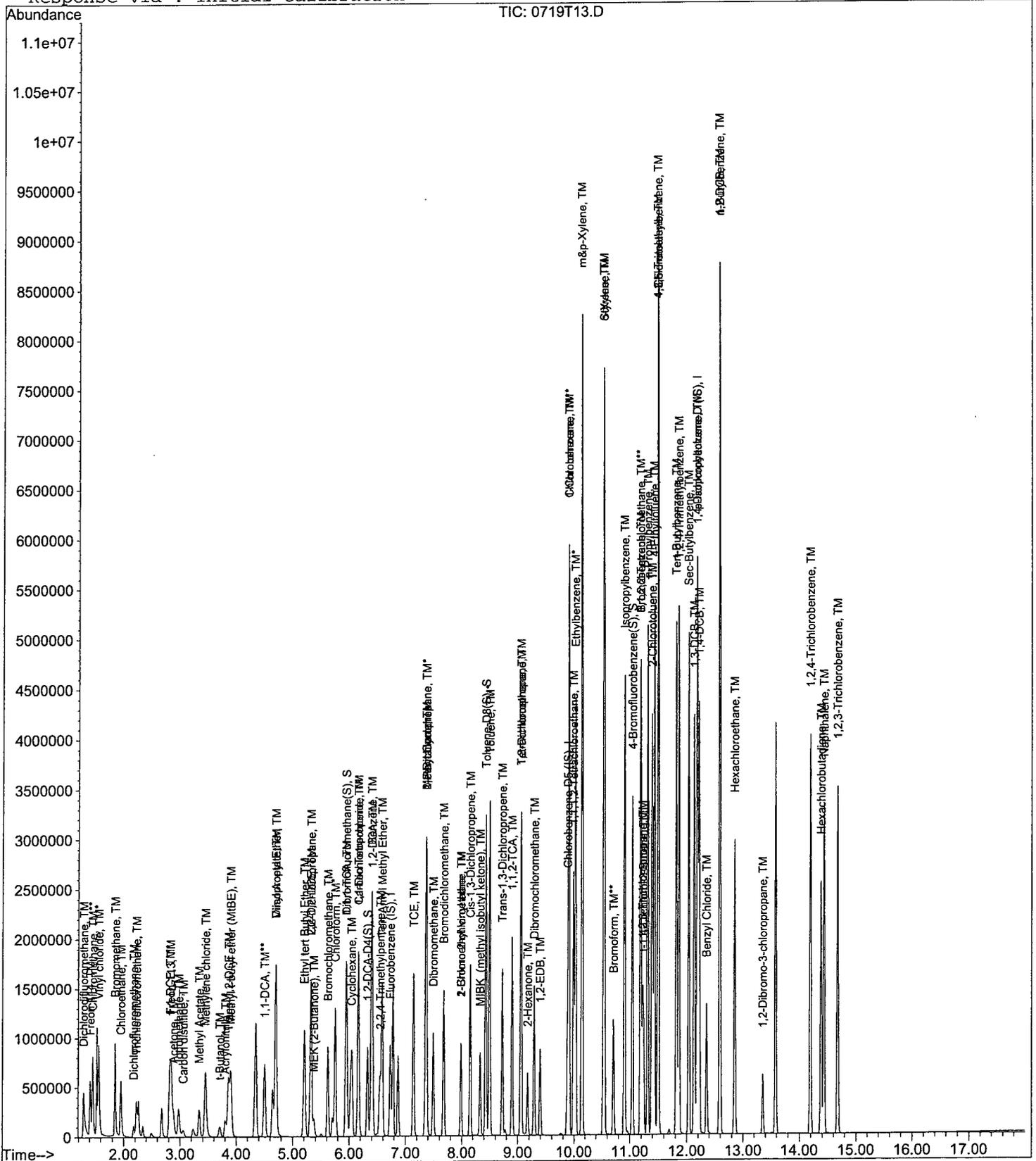
Data File : M:\THOR\DATA\T120719\0719T13.D
 Acq On : 19 Jul 12 14:44
 Sample : 100ug/L Vol Std 07-19-12
 Misc : 10ml w/5ul of IS&S: 06-7-12

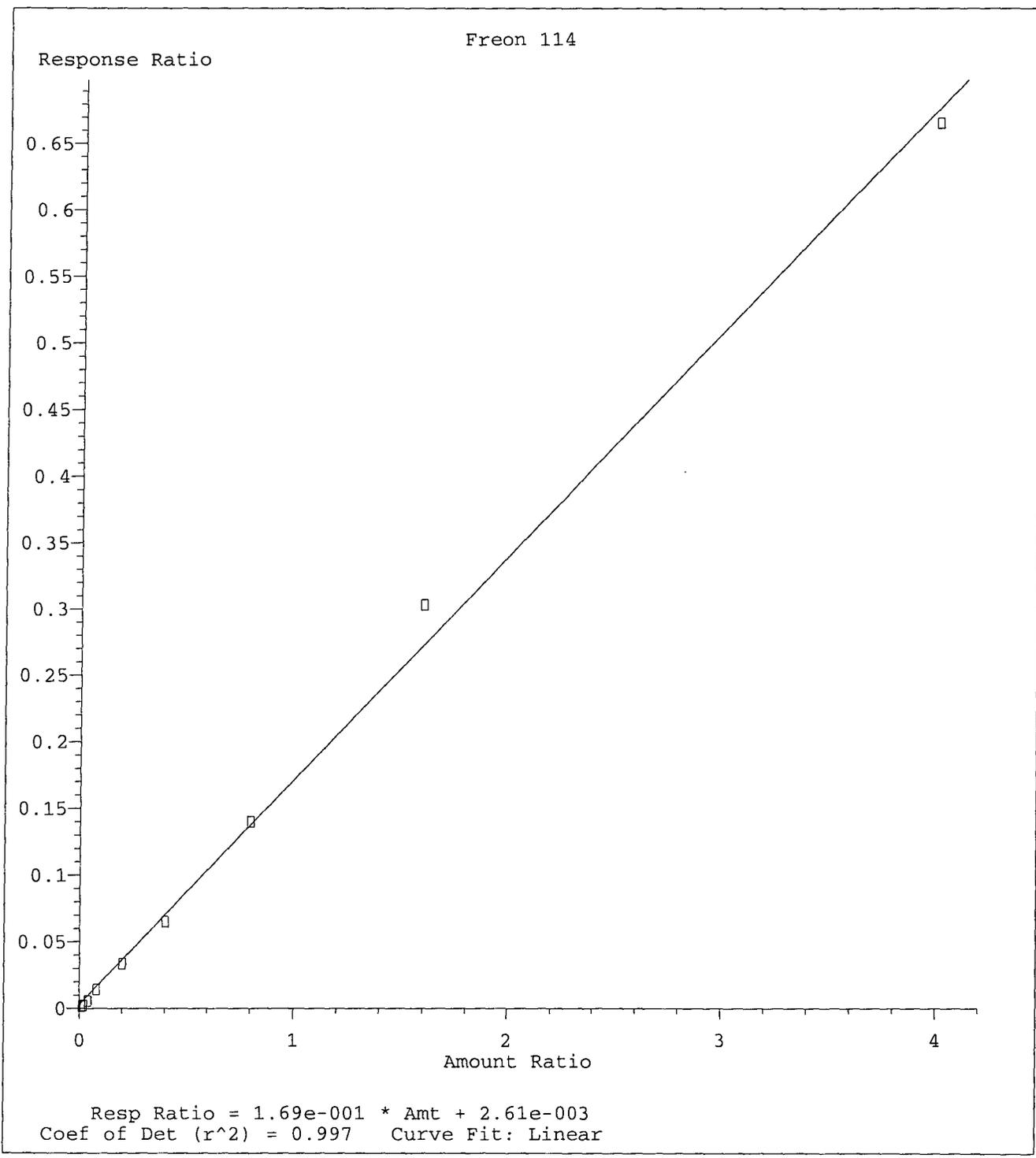
Vial: 13
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012

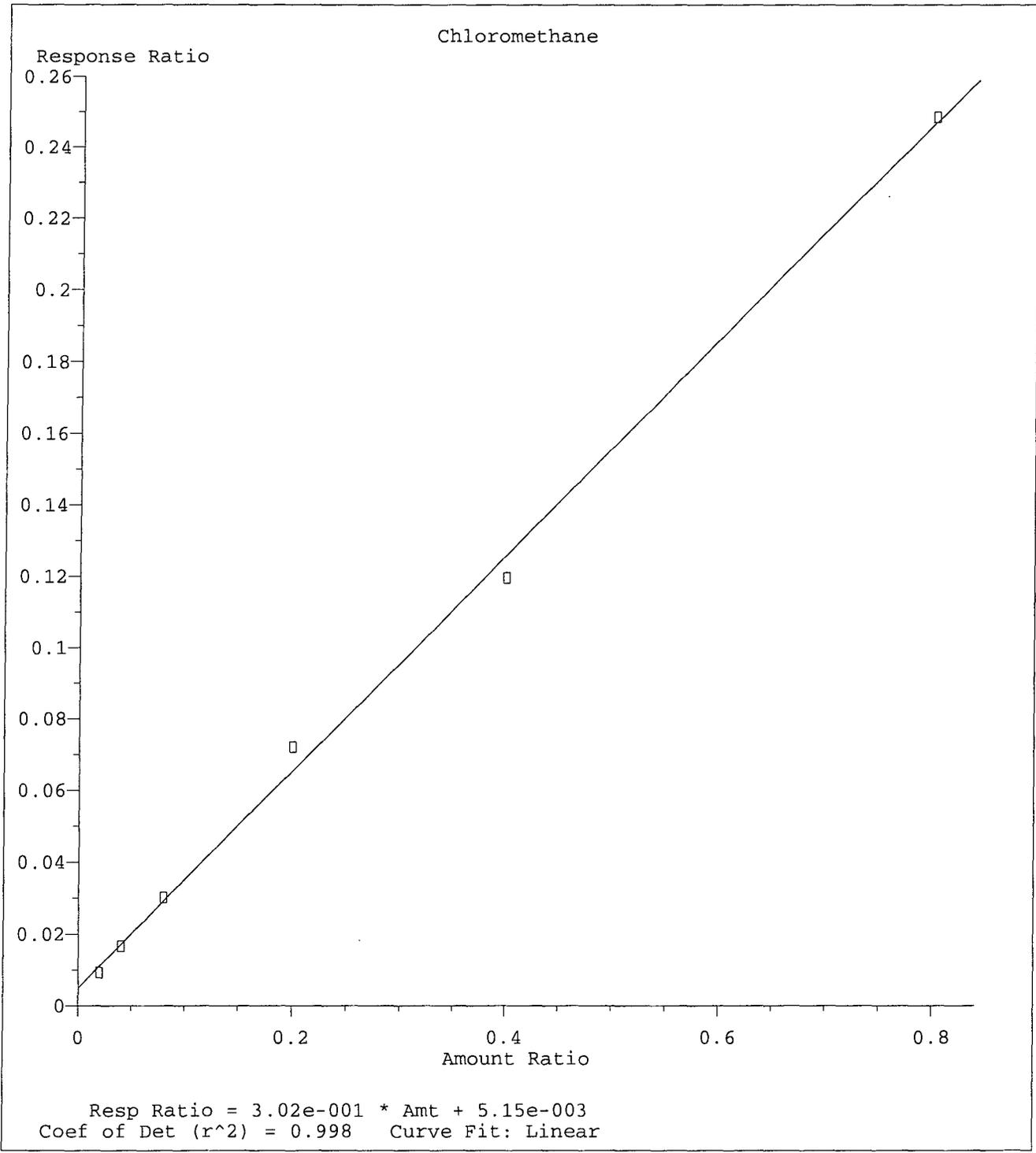
Quant Results File: TALLW.RES

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

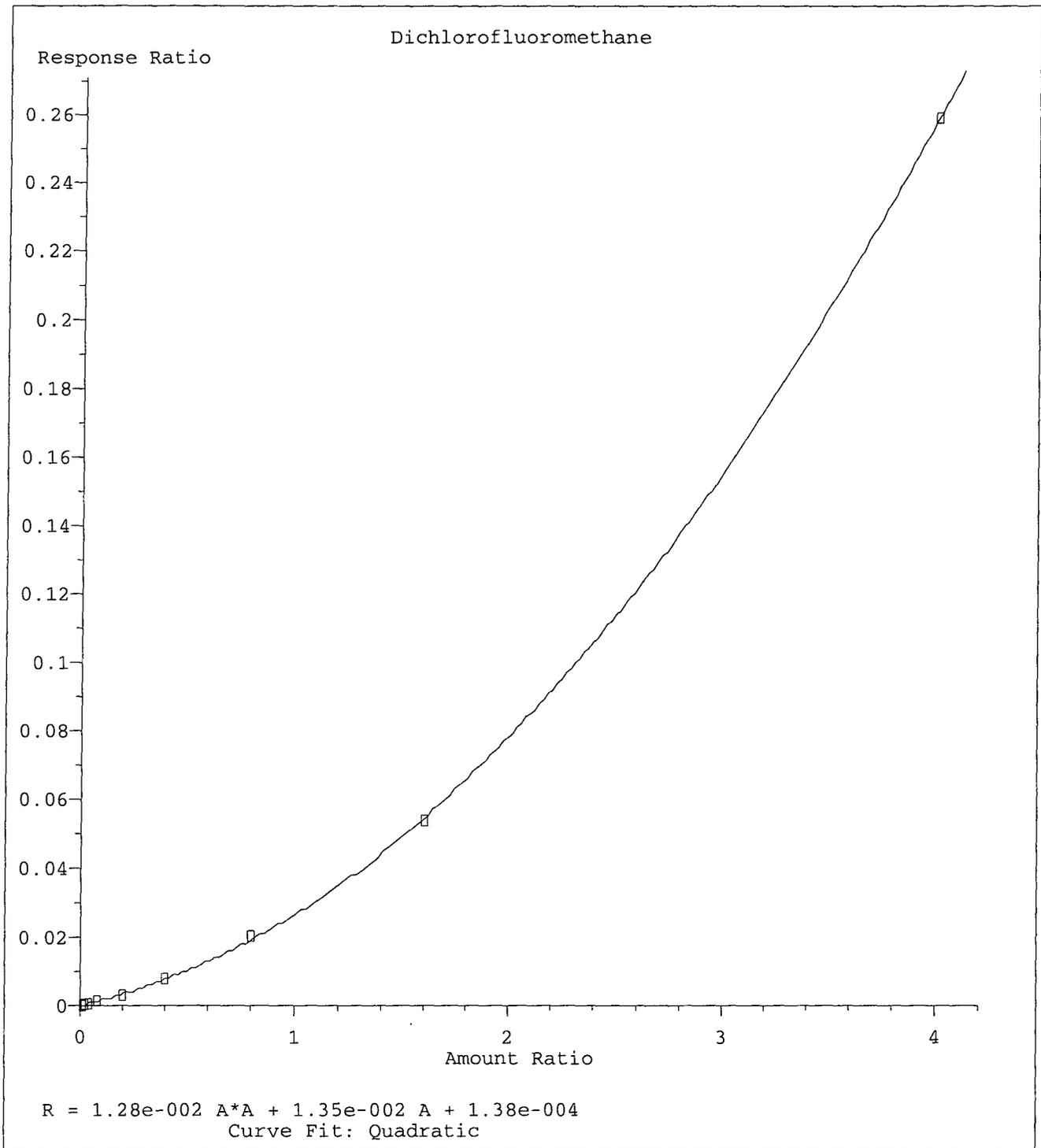




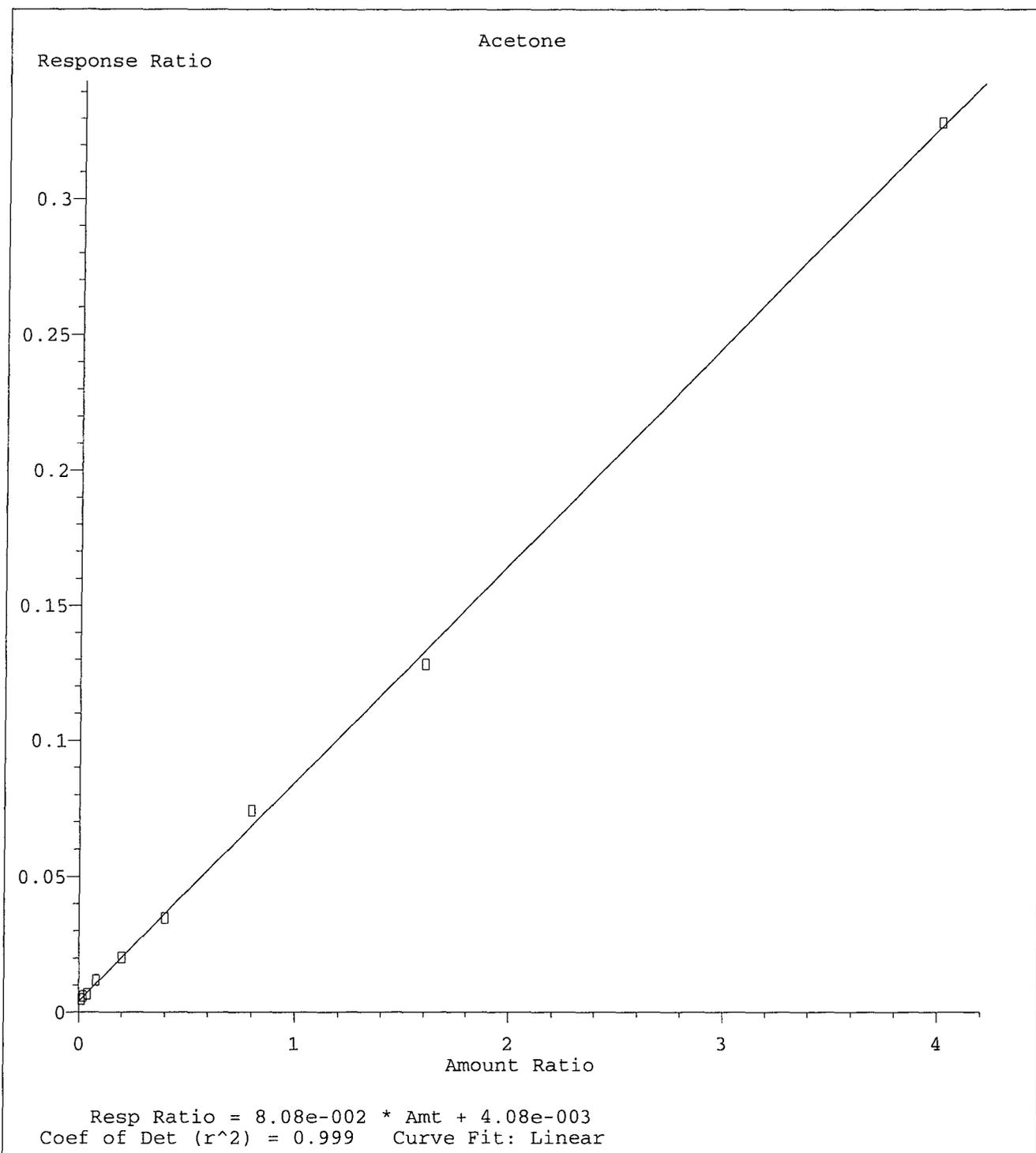
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



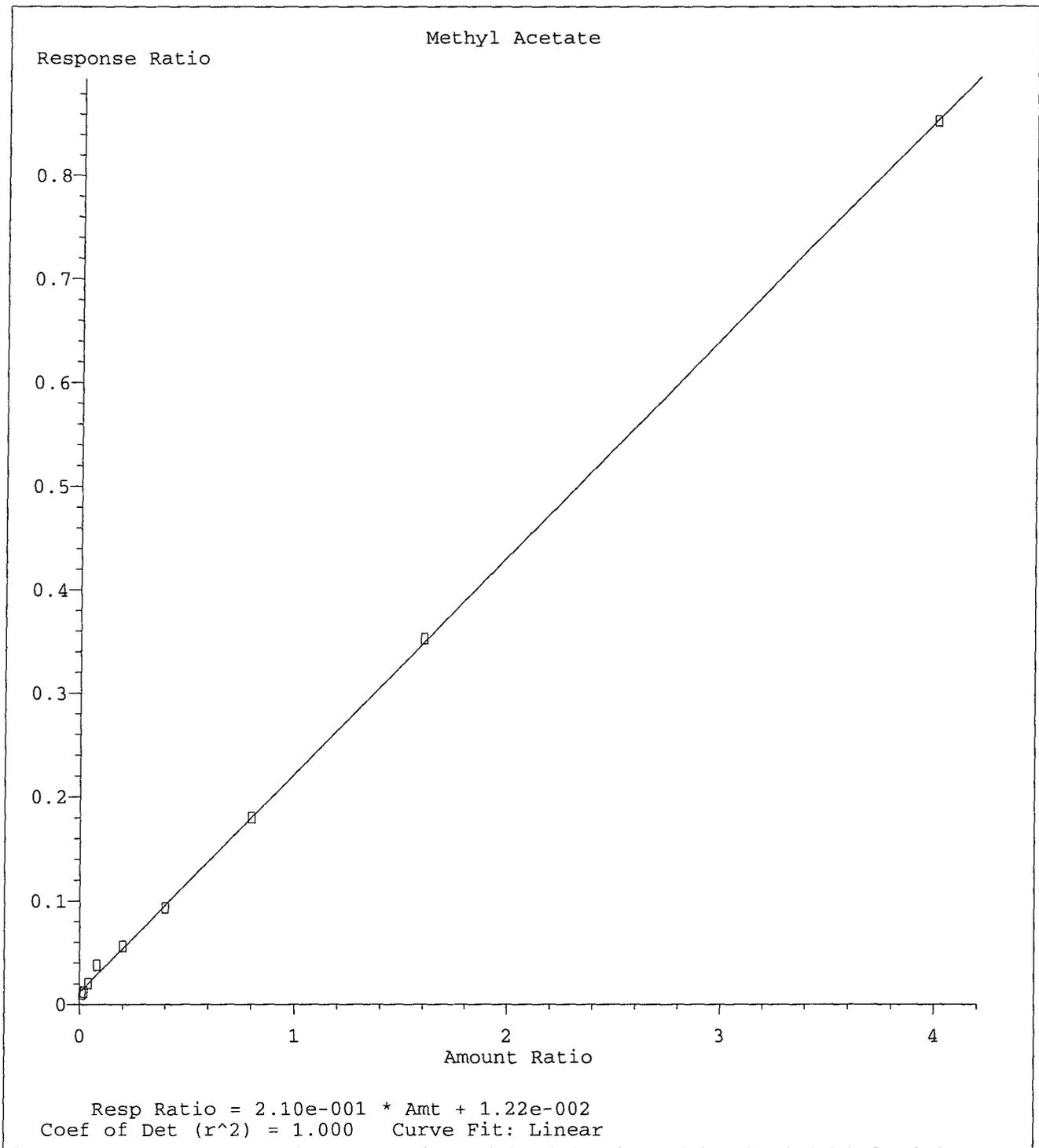
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



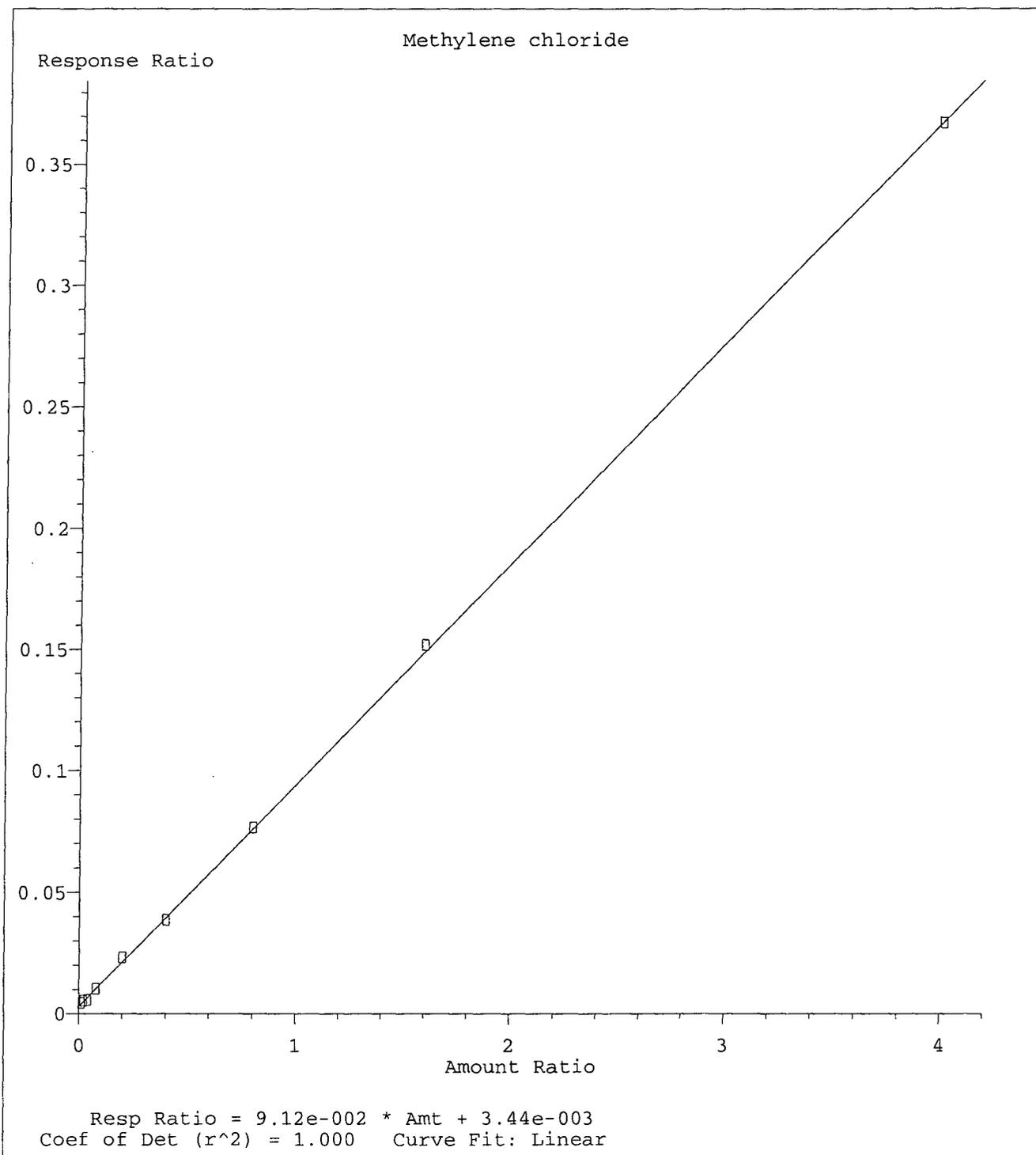
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



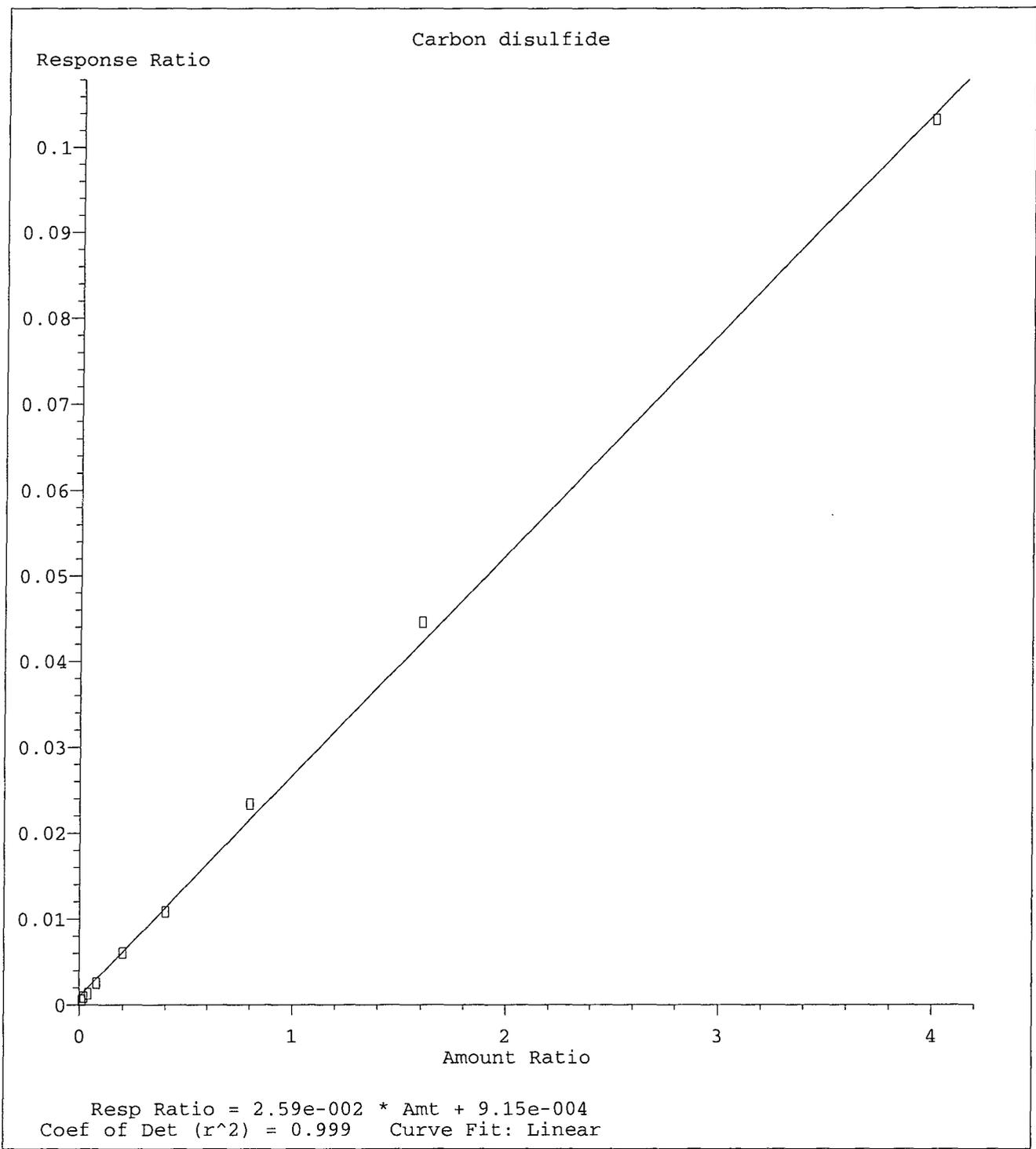
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



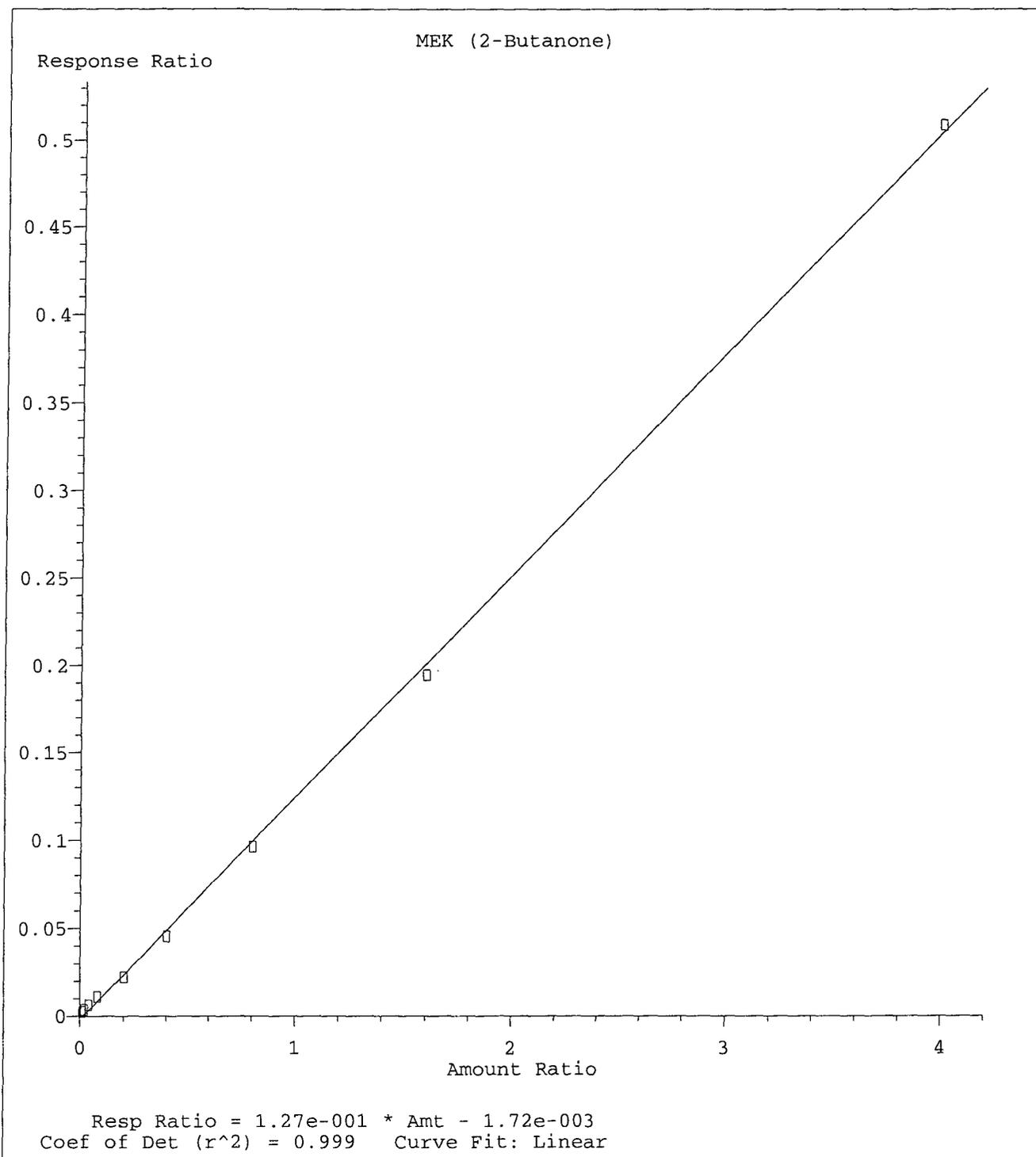
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



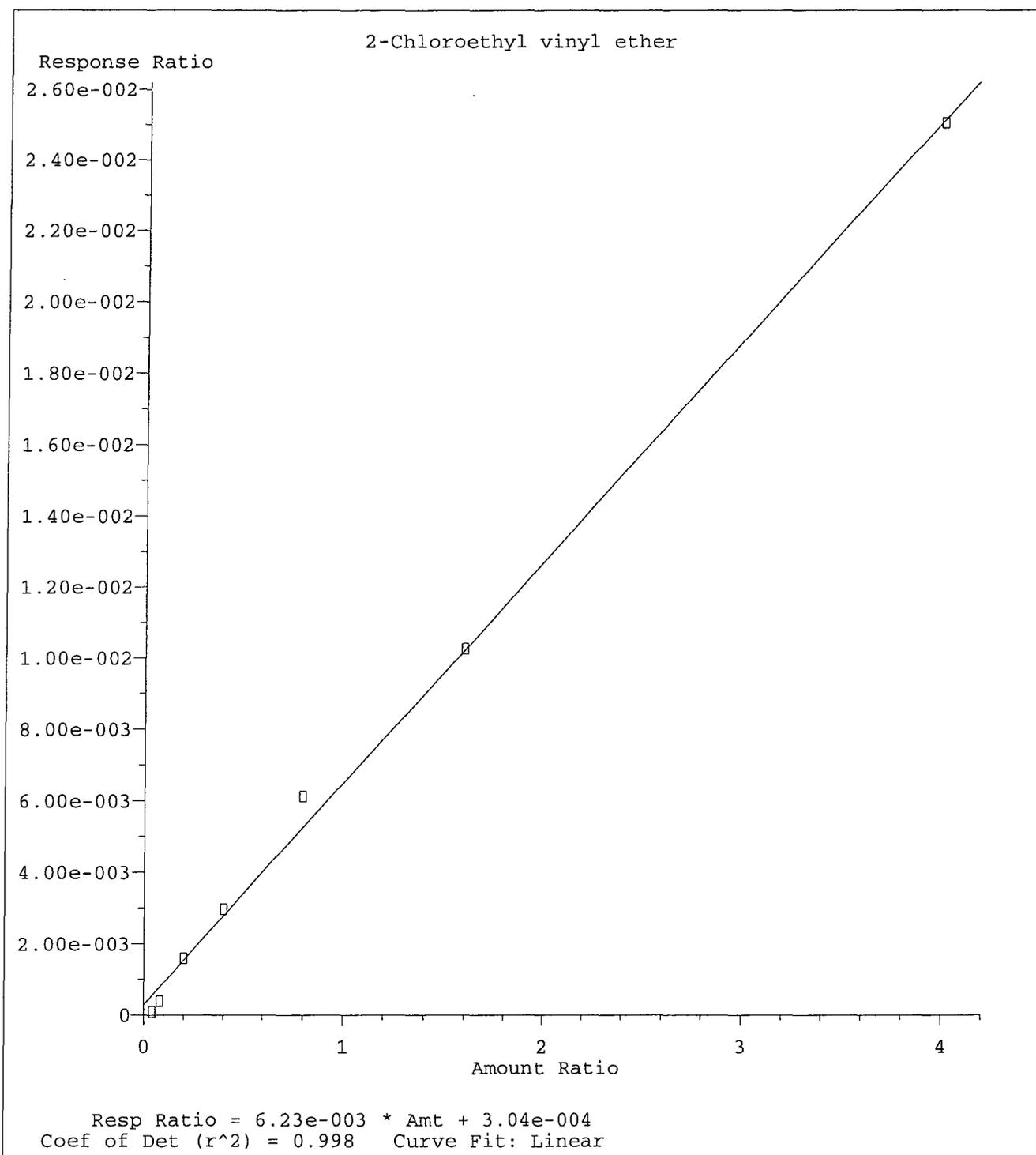
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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.
Case No: _____
Matrix: Water

SDG No: 68248
Date Analyzed: 07/19/12
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	10
4	TM**L	Chloromethane	0.3709	0.3090	17	TM**L	2.0
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	9.1
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	18
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	1.8
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	5.5
19	TML	Carbon disulfide	0.0329	0.0300	8.9	TML	7.0
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	2.9
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

AR57/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68248
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 11
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

MRS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.

SDG No: 68248

Case No: _____

Date Analyzed: 07/19/12

Matrix: Water

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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120						

*NT

Average

5.2

KRS 7/27/12

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

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	R.T.	QIon	Response	Conc Units	Dev(Min)
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	R.T.	QIon	Response	Conc Units	Dev(Min)
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

Algorithm check: $\frac{(91788)(25)}{(459584)(0.4941)} \times 10 = 10.10522903 \checkmark$
 Qvalue ARS 7/27/12

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

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</u>	ppb	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</u>	ppb	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

1,3-dichloropropene, total!
 18.71192 ppb

MRS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68248
Date Analyzed: 07/19/12
Instrument: Thor
Initial Cal. Date: 07/19/12
Data File: 0719T30.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Fluorobenzene (IS)	ISTD			I
2	TM	Dichlorodifluoromethane	0.1266	0.1166	7.9	TM
3	TML	Freon 114	0.1578	0.1597	1.2	TML 9.3
4	TM**L	Chloromethane	0.3709	0.2977	20	TM**L 5.7
5	TM*	Vinyl chloride	0.4941	0.4702	4.8	TM*
6	TM	Bromomethane	0.3158	0.2902	8.1	TM
7	TM	Chloroethane	0.2846	0.2732	4.0	TM
8	TMQ	Dichlorofluoromethane	0.0241	0.0166	31	TMQ 11
9	TM	Trichlorofluoromethane	0.1021	0.0978	4.2	TM
10	TMQ	Acrolein	0.0000	0.0068	0.00	TMQ
11	TML	Acetone	0.1608	0.0967	40	TML 7.0
12	TM	Freon-113	0.2054	0.1875	8.7	TM
13	TM*	1,1-DCE	0.2757	0.2609	5.3	TM*
14	TM	t-Butanol	0.0081	0.0087	7.1	TM
15	TML	Methyl Acetate	0.4032	0.2359	41	TML 2.4
16	TM	Iodomethane	0.2493	0.2420	2.9	TM
17	TM	Acrylonitrile	0.0790	0.0833	5.5	TM
18	TML	Methylene chloride	0.1556	0.0889	43	TML 12
19	TML	Carbon disulfide	0.0329	0.0275	16	TML 2.7
20	TM	Methyl t-butyl ether (MtBE)	0.5322	0.5055	5.0	TM
21	TM	Trans-1,2-DCE	0.1902	0.1709	10	TM
22	TM	Diisopropyl Ether	0.1192	0.1231	3.2	TM
23	TM**	1,1-DCA	0.5045	0.5008	0.73	TM**
24	TM	Vinyl Acetate	0.2849	0.2716	4.7	TM
25	TM	Ethyl tert Butyl Ether	0.6654	0.6458	2.9	TM
26	TML	MEK (2-Butanone)	0.1418	0.1240	13	TML 1.3
27	TM	Cis-1,2-DCE	0.3232	0.3160	2.2	TM
28	TM	2,2-Dichloropropane	0.2032	0.1621	20	TM
29	TM*	Chloroform	0.6265	0.6125	2.2	TM*
30	TM	Bromochloromethane	0.1573	0.1554	1.2	TM
31	S	Dibromofluoromethane(S)	0.3912	0.3908	0.10	S
32	TM	1,1,1-TCA	0.3769	0.3636	3.6	TM
33	TM	Cyclohexane	0.1023	0.0982	4.0	TM
34	TM	1,1-Dichloropropene	0.2737	0.2587	5.5	TM
35	TM	2,2,4-Trimethylpentane	0.3934	0.3120	21	TM
36	S	1,2-DCA-D4(S)	0.3636	0.3700	1.8	S
37	TM	Carbon Tetrachloride	0.3533	0.3368	4.7	TM
38	TM	Tert Amyl Methyl Ether	0.7083	0.6804	3.9	TM
39	TM	1,2-DCA	0.4108	0.3911	4.8	TM
40	TM	Benzene	1.122	1.067	4.9	TM

Average

9.5

ARS 7/27/12

*NT

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68248
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T30.D

		Compound	MEAN	CCRF	%D	%Drift
41	TM	TCE	0.3050	0.3112	2.1	TM
42	TM	2-Pentanone	0.2403	0.2399	0.15	TM
43	TM*	1,2-Dichloropropane	0.3661	0.3596	1.8	TM*
44	TM	Bromodichloromethane	0.5065	0.4910	3.1	TM
45	TM	Methyl Cyclohexane	0.2178	0.1937	11	TM
46	TM	Dibromomethane	0.1991	0.1997	0.25	TM
47	TML	2-Chloroethyl vinyl ether	0.0061	0.0058	5.7	TML 19
48	TM	MIBK (methyl isobutyl ketone)	0.1728	0.1756	1.6	TM
49	TM	1-Bromo-2-chloroethane	0.2547	0.2460	3.4	TM
50	TM	Cis-1,3-Dichloropropene	0.5012	0.4681	6.6	TM
51	TM*	Toluene	1.324	1.294	2.3	TM*
52	TM	Trans-1,3-Dichloropropene	0.4419	0.3995	9.6	TM
53	TM	1,1,2-TCA	0.2948	0.2755	6.5	TM
54	TM	2-Hexanone	0.1982	0.2041	3.0	TM
55	I	Chlorobenzene-D5 (IS)	ISTD			I
56	S	Toluene-D8(S)	1.478	1.440	2.6	S
57	TM	1,2-EDB	0.3748	0.3528	5.9	TM
58	TM	Tetrachloroethene	0.4238	0.3958	6.6	TM
59	TM	1-Chlorohexane	0.5045	0.4696	6.9	TM
60	TM	1,1,1,2-Tetrachloroethane	0.4952	0.4733	4.4	TM
61	TM	m&p-Xylene	0.7724	0.7473	3.3	TM
62	TM	o-Xylene	0.7990	0.7871	1.5	TM
63	TM	Styrene	1.358	1.344	1.0	TM
64	S	4-Bromofluorobenzene(S)	0.6990	0.6978	0.17	S
65	TM	1,3-Dichloropropane	0.6572	0.6315	3.9	TM
66	TM	Dibromochloromethane	0.4948	0.4681	5.4	TM
67	TM**	Chlorobenzene	1.292	1.221	5.5	TM**
68	TM*	Ethylbenzene	2.032	1.929	5.1	TM*
69	TM**	Bromoform	0.3388	0.3250	4.1	TM**
70	I	1,4-Dichlorobenzene-D (IS)	ISTD			I
71	TM	Isopropylbenzene	3.269	3.171	3.0	TM
72	TM**	1,1,2,2-Tetrachloroethane	0.9070	0.8329	8.2	TM**
73	TM	1,2,3-Trichloropropane	0.2574	0.2445	5.0	TM
74	TM	t-1,4-Dichloro-2-Butene	0.1723	0.1719	0.22	TM
75	TM	Bromobenzene	1.078	1.022	5.2	TM
76	TM	n-Propylbenzene	4.209	4.123	2.0	TM
77	TM	4-Ethyltoluene	3.614	3.563	1.4	TM
78	TM	2-Chlorotoluene	3.001	2.895	3.5	TM
79	TM	1,3,5-Trimethylbenzene	2.996	2.997	0.01	TM
80	TM	4-Chlorotoluene	2.971	2.935	1.2	TM

Average

3.8

MS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68248
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T30.D

		Compound	MEAN	CCRF	%D	%Drift
81	TM	Tert-Butylbenzene	2.745	2.626	4.3	TM
82	TM	1,2,4-Trimethylbenzene	3.100	3.057	1.4	TM
83	TM	Sec-Butylbenzene	3.664	3.593	2.0	TM
84	TM	p-Isopropyltoluene	3.096	3.026	2.3	TM
85	TM	Benzyl Chloride	0.9252	0.5995	35	TM
86	TM	1,3-DCB	2.038	1.945	4.5	TM
87	TM	1,4-DCB	2.134	1.972	7.6	TM
88	TM	n-Butylbenzene	2.775	2.582	7.0	TM
89	TM	1,2-DCB	1.975	1.872	5.2	TM
90	TM	Hexachloroethane	0.5673	0.5003	12	TM
91	TM	1,2-Dibromo-3-chloropropane	0.1699	0.1792	5.4	TM
92	TM	1,2,4-Trichlorobenzene	0.9054	0.8728	3.6	TM
93	TM	Hexachlorobutadiene	0.3782	0.3394	10	TM
94	TM	Naphthalene	2.528	2.547	0.74	TM
95	TM	1,2,3-Trichlorobenzene	1.290	1.249	3.1	TM
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Average

6.9

ARS 7/27/12

Data File : M:\THOR\DATA\T120719\0719T30.D
 Acq On : 19 Jul 12 22:35
 Sample : 10ug/L Vol Std 07-19-12
 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 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	452736	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	376000	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	220224	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
31) Dibromofluoromethane(S)	5.95	111	225646	31.84967	ppb	0.00
Spiked Amount	31.881		Recovery	=	99.902%	
36) 1,2-DCA-D4(S)	6.33	65	225427	34.23774	ppb	0.00
Spiked Amount	33.647		Recovery	=	101.757%	
56) Toluene-D8(S)	8.43	98	808613	36.37690	ppb	0.00
Spiked Amount	37.345		Recovery	=	97.408%	
64) 4-Bromofluorobenzene(S)	11.05	95	309746	29.46501	ppb	0.00
Spiked Amount	29.515		Recovery	=	99.830%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.30	85	21112	9.20611	ppb	98
3) Freon 114	1.41	85	28914	9.07008	ppb	93
4) Chloromethane	1.45	50	53915	9.42929	ppb	99
5) Vinyl chloride	1.56	62	85149	9.51612	ppb	100
6) Bromomethane	1.87	94	52548	9.18808	ppb	97
7) Chloroethane	1.97	64	49476	9.60029	ppb	90
8) Dichlorofluoromethane	2.18	67	2999	8.94765	ppb	# 79
9) Trichlorofluoromethane	2.24	101	17719	9.58052	ppb	99
11) Acetone	2.89	43	17505	10.70365	ppb	99
12) Freon-113	2.85	101	33955	9.12750	ppb	95
13) 1,1-DCE	2.82	61	47256	9.46594	ppb	97
14) t-Butanol	3.69	59	19648	133.83058	ppb	98
15) Methyl Acetate	3.34	43	42726	9.76130	ppb	99
16) Iodomethane	2.98	142	43831	9.70694	ppb	98
17) Acrylonitrile	3.81	52	15078	10.54515	ppb	82
18) Methylene chloride	3.45	84	16095	8.80124	ppb	99
19) Carbon disulfide	3.06	76	4973	9.72911	ppb	# 82
20) Methyl t-butyl ether (MtBE)	3.90	73	91548	9.49816	ppb	98
21) Trans-1,2-DCE	3.87	96	30943	8.98131	ppb	90
22) Diisopropyl Ether	4.71	59	22285	10.32400	ppb	99
23) 1,1-DCA	4.51	63	90691	9.92708	ppb	98
24) Vinyl Acetate	4.71	87	49188	9.53261	ppb	93
25) Ethyl tert Butyl Ether	5.21	59	116957	9.70566	ppb	98
26) MEK (2-Butanone)	5.38	43	22460	10.12955	ppb	91
27) Cis-1,2-DCE	5.33	96	57221	9.77754	ppb	95
28) 2,2-Dichloropropane	5.32	77	29359	7.97737	ppb	98
29) Chloroform	5.76	83	110917	9.77685	ppb	96
30) Bromochloromethane	5.62	128	28139	9.87532	ppb	92
32) 1,1,1-TCA	5.96	97	65837	9.64484	ppb	99
33) Cyclohexane	6.04	41	17788	9.60203	ppb	98
34) 1,1-Dichloropropene	6.17	75	46858	9.45227	ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	56506	7.93090	ppb	93
37) Carbon Tetrachloride	6.17	117	60992	9.53330	ppb	96
38) Tert Amyl Methyl Ether	6.59	73	123225	9.60738	ppb	98
39) 1,2-DCA	6.42	62	70817	9.51873	ppb	98
40) Benzene	6.40	78	193154	9.50568	ppb	99
41) TCE	7.15	95	56364	10.20509	ppb	97
42) 2-Pentanone	7.36	43	543080	124.81033	ppb	99
43) 1,2-Dichloropropane	7.37	63	65114	9.82099	ppb	97

(#) = qualifier out of range (m) = manual integration
 0719T30.D TALLW.M Fri Jul 20 10:53:26 2012

Data File : M:\THOR\DATA\T120719\0719T30.D
 Acq On : 19 Jul 12 22:35
 Sample : 10ug/L Vol Std 07-19-12
 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 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	88920	9.69476	ppb	99
45) Methyl Cyclohexane	7.36	83	35085	8.89704	ppb	99
46) Dibromomethane	7.49	93	36156	10.02526	ppb	91
47) 2-Chloroethyl vinyl ether	7.99	106	1046	8.05600	ppb	100
48) MIBK (methyl isobutyl ket	8.33	43	31800	10.16200	ppb	99
49) 1-Bromo-2-chloroethane	7.99	63	44552	9.65799	ppb	98
50) Cis-1,3-Dichloropropene	8.15	75	84767	9.33930	ppb	99
51) Toluene	8.50	91	234345	9.77470	ppb	99
52) Trans-1,3-Dichloropropene	8.72	75	72356	9.04130	ppb	99
53) 1,1,2-TCA	8.90	83	49884	9.34511	ppb	96
54) 2-Hexanone	9.18	43	36953	10.29763	ppb	92
57) 1,2-EDB	9.40	107	53068	9.41345	ppb	98
58) Tetrachloroethene	9.06	166	59525	9.33824	ppb	95
59) 1-Chlorohexane	9.90	91	70621	9.30765	ppb	98
60) 1,1,1,2-Tetrachloroethane	9.99	131	71180	9.55805	ppb	98
61) m&p-Xylene	10.14	106	224782	19.34899	ppb	97
62) o-Xylene	10.54	106	118374	9.85006	ppb	97
63) Styrene	10.55	104	202135	9.89948	ppb	99
65) 1,3-Dichloropropane	9.07	76	94972	9.60845	ppb	100
66) Dibromochloromethane	9.29	129	70401	9.46043	ppb	99
67) Chlorobenzene	9.90	112	183635	9.44678	ppb	98
68) Ethylbenzene	10.03	91	290081	9.49046	ppb	99
69) Bromoform	10.71	173	48885	9.59403	ppb	93
71) Isopropylbenzene	10.91	105	279290	9.69932	ppb	97
72) 1,1,2,2-Tetrachloroethane	11.19	83	73373	9.18301	ppb	99
73) 1,2,3-Trichloropropane	11.23	110	21535	9.49610	ppb	91
74) t-1,4-Dichloro-2-Butene	11.25	53	15144	9.97836	ppb	95
75) Bromobenzene	11.19	156	89995	9.48078	ppb	98
76) n-Propylbenzene	11.32	91	363226	9.79728	ppb	99
77) 4-Ethyltoluene	11.43	105	313892	9.85902	ppb	98
78) 2-Chlorotoluene	11.39	91	254998	9.64544	ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	263962	10.00144	ppb	100
80) 4-Chlorotoluene	11.50	91	258569	9.88101	ppb	100
81) Tert-Butylbenzene	11.82	119	231316	9.56718	ppb	98
82) 1,2,4-Trimethylbenzene	11.86	105	269333	9.86200	ppb	99
83) Sec-Butylbenzene	12.04	105	316488	9.80462	ppb	99
84) p-Isopropyltoluene	12.19	119	266591	9.77446	ppb	99
85) Benzyl Chloride	12.35	91	52811	6.47962	ppb	100
86) 1,3-DCB	12.13	146	171365	9.54592	ppb	99
87) 1,4-DCB	12.22	146	173724	9.24038	ppb	98
88) n-Butylbenzene	12.59	91	227452	9.30400	ppb	99
89) 1,2-DCB	12.59	146	164890	9.47686	ppb	97
90) Hexachloroethane	12.86	117	44069	8.81878	ppb	96
91) 1,2-Dibromo-3-chloropropan	13.35	157	15783	10.54375	ppb	90
92) 1,2,4-Trichlorobenzene	14.20	180	76888	9.64054	ppb	96
93) Hexachlorobutadiene	14.38	223	29896	8.97326	ppb	94
94) Naphthalene	14.43	128	224347	10.07414	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	110057	9.68516	ppb	98

(#) = qualifier out of range (m) = manual integration
 0719T30.D TALLW.M Fri Jul 20 10:53:27 2012

Quantitation Report

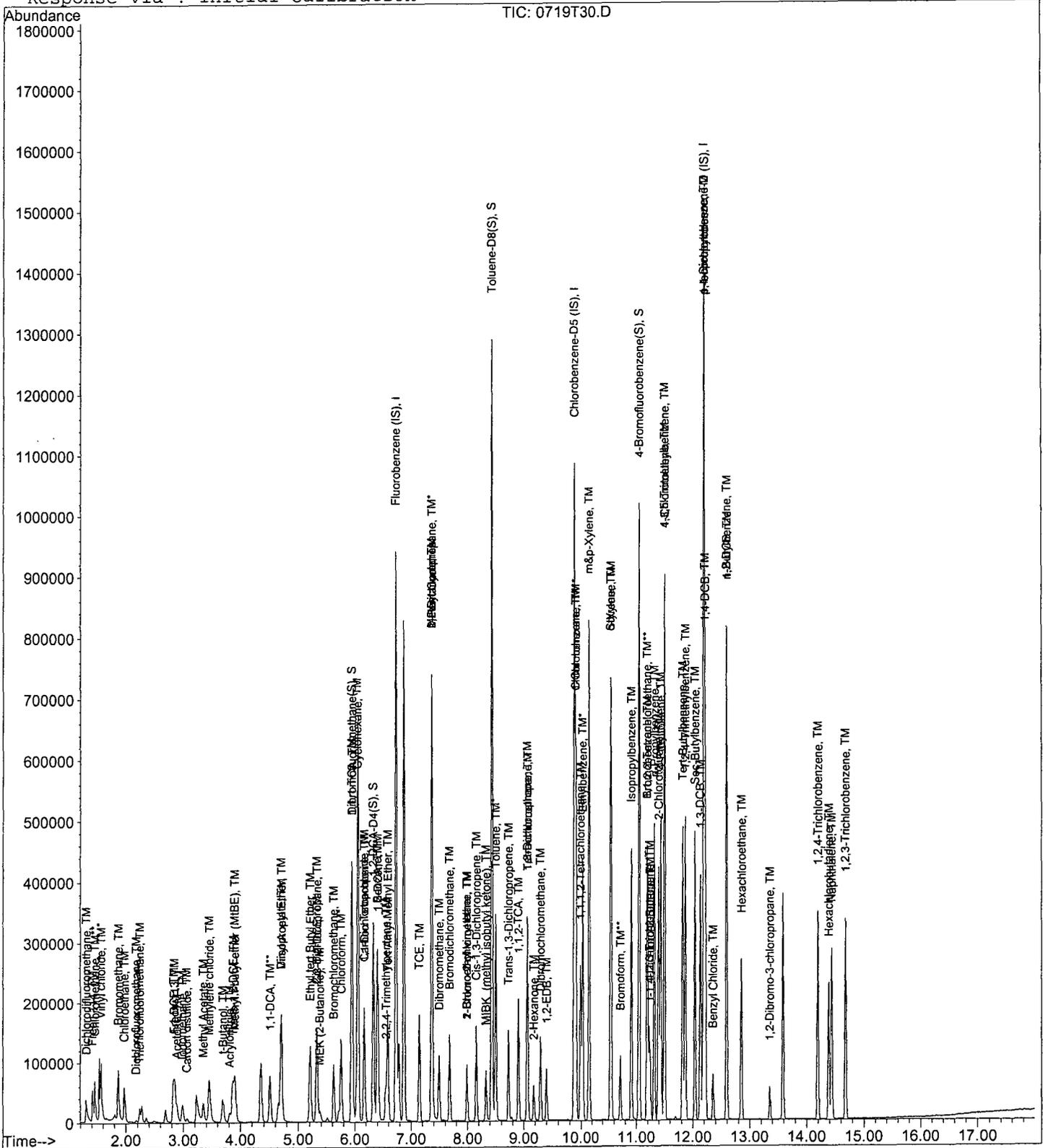
Data File : M:\THOR\DATA\T120719\0719T30.D
Acq On : 19 Jul 12 22:35
Sample : 10ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 30
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 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 6
Initial Calibration

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

SDG No: 68248
Initial Cal. Date: 07/24/12
Instrument: Thor (TGAS.M)

Initials: _____

	Compound	20	100	300	600	800					Avg	%RSD		r2
1	I Fluorobenzene (IS)													
2	TMHBL Gasoline	10.3	2.788	1.606	1.383	1.350					3.5	111	TMHBL	0.998
3	I Chlorobenzene-D5 (IS)													
4	I 1,4-Dichlorobenzene-D (IS)													
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AKS 7/26/12

Data File : M:\THOR\DATA\T120724\0724T02.D Vial: 1
 Acq On : 24 Jul 12 16:33 Operator: DG,RS,HW,ARS,SV
 Sample : VOC MIX MARKER Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:33 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	407680	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	339456	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	197888	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
31) Dibromofluoromethane(S)	5.95	111	1481	0.23214	ppb	0.00
Spiked Amount	31.881		Recovery	=	0.728%	
36) 1,2-DCA-D4(S)	6.33	65	1574	0.26548	ppb	0.00
Spiked Amount	33.647		Recovery	=	0.788%	
56) Toluene-D8(S)	8.43	98	6919	0.34477	ppb	0.00
Spiked Amount	37.345		Recovery	=	0.924%	
64) 4-Bromofluorobenzene(S)	11.05	95	5962	0.62820	ppb	0.00
Spiked Amount	29.515		Recovery	=	2.128%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
4) Chloromethane	1.46	50	229	-0.37974	ppb	# 41
11) Acetone	2.90	43	2395	0.55562	ppb	95
15) Methyl Acetate	3.52	43	268342	76.75986	ppb	# 52
18) Methylene chloride	3.45	84	1624	0.14816	ppb	91
19) Carbon disulfide	3.06	76	110	-0.62303	ppb	# 65
23) 1,1-DCA	4.34	63	1127	0.13700	ppb	# 1
26) MEK (2-Butanone)	5.39	43	833	0.74323	ppb	# 46
34) 1,1-Dichloropropene	6.05	75	22909	5.13197	ppb	# 51
35) 2,2,4-Trimethylpentane	6.54	57	1049	0.16350	ppb	# 80
37) Carbon Tetrachloride	6.05	117	32481	5.63800	ppb	# 13
38) Tert Amyl Methyl Ether	6.73	73	8906	0.77111	ppb	# 32
39) 1,2-DCA	6.40	62	7694	1.14847	ppb	# 74
40) Benzene	6.40	78	959236	52.42403	ppb	98
42) 2-Pentanone	7.37	43	6145	1.56832	ppb	94
45) Methyl Cyclohexane	7.35	83	427	0.12025	ppb	95
48) MIBK (methyl isobutyl ket	8.33	43	603	0.21399	ppb	# 78
51) Toluene	8.50	91	1012976	46.92157	ppb	99
54) 2-Hexanone	9.18	43	883	0.27326	ppb	# 73
58) Tetrachloroethene	9.05	166	610	0.10600	ppb	# 77
59) 1-Chlorohexane	10.03	91	1126802	164.49710	ppb	# 17
61) m&p-Xylene	10.14	106	893103	85.15353	ppb	97
62) o-Xylene	10.54	106	438466	40.41314	ppb	98
63) Styrene	10.54	104	24145	1.30979	ppb	# 1
68) Ethylbenzene	10.03	91	1127198	40.84815	ppb	99
71) Isopropylbenzene	10.91	105	2280	0.08812	ppb	91
76) n-Propylbenzene	11.32	91	4055	0.12172	ppb	98
77) 4-Ethyltoluene	11.43	105	3102	0.10843	ppb	95
78) 2-Chlorotoluene	11.50	91	3947	0.16615	ppb	86
79) 1,3,5-Trimethylbenzene	11.50	105	5817	0.24528	ppb	94
80) 4-Chlorotoluene	11.50	91	3947	0.16786	ppb	92
81) Tert-Butylbenzene	11.82	119	2102	0.09675	ppb	85
82) 1,2,4-Trimethylbenzene	11.86	105	937262	38.19280	ppb	99
83) Sec-Butylbenzene	11.86	105	909973	31.37237	ppb	# 55
84) p-Isopropyltoluene	12.19	119	3544	0.14461	ppb	97
86) 1,3-DCB	12.13	146	2384	0.14779	ppb	96
87) 1,4-DCB	12.22	146	2584	0.15296	ppb	# 84
88) n-Butylbenzene	12.59	91	5311	0.24177	ppb	93
89) 1,2-DCB	12.59	146	1944	0.12434	ppb	# 81
92) 1,2,4-Trichlorobenzene	14.19	180	2130	0.29721	ppb	# 87

ARS 7/26/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120724\0724T02.D Vial: 1
 Acq On : 24 Jul 12 16:33 Operator: DG,RS,HW,ARS,SV
 Sample : VOC MIX MARKER Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:33 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
93) Hexachlorobutadiene	14.38	223	1101	0.36776	ppb #	81
94) Naphthalene	14.43	128	709292	35.44526	ppb	100
95) 1,2,3-Trichlorobenzene	14.68	180	4306	0.42170	ppb	91

Quantitation Report

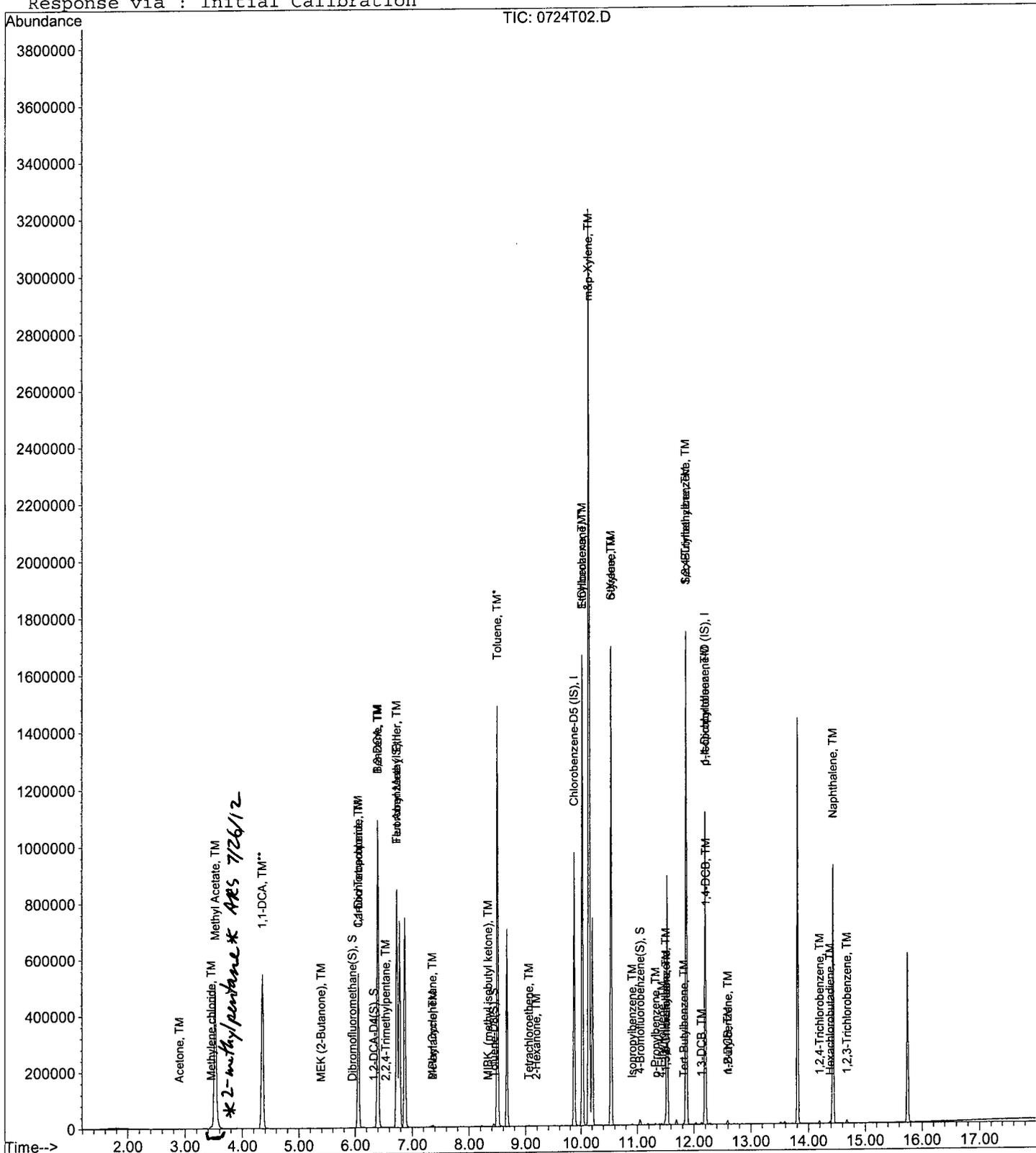
Data File : M:\THOR\DATA\T120724\0724T02.D
Acq On : 24 Jul 12 16:33
Sample : VOC MIX MARKER
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 1
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:33 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



Data File : M:\THOR\DATA\T120724\0724T03.D Vial: 2
 Acq On : 24 Jul 12 17:01 Operator: DG,RS,HW,ARS,SV
 Sample : 20ug/L Vol Std 07-24-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 8:10 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 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	501496	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	556350	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	638639	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	9.87	TIC	4150901m	35.99979	ppb	100

Quantitation Report

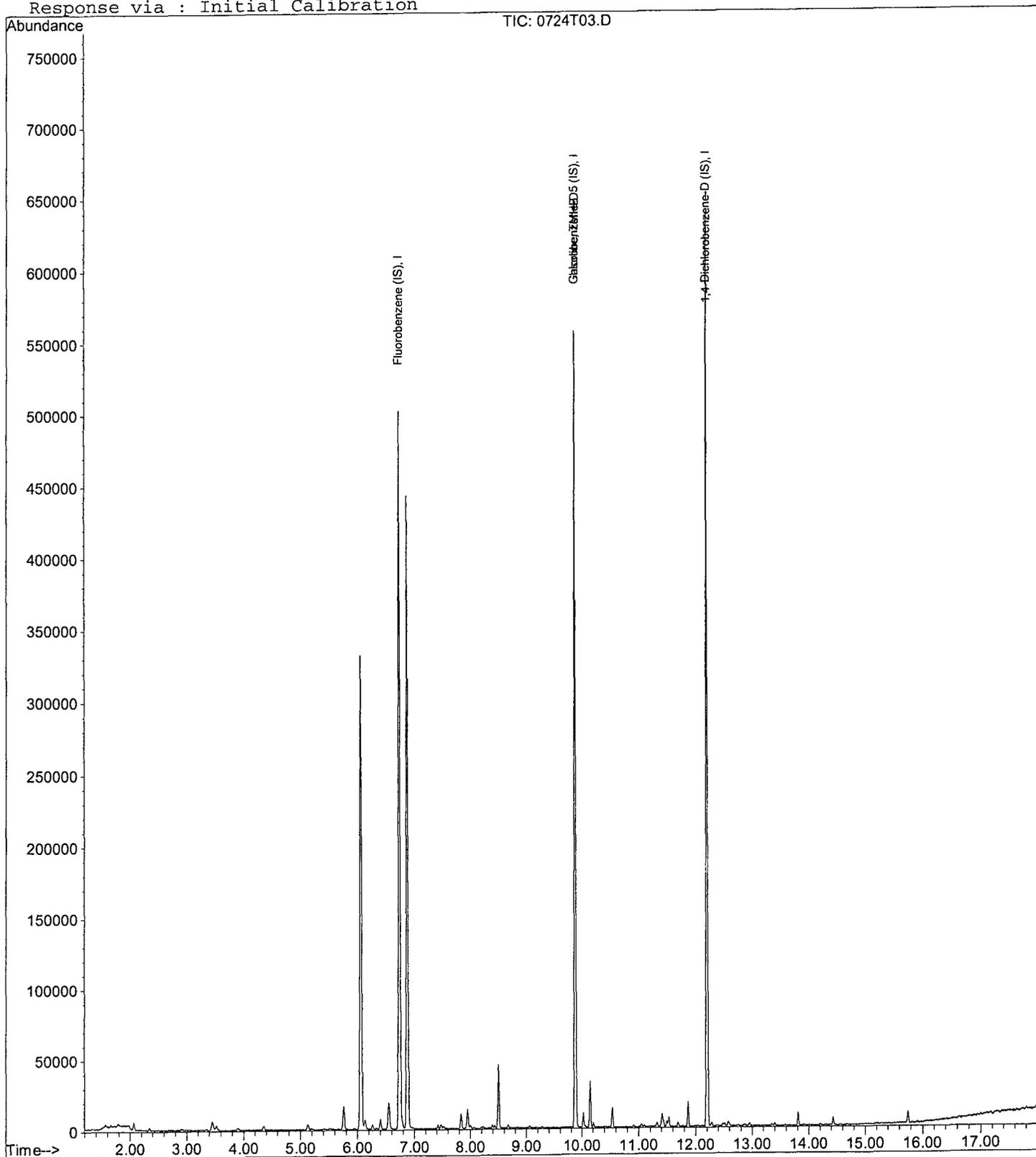
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Acq On : 24 Jul 12 17:01
Sample : 20ug/L Vol Std 07-24-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 2
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 8:10 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

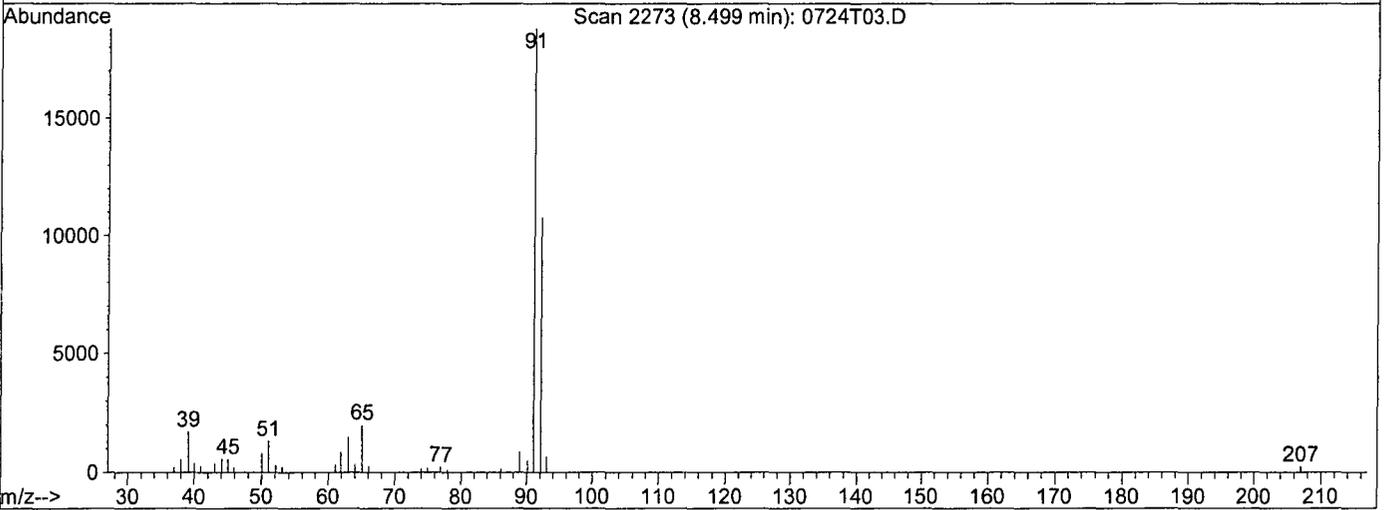
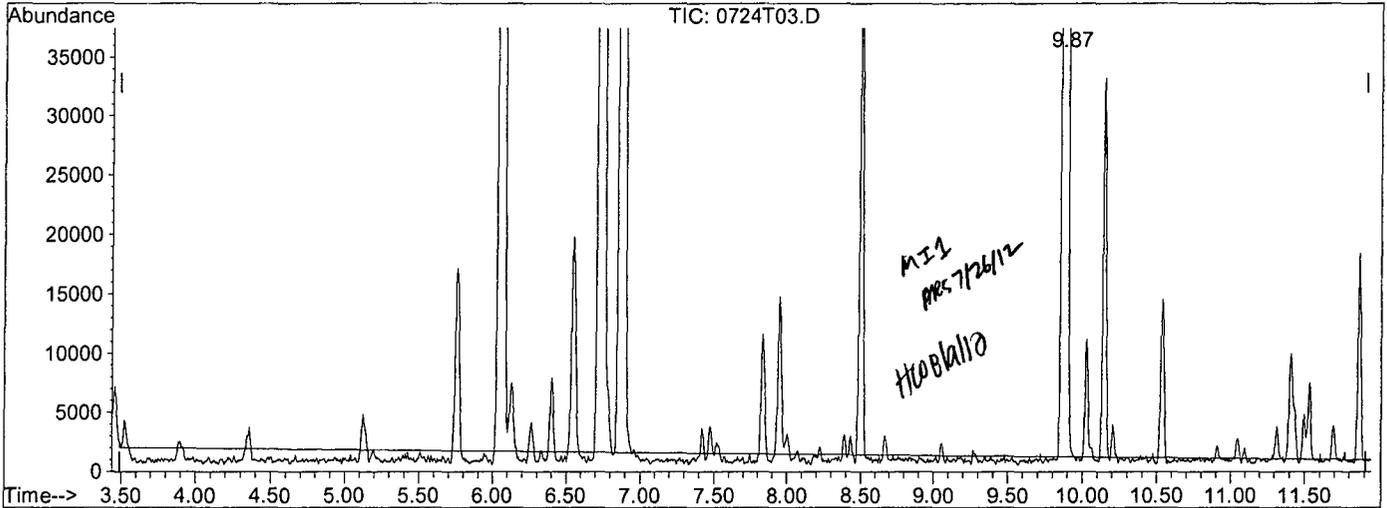


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T03.D
 Acq On : 24 Jul 12 17:01
 Sample : 20ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:05 2012

Vial: 2
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T03.D

(2) Gasoline (TMHB)
 8.50min -39.7992ppb m
 response 2510316

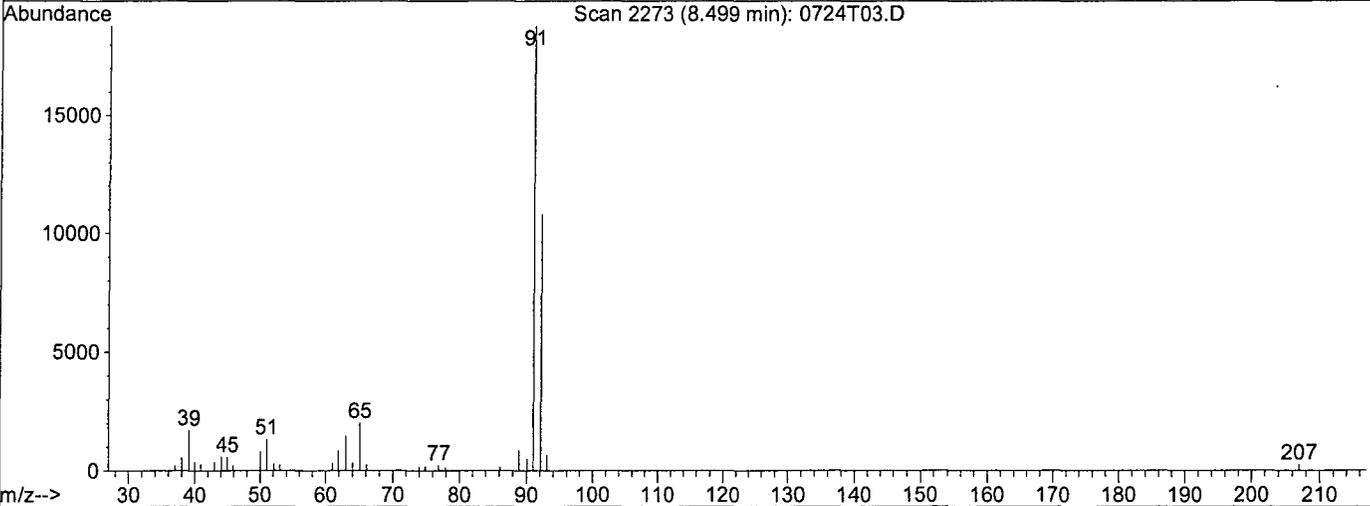
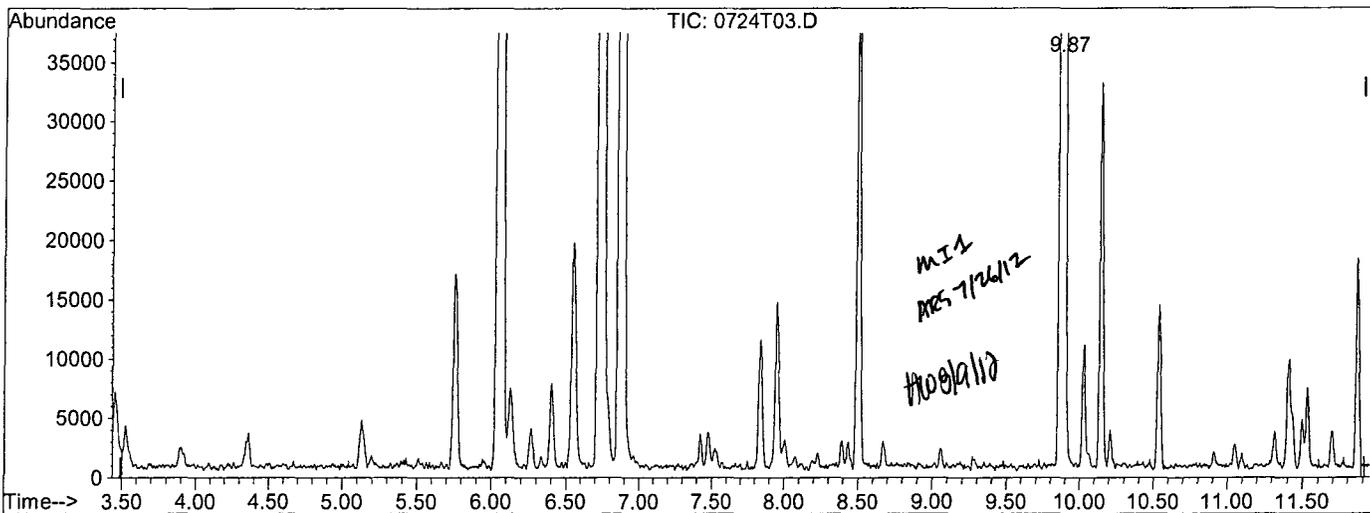
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	2.49#
0.00	1.80	7.14#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T03.D
 Acq On : 24 Jul 12 17:01
 Sample : 20ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:10 2012

Vial: 2
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T03.D

(2) Gasoline (TMHB)

9.87min 35.9998ppb m

response 4150901

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.50#
0.00	1.80	4.32#
0.00	0.00	0.00

Data File : M:\THOR\DATA\T120724\0724T04.D Vial: 3
 Acq On : 24 Jul 12 17:29 Operator: DG,RS,HW,ARS,SV
 Sample : 100ug/L Vol Std 07-24-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 8:08 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 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	546001	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	600883	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	672310	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	9.87	TIC	6089943m	102.65354	ppb	100

Quantitation Report

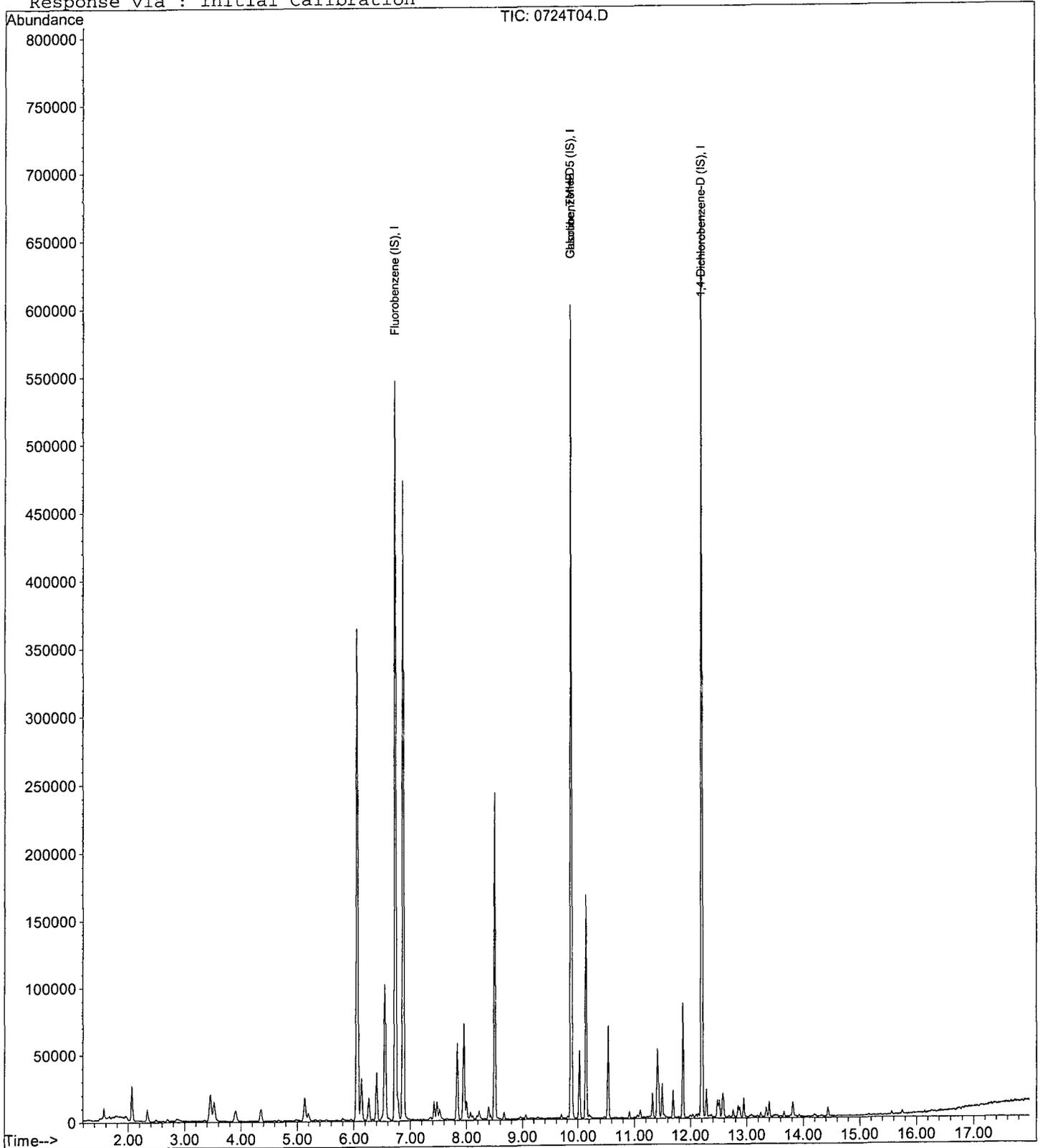
Data File : M:\THOR\DATA\T120724\0724T04.D
Acq On : 24 Jul 12 17:29
Sample : 100ug/L Vol Std 07-24-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 3
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 8:08 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

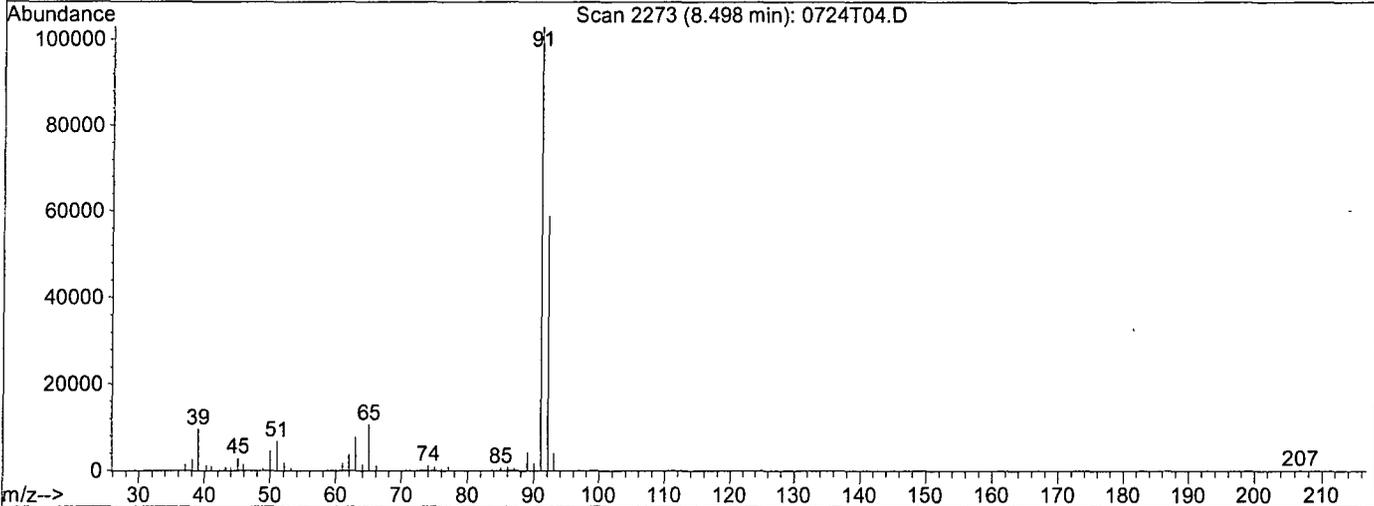
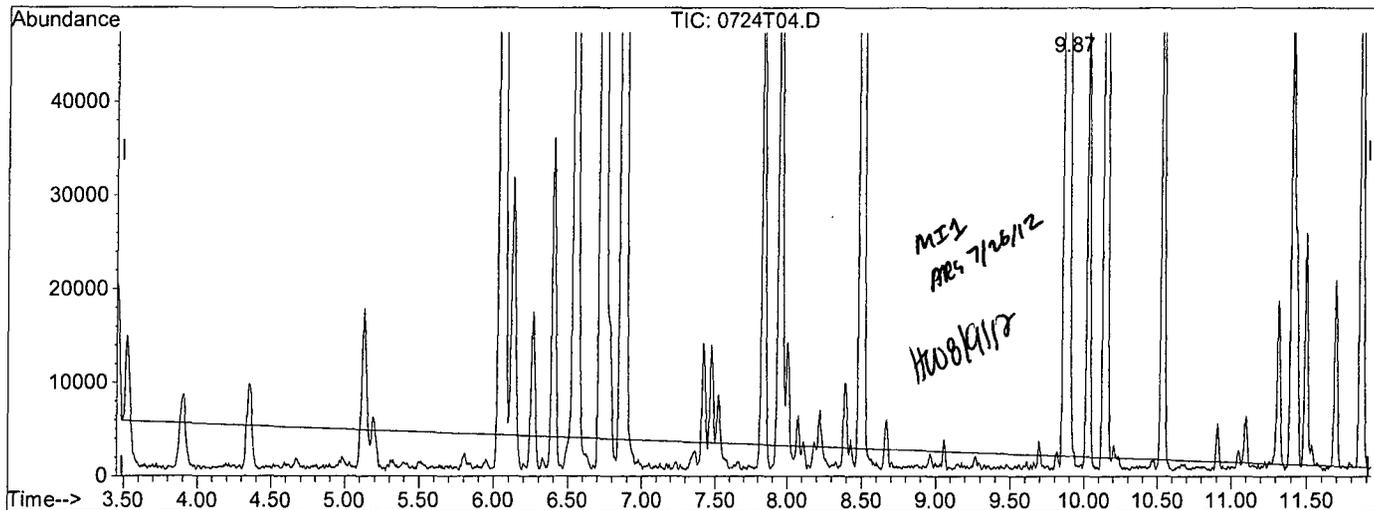


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T04.D
 Acq On : 24 Jul 12 17:29
 Sample : 100ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:05 2012

Vial: 3
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T04.D

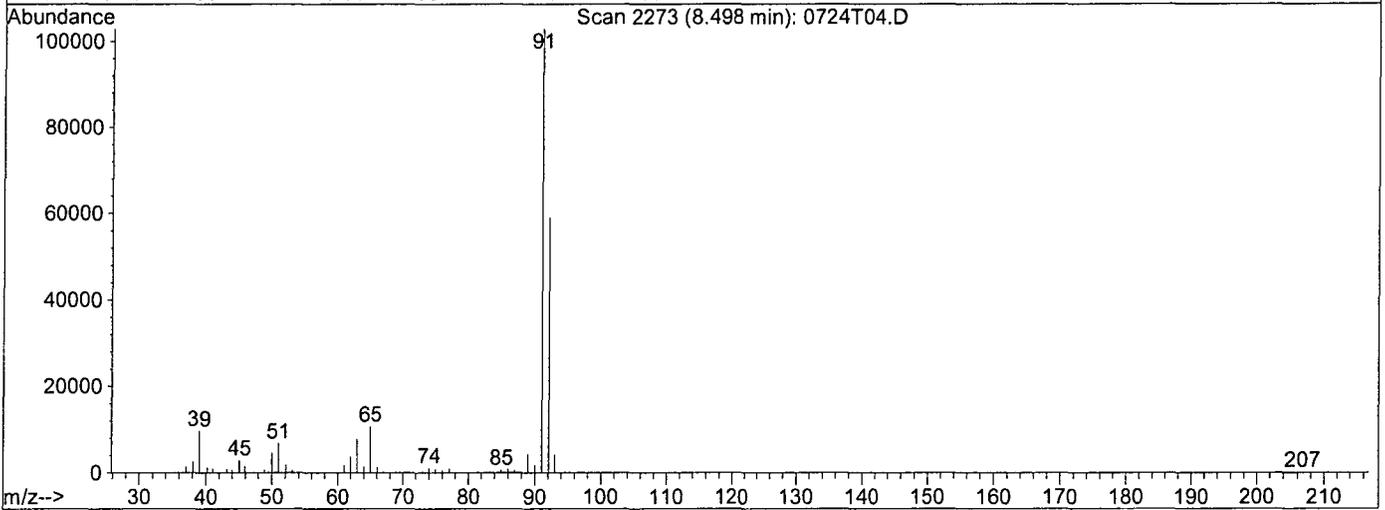
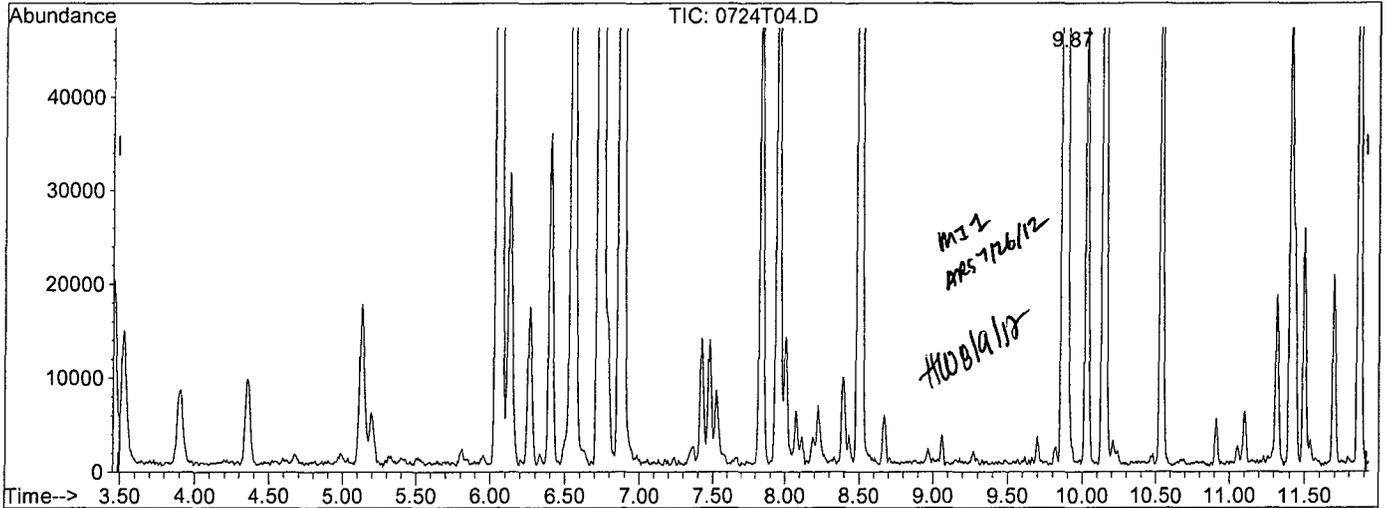
(2) Gasoline (TMHB)		
8.50min	30.2598ppb m	
response	4384009	
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.47#
0.00	1.80	4.27#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T04.D
 Acq On : 24 Jul 12 17:29
 Sample : 100ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:08 2012

Vial: 3
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T04.D

(2) Gasoline (TMHB)		
9.87min	102.6535ppb m	
response	6089943	
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.06#
0.00	1.80	3.07#
0.00	0.00	0.00

Data File : M:\THOR\DATA\T120724\0724T05.D Vial: 4
 Acq On : 24 Jul 12 17:57 Operator: DG,RS,HW,ARS,SV
 Sample : 300ug/L Vol Std 07-24-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 8:03 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 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	608785	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	680507	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	762779	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.50	TIC	11731974m	288.59877	ppb	100

Quantitation Report

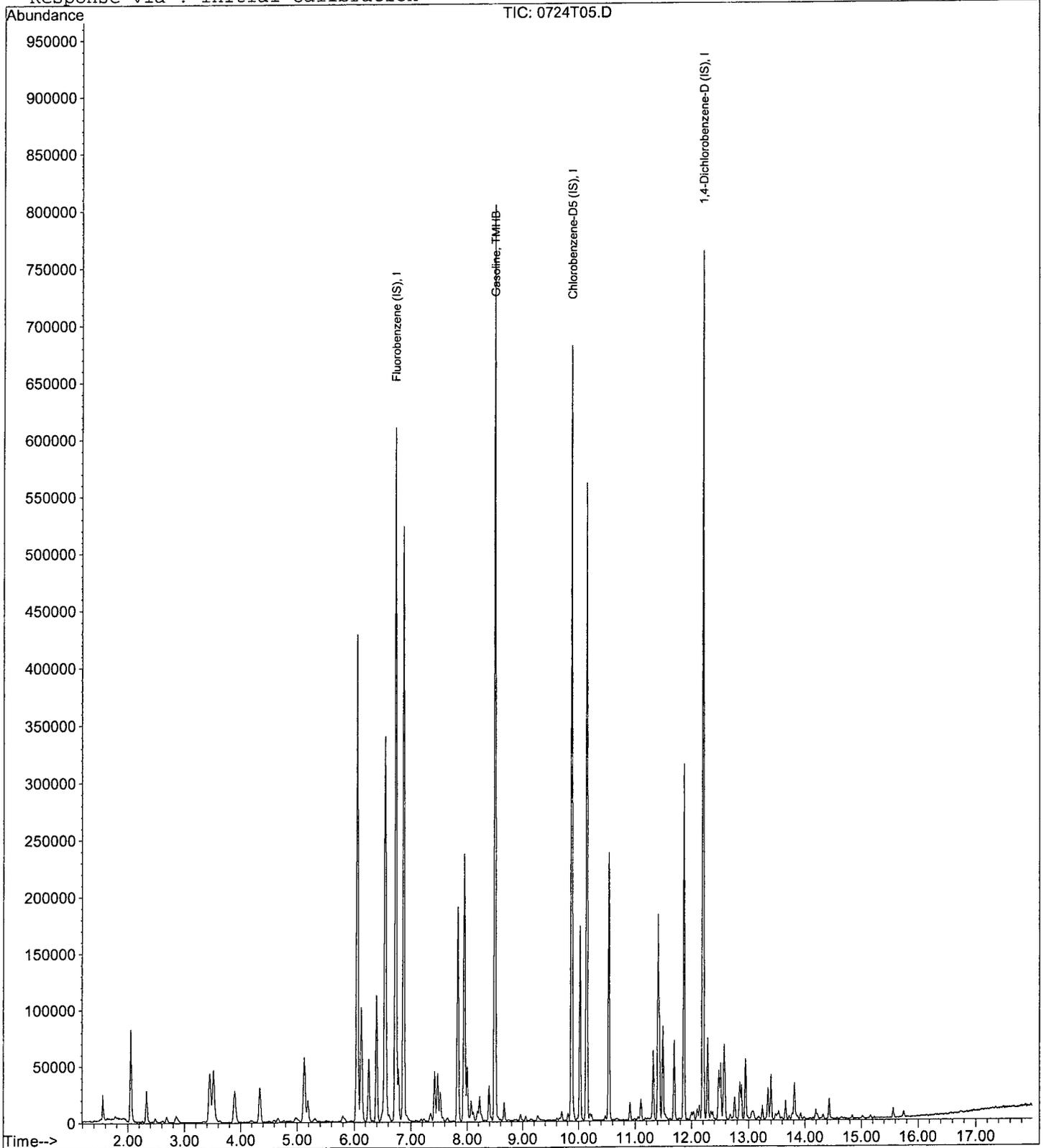
Data File : M:\THOR\DATA\T120724\0724T05.D
Acq On : 24 Jul 12 17:57
Sample : 300ug/L Vol Std 07-24-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 4
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 8:03 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

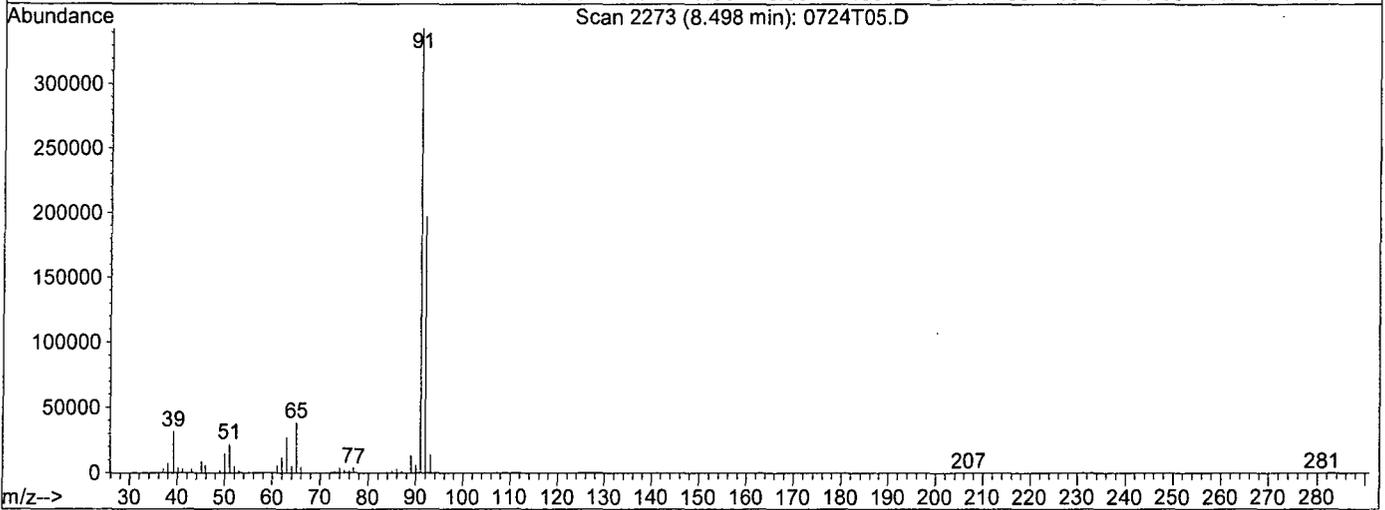
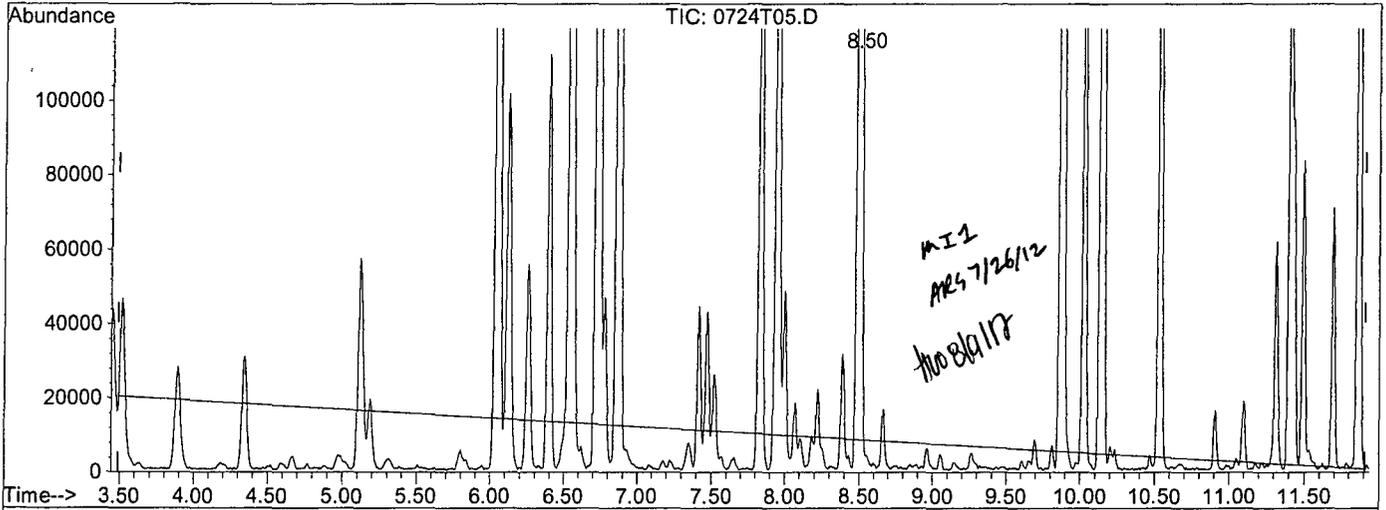


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T05.D
 Acq On : 24 Jul 12 17:57
 Sample : 300ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:03 2012

Vial: 4
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T05.D

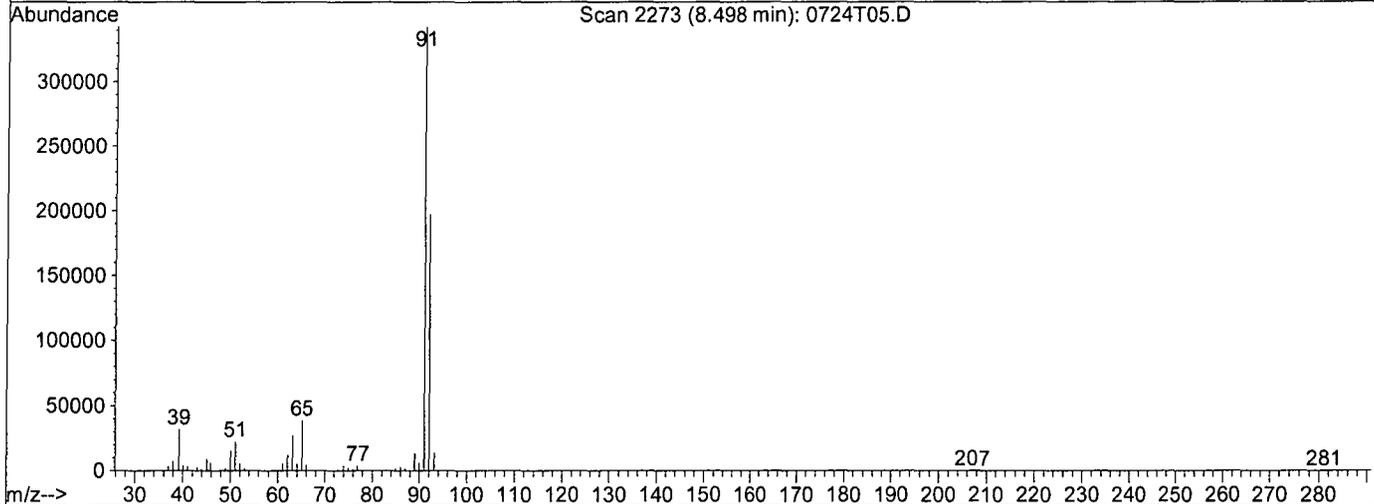
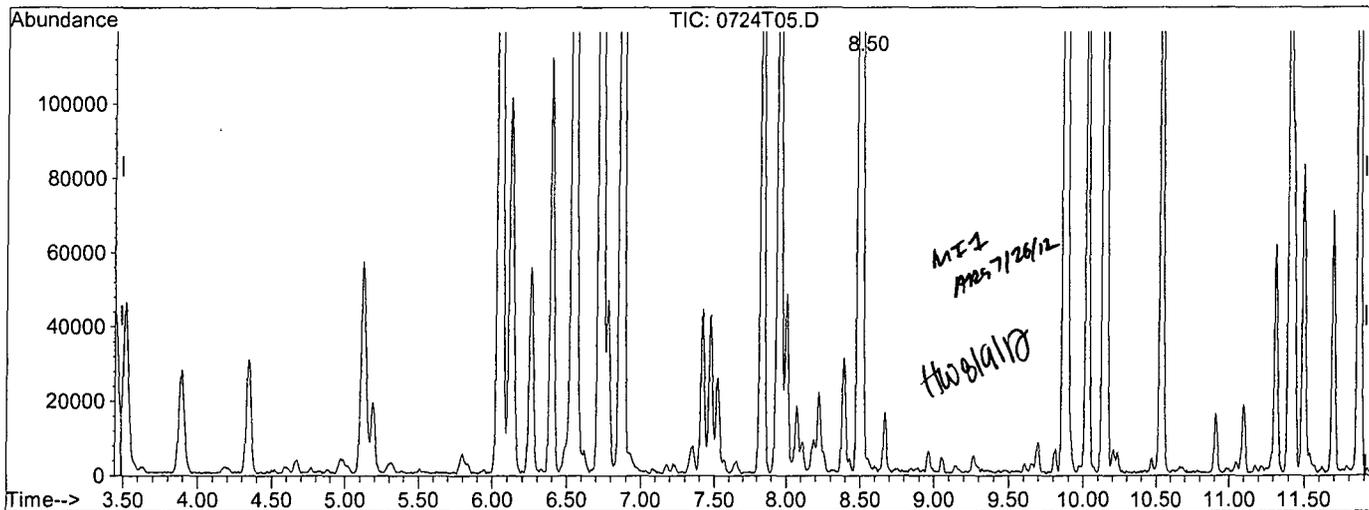
(2) Gasoline (TMHB)		
8.50min	214.5236ppb m	
response	9788840	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.73#
0.00	0.00	2.20#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T05.D
 Acq On : 24 Jul 12 17:57
 Sample : 300ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:03 2012

Vial: 4
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T05.D

(2) Gasoline (TMHB)

8.50min 288.5988ppb m

response 11731974

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.61#
0.00	0.00	1.83#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120724\0724T06.D Vial: 5
 Acq On : 24 Jul 12 18:24 Operator: DG,RS,HW,ARS,SV
 Sample : 600ug/L Vol Std 07-24-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 8:07 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 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	769988	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	871478	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	990742	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.50	TIC	25555181m	613.21989	ppb	100

Quantitation Report

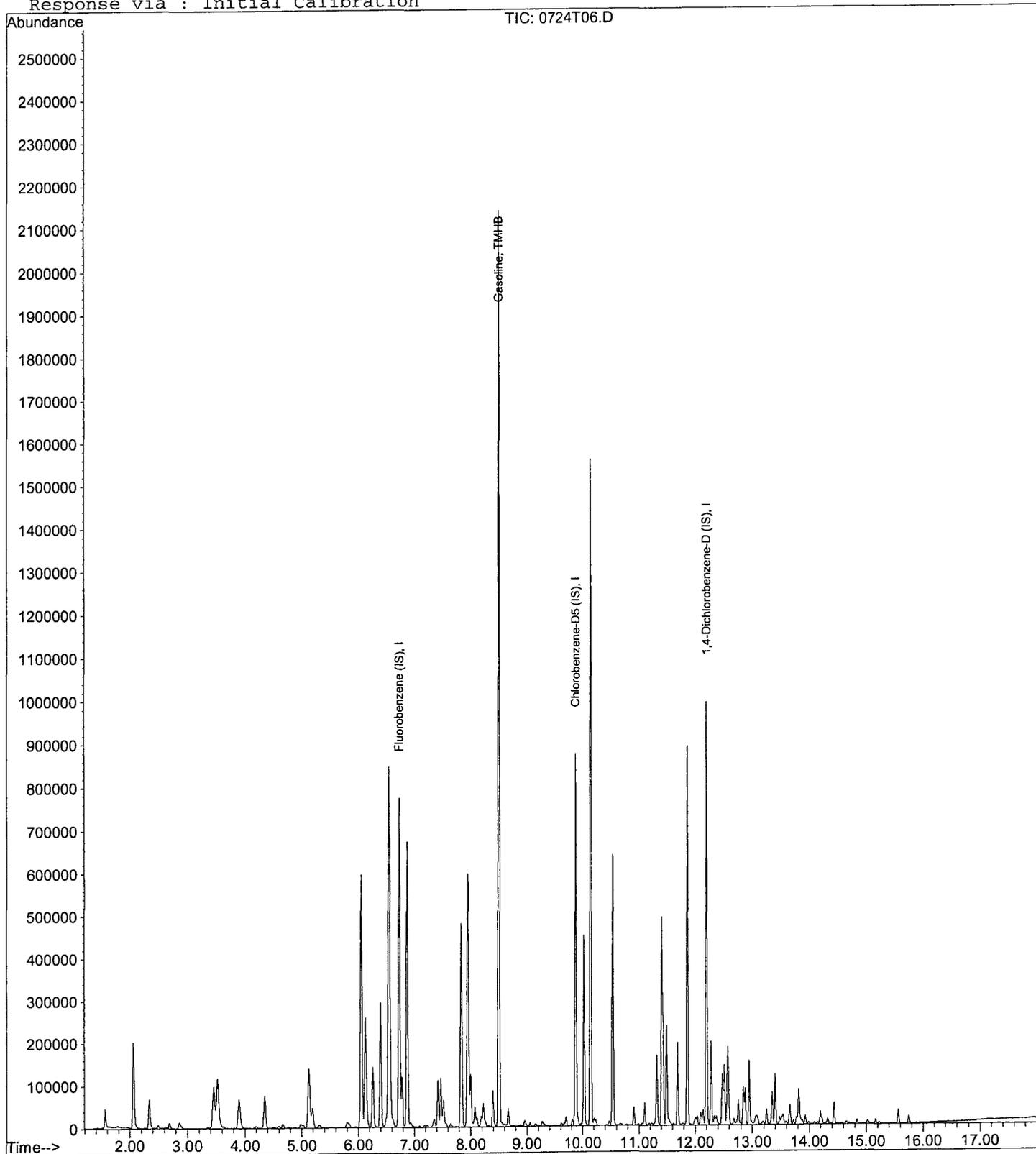
Data File : M:\THOR\DATA\T120724\0724T06.D
Acq On : 24 Jul 12 18:24
Sample : 600ug/L Vol Std 07-24-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 8:07 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

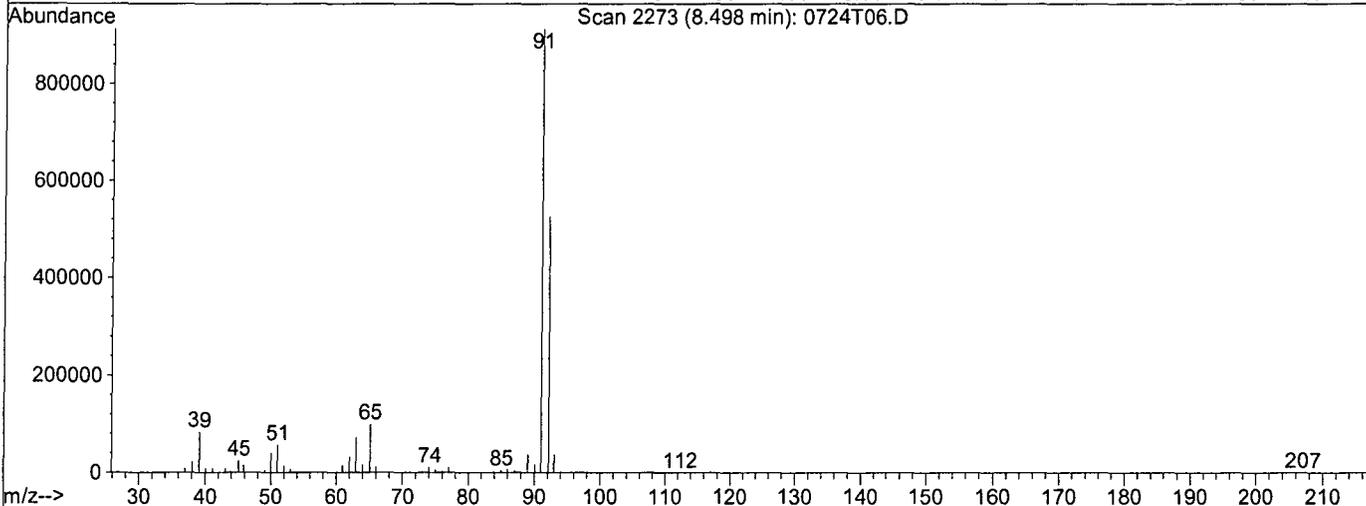
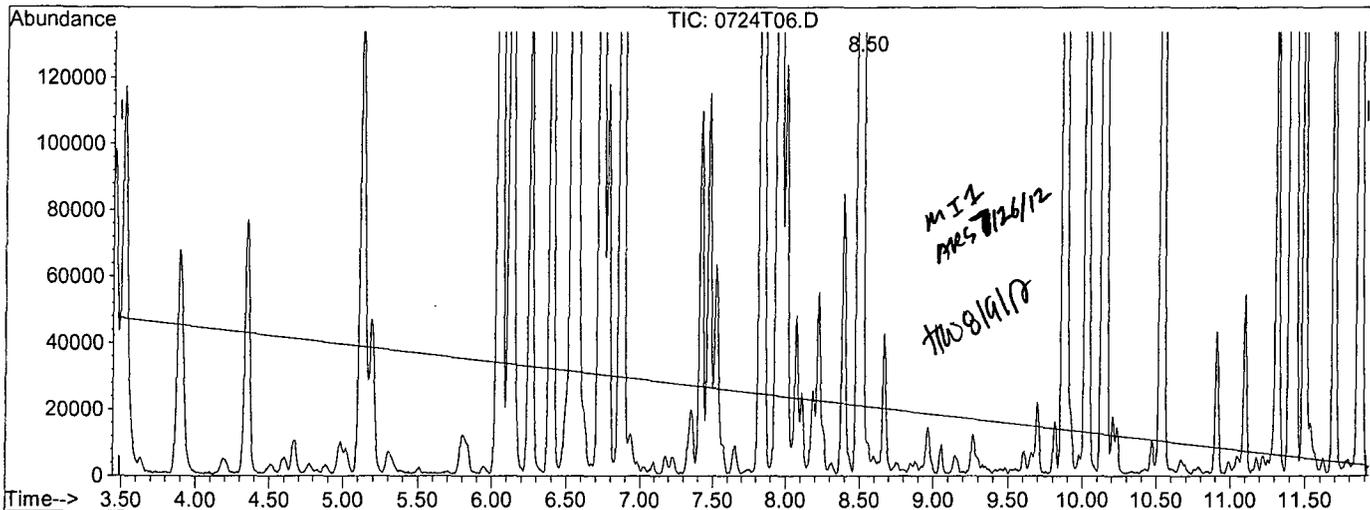


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T06.D
 Acq On : 24 Jul 12 18:24
 Sample : 600ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:05 2012

Vial: 5
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T06.D

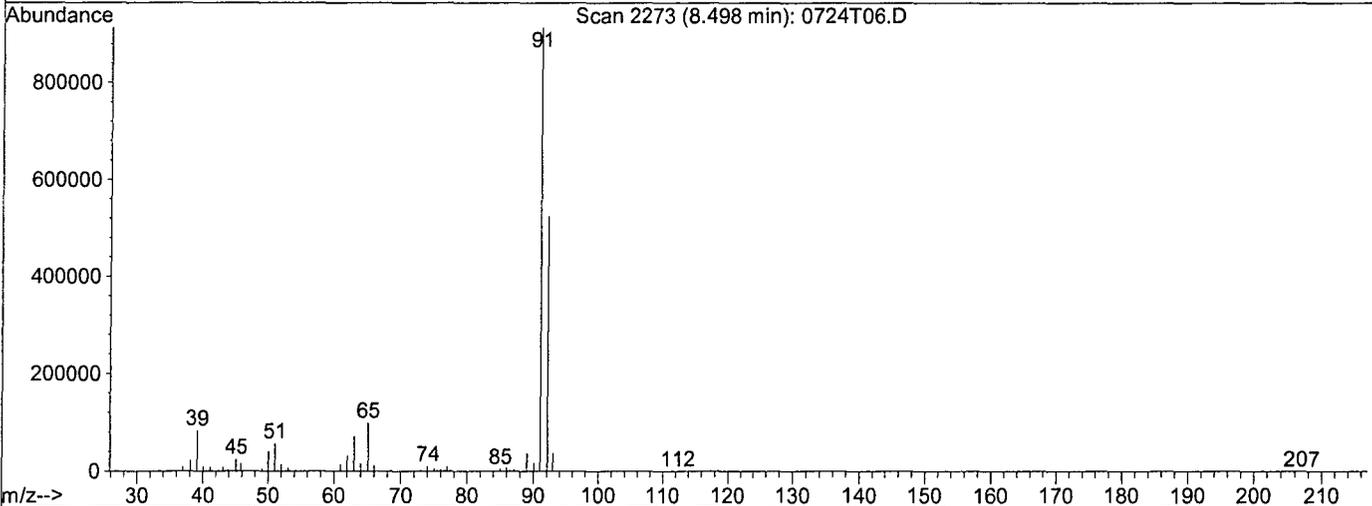
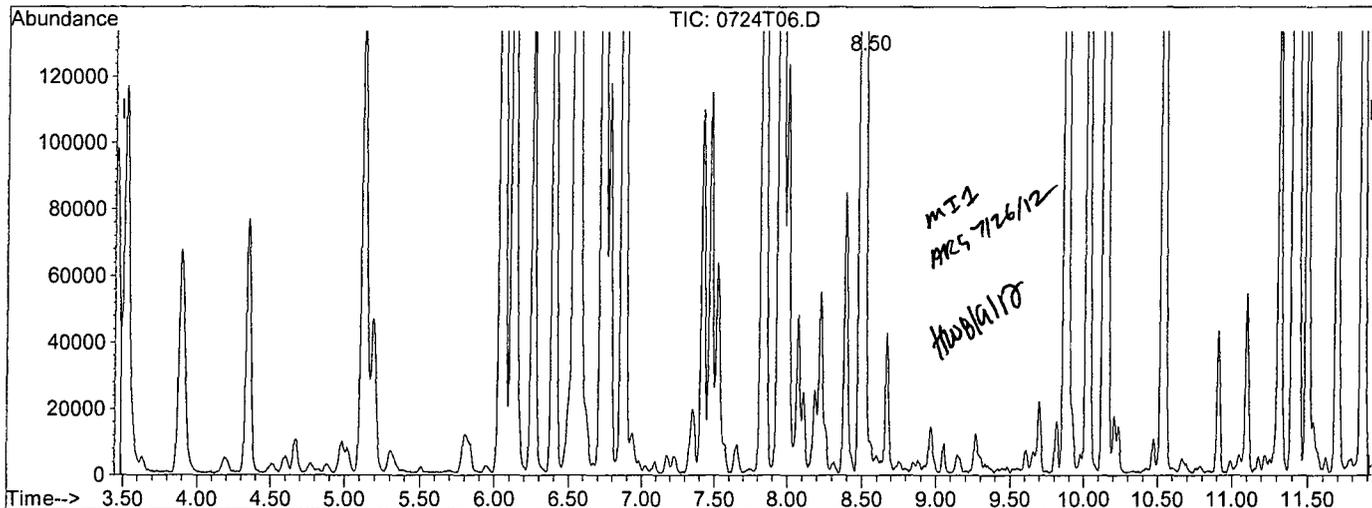
(2) Gasoline (TMHB)		
8.50min	518.4393ppb m	
response	22405468	
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.43#
0.00	1.80	1.23#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T06.D
 Acq On : 24 Jul 12 18:24
 Sample : 600ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:07 2012

Vial: 5
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T06.D

(2) Gasoline (TMHB)		
8.50min	613.2199ppb m	
response	25555181	
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.38#
0.00	1.80	1.08#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120724\0724T07.D Vial: 6
 Acq On : 24 Jul 12 18:52 Operator: DG,RS,HW,ARS,SV
 Sample : 800ug/L Vol Std 07-24-12 Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 8:06 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 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	757783	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	855876	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	963340	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.50	TIC	32745899m	845.47245	ppb	100

Quantitation Report

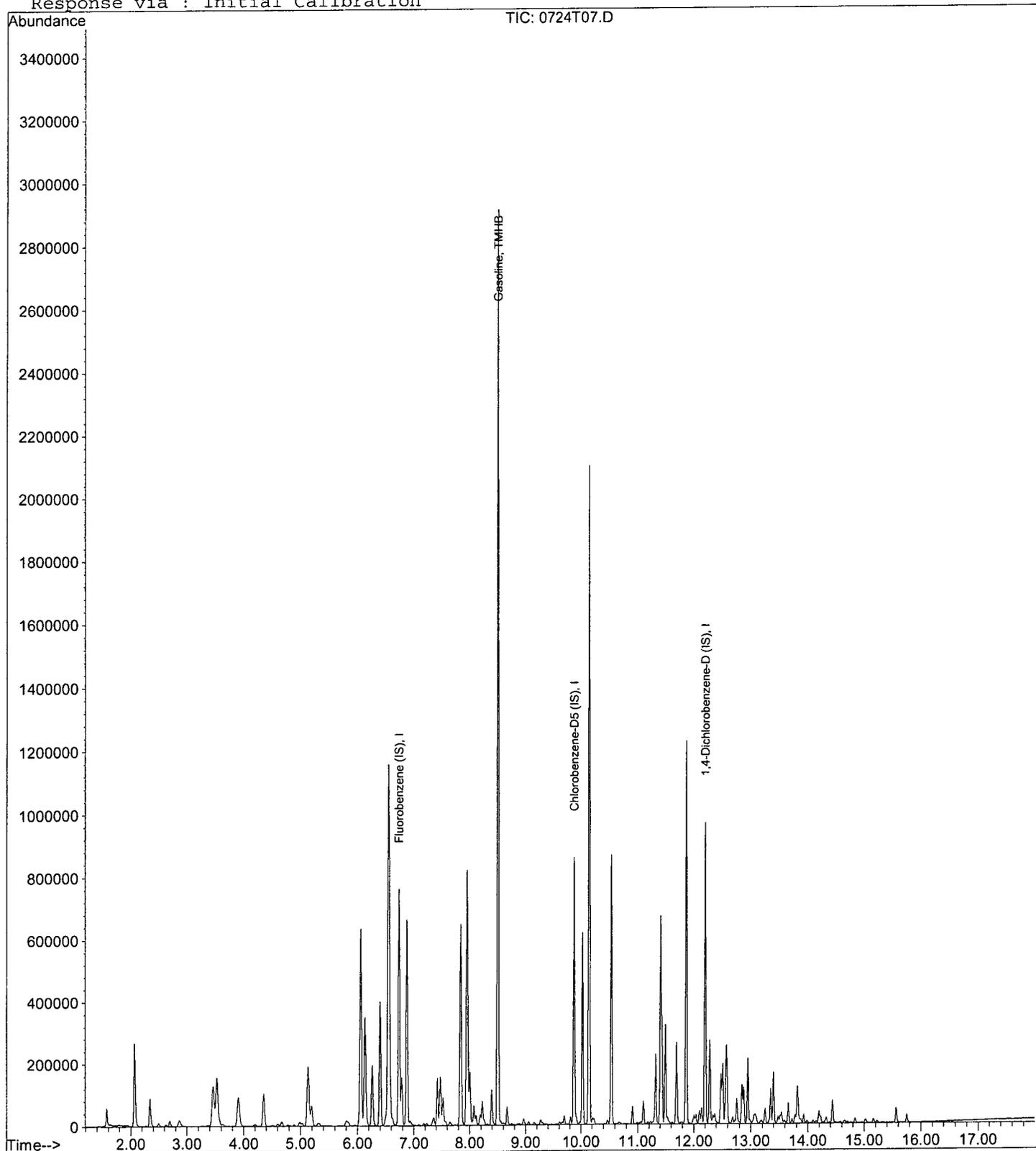
Data File : M:\THOR\DATA\T120724\0724T07.D
Acq On : 24 Jul 12 18:52
Sample : 800ug/L Vol Std 07-24-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 8:06 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

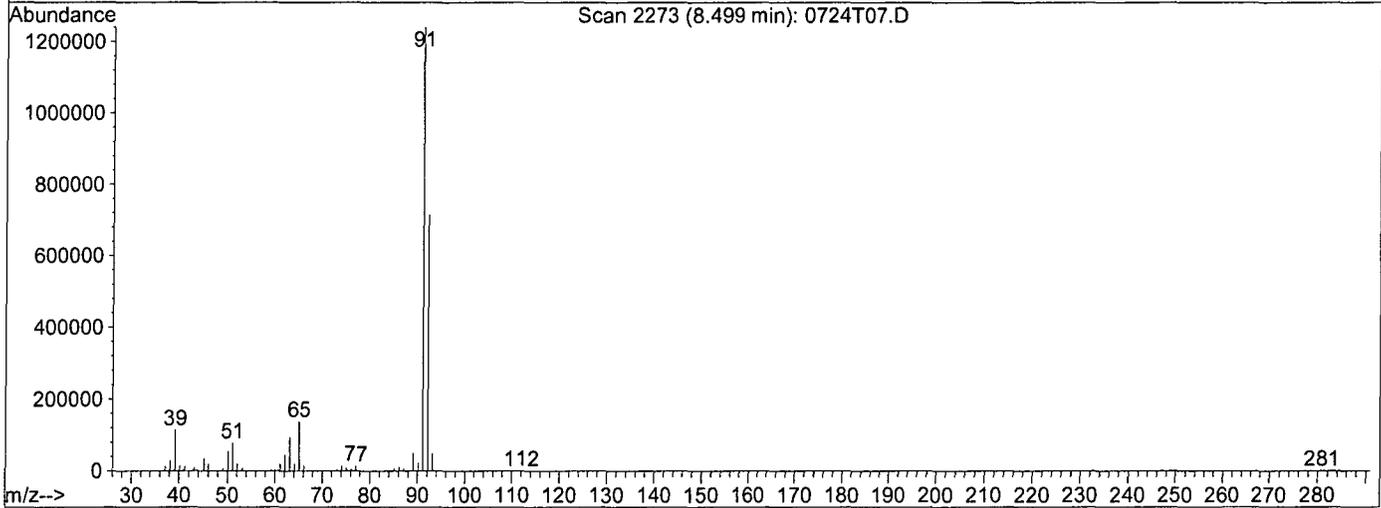
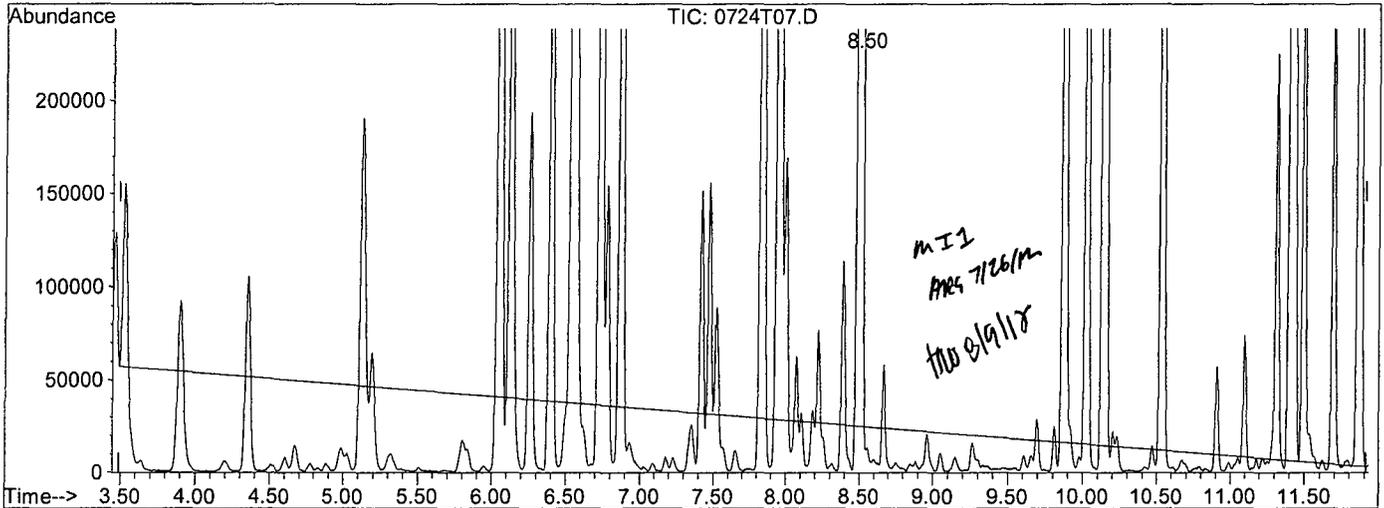


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T07.D
 Acq On : 24 Jul 12 18:52
 Sample : 800ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:05 2012

Vial: 6
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T07.D

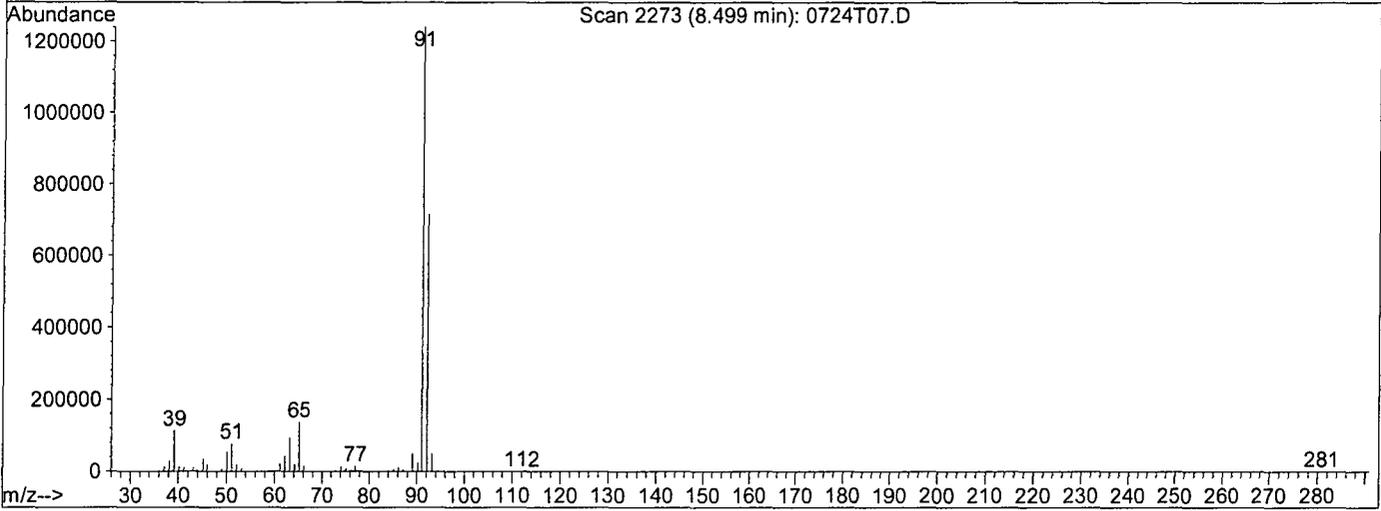
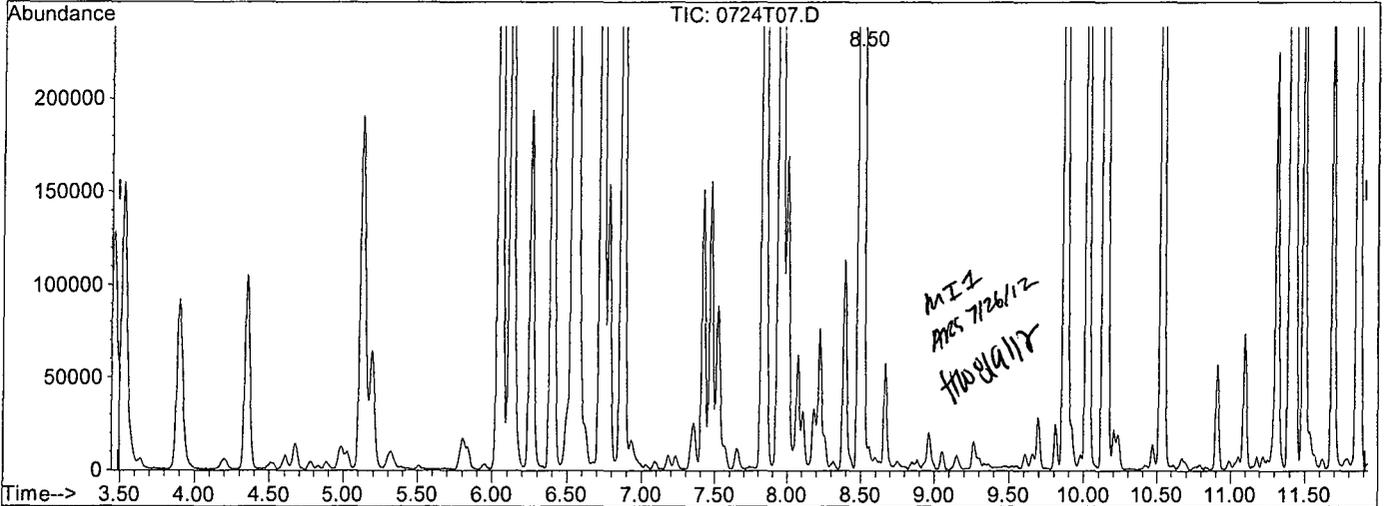
(2) Gasoline (TMHB)		
8.50min	743.4027ppb m	
response	29407721	
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.32#
0.00	1.80	0.91#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T07.D
 Acq On : 24 Jul 12 18:52
 Sample : 800ug/L Vol Std 07-24-12
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 25 8:06 2012

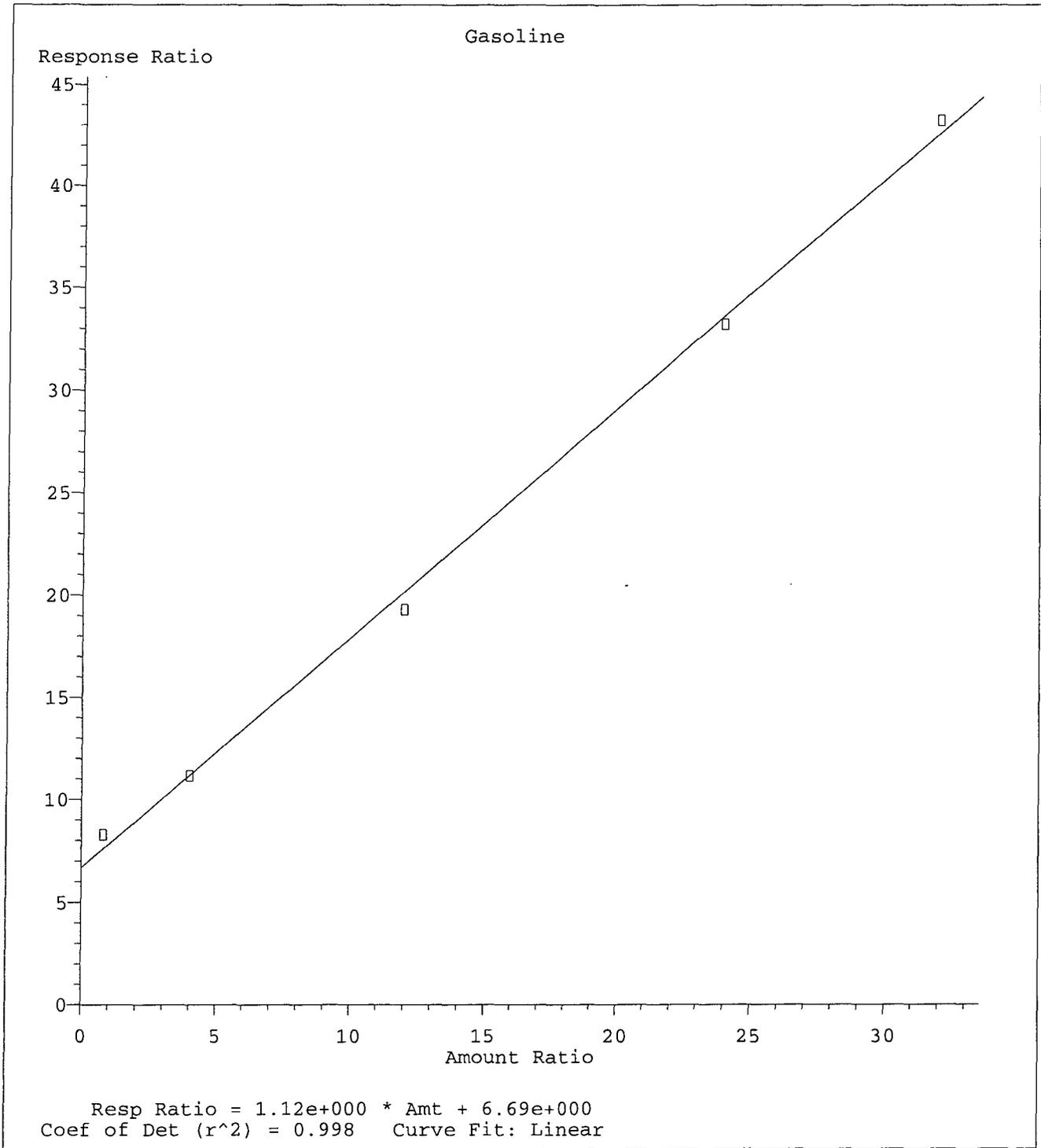
Vial: 6
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:02:47 2012
 Response via : Single Level Calibration



TIC: 0724T07.D

(2) Gasoline (TMHB)		
8.50min	845.4724ppb m	
response	32745899	
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.29#
0.00	1.80	0.81#
0.00	0.00	0.00



Method Name: M:\THOR\DATA\T120724\TGAS.M
Calibration Table Last Updated: Wed Jul 25 08:14:32 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68248
Date Analyzed: 07/24/12
Instrument: Thor
Initial Cal. Date: 07/24/12
Data File: 0724T10.D

	Compound	MEAN	CCRF	%D	%Drift
1	Fluorobenzene (IS)	ISTD			
2	TMHB Gasoline	3.495	2.123	39	TMHBL 40 *
3	Chlorobenzene-D5 (IS)	ISTD			
4	1,4-Dichlorobenzene-D (IS)	ISTD			
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			39.0	

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120724\0724T10.D Vial: 9
 Acq On : 24 Jul 12 20:15 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 14:48 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	776734	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	880394	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1005627	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.50	TIC	19788320m	418.73004	ppb	100

Quantitation Report

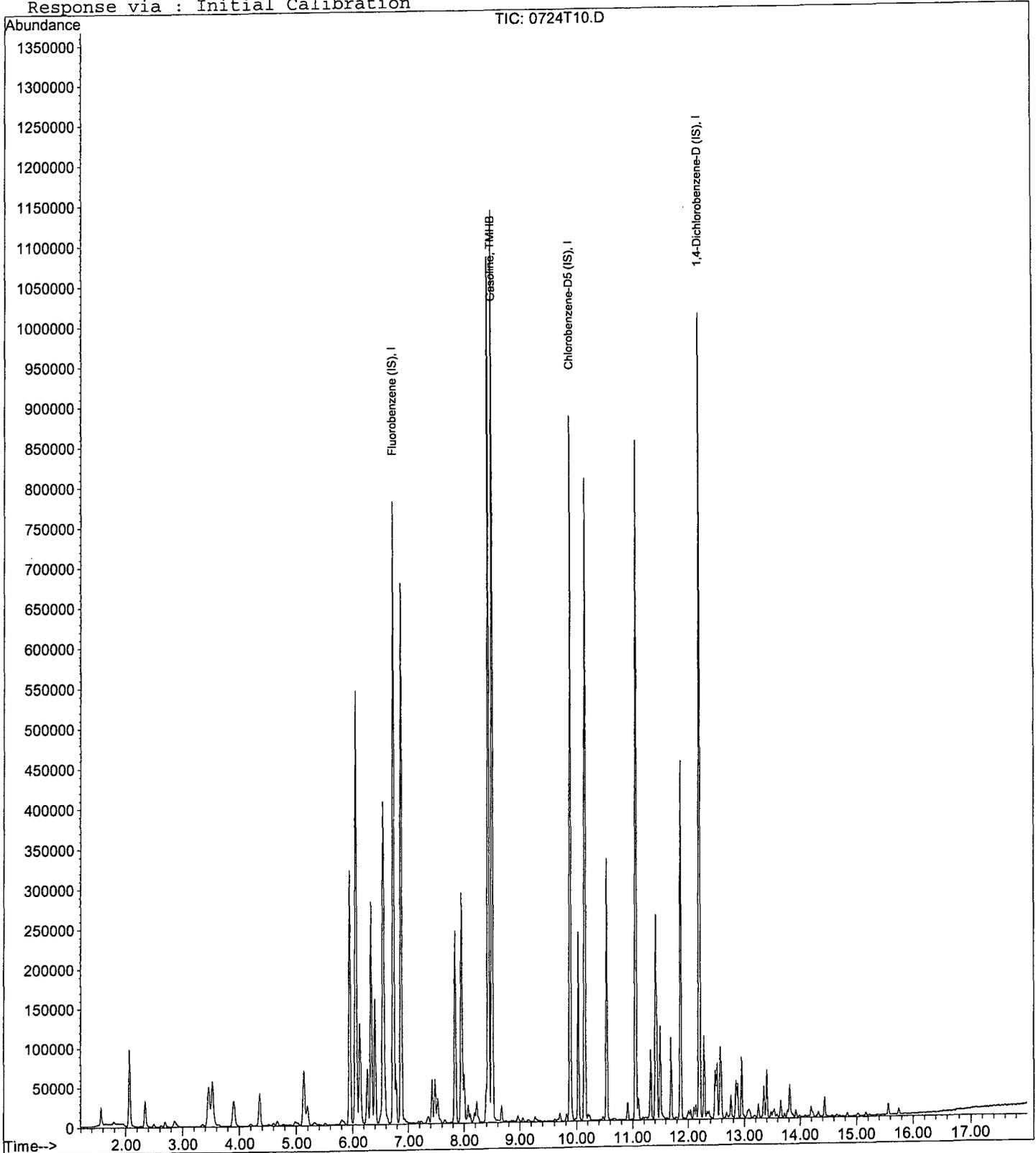
Data File : M:\THOR\DATA\T120724\0724T10.D
Acq On : 24 Jul 12 20:15
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 14:48 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

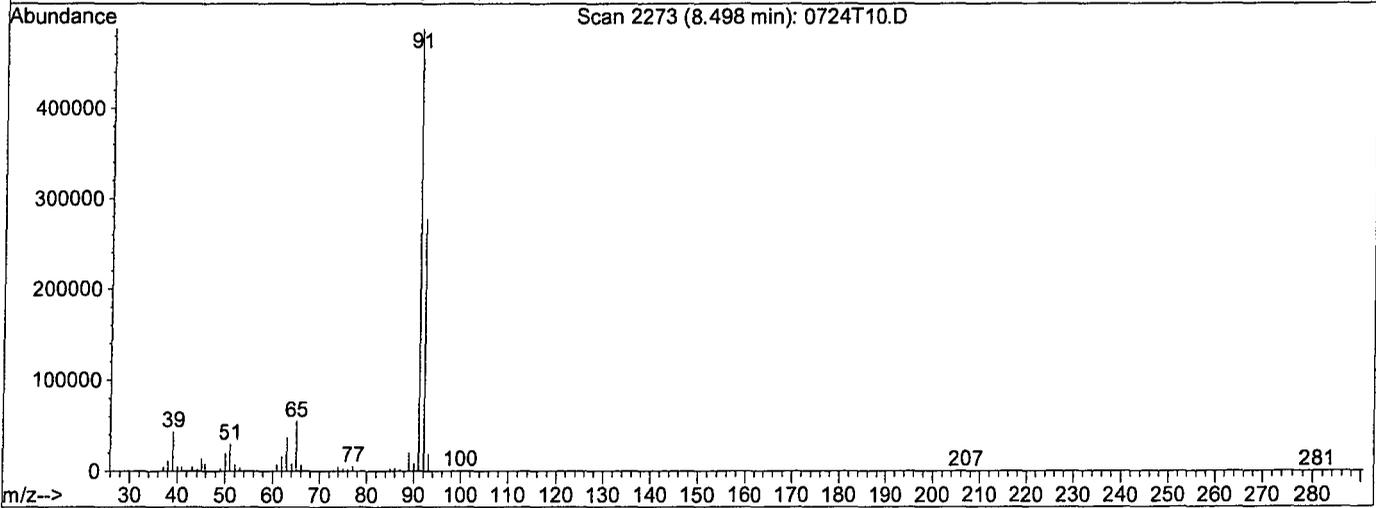
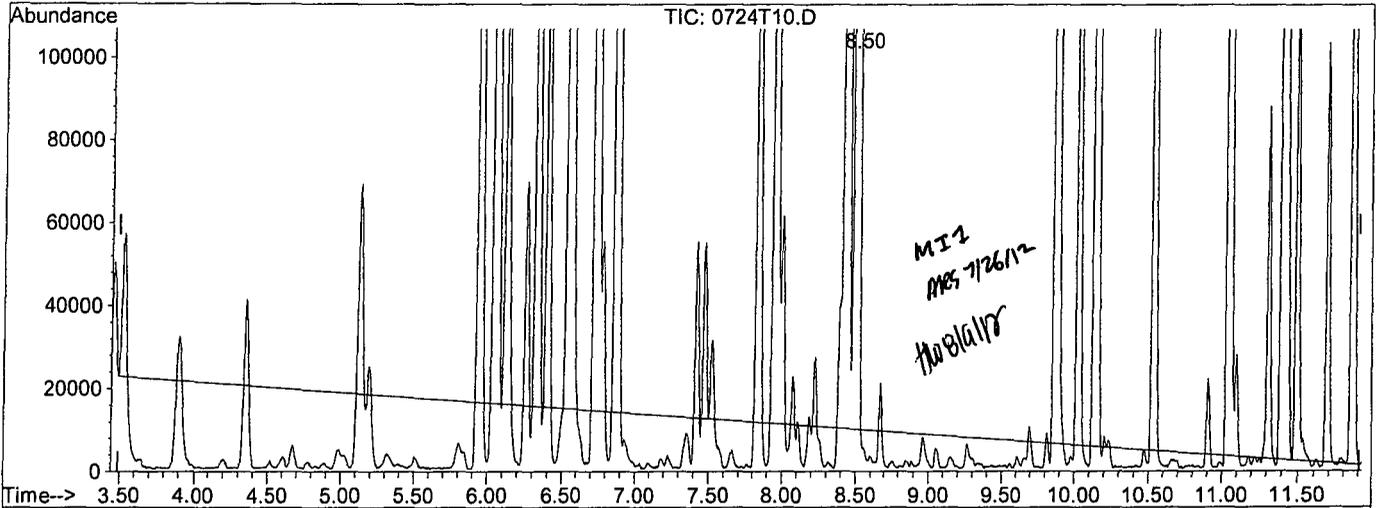


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D
 Acq On : 24 Jul 12 20:15
 Sample : LCS gas 300ug/L (SS)
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 9
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T10.D

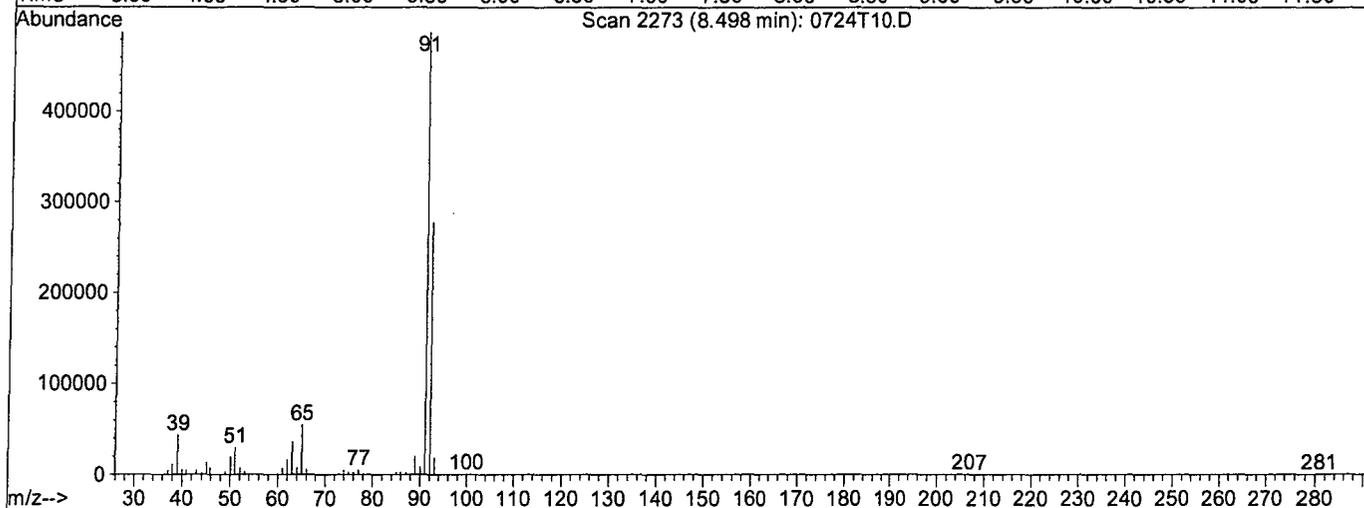
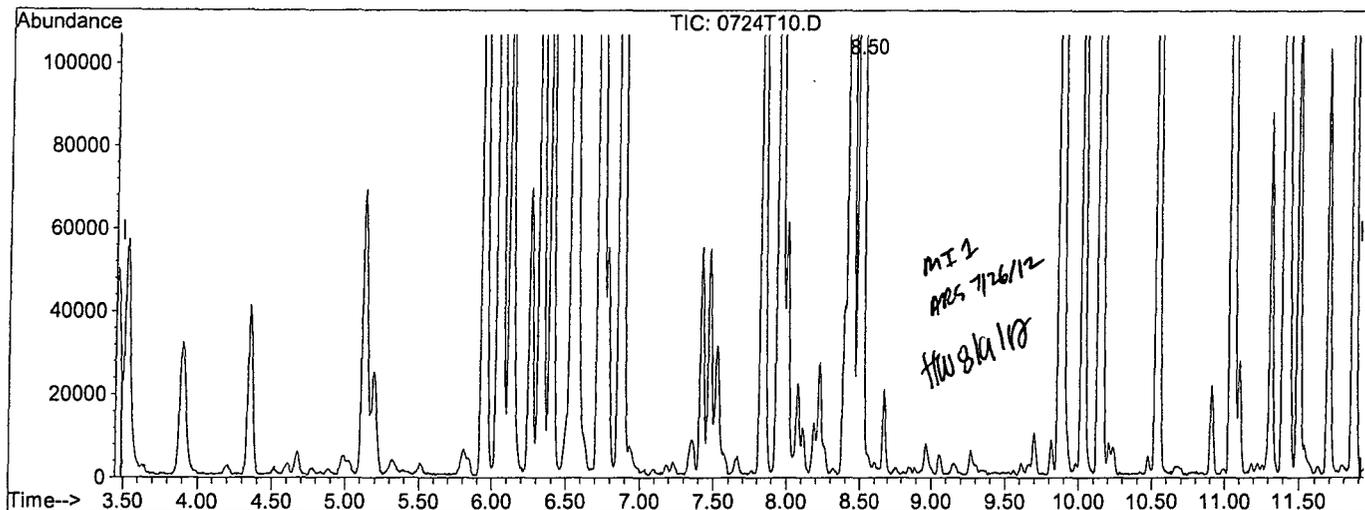
(2) Gasoline (TMHB)		
8.50min	344.3603ppb m	
response	17196555	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.56#
0.00	0.00	1.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D
 Acq On : 24 Jul 12 20:15
 Sample : LCS gas 300ug/L (SS)
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:48 2012

Vial: 9
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T10.D

(2) Gasoline (TMHB)		
8.50min	418.7300ppb m	
response	19788320	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.49#
0.00	0.00	1.42#
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: 68248
Date Analyzed: 07/24/12
Instrument: Thor
Initial Cal. Date: 07/24/12
Data File: 0724T09.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	3.495	2.089	40	TMHBL	37 *
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Average

40.0

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120724\0724T09.D Vial: 8
 Acq On : 24 Jul 12 19:48 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 14:47 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	776087	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	877174	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1014328	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.43	TIC	19450673m	409.50667	ppb	100

Quantitation Report

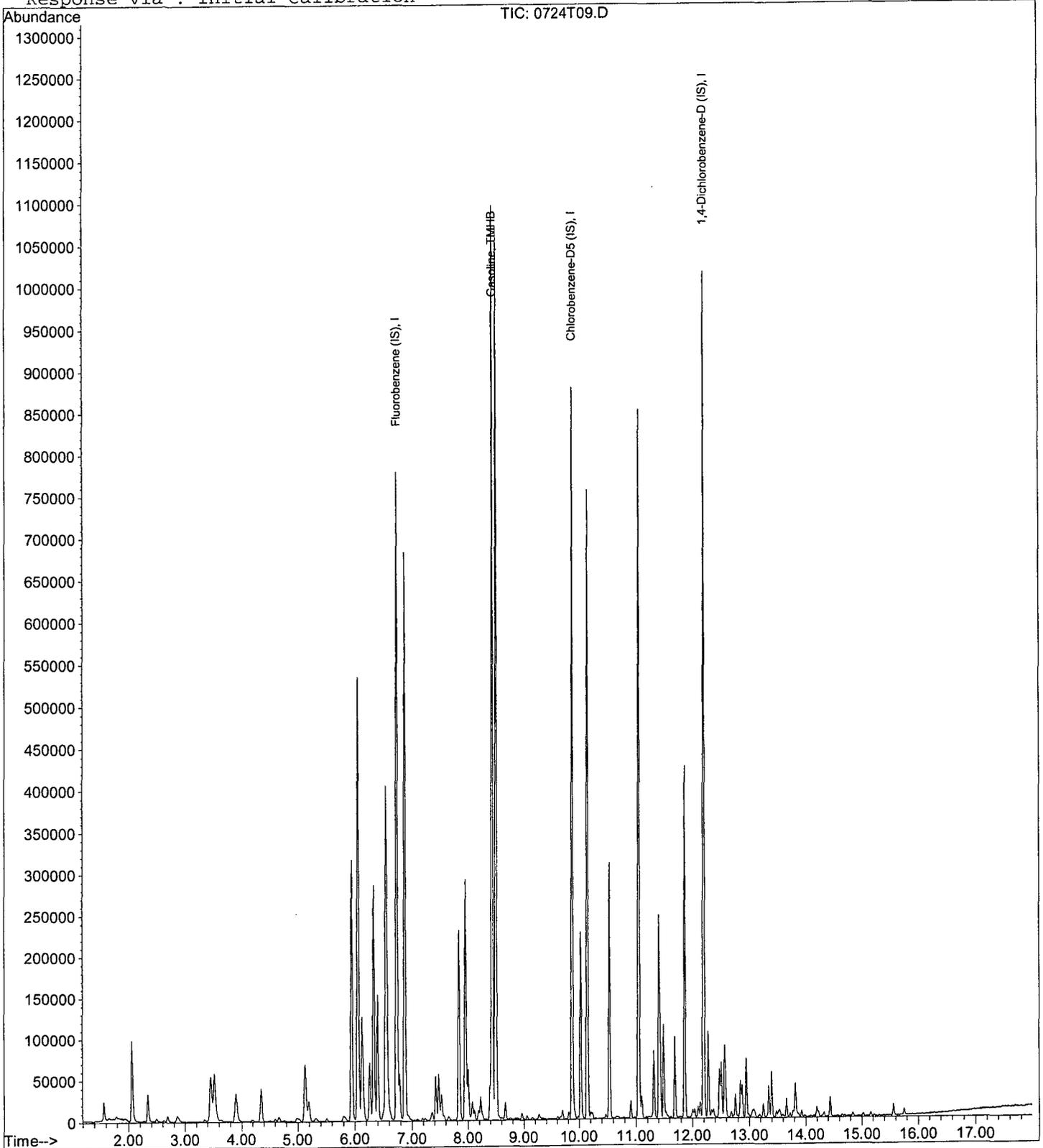
Data File : M:\THOR\DATA\T120724\0724T09.D
Acq On : 24 Jul 12 19:48
Sample : CCV gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 14:47 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

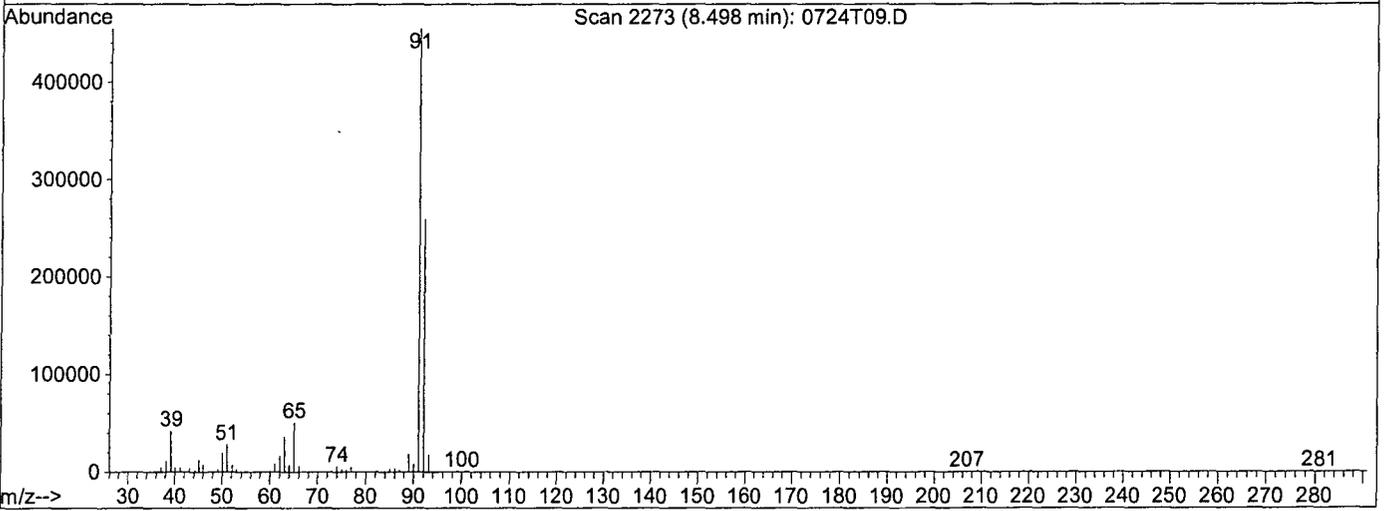
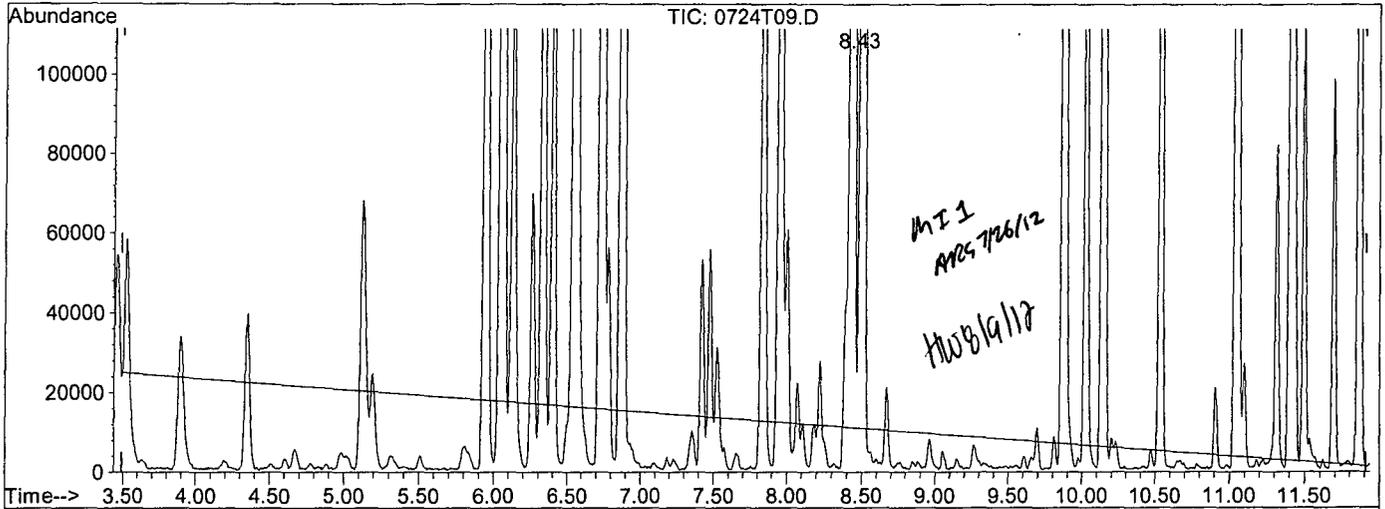


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T09.D
 Acq On : 24 Jul 12 19:48
 Sample : CCV gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 8
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T09.D

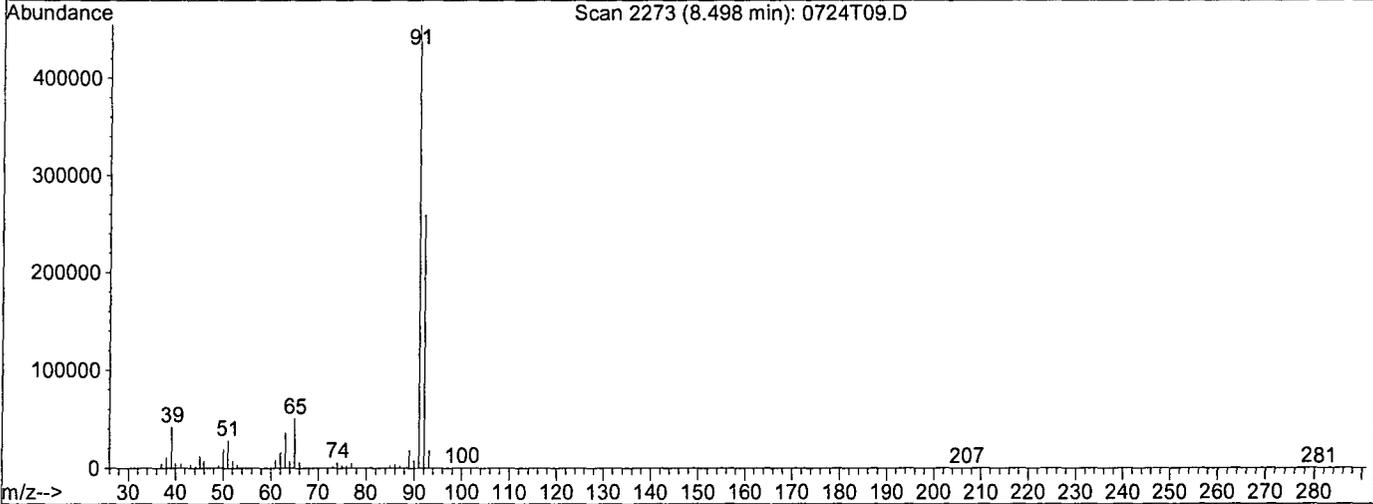
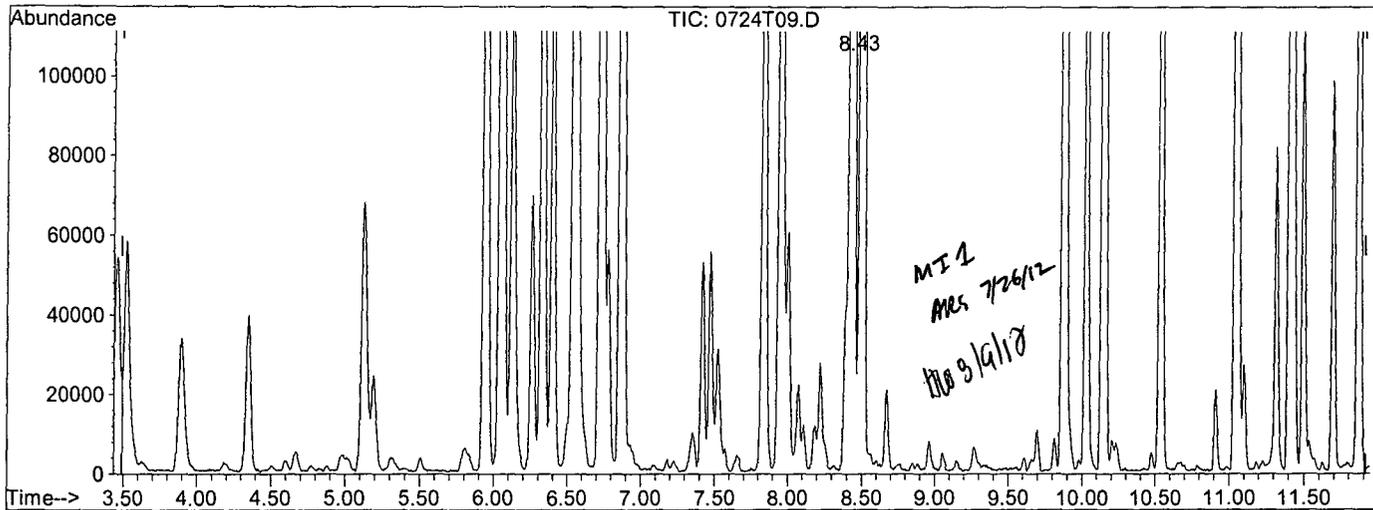
(2) Gasoline (TMHB)		
8.50min	338.2810ppb m	
response	16970545	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.57#
0.00	0.00	1.67#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T09.D
 Acq On : 24 Jul 12 19:48
 Sample : CCV gas 300ug/L
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:47 2012

Vial: 8
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T09.D

(2) Gasoline (TMHB)		
8.43min	409.5067ppb m	
response	19450673	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.50#
0.00	0.00	1.46#
0.00	0.00	0.00

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: 120719W-65041 - 169331
 Batch ID: #86RHB-120719AT

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

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	07/20/12	07/20/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/20/12	07/20/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/20/12	07/20/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/20/12	07/20/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/20/12	07/20/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/20/12	07/20/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/20/12	07/20/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/20/12	07/20/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/20/12	07/20/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/20/12	07/20/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/20/12	07/20/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/20/12	07/20/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/20/12	07/20/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/20/12	07/20/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/20/12	07/20/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/20/12	07/20/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/20/12	07/20/12

Quant Method: TALLW.M
 Run #: 0719T38
 Instrument: Thor
 Sequence: T120719
 Initials: HW

Printed: 07/31/12 9:19:22 AM
 GC SC-Blank-REG MDLs

Method Blank
EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120719W-65041 - 169331**
 Batch ID: #86RHB-120719AT

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

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	07/20/12	07/20/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/20/12	07/20/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/20/12	07/20/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/20/12	07/20/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/20/12	07/20/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/20/12	07/20/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/20/12	07/20/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/20/12	07/20/12
BLANK	SURROGATE: DIBROMOFLUOR	100	85-115			%	07/20/12	07/20/12
BLANK	SURROGATE: TOLUENE-D8 (S)	99.7	85-120			%	07/20/12	07/20/12

Quant Method: TALLW.M
 Run #: 0719T38
 Instrument: Thor
 Sequence: T120719
 Initials: HW

Printed: 07/31/12 9:19:22 AM
 GC SC-Blank-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T38.D
Acq On : 20 Jul 12 2:18
Sample : 120719A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 38
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 23 10:44 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	441792	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	355584	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	206976	25.00000	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
31) Dibromofluoromethane(S)	5.95	111	220986	31.96459	ppb	0.00
Spiked Amount				31.881		
					Recovery = 100.263%	
36) 1,2-DCA-D4(S)	6.33	65	221504	34.47528	ppb	0.00
Spiked Amount				33.647		
					Recovery = 102.462%	
56) Toluene-D8(S)	8.43	98	782720	37.23377	ppb	0.00
Spiked Amount				37.345		
					Recovery = 99.703%	
64) 4-Bromofluorobenzene(S)	11.05	95	294956	29.66906	ppb	0.00
Spiked Amount				29.515		
					Recovery = 100.521%	

Target Compounds

Qvalue

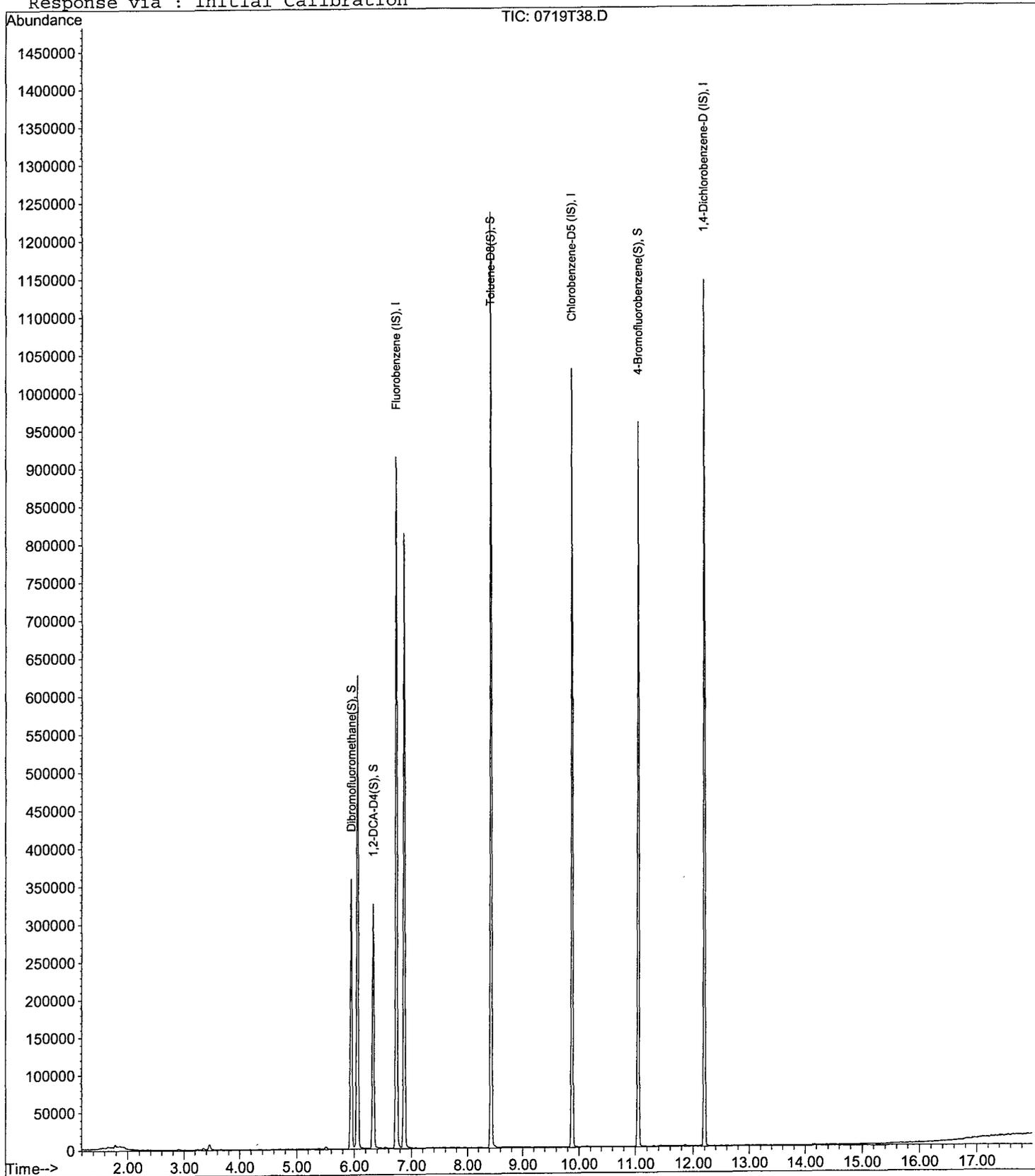
Data File : M:\THOR\DATA\T120719\0719T38.D
Acq On : 20 Jul 12 2:18
Sample : 120719A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 38
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 23 10:44 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\T120724\0724T13.D Vial: 12
 Acq On : 24 Jul 12 21:39 Operator: DG,RS,HW,ARS,SV
 Sample : 120724A BLK-1WT Inst : Thor
 Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:49 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	740452	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	841778	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	916024	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.43	TIC	9145730m	126.20391	ppb	ND 100

*No gasoline pattern detected.
 HRS 7/26/12*

Quantitation Report

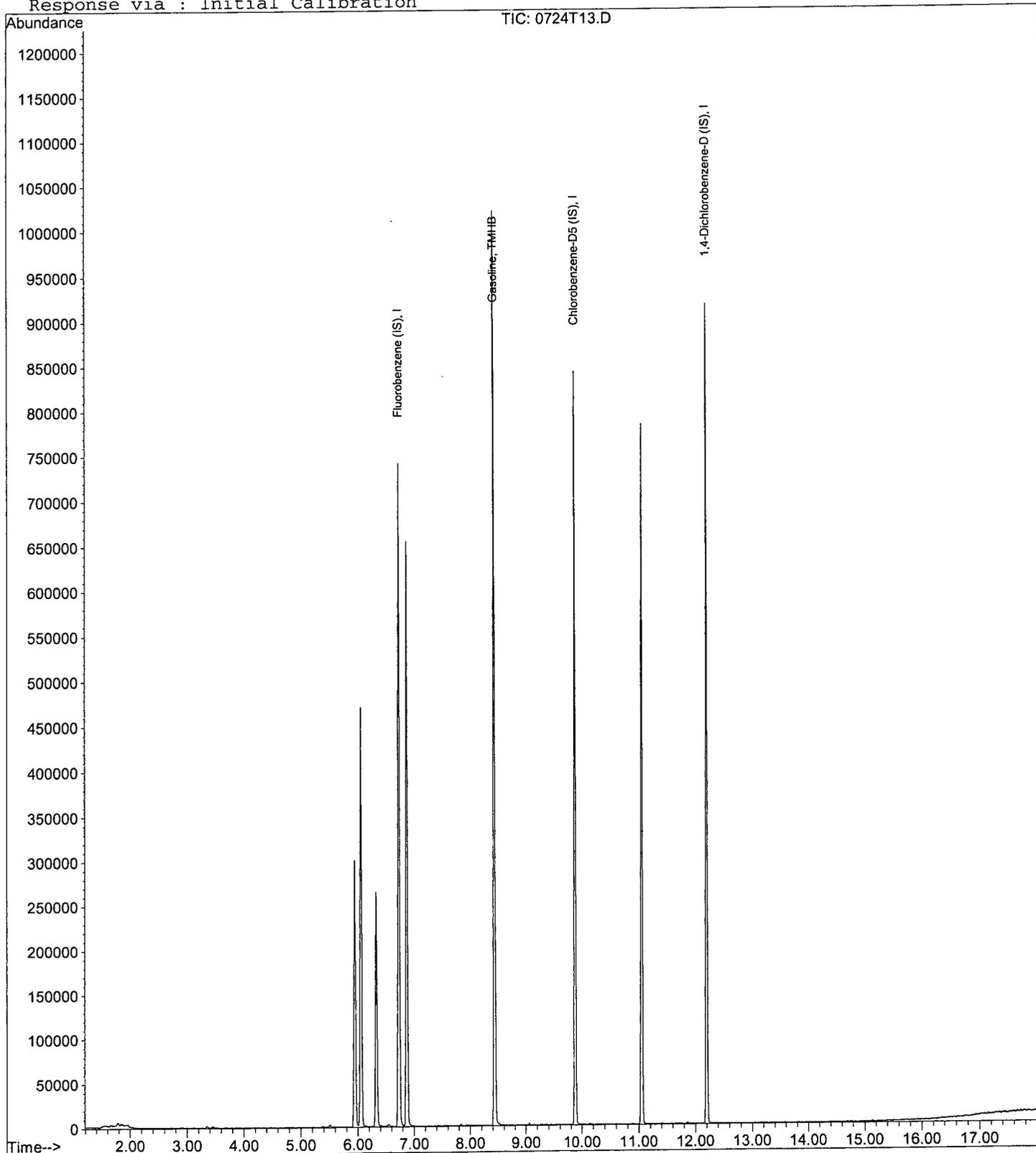
Data File : M:\THOR\DATA\T120724\0724T13.D
Acq On : 24 Jul 12 21:39
Sample : 120724A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 14:49 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

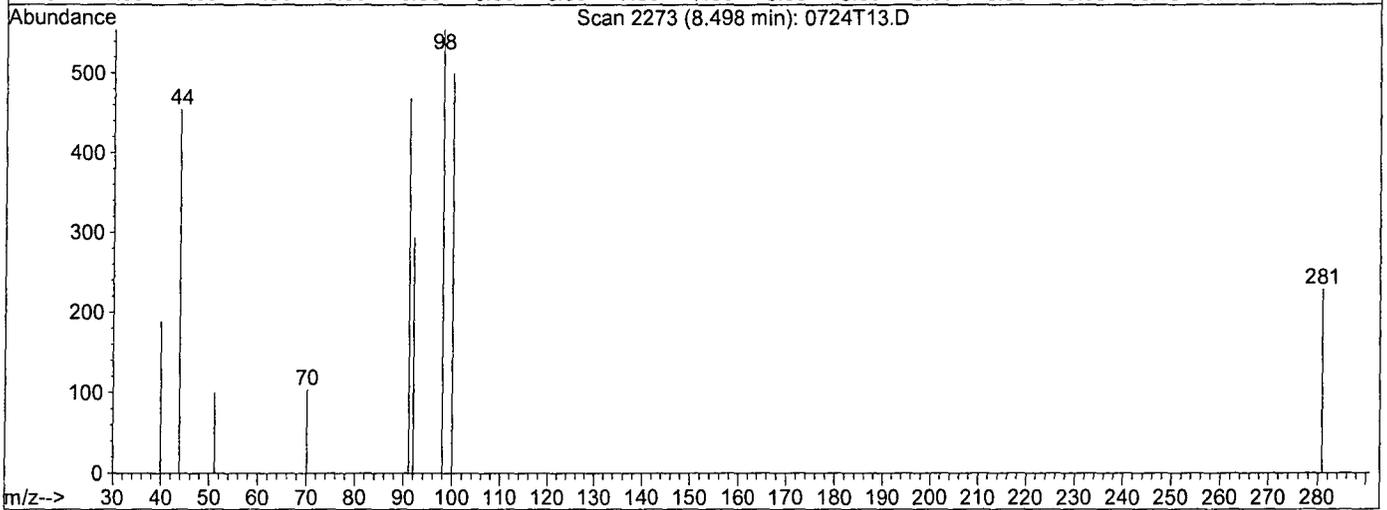
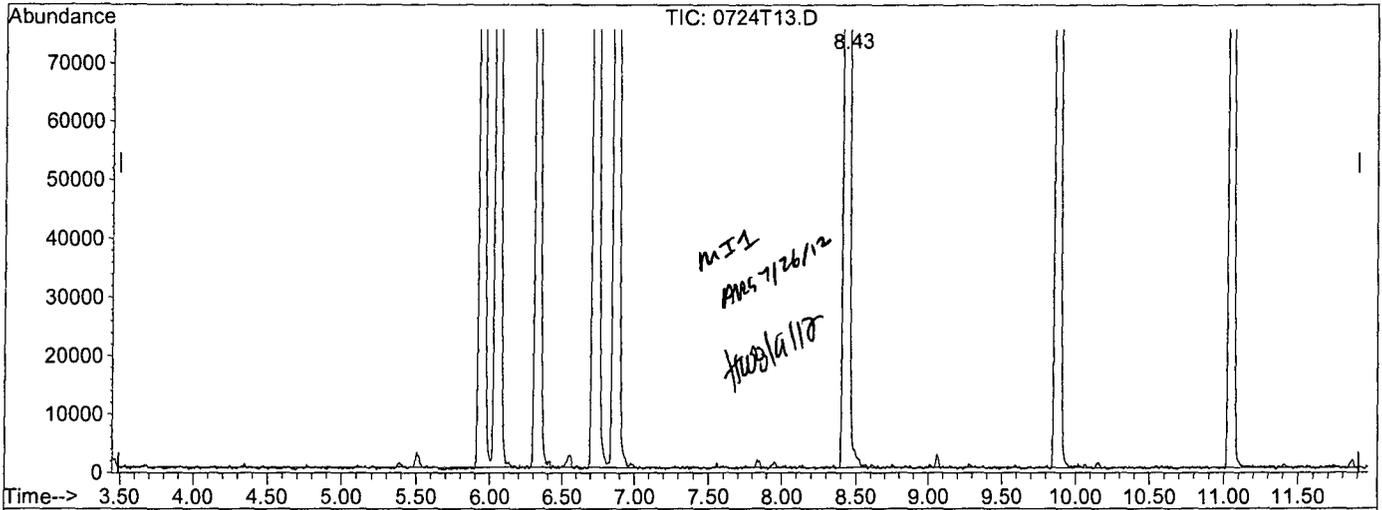


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T13.D
 Acq On : 24 Jul 12 21:39
 Sample : 120724A BLK-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 12
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T13.D

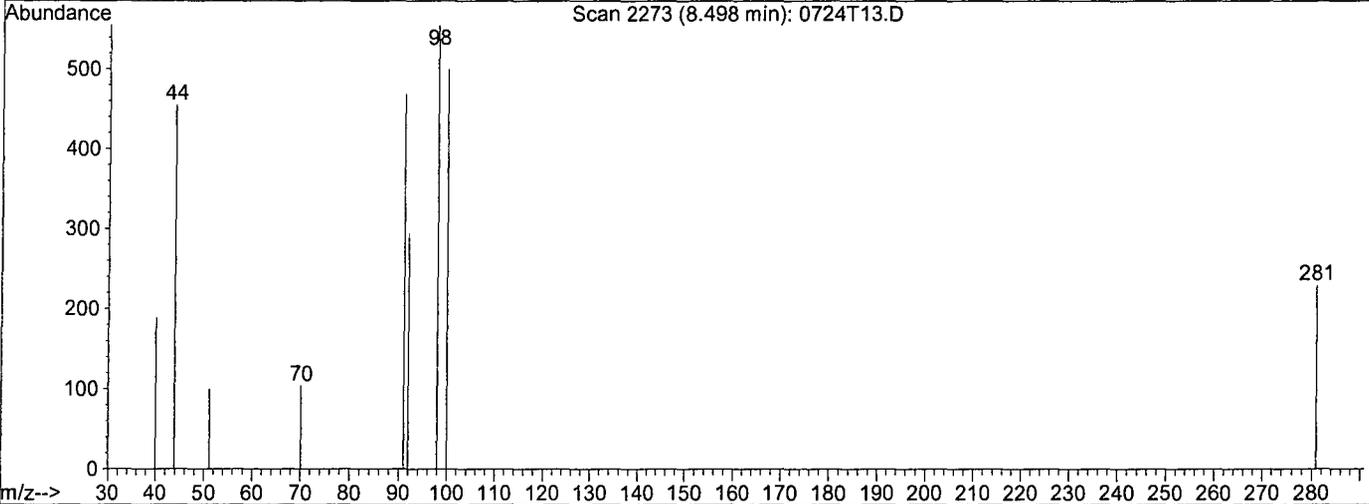
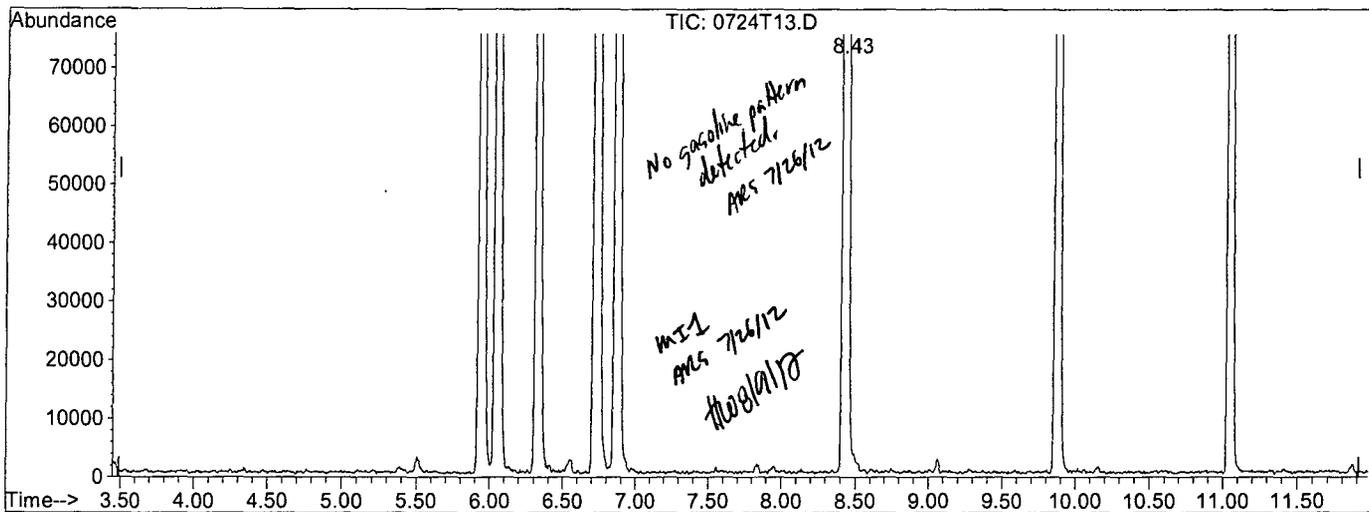
(2) Gasoline (TMHB)		
8.50min	63.6707ppb m	
response	7068262	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.24#
0.00	0.00	3.65#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T13.D
 Acq On : 24 Jul 12 21:39
 Sample : 120724A BLK-1WT
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:49 2012

Vial: 12
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T13.D

(2) Gasoline (TMHB)		
8.43min	126.2039ppb m	
response	9145730	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.96#
0.00	0.00	2.82#
0.00	0.00	0.00

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: 120719W-65041 LCS - 169331
 Batch ID: #86RHB-120719AT

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	9.79	97.9	80-130
1,1,1-TRICHLOROETHANE	10.00	9.62	96.2	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.22	92.2	65-130
1,1,2-TRICHLOROETHANE	10.00	9.61	96.1	75-125
1,1-DICHLOROETHANE	10.00	10.1	101	70-135
1,1-DICHLOROETHENE	10.00	9.64	96.4	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	9.98	99.8	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.1	101	50-130
1,2-DIBROMOETHANE	10.00	9.79	97.9	70-130
1,2-DICHLOROBENZENE	10.00	9.83	98.3	70-120
1,2-DICHLOROETHANE	10.00	9.76	97.6	70-130
1,2-DICHLOROPROPANE	10.00	10.1	101	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	18.7	93.5	70-130
1,4-DICHLOROBENZENE	10.00	9.82	98.2	75-125
2-BUTANONE	10.00	10.3	103	30-150
4-METHYL-2-PENTANONE	10.00	10.2	102	60-135
ACETONE	10.00	11.8	118	40-140
BENZENE	10.00	9.47	94.7	80-120
BROMODICHLOROMETHANE	10.00	9.57	95.7	75-120
BROMOFORM	10.00	9.70	97.0	70-130
BROMOMETHANE	10.00	9.36	93.6	30-145
CARBON TETRACHLORIDE	10.00	10.0	100	65-140
CHLOROBENZENE	10.00	9.82	98.2	80-120
CHLORODIBROMOMETHANE	10.00	9.73	97.3	60-135
CHLOROETHANE	10.00	9.84	98.4	60-135
CHLOROFORM	10.00	9.60	96.0	65-135
CHLOROMETHANE	10.00	9.80	98.0	40-125
CIS-1,2-DICHLOROETHENE	10.00	9.99	99.9	70-125
ETHYLBENZENE	10.00	10.1	101	75-125

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/19/12
Analysis Date :	07/19/12
Instrument :	Thor
Run :	0719T31
Initials :	HW

Printed: 07/31/12 9:19:15 AM
 APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: 120719W-65041 LCS - 169331

Batch ID: #86RHB-120719AT

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE	300	419	140 #	75-125
HEXACHLOROBUTADIENE	10.00	9.23	92.3	50-140
METHYL TERT-BUTYL ETHER	10.00	9.48	94.8	65-125
METHYLENE CHLORIDE	10.00	9.45	94.5	55-140
STYRENE	10.00	10.4	104	65-135
TETRACHLOROETHENE	10.00	10.1	101	45-150
TOLUENE	10.00	10.1	101	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.79	97.9	60-140
TRICHLOROETHENE	10.00	10.6	106	70-125
VINYL CHLORIDE	10.00	10.1	101	50-145
XYLENES (TOTAL)	30.0	31.3	104	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	32.9	97.8	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.2	102	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	31.3	98.2	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	36.6	98.0	85-120

= Recovery is outside QC limits.

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	TALLW.M
Extraction Date :	07/19/12
Analysis Date :	07/19/12
Instrument :	Thor
Run :	0719T31
Initials :	HW

Printed: 07/31/12 9:19:15 AM

APPL Standard LCS

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

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

Algorithm Check: (91788)(25) CI = 10.10522903 ✓
 (459584)(0.4941) Qvalue ARS 7/27/12

(#) = qualifier out of range (m) = manual integration
 0719T31.D TALLW.M Fri Jul 20 10:53:41 2012

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

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</u>	ppb	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</u>	ppb	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

*1,3-dichloropropene, total:
18.71192 ppb*

MRS 7/27/12

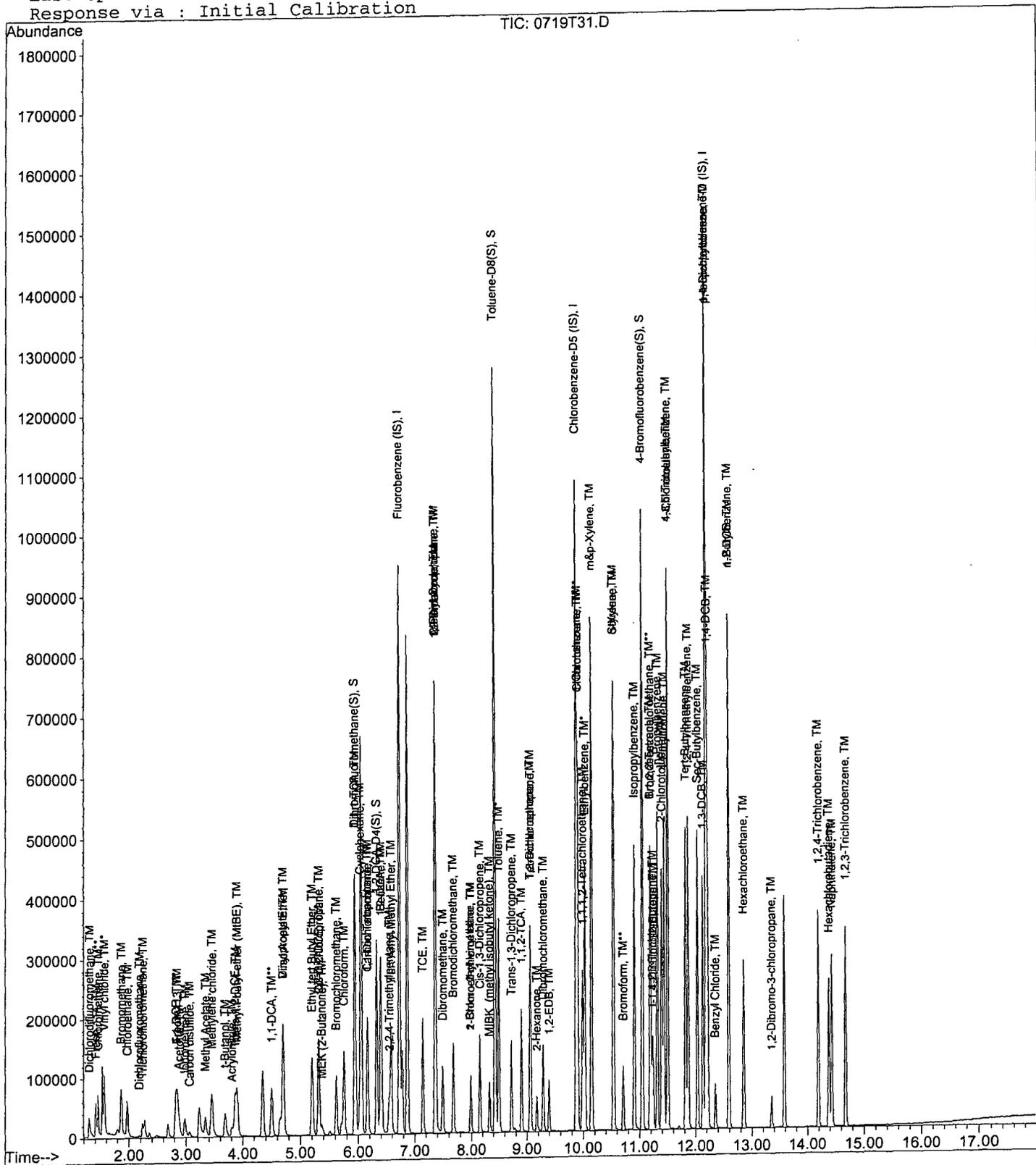
Data File : M:\THOR\DATA\T120719\0719T31.D
Acq On : 19 Jul 12 23:03
Sample : 120719A LCS-1WT (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

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



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120724\0724T10.D Vial: 9
 Acq On : 24 Jul 12 20:15 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 14:48 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120724\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	776734	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	880394	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1005627	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Gasoline	8.50	TIC	19788320m	418.73004	ppb	100

Quantitation Report

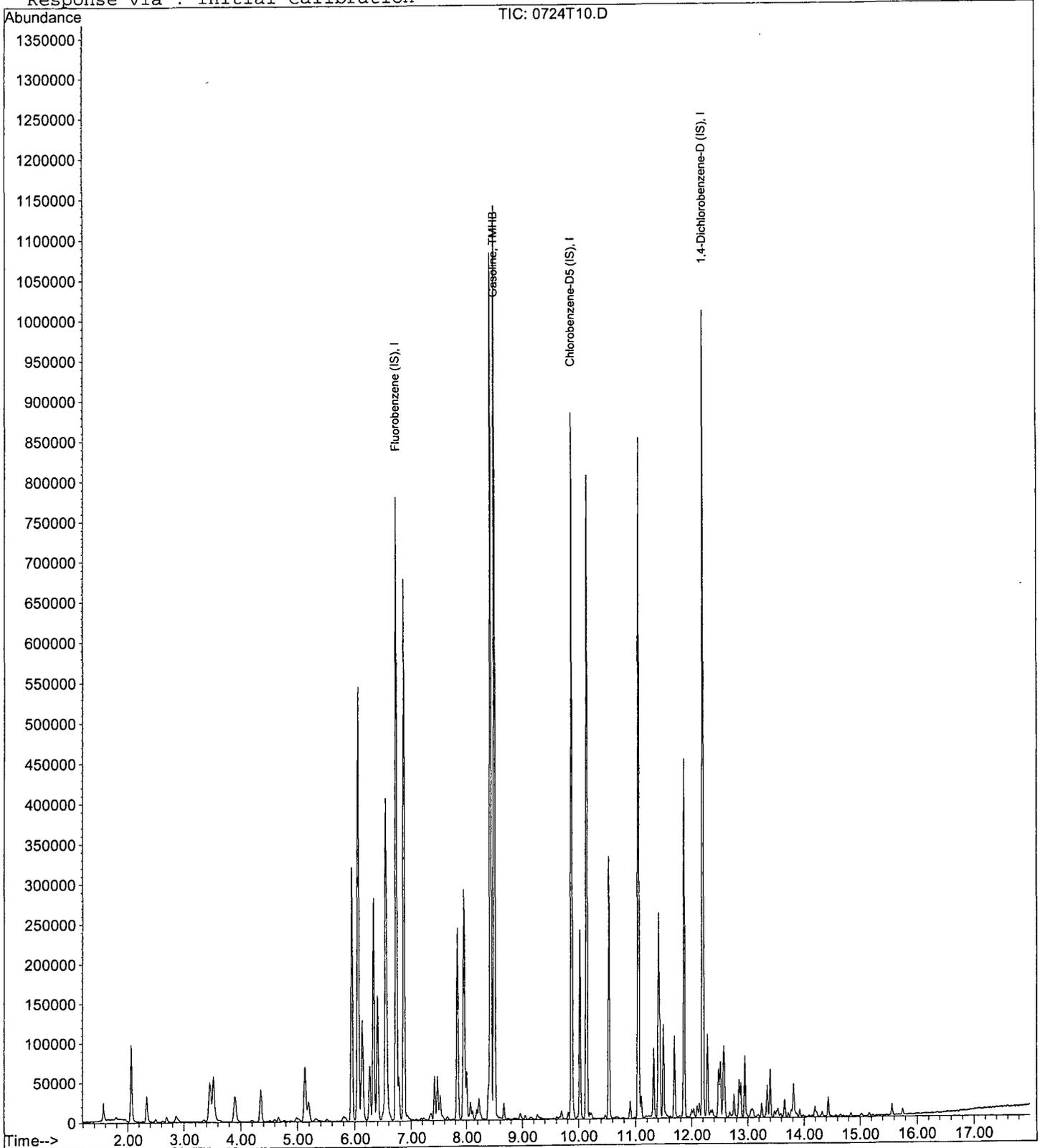
Data File : M:\THOR\DATA\T120724\0724T10.D
Acq On : 24 Jul 12 20:15
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 14:48 2012

Quant Results File: TGAS.RES

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

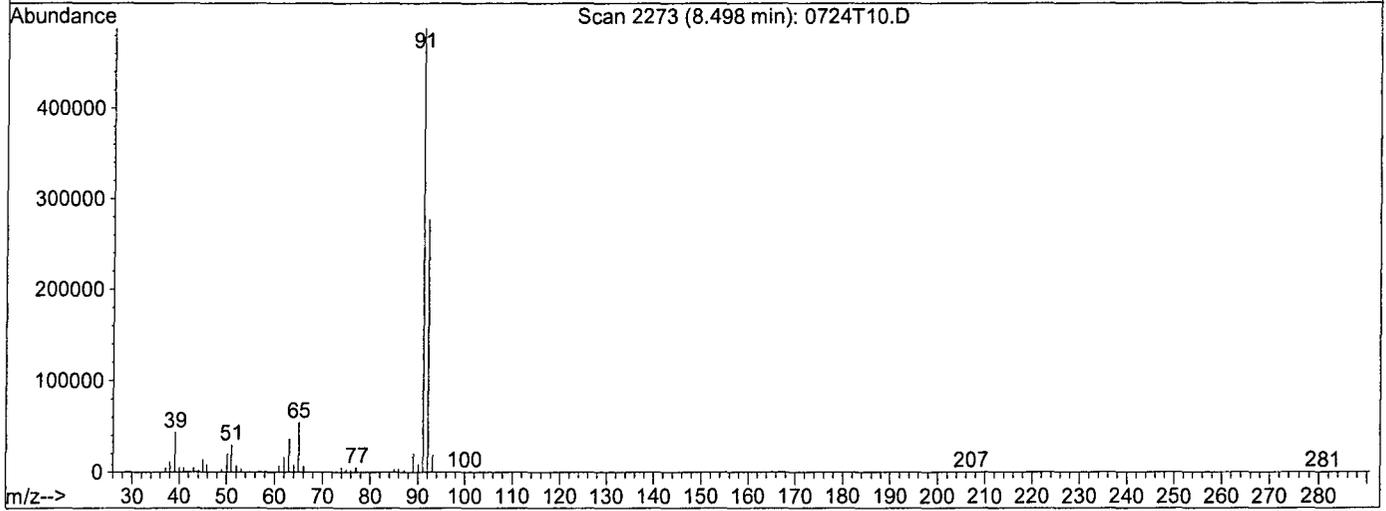
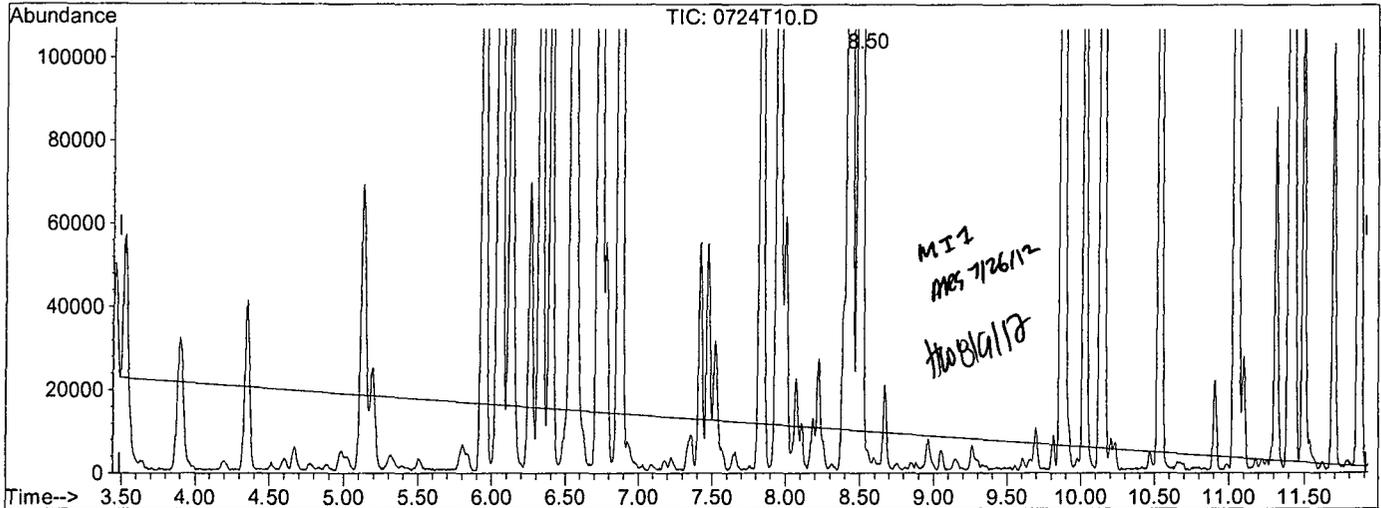


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D
 Acq On : 24 Jul 12 20:15
 Sample : LCS gas 300ug/L (SS)
 Misc : 10ml w/5ul of IS&S: 06-7-12
 Quant Time: Jul 26 14:28 2012

Vial: 9
 Operator: DG,RS,HW,ARS,SV
 Inst : Thor
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
 Title : METHOD 8260B
 Last Update : Wed Jul 25 08:14:32 2012
 Response via : Single Level Calibration



TIC: 0724T10.D

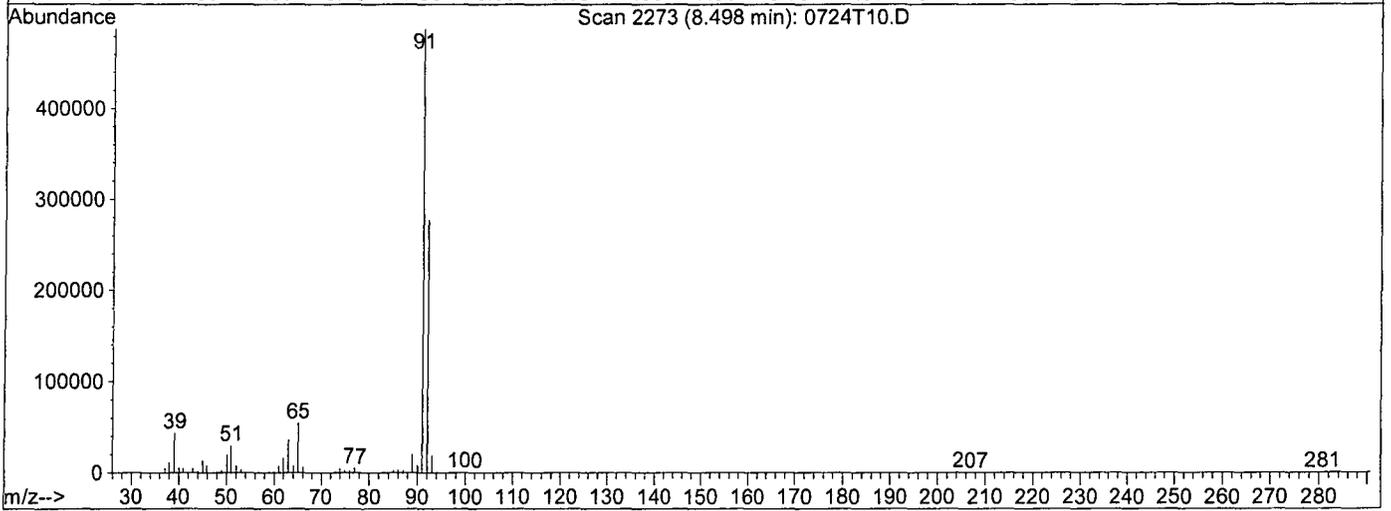
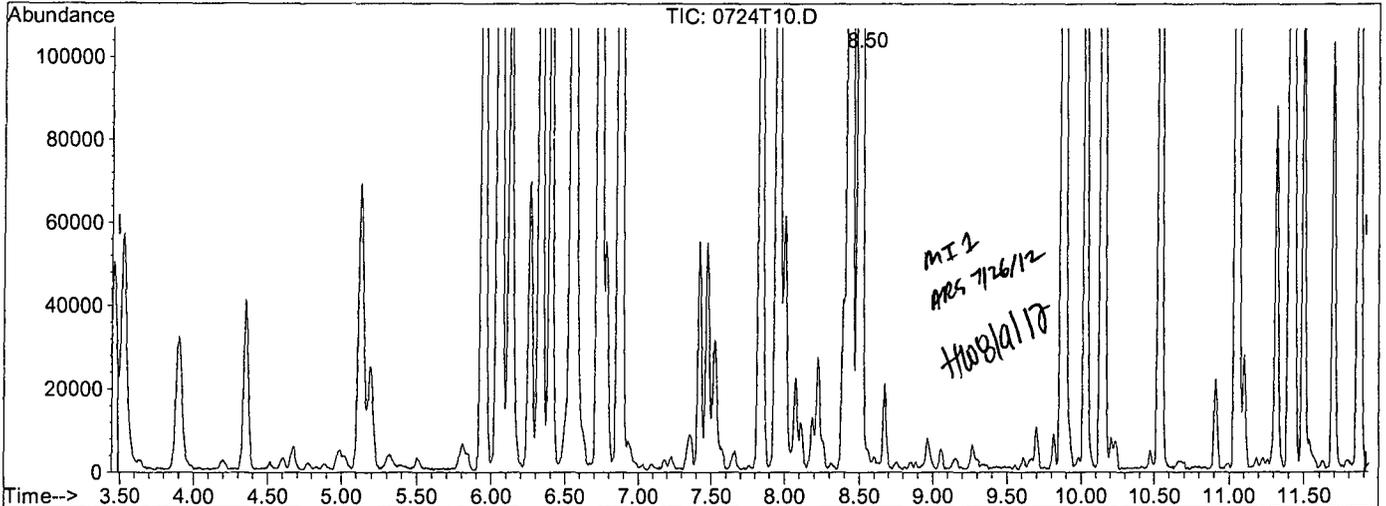
(2) Gasoline (TMHB)		
8.50min	344.3603ppb m	
response	17196555	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.56#
0.00	0.00	1.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D
Acq On : 24 Jul 12 20:15
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12
Quant Time: Jul 26 14:48 2012

Vial: 9
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00
Quant Results File: temp.res

Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration



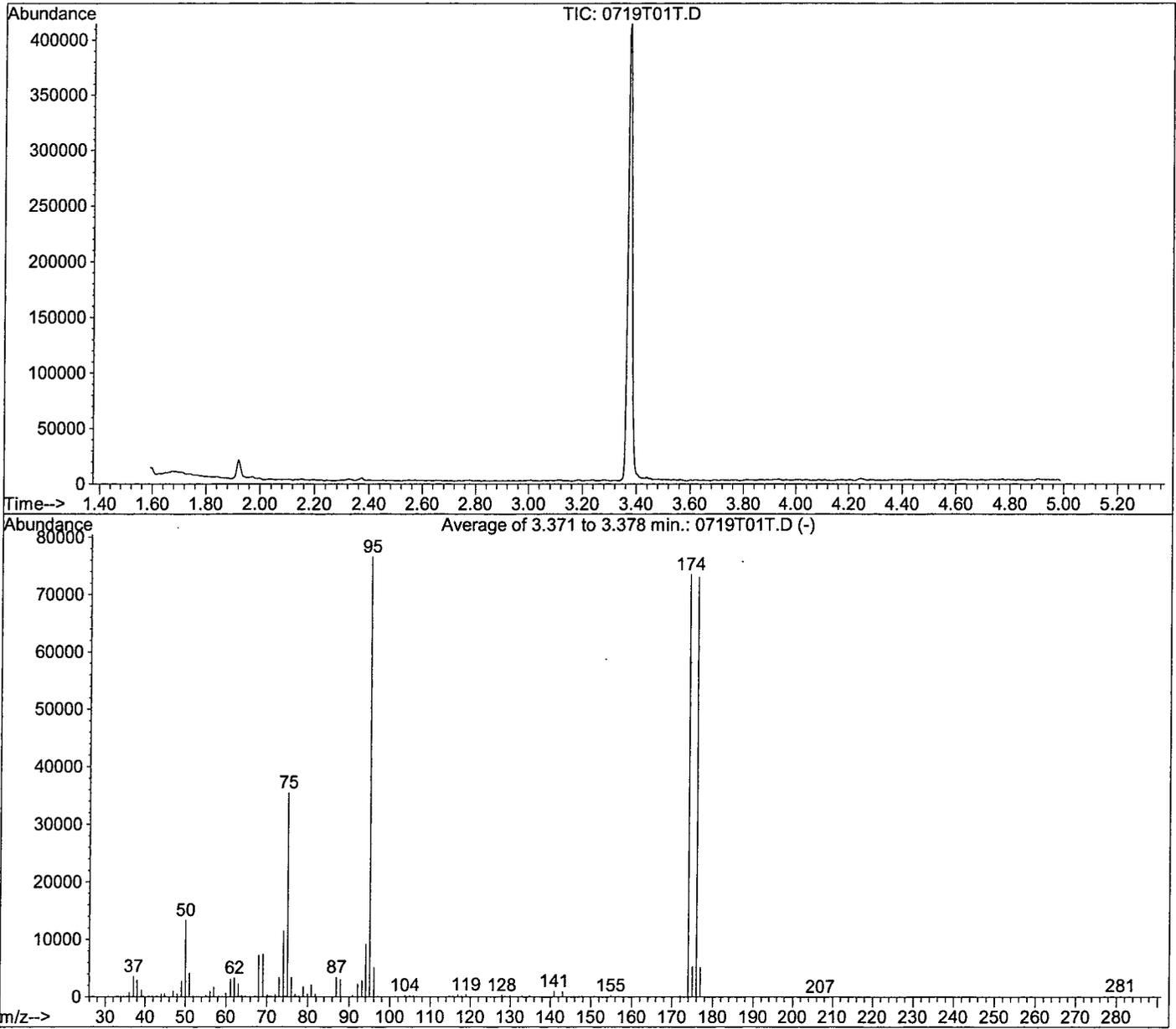
TIC: 0724T10.D

(2) Gasoline (TMHB)		
8.50min	418.7300ppb m	
response	19788320	
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.49#
0.00	0.00	1.42#
0.00	0.00	0.00

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



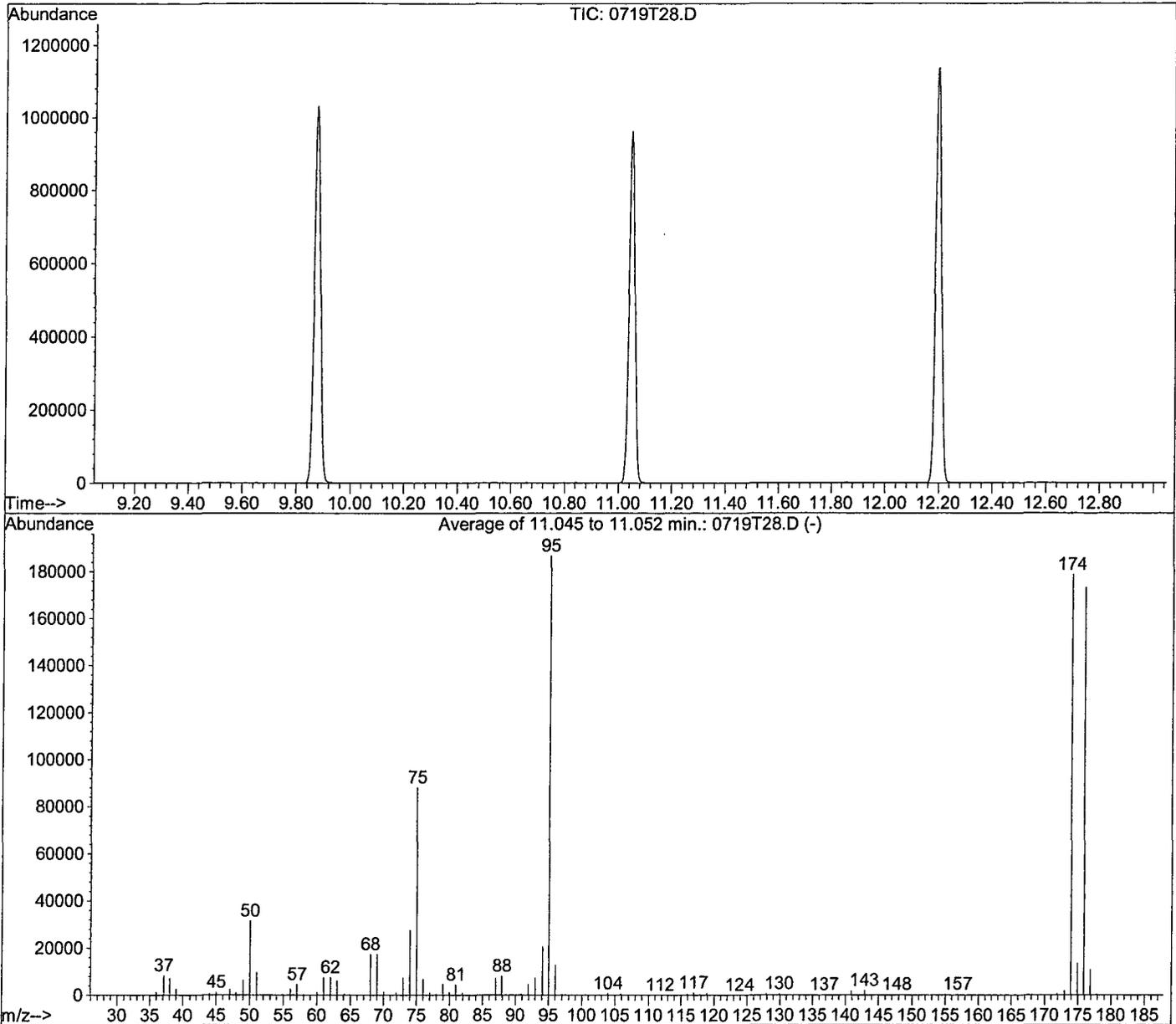
AutoFind: Scans 554, 555, 556; Background Corrected with Scan 544

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

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

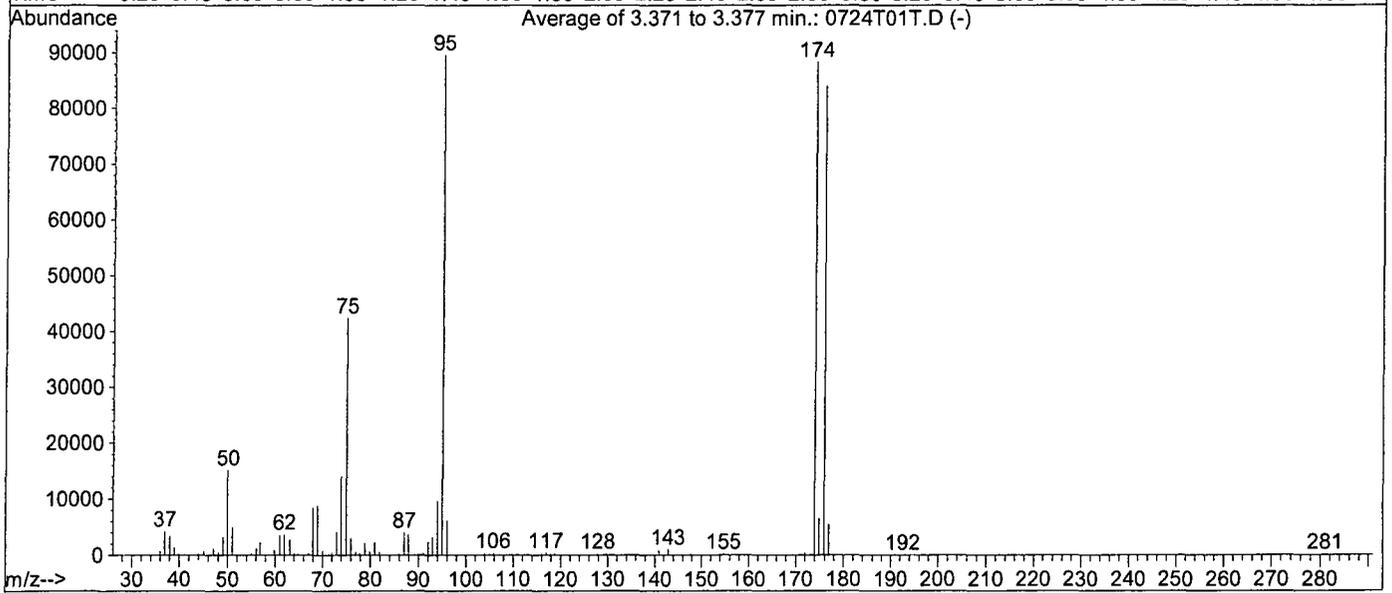
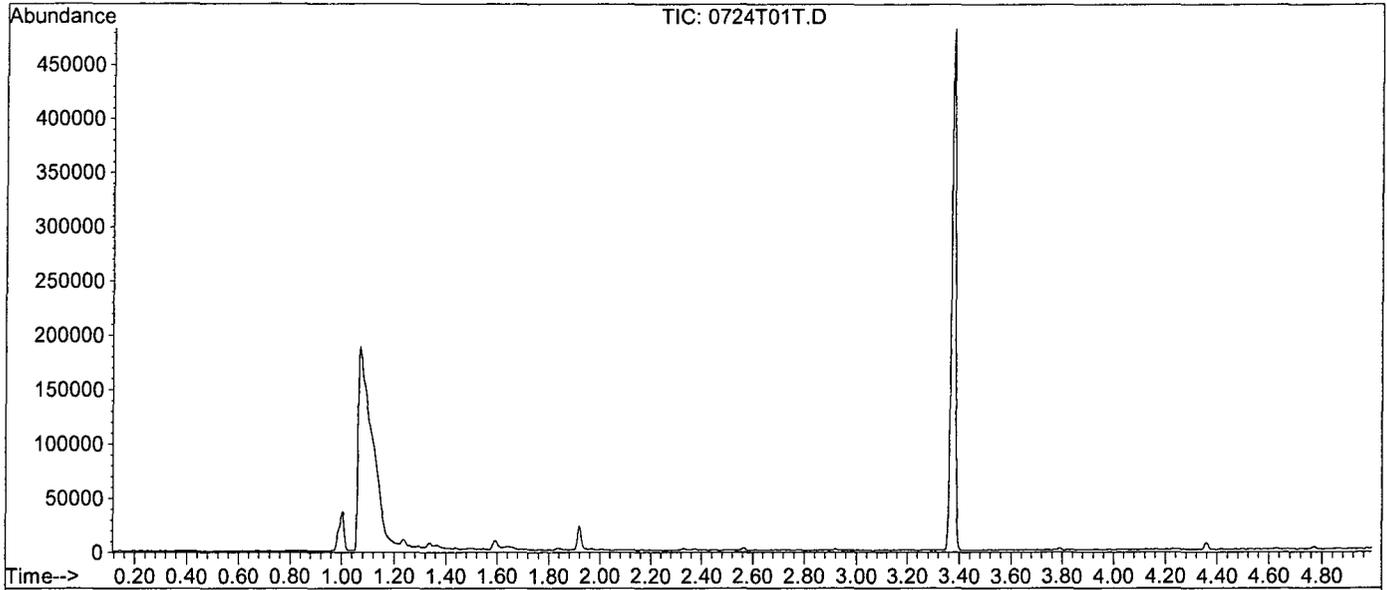
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	31552	PASS
75	95	30	60	47.3	88245	PASS
95	95	100	100	100.0	186709	PASS
96	95	5	9	6.8	12716	PASS
173	174	0.00	2	1.0	1785	PASS
174	95	50	100	95.8	178816	PASS
175	174	5	9	7.5	13428	PASS
176	174	95	101	96.9	173248	PASS
177	176	5	9	6.2	10814	PASS

BFB

Data File : M:\THOR\DATA\T120724\0724T01T.D
Acq On : 24 Jul 12 16:11
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\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 3.371 to 3.377 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	15177	PASS
75	95	30	60	47.3	42376	PASS
95	95	100	100	100.0	89616	PASS
96	95	5	9	6.8	6078	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	98.5	88291	PASS
175	174	5	9	7.4	6537	PASS
176	174	95	101	95.1	83963	PASS
177	176	5	9	6.5	5489	PASS

048

GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

6/09/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA											
Expiration Date:		06/09/12									
Date	Conc.	5ug/mL Vol Std #9	5ug/mL Surr	50ug/mL Vol Std #7	50ug/mL Vol Std #8	50ug/mL Surr	50ug/mL Vol Std #10	50ug/mL Vol Std #1	50ug/mL Vol Std #2	50ug/mL Vol Std #12	50ug/mL Vol Std #12
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	Exp:06-09-12
06-08-12A	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a	n/a
06-08-12B	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a	n/a
06-08-12C	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a	n/a
06-08-12D	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a	n/a
06-08-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	n/a	5
06-08-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	n/a	10
06-08-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	n/a	20

6/11/12 RS

250ug/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

6/11/12 RS

06-11-12A							
25ug/ml BFB STD							
Conc.	Date		EXP:				
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 BFB STD							
Conc.	Date		EXP:				
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 BFB STD							
Conc.	Date		EXP:				
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

6/11/12 RS

Volatile Standard Curve	
Date	Conc. 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

6/11/12 RS

D-

Method 8260 Internal Standard Solution, 2,000 mg/L, 1 ml
 120302-03
 Lot# 166255 Storage 5-10 Degrees C Expiry 11/18/12
 Solv: P/T Methanol
 Method 8260 Internal Standard
 Lot #: 166255 - 29275
 Rec: 8/5/11 MFR exp. 11/18/12

RS

6/11/12 RS

E-

Fluorobenzene Solution, 2,000 mg/L, 1 ml
 829132-02
 Lot# 169170 Storage 5-6 Degrees C Expiry 2/13/14
 Solv: P/T Methanol
 Fluorobenzene
 Lot #: 169170 - 28869
 Rec: 5/25/11 MFR exp. 02/13/14

RS

Volatile Standard Curve	
Date	Conc. 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

Method 8260B Surrogate
Solution, 2,000 mg/L, 1 ml

Lot# 120002-01
Storage Expiry
185763 < 10 Degrees C 2/19/15
Solv: P/T MeOHanol

Method 8260B Surrogate
Lot #: 185763 - 30467
Rec: 2/20/12 MFR exp 02/19/15

6/11/12
RS

F-

#2	50µg/mL Vol Std #12
	06-02-12AB
	Exp:06-09-12
	n/a
	n/a
	n/a
	n/a
	5
	10
	20

mL TBA	Final Vol
2-12AE	w/P&T H2O
6-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

Thor						
06-11-12G						
50ug/ml 8260 Internal Standard						
Supplier			ID #	Conc.	Date	Exp.
O2SI			120302-03	Internal Standard Mix	2000	166255-29275
O2SI			020132-02	Fluorobenzene Standard	2000	169170-28869
J.T Baker				Purge & Trap MeOH	K14E06-00626	06/11/12
06-11-12H						
50ug/ml 8260B Surrogate-Thor						
Supplier			ID #	Conc.	Date	Exp.
O2SI			8260B Surr	Surrogate Standards	2000	178653-30467
J.T Baker				Purge & Trap MeOH	K14E06-00626	06/11/12

P:	u1
1/12	20
8/12	1980

6/11/12
RS

P:	u1
1/12	20

8/12	1980
------	------

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Expiration Date											
06/12/12			06/12/12								
Date	Conc.	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	5µg/mL Vol Std #12
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	Exp:06-09-12
06-11-12I	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3	3
06-11-12J	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5	5
06-11-12K	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10	10
06-11-12L	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20	20
06-11-12M	5	n/a	n/a	5	5	10	n/a	5	5	n/a	n/a
06-11-12N	10	n/a	n/a	10	10	25	n/a	10	10	n/a	n/a
06-11-12O	20	n/a	n/a	20	20	40	n/a	20	20	n/a	n/a
06-11-12P	40	n/a	n/a	40	40	80	n/a	40	40	n/a	n/a
06-11-12Q	100	n/a	n/a	100	100	100	n/a	100	100	n/a	n/a

250µg/mL TAPD	Final Vol
06-02-12AE	w/P&T H2O
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 5mL Purge (8260 soil)-SWEETPEA

Expiration Date											
06/12/12			06/12/12								
Date	Conc.	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	5µg/mL Vol Std #12
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	Exp:06-09-12
06-11-12R	2	2	2	n/a	n/a	n/a	2	n/a	n/a	2	n/a
06-11-12S	5	5	5	n/a	n/a	n/a	5	n/a	n/a	5	n/a
06-11-12T	10	10	10	n/a	n/a	n/a	10	n/a	n/a	10	n/a
06-11-12U	20	20	20	n/a	n/a	n/a	20	n/a	n/a	20	n/a
06-11-12V	50	n/a	n/a	5	5	5	n/a	5	n/a	5	5
06-11-12W	100	n/a	n/a	10	10	10	n/a	10	n/a	10	10
06-11-12X	200	n/a	n/a	20	20	20	n/a	20	n/a	20	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

6/12/12
RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

Expiration Date:	07/12/12		07/05/12		07/05/12		07/05/12		07/05/12		07/05/12	
50µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Vol Std #6	50µg/mL Vol Std #5	50µg/mL Vol Std #4	50µg/mL Vol Std #3	50µg/mL Vol Std #2	50µg/mL Vol Std #1	50µg/mL Vol Std #12	50µg/mL Vol Std #11	50µg/mL Vol Std #10
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	07-05-12O	07-05-12P	07-05-12Q
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	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12
Code	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07-11-12E	2	2	n/a	n/a	n/a	2	n/a	2	n/a	2	n/a	2
07-11-12F	5	5	n/a	n/a	n/a	5	n/a	5	n/a	5	n/a	5
07-11-12G	10	10	n/a	n/a	n/a	10	n/a	10	n/a	10	n/a	10
07-11-12H	20	20	n/a	n/a	n/a	20	n/a	20	n/a	20	n/a	20
07-11-12I	n/a	n/a	5	5	5	n/a	5	n/a	5	n/a	5	n/a
07-11-12J	n/a	n/a	10	10	10	n/a	10	n/a	10	n/a	10	n/a

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

50ug/ml 524 Internal Standard w/ Surrogate	Conc.	Date	Exp.
ug/ml	Lot #	Code	Date
uL	uL	uL	uL
02SI	122450-02	524 Fortification Sol	10/10/12
J&T Baker		Purge & Trap MeOH	12/22/13
		K14E06-00643	07/09/12
			3800

Volatile Standard Curve Preparation for 10mL Purge (524 water)-CHICO

Expiration Date:	07/13/12		07/05/12		07/05/12		07/05/12		07/05/12		07/05/12	
Date	Conc.	5µg/mL Vol Std #9	5µg/mL Vol Std #12	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Vol Std #2	250µg/mL TAPD	Final Vol	µg/L	µg/L	µg/L	µg/L
07-12-12B	0.2	2	2	n/a	n/a	n/a	2	50	0.2	2	2	n/a
07-12-12C	0.5	5	5	n/a	n/a	n/a	5	50	0.5	5	5	n/a
07-12-12D	1	10	10	n/a	n/a	n/a	10	50	1	10	10	n/a
07-12-12E	2	20	20	n/a	n/a	n/a	15	50	2	20	20	n/a
07-12-12F	5	n/a	n/a	5	5	5	20	50	5	n/a	n/a	5
07-12-12G	10	n/a	n/a	10	10	10	25	50	10	n/a	n/a	10
07-12-12H	20	n/a	n/a	20	20	20	30	50	20	n/a	n/a	20
07-12-12I	40	n/a	n/a	40	40	40	35	50	40	n/a	n/a	40
07-02-12H	100	n/a	n/a	100	100	100	40	50	100	n/a	n/a	100

4-Bromofluorobenzene Solution, 2,500 mg/L, 1 ml

020135-03
 Lot # Storage Entry
 163173 5-18 Degree 8/24/13
 Sol: P/T Methanol

4-Bromofluorobenzene
 Lot #: 163173-29063
 Rec: 8/1/11 MFR exp. 08/24/13

25ug/ml BPB STD	Conc.	Date	EXP:
ug/ml	Lot#	CODE	Date
uL	uL	uL	uL
02SI	020135-03	4-Bromofluorobenzene	12/11/12
J&T Baker		Purge & Trap MeOH	09/28/13
		K08E01-00643	07/16/12
			1980
02SI	020135-03	4-Bromofluorobenzene	12/11/12
J&T Baker		Purge & Trap MeOH	09/28/13
		K08E01-00643	07/16/12
			1980
02SI	020135-03	4-Bromofluorobenzene	12/11/12
J&T Baker		Purge & Trap MeOH	09/28/13
		K08E01-00643	07/16/12
			1980
02SI	020135-03	4-Bromofluorobenzene	12/11/12
J&T Baker		Purge & Trap MeOH	09/28/13
		K08E01-00643	07/16/12
			1980

072

7/17/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

Expiration Date:		07/18/12									
Date	Conc.	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	
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	
07-17-12A	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a	
07-17-12B	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a	
07-17-12C	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a	
07-17-12D	20	20	20	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	
07-17-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	n/a	
07-17-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	n/a	

9/18/12 RS

- Thor 524 curve on pg. 74 RS 7/18/12 RS

250µg/mL TBA	Final Vol
07-05-12NE	(W/P & H ₂ O)
Exp:07-12-12	µmL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

9/18/12 RS

A-

Method 8260 Gases, 2,000 mg/L, 2 X 0.6 ml

120016-03

Lot # Storage Expiry

180013 ≤ -10 Degrees C 10/17/14

Solv: P/L Methanol

Method 8260 Gases

Lot #: 180013 - 29760

Rec: 10/24/11 MFR exp. 10/17/14

RS

9/18/12 RS

9/18/12 RS

B-

Hexachloroethane Solution, 1000 mg/L, 1 ml

020049-02

Lot # Storage Expiry

176700 ≤ -10 Degrees C 7/31/13

Solv: P/L Methanol

Hexachloroethane

Lot #: 176700 - 30724

Rec: 5/9/12 MFR exp. 07/31/13

RS

9/18/12 RS

9/18/12 RS

C-

Benzyl Chloride Solution, 1000 mg/L, 1 ml

020228-02

Lot # Storage Expiry

176701 ≤ -10 Degrees C 7/31/13

Solv: P/L Methanol

Benzyl Chloride

Lot #: 176701 - 31019

Rec: 6/19/12 MFR exp. 07/31/13

RS

9/18/12 RS

D-

n-Hexane Solution, 1,000 mg/L, 1 ml

020620-02

Lot # Storage Expiry

176773 ≤ -10 Degrees C 7/30/16

Solv: P/L Methanol

n-Hexane Solution

Lot #: 176773 - 31024

Rec: 6/19/12 MFR exp. 07/30/16

RS

9/18/12 RS

07/19/12A						
2000ug/ml Gasoline						
Supplier	ID #	Conc.	Lot #	Date	APPL	Exp.
Supelco	LB82077	Gasoline	20,000	LB82077-29979	01-26-12A	02/01/14
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13
						200
						1800

07/19/12B						
2000ug/ml Unleaded Gasoline						
Supplier	ID #	Conc.	Lot #	Date	APPL	Exp.
Restek	30205	Unleaded Gasoline	50,000	A081012-29980	01-26-12B	02/01/14
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13
						80
						1920

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Expiration Date:	07/20/12											
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 #12			
Code	ug/L	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12
07-19-12C	3	3	6	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	3
07-19-12D	5	5	10	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	5
07-19-12E	10	10	20	n/a	n/a	n/a	10	n/a	n/a	n/a	n/a	10
07-19-12F	20	20	40	n/a	n/a	n/a	20	n/a	n/a	n/a	n/a	20
07-19-12G	n/a	n/a	n/a	5	5	10	n/a	5	5	10	5	n/a
07-19-12H	n/a	n/a	n/a	10	10	25	n/a	10	10	20	10	n/a
07-19-12I	n/a	n/a	n/a	20	20	40	n/a	20	20	40	20	n/a
07-19-12J	n/a	n/a	n/a	40	40	80	n/a	40	40	80	40	n/a
07-19-12K	n/a	n/a	n/a	100	100	100	n/a	100	100	100	100	n/a

250ug/mL TAPD	Final Vol
07-18-12Q	w/P&T H2O
Exp:07-25-12	mL
3	50
5	50
10	50
15	50
20	50
25	50
30	50
35	50
40	50

Gasoline Curve Preparation for 100mL Purge (water)-THOR

Expiration Date:		07/20/12	
Date	Conc.	07-19-12A	Final Vol
Code	ug/L	Exp 01-03-13	mL
07-19-12L	20	1	100
07-19-12M	50	2.5	100
07-19-12N	100	5	100
07-19-12O	300	15	100
07-19-12P	600	30	100
07-19-12Q	800	40	100
07-19-12R	1000	50	100

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

Expiration Date:	07/20/12											
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 #12			
Code	ug/L	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12
07-19-12S	2	2	2	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	2
07-19-12T	5	5	5	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	5
07-19-12U	10	10	10	n/a	n/a	n/a	10	n/a	n/a	n/a	n/a	10
07-19-12V	20	20	20	n/a	n/a	n/a	20	n/a	n/a	n/a	n/a	20
07-19-12W	n/a	n/a	n/a	5	5	5	n/a	5	5	10	n/a	5
07-19-12X	n/a	n/a	n/a	10	10	10	n/a	10	10	20	n/a	10
07-19-12Y	n/a	n/a	n/a	20	20	20	n/a	20	20	40	n/a	20

250ug/mL TBA	Final Vol
07-18-12Q	w/P&T H2O
Exp:07-25-12	mL
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.	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 #12			
Code	ug/L	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12
07-23-12A	3	3	6	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	3
07-23-12B	5	5	10	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	5
07-23-12C	10	10	20	n/a	n/a	n/a	10	n/a	n/a	n/a	n/a	10
07-23-12D	n/a	n/a	n/a	5	5	10	n/a	5	5	10	n/a	n/a
07-23-12E	n/a	n/a	n/a	10	10	25	n/a	10	10	20	n/a	n/a
07-23-12F	n/a	n/a	n/a	20	20	40	n/a	20	20	40	n/a	n/a
07-23-12G	n/a	n/a	n/a	40	40	80	n/a	40	40	80	n/a	n/a
07-23-12H	n/a	n/a	n/a	100	100	100	n/a	100	100	100	n/a	n/a
07-23-12I	n/a	n/a	n/a	200	200	200	n/a	200	200	200	n/a	n/a

250ug/mL TAPD	Final Vol
07-18-12Q	w/P&T H2O
Exp:07-25-12	mL
3	50
5	50
10	50
20	50
25	50
30	50
35	50
40	50
45	50

076

GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

Neo 524							
07-24-12A							
10ug/ml Neo-524 Internal Standard w/ Surrogate				Conc.	Date	Exp	
				ug/ml	Lot #	Code	Date
02S1	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	09/10/12	200
J.T.Baker		Purge & Trap MeOH		K08E01-00645	07/20/12	12/12/12	19800

7/24/12
RS

7/30/12
RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-NEO									
Expiration Date:		07/25/12							
Date	Conc	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 IARD	Final Vol	
Code	µg/L	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	w/P&T H2O	
07-24-12B	0.2	2	2	n/a	n/a	n/a	2	50	
07-24-12C	0.5	5	5	n/a	n/a	n/a	5	50	
07-24-12D	1	10	10	n/a	n/a	n/a	10	50	
07-24-12E	2	20	20	n/a	n/a	n/a	20	50	
07-24-12F	5	n/a	n/a	5	5	5	5	50	
07-24-12G	10	n/a	n/a	10	10	10	10	50	
07-24-12H	40	n/a	n/a	40	40	40	40	50	

7/24/12
RS

7/30/12
RS

7/28/12
RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA									
Expiration Date:		07/25/12							
Date	Conc	50µg/mL Vol Std #9	50µg/mL Vol Std #12	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
Code	µg/L	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12	Exp:07-25-12
07-24-12I	2	2	2	n/a	n/a	n/a	2	n/a	n/a
07-24-12J	5	5	5	n/a	n/a	n/a	5	n/a	n/a
07-24-12K	10	10	10	n/a	n/a	n/a	10	n/a	n/a
07-24-12L	20	20	20	n/a	n/a	n/a	20	n/a	n/a
07-24-12M	50	n/a	n/a	5	5	5	5	n/a	n/a
07-24-12N	100	n/a	n/a	10	10	10	10	n/a	n/a
07-24-12O	200	n/a	n/a	20	20	20	20	n/a	n/a

Gasoline Curve Preparation for 100mL Purge (water)-THOR			
Expiration Date:		07/25/12	
Date	Conc	50µg/mL Gasoline	Final Vol
Code	µg/L	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

7/24/12
RS

7/30/12
RS

Gasoline Curve Preparation for 100mL Purge (water)-THOR			
Expiration Date:		07/26/12	
Date	Conc	50µg/mL Gasoline	Final Vol
Code	µg/L	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

7/25/12
RS

7/30/12
RS

Custom VOC Mix, 16-4, 100
mg/L, 4 x 1 ml

122725-03-4PAK

Lot # 181120 Storage Expiry
≤ -10 Degrees C 11/6/13

Solv: P/T Methanol

Custom VOC Mix 16-4

Lot #: 181120 - 30032

Rec: 11/16/11 MFR exp. 11/06/13

7/30/12
RS

Injection Log

Directory: MATHOR\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
13	40	0719T40.D	1	AY65042W01	10ml w/5ul of IS&S: 06-7	07/20/2012 03:13
14	43	0719T43.D	1	AY65041W01	10ml w/5ul of IS&S: 06-7	07/20/2012 04:36
15	44	0719T44.D	1	AY65043W01	10ml w/5ul of IS&S: 06-7	07/20/2012 05:03
16	45	0719T45.D	1	AY65044W01	10ml w/5ul of IS&S: 06-7	07/20/2012 05:31

Injection Log

Directory: M:\THOR\DATA\T120724

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0724T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/24/2012 16:11
2	1	0724T02.D	1	VOC MIX MARKER	10ml w/5ul of IS&S: 06-7	07/24/2012 16:33
3	2	0724T03.D	1	20ug/L Vol Std 07-24-12	10ml w/5ul of IS&S: 06-7	07/24/2012 17:01
4	3	0724T04.D	1	100ug/L Vol Std 07-24-12	10ml w/5ul of IS&S: 06-7	07/24/2012 17:29
5	4	0724T05.D	1	300ug/L Vol Std 07-24-12	10ml w/5ul of IS&S: 06-7	07/24/2012 17:57
6	5	0724T06.D	1	600ug/L Vol Std 07-24-12	10ml w/5ul of IS&S: 06-7	07/24/2012 18:24
7	6	0724T07.D	1	800ug/L Vol Std 07-24-12	10ml w/5ul of IS&S: 06-7	07/24/2012 18:52
8	8	0724T09.D	1	CCV gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/24/2012 19:48
9	9	0724T10.D	1	LCS gas 300ug/L (SS)	10ml w/5ul of IS&S: 06-7	07/24/2012 20:15
10	12	0724T13.D	1	120724A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/24/2012 21:39
11	13	0724T14.D	1	AY65042W02	10ml w/5ul of IS&S: 06-7	07/24/2012 22:06
12	14	0724T15.D	1	AY65041W02	10ml w/5ul of IS&S: 06-7	07/24/2012 22:34
13	15	0724T16.D	1	AY65043W02	10ml w/5ul of IS&S: 06-7	07/24/2012 23:02
14	16	0724T17.D	1	AY65044W02	10ml w/5ul of IS&S: 06-7	07/24/2012 23:30

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	07/19/12	07/20/12	#602D-120719A-AY65044

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	53.0	106	80-120	07/19/12	07/20/12	#602D-120719A-AY65044

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: 120719W-65044 MS - 169266

APPL Inc.

908 North Temperance Avenue

Sample ID: AY65044

Clovis, CA 93611

Client ID: ES080

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6020	LEAD (PB) (DISSOLVE	50.0	0.21	50.9	51.5	101	103	1.2	20	80-120	07/19/12	07/20/12	07/19/12	07/20/12	169266	AY65044

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: ES077

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65041

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	2.2	0.5	0.22	0.11	ug/L	1	07/19/12	07/20/12

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20K00.B\034SMPL.D\034SMPL.D#
 Date Acquired: Jul 20 2012 01:49 pm
 Operator: NBS
 Sample Name: AY65041W08
 Misc Info: 120719A-3015
 Vial Number: 3201
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	86.45	1000	
11 B	50.81 ug/l	56.45	1.42	1000	
23 Na	45340.00 ug/l	50372.74	1.33	25000	>Cal
24 Mg	19630.00 ug/l	21808.93	0.91	50000	
27 Al	22.69 ug/l	25.21	6.07	20000	
39 K	2642.00 ug/l	2935.26	0.78	20000	
44 Ca	21850.00 ug/l	24275.35	0.82	50000	
47 Ti	2.73 ug/l	3.04	6.71	1000	
51 V	13.72 ug/l	15.24	0.86	1000	
52 Cr	2.11 ug/l	2.34	2.05	1000	
55 Mn	0.89 ug/l	0.99	1.67	1000	
56 Fe	12.31 ug/l	13.68	0.42	20000	
59 Co	0.55 ug/l	0.61	1.77	1000	
60 Ni	0.32 ug/l	0.35	5.58	1000	
63 Cu	0.55 ug/l	0.61	1.56	1000	
65 Cu	0.56 ug/l	0.62	5.92	1000	
66 Zn	4.51 ug/l	5.01	2.18	1000	
75 As	0.11 ug/l	0.12	6.44	1000	
78 Se	0.31 ug/l	0.34	31.49	1000	
78 Se	0.84 ug/l	0.93	10.85	1000	
88 Sr	168.60 ug/l	187.31	0.34	1000	
88 Sr	161.00 ug/l	178.87	1.13	1000	
95 Mo	0.33 ug/l	0.37	7.03	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.01 ug/l	0.01	14.87	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.38 ug/l	0.42	5.34	1000	
118 Sn	0.55 ug/l	0.62	14.94	#####	
118 Sn	0.43 ug/l	0.48	2.25	#####	
118 Sn	0.37 ug/l	0.42	3.05	1000	
121 Sb	0.33 ug/l	0.36	3.49	1000	
137 Ba	8.95 ug/l	9.94	1.28	1000	
205 Tl	0.04 ug/l	0.04	4.24	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	1.98 ug/l	2.20	1.35	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-40996.51	9.43	-29895.57	137.1	70 - 120	IS Fai
45 Sc	2520551.30	11.18	2830107.80	89.1	70 - 120	
45 Sc	433565.97	0.53	373389.06	116.1	70 - 120	
45 Sc	9316079.00	1.08	7835315.00	118.9	70 - 120	
72 Ge	684287.50	10.25	735211.94	93.1	70 - 120	
72 Ge	279032.97	1.12	261572.13	106.7	70 - 120	
72 Ge	1963621.00	0.62	1727774.30	113.7	70 - 120	
115 In	4456321.00	13.37	5361365.50	83.1	70 - 120	
115 In	2944505.30	0.36	2785210.00	105.7	70 - 120	
115 In	12274897.00	1.15	10908714.00	112.5	70 - 120	
159 Tb	16378610.00	1.21	14663948.00	111.7	70 - 120	
165 Ho	16089183.00	0.54	14116038.00	114.0	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES079

Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65043

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.17J	0.5	0.22	0.11	ug/L	1	07/19/12	07/20/12

J = Estimated value.

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\038SMPL.D\038SMPL.D#
 Date Acquired: Jul 20 2012 02:16 pm
 Operator: NBS
 Sample Name: AY65043W08
 Misc Info: 120719A-3015
 Vial Number: 3202
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	220.37	1000	
11 B	461.00 ug/l	512.17	0.97	1000	
23 Na	121500.00 ug/l	134986.50	1.12	25000	>Cal
24 Mg	20660.00 ug/l	22953.26	1.02	50000	
27 Al	27.80 ug/l	30.89	1.71	20000	
39 K	3139.00 ug/l	3487.43	0.49	20000	
44 Ca	14610.00 ug/l	16231.71	1.10	50000	
47 Ti	4.30 ug/l	4.77	9.36	1000	
51 V	35.12 ug/l	39.02	1.13	1000	
52 Cr	6.47 ug/l	7.19	2.53	1000	
55 Mn	0.51 ug/l	0.57	3.18	1000	
56 Fe	20.83 ug/l	23.14	1.75	20000	
59 Co	0.20 ug/l	0.22	2.33	1000	
60 Ni	1.21 ug/l	1.34	5.56	1000	
63 Cu	1.30 ug/l	1.44	2.85	1000	
65 Cu	1.34 ug/l	1.48	1.19	1000	
66 Zn	8.99 ug/l	9.98	1.82	1000	
75 As	0.40 ug/l	0.45	4.21	1000	
78 Se	0.32 ug/l	0.36	5.05	1000	
78 Se	0.86 ug/l	0.95	9.57	1000	
88 Sr	152.10 ug/l	168.98	0.20	1000	
88 Sr	144.90 ug/l	160.98	1.06	1000	
95 Mo	1.94 ug/l	2.15	2.83	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.00 ug/l	0.00	18.42	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.04 ug/l	0.05	24.25	1000	
118 Sn	0.37 ug/l	0.41	2.68	#####	
118 Sn	0.37 ug/l	0.41	4.44	#####	
118 Sn	0.29 ug/l	0.32	4.91	1000	
121 Sb	0.26 ug/l	0.29	4.65	1000	
137 Ba	11.85 ug/l	13.17	1.95	1000	
205 Tl	0.04 ug/l	0.04	4.85	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.15 ug/l	0.17	4.91	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-39970.72	12.96	-29895.57	133.7	70 - 120	IS Fai NT NBS 07/23/12
45 Sc	3172666.50	1.67	2830107.80	112.1	70 - 120	
45 Sc	433928.22	0.99	373389.06	116.2	70 - 120	
45 Sc	9420520.00	1.20	7835315.00	120.2	70 - 120	IS Fai NT NBS 07/23/12
72 Ge	785387.13	0.39	735211.94	106.8	70 - 120	
72 Ge	279600.34	1.17	261572.13	106.9	70 - 120	
72 Ge	1983955.30	0.67	1727774.30	114.8	70 - 120	
115 In	5540059.00	1.42	5361365.50	103.3	70 - 120	
115 In	2927575.00	0.59	2785210.00	105.1	70 - 120	
115 In	12295342.00	0.50	10908714.00	112.7	70 - 120	
159 Tb	16416978.00	0.98	14663948.00	112.0	70 - 120	
165 Ho	15952934.00	1.16	14116038.00	113.0	70 - 120	

Tb159 is associated with Pb.
 -NBS 07/23/12

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 2 :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

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024

Sample ID: ES080
Sample Collection Date: 07/17/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68248

APPL ID: AY65044

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.21J	0.5	0.22	0.11	ug/L	1	07/19/12	07/20/12

J = Estimated value.

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\039SMPL.D\039SMPL.D#
 Date Acquired: Jul 20 2012 02:23 pm
 Operator: NBS
 Sample Name: AY65044W08
 Misc Info: 120719A-3015
 Vial Number: 3203
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	63.72	1000	
11 B	458.50 ug/l	509.39	1.33	1000	
23 Na	122200.00 ug/l	135764.20	1.54	25000	>Cal
24 Mg	20870.00 ug/l	23186.57	1.17	50000	
27 Al	35.57 ug/l	39.52	7.14	20000	
39 K	3182.00 ug/l	3535.20	1.12	20000	
44 Ca	14740.00 ug/l	16376.14	1.44	50000	
47 Ti	2.39 ug/l	2.66	10.06	1000	
51 V	35.17 ug/l	39.07	1.41	1000	
52 Cr	6.49 ug/l	7.21	1.40	1000	
55 Mn	1.66 ug/l	1.85	1.78	1000	
56 Fe	24.03 ug/l	26.70	1.21	20000	
59 Co	0.82 ug/l	0.91	2.92	1000	
60 Ni	1.28 ug/l	1.42	4.53	1000	
63 Cu	1.37 ug/l	1.52	1.65	1000	
65 Cu	1.36 ug/l	1.51	1.42	1000	
66 Zn	12.96 ug/l	14.40	1.19	1000	
75 As	0.39 ug/l	0.43	6.13	1000	
78 Se	0.47 ug/l	0.52	4.88	1000	
78 Se	1.00 ug/l	1.11	4.53	1000	
88 Sr	153.30 ug/l	170.32	0.89	1000	
88 Sr	146.30 ug/l	162.54	0.20	1000	
95 Mo	1.97 ug/l	2.19	2.91	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.00 ug/l	0.00	95.34	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.05 ug/l	0.06	15.35	1000	
118 Sn	0.29 ug/l	0.33	8.47	#####	
118 Sn	0.20 ug/l	0.23	4.89	#####	
118 Sn	0.19 ug/l	0.21	3.93	1000	
121 Sb	0.18 ug/l	0.20	3.45	1000	
137 Ba	11.97 ug/l	13.30	0.71	1000	
205 Tl	0.04 ug/l	0.04	7.08	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.19 ug/l	0.21	3.45	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-39160.43	21.55	-29895.57	131.0	70 - 120	IS Fai NT
45 Sc	2372152.80	8.31	2830107.80	83.8	70 - 120	
45 Sc	438536.59	1.72	373389.06	117.4	70 - 120	
45 Sc	9508099.00	0.16	7835315.00	121.3	70 - 120	IS Fai NT
72 Ge	632287.56	11.44	735211.94	86.0	70 - 120	
72 Ge	285020.94	0.87	261572.13	109.0	70 - 120	
72 Ge	1980289.60	0.52	1727774.30	114.6	70 - 120	
115 In	3969487.00	10.89	5361365.50	74.0	70 - 120	
115 In	2966220.50	0.80	2785210.00	106.5	70 - 120	
115 In	12340703.00	0.12	10908714.00	113.1	70 - 120	
159 Tb	16588778.00	0.76	14663948.00	113.1	70 - 120	
165 Ho	16147580.00	0.55	14116038.00	114.4	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 2 :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: 68248 SDG: 68248

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 07/20/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:03	%R(1)	True CCV1	Found 11:23	%R(1)	True CCV1	Found 12:50	%R(1)	
Lead (Pb)	100	100.7	101	50	51.64	103	50	50.96	102	P

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No: 68248 SDG: 68248

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 07/20/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:03	%R(1)	True CCV1	Found 13:56	%R(1)	True CCV1	Found 14:56	%R(1)	
Lead (Pb)	100	100.7	101	50	50.98	102	50	50.8	102	P

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.

Contract: Environet, Inc.

ARF No.: 68248

SDG: 68248

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/20/12

Analyte	Initial Calibration Blank (ug/L) C	Continuing Calibration Blank (ug/L)						Preparation Blank C	M
		1 C	2 C	3 C	4 C	5 C	6 C		
	11:16	11:30	13:03	14:09			12:03		
Lead (Pb)	.50 U	.50 U	.50 U	.50 U	.50 U	.50 U	.50 U	P	

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.

Contract: Environet, Inc.

ARF No.: 68248

SDG: 68248

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/20/12

Analyte	Initial Calibration Blank (ug/L) C	Continuing Calibration Blank (ug/L)						Preparation Blank C	M
		1	C	2	C	3	C		
	11:16	15:10						12:03	
Lead (Pb)	.50 U	.50	U					.50 U	P

ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC.
 ARF No.: 68248
 ICP ID Number: Optimus

Contract: Environet, Inc.
 SDG: 68248
 ICS Source: Environmental Express

Analysis Date: 07/20/12

Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 11:36	Sol AB 11:43	%R(1)
Lead (Pb)		500	0.4106	433.9	86.8

(1) Control Limits: Metals 80-120

A.P.P.L. INC.
9
ICP SERIAL DILUTION

CLIENT SAMPLE NO.

ES080

Lab Name: A.P.P.L. INC.

Contract: Environet, Inc.

ARF No.: 68248

SDG: 68248

Matrix: water

Analysis Date: 07/20/12

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	Serial Dilution Result (S)	%D	Q	M
Lead (Pb)	0.206127	0.2317964	NA		

Comments:

07/20/12 14:23 AY65044W08

07/20/12 14:49 AY65044W08-1/5

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\043SMPL.D\043SMPL.D#
 Date Acquired: Jul 20 2012 02:49 pm
 Operator: NBS
 Sample Name: AY65044W08-1/5
 Misc Info: 120719A-3015
 Vial Number: 3207
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	0.00	5976.30	1000	
11 B	109.20 ug/l	606.72	0.76	1000	
23 Na	25570.00 ug/l	142066.92	1.66	25000	>Cal
24 Mg	4545.00 ug/l	25252.02	2.89	50000	
27 Al	7.54 ug/l	41.88	2.79	20000	
39 K	682.10 ug/l	3789.75	1.33	20000	
44 Ca	3012.00 ug/l	16734.67	2.56	50000	
47 Ti	0.54 ug/l	3.01	17.23	1000	
51 V	7.12 ug/l	39.53	1.13	1000	
52 Cr	1.32 ug/l	7.31	1.25	1000	
55 Mn	0.33 ug/l	1.85	5.94	1000	
56 Fe	5.16 ug/l	28.65	1.75	20000	
59 Co	0.19 ug/l	1.06	2.01	1000	
60 Ni	0.26 ug/l	1.45	13.02	1000	
63 Cu	0.31 ug/l	1.72	1.45	1000	
65 Cu	0.31 ug/l	1.75	1.16	1000	
66 Zn	2.90 ug/l	16.13	1.56	1000	
75 As	0.13 ug/l	0.73	8.55	1000	
78 Se	0.10 ug/l	0.56	4.78	1000	
78 Se	0.48 ug/l	2.66	43.02	1000	
88 Sr	30.94 ug/l	171.90	0.40	1000	
88 Sr	30.44 ug/l	169.12	0.90	1000	
95 Mo	0.47 ug/l	2.63	4.40	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.09 ug/l	0.49	5.02	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.00 ug/l	0.02	306.87	1000	
118 Sn	0.45 ug/l	2.51	5.50	#####	
118 Sn	0.43 ug/l	2.36	8.46	#####	
118 Sn	0.35 ug/l	1.92	9.36	1000	
121 Sb	0.13 ug/l	0.71	1.70	1000	
137 Ba	2.44 ug/l	13.54	1.76	1000	
205 Tl	0.03 ug/l	0.16	3.46	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.04 ug/l	0.23	2.07	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-40223.52	12.94	-29895.57	134.5	70 - 120	IS Fai
45 Sc	3360235.30	0.60	2830107.80	118.7	70 - 120	
45 Sc	453760.09	1.66	373389.06	121.5	70 - 120	IS Fai
45 Sc	9541783.00	0.77	7835315.00	121.8	70 - 120	IS Fai
72 Ge	853571.63	0.65	735211.94	116.1	70 - 120	
72 Ge	297711.91	0.39	261572.13	113.8	70 - 120	
72 Ge	2050779.00	0.29	1727774.30	118.7	70 - 120	
115 In	6019070.50	0.54	5361365.50	112.3	70 - 120	
115 In	3115347.80	0.48	2785210.00	111.9	70 - 120	
115 In	12696071.00	0.76	10908714.00	116.4	70 - 120	
159 Tb	16751240.00	0.74	14663948.00	114.2	70 - 120	
165 Ho	16198755.00	0.46	14116038.00	114.8	70 - 120	

Handwritten note: } NT NBS 07/23/12

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 3 :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.

ES080

Lab Name: A.P.P.L. INC.
ARF No.: 68248

Contract: Environet, Inc.
SDG: 68248

Analysis Date: 07/20/12

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	241.647	0.206127	277.500	87.0		

Comments:

07/20/12 14:23 AY65044W08

07/20/12 14:43 AY65044W08-A

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\042SMPL.D\042SMPL.D#
 Date Acquired: Jul 20 2012 02:43 pm
 Operator: NBS
 Sample Name: AY65044W08-A
 Misc Info: 120719A-3015
 Vial Number: 3206
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	47.23 ug/l	52.47	1.10	1000	
11 B	701.40 ug/l	779.26	1.12	1000	
23 Na	145500.00 ug/l	161650.50	1.30	25000	>Cal
24 Mg	43370.00 ug/l	48184.07	1.70	50000	
27 Al	2033.00 ug/l	2258.66	1.69	20000	
39 K	7654.00 ug/l	8503.59	0.30	20000	
44 Ca	39270.00 ug/l	43628.97	0.34	50000	
47 Ti	245.90 ug/l	273.19	1.41	1000	
51 V	275.40 ug/l	305.97	3.23	1000	
52 Cr	242.40 ug/l	269.31	0.52	1000	
55 Mn	243.40 ug/l	270.42	0.36	1000	
56 Fe	945.50 ug/l	1050.45	1.31	20000	
59 Co	212.40 ug/l	235.98	1.80	1000	
60 Ni	223.30 ug/l	248.09	1.20	1000	
63 Cu	221.60 ug/l	246.20	0.64	1000	
65 Cu	218.90 ug/l	243.20	0.84	1000	
66 Zn	473.70 ug/l	526.28	1.20	1000	
75 As	242.30 ug/l	269.20	1.39	1000	
78 Se	218.20 ug/l	242.42	0.75	1000	
78 Se	224.30 ug/l	249.20	0.75	1000	
88 Sr	380.60 ug/l	422.85	0.78	1000	
88 Sr	386.30 ug/l	429.18	0.28	1000	
95 Mo	233.20 ug/l	259.09	1.31	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	73.35 ug/l	81.49	4.18	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	46.67 ug/l	51.85	0.84	1000	
118 Sn	235.40 ug/l	261.53	0.91	#####	
118 Sn	255.30 ug/l	283.64	0.80	#####	
118 Sn	232.60 ug/l	258.42	0.80	1000	
121 Sb	232.90 ug/l	258.75	0.65	1000	
137 Ba	239.90 ug/l	266.53	1.54	1000	
205 Tl	222.90 ug/l	247.64	0.32	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	217.70 ug/l	241.86	0.77	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-43038.52	9.53	-29895.57	144.0	70 - 120	IS Fai NT
45 Sc	3265639.00	0.31	2830107.80	115.4	70 - 120	
45 Sc	439850.38	0.68	373389.06	117.8	70 - 120	
45 Sc	9618463.00	0.62	7835315.00	122.8	70 - 120	IS Fai NT
72 Ge	807098.69	0.14	735211.94	109.8	70 - 120	
72 Ge	283830.00	1.07	261572.13	108.5	70 - 120	
72 Ge	1982567.10	0.28	1727774.30	114.7	70 - 120	
115 In	5647796.00	0.38	5361365.50	105.3	70 - 120	
115 In	2915070.30	1.28	2785210.00	104.7	70 - 120	
115 In	12322294.00	0.28	10908714.00	113.0	70 - 120	
159 Tb	16564629.00	0.26	14663948.00	113.0	70 - 120	
165 Ho	16098688.00	0.13	14116038.00	114.0	70 - 120	

> NBS 07/23/12

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 2 :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\12G20k00.B\004CAL
 Date Acquired: Jul 20 2012 10:30 am
 Operator: NBS
 Sample Name: Calibration Blank
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 10:27 am
 Sample Type: CalBlk
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)
6 Li	-29895.57 A	877.00	2.93
7 (Li)	4576693.00 A	37990.00	0.83
9 Be	42.22 P	21.69	51.37
11 B	11861.70 P	29.08	0.25
23 Na	57175.73 P	949.50	1.66
24 Mg	157.78 P	35.64	22.59
27 Al	63.34 P	26.67	42.11
39 K	35388.66 P	317.50	0.90
44 Ca	207.09 P	5.53	2.67
45 Sc	2830108.00 A	21570.00	0.76
45 Sc	373389.00 A	655.30	0.18
45 Sc	7835315.00 A	58030.00	0.74
47 Ti	7.56 P	8.57	113.45
51 V	51.56 P	13.15	25.51
52 Cr	400.01 P	18.81	4.70
55 Mn	330.68 P	8.11	2.45
56 Fe	3806.36 P	31.23	0.82
59 Co	102.22 P	8.15	7.97
60 Ni	96.00 P	6.11	6.36
63 Cu	184.45 P	21.72	11.78
65 Cu	84.89 P	3.08	3.63
66 Zn	277.34 P	1.33	0.48
72 Ge	735211.88 A	1902.00	0.26
72 Ge	261572.09 A	6168.00	2.36
72 Ge	1727774.00 A	4855.00	0.28
75 As	24.89 P	3.17	12.73
78 Se	15.22 P	1.17	7.69
78 Se	130.45 P	7.88	6.04
88 Sr	194.45 P	16.44	8.45
88 Sr	514.47 P	15.40	2.99
95 Mo	97.78 P	22.20	22.70
106 (Cd)	6.67 P	3.33	49.99
107 Ag	78.89 P	13.88	17.59
108 (Cd)	7.78 P	8.39	107.85
111 Cd	24.18 P	6.68	27.61
115 In	5361365.00 A	37120.00	0.69
115 In	2785210.00 A	12280.00	0.44
115 In	10908710.00 A	98570.00	0.90
118 Sn	162.23 P	32.38	19.96
118 Sn	84.45 P	25.46	30.15
118 Sn	275.57 P	5.09	1.85
121 Sb	162.23 P	19.53	12.04
137 Ba	77.78 P	3.85	4.95
159 Tb	14663950.00 A	57970.00	0.40
165 Ho	14116040.00 A	108000.00	0.77
205 Tl	255.57 P	28.74	11.25
206 (Pb)	304.46 P	10.72	3.52
207 (Pb)	307.79 P	30.97	10.06
208 Pb	1353.42 P	60.65	4.48

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\005CALG.D\005CALG.D#
 Date Acquired: Jul 20 2012 10:36 am
 Operator: NBS
 Sample Name: 120720 Standard 1
 Misc Info:
 Vial Number: 1103
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 10:33 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-31051.38 A	5106.00	16.44	0.0000
7 (Li)	5035299.00 A	26300.00	0.52	0.0000
9 Be	458.91 P	27.76	6.05	0.0000
11 B	13107.25 P	76.41	0.58	0.0000
23 Na	56419.59 P	192.20	0.34	0.0000
24 Mg	1200.09 P	14.53	1.21	0.0000
27 Al	255.57 P	13.47	5.27	0.0000
39 K	36784.31 P	607.50	1.65	0.0000
44 Ca	276.20 P	47.75	17.29	0.0000
45 Sc	2941895.00 A	12430.00	0.42	0.0000
45 Sc	389038.81 A	2209.00	0.57	0.0000
45 Sc	8560630.00 A	61690.00	0.72	0.0000
47 Ti	11.56 P	4.07	35.26	0.0000
51 V	435.12 P	57.66	13.25	0.0000
52 Cr	866.71 P	54.47	6.28	0.0000
55 Mn	535.57 P	44.75	8.36	0.0000
56 Fe	10807.66 P	159.50	1.48	0.0000
59 Co	558.24 P	2.78	0.50	0.0000
60 Ni	216.89 P	12.39	5.71	0.0000
63 Cu	649.80 P	12.10	1.86	0.0000
65 Cu	281.78 P	35.51	12.60	0.0000
66 Zn	320.90 P	15.16	4.72	0.0000
72 Ge	759093.50 A	9576.00	1.26	0.0000
72 Ge	267863.41 A	5756.00	2.15	0.0000
72 Ge	1866921.00 A	4611.00	0.25	0.0000
75 As	86.89 P	5.52	6.35	0.0000
78 Se	37.78 P	2.52	6.68	0.0000
78 Se	144.78 P	8.63	5.96	0.0000
88 Sr	624.48 P	40.19	6.44	0.0000
88 Sr	3827.31 P	16.68	0.44	0.0000
95 Mo	645.59 P	8.39	1.30	0.0000
106 (Cd)	40.00 P	12.02	30.05	0.0000
107 Ag	835.61 P	43.51	5.21	0.0000
108 (Cd)	31.11 P	6.94	22.30	0.0000
111 Cd	351.78 P	72.06	20.48	0.0000
115 In	5460909.00 A	37880.00	0.69	0.0000
115 In	2893795.00 A	11630.00	0.40	0.0000
115 In	11736690.00 A	45250.00	0.39	0.0000
118 Sn	1170.09 P	60.83	5.20	0.0000
118 Sn	718.93 P	21.69	3.02	0.0000
118 Sn	2010.22 P	59.26	2.95	0.0000
121 Sb	1744.62 P	143.70	8.24	0.0000
137 Ba	608.93 P	47.42	7.79	0.0000
159 Tb	15779030.00 A	194600.00	1.23	0.0000
165 Ho	15335980.00 A	100600.00	0.66	0.0000
205 Tl	3031.57 P	5.09	0.17	0.0000
206 (Pb)	1116.76 P	56.67	5.07	0.0000
207 (Pb)	948.96 P	48.58	5.12	0.0000
208 Pb	4339.32 P	133.60	3.08	0.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-31051.38	16.44	-29895.57	103.9	70 -	120 IS Fail
45 Sc	2941895.50	0.42	2830107.80	103.9	70 -	120
45 Sc	389038.78	0.57	373389.06	104.2	70 -	120
45 Sc	8560630.00	0.72	7835315.00	109.3	70 -	120
72 Ge	759093.50	1.26	735211.94	103.2	70 -	120
72 Ge	267863.41	2.15	261572.13	102.4	70 -	120
72 Ge	1866920.80	0.25	1727774.30	108.1	70 -	120
115 In	5460908.50	0.69	5361365.50	101.9	70 -	120
115 In	2893795.30	0.40	2785210.00	103.9	70 -	120
115 In	11736691.00	0.39	10908714.00	107.6	70 -	120
159 Tb	15779035.00	1.23	14663948.00	107.6	70 -	120
165 Ho	15335983.00	0.66	14116038.00	108.6	70 -	120

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\006CALB.D\006CALB.D#
 Date Acquired: Jul 20 2012 10:43 am
 Operator: NBS
 Sample Name: 120720 Standard 2
 Misc Info:
 Vial Number: 1104
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 10:40 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements	Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-32630.78 A	6201.00	19.00	0.0000	
7 (Li)	5094434.00 A	28330.00	0.56	1.0000	
9 Be	4314.09 P	155.60	3.61	1.0000	
11 B	14150.46 P	167.10	1.18	1.0000	
23 Na	65670.47 P	439.60	0.67	-1.0000	
24 Mg	10415.07 P	325.00	3.12	1.0000	
27 Al	1807.95 P	81.48	4.51	1.0000	
39 K	42169.65 P	283.20	0.67	-1.0000	
44 Ca	900.67 P	68.60	7.62	1.0000	
45 Sc	2965088.00 A	12140.00	0.41	0.0000	
45 Sc	402870.09 A	13630.00	3.38	0.0000	
45 Sc	8531616.00 A	113300.00	1.33	0.0000	
47 Ti	80.45 P	5.39	6.70	1.0000	
51 V	2760.74 P	151.10	5.47	1.0000	
52 Cr	3570.71 P	80.60	2.26	1.0000	
55 Mn	2531.37 P	69.76	2.76	1.0000	
56 Fe	62362.08 P	372.90	0.60	1.0000	
59 Co	4726.60 P	3.36	0.07	1.0000	
60 Ni	1268.07 P	37.81	2.98	1.0000	
63 Cu	3497.36 P	99.13	2.83	1.0000	
65 Cu	1639.67 P	29.25	1.78	1.0000	
66 Zn	932.49 P	12.60	1.35	1.0000	
72 Ge	769750.88 A	1493.00	0.19	0.0000	
72 Ge	273122.31 A	12020.00	4.40	0.0000	
72 Ge	1865040.00 A	19870.00	1.07	0.0000	
75 As	526.90 P	20.92	3.97	1.0000	
78 Se	243.56 P	1.17	0.48	1.0000	
78 Se	185.67 P	2.60	1.40	1.0000	
88 Sr	4329.70 P	103.30	2.39	1.0000	
88 Sr	31779.42 P	243.90	0.77	1.0000	
95 Mo	5878.08 P	109.80	1.87	1.0000	
106 (Cd)	360.02 P	14.53	4.04	1.0000	
107 Ag	7757.96 P	117.00	1.51	1.0000	
108 (Cd)	208.90 P	22.20	10.63	1.0000	
111 Cd	3416.04 P	151.20	4.43	1.0000	
115 In	5514178.00 A	40050.00	0.73	0.0000	
115 In	2978857.00 A	134400.00	4.51	0.0000	
115 In	11703870.00 A	38410.00	0.33	0.0000	
118 Sn	4706.50 P	104.50	2.22	1.0000	
118 Sn	2684.80 P	89.22	3.32	1.0000	
118 Sn	9832.68 P	35.67	0.36	1.0000	
121 Sb	12993.17 P	92.16	0.71	1.0000	
137 Ba	4805.45 P	60.51	1.26	1.0000	
159 Tb	15798180.00 A	79100.00	0.50	0.0000	
165 Ho	15386980.00 A	192100.00	1.25	0.0000	
205 Tl	28000.36 P	85.31	0.30	1.0000	
206 (Pb)	9803.97 P	100.80	1.03	1.0000	
207 (Pb)	8203.95 P	67.41	0.82	1.0000	
208 Pb	38118.30 P	279.20	0.73	1.0000	

ISTD Elements	Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-32630.78	19.00	-29895.57	109.1	70 -	120	IS Fail
45 Sc	2965088.00	0.41	2830107.80	104.8	70 -	120	
45 Sc	402870.09	3.38	373389.06	107.9	70 -	120	
45 Sc	8531616.00	1.33	7835315.00	108.9	70 -	120	
72 Ge	769750.94	0.19	735211.94	104.7	70 -	120	
72 Ge	273122.31	4.40	261572.13	104.4	70 -	120	
72 Ge	1865039.90	1.07	1727774.30	107.9	70 -	120	
115 In	5514178.00	0.73	5361365.50	102.9	70 -	120	
115 In	2978857.00	4.51	2785210.00	107.0	70 -	120	
115 In	11703867.00	0.33	10908714.00	107.3	70 -	120	
159 Tb	15798183.00	0.50	14663948.00	107.7	70 -	120	
165 Ho	15386983.00	1.25	14116038.00	109.0	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\007CALB.D\007CALB.D#
 Date Acquired: Jul 20 2012 10:50 am
 Operator: NBS
 Sample Name: 120720 Standard 3
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 10:47 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-33498.63 A	5876.00	17.54	0.0000
7 (Li)	5127803.00 A	23530.00	0.46	0.6587
9 Be	218849.41 P	525.50	0.24	1.0000
11 B	144161.91 P	2264.00	1.57	0.9998
23 Na	538122.50 P	1856.00	0.34	0.8502
24 Mg	501853.69 P	4116.00	0.82	1.0000
27 Al	85695.06 P	870.10	1.02	0.9999
39 K	316496.19 P	2033.00	0.64	0.9939
44 Ca	35672.18 P	298.60	0.84	1.0000
45 Sc	3026527.00 A	18880.00	0.62	0.0000
45 Sc	399481.91 A	8490.00	2.13	0.0000
45 Sc	8669169.00 A	72640.00	0.84	0.0000
47 Ti	4748.38 P	122.20	2.57	0.9990
51 V	132534.20 P	1079.00	0.81	0.9990
52 Cr	155519.70 P	2657.00	1.71	0.9989
55 Mn	108733.20 P	1538.00	1.41	1.0000
56 Fe	2607702.00 A	17060.00	0.65	0.9998
59 Co	229250.30 P	1857.00	0.81	1.0000
60 Ni	57714.10 P	145.70	0.25	1.0000
63 Cu	156662.91 P	340.50	0.22	0.9991
65 Cu	76628.08 P	328.40	0.43	0.9996
66 Zn	31714.75 P	272.10	0.86	0.9990
72 Ge	779218.50 A	3228.00	0.41	0.0000
72 Ge	272185.41 A	2541.00	0.93	0.0000
72 Ge	1865774.00 A	32950.00	1.77	0.0000
75 As	24955.54 P	275.40	1.10	0.9997
78 Se	11163.88 P	50.83	0.46	1.0000
78 Se	2713.60 P	11.14	0.41	0.9945
88 Sr	203971.59 P	329.10	0.16	1.0000
88 Sr	1464976.00 A	26700.00	1.82	1.0000
95 Mo	294256.91 P	2244.00	0.76	1.0000
106 (Cd)	14784.87 P	115.10	0.78	1.0000
107 Ag	377319.91 P	2436.00	0.65	1.0000
108 (Cd)	11002.44 P	105.80	0.96	0.9999
111 Cd	161631.50 P	485.30	0.30	1.0000
115 In	5540690.00 A	7963.00	0.14	0.0000
115 In	2893345.00 A	40480.00	1.40	0.0000
115 In	11769930.00 A	110600.00	0.94	0.0000
118 Sn	203834.80 P	1659.00	0.81	0.9924
118 Sn	115303.20 P	1410.00	1.22	0.9885
118 Sn	449979.19 P	4723.00	1.05	0.9970
121 Sb	645486.00 P	4788.00	0.74	0.9998
137 Ba	235048.91 P	1729.00	0.74	0.9999
159 Tb	15746990.00 A	53370.00	0.34	0.0000
165 Ho	15323640.00 A	22390.00	0.15	0.0000
205 Tl	1275197.00 A	12460.00	0.98	1.0000
206 (Pb)	467574.69 P	569.80	0.12	0.9999
207 (Pb)	391731.50 P	2253.00	0.58	0.9998
208 Pb	1839336.00 P	6700.00	0.36	0.9998

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-33498.63	17.54	-29895.57	112.1	70 -	120 IS Fail
45 Sc	3026527.50	0.62	2830107.80	106.9	70 -	120
45 Sc	399481.91	2.13	373389.06	107.0	70 -	120
45 Sc	8669169.00	0.84	7835315.00	110.6	70 -	120
72 Ge	779218.50	0.41	735211.94	106.0	70 -	120
72 Ge	272185.38	0.93	261572.13	104.1	70 -	120
72 Ge	1865773.90	1.77	1727774.30	108.0	70 -	120
115 In	5540690.00	0.14	5361365.50	103.3	70 -	120
115 In	2893345.00	1.40	2785210.00	103.9	70 -	120
115 In	11769925.00	0.94	10908714.00	107.9	70 -	120
159 Tb	15746994.00	0.34	14663948.00	107.4	70 -	120
165 Ho	15323643.00	0.15	14116038.00	108.6	70 -	120

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\008CALB.D\008CALB.D#
 Date Acquired: Jul 20 2012 10:56 am
 Operator: NBS
 Sample Name: 120720 Standard 4
 Misc Info:
 Vial Number: 1106
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 10:54 am
 Sample Type: CalStd
 Total Dil Factor: 1.00

QC&ISTD Elements	Element	CPS Mean	SD	RSD(%)	Cal Coef
6 Li	-27932.82 A	6488.00	23.23	0.0000	
7 (Li)	5227297.00 A	34630.00	0.66	0.4489	
9 Be	441213.09 P	3353.00	0.76	1.0000	
11 B	280818.41 P	3386.00	1.21	1.0000	
23 Na	1028440.00 A	7563.00	0.74	0.9999	
24 Mg	1001851.00 A	12140.00	1.21	1.0000	
27 Al	173431.91 P	903.70	0.52	1.0000	
39 K	610255.38 P	1671.00	0.27	1.0000	
44 Ca	72554.98 P	650.90	0.90	1.0000	
45 Sc	3047910.00 A	7499.00	0.25	0.0000	
45 Sc	400844.41 A	4274.00	1.07	0.0000	
45 Sc	8796261.00 A	12070.00	0.14	0.0000	
47 Ti	9623.25 P	164.20	1.71	1.0000	
51 V	269495.81 P	1109.00	0.41	1.0000	
52 Cr	313814.81 P	922.70	0.29	1.0000	
55 Mn	218807.70 P	1128.00	0.52	1.0000	
56 Fe	5249172.00 A	39100.00	0.74	1.0000	
59 Co	459136.19 P	3604.00	0.78	1.0000	
60 Ni	115446.30 P	847.10	0.73	1.0000	
63 Cu	313562.31 P	2375.00	0.76	1.0000	
65 Cu	153588.59 P	1522.00	0.99	1.0000	
66 Zn	63188.26 P	67.00	0.11	1.0000	
72 Ge	789040.38 A	6047.00	0.77	0.0000	
72 Ge	270885.00 A	3982.00	1.47	0.0000	
72 Ge	1900538.00 A	9262.00	0.49	0.0000	
75 As	50176.98 P	107.00	0.21	1.0000	
78 Se	22494.79 P	202.30	0.90	1.0000	
78 Se	5399.13 P	67.54	1.25	1.0000	
88 Sr	412688.81 P	3271.00	0.79	1.0000	
88 Sr	2913105.00 A	21820.00	0.75	1.0000	
95 Mo	594246.31 P	3628.00	0.61	1.0000	
106 (Cd)	29876.79 P	252.40	0.84	1.0000	
107 Ag	776321.31 P	3545.00	0.46	1.0000	
108 (Cd)	21872.05 P	194.90	0.89	1.0000	
111 Cd	324455.91 P	1592.00	0.49	1.0000	
115 In	5586248.00 A	38860.00	0.70	0.0000	
115 In	2906573.00 A	4561.00	0.16	0.0000	
115 In	11893100.00 A	51960.00	0.44	0.0000	
118 Sn	409229.00 P	4072.00	1.00	1.0000	
118 Sn	231592.91 P	2043.00	0.88	1.0000	
118 Sn	904775.69 P	3794.00	0.42	1.0000	
121 Sb	1202547.00 A	10310.00	0.86	1.0000	
137 Ba	469947.00 P	1278.00	0.27	1.0000	
159 Tb	15988670.00 A	84370.00	0.53	0.0000	
165 Ho	15439330.00 A	108100.00	0.70	0.0000	
205 Tl	2499272.00 A	23800.00	0.95	1.0000	
206 (Pb)	936012.38 P	6168.00	0.66	1.0000	
207 (Pb)	787186.38 P	5632.00	0.72	1.0000	
208 Pb	3525704.00 A	9976.00	0.28	1.0000	

ISTD Elements	Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-27932.83	23.23	-29895.57	93.4	70 -	120	IS Fail
45 Sc	3047910.00	0.25	2830107.80	107.7	70 -	120	
45 Sc	400844.41	1.07	373389.06	107.4	70 -	120	
45 Sc	8796261.00	0.14	7835315.00	112.3	70 -	120	
72 Ge	789040.38	0.77	735211.94	107.3	70 -	120	
72 Ge	270885.00	1.47	261572.13	103.6	70 -	120	
72 Ge	1900538.00	0.49	1727774.30	110.0	70 -	120	
115 In	5586248.00	0.70	5361365.50	104.2	70 -	120	
115 In	2906573.30	0.16	2785210.00	104.4	70 -	120	
115 In	11893096.00	0.44	10908714.00	109.0	70 -	120	
159 Tb	15988672.00	0.53	14663948.00	109.0	70 -	120	
165 Ho	15439329.00	0.70	14116038.00	109.4	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\009_QCS.D\009_QCS.D#
 Date Acquired: Jul 20 2012 11:03 am
 Operator: NBS
 Sample Name: ICV 120720
 Misc Info:
 Vial Number: 1107
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	101.90 ug/l	0.57	100.00	90 - 110	
11 B	102.40 ug/l	0.38	100.00	90 - 110	
23 Na	2450.00 ug/l	1.08	2500.00	90 - 110	
24 Mg	2474.00 ug/l	0.75	2500.00	90 - 110	
27 Al	2450.00 ug/l	0.32	2500.00	90 - 110	
39 K	2451.00 ug/l	0.53	2500.00	90 - 110	
44 Ca	2427.00 ug/l	1.22	2500.00	90 - 110	
47 Ti	97.19 ug/l	0.78	100.00	90 - 110	
51 V	100.40 ug/l	0.61	100.00	90 - 110	
52 Cr	101.10 ug/l	1.04	100.00	90 - 110	
55 Mn	100.60 ug/l	0.54	100.00	90 - 110	
56 Fe	2397.00 ug/l	0.82	2500.00	90 - 110	
59 Co	99.25 ug/l	1.63	100.00	90 - 110	
60 Ni	101.10 ug/l	0.86	100.00	90 - 110	
63 Cu	98.71 ug/l	1.01	100.00	90 - 110	
65 Cu	97.75 ug/l	1.23	100.00	90 - 110	
66 Zn	102.00 ug/l	0.92	100.00	90 - 110	
75 As	99.56 ug/l	1.08	100.00	90 - 110	
78 Se	101.40 ug/l	0.33	100.00	90 - 110	
78 Se	100.80 ug/l	0.74	100.00	90 - 110	
88 Sr	98.35 ug/l	0.94	100.00	90 - 110	
88 Sr	99.14 ug/l	0.55	100.00	90 - 110	
95 Mo	99.98 ug/l	0.19	100.00	90 - 110	
106 (Cd)	----- ug/l	-----	100.00	90 - 110	
107 Ag	50.24 ug/l	0.69	50.00	90 - 110	
108 (Cd)	----- ug/l	-----	100.00	90 - 110	
111 Cd	101.00 ug/l	0.53	100.00	90 - 110	
118 Sn	53.32 ug/l	6.19	50.00	90 - 110	
118 Sn	51.28 ug/l	9.27	50.00	90 - 110	
118 Sn	42.05 ug/l	1.94	50.00	90 - 110	Fail
121 Sb	101.00 ug/l	0.61	100.00	90 - 110	
137 Ba	98.34 ug/l	0.95	100.00	90 - 110	
205 Tl	98.87 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	100.70 ug/l	0.40	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-33155.02	14.51	-29895.57	110.9	70 - 120	IS Fail
45 Sc	3035328.30	0.34	2830107.80	107.3	70 - 120	
45 Sc	410321.50	0.60	373389.06	109.9	70 - 120	
45 Sc	8778832.00	0.39	7835315.00	112.0	70 - 120	
72 Ge	777997.38	0.84	735211.94	105.8	70 - 120	
72 Ge	275433.97	0.48	261572.13	105.3	70 - 120	
72 Ge	1909040.60	0.76	1727774.30	110.5	70 - 120	
115 In	5573972.50	0.59	5361365.50	104.0	70 - 120	
115 In	2936688.00	0.74	2785210.00	105.4	70 - 120	
115 In	11974508.00	0.21	10908714.00	109.8	70 - 120	
159 Tb	16012065.00	0.44	14663948.00	109.2	70 - 120	
165 Ho	15490376.00	0.82	14116038.00	109.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\012_CCV.D\012_CCV.D#
 Date Acquired: Jul 20 2012 11:23 am
 Operator: NBS
 Sample Name: CCV 120720
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	49.73 ug/l	0.45	50.00	90 - 110	
11 B	49.88 ug/l	0.38	50.00	90 - 110	
23 Na	1265.00 ug/l	1.04	1250.00	90 - 110	
24 Mg	2557.00 ug/l	0.86	2500.00	90 - 110	
27 Al	1008.00 ug/l	0.49	1000.00	90 - 110	
39 K	1009.00 ug/l	0.48	1000.00	90 - 110	
44 Ca	2495.00 ug/l	1.48	2500.00	90 - 110	
47 Ti	49.70 ug/l	1.16	50.00	90 - 110	
51 V	49.72 ug/l	1.19	50.00	90 - 110	
52 Cr	49.61 ug/l	0.88	50.00	90 - 110	
55 Mn	49.94 ug/l	0.29	50.00	90 - 110	
56 Fe	1005.00 ug/l	0.06	1000.00	90 - 110	
59 Co	49.65 ug/l	0.66	50.00	90 - 110	
60 Ni	49.57 ug/l	0.48	50.00	90 - 110	
63 Cu	49.76 ug/l	0.19	50.00	90 - 110	
65 Cu	49.77 ug/l	0.27	50.00	90 - 110	
66 Zn	50.38 ug/l	0.90	50.00	90 - 110	
75 As	50.11 ug/l	0.73	50.00	90 - 110	
78 Se	50.73 ug/l	0.63	50.00	90 - 110	
78 Se	49.35 ug/l	0.36	50.00	90 - 110	
88 Sr	50.15 ug/l	0.44	50.00	90 - 110	
88 Sr	50.19 ug/l	0.97	50.00	90 - 110	
95 Mo	49.83 ug/l	0.43	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.38 ug/l	0.64	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	50.38 ug/l	0.32	50.00	90 - 110	
118 Sn	50.06 ug/l	0.71	---	##### - #####	
118 Sn	49.42 ug/l	0.90	---	##### - #####	
118 Sn	49.88 ug/l	0.74	50.00	90 - 110	
121 Sb	52.35 ug/l	0.18	50.00	90 - 110	
137 Ba	49.61 ug/l	1.30	50.00	90 - 110	
205 Tl	50.52 ug/l	1.09	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	51.64 ug/l	0.92	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-35043.24	18.39	-29895.57	117.2	70 - 120	IS Fail
45 Sc	3061517.80	0.74	2830107.80	108.2	70 - 120	
45 Sc	403225.16	0.43	373389.06	108.0	70 - 120	
45 Sc	8909548.00	0.57	7835315.00	113.7	70 - 120	
72 Ge	782340.63	0.29	735211.94	106.4	70 - 120	
72 Ge	275283.34	1.30	261572.13	105.2	70 - 120	
72 Ge	1920962.30	0.67	1727774.30	111.2	70 - 120	
115 In	5501277.50	0.95	5361365.50	102.6	70 - 120	
115 In	2902767.50	0.61	2785210.00	104.2	70 - 120	
115 In	12034912.00	0.53	10908714.00	110.3	70 - 120	
159 Tb	15928094.00	1.00	14663948.00	108.6	70 - 120	
165 Ho	15429876.00	0.50	14116038.00	109.3	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\013_CCB.D\013_CCB.D#
 Date Acquired: Jul 20 2012 11:30 am
 Operator: NBS
 Sample Name: CCB 120720
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	54.74	0.12	
11 B	0.69 ug/l	2.66	15.00	
23 Na	-7.65 ug/l	16.88	77.10	
24 Mg	0.61 ug/l	17.01	7.50	
27 Al	0.48 ug/l	39.87	3.96	
39 K	-0.63 ug/l	323.05	19.20	
44 Ca	-3.63 ug/l	49.67	90.00	
47 Ti	-0.01 ug/l	441.18	0.78	
51 V	0.02 ug/l	16.76	0.21	
52 Cr	-0.01 ug/l	31.81	0.12	
55 Mn	-0.02 ug/l	70.96	0.18	
56 Fe	0.36 ug/l	23.29	40.80	
59 Co	0.01 ug/l	30.68	0.09	
60 Ni	0.02 ug/l	70.08	0.48	
63 Cu	0.00 ug/l	406.93	0.39	
65 Cu	0.01 ug/l	94.34	0.39	
66 Zn	0.03 ug/l	41.05	6.90	
75 As	0.02 ug/l	49.17	0.27	
78 Se	0.01 ug/l	65.30	0.30	
78 Se	0.23 ug/l	42.98	0.30	
88 Sr	0.03 ug/l	17.03	0.03	
88 Sr	0.02 ug/l	9.92	0.03	
95 Mo	0.07 ug/l	8.37	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	34.32	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.01 ug/l	110.54	0.06	
118 Sn	0.11 ug/l	6.97	#####	
118 Sn	0.08 ug/l	25.27	#####	
118 Sn	0.05 ug/l	18.90	0.30	
121 Sb	0.10 ug/l	6.77	0.03	Fail
137 Ba	0.01 ug/l	60.68	0.12	
205 Tl	0.02 ug/l	12.93	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	0.00 ug/l	38.95	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-33367.50	10.88	-29895.57	111.6	70 - 120	IS Fail
45 Sc	2981742.00	0.87	2830107.80	105.4	70 - 120	
45 Sc	397301.16	0.98	373389.06	106.4	70 - 120	
45 Sc	8063781.50	0.02	7835315.00	102.9	70 - 120	
72 Ge	765724.19	0.93	735211.94	104.2	70 - 120	
72 Ge	271125.00	0.91	261572.13	103.7	70 - 120	
72 Ge	1767881.50	0.79	1727774.30	102.3	70 - 120	
115 In	5464792.00	0.61	5361365.50	101.9	70 - 120	
115 In	2859749.00	0.93	2785210.00	102.7	70 - 120	
115 In	11112685.00	0.29	10908714.00	101.9	70 - 120	
159 Tb	14788974.00	0.56	14663948.00	100.9	70 - 120	
165 Ho	14382564.00	0.33	14116038.00	101.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\014SMPL.D\014SMPL.D#
 Date Acquired: Jul 20 2012 11:36 am
 Operator: NBS
 Sample Name: ICSA 120720
 Misc Info:
 Vial Number: 2102
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	32.63	1000	
11 B	1.02 ug/l	1.02	6.96	1000	
23 Na	91690.00 ug/l	91690.00	0.40	25000	>Cal
24 Mg	88640.00 ug/l	88640.00	0.99	50000	>Cal
27 Al	89800.00 ug/l	89800.00	1.13	20000	>Cal
39 K	89950.00 ug/l	89950.00	1.46	20000	>Cal
44 Ca	92330.00 ug/l	92330.00	2.14	50000	>Cal
47 Ti	1724.00 ug/l	1724.00	1.46	1000	>Cal
51 V	0.09 ug/l	0.09	6.05	1000	
52 Cr	1.53 ug/l	1.53	5.74	1000	
55 Mn	5.75 ug/l	5.75	1.37	1000	
56 Fe	89780.00 ug/l	89780.00	1.98	20000	>Cal
59 Co	1.96 ug/l	1.96	0.81	1000	
60 Ni	1.92 ug/l	1.92	2.92	1000	
63 Cu	0.75 ug/l	0.75	0.96	1000	
65 Cu	0.83 ug/l	0.83	1.57	1000	
66 Zn	1.29 ug/l	1.29	5.01	1000	
75 As	0.29 ug/l	0.29	6.86	1000	
78 Se	0.10 ug/l	0.10	11.94	1000	
78 Se	0.79 ug/l	0.79	5.70	1000	
88 Sr	1.30 ug/l	1.30	3.80	1000	
88 Sr	1.36 ug/l	1.36	1.41	1000	
95 Mo	1850.00 ug/l	1850.00	0.52	1000	>Cal
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.07 ug/l	0.07	2.51	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.89 ug/l	0.89	10.78	1000	
118 Sn	0.23 ug/l	0.23	4.06	#####	
118 Sn	0.25 ug/l	0.25	3.95	#####	
118 Sn	0.23 ug/l	0.23	3.48	1000	
121 Sb	1.09 ug/l	1.09	2.82	1000	
137 Ba	2.53 ug/l	2.53	1.76	1000	
205 Tl	0.07 ug/l	0.07	1.69	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	0.41 ug/l	0.41	2.25	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-38401.96	12.20	-29895.57	128.5	70 - 120	IS Fai
45 Sc	3083390.50	0.85	2830107.80	108.9	70 - 120	
45 Sc	417569.25	0.92	373389.06	111.8	70 - 120	
45 Sc	8856958.00	0.89	7835315.00	113.0	70 - 120	
72 Ge	764578.50	0.80	735211.94	104.0	70 - 120	
72 Ge	277761.69	1.87	261572.13	106.2	70 - 120	
72 Ge	1917863.40	0.91	1727774.30	111.0	70 - 120	
115 In	5330861.00	0.75	5361365.50	99.4	70 - 120	
115 In	2756140.30	0.55	2785210.00	99.0	70 - 120	
115 In	11358396.00	0.88	10908714.00	104.1	70 - 120	
159 Tb	15860718.00	0.50	14663948.00	108.2	70 - 120	
165 Ho	15379126.00	0.39	14116038.00	108.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\015ICSB.D\015ICSB.D#
 Date Acquired: Jul 20 2012 11:43 am
 Acq. Method: 62A0720A.M
 Operator: NBS
 Sample Name: ICSAB 120720
 Misc Info:
 Vial Number: 2103
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal. Update: Jul 20 2012 11:00 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	237.70	0.25	250	95.1	80 - 120	
11 B	45	3	2.12	149.53	---	---	-	
23 Na	45	2	95170.00	0.93	---	---	-	
24 Mg	45	2	91470.00	1.08	---	---	-	
27 Al	45	2	92370.00	1.30	---	---	-	
39 K	45	2	93290.00	0.33	---	---	-	
44 Ca	45	2	95840.00	1.07	---	---	-	
47 Ti	45	2	1772.00	0.91	2000	88.6	80 - 120	
51 V	45	2	261.80	1.16	250	104.7	80 - 120	
52 Cr	45	2	249.10	0.35	250	99.6	80 - 120	
55 Mn	45	2	256.10	0.85	250	102.4	80 - 120	
56 Fe	45	2	93000.00	0.74	---	---	-	
59 Co	45	2	223.30	0.61	250	89.3	80 - 120	
60 Ni	45	2	467.50	0.87	500	93.5	80 - 120	
63 Cu	45	2	227.20	0.76	250	90.9	80 - 120	
65 Cu	45	2	226.90	0.74	250	90.8	80 - 120	
66 Zn	115	2	504.20	0.65	500	100.8	80 - 120	
75 As	115	2	274.20	0.75	250	109.7	80 - 120	
78 Se	115	1	263.30	0.75	250	105.3	80 - 120	
78 Se	115	2	265.80	0.88	250	106.3	80 - 120	
88 Sr	115	2	1.40	0.78	---	---	-	
88 Sr	115	3	1.42	0.80	---	---	-	
95 Mo	115	3	2164.00	0.23	2000	108.2	80 - 120	
106 (Cd)	---	3	-----	---	---	---	-	
107 Ag	115	3	466.30	3.09	500	93.3	80 - 120	
108 (Cd)	---	3	-----	---	---	---	-	
111 Cd	115	3	461.60	0.58	500	92.3	80 - 120	
118 Sn	115	1	0.24	4.71	---	---	-	
118 Sn	115	2	0.21	14.06	---	---	-	
118 Sn	115	3	0.22	4.36	---	---	-	
121 Sb	115	3	252.00	0.79	250	100.8	80 - 120	
137 Ba	115	3	251.10	0.90	250	100.4	80 - 120	
205 Tl	159	3	224.50	0.19	250	89.8	80 - 120	
206 (Pb)	---	3	-----	---	---	---	-	
207 (Pb)	---	3	-----	---	---	---	-	
208 Pb	159	3	433.90	0.48	500	86.8	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3	-35127	8.50	-29896	117.5	70 - 120	IS Fail
45 Sc	1	3151850	0.39	2830108	111.4	70 - 120	
45 Sc	2	417038	0.62	373389	111.7	70 - 120	
45 Sc	3	9122212	0.98	7835315	116.4	70 - 120	
72 Ge	1	782875	1.00	735212	106.5	70 - 120	
72 Ge	2	277274	0.33	261572	106.0	70 - 120	
72 Ge	3	1970595	1.29	1727774	114.1	70 - 120	
115 In	1	5418989	0.35	5361366	101.1	70 - 120	
115 In	2	2772493	0.70	2785210	99.5	70 - 120	
115 In	3	11532447	0.84	10908714	105.7	70 - 120	
159 Tb	3	16121317	0.17	14663948	109.9	70 - 120	
165 Ho	3	15657963	0.42	14116038	110.9	70 - 120	

Tune File# 1 c:\icpchem\1\7500\h2_hmi.u
 Tune File# 2 c:\icpchem\1\7500\he_hmi.u
 Tune File# 3 c:\icpchem\1\7500\ng_hmi.u

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\025_CCV.D\025_CCV.D#
 Date Acquired: Jul 20 2012 12:50 pm
 Operator: NBS
 Sample Name: CCV 120720
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	49.48 ug/l	0.75	50.00	90 - 110	
11 B	48.35 ug/l	1.30	50.00	90 - 110	
23 Na	1264.00 ug/l	1.26	1250.00	90 - 110	
24 Mg	2565.00 ug/l	1.24	2500.00	90 - 110	
27 Al	1014.00 ug/l	1.08	1000.00	90 - 110	
39 K	1030.00 ug/l	0.55	1000.00	90 - 110	
44 Ca	2503.00 ug/l	1.07	2500.00	90 - 110	
47 Ti	49.92 ug/l	0.73	50.00	90 - 110	
51 V	49.63 ug/l	0.19	50.00	90 - 110	
52 Cr	49.84 ug/l	0.62	50.00	90 - 110	
55 Mn	50.23 ug/l	0.24	50.00	90 - 110	
56 Fe	1003.00 ug/l	0.56	1000.00	90 - 110	
59 Co	49.89 ug/l	0.40	50.00	90 - 110	
60 Ni	49.67 ug/l	1.00	50.00	90 - 110	
63 Cu	49.60 ug/l	1.12	50.00	90 - 110	
65 Cu	49.17 ug/l	0.43	50.00	90 - 110	
66 Zn	51.08 ug/l	0.86	50.00	90 - 110	
75 As	51.17 ug/l	0.51	50.00	90 - 110	
78 Se	50.05 ug/l	1.17	50.00	90 - 110	
78 Se	50.84 ug/l	0.67	50.00	90 - 110	
88 Sr	51.13 ug/l	0.96	50.00	90 - 110	
88 Sr	50.78 ug/l	1.30	50.00	90 - 110	
95 Mo	49.74 ug/l	0.74	50.00	90 - 110	
106 (Cd)	ug/l		50.00	90 - 110	
107 Ag	24.52 ug/l	1.02	25.00	90 - 110	
108 (Cd)	ug/l		50.00	90 - 110	
111 Cd	50.32 ug/l	0.29	50.00	90 - 110	
118 Sn	49.83 ug/l	1.17	---	#### - #####	
118 Sn	50.00 ug/l	1.35	---	#### - #####	
118 Sn	49.54 ug/l	1.27	50.00	90 - 110	
121 Sb	52.57 ug/l	0.74	50.00	90 - 110	
137 Ba	49.55 ug/l	0.86	50.00	90 - 110	
205 Tl	50.11 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	50.96 ug/l	0.92	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-33461.59	25.16	-29895.57	111.9	70 - 120	IS Fail
45 Sc	3266000.30	1.15	2830107.80	115.4	70 - 120	
45 Sc	428942.34	1.01	373389.06	114.9	70 - 120	
45 Sc	9263519.00	0.19	7835315.00	118.2	70 - 120	
72 Ge	834660.69	0.23	735211.94	113.5	70 - 120	
72 Ge	291520.09	1.14	261572.13	111.4	70 - 120	
72 Ge	1996612.90	0.20	1727774.30	115.6	70 - 120	
115 In	5888556.00	0.43	5361365.50	109.8	70 - 120	
115 In	3031474.50	0.70	2785210.00	108.8	70 - 120	
115 In	12402791.00	0.96	10908714.00	113.7	70 - 120	
159 Tb	16386850.00	0.82	14663948.00	111.7	70 - 120	
165 Ho	15926537.00	0.95	14116038.00	112.8	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\027_CCB.D\027_CCB.D#
 Date Acquired: Jul 20 2012 01:03 pm
 Operator: NBS
 Sample Name: CCB 120720
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	166.77	0.12	
11 B	-1.35 ug/l	5.55	15.00	
23 Na	-8.49 ug/l	18.28	77.10	
24 Mg	0.19 ug/l	46.09	7.50	
27 Al	0.06 ug/l	39.64	3.96	
39 K	4.27 ug/l	38.94	19.20	
44 Ca	-2.50 ug/l	43.86	90.00	
47 Ti	-0.05 ug/l	57.52	0.78	
51 V	0.01 ug/l	6.51	0.21	
52 Cr	-0.05 ug/l	7.92	0.12	
55 Mn	-0.08 ug/l	5.35	0.18	
56 Fe	0.05 ug/l	41.38	40.80	
59 Co	-0.01 ug/l	32.53	0.09	
60 Ni	-0.03 ug/l	36.33	0.48	
63 Cu	-0.01 ug/l	87.94	0.39	
65 Cu	0.01 ug/l	31.34	0.39	
66 Zn	-0.01 ug/l	143.61	6.90	
75 As	0.00 ug/l	75.36	0.27	
78 Se	0.00 ug/l	413.25	0.30	
78 Se	0.45 ug/l	17.65	0.30	Fail
88 Sr	0.01 ug/l	6.04	0.03	
88 Sr	0.01 ug/l	23.17	0.03	
95 Mo	0.03 ug/l	6.60	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	66.68	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.00 ug/l	459.82	0.06	
118 Sn	0.03 ug/l	12.76	#####	
118 Sn	0.03 ug/l	38.90	#####	
118 Sn	0.02 ug/l	18.10	0.30	
121 Sb	0.04 ug/l	12.08	0.03	Fail
137 Ba	0.00 ug/l	130.02	0.12	
205 Tl	0.00 ug/l	85.66	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.01 ug/l	12.82	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-32803.70	20.65	-29895.57	109.7	70 - 120	IS Fai.
45 Sc	3155918.50	0.87	2830107.80	111.5	70 - 120	
45 Sc	420031.06	1.59	373389.06	112.5	70 - 120	
45 Sc	8523010.00	1.60	7835315.00	108.8	70 - 120	
72 Ge	797850.25	0.31	735211.94	108.5	70 - 120	
72 Ge	281855.75	1.00	261572.13	107.8	70 - 120	
72 Ge	1851627.10	1.60	1727774.30	107.2	70 - 120	
115 In	5682842.00	0.81	5361365.50	106.0	70 - 120	
115 In	2960577.00	0.49	2785210.00	106.3	70 - 120	
115 In	11516044.00	0.28	10908714.00	105.6	70 - 120	
159 Tb	15107972.00	0.43	14663948.00	103.0	70 - 120	
165 Ho	14616279.00	0.76	14116038.00	103.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\035_CCV.D\035_CCV.D#
 Date Acquired: Jul 20 2012 01:56 pm
 Operator: NBS
 Sample Name: CCV 120720
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	49.21 ug/l	0.44	50.00	90 - 110	
11 B	51.61 ug/l	1.43	50.00	90 - 110	
23 Na	1286.00 ug/l	0.87	1250.00	90 - 110	
24 Mg	2600.00 ug/l	0.11	2500.00	90 - 110	
27 Al	1036.00 ug/l	0.60	1000.00	90 - 110	
39 K	1042.00 ug/l	0.66	1000.00	90 - 110	
44 Ca	2547.00 ug/l	0.42	2500.00	90 - 110	
47 Ti	50.28 ug/l	1.54	50.00	90 - 110	
51 V	49.72 ug/l	1.45	50.00	90 - 110	
52 Cr	49.90 ug/l	1.37	50.00	90 - 110	
55 Mn	50.37 ug/l	0.93	50.00	90 - 110	
56 Fe	1003.00 ug/l	0.96	1000.00	90 - 110	
59 Co	49.70 ug/l	1.14	50.00	90 - 110	
60 Ni	49.04 ug/l	0.57	50.00	90 - 110	
63 Cu	49.08 ug/l	1.08	50.00	90 - 110	
65 Cu	48.99 ug/l	1.07	50.00	90 - 110	
66 Zn	50.88 ug/l	0.69	50.00	90 - 110	
75 As	51.03 ug/l	0.43	50.00	90 - 110	
78 Se	49.74 ug/l	1.32	50.00	90 - 110	
78 Se	50.58 ug/l	0.80	50.00	90 - 110	
88 Sr	51.36 ug/l	0.48	50.00	90 - 110	
88 Sr	50.85 ug/l	1.13	50.00	90 - 110	
95 Mo	50.30 ug/l	0.76	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.64 ug/l	0.57	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	50.16 ug/l	0.24	50.00	90 - 110	
118 Sn	50.14 ug/l	0.81	---	##### - #####	
118 Sn	50.04 ug/l	0.37	---	##### - #####	
118 Sn	50.06 ug/l	0.82	50.00	90 - 110	
121 Sb	52.94 ug/l	0.21	50.00	90 - 110	
137 Ba	50.13 ug/l	0.56	50.00	90 - 110	
205 Tl	50.06 ug/l	0.48	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	50.98 ug/l	0.74	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range (%)	Flag
6 Li	-32786.82	13.80	-29895.57	109.7	70 - 120	IS Fail
45 Sc	3320781.30	0.60	2830107.80	117.3	70 - 120	
45 Sc	436744.19	1.01	373389.06	117.0	70 - 120	
45 Sc	9302661.00	0.54	7835315.00	118.7	70 - 120	
72 Ge	847294.50	0.73	735211.94	115.2	70 - 120	
72 Ge	295756.72	0.89	261572.13	113.1	70 - 120	
72 Ge	2005152.30	0.24	1727774.30	116.1	70 - 120	
115 In	5943993.00	0.99	5361365.50	110.9	70 - 120	
115 In	3092284.50	0.47	2785210.00	111.0	70 - 120	
115 In	12518871.00	0.60	10908714.00	114.8	70 - 120	
159 Tb	16569519.00	0.72	14663948.00	113.0	70 - 120	
165 Ho	16227099.00	0.31	14116038.00	115.0	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\037_CCB.D\037_CCB.D#
 Date Acquired: Jul 20 2012 02:09 pm
 Operator: NBS
 Sample Name: CCB 120720
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	28.59	0.12	
11 B	0.22 ug/l	28.67	15.00	
23 Na	-9.28 ug/l	5.07	77.10	
24 Mg	0.07 ug/l	50.90	7.50	
27 Al	0.38 ug/l	45.95	3.96	
39 K	3.18 ug/l	27.59	19.20	
44 Ca	-1.54 ug/l	152.11	90.00	
47 Ti	-0.05 ug/l	40.43	0.78	
51 V	0.00 ug/l	37.08	0.21	
52 Cr	-0.06 ug/l	11.99	0.12	
55 Mn	-0.07 ug/l	22.57	0.18	
56 Fe	-0.01 ug/l	361.07	40.80	
59 Co	0.00 ug/l	546.22	0.09	
60 Ni	-0.02 ug/l	103.56	0.48	
63 Cu	0.00 ug/l	87.04	0.39	
65 Cu	0.00 ug/l	38523.00	0.39	
66 Zn	-0.02 ug/l	246.24	6.90	
75 As	0.02 ug/l	27.92	0.27	
78 Se	0.00 ug/l	158.84	0.30	
78 Se	0.45 ug/l	56.68	0.30	Fail
88 Sr	0.02 ug/l	24.71	0.03	
88 Sr	0.01 ug/l	12.50	0.03	
95 Mo	0.03 ug/l	15.13	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	89.69	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.00 ug/l	711.06	0.06	
118 Sn	0.05 ug/l	17.92	#####	
118 Sn	0.05 ug/l	22.63	#####	
118 Sn	0.03 ug/l	14.22	0.30	
121 Sb	0.04 ug/l	9.81	0.03	Fail
137 Ba	0.00 ug/l	158.10	0.12	
205 Tl	0.01 ug/l	24.46	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.01 ug/l	23.86	0.33	

ISTD Elements

Element	CPS Mean	RSD (%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-35172.29	10.48	-29895.57	117.7	70 - 120	IS Fai.
45 Sc	3151319.30	0.81	2830107.80	111.3	70 - 120	
45 Sc	426215.50	1.07	373389.06	114.1	70 - 120	
45 Sc	8646691.00	0.80	7835315.00	110.4	70 - 120	
72 Ge	810620.44	0.98	735211.94	110.3	70 - 120	
72 Ge	289498.59	1.12	261572.13	110.7	70 - 120	
72 Ge	1877512.00	0.49	1727774.30	108.7	70 - 120	
115 In	5730131.50	1.73	5361365.50	106.9	70 - 120	
115 In	2981464.00	0.95	2785210.00	107.0	70 - 120	
115 In	11722050.00	0.26	10908714.00	107.5	70 - 120	
159 Tb	15373301.00	0.28	14663948.00	104.8	70 - 120	
165 Ho	14948807.00	0.70	14116038.00	105.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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\12G20k00.B\044_CCV.D\044_CCV.D#
 Date Acquired: Jul 20 2012 02:56 pm
 Operator: NBS
 Sample Name: CCV 120720
 Misc Info:
 Vial Number: 1105
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	49.55 ug/l	0.34	50.00	90 - 110	
11 B	67.20 ug/l	0.46	50.00	90 - 110	Fail
23 Na	1299.00 ug/l	1.81	1250.00	90 - 110	
24 Mg	2570.00 ug/l	1.42	2500.00	90 - 110	
27 Al	1015.00 ug/l	2.00	1000.00	90 - 110	
39 K	1033.00 ug/l	1.77	1000.00	90 - 110	
44 Ca	2532.00 ug/l	1.49	2500.00	90 - 110	
47 Ti	48.95 ug/l	1.14	50.00	90 - 110	
51 V	48.77 ug/l	1.58	50.00	90 - 110	
52 Cr	49.02 ug/l	1.52	50.00	90 - 110	
55 Mn	49.60 ug/l	1.29	50.00	90 - 110	
56 Fe	992.00 ug/l	1.68	1000.00	90 - 110	
59 Co	48.70 ug/l	1.65	50.00	90 - 110	
60 Ni	48.32 ug/l	0.70	50.00	90 - 110	
63 Cu	48.54 ug/l	1.59	50.00	90 - 110	
65 Cu	48.09 ug/l	1.43	50.00	90 - 110	
66 Zn	50.85 ug/l	0.29	50.00	90 - 110	
75 As	50.74 ug/l	0.62	50.00	90 - 110	
78 Se	50.09 ug/l	1.20	50.00	90 - 110	
78 Se	50.84 ug/l	1.71	50.00	90 - 110	
88 Sr	51.17 ug/l	0.75	50.00	90 - 110	
88 Sr	50.53 ug/l	0.95	50.00	90 - 110	
95 Mo	49.63 ug/l	0.43	50.00	90 - 110	
106 (Cd)	----- ug/l	-----	50.00	90 - 110	
107 Ag	24.48 ug/l	0.76	25.00	90 - 110	
108 (Cd)	----- ug/l	-----	50.00	90 - 110	
111 Cd	49.71 ug/l	0.69	50.00	90 - 110	
118 Sn	49.89 ug/l	0.34	---	##### - #####	
118 Sn	50.43 ug/l	1.42	---	##### - #####	
118 Sn	49.71 ug/l	0.63	50.00	90 - 110	
121 Sb	52.57 ug/l	0.47	50.00	90 - 110	
137 Ba	49.40 ug/l	1.55	50.00	90 - 110	
205 Tl	49.87 ug/l	0.32	50.00	90 - 110	
206 (Pb)	----- ug/l	-----	50.00	90 - 110	
207 (Pb)	----- ug/l	-----	50.00	90 - 110	
208 Pb	50.80 ug/l	0.75	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-35740.07	10.23	-29895.57	119.5	70 - 120	IS Fail NT
45 Sc	3359929.50	0.54	2830107.80	118.7	70 - 120	
45 Sc	446610.56	1.31	373389.06	119.6	70 - 120	
45 Sc	9498687.00	0.82	7835315.00	121.2	70 - 120	IS Fail NT
72 Ge	849823.94	1.67	735211.94	115.6	70 - 120	
72 Ge	292269.16	1.32	261572.13	111.7	70 - 120	
72 Ge	2055978.50	1.31	1727774.30	119.0	70 - 120	
115 In	6007832.00	1.15	5361365.50	112.1	70 - 120	
115 In	3096709.00	0.58	2785210.00	111.2	70 - 120	
115 In	12709739.00	0.12	10908714.00	116.5	70 - 120	
159 Tb	16811392.00	1.11	14663948.00	114.6	70 - 120	
165 Ho	16348404.00	1.54	14116038.00	115.8	70 - 120	

> NBS 07/23/12

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 2 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\046_CCB.D\046_CCB.D#
 Date Acquired: Jul 20 2012 03:10 pm
 Operator: NBS
 Sample Name: CCB 120720
 Misc Info:
 Vial Number: 1102
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	922.30	0.12	
11 B	10.25 ug/l	3.05	15.00	
23 Na	10.63 ug/l	22.00	77.10	
24 Mg	0.36 ug/l	57.34	7.50	
27 Al	0.51 ug/l	63.43	3.96	
39 K	8.05 ug/l	24.53	19.20	
44 Ca	-3.61 ug/l	19.10	90.00	
47 Ti	-0.04 ug/l	64.74	0.78	
51 V	0.01 ug/l	82.35	0.21	
52 Cr	-0.06 ug/l	7.92	0.12	
55 Mn	-0.06 ug/l	25.39	0.18	
56 Fe	0.21 ug/l	8.15	40.80	
59 Co	0.00 ug/l	51.68	0.09	
60 Ni	-0.03 ug/l	25.25	0.48	
63 Cu	0.00 ug/l	167.00	0.39	
65 Cu	0.00 ug/l	5611.40	0.39	
66 Zn	0.02 ug/l	59.48	6.90	
75 As	0.01 ug/l	35.74	0.27	
78 Se	0.00 ug/l	409.04	0.30	
78 Se	0.34 ug/l	43.89	0.30	Fail
88 Sr	0.02 ug/l	20.71	0.03	
88 Sr	0.01 ug/l	12.63	0.03	
95 Mo	0.03 ug/l	8.16	0.21	
106 (Cd)	----- ug/l	-----	#####	
107 Ag	0.00 ug/l	81.93	0.09	
108 (Cd)	----- ug/l	-----	#####	
111 Cd	0.00 ug/l	1477.30	0.06	
118 Sn	0.06 ug/l	9.73	#####	
118 Sn	0.06 ug/l	24.96	#####	
118 Sn	0.04 ug/l	10.73	0.30	
121 Sb	0.04 ug/l	4.45	0.03	Fail
137 Ba	0.01 ug/l	36.69	0.12	
205 Tl	0.01 ug/l	5.27	0.03	
206 (Pb)	----- ug/l	-----	#####	
207 (Pb)	----- ug/l	-----	#####	
208 Pb	-0.01 ug/l	6.35	0.33	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-29421.22	25.04	-29895.57	98.4	70 - 120	IS Fai	
45 Sc	3182231.00	1.52	2830107.80	112.4	70 - 120		
45 Sc	431615.88	0.87	373389.06	115.6	70 - 120		
45 Sc	8794947.00	0.63	7835315.00	112.2	70 - 120		
72 Ge	821033.88	1.48	735211.94	111.7	70 - 120		
72 Ge	289164.22	0.85	261572.13	110.5	70 - 120		
72 Ge	1891629.60	0.99	1727774.30	109.5	70 - 120		
115 In	5799300.00	0.95	5361365.50	108.2	70 - 120		
115 In	3045099.00	0.32	2785210.00	109.3	70 - 120		
115 In	11841903.00	0.64	10908714.00	108.6	70 - 120		
159 Tb	15537319.00	0.47	14663948.00	106.0	70 - 120		
165 Ho	15093237.00	0.95	14116038.00	106.9	70 - 120		

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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

**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	07/19/12	07/20/12	#602D-120719A-AY65044

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20K00.B\018SMPL.D\018SMPL.D#
 Date Acquired: Jul 20 2012 12:03 pm
 Operator: NBS
 Sample Name: 120719A-3015-BLK
 Misc Info: 120719A-3015
 Vial Number: 3101
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	0.01 ug/l	0.01	56.86	1000	
11 B	-1.25 ug/l	-1.39	6.97	1000	
23 Na	-11.38 ug/l	-12.64	5.22	25000	
24 Mg	1.32 ug/l	1.46	19.00	50000	
27 Al	2.26 ug/l	2.51	19.29	20000	
39 K	1.04 ug/l	1.15	149.57	20000	
44 Ca	1.16 ug/l	1.29	175.90	50000	
47 Ti	0.20 ug/l	0.23	13.84	1000	
51 V	0.01 ug/l	0.01	69.63	1000	
52 Cr	0.10 ug/l	0.11	5.26	1000	
55 Mn	-0.06 ug/l	-0.07	16.20	1000	
56 Fe	4.37 ug/l	4.86	12.80	20000	
59 Co	0.07 ug/l	0.07	20.32	1000	
60 Ni	-0.03 ug/l	-0.03	55.96	1000	
63 Cu	0.09 ug/l	0.09	2.42	1000	
65 Cu	0.10 ug/l	0.11	15.50	1000	
66 Zn	0.03 ug/l	0.03	131.28	1000	
75 As	0.02 ug/l	0.02	34.32	1000	
78 Se	0.01 ug/l	0.02	43.62	1000	
78 Se	0.38 ug/l	0.42	18.64	1000	
88 Sr	0.02 ug/l	0.02	14.60	1000	
88 Sr	0.00 ug/l	0.00	10.44	1000	
95 Mo	0.35 ug/l	0.39	3.45	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	0.26 ug/l	0.28	11.64	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	0.03 ug/l	0.04	11.63	1000	
118 Sn	0.15 ug/l	0.16	3.16	#####	
118 Sn	0.13 ug/l	0.15	11.46	#####	
118 Sn	0.11 ug/l	0.12	12.13	1000	
121 Sb	0.25 ug/l	0.28	6.65	1000	
137 Ba	0.01 ug/l	0.01	65.79	1000	
205 Tl	0.04 ug/l	0.05	8.58	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	-0.02 ug/l	-0.02	4.13	1000	

ISTD Elements

Element	CPS	Mean	RSD(%)	Ref Value	Rec (%)	QC Range (%)	Flag
6 Li	-39464.26	16.99		-29895.57	132.0	70 - 120	IS Fai
45 Sc	3149458.30	1.49		2830107.80	111.3	70 - 120	
45 Sc	417940.50	0.43		373389.06	111.9	70 - 120	
45 Sc	9336729.00	0.52		7835315.00	119.2	70 - 120	
72 Ge	798498.94	1.11		735211.94	108.6	70 - 120	
72 Ge	276248.34	1.51		261572.13	105.6	70 - 120	
72 Ge	1978956.00	0.71		1727774.30	114.5	70 - 120	
115 In	5623417.00	0.66		5361365.50	104.9	70 - 120	
115 In	2927802.00	0.34		2785210.00	105.1	70 - 120	
115 In	12377385.00	1.11		10908714.00	113.5	70 - 120	
159 Tb	16551154.00	0.60		14663948.00	112.9	70 - 120	
165 Ho	16019232.00	0.38		14116038.00	113.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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	53.0	106	80-120	07/19/12	07/20/12	#602D-120719A-AY65044

Comments:

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\022SMPL.D\022SMPL.D#
 Date Acquired: Jul 20 2012 12:29 pm
 Operator: NBS
 Sample Name: 120719A-3015-LCS
 Misc Info: 120719A-3015
 Vial Number: 3105
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	9.01 ug/l	10.01	0.91	1000	
11 B	45.31 ug/l	50.34	1.07	1000	
23 Na	4524.00 ug/l	5026.16	0.25	25000	
24 Mg	4574.00 ug/l	5081.71	1.10	50000	
27 Al	375.10 ug/l	416.74	1.86	20000	
39 K	942.40 ug/l	1047.01	1.00	20000	
44 Ca	4872.00 ug/l	5412.79	0.56	50000	
47 Ti	47.19 ug/l	52.43	2.69	1000	
51 V	47.33 ug/l	52.58	0.30	1000	
52 Cr	47.26 ug/l	52.51	0.96	1000	
55 Mn	47.49 ug/l	52.76	0.81	1000	
56 Fe	201.40 ug/l	223.76	0.18	20000	
59 Co	45.55 ug/l	50.61	0.48	1000	
60 Ni	45.79 ug/l	50.87	0.62	1000	
63 Cu	44.32 ug/l	49.24	0.99	1000	
65 Cu	43.99 ug/l	48.87	0.62	1000	
66 Zn	92.04 ug/l	102.26	1.41	1000	
75 As	44.10 ug/l	49.00	1.26	1000	
78 Se	41.09 ug/l	45.65	1.27	1000	
78 Se	42.21 ug/l	46.90	2.39	1000	
88 Sr	47.93 ug/l	53.25	1.47	1000	
88 Sr	47.91 ug/l	53.23	0.61	1000	
95 Mo	46.56 ug/l	51.73	0.21	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	17.66 ug/l	19.62	0.35	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	8.96 ug/l	9.95	0.96	1000	
118 Sn	48.52 ug/l	53.91	0.28	#####	
118 Sn	48.11 ug/l	53.45	0.74	#####	
118 Sn	48.34 ug/l	53.71	0.37	1000	
121 Sb	47.90 ug/l	53.22	0.42	1000	
137 Ba	46.19 ug/l	51.32	0.27	1000	
205 Tl	46.14 ug/l	51.26	0.80	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	47.79 ug/l	53.09	0.29	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-40171.81	7.90	-29895.57	134.4	70 - 120	IS Fai
45 Sc	3158251.30	0.48	2830107.80	111.6	70 - 120	
45 Sc	430667.94	0.57	373389.06	115.3	70 - 120	
45 Sc	9357612.00	0.87	7835315.00	119.4	70 - 120	
72 Ge	796678.25	0.61	735211.94	108.4	70 - 120	
72 Ge	278973.75	1.32	261572.13	106.7	70 - 120	
72 Ge	1976016.00	0.89	1727774.30	114.4	70 - 120	
115 In	5724514.00	0.83	5361365.50	106.8	70 - 120	
115 In	3027750.50	0.98	2785210.00	108.7	70 - 120	
115 In	12522802.00	0.43	10908714.00	114.8	70 - 120	
159 Tb	16726869.00	0.59	14663948.00	114.1	70 - 120	
165 Ho	16191016.00	0.41	14116038.00	114.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.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: 120719W-65044 MS - 169266

APPL Inc.

Sample ID: AY65044

908 North Temperance Avenue

Client ID: ES080

Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6020	LEAD (PB) (DISSOLVE	50.0	0.21	50.9	51.5	101	103	1.2	20	80-120	07/19/12	07/20/12	07/19/12	07/20/12	169266	AY65044

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\040SMPL.D\040SMPL.D#
 Date Acquired: Jul 20 2012 02:29 pm
 Operator: NBS
 Sample Name: AY65044W08 MS
 Misc Info: 120719A-3015
 Vial Number: 3204
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	9.02 ug/l	10.02	2.25	1000	
11 B	508.00 ug/l	564.39	0.99	1000	
23 Na	127100.00 ug/l	141208.10	0.91	25000	>Cal
24 Mg	25030.00 ug/l	27808.33	0.84	50000	
27 Al	395.50 ug/l	439.40	1.71	20000	
39 K	4048.00 ug/l	4497.33	1.68	20000	
44 Ca	19380.00 ug/l	21531.18	0.96	50000	
47 Ti	47.10 ug/l	52.33	2.21	1000	
51 V	80.84 ug/l	89.81	0.96	1000	
52 Cr	50.89 ug/l	56.54	0.62	1000	
55 Mn	46.79 ug/l	51.98	0.82	1000	
56 Fe	209.60 ug/l	232.87	0.96	20000	
59 Co	44.11 ug/l	49.01	0.35	1000	
60 Ni	43.64 ug/l	48.48	0.88	1000	
63 Cu	43.12 ug/l	47.91	0.40	1000	
65 Cu	43.09 ug/l	47.87	1.16	1000	
66 Zn	104.60 ug/l	116.21	0.59	1000	
75 As	45.59 ug/l	50.65	0.56	1000	
78 Se	41.46 ug/l	46.06	0.29	1000	
78 Se	42.90 ug/l	47.66	1.54	1000	
88 Sr	201.80 ug/l	224.20	0.26	1000	
88 Sr	194.40 ug/l	215.98	1.08	1000	
95 Mo	49.05 ug/l	54.49	0.59	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	17.13 ug/l	19.03	0.82	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	8.91 ug/l	9.90	0.97	1000	
118 Sn	48.84 ug/l	54.26	0.44	#####	
118 Sn	48.43 ug/l	53.81	1.03	#####	
118 Sn	48.69 ug/l	54.09	0.26	1000	
121 Sb	49.14 ug/l	54.59	0.35	1000	
137 Ba	58.97 ug/l	65.52	0.18	1000	
205 Tl	44.21 ug/l	49.12	0.11	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	45.83 ug/l	50.92	0.25	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-36027.67	3.46	-29895.57	120.5	70 - 120	IS Fai N1
45 Sc	3248716.00	0.86	2830107.80	114.8	70 - 120	
45 Sc	444680.38	0.78	373389.06	119.1	70 - 120	
45 Sc	9567347.00	1.00	7835315.00	122.1	70 - 120	IS Fai N1
72 Ge	800150.81	0.47	735211.94	108.8	70 - 120	
72 Ge	285320.19	0.64	261572.13	109.1	70 - 120	
72 Ge	1972646.90	1.99	1727774.30	114.2	70 - 120	
115 In	5640091.00	0.86	5361365.50	105.2	70 - 120	
115 In	2963479.50	0.63	2785210.00	106.4	70 - 120	
115 In	12205671.00	0.43	10908714.00	111.9	70 - 120	
159 Tb	16610334.00	0.12	14663948.00	113.3	70 - 120	
165 Ho	16193127.00	0.49	14116038.00	114.7	70 - 120	

NBS 07/23/12

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
 2 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\041SMPL.D\041SMPL.D#
 Date Acquired: Jul 20 2012 02:36 pm
 Operator: NBS
 Sample Name: AY65044W08 MSD
 Misc Info: 120719A-3015
 Vial Number: 3205
 Current Method: C:\ICPCHEM\1\METHODS\62A0720A.M
 Calibration File: C:\ICPCHEM\1\CALIB\62A0720A.C
 Last Cal Update: Jul 20 2012 11:00 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	9.12 ug/l	10.13	0.83	1000	
11 B	516.20 ug/l	573.50	0.56	1000	
23 Na	129500.00 ug/l	143874.50	1.31	25000	>Cal
24 Mg	25440.00 ug/l	28263.84	1.99	50000	
27 Al	443.90 ug/l	493.17	2.18	20000	
39 K	4107.00 ug/l	4562.88	1.34	20000	
44 Ca	22190.00 ug/l	24653.09	1.19	50000	
47 Ti	53.77 ug/l	59.74	1.35	1000	
51 V	82.33 ug/l	91.47	0.88	1000	
52 Cr	52.14 ug/l	57.93	0.79	1000	
55 Mn	49.05 ug/l	54.49	1.14	1000	
56 Fe	297.30 ug/l	330.30	1.25	20000	
59 Co	44.83 ug/l	49.81	1.54	1000	
60 Ni	45.01 ug/l	50.01	1.06	1000	
63 Cu	44.58 ug/l	49.53	1.18	1000	
65 Cu	44.40 ug/l	49.33	1.03	1000	
66 Zn	99.26 ug/l	110.28	1.31	1000	
75 As	46.03 ug/l	51.14	0.96	1000	
78 Se	41.97 ug/l	46.63	1.46	1000	
78 Se	42.58 ug/l	47.31	1.95	1000	
88 Sr	214.90 ug/l	238.75	0.40	1000	
88 Sr	219.70 ug/l	244.09	0.23	1000	
95 Mo	48.94 ug/l	54.37	0.46	1000	
106 (Cd)	----- ug/l	#VALUE!	-----	#####	
107 Ag	17.04 ug/l	18.93	0.77	500	
108 (Cd)	----- ug/l	#VALUE!	-----	#####	
111 Cd	9.02 ug/l	10.02	2.12	1000	
118 Sn	49.19 ug/l	54.65	0.90	#####	
118 Sn	48.66 ug/l	54.06	1.24	#####	
118 Sn	48.32 ug/l	53.68	0.71	1000	
121 Sb	48.89 ug/l	54.32	0.99	1000	
137 Ba	58.81 ug/l	65.34	0.86	1000	
205 Tl	44.40 ug/l	49.33	0.22	1000	
206 (Pb)	----- ug/l	#VALUE!	-----	#####	
207 (Pb)	----- ug/l	#VALUE!	-----	#####	
208 Pb	46.43 ug/l	51.58	0.74	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-39213.74	4.52	-29895.57	131.2	70 - 120	IS Fai NT
45 Sc	3253422.30	1.35	2830107.80	115.0	70 - 120	
45 Sc	440604.63	1.73	373389.06	118.0	70 - 120	
45 Sc	9684490.00	0.45	7835315.00	123.6	70 - 120	IS Fai NT
72 Ge	804434.69	0.71	735211.94	109.4	70 - 120	
72 Ge	286202.91	1.58	261572.13	109.4	70 - 120	
72 Ge	1994535.00	0.93	1727774.30	115.4	70 - 120	
115 In	5670486.00	0.75	5361365.50	105.8	70 - 120	
115 In	2965847.50	0.88	2785210.00	106.5	70 - 120	
115 In	12435346.00	1.07	10908714.00	114.0	70 - 120	
159 Tb	16671569.00	0.72	14663948.00	113.7	70 - 120	
165 Ho	16184047.00	0.88	14116038.00	114.7	70 - 120	

> NBS 7/23/12

ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

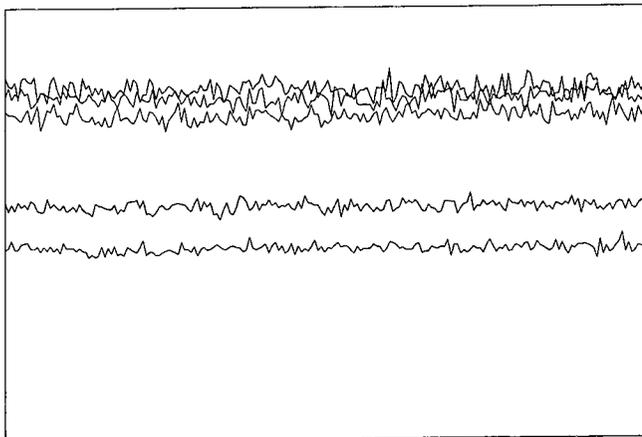
1 :Element Failures 0 :Max. Number of Failures Allowed
 2 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
 ISTD: Fail

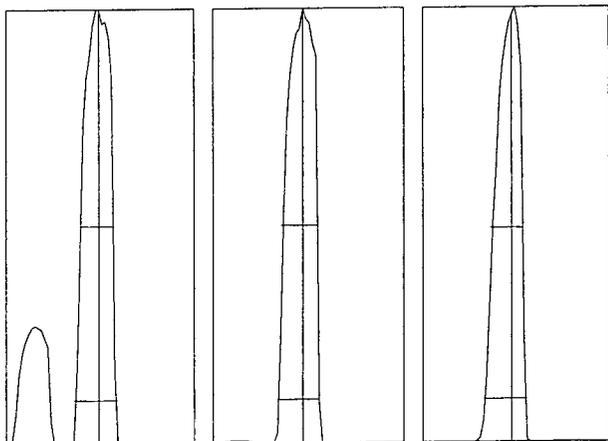
Tune Report

Tune File : NG_HMI.u
 Comment : 120720



Integration Time: 0.1000 sec
 Sampling Period: 0.7200 sec
 n: 200
 Oxide: 156/140 0.655%
 Doubly Charged: 70/140 1.066%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	16457.0	16188.5	2.17	2.10
89	50,000	38547.0	37345.4	2.01	2.30
205	50,000	27128.0	26819.1	2.02	7.60
156/140	2	0.736%	0.673%	7.08	
70/140	2	0.945%	1.039%	6.57	
140	50,000	39670.0	39402.0	2.02	4.50
59	50,000	21764.0	21930.1	2.17	2.80



m/z:	7	89	205
Height:	16,449	38,512	26,457
Axis:	7.00	88.95	204.95
W-50%:	0.55	0.60	0.55
W-10%:	0.700	0.6500	0.700

Integration Time: 0.1000 sec
 Acquisition Time: 22.7600 sec

Y axis : Linear

Tune Report

Tune File : NG_HMI.u
Comment : 120720

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

===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

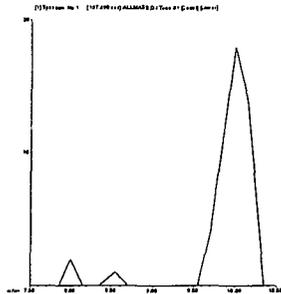
===Octopole Parameters===
  OctP RF : 180 V
  OctP Bias : -6 V

===Reaction Cell===
  Reaction Mode : OFF
  H2 Gas : 0 mL/min
  He Gas : 0 mL/min
  Optional Gas : --- %
```

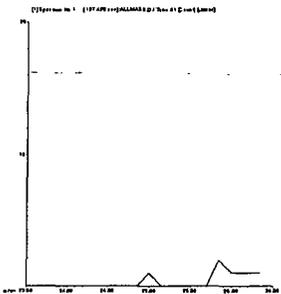
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\001TUNE.D
 Date Acquired: Jul 20 2012 10:07 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

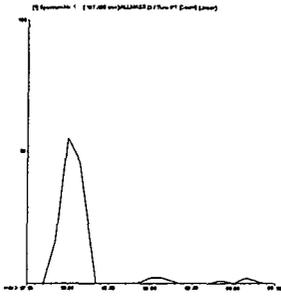
Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
9 Be	881336	876428	880775	880066	884445	884964	0.35	5.00	
24 Mg	2705169	2672077	2695643	2721240	2710985	2725898	0.92	5.00	
59 Co	4714078	4698461	4751401	4707923	4707726	4704877	0.66	5.00	
115 In	23506640	23537396	23487156	23544216	23442286	23522144	0.15	5.00	
208 Pb	3863011	3846994	3888961	3871960	3867395	3839743	0.95	5.00	



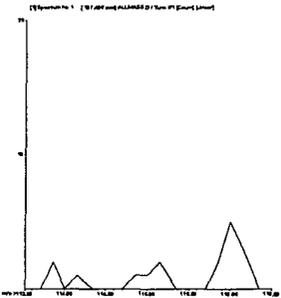
9 Be
Mass Calib.
 Actual: 9.00
 Required: 8.90 - 9.10
 Flag:
Peak Width
 Actual: 0.55
 Required: 0.90
 Flag:



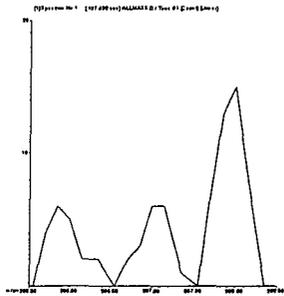
24 Mg
Mass Calib.
 Actual: 23.95
 Required: 23.90 - 24.10
 Flag:
Peak Width
 Actual: 0.60
 Required: 0.80
 Flag:



59 Co
Mass Calib.
Actual: 58.95
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.55
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

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 7/20/12

RJS 7/20/12

RJS 7/20/12

NBS 07/20/12

6516/6020A



NBS 07/20/12

ICP-MS STANDARDS 6020/6020A/3015/3051A			
Today's Date: 07/20/12			
Expires: 07/27/12			
Prep 1% HNO3/1.0% HCL			
20 mL HNO3 / 2000 mL DI Water			
Lot #L08023			
20mL HCL / 2000mL DI Water			
Lot #51305			
Expires: 07/27/12			
Internal Standard Mix: Prep 07/17/2012			
Standard 4			
Amount	STD	Manufacturer	Lot #
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 100 mL of 1% HNO3/1.0% HCL 07/20/12			
Standard 3 07/27/12			
Amount	STD	Manufacturer	Lot #
25 uL	CCV-A	ABS STDS	012512-30306
25 uL	CCV-B	ABS STDS	021312-30337
25 uL	CCV-C	ABS STDS	012512-30307
Prepared in 100 mL of 1% HNO3/1.0% HCL 07/20/12			
Intermediate-Sb 07/27/12			
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL			
ICV-Sb 07/27/12			
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL			

Standard 2 07/27/12			
Amount	STD		
500 uL	Standard 4		07/20/12
Prepared in 50 mL of 1% HNO3/1.0% HCL 07/20/12			
Standard 1 07/27/12			
Amount	STD		
50 uL	Standard 4		07/20/12
Prepared in 50 mL of 1% HNO3/1.0% HCL 07/20/12			
ICP-MS ICV 07/27/12			
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 07/20/12			
ICSA Prep: 07/27/12			
1 mL	ICSA	CPI	12E134
Prepared in 5 mL of 1% HNO3/1.0% HCL 07/20/12			
ICSAB Prep: 07/27/12			
1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265
Prepared in 5 mL of 1% HNO3/1.0% HCL 07/20/12			
ICP-LDR 07/27/12			
Amount	STD		
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 07/20/12			

Metals Digestion Worksheet

Method Name 3015 Digestion

Prep Method M3015

Set 120719A

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: 07/19/12 8:30:00 AM
Witnessed By	BC Date: 07/19/12 8:30:00 AM

Starting Temp:	20 c
Ending Temp:	170 c
Temperature Type:	Microwave
Sufficient Vol for Matrix QC:	Yes
End Date/Time	07/19/12 9:30

Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1 120719A Blk				45mL	50mL	07/19/12 8:30	equip: Venus
2 120719A LCS		90uL	1+2	45mL	50mL	07/19/12 8:30	equip: Venus
3 AY65041	AY65041W08			45mL	50mL	07/19/12 8:30	equip: Venus
4 AY65043	AY65043W08			45mL	50mL	07/19/12 8:30	equip: Venus
5 AY65044	AY65044W08			45mL	50mL	07/19/12 8:30	equip: Venus
6 AY65044 MS	AY65044W08	90uL	1+2	45mL	50mL	07/19/12 8:30	equip: Venus
7 AY65044 MSD	AY65044W08	90uL	1+2	45mL	50mL	07/19/12 8:30	equip: Venus

Solvent and Lot#
HNO3 J.T.B L10023 0226

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	EA
Date	7-19-12
Time	9:30
Moved to	metals

Technician's Initials	
Scanned By	lo
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	07/19/12 7:58:27 AM

Reviewed By: EA

Date: 7-19-12

6020/200.8 Injection Log

Directory: K:\ICP-MS Optimus\raw data output csv\

RunID	Injected	Sample Name	Misc Info	FileName	Multiplier
1	20 Jul 2012 10:30	Calibration Blank		120720Arev	1.
2	20 Jul 2012 10:36	120720 Standard 1		120720Arev	1.
3	20 Jul 2012 10:43	120720 Standard 2		120720Arev	1.
4	20 Jul 2012 10:50	120720 Standard 3		120720Arev	1.
5	20 Jul 2012 10:56	120720 Standard 4		120720Arev	1.
6	20 Jul 2012 11:03	ICV 120720		120720Arev	1.
8	20 Jul 2012 11:16	ICB 120720		120720Arev	1.
9	20 Jul 2012 11:23	CCV 120720		120720Arev	1.
10	20 Jul 2012 11:30	CCB 120720		120720Arev	1.
11	20 Jul 2012 11:36	ICSA 120720		120720Arev	1.
12	20 Jul 2012 11:43	ICSAB 120720		120720Arev	1.
13	20 Jul 2012 12:03	120719A-3015-BLK		120720Arev	1.
17	20 Jul 2012 12:29	120719A-3015-LCS		120720Arev	1.
20	20 Jul 2012 12:50	CCV 120720		120720Arev	1.
21	20 Jul 2012 13:03	CCB 120720		120720Arev	1.
28	20 Jul 2012 13:49	AY65041W08		120720Arev	1.
29	20 Jul 2012 13:56	CCV 120720		120720Arev	1.
30	20 Jul 2012 14:09	CCB 120720		120720Arev	1.
31	20 Jul 2012 14:16	AY65043W08		120720Arev	1.
32	20 Jul 2012 14:23	AY65044W08		120720Arev	1.
33	20 Jul 2012 14:29	AY65044W08 MS		120720Arev	1.
34	20 Jul 2012 14:36	AY65044W08 MSD		120720Arev	1.
35	20 Jul 2012 14:43	AY65044W08-A		120720Arev	1.
36	20 Jul 2012 14:49	AY65044W08-1/5		120720Arev	5.
37	20 Jul 2012 14:56	CCV 120720		120720Arev	1.
38	20 Jul 2012 15:10	CCB 120720		120720Arev	1.